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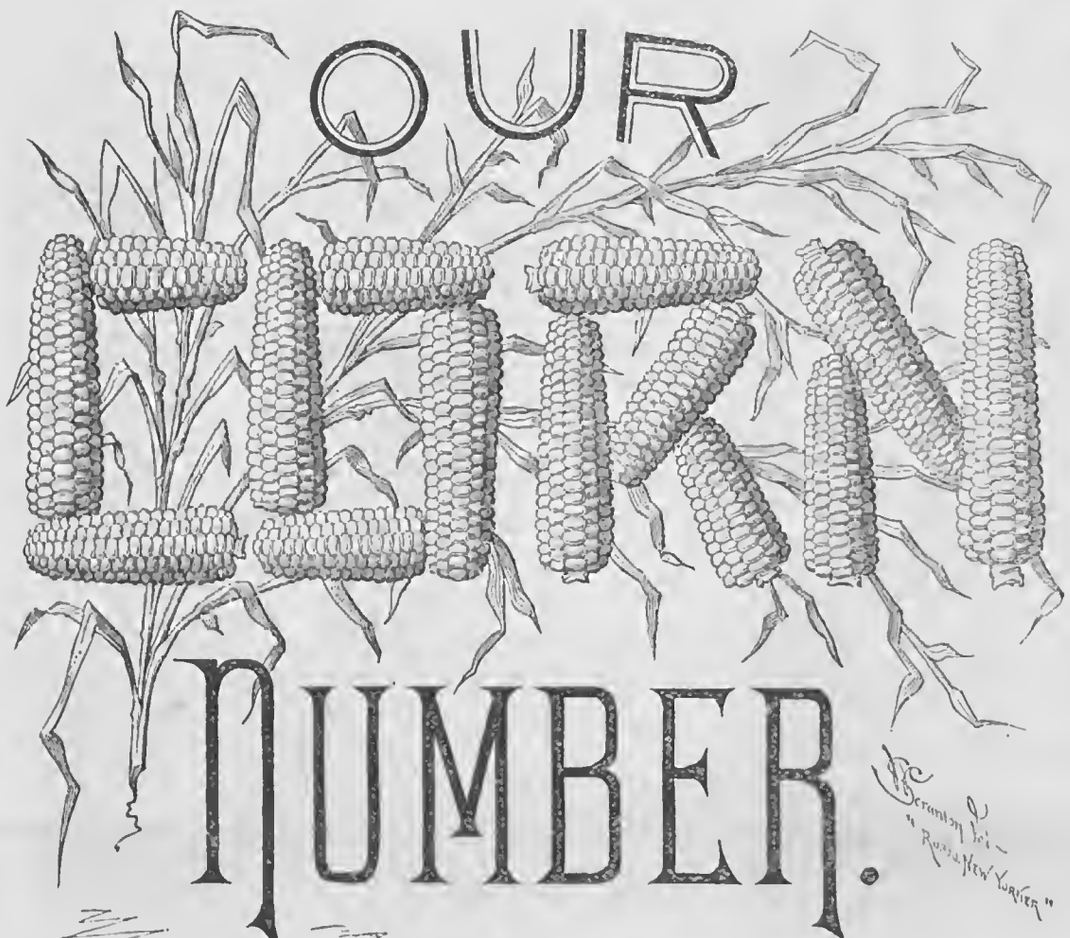
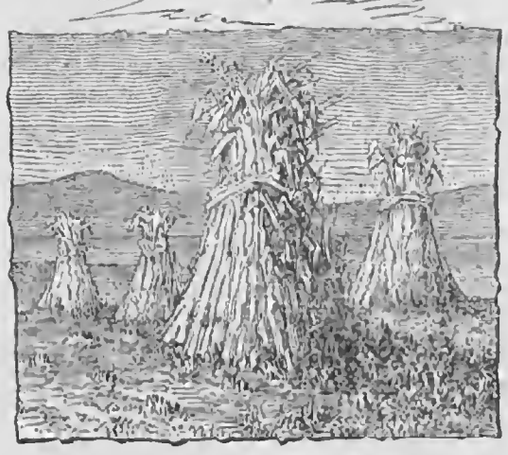




Corn Report from the Rural Farm.

CHESTER COUNTY MAMMOTH.

The Rural's estimate of the yield for the best acre too small!

BLOUNT'S WHITE PROLIFIC.

The Rural's estimated yield too high.

Probably the best well-authenticated Yields of Indian Corn on Record without Farm Manure, and at so Small a Cost

The Faults and Merits of the two Varieties:

A Fine Yield of Yellow Flint without any Manure, planted not until June 10.

THE WHOLE STORY TOLD.

The "Wild Corn of America."

Engravings from Nature.

NOTES FROM THE RURAL FARM,

JANUARY 1st, 1881.

The field upon which the Chester Co. Mammoth was produced, we have always considered, as has been before stated, one of the poorest of this farm. It had been lying idle for about fourteen years. We say "idle" because during that period—at least the middle and latter part of it—it has been used as a thoroughfare to and from all parts of the farm, for cattle, teams and men, running lengthwise, as it does of the dwelling, farm, buildings, garden, &c. The soil had become very hard, and where it was not quite bare gave a stunted growth of grass, daisies and weeds generally. It was in fact an eyesore, and it was plowed up and prepared for corn less for the crop than to cover it up from ourselves and our visitors, many of whom were impressed unfavorably with the entire farm, from seeing this first, as necessarily they must.

THE LAND is very gravelly, high, and naturally well-drained, except in the eastern part toward which it slopes, there forming a little valley, which could only be drained at an expense greater than the improvement would be worth.

The field contains over five acres, upon four of which the Chester Corn was grown. It was plowed in early May, except about an acre of the west part, which being nearly a solid bed of white weeds—daisies (Leucanthemum vulgare) was previously plowed in August of 1879, while the daisies were in fullest bloom. It was harrowed once with La Dow's Pulverizing Clod Crusher, and again with a straight iron tooth harrow, 350 lbs., of concentrated fertilizer (Mapes's corn manure), having been mixed with double its bulk of earth and sown broadcast before the last harrowing. No farm manure was used. The field was marked out with a shallow plow, the marks running from three and a half to four feet, or an average of perhaps three and three quarters feet apart. The planting was begun and finished May 15th. We used the Hoosier Corn Drill, which dropped a grain about every 16 inches, covering it an inch deep. With this implement it takes less than twice as long to *plant* a field as it does to *harrow* it. A shaft may be connected with any one of three rows of cogs upon the wheel, the outer row of which adjusts the machine so that it will drop a kernel, not accurately, of course, every 12 inches—the middle one every 16 inches and the inner one 20 inches. We used the middle row of cogs, though another season we should try the outer row. Indeed it may be questioned whether it would not insure a more even stand and provide against the many disadvantages of a second planting if the machine were to drop a grain every six inches or less. Then at the first hoeing every other plant could readily be cut out when every grain germinated, leaving the plants 12 inches (more or less) apart; while all could remain where alternate or occasional failures occurred.

The seed germinated poorly for some reason which we did not understand, laps of from five to fifteen feet occurring in many parts of the field, so that a second planting was necessary. This on account of a severe drought, which by that time was well under way, proved quite ineffectual to fill up the gaps caused by the first failures. The *stand*, therefore, was one which gave no sign of an abundant harvest. As we did not consider this an experiment field or crop at all, we have no reliable data as to when or how often it was cultivated. According to the writer's memory, refreshed by consulting with our farm hands, it was cultivated twice and hoed thrice. The cultivator used is a late invention, which, being unworthy of much praise, is sufficiently shown by the accompanying cut, fig. 4. It, however, stirred the ground pretty thoroughly for two or three inches in depth, leaving it somewhat raised or oval in the middle, and correspondingly lower towards the rows of corn. This was leveled by hoeing.

THE WEATHER was dry during late May and June. During early July a good deal of fodder corn became so shriveled on many farms that it did not recover. The leaves of the Chester curled considerably, and we supposed that the crop would be seriously injured. It appears, however, that the season, taken from beginning to end, could scarcely have been more favorable for the corn-fields of Long Island. During August high winds broke off or lodged a few stalks here and there. In early September also, a heavy storm of rain and wind harmed the corn measurably. But such storms always occur, and they were no more destructive last than in the average season.

When this corn was in silk the field was beautiful to look upon. It was then apparent that the yield would be immense, and many of our visitors and the neighboring farmers freely expressed themselves that they had never seen anything like it.

THE CHESTER CORN plant grows nearly as tall as the Blount, and the stalks are much larger. Generally, each stalk bears one ear. Possibly as many as one stalk in fifteen bears two ears. Occasionally three ears are found, and in the entire field there were three or four stalks with four ears each. But these ears do not, as in many kinds of Dent corn, proceed from different joints. As shown in the engraving (fig. 3), they are clustered together at a single joint. Evidently it is not therefore desirable to attempt by selection to fix or cultivate this habit. The ears crowd each other, and instead of one large perfect ear, we have several imperfect ears. We have selected seed from the multiple ears, it is true, for experiment on a small scale, but the bulk of our seed has been selected from the heaviest and finest. Our engraving of the ear of Chester Corn (fig. 2) is from life, and it is by no means the largest that could have been selected. There were scores as good. It fairly represents an *average* of the *best* ears.

This variety may be described as varying from 14 to 34 rows—the average being about 18. Its form is sufficiently shown in the engraving which may be accepted as typical. Each row will average 50 kernels so that the average ear will contain about 900 kernels. The kernels are deep—the color of Yellow Flint below and of a light buff on the top which is much dented.

THE FAULTS of this variety are that it grows too tall—the stalks are too thick and the ears are borne too high. It would also be desirable if its season of ripening could be made a little earlier, as no doubt it can.

The shorter of the Chester ears is one of 30 rows. These are occasionaly met with—always losing more in length of ear and size of kernel that they add by the greater number of rows. We found two ears with 34 rows, but they were less perfect than the one shown—fig. 1, which is a true portrait.

The Yield of Chester Co. Mammoth Corn.

It will have been observed that a portion of the west part of this field was plowed in August 1879, for the purpose of subduing daisies. It was upon this portion that the yield was heaviest and it was there that Mr. Bruggerhoff (J. M. Thorburn & Co.) by having stooks husked here and there, based his estimate of 300 bushels of *perfect ears* per acre for the entire field. This estimate, though within the truth for the *best* acre, was too high for the entire field as will be seen. The committee consisting of Robert J. Dodge (Pres't. Farmers' Club, Am. Institute), W. M. Habirshaw, F. C. S. (Chemist, N. Y. Ag. Soc.), L. C. Benedict (Ag. Ed. N. Y. World), confined their inquiry to the *middle* portion of the field which, by careful measurement of one acre of land and five stooks husked in different parts yielded according to their certificate 236 bushels of ears per acre. We have since ascertained that a third acre yielded about 200 bushels of ears and the fourth acre—that which is not well drained—about 120 bushels of ears—making in all 856 bushels of ears upon the four acres. Shelled Nov. 10 we found an average bushel of ears to make just 17 quarts of grain. It may therefore be said that the best acre yielded 159.37 bushels of shelled corn. The next best acre yielded 125 37 bushels. The next 106.24—the poorest 63.75 bushels and the entire field 113 69 bushels of shelled corn per acre. The yield (856 bushels) was carefully measured by our farm manager as it was placed in the cribs. The expense of producing this yield of corn, it must be seen, is exceptionally small. The items of labor and manure are as follows:

Taxes and interest on land value	——
Plowing. Two horses and man—say two days.	——
Harrowing twice. " " " two "	——
Planting, cultiving twice. One horse " three "	——
Hoed three times. One man " 12 "	——
Manure, 350 pounds per acre $800.	——
Cutting, husking, etc.	——

The Blount Corn.

For the information of our many new readers, we may briefly state that Blount's corn (purchased from Prof. A. E. Blount the originator, now of Col. State Coll.) was one kind offered in our Free Plant and Seed Distribution of 1878. From this seed we planted in 1879 a measured quarter of an acre and though the plot was badly selected—though a late frost killed a portion, eighteen bushels of shelled grain (72 per acre) were harvested therefrom. Our seed for last season's planting was saved from such stalks only as bore four ears or more. That part of the field given to it measured (we take Mr. Dodge's measurement) 310 feet by 122 4 feet, or .87 or within a fraction of seven-eighths of an acre.

It had been in grass (mostly Couch, Quitch or Quack of late years) for seven years. It was plowed in late Fall and in early May, the new cultivator (see illustration) was used to cut off the "Quack" which was already growing finely. Then it was harrowed with the "Clod Crusher" (LaDow's), again with the iron-tooth and the drills marked four feet three inches apart; 300 pounds of the same concentrated corn fretilizer were sown broadcast before the last harrowing; 100 pounds of the same when the corn was about six inches high, and 100 pounds of concentrated potato fertilizer when it was about 18 inches high. In other respects the treatment of this field was the same as the Chester. That is to say it was cultivated twice with the same cultivator and hoed three times, always hoeing flat so that there was not the slightest appearance of a hill about the base of the stalk. It was our wish to have given it at least two other hoeings and we endeavored so to do. But just when labor is most needed upon this farm, it cannot be had and our most cherished experiments have often come to naught because we were prevented from giving that careful attention to every detail without which an experiment is of no value whatever, except it may be to those free-and easy people who deem it time and labor thrown away to obtain *exact*

results when they may in the main be *guessed* at. The soil of the Blount field is a sandy loam—somewhat gravelly but not so much so as the Chester.

THE EAR of the Blount corn varies (not to speak of nubbins) from seven to nine inches in length and from eight to fourteen rows and from 40 to 50 kernels in the row. [An engraving of an average ear and cob of Blount's was was presented March 8, 1879.—EDS.] We think the average ear would not contain over 450 kernels. They are white—less dented than those of Chester, not so deep and wider at the top or more wedge-shaped. If they were as large at the bottom, it would be necessary for them to have a thicker cob to stand upon.

THE BLOUNT CORN PLANT in 1879 grew a full foot taller and required at *least* two weeks longer to mature than in 1880. Its hight last season averaged between 10 and 11 feet. In many plants the disposition is shown to form an ear at every joint. "Sets," indeed, often appeared at every joint, but the lower ones made no growth or development. The greatest number of ears found upon any plant was 10. Upon several stalks in this field eight were found, though the lower ones were often nubbins. We should judge from an estimate, though not an exact one, that *each* stalk would average not less than two and a half perfect ears. Upon some stalks the sets, instead of developing into ears, would remain dormant, while the ear stalk, or "shank," would grow into stalks, so that the plant would become branching, spreading and sterile. Sometimes ears would develop near the ends of these branches; but the weight of the ears would always break them (the branches) down before the corn had ripened.

FAULTS OF THE BLOUNT.—It can hardly be deemed a fault in this variety that the ears average small, since it is evident that the corn plant has not strength to support two or more very large ears. The stalks are very strong and the ears generally grow from opposite nodes in a manner to balance each other, though rather high up. The tips of the ears are rarely covered. The "shanks," or earstalks, are often long, as we have said, though we are satisfied that this objection could soon be bred out. As in the Chester, the perfect ears grow too high up. The stalks grow too high by a foot at least. In 1879 the season was scarcely long enough for it to mature. Last season it had two weeks to spare. It should not be overlooked, however, that '79 was as unfavorable as '80 was the reverse.

The Yield.

As our old readers are aware, several committees of eminent agriculturists made it their business to carefully investigate the yield of this field. Huskers were ready to do their bidding. The field was measured on three different occasions. Stooks were selected and husked at the bidding of the committees. The highest estimate thus formed was 150 bushels of shelled corn to the acre; the lowest, as we remember, 132. The actual yield, however, proves to be nearer the latter, viz., 134.44 bushels of shelled corn per acre, as estimated from measurements completed December 5th, when the last of the corn was cribbed.

MEMORANDA.—A bushel of ears of Blount weighs 35 pounds and gives 17.5 quarts of grain, weighing 28.99 pounds, the cobs weighing 6.01 pounds. The Chester bushel of ears weighs 35 pounds also, making 17.0 quarts of grain, weighing 28 pounds. The cobs weigh seven pounds.

A Remarkable Yield under the Circumstances.

Some of our readers will attribute the above immense yields to one thing—some to another. The favorable season was one element of success, but not the chief one, because many good farmers hereabouts, upon land fully as fertile, naturally, and highly manured, raised less than 75 bushels to the acre. The method of planting and cultivating was no doubt another element of success. The variety of corn planted was another element, and possibly the special fertilizer used still another. But undue prominence must not be awarded to either the variety or the concentrated fertilizers as we now proceed to show.

In another part of the same field upon which the Blount was grown we had determined to raise a crop of Minnesota Early Amber cane, with which to experiment in making sirup and sugar. The seed was sown, but as it was slow to germinate, having been covered too deeply, the "Quack" grass grew to such a hight that we concluded, though late (June 9) to again plow the field and plant corn. This was accordingly done. It was again harrowed twice, the rows marked off *three and a half* feet apart, and, as with the Chester and Blount, the seed drilled in June 10. It was then *rolled* with a heavy iron roller. The variety here planted was the common 8-12 rowed Yellow Flint. It must be noted that no manure of *any* kind was used. The plot measured .733 of an acre or .03 over seven-tenths of an acre. From this plot we have gathered 105¼ bushels of ears, which is at the rate of over 143 (143.16) bushels of ears per acre. We find, however, that a bushel of ears of this variety of corn makes (averages) but 31 pints of grain. The yield of grain per bushel of ears therefore would fall short as compared with either of the others, and the yield of shelled corn per acre would be 69⅓ (69.34).*

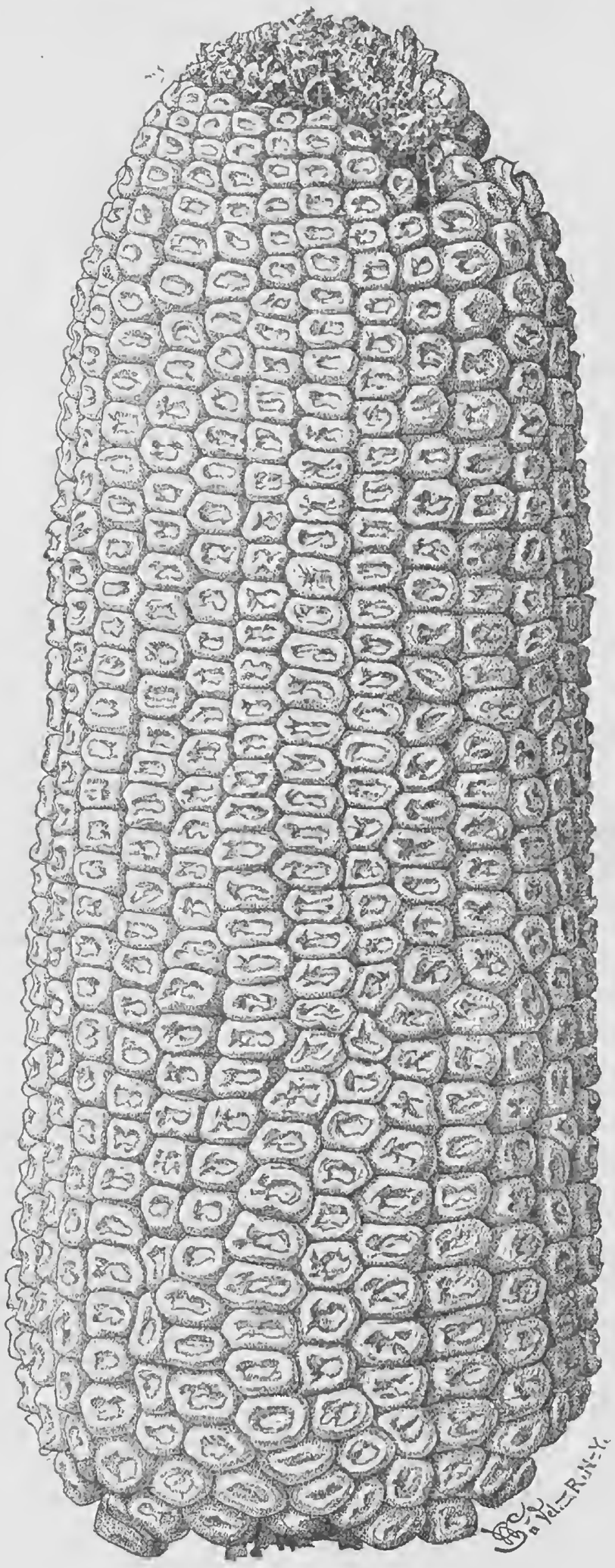
Here we have an unusually fine crop of corn planted not until June 10th, without any manure. To what was it due? To a very favorable season chiefly? We think not. Many crops of corn have been raised hereabouts the past season, some of them highly manured—some not. One field, indeed, of three and a half acres received 1 200 pounds to the acre of Lister's ammoniated bone phosphate, besides a "handful to the hill." Another field received 25 loads per acre of farm manure of an excellent quality and a handful of phosphate to the hill. These two fields are situated similarly to ours and the soil of either cannot be distinguished from the other by the sight or by handling. The corn is planted in hills usually four feet apart—four kernels to the hill. Very little hoeing is done, the plow or two-horse cultivator being relied upon to keep down the weeds. Not one of these fields has yielded a hundred bushels of shelled corn and few of them seventy-five.

Well, we must not, therefore, good readers, credit too much to the season or to the manure, as many of us are prone to do. The expression that a given quantity or kind of manure or fertilizer gave a certain yield is used too often. We are satisfied that in a given season and crop little is known how much or how little is due to any one factor. Granting, however, a fair percentage of credit to the favorable season and to the concentrated fertilizer in the case of the Blount and Chester, the following items remain to be considered:

Thorough Preparation of the Land.
Variety of Seed.
Drilling in the Seed.
Flat Cultivation
The Preservation of a Mellow Surface and the Timely Destruction of Weeds.
No Interference with the Roots of Corn by plowing or otherwise.

We hope, life spared, to prove to our friends that the Rural Farm can raise as large a crop of corn in 1881 as it did in 1880.

*One bushel of ears of this Yellow Flint weighs 34½ pounds, making 31 pints of grain weighing 27 pounds.



CHESTER CO. MAMMOTH—30 ROWS.—FIG. 1.

"The Wild Corn of America"

IN the RURAL NEW-YORKER of March 3rd, 1877, an engraving appeared of what is variously known as Wild Californian or Oregon Corn, Rocky Mountain Corn, Texas Wild Corn, Cow Corn, Corn in pods, etc. By whatever name it is known here or there, it is generally looked upon as the Wild Corn of America. Each kernel is enclosed in a covering or husk of its own, the same as the kernels of wheat or oats are enclosed. But the entire ear is enveloped in a husk the same as other corn. Whether this is the original type of the many kinds of corn now known need not here be discussed. In fact, mere speculation would not aid us in determining anything one way or the other. We desire here to speak of the tassel which this "Podded" Corn plant bears, a true representation of which reduced one-half in size (to save space) is herewith presented (p. 5). Generally in the sorts of Indian Corn now cultivated, the tassel is the male organ furnishing the pollen for the pistils (silk) of the female flowers beneath. Occasionally, however, female flowers appear upon the tassel and hence we sometimes find thereupon scattered kernels or more or less imperfect ears. Last season we raised a small quantity of this "Podded Corn at the Rural Farm, merely as a matter of curiosity, for, though it may be the "Wild Corn of America," most of our visitors had never before seen it and were, therefore, greatly interested in its peculiarities. The tassels of this corn, instead of being composed of male flowers only, as is generally the case with other kinds, bore more females than males—or at least, as many, and these are pretty regularly distributed throughout the panicle. So far as we have observed the flowers are never *perfect*, *i. e.*, possessed of both stamens and pistils, and Professor Beal, who examined several fruits from one of these spikelets under a glass, was unable to distinguish even the rudiments of stamens. The disposition on the part of the corn plant to produce not only females among the males (as shown in the tassel), but males among the females is shown in figure 5, which is an ear of Blount's Corn, and an accurate drawing from life. Here, it will be seen, we have first a normal growth of ear which abruptly changes to male flowers. Then there are several kernels, and finally the resumption of the ear, which is again in every way similar to the corresponding part of other ears. Many of our fruits are shaped by pressure. It is so with corn. Whenever the pressure does not exist, the kernel assumes a round shape. This may be seen in the kernels upon the "tips" of ears where they are less crowded. The kernels of the tassels of the "Pod" (as we may call it for short), corn are quite round as shown at fig. 7, in the engraving and are of the *natural* size. A very interesting experiment would be to select (as we have done,) kernels from these tassels and plant them year after year with the view of ascertaining what form they would gradually assume. Would they lose the pod? Would the tassel become exclusively male, as in other kinds? Would they gradually assume the appearance and characteristics of the corn at present cultivated? In such experiments, it would be necessary to keep the plants away from contact with foreign pollen. In this way a few years would probably suffice to determine whether or not this "Pod" corn is, or is not, the original Zea Mays.

[*As is well known to old subscribers, it has been our custom during several years past to issue* SPECIAL NUMBERS *of the* RURAL NEW-YORKER. *The present is our second number, especially devoted to* INDIAN CORN. *The next special will be devoted to those Hardy Shrubs and Trees which are best suited to the Rural Home. The third Special will treat of Strawberries, &c.—the best of the new and old varieties with original illustrations from nature. The fourth Special will be devoted to Wheats—new hybrids—rare varieties—the best yielders. Seventy-seven different kinds of wheat are now growing on the Experiment Farm of the* RURAL NEW-YORKER. *Several of those which have originated there are being raised for the purpose of free distribution among our subscribers.*]

THE ESSENTIALS FOR A CORN CROP ON THE ILLINOIS PRAIRIES.

B. F. JOHNSON.

THE following facts in respect to Indian Corn Cultivation are gathered from twenty-five years' observation and experience on the black soil prairie of Illinois, in about North latitude 40 deg., or near the parallel of Columbus, Ohio, and Springfield, Ill. The crops were first made on a virgin soil and have been continued to this time, and the details, unless otherwise noted, refer to making them without manures or fertilizers of any kind. And another explanation which perhaps should be made is that in order to obtain the best crop, it is necessary to modify the practice as the soil acquires age and becomes more or less partially exhausted. Thus when the soil is new, one certain treatment makes the best crops; after four or five years this requires to be changed, at the end of ten years other changes must be adopted; until finally, when the soil has arrived at the stage of impoverishment common to the land in the early settled timber States, the best methods and practices are found to be nearly identical with those common there. Therefore let it be understood, that what is here set down applies to black prairie soils which have been cropped from ten to fifteen years, as the present representative corn crop of the country, avoiding an account of the *minimum* of cultivation which produces the largest crops on fresh soils, and the *maximum* which brings about results nearly equally satisfactory, on lands which have been cropped for nearly half a century.

But the essentials for a good corn crop on the black soil prairie, are neither many nor difficult to be attained and are pretty much confined to the following points—a strong, rich soil, a good seed bed, a full stand, an early start and thereafter sufficient cultivation. These embrace the details of 1, plowing and soil preparation, 2, planting and seed, and 3, timely and sufficient cultivation.

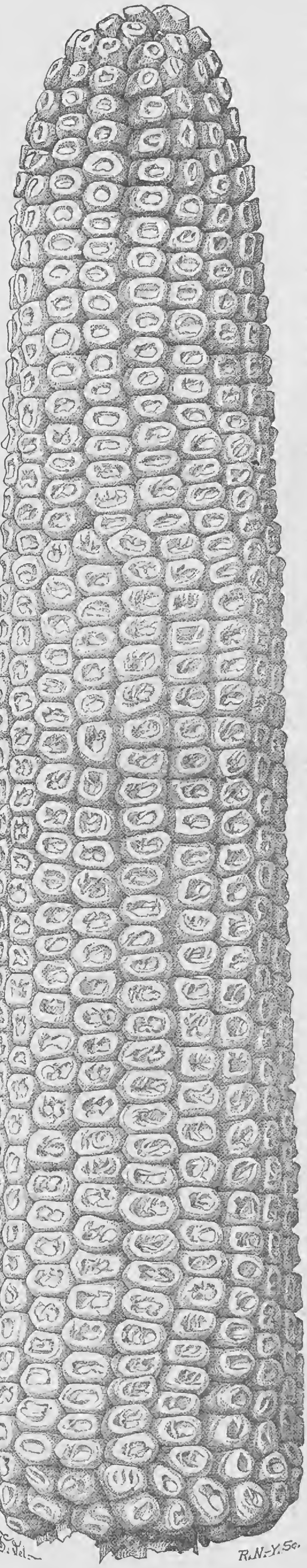
PLOWING AND SOIL PREPARATION.—In the case of a wheat or an oat stubble, or a Timothy or Blue Grass sod, the land should invaria-

bly be plowed in the Fall, deeply if previous plowings have been shallow, but rarely more than five or six inches. And where corn follows corn, as the too common custom is, where possible, the corn should be husked, the stalks broken down and turned under in the Fall or Winter months, because, over and above the advantage of doing Spring work in advance and removing part of the small pressure on the seed-time season, turning under stubbles or swards of any and all kinds allows of that decomposition and decay to take place, and time for that action and reaction in the raw materials for plant food, which are essential to full crops sown on the best soils. So in the case of where manures and fertilizers are to be used, these should be put upon the land some months before the crop is planted. This is a new but a clearly demonstrable view of the true use of manures as fertilizers. If the plowing of corn stubble is deferred till Spring, because of the lateness of the corn harvest, care should be taken to break the stubbles off even with the ground while it is yet hard frozen, using a 15 or 20 foot bar of railroad iron for the purpose, managed with a pair of horses attached to either end. The stalks should then be raked into rows and burned, though the better practice is to turn the stalks under by the three-horse sulky or the 16-inch common plow; because, though the depth of the furrow necessary to cover the stubble would probably lessen the crop immediately following, the addition of the vegetable matter will benefit the land over and above the loss on the current year's crop. Spring plowing should also be done as early as possible, in order to have the soil lay and be compacted, as well as to admit of a partial preparation of these crude elements of plant food which have been turned under, and which, until they find their way back near the surface, are out of the way of the feeding roots. There never was a greater error than the common practice which demands that corn and wheat land should be seeded immediately after being turned up with the plow, the assumption being that seeds germinate best when placed in an open, porous, cool and fresh seed bed.

PLANTING AND SEED.—Seeding time having arrived, which varies from the 15th of April to the 10th of May for latitude 40 deg. the corn crop land should be entered upon and given a thorough going over with a double shovel, or better with a heavy, long and sharp-toothed harrow, in order to destroy the weeds which start early and to prepare a fine and tilthy seed-bed; but in no case should the soil be disturbed to a greater depth than three or four inches. For doing this work the new revolving disk-harrow, answers an excellent purpose, which drawn by three or four stout mules or horses, hitched abreast, will cut a furrow from twelve to fifteen feet wide and go over from 20 to 25 acres in a day. And let it be repeated here as an essential thing, that in doing the second plowing, stirring or fining of the fallow, no attempt should be made to turn the surface under; because in the case of fall plowed land the elements of plant food are just where they are needed, and in the case of spring plowed, the three or four weeks, intervening between plowing and seeding have allowed the same fertilizing causes to operate in a less measure.

The surface having been fined the land is now ready for the seed which should be drilled in with the common planter, the rows standing apart three feet eight inches to four feet, and the stalks singly, in the row distance from eight to twelve inches, according to the variety of corn, the strength of the land, and the purposes for which the crop is to be used. If the land is foul and rows both ways are needed, so as to admit of cultivation in transverse directions, the hills should stand from three and a half feet to four and with not less than two nor more than three stalks in a hill. Where corn is grown to be fed from the shock and small ears and an increased amount of forage is desirable, the distance between the rows and the hills both may be considerably lessened. The two great errors in this portion of the work of maturing the corn crop, and they are not these alone, but these are vices, are in the first place, deferring the time of seeding one or two weeks, and second, the use of too much seed. The first arises from the bad habit of Spring plowing, which frequently does not admit of the land being entered upon till late in the season, and the second from a want of faith in the seed. Given Fall plowing, early seeding, and perfectly sound seed and land having complete natural or artificial draining, the corn crop of the black soil counties has never been known to fail.

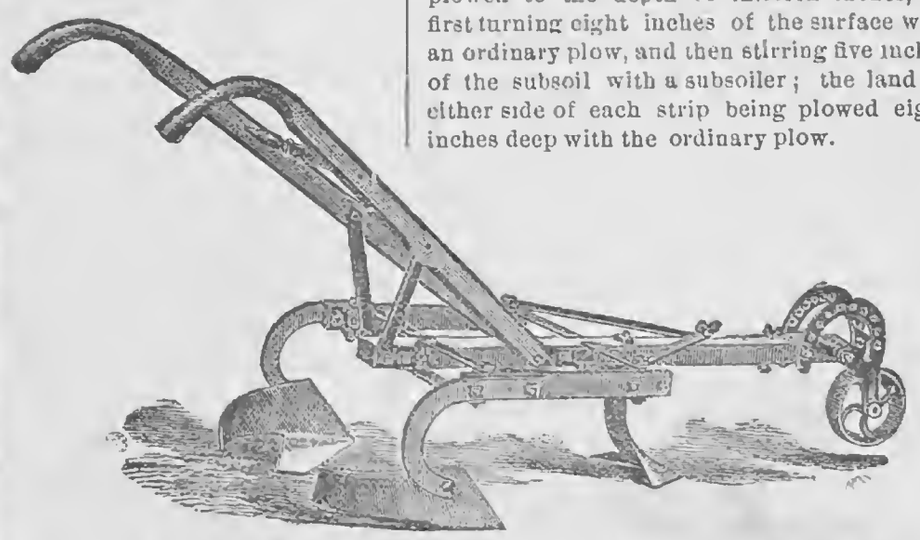
But in this connection and in so vital a matter, the subject of seed corn deserves some attention. One peculiarity of seed corn is (and probably the same is true of most seeds), that a given lot may be sound enough and good enough to germinate to the last kernel, when all the conditions are favorable—heat, moisture and the like—and fail to grow when the conditions are of an opposite character. Thoroughly good and sound seed will, if planted a little too early, or when the earth is too cold, or too dry, or too wet, retain its vitality and start when the conditions have become favorable. Such seed corn is only readily obtainable in good corn ripening seasons, unless care is taken to select the ears from the field before sharp frosts come, truss them up by the husks and suspend them where it is airy, warm and dry—and the dryer and warmer the better—provided the temperature does not get above 125 or 130 degrees, because it has been demonstrated again and again that no common treatment preserves or perhaps develops the vitality of the seed corn germ like long exposure to a high and dry temperature. While it is a common thing for wheat and oats exposed on the ground during the Winter months to make a volunteer growth in the Spring, corn does so not oftener than once in four or five years, that is, in very favorable corn crop years, which in the afterpart are always seasons of considerable heat and drought.



CHESTER CO., MAMMOTH.
AN AVERAGE OF THE BEST EARS.—FIG. 2.

Planting having been accomplished if the season is droughty, the soil dry and inclined to be cloddy, the corn field should have a heavy roller put over it, although the best corn planters, like the best wheat drills, pack the soil over the seed. After rolling, or as soon as the springing corn shows along the furrows, the field should be thoroughly harrowed in both directions, which no fear of injuring the springing corn should prevent. Indeed, no matter how heavy the harrow may be, if the teeth are only slim and sharp, the field may be gone over half a dozen times without displacing one shoot or one kernel in a thousand. In case the land is dry, the roller should follow the harrow, and just as soon as the stand is fairly full, the plow should be set again and kept going till the weeds are subdued, or until the corn growth so shades the soil that ordinary weeds will not interfere with the crop.

As to shallow or deep cultivation, to the number of plowings to be given, the instruments to be used, and a variety of other matters, these depend on circumstances quite as varied. If the season is a warm and moist one, any amount of cultivation in almost any form will benefit the crop, but if moist and cool, nothing should be done which invites late growth, and cultivation after midsummer should be avoided. Where a drouth is approaching, continued shallow cultivation is desirable, but never deep plowing in very hot and dry weather, because deep cultivation in a hot and dry time produces disaster by firing the crop. The essential thing for a good corn crop being a rich, strong, clean soil, a mellow seed-bed, a good stand and an early start, any kind of cultivation which will leave to the crop the monopoly of the land will do as well as any other one.



CULTIVATOR USED IN THE CORN FIELDS OF THE RURAL FARM.—FIG. 4.

With these essentials attended to the corn crop of the black soil prairie yields from 30 bushels in bad season to 50 in average, or 75 to 80 in good, the rainfall and the temperature being an important factor in the outcome of crops, as well in Illinois as elsewhere.

[*The* RURAL NEW YORKER *has the proof that it has been offered and that it refused $15 00 per bushel for the yield of one of the wheats which were originated on the Rural Farm. This is one of the kinds of seeds which we propose to offer in our future Free Seed and Plant Distributions.*]

SOME EXPERIMENTS IN DEEP PLOWING FOR CORN.

C. E. THORNE.

THE following is a statement of some of the results obtained from a series of experiments in deep plowing for corn, made on the farm of the Ohio State University during the seasons of 1878, '79 and '80. Deep plowing, however, is hardly the proper term to use, as in these experiments we have not succeeded in disturbing more than twelve or thirteen inches of the soil, for want of tools adapted to the purpose.

CHESTER CO. MAMMOTH CORN PLANT.—FIG. 3.

The soil in which the experiments were made is a rich alluvium, largely composed of the disintegrated rocks of the Huron shale, and resting, in most places, upon a substratum of gravel, which gives the most perfect drainage. It is such a soil, in short, as the black walnut and sugar-tree delight in, but it has been continuously cropped for many years, with little or no manuring. It was supposed that a soil of this character would be found sufficiently weathered for the purposes of crop production to a considerable depth, and therefore two methods of deepening the tilth were tried in preparing for the crop of 1878:

(1.) Two strips, in different fields, were plowed to the depth of thirteen inches, by first turning eight inches of the surface with an ordinary plow, and then stirring five inches of the subsoil with a subsoiler; the land on either side of each strip being plowed eight inches deep with the ordinary plow.

The crop yielded as follows:

		Per acre.	
Strip (a), subsoiled, at the rate of		48.47	bus. (shelled).
Adjoining strips	"	51.07	" "
Strip (b), subsoiled,	"	49.23	" "
Adjoining strips,	"	55.37	" "

Evidently our subsoiling did not pay.

(2.) In a third field, a part of which had been in meadow and pasture for many years, while the remainder had been devoted to grain

crops, and was apparently much worn, a strip containing nearly two acres of land was plowed across both meadow and tilled land with a plow of the double-Michigan pattern, drawn by four horses working abreast; while strip on either side, of half this size, was plowed eight inches deep with an ordinary plow drawn by three horses. The corn was cut into four shock-rows, and the grain of each husked and weighed separately, with the following result:

						Per acre.	
Row No. 1,	plowed	8	inches	deep,	yielded	63.24	bus.
" 2,	"	12	"	"	"	77.64	"
" 3,	"	12	"	"	"	76.50	"
" 4,	"	8	"	"	"	71.44	"
Average yield for 8 inch plowing,						67.34	"
" " " 12 " "						77.07	"
Increased yield for deeper plowing,						9.73	"

The yields of the portion which had been in meadow and of that which had been in cultivation were weighed separately, but the increase was the same for both.

(3.) In 1879 this field was plowed to a uniform depth of eight inches, but the products of the strips which had been under experiment the previous year were weighed separately, and showed a further increase of two bushels per acre for the deeper plowing of that year.

(4.) During this season, experiment No. 2 was duplicated in another field, with the result of the same increase of two bushels per acre. This was a very unfavorable season for corn, owing to the failure of nearly all the seed first planted to germinate, thus necessitating two or three plantings to secure a stand, and making the crop late, while subsequent unfavorableness of weather prevented the crop from regaining the lost ground, so that the average yield of the best fields was not more than forty-five bushels of shelled corn per acre. Meanwhile our clover-seed had failed to catch, which necessitated the planting again to corn of the field in which experiments No. 2 and No. 3 had been made. For reasons connected with the general management of the farm we did not wish to use any manure upon this field, and therefore the area of deep plowing was considerably increased.

The result of the experiment was as follows:

Shock-row No. 1	plowed	12 in.	yielded	63.64 bu	corn and	3,375 lbs.	stover per acre
" 2	"	12 "	"	63.35	" "	[illegible],357 "	" "
" 3	"	8 "	"	57.19	" "	2,881 "	" "
" 4	"	8 "	"	59.27	" "	3,069 "	" "
" 5	"	12 "	"	60.13	" "	3,253 "	" "
" 6	"	12 "	"	66.00	" "	3,352 "	" "
" 7	"	12 "	"	60.63	" "	3,139 "	" "
" 8	"	12 "	"	60.41	" "	3,053 "	" "
" 9	"	8 "	"	53.32	" "	2,676 "	" "
" 10	"	8 "	"	53 68	" "	2,870 "	" "
Average yield for 12 inch plowing......				62.19	" "	3,237 "	" "
" " " 8 " "				......55.86	" "	2,874 "	" "
Increased yield for 12 in. plowing......				6.33	" "	363 "	" "

(Each shock-row contained nearly one acre of land. The rows numbered 1 and 2 covered the same ground as those numbered 2 and 3 in experiment No. 2.)

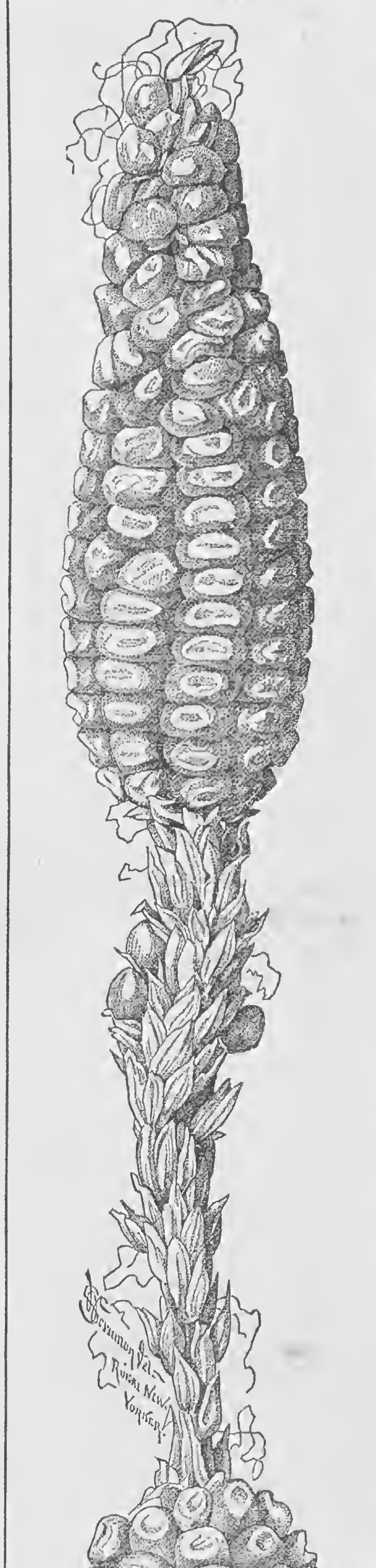
The net value of the above increased yield, at the current rates here for corn and stover in the field at the time of husking, viz: 33 cents per bushel for the corn and $3 per ton for the stover, would be $2.63, while the experiment of 1879 indicates that the benefit of the deeper plowing does not end with a single season. The additional cost of this increase can be reduced to that of the labor of one horse in the plowing by the use of the sulky plow.

The stover in the above experiment was cut about 12 inches above the ground, and the value assigned to it is not more than half its actual feeding value when compared with hay at current rates, viz: $16 to $18 per ton.

It is interesting to note the ratio of grain to stover, being as one bushel of corn to 51.45 pounds of stover for the eight-inch plowing, and one bushel to 52.85 pounds stover for the twelve-inch plowing.

It will be noticed that the inversion of four inches of subsoil which had never before seen the light has had only a favorable effect upon the crop immediately following, although the plowing was done late in the Spring and the corn immediately planted. It is reasonable to suppose that some soils would be injuriously affected by such a sudden transition to deep working, such as shallow sedentary soils and possibly a few of the stiffer clays of the drift, but these experiments and others which have been made upon a heavy clay soil and drift formation justify the inference that the plow might profitably be set deeper in many localities. The only way by which a farmer may know positively the adaptability of his soil to this mode of working is by actual experiment, or by noting the results of such experiments upon soils of a geological origin similar to **that of his farm.**

In the case of soils whose drainage is defective the results of deep plowing are likely to



BLOUNT'S CORN—MALE FLOWERS DIVIDING THE EAR—FROM LIFE—FIG. 5.

be observed by this cause; for instance, it can scarcely be profitable to deepen the tilth of a flat lying, soggy piece of land, unless the deep plowing can also be made a sort of under drainage, by carrying the water to still lower levels, for which there must of course be some outlet. In such a case the advantages of the deeper working should be still more apparent than upon such soils as that upon which our experiments have been made.

Farm Dep't Ohio State University.

[By the carefulest selections and cultivation we are endeavoring to obtain a new breed of the Chester County Mammoth Corn which shall prove more productive everywhere, and better suited to the fields of the North than was the seed which was originally planted at the Rural Farm. In this direction we have already made marked progress with Blount's White Prolific.]

RURAL BRIEFLETS.

THE advantages of drilling in corn are well set forth by Mr. Charles A. Green in his excellent "Corn Notes." . . . .

AT Professor Beal's request we sent to the Michigan Agricultural College at Lansing a few ears of the several kinds of corn raised at the Rural Farm during the past season. Here is his reply: "The Chester Co., Mammoth which you sent I think is the largest I ever saw. The Blount and Yellow Flint are also desirable." . . . .

FIG. 6.

WHEN manure is used in the hill, an excellent—though an old-fashioned fertilizer to give corn a start—is a full handful of hen manure that has previously been mixed with the same bulk of muck and wood ashes. . . . .

IN our corn experiments, however, we have been led to think less of manuring in the hill than of sowing or spreading some soluble manure broadcast. We know of an instance in which bone meal (coarse) was used and the yield was over 80 bushels. Much credit was given to the bone, though it may be doubted whether it could have had *any* effect until another season. . . .

MANY of our readers have urged us to sell them small quantities of the above kinds of corn. We would gladly have obliged them, but our rule is one without an exception, never to sell anything to our subscribers. This corn will no doubt be offered by all prominent seedsmen whose catalogues will be noticed in these columns as soon as they are received. . . . .

WE were struck by the force of the following remarks by our venerable friend Conrad Wilson. "One man gives great attention to *plant food* and little heed to anything else. Another is all engrossed with the problems of *tillage*, and discovers but little value in the other factors. A third attaches exceptional importance to the variety of the grain, or the question of pedigree, and so on to the end of the catalogue. But rarely do we meet with the farmer who is wise enough to divide his attention fairly between all the essential conditions that belong to a maximum crop. Yet it is entirely true, and not to be denied, that very fair results are often reached, even in spite of important factors having been overlooked, and it is also true and still more remarkable, that among all the corn products yet recorded, there is not a single case in which all the elements of success are included or even recognized." . . . .

WE should like to have our readers consider this question: What good does it do to hill up corn? . . . .

UNLESS seed corn has been selected with care, it is useless to look for large yields. It is not a very costly matter for each farmer to procure half-a-dozen varieties of corn which in other places he knows to have yielded heavily. These may be planted on small plots 33x33 feet square (one-fortieth of an acre) on different parts of the farm and the most prolific kinds thus determined for future guidance. . . . .

WE are convinced that excessive manuring for corn is money thrown away. . . . .

IT will be remembered that Joseph Harris announced a profit of about $700 on a corn crop of 15 acres. He attributed the result in the main to an exceptional amount of tillage both before the corn was planted and afterwards. THE RURAL NEW-YORKER *has been offered $1.50 per bushel for the entire yield of the Chester Corn* (minus the tips and butts); *$3 00 per bushel for all the Blount Corn that was taken from stalks bearing three ears and more and $1.50 per bushel for the rest.* At this rate our yield from *five* acres would amount to not less than $750. Of course such prices could be paid only for remarkable kinds of corn for seed purposes. . . . .

IN every case, says Prof. Beal, the root-pruning of corn as tried at the Michigan Agricultural College was a failure. . . . . . .

PROFESSOR BEAL writes us that he thinks Waushakum the most thorough-bred corn with which he is acquainted. . . . . .

THE ash of corn cobs is a good manure, since, as the cobs contain but a small percentage of nutriment, it is better to use the ash as a fertilizer than to grind the cob with corn for stock food. . . . .

THE HORSE that succeeds in accomplishing his mile a few seconds sooner than any other, wins renown for himself and makes his master a hero, says Mr. Conrad Wilson. The event excites universal interest, and the press teems with eulogies that are shared in due proportion between the steed and his owner.

The pugilist who by dint of muscle and power of endurance, succeeds in vanquishing his antagonist in the ring, punishing him within an inch of his life, and pounding his features into a condition equally frightful and disgusting, is triumphantly escorted from the arena by an applauding multitude, and his fame goes abroad on every wind of heaven. The truth of the above paragraph will be conceded. Here is the application: BUT the farmer who at the least cost of production, raises the greatest amount of corn to the acre is not eulogized by the press; is not applauded by an admiring multitude and his fame goeth not abroad on every wind of heaven. . . .

PROF. COOK, as we have stated, from experiments made in 1872, condemns the use of sulphate of ammonia for corn. Both corn and stalks were diminished in weight by its use. But muriate of potash was beneficial to both corn and stalks. He concludes that corn is a potash plant. What plant is not? . . . .

The average yield of corn is about 40 bushels to the acre. The average yield of wheat is about 13 bushels. We can from present knowledge, more easily increase the average yield of corn to 75 bushels than we can that of wheat to 20 bushels. . . . .

THOROUGHBRED SEED-CORN.

E. LEWIS STURTEVANT, M. D., SO FRAMINGHAM, MASS.

THE ONLY two thoroughbred seed-corns I know of, are the Blount's Prolific and the Waushakum, both corns which have justified themselves by trial as being of extra uniformity and of great fecundity. In the farm practice of Mr. Carman on Rural Farm Blount's Prolific has yielded 134 bushels shelled corn per acre; with Sturtevant Bros. a single acre planted with Waushakum has given 123 bushels shelled corn.

The difference between a well-bred corn and ordinary seed is scarcely apprehended by those who have not tested experimentally. Uniformity is one point gained—a point visible to the eye in the seed and in the growth of the plant. This is not, however, all. Whatever is called thoroughbred possesses a uniformity and transmits its own peculiarities strongly. A thoroughbred seed with fecund habit gives uniformity and fecundity. A thoroughbred seed with non fecund habit, gives uniformity and not fecundity. So it is seen that something more than mere thorough breeding is required: we must breed towards fecundity. When seed-growers do this last, then scarcely any size of crop within reason can be considered improbable or impossible. Now these two seed-corns, mentioned by name not for advertisement, but simply because they are the only two illustrations we have, derive their value from the fact that through selection and proper manipulation they have become thoroughbred and fecund.

Another point of view, which we will give in the form of a positive statement: Under ordinary poor care, poor fertilization, and inferior management of crop, a field planted with thoroughbred and fecund seed *may* not yield more than another field, under equivalent conditions, planted with ordinary seed of medium good quality. Let, however, good conditions of culture be applied, and the thoroughbred seed immediately responds to the good treatment far in excess over the other seed, and gives a far larger crop. It is easy to obtain a 40-bushel crop with any good seed; we cannot be sure of the 80-bushel crop without using the best of seed; we cannot hope for the 100-bushel crop without a thoroughbred seed.

I speak in this article of corn grown in large areas under ordinary conditions of farm culture, and not the one-eighth acre lots so popular with some, because the outside roots, which form such a large percentage of the total roots in the lot, feed outside the measured bounds, and give better results than would be shown on a large field and thus serve the purpose of a brag crop.

Could Mr. Bowditch, of Framingham, my neighbor, have obtained 100 bushels per acre of shelled corn on a field of 17½ acres, manured with fertilizer and managed economically by machinery, without hand labor except in the harvesting, except he had the benefit of thoroughbred seed? His own experience proves the contrary. These are his figures, based on $1.50 a day for man and 75 cents a day for horse labor:—

Statement of E. F. Bowditch, Millwood Farm,

Framingham, Mass. Field surveyed by C. J. Frost, an expert.

Dr—	
Labor up to harvest	$98 85
" stooking	60 00
" harvesting	234 07
138 bags Stockbridge corn manure	579 90
Total cost	$972 82
Cr.—	
52 32-100 tons stover at $8	$418 56
Cost of 3,474 baskets of ears of corn	$554 26
17.4 acres, yield per acre	199.6 bushels.
Cost per basket	16 cents.

In farm measurement two baskets of ears are called one bushel of shelled corn. As a matter of fact, sale being by weight, two baskets yield one bushel and one quart of shelled corn by measure, or 62 pounds by weight, or 1 1-10 bushel corn at 56 pounds to the bushel. This makes the yield read 99.8 bushels shelled corn by measure, or 109¾ by weight. This is a reliable farm yield, without extra cost or appliance, of 109¾ bushels shelled corn of prime quality on 17 4 acres of land.

[We shall continue throughout the present year our original illustrations of Pears, Apples, Grapes, Peaches and Small Fruits of all kinds.]

NOTES ON CORN.

PROFESSOR I. P. ROBERTS.

After twelve years of experimenting and careful observation, I am led to the following conclusions which, however, subsequent knowledge will doubtless modify or perhaps entirely overturn. They are all based on carefully conducted experiments and I prefer to give the results of my work in this condensed form rather than in extended tables of details. Soluble commercial fertilizers, if used in large quantities, should be applied broadcast, one half just after the corn is cultivated the first time. The reason why superphosphates appear to do so little good the first year, is that the soil is rich in lime and the phosphoric acid combines with the lime in the soil and for the time being, becomes insoluble. The plant food is not thrown away though no present increase appears, and will benefit the succeeding crops as the locked-up phosphoric acid becomes slowly soluble.

Farm manures give better results when applied in the Fall or early Winter than when applied just before plowing in the Spring.

Fall or early Spring plowing when done under proper conditions and when the soil is in other respects carefully prepared before planting, gives far better results than late plowing, except on clover lees, when by late plowing, quite a growth of clover may be turned over. In those localities where the seasons are so short or so cool or where the soil is so cold that the larger varieties of corn do not do as well as the smaller or flint varieties, the plowing, if done in the Spring should not usually exceed six inches in depth.

In cold soils, or cool climates, moderate ridging is very beneficial, if not done in too dry weather; heavy ridging is admissable in continued cool, wet weather. Warm, light soils in almost any climate, and almost any soil in a dry or hot climate, give better results with flat culture. In most localities in the Eastern and middle States, drill culture gives the best and most economical results both in corn and "stover" after one has learned to seed thickly, to cultivate extremely close while the plants are young, and to cut out with the hoe the surplus and weakly plants. With larger varieties of corn in most of the great corn districts of the West where land is cheap and labor dear, and where "stover" is of comparatively small value, hill culture is to be preferred.

From five to twenty-five bushels increase per acre is often due entirely to seed of superior quality or variety. Superior culture and fertility though unimproved seed is planted, if it is aided by selection for a single year, often give to the product the tendency in after years to produce from three to five bushels more per acre than the normal yield of the variety; by proper management this tendency to increased yield may be carried still further but no succeeding year is liable to give such marked results as the first.

Root pruning in rich soils in moist or wet weather when growth is very rapid, is apt to be beneficial; in dry hot weather, it is quite as apt to be injurious. Suckering corn, taking one year with another, diminishes the yield. The feeding value of corn for milch cows, young cattle and work horses, based on chemical analysis, is far less than its real feeding value. To illustrate: in Scotland they [illegible] to two pounds in weight per day with a ration of ten pounds straw and two hundred pounds turnips. Five pounds of oil meal are theoretically equivalent to one hundred pounds of turnips but when substituted for them, the bullock ceases to gain in weight; that is, turnips are worth more than they are credited with, or oil meal is worth less. My judgment is, that corn as an animal food, is usually rated much below its real feeding value.

CORN NOTES FROM VIRGINIA.

HUGH L. WYSOR.

Commercial Fertilizers.

I presume it was the Rural's object last year in offering premiums for the greatest yield of Blount's Prolific corn on a certain specified plot, to ascertain in some measure how much corn it is possible to raise on an acre without regard to the cost of cultivation or the profits of the crop. To my mind a far more important problem which needs solution is, how much corn can *profitably* be raised on an acre, taking into consideration the use of commercial fertilizers. This problem must be extended to embrace a method which shall be *practically* appliable to at least five acres.

Now the methods usually followed in raising premium crops are not such as can be adopted in a field of the size mentioned, much less in one still larger, nor, for the same reason, can a fraction of an acre, cultivated at great trouble and expense, show what may be done on a single acre, not to speak of five or ten acres. Dr. Chamberlin's yield at the rate of over 186 bushels per acre, compared with the Rural's yield of 142 bushels, shows this conclusively. Prof. Blount's crop of from 70 to 96 bushels through a period of several years without fertilizers was a more profitable crop than if he had raised 180 bushels following the method of Dr. Chamberlin or that of any of the winners of premiums, and applying it to the ten acres he mentions in the Rural of March 6th. Indeed, any such method would have brought him heavily in debt.

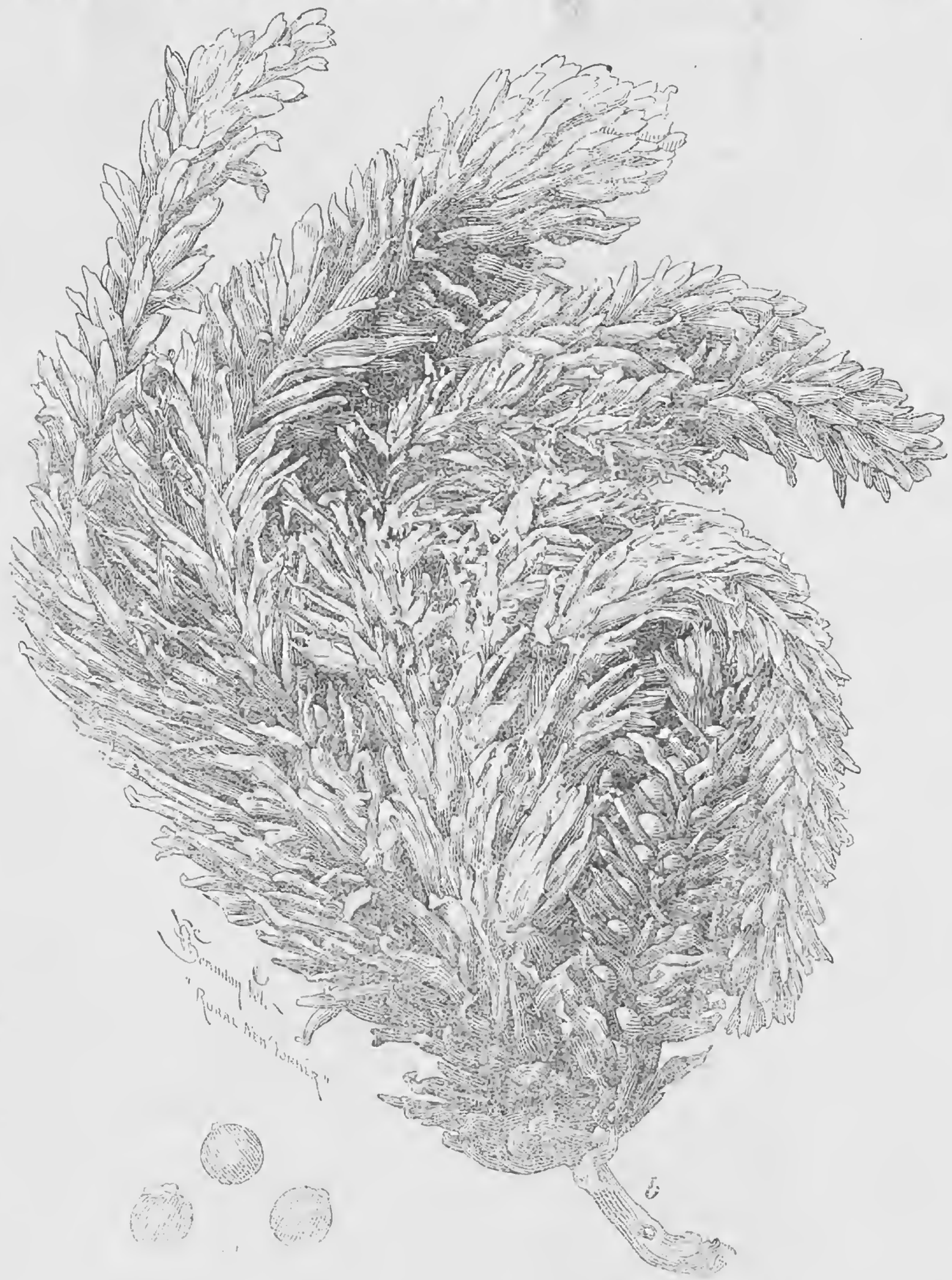
I remember that one agricultural paper advertised as one of its merits that it taught farmers how to raise 60 bushels of wheat or 100 bushels of corn per acre. This was well enough, provided it taught at the same time how these two things could be done with profit. But farmers have no desire to know how such large quantities of these cereals can be raised if they must be raised at a cost of five dollars per bushel to sell in market, the one at one dollar and the other at fifty cents or less. They have no earthly use for such knowledge, unless it be for the gratification of an idle curiosity. Here, then we are brought face to face with the question whether the use of commercial fertilizers on the corn crop is at all profitable. I am inclined to answer no, to this question. If a small quantity of fertilizer be used, it produces no effect, if a larger, the increased yield does not pay for the extra expense.

The report of the Cornell University experiment station shows that in no case was the increased yield of either wheat or corn sufficient to pay for the fertilizers applied to produce it. (See Rural of July 24, '80.) I saw recommended in some agricultural paper the application of one half pint of bone dust to the hill of corn. A good article of bone dust costs here, inclusive of freight, $50 a ton. Now it can easily be shown that using even a gill of this manure to a hill of corn will require nearly a ton to the acre. If, then, we say that on land which before brought 50 bushels per acre, this application increased the yield to 100 bushels, it will take the whole crop at 50 cents per bushel to pay for the fertilizer. The estimated yield of the Rural's Blount corn this year as reported in its issue of Nov. 13, is 142 bushels. This has been in part secured by the use of 500 pounds of fertilizers. It is fair to presume that the cost of these manures was $10 per acre, as no high grade fertilizer can be bought for less than $40 a ton. It would require, then, an increased yield of 25 bushels per acre, allowing the price of corn to be 40 cents, to pay for the manures. If the soil simple would have produced 117 bushels, the fertilizer has been of no value; if more than that, it has brought the Rural in debt for its use. The uncertainty with which all commercial manures act—depending as they do upon the character of the seasons and the soil—and our ignorance of what the soil is in need of, will always render their application of doubtful value.

The case of wheat, however, is quite different from that of corn, because wheat brings a much better price in the market. On wheat, it yet remains to be settled how small or how large a quantity of fertilizer may be used with profit. It might be more profitable to use 500 or even 1000 pounds per acre than 200. If it be granted that the application of 1000 pounds of a $50 fertilizer will increase the yield from 25 to 50 bushels, then that amount can be profitably applied. Yet, as the Rural has several times shown, a man may have to test every field on his farm to find out what fertilizers are adapted to it.

Cuzco Corn.

Last Spring I purchased ten kernels of this corn from J. J. H. Gregory, Marblehead, Mass., and planted them about the 20th of April in my garden. Six of them came up and grew. All were in tassel about the 20th of July. Several weeks elapsed after that before any shoots appeared, and two of the stalks never bore any shoots at all. None of the stalks exceeded 11 feet in hight and two of them were not over nine feet. As I watched this corn from time to time I observed that the blades as high up as the seventh joint were stripped away from the stalk as if some one had caught hold of them and jerked them down. I at first supposed that the children had done this, but on a closer examination I found that it was caused by the brace-roots, which came out at every joint as high as I have mentioned and pushed the blades off the stalk. This shows that the corn must grow very tall in its native country to need so much bracing as this. It is of a different species from our varieties. [It is possibly Zea macrosperma. See Rural, March 13, 1880.—Eds.] The stalk for three or four feet from the ground is of a dark brown color, and the ears grow in clusters, not singly as in our kinds when they bear more than one ear to the stalk. One center shoot first appears and then frequently as many as seven or eight shoots grow out of the sides of this. The ears are not longer or larger than our nubbins. The kernels grow, not as in our corn, perpendicular to the cob, but at an oblique angle to it, which accounts for the great length and breadth. Only one of the stalks matured its ears, and this was owing to accident. It was blown down by the wind and nearly all of its roots broken. I tied it up to a stake and it hardened its grain about the last of October. You will see by the sample I send you that the kernels are much diminished in size. [The kernels were not received.—Eds.] The kernels on the other stalks reached their full size, but were still very soft on the 20th of October, when they were destroyed by the frost. This corn could probably be adapted to the climate of Virginia in the course of three or four years, but it is doubtful whether it would be worth the effort.



(a) Kernels of Tassel, Natural Size. (b) Tassel of "Podded" Corn (Wild Corn of America?) Reduced one-third.—Fig. 7.

Corn Planted After Harvest.

I purchased one-half bushel of eight-rowed white Flint corn of Messrs. B. K. Bliss & Sons, and planted two and one-half acres in it after having removed a wheat crop which had grown on the land. The corn was got in between the 1st and 5th of July, and matured perfectly by the 1st of October, yielding about 30 bushels per acre. This variety does not grow taller than six feet, and the yield would have been greater if I had made the rows two and a half feet apart instead of three feet. The field was sown down to clover in August and a fine set obtained. There were only two things particularly noticeable about the crop. One was that there was not a single ear which had not one or more cornworms in it. The other goes to confirm what Professor Thomas has said about the new wheat enemy in the Fair Number of the Rural. About one-fifth of the plants perished within three weeks from the time they appeared above ground. All of the diseased plants that I examined had several of the maggots described by Professor Thomas in the pith of the stalk, which caused the center roll of leaves to wither, as in the case of the wireworm. These maggots came, no doubt, out of the wheat stubble which had been turned under.

Prof. Blount's Theory About Corn.

In all the advertisements of the White Prolific corn, it has been stated as Professor Blount's theory that every joint which has a groove should bring an ear or a shoot. This language would seem to imply that there are joints on a stalk which have no grooves. If I understand what is meant by a groove, all the joints have it. Why not say, then, that every joint should bear an ear? By the way, the Rural's last experiment has proven that a variety of corn bearing three or four small ears to the stalk possesses no advantage over a variety bearing one large ear, for it is yet in doubt whether the Blount has yielded more than the Mammoth Chester.

Professor Blount also advised "W. S. M.," in the RURAL of May 8th, to select for seed even-rowed ears and ears whose rows are straight. Has the Professor ever seen an ear which had not an even number of rows? Mr. A. B. Allen, some time editor of the American Agriculturist, and, I think, a present contributor of the RURAL, asserted in the year 1842 that he had seen an ear which had 21 rows. The next year he received numerous communications to prove to him that he was in error. In his replies he is hard put to make out his case, but finally concludes that things of this sort are freaks of nature.

[*The* RURAL NEW-YORKER *has in no instance* SOLD *the plants or seeds raised upon its Experiment Grounds. Our first object is to* MAKE KNOWN *the value of new plants through our Free Seed and Plant Distributions. We leave it to the seedsmen and nurserymen to supply the demand thus created.*]

THE RURAL'S ADVICE AS TO THE CULTIVATION OF INDIAN CORN.

1. PREPARE the land thoroughly by harrowing and rolling. The roller breaks up hard lumps of earth which the harrow passes over. A thorough preparation of the land is as essential as a liberal application of manure.

2. IT IS of the first importance to select seeds which are the best adapted to the soil and climate. Experiments have shown that of two distinct varieties of dent or flint corn, treated in all respects alike and raised upon the same field, one has produced fifty bushels of grain to the acre more than the other. The best and most economical way to ascertain what variety of corn is best suited to a given farm is to test different varieties upon different plots. These plots should be as far apart as practicable to prevent mixing. Plots 33 feet square, one-fortieth of an acre, are large enough for the purpose and the yield thereon is easily computed.

3. DRILL in the seed, six, or even three inches apart. At the first hoeing plants may be cut out so as to leave the distances between those remaining suited to the size of the variety of corn planted.

4. A NARROW, *heavy* roller may be advantageously used upon the drills after the seed is dropped. This insures a close contact of the soil with the seed and an earlier germination.

5. DO NOT USE A PLOW AFTER the seed is planted.

6. KEEP THE SURFACE of the ground MELLOW and all weeds subdued.

7. CULTIVATE SHALLOW and FLAT with cultivator and hoe.

RURAL REBUS.—FIG. 8.

PRACTICAL RESULTS VS. POSSIBILITIES WITH CORN.

COL. F. D. CURTIS.

THE *possibilities* of corn crops are problematical, but the *probabilities* are very much in line with practical experience. Every farmer of common intelligence knows that the more he feeds his corn crop the more he feeds his corn crib. If the average farmer can raise 50 bushels of shelled corn to the acre, he is well satisfied with his crop. This yield, however, exceptional, as the average would not be as much. Mr. D. F. Wicks raised this year 1,300 bushels of ears of corn on 11 acres. This is considered in this latitude (43 deg.) to be an unusually fine crop. Alexander Davidson, Esq., just across the road, must have had equally as good a yield.

These fine crops were produced by a liberal sprinkling of barnyard manure, which was thoroughly harrowed in on an upturned greensward. It was not the manure or the soil altogether (although the land was in good heart) which produced these crops, but the important auxiliary of early and constant cultivation of the corn itself. Farmers are getting in a lax way of not hoeing their corn or cultivating it as much as formerly.

In olden times, when cultivators were crude implements, a great deal of hand-hoeing was necessary. Now, with improved cultivators, many go to an opposite extreme and do not hoe at all. This is a mistake. Nothing will give a young plant a good start and keep it growing better than stirring the ground and putting fresh soil around it. It takes hand labor to do this, and it should be done as soon as the plants are well started. The crust on top of the hill which has been formed while the corn has been coming up needs to be broken and mellowed so that the dews and heat may readily penetrate to the young rootlets. When there is a scarcity of manure, experience and observation have both taught us that it is always best to apply it directly in the hill with a slight covering of earth on it, upon which plant the seed. We made four loads of sheep manure, applied in this manner, go a long ways, covering several acres last Spring with most satisfactory results.

The next most important consideration in the growing of corn is the selection of seed. Everybody knows that there are varieties of corn suited to latitudes, but everybody does not know that corn can be made thoroughbred, that is to say, that it can be so grown that it will possess characteristics or innate qualities which fit it not only for latitudes, but for special soils and conditions, and a nature also, or aptitude, to take care of itself under unfavorable circumstances. For instance, with two kinds of corn adapted to the same latitude, one will not, in a cold, unfavorable season, produce anything, whereas the other, by possessing a strong nature, notwithstanding the unfavorable surroundings, would yield a good crop. Take another case, one kind of corn, 12-rowed Dutton, as we have experienced, on poor land produced no ears of any account, whereas Smut White yielded a fair crop. On land excessively rich the 12 rowed kind would probably afford the largest yield.

The adaptation of the variety of corn can best be determined by practical experience. We succeeded this year in raising a good crop of corn on poor soil by traveling backwards. We sought out an old farmer who lived on a farm with thin soil and obtained our seed from him. We said "we didn't want Short-horns on moors." This farmer had bred his own corn for half a lifetime—the same variety on the same farm. Every year he had gone into the field and selected the earliest and the best ears, taking them where there were two on a stalk.

This corn had become adapted to his soil and he was always sure of a crop, even if the season was unfavorable. It was indigenous. By his system of selecting the earliest and the fittest he had reduced the time for growth to less than 80 days. This seed, on an old pasture this year, without manure, produced a fair crop of corn. All over the piece there could be seen the effort to produce two ears on a stalk, although many of them were short. It is a mistake also to mix seed corn, that is, to plant several varieties together, as the dropping of the pollen is not uniform and the effect is like planting one hill of corn by itself, as the different varieties will vary in the maturing of their pollen.

We do not believe, so far as corn is concerned, in changing seed. It is more sensible to improve the old seed rather than to import strange varieties, which, as we have found, are totally unsuited to our use. The nearer we can make our corn indigenous to our own farm the better, and then improve the same by the best culture.

SOME MISTAKES IN CORN CULTURE.

HENRY STEWART.

CORN is the most prolific grain we grow. An average ear contains 500 grains and there are varieties which produce nearly 1000 grains upon an ear. An easily possible crop is 100 bushels of grain per acre and the stalks are worth several times as much as any straw. Corn serves more useful purposes than any other grain. It is not only an agreeable, nutritious and healthful human food, an acceptable and profitable food for every one of our domesticated animals, but it is the basis of several very useful and important manufactured staples. If by some unforeseen accidents every other grain crop, every root crop, and all our grass and other fodder crops were lost to us, we could still survive and prosper if only corn were spared. Mankind could still be abundantly, variously and agreeably fed; our beef would still be provided; our pork, our mutton and our poultry would be sure; the dairy would not suffer for necessary fodder and grain food; the housekeeper would have her starch and her syrup; and the children, even, might not miss their favorite candies. In its place as only one of our field products it provides employment for a vast army of men; it furnishes freight for five million railroad box cars every year; a number, which if placed in line, would reach 30,000 miles, or starting from San Francisco eastward would lap around the world and leave a second line reaching over to Central Europe; and which passing at the rate of one every two seconds would require 300 days of 10 hours each to pass by any stationary observer. At the same time there is no other product whose use is so steadily extending year by year or which can more easily bear a steady increase.

This being the case, the importance of considering how the product of this grain may be increased can scarcely be over estimated. Some years ago when discussing the possibility of largely increasing the product of wheat, I was met with an objection by a prominent agricultural writer to the effect that it was not wise to argue in favor of increasing the yield of wheat, because there was only a limited demand for it and a large surplus would be unsalable. Having been used to consider, as an economical fact, that demands are created by supply, rather than supplies are brought out by demand, and seeing this fact exemplified in most surprisingly varied cases every day, I have never had any fear in urging farmers to enlarge their products in every possible way. And the fact that a yearly product of nearly 500,000,000 bushels of wheat can now be disposed of without difficulty, ought to show that if our corn crop were to be doubled within the next ten years every bushel would doubtless be sold or used to advantage.

BLOUNT'S WHITE PROLIFIC.—FIG. 9.

I firmly believe that within the next decade our total corn crop may reach to 3,000,000,000 of bushels and that every bushel will find a use or a market. Further, I believe that this vast quantity which is about 1,000 bushels to each farm in the United States may be grown upon no more than an average of 10 acres to each farm, yielding an average of 100 bushels per acre. For a great change has occurred within the past few years in corn growing. A dozen years ago when any enthusiastic person hinted at a crop of 100 bushels per acre, he was treated with derision, and the farmers who grew such a crop were few and far between. Now, one can scarcely pick up an agricultural paper without noticing some report of a crop of 100 bushels per acre or over. No one doubts it now. And no farmer who has succeeded in growing 100 bushels upon an acre doubts or can doubt that he can do considerably better if he will only avoid some mistakes which he can plainly see has reduced the possible yield of his crop.

There are some very frequent mistakes made in growing corn. These are due, perhaps, to too rigid a conservatism on the part of farmers. It is judicious to observe a conservative practice in the main, but it is at the same time wise to try new methods in a safe manner. Every farm must be worked and managed to a great extent by its own code of rules, and what Mr. Jones finds proper to do in his fields and with his own system, may not be right for Mr. Smith over the way to do. So that one whose bread depends upon his crops should not risk it by making innovations until he has made himself sure by repeated tests that it is entirely safe. Now it will be quite safe for every farmer who plows his corn deeply between the rows to try an acre or half an acre with flat cultivation instead of plowing. It is a mistake to put a plow into a cornfield after the plants are a month old. At that age, I have traced corn roots entirely across the rows, and intermingling with those of adjacent rows. It cannot be right to cut and tear those roots and deprive the plants of their mouths by which they feed, or to confine them to a narrow strip of soil of only two feet wide. I know it is not right for me to do so. When I first used a Share's horse hoe for cultivating corn nearly 20 years ago, I was first encouraged to try to grow large crops of corn, for I found flat cultivation greatly increased the yield. More recently I was still more forcibly taught that plowing corn was a mistake. A field of sweet corn was partly cultivated with a horse hoe and a part was plowed. A stubborn hired man, who thought his plan was the best, and in spite of orders, plowed four acres very deeply, earthing up the corn several inches. It was as severe a case of root-pruning as one could wish for. The consequence was that from that day the plowed corn stopped growing, and yielded not one ear, while the rest of the field produced more than eleven thousand ears to the acre. Root-pruning corn is a serious mistake and deep plowing among corn is root-pruning. Another mistake is in suffering barren stalks to matnre pollen in the fields.

It is the presence of these barren plants in a field which so largely decreases the yield. Some kinds of corn, grown without selection and without care to prevent fertilization by barren plants, will produce two barren stalks out of five; other kinds which have been carefully bred only from perfect plants will have rarely a barren plant upon a whole acre, and this one should be carefully emasculated. This is a process of emasculation to prevent breeding from undesirable male plants, and is precisely parallel to the same method practised with animals. It is therefore a mistake to neglect it.

A mistake is also made in fertilizing. Corn may be over-fertilized. It is over-fertilized when upon good or rich soil a large dose of artificial fertilizer is used; or when a too liberal quantity of the common home-made fertilizer, poultry manure and wood ashes mixed, is applied in the hill. Corn requires repeated moderate fertilizings, upon moderately good soil to begin with. As for instance, 100 to 150 lbs. per acre at the planting, and a similar application at intervals twice during the growing season. The best crop of corn I have grown had at the rate of 600 lbs. of special fertilizers in three doses, one at planting, one at the second cultivation, and one when the tassel first appeared. Large applications of special fertilizer, before and immediately after planting are useful upon poor unmanured soil; but when other manures are used, the special fertilizer should be given at intervals. It is a mistake to force the crop to too vigorous leaf growth in its early stages. A portion of acceptable soluble food is especially beneficial when the ears are beginning to form. Frequent cultivation is also beneficial up to the latest possible period.

Hill planting is also a mistake. Nearly twice as many plants may be grown by planting in drills. Hills, 3 feet by 3 apart, give 9 square feet for each. Drills 4 feet apart and seed at 2 1-4 feet apart, give also 9 feet. But by planting 18 inches apart in 4 feet drills there are 50 per cent, or one-half more plants on the same ground. and almost invariably the crop yields about the same proportionate increase of ears. On a plot of about 3 acres of evergreen sweet corn, part planted 3x3 and part 3x1½, apart, the latter portion gave fully as good ears and twice as many to the row as the thinner planted. The increase in fodder alone in drill planting, even if nothing is gained in ears, is sure and sufficiently profitable, but the increase in grain is rarely less than 25 per cent. If this is true, hill planting is a mistake, and if the cultivation is made by a good horse-hoe, and is begun before the weeds start and when the plants are small, the ground may be kept very clean even when planted in drills.

MY NEIGHBOR'S CORN.

PROFESSOR W. J. BEAL.

A NEIGHBOR has just sold me a load of Indian corn in the car. He is industrious, economical, and what most people would call a good practical farmer. "Do you like this kind of corn." I said, "Yes, it husks awful easy and shells, oh! very easy. It gets ripe early. I get a good deal of shelled corn to a bushel of cars. The cob is small." "How long have you raised this kind?" "Two or three years."

"Will you select some ears such as you would plant?" He did so. The corn is mostly a small red-cobbed dent. The largest ear was seven inches and contained twelve rows which were more or less broken and uneven. The diameter of the ear through the middle was just an inch and a half; through the butt end an inch and three-fourths. The ear is quite prim and the kernels of a bright golden yellow color. The tips of the kernels are but slightly depressed. The kernels are widest at the middle and taper each way. By this means there is a deep groove or furrow near the surface between the rows. These grooves give a good opportunity for the teeth of horses and swine to get off the corn. Many ears of corn, not such as he preferred for seed, had but eight rows, and the cob could be seen between them, because the kernels tapered the wrong way from the end next the cob to the surface. He rejected the ears which had kernels containing large indentations. They were not so bright, not so solid and did not ripen so early. He wanted the ears well filled out at the tip. His crop was light, he did not know how much to the acre. I thought he might add a third or more to his crop by procuring seed of another variety near him. The first question asked was the cost of the seed. He would prefer to plant his own seed to paying a high price, even for a better variety. The kernels should be wedged shape with the small end next the cob. If we want to increase the length, ears should be saved which are not filled out at the end. This indicates that there is still room for more kernels if every thing else were favorable. Ears well tipped or filled out to the end are not inclined to produce longer ears, but those which are shorter.

For ease in husking, the cob should not be very large at the base. I see no objection to a cob of some size as it probably costs the plant but little effort to produce so much woody matter. An ear with a large cob would require more time to dry out thoroughly, but it has room for a good deal of corn. Our seasons are short and we need a corn which shall occupy the whole of the warm weather for growth and maturity. We lose three weeks of growth and very likely something in yield, if our corn ripens by the middle of August, when it might grow till the end of the last week in September without danger of frost.

[*We hold that an agricultural and horticultural journal cannot sell the seeds or plants or farm implements it announces in its editorial or advertising columns and yet inspire a high degree of confidence in the minds of its readers respecting the disinterestedness of its views, touching the articles thus offered for sale.*]

CORN IN CENTRAL NEW YORK.

EDITOR RURAL NEW-YORKER.—Corn, its value, different sorts, and methods of cultivation, by farmers in the different states, is to be the initial number of the RURAL for 1881. On my farm with such cultivation as I have ever thought best to give, I have not yet succeeded in raising one hundred bushels of shelled corn on one acre, or if so have not done it where it has been harvested by itself; have in some instances of trial come very near it, and in most cases where that amount is reported to be raised it is taken from trial plots and estimated, which is a very loose way of getting at the true amount raised. I have no doubt that that amount has been raised on an acre, and even more, but that it is a common crop even with good farmers I do not believe, nor do I think it will be very soon.

It is usual in this vicinity to plant our corn in squares to cultivate each way, the distance we plant the hills apart varies from three to four feet, usually about three feet six inches, and to leave four stalks in a hill. Some drill or plant their corn with rows running only one way with two or three stalks in a place, about eighteen inches apart in the rows and the rows three feet and six inches apart. This method will doubtless yield the most corn per acre, with more expense in cultivation. Where the soil is mellow and free from weeds, the drill system is no doubt the most productive in grain, and perhaps in fodder also, but with weedy land the expense of hand cultivation would more than balance the extra yield of corn or fodder. We do not in this latitude grow the western or southern corn to any extent, the Dutton, is one of our best sorts, grows abundant crops in both grain, and fodder, and ripens with the season in good time for the fall harvesting, and is thought one of the best sorts by many farmers, while many farmers cultivate smaller varieties of eight rowed sorts, both white, and yellow. Each sort has its advocates, and each is best on different soils no doubt, as the eight rowed sorts are usually the earliest to mature and do not grow as large stalks, hence on lighter lands are the best sorts to cultivate.

Our methods of culture are usually by turning over greensward, with a coat of stable manure, either plowed in or spread on the surface after plowing and worked in with the harrow, or cultivator, and sometimes both, as the condition of the soil may require, either method usually produces good crops of corn. Some of our best farmers are now using more or less commercial fertilizers in the hill, or drill at planting time, and think it a paying investment, while others who have tried that method of manuring think it a waste of money in their purchase. On the whole, the use of commercial fertilizers is on the increase, and in some cases there seems no doubt of their benefit, but I think every farmer should make and use all the manure he can first; then a little superphosphate to give crops an early start, would no doubt be beneficial to the maturing crop at harvest time. Each farmer must try the experiment on his own fields, and on the crops he cultivates, in order to obtain a correct knowledge of their true value for himself whether it will pay him to continue to use them, or to abandon their use and depend on the farm-yard alone for manurial purposes. I am one of those farmers who think that every farmer should experiment for himself. The knowledge thus gained is worth more than any experiment carried on by other persons in different soils and in different sections of the country.

Rome, N. Y., Dec., 1880. J. TALCOTT.

CORN NOTES.

CHARLES A. GREEN.

PLOW sod land, if clay or clay loam, in the Fall or early Spring, while the soil is moist. Get the soil in good condition if it takes all Summer. Make it rich. If we grow a heavy crop of corn in ninety days we must give it bountiful rations; hunger must not gnaw at its vitals.

Scatter the fertilizer broadcast, whatever it may be, corn is not squeamish in the matter of diet. Manuring in the hill is something like piling compost about the trunk of an apple tree. You can not place a handful of fertilizer in your corn fields where the corn roots will not reach it, unless you thrust it in the fence corner.

Select the best seed—this crop is exceedingly appreciative of attention in this regard; select that which ripens first. Change seed at times, securing that grown further North, as that will be likely to ripen earlier, and corn is always liable to be overtaken by frost.

Don't plant too early; of the two evils I prefer planting very late to very early. If the seed does not sprout at once after planting, it is very liable to injury or total destruction. The crop thrives best in hot weather; during chilly May days seed corn is safer in the bin. I have seen heavy crops from June planting. May 20th is the average day of planting in this county.

Plant with a grain drill at least four feet apart between the rows one peck of seed per acre and roll after planting, if at all dry. I once had a fine crop with one-half bushel seed per acre, but we thinned out the thickest parts with hoes. The drill reduces the cost:

(1.) By planting it in the time you would mark it one way—an entire saving of the hand labor and the corn marker, one way.

(2.) If you desire to apply fertilizers other than broadcast, there is no better way than with the grain drill.

(3.) The seed is planted at a more uniform depth.

(4.) The seed is dropped one after another in a direct line, giving the cultivator opportunity to run very close to it, whereas by hand planting the rows are straggling and the seed scattering in the hills; thus a strip ofter a foot wide is of necessity untouched by the cultivator.

(5.) Instead of four or five stalks being clumped together in a cramped position they are distributed evenly along the row, giving the roots more room for foraging.

(6.) The rows running North and South, four feet apart, admit the sunshine to the earth and plants more freely than when planted more closely in hills.

(7.) In cultivating, those roots that extend lengthwise of the rows are never disturbed—a happy circumstance, and one earnestly to be sought.

Cross the rows with smoothing-harrow about one week after planting, not fearing that the uprooting of a few plants will be disastrous. Cultivate early, cultivate often, cultivate late, but *beware of too deep cultivation* [the italics are ours—EDS.], especially near the plants after the roots have extended. Cultivate first with a flat tooth that runs close to the row; afterwards turn the soil to and from the row, as the case requires, but leave the soil level ultimately.

Cut corn early, while the leaves are green. Husk it early, and store the fodder before it becomes weather beaten and scented by field mice. It costs us one-seventh to one-eighth of the corn crop to get it husked. The western practice of feeding from the shock may not waste more than 100 bushels in 700. Grinding costs one-tenth. Therefore, if we give 100 bushels for husking 700, and 60 bushels to the miller, we have only 540 left. It is not easy to waste corn about farm yards, even that passed undigested, if chickens and pigs are plenty. I suggest that we cut, unhusked, with a cutting machine, at least a portion of the corn crop.

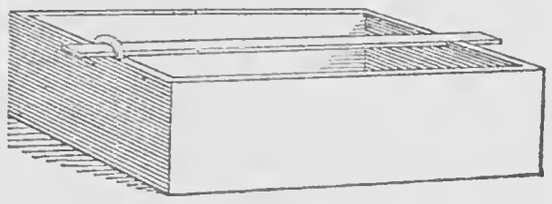
The corn field is grand to look upon in its glory, in August! It resembles an army of tasselled knights, decorated gracefully with ribbons, each member of which sports a silk pocket handkerchief.

Monroe County, N. Y.

A HOME-MADE CORN SHELLER.

T. H. HOSKINS, M. D.

I do not design to speak here of corn shelling upon the large scale, by horse or steam power, but of what may be practically regarded as hand shelling, only simple and cheap tools being used. This is the corn shelling of the greater number of New England and Eastern farmers. There are thousands of these who just grow small plots of corn for family use, with perhaps a little to feed a horse or a few fowls, or to fatten one or two pigs. Such need some simple and inexpensive way of separating the grain from the cob. They usually shell across a shovel. The little one dollar sheller of P. P. Mast & Co., of Springfield, Ohio, is likely to attract the attention of many of them, especially as it is editorially commended in the RURAL. It is really worth all that is asked for it, as a handy thing to shell a few ears for the hens, or a little seed corn. But the claim made that thirty bushels can be shelled with it in a day is absurd, and particularly so if applied to the small 8 rowed corn usually grown in New England. This variety of corn runs from 250 to 300 average ears to the bushel, which would give from 7,500 to 9,000 ears to 30 bushels, requiring that from 750 to 900 ears should be handled per hour, or from 12 to 15 ears a minute. The real speed with which the work can be carried on is at the rate of from six to ten bushels a day, and pretty tired a man will be at the end of the day who has shelled his bushel an hour. But as a matter of fact this implement will not shell the common 8-rowed Yankee corn at all. It does very good work on ten and twelve rowed varieties, and on some 8-rowed kinds with large cobs, like the Sanford; but the small 8-rowed sorts have too small a cob for the spiral-propelling points of the tool to get a "bite" on. The other chief objection to this corn sheller is that the sand-scale is not removed from the castings. They are merely lacquered over on the outside. The result is that the man who uses it half a day will get pretty sore hands. I was compelled to resort to gloves before shelling an hour with it, and wore out the gloves in five days by the friction against the sides of the sheller. Leaving off the lettering cast in the iron, and applying the castings, where they come in contact with the hands in shelling, to a good emery wheel for a few moments, would, however, remedy this serious objection.



CORN SHELLER.—FIG. 10.

After a week's use of Mast's sheller upon sweet, Sanford, and yellow corn, I have returned to my own way, into which I graduated from the shovel some 40 years ago. This is simply the use of a bar of iron laid across a box. The box is made of a convenient height to sit upon, say twelve or fourteen inches, and is eighteen by thirty inches square. This size will hold over two bushels. The bar of iron, (or better of steel) should be ¾ by ¼ of an inch in size, and a little longer than the box Put a staple sufficiently large to admit the bar into the middle of the upper edge of one end of the box, and cut a notch the size of the bar in the other end. Put in the bar, put a piece of board across the notched end for a seat, and go ahead with your shelling. I can shell any kind of corn with this rig as fast again as I can with the Mast sheller. Both hands are used in the operation, the left clasped lightly around the bar between the legs of the operator, while the ear is drawn upward by the right hand, the fingers of the left holding it firmly against the bar and slightly pushing it upwards. Shell two-thirds of the small end first, then turn and shell the butt. Two bushels of our small corn can be easily shelled in an hour, after getting a little accustomed to the manipulation. I have tried many other ways, but none have proved at once so easy and so rapid as this. Annexed is a sketch of the box and bar.

[*All of the 500 illustrations yearly presented in the columns of the* RURAL NEW-YORKER *are our own reproductions, or drawn and engraved from nature.*]

CORN.

S. RUFUS MASON.

THERE are many farmers who cannot raise corn successfully. They have a crop every year to husk out, but it seldom pays a profit, and in poor seasons never pays cost of labor. I will give such a man ten acres of land heavily manured, and will take ten acres adjoining without manure, and let the season be what it may, I will produce more and better corn than he will. I will not ascribe his failures to laziness, poor team, poor tools, or poor seed, but only to a want of appreciation of the requirements of this peculiar crop. Gardeners know well that beets and cabbages must be hoed often, they will bear it almost, if not quite constantly, and amply repay the time spent, if the work is done with judgment. Corn is even more susceptible to thorough and constant cultivation. To be sure, manure is necessary, but I find that timely cultivation is a *sine qua non*.

The time to hoe corn, is before it comes up, as soon as it is up, and every five days thereafter till the pollen begins to fall, then let it rest till the silk turns dark, and then commence again and continue till in the dough. The first cultivation must be quite shallow, the next a little deeper, the fifth or sixth deepest of all, and then shallower and shallower till laid by for the season. The object is to drive the roots down into the soil as soon as possible that they may be out of reach of July and August heats, for in those months we want comparatively cool roots, to supply an abundance of sap for the powerful growth, and the filling up of the grain. I say nothing about weeds, as the dumbest farmer knows there is no market for them, and therefore he need not grow them. [How can deep plowing drive the roots down.—EDS.]

The surface soil of a corn field should never become hide bound, it must be kept open and loose, and immediately after a heavy rain must be attended to before it bakes. The moment the top soil becomes hard, the roots rise to seek air, if it is kept loose, they get all they want down as deep as five feet or more.

Much labor is lost by undertaking but a few more acres than the farmer can attend to. Twenty-five acres can be made, by one man and team, to produce 80 bushels per acre, while the same force on fifty acres would possibly not bring more than thirty, a loss of much time and labor, as well as 500 bushels of corn, while the whole yield of the 50 acres would be 20 per cent poorer in quality.

Almost any of the many varieties of field corn, if they have small cob and deep grains will over-run the legal weight (56 pounds per bushel), when shelled at New Year's, if well grown. An ear of corn will have but its destined number of grains:—if poorly grown or if the plant is sap starved, the grains will be both small and spongy in texture, which makes light weight, while strong, vigorous growth fills every grain out full and plump, makes the grain compact and solid, and gives weight, which is the point to be aimed for.

Manure well, but all the manure in the world will not produce good corn if the plant cannot draw breath while feeding. Cultivation is the foundation of this, as well as of many other crops.

Dodge Co., Neb.

CORN ON SOD IN A DRY TIME.

There was a severe drouth through the most of New England during the past Summer. In some places corn, even on stubble ground, suffered greatly, and was a poor crop. But corn endures drouth well when the ground is well fertilized, and usually our stubble corn will be an average crop. Where corn has been planted on a reversed sod, even though liberally fertilized, the crop is often an entire failure. There has not been moisture enough from above to settle the ground and rot the sod, while the dry, fibrous matter of the unrotted sod seems to have cut off the moisture from below. The consequence was, in many corn fields, that not only the corn, but the pumpkins and the beans, which many of our farmers still plant among their corn, came to nothing, the corn in many places not standing more than 4 or 5 feet high, with hardly a nubbin, while the bean vines were barren, and what few pumpkins there were, were not bigger than a man's head. Some fields plowed with lap-furrows and well worked with the Randall or La Dow harrow before planting looked as well as stubble corn.

Orleans Co., Vt. T. H. H.

(Continued on page 9.)

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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SATURDAY, JAN. 1, 1881.

SPECIAL NUMBERS OF THE RURAL NEW-YORKER.

THE NEXT SPECIAL NUMBER of the RURAL NEW-YORKER will be devoted to those *hardy shrubs* and *trees best suited to the grounds about the country or suburban home.* Having tested at the Rural's Experiment Grounds, during the past eight years, all of the old well-known kinds and all of the newer species which have seemed to be worthy of trial, our notes will be drawn from actual observation and experience. The next SPECIAL thereafter will be a *small-fruit number;* and the next will be devoted to WHEAT. The Rural Farm has made the testing of wheats a specialty for several years. We have now 77 different varieties growing, none of which are very well known, while many of them are new cross-breeds which have never been offered for sale.

The best of these varieties we shall cultivate with a view to placing them in our FREE SEED AND PLANT DISTRIBUTIONS, so soon as a sufficient amount of seed can be grown for that purpose.

WE find, upon looking over the Index for 1880, that the RURAL has published (under "EVERYWHERE") 665 communications from different parts of this and other countries.

CONSIDERABLE importance, as we have remarked elsewhere, is by many attached to having the rows of corn run North and South, when the seed is drilled in. The rows of the Chester and Blount were East and West.

MANY of our new readers may think that a good deal might have been said in this number about corn which has not been said. It may be remarked that the RURAL NEW-YORKER of March 8, 1879, was also a *special corn* number, and we have endeavored, in so far as it was possible, not to repeat in this what appeared in that.

AN experiment, easily tried and which would demonstrate to farmers whether it is more profitable to plant corn in hills or drills, is the following: Measure off a strip, let us say, 16 feet wide, extending entirely across the field, or, if desired, a distance only of from 28 to 80 feet, or any other number divisible by four. Plant corn in drills four feet apart and a foot apart in the drills. In another strip of the same dimensions, plant in hills four feet apart each way, four kernels in a hill. It will be seen that the number of kernels in each strip will be the same. Give the same manure, preparation and culture. We believe that most farmers who will fairly try the above experiment will entirely abandon hill culture of Indian Corn.

TIME REQUIRED FOR FIXING A NEW VARIETY OF INDIAN CORN.—Five years ago, according to memory, we made a cross between Stowell's Evergreen and the Black Mexican. Several of the kernels from this cross were of a *rose* color, Such kernels were selected and planted the next year. From this cross the rose-colored kernels were again selected and so on until last year. From last year's selection we have before us five ears. Taking one that seems to be an average of the progress made in fixing the rose variety, we count as follows:

Whole number of kernels on the ear	336
White (like Evergreen)	76
Black or dark colored	126
Rose colored	35
Variously colored	99

From the above, it would appear that at least five years more will be required to *fix* the "Rose" Corn; that is, so that all the kernels shall be uniform in color and size.

GREAT POULTRY SHOW.

AT the one which recently came off at the Crystal Palace in England, there were 800 exhibitors, showing 3,865 pens. Of these, 2,200 were of cocks and hens, 122 ducks, six geese, seven turkeys and 1,530 pigeons.

We are surprised to find so few geese there, as England is a great goose-breeding country. The flocks there frequently have hundreds in them, far exceeding those in America; but as for turkeys, there are few compared with ours. In pigeons they excel, and the varieties are astonishing—one can hardly keep the run of them, so many new are brought out from time to time there and in other parts of Europe.

At the later Fat Cattle Show at Birmingham, the poultry and pigeons exhibited numbered 3,062. So far as we can judge, these seem to be considerably on the increase in England, and it ought to be the same in the United States. Considering their flesh and eggs, hens, at least, are the most profitable stock we can keep.

IT IS NOT MANURE ALONE.

Dr. Sturtevant, who has studied corn as closely as any person we are acquainted with, once told us: "Were the average farmer to be asked to name the one thing most essential in growing a large yield of corn, he would reply 'manure;' and yet there is no greater mistaken belief current than that applying manure will produce the large crop." And this is our own belief from our experience in raising our large yields of Blount and Chester. It is strengthened by the fact that one of our best farm neighbors applied at the rate of 1,200 lbs. per acre of Lister's Chemical Fertilizers on the half of a seven-acre field, besides a handful in the hill; and twenty-five loads of farm manure on the other half, with the same chemical fertilizer in the hill, and yet his yield was not over 80 bushels to the acre of shelled corn. His field was naturally and by better treatment a more productive field than ours. His corn (White Dent) was planted in hills four feet apart, four kernels to the hill. The corn was hilled up and the land cultivated with a plow only. WHY did we raise over 150 bushels of shelled corn with 350 pounds of chemical fertilizer, while, with over 1,200 pounds, he raised but 80 on a naturally more fertile field?

A HIGH-PRICED RAM.

THE owner of a ram exhibited at a late show at Melbourne, Australia, was offered and refused for him £1,500 (say about $7,200 of our money.) His breed is not reported, but we presume it was one of the varieties of the Merino sheep as on account of the numerous large flocks of them in that country, and the greater value of their fleeces, they have been held at far higher prices than mutton sheep imported from England.

American Merinos have found great favor in Australia for some years past, and quite a number have been exported thither. They yield more wool for their weight than any other class of Merinos, and although of not quite so fine a fiber as the Saxon or Silesian, it is still fine enough for all useful purposes, and counts as the most profitable fleece, probably, upon the whole, that is grown among the flock-masters.

We believe rams of this sort bred in Vermont, have been sold at a higher price than was offered for the above in Australia. If we recollect aright, $10,000 to $15,000 have been refused once or twice for such. Whether the offers were in good faith we do not know, and do not see how rams costing anything like the above sums, can pay a profit from their breeding, any more than Short-horn cows and bulls at $10,000 to $30,000. Such prices seem to us altogether exorbitant, and no prudent breeder can be justified in paying them.

SHALLOW CULTIVATION FOR CORN.

WE cannot think that there is any kind of cultivation that cuts or displaces the roots of corn that can increase the yield of *grain*. We want to encourage root growth in every way. We want to supply the roots with every condition favorable to their healthy existence. They supply the grain through the leaves and stalks with the food which is necessary to their fullest development.

From our own experience, we condemn the deep working of the soil after the roots of corn have begun to spread laterally. Disturb them not any more than we would those of a tender flower during the hot sunshine. Cultivate shallow—the shallower, the better, so that the crust is broken and germinating weed-seeds killed. Keep the surface soil mellow, that it may drink in the air and moisture, which are both drink and food for the tender root fibrils. Root pruning in the case of *perennials* of vigorous wood growth induces fruitfulness. But it not the less impairs vitality. An earlier production of fruit is thus secured. But more than is gained in this way, is, perhaps, lost in later years.

The corn plant is an annual and needs all of its roots for the never-ceasing labors of a short, busy life. If our "corn grows to stalks and leaves," instead of ears, this is not because it has too many roots, but because from want of sunshine or suitable nutriment its equilibrium is destroyed, and its energies are spent in the least laborous and exhausting of two labors.

HAPPY NEW YEAR.

To-day, as greetings are exchanged between friend and friend, while all hearts are happy, and faces radiant with the joy which the first day of the year is peculiarly fitted to bring, the RURAL pauses a moment from its corn deliberations to wish its readers, one and all, a HAPPY NEW YEAR! The old year, with its opportunities improved and unimproved, with its duties performed or unperformed, with its sorrows and its joys—is gone, and another page of our life history is written.

To-day, the poet's words come to us, in the fullness of their meaning, and we realize, indeed, that

> "The corridors of Time
> Are full of doors—the portals of closed years;
> We enter them no more, though bitter tears
> Beat hard against them, and we hear the chime
> Of lost dreams, dirge-like, in behind them ring
> At Memory's opening."

And, yet, we would not hastily dismiss the old year from our thoughts, for it has been laden with unusual blessings, especially to the great body of "tillers of the soil," who have reaped a full reward in abundant harvests, and good prices. Recovering from the discouraging effects of a small remuneration for almost unceasing toil, the rural population have, now if ever, great reason to be happy, and if they make "economy and industry" their motto, they may reasonably expect a continuation of the present era of "good times." Economy—not parsimony—is what farmers, as well as others, must practice if they would prosper, and this, combined with an advanced enlightenment and a laudable ambition to make farming more of a profession, will make farmers happier men and farming a more attractive pursuit.

With the assistance of our able corps of contributors; with abundant means; with the valuable and trustworthy information gained from the Rural Experimental Grounds; with a careful and concise statement and discussion of the various subjects pertaining to the farm, garden and household, and with the promise of the largest list of subscribers the RURAL NEW-YORKER has ever received, we shall continue our best endeavors to make this journal a reliable source of information on all topics of which it treats, so that it ever may find a hearty welcome from its subscribers and friends. To those, then, whom we, to-day, greet for the first time, we extend a most cordial welcome, while to such as have been with us in the past, we proffer our sincerest thanks for their support and encouragement, wishing, again, for one and all, the HAPPIEST NEW YEAR of all their lives.

BREVITIES.

"OH, anybody can grow corn!"

HOE! Everyone, hoe! Give ear to corn's talks.

OUR last special devoted to corn was March 8, 1879.

DR. HEXAMER'S method of raising sweet corn as occasionally followed is original and peculiar.

MANY are fond of blowing their own trumpets. The best horn to blow is the horn of plenty—corn-ucopia. Blow that!

IT seems that the American Entomologist has been abandoned altogether. This is a surprise and a disappointment. The magazine was well got up—well edited.

IF it were as hard to breed good seed, and it required as long a time as to breed good animals, there would be some excuse for our indifference as to the former.

THERE is a ready sale for the cobs of such kinds of corn as Chester Co. Mammoth. They are manufactured into pipe heads. Smaller cobs do not so well answer the purpose.

DR. STURTEVANT thinks, after careful investigation, that we have not as yet one strictly good seed corn in the market. He thinks Blount's the best, though not for New England culture.

IT appears from Mr. Brown's letter (Butler Co., Kansas) that he has raised at the rate of 112 bushels of Blount's Corn to the acre. He has a good word to speak for Chester Co. Mammoth.

THE question as to whether it pays to sucker corn has been experimented upon in various places—notably at the Michigan Agricultural College and at Cornell University. The results agree in showing that suckering does not pay.

THOSE of our friends who next season adopt the methods of corn cultivation recommended in this number would greatly oblige us if they would make memoranda of all notable steps and results and send them to the RURAL for publication.

The RURAL NEW-YORKER *gives information respecting all hardy flowers, trees and shrubs—all sorts of bulbous plants—house plants which are best adapted to the Country Home. All such plants are tested in the Experiment Grounds of the* RURAL NEW-YORKER, *and impartially estimated.*

THE A. A. commences the New Year reduced in size not less than one-quarter, according to our reckoning. We must congratulate our esteemed contemporary upon—er-er-upon its—what shall we say? Well—we simply congratulate our esteemed contemporary.

ACORNS FOR POULTRY.—In situations where acorns—and children to collect them—are abundant, the following German recipe for preparing poultry-food is said to serve a good purpose: "Roast the acorns, grind them to a coarse meal, and bake the meal to bread."

IT is a pity that some simple remedy could not be hit upon to destroy the corn worm which in many parts of the North, West and East is every year becoming more plentiful and destructive. Of our several varieties of corn, the Yellow Flint was most infested. It has been suggested that late Fall plowing would destroy many of the chrysalids.

WE have reserved the particulars of the cultivation and treatment given to our corn-fields during last season for this number. We claimed that both the Chester County Mammoth and the Blount's were the largest yields ever before produced when the *cost* of *their production* was duly considered, and we have since seen nothing which has invalidated this claim.

[*The* RURAL NEW-YORKER *gives much space to the decoration of the home; to Domestic Economy, to the Agricultural news of the world. Its market reports are made a specialty. Its first aim is to supply, in one journal, all the reading matter needed in the country or suburban home.*]

IT is well to bear in mind that the Yellow or White Flint Corn may be planted close to, or in the midst of, such varieties as Blount or Chester Co. Mammoth without any fear that the two will mix. The Flint sheds its pollen a month before the others. But if the Blount and Chester were planted near each other they would be certain to mix, as their season of bloom is nearly the same.

WHEN corn is planted in drills, the drills should run North and South, it is reasonably said. In this case the Eastern part of the corn receives the morning sun, the Western the afternoon sun. Were the rows to run East and West, the North side of the rows would receive sunshine only at midday. To what extent the crop is affected by the direction of the rows is a fit subject for experiment.

WE have been looking over a great number of experiments with different kinds of concentrated fertilizers upon corn. The conclusion that must be drawn is, that while bone has shown the best effects in a majority of instances, in many others it does not appear to have produced any appreciable effect. We can only repeat what we have already said many times, that this is a question which each farmer, by careful observation and experiment, must determine for himself.

WE would remind our readers that the Winter is the best time to destroy the tent caterpillar. The nests of eggs can now be plainly seen encircling the small twigs, having the appearance of a dark polished ring. They are easily removed by splitting them with the thumb nail. Go over the orchard carefully, collect the nests in a basket, and burn them, but not in the kitchen stove. We have known this to be done, and the whole household driven into the open air in consequence of the horribly offensive smell.

IT is said that "a merciful man is merciful to his beast." If this be so, can he be a merciful man who leaves his cattle exposed in the pasture lots night and day, to the inclemency of such weather as we have experienced during the past month or so? And yet, in a large dairy district on the Harlem Railroad, cattle are exposed in this way in such numbers that one might be justified in concluding it was the rule and not the exception. Stacks of hay are left out for the cattle to feed on, but the poor beasts have a hard time of it, especially where the stacks are covered with snow; and their frowsy hides and pitiful looks clearly show that they suffer. Those who indulge in this kind of cruelty excuse themselves by saying that the animals gradually get used to it, and do not mind it; but the looks and motions of the poor animals are an eloquent reply to such shallow reasoning. Self-interest, at least, should teach these men that there is no gain but great loss in this unfeeling exposure. The experience as well as the teachings of the advanced agriculture of to-day all go to show that shelter for domestic animals is profitable for both man and beast.

[Continued from page 7.]

THE BUSHEL VS. THE "BUSHEL OF EARS."

In the "Corn" number of the "Rural" seems an appropriate place to enter a protest against the practice of quoting corn yields of "bushels of ears." The legal measure everywhere is the bushel of shelled grain, and a bushel of corn should always mean that quantity which will give the legal measure. An illustration of the inconvenience, to say the least, of this practice of calling two different measures by the same name, has just been brought to light by the wide-awake secretary of the Ohio State Board of Agriculture, W. I. Chamberlain, Esq. In the first "Ohio Crop Report" just issued by Mr. Chamberlain, under the auspices of the State Board of Agriculture, he calls attention to the fact that "the very heavy averages (of corn) per acre are nearly all in North-eastern Ohio," and suspects that "at least in some cases 'bushels of ears' are reported instead of bushels of shelled corn." By referring to the tables accompanying his report it is seen that Summit county claims an *average* yield of 65 bushels per acre; Trumbull county of 57 bushels, and Stark county of 52 bushels; while of the counties containing the famous Miami Valley, Butler returns but 38 bushels, Miami 37 bushels and Montgomery 34 bushels. In the northern counties the "bushel of ears" is often heard of, in the southern ones, never: hence Mr. C.'s suspicions, while the averages claimed for these northern counties, though not above what ought to be made, are certainly higher than have yet been made by any but a very few of the best farmers. C. E T.

RAISING CORN IN MISSOURI.

In raising corn here we follow two plans: If we have sod or pasture land or land that has been in wheat or oats the past season, we plow in the Fall and let it lie until Spring, when the ground is again plowed and furrowed with a shovel plow both ways; then the seed is dropped and covered either with the hoe, a shovel plow, or a large rake, if a horse is used. In case the land has been in corn the previous year, then it is plowed in the Spring and planted in the same way. In cultivating, double shovels are used almost altogether, unless riding or walking cultivators are employed. In this State very few, if any, diamond plows are used, and, as a rule, the ground is left level, very few believing in hilling up. The main idea is to keep the surface stirred up and the corn clean of weeds.

As a rule, bottom lands are the best for corn, as most of our soil is rather light and gravelly on the ridges, and, in case of a protracted drought, the ridge land seems to suffer first and most. This fact was very plain this year; for, while we had an unusually dry Summer, we had a reasonably fair crop of corn on bottom land, while the ridge land was burned up, and in many cases, it did not yield ten bushels to the acre. Corn is one of the main crops here, and the general opinion seems to be that level culture is the best, both for the yield of corn and also for the land.

N. J. SHEPHERD.
Miller County, Mo.

JOTTINGS.

I SEE by the Tribune the editor of the RURAL gives the yield of Blount's Corn as 150 bushels per acre, and claims this extraordinary yield was largely due to level culture. Does he know, or what evidence has he for the belief, that level culture tended any more towards producing this large yield than if anti-level culture had been practiced. If different methods of culture had been adopted in different portions of the same field the comparison of the products of the different portions might have appeared to favor level culture, but as the whole plot was treated alike I fail to see why or how the kind of culture should receive this credit. I hope the Editor will give the reason for the "faith that is in him."

[The above criticism is quite merited. See notes from the Rural Farm. EDS.]

THE BURLINGTON COUNTY, New Jersey Agricultural Society, offered premiums on best six acres, or more, of corn, grown in the County. As usual, the past season, the Committee to award premiums were called to view and examine quite a number of fine fields of corn. The crop that was finally decided to be the best, was planted in April, in hills 4½ feet apart each way, three to four stalks allowed to grow in each hill. Variety, common Yellow Gourd seed. The Committee husked a number of hills, supposed to be an average, and the weight of the corn in the ear averaged four pounds per hill, which, allowing 70 pounds to the bushel, would indicate a yield of 123 3-7 bushels per acre; at the time the corn was weighed, it was quite ripe, and in condition to husk and crib. The field that was awarded the 2nd premium, was planted in May four feet apart each way, three stalks allowed to grow to each hill. The samples selected by the Committee, averaged 3 1-5 pounds of corn per hill, and the hills being closer together, would show a yield of 8,710 pounds per acre, or, at 70 pounds per bushel, a yield per acre of 124-3-7 bushels, which is more than field No. 1 figured, but the corn in No. 2 was greener, not ripe enough to crib unless in a very favorable location. Neither field had extra manure or culture. The owner of field No. 2, husked a number of hills, which he considered not over an average, which indicated a weight of 3¾ pounds per hill, or 145.57-70 bushels per acre. As an evidence of the shrinkage of new corn it may be stated that 37½ pounds of the corn on the cobs from field No. 2, in a dry, exposed place shrunk in 17 days to October 6th, to 27 pounds—in next 14 days to 25½ pounds, and in next 30 days to 25 pounds. J. S. COLLINS.
Moorestown, N. J.

[From our own experience—we have no confidence whatever in this, or in such methods of ascertaining the yield of corn, and we hope our readers will not accept such estimates as of more than passing value.—EDS]

NOTES.

FOR the benefit of new subscribers we here present a reduced cut of the Blount Corn from the original, published in the RURAL NEW-YORKER of March 8, 1879. During the season it was one of the kinds offered in our then Free Plant and Seed Distribution. (See page 6.)

IN planting sweet corn, farmers are very apt not to make late plantings, so as to supply the family with green corn until frost. It is generally safe in this climate to plant the early kinds as late as August 1st.

THERE is no preventive that we know of for smut in corn. The spread of this fungoid parasitic plant—botanically *Ustilago maydis*—may be measurably prevented by going through a field as soon as the affected ears can be determined, pulling them off and burning them. This plan no doubt would consume more value in time than the smut, if left to itself, would do harm.

JOHN STANTON GOULD, according to Prof. Atwater, once stated that he has seen the roots of Indian corn extending seven feet downward. Prof. Johnson states that the roots of corn which in a rich and tenacious earth extend but two or three feet, have been traced to a length of ten or even fifteen feet in a light, sandy soil.

GEN. DIVEN, of the Elmira Club (N. Y.), speaks of having raised on seven acres of old meadow, without manure, 1260 bushels of ears, or, allowing two bushels of ears to one of shelled corn, 90 bushels of shelled corn to the acre. Mr. McCann remarked (as reported in the Husbandman), that he did not see how such crops of corn could be raised. He spread 52 loads of manure on one acre and got only 208 bushels of ears. Evidently, the old pasture sod of Gen. Diven was better for the corn than the 52 loads of manure used by Mr. McCann.

THE EXPERIMENT RECORD, after referring to our corn crops of last Fall, says:

"But the editor has 'a strong faith' that he can repeat the same yield 'again and again.' That is a grand point, but too seldom thought of by farmers. To win a large result by thoughtful effort, and then to repeat the same indefinitely through following years, that is the ideal perfection of culture that we have long been working for, and have endeavored to point farmers in the same direction. That is the way to make farming an *exact science*, a result which we have claimed to be possible and which is now clearly foreshadowed by facts and figures that continually multiply around us, and that we are endeavoring to accumulate and diffuse.

Now let the RURAL go ahead in its noble work, and let other journals and other farmers everywhere take the hint, not only for corn and wheat, but for all food staples, and let them take up everywhere the universal refrain, *more food from an acre, and less cost for production.*

FEELING an interest in your paper and your experimental garden, I send an ear of corn for experiment and name. I bought of a neighbor last Spring one bushel of ears and planted five acres with it, without any fertilizers, and harvested 600 bushels of ears. It was planted the 8th of May and cut the 10th of September, in good sound condition. Please try it and report in the RURAL, and oblige

Lucas Co., Ohio. OTIS FORD.

[It is hard to distinguish this from the Chester Co. Mammoth in appearance. The above yield would be not less than 65 bushels of shelled corn per acre.—EDS.]

DR STURTEVANT has tried some experiments with corn stover which lead him to think it does not pay to strip off the leaves in feeding. He finds the part rejected by the cows is under—certainly not over—ten per cent. Now will it pay to cut ten tons of stover in order to make the cows eat one ton in ten?

He thinks that corn stover, if cut early and put into the barn, or under cover, before it is washed by the rains, is worth six-tenths as much as hay.

He would cut as soon as the corn is glazed.

The great question as to concentrated fertilizers is, whether we can buy them in the market and raise our corn, and not deteriorate our land. Dr. Sturtevant says that he has demonstrated that this can be done in so far as 5 years of trial can be considered a test. The first year he manured 8 acres; the second, third and fourth, 9 acres, and the fifth, 6 acres. The result was that his land gave him 4 tons of Hungarian grass this, the last year, per acre.

"I WISH I was a geese,
All forlorn, all forlorn.
For they possess their souls in peace,
And accumulate much grease,
Eat'in' corn."

SIXTEEN INCHES LONG.—At the Connecticut meeting of the Board of Agriculture, at New Britain, Dec. 15, 16 and 17, there was exhibited an ear of the Beuton Corn sixteen inches long. I measured it and will vouch for the fact. This is 2 inches longer than the longest exhibited at the Centennial, and 1 inch longer than I have ever seen before.

E. LEWIS STURTEVANT, M. D.

ANOTHER query suggests itself, i. e. whether the application of the fertilizers at three different periods was any more potent than if applied all at once? Did the crop get as much relative nourishment from the last application as from the first? Or did it get as much from the last as it would it it had been applied with the first? Would any virtues have been lost if all were applied at the same time? Who can tell?

[Should not we have to consider the solubility of the fertilizers and the amount of rainfall after the application? EDS.]

STOOKS VERSUS STACKS.—Why will editors persist in using the word stook in reference to unhusked corn? I know they are presumed to know everything, but in this instance I think they are wrong. Stack as thus applied is an Americanism and to the manor born. Stook is English, meaning a collection of 15 bundles or sheaves and corresponds to our American term shock, meaning the same. I deprecate the custom so prevalent of using foreign terms to express American ideas, and protest against the use of stook and shall persist in writing stack, and proof-readers and editors may change it if they choose, but it is annoying to me to read it and to appear as not knowing any better. KIT.

An Extra-long Variety of Yellow Flint.

Several have brought to the RURAL office ears of a yellow flint corn which are longer than the usual eight-rowed flint, with a smaller cob. The illustration, figure 6, shows somewhat these two peculiarities. The cob is, in fact, too small, as 5 out of every 6 would break in two when shelled.

It is offered by seedsmen under the name of "Improved Eight-rowed Yellow Flint."

SWEET CORN.

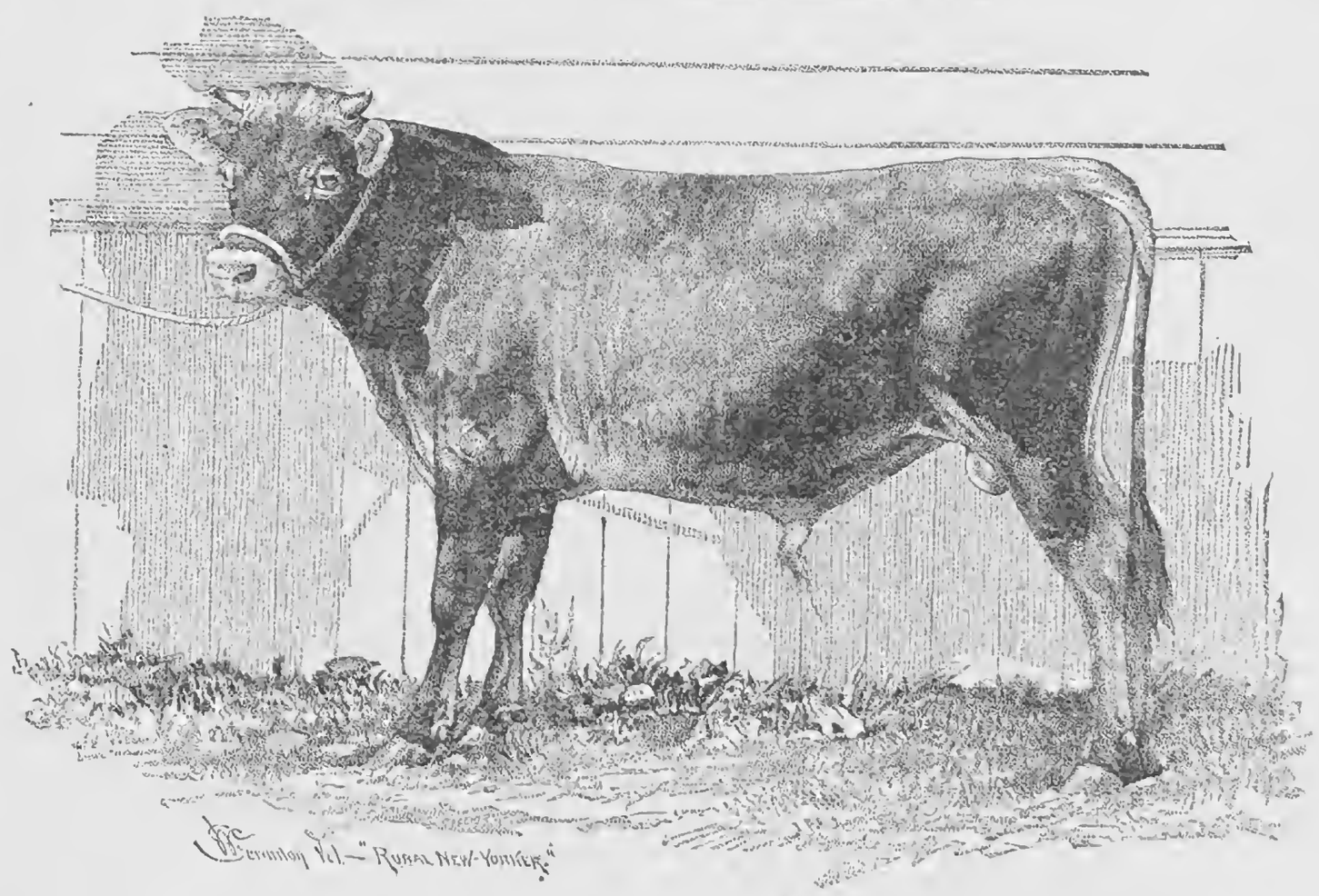
E. WILLIAMS.

THE MEXICAN SWEET.—What funny looking corn! It is not sweet corn is it? I never saw sweet corn that color before! I should not think such black looking corn was fit to eat! What makes it so dark? What is the matter with it? The above are but samples of the remarks made by guests at our table every season for years past, and every one without exception on being assured the coloring was natural and that it was really and truly sweet corn, have, after tasting for themselves, unanimously pronounced it the very best sweet corn they ever ate.

While many are prejudiced in favor of a white article all admit the superior quality of the colored. One lady asked this past season why she had never seen such corn in market and said it was almost impossible to get corn that was really sweet. Would you have bought such looking corn if you had seen it? I asked. No, because I did not know it was sweet. And for the same reasons others would not purchase it till, like you, they became acquainted with it and could overcome their prejudice against its looks. There is, doubtless, much corn offered in our markets in a green state that is not genuine sweet corn, and much that loses its sweetness by heating in transit long before it reaches the table of the consumer.

The Early Burlington, an early dwarf white field corn is sometimes grown quite extensively for market, and though quite sweet for a field variety, will not compare with the shriveled sweet kinds for which it is no doubt often sold. And right here is where the color of the Mexican is of advantage, proclaiming at once its identity. I think it must be 15 or 20 years since we first obtained the seed, and we long since decided it was the sweetest and tenderest of all the sweet or sugar varieties we have ever grown. It is also one of the earliest.

THE TRIUMPH SWEET.—Of the white varieties I place the Triumph at the head of the list as far as my experience goes. It is tender, sweet and excellent, the ears of good size, and it is very productive, generally two good ears on the stalks, and sometimes three. Planted at the same time as the Mexican it comes in season just as the Mexican is over. I have not tried all the known kinds, but Darling's Extra Early, Crosby's Sweet, Excelsior, Campbell's 60-Day Sugar, Stowell's Evergreen, Moore's Early Concord, Mammoth Sweet, Trimble's Farmers' Club and Egyptian are among those I have tried and our preference, so far, is in favor of Mexican and Triumph



JERSEY BULL DIAVOLO.—FIG. 11.

If there are any *better* kinds I have yet to find them.

SWEET CORN FOR SOILING.—I always use it if I have the seed and I generally manage to save enough for this purpose. This last Summer after the drought had ruined our hay crop I put in all the sweet corn I had left, some of it several years old, and it came nicely. The result is several tons of excellent fodder with "nubbins" enough to make the cattle and horses appreciate it. With this and the stalks from our field corn I hope to bridge over the feeding season till grass grows again.

PLANTING SWEET CORN.

As Winter passes away and Spring first ventures to appear, all persons fortunate enough to be possessed of a garden, large or small, become at once busy. First in preparing the ground, then in sowing seeds of the first early vegetables, and finally, later on, in corn planting. Then comes the perplexing question, which is the very best of the many known varieties to plant? How many have asked this very question, and how difficult a one to answer.

Many believe that one variety alone should be sufficient, but then this one is to possess all the qualities of the four or five varieties which every well-kept garden should contain. How difficult it is to bring about such a result none will know till it is accomplished. Of such a variety I do not intend to speak, but rather of the four or five at least necessary to any kind of a garden.

Should the desire be a corn to come very early, to outstrip, perhaps, any of your neighbors, then plant by all means the Minnesota. The ears of this variety, though diminutive in size, are very sweet, and so very early in the season will be found very acceptable for the table. The Concord corn, though maturing some two weeks later, produces larger and very sweet ears, so for second crop this variety should be planted. For a third succession, a fine large and very white corn known as Hickok, may be planted and is sure to give satisfaction.

Did the Evergreen mature as early as the Minnesota, it might be ranked as the first of all good sweet corn; but coming late as it does, we have to place it last in line as far as precocity is concerned, but first, indeed, when size and quality are regarded. A garden properly planted with the best and purest strains of the foregoing varieties, would provide its owner with a succession of good corn throughout the season. Another variety, most appropriately named Mammoth, on account of its extraordinary size, matures somewhat later than Evergreen, though hardly as sweet as this variety; still by reason of its huge proportions it is regarded by many as very desirable.

Market gardeners, I think, would do well to plant the Concord for an early crop, to be followed by the Excelsior, and finally the Evergreen and Mammoth. The Hickok being now but little known, I must recommend it to all persons who CAN vegetables as the very best variety for this purpose, being of a pure white color and very productive. F. W. B.

CHEAP SWEET CORN.

DR. F. M. HEXAMER.

BY some accident I discovered the cheapest and easiest way of growing sweet corn I have yet heard of. A box containing several packages of different seeds,—sweet corn, bush beans, cucumbers and peas, the latter largely predominating—was carelessly left open, so that mice got into it. A high festival they must have had, gnawing through the bags, mixing up the entire lot and destroying as much as they could, before the mishap was discovered.

We were just then making garden, and it occurred to me, that the best use to make of these mixed seeds might be to sow them instead of peas alone, anticipating that the more tender kinds would fail to sprout or be killed by frosts, as it was several weeks before the season for planting corn and cucumbers in the open ground.

The peas came on finely and produced a full crop. Beans appeared a little later and furnished a dish sooner than the regular sowing. I had almost forgotten about the other seeds, when to my surprise an occasional cucumber vine showed itself, and the corn pushed vigorously up through the withering pea vines. The first peas, the first beans, as well as the first ears of corn from the garden, were picked on this row—a vegetable garden in itself. Encouraged by this success, I have often since repeated the experiment, in part, at least, by sowing early corn and peas in the same furrow. The corn does not interfere with the peas, as the latter have already completed their growth when the corn requires the entire ground, and the pea vines are rather beneficial to the young corn, affording protection against frosts. I do not advise to rely, for the main crop, solely on this mixed corn and pea growing, but as the loss of the seed, even if the corn should fail, is not worth mentioning, and as no extra ground and labor are required, and an additional source for a successive supply of sweet corn is opened thereby, the experiment is worth a trial.

Early Minnesota and Dolly Dutton are the earliest and best early varieties I have grown; Darling's and Moore's Early I found the most desirable for medium, and Egyptian, or Washington Market for late crops.

TRIUMPH SWEET CORN.—In a test-trial of the different varieties of Sweet Corn which I have been prosecuting for some years, I have found Triumph to be the best, all things considered for this part of the country, at least. True, it is not so early by a few days as Early Minnesota, Crosby's Early, and a few others, yet it is *early*, and its ears so large and full, (and with all it is so prolific), one is well repaid for the necessary waiting. In richness and tenderness it nearly, if not quite, equals that superb, old, late sort—Stowell's Evergreen. Should I confine myself to a single variety, that variety would be the Triumph. L.

[*The actual value of our seed and plant collections distributed as they have been and are over our entire country very soon becomes known. As they are distributed without charge, it is apparent that we could have no motive in selecting those kinds which would not reflect credit upon this journal.*]

RURAL SPECIAL REPORTS.

N. Y., Medina, Orleans Co.—I planted, May 13, 1880, a piece of land, eight by thirty rods, to Blount's corn, on last year's soil after beans, fitted in the usual manner and without fertilizer of any kind. I planted it with a hoe one foot by four feet apart, one kernel in a place, cultivated it three times and hoed it twice (flat cultivation). I picked my seed for next year September 1, and cut up the balance October 1. I have just finished husking and it measures 314 bushels in the ear. Last year I, for my prize corn, selected some of the best land I had and fertilized it to the best of my ability. This year I selected some of the poorest land I had, land that has not been fertilized in any manner in 18 years, and when you consider the drouth, wire worms, poor soil and no fertilizer, I am much better satisfied with the result of my experiment this year than last. WM. H. CHAMBERLIN, M. D.

[It will be remembered that Dr. Chamberlin took the RURAL NEW-YORKER gold prize for $100 for the greatest yield from the Blount's corn which we sent out in our Free Plant and Seed Distribution of 1878-9. EDS.]

IND., Hall's Corners, Allen Co., Dec. 10.—As you request a report from me on my boy's acre of Blount's corn, I will try to make one as near as possible. In the first place, the soil is a dark, sandy loam, not drained, plowed once and then surface plowed and well pulverized with harrow. Ten loads of barnyard straw manure were used on the acre. Checked three feet by 3 feet 8 in. Planted about 8th of May with four kernels to each hill; when well up thinned out all suckers, leaving only three stalks to hill. It suffered from wet in June and from drought in August; it was plowed for level culture twice, but the wet changed our minds and then we used a single shovel plow twice, once each way, and hand-hoed once. Then the weather became dry and harvesting had to be attended to, consequently it was so dry we did no more to it. Very heavy rains the latter part of August caused about one-half to fall flat to the ground. Now for the result. We have it all cut into stooks 8x8, or 64 hills each. In husking we have an average of 169 pounds, gross, to stook. There being 3,960 hills, consequently we have 61 54-64 stooks, or a fraction over 148 bushels shelled corn at 70 pounds per bushel. Corn cut up by 15th September, nearly all husked at present, and I think shelling the corn would increase the yield. I am satisfied we will have more corn if all was shelled and weighed.

Respectfully, W. H. HARTER.

[The above is a very surprising yield, and, under the circumstances, hard to believe. We would by no means doubt the statement of Mr. Harter, but it would carry more weight if the yield had been measured and certified to by well-known persons.—EDS.]

N. C., Brookston, Warren Co.—Last Spring the Editor of the RURAL sent me a package of Cuzco corn with the request to "plant, save ears, and report." The first was done April 19, the second I could not do, as there were none to save, not even a respectable cob. On the 22 stalks there were four ears set. It attained a hight of 15 feet, throwing out roots at each joint for a long way up. One stalk which I have saved has roots two inches long at the thirteenth joint five and one-half feet from the ground. This one grew partially inclined, however; those in a perpendicular position were not quite so prolific of roots. To sum it up, it is a failure here. Neither is the Blount's Prolific adapted to this section. From seed saved last year I planted an acre or more. The returns of fodder were much better than our common corn, just how much I cannot say, as I did not weigh it. A large proportion of the stalks produced three ears or rather "nubbins." Less than 50 were filled out at both ends, which is a general fault with all varieties of corn here, but the Blount is the worst of all. M. B. P.

CHESTER CO. MAMMOTH.—Blount's White Prolific Corn, as will be seen, bears a single ear in each axil or in several of the axils of the leaves. Not so with the Chester. Generally, as is elsewhere remarked, it bears but one large ear. Occasionally, however, it bears two and very rarely three or four ears, all of them growing out of a single axil as is shown in the engraving.

IMPROVEMENT OF CORN.

PROF. A. E. BLOUNT.

THE object of all practically successful farmers is to raise from a given extent of land the largest quantity of the most valuable and marketable products at the least cost, in the shortest possible time and with the least injury to their soil.

Corn is always marketable and should, in all cases, pay the farmer at least enough to encourage him to make it better, improve and raise not only a better quality of grain but of fodder. When compared with other crops it is not considered exhaustive, especially on deep alluvial soils. The better the quality he raises the less exhaustive. It is a curious fact that the finer the farmer makes the soil and the more prolific the less injury it does, while the coarser and grosser the cultivation the more injurious. Hence, it not only pays the farmer to improve his corn in order that he may make greater yields and get higher prices, but to save impoverishing his soil.

That corn can be greatly improved—and much more easily than other crops—and that it can be made more prolific and of finer quality and with less expense than it now is, are facts none can dispute.

A careful examination of a hundred fields of corn in different localities will show any one that not even one per cent. of the stalks or ears is perfect. There will always be found some defect. It will not be uniform; too coarse, too late tasseling or silking, ears too small, cob too large, grain too light, rows too irregular and not prolific enough.

No corn can be called prolific that produces more than nine pounds of cob in every seventy of ears, nor can a crop be called profitable for grain whose stover amounts to over 65 per cent.

When a large amount of fodder is produced—as is the case on bottom lands—the grain is sacrificed; but when the largest possible quantity of grain is made the producer's crop stands about seventy-one per cent. stover, and twenty-nine per cent. grain.

It is very evident to every one that it takes about three times more plant food and labor to produce the stalk than it does the grain that grows on it. Good farmers make a little better showing than this, however, in some States, while in others the crop stands stover, ninety per cent.; grain, ten per cent.

Corn requires as much attention as the farmer's $1,000 stallion. He never neglects him. Every want is satisfied, while the demands of his crops are never once considered—cultivation and a little common-place fertilizer excepted.

Besides the regular routine of corn culture, the farmer would do well to plant pure, sound seed in good ground, giving it early attention and late, feeding it as regularly as he does his stock.

Corn wants room, something to feed upon; it wants cultivation up to a certain time, and then it demands rest. The atmosphere can in no way be used as an agent to improve the crop; the farmer must make the soil the avenue to supply it with necessary food.

By crossing varieties that have fine and nutritious properties of their own; by keeping them from being adulterated, as it were, by Pharaoh's thin ears and blasted; by selecting and sowing the "fittest," as stockmen do, the corn crop, all over the world, could be made far better and more profitable. In corn, as well as in all other vegetables, and as in the animal kingdom, coarse and fine specimens are found with good and bad qualities, sluggish and vigorous habits, and inferior and superior points. The law that "like produces like," although by no means true in all things, must be respected in the improvement of corn. The stalk can be made smaller or larger, shorter or taller, the cob can be lessened and the grain on it increased, its color changed to suit the taste, the ear and shank shortened and lengthened, single or many ears upon the stalk, and a hundred more changes can be wrought if the farmer has the inclination and patience to give it his attention.

Corn is so remarkably susceptible to change, so tender yet so hardy, so easily turned out of its course, even in one season, that the slightest attention or neglect will make it a lucrative crop or a failure. The main points, then, for the farmer to observe in the improvement of corn are those that cover the rules to make a larger quantity, a better quality, a more abundant yield, in a shorter time and at a less expense.

Farm Manager Colorado State College.

CLASSIFICATION OF CORN.

EDITOR RURAL:—You have informed us of your intention to devote a number of your excellent paper to Indian corn. While others discuss the native country of this noble cereal, and may cite Longfellow's authority for the aborigines of this country having dedicated it to their god, Mondamin, as proof of its American origin, and while others, with equal confidence, assign it a birth place in the East, or even in the "dark continent," and while most of these who contribute to the literature of the subject by detailing their several modes of culture and treatment—permit an old corn-planter to make a few suggestions as to the classification of the very many sub-varieties that have been observed, as a result of long cultivation, accompanied by crossing and careful selection.

Desiring to effect an arrangement of these diverse forms of variation, something was attempted by the writer already in 1858, when responding to a circular for information that was issued by the Secretary of the Ohio Board of Agriculture, Mr. John H. Klippart, and this was afterwards adopted in part by him and published in the appendix to his book on the Wheat Plant.

The following will give the idea:

- Hard or Flinty
  - Yellow Flint,
  - White,
  - Colored or mixed,
  - Pop corns, etc.
- Soft and Dented
  - Yellow,
  - White,
  - Colored.
  - Shriveled or Sugar Corn.

THE HARD CORNS are characterized by fewer rows of short, round grains which are very hard, more or less translucent throughout, rarely whitish or thickened at the outer extremity, which is never dented. These are commonly called Flint corns, and they are largely cultivated in the northern regions. They are usually early varieties, but when carried to lower latitudes some of them have been found to enlarge their stalks, to become really tall and at the same time to require a longer season for their maturity. Such are the White Flints that are used in the preparation of the domestic hominy of the Gulf States.

These flint corns may be grouped in subdivisions characterized by color, as *yellow*, embracing orange and rarely red; *white* and *mixed*, in which different colors are found associated upon the same cob, as in the squaw corn. In this class are to be found the small-grained varieties, known as pop corn, the grains of which expand and burst when roasted. These are often furnished with larger grains than others of the flinty class, and one of them, being unusually long and pointed at the end, has received the name of rice-corn; of this the plants yield both pure white and bright red grains on separate ears.

A very curious variety exists that is thought by some to be the original corn plant, in which the husks enclose each grain separately. This is only a curiosity, and is rarely cultivated.—[See the tassel illustrated elsewhere, the male flowers of which while furnishing pollen for the silk of ears underneath, also serve to fertilize the female flowers which also grow upon the same tassel, fig. 7, p. 9.—EDS.]

SOFT OR DENT CORNS embrace all that are not flinty, but their hardness varies considerably, nor are they always soft in the common acceptation of the term. All the Gourd-seed and Dent varieties belong to this class. They usually have rather long grains, that are always whitish or opaque at the end, and are either dented or roughened and pointed.

In this class we must also place the variety with short grains that are opaque throughout, but so soft as to be easily crushed by the nail.

In many of this class the body of the grain is translucent, firm and flinty, hence they are heavy, and the white varieties are largely used in the manufacture of hominy, as prepared by the machinery which has supplanted the primitive hominy block of the slave era.

Under the class of soft corns is found a group which, though essentially soft, is also very distinct from all others. These are the shriveled or sugar corns, so named from their corrugated forms and from their sweetness. They are especially devoted to the kitchen garden, and are grown for table use, almost exclusively. Under continued culture, crossing and selection, these also have resulted in numerous variations as to size and color, as well as in their time of ripening.

The peculiar character of the inflorescence of the *Zea mays* renders it one of the most plastic and easily crossed of all our grasses, and there would seem to be no end to the variations that might be produced, and yet it is remarkable that many of our established varieties so reproduce themselves with great constancy. W.

HISTORY OF CORN FROM 1492 TO 1881.

A Truly Scientific Paper.

S. RUFUS MASON, X. Y. Z.; O. K.

WHEN Columbus discovered America he also discovered corn, to his great and lasting amazement. All efforts to learn its origin failed, but as it existed everywhere, he concluded it came from Nature's great cornucopia, which he translated Copious corn crops.

Cornplanter, a descendant of the Digger Indians, and progenitor of the Cornish Miner now settled around Cornhill, England, while upon a still hunt one moonshiny night, in company with some Yengeese, discovered corn-juice, and imbibing too freely, caused a rise in spirits. Great excitement ensued; everybody went into corn-juice, and *vice versa*.

The mode of cultivating corn was, in the time of Columbus and Cornplanter, well known and understood, and was as follows: The natives got seed *ad libitum*, planted it in hills *quantum sufficit*, hoed it *cum spiritum non stoperandum*, husked it *nil desperandum*, hauled it to the Yengeese still, and put the juice under their jackets *con amore*. There has been an improvement in this process, but success depends entirely upon circumstances, some of which are mental, some physical, some atmospherical, and some metaphysical, the last only when all the others are *conjunctis unnaturabilis ad hominum*.

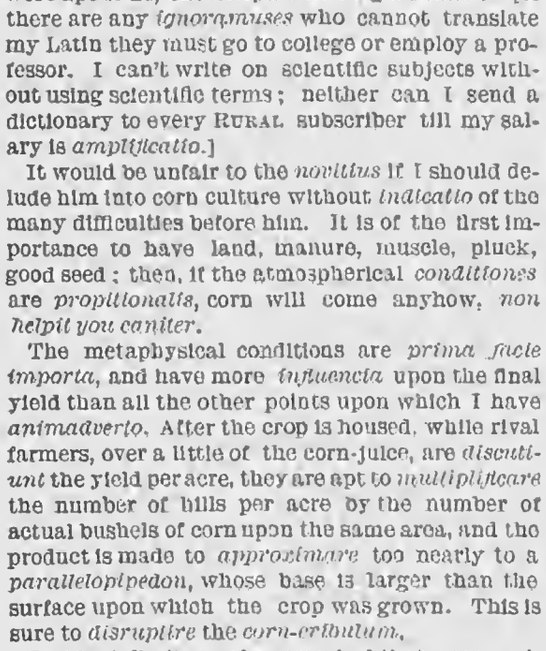
As Cornplanter was the first who investigated the subject scientifically, the machine with which corn is planted is called after him *in memora*.

While returning from the still the old chief was always in a roaring good humor, even if the Yengeese cheated him out of half his grist, as they were apt to do, but *non fuit non differentialis*. [If there are any *ignoramuses* who cannot translate my Latin they must go to college or employ a professor. I can't write on scientific subjects without using scientific terms; neither can I send a dictionary to every RURAL subscriber till my salary is *amplificatio*.]

It would be unfair to the *novitius* if I should delude him into corn culture without *indicatio* of the many difficulties before him. It is of the first importance to have land, manure, muscle, pluck, good seed; then, if the atmospherical *conditiones* are *propitionalis*, corn will come anyhow, *non helpit you caniter*.

The metaphysical conditions are *prima facie importa*, and have more *influencia* upon the final yield than all the other points upon which I have *animadverto*. After the crop is housed, while rival farmers, over a little of the corn-juice, are *discutiunt* the yield per acre, they are apt to *multiplicare* the number of hills per acre by the number of actual bushels of corn upon the same area, and the product is made to *approximare* too nearly to a *parallelopipedon*, whose base is larger than the surface upon which the crop was grown. This is sure to *disruptire* the *corn-cribulum*.

Incidentally it may be remarked that a too copious *imbibitiore* of *cornus spiritus* will *inevitabulum production serpentarium* in *bootes*. "I pray you avoid it," or you'll get shakes. In this year of cornucopia we have a great crop; all our knowledge has been put into the ground, and now our yield is in exact *proportionability* to our outlay. So it has always been and always will be. Live and learn.



JERSEY BULL, DIAVOLO.

THIS bull was the first prize in the yearling class at N. Y. State Fair in 1880. It is the property of Hon. Erastus Corning, of Albany.

The engraving, Page 9, from a photograph taken for the RURAL NEW YORKER, at the time of the fair, and reproduced by our own artist with great faithfulness, is a very correct portrait of this spirited and beautiful animal. That he is "good enough" goes without saying, for he won the highest honor in a large class. The photograph, as usual, slightly exaggerates the legs, perhaps, but the lifelike play of light on the hide, the shadows, the spirited pose of the animal are excellent, and so well preserved that the picture is a source of pleasure simply as a work of art. Diavolo was sired by Stockwell 3d, the noble bull which won the first at the same show in "aged" class, and was imported by Mr. Corning. His dam, Tranquility, is by the same sire, her dam being Daisy Morton, also imported.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING THE DISCIPLINE OF CARELESS PEOPLE.

MARY WAGER-FISHER.

I KNOW a woman of very large wealth who trained her children to careful habits with a strictness not all the mothers in the country are capable of, but which, if they were capable of, there would be fewer careless people in the world to vex and annoy the careful ones. Her method was to pick up every article left by a child out of its proper place, and put it in a box or bag for two weeks; it might be a "Sunday" hat, shoes, cloak, stockings—no matter what it was, it went forthwith into the secret receptacle and remained there until the expiration of the fortnight. At that time the children were assembled, the bag produced, one by one the articles were taken out, held up, and the owners called to claim them. Of course it often happened that the punishment was very severe, as when a child was obliged to remain at home for lack of some article to wear; but the result was delightful—each child soon became accustomed to take care of his own things, put and keep them in proper place, and always know where to find every article he wanted. And that is precisely what every child should be trained to, and any mother who does less than to train her children, especially her boys, to orderly habits, fails in her duty; and I am free to confess that a very great many fail herein.

I have had, within the past year or two, a great deal of experience with a boy nearly out of his teens, who was born with the "bump" of carefulness left entirely out of his composition. From his infancy up he had been talked to and scolded at continually for this woful fault, but never *trained* to take care of anything. He would leave his best coat, hat or boots out in an all day's rain, and wherever he found it convenient to lay down any article whatever—clothing, books, horse-harness or what not—there it remained until some other person chanced to come across it. A more incorrigible and hopeless case it would be impossible to imagine. I am explicit on this point so as to assure every reader who has such a "pest" in her family that the case *is* curable. To begin with, I gave orders to all the domestics about the house never to pick up or put away an article of his clothing. When the sitting-room devoted to the "help" became fairly obstructed by this youngster's belongings I would call him in, and, pointing around to each article, ask him if he knew to whom that belonged, and by the time he left the room he would be loaded to the top of his head with dry goods, and very often with wet goods—garments that had been soaked in the rain and thrown down in a wad in some corner. I continued in this manner for several months, but without any perceptible change in the boy's habits. Finally I hung a bag in the room, and without any comments I put into this bag whatever article I found in the room that belonged to him. Boots and coats and trousers that were too large to put in the bag I stuffed away in the most obscure corner of a dark closet that opened out of the room. I laugh now when I think of the perplexity that young man has endured in search of his wearing apparel, and I am not at all sure that he has yet made the discovery of the bag in the room, as, in common with all careless people, he has eyes but he sees not. But the bag, and the putting-out-of-sight of his possessions, wrought better results within one week's time than all the talking and scolding had accomplished in fifteen years. To succeed in a reform of this sort requires stolidity of feeling. As to the *boy's* feelings in the matter, the more he can be made to suffer from his carelessness the better, for any suffering that he can be made to undergo, short of destroying his health or killing him, will be of but small account if he is cured of his fault by the ordeal; for I hold that an utterly careless and thoughtless person, in whom no trust can be imposed with security, is an absolute nuisance, and has no claim upon society for a place in it, except the irresponsible one that he is in the world and must stay somewhere until the world is happily rid of him.

Very many persons act upon the theory that because a boy *is* a boy he must therefore be inordinately careless, and have mother or sisters trotting after him in order to keep him and his belongings in shape. If there is anybody able to wait upon himself, to keep his room in order, his drawers of clothing in a proper state, to sew on his loose buttons, and to darn his stockings, it is the healthy, romping, all-alive boy of the family, and to expect anybody else to do these things for him is altogether a mistake. I know of no reason why the tired mother should never have an evening for rest or reading, because of the never-ending darning and mending and odds and ends of work for husband and boys who spend their evenings in eating apples, in whittling a stick by the fire, or in some other equally profitless way. To the thorough-going housekeeper there is never an end of the work, but there is nothing that so lightens the load and facilitates the easy and agreeable motion of the household machinery as for each member of it to wait upon himself and to do his own "picking up." It is only a trifle for each one to do these small things for himself, but when aggregated and put upon the mother or sister, who has plenty of other tasks, it becomes a burden that is as cruel as it is unnecessary. And if any or all mankind leave these things for some woman to do, it is the fault of womankind. The most important member of the family is the wife and mother, and if she wears herself out in doing for the members of her family what they can and should do for themselves, her love for them is of very small compass. The man who always left his boots and his soiled linen in the middle of the floor, because his wife "liked to pick up after him," is by no means an uncommon person. He is closely related to the man who depends upon his wife or daughter to lay out his clean linen for him and to brush his clothing. If he brushes it himself, he always does it in the house, because, as his wife has to "dust things anyway," she might as well have "more dust" while she is about it. I think it is a misfortune for an energetic person to know "everything," but I do think it is a very important thing that all boys should be taught how to use the needle sufficiently well to sew on buttons, to fix their torn buttonholes neatly, to sew up a rent in the coat, or a rip in the trousers. There comes a time in the life of every man when he would be saved much vexation and annoyance by knowing how to do these things, instead of standing in despair and humiliation before his looking-glass, unmanned and unnerved by the sight of a rent or a lost button. Needles, thread, thimble and scissors should be in every boy's bedroom; the use of them will go a little way, at least, in teaching him observation, carefulness and self-reliance. The sooner a child learns that in order to be best waited upon he must wait upon himself, the better. For boys and girls of all ages there is no equipment better for them in life than the formation of careful habits, and the ability to think, act and do for themselves, and to carry the resources of their own happiness within themselves.

DOMESTIC RECIPES.

Steamed Corn Bread.

Two cups of white Indian meal, one cup of sifted flour, two and a half cups of buttermilk, a tablespoonful of melted butter, two tablespoonfuls of sugar, a teaspoonful of soda and a teaspoonful of salt. Beat thoroughly, put into a buttered mold or tin pail and steam one hour and a half, then set in the oven ten minutes. Turn out and eat while warm. This makes an excellent dessert eaten with liquid sauce. By adding a cupful of dried cherries or currants it is much better for a pudding.

Corn Gems.

One scant pint of meal, two tablespoonfuls of sugar, a teaspoonful of salt and a generous pint of *boiling* milk. Stir thoroughly and let stand until cool, then stir in three beaten eggs and bake in buttered gem pans.

Indian Crumpets.

Bring one quart of milk to the boiling point and pour over a quart of fine meal, mix, and let stand until lukewarm, then stir in two tablespoonfuls of sugar, two of melted lard and butter mixed or of either alone, and a teaspoonful of salt, half a teacupful of home-made, soft yeast. Let rise five or six hours, then put into greased muffin-rings, set before the fire for 20 minutes and bake 35 minutes in a rather quick oven. MARY B.

Corn Mush.

When the water intended for mush begins to boil, salt, sift in the meal with one hand, stirring with the other to prevent lumps. When thick, set the kettle into the oven and let it bake an hour. This cooks the meal thoroughly without danger of burning.

Fried Mush.

The addition of flour—a teacupful to two quarts of meal—to mush intended for frying makes it very nice. Fry in beef-drippings, not lard and if the slices of mush are first dipped in beaten egg and then in cracker crumbs before frying, they are very much better.

Corn-meal Fritters.

Two cups of white meal, three cups of sweet milk, one-half cup of flour, four eggs, beaten separately, a tablespoonful of melted butter, a teaspoonful of salt, two teaspoonfuls of baking powder. Beat the yelk, to them add the milk, butter, salt and meal, beat hard, add next the whipped whites, and last the flour and baking powder. Drop at once into boiling lard. Eat with a hard or liquid sauce. The batter should be just thick enough to drop readily from the spoon. Make the fritters of small size. MRS. BRADY.

Hominy Croquettes.

Boil two cups of fine-grained hominy. When quite cold work in two beaten eggs, two tablespoonfuls of melted butter, salt and pepper to taste. With floured hands make into oblong rolls and fry to a light brown in hot lard.

Hominy Muffins.

Two and a half cups of soft-boiled hominy, one quart of sweet milk, three eggs beaten well, a large tablespoonful of melted butter, a tablespoonful of sugar, a little salt and a large cupful of flour with two teaspoonfuls of baking-powder sifted with it. Mix well before adding flour, beat the flour quickly and bake in hot muffin-rings. H. L. 1.

Corn-meal Pudding.

Two cups of Indian meal, one cup of flour, three cups of sour milk, two tablespoonfuls of sugar, a tablespoonful of melted butter, a little salt, any spice you please, and a large teaspoonful of soda dissolved in hot water. Beat the ingredients free from lumps, adding the soda last. Pour into a buttered mold or tin pail and boil two hours without stopping. Eat with liquid sauce or maple sirup.

Corn-meal Pudding No. 2.

One scant quart of meal, one quart of new milk, three well-beaten eggs, two tablespoonfuls of molasses, a teaspoonful of salt, any spice you please, and one-fourth pound of beef suet minced very fine. Bring the milk to a boil and pour over the meal and suet. When cool add the sugar and yelks, and last the whipped whites. Dip your pudding bag into hot water, flour it and pour in the mixture. The bag should be but half filled as it swells very much. Boil five or six hours. Eat with butter, sugar and nutmeg.

MRS. E. SARGENT.

Miscellaneous.

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THE WEEKLY EVENING POST (New York), the leading weekly independent, political and literary paper of New York, price $1.50, will be sent one year with the RURAL NEW-YORKER and the RURAL'S seed and plant distribution, for only $3.20.

THE WEEKLY DETROIT FREE PRESS (Detroit, Mich.), one of the most popular weeklies in the United States, combining wit and humor with the best literary and secular matter; ALSO the "Household," a bright and sympathetic paper for the home circle, will be sent one year with the RURAL NEW-YORKER and the RURAL'S free seed and plant distribution for only $3.50.

THE WEEKLY PIONEER PRESS (St. Paul, Minn.), the leading secular and political weekly of the great Northwest, price $1.15, will be sent with the RURAL NEW-YORKER one year, and the RURAL'S seed and plant distribution, for only $2.75.

THE WEEKLY NEW YORK WORLD (New York), a live, enterprising and ably-edited newspaper, full of the latest political, secular and literary news of the day, price $1.00, will be sent with the RURAL NEW-YORKER one year, and the RURAL'S seed and plant distribution, for only $2.75.

THE WEEKLY GLOBE-DEMOCRAT (St. Louis, Mo.), the leading secular and political newspaper west of the Mississippi River, ably edited and in every respect a first-class weekly journal, price $1.00, will be sent one year, with the RURAL NEW-YORKER and the RURAL'S free seed and plant distribution, for only $2.75.

Specimen copies of any of the journals here announced as clubbing with the RURAL NEW-YORKER *will be sent without charge to all who apply. The application, however, must be made to the journal of which specimen copies are desired. Send for them!*

News of the Week.

HOME NEWS.

MONDAY, Dec. 27, 1880.

A dispatch from London announces the fact that Mrs. Cross (George Eliot,) the distinguished novelist, died at 10 o'clock, Wednesday night. Her death was quiet, and almost painless. Mrs. Cross was seized with a sudden chill, which attacked her in the larynx on Sunday last. She had, a short time before that attack, received several friends, who left her apparently in good health and spirits. The attack, however, did not give serious cause for alarm until 6 o'clock Wednesday evening. Dr. Andrew Clark then discovered that the pericardium was seriously affected, and pronounced the case almost hopeless. She passed away quietly. On the 6th of May last the deceased was married as Miss Marian Evans to John Walter Cross, of Weybridge, Surrey, a merchant in London.....Harry L. Hill, chief of the scouts of the Oklahoma Colony, and Col. Thomas D. Craddock, General Manager, who went into the Territory on December 8, having flanked the military at Arkansas City, came into camp on the 23d. They were gone fourteen days, and scouted up the north fork of the Canadian and over to the south fork. They say the territory is full of people. They met at appointed rendezvous over fifty wagons, concealed from scouts, and waiting for Capt. Payne, who would have joined them as soon as he reached the town site. They report that hundreds of claims have been taken and the foundations for houses are being built on them. Most of the emigrants they met were from Texas, Arkansas, and the Chickasaw Nation. Most of the colonists have gone to their homes to spend Christmas, only about 100 remaining in camp. Six inches of snow fell last night.....The Pacific Flouring Mill, of Rehler Brothers, at Third and Cedar streets, St. Louis, was almost completely destroyed by fire on the 23d. About 500 barrels of flour, 10,000 bushels of wheat, and about $15,000 worth of new machinery waiting to be set up (which was also in the mill) were either destroyed or badly damaged.....

Congress stands adjourned until January 5.... The United states Supreme Court adjourned until January 3....Jesse James, the notorious outlaw, is said to be robbing Texas stage coaches.... Diphtheria and small pox are increasing at Chicago to an alarming extent... J. Nathass, an insurance and steamboat agent at London, Ont., has absconded with heavy liabilities....The Marshall House, at Ludington, Mich., was burned on the 22d. The loss is $6000; insurance, $2700.. .The Governor of Vermont has signed the "nuisance" bill, which is very stringent against liquor dealers. ....A fire in Ramberg, S. C., on the 20th destroyed property and stocks of stores valued at $12,000.

Charles L. Wilson and Edwin W. Hall were arrested at Cincinnati in the act of manufacturing counterfeit silver coins. A lot of moulds and other material were captured.... The big flouring mill of Alexander Mair, at Lapeer, Mich., was on the 22d destroyed by fire. The loss is $25,000; insured for $10,000 in the Millers' Association, and $5000 in the North American ...A jury of two colored and ten white men has been empanelled at Jefferson, Texas, to try Abe Rothschild for murder....William J. Holmes, the Chicago religious publisher, died from a carbuncle on the neck. He was 56 years old....The first trial of the electric light as a means of illuminating the Hoosac tunnel was made yesterday, with success. ....A fire at Auburn, Me., destroyed four houses occupied by eleven families, causing a total loss of $6000; insured for $3000.

The 71st anniversary of the New England Society of New York City was held on the evening of the 22d, in Metropolitan Concert Hall. As the guests entered the hall they were conducted to a reception room, where they were introduced to General Grant, General Sherman, Levi P. Morton and others... ....Judge Blodgett, at Chicago, passed sentence on John G. Wustun, Orin C. Whitney and Charles H. Perkins, guilty of defrauding the Government in the celebrated match bond cases. Each received one year with hard labor in the Chester Penitentiary.....According to custom, the Executive Departments of the Government will only be open for business from 9 A. M. to 12 M. during holiday week. .....Professor Gamgee gave an exhibition at the Washington Navy Yard of his newly-invented ice machine, the novelty of which consists in the utilizing of heat, which other machines waste, and the liquefaction of ammonia by expansion. The test was very satisfactory..... The Senate in executive session voted down the motion to reconsider the confirmation of Judge William B. Woods as Associate Justice of the Supreme Court, and his confirmation thererore stands. The Senate also confirmed the nomination of Theo. S. Singiser, of Pennsylvania, to be Secretary of Idaho Territory.....The Senate took up the resolution offered by Mr. Morgan in June last declaring that the President of the Senate is not constitutionally authorized to count Electoral votes so as to determine what votes shall be received and counted or what rejected. Mr. Morgan spoke at length in favor of the resolution, and was followed by Mr. Edmunds in opposition, when the resolution was laid aside.

[Chicago Journal.]

A Chicago Broker's Happy Investment.

Lewis H. O'Connor, Esq., whose office is located at 93 Washington street, this city, lately related the following in the hearing of one of our reporters as an evidence of special good fortune. I have been suffering, said Mr. O'Connor, for a number of weeks with a very severe pain in my back, believed to be from the effects of a cold contracted while on the lakes. I had been prescribed for by several of our physicians and used various remedies. Three days ago I abandoned them all and bought a bottle of St. Jacobs Oil, applied it at night before retiring, and to-day feel like a new man. I experienced almost instant relief, and now feel no pain whatever.

AGRICULTURAL NEWS.

SORGHUM SUGAR MAKING.—The Second annual meeting of the Illinois State Cane-Growers' and Sugar-Makers' Association was held in the rooms of the Department of Agriculture at Springfield, Ill., and was called to order by Dr. Newberry, Secretary. In the absence of the President, Maj. McDowell, of Chicago, proprietor of the South Elgin Sugar Works, was called to the chair, and the following committees appointed to prepare business for the action of the Association; on Order of Business, Dr. Newberry, Maj. McDowell, H. J. Emery; on Resolutions, M. D. Scoville, Jonathan Perriam, and O. C. Gibbs. A fine display of sugars and sirups was on exhibition, there being a notable increase in the number of samples of dry sugars in comparison with sirups over any previous exhibition, showing that a substantial advance had been made in the last year. Maj. McDowell, from the Committee on the Order of Business, reported the following topics for discussion: First, "Season of Planting"; second, "Preparation of Ground"; third, "Seed Varieties, and Where From"; fourth, "Planting Hills or Drills, Quantity of Seed to the Acre"; fifth, "Cultivation"; sixth, "Harvesting, When; Condition of the Seed Strip or Top"; "Would You Harvest, as Wanted to Work Up and Cut and Pile Up, and in What Manner?" eight, "What is the Treatment of the Juice?" ninth, "What Process of Manufacture: Open Pan or Vacuum, Fire or Steam"; tenth, "How Much Average Product of Cane to the Acre"; eleventh, "How Many Gallons of Sirup to the Ton"; the twelfth, "How Much Sugar Per Gallon of Sirup"; thirteenth, "Cost of Production Per Acre of Cane"; fourteenth, "Cost Per Gallon of Sirup." The following is a summary of conclusions arrived at by the testimony:

First—Season of planting: as soon as the ground is warm enough to insure a quick germination of the seed.

Second—Preparation of the ground; should be thoroughly pulverized and a fine seed-bed formed.

Third—Varieties of seed; for northern localities like Minnesota, Wisconsin and Northern Iowa the early amber; in more southern localities early amber for the earliest working, and the early orange, which ripens from three to four weeks later, for the latter working, thus extending the length of the working season.

Fourth—Method of planting; both hills and drills were advocated with a general expression in favor of drilling very thick in the row, using not less than three pounds of seed to the acre.

Fifth—Cultivation; about the same as corn, except that it requires more care to keep clean when small.

Sixth—Time for harvesting; experience and analysis of the juices show that it is richest in cane-sugar when the seed is hardening from the dough state.

Seventh—Should it be cut only as wanted to grind or cut and piled up? Testimony conflicting; those from Minnesota say there is no deterioration when kept for weeks after cutting, if not frozen. In this State the general testimony is that it deteriorates in cane-sugar, which changes to grape-sugar if kept, after being cut, for any length of time.

Eighth—Treatment of juice; all agree that the acid of the cane should be neutralized by using milk of lime in the juice heated from 180 to 200 degrees, and the defecied juice then reduced to sirup as rapidly as possible. If the boiling is slow and long-continued, the cane-sugar inverts or changes to grape-sugar.

Ninth—Process of manufacturing. Should the evaporation be by fire or steam; equally good results are obtained by either method, rapid evaporation alone being essential.

Tenth—What amount of cane can be produced per acre This varies with the season, condition of the soil, and method of cultivation, but will vary from ten to fifteen tons

Eleventh—How many gallons of syrup can be produced per acre? This varies greatly, reports running all the way from 60 to 200 gallons. With good soil and cultivation an average of 150 gallons per acre can be relied upon.

Twelfth—What is the cost of producing cane per acre in comparison with corn, the cane to be delivered at the mill ready for grinding, and corn harvested, shelled and hauled an equal distance to market? About the same; perhaps a little more for the cane.

Thirteenth—Number of pounds of sugar from each gallon of sirup; three to nine pounds. Of this more hereafter.

Fourteenth—Cost of making syrup per gallon; 12½ to 19 cents, according to kind and capacity of works.

Fifteenth—Value of seed; all agree that it is valuable for feed for stock. Many claim that it is equal to its weight in corn. An analysis which was given, however, showed that it is not the equal of corn. Most, however, show that it will pay for the labor of planting and cultivating the crop.

Sixteenth—Length of manufacturing season; with the early orange to follow the early amber; the season can be extended from sixty to ninety days.

DEATH OF PROF. MECHI.—A despatch from London, as we go to press, announces the death of Prof. J. J. Mechi, the celebrated English agriculturist.

[Cleveland Penny Press.]

See the Conquering Hero, etc.

Among the most wonderful articles of the period is St. Jacobs Oil. The Hon. Leonard Sweet, of Chicago, pronounces it the most thorough conqueror of pain that he has ever known.

[This being our Special Corn Number, our usual departments devoted to Literary Miscellany, to Women, &c., &c., are either excluded or abridged.]

Dr. Pierce's Golden Medical Discovery cures every kind of humor, from the worst scrofula to the common pimple or eruption.

Four to six bottles cure salt-rheum or tetter.

One to five bottles cure the worst kind of pimples on the face.

Two to four bottles clear the system of boils, carbuncles and sores.

Four to six bottles cure the worst kind of erysipelas.

Three to six bottles cure blotches among the hair.

Six to ten bottles cure running at the ears.

Five to eight bottles cure corrupt or running ulcers.

Eight to twelve bottles cure the worst scrofula.

Sold by druggists, and in half-dozen and dozen lots at great discount.

Druggists say that LYDIA E. PINKHAM'S VEGETABLE COMPOUND is the best remedy for female weakness that they ever heard of, for it gives universal satisfaction. Send to Mrs Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Tropic Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by druggists.

Millions of bottles of BURNETT'S COCOAINE have been sold during the last twenty years, in every civilized country, and the public have rendered the verdict that it is the cheapest and best Hair Dressing in the world.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Friday, Dec. 24, 1880.

BEANS AND PEAS.—The demand for beans is light and prices for mediums and marrows show a weakness under the very heavy receipts. Sellers, however, do not apprehend a serious decline, as they look for a lull in the demand at this season. Green peas quiet but somewhat steadier at $1.70@1.75. Southern B. E. peas firm at $2 ₱ 2-bush. bag.

Marrow beans prime $1.87½, do. other $1.75@1.80, medium prime $1.70@1.75, do other $1.60@1.65, pea $1.60@1.80, white kidney $1.85@2.05, red do. choice $1.70@1.75, do. other $1.55@1.65, black or turtle soup $1.60@1.65, lima $4.50@5.

BUTTER.—The week has been attended with liberal arrivals of high grade State butter, and buyers have soon discovered the favorable point thus given them. Best buyers are holding off and the market is easier as our price-list indicates. The high prices of December have prevented the accustomed activity of that winter month, especially as the demand has been so locally confined. Dealers look for an early start in trade after the holidays are over as both quality and quotations will be on buyer's side. Sellers of western began to shade figures early in the week and there is yet room for further marking off before an enlarged call is drawn away from fair priced table grades of State. The chief weakness of the moment is in creamery.

Creamery, Western choice 34c. fair to prime, 29@32c; State poor to best 22@33c.; sweet cream 25@31c.; State dairies, entire choice, 22c.; fair to prime, 22@24c.; firkins, 19@24c.; pails and h'f tubs, choice 28@29c.; fair to prime, 24@27c.; poor, 18@20c.; Welsh tubs, fresh 25@27c; other 18@23c.; Western imitation creamery, 24@28c.; dairy, choice, 24@26c.; fair to prime, 20@24c; poor 16@18c.; factory, late made 20@21c.; common to prime 13@19c.; rolls choice, 21c.; other, 19@20c.

Receipts for the week, 18,914 pkgs.

CHEESE.—A very fair business has been done this week on export account and the market closed strong. Medium grades have been most freely taken, or stock to be had at 10@12½c. Fancy grades are offered reservedly, and the best at 13¼, with here and there 13½ asked. Quotations are for

State factory, fancy, at 13@13½c.; do. good and prime, 12½@12¾c.; do. fair to good, at 11½@12½c.; do. h'f skimmed, 8½@10c.; Wisconsin factory, fine, 12½@12¾c; do. good to prime, 11¾@12¼c.; do. fair to good, 10¾@11¾c.; Ohio factory, fine, 12¾@12¾c.; do. good to prime, 11¾@12¼c.; do. flat, fair to good, 10@11¾c; do. poor to fair, 7@10c.

Receipts for week, 40 677 boxes.

Liverpool cable price, 63s.

Steam for dairy products to Gt. Britain, 35@45s.

COTTON—The market has shown little life the past week, and the changes in prices have not been very material. Latest prices are for

December at 11 80@11.82c.; January at 11.88@11.89c.; February at 12.06@12.07c.; March at 12.23@12.24c.; April at 12.36@12.37c.; May at 12.49@12.50c.; June at 12.60@12.61c.; July at 12.59@12.71c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8 15-16	8 15-16	8 15-16
Strict ordinary	9 9-16	9 11-16	9 11-16
Good ordinary	10 9-16	10 11-16	10 11-16
Strict good do.	10 15-16	11 1-16	11 1-16
Low middling	11¼	11¼	11¼
Strict low middling	11¾	12	12
Middling	11 15-16	12 3-16	12 3-16
Good middling	12 7-16	12 11-16	12 11-16
Strict good middling	12 11-16	12 15-16	12 15-16
Middling Fair	13 3-16	13 7-16	13 7-16
Fair	13 13-16	14 1-16	14 1-16

STAINED.

Good ordinary	8¾	Low middling	10¾
Strict good ordinary	9¾	Middling	11¼

Receipts for the week, 32,766 bales. Exports do. 9 475 do.

DRIED FRUITS.—Apples have had little attention the past week, and in fact the whole market shows the lull incident to the holidays. Quotations are for

Evaporated apples at 8¾@8¾c. for the better qualities; sliced apples at 5@5¼c. for good to choice North Carolina; 3¾@4¼c. for Va. apples, 4@4¼c. for Tenn. do; 4¼@5¼c. for State do; 3¾@5¼c. for western Ohio and Mich. Peaches at 30@32c. for evaporated peeled; 10c. for unpeeled do.; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6¾@7¼c. for halves and 6¼@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 18c. Raspberries at 25c. Whortleberries at 12@12½c.

Receipts for the week, all kinds, 1,947 pkgs.

Exports for the week, dried apples, 7,734 pkgs.

EGGS.—Receipts for the week, 13,649 bbls.; do last week, 15,179 do. Daily supplies light. The demand is good but chiefly directed to good stored and limed, owing to the high prices for fresh.

Near points 34@35 State and Pa. 31, Western fresh 31, Southern 31, seconds 25@28, limed State 24, do. Canadian 23@24, Western 25@28½.

FLOUR. Supplies have steadily accumulated and the market has had a downward turn and closed weak. Exporters have taken fair quantities at the yielding prices.

Latest prices are: $3.10@3.85 for very inferior to strictly fancy superfine State and Western; $4.00@4 40 for poor to choice extra State and Western, odd lots and lines; $4 10@4 65 for choice to fancy do.; Inferior to good white wheat, trade and family extras, $4 25@5.10; good to choice do, at $5.10@5.85; (very choice up to $6 25;) red and amber wheat inferior to choice trade and family, at $4.25@5.85; round hoop Ohio $4.25@4 75; and trade and family brands of do at $4.80@6.25, the latter for very fancy: St. Louis at $4.40@5.25 for inferior to good extra; $5.25, for good to choice, Minnesota clear, inferior to very choice at $4.35@6.00; Minnesota "straight," poor to fancy, at $5.25@7.00, and patent inferior to fancy at $5.75@8.00; city mill extra at $5.25@5.50 for ordinary to very choice for the West Indies; do. for England, $4.20@4.90 for poor to very choice spring wheat, and $4.75@5.50 for winterwheat product; do. trade and family extras, $5.65@7; do. for South America, $5.50@6.00; the latter for fancy; No. 2 at $2 85@3.50 for inferior to fancy.

Receipts for week, flour, bbls. 148 400; corn meal, do. 2,000; wheat, bush. 672,850; corn, do. 297,250; oats do. 165,350; rye, do. 14,875; malt, do. 28 274; barley, do. 88,500. beans, do., 12,208; rice, pkgs. 2,175.

Exports for week, flour, bbls. 113,000; corn meal, do. 1,035; wheat, bush 863,500; corn, do, 255,900; oats, do. 270; peas, do. 3,100; beans, pkgs. 180; rice, 364.

CORN MEAL.—Sales at $2.60@3.15 for yellow Western and $3.50 for Brandywine.

FRESH FRUITS.—Christmas-time always increases the demand in every line of fruit and nuts and with the activity of the past week sellers have no reason to complain this year. The fine quality of apples is a marked feature which will tend to keep trade steady. It is not usual to see lady apples at the cheap rates of the present Most of the demand for apples is from safely-housed storings. Railroad lots as before are irregular, as many are sold conditionally. We quote prime Baldwins ₱ bbl. $1.87@2; Greenings, $1.75 Sulzenbergs, $2@2.25 Northern Spy $1.50@1.75; Lady apples, selected; $7@8; other, $3@6; Half bbls. sell quickest. Cranberries have a good but not large local movement; Capes are firm and high; N. J. have a promised abundance and only prime hard fruit shows firmness. Cape Cod fancy bbls. $7.50@8; other $4@7, N. J., boxes fancy $2.12@2.25, other $1.50@2. Florida oranges are in large supply and dull for the bulk of stock; most of the arrivals to be repacked. Choice half bbl. boxes, $3.25@3.50; ordinary $2.00@3. Boston pears, $4@6 per box. Catawba grapes 4@6c. ₱ Peanuts are in fair demand; at this season trade in nuts is divided among foreign. Va. hand-picked peanuts 4½@5, other, 3½@4¼, shelled 4@4½, Hickorynuts ₱ bush. of 50 ₱s. $1.62@1.87. Bull nuts 60@75. Black walnuts 40@50c. Pecans 9¼@9½c.

FEED.—Sales at $16@17.50 for 40 to 60 ₱s., $16.25@17.25 for 80 ₱s, $17@18.50 for 100 ₱s.

GRAIN.—Wheat has been steadily declining on the increasing supplies and moderate export trade. Latest sales are of

No. 1 white at $1.13¼@1.14, do. December at $1.13¼@1.13¾, do. January at $1.13¾@1.14, do. February at $1.16¼@1.16½, do. steamer at $1.11@1.12¾, No. 2 white at $1.11¾@1.12, ungraded white at $1.08@1.13, No. 2 red at $1.15@1.16¼, do. December at $1.16¼@1.16¾, do January option at $1.15¼@1.17¼, do. February a.

$1.19@1.20¼, do. March at $1.21@1.21½, do. May at $1.31¾@1.31¾. No. 3 red in lots at $1.12@1.14, ungraded red at $1.07@1.20, No 2 Chicago at $1.15, rejected Spring at 9?@$1, ungraded Spring at $1@1.11,

Rye quoted at 97@99.

Corn is at easier prices and demand moderately active: lowest prices are for

New York No. 2 at 57½, do. January at 57@57¼, do. February at 57¾@57¾, do. March at 57¾, do May at 56¾@56¾, ungraded mixed Western at 54@57¼, No. 3 at 54½ New York steamer mixed at 55@55¼, N.Y yellow at 57¼ for old, and yellow Jersey at 55¼.

Oats have been fairly active closing with sales of Extra white at 43, No 1 white 45@46½, New York No. 2 white at 44@44½, No. 3 white at 41¾@42, New York No. 1 at 42¾@43, New York No. 2 at 42¼, do January at 42@42½, do. February at 43½@43¾, do. March at 41¾, No. 3 at 41¾, ungraded white Western at 42@46, ungraded mixed Western at 41@43, No. 2 Chicago quoted at 42½.

HAY AND STRAW.—The arrivals by rail have been liberal and prices have eased off a little. Quotations are for

Selected retail State hay $1.20@1.30 per 100 lbs; other grades of timothy at $1.15@1.20 do, grades for railway and shipping wants at $1.05@1.10, clover mixed at $1.00@1.05, clover clear at 95c.@$1, salt hay at 65@70c. Straw—long rye; $1.10@1.20, short rye, oat, wheat and barley 85@90.

Exports for the week 500 bales.

HOPS.—The market has had a dull look this week without, however, marked change in prices the impression being that with the close of the holidays more animation will result.

	Cents per lb.
New Yorks, crop 1880, prime and choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40
Pacific coast, new	20 @24

HONEY.—Supplies are large in first hands and the demand is not sharp enough to vary late figures.

White clover, comb, single, 17@18c.; larger pkgs. do. 15@16c.; buckwheat 12@13c.; extracted 7@11c. as to color.

LEATHER.—Quotations for hemlock sole are 22½@24 for light 23½@25 for middle, 25½@25 for heavy and 21½@22½ for good damaged.

POULTRY AND GAME.—When it is remembered that Christmas week has traditions in the matter of roast beef and fat geese, that hardly permit turkeys to hold a special trade, the market this week for the latter may be regarded as the best noted for several years for the period Sales have been very steady, and the upper prices have been readily made for prime dry picked and carefully scalded, from any section. Chickens and fowls are slow and easy in price. Ducks active for prime. Geese seem to have recovered their old time demand and prices are good for the quality offering. Weather fine for poultry, and any surplus that may be left will carry over well.

Turkeys, N. J. choice, 13@13½, State do. 12@13; good to prime 11@12, Western, choice, 12@12½, good to prime 10½@11½, fair to good 9@10, Phila. dry'd, 12@14. Chickens do. 12@13, Ducks Co. 10@12; N. J. 10@11c.; State scalded, 8@11c.; Western, do., 8@9c.; common 6@7. Fowls, Phila, dry-picked, 10 N. J., 9@10, scalded, do, 8@9; State and Western prime, 7@8; poor to fair 6@7. Ducks, choice 11@13; other 8@10, Geese, choice 13½@14½; other, 8@10. Squabs, light $2@2.25 dark, $1.25. Live poultry has advanced with a demand from Jews. Supply higher. Chickens and fowls, 8@10; roosters, 4@5, turkeys, 10@13. Ducks, choice, 60@75, other 40@50. Geese, choice, $1.75@2.20; other 80@$1.50.

Wild ducks, canvas back $1.25@2, the latter for Havre de Grace; red heads 50@75; mallard 50@60, teal, 30@40, the latter for blue winged; common 25@30, including bread-billed; quail prime trapped per doz $1.50@1.62, poor and soft, 75@$1.25, partridges, 60@85. Grouse prime $1@1.12, drawn 80@90, Hares, 20@25, Rabbits, 15@20, Venison, Minn. saddle, 11@12, other 10@11. Whole deer, 7@8: show deer with fine antlers, 10@11.

Venison is low, as dealers press its sale owing to the close of the season, Dec. 31st. Birds are fairly firm a good demand looked for during holiday week. Quail are high, but other items favor buyers.

PROVISIONS.—Hog products have been moderately active only and prices weak.

Mess pork closed quoted at $13 25 for old in job lots, while round lots of new are for February delivery $13.30 bid and $14.20 asked. Bacon at 7.20 for long clear, and 7.50 for short clear. Beef at $19@20 for city extra India mess. $9.50 for extra mess, $8 50 for plain mess. Beef hams at $15.50@15. Lard, Western steam at 8.85 for spot lots, 8 82½ for December and January 8 92½@8.95 for February, 9 02½ for March. Stearine at 9@9¼. Tallow at 6.06¼ for prime

Receipts for week, beef, bbls. and tcs.; 800: pork, 7,026 bbls; cut meats, 47,471 pkgs.; lard, 22,701 pkgs.

Exports for week, beef, bbls, and tcs. 2,243, pork, 3 611 bbls.; cutmeats, 15,080,518 lbs.; lard, 5 980,450 lbs.

TOBACCO.—There has been a dull in trade this week and prices not showing important change.

SEED LEAF.	Crop 1879.
New England Havana seed	19 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5½@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7 @10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	1 @18

SEED.—Clover is strong and moderately active. Quoted 8@9¼ for Western Timothy is quiet at $2.75@2.85.

VEGETABLES.—Exports of potatoes for week, 402 bbls. Choice cable-headed potatoes are firm with only a moderate demand. Receipts are free enough to put a liberal supply of useful stock in that would sell to a wholesale buyer at inside figures. In bulk potatoes are allowed 180 lbs to the bbl. Onions are steady with some extra call for white and yellow. Cabbage firm; other truck firm when prime.

Potatoes, E. Rose Eastern double heads $2@2.25, State, $1 75@2; do. in bulk $1.75@1 87; Burbank and prolific $1.50@1.55; snowflake $1.75@2; peerless, $1 37@1.75 peachblows $2@2.25 Sweet Del. $2.50@2.75, Onions, white, $5@5.50 yellow, $3.00@3.25; red, $3 00@3 25; Chester, $3.25; carrots, $1.25@1.50; marrow squash, 40@50; Hubbard, 75c.@$1; cauliflower, $2@3.50, cabbage, @ 100, $4@5; red, do. $5@7, pumpkins, $3@5; celery, @ dozen, $1.00@1.50; turnips, white, @ bbl. 50@75, Russia 50@75.

WOOL.—The market has shown a moderate degree of activity only this week, with prices, however, held firmly.

XX Ohio, Penn., and Va. fleeces quoted at 48@49c. X, do, at 47@49c. XXX and picklock at 50@53, No. 1 at 49@50c. No. 2 45@48c.; common at 44@46c.; combing at 50@52c.

N. Y., Mich, Ind. and Wis. 43@45c. for X and XX; 48@49c. for No. 1; 41@46c. for No. 2; and 41@44c, for common.

Iowa, Vt, and Ill. at 42@44c. for X and XX; 47@49c. for No. 1; and 43@40c. for No. 2.

Mo., Ky. and Tenn. at 46@48c. for washed and 30@37c. for unwashed.

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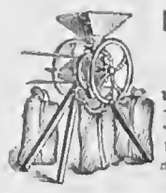

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CORN.—Ten acres. Variety, White Flint, (not a heavy yielder.) My corn has turned out splendidly, three and four, up to seven ears of corn on a stalk. I send you a stalk with seven ears on when cut. It is remarkable how few nubbins there are. This corn shells out over 80 bushels to the acre. When your representative told me two years ago you could raise seventy-five bushels shelled corn per acre on these "plains," I thought him too enthusiastic, but on this farm I have proved his statement to be moderate—used three bags per acre broadcast. J. G. Shepard, Hicksville, Long Island.

CORN.—For reports of crops grown during past season, on farm of RURAL NEW YORKER, at Hewlett's Long Island, see RURAL NEW YORKER, October 9th, November 13th and 20th, 1880.

POTATOES, (Burbanks or White Rose). YIELD 400 BUSHELS PER ACRE.—800 lbs. Mapes' Potato Manure per acre scattered in the rows. Grown by Robinson Gordon, Manorville, L. I., who writes, October 15th, "I send you one barrel of potatoes raised from your Potato Manure" (160 potatoes filled the barrel and weighed 180 lbs). "This is the first season I have tried it. I used four bags to the acre, and had remarkably good results from its effects. I had *four hundred bushels to the acre* of the *finest* potatoes I ever raised, remarkably smooth and good flavored, as you will see by the barrel I send you. I have raised potatoes for the last thirty years, more or less for market, but never had such good results before. I have tried three different kinds of manure this season, but yours has done the best. I shall use it in preference to any other next season."

POTATOES. E S. BROWNELL, ESSEX JUNCTION, VT., the well-known originator of "Brownell's Beauty," "Centennial," "Pride of America," and other celebrated seedlings, wrote to B. K. Bliss & Sons, New York, Sept. 27th, 1880: "I bought of you last Spring some of Mapes' Potato Manure, which *excelled* any fertilizer that I ever used in *producing smooth and large tubers*. I got *one-third more crop* than was produced alongside when it was not used. The potatoes that I send you for exhibition, Nos. 50, 51, 52, 53, 54, 55, 56, or "White Star," show the effects of Mapes' Potato Manure. I expect to use it more extensively another season." These potatoes, as well as the "Pride of America," grown with the Mapes' Potato Manure, enlisted the verdict at the several fairs as being the smoothest and finest quality potatoes offered.

POTATOES. Late Rose.) Report of W. H. WALBERT, LANARK, LEHIGH CO., PENN., Nov. 12, 1880.

	Bushels per acre.	Quality.
Yield with natural soil	75	Medium.
" " stable manure, 15 two-horse loads	140	Good.
" " " " "s Mineral Fertilizer	60	Very poor.
" " Mapes' Potato Manure, 400 lbs. per acre	190	Very good.

Soil, chocolate loam, season very dry—had hardly any rain." Mr. Walbert adds: "For potatoes the season was too awfully dry. I wonder only how your fertilizers gave so many potatoes. The year before (1879) was a good season for raising potatoes, and the yield was immense. Potatoes are my chief crop."

VALUATION OF THE MAPES COMPLETE MANURE "A" Brand, by the New Jersey State Agricultural Station—Bulletin, July 3rd, 1880, shows this manure *to be the cheapest of all the twenty-five fertilizers examined.*
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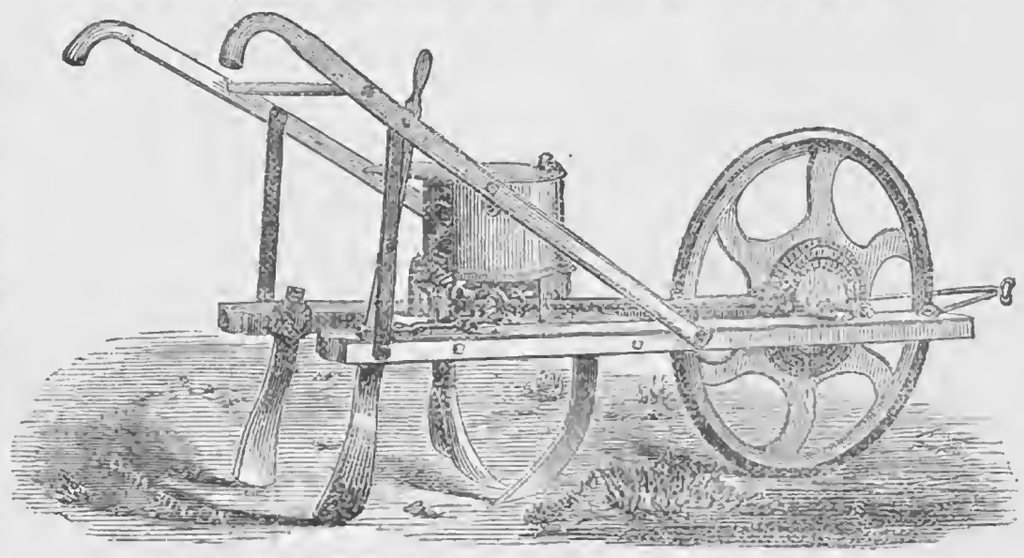

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Literary Miscellany.

A TALK WITH THE OLD YEAR.

MRS. T. H. GRIFFITH.

I SAT alone in my room one night,
Sat and gazed at the dim firelight,
As it danced in shadows, fantastic and tall,
Over the floor, and ceiling, and wall.
'Twas a wild, dark night, and the snow and sleet
Wrapped the world in a winding-sheet;
While the wind in desperate fury blew,
And piled up the snow in drifts anew,
While as I sat by the fire and thought
Of the changes the year for me had wrought;
Quite suddenly, the half-closed door
Flew open, and there stood before
Me, one whose face and features wild,
Would have gained the trust of a little child.
His form was bent, and his hair was gray,
And the vigor of life had passed away;
But as heavily on his staff he leaned,
Old age had never so beautiful seemed;
For though his brow was furrowed with care,
His smile was most serene and fair
As if he'd thought for a long, long time
Of a better world and a sinless clime.
At last he spoke: "My dear young woman," said he,
"You have been thinking to-night, of me.
Of the change that I, in you have wrought,
Of the lessons that I in love have taught,
Of the oft repentant and bitter tear,
Seen by none but the old, old Year.
The varied year that is well-nigh gone
Must yield to Eighteen-Hundred and Eighty-One.
E'en now the effort to draw my breath
Warns me of my approaching death;
And the elements meeting in bitter strife.
Speak sadly of my departing life,
But I go to a land where burden and care
Are wholly unknown, and everywhere
There reigneth peace, unsullied and free;
A rest that cannot abate, for me.
And now, I'd ask, is there anything
Which you'd have no longer to memory cling?
Of all the secrets your heart has kept,
Of all the sorrows o'er which you have wept,
Have you nothing to send to unconscious bliss?
Naught for the land of forgetfulness?"
"Aye, father," I cried, "there are many things
Which call for a blush as memory brings
Before the eye of my mind, the light
Of deeds that I cannot undo to-night.
Take with you thoughts of the broken vow,
Whose fragments can only be mourned over now;
Of the angry look, and the careless tone,
By which I've thrust the lonely down;
Of the weakness with which I've grown tired of life,
Have neglected duty and inclined to strife;
The failure to do what I've often resolved,
The deaf ear I've turned when conscience has called,
O, blot them all out in forgetfulness
That I may no longer remember this."
"Ah, you are like all the rest, my child,"
The old man said, with his smile so mild,
"You would open the door that memory holds fast,
And bury sad truths in the dead, dead past.
But do you not know that the angry look
Has shown you your heart like a well-written book?
That the ceaseless tone, and the tending to strife,
Have shown you the need of Christ in your life?
That the failure to do what you've often resolved
Has taught you to *heed* when conscience has called!
And do you not know that should I become
The sexton to bury your thoughts in the tomb,
You would learn to trust in your own human hand,
And build your house on the treacherous sand?
Ah, no! let your mind call up now and then,
The saddest of words, 'It might have been,'
To teach you to look to a Power above,
To fashion your life in the depths of His love;
That its lamp, trimmed and burning, constantly may
Shine brighter and brighter to the sweet, perfect day.
Far better to part with injuries given
By those who often and often have striven
To wrong you in thought, in word, and in deed,
And left you to struggle alone in your need;
Far better to bury them deep in the tomb,
And leave sweet charity's flower to bloom
O'er their graves, for you'll surely find, then,
Of all *sweet* words of tongue or of pen,
The sweetest, to tunes of peace are set,
And are simply these: '*Forgive and Forget.*'"
He ceased to speak, and I gazed on his face,
So grandly calm in its dying grace,
And I touched his arm, as I whispered, and said:
"Father, Thou'rt right. Among the dead
Bury the thoughts that have clung so strong
To me, of those who have treated me wrong;
I forgive as I hope to be forgiven
By the mercy of Him who dwells in Heaven."
He smiled, but to speak he'd lost the power,
For the clock was striking his dying hour.
But he cheerily waved his hand at the last,
And was borne away on the wings of the past.
My dreaming was over. I sprang to my feet,
In a burst of song the New Year to meet,
Dashing away the last, sad tear,
I had shed for the death of the old, Old Year.

NOTICE.

IN consequence of the increased demand for space to accommodate the "Corn" subject, the "Literary Department" has been curtailed to a great extent and that of the "Woman's" entirely left out.

We ask indulgence from those who enjoy these particular features, promising to do our best to keep our *practical* neighbors from trespassing.

R. C.

THE family were telling riddles one evening, and the five year-old told this:

"Four little hopper-toads sat on a tree,
Two hopped off and then there were three."

Nobody could guess it. "Well," she explained, "one of them hopped right back again." "Who told you that riddle?" asked mamma. "Nobody," replied the little one. "I thunk it up myself:"

LORD C——, whose popularity was not excessive in the Scotch town of A——, having refused an importunate beggar, she renewed her application with, "Now me lord, if ye'd just give me one little sixpence I could treat every friend ye have in the town."

THE RURAL NEW-YORKER.

AT this season of the year we are receiving many calls for specimen copies. For the information of the new readers into whose hands the present number may fall, we present a list of those who may be considered as the present contributors to our columns; from which it may be seen whether or not our claim to having the most eminent practical writers is well founded.

Dr. J. B. Lawes	Rothamsted, England.
Prof. J. P. Sheldon, Hants. & Wilts. Ag'l Col.	"
William Robinson, F. R. S., Editor and Founder of the London Garden	"
Prof. S. W. Johnson, Sheffield Scientific School, Yale College	Conn
Gen. W. H. Noble	"
W. M. Yeomans	"
Prof. F. H. Storer, Bussey Institute	Mass
Hon. Marshall P. Wilder, Boston	"
William Falconer, Cambridge University	"
Levi Stockbridge	"
Richard Goodman, Pres. J. C. C	"
Richard Goodman, Jr.	"
B. Pickman Mann	"
Prof. W. J. Beal, Agricultural College	Mich.
Prof. R. C. Carpenter " "	"
F. Gulley, Farm Manager " "	"
Prest. T. T. Lyon, Pom. Society	"
Sec'y. C. A. Garfield, " "	"
S. B. Peck	"
"May Maple"	"
Mrs. Mary Beal McLouth	"
Mrs. O. W. Day	"
W. I. Chamberlain, Sec'y State B'd Ag.	Ohio
C. E. Thorne, Farm Manager State Ag'l Col.	"
Dr. John A. Warder	"
B. F. Johnson	Ill.
Prof. G. E. Morrow, State Ag'l Col.	"
Prof. Cyrus Thomas	"
G. W. French	"
W. B. Derrick	"
Prof. E. M. Shelton, Agricultural College	Kan.
Prof. Elbridge Gale, " "	"
James Barton	"
Prof. Thomas Meehan, Author of NativeFlowers and Ferns	Pa.
Mrs. Mary Wager-Fisher	"
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Mrs. J. E. McConaughty	"
Ex-Gov. Robert W. Furnas	Neb.
S. Rufus Mason	"
Rev. R. H. Crane	"
Prof. C. C. Georgeson Agr'l College	Texas.
George Marti	"
George Gordon	"
Will N. Wallis	"
Charles Shinn	Cal.
W. C. L. Drew	"
Luther Burbank	"
J. B. Armstrong	"
"Maude Meredith."	Iowa.
Edson Gaylord	"
Mrs. B. C. Dunlap	Wis.
Prof. G. C. Caldwell, Cornell University	N. Y.
I. P. Roberts, Farm Manager "	"
Prof. L. B. Arnold	"
Dr. A. R. Ledoux	"
Charles Downing	"
Samuel B. Parsons	"
Samuel Parsons, Jr.	"
A. B. Allen	"
Prof. E. W. Stewart	"
Col. F. D. Curtis	"
Peter B. Mead	"
L. S. Hardin	"
C. R. Dodge	"
James Hogg	"
Forrest K. Moreland	"
Jonathan Talcott	"
Lorenzo Rouse	"
Nelson Ritter	"
L. A. Roberts	"
D. S. Marvin	"
J. G. Bingham	"
G. A. Goff, Jr.	"
G. D. Hopkins, Vet. Surgeon, N. Y. City	"
G. M. Doolittle	"
E. W. Powell	"
Miss Alice Hough	"
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Prof. S. M. Tracy	Mo.
D. S. Holman	"
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H. W. Ravenel	S. C.
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J. W. Kerr	Md,
Hugh L. Wysor	Va.
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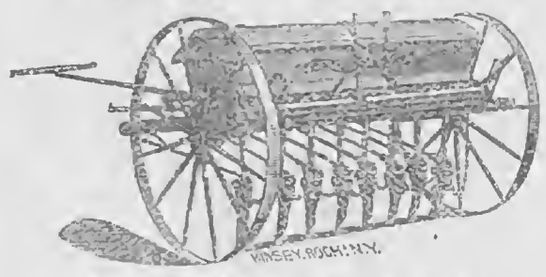

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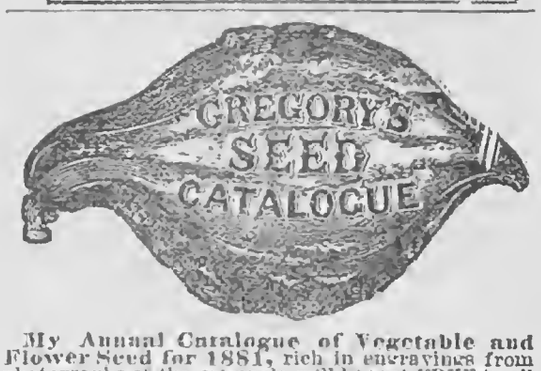

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PERSONAL ITEMS.

Mayor Stokley, of Philadelphia, when a boy, worked for a dollar a week and slept under a counter.

Gen. Jeff. C. Davis's widow has ordered a monument for his grave like the Wool monument at Troy, N. Y.

Mrs. Emma W. Skelton observed the 103d anniversary of her birthday at the Old Ladies' Home in Boston on the 18th.

Mr. Pendleton, of Ohio, has introduced a bill in the Senate for regulating appointments to office and the conduct of office-holders.

Mrs. Julia Shayer, the author of delightful sketches of Washington life, is the daughter of a clergyman residing in Deering, Maine.

William H. Vanderbilt is supposed to own about one-fourth of the stock of the Western Union Telegraph Company, representing ten millions of dollars.

General Hancock has been presented with a silver-mounted stick cut from the hickory tree on the Hancock farm in Pennsylvania, where he was born.

Rev. Dr. Talmage is again to be "hauled over the coals" by his enemies in the Brooklyn Presbytery, who claim to have new evidence of his deceit and falsehood.

General O. O Howard, who has been assigned to the command of the West Point Military Academy, will go to California to settle up his private matters preparatory to entering upon his new duties.

Mrs. A. T. Stewart leads as quiet and amiable a life as any rich woman in the country. She is much attached to the Episcopal Church, and solely sustains the Bishopric of Long Island, to which appertain the cathedral and schools of Garden City.

The Atlanta Constitution says there is a keener appreciation of Mr. Lincoln's character and genius at the South than at the North. R. J. Burdette, who has been lecturing at the South, says he has been amazed by the applause which greeted his eulogy of Lincoln.

"Gratitude and Duty."

Hon. Wm. D. Kelley says in a letter to Dr. Starkey: "Gratitude to you and duty to those who may be suffering as I was from Chronic Catarrh and almost daily effusions of blood, in greater or less quantities, impel me to say to you, and *to authorize you to give any degree of publicity to my assertion*, that the use of your Compound Oxygen at intervals has so far restored my health that I am not conscious of having discharged any blood for more than a year; and my cough, the severity of which made me a frequent object of sympathy, has disappeared." Our Treatise on Compound Oxygen sent free. Address Drs. STARKEY & PALEN, 1109 and 1111 Girard St., Phila.

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AM. S. S. UNION QUARTERLY, single copy, 5c.; 20c. per year; 5 copies and over, 15c. each.
THE PRIMARY LESSON PAPER, 10 copies, per year, 75c., or 100 copies, $7.50.
THE SCHOLAR'S PAPER. Price same as last.
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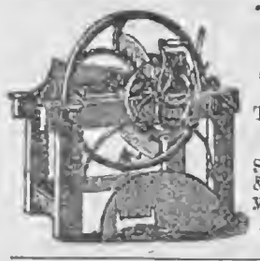
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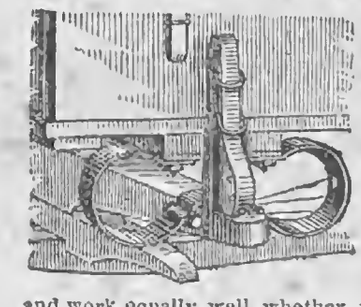
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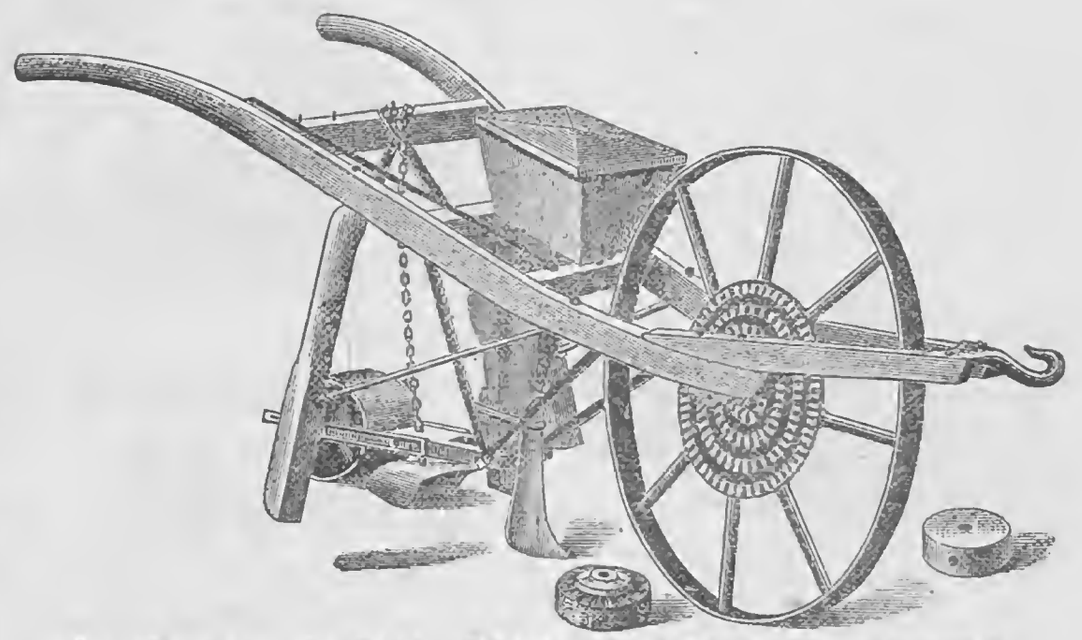

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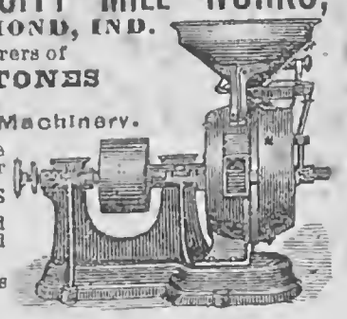

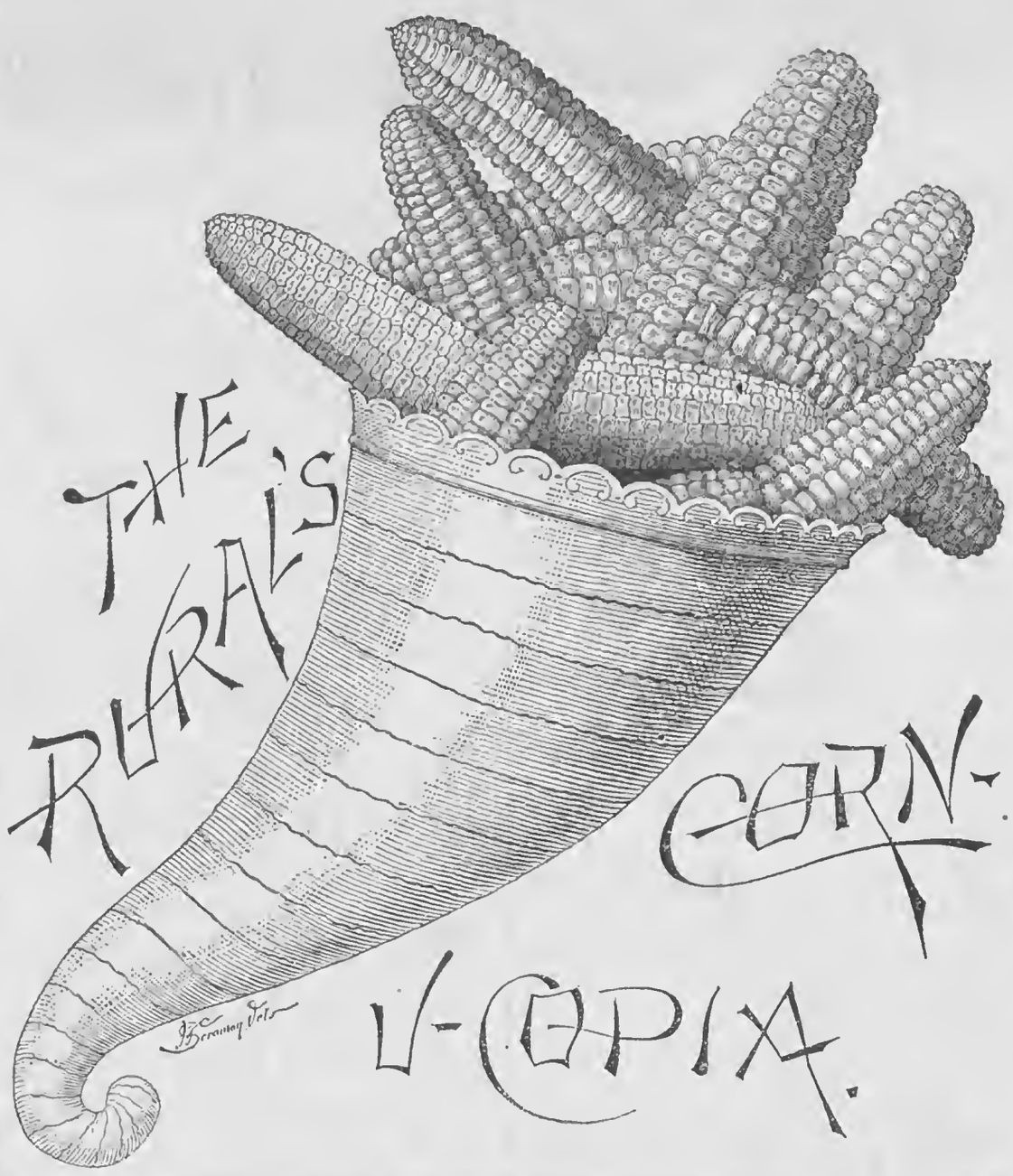

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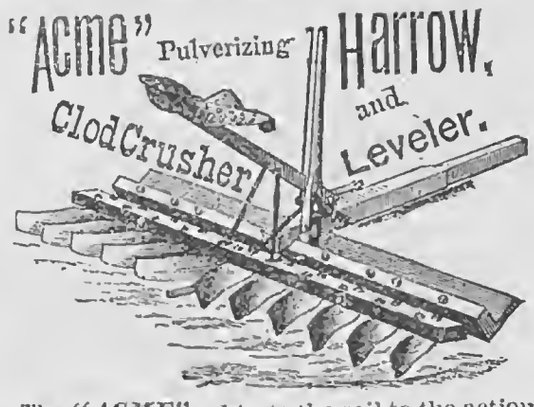

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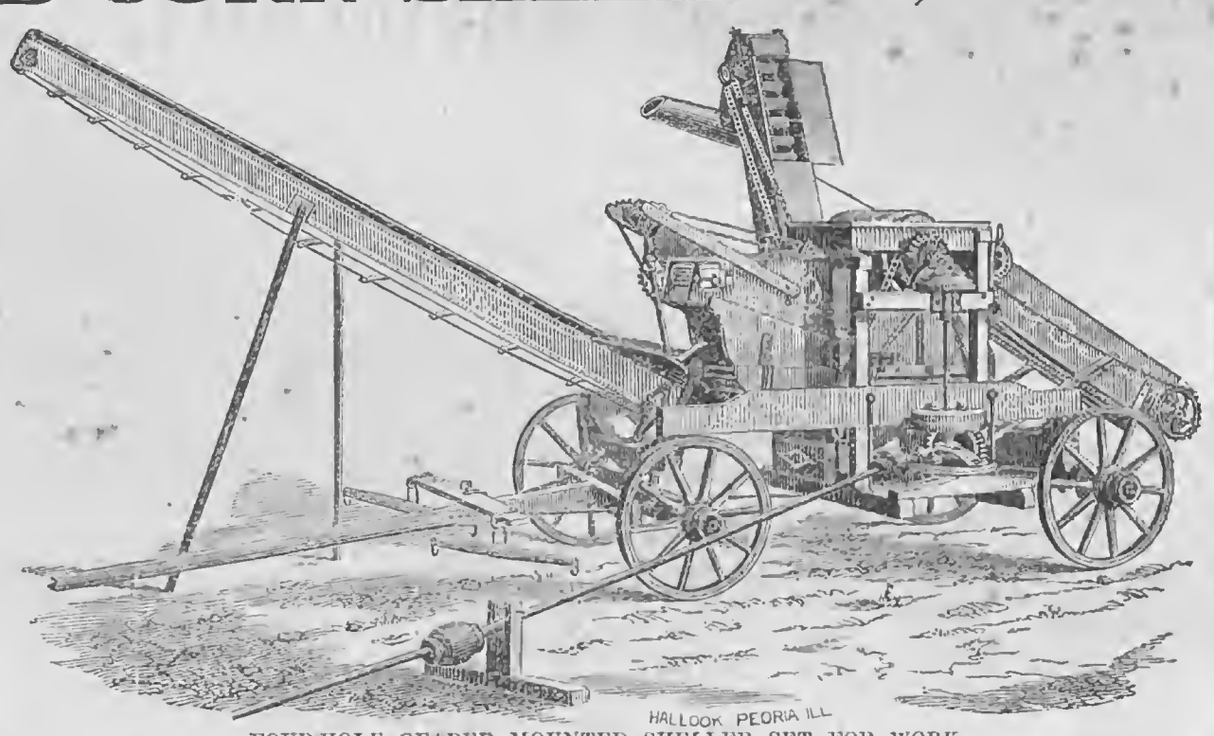

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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The Herdsman.

SHORT-HORN BULL LORD UPTON.

Second Prize N. Y. State Show, at Albany, 1880.

THE engraving herewith presented is an accurate reproduction, by our artist, of a photograph taken for the RURAL on the fair grounds. The bull, a handsome roan, was bred by the exhibitor, Mr. Wm. S. Moore, Jr., of Mt. Upton, N. Y., whose herd, as represented at the fair, certainly did him credit. Lord Upton's sire was bred by Mr. D. W. Bartlett, of East Windsor, Conn., one of the most discriminating of the breeders of the Connecticut milking Short-horns, and the subject of our sketch is no doubt a good representative of that blood. His dam is also of a family reputed to be great milkers, so that while no doubt in points and style he is worthy the honor he wins, in point of usefulness as a dairy sire his pedigree is a most promising one.

NOTES BY A STOCKMAN.

I SAID recently: "The great bugbear of farmers in this business (breeding) is close breeding." Thereupon Mr. Jonathan Talcott takes issue and propounds a question as follows:—"If Mr. Bates was so successful in his breeding, where are the descendants of Duchess at this date?" What a field of thought this question opens up! It reminds me of the tradition of one of the noble aborigines of this continent, who when questioned as to the number of his tribe and people, pointed to the forest spreading beyond the reach of the eye and said "as the leaves of the forest, so are my people."

Where has not the Bates blood spread? There are the Duchesses, the Princesses, the Oxfords, Red Roses, Wild Eyes and other noted families, all bred by the same methods as the first, and their blood has flowed in every direction in all civilized lands until it has colored an ocean. Who can trace even the Duchess streams to its present limits? It flows over the plains of the West, of Australia and New Zealand. It appears more or less diluted in every beef market where Short-horn grades supply the shambles. It is not confined to the central concentrated receptacles, the numerous Dukes of this and Duchesses of that, that may be pointed out wherever Short-horn breeding is carried on; but it spreads everywhere.

Let Mr. Talcott consider the splendid picture of Baron Hillhurst which abuts close to his communication on the first page of the RURAL; (and which by the way is one of the best specimens of animal portraiture I have ever seen engraved) and he will see an example of what I wanted to teach That noble animal is the product of the closest breeding ever practiced by the founder of its ancestral families, who was one of the closest of breeders that ever existed.

It is the fashion with objectors to this close breeding to ask precisely this question of Mr. Talcott. But if there was not one direct purely descended Duke or Duchess remaining, it would be no argument against the system by which this wonderful family was produced and made to serve the most valuable and useful purposes to produce effects that are unparalleled.

Therefore a Duke or Duchess even now is sought for with eagerness and brings about its live weight in silver dollars.

But, again, there was but one Thomas Bates!

His system has been adopted by every successful breeder. Bakewell doubtless taught it to him, for Bakewell was the first breeder who applied in-and-in breeding as a system. Of him a noted breeder said in 1786, "Mr. Bakewell has not had a cross for upwards of 20 years; his best stock have been most closely bred; yet they have not decreased in size; are not less hardy or healthful, but, on the contrary, have kept in a progressive state of improvement." This was said in reference to Mr. Bakewell's cattle. What he did with his sheep under the same method is so well known as to need mere reference.

Webb with his South-Downs followed Mr. Bates's system. And the Webb and Walsingham sheep tell their own story. He did the very same with his tribe of Short-horns, and with the same conspicuous success.

Curiously enough an open page of the Agricultural Gazette has just caught my eye, and I find there the following reference to this very noted Celia tribe of Short-horns. It originated thusly: "Millbank had a son Driffield. *Driffield was put to his dam* and produced young Millbank. Patriot was got by Driffield out of Millbank's grand-daughter. Young Millbank produced Crimson by Patriot. Crimson produced Charlotte by Palmflower, her own brother." And so on, a perfect concentration of blood and breeding until Celia appears and founds her tribe. This was done by that eminent breeder Mr. G. Coates, and Mr. Jonas Webb went on where he left off, until his death.

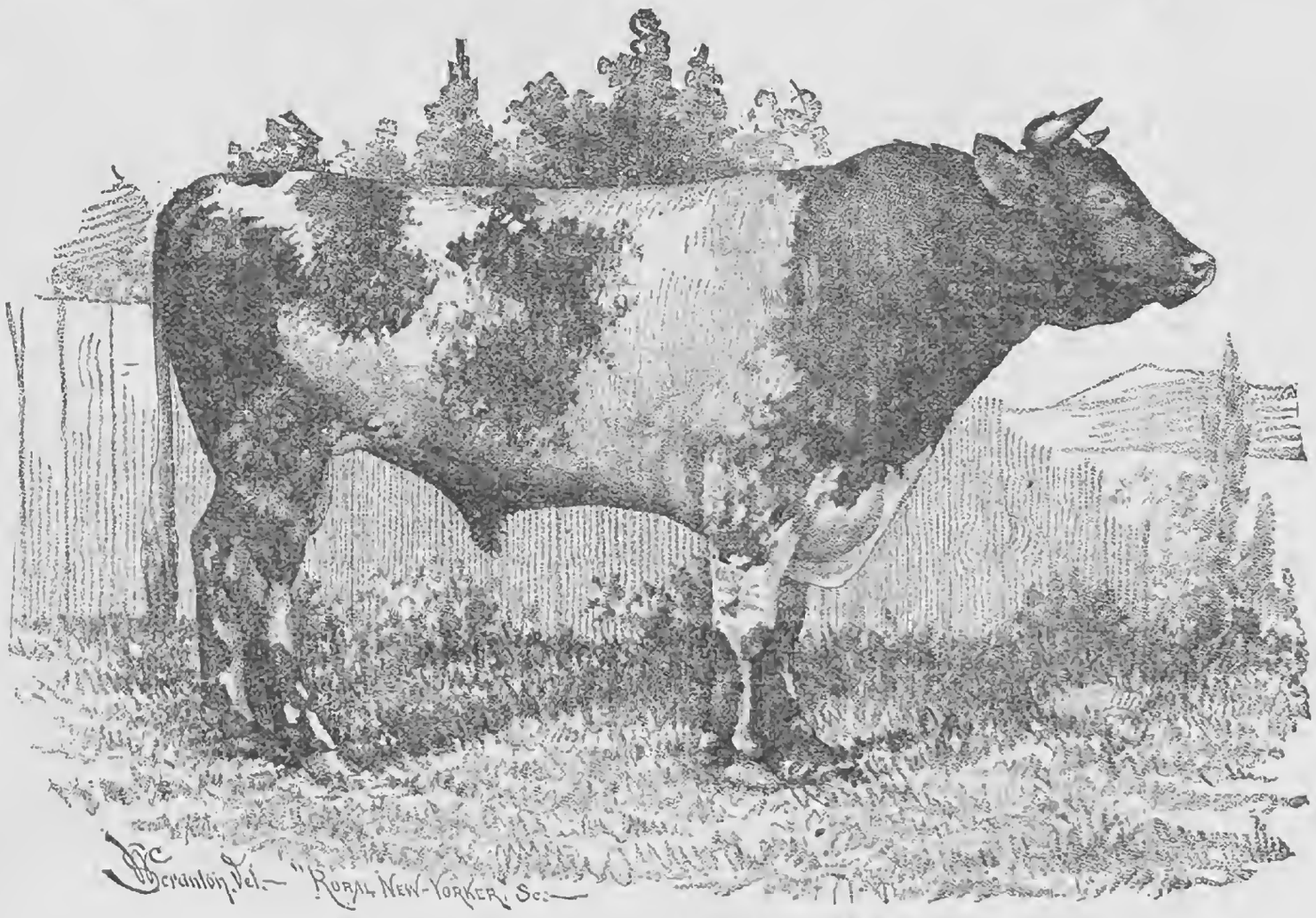
I think I remarked something about prejudice in this connection. I don't wish to say for a moment that Mr. Talcott is prejudiced, for that argues, to some extent, want of intelligent and reasonable thought and consideration of which I know Mr. Talcott posseses an ample power. But against the objections made to this practice we have the whole history of successful breeding of horses, cattle, sheep, pigs, dogs, fowls and even of the domestic canary birds, which have been brought to the greatest elegance of form, brilliance of color and sweetness of song by what the English objectors call "ower 'sib' breeding," meaning too close relationship.

Well; "the end justifies the means" in breeding, however inapplicable it may be in morals.

What instances I could bring home to Mr. Talcott, here "in our own country and among our own people," in the stall, the dairy, the flock, the pen, if I had but space—and I had not, this moment, to milk and feed and clean up—which ought to have been done an hour ago.

But—"we can have too much of a good thing" and one should know just where to stop. Not knowing precisely where this point is, is just what's the matter with a good many breeders. And the puzzlesome science of mathematics cannot hold a candle to the science of breeding and few there be that find it out.

THE HOLSTEIN BREEDERS' ASSOCIATION OF AMERICA.—In view of the sterling merits and growing popularity of the Holstein breed of cattle, we are glad to see that the above Association has been incorporated under the laws of this State. The objects of the Association are to improve the breed of thoroughbred Holstein cattle; to ascertain, preserve and disseminate all useful information as to their pedigrees and admirable qualities, as well as the distinguishing characteristics of the best specimens; to publish a Holstein Herd Book; and generally to pomote the best interests of the importers, breeders and owners of such cattle. The present officers of the association are:—Edward A. Powell, Pres; Charles Houghton, Sec; W. C. Brayton, Treas; and Gerritt S. Miller, Vice-Pres. Any person interested in the breeding of Holstein cattle who is also an owner of animals of that breed is eligible for membership and on sending an application to the Secretary, together with a membership fee of $15, a certificate of membership will be sent to him, provided he is admitted by a unanimous vote of the board of officers. Blank forms of application and all needed information will be promptly furnished by Charles Houghton, Whitestown, N. Y.



SHORT-HORN BULL, LORD UPTON.—Fig. 12.

Farm Economy.

APPLES FOR STOCK.

CLINTON.

THE past season has been unusually productive of an abundant yield of apples in all Central New York, as well as elsewhere. The yield has, in fact, been so very great that the market for this valuable fruit has been absolutely glutted. Of course, being so plentiful, a larger quantity than usual finds a home market in the family, or among near friends and neighbors. But where these have all been supplied in profusion the question arises, What shall be done with the surplus? Those living near a good market will, of course, be able to work it off gradually, at some profit, but those living at any considerable distance from such market have hardly felt compensated for the careful picking, packing and hauling necessary to avail themselves of such market, at the low price of 50 to 60 cents per barrel for the finest grafted fruit, for when there is an abundance, only the very finest and the most carefully assorted and handled will be accepted by the dealers. A small quantity can be made into cider for vinegar and culinary purposes, but beyond that the *temperate* will not care to go. And to gather the apples and haul them any considerable distance to a cidermill, for sale at from only five to seven cents per bushel, is surely not a very profitable business for a farmer who has his corn, his potatoes and other vegetables to attend to, besides the thousand and one things always necessary to be looked after on the approach of Winter. The question then arises, What use shall we make of the surplus apple crop, that will be most remunerative?

My answer has always been, in such cases, store them carefully and use them as Winter feed for your stock. They will be valuable for such use, especially with the present rather light supply of hay in the country. My experience and experiments, running through a long series of years, have convinced me that apples are valuable for such use, for either cattle, horses, sheep or store pigs. I do not claim that the fattening properties of apples are very great, but I do claim that they are not destitute of nutriment, and that their use for animals, kept mainly on dry food during our long Winters, is highly beneficial in aiding the appetite and the digestion, and thus giving a healthful tone to the system. When prop-

erly fed they increase the flow of milk in cows without impairing the quality, and I value a daily feed of apples for the horse as highly as I do one of carrots. The horse is a great lover of apples, in that respect equaling any schoolboy. If, when you visit the horse in his stable in Winter, you will make it a rule to give him, now and then, the treat of an apple, you will soon find that you have gained his affections and confidence, and that he will always greet you with pleasure. Indeed, I have found that when I have desired to catch a horse that is in pasture, an apple or two are always more attractive to him than a taste of either salt or grain, besides being much more convenient to carry. My conclusion is that for sheep, and especially for breeding ewes, kept mostly on dry hay, they are valuable as a preventive of costiveness, and that, on the whole, they are as valuable for feed for stock in general in Winter, in proportion to their weight, as the roots usually grown for that purpose, and *more* valuable than the common flat turnip, while the milk of the dairy is entirely free from any unpleasant taste or odor arising from their use. But in the commencement of their use proper judgment should be exercised, as in every other case of a sudden change of food with animals. The change should be somewhat gradual, increasing the amount as the animal's system becomes accustomed to the change, and the feed may be increased till, we will say, about one peck is given at a feed to each horse or full-grown cow or steer, and in a similar proportion to the young cattle or sheep. For colts they are invaluable, if properly fed.

But here I am met by an article which I find is going the rounds of the country newspapers and, under the head of "Facts for Farmers," cautioning them against the use of apples as a food for stock, as likely to be productive of injury. The article appears anonymously and no hint is given as to the quarter where it originated. Besides this, it seems to me to be too absurd to be worthy of any consideration, were it not that it may, perchance, alarm or influence some young or inexperienced stock grower, to his detriment. Therefore I refer to it in passing. I quote a portion of the article: "Some farmers near Middletown claim to have discovered that their cattle, when fed on apples, have shown every evidence of drunkenness. One farmer claims that his cows staggered about so that he had to watch them all day to prevent them from falling into the creek." The explanation given is, that the cow, being a ruminating animal, allows the apples to "remain so long in the first stomach that fermentation commences," and, of course, progresses sufficiently to produce intoxication! Surprising theory that! Now we are not even informed what particular "Middletown" is referred to, "near" which such extraordinary occurrences were noticed, and where the cows were so unusually dilatory in "chewing the end," as the writer expresses it. There are in the United States no less than 18 "Middletowns," having different locations. We are not informed whether the one referred to is in Connecticut, in New York, or in the *moon*. We rather incline to think it is in the latter place, or at least that the originator of the theory was a little *moon-struck* when he advanced it, for the idea that any article of food will remain in the stomach of any healthy animal, man or beast, so long before it is digested as to undergo such a kind of fermentation as will produce *intoxication*, is preposterous, and is a direct impeachment of the wisdom and goodness of the Almighty. If it be true, why may not similar results be produced by feeding the meal of any grain? for meal, after undergoing a certain amount of fermentation, will certainly evolve a much greater amount of alcohol in proportion to its bulk than crushed or masticated apples can possibly do: otherwise chemistry and all experience have been sadly at fault. And I am yet to learn that meal does not remain for as long a time in the stomach of *any* animal to ferment and evolve its intoxicating principles as do apples. If the theory advanced in the article quoted be correct, then it strikes me the pledge administered by our temperance advocates should include in its prohibitions the feeding to our animals of anything which is likely, by its fermentation in their stomachs, to produce "drunkenness," as in the case of the cows mentioned. But the idea is too preposterous to be followed further. My only, or greatest, wonder is that any *intelligent* editor should copy it among his "Facts for Farmers." He must place a low estimate on the intelligence of farmers.

My own experience prompts me to continue to practice, and also to recommend to others, the free use of apples, both for man and beast, especially during the Winter season, when there is so little other green food for use, as being not only nutritious, but as being such a regulator of the system as is necessary for its welfare, and therefore highly conducive to its health. Of course, I intend this recommendation only for such as are in ordinary health, and then to be used with some judgment, or at least with *common sense*.

Dairy Husbandry.

THE DAIRY COW—NO. 20.

HENRY STEWART.

Butter Making—Churns and Churning.

The importance of butter-making may be estimated from the fact that several hundred patents have been taken out for churns. Most of these are designed to save labor in operating the churn; and to change the common up-and-down motion into an easier rotary motion. Others base their claims upon the formation of the dasher, by which the objectionable rubbing effect upon the butter, and the consequent damage to its texture are avoided. Others, again, claim an improvement in abolishing the dasher altogether and effecting the reduction of the cream into butter by the agitation and concussion of the former upon the sides and covers of the churn. All the varying differences in the multitude of churns may be classed in accordance with the above three main principles, and all of them are based upon some simple facts which relate to the formation of butter in the churn. These may be summed up as follows:

Cream consists of the aggregated butter globules of the milk, mixed with a portion of milk which fills the interstices between them, and which adheres to them by capillary or superficial attraction. As the butter globules rise to the surface they take with them this adhering milk, which remains in close contact with them and separates them one from another. Under the microscope, milk and cream appear as at A, figure 13, and differ only in their proportionate contents of butter globules. Each globule, however, seems to be coated with a firmer envelope than one of liquid milk, but this is probably nothing more than a closely adhering film of the milk held by superficial attraction, just as any foreign body placed in a liquid draws to its surface an envelope of the liquid and holds it in close contact. As long as the butter globules are thus suspended in the milk or the cream, they keep themselves separate by virtue of a molecular attraction of the particles of oil by which they gather into small spheres or round bodies precisely as the small drops of quicksilver remain separate when a quantity of it is dropped on to a plate or flat surface; and as these may be brought together and mingled into a mass by agitation, so the butter globules may be brought together into a mass as soon as they are violently agitated and the enveloping medium is forced by pressure or friction from between them, in the churn. The natural affinity of related particles, the common process of aggregation, in fact, brings the butter globules together into a mass as soon as the separating fluid is forced from between them.

The whole operation of the most perfect churning then depends upon the most effective method of bringing about this result. Some knowledge of the commonest principles of machines will enable any one to distinguish between the various methods of churning and to choose that system or process which is the easiest and most effective. The better designed the churn may be for its special purpose, the more rapidly and the more easily the churning is effected. The more thorough the agitation and concussion in the churn, the sooner the result will be reached. But rotary motion is more easy than perpendicular motion, and in small dairies where the work is done by hand the old-fashioned up-and-down churn is discarded and the crank churns are used. But to turn a dasher, which is made to revolve in the cream, is more laborious than to simply turn around a box in which the cream is placed, without any dasher, and so the dashless churns are coming into use very extensively.

The peculiar and different motion of the cream in these three churns may be understood by means of the following illustrations. In the up-and-down churn B, fig. 13, the action is seen to be very defective. The flaring sides of the churn leave a wide space between them and the dasher, which is necessarily smaller than the narrow opening at the top through which it is inserted. This permits the cream to pass through too easily and with but very little friction or pressure, leaving the most of the work to be done by concussion. This is very feeble on account of the almost upright sides and the elevated top against which the cream is thrown with but slight force. The chief part of the work is really done by the pounding of the dasher on to the cream, and the forcing of this against the bottom and lower part of the churn. These effects being very imperfectly produced, the churning, of course, occupies a long time, and for hand-work this kind of churn is the most laborious of any.

The revolving dash-churn C, of which the excellent one known as the Blanchard is a good type, is far more effective, both on account of the better concussion and the ease of operating it. But it has the disadvantage of carrying around with the dasher a large portion of the cream, and of exerting the best effect only at the extremity of the dashers where the cream is seen, as at C, to be thrown against the sides and top of the churn with force.

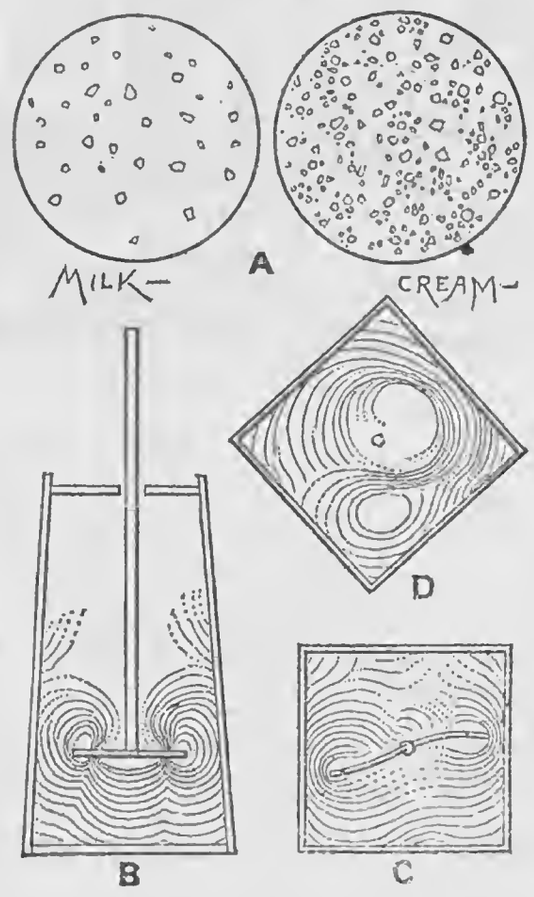


FIG. 13

The revolving churn, which itself is rotated and has no dash, produces the requisite concussion and agitation most perfectly. In this the cream in a compact body is thrown with great force on to the opposite side of the churn, and in rebounding meets the adjacent side and is dashed against that, and so on continuously (D). This effect is greatly increased by a method of hanging the churn by two diagonally opposite corners, which causes the cream to be thrown in many more directions and increases the agitation to its utmost limit, making cross currents in the mass which greatly add to the friction. This effect is so complete that the principle involved in it is made use of in some factories where small articles are smoothed and polished by friction against each other, as they are rotated in a barrel or box. It is an application of precisely the mechanical effects of churning, and it has been found that the rectangular box hung upon opposite corners completes the polishing much more rapidly than any other device.

The effect of the churning is increased up to its most complete point when the churn is only half filled. In the up-and-down churn there should not be so much as this to produce the best effect, and much difficulty in churning arises from this unsuspected cause, viz., putting too much cream in the churn. It will be evident that if the churn were completely filled, the necessary concussive action could not take place at all, and this action will be increased more and more as the quantity of cream in the churn is reduced, until the point is reached when the action is the most effective. In the up-and-down churn this point is when the cream in the churn is but a few inches in depth; in the revolving dash churn, when it is less than half full and the cream does not reach to the shaft of the dasher; and in the rectangular, dashless churns, when they are a little less than half full. When more cream than this is put in either of the churns, the time of churning is lengthened in proportion to the increased quantity.

DAIRY FLOOR WIPER.

A HANDY DAIRY-FLOOR WIPER is shown at figure 14. It consists of a strip of vulcanized rubber attached, as shown, to a flat piece of wood, beyond which it projects about an inch. A handle is inserted in the piece of wood, and

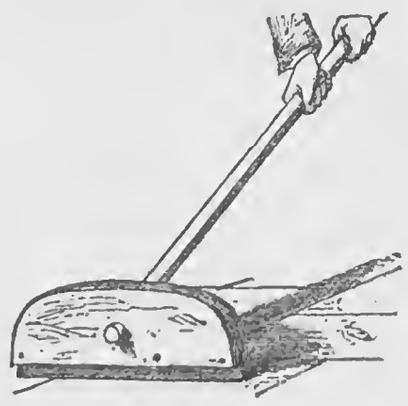


FIG. 14.

thus is formed a cheap and convenient implement that saves time and money in the dairy, as its use there leaves the floor nearly dry. Milk, whey and other slops soon decay in such places, vitiating the air and imparting an injurious odor to the cheese or butter made from the milk or cream kept there. The floor, therefore, should be frequently scrubbed and washed, especially in warm weather, and the above implement will be found very useful.

The Poultry Yard.

KEEPING EGGS.

THE hen, properly speaking, is an artificial creature, and just as our plethoric and "diseased roots" called mangels, turnips, etc., originated from insignificant wild specimens, so the hen, with her nine to fifteen dozens of eggs a year, is the cultivated and civilized result from a single or, at best, a double-dozened bird in the jungle. While we are at liberty to admire her cultivation up to the present standard, yet as she delivers these eggs mostly in one season of the year, she is to that measure inconvenient, and should in some way be induced to spread her favors more evenly over the whole year and thus give us eggs at a time when most needed, as in the Winter, during the absence of fresh vegetables and fruit. The art of artificial incubation will have a tendency, as it becomes more universally adopted, to do away with the brooding characteristics of fowls and make the non-sitting breeds more popular, and thus abolish the desire on the part of hens to lay more eggs at one season than another. The question of accommodations cuts much figure in it, too, for a poorly-fed hen when wet and cold can have little desire to propagate her species, and we needs must look somewhere for a substitute for Winter layers.

The best plan hit upon so far is a method for preserving eggs fresh from the time they are laid in the Spring and Summer until the demand increases for them in Winter. To accomplish this many plans have been devised. We notice in the poultry papers quite a number of recipes or devices. Some claim that eggs should be oiled or greased to keep out the air; others that they should be turned once a day, and an ingenious plan is suggested—to fill a bag with eggs wrapped in paper and have a loop on both ends to hang it up by one end one day and the other end the next day. While we can understand the necessity for turning eggs while hatching in order to get the heat on all sides, we fail to see the keeping quality of this process, though we know it is quite universally practiced.

Keeping eggs is quite a feature in commerce, where they change hands under the common name of "limed eggs," whether they have ever been near lime or not. Almost every merchant that deals at all extensively in eggs has a secret pickle of his own to keep them in. A correspondent of the Western Rural gives the following recipe for a pickle: "Take five quarts of rock-salt, five pounds of unslaked lime and a quarter of a pound of cream-of-tartar; dissolve in four pails of water, which make sufficient pickle for a barrel of eggs." Then there is cold storage for holding eggs along with butter and cheese. At the last meeting of the National Butter, Cheese and Egg Association, held at Indianapolis, there was quite a discussion between the egg merchants present as to what was the best temperature for holding eggs for long storage. We give their ideas in their own language:—

Mr. J. A. Smith, of New York—I think the egg trade of this country the most irregular trade that we have. A storage house properly constructed, properly put up, will keep eggs three months, possibly four months. They should be worked off within four months. Three months is as long as any eggs should be held in cold storage. I have never known but one way to hold eggs in cold storage to hold them properly, so that they came out good, and that is, take good oats (the oats must be perfectly dry, sweet and clean); get every particle of dust out of them, then pack the eggs in them. If you pack eggs in musty oats they will certainly be useless when they come out. They should be in a temperature of 36° to 40°. The reason so much is said against this cold storage is, that eggs are not properly packed; they are put in musty straw.

Mr. Gilbough—I have had 15 years' experience in keeping eggs in cold storage. If eggs are taken fresh and placed in cold storage they can be safely kept. It has resulted profitably to me. First, get fresh eggs, take out all dirty or soiled eggs; get the very best oats—the cleanest and the best—put them through the fanning-mill and take all the dust out, and pack the eggs in cold storage of about 45°. When we take them out of the cold storage we let them stand, so that they may become of the same temperature as the atmosphere around them.

Mr. A. Albro—I move to hold eggs any length of time in cold storage—36° to 40°—should

be considered the proper temperatnre. Motion carried.

MR. TALCOTT AND THE DUCKS.

Mr. Talcott wishes to know how large and deep a pot for young ducks to feed out of should be. It was always my custom to take any pot or pan that was convenient, lay an old stone over it after burying it in the ground, and then put water enough in it to just allow the ducks to reach the bottom with their bills. The larger the pot the better, as it requires filling with water less frequently. It is my custom to keep the young ducks penned up or confined to the chicken yard until they are six or eight weeks old, as they are sure to be lost if allowed to go to the pond.

In regard to their eating whole corn, or, as Mr. Talcott puts it, "at how young an age will the ducks fish out corn *and eat it* if so provided for them;" that will depend upon the breed and growth of the ducks. I have never noted the exact age at which they will swallow a grain of corn, and all I claimed was that it would amuse them; but I think at four weeks of age they will keep the trough or pot clear of corn; but this was never intended to be recommended as the sole feed. On the contrary, I stated that this would amuse them. The ducklings should have their regular feed of coarse corn meal, bran and boiled potatoes all mashed together, twice a day with a grass run if possible. They are excellent foragers in the garden where they will hunt slugs and bugs all day and nearly all night, and do but little harm to fruit or vegetables.

It was never my good fortune to have a small creek for the ducklings to wade in; but if allowed even that with unlimited range, I should expect to lose a large number of them. Water is of no service to them until well feathered when about two months of age, and if their general wants are attended to and a good range in grass and shade is allowed them they will do quite as well without as with a large supply of water. The flavor of the flesh is then better than when they get most of the feed from the pond. L. S. Hardin.

PROFIT IN EGGS.

It has been always considered a mooted question whether or not hens can be made to pay when all the food must be purchased. Hearing of a Mr. James Kelly who carried a considerable flock of hens on a small place and bought all the feed, I was interested to know how his accounts stood. On interviewing him he told me he sold all the eggs at one store where an account was kept, and as he purchased all his feed at the same store a debit and credit account thus appeared with his fowls. He had 85 hens. Last year he made a clean profit with them, for eggs alone, of $196. This year, beginning March 15th, and extending through to November 13th, his account shows a sale of $116 80 worth of eggs and $30 for chickens, with a debit account of $45 80 for feed. He has purchased just two dollars' worth of feed outside of this store, and on November 13th, had about that amount of feed on hand. As there are but two in his family—himself and wife—there can be but little aid in feeding from table scraps. Everything about his place is in convenient order for the well-doing of chickens. He keeps feed constantly before them, which is not always considered the best plan, but here there is an abundant variety—wheat, corn, broken oyster shells, and an abundant range on grass land, and dust baths at hand, besides a wide-open shed facing South to catch the sunshine while enjoying shelter from the cold winds of Winter. He sells his eggs for from 20 to 30 cents a dozen, and as he buys all his feed at one store, of course, he does not get the benefit of bargains he otherwise might obtain. No artificial heat is used in Winter to aid the hens when eggs are highest, so that this is a successful effort unaided by any special preparation or outlay.

L. S. H.

THE SUPPLY OF WATER.

Summer is the season when fowls, like most other animals, require the largest supply of water, yet just now is the time when they are most likely to suffer from the need of a fresh and wholesome supply of it. Those who have never kept fowls in confinement have no idea how much water they drink in 24 hours. They take but one or two sips at a time, but those sips are taken so often that in a day the aggregate amount consumed is quite large.

In Winter, when water freezes so readily, it is quite a problem how to keep fowls in confinement well supplied. Many devices for this purpose have been invented which have turned out more or less successful. Probably the best and only guarantee against absolute freezing up is to have a running stream, and to secure this on a small scale, the best method is to have a barrel of water well protected from frost with a wooden faucet in the end, and to allow this faucet to leak at about the rate of two drops a second into a basin just so deep that the hens can reach the bottom of it when no ice is in it. They can drink from this until it is full of solid ice, when the basin must be thawed out and emptied. Everyone knows that hens cannot lay without a full supply of water; but few know how readily they are made sick by having to drink the water from melted snow or to eat snow.

I have never found it a good plan to add red pepper, Douglas Mixture, or any other compounds to the water. The fowls are too willing to deny themselves the necessary supply of water if it has a repulsive taste to them. The only rational way to doctor a chicken is to catch it and cram the dose down its throat. The process is much easier than most people would imagine. The extra labor required to supply hens with fresh, wholesome water in Winter is a mere trifle, and will be amply repaid, not only be the greater number of eggs laid, but also by the better health of the fowls. No one who has a due regard for the comfort of domestic animals, or even for his own interests will be dilatory in this. Poultryman.

Horticultural.

CRYSTAL WHITE BLACKBERRY.

It seems to me to be about twenty years ago that a few plants of a white blackberry came from a Boston friend. On trial it proved to be of rather poor quality, and was thrown out. The Crystal White may be a seedling of this, or it may be something of another origin. I have only seen the fruit of the latter, and so far as my memory serves me it is of a better quality than the former, and of a purer white. Still, the little I have seen of the fruit has not led me to form a high estimate of its quality, though there is room to hope that it may prove to be the pioneer of a class of white blackberries that shall have excellence as well as novelty to recommend them.

Westchester Co., N. Y. Peter B. Mead.

[We are indebted to Mr. J. T. Lovett for the branch from which the Crystal is drawn.—Eds.]

WHITE BLACKBERRIES.

Some 12 or 15 years ago a friend in the West sent me roots of a white, a red and a black blackberry which he considered novelties as well as acquisitions; but a trial has failed to develop any desirable qualities about them in this soil and climate, unless it be a remarkable tenacity of life, as I have not yet entirely succeeded in eradicating them. The former was truly a white (yellow) blackberry of medium size, about an inch in length by three-quarters of an inch in thickness in the best specimens, of very indifferent quality, and the plants, though very vigorous, were not hardy.

If what is now being sold as "Crystal White" is identical with, or no better than, the above white blackberry, a trial of it will only end in dissatisfaction. Having waged a warfare with the blackberry briars to a greater or less extent for many years past, anything in this line that receives my commendation or toleration must be above mediocrity, which none of the above approached.

Montclair, N. J. E. Williams.

CRYSTAL WHITE BLACKBERRY.—FROM LIFE.—FIG. 15.

RURALISMS.

Winter is the time in which to mature plans for Spring improvements. This kind of headwork is too often avoided and put off till it is too late to think calmly or decide wisely. New members of the guild seem to think it must be very irksome, whereas there is nothing in horticulture more fascinating than planning for the future. Perhaps a suggestion in regard to hedges may be useful to some reader of the Rural. I have in view now a *deciduous* hedge. I have made hedges of all manner of things, from a pear tree to a Japan Quince, the interval embracing a good many pretty things. For a *useful* hedge in the proper place I prefer the pear; but only a few kinds are well adapted for the purpose. For an *ornamental* deciduous hedge almost anywhere, there is nothing to surpass, if to equal, the Japan quince—Cydonia Japonica. There are a number of deciduous plants that make pretty hedges, but the most of them are difficult to form and troublesome to keep in good shape and order. The Cydonia is almost entirely free from these objections, provided only that young plants be used to start with. What a lovely sight it is when in bloom, and how picturesque at all other times. Those who have a fancy for more than one color can use the rose and the white-colored to mix with the crimson. There is this farther to be said in favor of the Japan quince that scarcely any manner of neglect can spoil its beauty. It can be easily and quickly brought into shape again. It will always retain its beauty, though it may lose its primness by neglect to be sheared. No amount of shearing, however, can ever give it that hard, solid, expressionless surface so common to evergreen hedges, or take away its *negligee* beauty, if I may so call it, and for that I like it above all others.

I have heretofore stated that the Japan Climbing Fern (Lygodium scandens) was hardy. The top growth has matured and died, but the lower fronds near the ground are still (Dec. 19) fresh and green, notwithstanding the thermometer has been down to 8°, and the Winter thus far exceptionally cold. As we have a fair promise of zero weather to give the Lygodium a thorough trial, I have not allowed so much as a dried leaf to remain near one plant. If it survives after three years' trial, it may safely be regarded as a hardy plant; and I hope it may, for with its enormous growth out-of-doors and its beautiful fronds, I readily perceive what a useful plant it will be. What a lovely thing it would be in the moist climate of England, where it would be perfectly hardy, if here. The best manner of growing this plant is not yet understood, to judge from what I have seen.

A recent writer in a cotemporary press tells how he has succeeded in grafting the tomato upon the potato. He supposes the operation to be new and original with himself, and goes somewhat into detail over the difficulties he encountered before his efforts were finally successful. There is "nothing new under the sun." This is another zinc label case. Somewhere about 1860 I saw the two plants growing together in this way in the garden of Dr. Siedhof, still an enthusiastic horticulturist. He wrote me a description of his method of performing the grafting, and it was published in the Horticulturist. Whether the writer alluded to above ever saw this published description I cannot say, but his method and Dr. Siedhof's are the same. The result of the grafting is that one gets a small crop of potatoes beneath the surface and a crop of tomatoes above; besides, the experiment is curious and interesting. If it would interest the readers of the Rural, I would tell them how it is done. It is very simple.

The late severe weather has finally browned and destroyed the foliage on my pretty Spiræa Thunbergii, which I lately spoke of as being almost an evergreen. It gave me a great deal of pleasure up to the 15th of December.

Some of our "country cousins" may be surprised to learn that Gen. Jacqueminot Roses are now selling in New York (Dec. 23) for one dollar each at wholesale; and yet there are supposed to be not less than ten acres of glass in New York and its vicinity devoted to forcing this rose alone. I do not know precisely how many acres are devoted to Marechal Niel, but perhaps nearly as many more; and probably half the number to Lamarque. If I should state half the number devoted to Cornelia Cook, Niphetos, Perle des Jardins, Bon Silene and similar popular kinds for Winter florist work, I should hardly be believed. Marechal Niel, one of the grandest and most perfect roses ever raised, and infinitely superior to Gen. Jacqueminot, is now selling for seventy-five cents each—twenty-five cents less than the General. There is a "craze" among young people, however, about Gen. Jacqueminot because of its brilliant color and fine bud. Aside from these two points it has no great merit as a rose, except that it is one of the very few Remontants that will force at all. But boys and girls love to look gay. Fashion is an unreasoning tyrant. Young men struggling in the world to "make both ends meet," pay a dollar for a rose-bud to carry to their sweethearts. Many of them will wish those dollars back again when they go to housekeeping.

Through the kindness of my friend, Mr. Bruggerhof, I have lately had the pleasure of reading some odd numbers of the London Garden. I have never seen a work of any kind more admirably conducted; and this is the more surprising to me since it covers so large a field, and covers it all over, if I may so say, with everything that is pleasing to the eye and good to the taste. I congratulate Mr. Robinson, the editor, that he has been so successful in preparing this delightful weekly feast, and I congratulate English gardeners and others that enjoy the privilege of sitting down to it. While speaking of the "Garden," I must say I am delighted with "Leaflets," by Justicia. He is a man after my own heart. I like the downright heartiness which runs through all the "Leaflets" and keeps them always fresh and green. He is evidently at liberty to write as much or as little as he pleases, and how he pleases; and this liberty is the source of his strength. I would advise the editor of the "Garden" to put no restraint upon him, but to let him go on in his own way.

I wish to drop a caution here, lest I should mislead some of the readers of the RURAL. I find on further experiment, that *pure* alcohol of the proof I use is too strong for the young and tender growth of some plants. It kills the insects, but disfigures the new growth. It should be diluted for plants that are growing. I am now trying a solution of carbolic acid soap with a small proportion of alcohol and a few drops of ammonia added, and am much pleased with it; besides, it makes a cheap compound. The proportions I shall be able to give when I have experimented further, if it proves to be really good. What a boon it will be to the horticultural world when a *cheap* compound shall have been discovered for the destruction of all kinds of insects that infest plants; something without *poison*, easy to apply, and not offensive to use. HORTICOLA.

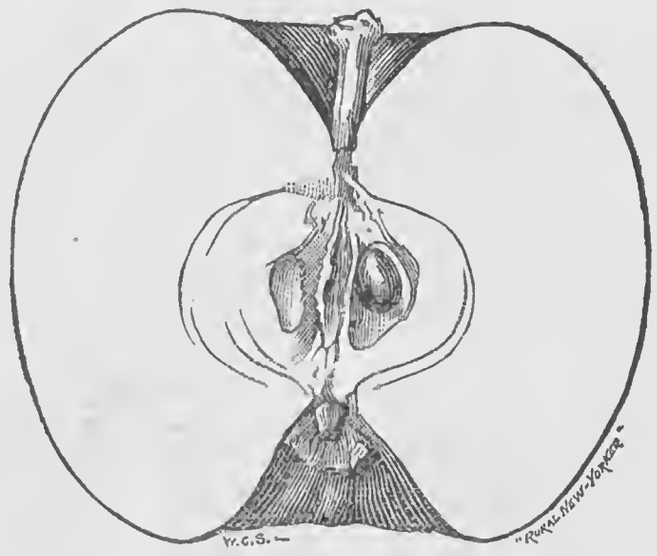
Pomological.

THE WHEATLAND PEACH.

DANIEL E. ROGERS, the originator of this peach, is the largest and most successful grower of peaches in this county. At a time when peach growing here was on the wane, and many thought this profitable industry a thing of the past, Mr. Rogers planted an orchard of 15 acres on strong wheat-producing loam, on an elevation. With no previous experience in field culture, and with little outlay, he made the orchard exceedingly profitable. His success was so remarkable that it produced a furore in peach planting that has not since subsided.

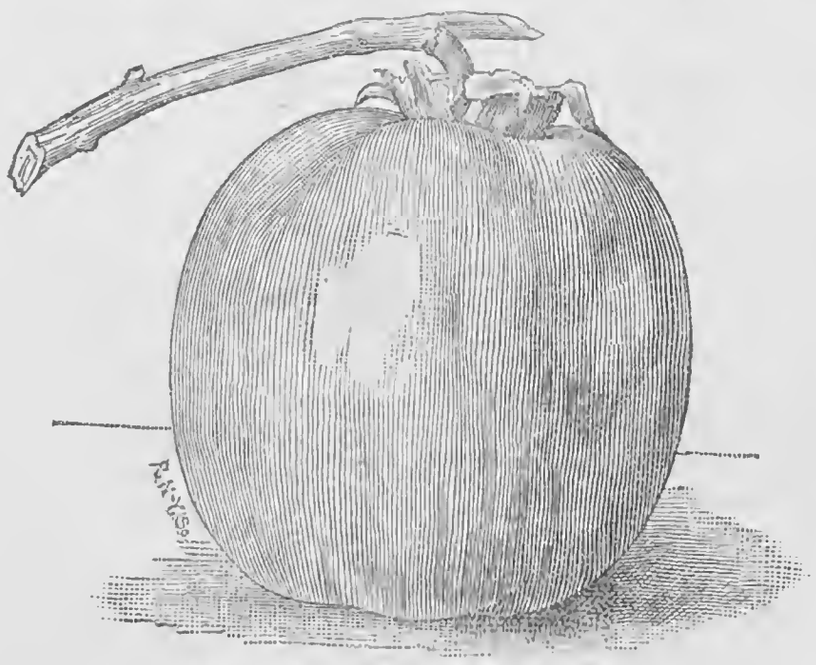
In response to an invitation I drove into Mr. Rogers's orchard, some years ago, with some friends, to learn his methods and to sample his fruits. We attributed his success, 1, to the elevated site. While not properly a hill-top, it commanded the view of a large tract of country. Those fatal late Spring frosts to which the peach here is subject would be much less likely to do injury here than lower down toward the valleys. 2. To the fertility of the soil, and its superior natural drainage. 3. To the thorough cultivation given.

After passing through the orchard, viewing the different varieties in various stages of maturity, Mr. Rogers said he would now show us his favorite. After a short walk he pointed to a peach tree about eight years old, of remarkable vigor and foliage, laden to an alarming extent with uniformly large, yellow fruit with red cheeks. The branches of this strong tree seemed about to give way under their burden, which hung in continuous ribbons, apparently as closely as space would admit. "What peach is this?" I asked, plucking a specimen. "That is just what I want to find out," was the reply. "It was bought for a Crawford's Late, and planted with that variety, but you can see that it is over a week earlier. It ripens when I have no other to market. The top of this tree died back after planting, and sprouts that form the present head came up from below where it was budded."



SUMMER ROSE.—FROM LIFE.—FIG. 16.

Mr. Rogers soon after exhibited peaches from his overburdened tree at the New York State Fair, held at Rochester, where they were awarded the first premium, the late Mr. M. B. Bateham, of Ohio,—than whom there was no better judge—being one of the judges. Mr. Bateham pronounced it a new variety. An enterprising nursery firm subsequently purchased the tree for propagation, naming it the Wheatland, after the town of its nativity.



JAPAN PERSIMMON.—FROM LIFE.—FIG. 17.

The leaves of the Wheatland are exceedingly large and glossy; glands reniform; fruit large, roundish, with moderate suture on one side; skin deep golden yellow, with bright red cheek where exposed; flesh yellow, exceedingly firm, juicy, rich and of good quality; stone free and small. This peach has been visited in bearing by many prominent horticulturists. Mr. A. C. Younglove, the veteran peach and grape grower of Vine Valley, N. Y., reported it at our Western New York Horticultural Society as "the largest, hardiest and best of its season, superior to Crawford's Late; though crowded on the tree, the fruit was all large." The original tree is now 12 years old, and in perfect health. Thirty-nine specimens from this old tree the past season weighed 18 pounds.

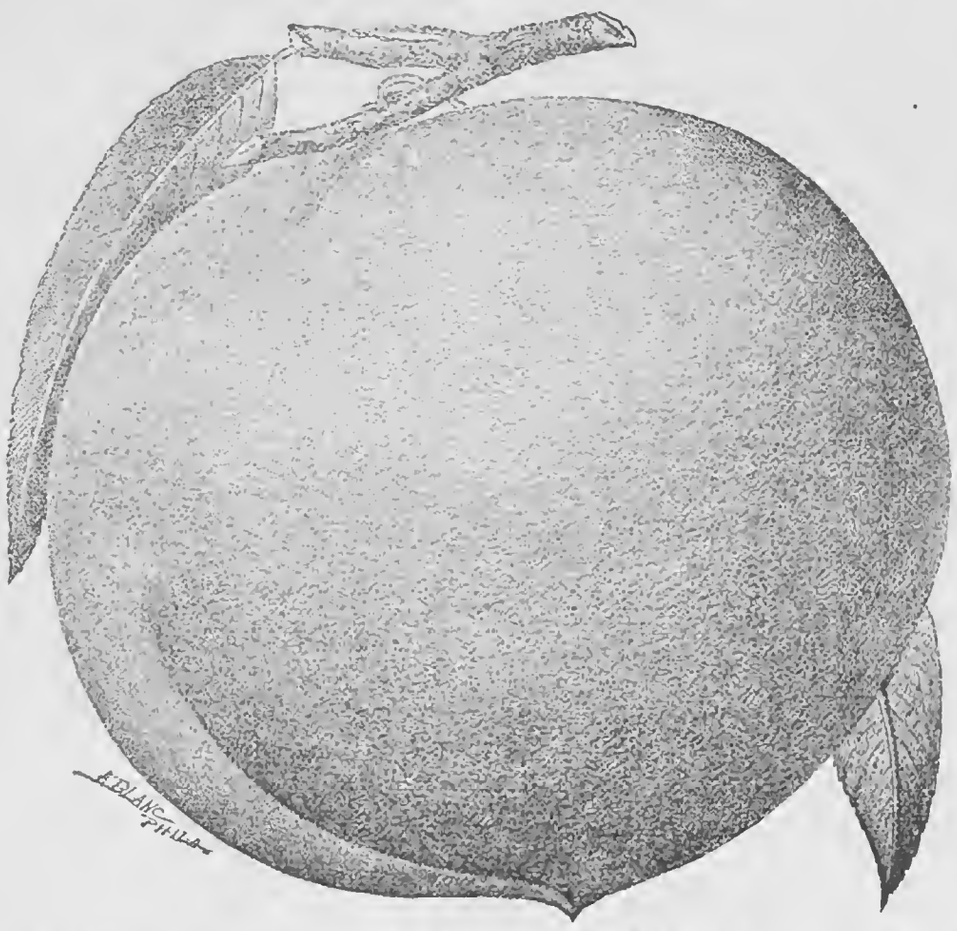
Monroe Co., N. Y. CHARLES A. GREEN.

MORE ABOUT PEACHES.

T. T. LYON.

ABRICOTEE.—We have, for perhaps thirty years, been familiar with a peach, in Eastern Michigan, under the name of Admirable; and more recently we find it in Western Michigan, without name, reproducing itself from seed, without perceptible change. We find it to correspond fully with the description, by Downing, of the Abricotee, Apricot Peach, or Yellow Admirable, and can hardly doubt that it is the same, although he does not mention its ability to reproduce itself from the pit. Although almost destitute of red, it is still an attractive fruit, and has some valuable qualities as a market peach; among which is its late ripening about the last of September.

JACQUES' RARERIPE is large, yellow and showy enough to be popular in the market, where it in common with most other yellow peaches ripening in September, passes among buyers as a Crawford. It seems to be growing in the estimation of Southern Michigan planters. Although popular with those who "buy by the eye," it can never meet the requirements of a discriminating buyer.



THE WHEATLAND PEACH—(From an engraving furnished by Mr. Charles A. Green.)—Fig. 18.

MOORE'S FAVORITE, so far as I am informed, is new in the "Michigan Fruit Belt," although an old variety at the East. It gives promise of value as an excellent dessert fruit, with only a reputation yet to be established for productiveness, to give it position as a market variety. It ripened here, this season, about September 10th; and is certainly good and beautiful enough to command attention.

MUSCOGEE is a child of the extreme South; and came to us, for trial, from L. E. Berckmans, of Georgia. It is an odd, unprepossessing fruit; so repulsive, indeed, in appearance, that it can hardly be expected to win its way among purchasers, although of really excellent quality. Very probably it may put on a more attractive appearance in its own "Sunny South."

OLDMIXON FREE has been so long, so generally and so favorably known everywhere, as to scarcely require a mention. I, however, take occasion to say that it is decidedly growing in favor among planters here, notwithstanding the host of more recent rivals. It is one of the oldest of our still popular market peaches, and is by no means to be ignored as an amateur sort.

THURBER is another of the trial varieties sent us by Mr. Berckmans. Although of good size and well colored, the experience of a single season shows a slight excess of acid, leading me to fear that its high reputation at the South may not be fully sustained under Northern skies.

MORRIS'S WHITE is not yet so old as to be wholly laid aside. It is still considered one of the finest of canning peaches, although it has several competitors. At the West, the later yellow-fleshed varieties to a great extent take its place, even for this purpose. Still it is not without its friends, and will be found in many even of our commercial orchards.

SUSQUEHANNA, notwithstanding its Eastern reputation for unproductiveness, is rising rapidly in favor at the West. Its large size and fine quality no doubt foster this tendency, although there is room for doubt whether its popularity can be permanent. This is doubtless increased by the vigorous habit of the tree.

THE SUMMER ROSE APPLE.

THIS apple is small to medium in size, round, sometimes oblong; stem short; calyx closed, in an even basin; skin smooth and waxen in appearance, streaked with red, generally, over the entire surface when at maturity; flesh tender and of a sprightly, pleasant sub-acid flavor; season last of July to the middle of August. As handsome as wax, and as *good* as it is handsome.

We have grown it for the past 15 years, and esteem it the best of its season with which we are acquainted. The tree is a moderate grower and a fair bearer. The fruit also, from some cause, is usually very fair. While the Astrachan within a few feet will hardly give 25 per cent. of sound, perfect fruit, a much larger percentage of the Summer Rose will be found perfect. Another peculiar feature is, that the smallest specimens, sometimes not over an inch and a half in diameter, will, in quality and flavor, compare very favorably with the largest. E. WILLIAMS.

THE SUMMER ROSE APPLE is one of the best of its season for family use, and will please almost any taste. CHARLES DOWNING.

The Japan Persimmon.

A few weeks ago we received from Mr. John Saul, of Washington, D. C., a specimen of the fruit of the Japan Persimmon, of which the illustration, figure 17, is a true portrait. The tree was grown on the grounds of the Naval Observatory, in Washington, where it has stood uninjured for 20 years. It was brought to this country by the Perry expedition to Japan, more than 25 years ago, together with a few others. This tree has borne fruit during the past two seasons. (See Editorial page.)

Farm Topics.

ENSILAGE.

This subject is at the present time receiving much attention through the agricultural press and yet it is questionable whether it is best for the average farmer to be led away by any undue enthusiasm in that direction. It has always been supposed that the genuine Yankee possessed a good degree of cautiousness, and that before adopting anything new, he was inclined to inquire, "Will it pay?" which is an important consideration before taking any very radical departure from the accustomed routine; and yet, for some reason or other, "Morus multicaulis"-like, "ensilage and silos seem to have caused some to almost run wild. One objection to ensilage is the extra expense that is entailed upon the farmer in the preparation of the silo and the preparation and packing of the fodder. On general principles the average farmer cannot afford to largely increase the running expenses of his farm. It is safe sometimes to try experiments that are inexpensive, or perhaps those which entail some expense, provided the increased benefits therefrom are sufficiently large to justify the outlay. It is not alway

wise for the farmer to desire to be first and foremost in that which is new, for many times he has been awakened to a realizing sense of the idea that he has been humbugged, or, in the words of Dr. Franklin, has "paid too dear for the whistle." Now to construct a silo requires an expenditure of labor and money, and the question to be determined is, will the advantage gained in any way balance the expenditure?

In the first place, what is the advantage, if any? It must consist in the production of some chemical change that increases the feeding value of the fodder or else no benefit is derived. It is very easy for a person to believe what he is anxious for, and so any man who has put out his money in a new enterprise very earnestly desires that he should be benefited thereby, and hence is ready to believe that he really is benefited, when perhaps he is not. Again, persons are apt to speak of an enterprise in which they are engaged as successful because of the mortification that comes from acknowledging a failure.

Some years ago there was a great hue and cry regarding the advantage of cooking food for animals, and yet from the fact that so little is said about it now, and so little food is cooked, it is evident that the benefit did not balance the extra expenditure, so that it is more than probable that a few years will be sufficient to hush the cry about ensilage. Some, more honest than others, even now, after a satisfactory trial, acknowledge themselves disappointed, and express a determination to adhere to the old mode of curing fodder as being more satisfactory, all things considered.

Average farmers should be slow to adopt any person's cherished hobby until on a small scale it can have been tested sufficiently to prove its efficiency and desirability.

Tolland Co., Ct. WILLIAM H. YEOMANS.

A CONVENIENT POWER for dog or goat is shown at figure 20. Such a power can be bought cheaply, or made at home by a neighboring carpenter or handy member of the family, and will, in the course of a year or two,

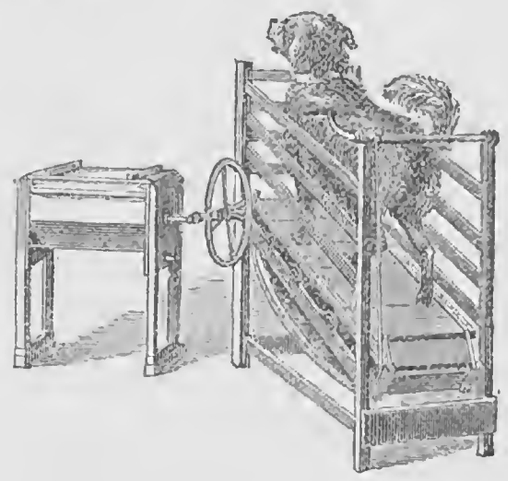


FIG. 20.

save many times its cost, in labor and worry. A little ingenuity will easily attach it to a churn of any sort, or to a cider press; and if more power is needed, a couple of dogs or goats may be used, or that animal so common across the Atlantic, but so rare here—a donkey.

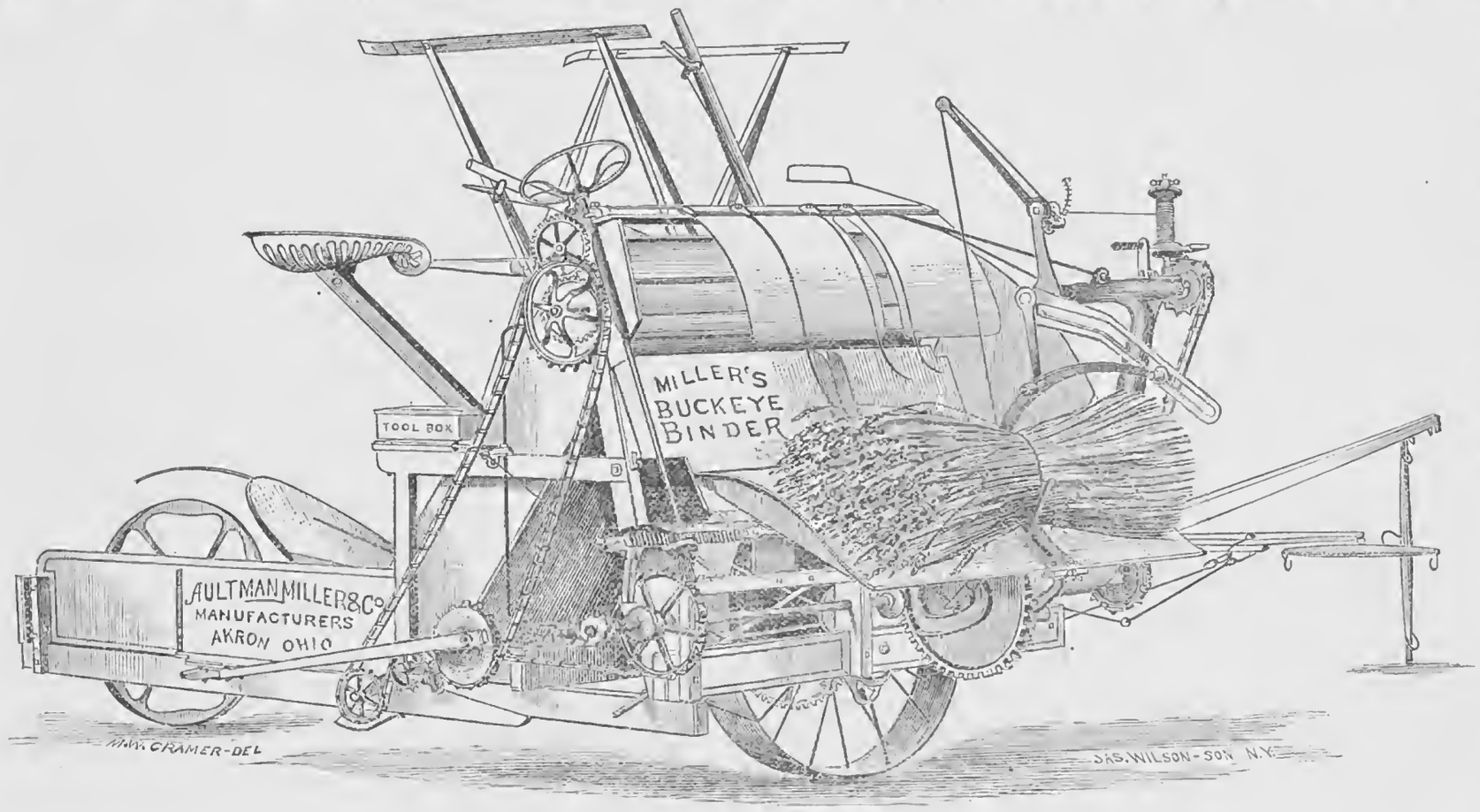
Industrial Implements

MILLER'S BUCKEYE BINDER.

In the large wheat-growing sections of the country the self-binder is a most desirable machine, and is every year coming into more general use. With last year's harvest the Buckeye machines celebrated their twenty-fifth birthday, having been first brought out by their inventor, Mr. Lewis Miller, in 1855. One of Mr. Miller's last and most important introductions has been the Miller Buckeye Self-Binding Harvester, as represented in figure 19. The aim of the manufacturers of this binder (Messrs. Aultman, Miller & Co., Akron, O.) has been to secure, as far as possible, the utmost simplicity. It has been thoroughly tested in the fields, and from the reports we heard from farmers at the fairs last Fall we should say it has stood every test well. It has a simple crank movement for the needle, allowing a stationary arm of cast-iron, tubular in form, to be brought close to the work to be done, giving a rigid support to the needle itself and securing great steadiness of motion.

The driver, without leaving his seat, can instantly move the binding apparatus forward or backward to suit long or short straw. Bundles are delivered regularly at intervals of nine or eleven feet, or by means of a foot-lever the size of the gavel may be regulated at will by the driver, and large or small bundles bound without change of adjustment. When properly adjusted the Buckeye will bind as tightly as may be desired, the limit being not the capacity of the machine, but the strength of the wire. While the cry of the farmer is still for twine binders, they have not as yet been so thoroughly perfected as those that use the wire. Suitable twine has also been hard to get in sufficient quantities to meet the demand, should our country again be favored with another large harvest. Farmers should prepare early and thoroughly to post themselves on labor-saving implements which they will have to buy for the coming season.

BEPPO.



MILLER'S BUCKEYE BINDER.—FIG. 19.

A PROSPEROUS FIRM.—How fortunate it is that no honest, enterprising dealer or manufacturer can benefit himself without at the same time benefiting his customers. His own prosperity depends on his supplying the public with wares of the best design and make at reasonable prices, and in doing this he helps every one who buys his products. There are few firms in the country who have been more successful than the Vermont Farm Machine Company in benefiting themselves and the farming community in this way. Beginning in a comparatively small way at Bellows Falls, Vermont, in 1871, their prosperity has since been steadily increasing, owing to the constant increase of their trade due to the excellence of the goods they manufacture, so that lately they have been enabled to transfer their business to much larger and more convenient quarters. Of their manufactures, the Cooley Creamer has won a first-class reputation, not only in this country, but also in Europe, and wherever the best appliances are used in the dairy; the Davis Swing Churn, without dashers, floats or inside gear, has become popular wherever it has become known; the Eureka Butter Worker has obtained a sale almost as world-wide as that of the Cooley Creamer, while the improved Evaporator is gaining a fine reputation not only for making maple sirup and sugar as well as apple jelly, but also in the growing industry of sorghum sirup and sugar making. LYNX EYE.

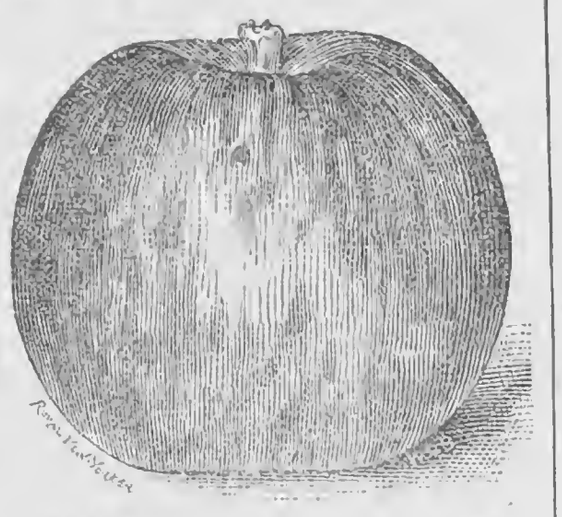
A GOOD REPORT.—The Warrior Mower Co., of Little Falls, N. Y., put 479 machines into the State of Michigan last year. They were all sold and settled for before the first of January. This speaks well for the company, for their machines, and also for the farmers of that State.

Miscellaneous.

RURAL BRIEFLETS.

IT is a great satisfaction for us to receive fresh, sound, native, white grapes at this season. A small box of the Prentiss has been received from Mr. Hubbard, of Fredonia, N. Y. The several bunches which it contained were in a state of almost perfect preservation, and they were as sweet and agreeable as they looked to be. Mr. Woodward, a few days ago, brought us a few of the Niagara which were also well preserved, though, we believe, long-keeping qualities have never been urged as among its merits. "What shall we do with all of our new fine white grapes?" is asked. It will be a good while before we shall have that bridge to cross. During last season we were unable to procure hardy white grapes of any kind except Rebeccas, and they were sold at a high price and scarce at that. "Why don't you get them?" we asked at several grape stands. "Because we can't," was the reply. . . . . .

WE have received a note from one of our most experienced stockmen, and the following extract from it is gratifying to the RURAL NEW-YORKER, and may interest its readers: "Your animal portraits are magnificent as works of art, and all the better because they are true. Now let us see if truth and honesty in animal portraiture will not prevail. It is the breeders who have been inflicting pictorial monstrosities upon the public, but breeders cannot live upon themselves, and must fall back upon the public for support, and the public have been taught by their own good sense that the absurdly foolish pictures of animals, that have heretofore been published could only be considered as suspicious circumstances carrying with them taints of deceit. For if the pictures were deceptive might not the originals be so too? The good sense of sensible breeders, like General Curtis and others, will, however, prevail, and support honest journalism, which rests upon the truth in all things." . . . . . .



SUMMER ROSE APPLE, SHOWING VARIATION IN SIZE. (See page 20.)—FIG. 22.

WE have on several occasions discouraged the use of the immense quantities of manure which are by many thought to be necessary to the production of fine asparagus either in the field or garden. We have referred in support of our view to the immense areas under asparagus cultivation within a few miles of the Rural Farm, that have received no manure for years and we have been unable to learn that they were ever heavily manured. Upon these highland, sandy farms there is no other crop that can be raised with so little labor that returns a larger profit. . . . .

WE have just been reading in the London Chronicle, an account of the mode of cultivating asparagus in the Argenteuil district of France. There the amount of labor given to the crop is prodigious, though it would appear that manure is no more valued there than here in the Long Island asparagus belt. In Argenteuil they are far more careful, also, not to over-cut than we are here. The writer of the account above referred to, says that he saw no sign anywhere about Argenteuil of exhaustion from over-cutting. On the contrary, all the beds and rows seemed to have been cut for the permanent good of the plants rather than the produce. A great deal of the asparagus was *staked*. Each plant was earthed up into a compact little hill—"a foot, 18 inches or more in hight—"around its stems. This was pressed firmly around the plants to prevent the wind from blowing them about as well as to blanch the shoots and "feed the roots of the asparagus." The entire process of culture is carried out by hand, neither hoe, fork nor spade being used. The little mounds are leveled down to the ground in gathering and the young shoots snapped off by a sudden twist of the finger and thumb. . . . . .

THUS the soil is moved twice a year and is as "fine as an ash-heap." Of this fineness the growers are wonderfully proud. They say that the weather and Winter exposure of the soil between the rows sufficiently enrich the soil. . .

Notwithstanding all the labor bestowed upon this mode of cultivation, Argenteuil, it is said, has become rich upon this special industry. . . . . .

It is from this place, spot, district or whatever it may best be called, that we have imported the Argenteuil asparagus seed now offered in the RURAL'S Free Plant and Seed Distribution. About a half ounce will be sent to each subscriber who applies, and we hope that all who thus receive it will follow our directions (to be given before Spring) as to cultivating it. It may prove no better than our own. It may prove in our soil to be essentially the same. But let us give it all needed care, hoping that asparagus culture may thus receive an impetus which its value to the farmer, either for his home or for market, richly entitles it to. . . . . .

A NOTE from Mr. James J. H. Gregory of Marblehead, Mass., to the RURAL reads as follows: "As a friend of Blount's White Prolific Corn, it may please you to know that it is a success in far-off India, just below the Himalaya Mountains, in the Hooloo Valley. A friend residing there writes me that it has done capitally and is an acquisition. I was glad to read your hearty words of commedation of Commissioner Le Duc. I admire his energy and pluck, and as to his enthusiasm, we want oceans of it in that office, with a country of such magnificent possibilities as ours." . . . . . .

THE controversy between Gen. Le Duc Com. of Ag.,) Prof C. V. Riley and the RURAL NEW-YORKER is still fresh in the minds of those of our readers who interested themselves in it. It may be remembered that Prof. Riley expressed himself at the time that he feared the RURAL was prejudiced in favor of Gen Le Duc and that it was not willing to present the case strictly according to its merits. The following extract from a note to the editor will show that Professor Riley must, in the end, have been well satisfied with the impartiality of our course. "I cannot too strongly express my satisfaction at the increasing evidence of prosperity and enterprise which the RURAL NEW-YORKER exhibits."

What Others Say.

WHILE British agriculture is in a transition state, says the Live Stock Journal, would it not be advisable for cottagers to lay to heart the hints we publish now and again, on the advantages of goat keeping? If the depressed Irish farmers, for instance, were to keep goats as they do pigs, they would soon find that the one would, at little cost, assist the other to "pay the rint," and also afford a palatable and nutritious diet to their children. Goats can be kept by people who cannot afford a cow; and if they would only be less short-sighted, our milk supply might be greatly increased, and the health of cottagers' and laborers' children much improved.

DAVID SHAPPEE, of the Elmira Farmers' Club, said that fourteen years ago he helped build a fence, the posts of which were Red-cedar set fifty years before, as he was told by Mr. Bartlett upon whose farm they were standing. They were as good as new when he helped upon the fence. A great many years ago, before he was born, remarked Mr. Hoffman, an old resident of the valley set cedar posts on a farm that afterwards came into his father's possession. Those posts are now supporting a fence, and he believes are good.

UNDER the Veterinarian Department, referring to statements which have been made to the effect that pleuro-pneumonia can be communicated by the virus from inoculation sores, the Mark Lane Express (London) says: "The RURAL NEW-YORKER quotes from the North British Agriculturist to the effect that 'The artificially produced disorder may generate virus which, *it is stated*, may suffice to set up the immodified disease in all its contagious activity.' The italics are our own, and the words so emphasized show that our contemporary does not take the responsibility of the statement. With regard to this matter we can say that no case of pleuro-pneumonia communicated by inoculation has ever yet been authenticated; in fact, the advocates of inoculation do not claim that much, so far as we are aware. As the case stands, pleuro-pneumonia has never yet been proved to be inoculable. Cows have lost their tails, and lost their lives, through inoculation, but not one solitary case has ever yet come to light in which inoculation conveyed the disease, or any modified form of it. It produces an effect on tails, and further up the body sometimes, but it has never yet been known to reach the lungs. How, then, can the pus from an inoculation sore convey pleuro-pneumonia?"

FORCIBLY PUT.—"The only thing certain is that the grain-mining of America must come to an end," says a writer in the London Ag. Gazette. "In England we mine prudently, and our miners strike sometimes so as to retard the too rapid exhaustion of the coal. In America they mine for grain furiously, and the laborers employed have neither struck nor paused for several years. There is no country in the world where the gift of a fertile soil is so fearfully abused. It is very well to say that when the prairie land has lost its store of plant-food in the sod, ordinary farming will begin. That is tall talk indeed, for American grain will come cheap only so long as it can be mined free of the customary charges. When you have to farm for grain you require a population close at hand, and the return to the land of the plant food the crops remove. The American system ravages God's earth, and abandons a fair country to the culpable cupidity of speculators. The rush is still westward, and Yankees say, with wild humor, that if a pioneer went aloft and found in Heaven no western region to make tracks for, he would prefer coming away and prospecting in some other place."

PRUNING TREES AND OTHER PLANTS.—There are persons who assume to believe that pruning plants is at best an unnecessary operation, says the N. Y. Sun. They will tell us that nature does not prune trees; neither does she train them to stakes or trellises, but everything is permitted to grow unrestrained, except as one plant may crowd or overtop its neighbor. It is true that plants do thrive under certain conditions and restrictions without the aid of man, and so does man live without clothes or education, but only in the lowest and most degraded condition. There are few, however, who will claim that the highest development of either physical or mental powers is found among human beings who have never been trained in the arts, or subjected to the influence of civilization. Plants in their wild state require little aid from man to produce natural results. If man could be satisfied with wild grapes, crab pears and apples, we might let the plants grow wild, unpruned and without care, for under such conditions they would produce as much fruit as would be required to supply the demand. If our only apples were those gathered from wild trees, very few would produce fruit enough to supply the demand. But with an improvement in quality there usually comes an increased demand, not only because a superior article is preferred, but because the higher-flavored and more tender the fruit the greater is the consumption without injury to the consumer. The moment a plant is subjected to cultivation it begins an artificial life, and it then requires treatment to correspond with its unnatural surroundings.

CATALOGUES, ETC., RECEIVED.

THE Massachusetts Arms Co., Chicopee Falls, Mass. A beautifully illustrated, descriptive catalogue of the Maynard Breech-loading Firearms. The fine qualities of these firearms are well-known. Those desiring sporting, hunting, target-shooting rifles or shot-guns would lose nothing, certainly, by sending for this catalogue and examining it before purchasing.

ANNOUNCEMENT of Ninth Annual Meeting of the Wisconsin Dairymen's Association, at Waukesha, Wis., Jan. 12, 13, 14, 1881.

FIFTH Report of the Montreal Horticultural Society, and Fruit Growers' Association of the Province of Quebec, for 1879.

AN Illustrated Price List of the Lamb Knitting Machine Co., Chicopee Falls, Mass.

Cherrypeer.

NOTES FROM VIRGINIA.

AFTER 23 years' experience in farm matters in Central New Jersey, the writer has already had three years of like experience in the lower part of Virginia, together with fair opportunities for observation, so that he is in a position to state facts candidly as he observes them.

The climate—which necessarily has a good deal to do with agricultural production,—is here far more agreeable personally and more favorable to vegetation than that of Middle New Jersey. The regular daily breezes of the warmer part of the year temper its heat, and the brief term of cold weather is considerably in favor of a more thorough working of the soil, and a better growth of hardy crops than in the North. The general lay of the land (or its topography) is quite superior to any that I have ever seen in such wide areas, and I have inspected that of all the States on a line from the seaboard at New York City to St. Louis, Mo., and along the whole course of the Ohio River and a part of the lake belt in upper New York, Pennsylvania and Ohio. There are here no swampy districts save along the coast line, and the gently undulating surface of the land makes the natural drainage almost perfect; neither is there any large area too rugged for the convenient use of farm machinery.

The general character of the soil is worthy of especial mention and will bear close and thorough investigation. It is utterly impossible in a hasty trip across the State or through some portion of it to get at anything like a correct conclusion in regard to it; but its river and creek bottoms; its chocolate lands; its sandy basins; its virgin red-clay lands are all really good soils, yet too often a sort of wholesale condemnation is given the farm lands of this State because some of its fields are badly run down from too long cropping with little or no attempt at manuring. When stable manure is spread on the land out of a basket—as I have frequently seen here—it is evident it is putting it on "a little too thin," as the jokers would say. Nor will 100 pounds of ordinary commercial fertilizer per acre do. If the lands of Virginia were treated in the same way in which the New Jersey or the Pennsylvania farmer treats his land, the crops here would prove of excellent character. Already there is some evidence on this point, for here and there some poor, sorry-looking fields have been fairly treated, and now bring forth "some, thirty; some, sixty and some a hundred-fold." A gentleman of Albemarle County this year *without any special effort*, raised 115 bushels of corn from the acre on measured land, while several others, who might be named, obtained fully 100 bushels per acre. It is no very uncommon thing for some bottom lands to yield 75 to 80 bushels of corn per acre, and I have seen some wheat that had measured forty bushels per acre, and was informed of one field that had yielded 42½ bushels. Oats sometimes reach 80 bushels per acre, and I have from the mouths of two credible witnesses that they have made from 65 to 70 cwts. of hay per acre; nor are 300 bushels of round potatoes such a rare yield per acre here as might be supposed.

By this it may be seen that good crops are within the reach of such as choose to treat the land fairly well—the climate and soil are in no way in fault. As for prices of products, I have found them fully as good as at the North, and about 50 to 60 per cent. better than at the West. In fact there are quite a number of products that bring higher prices here than the same kinds do in Essex County, New Jersey, speaking within my personal knowledge.

The cost of farm lands in Southern Virginia, is so very low that any person can very soon earn for himself a farm of good size. Thousands of farms are to-day offered for about what the improvements are worth, or, in other cases, what the wood thereon is worth standing. Thus the land is given away. As a general rule, unimproved land can be purchased at ten dollars per acre in desirable neighborhoods, while most of the farms now offered must be sold at scarcely half that price, on account of the legal pressure to turn them into money so as to get rid of the encumbrances on them. Thousands of acres can be bought at the present time for less than a single crop thereon should clear for an intelligent and skillful worker.

A period of transition is now upon us; the former condition as it existed under slave labor is passing rapidly away, and within a few years these same lands will be held at double and quadruple their present prices. The question is not unfrequently asked why is it that so many Northern settlers here fail, and often lose all they brought with them, get discouraged, and in many cases desire to return or remove to other parts. Let me unfold the secret—the cheapness of the land incites them to buy too large an area. It is very hard for a man who has come here from where land is selling at $150 per acre, or perhaps still more, to restrain himself when he is offered fine-looking land at $10 per acre, or if improved fairly well, at $15. In nine cases out of ten he will overload himself with land, thinking of its prospective increase in value. It has been a surprise to me to see how readily the poor, sorry-looking fields can be restored and how cheaply it can be done. It is no longer a secret that clover, gypsum, lime and ashes will work a complete and desirable change in all these poverty-stricken fields, so that three or four years' time will bring them up to the standard of fair paying crops—say 20 bushels of wheat, or 50 bushels of corn per acre. Some new ideas have to be learned by the newcomer wheresoever he may choose to locate, and yet in no small number of cases do men think they can do the same in the new places as has been their wont in the old. From this cause alone come no small number of failures in farm operations here.

The social condition of farm life in Virginia deserves favorable notice, as do its schools, its churches, its moral sentiment, its law-abiding citizens, its convenient stores, mills, smithshops, railroad stations, Post Offices, etc. Its roads are not altogether what they might be—especially when it is considered that timber is very plentiful, so that streams could be readily bridged if there were a little more public spirit and enterprise. With gravel beds, too, convenient to almost any point, bad places could be made quite passable for loads fully double as heavy as are now customary. Wood and water abound and are of excellent quality for all required purposes. Stone, clay, gravel, marl, coal, iron ore and a dozen other valuable minerals are to be found in abundant supply at points not remote from valuable farm lands.

Do you ask, is it a pasturing county? I answer it is not quite equal to New York, if compared with Orange, Herkimer and Oneida Counties; but, taken as a whole, it will compare favorably in this respect with New Jersey or Pennsylvania. What are its real drawbacks? Want of skill and enterprise; the absence of small land holdings; lack of capital, cattle and sheep; too much hunting; too much of politics; too much of social "imbibing," too much reliance on the colored hands.

Henrico Co., Va. A. F. B.

RURAL SPECIAL REPORTS.

IOWA, Wyoming, Jones Co., Dec. 24.—In this county corn was a little below the average—the dry weather about Midsummer having injured the crop somewhat. The average yield was about 40 bushels per acre on poor farms, while it ran as high as 75 bushels on well cultivated land. Oats, too, were a little below the average; while potatoes were a failure. Fruit was more plentiful than for years, so that a great deal was left to rot on the ground. Wheat was almost a failure, except on a few sheltered patches. Still, quite a large acreage was sown this Fall. A. S. T.

IOWA, Monticello, Jones Co., Dec. 25.—My seeds did very well last season, especially the raspberries, for we had as many as three or four dozen berries from the vines this year, and they were the best berries I ever tasted. Corn did very well this year, but not as well as last. It is worth from 28 to 30 cents; oats from 27 to 28 cents; hay from $6 to $8 per ton. Wheat was an entire failure. A. S. T.

KANSAS, Butler Co., Dec. 26.—Your correspondent, H. L. J., in the issue of Nov. 27th, has struck the key-note to all the suffering in Kansas. His article will be indorsed by nine-tenths of the industrious and intelligent citizens of this State.

I lived here from '72 till '75, when I left the State temporarily, but circumstances detained me elsewhere till this Fall, when I returned, because I had faith in Kansas. I am told by the better class of citizens that they are willing to endure such a season as this just passed, just to get rid of the class of people that have moved out.

There is no starvation, and but little suffering amongst the industrious class. My observation convinces me that the hard times have fallen heaviest upon those who could not get what tobacco and whiskey they wanted!

D. E. S.

MICH., Bear Lake, Manistee Co., Dec. 27.—My Beauty of Hebron potatoes, sent in 1879—through the tribulation of sprouting too much during the Winter, a June frost, drought and beetles—came near being a failure; but last Spring I planted 33 eyes, one eye in a hill, in good, rich sandy loam, and beside them the same amount of Early Rose. They received the same care, were cultivated in the same way and kept equally free from weeds, and the beetles hand-picked every day when necessary till the tubers were ripe. We dug one and a half bushel of the Beauty of Hebron—nice ones too—and a little over two bushels of Early Rose. I think I cut the former into too small pieces, and thus they grew more spindling at first. The cow-peas had grown about a yard high and were in full bloom when a frost came on the 6th of September and laid them low. They were grown on rich soil, as our garden patch was previously a barnyard. The Ovoid Mangels were large and nice, but as our gardening necessarily was later than that of some of your subscribers, I concluded it would not be worth while to strive for the premium. I chanced to receive four Cuthbert Raspberries, but only two of them lived. I hope to see the fruit next Summer. The willows did not grow; they were badly withered when I received them. I put them in water for a few days, but they did not freshen up, and all my care did not prevail upon a single cutting to send forth a single sprout. Two Mauroot seeds sprouted and the plants grew nicely till Autumn, when the tops died. I never disturbed the roots, hoping they would sprout in the Spring after all. Several iris seeds came up and made very fine plants. One hollyhock, of seed sent in 1879, came up and made a very fine plant. Those I sowed last year were destroyed, either by moles or winter-killed. I hope for better success from this root. Last year I sowed my Hibiscus Moscheutos in a box. The plants grew to be about six inches in hight, when I transplanted them into the garden. This year some of them grew about a foot. But last Spring I put out some more seed in very rich soil, and put sash over them, and one of the plants grew to be nearly three feet high, and in September it budded for blossom, but the buds could not mature. Then I have one lot of shrubs of which I do not know the names, as the heavy rain washed the pencil-marks from the wooden label, but I know they are seedlings from the Rural Grounds. There are four plants, measuring from five to six feet in hight, all one season's growth. Some of them must be an inch and a half in diameter at the base. The foliage is very handsome. [This is perhaps Hibiscus militaris, a hardy herbaceous shrub of much beauty.—EDS.] The magnolias have not yet made their appearance. I have some seeds left over of the other varieties to sow next Spring, and may be more successful with them. I had three quarts of Mold's Ennobled Oats; they were sowed in drills on good, rich sandy loam.

Our Winter set in about the 12th of November, and we have had very cold weather for the time of year; the snow is 16 to 18 inches deep, and more coming.

Potatoes, 35 cents per bushel; butter, 25 cents per pound; eggs, 17 cents per dozen.

M. E. A.

MICH., Clinton Co., Dec 24.—We are having steady Winter weather; it is not very cold, however, the mercury being only a little below the freezing point. It has not been lower than 8° below zero here this Winter. That was in November. Wheat does not look very well; it was sown so late that it did not have a chance to get a good start before cold weather set in. The farmers were not in a hurry about sowing on account of the fly. Then there was so much rain they could not get their ground ready. Those beets from the RURAL were a success. M. E. B.

NEB., Papillon, Sarpy Co. Dec. 25.—I have now an orchard of 100 bearing fruit trees and last Spring I planted 2,000 on Arbor Day, 1,100 apple and 900 peach trees, and now I think I must not stop planting. My trees have done very well, considering the very unfavorable season. I do not think I shall lose over 100 of the apple trees. The season has been very dry, and corn in this county has averaged about 40 bushels per acre; wheat, about 10; oats, about 25. The hay crop was very light. Prices are: corn, 23c.; oats, 26c.; wheat, 65@80c.; potatoes, 80c.; butter, 25c.; eggs, 25c. I came to this State 23 years ago and I like the climate better than that of any other State I have lived in. Cold weather commenced this year earlier than at any time in my past experience. The Missouri River closed on the 18th of November, and it has been steadily cold almost every day since. On the advent of cold weather many farmers had not all their potatoes dug, and only a few had their corn gathered on account of scarcity of help.

E. E. S.

N. Y., Elmira, Chemung Co., Dec. 20, 1880. Cold weather has continued with little interruption since Nov. 15th. Very little snow has fallen, and that little disappeared during a few mild days, ending Dec. 6th. Since then the ground has been bare, and the roads as smooth almost as glass, which is favorable for teaming. The greater proportion of the to-

bacco crop of this county is yet hanging on the poles, the weather not having been favorable for taking it down. This is not a pleasant state of affairs for growers who have large crops to handle, and much anxiety is felt by many lest they will be seriously delayed with the work of stripping and sorting their crop. The entire crop of this tobacco-growing section has passed into the hands of buyers at prices ranging all the way from 10 to 14 cents per pound. The crop of this section is estimated at 10,000 cases, or about 4,000,000 pounds. The cold weather has sharpened the appetites of all kinds of stock, which has strengthened the prices of hay and straw, which at present range from $14 to $18 for hay and $6 to $13 for straw. Wheat brings $1.10 to $1.15; corn, 60 to 65c; barley, 70 to 80c; oats, 38 to 40c; butter ranges from 20 to 28c per pound. G. A. G., JR.

S. C.—Aiken, Aiken Co.—Knowing your interest in Doura, I take pleasure in sending you a single stalk, cut from a plant containing seven others of about the same size and length, 14 feet, also a stub from which three cuttings have been made, each averaging three to five feet length. These plants were produced from a single seed, and grown upon land that this year would not produce ten bushels of corn per acre. I just placed a plant upon the scales cut off at the surface: its weight is 26¾ lbs.

If the silo system is a success there is no trouble now to produce and preserve an abundance of cheap, nutritious fodder. As this far excels pearl millet, prickly comfrey, Teosinte, or anything I have seen grow.

It is especially valuable for milch cows, imparting to the butter a deeper color than is produced by feeding upon Indian corn. Have not tested the feeding qualities of the seeds, but believe they will make excellent meal.

S. C. SATTERTHWAIT.

VT., Brandon, Rutland Co., Dec. 26.—Notwithstanding the drought, and the growlers, the past season has been one of unusual prosperity to those who have worked hard and waited patiently for the results. The hay crop, although somewhat smaller than usual in quantity was of fine quality. The oat crop was good. Fruits were rather scarce, in the State generally, but there was an abundance in near localities with easy modes of transportation, so that we have had a liberal supply at moderate cost. Wool and dairy products have brought remunerative prices. Thanks for the RURAL'S Seed Distribution, there is no lack of attractive plants for the Winter, or wholesome vegetables for the cellar. N. B.

WISCONSIN, Elkhorn, Walworth Co., December 26th. In the seed distribution made by the RURAL two years ago, I received among other kinds, seeds of the Rural Acme Tomato. I took the first premium at our county fair, last September, on a dozen of them. They were of such desirable smoothness, size, flavor, etc., as to leave little to be desired farther in the tomato line.

The weevil-eaten pea is so frequently dealt with that I have often thought of giving an opinion on the subject. I know a practical farmer who says that if the peas are kept over a year the weevil dies and the germinating power of the peas remains [Yes, remains *impaired*.—EDS.] No particular experiment was made to show how large a percentage failed to grow, but one year, having an unusual quantity of peas, he stowed them away and the barrel supplied several families with seed for two or three years, and no fault was found with the crop, and the seeds were the kind of peas I understand to be weevil-eaten; that is, they had small holes in them—not every pea, but a goodly proportion of them.

B. C. D.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

The Sorghum Sugar Literature.

R. H. Glen, N. Y., asks what works have been published on the manufacture of sirup and sugar from sorghum and corn-stalks.

ANS.—The literature of maize and sorghum sugar manufacture consists of two works, one by F. L. Stewart, Murrysville, Pa., and another by I. A. Hedges, of St. Louis. The first is a modern work which explains very clearly the whole process from the preparation of the soil, the planting and culture of the corn or sugar cane, the harvesting and working of the stalks to the making of the sirup and sugar. The directions given are very plain and leave no difficulties which may not be overcome after a short experience by any intelligent person. This work has special reference to the use of certain materials to be used for clearing the sirup and crystallizing the sugar and which are patented by the author, who alone can supply them. The second treats only of the different varieties of the sorghum and the manufacture of sirup and sugar from them. It refers specially to a process of Mr. Hedges in which a preparation made by him is used for the purpose of clearing and crystallizing the sirup. It also gives plans and descriptions of machinery and buildings required for the manufacture. These two processes are rival methods and it does not seem to be settled as yet which is the better of the two, excepting so far as Mr. Stewart's method includes sweet corn and common maize, as the raw materials, along with the various kinds of sorghum. Good sugar is profitably made by either process. The book is published by the Republic Company, Washington, D. C. Mr. Hedges publishes his book himself. We have just learnt that Mr. Hedges intends to publish in book form his latest experience in the sorghum sugar and sirup industry at an early day. A small but excellent pamphlet on the subject has also been published by Mr. A. J. Russell, Superintendent of the Sorghum Sugar Works at Crystal Lake, Ill.

Green Manuring for Poor Land.

O. M. T., Orland, Ind., asks of what value to poor land it would be to sow corn on it in the Spring, to be plowed in as a fertilizer.

ANS.—The attempt to improve poor land by plowing in green crops is a somewhat delusive business. The effect of the crop plowed in is in proportion to its bulk. If the land is so poor as to be unable to bring a crop, it is hardly possible to get sufficient green matter to plow in with benefit. Green manuring is more useful to keep land in good condition than to restore poor land to fertility. The best thing that can be done is by some means to get the land in clover and plow that in. The most practicable method we can suggest is probably to plow well twice and harrow thoroughly. Then sow buckwheat in May. Plow that down in July and sow again, and plow this under in September and seed down to rye. Plow the rye in in May and plant corn in drills 30 inches apart and three inches apart in the drill. Cultivate well, but don't plow, keeping the ground level. Then plow the corn in, early in August, across the drills, dragging it in with a chain so as to cover well; harrow two or three times to keep the ground loose; finally work over shallow with a cultivator and seed to wheat, and in the Spring seed to clover. This is a good deal of labor and expense, but nothing can come out of nothing, and when a soil is worn out and poor it has to be treated as a sick man who is restored to strength only by a slow process of nursing and feeding. There is but one other alternative, and that costs money; viz., to apply artificial fertilizers and get the ground into grass and clover at once by seeding with Spring rye or alone; then pasture and plow in the sod and repeat the operation. It must be a work of time and patience anyhow.

Sugar from Sorghum and Corn-stalks.

E. N., Outagamie Co., Wis., asks for information about Amber Sugar-cane and its manufacture into sugar and sirup; 1, does the manufacture of the former differ from that of the latter; 2, does it require expensive apparatus to make sugar; 3, is the manufacture of sugar from the cane an assured success; 4, should the juice of the cane be cleaned and purified before boiling into sugar; 5, has anybody been successful in making sugar or sirup from the stalks of sweet or common corn.

ANSWERED BY A. J. RUSSELL.

1. To manufacture sugar from sorghum the treatment must be somewhat different from that for the production of sirup. 2. The most economical sorgo steam train for making sugar will cost about $3,000, with a capacity for working 60 to 70 tons per day of 24 hours. It is not necessary to fit up expensive vacuum-pan works that cost from $10,000 upwards, to make a beautiful commercial sirup and sugar, in paying quantities. 3. The business is an assured success, the best evidence of the fact being the increasing of their capacity by established works. 4. Without a perfect cleansing of the juice before boiling into sirup, nothing can be expected but a rank, unpleasant article, and no sugar that will pay for purging. 5. Sugar has been made from corn-stalks, in small quantities, but those who have tried it on a large scale say that they can make sugar but not in sufficient quantities to pay for manufacturing. The highest price obtained in the Chicago market for the sirup, is 20 cents per gallon.

Catarrh in Sheep.

S. C. M., Rome, Pa., says that for the past year his sheep have been troubled with an excessive discharge at the nose, although they have received excellent care and in other respects appear to be in good condition, and he asks what is the matter with them. They have salt, sulphur and resin, and tar once in a while.

ANS.—The sheep are troubled with catarrh, a very frequent disorder but not serious as long as the lungs are free. The danger is that it may by-and-by involve the lungs if it becomes chronic. The cause may be that the sheep are kept too warm and take cold. Sheep are well jacketed and do not require any more shelter than a dry shed, protected from storms and very well ventilated. A dry, clean yard should be attached, for the coldest nights the sheep will as often lie out in the yard as in the shed if they have dry litter. Give no sulphur or resin. These are dangerous. Sulphur causes too free perspiration from the skin and is weakening, and resin acts too much on the kidneys. A little tar is useful occasionally. Stir the water once a week with a tarry stick and if any sheep are much troubled with nasal discharge rub the tar on the nose and lips so they will lick some of it off. Salt once a week is sufficient.

Creamery and Dairy Butter.

F. McM., Red Bank N. J., asks what is the difference between creamery and dairy butter.

ANS. The difference between creamery and dairy butter is simply that one is made in a "creamery" or butter factory and the other is made in a private dairy. Creamery butter has the better reputation in the market because it is made in large quantities with every modern improved appliance and by the best attainable skill, and comes to market fresh and in the best condition, and in large straight, or even, lots; while dairy butter is in general subject to many disadvantages in the making, and is not always skillfully made, and comes to market in uneven and varying qualities and packages. But there is no reason why dairy butter might not be fully equal to creamery, and, in fact, some dairies are of such superior quality as to be eagerly sought for and taken for special consumption before they can reach the general market.

Miscellaneous.

J. G. K., Port Hope, Ont., says that among 200 grape-vines he planted out last Spring, some were of the Lydia variety; since then, however, this grape has been expunged from the list of the nurseryman from whom he bought the vines; yet as it made by far the strongest growth on his grounds, he asks whether it is likely to fulfill its early promise of excellence. 2, He has a hedge of Honey Locusts which he has cut down to the ground the second year and close back about July 12, and it has a fine, bushy appearance; wishing to plant another of Pyrus Japonica, he asks whether he should treat it in the same way. 3, He inquires which is the best work on the treatment of the gooseberry and the Red and Black Currant.

ANS.—1. The Lydia, which originated with Mr. Carpenter, of Kelly's Island (Lake Erie), was considered years ago a vine of good promise. We tried it for three years at the Rural Grounds, but, as it made a sickly growth, it was then discarded. We had not heard this grape mentioned for years before, and the presumption is that it does not fulfill its early promise. 2. We would advise leaving the plants to grow as they will for two years and then cutting them back in the Spring of the third year. 3. Really, upon this subject there is no better work than a good agricultural journal. We have several times given all the information there is upon such subjects.

E. E. B., Canterbury, Conn., has two plants of the Iris Lævigata six inches high in four-inch pots, and asks, 1, whether they should be treated as house plants during the Winter or put away in the cellar; 2, which is the better breed of poultry for early chicks—Light Brahma or Plymouth Rock; 3, how would the Partridge Cochins do for this purpose; 4, will cranberries thrive on upland.

ANS.—Perhaps it would be better to treat the Iris Lævigata like a geranium this Winter. They should not be watered too much. Plant them out in the Spring after frosts. 2. We prefer the Plymouth Rocks. Partridge Cochins are slow to mature and slow to lay. The breed is a stupid, unprofitable one, according to our experience. 4. We have heard of a few cases where fair crops have been obtained from cranberry plantations on uplands; but, as a rule, they are wholly unprofitable.

J. R. J., McGregor, Ia., asks who offered a premium of $5,000 for the most convenient car for the transportation of stock.

ANS.—The American Humane Association offered a premium of $5,000 for a satisfactory cattle car for the conveyance of live stock, with facilities for feeding and watering. Plans, specifications and models were to be sent in before the 1st of January, 1881. The offices of the association are in New York. The time is now so nearly expired that it would probably be impracticable to get in such detailed description of the car as would entitle it to competition.

C. L. R., Highland, Ills., asks, 1, the proper time for sowing salt on wheat; 2, how much should be sown per acre; 3, on what sort of land will it do most good.

ANS.—1. Early Spring. 2. The amount will depend on the condition of the soil; but about five bushels per acre will not be too much. A trial will be the best way to determine on what soil, it will produce the best effect. Although it has the reputation of increasing the crop by four or five bushels per acre, besides strengthening the straw still, it sometimes produces no effect and occasionally an injurious one.

J. H. Mc., Mifflintown, Pa., asks, 1. whether Clark's root-cutter, sold by the Higganum M'f'g. Co., Higganum, Conn., will clean itself after it has been used, or must it be cleaned out every time so as to leave nothing to freeze up in it; 2, will it cut whole pumpkins as well as roots.

ANS.—The cutter will clean itself so that no pieces are left to freeze. After all the roots needed have been cut, give the wheel a few turns and every piece will drop out. 2 It will cut all pumpkins that are not too large to reach the knives.

W. R. Jeromeville, Ohio, asks 1, at what age a persimmon tree is supposed to bear; 2, what can be done to bring a tree, now ten years old, into bearing. It has bloomed profusely for four years, but borne no fruit.

ANS.—Dig a trench about the roots three feet from the stem; or cut a circle with a sharp spade, severing the roots as deep in the earth as the spade can be thrust. Girdling the branches, as explained in Mr. Chamberlain's article a few months ago, or bending down the branches by weights might also be resorted to.

H. A., Jenisonville, Mich., wishes to know how to raise grape-vines from cuttings; should they be taken from last year's growth or from an older growth.

ANS.—Cuttings may be made of such a length as to include two joints. Well ripened canes of last year's growth should be selected. Set these in mellow ground just so as to leave the uppermost joint out of the ground. Cover with hay or long manure until frosts are over.

W. H. W., Medina, N. Y., asks, 1, which is the best and most prolific Black-cap raspberry for drying; 2, what is a fair yield per acre; 3, how far apart should the plants be set.

ANS. — Would recommend the Mammoth Cluster and Gregg. 2. The Mammoth Cluster will yield from 75 to 100 bushels to the acre. 3 Three feet apart in the row—the rows six feet apart.

C. E. H., Rochester, Minn., says a young fat sheep got its head fast in its manger, and in trying to get out choked itself to death. I hung it up and dressed it immediately and the meat looks as nice as any meat. Is it wholesome?

ANS. — Of course. Disease only makes meat unwholesome. It is better to bleed in killing because the meat is less dark in color.

U. F., Brillion, Wis., asks, 1, whether Silver Chaff wheat is hardy enough to withstand the climate of Northern Wisconsin; 2, where it can be bought?

ANS. 1—Yes, we think it is. 2. We do not know where it can be bought at present. No doubt the catalogues of seedsmen will offer it in time to be sown next season.

R. M. P., Brockport, N. Y., asks whether he can buy half a bushel of Rural Branching Sorghum anywhere at any price.

ANS.—Not that we are aware of. In fact, we are nearly positive that it cannot be obtained.

W. H. B., Union Co., Ia., asks whether he could get grape-vine cuttings from New York or New Jersey wrapped up so that they will grow next Spring, if sent by mail; and if so, when should they be mailed.

ANS —Yes. At any time.

S. G. C., Clinton, N. Y., sends an ear of corn for name.

ANS.—This is the ordinary 8-rowed Yellow Flint of a well-bred strain.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 1.

Mrs H. L. W., the papers have been sent twice according to our office reports. Shall attend at once.—A. E. B.—G. H. F.—E. L. S.—F. H. S.—J. L (Auburndale) happy to hear from you again.—W. H. T.—J. M. L.—A. F. B.—G. A. Bruce, thanks for ear of corn.—W. P.—W. H. W.—J. D. S.—H. C. S.—W. J., thank you for reports. We cannot always use them, but we are obliged all the same.—A. B. A.

We must beg our contributors to bear with us on account of the delay in publishing their favors caused by the Index and Corn numbers.—F. McM.—W. M. L.—M. E. A.—S. C. G., thanks for the corn.—W. H. D.—R. M. P.—N. B.—D. S. M., no, we are thankful for all well-meant suggestions.—D. E. S.—J. S. S.—A. E. B., this has not been our experience.—A. D. J.—J. P.—W. F. Jr., a remarkable statement.—F. K. G., no, thanks, we are full of dahlias.—"Mystic," many thanks. We think you might occasionally favor Ray Clark or Emily Maple.—A. J. R.—R. M. L.—D. M. H.—E. E. B.—M. E. H.—H. S.—A. W.—R. S. S.—G. D. S.—J. G. K.—J. T., corn received—thanks.—F. H. D.—R. N.-T., continued.—M. W.-F.—P. B. M.—T. T. L.—G. G.—S. B. P., the metric system in a few weeks—thanks.—G. A. G. Jr.—E. T.—F. K. M.—E. L. B.—L. R.—T. W.—L. A. H.—H. S.—R. L. S.—C. L. R.—A. E. S.—W. H. B.—M. W. F.—I. D.—O. W. D.—I. T.—J. G. K.—F. H. D., yes.—G. E. N.—A. B. A.—G. A. B.—J. B.—P. M. A.—J. B.—F. A. E.—L. S.—J. S. W., thanks.—P. D. S.—W. L. F.—N. R.—E. H. B.—R. H. B.—W. E.—J. T. L.—R. W. S.—R. J. D.—J. E. B.—G. L. T.—H. B. S.—A. W.—A. L. J.—J. B.—"Bessie Victor."—C. D. W.—A. J. S.—R. B. S.—M and L.—E. A. S.—W. G.—E. S. A.—W. F. C.—P. T. J.—W. R. D.—C. A. G.—S.—J. S.—"Oak Dale."—U. T. S.—J. J. P.—F. C.—W. M.—T. H. H. J. P.—G. L.—R. G.—J. J. H. G.—M. C.—A. S. T.—T. J. B.—G. A. B.—J. G. B.—C. C. G.—J. A. C.—M.

THE
Rural New-Yorker,
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Conducted by
ELBERT S. CARMAN.

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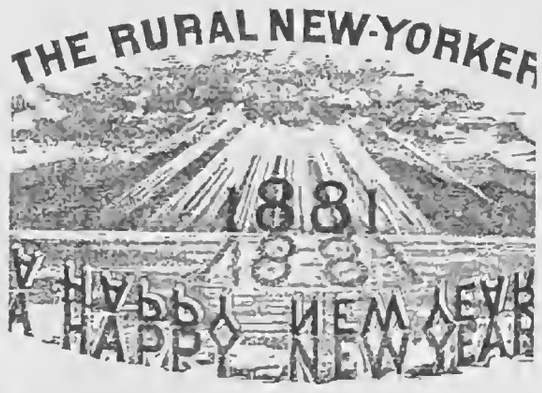
SATURDAY, JAN. 8, 1881.



Two months ago, Mr. Saul, of Washington, D. C., sent us the Japan Persimmon (fruit) which is figured on page 20. It was then about the weight and firmness of a peach of the same size, with a leathery, yellow skin, somewhat like that of red peppers. The skin is now much shriveled—wrinkled—though the flesh is still firm and juicy, but of a puckery, undecided, and not agreeable taste.

THE CRYSTAL WHITE BLACKBERRY.—On page 19 is presented an engraving of the Crystal White Blackberry, the original of which was brought to the RURAL office by Mr. J. T. Lovett. It was laden with fruit (as shown) of a dull white color and of excellent quality. Small-fruit authorities speak of this variety as valuable "only as a curiosity"—but it strikes us that it is not unworthy of better praise. The fruit is not only pleasing to look upon, but, being sweet, why should not it hold as high a place among blackberries as Brinckle's Orange does among raspberries? It originated in Albion, Illinois, and is, we believe, fruitful there in a majority of seasons.

THE ACTION OF BONE FLOUR.—The following letter from Professor S. W. Johnson, is in reply to our question, and explains itself:

THE CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

NEW HAVEN, CT., Dec., 24, 1880.

I don't doubt that bone flour, if *really fine*, will often act promptly and efficiently on corn, applied in May. To do so the conditions must be highly favorable to its decay; that is, the soil must give it high temperature, moisture and the *germs* of decay (bacteria.) In this region about New Haven, it passes as an established maxim that bone does well on low land but not on the hills, that is, as I take it, on moist and not on dry soils.

The action of bone is hastened greatly by a preliminary fermentation, heaping it up, well mixed with its own bulk of loam or saw-dust, under shelter and *moistening* (not soaking) with urine and letting it heat, eight days, until it becomes considerably decomposed.

What ordinarily passes as bone dust is too coarse to have prompt action under ordinary circumstances. Yours, S. W. JOHNSON.

A SPECIAL CALL OF A CHAMPION FAT OX UPON HER MAJESTY QUEEN VICTORIA.—THE Agricultural Gazette informs us that Mr. Colman's prize ox, at the late Fat Cattle Show in London, received the compliment of a special invitation to Windsor Castle to be introduced to Her Majesty the Queen. Another feat of Her Majesty was to walk in the morning, together with the Princess Beatrice, to the farm of the late Prince Consort, some four or five miles from Windsor Castle, to look over the fat stock bred there previous to the commencement of their sale in the afternoon. This is a famous live stock breeding farm, and it was a delight with the late Prince Albert to oversee and direct all its operations; and no one took more pleasure in showing it to his visitors, or was more happy than he in obtaining a prize on the exhibition of any of his animals at the Cattle Shows of England.

THE DEPARTMENT OF AGRICULTURE.

CONCERNING the Department of Agriculture one of two things should be done: either abolish it altogether or else place it on a better financial basis. Not only should the appropriations called for by the Commissioner in his last report, be made at once; but the salary connected with his office should be increased. The office, as it is, offers no pecuniary inducements to men worthy of occupying the position. Those who are well fitted for such a position, find they can make a more profitable use of their time and talent elsewhere, so that men not so well qualified must fill the place. What are we to think of those who now advocate a reduction of the Commissioner's salary! It is an inconsistent and false economy which is so chary of funds for the promotion of great public interests and so lavish with them when mere partisan ends may be subserved. A penny for the advancement of the agricultural interests of the country, and a pound for individual political preferment! A just economy is always commendable; an unwise parsimony, never. If the Department of Agriculture is to be a success and not a failure, men eminently qualified to do efficient work, must be at its head, and such men can be found only when satisfactory inducements are offered.

We hope to hear less about reducing the already too meager salary of the Commissioner of Agriculture.

THE RURAL'S PROSPECTS FOR 1881—THANKS TO OLD FRIENDS.

A FEW weeks ago we suggested to our subscribers that if each would send us another subscriber, our subscription list would be doubled for 1881. The proposition was a self-evident one, and was given out merely to show that though it would prove a great task for any journal having a large circulation, to double it from its own direct efforts, yet it seemed a very simple matter for each subscriber to send us one other subscriber, which would work the same result.

Now whether the RURAL NEW-YORKER has been far better during 1880 than ever before; whether, for other reasons, its readers have grown more attached to it, we cannot say. Certain it is that very many of them have acted upon our suggestion, as if they felt it not only a pleasure, but almost a sense of duty—to comply with the request.

Many others also in renewing, have expressed earnest regret that their efforts to secure other names had failed. Our mails have been so full of such evidences of appreciation and friendship that we have more than once felt our utter helplessness by any means, or words, to express an almost oppressive sense of gratitude which our kind friends are placing us under. It is a relief when one can shake the hand of a friend in response to any kindly act and say, "I thank you." But our friends are far away;—we can not shake their hands:—we can only say that we feel very greatly obliged to them, while regretting that such words so feebly express our sense of indebtedness. Up to the present time, the number of subscriptions received for 1881, is far in advance of any previous year since we have had any connection whatever with this journal. In great part this increase seems to be due to the *efforts of our old subscribers.*

THE CAT IN HISTORY.

A GOOD deal of attention has been given of late years, by students of natural history, to the question of historical distribution of plants and animals, and many points of popular interest have been elucidated by their researches. It has been shown, for example, that while the dog has been a companion of man from the very earliest times, the cat is a comparatively recent addition to the complications of life. Cats were tamed indeed by the Egyptian priests and accorded religious honors and even worship. But the ancient Greeks knew nothing of the domestic cat, although mice were known to them from the highest antiquity. Indeed, mice were at times very troublesome to the Greeks, whole districts being sometimes devastated by them and the people driven away, as they are by grass-hoppers from some places nowadays.

In order to cope in some measure with mice the older Greeks kept weasels or martens, which were tamed for the purpose. The weasel, in particular, occupied somewhat the same place in the world that the cat does now, and numerous fables and proverbs relating to the weasel, which are still current, originated at that period. The old Romans knew no more about cats than the Greeks, and it is only in the fourth century after Christ that mention begins to be made of the cat as a domestic animal. Evidently, it was at this time or perhaps a little earlier, that the domestic cat was distributed throughout Europe and Asia.

It is not a little remarkable, though perfectly natural, that the introduction of the cat gave a new impulse to tales and fears of ghosts and enchantments. The sly, creeping, noctural grimalkin took rank at once with owls and bats and soon surpassed them both as an exponent of all that is weird and supernatural. Entirely new conceptions of witchcraft were gained for the world when the black cat appeared upon the scene with her swollen tail, glistening eye, and unearthly yell.

ENSILAGE.

A GREAT deal is being said in agricultural papers respecting the value of the silo system of preserving green fodder. We have read the statements of a dozen or more who are testing the method and it is but fair to say that their reports are enthusiastically in its favor. The silos preserve the fodder in a partially green state and the ensilage is relished by stock in general. The economy of the sytem, is, however, yet to be ascertained. A silo that will hold 250 to 300 tons of corn ensilage will cost not less than $300 and needs to be, let us say, 40 feet long, 12 wide and 20 deep. The stalks and leaves have then to be finely cut up and so packed in the silos—or pits or cellars as they might better be called—as to exclude the air. Contact with the air at once causes mold, fermentation and decay. The tops of the pits have therefore to be covered with several inches of cut straw upon which planks are laid and heavily weighted. As soon as the silos are opened, exposure necessarily begins so that, unless the amount daily used is considerable, the surface ensilage remaining is unfit for use and must be daily thrown away. We *know* as yet very little as to the actual value of food of this nature for milch cows. That the cost of building pits, of gathering, cutting, and storing the ensilage whether it be clover, Hungarian Grass, cow-pea vines, the Branching Rural Sorghum or whatever other forage plant may be preferred, are formidable items. Probably no farmer that can raise 75 bushels of shelled corn per acre will ever become an enthusiast over ensilage, while those who can raise 30 tons of corn-stalks and leaves and not over 25 bushels of corn per acre may feel the necessity of carefully considering the merits of the "new dispensation." We are not yet willing to advise any of our readers to invest his capital in silos.

A WORD TO NEW SUBSCRIBERS.

MANY (hundreds) of our *new* subscribers write to us: "We have received the first number of your paper but not the seeds—Please send them."

Our new subscribers should "stop a bit", and consider, first, that we cannot send the seeds until we have them to send, and, second, we can not put them up and mail them in a day when they are received. The White Elephant Potato is sent as the weather permits because of necessity it is packed by itself in a little wooden box. The Argenteuil Asparagus seeds have been received from France, and are already put in envelopes. So also are the Washington Oats. The Rural Branching Sorghum is not yet received. Neither may we hope to receive the Dianthus seed in less than one month. The German and French wholesale catalogues for 1881 were received only last week, and from these our orders were made out and forwarded. We beg that our friends interested in flowers will give the Dianthus seeds due care. Fifteen dollars per pound is the *lowest* price paid for the seeds of PICOTEES and CARNATIONS, while the price of a portion of them is not less than $150 *per pound!* Whether they will prove worth the especial care of our readers may be judged from the above statement.

It is necessary, also, that we should remind our new friends that these distributions are *not* premiums. We offer them as, and when, we please, and discontinue them when we please, so long as we repay every obligation to our subscribers. Greatly gratified by the good to agriculture which these distributions of new or rare seeds have wrought, there is no thought to discontinue them so long as we are enabled to procure or to raise kinds which promise to support the good name which our Free Distributions have well earned for themselves. If we had no pride in the matter and put up seeds as *premiums*, we should select popular sorts, such as any seedsman can furnish for five or ten cents per packet.

BREVITIES.

THE RURAL Rebus (p. 6, Corn Number) remains unsolved. It is an easy one, too.

THE St. Louis Cane Growers' meeting will be held the 21st.

DURING the week ending January 1st, turkeys were sold at 12 cents per pound, with a chromo for each turkey.

GEN. LEDUC expects to be present at the meeting of the Minnesota Cane Growers' Association, to be held at Minneapolis on Thursday, the 20th inst.

IN the earlier impressions of the Corn Number the period was left out between the 8 and the 00, making the cost of the special fertilizer used upon the Chester Co. Mammoth $800 instead of $8.00 per acre.

DR. ZABRISKY, a New Jersey physician of long experience and a wide practice, tells us that of all remedies for diptheria he has been most successful with sal-ammoniac (muriate or ammonia). A saturated solution is used as a gargle.

LADY APPLES (Pomme d' api) sold during the holidays for from six to seven dollars per barrel. Half barrels brought $3.50. There seems as yet no apple that can be looked upon as a formidable competitor of the bright-cheeked little Lady.

WHEN our fowls are affected with scaly legs, which are caused by a minute insect, we place the feet and legs in a narrow tin pail of kerosene. This treatment will soon cure the worst cases, if persisted in. The application of ointments and bandages often recommended involves more trouble with no more decisive results.

RURAL GROUNDS, Dec. 30.—Thermometer nine degrees below zero at seven o'clock A. M. Eight inches of snow. Seven o'clock P. M., thermometer one degree below. December 31, seven o'clock A. M., 15 degrees below. January 1, 1881, seven o'clock A. M., 19 degrees below. January 2, seven o'clock P. M., 10 degrees above.

OUR news editor, in speaking of the death of J. J. Mechi, of England, called him *Professor* Mechi. He was simply *Farmer* Mechi—a benevolent soul that loved agriculture as he did his life. A portrait, the original of which—a photograph—was sent to us by Mr. Mechi himself, together with a sketch of his life, appeared in the RURAL NEW-YORKER of Sept. 14, 1878, p. 585.

ONE of the best resolutions the farmer can make for this new year—if it has not already received due attention in past years—is to devote a part of his farm—an acre at least—to small fruits and fruit trees. Determine as to the best kinds to be selected from the catalogues we shall shortly notice, guided by the information which may be gleaned from trustworthy journals and books or friends who can speak from experience. One cannot be too painstaking in selecting *varieties.* Some kinds are suited to your soil and climate—others are not. To select without careful investigation is to throw money and time away.

WE have received the following pleasant note from the Higganum Manufacturing Corporation, Higganum, Conn.:

"We could not believe it possible for a paper to improve as the RURAL has during several years past. It has no equal to-day as an agricultural journal, and every one who reads it can see that live men are at the wheel. As an advertising medium it cannot be beat. We have given it a thorough trial on specialties for the past two years, and for once we can say that we have seen the benefit, for on cider mills and root cutters our trade has been immense, and the orders have come from nearly every State in the Union. If you have any doubting ones, send them to us and we will convince them that they can get two dollars back for every one they will put into advertising in the RURAL. Wishing you a happy and prosperous New Year, we remain,

Yours truly,
CLINTON B. DAVIS, Treas.

ON the night of December 28 a cold spell of extraordinary severity set in all over the country, and next day snow fell from the Rocky Mountains to the Atlantic and from the the lakes to the Gulf. Telegrams of the 29th from the chief cities within this vast area all speak in forcible terms of the intensity of the cold, and mention the fall of snow. In some parts of the country this was so heavy as to block up the roads and railways and prevent or impede travel and transportation, while in other places, as in Galveston, Texas, there were only few feathery flakes. While cold of equal or even greater severity has been by no means uncommon even at this season in nearly every part of the country, it is rarely that weather has been so frigid simultaneously over so extensive an area. Since then telegraphic advices from Alaska to Florida speak of extremely cold weather all over that vast territory: many human deaths from exposure to the arctic cold are reported even from places as far south as Virginia, while a very heavy mortality among stock is announced.

FROM across the Atlantic comes the news that the Great Eastern steamship has been definitely chartered for ten years to carry dead meat to the United Kingdom, from this country and South America. The promoters of the enterprise intend to slaughter the cattle on board the ship as they are received day by day, and for this purpose they are reported to have already secured the services of trained butchers from the Chicago slaughter-houses. It is estimated that from 10,000 to 15,000 carcasses of beef can be shipped each voyage. The meat will be hung in refrigerators and it is calculated that excellent beef from Texas and the Argentine Republic can be landed in the United Kingdom at six cents a pound. If this enterprise shall prove successful it will doubtless find many imitators; the stock interests of this continent will prove still more profitable, and the farmers of the United Kingdom, who have hitherto found consolation in the supposition that they can always bid defiance to competition in foreign meat, will *meet* with a discouraging disappointment.

Literary Miscellany.

THE BABE AT BETHLEHEM.

THE night swept cool o'er Bethlehem's plain
And folded close the distant hill;
Alone the weary shepherds watched
While all their drowsy flocks were still;
Above, the silent stars moved on,
Each in its own majestic way—
Who dreamed the Son of Man had come
And in a Bethlehem manger lay?

No wondrous sign had filled the sky
When sank the flaming sun afar;
No ominous cloud with darkness came
To pale or hide the Eastern star;
No tumult filled the town or inn,
Where travelers tarried on their way,
Unconscious that the Son of God
So near them in a manger lay.

Along the surging streets of Rome,
Through all the Empire of the West,
Nor sign nor sound the hour made known
In which all nations should be blest;
That night Imperial Cæsar slept
On regal couch his cares away,
And dreamed not that the King of Kings
At Bethlehem in a manger lay.

Only where simple shepherds watched
In fields which Ruth of old did glean,
Was the wrapt song of angels heard,
The sudden, mystic glory seen;
And when the heavenly light had ceased,
The heavenly light had passed away
The shepherd entered Bethlehem
And found the place where Jesus lay.

No marvel that they spread abroad
The saying that to them was told—
"Lo, He has come!"—the Christ of God,
The Saviour, promised them of old;
No marvel that, with prayer and praise,
Back to their flocks they took their way;
The Shepherd of their soul had come—
At Bethlehem in a manger lay!

INMATES OF LESTER HALL.

(Continued from page 851.)

CHAPTER XXX.

MEANWHILE Ernest had opened the door of the room where Cecil was and entered softly, so softly indeed that she did not for a moment perceive him, and he had leisure to look at the beautiful wan face lying so wearily on the cushions—at the frail hands, and the dark shadows under the lustrous eyes. In a minute, however, Cecil raised her eyes and saw him, and Ernest coming quickly forward, knelt down beside her and pressed his lips fondly and lingeringly on her forehead, then he drew back a little and scanned her face eagerly.

"You are better, my dearest?" he whispered; "and yet what a wan, white face this is—my snowdrop—my poor pale flower!"

"I have been ill, very ill," she said, faintly. "Ernest, do not pity me; I deserve it all."

He looked at her in intense surprise.

"Yes," she went on firmly, "I deserve it all. I have something to tell you Ernest; sit down there please."

She pointed to a seat a few feet from her sofa, and, surprised and alarmed, Ernest obeyed her, and seated himself in silence.

"Will you be very angry with me?" she said, faintly, pale to her lips, and evidently speaking under the strongest emotion. "Will you ever forgive me, Ernest, for my bad conduct to you?"

"My darling, as if I ever blamed you—as if I had any cause! It was not your fault that you were ill, love."

"It is not that—it is not that," she said, brokenly, hiding her face in her hands.

"What is it, dear?" he said, gently. "Remember, you must not agitate yourself. You must get strong as quickly as possible, you know, and we shall have a quiet wedding, without all that fuss and bother, and I will take you away to some country which has bluer skies and a softer climate than ours. How soon shall you be well enough, Cecil?"

"Ernest," the girl said, suddenly lifting her eyes to his with a woe-begone expression, "I shall never be your wife!"

He started and paled; then, concealing his agitation, he said, calmly:

"Never is a long day, sweet. Dr. Collins assures me that you will be quite well in a few days."

"That will not alter it, Ernest. Oh!"—and she clasped her hands together with a little cry of pain—"will you not understand? Do you not see?"

He started to his feet, his face growing ghastly white, his lips quivering.

"Cecil," he exclaimed, suddenly—"Cecil, you are not going to throw me over?"

There was a moment's dead silence. Cecil had covered her face with one hand and lay still, but trembling in every limb, while her lover stood there before her, looking at her with the same horror-stricken countenance. He was the first to speak. He forced a laugh, and sat down again.

"What a fool I am, Cecil, dear! Forgive me; I was mistaken, was I not? Tell me what you mean darling; I won't startle you again. I don't know what put such an idea into my head."

He drew his chair closer to her, and put out his hand, still a little unsteady. Cecil drew off the diamond ring she wore and put it in his hand in silence.

"Cecil," he said, hoarsely—"Cecil, are you jesting? It is a painful joke, dear; I cannot—I cannot bear it. Oh, great Heaven"—he started to his feet—"I will not believe it!"

"Ernest—Ernest, forgive me," said Cecil, faintly.

He took two or three turns up and down the room in angry perturbation; then he stopped his perambulations and came to her side once more.

"In plain English," he said, calmly, "you mean to jilt me. It is a harsh word, perhaps," he went on, seeing how she shrank and trembled, "but I know no other word that is applicable to these circumstances. May I ask, Miss Lester, what has induced you to change your mind?"

"The fear of inflicting a yet greater wrong upon you," she said, very gently.

"Is that possible?" he said, bitterly, and Cecil shivered at the bitterness in his voice.

"You do well to be angry," she said, sadly. "I have deserved that you should be so, but it is better that I should bear your anger, and you some suffering now, if it will spare you greater pain by-and-by. If I had been braver—if I had not been so selfish in wishing to spare myself suffering, I might have spared you a little. I do not know—Ernest, will you listen while I try to explain—it is so hard—it is so hard?"

He sat down silently. Angry and hurt as he was, something in the girl's face and voice touched him.

"How can I begin?" she said, sorrowfully. "It is all so sad, and I have been so wrong throughout Ernest, when I accepted you, I told you that I did not love you as you loved me, but I did not tell you—I did not tell you"—a hot, painful color rose in her pale cheek—"that—that—I loved some one else."

There was a short, embarrassed silence.

"I see," Ernest said, calmly, but his voice was hoarse and muffled; "and I presume that this gentleman, more fortunate than myself, is to be made happy shortly?"

"I told you that I loved someone else," Cecil said, brokenly; "but I did not tell you that he loved me. Ernest, if I could tell you all, you would not be angry; I think you would be a little sorry."

"I am sorry for myself," he said, bitterly. "Are you not going to marry him?"

"If I were to go down on my knees to him, he would not marry me; he would not love me—now—if I were the only woman extant," she said, with a faint, bitter smile.

"And you love him?" said he, incredulously.

"Heaven help me! yes."

"Cecil," said the young man, after a long pause, "if you are sure—if you have no hope that he will love you—will you not let me have a chance?"

"Would you have me still?" she said, lifting her eyes to his.

"When a man is starving he is thankful for a crust," he said, with a forced laugh. "Cecil"—he fell on his knees by her sofa, and took the little ringless hands in his fond clasp—"you see I love you. I shall only be too happy to have you on any terms."

"Is it yes, my dearest," said he after a pause.

"No a thousand times no," she said, when she could speak. "Do you think I could be so selfish? I hope there is a happier fate in store for you, Ernest, than marriage with a woman who could not return your love. No, do not try to tempt me, dear. You do not know how hard it is, how very hard for me to be firm; but I hope some day that you will bring your wife to see me, and——"

"Never," said Ernest, passionately.

"Never is a long day," Cecil said, smiling—that sad, slow smile of hers, which was so infinitely sad. "Time will tell, Ernest. It would make me so happy, dear."

But Ernest was not so easily pacified, nor would he accept his dismissal. He implored, entreated, stormed in vain. Cecil listened in silence, and with many tears, but she did not yield.

"I cannot do you such a wrong," she said, pitifully, at last. "Be merciful to me, Ernest, I have suffered so much, and I have all my life yet to live and to suffer."

"Merciful! Did you show me any mercy? Did you not buoy me up with hope unto the last? Would any man be patient under such treatment? I am made a laughing-stock to all my acquaintances, and I am expected to acquiesce patiently, and to 'grin and bear it.' The world is not very hard on such sins as yours, I believe," he continued passionately. "It is a woman's privilege to change her mind," with a harsh, jarring laugh, "and the oftener she does so, and the more men's hearts she breaks, the better for her reputation as a *belle*. I am not so lenient as society, Miss Lester: I have a plain word which expresses our conduct. Shall I tell you what it is?—it is perfidy.

"Yes, perfidy," he continued, seeing she did not speak. "Perfidy—a plain, unvarnished, harsh, sounding word, but one which is a true one here if ever it were so."

Proud as Cecil was, she bore his vehement reproaches patiently; she felt that she deserved them—that he had indeed been cruelly treated, and his anger was easier to bear than his sorrow."

"Who is this man?" he said, after a long pause, during which he had been pacing up and down the room like a caged lion, and at the question the hot color rose in Cecil's face.

"You have no right to ask me such a question," she said, passionately. "I have told you that this man can be nothing to me. Had you a spark of generosity, you would spare me such a question as that."

"Generosity!" he said, hotly. "What use is there in talking to a desperate man of generosity? If I had been here, Cecil," clenching his hands vindictively, "I would show you how generous I could be."

"If he were here—even he, although he hates me, would have more pity than you have," panted Cecil. "It is easy to threaten, Mr. Eleston."

"I would to Heaven I could carry the threat into execution!" he said, passionately. "Well, if I were sensible I should be grateful to him, for he has done me a great service—indirectly and unwillingly apparently—but a great service nevertheless."

He turned away from her with these bitter words and left the room, and it was many months ere these two, who should have been man and wife, met again.

That evening he left Thorn Lee, seeing only Mrs. and Mr. Edgar before he left; but as he was taking leave of them, Lottie Tyrrell, in her pretty evening-dress of fleecy blue gauze, came into the hall. Seeing them in earnest conversation, she would have retreated, but Ernest went hastily to her side and took her hands in his.

"Lottie!" he said, unsteadily, "I am going away, and I am glad of this opportunity of saying good-bye to you. It may be many months before we meet again, but I shall not forget how good you were to me the other day. Heaven bless you, dear, and make you very happy."

He bent over her and pressed his lips to the little hand he held, took a hasty leave of his host and hostess, and went away; but the next morning, in detailing his departure to her sister, Mattie mentioned this little circumstance, and the first real smile which had been on Cecil Lester's lips for months played on them as she listened.

"I am so glad," she said, gently. "Lottie is doomed to heal the wounds I inflict. When we were at Mrs. Brayburn's, at Christmas, I thought Dr. Carewe cared for her, but I suppose I was mistaken. Now, if only Ernest would fall in love with her I should be quite happy."

"It is early days yet to think of that," said Mattie, playing with her watch-chain, and suddenly becoming very intent on the setting of one of her rings. "Apropos of Dr. Carewe, did Uncle Henry tell you of his intentions?"

"His intentions?" repeated Cecil hurriedly (Ernest and Lottie Tyrrell both forgotten), "no, what intentions?"

"It is very foolish of him," said Mattie, vehemently. "Uncle Henry is dreadfully cut up about it, and even some of the newspapers have said what a pity it was for such a distinguished man to throw himself away in such a manner."

"What is it? What is he going to do? You have not told me," Cecil said, breathlessly.

"He is going abroad immediately," said Mattie, in a tone of extreme dissatisfaction. "He has volunteered as surgeon in this dreadful Turko-Russian war, and he is to start almost directly for Turkey."

"Oh," said Cecil softly, and that was all.

CHAPTER XXXI.

A NEWSPAPER PARAGRAPH.

THE nine days' wonder of Cecil's broken engagement was long over, and several months had elapsed since that disastrous wedding day which had destroyed all Ernest's hopes, when we find Cecil and her uncle again in the house which Mr. Daton had prepared with so much pleasure for his nieces and of which now he and Cecil are the only occupants, save when Mattie and Edgar come up from Thorn Lee to spend a few days with them. Latterly these visits had been few and far between; indeed, within the last few weeks they had ceased altogether, for Mattie had presented her husband with a "son and heir," and great had been the rejoicings thereat.

Autumn has come again, following its elder brother Summer very quickly; the fire in the dining-room blazes away cheerily, waiting for the young mistress to come down and make tea—Cecil's daily duty—for Mr. Daton, like a sensible man, likes his tea hot, and fresh, and strong, and consequently eschews that beverage when made in the kitchen. The dining-room presents a very comfortable aspect, with its cheerful fire and daintily-appointed breakfast table. Mr. Daton's newspaper is lying ready to his hand, and a pile of letters lie beside his plate, while Cecil, too, has her share of correspondence.

It is very rarely that Mr. Daton's appearance precedes that of his niece, but on that particular morning he comes down first, and has dispatched the greater number of his letters when Cecil enters, rubbing her little hands and smiling as she makes her apologies.

"So sorry, dear uncle," she says, as she stoops and puts her lips softly on his forehead. "I don't know how it is that I'm so late this morning; it shall not happen again."

"It does not matter, dear child," replied her uncle fondly; "I hope I am not quite such a martinet. There is a letter here from Mr. Edgar; he is coming up by an early train and will be here to luncheon."

"Very well, answers Cecil, we shall be glad to see him. I want to see how he bears his new honors."

So saying, Cecil takes up one of her letters, opens it and begins to read; while Mr. Daton, having finished his correspondence, takes up the morning paper and turns to the foreign intelligence.

Eastern Europe is pretty peaceful just now—the dreadful atrocities, the heartrending descriptions of the doings in Turkey, have ceased, and the civilized world is tolerably tranquil *pro tem.*; but Mr. Daton takes a very unusual interest in Eastern Europe, and has done so all through the war, searching the newspaper columns for every scrap of news, and particularly desirous of seeing whether any mention is made of a certain physician, whose departure for the East had been commented upon, and loudly lamented, some months previously. Several times he has seen the name, and always in connection with some deed of mercy and charity, and healing, which had more real courage in it than any feat of "derringdo" which the special correspondent reported; and he and Cecil had read these paragraphs over and over, for although no word of his niece's love for Dr. Carewe had ever passed her lips, Mr. Daton knew that she loved him as well as she did herself.

The six months which have elapsed since we last saw Cecil Lester have made but slight change in her. Her health is completely re-established, for sorrow, thank Heaven! rarely kills, and the girl had struggled bravely with hers, which had not been the less keen because it was self-inflicted; and, although she would carry the wounds until her dying day, Cecil made no moan, and was generally cheerful.

People said that Miss Lester was as beautiful as ever; and although she had lost much of her brilliance, methinks they were not far wrong. She is always pale now, and the lustrous eyes have a look of dreamy sadness in their depths which was not there before; her manner is quieter, more subdued, and she *never flirts now*.

That last, perhaps, is the greatest change of all, and one which surprises many. She is always courteous and gentle, even if a little reserved, and not one of her many admirers can boast of having received any marks of her favor—not one of the many who have laid their hearts at her feet can reproach her with having encourged them in the smallest degree. Nevertheless, cold as she is, and proud as many deem her, Cecil is still very much admired, and she still retains her sovereignty—no one has been able to wrest it from her, for not one has equalled her in beauty and charm.

Many wondered why she did not marry; some said, sneeringly, that she was "waiting for a prince of the blood" at least, and that no other would find favor in her sight; and others, that she was too proud and cold to care for anyone. What would these have said, I wonder, if they knew how often and how tenderly Cecil's thoughts traveled away eastwards, to where Lawrence Carewe was doing his duty so nobly and so bravely? what would they have thought if they had known the many sleepless nights, when her pillows were watered by passionate tears, shed for "what might have been?" Would they have thought her proud and cold, I wonder, if they had known that—for the sake of one man who had given her scorn, who had rejected her proffered love with contumely—to save him one pang she would gladly have laid down her life?

"I have had a letter from little Lottie Tyrrell," says Cecil, smiling, as she begins to pour out tea; "she is delighted with Switzerland—fills four pages with a description of the Rigi and Mont Blanc, and then in two lines of a postscript, which, as usual, contains the most important part of a young lady's letter, tells me that Ernest joined their party at Grenoble and has been with them ever since. You see, uncle Henry, my prophecy will turn out true. Ernest was always fond of Lottie, and she will make a charming little wife for him."

Mr. Daton makes no answer; he is apparently absorbed in his newspaper, which he holds before his face in a manner which looks very much as if he were anxious to hide it from his niece; but the hand which holds it is very unsteady, and Cecil sees that it is trembling.

CHAPTER XXXII.

"Did you hear me, Uncle Henry?" Cecil says. "Why don't you answer? Don't you think it would be a very suitable match?"

"Yes, yes, my dear," answers Mr. Daton, hurriedly, putting down the paper, and desperately attacking the dish before him. "Can I give you some of this, Cecil?"

"No, thank you," she replies, slowly, seeing how his kind old face has grown pale and how his eyes avoid meeting hers. "Have you finished with the paper, Uncle? May I see it?"

There is a moment's silence, during which Mr. Daton looks over helplessly at his niece, and holds the paper tightly in his hand.

"May I see it?" she repeats gently. "Uncle, do not be afraid. I can bear it, whatever it be!"

She rises from her chair, and going over to his side, kneels down beside him, taking the paper gently from his shaking hands. He puts his arm around her in silence, and draws her closer to him, as if by his tenderness he wishes to soften the blow to her.

Cecil smiles, although her eyes are dim, and she turns her cheek confidingly against his shoulder for a moment; then she draws the paper nearer to her, and the eager eyes run rapidly over the columns in search of the name which is so dear to her. They do not seek it long; quickly the paragraph she is searching for is found. Cecil Lester looks at it in helpless silence for a moment, then she turns feebly to her uncle:

"Uncle Henry, read it to me!" she whispers, low. "I cannot—I cannot see it!"

Very low and tremulous is the old man's voice, as he reads. He loves her so dearly, and he knows what these tidings may be to her.

"'It is with the deepest regret'—so runs the paragraph—'that we announce the death of Dr. Lawrence Carewe, whose departure for the East we chronicled some months ago. This gentleman after rendering very great services during the late disastrous Turkish war, had started with a friend on a tour through the Principalities, and after having escaped scot-free through the perilous war campaign, has met a terrible death in the hill country on the other side of the Carpathian range on the borders of Moldavia.

Traveling through a dense forest district with his friend Captain Moray, late of the——Lancers, and their attendants. Dr. Carewe's party was attacked by the hill robbers who infest those parts, and were overpowered after a short and desperate resistance. Dr. Carewe and three of the band were left dead in the forest; the rest were taken prisoners, and but one escaped. This man, after suffering terrible hardships, arrived at the nearest town of Belgrade, where he at once laid the matter in the hands of the authorities, who sent a troop of soldiers to reconnoitre, but without success, and nothing was found but the unfortunate men who had been the prey of the vulture and the kite, and were beyond recognition. The unfortunate gentleman whose sad fate we deplore was in his thirty-fourth year, and had already attained no small degree of eminence in his profession. He was unmarried."

"It may not be true, my darling," said Mr. Daton, tenderly: and although his blue eyes were full of tears, he strove to speak cheerfully. "There may be some mistake.

Cecil shakes her head.

"I have no hope!" she said, in a hollow tone. "He is dead! Oh, Uncle Henry, do you think he knows *now* how much I loved him?"

"My poor, poor child!" said the kindly merchant, brokenly, tears running down his wrinkled cheeks. But Cecil's eyes are dry and burning, and have an expression of intolerable pain.

"It may not be true, my child," says Mr. Daton, tenderly. You know how often—how very often—

such things have happened before, when people who have been reported dead have returned after a time. For my part, I believe—something tells me—that Lawrence Carewe is not dead."

Cecil shakes her head again mournfully, but a shade of color steals into the pale lips as she listens, and a gleam of hope into her heart.

"Can you be patient until Edgar comes? continued Mr. Daton, gently. "You know he has considerable interest in the Foreign Office, and I am sure he will go there at once, and ascertain what ground there is for this assertion, and whether they can give us any hope."

"Uncle," says Cecil, suddenly lifting her eyes to his, "what do you think yourself? Ah! dear, do not try to deceive me. I can bear it better now than if I had hope which turned out to be groundless."

"My child," says Mr. Daton, fondly, "I do not seek to mislead you; I only tell you what I believe myself, and which I hope will prove true."

"Thank you," says Cecil, gently, as she rose from her knees and went back to her seat, ghastly pale still, but calm. She even made a pretence of eating something, to reassure her uncle, who watched her most anxiously; it was but a poor pretence after all, and very soon the forced composure failed her, and she sprang up shuddering from head to foot, and uttering a cry of agony which brought him to her side.

"Oh, uncle, think!" she cried, wildly, "Think what a terrible, awful death; left alone there, perhaps not dead at all! Perhaps after they were gone he awoke to consciousness and found himself alone there, beyond all appeal for help; all hope of assistance, powerless to drive away—oh, great Heaven! it is too terrible. I dare not think of it, or I shall go mad! Oh! what a terrible, lonely death! perhaps he lingered for hours, who can tell?" she went on in her anguish-stricken tones, "perhaps he died of starvation and thirst. Oh, Lawrence! oh, my darling! if it had been possible, how gladly would I have died for thee!"

And then, fortunately, tears come to her relief, and she clings convulsively to her uncle, sobbing passionate, hard sobs, which rend her slender frame and leave her exhausted to faintness.

By-and-by Edgar comes, his handsome, pleasant face very grave, for he, too, has read the account in the train, and he guessed that Cecil would feel it; although he does not know how passionately she had loved him, and loves him still.

As soon as he enters, Cecil springs forward to greet him, her white, haggard face, flashing eyes and parched lips striking him painfully as he takes the little trembling hands in his.

"You will come with us," she says, imploringly. "Edgar, do *you* think it is true?"

"Where do you want me to go, Cecil?" he asks.

"To the Foreign Office," she says, rapidly. "Uncle Henry thinks there is still a chance. Edgar, you will go with us? He cannot be dead!" she cries out, wringing her hands, passionately. "He was so strong—so strong! Oh, Edgar, he was your friend—you loved him. Tell me—have you any hope?" But Mr. Edgar turns away his head without replying. He dare not tell her that he has none, although he is quite willing to go to the Foreign Office and glean what information he can there.

When Cecil comes down ready, both men look at her anxiously, but she is quite calm, and during the drive her composure is perfect. Neither of the two men will quickly forget that half-hour's drive, nor the evident efforts which Cecil makes not to distress them by any emotion.

They will remember for many months how the white, quivering lips try to force a smile, and how little broken sentences escape her now and then; remarks on anything they pass, or on the weather—little questions, the answer to which she does not hear nor heed.

When they stop, both gentlemen get out, and Cecil is left alone; but they have some minutes to wait before they can see Edgar's friend, and her brother-in-law comes back to the carriage to ask Cecil if she will come in and wait.

"It is cold for you, Cecil; you had better come in," he says, persuasively, and Cecil obeys passively. It seems as if she had not strength to resist; and when the under-secretary comes into the room where they are waiting to see him, he does not recognize Cecil Lester, whom he has danced with more than once. When he does so, the smiling, suave manner, so perfectly courteous, changes into gravity, and he does not look at her again while Edgar tells him what they wish to know.

"I will inquire," he says, hesitatingly, and he leaves the room with a troubled face.

"He knows there is no hope," says Cecil, wearily. "He has gone away because he does not like to tell us."

"Perhaps not, dear child," Mr. Daton says, gently, and in a few moments the young man comes back.

"I fear that the sad announcement is but too well authenticated," he says, hurriedly. "There is no reason to doubt its truth. It is a very sad occurrence. We all regretted it greatly, our chief especially, as he was acquainted with Dr. Carewe. I am sorry, truly sorry," he adds, earnestly, "that I can give you no better news."

"Thank you," she says, calmly, but her voice has a hollow, far-away sound, which is strange and painful, and the embryo diplomatist is by no means sorry when the carriage has driven away, although the beautiful, miserable face haunts him still.

"Whoever thought Miss Lester had a heart?" he muses, as he settles himself in his comfortable elbow-seat and resumes the arduous (?) duties of an under-secretary. "I should have as soon expected the statue on the monument to shed tears. Poor girl! how awfully cut up she looked! I suppose she cared for Carewe. Whatever made him go out there? It would surely have been much wiser to have stayed at home, looked after his profession, and married Cecil Lester—if she cared for him."—To be continued.

THE EYE-OPENER.

From several parts of the country come complaints of lightning-rod swindlers, who love most to play their "little games" on our immigrant settlers who cannot understand English writing very well, but in the absence of these, the fellows "try their luck" with others also, in search of a green-horn. Their usual practice is to get the owner of a house or barn to sign a contract nominally for a specified sum, but they either leave a blank which they fill in afterwards with a higher amount, or they so confuse the victim that he signs for a higher sum than he intended; or in some cases they add forgery to their other rascalities and change the figures of the contract. In all cases they make over the note to some one else, generally a confederate, for collection, so as to make it appear that it is in the hands of an innocent party. If they can't get the intended dupe to sign for lightning rods, they are ever ready to swindle him in something else, by getting him to sign a contract for anything from curing a pig to loaning him money. What they are after is his signature, which they are sure to use to his disadvantage. Moral, don't sign anything which you don't *clearly* understand, nor for anybody whose honesty you are not perfectly sure of; and never sign any note or contract for a gadabout stranger.

The post office is doing good work in protecting people from swindlers by excluding from the mail all matter addressed to parties known or believed to be guilty of fraudulent practices. Below is a list of names of parties in this city to whom the Department refuses to pay money orders or deliver registered letters:

Allen, H. D. S.; Ballard, P., 260 Greenwich St.; Baxter & Co., 7 & 11 Wall St.; Bell, Jas., 133 Division St.; Benedict & Co., Bain, John C., *alias* Excelsior M'f'g Co., or The Sheffield Fire-arms Agency; Brooks, Charles D., 128 West St.; Burtnett, H. A.; Cateley, Alfred, *alias* The Family Sewing Machine Co., The Combination Sewing Machine Co. and The Standard Sewing Machine Co.; Clark, M., 50 Delancey St.; Clark & Co, *alias* The Silver Mining Co; Clemmens, M., 1681 First Avenue; Commerford, T. J. N.; Commonwealth Distribution Co. (This concern has a place in Louisville, Ky., also.) Creighton, W. C., *alias* B. H. Porter & Co.; Dayton, John, 1212 Broadway, *alias* R. Field & Co.; Dee, John, *alias* Arnould, Jas., 151 Eldridge St.; Duff, J., & Co., 42 Nassau St.; Duffee, Maurice, *alias* Bell, C. & Co., 1215 Broadway; Elias, Ellis, *alias* Russell & Co.; Emmerson, Jos., & Goss, 180 Broadway and 35 Fulton St.; Evarts, Barnes & Co.; Frenks, A., 151 Eldridge St., Foxwell, Chas, & Co.; George, Jas. W., & Co.

We shall continue this list next week and every week thereafter, besides exposing frauds in other parts of the country also. KEEP the lists and refer to them when you receive an alluring circular or see a tempting advertisement, and *keep your money at least until you see the end of our list of swindlers.*

BRIC-A-BRAC.

AN OLD RAT'S TALE.

He was a rat and she was a rat,
And down in one hole they did dwell
And both were as black as witch's cat
And they loved one an-oth-er well.
He had a tail and she had a tail,
Both long and curling and fine;
And each said, "Yours is the fin-est tail
In the world, ex-cept-ing mine."
He smelt the cheese, and she smelt the cheese,
And they both pro-nounced it good;
And both re-marked it would great-ly add
To the charms of their dai-ly food.
So he ven-tured out, and she ventured out,
And I saw them go with pain;
But what be-fell them I ne-ver can tell,
For they nev-er came back again.

"DE UDDER TICKET."

OLD Uncle Mose, of Galveston, was not noticed near the polls on election day, consequently a colored striker was sent to hunt him up. He was found sitting by the fire, groaning dismally, in his cabin.

"Uncle Mose, has yer voted ylt?" asked the colored rounder.

"No, chile, I wouldn't risk ketchin' a cold in my lungs foah all de money in de world."

"Here's a dollar to pay for your time."

The old man secured the subsidy, remarking, "If you is comin' de bulldoze on dis ole niggah, he weakens. Hev you fetched a kerridge for me?"

"Hit's waiting at the doah, Uncle Mose."

"Is yer gwine to bring me back after ise voted?"

"Bring you right back, Uncle Mose; hurry up, now."

"Gimme a dram foah I starts?"

"Here it is," said the emmissary, producing a flask. "Take a pull?"

He pulled, and asked:

"Gwine to gimme annudder pull when ise done voted?" and then he pulled again.

"Yes, take annudder pull right now, don't be afeared ob it. Dar's plenty moah whar it come from."

So the old man pulled again, and wanted to know:

"Hev yer got annudder dollar bill wid yer?"

"Look heah, ole man, you mus' 'low de campaign committee's made ob money. Here's yer udder dollar. Now jump. De polls is gwine to close."

"Lor, chile, you making out you is a statesman, heah! heah! heah! I'se been foolin' yer. I done voted de udder ticket only dis morning, heah! heah! heah!" and the old image settled down in front of the fire, and nearly chuckled his head off.

"GIVE ME RAGGLES."

A WELL-KNOWN lady artist resident in Rome, relates that while standing one day near the statue of the Apollo Belvidere, she suddenly became aware of the presence of a country-woman. The newcomer, a well-to-do looking American woman introduced herself as Mrs. Raggles, of ——, Missouri, and then asked:

"Is this the Apollo Belvidere?"

Miss H. testified to the identity of the work, and the tourist then said:

"Considered a great statue?"

The interrogated lady replied that it was generally thought to be one of the masterpieces of the world.

"Manly beauty, and all that sort of thing?' said the lady from the land of the setting sun.

"Yes," responded the now amazed artist. "It is said to be one of the noblest representations of the human frame."

"Well," exclaimed Mrs. Raggles, closing her Badeker, and with arms akimbo, taking a last and earnest look at the marble, "I've seen the Apollo Belvidere and I've seen Raggles, and give me Raggles."

For Women.

TED BY MISS RAY CLARK.

KEEPING THE HOLIDAYS.

It is the children's time o' year;
Their faces, radiant with delight,
Fill even the poorest homes with cheer,
And make the happiest still more bright;
The gravest eyes put on a smile,
To watch their pranks and merry ways,
And mark how glad the world is, while
With gifts and laughter, songs and plays,
The children keep the holidays.

But how shall we, whom years have taught
The bitter truths of toil and care,
Whose soberer grown-up hearts are not
Like theirs, as light as Summer air,—
We, who have learned that time beguiles,
That youth departs, that joy decays,
That fortune's frowns outlasts her smiles,
And life deceives and age betrays,
How shall we keep the holidays?

We cannot dance in cap and bells;
We cannot blind ourselves to truth—
For time, the oculist, dispels
The glamour from the eyes of youth;
We know life's cheats and mockery,
And hope's sweet lies and soft delays;
And ghosts which children do not see
Sit at our feasts and haunt our ways,
And help us keep our holidays.

But selfish grief is vain and weak;
Those souls are ever happiest
Which, through this devious journey, seek
Their bliss in making others blest,
If we but shed one helpful gleam
Along the world's bewildering ways,
And make one sad life brighter seem,
More warmly shall our home-fires blaze,
And happier be our holidays.

Ah! he whose tender thought gives heed
To poverty and wretchedness,
Who hears the cry of woe and need,
The plaint of hunger and distress,—
Whose heart with pure compassion burns
For those who walk in thorny ways,
Who dries the mourner's eyes, and turns
The orphans tears to songs of praise,
Most fitly keep the holidays.

BUSINESS FOR GIRLS.

ACCORDING to the recent census, it appears that there are nearly a third more females in our country than males; so, of course, there are not husbands enough to supply the demand. Under this state of affairs there is nothing left for the girls but to change their tactics; instead of spending their time and energies in fascinating the beaux, set themselves to work to earn their own livelihood, independent of the masculine gender. They can do it, too. Let them calmly and decidedly make up their minds that there is an independent work in life for them to do, and that they do not propose to throw themselves as martyrs into the matrimonial market to be disposed of to the highest bi[illegible].

The title of old maid is nothing terrible to bear; simply because now and then a single woman is meddling, tattling and fussy, it is no reason why others should be the same. If any man had made the mistake of marrying her in her younger days, she could probably have shown the same disposition as a wife that spoils her for a maid. Hundreds of women have lived happy, useful lives and died respected and deeply mourned by their circle of friends, who, for some reason, never married, and no one ever thought of ridiculing them because they had not the handle of Mrs. prefixed to their names.

It is all nonsense to be afraid of living a single life. In nine cases out of ten a woman is far happier single than if she had a wedding ring fitted on her finger. Custom is an arbitrary ruler, and because it is the custom for girls to marry, it has come to be a universal conclusion that they must be yoked by the matrimonial fetters just as soon as they are fairly graduated from school. It is not considered whether they are fitted to become wives, to assume the responsibilities of housekeepers; it is just to get married. No wonder that so many sad mistakes occur; not strange that families are broken up, or that two-thirds of the married people get divorces, or wish they could. It is the inevitable result of injudicious matches.

Let a young lady seriously consider all the ins and outings of her coming life, and if she is convinced that she will be just as happy, and as comfortable, to rely upon herself, for future maintenance; then let her choose some vocation that she can follow, and carve out her own fortune.

Many departments are now open for girls, and their services are recognized as equal to men; new paths of employment are continually opening, for hand and brain work; just such employment as girls can do precisely as well as men and they ought to command equal pay. All girls cannot feel able to go out, and carve their way in the bustling world, but for such there is more genial employment at home.

Small fruits will grow and yield as well under ladies care as if a man hoed and pruned them. They will bring in an equal remuneration. Garden vegetables, where one is near market pay well for raising; and the work is not laborious. The care of bees, is another occupation peculiarly adapted to engage the attention of ladies; and since a new hive has been invented that meets the necessities and comforts, of both the industrious worker, and Apiarist, ladies can manage them as well as a man. They can turn their labors into a source of profit; receiving a healthy recreation, and securing an amount of pleasure that no other occupation could give.

If girls have a good comfortable home, it is far better to abide there, if they can find anything to employ their time and energies, than it is to go among strangers and fight their way. As long as they have a mother, to love them; it is well to keep by her, for in no place can purer happiness be found; after she is gone, there will be room enough to buffet the storms of life in the wide world.

A girl can be independent if she chooses, and earn a comfortable living in many ways, and it is not the worst fortune in life, to be born a girl; not half as bad as it is to be married to a man that you can neither respect nor love, and who makes you a perfect slave, to pander to his comfort, and humor his caprices. Think well before you make your choice of business. GRANDMOTHER.

CONCERNING SCRAPS OF SILK AND VELVET.—HOW TO UTILIZE THEM.

MARY WAGER-FISHER.

"I WANT you to send me pieces—mere scraps will do—of your silk frocks. I am making the loviest Japanese silk quilt that ever you saw," wrote Amelia to me a little less than a year ago. I sent her the "Scraps" and ridiculed her for her folly in "piecing" a silk quilt. It seemed such endless business as I thought of the numerous silk quilts I had begun, hardly ever one finished—with hundreds of tiny pieces cut with great exactness, laid smoothly together "over and over." Assuredly, any woman who valued her time must be a fanatic to undertake a task like that.

Not long after, who should make her appearance one fine morning, before breakfast, but Amelia, looking as bright, after a ride of fifteen hundred miles as the morning. One of the first things she did, after her trunk was carried to her room, was to bring me some blocks of her "Japanese" quilt, exclaiming confidently, as she laid them out on the library table: "There! isn't that perfectly beautiful?" I looked, admired and speedily confessed that it was the only sensible method I had ever seen for using up scraps of silk, ribbon and velvet. I was so "taken" with the work, that I very soon began a quilt myself; a long and rather narrow affair, to throw over one when lying on the sofa. I bethought me of a cast-off frock of checked silk that would be just the thing to line it.

To begin a quilt of this sort, you must first decide upon the size of the block that will suit you to work upon, and of which a certain number will make a cover the size you require. It is a good way to prepare the lining first, you can take its dimensions with a tape measure and arrange the size of the blocks. From soft, worn, muslin, cut as many squares or pieces the size of the blocks as you will want of blocks. Cover each block of muslin with one thickness of white, sheet cotton. The blocks are then ready for the silk. Now gather together from all parts of the house, every scrap of silk and velvet that you do not need to use for other purposes; old ribbons, neckties, velvet from old vests, coats and bonnets; all these things will contain in some part a bit that is clean and bright and that will give color to the quilt. Smooth every piece out with a warm iron and put in a large box or basket. In arranging the pieces on the layer of cotton, it will rarely be necessary to cut them, unless they are so large as to cover more than a quarter of a block. You can begin any where on the block to arrange your pieces; the corner is a good place, as you often find a piece of silk in your basket with a right-angled corner that will fit the corner of the block.

But wherever you begin and whatever be the shape of the piece of silk or velvet that you first lay on the cotton, your next selection should be a piece that will fit along one side of it and harmonize with it as to color. Contrast every positive color—red, blue, yellow, green, etc., as well as white, with black, or some dark shade. The arrangement as to color, so as to insure a bright effect in the block, however, must be your own, and your first block will probably *not* be your *best* one. The arrangement of the silk pieces, of different sizes and shapes, may be as "pell mell" as you please. The requisites are, to distribute your colors well and to have your pieces overlap each other enough to admit of being turned under at the edge and sewed down on the adjoining piece. After you have your block covered with the arranged pieces, pin or baste the pieces to the block to hold them in place. You can prepare as many blocks as you like for the sewing, but it is better to finish two or three blocks at first, so as to see how they look, and so as to correct any mistakes in arrangement which you may have made. To hem, "fell" or embroider the pieces down to the block, sewing silk of various shades is required; a box of waste silk such as the shop-keepers sell for twenty-five cents, and weighing an ounce, is convenient to select from, as it often contains six or eight shades of sewing silk. An ounce of embroidery silk in bright colors adds to the beauty of the quilt, for where you have a large piece of plain silk to put on the block, its sameness can be brightened up by crossing it with the embroidery silk in herring bone, "cat" stitch, or any of the "Kensington" stitches. You can ornament it still further by embroidering

figures on it, giving it a brocaded appearance, but this only when you wish to make a very elaborate affair. Silk, velvet, or ribbons with colored edges—nearly all black silk has a colored selvedge—contributes to a better effect. The smaller your pieces are, the prettier will be your quilt, but it is best to use your pieces just as you find them, so there will be no waste, and the chance shapes they are in will produce quite as gay and "Japanese" an effect as any you could cut to order. Of course, when your blocks are done, your quilt is wadded and quilted. You have but to sew the blocks together and fasten the lining to the seams. The quilt may be simply bound around, or a narrow ruffle of "pinked" silk may be sewed in between the cover and lining to finish the edge. This ruffle should be of various colored strips of silk to match the cover.

Scraps of silk may be used in this same way for making covers for sofa pillows, cushions for upholstering chairs and stools, or for ornamenting the border of a curtain for a door. It is good economy to preserve pieces of silk. When once the work is begun, progress is very rapid, as it forms very fascinating employment. A cover of this sort is very nice to spread over an invalid; it is light and warm, and the bright and curious appearance it presents is entertaining and amusing. I see no reason why pieces of worsted and even calico could not be similarly worked up. If one has more time than money, or has little girls who need exercise with the needle and training as to arrangement and color. It is more economical than to cut the pieces into any specified shape; while the sewing of the pieces forms also the quilting, and that is a great item.

DOMESTIC SERVICE.

An impartial observer must often be struck while hearing the frequent complaints made now-a-days against servants, that "that spirit of fair play" so characteristic of Englishmen, is a little lost sight of in their case.

Surely all servants are not bad! There must be some good, bad and indifferent, as there are good, bad and indifferent mistresses.

In the choice of her servants a housekeeper must not be entirely guided by her instinct and the impression she receives at first sight of the person she wishes to engage. A pleasant voice and cheerful face are generally an indication of an obliging disposition.

How can a young mistress be expected to train, or at least direct her servants, when she has herself but a superficial knowledge of housekeeping and servants' work? There is no denying that servants will take every advantage of the laxity of household rems.

It is really past understanding why mothers, who have their children's future happiness so much at heart, should so mistake what is for their real good, and allow them to grow up in ignorance of their most serious duties in life. After leaving school a young girl's time ought to be given up, not as it usually is, in keeping up her "accomplishments," which ought to become from that time but a secondary object—but in acquiring a perfect knowledge of housekeeping, so that she may become in deed, as well as in word, a "true helpmeet."

To resume, then. The best servants are those who have been trained in a large establishment, under an orderly and methodical housekeeper, who is herself responsible for the proper working of the house. This will show, therefore, that if the mistress of an ordinary household is desirous of having good servants, she must be her own housekeeper on a smaller scale. The amount of housework for each servant varies according to their number, and also greatly on the style in which the household lives. In a household of small means a "general servant," which literally means everything useful, is usually employed. The amount of her work depends, of course, upon the kind of situation she occupies; if she be methodical in her habits, does everything in its proper time, keeps everything to its proper use, and puts everything in its proper place, she will greatly lessen her daily labor.

In the household in which there is more than one servant, the cook, if she has much cooking to do, cannot help with the housework; but she has generally to clean the kitchen, scullery, and all downstairs offices, as also the doorsteps, hall, and passages; she is also expected to make her own bed and clean her bedroom.

The housemaid has the care of the sitting-rooms, bedrooms, staircase, and passage; she also washes the breakfast and tea things, cleans the crystal and plate, and answers the door, and waits at table. She should be provided with a closet on the bedroom landing, having hot and cold water taps, hooks for hanging her brooms, etc.; also a number of drawers, in which to keep her dusters, gloves, etc.

The under-nurse has the care of the nurseries, lights the fire, cleans the grates, sweeps and dusts the rooms, makes the beds, has charge of the table, and assists in washing and dressing the children, and helps in the mending.

To discharge her various duties properly should be the aim of every conscientious servant: indeed, it would be but reasonable, if the relations between mistress and servant were based on the mutual accommodation principle, seeing they can not very well do without each other; and a good servant is not often willing to leave a situation where she is well treated, even when tempted by higher wages elsewhere. Therefore, when in the possession of good servants, a mistress will do well to study how to keep them.—Correspondent.

FEMALE FARMING EXTRAORDINARY.

As a case of extraordinary female farming, I send the following and ask can any town, county or state, in the United States beat or equal it? In this township—McCamish—we have a lady, who this season, with the assistance of her little girl alone, has broken the ground, harrowed, planted, and cultivated three times, sixty-five acres of corn—plowed the ground, harrowed twice, and drilled, thirty acres of flax—done all the work of preparing the ground and putting in six acres of millet—harvested, with dropper, eight acres of wheat—plowed, prepared, and sowed the wheat stubble to buckwheat, has plowed the ground, harrowed three times and drilled, forty-five acres of fall wheat, which looks exceedingly well, without a skip, balk or bobble in the drilling—broken ten acres of prairie sod for next springs sowing to flax—put up, 14x14 hills, two hundred neatly built and securely bound shocks of corn-fodder—kept a dairy of ten cows, an apiary of twenty stands of bees, done all of her own housework for a family of three, and kept her house always presentable and in order. She weighs only 98 pounds, and presents a frail and delicate appearance. During the time she has also broken to work and ride, four colts, and written three serials which have been bought, paid for, published and praised by a respectable journal. Her husband—well, he does the dirty work on the farm, clerks at election occasionally, every ten years helps to enumerate the U. S. census, and writes poetry under the sweet sounding *nom de plume* of "Edgerton."

These people are not growing rapidly rich, for unfortunately such is not the reward of farm labor; but they own a good little farm, free from encumbrance, and can look the human race squarely in the face with the happy consciousness "we don't owe you" W. F., Jr.

N. B. It is proper to state that all the above farm work was done on three-horse and other riding implements, except the corn cutting.

Edgerton, Kan. Dec. 7, '80. W. F. Jr.

[The above is a little startling. We are assured the statements are true.—Eds.

CONFEDERATE EXPEDIENTS.

Any one having read a letter headed "How Comfort may be had and the Fashions Followed," and another "Dress Under Difficulties," which was published in a Richmond paper will remember, no doubt, the contrast to have struck them in an almost ludicrous way, as to what is now considered a necessarily decent appearance in society, and what was, during the late war, regarded as an elegant costume. I doubt, however, if the costly fabrics of to-day are worn with half the satisfaction, that the home spun costumes afforded the ladies of the confederacy when the individual taste of the wearer was alone consulted, and they vied with one another in ingenuity of invention.

Some of the ladies plaited their own hats of split oat-straw and made them up with trimmings of straw, really displaying an artistic taste of which they might well be proud. Others developed a turn for manufacturing gaiters and slippers from scraps of black cloth, that was truly wonderful. Some made caps for their sons and brothers of rabbit skins; while the boys busied themselves during the day making candles for them to pursue their various occupations at night. The light given forth by these candles has no doubt injured many eyes, but at that time they were considered luxuries. They were made of beeswax and resin melted together, with a slack-twisted cotton wick drawn through it several times, and wound into a ball of which one end was drawn up and lighted.

A lady of high position at the North, who was living at the South during the war, developed great ingenuity in utilizing the material at hand. She originated the plan of using persimmon seed for buttons; for this idea we gave her great credit as they made quite a pretty finish to a neat calico dress.

Serviceable mats for the table were plaited from soft strips of white corn shucks.

Old scraps of black silk were utilized by cutting them into small squares, picking them up fine and mixing with cotton, which was spun, twisted, and knit into soft and comfortable socks for the gentlemen. Eulalie.

Truth is mighty and has prevailed. See its triumph in Hop Bitters.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

Wednesday.—A day in the city! It does one good once in a while to visit the busy thoroughfares and see the bustle and struggle among the citizens for their daily bread, or the wealth they covet. The faces we meet have a preoccupied air, and are often deeply lined as if with care and anxiety. Business is the chief end of man and woman, too, there. You go into a store and they measure you by the length of your purse, or the richness of your dress. How soon these clerks learn to know from whom to expect a purchase! although they are sometimes mistaken, and find the most money belongs to those whose appearance is plainest. I came home thinking of these things and many others to add to our contentment. What a sure, safe way of living is this! The luxuries of the land are ours for the growing, and we have no fear of want that the loss of a situation will cause to the middle classes of a city. We are all the time engaged in the production of articles that every one must buy. Flour and potatoes, vegetables of all sorts, fruit, grain, and cattle, with butter and cheese, are staples that will always command a market, even when people cannot afford new clothes or furniture. Let us be thankful. Then we have constantly around us what is of great value but cannot be found in city streets,—the fresh pure air that greets us as soon as the cars leave those smoky environs.

I think the greatest drawback to country life where there is a growing family, is the isolation. We read of the great singers, lecturers, and other prominent stars who visit the large towns, and in our quiet homes envy the citizen who with all these choice advantages within reach, is often too tired or too careless to attend them. Our provincial towns or villages are too small to attract anything but a circus, or third-rate singers that only fill us with disgust by giving us only the dry husks of what our souls crave, and so we plod on with this unfulfilled desire in our unsatisfied hearts. I have been thinking it would be a good plan to return in the Winter the visits our city friends pay us in Summer. I suppose it is the experience of most of us that as soon as the "Dog Days" come, city cousins arrive as if by a law of nature. They praise our cream, our fruit, our trees and fields, and accept the full benefit of our unwearying attentions. So I shall think it over, and another season try and avail myself of their invitations to "come and see us—do." But I know from past experience what such things are to many a woman who cannot leave home for a night to attend to any of these concerts or lectures, and who feels that this loss deprives country life of half its worth when the long winter evenings come on.

If it will be any help to such I will give the simple experience of one village in which a few of the scattered population determined to have some method of improvement and enjoyment among themselves. The one minister of the place was a young man of thoughtful temperament, whose heart was devoted to his work. With the aid of one or two who possessed advantages in regard to books and magazines, a literary circle was started, where the literature of the day was discussed, lessons given in elocution, and readers appointed to give chosen selections—interspersed with music, vocal and instrumental. The result was that in that village, where the young people had hitherto amused themselves with card playing and small talk, a radical change took place, and all spare thoughts were centred on preparing for the next meeting, or talking over the merits of the last. This can be done in any place where a few are agreed. These thoughts come to mind after a visit to the city, and at no other time does the glow of one's own fireside seem so bright, or home so dear.

TRYING LARD.

Several years ago, we were very glad to call in the assistance of a near and obliging neighbor to help about the "butchering," or, more particularly, about taking off the lard, and trying it out. We were in the habit of soaking it for two or three days, according to the old fashion of our great-grandmother's day. But Mrs. B.—— was an English woman, and had learned something in the way of trying out lard, that at least was new to us; and I will give it for the benefit of others, as it is in the season of butchering. She was very careful not to have the entrails opened, and thus the fat was kept perfectly clean. If by chance an accident happened, the opening was immediately tied with a bit of twine, all "muss" cleared away as quickly as possible, and any particles of fat that had become soiled, were put in a dish to be washed and tried by themselves. The rest was put into a kettle and set upon the stove over a slow fire. Not one drop of water or a pinch of salt was allowed to come in contact with the fat. As soon as it began to fry, it was stirred from the bottom, set into the stove, and allowed to cook as briskly as possible, being occasionally stirred to keep from burning; when done, the lard was drained and squeezed from the scraps, poured into a jar, and when cold covered with a plate or paper, and set away. "This," she said, "will be just as sweet and dry a year from now as it is to-day, if you do not happen to use it all up." We have always followed her fashion of trying lard, and none has ever become rancid, or strong.

Mrs. B.——also showed us how to cure hams, by a plan which we think is far superior to the old way of putting them down in pickle. The hams, shoulders and chops were laid upon a board either in the cellar or some cool room, when the hogs were first cut up; a quarter of saltpeter, and half a pound of brown sugar should be mixed well together, and rubbed thoroughly around the bones; then rub good salt over the meat and let them lay there for two or three weeks, going over them the third day with the sugar and saltpetre preparation, and rubbing on more salt, for they will drain some. If the work has been thoroughly done, they will need no other care than to be turned over occasionally till they are ready for smoking, after which they may be wrapped up and hung away in some cool, dark place, till wanted for use. The meat will be sweet and tender, retaining much more of its natural juices than when the old process of pickling for a month and soaking for another month is the rule. May Maple

DOMESTIC RECIPES.

Vinegar.

Where cider is not obtainable, very good vinegar may be made of molasses and rain water—one gallon of molasses to eleven of the water. Put in some "mother," if to be had. If not, boil *very soft*, a cup of white beans and use instead. Keep in a warm place with the bung open. It will make in a few weeks.

Mother's Johnny-Cake.

One quart of buttermilk, one egg, three tablespoonfuls of butter or drippings, one cupful of sweet apples chopped fine, a teaspoonful of soda, and a little salt. Meal to make of the proper consistency.

Apple-Butter Without Cider.

Stew the apples with a little water till tender, then pass through a sieve and add molasses at the rate of a pint to three pints of the fruit. Return to the fire until thick and smooth, stirring constantly to prevent burning. When nearly done season with nutmeg and cinnamon to taste.

Colorado Pie.

One cup of water, one half-cup of vinegar, one cup of sugar, five tablespoons of flour wet up with a part of the water, a piece of butter the size of a hickory nut. Flavor with nutmeg. May be put in a basin over the fire till it thickens, or be turned at once into the pie. Bake with top crust.

Pork Cake.

One pound of fat salt pork chopped till it resembles lard; one pound of raisins seeded and chopped, one cupful of boiling water poured over the chopped pork, two cups of sugar, one cup of molasses, one teaspoonful of soda, one-half ounce each of nutmeg and cloves, one ounce of cinnamon. Stir in flour till *quite stiff*, and bake slowly.

To Heal an Obstinate Sore.

Apply raw turnip, grated or scraped, changing it as often as it becomes partially dry. This is an excellent remedy.

Mrs. A. E. S.

To Corn Pork.

To eighty pounds of pork (hams, shoulders or sides) take one quart of fine salt and two ounces of saltpeter. Mix with New Orleans molasses to a thin paste. Rub the pork well on the flesh side and on the hock.

Let lie twenty-four hours with drainage, in single layer. Then rub on fine salt all over, as much as will adhere. Let lie two weeks, and then hang up in smoke-house for smoking, or paint twice with liquid smoke.

The above recipe I regard, after several years' use as unequaled. It is convenient, it is a saving of time and labor between the killing and hanging. *It never fails.*

Amos Stouffer.

QUESTIONS ANSWERED.

Yellow Hair, Bronzing.

No. 1, Can gray hair be kept from turning yellow? Will it do to wash it or oil it? The yellow tint does not look well with silver-white hair. No. 2. Can the bronze when worn off from lamps be renewed? Please give directions and obligo, S. N.

Ans.—No. 1, We cannot tell you. If any of our readers have had any experience with gray hair turning yellow, we wish they would please reply. No. 2. Bronzing is generally effected by the action of some substance which combines with and changes the nature of the metal. Not knowing the metal you wish to bronze, we cannot give positive directions. Try the following: wet the metal, which should be free from oil, with a solution of five drops nitric acid in a wine glass of water. When dry, impart to it a gradual and equable heat by which the surface will be darkened in proportion to the heat applied. If this does not prove satisfactory, please state the name of the metal.

Gilding Furniture.

Will some of our friends please give C. W. Wilcox directions for gilding furniture.

Marble Cake.

Will you be so kind as to publish the recipe for marble cake as given in the Rural dated Jan. 20, 1876 or 1877, I have forgotten which? Alfred Wells.

Ans.—"*Light part*—one and one-half cup of white sugar, one-half cup of butter, one-half cup of sweet milk, whites of four eggs, two and one-half cups of flour, one-half teaspoonful of soda and one of cream-of-tartar. Beat the butter and sugar together, mix the cream-of-tartar with the flour and dissolve the soda in the milk. *Dark part*—One cup of brown sugar, one-half cup of molasses, one-half cup of butter, one-half cup of sour milk, yelks of four eggs, two and a half cups of browned flour, one-half teaspoonful of soda, one-half teaspoonful each of ground cloves and cinnamon. When both are prepared, put in the cakepan alternate layers of each, or put them in spots on each other, making what is called leopard cake, until both are used."

Ice water is perfectly harmless and more refreshing with a little Hop Bitters in each draught.

News of the Week.

HOME NEWS.

MONDAY, Jan. 3, 1880.

W. H. HAWKET, M. D., of Helena, Montana, for two years Latin and Greek instructor at Rugby Academy, near Philadelphia, has been tendered the position of private tutor to President-elect Garfield's two oldest sons.....Seven boys, victims of the recent factory fire at Buffalo, N. Y., were buried in one grave, the pall bearers being 28 factory boys.....The Treasury Department has made the transfer of $3,999,500 in gold bullion from the Assay Office in New York to the Philadelphia Mint for coinage into eagles and half eagles. After this transfer there will still remain in the New York Assay Office about $63,000,000 in gold bullion, more than enough to keep the Philadelphia mint employed for six months in coining gold exclusively.....H. D. Cunningham, editor of the Troy (N. Y.) Telegram, has been arrested for criminally libelling Mayor Murphy, of that city, by publishing the statement that the Mayor on Monday attended a dog fight, and owned one of the contestants.....Snow attained to the depth of 2½ feet at The Dalles last week, 3 feet at the Cascades, 10 inches at Walla Walla and Celilo, and 8 inches at Blalocks, Oregon.....Hotels at The Dalles are crowded.

Mayor Adams' foundery and machine shop, at Marshall, Mich., were destroyed by fire on the 28th Loss, $15,000; insured for $4000.....D. W. Halstead's warehouse and B. Jones' meat market at Fort Dodge, Iowa, were burned on the 28th. Loss, $10,000; insurance, $5000 .. ....The President has definitely decided to renew the appointment of Secretary Ramsey as Acting Secretary of the Navy from time to time until the 4th of March..... .. The Ontario Association of Congregational Ministers, at Fairport, N. Y., has cut off from fellowship Rev. Myron Adams, of Plymouth Church, Rochester, for denying the doctrine of endless punishment.....Arthur Langloss, ten years old, ran away from the farm of Patrick Lawler, Manhattan, Ind., because of ill treatment, slept in an open field, had his feet frost-bitten, and yesterday at Chicago both feet were amputated..... Gangs of horse thieves and burglars are operating in the Hudson River Valley and the back country on either shore. Several valuable animals were stolen at New Paltz and other points. Three stores were broken into in Rondout on the 27th In one a safe was removed to the sidewalk to be loaded on a wagon, but the burglars were frightened off without accomplishing their object..... George McGerk was murdered on the 28th by his insane brother, Taylor McGerk, at McGerk's Station, on the Union Pacific Railroad, Moniteau Co., Mo. The homicide had just returned from an insane asylum, at Socorro, New Mexico.

Colonel D. Loder, A. A. G., has started a new military paper at Trenton, called The Jersey Blue, in the interest of National Guardsmen and Comrades of the Grand Army..... Having been tossed about by a succession of screeching gales, Captain O'Neill has just brought into port from Barrow, the ship G. W. Wolff. On the 25th of November the Wolff passed a Norwegian bark with her three topmasts gone by the board, the foreyard with one studding sail on it, all the boats gone, and part of the bulwarks on both sides washed away. The name of the bark was long and could not be deciphered. At the time a gale was blowing and the sea was washing over the deserted ship fore and aft. No signs of life were visible on the tempest-tossed craft..... A few days since an east-bound emigrant train on the Union Pacific Railroad parted in two near Lodge Pole Station, Nebraska, and on the portions striking together again, eight cars were wrecked and five passengers were hurt, but none fatally. .....Ira Fullerton, a young farmer of Roxanna township, Eaton county, Mich., lately surrendered himself to officers, saying he had been assaulted by Gilbert Dutcher, a neighbor, when he disemboweled him with an axe in self-defence.

The icemen of Maine sold 1,000,000 tons of ice last year, and expect to harvest 1,500,000 tons this season. They are already at work on the Penobscot and the Kennebec. It is said that it costs to cut ice on these rivers from 14 to 22 cents a ton, 50 cents to load it on vessels, and about $1.50 to freight it to market.....Eight Philadelphians have died during the year who left property valued at over half a million dollars.....The Ponca chiefs left Washington Dec. 29th, for Carlisle, Pa., to visit the Ponca children at the Indian Industrial School, and will thence proceed directly to their reservation in the Indian Territory..... A special from Fond du Lac, Wis., says: "An elderly woman named Tiffler died here under peculiar circumstances. She was a sufferer from pneumonia for some years, and a warm flat-iron was ordered to be put on her chest. Her husband, a habitual drunkard, applied a heavy iron, which was so hot that it burned through the cavity of her chest, and she died in the greatest agony.

The population of the State of Nebraska, according to the schedules returned to the Census Office, is 452,432. Of this number 249,275 are males and 203,157 females; 355,042 are native and 97,390 foreign-born; 444,805 are white and 2,627 are colored, "Indians not taxed"—that is, Indians in tribal relations under the care of the Government—are not included in the above.....The health of Mrs. W. T. Sherman is quite precarious, and she will not probably be in Washington society this Winter.....The production of whisky in the Cincinnati district in 1880 reached nearly 15,000,000 gallons, on which the government collected a revenue of $12,300,000.....

A new electric signal was placed along the track of the New York, Lake Erie and Western Railroad, 300 or 400 yards from the Jersey City depot, a few days ago.....The Pullman Car Company has an order for a private coach for a Philadelphia millionaire, to cost $30,000. It will be very handsomely appointed and named the "William Penn."....The boot shop of Daddleford & Clark, at Holliston, Mass., was burned on Thursday night. W. O. Hosmer, bootmaker, in the same building, and J. Stewart & Son, sustained small losses.....A fire at Jackson, Mich., recently destroyed the Marion House, a two-story frame building, with four stores on the first floor, and the adjoining brick block, containing the Jackson City Bank and four stores. The books of the bank were saved. Loss, $60,000.....The steamer Plough Boy, en route from Pine Bluff with a cargo of 400 bales of cotton consigned to New Orleans merchants, sank at Pendleton's Landing, fifteen miles below Pine Bluff, Ark., on Thursday evening. The boat was valued at $6000, and is thought to be a total loss.....Mr. Robillard, recently unseated in the Quebec Parliament because of undue influence exerted in his favor by the priests at the general election, has been again elected from Berthier county.....The Pennsylvania Railroad Company has paid to City Solicitor West, $10,626 88, being the amount of the judgment rendered against them by the referee, Joseph B. Townsend, Esq., for the Almshouse land taken some twenty years ago. This money was paid by the City Solicitor to City Treasurer Martin, and thus this long-vexed matter is at last at an end.....Abe Rothschild, tried at Jefferson Texas, for murdering his mistress, has been acquitted.....The fine residence of J. H. Kedzie, at Evanston, Ill., was burned Dec. 31. Loss, $20,000; insured.....H. C. Rogers, farmer, living near Huntsville, Texas, was on Thursday fatally stabbed by one Pickering, who escaped.

The receipts from customs for December will amount to nearly $13,000,000 and from internal revenue to nearly $12,000,000.....J. C. C. Whaley, editor of the Clinton Democrat, and Representative-elect, died at his residence in Lock Haven, Pa., Friday evening.....From time immemorial the Chinese language has found expression on paper in thousands of distinct symbols. Recently an alphabet has been invented, consisting of thirty-three characters, by which all the sounds of the Chinese language can be expressed..... Epes Sargent, who was editor of the Boston Transcript from 1844 to 1853, died in Boston Friday night, aged 67 years. In early life he was connected with the Boston Atlas, and was the author of the "Life of Henry Clay," and also of several well-known plays, and was associated with Park Benjamin in editing the World in New York. In later years he has devoted much labor to works on Spiritualism. During the last two years he edited the "Cyclopædia of British and American Poetry." At different periods of his career he has written several works of fiction and poetry.....There now remain $6,201,000 6s of 1880 (now due) unredeemed, of which amount the Treasury holds $1,083,000 as security for national bank circulation.

Ex-Rev. E. D. Winslow, the Boston forger, now living in Buenos Ayres with a second wife, has offered his Boston wife $15,000 if she will procure a divorce.....An Iowa judge, although 68 years of age, and considered a pretty well educated man, has entered a college in Boston as a student..... Vennor, the weather prophet, used to be a workman in an axe factory at Ballston, N. Y..... The proposition to divide Texas into several States is revived. There is also a movement to cut Missouri into two States.....One of our bicycling Doctors of Divinity is planning a run, with his son, through Scotland, England and Normandy, next Summer.....Hon. E. B. Washburne has been selected to write the article on "Illinois" for the "Encyclopædia Britannica," and Hon. James F. Wilson that upon "Iowa."....Governor-elect Porter, of Indiana, will be married in New York, on the 5th of January, to Miss Stone..... A liquor dealer in Norwich, Conn., on being prosecuted for selling liquor illegally, said to the prosecuting agent: "You did not send your officers to my place any too quick. It is a miserable business. You came just in time to save me. I am obliged to you."....The Judge Advocate-General has been directed to prefer charges and specifications for the trial of Cadet Whittaker. The court-martial will probably meet in New York city. It is said the President and Secretary of War are both of the opinion that it will be better to have the trial at some other place than West Point, where the influences are adverse to Whittaker.

At Newark, N. J., Edward Kissam, colored, beat his wife to death Christmas day with a club, and afterward put the corpse in bed and slept beside it all night. The couple had been drinking freely with friends, and, it is supposed, the murder was committed during a quarrel. Kissam was arrested. He denies his guilt.....At Hempstead, L. I., Sidney Hendrickson, a prominent farmer, who has been feeding live stock on the refuse of New York hotels and boarding-houses, and selling meat to unscrupulous butchers, pleaded guilty and was fined. The case excited great interest. A number of Hendrickson's cattle were lately seized by the authorities and killed.....Mrs. Mary Hardy is lecturing around the country in regard to young women, and she tells mothers to beware of the young man who drives a fast horse.....Mrs. Jessie Grant has left a most agreeable impression in Washington. She is a slender, willowy blonde, young and pretty, with high, clear-cut features, a pleasing voice, and winning manners.....Rev. James Hartnett preached a sermon at Davidville, Ark., on the duty of paying debts promptly. "So much for sentiment," he said, finally, "and the hard fact is that this church owes me five hundred dollars, and I shall never occupy this pulpit again until it is paid."

FOREIGN NEWS.

In Ireland the trial of the leaders of the Land League for conspiracy against the good order of the island—though nominally against the government—has begun. There is evidently a determination on part of the government to secure a conviction, although there is little display of the vindictive bitterness that has hitherto always marked political trials in the "Islands of Saints." The defendants appear resolved to make of the trial an occasion of proving to the world the gross abuses and intolerable grievances which have led to their action and the formation of the League. To this end they intend to summon oppressed tenant farmers and others from all parts of the island, to the number of 1,000, so as to obtain their sworn testimony of the hardships to which they and their class have been subjected. Prominent statesmen, such as John Bright and Gladstone himself, will, it is said, be subpœned to testify with regard to speeches favorable to Ireland, which they have delivered. The object will be to obtain, under oath, their real opinions of the Irish Question, as it is thought that they really believe the tenants were grievously oppressed. Meanwhile military preparations have been made so that a number of "flying columns" are ready to start at a moment's notice through the island in the event of an outbreak in any part of it. It is noticeable that among all the troops now in the country there is not a single Irish regiment. The Land Leaguers are still holding mass meetings all over the country, which are numerously attended except in Protestant Ulster. Even there many of the tenant farmers are joining the League, though the rest of the Orange population are bitterly opposed to it. The system of "Boycotting" is spreading, and is now applied to storekeepers, lawyers and to all who are obnoxious to the League. At the approaching meeting of Parliament the Government intend to introduce at the same time measures of coercion and relief.

[La Fayette Daily Journal.]

Anxious to Rise.

There's plenty of room upstairs, as Daniel Webster said to the young lawyer anxious to rise, but despondent of his chance to do so; but no one need injure himself either in climbing the stairs of fame or those of his own house or business place. The following is to the point: Mr. John A. Hutchinson, Supt. Downer's Kerosene Oil Works, Boston, Mass., writes: "Mr. Patton, one of our foremen, in walking up stairs last week sprained his leg badly. I gave him a bottle of St. Jacobs Oil to try. He used it and an almost instantaneous cure was effected."

AGRICULTURAL NEWS.

No official statistics of crops are collected in Russia, so that a great deal of uncertainty always prevails about the results of the harvest until the crops are actually marketed. Speculators seem this year to have taken advantage of this uncertainty, and grossly exaggerated the partial failure of the harvest in some districts; and it must be acknowledged that all official and other information from different parts of the empire also conveyed a gloomy view of the outlook. This was still further darkened by the almost entire cessation of exports of grain in the late Fall and early Winter. Later on, however, reports of the wheat crop became far more favorable, and exports began to resume their old-time magnitude. On Dec. the 9th, the following amount of wheat was afloat from Russian ports to the United Kingdom. From Azow, 608,000 bushels; from Odessa, 240,000; from Nicholaieff, 272,000, total, 1,120,000. At the same date the quantity on passage thither from the American Atlantic ports was 2,433,000 bushels, so that at the beginning of December Russia was contributing to the United Kindom nearly half as much wheat as all the Atlantic ports of the North American Continent. This doubtless has been the chief cause of the present depression in prices of wheat here.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports, and on rail from Western lake and river ports, and frozen in on New York canals, is:

	1880. Dec. 25. bush.	1880. Dec. 18. bush.	1879. Dec. 27. bush.	1878. Dec. 28. bush.
Wheat	30,007,418	29,709,288	28,634,366	18,283,701
Corn	16,921,123	16,465,295	10,175,216	8,525,819
Oats	3,859,694	3,783,061	2,795,105	2,700,310
Barley	3,183,241	3,057,731	4,529,297	5,248,452
Rye	873,360	940,916	1,091,333	1,732,955
Total	54,846,836	53,956,291	47,225,317	36,481,237

It will thus be seen that of late a great deal of grain has been thrown upon the market. Until a few weeks ago the visible supply was considerably greater last year than this, whereas now the case is reversed.

The tea crop of India this year is estimated at 700,000,000 pounds, nearly double the yield of 1878. Ten years ago it was only 14,000,000 pounds..... .....Mr. Vennor predicts the following for the month of January, 1881: "As will have been seen from the forecast of December, I anticipate that New Year's callers will have heavy sleighing this year from Montreal to Washington, D. C., and that a cold snap during the first quarter of this month will preserve it for that period. I expect blockades of snow in the United States on the 7th and 8th of January, and rainy days during the month will be exceedingly few. The second quarter will open with heavy snow-falls and terminate in a cold snap. The middle of the month will bring snow-falls which will terminate in milder weather toward the end of the third quarter. This thaw, which will be interrupted by a brief cold spell, will extend from about the 18th of the month into February. The record of this month will show it will have been a severe one, and the general conditions of the weather will probably remind us of what are called 'real old-fashioned Winters.'".... ....It is stated that the Government Signal Service, through its multitude of stations has carefully tested Vennor's weather forecasts, and found that they are no more correct than good guesses. The country is so extensive that whatever kind of weather may be predicted in a general way is pretty sure to occur in one part or another of the Union.

THE receipts of cattle in Buffalo have increased from 388,057 in 1870 to 789,854 in 1880. The shipments over the Canadian roads have entirely recovered since the repeal of the prohibitory order. The total receipts in Buffalo of all kinds of animals, except horses, show a marked increase..... .....A telegram from Charleston, S. C., on Dec. 27, says:—Mr. Le Duc, Commissioner of Agriculture, is here, and has completed arrangements for the establishment of an experimental tea farm. The location selected is twenty miles from Charleston and two miles from Summerville, on the line of the South Carolina Railroad.....A cablegram from England on Dec. 29 says:—Official returns show that the foot-and-mouth disease is seriously spreading amongst the cattle in all the large counties of England. There are 5,754 cases of the disease reported in Norfolk and 2,736 in London... ....Ed. Richardson, the "cotton king" of America, is a member of the New Orleans firm of Richardson & May, cotton factors, and is said to be worth $15,000,000. He owns 10 or 12 plantations, and makes 15,000 or 20,000 bales a year. He is also a partner of Richardson & Oliver, who run the Mississippi Mills at Wesson, Miss., employing a capital of $600,000 and 800 hands, and running 400 looms and 18,000 spindles. The mills turn out both woolen and cotton goods, using up 18 and 20 bales of cotton and 3,500 pounds of wool daily, but so great is the demand for the goods in all the principal cities of the country that a Brush electric light and two sets of hands are employed to keep the mills running day and night. There is not a grog-shop in Wesson.

Twenty Years a Sufferer.

DR. R. V. PIERCE:

Dear Sir—Twenty years ago I was shipwrecked on the Atlantic Ocean, and the cold and exposure caused a large abscess to form on each leg, which kept continually discharging. After spending hundreds of dollars, with no benefit, I was persuaded to try your Golden Medical Discovery, and now, in less than three months after taking the first bottle, I am thankful to say I am completely cured, and for the first time in ten years can put my left heel to the ground.

I am, sir, yours respectfully,
WILLIAM RYDER,
87 Jefferson Street, Buffalo, N. Y.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND has rapidly made its way to favor among druggists, who have observed its effects on the health of their customers, Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

GEORGE ELIOT'S ROMOLA.

A TIMELY interest is given, by the death of the author, to the new edition of her masterpiece, "Romola," just issued by the American Book Exchange, New York. It shows her work at its best and strongest, and at the same time gives the reader the opportunity to acquire a lasting familiarity with the scenes and society of mediæval Italy. It is one of the few really great historical novels of the world. It is issued in handy and beautiful form, extra cloth binding, simple but rare elegance and taste in design, and like the other issues of the "Literary Revolution" its cost is almost nominal, viz., 35 cents. It is one of a series intended to form a library of classic fiction, which will include one representative and characteristic work of each of the great authors who have won lasting fame in the realm of fiction. Life is too short and too full of work to permit the reading of *all* that is beautiful and valuable in these creations of the imagination, but even very busy people can find time to read *one* book by each of the score of authors who have won immortal fame and place in the affections of the people. Not to be acquainted with them is to be ignorant of much that is most important and most interesting in the history of nations and of men. Not to possess them is to be deprived of most fruitful and profitable sources of enjoyment. Among those issued or nearly ready are: Scott's "Ivanhoe," Bulwer's "Pompeii," Irving's "Knickerbocker," Cooper's "Mohicans," "Tom Brown at Rugby," "Adventures of Don Quixote" and "Uarda, a Romance of Ancient Egypt." Full catalogue of standard publications will be sent on request, by the American Book Exchange, Tribune Building, New York.

AN EXCELLENT PREMIUM.—Those of our agents who are in want of a good cook stove should examine into the merits of the one we offer as a premium for this year. It has an oven 19x20 inches, and has a full set of trimmings as follows: 1 wash boiler, 1 coffee boiler, 1 steamer and cover, 1 pot cover, 1 iron or tin tea-kettle, 1 set (4) bake pans, 1 joint pipe, 1 pot, 1 kettle, 2 skillets or spiders, 1 iron heater, 2 cake griddles—all securely packed and delivered F. O. B. at any steamboat or at any depot in St. Louis. This stove can be used with either hard or soft coal. We give this valuable premium for 44 subscribers. Circulars giving full description of it will be furnished to those who desire them, by addressing the manufacturers, the Excelsior Manufacturing Co., St. Louis, Mo.

All your own fault if you remain sick when you can get Hop Bitters that never fail.

To Housekeepers.—The attention of heads of families is respectfuly invited to the superior quality of BURNETT'S FLAVORING EXTRACTS. They are entirely free from the poisonous oils and acids which enter into the composition of many of the factitious fruits flavors now in the market. They are highly concentrated, have all the freshness and delicacy of the fruits from which they are prepared, and are less expensive.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Jan. 2.

Boston.— POTATOES—There is no change. A moderate trade at 45c. for Chenangoes, 55@60c. for Prollifics, 60@65c. for Northern Rose and choice eastern, including Houlton stock, sell for 65@70c. Native red onions sell at $3.50, and yellow at $4@4.25 ℔ bush. The market is firm for good apples at $1.50 ℔ bbl., and some fancy lots sell up to $1.75. Cranberries—Market remains dull at $4@5 for country and $5@6.50 for Cape. BUTTER—Freshly made Northern and Western Creameries sell at 30@33c. for choice, and summer made at 27@29c. Choice lots of fall New York and Vermont dairy butter sell at 26@28c. Choice freshly made Western or Northern dairy butter, that is all right in color and flavor, is in fair demand at 24@27c.; freshly made ladle packed sells at 22@24c., and summer made ladle at 15@18c as to quality. CHEESE—Northern factory, fine, 12½@13c. per lb.; Western factory, fine, 12½c; fair to good, 11@12c per lb; common, 8@10c per lb. HAY AND STRAW—Northern and Eastern prime, $23@24 per ton; Northern and Eastern medium, $20@22; Swale, $13@14c; Straw—rye, $28@25 per ton; oat, $13@14.

Chicago.—Wheat unsettled; No. 2 red Winter, 94c; No. 2 Chicago Spring, 96½c. cash; 96½c, January; 97½c bid, February; sales at 95@97½c, February. Corn dull and weak: 36½c, cash; 36½c, January; 37½, February; 41½c bid, May; 41½c. June. Oats unsettled; 30c, cash; 30½c. January; 30½c, February; 35c asked, May. Rye firm at 83c. Barley firm but not quotably higher at $1.07. PORK—Active, firm, and higher; new, $12.60, cash. $12.52½@12.55, January; $12 72½@12.75, February; $12 90@12 93½, March. Lard unsettled, but generally higher; $8.45@8.47½, January; $8.60@8.62½ February; $8.72½@8.75, March. Bulk meats stronger; shoulders, $4.15; short rib, $5.65; short clear, $6.90. BUTTER—Choice to fancy creamery 31@32c per lb.; fair to good do. 28@30c; fine to fancy dairy, 24@26c; good to choice dairy, 21@23c; medium to fair dairy, in shipping lots, 16@18c; ladle packed, good to choice, 17@18c; fair to the best packing stock 12½@14c; grease butter, 8@10c. fair to choice roll butter sells at 15@17c. CHEESE—Good to fine cheddar creams at 11@12c per lb, and do flat skins, at 7@8c, while the poorer lots have to be heavily shaded, and the refuse will not sell at all. WOOL—There was about the usual inquiry for this season of the year on mail-order account, and prices were steady as previously gived. For assorted lots from store we quote Eastern Iowa, Wisconsin and Illinois wools as follows: Tub-washed, bright, 46@47c per lb; do dingy and coarse, 41@43c; fleece-washed medium, 43@45c; do fine, 39@40c; do coarse, 35@38c; unwashed medium, 32@31c; do coarse, 25@27c; do fine bright, 26@28c; do heavy, 18@25c. Bucks' fleece, 16@18c. Consignments from Western Iowa, Nebraska and Kansas sell about 2@5c per lb. less than this range and burry and poor conditioned lots at 3@10c less. New Mexico wool (unassorted) is quoted at 22@25c per lb, for medium to fine; coarse to medium, 18@22c, and black at 19@22c.

Cincinnati.—WHEAT scarce and firm; No. 2 Red Winter, $1.03. CORN quiet; No. 2 Mixed, 42½@43c. OATS weak; No. 2 Mixed, 35@38c. RYE strong; No. 2, 95½@96c. Barley strong; No. 2 Fall, 95c@97c. PORK firm at $13 50. Lard strong at $8 45@$8 50. Bulk-meats quiet but firm; Shoulders 4½c; Clear Rib, 6¾c. Bacon quiet but firm; Clear Rib, 7¾c. BUTTER dull and nominal; choice Western Reserve, 22@23c; choice Central Ohio, 18@20c. Hogs firm; common, $3 90@4 30; light, $4 35@4 60; packing, $4 60@4 90; butchers', $4 90@5. HAY—Common sells at $14@15, prime do. at $16@16 50 ℔ ton, and prairie hay at $11@12 per ton, in bales on arrival. Wheat and rye straw are firm at $9, and Oats straw firm at $10. HIDES—There is little demand, and prices are fully ½c ℔ lb lower for green and wet salted Hides. Green Hides bring 7@8c, green salted 8½@9c, dry salted 13@14c, and dry flint 15@17c ℔ lb. Sheep pelts sell at $1@1 60 for prime to choice wool, and 25@50c for sheared. Damaged hides one-quarter to one-third less.

St. Louis, Mo.—WHEAT: trading light; No. 2 Red Fall, 96½c.@97½c. cash; 96½c.@97½c., January; $1.01 bid, February; $1.01½@1.03½, March; $1.05@$1.06, May; No. 3 do., 94½c.; No. 4 do., 87½c. bid. CORN market slow; 37@37½c., cash; 37½@37½c., December; 37½@38¾c., January; 40c. April; 40¾@41½c., May. OATS dull; 29½c., cash; 30c.; January; 31½c. February. RYE dull; 52c. bid. HOGS active; light $4 20@4 40; mixed packing $4 30@4 60; butchers' to fancy $4 65@4 80. CATTLE—firm with a good demand; exports, $5.25@5.75; good to choice shipping, $4.75@5.25; fair to good $4 40@4.75; light, $4@4.30; good butchers' steers $3.50@4.25; good to choice cows $3@4; good to choice heifers $3.25@4.25; fair to good colorado steers $4.75@4 25. SHEEP strong, scarce and wanted; fair to choice, $3.50@5; extra heavy, $5.25@5.50.

PRODUCE AND PROVISIONS.

NEW YORK, Friday, Dec. 31, 1880.

There has been no wholesale movement during holiday week that has kept quotations beyond a nominal character. Cold weather and a snow storm have hardened prices for some items that depend upon daily delivery, but these are few. We annex some:—

BEANS AND PEAS.—Beans are selling only for local use and with heavy receipts and accumulating stocks prices favor buyers. Exporting grades have only small outlet: the 750 pkgs for the week do not tell upon the supply to any extent. Peas are dull at $1.65@1.70 for Wisconsin green and $3 for 2-bush. bag B. C.

Marrow beans prime $1.85@1.87, do. other $1.75@1.80, medium prime $1.70@1.72, do. other $1.60@1.75, pea $1.60@1.80, white kidney $1.85@2.05, red do. prime $1.70@1.75, do. other $1.55@1.65, black or turtle soup $1.60; lima $4.50@5.

BEESWAX.—Small sales at 23@24 for Western and Southern.

BUTTER.—Market has had a full fortnight's dullness. The current impression among dealers is that Jan. will open with easier rates all around. Prices are off something for even the light trade now moving. The most confidence is in fine grade western, as the relative prices compared with State, has already given it much of its usual steady call.

Creamery, Western choice 28@33½c; State 24@30c.; poor 20@23c.; State dairies, 20@25c.; firkins, 17@23c.; pails and half tubs, fair to prime 24@27c.; poor, 18@20c.; Welsh tubs, fall, 25@27c.; other 17@22c.; Western imitation creamery, 24@26c.; dairy, good to extra, 22@25c; other 16@20c; factory, fair to best, 14@20c.; other 13@13½c. rolls 19@21c.

COTTON—The market has ruled weak and moderately active. Latest prices are for

December at 11.83@11.85c.; January at 11.86c.; February at 12.06@12.07c.; March at 12.25c.; April at 12.40c.; May at 12.52@12.53c.; June at 12.62@12.64c.; July at 12.70@12.73c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	8¼	8¼	8¼
Strict ordinary	9⅛	9⅛	9⅛
Good ordinary	10⅛	10⅛	10⅛
Strict good do	10¾	11	11
Low middling	11 7-16	11 11-16	11 11-16
Strict low middling	11 11-16	11 15-16	11 15-16
Middling	11¾	12⅛	12¼
Good middling	12⅜	12⅝	12⅝
Strict good middling	12⅝	12⅞	12⅞
Middling Fair	13⅛	13⅜	13⅜
Fair	13⅞	14	14

STAINED.

Good ordinary	8 9-16	Low middling	10 5-16
Strict good ordinary	9 7-16	Middling	11 3-16

Receipts for the week, 32,166 bales. Exports do. 9,475 do.

CHEESE.—Export demand is moderately active only this week and the home trade light, with prices not showing important change. Latest prices are for State factory, fancy, at 13@13½c.; do. good and prime, 12¾@12¾c.; do. fair to good, at 11¾@12¾c.; do. h'f skimmed, 8¾@10c.; Wisconsin factory, fine, 12½@12¾c; do. good to prime, 11¾@12½c.; do. fair to good, 10¾@11¾c.; Ohio factory, fine, 12½@12¾c.; do. good to prime, 11¾@12½c.; do. flat, fair to good, 10@11½c; do. poor to fair, 7@10c.

DRIED FRUITS.—Trade has been slack this week, confined to small lots, with prices not showing important change. Quotations are for

Evaporated apples at 8¼@9¼c. for the better qualities; sliced apples at 5@6½c. for good to choice North Carolina; 3½@4¼c. for Va. apples, 4@4½c. for Tenn. do; 4½@5½c. for State do; 3½@5¼c. for western Ohio and Mich. Peaches at 8@12c. for evaporated peeled; 16c. for unpeeled do.; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6¼@7½c. for halves and 6¾@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 18c. Raspberries at 25c. Whortleberries at 12@12½c.

EGGS.—Receipts for the week, 2654 bbls.; do last week, 3549do. Since the light weather the market shows a decided advance, which supported by the additional wants for holiday cooking. Limed are bringing remarkably good figures.

The annexed high prices are not regarded as settled, as part of the advance may be ascribed to an excited trade.

Near points 28@33, State and Pa. 32@35, Western, 32@35, Southern 32@35, Canadian, 31@32, stored fresh 28@30, State limed, 28@29, Western and Canadian 27@28.

FLOUR.—There is a more confident temper to the market, especially toward the close, with increasing demand.

Latest prices are: $3.00@3.75 for very inferior to very fancy superfine State and Western; $4.00@4.40 for poor to choice extra State and Western, odd lots and lines; $4.40@4 65 for choice to fancy do.; Inferior to good white wheat, trade and family extras, $4 25@5.10; good to choice do. at $5.10@5.85; (very choice up to $6.25;) red and amber winter wheat inferior to choice trade and family, at $4.25@5.85; round hoop Ohio, $4.25@4 75; and trade and family brands of do at $4.80@6.25, the latter for fancy; St. Louis $4.40@5.25 for inferior to good extra; $5.25@6.25 for good to choice, Minnesota clear, inferior to very choice at $4.25@6.00. Minnesota "straight," poor to fancy, at $5 25@7.00, and patent inferior to fancy at $5.75@8.00; city mill extra at $5.20@5.45 for ordinary to very choice for the West Indies; do. for England, $4.20@4.40 for poor to very choice spring wheat, and $4.75@5.50 for winter wheat product; do. trade and family extras, $5.65@6.75; do. for South America, $5.55@5.75; the latter for fancy; No. 2 at $2 85@3.50 for inferior to fancy.

CORN MEAL.—Sales at $3.35 for Brandywine.

FRESH FRUITS.—Cold weather checks the sale of all fruits, and with some doubt as to the condition of stock prices easier to sell.

Baldwins ℔ bbl. $1 75@1 87; Greenings, $1.62@1.75; Spitzenbergs, $1.75@2; Lady apples $1@6. Cranberries in bbls. Capes fancy $7.50@8; other, $4@7; N. J. in boxes $1.50@2.25, the latter for selected. Florida oranges have had a poor season thus far; prices low for original pkgs, ranging $3.50@3.25; Boston pears nominal at $4@6; Catawba grapes $4@5. In nuts there has been good demand; market now quiet. Peanuts, hand-picked Va. 4½@5, other, 3½@4¼. Hickory nuts ℔ bush. of 50 lbs., $1.50@1.75. Black walnuts 60@75. Pecans 9@10c.

FURS AND SKINS.—Some speculation is showing, but there is not activity enough yet to make a precise price scale.

GRAIN.—The whole market has been more or less affected by the severe weather of the past week. In wheat particularly, as it may effect the winter crop, and all articles influenced by the prospective temporary diminution of receipts as shown by the higher prices.

Wheat is active and close strong on a fair export demand. Latest prices are for

No. 1 white at $1.13¾@1.14¾, do December at $1.14, do, January at $1.14@1.14¼, do. February at 1.16⅝, do. March at $1.17¾@1.18, do. May at $1.17¾@1.18; do steamer at $1.12, No. 2 white at $1.12¾@1.12¾; ungraded white at $1.10; mixed winter at $1.14¾; No. 1 red at $1.24@1.25; No. 2 red at $1.16@1.16¾; do. December at $1.16¾@1.16¾, do January option at $1.16@1.16¾; do. February at $1.18@1.19¾; do. March at $1.20¾@1.21¾, do. May at $1.21¾@1.21¾, No. 3 red in lots at $1.14@1.14¾, ungraded red at $1 06@1.21; ungraded Spring at $1.12

Corn is fairly active and firm in price: latest prices are for

New York No. 2 at 57c, do. December at 56¾c., do. January at 56¾@57, do. February at 57¾@57½, do. March at 57¾@57¾, do. May at 55½ bid and 56 asked; new crop No. 2 at 54¾@56¾c; ungraded mixed Western at 52¾@57, No. 3 at 52¾@53; No. 2 white at 57; steamer yellow at 53¾@54.

Oats have realized an advance; latest prices are for

No. 1 white 47½; New York No. 2 white at 46; No. 3 white at 43½; New York No. 1 at 44½; New York No. 2 at 44@44¼, do. January at 43¾@43½; do. February at 45@45½, No. 3 at 43@43½, ungraded white Western at 43¾@45¾, ungraded mixed Western at 42½@44¾, No. 2 Chicago quoted at 44.

HAY AND STRAW.—The severe storm has limited receipts and prices are doing a little better.

Selected retail State hay $1.20@1.30 per 100 lbs; other grades of timothy at $1.15@1.20 do, grades for railway and shipping wants at $1.05@1.10, clover mixed at $1.00@1.05, clover clear at 95c.@$1, salt hay at 65@70c. Straw—long rye: $1.15@1.20, short rye, oat, wheat and barley 85@90.

HONEY.—The market is lower and fails to revive; country dwood lots are beginning to be pressed for sale. White clover, single, 16@17; larger pkgs. 14@16; buckwheat 11@12; extracted, as to color, 6@10.

HOPS.—Trade has been very moderate the past week, exporters indifferent and brewers doing little; prices are without change. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Bohemians	35 @40
Pacific coast, new	20 @24

PROVISIONS.—Hog products have been tending stronger and have a fair range.

Mess pork quoted at $13 for old on the spot in jobbts, round lots of new are about $13.50. Bacon at 7.20 for long clear, and 7.50 for short clear. Lard—Western steam at 8.95 for spot lots, 8.95@8.97½ for January, 9.07½ for February, 9.15@9.17½ for March. Stearine at 9@9¼. Tallow at 6@6¼. Beef hams at $17@17.50. Beef, extra India mess quoted at $19@20 for city; $9.50 for extra mess, $8.50 for plain mess, and $13@13.25 for family mess.

POULTRY AND GAME.—Light supplies of dressed poultry have sent up prices for very prime; but with the advance trade naturally slackens after buyers have been so long used to easy figures. Shipping roads are said to be in bad order and arrivals are expected to run light for a number of days.

Turkeys range 14@16, chickens 11@15, poor lots 7@9, chickens and fowls western mixed 6@9¼, fowls, good to prime 9@11, poor 6@8. Ducks, choice 12@14; other 9@11. Geese, 8@12. Squabs, white ℔ doz. $2.50@2.75, dark $1.25@1.50. Live poultry is in small supply and prices are temporarily good. Chickens 11@12, fowls, 9@10c; roosters, 5@7, Ducks, choice, 65@80, other 50@60. Geese, extra, $1.75@2; other $1.25@1.50.

Venison winds up at 6@9 the latter for saddles. No legal sale for it after Dec. 31. Birds have had a good demand and as the weather diminishes supplies prices are firm.

Canvas back $1.25@1.75, red heads, 50@75; mallard 50, teal, 30@40, common 20@25, quail prime trapped ℔ doz $1.87@2, poor $1@1.50, partridges, 37@75, the latter for State. Grouse prime $1.12@1.20, drawn 90@$1 Hares, 25@30. Rabbits, 15@20.

SEED.—Clover is steady at 8@9¼ for fair to strictly prime, to 9¾ for extra choice. Timothy is inactive at $2.75@2.85.

VEGETABLES.—The weather is risky for the potato trade and prices are not above steady.

Potatoes, E. Rose Eastern double heads $2@2.25, State, $1.75@2; do. in bulk $1.75@1.87; prolific do. $1.50@1.75; Burbank do. $1.50@1.75; do in d. h. $1.75@1 87 peachblow do. $2@2.25; snowflake $1.75@2; peerless State $1.50@1.75; N. J. $1.37@1.50. Sweet Del. $2.50@2.75. Onions, white, $5@5.50; yellow, $3.25; red, $3.00@3.25; Chester, $3.00@3.25; marrow squash, 40@50; Hubbard, 75c.@$1; beets, 75c.@$1; carrots, $1.25@1.50; R. turnips, 50@75c.; white, do. 50@75; cabbage, ℔ 100, $3@5; red, do. $4@6; celery ℔ dozen, $1.00@1.50; cauliflower, ℔ bbl. $4@7.

WOOL.—Has been very quiet this week, on account of the holidays and is essentially in price as quoted last week.

LIVE STOCK MARKETS

NEW YORK, Friday Dec. 31, 1880.

BEEVES.—Receipts for the week 9,575 head; do last week 11,215 do. Light receipts and good butchering weather have kept the market brisk all this week with an advance in the under good grades since Wednesday. Such dry cows, heifers, oxen and stags that are pushed upon the market at this season sold at 3½@4½c. live weight; some bulls sold at 3¼@4¼. Poor to fair steers ranged at 8@10 to dress 55@56 lbs.; good to extra 10½@12¾ Average price of beef cattle for 1880, 9¾c., against 9c. strong in 1878.

COWS AND CALVES.—There is no positive market. An inquiry for fine milkers would be apt to be sent to the country without depending upon current receipts.

SHEEP AND LAMBS.—Receipts for week, 22,138 head; do last week, 23,181 do. Market firm with moderate supplies. Sheep ranged $5.25@6.60 per 100 lbs.; lambs $7 75@7.37½ do.

SWINE.—Receipts for the week, 22,490 head; do. last week, 32,470 do. Weather favorable for packing and the market not well supplied.

Live hogs, corn, $5.45@5.55 per 100, country dressed pork 6@8, light to heavy city dressed State 6@7¾, city dressed Western 6½@6¾. Western dressed 6@6¾. Pork tenderloins 10½.

VEAL CALVES.—Live calves are scarce and high. Best N. J. quick at 8, prime State and N. J. 7½@7¾, fair to good 6½@7, poor 5½@6, Mt. Holly, 5@8, heavy to light buttermilk, 4@5, grassers, 2½@2¾, hog-dressed calves scarce with blocked roads: prime 10½@11, fair to prime 8½@10¼, very common 4½@7.

Comparative receipts live stock:—

Totals,	1880.....	676,932	6,585	188 295	1 682.734	1,744,435
"	1879.....	568,681	8,231	168.340	1 540,180	1,711.094
"	1878.....	544,741	4,608	144,738	1,350,597	1,802,046
"	1877.....	478,555	4,163	136,483	1,210,626	1,263,498

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Reading for the Young.

THE HIRED SQUIRREL.

A LION to the squirrel said:
"Work faithfully for me,
And when your task is done, my friend,
Rewarded you shall be
With barrelful of finest nuts fresh from
My own nut tree."
"My lion king," the squirrel said, "to this
I do agree."

The squirrel toiled both day and night
Quite faithful to his hire;
So hungry and so faint, sometimes,
He thought he must expire.
But still he kept his courage up, and tugged
With might and main.
"How nice the nuts will taste," he thought,
"When I my barrel gain."

At last, when he was nearly dead,
And thin, and old and gray,
Quoth lion: "There's no more hard work
You're fit to do. I'll pay."
A barrelful of nuts he gave—ripe, rich,
And big, but oh!
The squirrel's tears ran down his cheeks:
He'd lost his teeth, you know.

FARMING FOR BOYS AND GIRLS.—NO. 8.

HENRY STEWART.

Draining.

PLANTS cannot live without water; but neither can they live in an excess of water. When the soil is in a right condition of moisture plants and crops thrive. When the soil is too much filled with water the plants become sickly, the leaves turn yellow and drop from the stems, because they are drowned. They are drowned, in fact, just as much as any animal that needs air to breathe is drowned and dies when plunged into the water; for plants need air as well as animals, and if the roots of a plant are covered up with water they can get no air, because the water drives the air out of the soil, and being heavier than the air, takes its place.

To test the presence of water in the soil, one may dig a small hole, as shown at A, figure 21; if the water rises in the hole to within a foot of the surface, as shown by the lines in the open space, one may be sure that the water stands at the same hight all through the soil. This is evident to every person, young or old; and the fact depends upon a law of hydrostatics, which is that branch of science which relates to the pressure and movements of water and other liquids. This law is, that liquids when at rest always preserve an even, level surface. This is shown more plainly by the illustration B, figure 21, of a bent pipe, in which, when

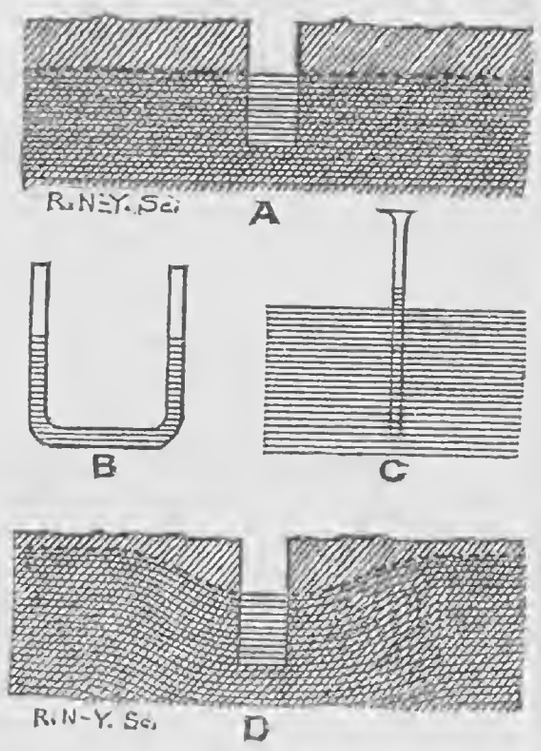

FIG. 21.

water is poured into one part of it, the water rises in the other part to precisely the same level.

It is on this law that the action and presence of springs depend; for a spring bursting out of the ground, or the water rising in a well, is simply the effort of the escaping water to rise to the level of its source, which may be at a distance. So, when the hole is dug in the soil, the hight to which the water rises in it is exactly the same as that to which the water lies in the surrounding soil. This line is called the water-table, which means in other words, the water surface below the soil, and this water-table is represented at A, figure 21, by the dotted line above the darker shading. The darker shading represents the wet soil and the lighter shading the dry soil. If a crop should be planted in a soil filled with water to this extent, the roots will descend until they reach the water, when they will stop growing, and as they stop, the plants stop, because the roots are the mouths of the plants, so to speak, and when they stop the gathering of food the plants starve and grow no more. Indeed, the facts are even worse than this, for the following reason: There is another law of hydrostatics, which is, that water will rise above its general level in narrow tubes, as shown at C. This is called capillary attraction, because the narrow tubes may be likened to hairs. The word is derived from the Latin *capillus*, a hair, and *capillaris*, belonging to a hair.

The same action takes place in sand or loose soil because the spaces between the grains of sand act precisely as small tubes and so the water rises in these spaces. A sponge or a piece of loaf sugar sucks up water in the same way. Thus the water rises higher in the soil than in the hole and may even reach very near the surface at a short distance from the hole; as seen at B, where the water table is seen to be lowered considerably by the hole dug in the soil.

This water in the soil is removed by drainage and this process is one of the most important in the art of cultivating the soil. It has made pleasant, healthful and fruitful fields, of offensive, unwholesome and useless swamps and marshes; it has doubled and trebled the yield of thousands of fields, it has enriched the farmers who have applied it to their lands, and it has been the means of producing food for thousands of industrious workers who without it would have lacked the means to live.

There is another injurious effect which is produced by water in the soil which should be mentioned. Where water exists, air cannot go. Let us then consider for a moment the condition of soil that is filled with water and that of one which is free from it at the opening of Spring. The snow has disappeared; the beams of the sun cheer the glad soil; the warm breath of Spring comes from the South and blows upon the earth; but the soil filled with water to the surface, or very nearly, receives no warmth, the sun's heat is lost and wasted upon it, for no heat can penetrate the dense mass of sodden earth and no warm air can enter its pores. It remains cold, and no evidence of life springs from it. But the soil which is drained has parted with its water; this has sunk down into the drains or the under soil and has flowed away. As the water sinks down the warm air rushes in to take its place; the sun beams upon the soil and its heat goes down into and warms it; the roots of the plants are awakened from their winters sleep; they drink in the warm air and absorb the heat of the sun. With a suddenness unknown in other climates and countries than ours, vegetation bursts into life with a bound, and we exclaim as we look around, amazed at the surprising change, "Summer is come!" Yes, Summer to the industrious skillful farmer who may bring out his plow and turn over his drained fields; but it is still Winter to the farmer who has neglected to avail himself of all the benefits which drainage of his fields would have conferred upon him, for his plow must still remain idle and he must lose all the advantages which are derived from early planting and a warm dry soil, because his fields are too wet to be plowed and so cold that the seed would rot in them.

CHRISTMAS AWAY UP NORTH.

TO THE HORTICULTURAL CLUB:—I often read in the RURAL letters from the nephews and nieces. I am an auntie and very fond of all little nephews and nieces. I am sure that you will be glad to get a letter from an auntie who has spent several winters far north, on one of the most dreary, ice-bound shores of America. I went there to teach school, and the first time I saw the rough-looking, big boys of whom I was to take charge, my heart failed me. Most of them were half-breed: that is, one of the parents being Indians. But love works wonders; I soon won their regard, and found my work of teaching them a great pleasure.

My school-children informed me that it was customary to give the teacher a "fling" they call it, on their birthday. I inquired and found that they usually had a dance with cakes and rum, and every one who came to the dance paid a shilling in money or goods, all of which was given to the teacher. I told them that I had a dear friend whose birthday I wished they would join me in celebrating. They listened with the greatest attention while I told them how rich this friend was, and that He loved little children, and would be so glad to have them keep his birthday. I said, "Every one of you can bring him a gift, which will please that dear friend much. That is your love."

Then I said, "I suppose, children, you know all about Christ-mas?" "Oh, yes!" they replied, "is that the fellow you are speaking of? Why, when he went away from the coast he was very poor. And do you know him? He knows us very well. Many a funny story he told us." It was my turn to be astonished. Was it possible that these children had never heard anything about that most beautiful day—Christ-mas?"

It was just eight days to that honored birthday, and my scholars joined me heartily in making preparations to celebrate it. The boys were busy every evening cutting evergreens for us to make into wreaths and to festoon round the school-room. The girls and I made cakes, and I was the lucky possessor of a barrel of apples.

It was 10 o'clock the night before Chrismas Eve before I found time to go to the woods to get that tree which you all know about, but which was a mystery to the children of this ice-bound coast. Off we started at 10 o'clock, teacher, boys and girls, to the number of twenty-five. It was cold, but the moon was very bright. Only those who have been in the far North in Winter have seen the moon shine in all its glory, and the aurora-borealis adding its light making the scene magnificent beyond description. We had toboggins with dogs attached to them, and snow-shoes for the bush. We brought home a goodly tree, and also a quantity of mountain-ash berries to deck the evergreens with.

By seven o'clock Christmas Eve all was ready, the tree being loaded with rosy apples and presents, for every one of my scholars had an apple and a present. The tree was lighted with bits of tallow candles stuck on every branch. I had invited the parents, so the school-house was crowded. All were filled with admiration, and while I told them of the wonderful love of Him whose birthday we were celebrating, and what that Christ had done for us all, that rough crowd kept a solemn silence. I asked the children if they had "prepared a gift for that best of Friends." One of my scholars answered, "You told us He wanted our love." I said, "Yes; will you give Him your best love?" And they all pledged their love and obedience to Him who had come into this world to die for them. And that night I lay awake, thinking with grief of how many of my little nephews and nieces, who know all about that much-to-be-honored Friend, and yet have never brought Him such a gift. But I must conclude my story. We sang hymns and played games until midnight. I remained on the coast several years, and was rejoiced to see my Christmas tree bear much good fruit.

AUNTIE C. E. T.

Arthabaskaville, P. Q.

LETTERS FROM THE COUSINS.

UNCLE MARK AND RURAL COUSINS:—I will now report my success and failures with the seed sent me from the RURAL. The okra didn't come up at all. I was sorry, but fortunately had plenty without it. The Surprise muskmelon did not do well; I didn't get one good one. They were all faulty. I suppose the soil did not suit them. The portulacas were wonderfully beautiful; every morning there would be a perfect boquet of bright colors. I have saved a great many seeds from them. I only had two or three plants of phlox to bloom, but we have a very large bunch in the garden, which is very beautiful. I only had one plant of Double China pink. The mignonette were very sweet, but just as soon as they bloomed they all died, until I only had one plant living, when one morning I found it covered with something looking like red spiders. I poured some warm soap-suds on it, which killed the insects. I am going to try to better prepare for my flowers next year. I think Bertha Estella would be a pretty double name for Mary Walker's little sister. Stella would be a pretty single name.

LOUDIE S.

Griffin, Ga.

DEAR UNCLE MARK:—I have thought for some time that I would write to you, to see if you would let me join your club. I am a farmer's daughter and have a garden of my own to cultivate and I would be pleased to receive some seeds. I have many pets, three cats, Frank, Tilly and Pearl; a large black dog named Rover, and a canary bird named Charley. Rover can jump through a hoop as nicely as a circus performer. We have a great many flowers in the summer. At the town fair here this fall our flowers took the second premium, we mean to get the first premium next year. Your affectionate niece,

Sullivan Co., N. Y. MARY E. CARRIER.

DEAR UNCLE MARK:—I have often thought I would ask you to let me become a member of the Horticultural Club. I am seven years old, I go to school most of the time. I have a garden in which I raise flowers. I hope you will send me some seeds. I do not grow many kinds but they are generally very nice. Yours,

Beaver Co., Pa. BESSIE MCCLOUD.

DEAR UNCLE MARK:—My father takes the RURAL and we like it very well. I would like to join your club if you would take me. My mother has promised me a piece of ground to plant with flowers, and I hope you will not forget me when you distribute your seeds. Your nephew, J. G. LANG.

Dutchess Co., N. Y.

The Puzzler.

HIDDEN DANCES.

1. Is the tree leafless?
2. He sprang from arch to arch.
3. Sara, bandoline ruins the hair.
4. You must not poke a fire.
5. Noah, or "N. P.," I perceived.
6. Asmin Uethla was a Dane.
7. Mrs. F., I gave them all I had.
8. At the ball Ettie fainted.
9. Ewalt zinced my walls.
10. I met the squad, Rillea.
11. Will wire do, Walter?
12. What a leg Erman has!
13. Can candy be made at home?
14. In Donnegal Lopez too sick.
15. When you get the fan, Dan, go home at once.
16. In yonder cot Ill Ion dwells.
17. Do move quick, Stephen.
18. Pascho, 'tis changed now.
19. Watch the lance R. sends out.

☞ Answer in two weeks. LITTLE ONE.

CROSSWORD ENIGMA.

In knight, but not in earl,
In diamond, but not in pearl.
In fierce, but not in wild.
In strong, but not in mild.
In pennon, but not in flag.
In boast, but not in brag.
In grind, but not in bray.
In brick, but not in clay.
Whole is consecrated to sacred uses.

☞ Answer in two weeks. GUS.

SQUARE WORD.

Something very small.
A short article.
A limited time.
A girl's name.

☞ Answer in two weeks. GUS.

PUZZLER ANSWERS.—DEC. 11.

NUMERICAL ENIGMA.—Energy is the price of success.

SQUARE WORD.—

M A R L
A R E A
R E A D
L A D E

VERBAL CHARADES.—Nosegay.—M. M'D (Goodrich), a lunatic (Hill End), R. D. (Colly Blue), O. K. (Stanmore), J. C. (Hill End), R. M. (Nandewa), Public Schoolboy (Armidale), A. N. (Den).

HIDDEN BUSINESS MEN.—1. Potter; 2. baker; 3. saddler; 4. mason; 5. tailor; 6. cooper; 7. shoemaker; 8. blacksmith; 9. bricklayer; 10. painter; 11. tinner; 12. canmaker; 13. tinker; 14. cobbler; 15. huckster; 16. farmer; 17. printer; 18. carpenter; 19. jeweler; 20. locksmith; 21. cabinet-maker; 22. undertaker; 23. upholsterer; 24. merchant; 25. grocer.

Sabbath Reading.

THE PARABLE OF THE TALENTS.

IN the parable of the talents, we are taught what is the accountability of men, however their circumstances or condition of life may differ. "The kingdom of heaven," said the Savior, "is as a man traveling into a far country, who called his own servants, and delivered unto them his goods. And unto one he gave five talents, to another two, and to another one."

The condition, then, here represented is that of steward, and the principle to be maintained is that all men are responsible to God. They have received from Him certain trusts, to be employed according to his will, and with a view to his glory, and for the right keeping of which they shall one day render account: it may be with grief, it may be with gladness. It is required of a steward that he be found faithful: faithful to his master by whom the great trust has been committed to him and faithful to his fellow-servants, for whose benefit he was put in trust.

What, then, are some of these talents or trusts for which we are held accountable? First, God has endued us with our natural powers. These are high trusts, for which we shall be reckened with, according to our means and opportunities of employing them, according as their strength or feebleness may be. There are some with faculties of a high order; master-spirits, who by their powers of reasoning, or force of eloquence, can sway the masses either for good or evil. Upon such as these there rests a heavy responsibility. "To whom much is given, of him shall much be required."

There is, again, the responsibility arising out of our position in life, and the influence it gives; our worldly circumstances, our education, our opportunities of usefulness. Above all, there is the responsibility arising out of the dispensation under which we live, in gospel times and with gospel privileges. Numerous, indeed, are the gifts bestowed upon all, and the graces bestowed upon some, but ever upon the stewardship, and this, whether we regard our natural life or our religious privileges. Think of our services and sacraments ordained by Christ himself; the written word and a living ministry. "warning every man," says the apostle, "and teaching every man, that we may present every man perfect in Christ Jesus."

How should not this urge us to the right improvement of our several trusts, the wise employment of the talents which God may have given us, knowing that to abuse, or not rightly to use them, will constitute a crime for which we have to give, a reckoning. And yet, as with the servants in the parable, some traded more or less diligently and gained other talents, while some hid theirs in a napkin and gained nothing; so among the professed followers of Christ some are diligent and improve their opportunities, others are slothful, negligent, and do nothing for their absent Lord.

You see, then, what it is that constitutes our stewardship, and in what our responsibility consists. Not ministers and teachers only, but we all are stewards when we consider our natural faculties; we are stewards when we consider our social advantages, our domestic blessings, and religious privileges, and are accountable to God for all.

We have now to notice the special qualities which are required in the condition of a steward and they are two, fidelity and wisdom. "Who," said the Savior, "is that faithful and wise steward, whom his lord shall make ruler over his household?" The practical question is, How are these qualities to be realized?

Well, to be faithful as a steward in things of this world one must ascertain what are the duties of his calling. To do right in any office it is necessary that we have a correct knowledge of our work, the object and scope of it. It is absurd for a man to undertake a work of which he knows little or nothing.

Now, if this be true in earthly callings, how much more in things spiritual. It therefore becomes a first duty of the Christian to know what is the will of God, that we may know what our duty is: and secondly, we should ask of God that He would give us guidance, grace and wisdom, that we may do in a way and in a spirit well-pleasing in His sight.

Again, as good stewards we must bring to His service such feelings of attachment to our Master and such love for His work as will show that we are worthy depositories of the trust confided to us. And many are the considerations why we should cherish such feelings. From infancy He has crowned us with mercies and loving kindnesses. He has sent His Son, His only begotten Son, to redeem us from sin and its consequences; and has opened to us the prospect of a glorious immortality beyond the grave.

Further, as good stewards we must not only know what is our duty; we must do it. A mere knowledge of the Master's will, or a mere profession of attachment to His person, however ardent, will not do. Something more is needed; there must be diligent working. Christianity is not merely a creed, it is a power; not a system of belief, but a habit of work. This it is which marks a knowledge that is practical, a genuine faith. There can be no real faith in the heart where there is no fruit brought forth in the life. "I must be about my Father's business," said Christ; "I must do the work of Him that sent Me." Let this be our resolve: "I must be about my Father's business," "I must do the work of Him that sent me."

No one ever designed injury to another but at the same time he did a much greater to himself.—Bishop Butler.

No sense in having sickness in the family if you will use Hop Bitters in time. Ask those who know.

PERSONAL ITEMS.

Mr. and Mrs. Jefferson Davis will go to Europe.

Lord Beaconsfield's "Endymion" is said to have paid him about fifty cents a word.

Mrs. Jessie Fremont has organized classes in history among the grown-up sons and daughters of the poor settlers in Arizona.

Mr. James C. Flood, of San Francisco, is said to have had transactions to the amount of $300,000,000 in the stock exchange during the last five years.

The sale of season tickets for the Bernhardt engagement closed at Chicago aggregated $7,000. This is the heaviest sale of the kind ever made there.

The President has ordered a court-martial to convene at West Point, on January 18, for the trial of Cadet Whittaker, the court having been ordered at the request of the accused.

Brig.-Gen. Randolph B. Marcy, Inspector-General, and Col. John G. Barnard, of the Corps of Engineers, were recently placed on the retired list by the President, their retirement to date from Jan. 2.

Mr. A. S. Logan, a lineal descendant of the celebrated Indian chief of the Six Nations of that name, so well known to juvenile orators, has been appointed by Secretary Schurz to a position in the Interior Department.

The remains of Lieutenant Irving, of Sir John Franklin's Arctic Expedition, brought to New York by Lieutenant Schwatka, and which arrived at Glasgow on the 25th instant, on the steamer Circassian, are to be buried at Edinburgh.

General Robert Toombs and Senator Brown were on the point of fighting a duel a few years ago. The challenge was sent and accepted, but fortunately the affair was compromised. It is said that Mr. Brown practiced savagely in anticipation of the sanguinary event.

Rev. Dr. E. H. Chapin, the leading and most celebrated Universalist clergyman in the country, died at New York City, on the 29th, aged sixty-six years. The funeral services were very imposing; Dr. Colyer, Dr. Armitage and Rev. Henry Ward Beecher making eulogistic addresses.

Hon. A. L. Akerman, died at his home in Cartersville, Ga., on the 21st inst., after a week's sickness from inflammatory rheumatism. He was born in New Hampshire and, after graduating at Dartmouth College, went to Georgia and practiced law. He was a Unionist during the war, took part in the Reconstruction Convention of 1867, and in 1870 was appointed Attorney General of the United States by President Grant. He was succeeded by Mr. Williams.

[Chicago Tribune.]

Thomas O. Thompson, Esq., the Mayor's Secretary, who, some few days ago slipped on a banana peel and sprained his knee, writes that St. Jacob's Oil "acted like a charm."

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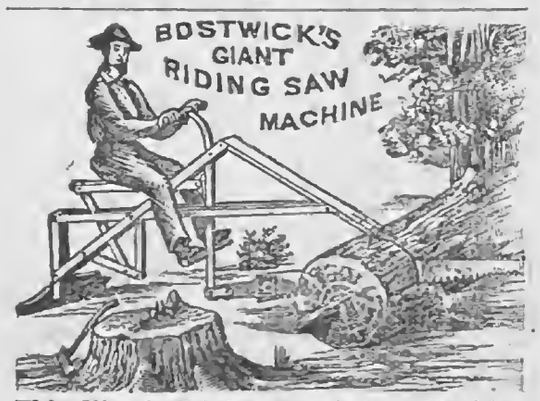

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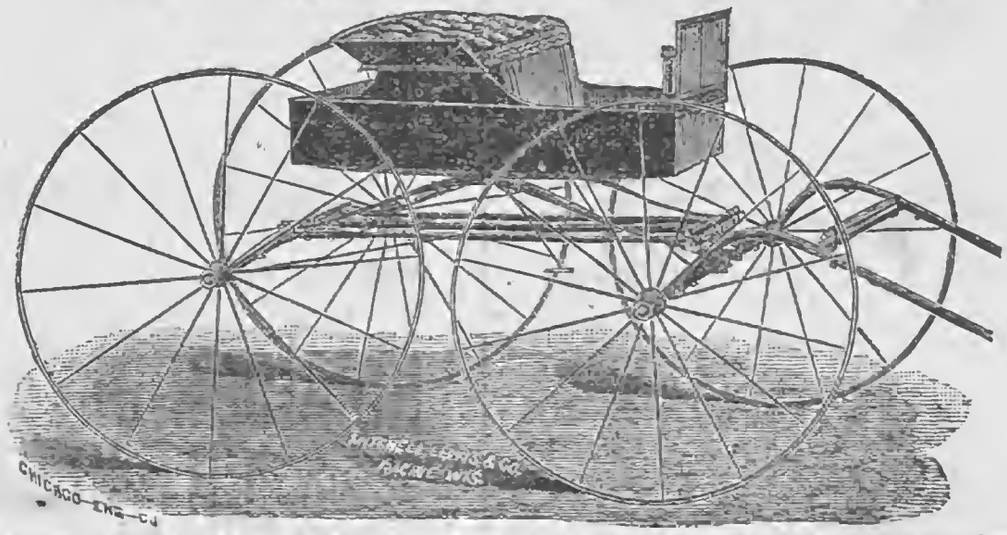

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"GIVE Me My Heart," is the title of a poem sent in by "Penelope." Certainly; we will send it by return mail. If any more of your anatomy is missing notify us by telegraph.—N. Y. Graphic.

AN exchange says that "up in New Hampshire you can, for $2.50, purchase a barrel of cider with a yellow dog thrown in." Yes, but hang it, who wants a barrel of cider into which a yellow dog has been thrown?—Boston Post.

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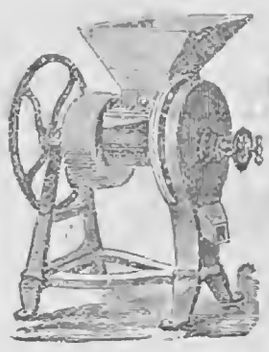

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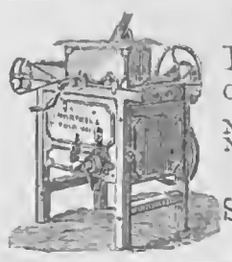

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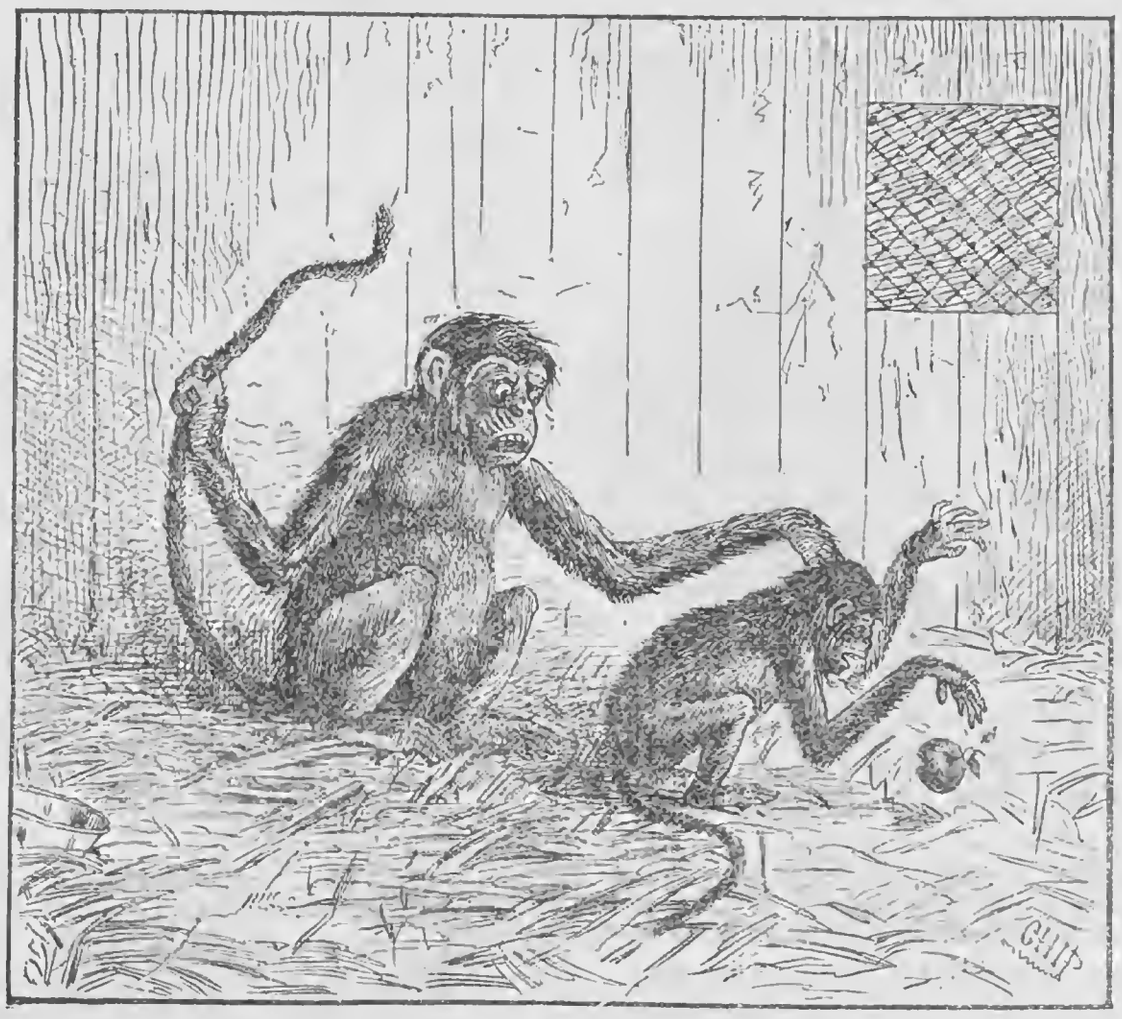

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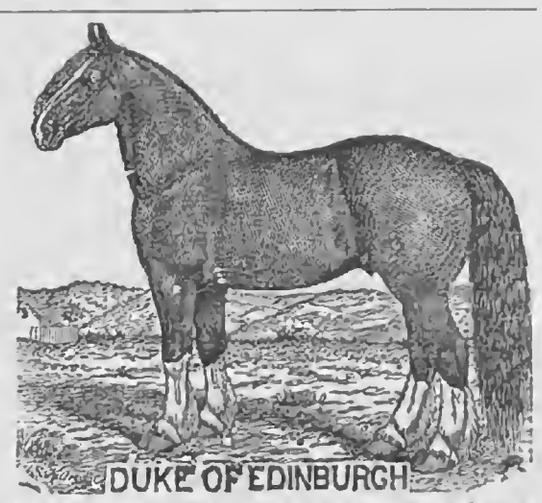

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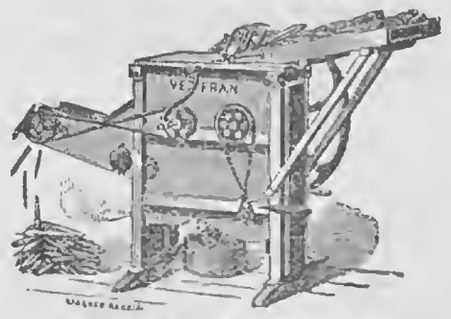

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VOL. XL. No. 3. WHOLE No. 1616. | NEW YORK, JAN. 15, 1881. | PRICE FIVE CENTS. $2.00 PER YEAR.

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Pomological.

THE MRS. BRETT PEACH.

MR. RICKETTS left at this office several peaches of a new variety which he calls Mrs. Brett. They were of beautiful appearance. Mr. Downing favors us with the following description:—

A chance seedling in the garden of Mrs. Maria Brett, Newburgh, N. Y. Tree vigorous and an abundant bearer; flowers small. Glands globose. Fruit large, roundish; suture small, but distinct, extending a little beyond the apex, which is a small point; skin whitish, shaded over half the surface with light and dark red, brownish red where fully exposed; flesh white—red at the stone—juicy, melting, sweet, slightly vinous, rich and of very good quality, separates freely from the stone. Ripens the middle of September.

CHARLES DOWNING

[The engraving is an exact reproduction of one of those left at the office by Mr. Ricketts.—EDS.

NOTICES OF PEACHES.

WITH NOTES TAKEN AT MATURITY.

T. T. LYON.

YELLOW RARERIPE is a name applied by different persons to several distinct sorts. For this reason it behooves the planter to purchase with great care, if he would be sure of the genuine sort, which, according to Downing, has globose glands and small flowers, and ripens very nearly with Early Crawford. A peach somewhat grown here under this name is creamy-yellow, with scarce a trace of red, and ripens at least two weeks after Early Crawford. It is hardly "good."

Another is of medium size, oblong or oval (instead of round), rich yellow flesh, firm, fibrous, but melting in texture, with mild vinous flavor. A good market variety. Neither of the above will sustain the character given in Downing's description of the genuine variety.

RICHMOND, which originated some years since with the late E. Ware Sylvester, of Lyons, N. Y., was at first supposed to be a comparatively late variety; but several years' fruitage determines that, while it is an improvement upon Early Crawford so far as beauty of color is concerned, it commences to ripen while the other is yet in season, only continuing slightly longer. The tree, in nursery, is less vigorous than many others, although, in orchard, it bears a favorable comparison. In the Lake Shore region it is growing in popularity, and seems likely soon to become a leading market variety, since its chief competitor,

EARLY CRAWFORD, is open to the charge of comparative unproductiveness, although it is probably even yet more extensively planted than any other single variety. This is certainly the case within the limit of my direct observation. This result is, however, probably due in part to the circumstance that in our Western markets almost all yellow peaches of that season pass as Early Crawfords.

FOSTER, when first disseminated, was also expected to extend the season of the Early Crawford; but, so far, it has proved more nearly identical in season than Richmond, while it has not, even yet, succeeded in acquiring precedence of that old favorite in any important particular, save possibly that of richer or higher coloring. Its status cannot yet be said to be fully determined, especially as a market variety.

HONEST JOHN is one of those fickle titles which seem, in obedience to some unaccountable fatality, to fasten themselves first upon one variety and then upon another. Fixing itself first upon Serrate Early York, and afterwards upon Large Early York, it has since become a pseudonym of a yellow peach somewhat known in Western New York; and thence, either with that, or, very probably, in connection with several varieties of yellow peaches, it seems to have been transmitted to Western Michigan, where, as yet, little has been done to detect these fallacies and identify the estrays. The sooner such parasitical names can be arrested and banished from the arena of civilized pomology the better for all concerned.

COOPER'S MAMMOTH is also a floating name, for which no person or variety seems to be held responsible. I received and planted trees under this name more than forty years ago, which on fruiting proved to be Early Crawford. I have often since seen the name, even in the catalogues of very pretentious nurseries; but it seems never yet to have become attached to any variety which it was fairly entitled to represent. In Western Michigan I find it given to a large, showy, serrate, yellow peach, which a planter here found in his collection, simply for the reason that he was unable to identify it with any known variety.

PEACHES ON THE EASTERN SHORE OF MARYLAND.

J. W. KERR.

AFTER reading the articles of Mr. T. T. Lyon, of Michigan, on peaches, I think the influence of soil and climate on certain varieties asserts itself as a matter deserving intelligent consideration by commercial planters in all sections. A peach that is of value anywhere else, is, as a rule, not likely to lose any merit when introduced to the genial influences that notably give perfect development to all that tends toward quality in that fruit, here on the "Peach Peninsula." But we find that the "rule" works differently when some of the varieties that are excellent here, are taken elsewhere. For instance, Bilyeu's Late (or Comet, as it is sometimes called) introduced here several years ago by a Mr. Bilyeu, and which is a fine very late peach—resembling "Old Mixon Free" in size and color—is almost totally worthless in some sections farther South. The same is the case with several other varieties that are very good here.

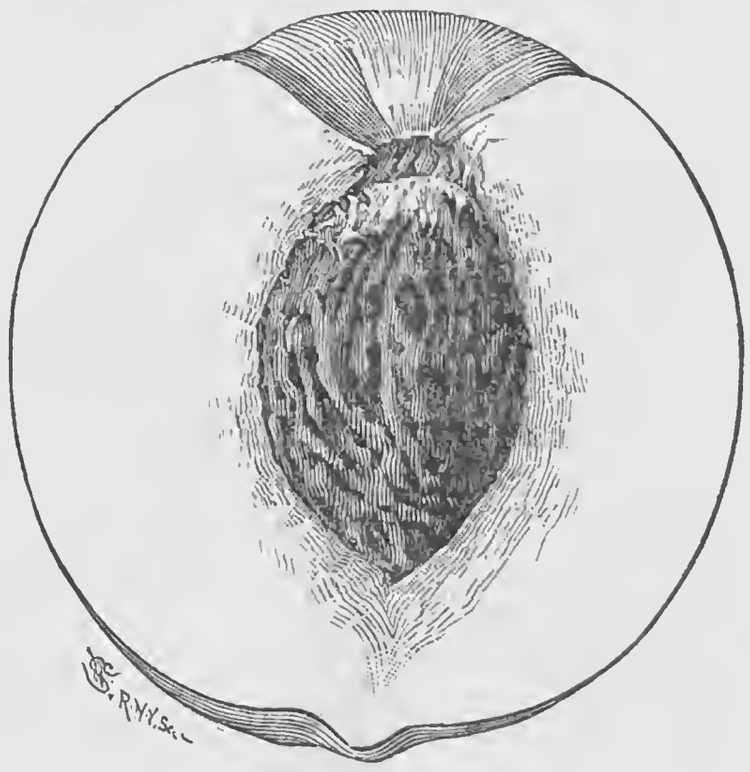
The Early Tillotson succeeds well enough here, but the more intelligent market growers incline to the belief that serrated leaves are an infallible indication of inherent weakness or debility, and, guarding well the vigor and healthfulness of their orchards, leave the serrated varieties out. My own observation and experience in that relation compel me to indorse the practice. The identity of the Alexander and Amsden, referred to by Mr. Lyon, is no less marked here than in Michigan, and, in fact, the similarity existing among all the quite early kinds, is such as to prompt an indorsement of the views of a Pennsylvania pomologist as expressed in a private letter a few weeks back, viz.: "When you have Alexander you have all." "Troth's Early," says Mr. Lyon, "is desirable only as a prolific early market peach, and is hardly good enough even for that purpose." Here there are few varieties more popular than the Troth; in fact, it leads all other white-fleshed sorts; its strong points of excellence being productiveness, freedom from rot, good color, shipping qualities equal to the best, and, with good culture, the quality is good, and the fruit always commands remunerative prices in market.

Mountain Rose has superseded the Early York on this Peninsula; and properly too, as it is in all respects superior to the best of the Early Yorks. In turn, however, the Mountain Rose is likely to be eclipsed for market purposes by Harris's Early, which is much larger, though not as prolific; but size has a telling effect in market. The feeling and tendency among peach growers here for the last three years, have been the same as described by Mr. Lyon as prevailing in Michigan, viz.; the commercial growers have been confining their planting largely to the yellow-fleshed varieties. Crawford's Early, Mary's Choice, Reeves's Favorite, Crawford's Late, Beer's Smock, Garey's Hold On, and Salway comprise the bulk of every selection, with variations in accord with the individual circumstances of the planter.

The action of the canners has been mainly instrumental in creating the demand for yellow-fleshed peaches. As is plain to everybody, a yellow-fleshed peach, when canned, carries a deliciousness in its appearance far surpassing in attractiveness the white-fleshed kinds; and, indeed, well ripened Mary's Choice (*i. e.* when the fruit is just ready to merge into the soft stage), when nicely canned, are superior in a large degree to any white-fleshed peach that it has been my good fortune to test. Prince's Excelsior is another yellow peach that is very fine for canning, retaining, to a large extent, all the superior flavor it has when freshly picked from the tree.

At the present time another demand is springing up very rapidly, that bids fair to divide popularity between yellow fleshed and white-fleshed peaches. This is the evaporating or drying industry. In this the requirement is the opposite of that in the canning business, to insure the largest remuneration; as the whiter and more delicate in appearance the evaporated fruit, the higher its rank in market. Hence, those who are now planting with a view to drying, want mainly such kinds as Troth, Old Mixon Free, Moore's Favorite, Mountain Rose, Stump-the-World, Silver Medal, etc. This industry will secure to the peach grower advantages which he has not enjoyed heretofore, as he was compelled to sell his fruit when ripe, whether the price was high or low, or otherwise allow large quantities to rot in the orchard. Now, when the prices in market rule too low to afford compensation for his trouble, he can dispose of his fruit to better advantage either by drying it himself, or having it dried on shares by other parties; so that the growing of peaches is likely to be continued with increased zeal for years to come.

Caroline Co., Md.



THE MRS. BRETT PEACH.—From Life.—Fig. 23.

The Vineyard.

THE PARENTAGE OF THE GRAPE OF THE FUTURE.

EDITOR OF THE RURAL:—Please explain which you mean—Vitis æstivalis, or V. cordifolia, when you say in the RURAL for '80 on page 707, "It would seem that we have the least to hope for from seedlings of, or crosses with, the Frost or Summer Grape." If you mean V. cordifolia, then you may be right, but hybridists would not like to dispense with even this class, and we generally esteem V. æstivalis the most promising of all our classes.

D. S. MARVIN.

[We meant what we said, viz., that we have least to hope for from seedlings of, or crosses with, *either* the Frost Grape (V. cordifolia) *or* the Summer Grape (V. æstivalis). EDS.]

PROF. HUSMANN takes Mr. Marvin's view. He says that he is inclined to believe that only the Summer and Frost Grapes will give us the true wine grapes of the country and that, if we can increase their size somewhat, they will also be the best table grapes.

NEWBURGH, Dec. 22, '80.

ED. RURAL:—In reply to your note I do not know of any seedling from Vitis æstivalis of any worth, of my own knowledge.

CHAS DOWNING.

Vitis Æstivalis.

It is to this class we look for our best wine grapes, of which Herbemont, Cynthiana, Cunningham and Norton's Virginia are the most prominent old sorts. By crossing these with Labrusca and other classes there is no doubt that grand results may be obtained, and a few have already been produced that yield a most delightful dry wine. Prominent among these I would mention No. 331 raised by Mr. Ricketts. It is Æstivalis crossed with Labrusca, partaking more of the former than of the latter; color, black; berry, medium; pulp, soft, tender and juicy. In 1878 its must stood 105 saccharine matter or sugar contained in the expressed juice, and 7.50-100 per mill. acid. I have seen the wine from this grape frequently sampled while standing in bottles allowed to remain partly filled, and at the same time it was perfectly clear and brilliant, retaining all its flavor and bouquet. When the grape is pressed immediately after crushing, it produces a pale, amber wine of fine flavor, and although the samples of which I speak are but two years old, they are quite soft and mellow. Mr. Ricketts has other promising seedlings of various Æstivalis crosses, which may prove valuable for wine. I hope some day not very far distant, to send you samples of some of my

seedlings of this class, one in particular, a cross between Bacchus and Herbemont, to which I look with much interest. I am making collections of various sorts of wild Æstivalis for the purpose of further experiment, and will inform you of the result, if anything of interest presents itself,

Fishkill, N. Y. J. G. BURROW.

Field Crops.

THE WHITE ELEPHANT POTATO.

THE RURAL has on several occasions expressed doubts about the reputed parentage of new varieties of potatoes, and has assigned therefor very convincing reasons. My own observations go to confirm what the RURAL has said in this regard. Twenty years ago it was not uncommon to see balls on the potato vines, particularly on those of late kinds, but within a period of ten years past I do not remember having seen a single ball. Although some kinds flower plentifully, yet no fruit is produced, and this arises either from some defect in the organs of the flowers or, as I am more than inclined to suspect, from a change in our climate, which has resulted from the opening out of the country. The potato cannot resist the intense heat of our Summers, and as a consequence the vines are scalded and the flowers drop off prematurely. It is now a rare thing to see the vines decay in a natural way, while at the same time large crops of the tubers are raised. For this reason it is best to make the intervals between the rows closer than we have been in the habit of doing—say two feet—and to plant either very early in the Spring, so that the tubers shall be pretty well matured before the hot weather comes on, or else late in Summer—say July 1st—so that they shall catch the cool weather of Autumn. I speak here, of course, of very early varieties. The Peachblow is the only late variety which seems able to pass our Summer unscathed.

I am inclined to believe that most of our new varieties of potatoes originate from what are called sports. What a sport is precisely, or what causes it nobody seems to know. We only know that it is a departure in one or more particulars from its original—in color, in shape, or in time of ripening. I cannot believe that potatoes, any more than other vegetables, can be crossed in any way except through the flowers, and therefore I am of opinion that a sport is an offshoot of a variety which has not entirely assumed a fixed characteristic.

Two years ago I noticed among my Beauty of Hebron vines a hill which was two or three weeks later than any other. On digging it I found the tubers much longer, larger and rougher than the Hebron, but of about the same color. I saved six of the largest, and from these I raised this year two bushels. I have just received specimens of the "White Elephant," said to be produced from a seed-ball of the Garnet Chili, fertilized with pollen from the White Peachblow. This potato and the one which I have been raising are, beyond question, the same. The White Elephant might more properly be called the Late Hebron. I thought this was the case when I saw the illustration of the White Elephant in the Fair Number of the RURAL. I am now convinced of it. I saved also two potatoes from a sport of Bliss's Improved Peachblow. This was growing by the side of a hill of Snowflakes, and at first I supposed, as the potatoes were very smooth and white, that the Peachblow and the Snowflake had crossed in some way; but, on planting the two potatoes and observing the vines, I saw they differed in no particular from the Peachblow family. The tubers of this crop are smoother and more uniform in shape than Bliss's Improved, and are white with small specks of red. HUGH L. WYSOR.

Pulaski Co., Va.

Heavy Manitoba Roots.

To show the fertility of the soil to English farmers, a consignment of roots grown in Manitoba the past season, was shipped thence. The Mammoth Long Red Mangel Wurzels weighed 75 lbs. each; the Giant Long Yellows, 65 pounds each; and the Prize Yellow Globes, 60 pounds each. The most surprising thing about these is, that they were very symmetrical in form, and of *fine quality*, without any of the coarseness usually found in roots of large size. We have occasionally grown in our own grounds here in the State of New York, roots varying from 15 to 20 pounds each; but they were so poor in quality and coarse in fiber that our stock would reject them unless very hungry. There is no doubt that more nutriment existed in the roots we grew of one-third to one-half the above weights, which our animals of all kinds devoured with avidity, either raw or cooked. England having a moister and cooler Summer climate than ours, can grow large roots of a better quality; they frequently get good ones of 20 to 35 pounds. H.

WHAT IS THE BEST VARIETY OF WHEAT?—Prof. Tracy, of the Missouri Agricultural College, has been engaged for several years in testing the comparative yields of different varieties of wheat. He has carefully tested over one hundred sorts, and not being satisfied with the results of these tests alone, desires to learn what the yields have been in other portions of the country. Parties engaged in wheat growing will confer a favor by sending him a postal card giving the names and varieties grown in the neighborhood, and the yield of each. These reports will be published in connection with Prof. Tracy's report, and a copy sent to all who render assistance in gathering the information desired. The question of what is the best variety of wheat for general cultivation is one of the very greatest importance to all, and it is one that the RURAL is hard at work to solve; it is hoped, therefore, that every farmer who reads this will forward a statement of the crops in his immediate locality.

Address: S. M. TRACY, Agricultural College, Columbia, Mo.

Farm Economy.

THE YEAR'S RESULTS IN SORGHUM SUGAR MAKING.

So far as concerns the past year's experience with Northern sugar-cane, the season has generally been of an unfavorable character, nevertheless there has been a decided progress. Better results than heretofore have been obtained by most new beginners, although some have made signal failures. I have generally dissuaded people without experience from going headlong into the business. I have been strenuously urging the necessity of experts' skill to make the production of sorghum sugar profitable, and I must still repeat that without such skill the business is seldom likely to turn out satisfactory; for in an extensive tour of observation I have always found that failures were the results of ignorance, either in the construction of apparatus or the process of converting the juice into sugar. It is true some sections have very nearly failed to get a crop of cane; but, strange to say, this crop has an astonishing vegetative recuperative power. In Kansas, for instance, where the drought had cut down all crops to the first of August, the rains that fell that month revived the cane, and a fair crop was produced, although it was not of as good a quality as it would have been under more favorable conditions of weather.

A few essential points have been settled this season. The first of these is, that the bagasse, or crushed cane from the mill, properly handled, will furnish ample fuel for grinding the cane by steam as well as for evaporating the juice. Furnaces for this purpose differ only slightly in construction from those for other sorts of fuel, and are only a few dollars more expensive. The second point settled has regard to the method of securing the cane from frost and prolonging the season of work. This is effected by culture of the crop, binding it into bundles and shocking the cane, with leaves and tufts on as soon as the seed is generally ripe. In this condition, with the tops tied, it has been standing in the interior of Kansas since the 10th of October until the present time (Dec. 14), and is now being worked into sugar, with good results. I have always favored the shocking of cane with the butts upon the ground. This is nature's position for it, and the standing of the freshly cut ends of the severed canes on the soil will prevent the action of the atmosphere that produces fermentation. The benefit of cutting as soon as ripe is shown by the fact that, if this is not done, new branches start directly from the upper joints of the cane, which may greatly impair the quality of the juice.

Another point gained this season is the development of a new variety of cane possessing greater sugar-making properties than the Early Orange, and for it the Mississippi Valley Cane Growers' Association is entitled to the credit; for it was in response to its call that a farmer in the extreme western part of Missouri sent on a single tuft of remarkable appearance, and from this has sprung the new variety which has returned some of the most remarkable results, not only in the quality of sugar, but also in the growth of cane per acre. It is somewhat later than the Early Amber, but still it ripened its seeds in Nebraska and in some places in Minnesota, while in Texas it matured in 65 days, besides being very large and rich in sugar.

Another very valuable feature in the manufacture of sorghum sugar, which is sure to be extensively established in the near future, is the value of the forage of the crop, for in all the reports received by the above Association, the seed ranks high in nutritive value. Moreover, the skimmings from the sugar works will be found more valuable when fed to hogs or cattle than the same number of gallons of milk. I. A. HEDGES.

Pres. M. V. C. G. A., St. Louis, Mo.

"Banking-Up" Houses—Ventilation of Cellars.

Mary Wager-Fisher asks (page 838) "Cannot much of the "banking-up" of the country house be advantageously made permanent?" My answer is that all "banking-up" can be advantageously dispensed with. Build your cellar walls of stone, well laid in cement, taking care that none of the stones reach through the wall; put in double windows, tightly fitted, and you will have a cellar frost-proof. The amount of time consumed in ten years in "banking-up" would build a good wall. Banking up the house is always a disagreeable and often a filthy job, discoloring the house, littering the yard, etc., and it is wholly unnecessary.

The best way to ventilate the cellar is to build the chimney from the cellar bottom, leaving a hole at the base for the escape of the bad air, and from which the soot can also be taken. Where the chimneys are already built, a ventilator running from the cellar to the chimney can be cheaply arranged. Fresh air can be admitted by the windows; or, better still, ventilators can be placed in the cellar walls. These can be opened, closed, or partially closed, as the weather varies. Plenty of light is most convenient, and promotes cleanliness. A dark cellar is almost sure to be a dirty one, and *vice versa*. NELSON RITTER.

Onondaga Co., N. Y.

Advantage of Caring for Implements.

In 1870 I purchased from R. H. Allen & Co., N. Y., a farm wagon, with hay rack; also two dumping carts all complete with iron axles and steel tires, all of the best quality. I have had them in constant use ever since, and to-day they are almost as good as new, their wheels and tires are the original ones. When not in use I keep them clean, under cover, using for that purpose the lower part of my corn crib, open on all sides, the wheels resting on planks instead of the ground. As soon as harvesting is finished and the Winter has set in, they are thoroughly cleaned, wood-work and all, and after any cracks are properly filled with putty, they get a substantial coat of paint, generally metallic, and are then ready for another year. The expenses for repairs have been trifling indeed. I do the same with plows, mowing machines and other implements and have used the most of them for many years at trifling expense for repairs, and they are in excellent condition.

Passaic Co., N. J. Wm. F. HEINS.

Apple Crates.

Crates are better and more convenient for storing apples in the cellar than barrels, because they are more easily handled, and they also admit of a free circulation of air. They may be made to hold a bushel or a bushel and a half, and they are cheaply made, too. The ends alone should be made of a whole board, (and a place should be cut out in each end to put the hand in to carry the crate by); the bottom and sides are formed by nailing on narrow strips about an inch or an inch and a half apart. If a farmer has not a supply of crates, now is a good time to make them and have them ready for next year's use. F. H. D.

Horticultural.

RURALISMS.

IN "going up and down through the earth" on the railroad and otherwise, I have been making the Winter aspect of deciduous trees a study, not, however, for the first time by any means, but I have been looking at them now in reference to the spray that adorns them after they have dropped their green garniture over their feet, as it were, to protect them from the Winter's cold. There are certain kinds and degrees of beauty in the aspect of the trees and woods in Winter, which cannot fail to interest and delight the true artist; and he who, be he artist or not, passes the trees by in Winter without a thought of their beauty or expression, deprives himself of a real pleasure. Day after day I have looked at the trees to determine, if I could, which of them all stood pre-eminent for the grandeur of its form and the beauty of its spray, and I finally decided that this pre-eminence belongs to the American Elm (Ulmus Americana). There is no time of its life, Winter or Summer, in which it is not a beautiful tree, but in Winter it is especially so. Take an old and full-grown tree, such as may be found on the college grounds at Fordham, or at New Haven, or occasionally on a lawn, or on the outskirts of the woods and elsewhere within a hundred miles or so of New York, and the Elm is a great lofty tree of marked gracefulness and grandeur. Its largest limbs have become curved or pendulous at the top, and are finely furnished with a light, feathery spray, purple-tinted, which naturally suggests the name of Fountain Elm. Take a young tree, from ten to fifteen feet high, and its feathery spray suggests a beautiful combination of plumes. Anywhere from five to eighty feet in hight, this urn-like tree is the most beautiful of all deciduous trees in its Winter dress. It is, beyond all peradventure, the best tree for planting on roads and avenues, and deserves a conspicuous place on all lawns where it can have room to develop its grand proportions, and is especially adapted to planting in public parks along the drives where shade is needed. One never knows all about a tree (for ornamental purposes at least) till he has studied it in the undress of Winter.

This little paragraph is intended for the lady readers of the RURAL who delight to grow plants in rooms. Orchids are plants that they seldom or never indulge in. They are supposed to be difficult to grow and to require a good deal of skillful care and attention, and a house built specially for them, and this is mainly true in regard to many of them, if the best results are to be attained; but it is not true of all of them. There is one terrestrial orchid which I do not hesitate to recommend to any lady accustomed to growing plants in rooms. I refer to Cypripedium insigne. It is generally supposed to need a warm greenhouse, or even a hot-house, but it is really a half-hardy plant, and does very well indeed in an ordinary sitting-room. An eastern or western window will suit it now, for while in flower it does not need sunshine, but a clear light. It should be regularly watered, but not saturated, till it has done flowering, and should never be allowed to dry up, though it needs less water after it has made its new growth. The flowers will remain good for at least six weeks, and sometimes longer. It is hardly a good time to buy this plant in Winter, unless one can be found growing in a cool greenhouse, as the sudden change to the air of a sitting-room does not always agree with the plant; still, it is worth while to buy a small plant in bud and run the risk. Of all who have tried it on my recommendation, only one has been unsuccessful. I can show a plant now with 39 flowers and buds on it, which has been growing for weeks in a night temperature ranging from 32 deg. to 45 deg. Fahr., and it looks as fresh as a daisy. Still the low temperature is to be avoided, as I find the flower stalks are not thrown sufficiently above the foliage, and this was an experiment.

Many readers of the RURAL may know the Libonia floribunda. It is one of the best of winter-flowering plants for the sitting-room, being in flower from the early part of November till the following Spring. A variety or seedling of this, named Libonia Penrhosiensis, is in most respects a great improvement upon it, and a plant worthy of a place even in a small collection; and I do not recommend a plant for room culture until I have thoroughly tested it in a room. L. floribunda produces one and two tubular flowers in the axils of the leaves, and seems to be almost covered with flowers when at its best; but the new plant, L. Penrhosiensis, produces from four to six flowers in the axil, with more red and less yellow in the color. It has darker foliage, and makes a denser growth, and what is important, the foliage is now persistent. It comes into flower a little earlier, and when the plants are quite small. It should be placed near the light, and abundantly watered; otherwise the foliage will drop, especially from L. floribunda. This is a plant that will please the ladies. I have no room for full description and culture in this column.

Last Winter the florists began to force pretty largely the Paris or Michaelmas Daisy (Chrysanthemum frutescens), for floral decoration, including especially the decoration of ladies' corsages. I noticed that some florists, not yet being provided with plants of the Paris Daisy, had recourse to the common Ox eye Daisy, (Leucanthemum vulgare) and many people do not yet know the difference. There is a yellow variety of the Paris Daisy, recently introduced, which is said to be finer than the white. I rather like this growing taste for flowers as Nature made them. This taste once established, the florist might find among our natives many a pretty plant that would "force" and suit his purpose. But it remains to be seen whether this Daisy "boom" is not mere fashion, and not a real cropping out of taste for nature's simple forms. I hope it may prove to be the latter. HORTICOLA.

ASPARAGUS PLUMOSUS.

THIS is an exceedingly handsome evergreen species, a slender, shrubby climber, indigenous to the Cape of Good Hope, Kaffirland and Natal. It was introduced to garden cultivation in Europe some five or six years ago, received a first-class certificate from the Royal Horticultural Society of London April 22, 1879,

and has but quite recently made its appearance in America. Festoon "strings" of it have an airy gracefulness unapproachable by fern or smilax, and its elegant sprayey branchlets have a lightness and brightness in bouquets and other floral work, that even Adiantum cuneatum var. gracillimum cannot equal. It is a greenhouse plant of easy culture, and, like most South African plants, would rather grow in Winter than in Summer. Ordinary light, rich soil, good drainage, plenty of water when in active growth, with a lesser supply in Summer, and a light, airy place in the greenhouse, seem to be favorable conditions for its growth. Like nearly all the other ornamental species of the asparagus, in a cut state its sprays preserve their freshness as long as smilax and longer than most ferns.

Besides the above, there are a great many species of ornamental asparagus. We have them here in the way of far-reaching, thorny climbers; shrubby, branchy roots; evergreen, arching plumes, and small, bright-green, densely-tufted, herbaceous kinds, all available for cut-flower work, lasting long in beauty after being cut; but some species are handsomer than others. WILLIAM FALCONER.

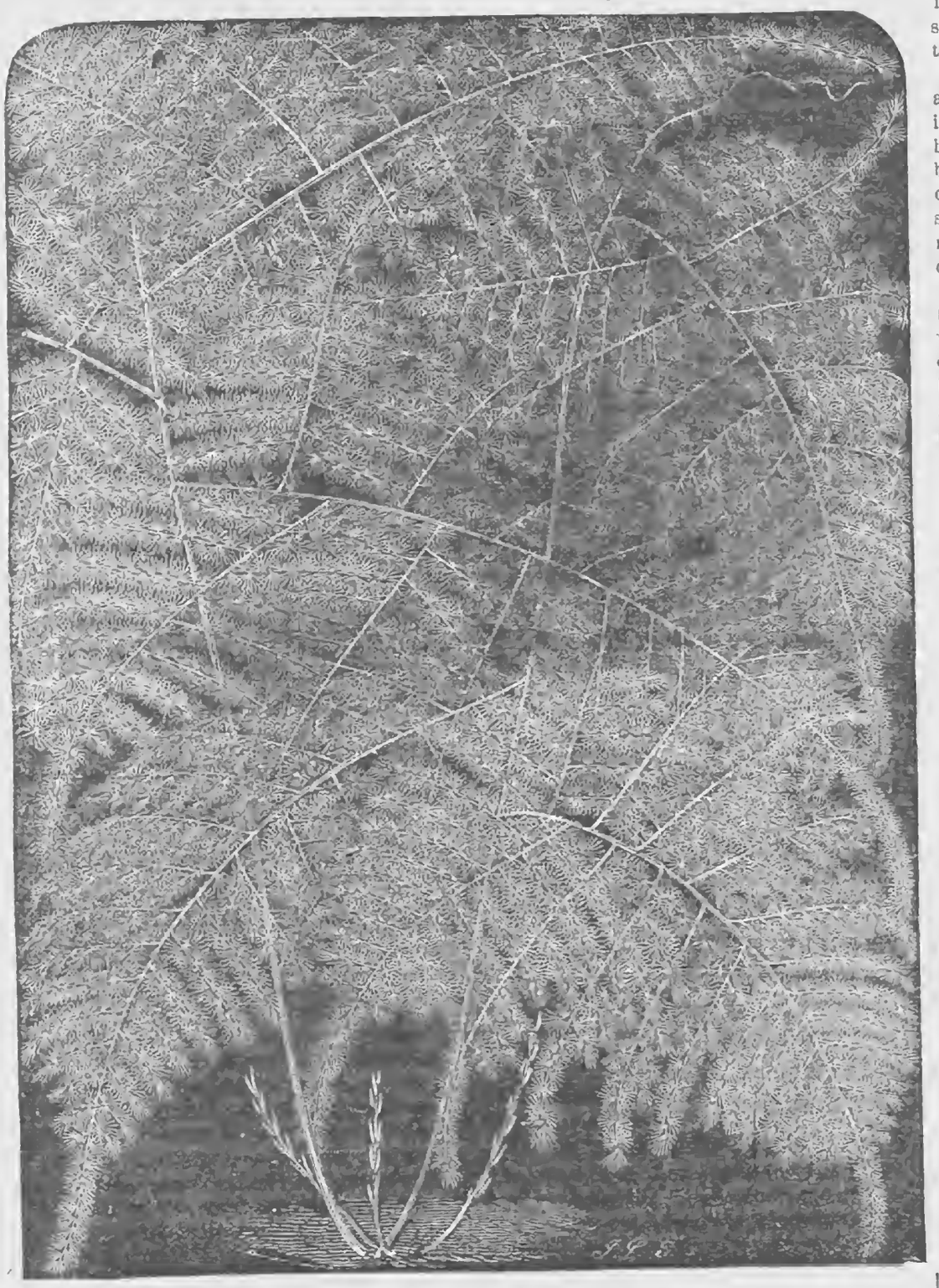
ASPARAGUS PLUMOSUS.

THE most prominent characteristic of the asparagus genus is the finely-divided, hair-like foliage, and no approach to it is to be found in any other class of plants, except the Horsetails—Equisetums. It is usual to speak of these hair-like divisions as leaves, but, though they serve the purpose of true leaves, they are only flattened branchlets, termed cladodes. The true leaves consist of grayish or brown triangular scales at the point of origin of the branches, and tufts of cladodes, which are sometimes transformed into spines.

A few of the species of ornamental asparagus are hardy, but the larger part of them require to be grown under glass, being natives of the tropics. The hardy ones, and a limited number of the tender ones, are deciduous, with erect, self-supporting stems, but by far the greater portion have slender, climbing, perennial stems, with spreading branches, some of which make elegant conservatory climbers. Their culture is very simple, their requirements being a light, rich soil, with plenty of root accommodation, an abundance of light and air, and a temperature of from 50° to 60°. They are increased by division or seeds.

The foliage of Asparagus plumosus is exquisitely fine and quite rivals in grace some of the hair-ferns. Unlike our garden asparagus, its stems have a flat, frond-like appearance. As it grows older its stems become scandent, but its lateral branches retain all the elegance of the juvenile state. There is probably no more useful plant known for associating with cut flowers, as it retains its freshness several days. It is a native of Natal.

JAS. TAPLIN.



ASPARAGUS PLUMOSUS.—FIG. 24.

Dairy Husbandry.

THE DAIRY COW—NO. 21.

HENRY STEWART.

Churning.

THE temperature of the cream and the velocity of the churn are very important elements in the process of churning. There seems to be a certain amount of agitation needed to produce the butter at a normal temperature, which I place at 60 degrees; and this requisite agitation is effected by making 60 revolutions or strokes of the churn for 20 to 30 minutes. The effect upon the cream of this amount of agitation and aeration seems to be precisely that which is required to produce the best quality of butter from cream that has undergone the necessary amount of ripening. This ripening process is effected by keeping the cream for 48 hours, on the average; that is to say, if the cream has been 72 hours, or three days, in collecting, or there have been three skimmings, its condition will be equivalent to that of cream of one skimming which has been kept 48 hours. The cream should have been gathered from milk that has been set no longer than 36 hours. If cream in a small dairy cannot be churned twice a week, being kept only three days, it should be kept at a lower temperature, not exceeding 45 degrees, until 24 hours before churning, when it should be raised to a temperature of 60 degrees for a whole day and night before it is put in the churn. As this point is very important, it may be well to repeat the rule in this case, viz.: Cream should be skimmed after the milk has been set 36 hours; it should be kept 48 hours before churning, at a temperature of 55 to 60 degrees; it should go into the churn at 60 degrees; it should be churned at least 20 minutes, and not more than 30, the churn moving about 60 strokes or turns in the minute.

This rule is subject to such changes only as will equalize the effect; for instance, if the temperature is lower than 55 to 60 degrees, the cream may be kept longer; if the cream is churned at a higher temperature than 60 degrees, the churn may be moved more slowly; and if the cream is colder, the motion may be more rapid. When there is cream enough for a daily churning of six pounds only, it is better to churn daily, and for this reason, viz., when the conditions are always the same the butter will always be of the same quality. There are two good qualifications for a dairyman—one is to be able to make good butter; the other is to make good butter always, and to have no variation in the quality at any time or season. There is a French proverb to the effect that when one excuses, he accuses himself. This is true of the dairyman or woman; and if he or she ever needs to excuse the inferior quality of the butter, there has been some fault committed.

When the butter appears in the churn in small grains or pellets the churning should stop. One can very soon learn to recognize the sound made by the churn when butter has come; yet it is well to have some other guide, and this is easily secured by fitting a piece of plate-glass in the cover of the churn. When the butter has come the glass will become very nearly clear, and the small fragments of butter may be seen upon it. Over-churning has the effect of injuring the texture of the butter and changing the waxy, almost crystalline appearance into a soft, greasy one. When the butter is in the best condition after churning, it appears as a mass of small granules loosely adhering together, but which easily fall apart when floated in cold water. These granules are no larger than the capsules of beet seed, and many of them are not more than half or a quarter as large, and when some cold water is poured into the churn to harden them, they are kept separate and do not adhere in a mass.

Butter of this form is better made in the rectangular or other dashless churns than in those with dashers, because the granules are not crushed, pressed, or rubbed, when there is no dasher used. The great advantage of this form of butter is that it can be completely freed from buttermilk, and can be washed, salted and packed into pails or tubs, or made into cakes, without any working. When the buttermilk is drawn off, a small hand strainer should be used to catch any of the small fragments that may run off with the milk. After the milk is run off, cold water is put into the churn until the butter floats; the churn is slightly moved to bring the water into contact with all the butter, and the water is drawn off. This is repeated until the water comes off perfectly clear, when the butter is ready for salting. This may be done in the rotary churn without removing the butter, as the butter and salt may be thoroughly mixed by giving a few turns to the churn. When other churns are used, the butter is lifted out with the ladle—it should never be touched by hand—into the bowl or butter-worker and mixed with the salt in the usual manner.

Sheep Husbandry.

SHALL WE BREED DOGS OR SHEEP?

SCARCELY a week passes but the papers have an account of some dog killing many sheep and maiming many others. Every year there is scarcely a sheep keeper who does not suffer more or less loss caused by dogs. The greatest damage is due, not to the number killed right-away or so maimed that they die afterwards, but to the terrible scare received by the other portion of the flock, from which they never fully recover.

Recently I passed through Connecticut and other portions of New England and saw thousands of acres only good for pasture and better adapted to sheep than to any other stock. When, however, I asked my companion how many sheep were kept, he commenced by telling how many were kept years ago, but said that lately the dogs were so bad it did not pay to keep sheep, and there were scarcely any. Those thousands of acres of rough pasture lands would keep many thousand sheep and produce vast quantities of the very best and most healthful kind of meat, and many, many thousand pounds of the very finest wool, thus adding largely to our national wealth, and going far toward making farming profitable in the older States with their hilly lands; but now they are rendered worthless, and, worse, are allowed to grow many noxious weeds, the seeds of which are scattered broadcast over the adjoining fields, all because we persist in growing and allowing others to grow a lot of entirely worthless curs.

The experience of New England is not very different from that of all the older-settled portions of our country; many townships to-day can count more dogs than sheep. How strange it is that a people so very intelligent and money-making as we claim to be, should think more of dogs than of sheep, and be willing to sacrifice the latter for the former.

In our towns the authorities are very careful—and justly so—to pass laws restraining cattle, hogs, or even geese from running at large, and employ an officer to enforce such laws, and yet the streets are infested with hundreds of vicious, worthless dogs, barking at every passer-by, and often making such streets dangerous to smaller children. Every town is a pest to the surrounding country by reason of the large number of dogs that run abroad from it, making it impossible to keep any sheep within miles of its outskirts. Now what shall we do? Shall we calmly submit to the existence of this great nuisance? Shall we go on importing annually millions and millions of dollars' worth of inferior foreign wools and let our hills and rough lands lie waste? Or shall we arouse the people and exterminate the dogs? I am aware that we now have laws designed to protect the sheep raiser, but in this county—and I presume it is so in every other—the dog fund (so called) is so grossly deficient that there are now more claims against it than can be paid in ten years, if not another sheep should be killed in that time—and yet the dogs are multiplying greatly each year.

I think this a question of great importance, and that it should be much oftener discussed in the public press. Public attention should be fixed upon it, and our law-makers should be urged to protect the farmers by the passage of some very stringent laws; such laws, as shall fully protect the sheep owner from, and remunerate him for, all damage by the ravages of dogs.

I am willing to concede that the dog is man's friend and companion in boyhood, and that we become attached to him, and, everything else that can be honestly claimed in his favor; but when it comes to a question of *no dogs* or *no sheep*, I must place myself on the side of the sheep, and if necessary insist on the extermination of the *last dog*. J. S. WOODWARD.

To Prevent Sheep Getting over Stone Walls.

A great many men who have farms excellently adapted for keeping sheep, are deterred from doing so on account of their farms being fenced with stone walls, and sheep will soon learn to get over any ordinary stone fence. The cheapest and at the same time the most effectual device for preventing this is one gotten up by a neighbor of mine. It consists in setting posts against the wall, boring a hole through these about sixteen inches above the top of the wall and running a No. 11 wire through the holes. This should be stretched very tight. If the first end is well fastened, this may be done with a crowbar for a long way, using the bar for a lever. The posts need not be nearer to each other than four to six rods, if the top of the wall is straight; if it is not, they should be somewhat nearer. This he has found to be perfectly satisfactory, so much so that a neighbor's big dog tried to get over it to the sheep once or twice, and went away perfectly disgusted. A much neater and more durable plan, costing but little more, would be to insert small iron posts into the cap-stones at proper distances and bend the posts so that the wire will hang directly over the face of the wall on the side on which the sheep run. Either of these methods costs so little that the profits of a small flock of sheep would more than pay the expense in one season. W. E. M.

Wallsville, Pa.

The Poultry Yard.

THE BREED FOR BROILERS.

L. S. HARDIN.

THIS is a subject that may be treated theoretically or practically. The authorities generally take the former view of it. The whole burden of their song is quality of flesh. To obtain this they choose the breeds that make the tenderest and most juicy grown fowls, and propose crosses between them, such as a Dorking cock on a La Fleche hen, thus combining all the tender qualities of these two tender breeds. Then what is the practical result? You obtain a chicken so extremely tender that it is the next thing to impossible to raise it at all. Along with the crossing of these tender breeds, they advocate feeding on milk oat-meal, and custard, until they reduce the flesh of the broiler to the tender consistency of underdone mush.

The fact is, one of the hard points in making first-class broilers is to get a sort of flesh not only tender, but sufficiently firm to furnish a relish. Then, again, it is useless to advocate a certain cross of which one must hatch out a hundred to raise a dozen. The practical poultry breeder, the one who hopes to make a profit on his fowls—and he is the one in whom we feel the deepest interest—wants a bird that will not only satisfy the purchaser, but return a fair profit to the breeder.

To get at the gist of this subject, we must, first, consider what are the hardest points to overcome in raising broilers, and then master or avoid them. First, then, in order to receive the highest price, one must bring the largest yield of stock into the market in early Spring. When hens alone are depended on for the necessary incubation, procuring the chicks at the right time will be the main difficulty, for

It is their very scarcity that makes the high prices for broilers at this early season. To overcome this difficulty the only remedy lies in a good incubator. I say "good," for there are numerous poor incubators on the market, and a good one can get as many chicks out of 100 eggs as a poor one will out of 500. Keeping the point of profit strictly in view, we must keep an eye on the eggs. At this season of the year eggs are scarce and high. It requires a great deal of time and trouble to get enough of them to keep a large incubator running. Then when they are got, if they are from ill-assorted fowls, only about one-third of them will hatch, and of those that do hatch a large percentage will die before they are ready for market. These weak points make a serious inroad on the profits, which may be avoided by raising eggs yourself, and from fowls so mated that weakness of the chick may be avoided. In accomplishing this end the first object to be attained is that of constitution in the parent fowls, and by this I do not mean large, strong hens and cocks, but those sorts that produce chicks capable of weathering rough usage. It is a peculiarity of many breeds, such as Dorking and Spanish, that while they are as hardy as most breeds after they become fully grown, yet as young chicks they are unusually delicate and hard to raise. Chicks from these breeds are, therefore, manifestly unfit for broilers, no matter how excellent the flesh might be after they have once reached the age of broilers. To make money we must have quantity as well as quality. The flesh of a young broiler is naturally so tender that I do not think breed of much moment in this respect. The quality of flesh in so young a bird is much more dependent upon the quality and adaptability of the food consumed than on the breed from which it has sprung. With proper feeding we may, therefore, safely abandon the breeds of fine flesh and choose our breeding stock from those alone that have other and more desirable qualities.

I believe, take it by and large, the common dung-hill fowl is hardier than any other breed when young. Born and nurtured for generations among the vicissitudes of farm life, having to-day a feast, with all the doting care and lavish abundance of some boyish fancier; to-morrow forgotten, totally neglected, and thrown unexpectedly on their own resources, they invariably rise above the occasion and the poultry fence; force their way through the thickets of environing hedges, and forage with a soldierly instinct on the fields alike of friend and foe. This self-reliance is so bred into our native stock that its good qualities crop out at an early age in the chick, making it enterprising, self-reliant and hardy. Here, then, we have constitution—a good foundation for stock.

The flesh of a white chicken always looks better than that of a black one, owing to the black pin-feathers that cannot be removed. I would, therefore, choose strong, healthy, light-colored, native pullets. To these points, one should add in the offspring size and quick growth, while detracting as little as possible from the rugged constitution the native hen gives the chick. I would also keep the color of the cock white, and with all these points in view my choice falls upon the Light Brahma—not the long-legged, fluffy-feathered, ostrich-like strains that are so popular at the poultry shows, but "disqualified" birds; those that stay near enough to earth to keep out of the realms of fancy and the show pen; strong, short-legged, stocky birds, with plenty of white on the body and prominent breast-bones. They can have pea-comb and striped hackle or not, just as they choose. I would put one of these cocks with five or six hens in flocks of not over thirty. The pullets should be not over three years old to be profitable layers. The cocks should be young enough to be vigorous, so that all the eggs may be properly fertilized. Without having, thus far, been able to determine the matter experimentally, it is my opinion that if one tread fertilizes three eggs, then if the hen receives no more, the first egg will hatch a vigorous chick; the next, if skillfully handled, will produce a weak chick; and the third chick will die in the shell when more or less formed. My experience thus far points to such conclusions. With the above management one will secure quick-growing, healthy chicks, and thus the battle is half won. The Asiatic blood from the Brahma causes the chicks to feather slowly, and while they have the objectionable and slovenly feathers on the legs, they have not those long wing feathers that cause the little chicks to droop around and finally die. I have found it highly beneficial in such cases to cut the feathers off and thus relieve the little things of the awkward feeling that seems to trouble them.

In raising stock to replenish the breeding hens I would procure eggs from farmers, and pay only moderate prices for disqualified cocks of pure blood, getting them from those near enough to allow of my personal examination of the birds before purchasing them, if possible. The quickest-growing of the pullets may be reserved for the breeding pens, but let every cock go to market. It is a waste of time and labor to work with a half-bred male bird. Then anything like in-breeding will raise the mischief with our fundamental principle—good constitution. Every element of weakness should be religiously eliminated, and for this reason cocks from circumscribed walks should be rejected. They should have a firm, elastic step, free from the slightest tendency to leg weakness; for this trouble, if inherited, will surely crop out in chicks that are forced in small pens with rich and abundant food.

WOMEN SHOULD RAISE POULTRY.

THE raising of poultry may be called a domestic art pertaining immediately to the occupation of a woman. A hen to a man is a fearfully fretful creature. Most men cannot stand the noise and especially the unceasing motion and nervous restlessness of their own children, much less the perverse love of mischief in a cunning old hen. Some one tells an amusing story of a man trying to drive a sitting hen back to her nest. After two or three ineffectual attempts he makes up his mind that she shall go in—and what a time they have of it! Over the porch, under the house and into the garden she goes; old shoes, bits of wood and tin cans follow her at every turn, while he yells and she cackles until he gives out exhausted, wipes his saturated face, puts on his coat and goes down town to his legitimate business of quarreling over "trades" and bossing the clerks. Now, see how easily his wife handles that hen. She approaches the hen gently, calling her and offering a little feed; as soon as the hen understands there are no more missiles to be feared she quiets down and with a few gentle wavings of the lady's skirts and a "Shoo, biddy!" the hen quietly walks to her nest. And thus it is all through the business of raising chickens. Woman's gentle, watchful care is of particular value in raising the little creatures that are so tender and frail. A motherly affection for them suggests methods for their protection or cures for their ailments, that never would cross a man's mind. Raising poultry is generally believed not to be profitable; neither would raising babies be profitable if men had to do it. There is no earthly reason why any woman of fair executive ability should not make money—and plenty of it—if she would only go at the undertaking in a business like way. The greatest branch of profit is in Spring chickens, just where her domestic powers would come best into play.

The Apiarian.

"DO BEES PUNCTURE GRAPES?"

Under the above caption a correspondent in a late number of the RURAL states that he has "noticed that bees made a puncture in the berry, and afterwards the wasp finished it by eating everything inside "except the skin and seeds."

Now, it so happens that the honey bee could not well make a "puncture," except with its sting, and I am sure that if this observer had really seen a bee puncturing grapes with its sting, he would have noted that fact and given it some prominence.

The correspondent further states that his grapes had not been molested for three years before this last season, but he thinks that now that the bees have had their "first taste they will, perhaps, next year come in swarms," when few grapes will be left, etc.

I desire to call attention to these statements as illustrating how easily one may be mistaken as to what he may have seen of the work of so small a thing as a bee, if he does not observe closely and take due account of certain well known facts.

There are many people who, having seen bees at work upon their grapes, have naturally inferred that they were the sole cause of all the mischief done, and a few, therefore, considering them a pest, have undertaken to poison them, a proceeding of doubtful justification even if it could be clearly shown that they do sometimes attack and destroy sound grapes.

The past season the bees worked upon my grapes when I took occasion to examine their work very closely to see if they made use of their mandibles to gnaw into the sound grapes, but no such use of them was detected. Their tongues were, however, used freely in licking up the juices of the ruptured fruit. They would run over and about the clusters as if in search of some opening, nor would they relax their activity until an unsound grape was found, when immediately the tongue was presented for use. I doubt very much if they ever make use of their mandibles in the act of gathering any kind of sweets.

It is well known that the cat-bird, blue-jay and brown-thrush are very destructive to grapes, and since they often live several years,—unlike the honey bee, whose life is only for a few months at best—they may profit from previous experience. It might be well, therefore, for persons complaining of their grapes being "punctured," to keep a sharp look-out for birds.

The rupturing of my grapes the past season may be readily and truly, as I believe, attributed to the continued very warm weather, frequent rains, and very damp atmosphere while the grapes were ripening, and afterwards. These were conditions favorable to a rapid growth of vegetation and to an active absorption of fluids both from the earth and air. Too rapid a growth of the grapes, or a superabundance of their juices occurring before or after ripening, was the direct cause of their rupturing.

I had also an early apple tree that was loaded with small but mild-flavored apples. They ripened about the middle of August, and the weather being as above described for several weeks, they nearly all cracked open, when the tree became full of bees and wasps every day as long as the apples lasted.

It is therefore apparent that bees will work upon unsound grapes and apples, but the very interesting question whether they ever injure or destroy sound, ripe fruit of any kind, does not, as yet, appear to be established by any decisive evidence. G. L. T.

New Philadelphia, Ohio.

BASSWOOD FOR HONEY.

PROMINENT bee-keepers both in the Eastern and Western States are advocating the cultivation of the Basswood (Tilia Americana) for the purpose of increasing the sources whence the honey bee may obtain honey of the first class. The Basswood is quite common in our forests, and is hardy, bearing transplanting remarkably well. Set out near the farmer's home, this stately tree, with its flower clusters fragrant with rich odors, becomes a source of pleasure as well as profit, and the busy bee, ever on the lookout for the sweet, "nectareous juice" will amply repay the farmer for his trouble, with increased honey stores.

The honey gathered from this source is equal to that obtained from white clover, being white in color and of a rich flavor; indeed, it may be said to have no superior. The Basswood blossoms soon after the white clover begins to fail, so the period during which the best honey may be made is extended very much. The greatest yield of nectar from this tree is from about the middle of July onward for two or three weeks. In vicinities where it abounds, swarms issuing as late as July 15, have been known to fill their hives. The tree yields profusely, the flowers seeming, indeed, to be dripping with "liquid sweetness."

An eminent apiarist, by taking advantage of circumstances, in moving a number of colonies to higher ground where the Basswood trees did not blossom for two weeks after those in the valley had failed, secured, during 40 days after the first blossoming of the Basswood, 10,000 pounds of surplus honey from an original colony of 100 swarms. He, also, has seen 25 pounds gathered in one day by a single swarm. Hence, experience shows that the general planting of these trees near apiaries, would have a strong tendency to increase the supplies of honey, and that, too, of the very richest and most delicious quality, and wherever the Basswood can be grown with success, I would recommend its culture, as making a worthy addition to our many excellent honey-producing plants and trees. J. W. D.

The Swine-Herd.

BREEDERS.

COL. F. D. CURTIS.

BREEDING for fancy and breeding for profit are different standards. In the one case, the eye is to be pleased, while in the other, taste may be sacrificed for utility. The fancy breeder generally does not consider expense, provided his notions are gratified, and these notions are so varied that any practical standard would be useless; but, *per contra*, the more practical a standard may be which contains a margin for profit, the more valuable it will be. Every breed has its advocates and every breed has its value. In making choice of breeds, the breeder should be governed by the circumstances which surround him. Locality is an important consideration. Another, more so, is the use which he intends to make of the pork when fitted for market. A large hog will convert more corn into pork than a small one, and on this account at points remote from market when corn is cheap, the former is an auxiliary which may be used to change a corn crib into a smaller compass and reduce the cost of freight. A large hog does not sell the best in market. The small and chunky hogs which make up several breeds are too fat, or rather lack lean meat, to be desirable either to cut up fresh, or to pickle.

For general purposes a medium-sized hog will be found the most profitable. Hogs of this sort will mature soon enough, and are fitted for the stall or the barrel. Such hogs may be had by crossing with all of the different breeds, and a proper selection of breeders. Coarse and fine hogs bred together, will usually produce those of medium size, but this is not an invariable rule; for in the same litters may be found pigs with the forms and characteristics of both parents. A sow with a long body and good bone is the best mother, and, if crossed with a male of fine bone and more compact form, the offspring will be found to be as nearly perfect for profitable feeding as pigs can be reared. This is a general law and applies to all breeds or to animals of no special breed. To get this class of pigs does not require a special strain of blood, but special strains of blood possess certain well-defined characteristics which will make such crosses more valuable, or less valuable, as the case may be.

In hot climates a cross of natives upon hairless breeds would not be judicious, or in cold climates either; as the characteristics of no hair, or scanty hair, would surely mark some of the progeny. Where hams and bacon are wanted crosses should be made upon the breeds which carry the most lean meat. A female which will make a good breeder will show the qualities when quite young. There will be length and depth of body, with well-developed udders, and these running the full length of the body. The hair should be soft and the skin pliable. The softer and brighter the hair, and the more elastic the skin, the better will be the capacity of the animal for producing milk. A female of the above description will be sure to produce large and healthy pigs, and take good care of them, if nature's laws are not violated in her case. A sow with a roomy body always bears young much larger than one more compact, and this fact is of much importance in giving the young ones a good start, which it often takes those not so fortunately bred two or three weeks to attain. They can never equal them, either in growth or size.

Some people argue that a small sow eats less than a large one. This may be true, but she also produces less. There is but little difference in the wintering cost of a mature hog on account of the size. It is not equal to the difference in the productive value. An old sow, or one matured, is much to be preferred to a young one, as the cost of keep is no more; that is to say, a mature hog may be kept as cheaply as a growing one, for the reason that the matured one does not require such substantial food, if it needs as much, which is doubtful. A breeding sow fully grown will usually have double the number of pigs a young one will produce, and they will be double the size. Breeding sows should never be fat, nor do they want to be fed to make their full growth. This condition should be left until fattening time. To be in good heart, and lean enough to be active is the proper condition.

Industrial Societies.

MEETING OF THE CONN. BOARD OF AGRICULTURE.

[Rural Special Report.]

PROF. W. O. ATWATER of Middleton spoke on the

Rational Side of Farm Life and Practice.

He began by giving a bit of history of a rural district in New England, where of quite a number of promising lads nearly all had deserted the old homes and left the farms and gone into other occupations greatly to the detriment of their old town and their old homes. This was only one out of thousands of instances showing how New England has been depleted. Now, what can be done to stay this course of depletion? Evidently we need something which will better satisfy the aspirations of Conn. farm boys and girls. The old treadmill course does not satisfy their cravings. We need schools, county schools, and high schools, that will *fit*, and not *unfit* their pupils for the pleasures and duties of farm life. Natural laws need to be studied and scientific investigations made whereby new interest will be given to the farm. Further accurate experiments need to be carried on whereby the farmer may know how to attain the best results with the means used and capital invested. Farming should be an occupation requiring the *intellect* as well as the *hands*. The farmer should be able to avail himself of the ablest researches and best appliances to secure the highest results. Any one who has $100,000, which he wishes to do the most good with, might devote it to some school of agriculture and experiment where the grandest results might be realized for the good of the tillers of the soil.

A very valuable paper was given by Sec. T. S. Gold, of the Conn. Board of Agriculture, on

Farmers' Clubs.

These were said to be of wide adaptation, from the county farmers' club, as in New Haven Connty, to the little district club in the school district. In connection with some is an agricnltural exhibition; others are merely for discussion of farm topics. Their organization is simple. The farmers' club in West Cornwall was mentioned as an instance. This club was organized many years ago, and has had meetings once in two weeks in Winter, adjourning over in Summer, and has had the following plan: Usually it has met at farm houses, all being invited, males and females, the gentlemen meeting in one room and ladies in another. The former discnss the question of the evening, while the ladies have a social time. At 9 P. M. the whole unite in eating apples and nuts (no more is allowed), and then the company adjourn to the next time and place. This club has had a successful exlstence for more than a generation. The farmers' club of Woodstock, Conn. was also instanced as one of the most useful of our clubs. It has a hall, library, cabinet of curiosities, a microscope and, thanks to Dr. Geo. A. Bowen, the club has been a grand success. Mr. Gold thought that no organization accomplished as much so cheaply as farmers' clubs.

Dr. Cressy spoke in the evening on "Facts and Fallacies in Veterinary Science."

On the 2nd day of the convention at 10.30 A. M., Prof. Beal spoke on

Our Schools of Agriculture.

He gave an account of the course of study at the Michigan Agricultural College, and more particularly of that in his own department—Agricultural Botany. His one great distinctive idea was that in the study of the natural sciences we should be close students of nature rather than memorize a text book. To this end he has had his students investigate nature in the vegetable kingdom to the utmost of their opportunities.

One mode mentioned was this; the class are each to take a branch of a tree and give it close study; at class exercise each is called on to state what he has discovered in his study of the branch until the subject has been well considered. So likewise in regard to fruits. Comparisons like the following are made: what is the difference between the Scotch Pine and Austrian Pine; the Black Spruce and Norway Spruce; the Butternut and the Black Walnut. At the Michigan Agricultural College students are employed at eight cents per hour for labor. About one in 15 makes a good foreman. Scholars are employed in the barn, as well as in agriculture and horticulture; also on the drive-ways, hot-beds and in the wild garden, experiments, etc.

In the literary colleges about one to three per cent. become farmers; from 212 graduates of the Michigan Agricultural College 86 have become farmers; 13 are professors in agricultural Colleges, while others are occupying other positions of influence in society. Altogether 1,300 students have taken a complete or partial course of study there, and of these most are farmers. The professors of the college do considerable work at Farmers' Institutes; of these about six are held during the year. Each of these is attended by from 600 to 1,000 listeners. Prof. Beal spoke of the educational work among farmers as advanced by farmers' clubs. These he thought good, but among Michigan farmers, Granges have done far more. Farmers' clubs there are few in number; Granges are found by the hundred. The Professor is himself a Granger. Many members of farmers' clubs look upon the Grange as a secret society; but there is no doubt it has done very much to help the farmer.

Dr. Sturtevant gave a lecture on

Thoughts on Agricultural Education.

He strongly urged the advisability of a good, thorough, practical and scientific education for the farmer. In the common school there should be object lessons or teaching from nature. He thought the prime object of the farmer should be to make money and better his condition. Education should enable him to improve his own condition and that of his family. The speaker thought that some ideas in vogue as to the desirability that agricultural colleges should be paying institutions pecuniarily, were false notions. A paying college farm shows a lack of instruction.

In the evening Professor S. W. Johnson spoke on

Systematic Agricultural Education,

as adapted to the American farmer. His lecture treated the subject grandly and was one of his best efforts. The idea that anything would suffice for the farmer was thoroughly refuted. The farmer should have a thorough systematic education. We should have the ground-work laid in the lower schools; then the superstructure built up in higher schools or in those of a middle grade, and then in those still higher. The speaker also gave an account of the foreign schools of agriculture as compared with ours, showing how much less we are doing for the higher education of the farmer than we should do, or than others are doing.

On Friday the 17th Mr. Gold, the Secretary, read an interesting paper on Agricultural Societies by Prof. Brewer of the Sheffield Scientific School.

Connecticut has probably in proportion to her population as many agricultural organizations as any State in the Union, and some of her farms are yielding a product which would have astonished the grandfathers. One thousand three hundred barrels of onions have been raised from a single farm besides potatoes, corn, grapes, strawberries, pears, hay, etc., amounting, in all, to from $6,000 to $8,000 per annum. On another farm a modest little dairy-house turns out annually 8,000 pounds of gilt-edged butter whose value is $2,500. On another the poultry house, *from eggs alone*, at common prices brings in the snug little sum of $250. These are only instances of what many farms may do, and will do in the near future. In the product of orchards and small fruits a wonderful advance has taken place, and the most encouraging thing of all for Connecticut farmers is that the best markets in the world are close at hand.

A most valuable and highly interesting paper was read by J. M. Hubbard, of Middletown on

Self-Education as a Necessity for the Farmer.

The leading idea was that while the schools may do much, the individual man must do still more. He held that the farmer must read, think and investigate. He didn't believe in having a job of manual labor for every rainy day, but he thought the farmer should take such times for reading and study. Mr. Hubbard is a plain, practical farmer, a good farmer, a good citizen and a man capable of filling any position the State has to offer. The time has come when we need not feel that the legal profession must fill all the higher positions. Conn. has just called one of her best mechanics and business men to the gubernatorial chair. We have plowmen who would adorn the same place with dignity and honor. We must honor the profession of agriculture with skill and intelligence and it will surely honor us.

J. B Olcott, of the Hartford Courant, read an admirable paper in the evening of the last day on the

Agricultural Press.

It was listened to by a full house and frequently applauded. Among all the educating influences of the day he considered none should be more heartily sustained and encouraged than the agricultural press. Mr. Olcott made some very humorous illustrations and brought a most interesting course to an appropriate end.

Scientific and Useful.

THE POWER OF WOOD-LAND TO HOLD WATER.

PROFESSOR F. H. STORER.

With the view of gaining more precise knowledge than we now possess of the well-known capacity of wood-land to absorb and retain water, Riegler, in Germany, has studied the comparative absorptive power of various kinds of leaves and mosses, by subjecting weighed quantities of each of them to the test of experiment. Cylindrical tin vessels, provided with sieve bottoms, were charged to the depth of three inches with the materials, such as rakings from a beech-wood, rakings from a fir-wood, bog-moss, etc.—all taken in the air-dried condition and pressed moderately firmly into the cylinders. Measured quantities of water were poured, in a fine stream, upon the materials day after day, and the amounts which trickled through each of the layers were caught and measured. The results of some of these trials are given in the following tables. It should be said that 500 parts of water, representing a rainfall of four-tenths of an inch, were poured upon the materials every day, in each instance.

RAKINGS FROM A BEECH WOOD.

	Water absorbed.	Water that trickled through.
1st day	99.7	400.3
2nd day	114.4	385.6
3rd day	165.2	334.8
4th day	146.1	353.9
5th day	97.0	403.0
6th day	25.6	474.4
7th day	34.6	465.4
8th day	12.4	487.6

RAKINGS FROM A FIR WOOD.

	Water absorbed.	Water that trickled through.
1st day	58.7	441-3
2nd day	54.9	445.1
3rd day	59.6	440.4
4th day	50.6	4 9.4
5th day	46.5	453 5
6th day	10.6	489 4
7th day	4.0	496.0
8th day	0.4	499.6

BOG-MOSS (SPHAGNUM).

	Water absorbed.	Water that trickled through.
1st day	284 0	216.0
2nd d y	394.4	105.6
3rd day	444.1	55 9
4th day	215.6	284.4
5th day	124.1	375.9
6th day	90.6	409.4
7th day	13.3	486 7
8th day	6.5	493.5

It appears that of the first day's sprinkling the beech litter absorbed about 20 per cent., the fir litter about 12 per cent., and the moss nearly 57 per cent.; or, calling the sprinkling equal to a rainfall of one inch, eight-tenths of it ran through the beech litter, nearly nine-tenths through the fir litter, and but little more than four-tenths through the moss. On the second day the absorptions were respectively 23, 11, and 79 per cent. In these experiments care was taken that the water should fall gently upon the litter. Other trials had shown, as was to be expected, that when the water fell somewhat forcibly upon the materials a larger proportion of it ran through, particularly through the layer of dry moss.

The figures above given enforce the lesson that the absorptive power of moss and wood-litter is by no means at its best when the materials have once become thoroughly dry. In order to attain the most effective absorption the moss, etc., must already be somewhat damp. One reason why this is so is that a quantity of air clings to the dry materials and hinders the water from immediately coming into thorough and complete contact with them. In case the leaves, or what not, press upon one another rather closely, or if the material swells up when moistened, the impaction hinders the water from flowing away, and so helps to retain it. Applying these facts to ordinary experience, it appears that many a woodland must absorb a smaller proportion of the rain which falls upon it after long-continued hot, dry weather than of that which falls when the litter is somewhat moist.

The Naturalist.

THAT WOODPECKER.

T. H. HOSKINS, M. D.

Gen. Noble's head is "level" when he calls upon the writers for the Rural to give its readers facts and not guesses. (And right here is a good place to thank the General for giving us, in the Rural of May 1, 1880, the facts about the Vergennes Grape, which promises to be a valuable addition to our list of choice fruits.) Regarding the woodpecker, commonly called "sap sucker," and which is noted everywhere as producing symmetrical circles of holes in the bark, not only of apple trees but of birches, poplars, firs, pines, cherries and several other species, both evergreen and deciduous, I will state a few facts observed by myself and others. Firstly, he is not the "bluggy"-headed kind. He is the "yellow-bellied," and is not strictly a *wood*-pecker, but a *bark*-pecker. He never digs insects out of rotten trees, and couldn't if he tried, because he hasn't got the right kind of tongue for the trade. The true woodpeckers which we hear "tapping the hollow oak tree," have tongues barbed at the end, which they thrust into the holes they make with their bills, and therewith draw out the insects, somewhat as a corkscrew draws out a cork. I know of no species of woodpecker which takes out worms from living trees. The locust and the aspen poplar are badly injured and often killed by boring grubs, as well as the apple and the peach, but if these grubs are sought for or extracted by any bird whatever. I have not in a somewhat long life surrounded by orchard and shade trees in whose preservation I have been deeply interested, yet discovered the fact.

The so-called "sap-sucker" pecks holes in the bark of living trees only. These holes are made around the trunk or a large branch. They are about a quarter of an inch in diameter, and the same or a little greater distance apart, and the rows, one under another to the number of six or more, are about one inch apart. The holes never extend into the wood, and are excavated laterally, so that the cavity is widest at the bottom. The great number of species of trees, both evergreen and deciduous, upon which these attacks are made, renders it highly improbable that the bird is after an insect or worm of any kind. We know of no insect that deposits or inserts eggs in so many species or in such circles and ranks as are represented by the "sap-sucker's" holes, nor do we ever note ravages such as worms hatched from eggs so deposited might be expected to make. On the contrary, this bird invariably attacks what appears to be perfectly sound and healthy bark. Great injury is inflicted by these attacks, both upon orchard and forest trees. The White Birch is frequently killed, and an apple tree badly pecked, ceases to bear for several years.

What the purpose of this bird, in making these excavations in the green bark of trees, may be, has been a matter of doubt and discussion among observers. The systematic ornithologists have confined their attention mostly to peculiarities of structure with the view to classification, and very few of them are able to give information of value to farmers about practical questions affecting the character of species in regard to their helpfulness or harmfulness upon the farm. The general assumption has been that all birds are useful, which is about as nearly right as similar claims set up in favor of quadrupeds would be. Generally a tirade of abuse meets any farmer who undertakes to protect himself against birds, or even writes disrespectfully of the doings of the feathered race. "Fool" and "brute" are the best epithets he is likely to escape with. Nevertheless we are obliged to exterminate rats, mice, squirrels, foxes, wolves and bears; and fruit-growers find that none of these do more damage to property than birds of various species.

The "sap-sucker" is an unmistakable nuisance. Yet there is good reason to think he is not rightly named. There is no evidence that he sucks the sap of the trees whose bark he perforates. I have held the opinion that he lives upon the inner bark, which I have never found upon the ground beneath the trees where I have seen him at work, but which is found in his crop. Recently several observers (Rev. Henry Fairbanks, of St Johnsbury, Vt., being one of them) have advanced the opinion, based upon observation, that these holes are made for the purpose of attracting insects upon which the bird feeds. This would seem to argue an incredible amount of intelligence, yet it is stated as an actual fact of observation by Mr. F. and other observers that the "sap-sucker" really makes his rounds from one freshly pecked tree to another to secure the insects which are attracted by the juices exuding from the wounds he has made. Here end my "facts." Who will add to or amend them?

Orleans Co., Vt.

The Woodpecker, according to ornithologists, has a long, straight, wedge-shaped bill, with flattened and truncated tip, and sides more or less ridged. It has two toes before and as many behind, furnished with sharp claws which enable it to run up a branch with the greatest ease. By one set of muscles the tongue is thrust out far beyond the bill, while another set draws it back. Its surface is covered with a glutinous matter, a fresh supply of which is furnished by a couple of glands every time it is drawn in. The tip is also horny, with several barbed filaments pointing backward to retain insects too large to be captured by the viscid secretion. They are very active in the woods and forests, constantly tapping the surfaces of trees to discover soft or rotten places in which are lurking the insects and their larvæ which form their principal food. There are hundreds of species of them, but the most common in this country are the hairy woodpecker, the ivory-billed woodpecker, the black woodpecker, the three-toed woodpecker, the red-headed woodpecker, and the flicker or yellow-shafted woodpecker.

Educational.

MISSISSIPPI AGRICULTURAL AND MECHANICAL COLLEGE.

This college was opened on October 6th, with 160 students. The number has already increased to 230, and more would come if room could be provided. The faculty at present is as follows:—Gen. S. D. Lee, President; G. S. Rondebush, Professor of Literature and English; R. F. Kedzie, Professor of Chemistry; F. A. Gulley, Professor of Agriculture; Dr. D. L. Phares, Professor of Biology; Lieut. E. Bolton, Commandant of Students and Professor of Mathematics; Dr. Sullivan, Superintendent of Preparatory Department; T. B. Bailey, Professor of Languages; Messrs. Harper and Rondebush, Instructors. Professors Kedzie and Gulley are from Michigan and graduates of the Michigan Agricultural College; the remainder of the faculty are Mississippi gentlemen.

The course of study is modeled after that of the Michigan Agricultural College, including the manual labor system. All students will be compelled to labor from two to three hours per day on five days in the week. Owing to lack of funds the Mechanical Department will not be opened during the coming year, but as soon as possible it will be fully equipped.

The college farm comprises 800 acres of land, of which 600 are cleared and can be cultivated.

The farm is destitute of buildings and fences, but as soon as lumber is procured these will be erected, and entirely by student labor, with the exception of team-driving and the necessary superintendence of the work by a foreman. All labor at the college will be performed by students, even to building the barns and other rough work. After the Mechanical Department is started it is expected that the college buildings may be put up by students as fast as needed, and that the making of furniture, repairing, etc., can be done in the college shop. Students will receive a thorough course of study in the sciences and English, and in the theory and practice of agriculture and the mechanic arts.

The college has opened with flattering prospects, is popular with the people, and numbers among its students the sons of some of the wealthiest and most prominent men of the State. It is located at Starkville, Oktibbeha County, on a branch of the Mobile & Ohio Railroad. The country around the town is high, undulating and healthful, making the location all that can be desired. Contrary to the opinion I heard before coming South, I find that Southern boys are not afraid of manual labor or study. Owing to the lack of schools, many of our students are backward in their studies, but from the way they go to work I can see they have the right stuff in them to make good men.

Starkville, Miss. F. A. GULLEY.

Miscellaneous.

JOTTINGS.

Pot-grown Vines.

I noticed Horticola's Ruralism on pot-grown vines, Henderson's rejoinder, and Horticola's explanation. Now, if a vine grown in a pot is superior to one grown out of it, why is it so? and in what respect? I am so much of a novice (!—EDS.) that I would like to learn the why and the wherefore. Does a cutting grown in a pot make more or better roots, or will they be in a more natural position than if grown otherwise.

I have grown a good many vines and I know there is a good deal of difference in varieties in the way of making roots, and often in vines of the same variety. I have set vines grown in pots, the roots of which had run round the pots till they assumed a corkscrew shape and were difficult to straighten out, but it never occurred to me that such plants were any better for having their roots in such a shape.

If pot-grown vines are really better than others let us know why and in what respect.

Plainness of Speech.

The friendly criticism of your correspondent on the abstruse expression of ideas by writers for the press, as quoted in "Brieflets," in a late issue, is very apropos. He hits the nail on the head squarely and deserves the thanks of all for so doing. An idea may be perfectly plain to the writer when written, but if afterwards he were to put himself in a position of one unfamiliar with the subject, and re-read it with a view to ascertain whether it was perfectly plain and free from any ambiguity to others, changes would be very frequent. "You know how it is yourself."

KIT.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

CITY ALLUREMENTS.

THE country supports the city. The wealth of the cities and towns is all necessarily drawn from the farms and the farmers who "pay for all." And not only in the way of legitimate business is rural wealth thus garnered into urban coffers, but by all sorts of fraudulent schemes and swindling devices are the country people made to contribute to the capacious and greedy desires of the city sharpers. The "lambs" from the green fields outside the city are shorn and fleeced by the speculators who offer five per cent. a month certain, and unlimited probabilities of extra profit from stock speculations, in which the certainties are wholly against the greenhorns who venture their money against the speculators' experience. Very soon the money and the experience change hands, and millions of dollars' worth of the latter commodity are yearly gathered in by hapless, rural victims.

This is, however, a virtuous transaction as compared with some of the nefarious schemes devised to entrap unwary country persons. If one should take up a city paper which has a large circulation and proportionate advertising business, its columns will be filled with the most palpably fraudulent announcements. Widows sorrowing over dearly loved husbands offer to sell, day after day for weeks and months, the deceased man's property, sold solely on account of the death. Broken-down horses, irreparably damaged and diseased but guilefully gotten up to deceive, are the favorite subjects of these bogus widows, and farmers seeking horses are the prey prayed for. The household effects of a gentleman departing for Europe, which consist of gaudy and cheap furniture, put together with glue and which will fall apart in a few weeks; worthless daubs represented to be paintings by first-class artists; pianos of similar character with the furniture, and made expressly for these sales, are forced on to unsuspicious rural purchasers, (desirous of making a show and of astonishing the natives by their magnificence) by gangs of confederated swindlers, experienced in all the arts and wiles of the confidence games. Business opportunities of every kind are offered by the hundreds to newcomers from the country who have more money than experience, and all these are put forth in such alluring and seductive guise, as to deceive even some of the city residents, themselves. But the most abominable cheats are those which offer situations to poor men from the country, coupled with the demand of a deposit of a sum of money, merely as a guarantee of honesty in the absence of known references. "The best of security," generally a mortgage on imaginary property in a suburban locality, is offered to secure the deposit. A few dollars are paid as wages, when the unhappy victim is on some early day astonished to find his employer vanished and the place of business deserted. Occasionally one of these rogues is hunted down and punished, but usually the disheartened and perhaps ruined youth, robbed of his last dollar, is only too glad to escape from the city and go back to his home to hide his wound, and to find himself a wiser and a sadder man. A recent case may be instructive to those concerned. A young man came from the country to seek employment in New York. Looking over a leading advertising paper he read the following.

"WANTED—A clerk for a safe and money-making business. Salary $12 a week guaranteed. Jones, 75 Center St."

The young man applying at the place, found an old man (a smooth, plausible villain, however) surrounded by a few barrels of apples. Mr. Jones required a deposit of $300 from the stranger as security "as a matter of form," and secured the money by a bogus mortgage. The money was deposited; the young man entered on his duties, which were the sorting over of the few faded apples, and looking out with vain hope and weary expectation for a customer, who came not. In the meantime he received but $3 on account of wages, while, as it afterwards turned out, his employer under other names and at other places was pursuing the same spider-like hunt for other prey, which as a matter of course he found. After a time the young man was amazed to find the place deserted, the apples had disappeared and Mr. Jones vanished. By good fortune the swindler was caught and other victims appeared against him, all of whom had the same story to tell. The rogue was held for trial, but it is probable he may escape punishment on account of the difficulty of prosecuting such a case with all the delays of law, and through the obvious want of means on the part of the victims. The truth of the matter is that cities are overflowing with misery and wretchedness caused in this and other similar ways. They are swarming with harpies who prey upon inexperience, ignorance and too sanguine hopes. A stranger coming to the city cannot be too careful to keep his money at home and send for it as he may want it, and never NEVER send money to be used in speculations. The more brilliant the promises of these, the more disastrous will be the disappointment.

NOTES AND COMMENTS.

HEREFORD CATTLE are, no doubt, exceedingly healthy and extraordinarily good breeders, and it is very much in their favor that it is not customary with the breeders of them to feed in such a forcing way as is general with Short-horn men.

Mr. Talcott's queries respecting the effects of close, in-and-in breeding are very pertinent. It would be satisfactory at the present moment to know the real cause why the Short-horn breeders in this country have been giving up their herds one after the other for the past 20 years.

"True Percherons" are lauded by "Westerner." There is not the slightest doubt about there being altogether a finer style of draft horse used in the great breweries in London than in any other part of the world. "Barclay and Perkins" employ competent and reliable dealers to supply them with the very best to be found on the earth, and I believe their great number of dray horses would average, in their usual working condition, nearly 2,240 pounds each, and yet they are very handsome and superior animals. There are good horses imported from the Continent into England, and Percherons, Normans, Belgians etc., are sold in London, but it is useless to deny that they are all inferior to the "Cart Horses" bred and raised in the midland counties of England. The Percherons, the Normans, etc., have been improved by the use of stallions purchased at the fairs in England, and within my memory there was a constant annual drain of splendid stallions of this sort half a century ago, cart horses being sought for by breeders of draft horses as eagerly as the sporting men looked out for thoroughbreds.

DUCKS.—I have raised a great many ducks and seen hundreds which have had access to water from the day they left the nest. Whether they should have this or not depends upon the kind of stream and whether there are rats, large frogs or turtles. I lost 70 in one day from turtles one of which was a monster. These ducks were two weeks old. Where there is a nice, quiet, slow-running stream and there are no enemies to the ducklings, I am sure no harm is done to them by their swimming, waddling and wading from morning till night. They will eat grain of any kind, split corn, etc., and come to any place where it is always to be found and they will come home at night when they are a few days old. Hens will raise them well, but will forsake them early, and in warm weather the little ungrateful wretches pay no heed to the poor anxious mother. If the water is changed often, little ducks will do very well as stated by Mr. L. S. Hardin.

CLOSE CONFINEMENT OF SHEEP.—The Winter having set in early and the snow being deep, the sheep will have too much inaction, especially the breeding ewes. Many farmers are keeping a flock for the first time, and if the ewes are injured by close confinement these men will for ever condemn sheep husbandry as a disappointment. To prevent ill effects from idleness I am driving my sheep every day, when not too stormy, to one or other of several pieces of pasture on which there still remain uncaten some bunches of grass, twigs and various sorts of herbage grown after midsummer. It is interesting to see the sheep paw and pick out mouthfuls of grass and take bites of whatever they uncover, and after three or four hours of busy employment they come home looking bright and happy.

G. G.

The Price of the Rural

I have been thinking over what you say about your mistake in putting the price of the RURAL at $2: you had better in my judgment go back to $2 50; it will then be cheaper than any of the monthlies. The reduction in price detracts from its usefulness by forcing you to make advertising pay the loss. But the worst evil is, it forces you to depend too much for reading matter upon voluntary contributors, and to see your able corps of correspondents (the most of whom work for you for nothing (!)) find their own stationery, pay their own postage, and "grub stakes," and the question is, is it in human nature to do good work under those circumstances.

Raise the price after February to $2 50; explain frankly the reasons for it, and see if you be not sustained.

D. S. M.

RURAL BRIEFLETS.

MR. John B. Moore, of Massachusetts, announces conspicuously a "New Cross-bred Asparagus." Would he kindly tell us what is meant in this case by "cross-bred?" According to our observation, the ovule of the asparagus flower is fertilized before it opens, and the male plant is of no service. What varieties were used to obtain the cross? How does he *know* it *is* a cross? We ask these questions in no spirit of incredulity, but merely for information. . . . . .

MR. Moore in a letter to the Editor says:

"Our new white grape "Hayes," which was exhibited before the Massachusetts Horticultural Society in September last and awarded a first-class certificate of merit, is now in course of propagation. This grape is a pure native, fine in bunch and berry, of excellent quality and extremely hardy. This last feature is particularly noticeable, the leaves hanging to the vine long after those of all other varieties have dropped. The "Hayes" can be recommended as a white grape especially suitable for the Northern and Eastern States and Canada. The dissemination of this variety cannot be accomplished for some years to come, and in the meantime all persons interested in grape culture are invited to make a thorough investigation of the merits which are claimed for it. Hoping that you may sanction this attempt to place before the public a white grape, that can be profitably cultivated——". . .

WE wish to ask Mr. Moore how "all persons interested in grape culture" can make "a thorough investigation of the merits" of the "Hayes," if it is not to be "disseminated in some years." . . . . . .

IT is proposed by the Editor of the Toronto Globe that, in order to destroy the pea-weevil, it is only necessary that the bags containing the seed peas be brought into a warm room there to remain until the weevils come out of their holes. Once out they may be left to die. Beans and all leguminous seeds liable to be infested, might be treated in the same way. Prof. Comstock, commenting upon the above, admits that it is a reasonable plan, but asks why not use carbon bisulphide with which the weevils will be destroyed, whether they leave the beans or not? . . . . . .

"REPORTS of large yields are very common every year, but I must say I am in some sense a 'doubting Thomas.' When I see it stated that one hundred and fifty bushels of shelled corn have been gathered from an acre on Long Island, as I noticed some time since in a New York paper, I must be set down as a 'doubting Thomas.' To get a statement of such a crop, men take green ears and estimate with every allowance favoring the big story."

Thus Mr. G. W. Hoffman, of the Elmira Farmers' Club, expressed himself at a late meeting, as reported in the Husbandman. Presuming that the New York paper referred to was the RURAL NEW-YORKER, we would say that had Mr. Hoffman read the reports of the several committees who visited the fields and estimated the yields, there could be no room for doubt, proven as the results were by our own actual measurement. We extended a general invitation to all interested in determining the yields to visit the Rural Farm, so that our own statements might receive support which would place them beyond suspicion. What more could we do? We regret we had not extended a special invitation to the members of the Elmira Farmers' Club. Had they accepted, they could no longer have remained among the "doubting Thomases," while if not, it would have been the more ungenerous in them to have disputed the statements which, it will be admitted, we were at great pains to have trustworthy. . . . . .

What Others Say.

THE BACKSETS IN SUGAR MAKING.—Thus spoke Mr. I. A. Hedges before the third annual meeting of the Cane Growers' Association, held in St. Louis December 21:—"Although sugar making is our great object, there have been more backsets caused by efforts to teach men to learn to make sugar before they had learned to make sirup than from any other one misdirection. I find those of most experience readily admit that after good sirup is made out of well developed cane, sugar making is an easy matter. This conclusion leaves us only to devise the best means of accomplishing the work profitably. I have so freely given my views on this subject, through the organs of our Association, that it is only necessary for me to briefly recapitulate them here, viz.: Small works do well as initiatory beginnings, but for permanent money-making establishments capital is essential, aggregated by association of individual investment, and in all such cases I am convinced that the first season should be devoted to sirup making in order to educate a crew of men and fully test the entire apparatus, as well as to settle the results of the soil surrounding the works. For this purpose careful polariscopic tests of the cane from all the varied soils growing the same should be made. That the use of vacuum boiling pans will be the better method is scarcely disputed, hence the location should be selected with that object in view. These considerations, as well as the ultimate results, will suggest the importance of the consultation of a competent person in the outset, so as to avoid mistakes. The lack of experts is the present great difficulty to the rapid advancement of this industry."

SORGO SIRUP.—Colonel Lamb, who resides about one mile from Skaneateles, has had several years' experience in the manufacture of sirup for home consumption, says Mr. Rose, in the Husbandman. For three years, previous to the past year, he planted the Siberian Cane and realized a good profit. This year he planted the Amber Cane, and from a few feet less than 100 rods of land had 275 gallons of sirup weighing 11 pounds and 14 ounces per gallon. He plants in rows 40 inches apart, and leaves the plants from three to four inches in the rows. He prefers Amber Cane, as it ripens early. He sells the sirup at 50 cents per gallon. There is a yield of 440 gallons per acre, which shows what may be done under favorable circumstances.

A HINT TO FARMERS.—In some sections—and it would be a decided advance in thoughtfulness and kindness in all sections—farmers give each of their boys and girls, too, a strip of ground to raise whatever they choose upon it, and dispose of the product for their own benefit. It is a favor that they all appreciate, says the Germantown Telegraph, and it is a pleasant and serviceable employment for them in their leisure hours. They will vie with each other in their skill at raising their little crops,

and the proceeds, applied to their own use, are frequently of some value, and the whole arrangement, while it instructs them in the cultivation of the soil, early implants in the children the idea of thrift and economy. Sometimes, where a good many animals are raised, a pig, a lamb, a calf, up to even a colt, according to the age of the children, is given to each to rear and to keep or sell. Farmers, think of this; it will more than repay you in the happiness and confidence it will impart to your sons and daughters.

TIRES LOOSENING.—At a late meeting of the Farmers' Club of Elmira (as reported in the Husbandman) the question was asked if the tires of the Davis iron wagon would grow loose. One member replied that this was impossible because they are set upon iron spokes and there is, therefore, none of the swelling that comes to wooden wheels in wet weather, and, of course, there cannot be the corresponding shrinkage.

J. Bridgman said that he had been troubled so much with loose tires that he had resolved to buy one of these iron wagons to obviate the difficulty, but he supposed it would be heavier than a wooden wagon, and that would be an objection.

J. Burnham replied that his wagon with the double box, whiffletrees and everything complete, weighed 1,050 pounds.

J. Bridgman remarked the difference between it and a wooden wagon in weight was not perceptible.

ANOTHER VICTORY FOR AMERICAN MANUFACTURE.—A cablegram from Melbourne, Australia, just received, says:—"At a field trial of grain binders held under the auspices of the Melbourne International Exposition, now in progress, the Walter A. Wood, Twine Binder was awarded the first prize, McCormick, Osborn and others competing."

Everywhere.

RURAL SPECIAL REPORTS.

KANSAS, Cedar Vale, Chautauqua Co., Dec. 29.—Some time last Summer the RURAL NEW-YORKER had a good deal to say about war on insects; but if we wage this war with poisons, it seems to me we are doing just about as much mischief as good. My two younger boys, who make the field and prairie their school and study-room, have taught me that. This has been a very bad chinch-bug year hereabouts, and one of those boys' observations was of a very consoling character. They found out that some other insects preying upon the "chinches," increase pretty fast, too, and "get away" with them at a pretty lively rate. We have also had some potato beetles. After they have deposited their eggs there comes a little bit of a slug that takes hold of the eggs one by one and sucks them in a gourmand like manner. [We observed last season these little things, and how rapidly the eggs were eaten by them. They cannot have escaped the notice of entomologists, and yet we do not remember to have seen any account of them.—EDS.] Now, if we fight the pests with Paris-green or London-purple, we must destroy their enemies with them. I believe Mother Nature will take care of these things best, if we only do not ruthlessly break her established equilibrium. But there lies the rub.

You once said that seedling grapes may bear and may not. I have about 150 of them out, two years old last Spring from the seed (gathered from the native wild grape), and once transplanted. Last Spring they all blossomed, and many of them so profusely that they almost scared me, for I feared they were going to kill themselves. I counted over 150 bunches on some vines. But the extremely dry weather caused them to drop their blossoms, and only a few of the latest bore some fruit. [The RURAL would be glad to hear as to these grapes—their difference in size, color, quality, etc.] We have had quite a supply of peaches here, but only from seedling trees; the budded fruit did not amount to anything. I had an indication of the same difference in toughness in my grape-vines. There are some rows of Concords and Clintons, raised from cuttings, in the same plot. I commenced trimming them in early March, leaving the cut vines on the ground, to be removed later at leisure. Then came that terrible cold snap that killed the budded peaches. When it was fairly over I resumed my trimming, and was astonished to find that the cut-off seedling vines had taken root, even where they had only lain loosely on the ground. The Concords and Clintons showed no signs of doing the like, and they were a year older. So my advice to fruit growers in untried localities would be to rely more on seedlings. Be sure to get something, and take the chance of what it will be and improve it in time.

The RURAL has already recommended the culture of root crops, and it is quite right in that. But if anywhere the seed is of the utmost importance, it is here. For several years—since I have been here—I have cultivated a few rows of beets, and have always been vexed to see them come up and grow so unevenly. This year I carefully set out about a dozen of the finest beets in order to raise my own seed. One Sunday morning, when they were in blossom, I happened to take a walk through the field, to see how the crops were getting along, when it seemed to me the beets made far too many shoots to be able to mature all the seeds well. So I went for a pair of small pruning scissors and shortened the shoots in pretty nearly one-half. Three plants I left untouched, in order to judge of the difference. And a difference there was, and a very marked one. The trimmed beets ripened their seeds evenly in size and of a superior quality at the same time, while there was a great deal more trouble to gather the other seeds, on account of their ripening so unevenly. This difference alone paid for the trouble of the trimming, and then there was the vastly improved quality of the seed besides. Next year I shall not only trim down the shoots, but cut the weakest ones entirely out. The seed I now have looks as if I could trust it if planted like corn. H. S.

N. Y., Corning, Steuben Co., Jan. 1.—The prices of stock are very low. I hear of good cows selling for $12 to $15; and yearlings at $6 to $8 apiece. Hay is high, $16 a ton—and good straw $10. Two years ago $7 a ton were all that was paid for first-quality hay delivered at the press. Beef is three to four cents; potatoes, 30 cts. per bushel; apples, 25 cts.; butter, 26 cts.; eggs, 25 cts. We had an unusual amount of high winds the past Fall, doing considerable damage to buildings and uprooting many trees in surrounding towns. The epizootic has been having a run, but I have heard of only one horse dying from the effects of the disease. Ice is being gathered, and it is of good quality and thickness this year. I am glad to note the improvements that have been made in the RURAL NEW-YORKER during the year just closed, and sincerely hope the agriculturists of the country will appreciate them. It looks strange, but it is nevertheless a fact that the majority of farmers' homes are not so well supplied with agricultural literature as they ought to be. Why is it that we see so many old sheep on our farms? When we consider how much easier young sheep are kept than old ones and the greater profit from them, it is certainly not good economy to keep any over six years of age—at least that is my idea. F. H. D.

WIS., Auburndale, Wood Co., Jan. 2.—I came into the woods here and "took up" a farm about 18 months ago. I never had any experience in farming; did not know how to sow grain, or make a garden; but hit on the happy thought that I ought to have a good, reliable "agricultural paper" to commence with; so I sent for the RURAL. It has paid me ten times over the subscription price, to say nothing of the seed distribution. I have now 17 acres cleared and under hay; I cut two tons per acre last year, and sold it for $12 per ton, realizing $24 per acre for cleared land, annually. I think this is not bad. But I cannot expect to plow for some years yet. My Ovoid Mangels did well, though in York State it would not be considered so; they averaged about seven pounds, say from four to ten pounds; but I sowed them on new land without manure. My Ennobled Oats did excellently. The raspberries and willow look well. The flower seeds did not germinate except the pentstemons and manroot. I have a specimen of both of these. I planted my potatoes last Spring on new land; they did very well, but next Spring I intend to plant on the same land again without plowing (it is impossible to plow) and have hauled on the land some very old barn-yard manure from a lumbering camp; and intend manuring them in the hill. Now, which had I better do, put the manure in first, laying the potatoes on the manure; or lay the manure on the potatoes. J. R.

[*Such* manure is equivalent to a highly enriched soil and should be placed where the roots will feed upon it from the start.—EDS.]

The Querist.

ANSWERS TO CORRESPONDENTS.

An Infertile Cow, Etc.

F. F., Van Wert, Ohio, says, 1, that a year ago he purchased for $50 a pedigreed Short-horn cow, 12 years old, weighing 1,500 pounds, for the purpose of getting a calf from her by a pure-bred Short-horn bull. She has been with the bull three times, but she is not with calf, and he asks what shall be do with her. It seems a pity to make beef of her, as she is very finely formed, gentle, a good feeder, and has had calves. 2, He has a half-bred Jersey heifer calf from a Jersey bull and a 15 year-old common or "native" cow which has been a remarkable milker. Heretofore her calves have not been extra-good milkers, though they have always been of her color, and he asks whether the half-Jersey is likely to be a better milker than her elder sisters.

ANS.—1. The cow is not too old to breed well, for Short-horns have often done so till past the age of 20 years. It is just possible she has formerly been fed too highly to make her show finely, and this may have injured her procreative power. The best way we have found to get a cow, and indeed all other domestic females, with young, under these circumstances, is to breed to an extra-vigorous male, if to be had, and let him cover the female as many times as she would stand for him. If this does not succeed, then the cow should be reduced in flesh by feeding hay, cornstalks or straw, without any grain, but a few vegetables may be added daily if necessary. During this time she must have plenty of out-door exercise in the day, and be kept in the sun as much as possible. After getting pretty thin in flesh, then put her again to the bull as directed above. It would have been much better for our correspondent to have added another $50 to the above amount and purchased a two-year-old Short-horn heifer, as a reasonably good one without pedigree—and perhaps with it—can be occasionally got for $100. 2. If the bull that begets the calves comes from a good milking strain—for there is a great difference in Jerseys as to this—the calves generally make rich and deep milkers, provided the dam is a good milker. It is quite extraordinary that this cow has not produced superior dairy animals.

Hen Manure and Stable Manure, Etc.

J. E. D. B., Waverly, N. Y., asks, 1. the comparative value of hen manure and ordinary stable manure; 2, whether castor pomace is a valuable fertilizer.

ANS.—1. The comparative value of the two manures may be seen by the following table

	Contents of 1,000 pounds of—Stable manure.	Hen manure.
Water	750 lbs.	560 lbs.
Nitrogen	5 "	16¼ "
Potash	6½ "	8½ "
Soda	2 "	1 "
Lime	7 "	24 "
Magnesia	1¾ "	7¾ "
Phosphoric acid	2⅜ "	15½ "

Nitrogen may be valued at 25 cents per pound, potash at 6 cents, and phosphoric acid at 10 cents; the rest is not worth considering. Fresh hen manure is therefore worth only about three times as much as stable manure, so far as its actual value is concerned. The value depends very much upon the condition of dryness. As the water is evaporated and decreased to about 25 per cent., of course, the proportion of the other constituents is increased, but at the best the hen manure is not worth more than about six times as much as good stable manure. Its apparent value depends very much upon its greater solubility and activity. 2. Castor pomace is a valuable fertilizer, being rich in nitrogen and containing about five per cent. of ammonia, besides considerable potash and phosphoric acid. It is, however, only to be procured, at a reasonable price, at St. Louis, where it is made, its bulk and the high freight increasing its cost too much for its profitable use in the East. It is sold at $8 a ton at St. Louis, and at $12 a ton would be a useful and moderately cheap fertilizer.

Black-leg.

A. S. W., Battle River, Dakota, asks what ailed a calf that had just died. When first noticed it was very stiff in the hind-quarters and scarcely able to walk; it died the next morning. On being skinned the right hind-quarter was found to be badly bloodshot and twice its natural size, and around the bone the flesh was very black.

ANS.—The disease was carbuncular erysipelas commonly known as black-leg, black-quarter and bloody murrain. It is a blood disease produced by too copious feeding and consequent unwholesome assimilation of the food. It is confined to young cattle in good thrifty condition and is so sudden and virulent in its attack that remedies are unavailing. When its approach is suspected the danger may be averted by a full dose of Epsom salts—four ounces for a yearling and six ounces for a two-year-old. As other cattle, or even man, may become infected from contact with the disease germs in the bodies of animals that have died from this malady, the carcasses should be buried deeply, or, better still, burned, hides and all.

The Best Floor for a Horse Stable.

H. T., Sioux City, Ia., asks which would make the best floor for a horse stable—earth, brick, plank or cement.

ANS.—Earth becomes soon saturated with the manure and both disagreeable and unhealthful. Brick is too soft; plank is not durable and is often slippery; cement is dry, durable, clean and warm. It should be made of one part of hydraulic cement and two parts of sand, mixed dry and then with water to a thin mortar into which five parts of coarse coal ashes or coarse gravel, previously wetted, is mixed thoroughly. This is laid three inches thick and well-rammed and beaten. When dry and smooth it should be soaked with hot gas tar and dry cement scattered on it until the tar is soaked up. This floor is perfectly water-, damp- and vermin-proof.

Miscellaneous.

H. B. Union Co., Ia., asks whether there is a red raspberry of any value which does not spread from the root; if so what is the variety? where can he get it, and what will be the probable cost per dozen?

ANS.—Strictly speaking there is no red raspberry in cultivation that does not sucker from the roots. Ganargua, Norwood, New Rochelle and the old Purple Cane are sorts that do not sucker and are called red, but all are either varieties or hybrids with part blood of the Purple Cane species, the berries of which are *purple* and not *red*. None of these are desirable except in certain sections. Philadelphia, Herstine and Franconia, or Naomi, are varieties that sucker but sparingly, the two last being among our finest raspberries, especially the Herstine. Plants of all may be had of those who advertise plants of the Small Fruits in the RURAL.

C. N. G., Plainfield, N. J., asks which is the better corn-planter—the Hoosier or the Cornell, of Albany; which would work the best in strong ground and be the most durable.

ANS.—We cannot answer the question, having *used* only the Hoosier upon sandy or gravelly land. We should think either would endure a heavy strain. The Cornell planter is the more elaborate machine. It is provided with hoes and fertilizer attachment. It will drop all the way from two inches to four feet apart. It would be better for our friend to examine both before purchasing.

A. S., Butterfly, N. Y., has some twelve-year-old currant bushes which she wishes to transplant, and asks, 1, when should this be done—in Spring or Fall; 2, if in the Fall at what time; 3, if in the Spring, how early or late can it be successfully done; 4, the nearest breeder from whom full blood Brahma fowls, well recommended, can be bought.

ANS.—1, There is little choice between Fall and Spring. Convenience would guide us. 2, As soon as the leaves begin to fall. 3, As soon as the ground is rid of frost. 4, Geo. S. Josselyn, Fredonia, N. Y.

I. H., West Granby, Conn., asks where can he get the Report of the United States Fish Commissioners for 1879, and at what price.

ANS.—The Report for '79 is not published yet. That for '78 was issued a few months ago. It is published by the Government at Washington for free distribution, and, like other Government publications, can be obtained, if at all, through the Congressman for the applicant's district or the Senator for his State. Members of Congress are assigned a certain number of such publications for distribution among their constituents, and application should therefore be made to them.

F. H., Beloit, Wis., asks where "Spurry seed" can be bought, and at what price.

ANS.—Spurry seed is rarely kept for sale in this country. It is common in England and Europe. It can be procured of R. H. Allen & Co., or Thorburn & Co., of New York, if anywhere: or either of these seedsmen may possibly be able to procure it for you. It should not cost more than 50 cents a quart. It is hardly a desirable fodder plant when we have so many other better ones.

T. H. B., Windsor, Ohio. asks, 1, what is the value of road dust as a fertilizer; 2, is bone that has been softened by remaining in wood ashes as valuable a fertilizer as ground bone.

ANS.—1. This question can hardly be answered. The value of road dust depends upon the value of the natural soil of the road and the amount of travel over it. 2. Yes.

A. S. T., Wyoming, Ia., asks where can he buy "Farming for Profit," and what is its price.

ANS.—This excellent work is published by J. C. McCurdy & Co., Philadelphia, Pa., price $3. The publishers have offices also at Cincinnati, Chicago and St. Louis, where the work can be had.

A Subscriber, Centreville, N. Y., asks where can he get eggs of the Golden-Spangled fowls true to name.

ANS.—Write to B. L. Wood, Doe Run, Chester Co., Pa.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 8.

W. M. C.—E. W. S.—A. H.—H. T.—Jot.—C. L. R.—F. A. G.—H. S.—S. L.—D. E. McA.—B. F. T.—A. S. S.—J. S. C—N. R., thanks—H. N. L.—W. E. M.—E. E. B. S.—C. K.—F. H.—F. D. C.—D. I. C., thanks for apples.—P. S. W. S. R. M.—J. W. R.—D. M.—J. B. P.—P. O. C.—G. H. A.—S. B. P.—A. C. H.—C. S. H.—A. D.—S. W. R.—E. H. P.—J. W.—W. J. McM.—W. G.—H. G.—J. R. S.—C. T.—N. R.—P. M. A.—J. S. W.—C N. G.—J. B.—J. L.—J. M. K.—E. H. P.—S. B. P.—G. W. A.—S. B. P.—J. W. R., thanks.—S. R. M.—C. T.—W. J. Mc., thanks—W. G., thanks for all such information. All of our readers should send us the valuable facts that appear every year.—E. W.—L. Y. A.—J. J. P.—D. T. ("Apple tree")—W. E. M., yes that experiment has often been tried. The corn is essentially the same as that from the ear.—G. A. G. Jr.,—A. B. A.—H. S.—F. K. M.—S. B. P., thanks—W. H.—E. S. T.—A. W.—M. B. P.—J. P.—G. G.—S. H.—J. H.—J. T. L.—M. L. S.—S. D. L.—H. L.—E. R. T.—H. C. B.—E. W. H.—R. C. P.—M. S.—L. R.—L. R. T.—H. P.—N. H.—N. B.—M. L. S.—M. S. F.,—K. B., thanks.—B. L. L.—E. V. N.—L. R.—D. N.—S. R.—L. K.—M. K.—L. L.—J. A. H.—S. M. T.—

THE
Rural New-Yorker,
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Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, JAN. 15, 1881.

WE CONTINUE to receive fine reports as to Silver Chaff, of which, as our readers have been told, our main crop consists, in place of Clawson, which we had raised for years before.

Prof. Tracy (Mo.) now writes us that a Mr. Heare (?) of Lexington, Ky., has raised of this variety, on first-class land, for four years, respectively, 45—40—46½ and 30 bushels per acre.

EARLY ENGLISH LAMBS.—We notice that lambs of the Devon horned breed are now taking the precedence of the Dorset horned. Ewes of the former are easily made to breed at any season of the year the owner likes, and two crops of lambs have frequently been obtained from them in a twelvemonth. But this is considered as working the sheep's constitution rather too hard, and might injure the ewes by continuing it. Weak offspring would probably soon follow, difficult to raise, and consequently unprofitable; nor would their meat be so savory and delicate as that from more vigorous and better feeding lambs.

SOUTH-DOWN SHEEP. — These, with their various crosses, are becoming more and more popular for mutton in England, and they are gradually displacing the larger long-wooled varieties; as the mutton of the latter is altogether too gross and fat for good eating. If one wishes to produce the largest quantity of mutton *tallow*, the long-wools are the breeds for him; but if he wishes to get a superior quality of profitable flesh, then he should take the South-Downs. Under this name we wish to include all the cognate breeds, for they are essentially the same; such as in England are called from the counties in which they happen to be bred—Hampshire, Wiltshire, Oxfordshire, Shropshire, etc. We do not like this multiplying of names where breeds of animals are essentially the same, as strangers are deceived by it, and induced to purchase several of nearly the same sort, when one alone would be sufficient.

WE ARE VERY MUCH OBLIGED to friends who send us early reports of the proceedings of agricultural, horticultural or pomological societies or conventions, from whatever section they may come. But many of the reports so received are made up of bald statements that Pres't Smith made an address which was listened to with marked attention; Sec. Brown read an essay on "New Peaches;" Prof. Green delivered an excellent address on "Raising our own Sugar." An animated discussion then followed on "How to Keep the Boys on the Farm." Thanks were tendered to Pres't Smith and Sec. Brown for the valuable suggestions given in their remarks. The society then proceeded to the election of officers, the names, of course, being given in full. We do not see of what interest such reports can be to the general reader, or to anybody besides those who are pleased to see their names in print. What was said, is the important thing.

A LARGE SALE of thoroughbred brood mares came off in England on December 10, and it is astonishing what high prices they brought, considering the great agricultural losses of that country from bad weather for several years past. The forty-eight mares sold, realized 10,865 guineas ($55,868); averaging $1,141 each. One of these mares was Bas Blue, 23 years old, the dam of the famous stallion Blue Gown, recently purchased for $20,000 by Mr. James Keene, the great speculator, who is also a breeder of thoroughbred horses; the animal died, however, from injuries received on board ship, on the voyage to New York. We are informed that this horse was fully insured. Not dispirited by the loss, this gentleman, it is said, has offered $50,000 for another famous horse in England, which was refused by its owner. We hope if he ever ships again to cross the Atlantic Ocean, it will be in Summer weather, when bad storms do not prevail, and full-grown animals can make the voyage with reasonable comfort and safety.

YOUNG ANIMALS AT FAT CATTLE SHOWS.—We observe that at the fat cattle shows lately held in England the number of young animals on exhibition was considerably larger than usual. It would seem as if the exhibitors there had adopted the reform in this matter, begun on this side of water at the Chicago Fat Cattle Show. When animals have become fully ripe for slaughter, it is a great waste of feed to keep them on for months, and even years after this, as has too often been the practice heretofore. If of a good breed, bullocks, sheep, and swine can be now pushed to maturity in half the time that was formerly needed. But in doing this, due care should be taken to give the animals plenty of exercise in the open air; otherwise their meat will not be marbled, but abound too much in fat, and this in coarse, thick streaks, or lumpy; nor will the meat be so savory and nourishing. Because they have plenty of exercise in pure, fresh air, in their wild state, is the chief reason why the flavor of well fed game is so superior to that of our domestic beasts and birds.

CANDAHAR MUTTON.—As this is raised in the Afghan deserts, or in some of the more distant mountainous districts, it is said to acquire something of the flavor for which the mutton grown on the Welsh hills is renowned. The price of this is never quoted in the English markets, as the sheep are not usually taken there for sale. The number which can be reared on the Welsh mountains is small; and rich gentlemen and noblemen are always glad to take them direct from their breeders at high prices, as their mutton is considered a great delicacy on their tables. The peculiar flavor of this is acquired from the sheep feeding on the aromatic grasses, found growing naturally only on the lofty hills of Wales. In the same way it is from feeding on the bulbous roots of a certain kind of grass growing in the Chesapeake Bay, that our Canvass-back ducks acquire their peculiar, high, luscious flavor. If killed before they get to this bay and have fed there a week or two, their flesh is no better than that of other ducks. The Redhead also often feeds on the same roots, and when it does, it is found scarcely inferior to the Canvass-back.

VARIATION IN COW'S MILK.—In recent analyses of milk by Dr. Playfair, of England, he ascertained by varying the food of the same cow, that the milk varied greatly in quality. In one case he found only 3.9 per cent. of butter in the milk, while in another there was as much as 6.7. Again, 2.7 per cent. of caseine was present in one morning's milk, and double this amount in another morning's. Here are data for the dairymen to work upon, showing how much they may increase the value of their milk by attending to the proper feed of their cows, and this they can only ascertain by a series of careful experiments. When engaged in making butter the feed should be such as will produce the greatest amount of fat in the milk; when making cheese that which produces the largest quantity of caseine. In this way double the number of pounds of butter and cheese may be obtained from the same quantity of milk, and probably at little, if any, more cost of feed, thus doubling the annual profit of every cow in the herd. We think there is still much to learn as to the best manner of keeping cows for the dairy. It is more difficult to get at than the best and most profitable method of making beef; but this should only stir us up to be more frequent and painstaking in carrying out our experiments.

WHO WILL FOLLOW THE GOOD EXAMPLE?—During the past week the Legislature of Ohio has set a good example to the Legislatures of her sister States by promptly passing a bill prohibiting the selling of pools upon the result of any trial or contest of skill or power of endurance of man or beast. The bill passed the senate at the last session and was brought up in the house on the 6th inst. when it was passed by a vote of 80 to 16, after which it received the Senate's approval.

The bill makes it a misdemeanor for the owner of a building to rent or use any part of it for the sale of pools, the penalty being not less than $5 or over $500 for each offence, or imprisonment of not less than five days or over six months. The seller or proprietor of any pooling business or association is liable to the same penalty. We can scarcely believe that this will put an end to the pernicious practice of betting on "hoss trots" at agricultural fairs in that State, a practice which we have always strongly reprobated everywhere; but it will at least put a check upon it; and it gives hope of more stringent laws in future. Mr. Sullivan was the introducer of the bill; who will be the introducers of similar measures in the Legislatures of other States? Even if such bills do not pass, their introducers will have deserved well of the farming community by calling public attention to the evil and forcing its supporters upon the record.

PROVE THE CHARGE OR BE SILENT.

A FEW weeks ago a Western Monthly which deals chiefly with stock matters, insinuated a charge against General Le Duc to the effect that he had requested a gentleman sent to Europe on official business, by the Department of Agriculture, to buy some sheep on the General's private account. More recently one of our Western weekly agricultural contemporaries, referring to the charge, emphasized it, but magnanimously offered to insert in its columns any answer the Commissioner might feel disposed or able to make. For General Le Duc to return any answer to a vague charge of this sort, unsupported by any name or proof, would, in our opinion, belittle the important office he holds. What would any sensible man think of the head of any other Department of the Government, or indeed of any prominent official, who might deem it necessary to answer in the public press every accusation made against him, however unsupported by the weight of proof or authority? A Congressional Committee, specially appointed for the purpose, is now investigating the Department of Agriculture and its management, and we submit that all charges of this sort, that are not the results of of personal ill-will or official disappointment, should be placed before it for investigation. There are upon the committee gentlemen enough who have no special friendship for the Commissioner, to insure that all charges to his detriment shall be thoroughly investigated.

AMERICAN ENTERPRISE—A PROSPECT.

IT is only a few years since, with doubt and fear, the construction of the Pacific railroads which should connect the Atlantic and Pacific, was proposed. Some far-seeing and enthusiastic persons met every doubt with confidence and the enterprise was pushed to completion. Even then some people asked each other, What will be the end of this folly? How shall this venture pay for itself? But now what wonderful results have sprung from that experiment. Where we were led to believe lay a vast desert as barren as the African Sahara, we now find green pastures and vast fields whose products have averted famine in Europe and have greatly helped, if they have not altogether done it, to turn the course of the foreign trade in our favor and bring in a huge flood of foreign gold. Few persons adequately consider the wonderful results of the completion of the Pacific Railroad upon American interests. In fact, one can scarcely realize them upon reasonable consideration, so enormous have they been.

But all this is a mere beginning. While we are busily engaged in securing the abundant harvests of that enterprise, other gigantic schemes of peaceful conquest are quietly reaching out arms to grasp the larger part of the North American continent and open up yet another field for enterprise. Just now a Southern Pacific Railroad, passing through Texas, New Mexico and Arizona, lacks but 36 miles of forming a connection between its two halves, each growing and lengthening day by day, and hour by hour, from its respective terminus. While this Southern road is now completing its connection, the Northern Pacific at our other boundary, lacks but 800 miles of effecting a junction, and a syndicate of capitalists in a day raised the forty millions of dollars required to complete it, thus making its finishing a work of but a few months. In addition to these works, the mouth of the Mississippi River has been opened for the passage of the largest ships which may ere long take on cargoes of grain at the levees of St. Louis or the elevators of Chicago by the construction of proposed facilities in the shape of river improvements and a canal.

Every one of these enterprises is for the general benefit. By cheapening communication and transportation the farmers' expenses are lessened and his profits increased; the prices of food and other commodities are decreased and the workman's wages proportionately enlarged; new fields of labor are opened and the industrious man meets a greater demand for his services. With cheaper food and more demand for labor we have the very fundamental elements for unlimited prosperity. And knowing the result of what has been already done, it seems hardly possible to set bounds to what may yet be in store for our country. Surely no other land and no other people can overlook so vast and so valuable a heritage as we can.

BREVITIES.

THE success of cinchona culture in British India will no doubt have the effect, in a year or so, of reducing the cost of quinine.

WE shall soon present a portrait of the Niagara Grape vine in fruit, showing the remarkable fruitfulness of that remarkable grape.

MR. REED thinks that if the farmer of England would live and dress as poorly and work as hard as the American farmer does, he might do as well here as he could in America.

WE are aiming to give the Hardy Shrub and Tree Number early next month. It is by no means designed to speak of all hardy shrubs and trees—that would fill a book—but only of such as are best adapted to the generality of country homes.

INFLAMED EYES IN HORSES.—We find the following simple cure for this malady, and as the medicine gives no pain—like pulverized alum and some other substances—and can do no harm, we recommend its trial. Take an egg and break the large end enough to admit the handle of a teaspoon; pour out the albumen or white; mix in all the salt you can until it is quite stiff; then set it in the center of a heap of red coals, and let it burn till done baking. When cool grind or pulverize this fine in a mortar, and blow a pinch of it into the eyes once a day.

A MEETING of the American Agricultural Association was held lately in this city. What is the A. A. A? What! have people already forgotten the hubbub made about its organization scarcely one short year ago? In spite of the efforts of Mr. Reall, the Secretary, it has not hitherto made much advance, but the following officers who have been elected for the current year, may push it along more successfully. President, Col. N. T. Sprague of Vermont; Senior Vice President, Dr. John A Warder of Ohio; Secretary J. H. Reall, 127 Water Street, New York; Treasurer, Henry M. McLaren, New York.

A SPECIMEN of the swindles referred to in the article "City Allurements" published elsewhere in this issue has just come to light in this city by the arrest of James H. Langley Treasurer of the Mexican Guano and Fertilizer Company, who swindled Henry Cooke out of $400 which were required as a deposit preliminary to his obtaining a situation in connection with the company's alleged guano islands. Cooke worked two months, for which he got not a cent; nor could he recover his $400 when he became convinced that the company was a fraud. Strangers in cities, from rural districts, cannot be too careful in avoiding such "city allurements."

THIRTY years ago the center of the flour milling interest of the country was in the northern parts of this State, especially in Rochester and Oswego. Since then, however, the railroad system has been constantly extending westward, while the "wheat belt" has been steadily shifting in the same direction, so that the milling business has been largely transferred to the West and Northwest, where about two-thirds of the flour manufactured in the Union is now produced. During the last decade the Northwestern States have doubled the number of their flour mills and tripled their run of stones, and new milling facilities of the latest and most approved patterns are constantly either taking the place of the old ones or adding to their productive capacity.

IMPORTS of Australian wheat into Great Britain are growing considerably more rapidly than even our own, and the grain from that quarter is of very superior quality. In October and September 1879, the imports were 428,360 cwt.; whereas, during the same period this year they ran up to 1,300 000 bushels—more than three times the quantity imported from that direction last season. Oats and barley are also imported from there, the latter selling at good figures for malting purposes, and the former being of fine appearance, but a trifle too thick-skinned. If Australia can afford to pay the heavy freight on the transportation of these products to Europe, surely we might find a profitable market there for more of our own crops, in view of the lower freight charges from this country.

HERE and there are found some people who, in spite of the disasters caused by the "Morus multicaulis" craze of about a quarter of a century ago, still believe silk culture can be profitably followed in the United States. We are not of this number. It is generally conceded that the climate of California is more favorable to success in this industry than that of any other section. In no other part of the country have so many careful and expensive experiments in the matter been made down to the present day, and hitherto, without one exception, these have turned out more or less unfortunate. Upwards of twenty-five years ago Mr. Provost, of San Jose, devoted years of his life and his whole fortune to the enterprise and died after finding it a failure. Since then Newman Brothers, A. P. Smith, of Sacramento, W. Blanding and Charles W. Reed, of Davisville, have spent money, labor, time and earnest efforts in trying to make silk culture profitable there, but not one of them has succeeded in his endeavors. The few who still cling to the idea that under present conditions this industry can be made remunerative in any part of the United States, would do well, it seems to us, to abandon the notion.

For Women.

CONDUCTED BY MISS RAY CLARK.

HOW CAN A WOMAN TELL?

MRS. M, A. KIDDER.

He told me his love this morning,
With his dear hand clasping mine,
And he said, "God speed the dawning
When, sweet, I shall call thee mine."
But my fond heart questioned softly,
Though loving him true and well,
Will his love outlast all changes?
Ah! how can a woman tell?

When the years shall bring their trials,
And the cares and the pains outweigh
The joys in the little household,
As clouds might obscure the day,
Will the hand that has held mine fondly,
When maidenly ills befell,
As earnestly shield from sorrow?
Ah! how can a woman tell?

When the silvery threads are creeping
Through my tresses one by one;
When I lose my youth and beauty,
As many a wife has done;
Will his heart be mine as truly
As when in the flowery dell
He gave me his trusted promise!
Ah! how can a woman tell?

I glance at my sweetheart waiting,
His eyes they are clear and true;
"I will love him," my heart says gladly,
"I will trust him the wide world through,"
I will be to him joy and comfort,
I will all other wives excel,
I will keep him with love's sweet magic—
This much may a woman tell!

DESCRIPTION OF CUTS.

FIG. 25. HAT.—The hat is of dark green beaver, trimmed with ostrich feathers of the same color.

FIG. 26.—WALKING OR HOUSE DRESS, in Indian Cashmere and Plaid Material.

FIG. 27.—BRUSH-POCKET.

The pocket is of undressed holland. For the foundation of the back, cut a piece of cardboard sixteen inches deep and nine inches wide; cover with holland, and bind with blue ribbon. The pockets measure seven inches deep and five inches wide. These have a piece of holland two inches wide bound to the front all round with blue ribbon to form the sides by which they are attached to the foundation. The front of the pockets are ornamented with cross-stitch designs, worked with blue

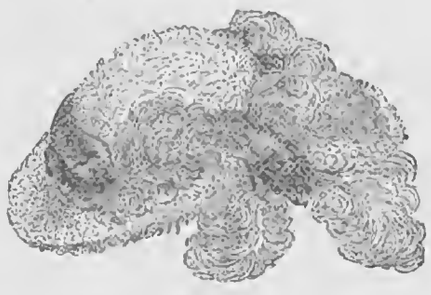

FIG. 25.

marking filoselle, as are the initial letters on the top of pocket. Three loops of cord with tassels are fixed to the top.

TABLE-SPREAD.

MRS. J. E. S.

This comparatively inexpensive table-spread represented in Fig. 28 is made of cretonne cloth, narrow black velvet ribbon and coarse spool silk. In the place of the velvet and silk, worsted dress braid and embroidery worsted may be used.

Take figured cretonne for the center blocks and striped cretonne for the border. Those marked *a* and *b* are squares of figured cretonne forming the center of the spread and may be nine inches or more, according to the size of spread wanted. The pieces should be of two kinds, or rather colors; that is those marked *a* dark and, those marked *b* bright, or vice versa. These blocks are sewn together so that the seams are on the right side of the cloth. The seams are pressed and covered with velvet ribbon just the width of the seams. This ribbon is feather-stitched on, generally with old gold-colored silk. The border is made of the striped cretonne—the width being double that of the center stripes—sewn on and covered in the same way. The heavy lines in the figure are sewn together with the seams on the right side and covered with the velvet ribbon feather-stitched on. The dotted lines at the four corners are simply sewn together with the seams on the wrong side of the cloth and neatly pressed. Some of the cretonne is cut lengthwise into stripes three or four inches wide and then these stripes were cut crosswise about a quarter of an inch in width leaving enough of the width of the stripe uncut, to sew on; this forms the fringe. If cut into stripes too narrow the fringe is apt to fray. If a heavier fringe is wanted than can be made from a single fold of cloth, it can be sewed on double.

Persons not having seen this kind of table-spread will be surprised at the richness and beauty of it. With few exceptions it would be suitable for any parlor throughout the country and would only fail to harmonize with extreme richness.

A FRIENDLY LETTER.

DEAR RURAL:

It is natural at the holiday season to think of distant friends and as I have long wanted to have a chat with you to thank you for your many letters of earnest counsel, good cheer and kindly greeting, I take this opportunity to do so.

When the mail is brought in, the RURAL is tossed over to me with the words, "There is your paper."

We have no farm—only a village lot of fruit trees and flowers, but still—"The RURAL" is just what we like, the paper of all others of our choice. You ask us to tell what pleases us most in it; now is not this asking too much? Just think of ones sitting down deliberately to designate the particular charms of a loved one; to analyze the why and wherefore that attracts! Have *you* the leisure requisite for a perusal of the long list? Would not even you call out "Condense, condense." "Time is money?" or, you did not ask us to criticise; were you not a little sly there?

You say "The portraits of distinguished farmers and horticulturists will be continued in 1881." How delighted the "Rural family" will be to have the father home at the holidays at the head of the feast he gives us, his face greeting us with "A Happy New Year!" You surely knew how much we wanted to see the old homestead when you sent that view of "The Rural Grounds." Many thanks for the pleasure it gave us to take a peep at your surroundings; that reminds me of another criticism; is it not too bad to profess love and then find fault? but some country ladies in speaking of architecture said most of the plans in the papers had too much waste room in halls, vestibules, etc.—for plain, country people; also requiring means of heating not easily attained in the country. Now, to come to the confessional, I am glad I am not looking in your face, when I acknowledge I have two hobbies! one is a love for flowers; not merely a love for them, but companionship with them individually; each one speaks a different language, and as a little girl said, "Heaven would not be so bright without the dear little flowers we have learned to love on earth." My other hobby is planning houses: now don't laugh and say, "strong minded." Not at all, it is only for arranging the interior so as to be most convenient for the family; this surely, is woman's work! These home arrangements must of couse be varied to suit the varied wants of different persons.

The city family with its princely hospitalities and retinue of servants, requires a very different establishment from the keeper of a small farm in the country, whose help consists of his own household. Well, this will never do! I spare you an essay on architecture, and again thank you for your good work for our country.

May many a "Merry Christmas and Happy New Year" be yours, who have contributed so much, to make happy the hearts and homes of your large family! Your's truly, MYRTLE.

[Although marked *private* we have taken the liberty to insert the above in acknowledgement of the kindness.—EDS.]

LUCRETIA MOTT.

BERTHA A. WINKLER.

ANOTHER bright light of the New World, has passed away—has raised the last veil of mystery and joined somewhere, somehow, the great kindred spirits gone before who, like her, have rendered faithful service to their country, and all future generations in the cause of truth, progress, and humanity.

What a noble assembly there must be in that vast area circled only with eternal infinitude! With bated breath we contemplate some sublime, Miltonic conception floating past the mind's eye and only the tremulous lips, the sudden tear faintly reflect some of that possible reality—the laborers of love; the teachers of compassion; the searchers after truth; with the smile of triumphant joy upon ethereal lips; the lustrous glory of noble deeds encircling ethereal brows; and she, the new arrival knowing, feeling, seeing all, at last. 'Twas worth a death to see such a life! 'Twas worth a farewell to receive such a welcome!

Few women but that know something of this brave, noble spirit enveloped in Quaker—sobriety and burning with an enthusiastic ardor; few who have not traced some mighty strides of human progress to her originating ideas and vigorous prosecution of them; and fewer still who have

FIG. 26.

not directly or indirectly been benefited by the workings of that tireless brain, and the warm pulsation of that mighty heart for an enslaved race and a degraded womanhood.

We remember the mob-violence: her brave eloquence against slavery excited some forty years ago, with wonder; we remember the general ridicule, in which she maintained her own and ours against the social slavery of her sister-women a few years later, with heartfelt gratitude: and we contemplate her whole eventful, toilsome, fruitful life with glowing ardor, feel eager to enter the path with hands ready to take up the great task yet unfinished.

The first of the great works which engaged her sympathies was born of compassion, fostered by the love of liberty and accomplished by the sword she abhorred. The second, sprung from the anger of unheeded justice; grew up in the mail of incon-

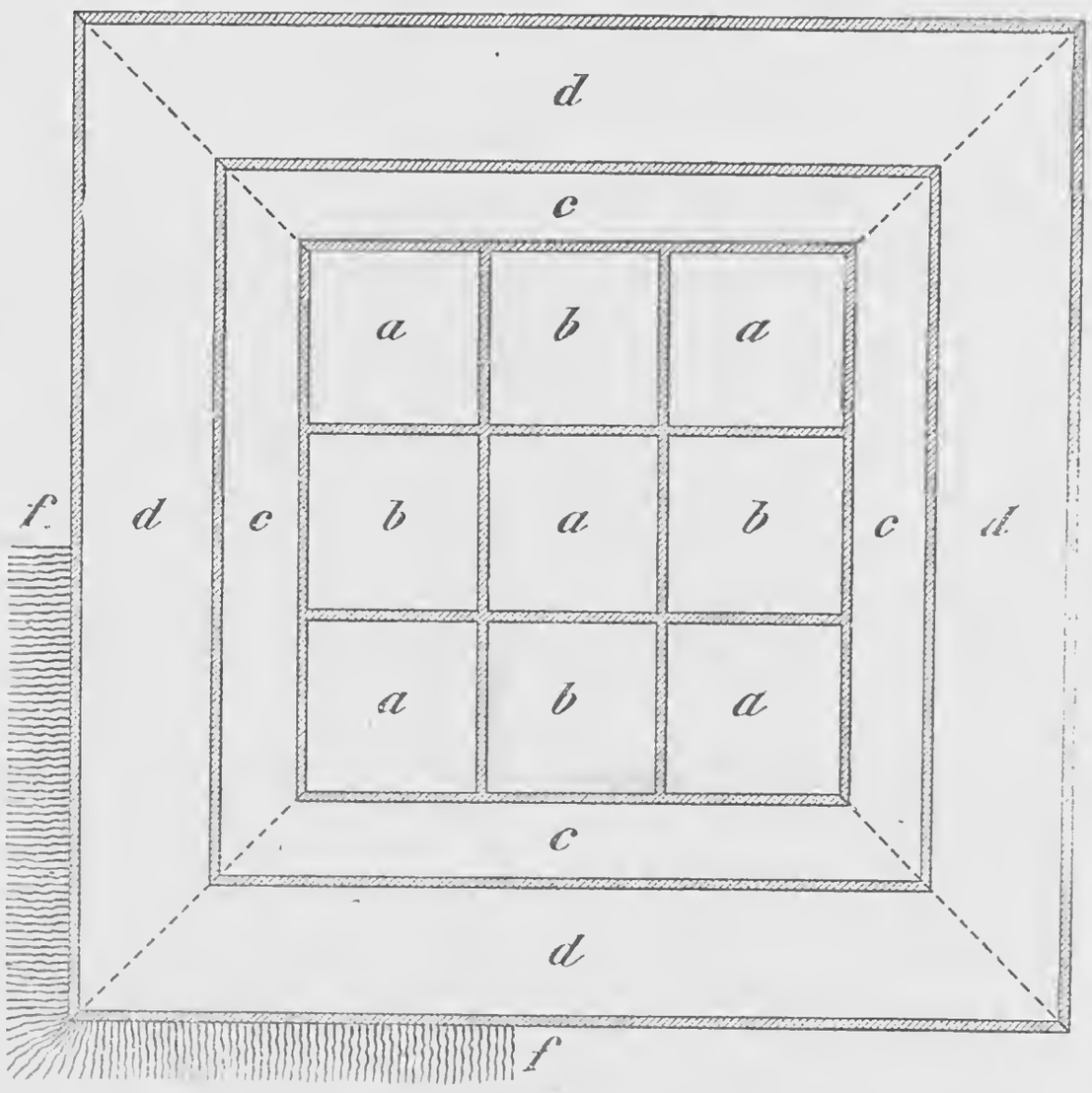

FIGURE 28.

testable truth too strong for battle, it shall be triumphantly accomplished in the peace she loved.

What, though she never lived to reap the full harvest? Did she not sow the seed and behold it bursting forth in fertile brains with the vigor of a truth-born power? Did she not diligently till the soil and behold it spreading over the whole garden of America, even beyond its boundaries into the old world's conservatism?

Here she has seen it in its promising bloom; yonder in company with her blessed co-laborers, she shall receive it in its ripened glory.

Farewell, daughter of pioneers! thyself a pioneer in woman's first land of liberty. Farewell revered mother of our noble cause! link of two generations with but one heart, and one hope the fields of thy labors are whitening, and an army of young daughters are here to harvest it in grateful remembrance of thee.

WIVES CONSIDERED.

As I AM neither an *old* maid nor a married woman, perhaps I can talk for a little while, without being *very* severely criticised.

Alline Ray says, "The farmers' wives have hard lives, doing all kinds of work, without assistance from their husbands."

It is true, there is more, and harder work to do on a farm, than elsewhere, but if you will observe closely, you will see that it is the *man* and not the *farmer*, who is indifferent to his wife's wants. A selfish man, whether farmer, or merchant, will think of his own aches and pains, regardless of his wife's comfort.

I am a farmer's daughter yet I never think of churning; and I can asssure you, I am far from being lazy.

It is women's own fault, that they receive so little help from the men. Men in general are rather thoughtless, but I feel sure that every man would be willing to help his wife or sister, if asked to do so. As far as *my* experience goes, farmers' wives are more happy and contented than any others. As to old maids, I do not think they are half so *snarly* as many married women. MARY E. S.

LADIES' TEETH.

BAD as Australian ladies' teeth are, and busy as dentists find themselves here, the American ladies are even worse off. An exchange says:—"Americans have, unquestionably, more perishable teeth than the English; probably than the French or the Spanish. But whether they have worse teeth than the mass of Italians, Germans, Russians, or other races is by no means certain. The common people, even many of those in tolerable circumstances, in other lands, neglect their teeth, rarely going or thinking of going to a dentist. But here, as a rule, almost everybody depends on art to make up for the ravages of nature. This is clearly shown by the fact that not less than 12,000 dentists, or one to every

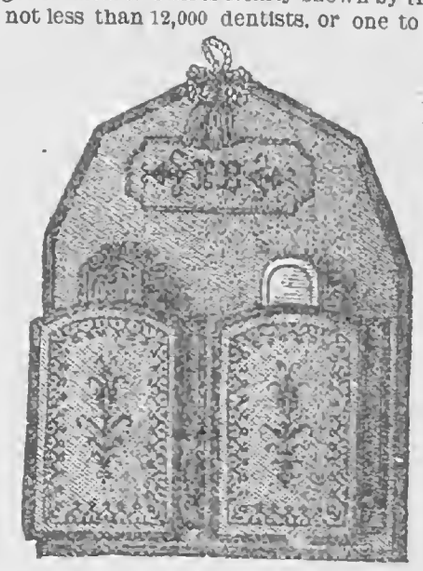

FIG. 27.

4,000 inhabitants, find employment in the United States. A prominent dentist has lately published an article in which he declares that about half a ton of pure gold—representing some $500,000—is annually used for filling teeth in the Republic, and that nearly four times as much material of a cheaper sort, silver and the like, is used for the same purpose. He estimates that only three centuries would be needed to put all the gold coin now in circulation in the country—$150,000,000—into graveyards by filling the teeth of different generations. He also says that almost 3,000,000 artificial teeth are made or mounted on various kinds of plates every year, and that out of an average of 80 persons of all classes here—the estimate is based on carefully-prepared statistics—only one person has perfectly sound teeth. The statement is not pleasant; but, conceding its truth, if we do not like it we can hardly resent it by showing our (own) teeth. In Sydney and suburbs I believe that the real cause of bad teeth is the absence of lime in the water we are supplied with. A leading Sydney dentist, however, attributes the great decay to fruit eating, and in support tells me that the most of his customers are from Hunter's Hill and Parramatta River generally, and that at the beginning of the orange season.—Sydney Journal.

HOW GIRLS ARE MADE STRAIGHT.

THE Hindoo girls are graceful and exquisitely formed. From their earliest childhood they are accustomed to carry burdens on their heads. The water for family use is always brought by the girls in earthern jars, carefully poised in this way. The exercise is said to strengthen the muscles of the back, while the chest is thrown forward. No crooked backs are seen in Hindoostan. Dr. Spray says that the exercise of carrying small vessels of water on the head might be advantageously introduced into our boarding schools and private families, and that it might entirely supersede the present machinery of dumb-bells, black-boards, skipping-rope, etc. The young ladies ought to be taught to carry the jars as these Hindoo women do, without ever touching them with their hands. —New York Express.

Miss Olivia Phelps Stokes, daughter of Mr. James Stokes, has presented to the City of New York a beautifully wrought drinking fountain, which is now in course of erection at the intersection of Madison avenue and Twenty-third street. Its cost will exceed six thousand dollars.

Literary Miscellany.

THE OUTCAST.

JOSTLE him out from the warmth and light—
  Only a vagrant, feeble and gray,
Let him reel on through the stormy night—
  What though his home be far away?
With a muttered curse on wind and rain,
He crept along through the muddy lane.

Lonely the pathway, and dark and cold;
  Shelter he sought 'neath a ruined wall;
Over his senses a numbness stole,
  Round him Sleep threw her mystic pall;
Then an angel came, with pitying tears,
And lifted the veil of by-gone years.

Gaily he sports by a rippling brook;
  Soft is the breath of the Summer air;
Flowers adorn each mossy nook,
  Sunshine and happiness everywhere.
He is *Willie* now, just four years old,
With his rose-bud lips and curls of gold.

Hark to the roll of the war-like drum!
  See the brave soldiers go marching by!
Home from the battle young *Will* has come,
  Courage and joy in his sparkling eye.
And his pulses thrill with hope and pride,
For he soon will greet his promised bride.

Now in the fireside's flickering glow,
  Calmly he's taking his evening rest;
Fondly he kisses his infant's brow,
  Sleeping secure on its mother's breast.
(And the dreamer stirred, and faintly smiled):
He is *William* now, with his wife and child.

* * * * * * *

The curtain dropped—the morning broke—
  Faint was the flush in the eastern sky;
Moaning and wretched the sleeper woke.
  Brushing a tear from his bloodshot eye.
To his squalid home behind the hill,
With a saddened heart crept poor old *Bill*.

INMATES OF LESTER HALL.

(Continued from page 26.)

CHAPTER XXXIII.

DYING AND ALONE.

A scene of greater magnificence, or wilder grandeur, of more utter solitude, eye has never seen, pen has never described—for it would be impossible—nor artist painted. Through the dense thickness of the pine forest the light pierced and shone on the innumerable paths so rarely trodden by human footsteps; behind rose the great Carpathian range of mountains, snow-capped, and gleaming rosy-red in the light of the setting sun; above, the cloudless skies were serene and steadfast.

All was still and silent, save for the splashing of the waters from some distant mountain-torrent or the rush of the wind through the pine-boughs swaying them to and fro: these sounds alone broke the dense mountain solitudes where Lawrence Carewe lay, his life's blood ebbing slowly away, staining the grass where he had fallen and soaking into the moss. For some hours—it had been morning when the brigands had made their attack, and evening was drawing near—he had lain there motionless, his face stretched up to the light, his eyes closed, where they had left him for dead!

They had left him for dead; but life lingered in him still, feebly perhaps, a faint glimmer of vitality which might easily die away, but he lived, and now and then a long, shuddering breath showed that the hill robbers had been mistaken when they thought life was extinct. That his wounds were grave and terrible there could be no doubt; but Lawrence Carewe was a man of vast physical strength, and where less powerful men would have succumbed, he lingered still, and when the life-stream flowing from him ceased, consciousness returned in some slight degree; he opened his eyes slowly and looked upward at the waving pines above his head.

For some minutes he recollected nothing; then dimly, slowly, heavily, sense returned, and through the keen physical anguish he was suffering came the yet keener pang of his isolated and terrible position.

To die there alone, without one near to close his eyes: to hold a cup of water to his parched and blackened lips; to speak one word of consolation and comfort—the idea was an awful and ghastly one, and as it came before him, he shuddered through all his limbs. He had no fear of death; his profession had made him too familiar with it under every aspect for that, and life had not been such a very precious boon to him; but such a death as this was horrible—horrible—horrible! Alone in his last hours, or if not alone, in companionship too horrible to think of—of the beasts and birds of prey.

He knew there was little or no hope of succor; the forest paths were but rarely visited; the dread of the banditti, who concealed themselves, in its wild recesses, kept all away, save, perhaps some poor charcoal-burner, who had nothing to fear because he had nothing to lose. Oh! great Heaven! It was a bitter and sore extremity!

He was suffering greatly too; he felt choked and suffocated, parched with burning thirst; for the fever of his wounds was upon him, and he was powerless to reach the water, whose cool splash fell upon his ear and tortured him with the torture of Tantalus. No wonder that a cry broke from him of unutterable agony and suffering, a cry which fell unheard in the wild solitude where he lay dying.

The setting sun sank to rest behind the mountains; the moonlight stole through the leaves and fell upon the white and ghastly face of the man Cecil Lester loved.

The dawn broke in the east; the sunrise bathed the earth in its crimson and gold, and heralded another day. Lawrence Carewe's heavy lids raised themselves languidly, and his eyes watched the beauty of this wondrous awakening world, which he was so soon to leave, and he said faintly to himself that it was the last sunrise he should ever see, and his thoughts flew back to Cecil.

"Will she ever know?" he wondered, vaguely; "and if she knows, will she care? will she grieve a little? will she be sorry?"

And as he wondered, his hand stole feebly to his breast, and sought and found a little knot of faded blue ribbon, stained now with his heart's best blood—the knot she had worn in the bosom of her white robe on that night when he had declared his love, and she had refused it.

"Oh, Cecil! oh, my darling!" came softly from the pale lips, and into the dying eyes came one bright, sudden gleam of admiration and love—quenched almost directly by a terrible physical anguish, which turned him sick and faint.

Then he remembered once more the last time they had met. He saw her again in her wondrous loveliness, robed as Queen Guinevere, her shining hair falling around her as she crouched at his feet, whispering, "Forgive! forgive!" He saw her as she came towards him through the dim firelit hall, with haughty grace subdued to the softest tenderness; he could hear the low, sweet tones saying, "I love you—I love you, Lawrence!" and he recollected how, when she had held out her trembling hand, he had turned from her scornfully. Had she forgiven him that scorn? he wondered, faintly. Had she forgotten all that now? Was she married? Did she love Ernest, and was he, Lawrence Carewe, forgotten? And as he thought, his weak hand stole up again to the pocket-book in which lay that little bloodstained blue silk knot beside a photograph of Cecil, which he had seen one day in a shop-window and purchased. If he could but find strength to open the pocket-book and take out the likeness, it would help him through the dark valley. If he could die with his eyes fixed on the face of the only woman he ever loved it might make his terrible solitude less terrible—his death less bitter.

Very feebly—ah! how feebly—and with many a pause, he fumbled in the breast-pocket of the riding-coat he wore, and found the pocket-book; drawing it out with an immense effort, which exhausted him so much that he was obliged to pause more than once before he could open the leather case and take out the treasured *carte*.

It was a vignette—an ordinary, or rather a somewhat superior photograph; and as he looked upon the lovely face pictured there a moan of unutterable anguish came from the pale lips. The photograph had been taken before any shadow had fallen upon Cecil's life, and it represented her bright and smiling, with soft laces about her throat, and a flower in her hair. How beautiful she was—how beautiful! and he would never see her again!—he would pass out of her life, and be forgotten for ever! He might say now that he loved her; there was no one nigh to hear; and even her husband could not be jealous of the love of a dying man; and he let his dim eyes linger over the lovely, radiant face until a sudden blindness came over him; his lips moved faintly trying to frame her name—"Cecil;" he lifted himself slightly on his elbow, made one last effort to raise himself from the ground, then he fell back, his eyes closed, the hand holding the photograph fell nerveless at his side, and all was still!

* * * * * * *

Whitewashed walls, bare and cold, a low-ceiled room, white, spotless draperies; in a little niche a figure of "Charity," and on the wall one picture representing the Healing of the Sick. Such was the scene on which Lawrence Carewe's eyes opened, when he recovered, after a long, long trance of insensibility, to all outward things, during which he had been conscious only of intense suffering, burning pain, and intolerable anguish.

Now it seemed to him, in the intense weakness following on the long fever caused by his wounds, which had prostrated him for many weeks, that it must be all a dream—that for him the bitterness of death was past, that he would find himself in that other world.

He felt no pain now, only great debility, and a dreamy sense of comfort fell upon him as he lay there; it was evening, the chamber was in semi-darkness, for the small swinging lamp gave but a dim light; all was very still.

> "So still, so peaceful, when a soft-toned chime
> Broke on the evening silence for a time;
> Then trembling into silence, seemed to cease
> In deeper silence and more utter peace."

As the little silvery chime fell upon Lawrence Carewe's ear he started slightly, and turned his head on his pillows with a faint wonder in his feeble mind as to where he was, and how he came there; and at the movement a woman rose from a low seat by his bed, and came forward, bending over him with a smile and gentle word.

"Where am I?" he said, faintly.

"At the hospital at Estavia," she answered. "You have been very ill. You are better now, but you must not talk."

"At Estavia," he repeated, faintly. "How came I here?"

But the nurse shook her head with a smile, put her finger to her lips in silence, and gave him some nourishment, which Lawrence took passively and without resistance, for he was weak as a child; but as she turned away he put out one weak hand and caught her dress.

"Where is it?" he said, feebly, and the nurse looked at him questioningly without a word. "Did you take it from me?" he persisted. "Who brought me here?"

"You were found almost lifeless in the forest by a charcoal-burner of the neighborhood," she answered, gently. "He came to us for assistance, and we had you brought hither."

There was a moment's silence, but as she was turning away again he detained her.

"Where is it?" he went on, as impatiently as it was possibly to him in his weakness. "I had it—did you take it from me?"

Then she understood, and nodded.

"I will give it to you," she said, gently; "but you must not talk any more."

She moved from the bedside, and in a moment returned with the photograph of Cecil Lester, which they had found between his fingers when they had discovered him senseless and dying in the forest solitudes.

"Is not this what you want?" said the nurse, putting it into his weak hand."

And he thanked her with a faint smile, and fell asleep again with the smile lingering on his face still.

As the nurse had told him, he had been found in the forest by a charcoal-burner—a poor Magyar peasant—who had brought the tidings to the little hospital which a holy sisterhood had established near a little village on the borders of the forests and brought him to the hospital, where he had been tended with skill and care and his wounds dressed.

A weaklier man would have had no chance of escape; but Lawrence Carewe's great strength and iron constitution, added to the constant care and attention he received at the little conventual hospital, and saved him, and on that evening, when he awoke, the nurse dared to hope.

All through that night he slept calmly, peacefully, dreamlessly, with the smile on his lids still, the photograph lying upon his breast, held loosely between his fingers; and the kind nuns watched over him and bent over him to look at the beautifully-pictured face with a smile and a sigh.

"It is the likeness of the woman he loves," they said softly one to the other, and the color rose in the pale cheeks of the younger sisters as they looked; and if at their heart there was a pang at the thought that such a love as this they had put from them for ever, who shall blame them?

They were greatly interested in their patient: in their quiet, holy lives such an excitement rarely came to them. They themselves were of many nations—the greater number being Hungarians; but there were one or two soft-eyed Italian women; one bright eyed little Frenchwoman, the life of the sisterhood, and one blue-eyed English sister, who had been Lawrence Carewe's most constant attendant, and who was called Sister Monica.

The lives of these sisters led, far from the great world, were beautiful and blameless, but full of pathos. Many of them were women of culture, and position, who had left brilliant, luxurious homes to bury themselves in these solitudes, devoting their lives and fortunes to the good of the poor peasant population of the neighboring hamlet. The hospital was never without inmates, but these were poor and illiterate—scarcely removed from animals—and it was but rarely such a patient as Lawrence Carewe fell to their care.

More especially to Sister Monica was committed the care of the wounded stranger, for he was of her country. She could understand the ravings which fell from the parched lips; she could answer him if consciousness returned; she could soothe him with words familiar to his ears, and well and nobly did the sister perform her part.

The night wore on, the sick man slumbered softly, and it was only when the sun was high in heaven that he awoke once more, quite conscious this time, and able to say a few faint words of gratitude to his kind nurses, and the gentle nuns sent up a glad "*Te Deum*" of joy and gratitude.

Still he was very ill; for days he lay in a profound exhaustion, from which at times they feared he would never rally; and this utter weakness brought with it a depression of spirits which made Lawrence Carewe feel at times as if he could weep like a woman.

"It is a beautiful face," she said, gently, looking at the photograph. "Your sister, perhaps?"

"No," Lawrence answered, wearily.

"Your wife, then?"

"No; I am not married," he answered; but the nun's gentle curiosity was not easily checked.

"Perhaps one nearer and dearer than all others?" she said, with a little smile. "Will you not tell me her name? I could write to her, you know. She must be very anxious, very unhappy about you."

Lawrence shook his head, and turned away to hide the tears which rose slowly in his eyes; he was easily moved in his great weakness; but even grief seemed better than the apathy which had mastered him, and Sister Monica was not sorry she had spoken.

"Think how anxious she must be at hearing no tidings of you," she said, gently. "You have been with us over six weeks now, and if you correspond with her she will have wondered why your letters have ceased."

"We do not correspond," he said, faintly.

"And yet you love her very dearly?" she said, simply.

Dr. Carewe shaded his face with one weak hand for a moment; then he turned to her suddenly:

"Yes, I love her," he said, passionately. "I love her so wildly that my last thought, when I lay dying in the forest was of her—the last sight I wished to see was her face; but if I recover, I shall never be anything to her, nor she to me."

"Would you care to tell me the story?" she said, gently. "Sometimes it is a relief to confide in another; and in your religion the great consolation of confession is denied to you. Would you like to tell me about it?"

"Would you care to hear?" he said wearily. "If so, I will tell you, my sister, although it is a common story enough."

"Tell me," she said; with a little smile and a stifled sigh. "Even common stories are uncommon here you know."

"I hardly know how to begin," he said, with a slight, weary smile. "Shall I say 'Once upon a time?'"

"As you will," she answered, touched more by his attempt at gaiety than by his mournful sadness.

"Once upon a time," began Lawrence Carewe, with a sad smile, "there lived a man who had chosen medicine for his profession, had devoted himself to it with more than usual interest, who lived for little else, who cared for nothing else, for he had few relatives, and none for whom he cared. One day—an unlucky day for him—he went to a dinner party and there he met a girl, with whom he fell hopelessly and irretrievably in love—hopelessly, for she was a reigning belle, of high position, and hardly likely to accept a struggling physician for a husband! But he loved her, and madman that he was, he fancied at times, that he was not quite indifferent to her. It seemed to him, poor idiot, that she gave him sweeter smiles and gentler words than she did to others, and he dared to hope; he dared even one night when they were alone, to tell her that he loved her."—To be continued.

THE EYE-OPENER.

A SWINDLE practiced frequently on farmers, and occasionally on others, was illustrated the other day in the United States Circuit Court in Indiana, in the case of Woodbury and others against Kistler. A couple of agents of the "Windmill Pump Company," of Chicago, agreed with Kistler to send him certain machines for which, on their receipt, he would give his note for $540. The note was drawn, so as to have it ready to send on when the goods should come to hand. One of the agents kindly furnished an envelope, ostentatiously inclosed the note in it and, having sealed it, handed it to Kistler. When the latter, getting suspicious, opened the envelope a few days later, lo! it contained some waste paper, which the swindler had adroitly substituted for the note, which he afterwards sold to "innocent" parties, in the persons of Woodbury and others, who in turn brought suit for the amount of the note. These, in the character of "innocents," of course expected a favorable verdict; but the sympathies of the jury were so strongly in favor of the gulled Kistler that they rendered a verdict in his favor. We have, within the year, seen accounts of similar verdicts in like cases in many parts of the country, especially in the West. Swindles of this sort are quite common, the mode of carrying them out differing, of course, a trifle in each case. The "Western Medical Works," of Chicago, are said to use notes almost identical with that employed by the "Windmill Pump Company," so that it is by no means impossible that both concerns are "worked" by the same "parties."

Here are the names of a few more "parties" *in this city*, to whom the Post Office refuses to deliver letters or money orders on the ground that they are conducting their business in a way which gives reasonable cause for suspecting them of dishonesty. You see the Post Office doesn't like to call a spade, a spade, right out, or a swindler a swindler—it prefers to use more euphonious language. Gray, W., 506 Fifth Ave.; Hall, J. H. & Co.; Hamilton, Thomas J., *alias* Dr. Mattison; Hamilton, J. B. & Co.; Harris, James, care of Mr. Grampps, 253 East Church street; Harris, O. W.; Herrick, D. P. & Co.; Hubbell, W. F.; Jones Albert W., *alias* R. M. Boardman & Co; Kosbotb, R. J., *alias* Mutual Stock Companies, Nos. 1 and 2; Lawrence & Co., *alias* Adams, Brown & Co., and Allen, Jordan & Co., as well as Barnes, Garrison & Co. and W. D. Duff & Co.; Lee, W., care of Mr. Shepherd, 272 Third street; Lee, W., care of Mr. Huff, 127 Broome street; Lindauer, Charles F., 184 Mercer street; McCall, W. T.; McCaulay, S. A., 35 Broadway; Marcotte Company, 22 Church street; Martin, George, 172 Franklin street; Mattison, Dr. *alias* J. J. Hamilton, (this twofold individual is noticed above under H, also;) Nassau Banking Co.; Nathan, B., 179 and 838 Broadway; National Banking Co.; Noelke, Charles D. J., 238 Grand street; Perkins, Howitt, 11 Park Row and 297 Greenwich street; Porter, W.; Rand, B., 62 Harrison street; Rand, S., care of Mr. Warren, 78 Christie street; Russell & Co; Silver Mining Co; Smalley, C. & Gale, 32 Broadway; Standard Sewing Machine Co *alias* Alfred Cately (noticed under C); Taylor & Co.; Thatcher, Belmont & Co.; Tomlinson, James A.; Tully, J. F., 1215 Broadway, *alias* Bell, C. & Co.; Uplogton, G.; Veadero, Ciriaco, 69, 71, 73 Broadway, *alias* Martinez & Co.; Webb, Samuel, 126 and 267 Broadway, *alias* Wilson, W. S; Wright, T. Potter & Co; Williamson & Co.; Zsosch, Theodore, 23 Park Row and 861 Broadway. This comprises the BLACK list for this city until New Year's. There will be lots more during the coming year; for new "shearers" are always ready to "fleece" the credulous everywhere, and doubtless most of the old hands will appear under new names, so that it will take some time to identify them. Next week we will begin the list of exposed rascals elsewhere. Again we urge our friends to prevent any of their acquaintances from throwing away their money by sending it to such swindling concerns, at least until we shall have finished our list—some years hence. Of course, we have too high an opinion of our readers—that is, if they are not the sort who merely borrow the paper—to imagine for a moment that any of them would be foolish enough to be guilty of such a stupidity.

MAGAZINES FOR JANUARY.

THE ATLANTIC MONTHLY.—Contents—The Portrait of a Lady. XI.—XIV.; Ye Tombe of Ye Poet Chaucer—Westminster Abbey; Smith; Getting Married in Germany; A Winter Journey in Colorado; The Wives of Poets. I; A Symposium of Sixty Years Ago; Sociology and Hero-Worship—An Evolutionist's Reply to Dr. James; Within the Gate—L. M. C.; Friends: A Duet I.—III. Sara Bernhardt; A Look Ahead; The Long Dream; Illustrated Books; Zola's Essays; Some Political Novels; Books for Young People; Horace Bushnell; The Origin of Religion; The Contributor's Club; Books of the Month.

DENVER.—The city of Denver ends the plain travel. After the long journey through a region where the waves of civilization seem to die away among the alkali plains and antelopes, it is a strange sensation to find one's self once again in a full-grown and prosperous town, with Paris fashions in homes and people, and the look of thrift that usually comes only with time. It needs the iron wall on the west, to persuade one that he is on the very front of civilization, and that what he sees about him has been scarce a score of

years in its making. Except that the town is squared, and not close knit, it might belong in Ohio, or even in New England. There are shops that would do credit to Broadway, and houses that would fit in our oldest towns. In the people there is no more of the frontier than one may find in all the towns west of the Alleghanies. The laboring miner has been called to the mountains, and except that he comes here to spend his gains, or to show his "prospects" to men of capital, Denver is out of his range. Probably no other American city has such a noble site. The eastern slope of the Platte rises evenly and gradually from its sandy bed, until in a mile it gains a height of two or three hundred feet. From any house-top and all the streets one gets majestic views out over the vast eastern plain or over the mountains. A canal brought on to the ridges of the plain from the Platte canon supplies ditches, through which, in summer, water finds its way along the street, and by little sluice gates into the gardens that surround every house. For the time irrigation of this long-parched soil has brought about much sickness, so that the town seems to be temporarily unwholesome; but this condition must soon pass, and leave the city with almost ideal conditions of salubrity. Free from parching heats and withering cold, nearly snowless, with the sweet, dry air of the mountains and the oasis-like fertility that irrigation will in time give to its surroundings, it may hope for a noble future.—N. S. Shaler in January Atlantic.

APPLETONS' JOURNAL.—Contents: The Veterans of Yesterday, in Three Parts (Part First), from the French of Erckmaan-Chatrian; The Early History of Charles James Fox; Social Life Among the Ancient Greeks; The Influence of Art in Daily Life (V. Dress), by J. Beavington Atkinson; Political Somnambulism, by Professor J. R. Seeley; Holland and its People; Philosophy at Concord, by Mrs. A. B. Blake; The Earl of Beaconsfield's New Novel; Vers de Societe, by A. H. Japp; The Court and Literary Salons of Old Paris; Editor's Table: Eccentricities of Punctuation—New and Old Art Theories—Ex-Presidents as Senators; Notes for Readers.

The publishers announce their intention of adhering to their purpose of providing intelligent readers with literature of a permanent and sterling character on all topics which affect public welfare and general culture. "Large space," they say, "will continue to be given to Literary and Art Themes, to Discussions of Social Questions, to Critical and Speculative Essays, to Papers, original and selected, that in any way are likely to interest intelligent people, or which will reflect the intellectual activity of the age." A feature will be brilliant novelettes from French, British, and home writers; and considerable attention will be given to comprehensive and analytical reviews of important new books. A sub-editorial department has been added, under the title of "Notes for Readers," in which will be preserved many minor things in literature of interest to readers.

NORTH AMERICAN REVIEW—CONTENTS:—The Philosophy of Persecution, Professor John Fiske; Controlling Forces in American Politics, Senator George F. Edmunds; Atheism in Colleges, John Bascom, D. D., LL.D., President of the University of Wisconsin; The Ruins of Central America, Part V., Desire Charnay; Partisan Government, Wm. D. Le Sueur; Popular Art-Education, Professor John F. Weir, Director of the School of Fine Arts, Yale College; The Limitations of Sex, Nina Morais; The Mission of the Democratic Party, Senator William A. Wallace; Recent Philological Works, Professor F. A. March.

THE PHILOSOPHY OF PERSECUTION.—In the first series of his admirable essays on contemporary literature, M. Scherer reminds us that in 1841 Lacordaire wrote a biography of Saint Dominic, in order to prove that he was not the founder of the Inquisition. "Strange are the vicissitudes of opinion," observes the critic. "The Bollandists saw a title of honor where the modern Dominican sees a blemish which he would fain wipe away. While the former scornfully asked what there is criminal or shameful in delivering heretics to the torture, Lacordaire complains of the calumnies which have injured, in the eyes of posterity, the reputation of the chief of his order." The case is indeed a striking one; but the vicissitudes of opinion which it illustrates, are in no way temporary or accidental, but are symptomatic of a general and progressive change in the tempers and opinions of civilized men. The interval of a century or more between the earlier Bollandists and Lacordaire marked a new era in this change of temper, in so far as persecution, while losing much of its old cruel intensity, became also discredited and disavowed. It was during this interval that Lessing's theory of the relative truth of opinions, which destroyed the logical basis of persecution, began to make its way among cultivated minds. Though the persecuting spirit has not yet ceased to influence men's actions, it is no longer regarded as a trait to be proud of, but seeks to hide itself under specious disguises. Its manifestations, too, have become correspondingly feeble.—*North American Review for January.*

SCRIBNER'S MONTHLY.—Contents: Peter the Great as Ruler and Reformer. III. (Illustrated); The London Theaters (Illustrated); The Expensive Treat of Colonel Moses Grice: In Albania with the Ghegs (Illustrated); Jean-Francois Millet—Peasant and Painter. V. Conclusion (Illustrated); Tiger-lily. In three parts. Part III.; My Neighbor's Confession; Recollections of American Society. I.; The Charcoal-Burner; Glimpses of Parisian Art. II. (Illustrated); A Christmas Hymn (with two illustrations); Welsh Fairs (Illustrated); Christmas Song; The Bible Society and the New Revision; The Battle of Waterloo Encored; Topics of the Time; Home and Society; Culture and Progress; The World's Work; Bric-a-Brac.

CHARACTER, AND WHAT COMES OF IT.—Above all other things in the world, character has supreme value. A man can never be more than what his character—intellectual, moral, spiritual—makes him. A man can never do more, or better, than deliver, or embody, that which is characteristic of himself. All masquerading and make-believe produce little impression, and, in their products and results, die early. Nothing valuable can come out of a man that is not in him, embodied in his character. Nothing can be more unphilosophical than the idea that a man who stands upon a low moral and spiritual plane can produce, in literature or art, anything valuable. He may do that which dazzles or excites wonder or admiration, but he can produce nothing that has genuine value, for, after all, value must be measured by the power to enrich, exalt and purify life. If art were an end, in itself—if there were any meaning in the phrase "Art for art's sake,"—then what we say about character would not, or need not, be true; but art is not an end in itself any more than milk, or flannel, or tilth, or harvest. The further art is removed from ministry, the more it is divorced from it, the more illegitimate does it become. Pyrotechny attracts many eyes, and may excite a great deal of wonder and admiration, but when we talk about the value of fire, we only think of its service in the furnace and on the hearth.—*Scribner's for January.*

NOTICES of Magazines, &c., for December, 1880, were unavoidably crowded out.

INFLUENCE OF FLOWERS.—What can give an air of refinement to the meanest place more effectually than flowers? I know a row of dingy looking city houses, in front of which a few ragged, dirty trees drag on a miserable existence, but between the end house and a dreary blank wall there is a triangular bit of ground, which is literally carpeted with lilies of the valley whenever May comes round. They scent the squalid street and not a single pair of leaves come up without its attendant spray of blossom.

"HANDS wanted on boys' pants," is the daily advertisement in the newspapers. 'Twas ever thus from childhood's hour.

Ask any good doctor if Hop Bitters are not the best family medicine on earth. See notice.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING DINNER PARTIES.

MARY WAGER-FISHER.

A DINNER party, to my mind, is the most enjoyable of all social interconrse, providing, of course, that the company be well chosen and the dinner a good one. The dinner need not necessarily be either sumptuous or expensive, but it should be good, well cooked and nicely served. Now that the Winter is well under way, and dinner parties a feature of the season, it may not be amiss to say something about them. As a rule, people who never have time to "go visiting" will accept an invitation to dinner, and be very punctilious, as they should be, in arriving in time; if the dinner hour is fixed at six o'clock, they come ten or fifteen minutes before six.

There are reasons for most things under the sun, and one reason for beginning a dinner with soup, is that it saves one from the waiting, and often awkwardness, attendant upon the carving of the roast, or rather it puts the company into a condition to wait—the sharpness of the appetite is assuaged by it, and the ball of conversation is set rolling. Soup should always be made the day before it is wanted, so that it may get cold, and the grease or suet, which rises to the top be taken off, for greasy soup is an "abomination." It is a very easy matter to have soup two or three times a week at least, if one is so disposed. For a soup kettle I find the granite-ware very nice, and most convenient, as it is light to handle and the soup can be allowed to stand in it any length of time. Of course, the kettle should have a closely fitting cover. Two or three kinds of meat make a better soup than when one alone is used, and bones always give a good flavor. While the juices of the meat are being extracted, the water should simmer—never boil.

After the soup has been removed from the table, and the host or hostess is carving the roast (it is to be hoped that the carving is done without the carver rising to his feet), *entremets* may be passed. These may be beef's tongue, spiced, raw or fried oysters, cold, boiled ham, head-cheese or slices of molded souse, from which the bones have been removed. For an elaborate dinner one serves fish after soup, but we are considering a dinner the materials for which may be found in the larder of most country dwellings. Spiced oysters are an appetizer enjoyed by most persons, and they will keep for three or four weeks in a cold place. If the roast is to be of beef, do not put water in the roasting pan; water converts the roast into a stew. If you want the beef extra-nice, cover the roasting pan with another pan of the same size. All sorts of meats cooked in the oven are the better for being roasted in a covered vessel. Some very good cooks dust the outside of a roast with wheat flour; others condemn the practice, so that it is quite a matter of taste. Among vegetables the potato holds a pre-eminent place and there are more ways of preparing it than there are days in the year, and there are as many *grades* of mashed potato! The most delicious mashed potato that ever came on my table was prepared by an Irish girl whose stupidity was most rasping. But her mashed potato was her redeeming feature, and as I now think of her in connection with that dish, her memory is a pleasant one. She had no better potatoes, or cream to put in them, than the house always affords, but she mashed and beat them until they were utterly smooth, and light like foam. A dish of them sent on the table hot never failed to elicit words of praise from some member of the family. If, after potatoes are mashed, they be put through a colander, and the long "strings" pile themselves high and loose in a dish, and if they are then set in the oven long enough to brown, they both look very nice and taste very good.

There must be a salad, and a very nice salad can be had in cold-slaw, if rightly prepared. When I was in Baltimore a few days ago, my hostess there set before me a slaw that I thought was dressed with oil, and was very nice. Of course, the cabbage was finely cut with a knife—not chopped—and here is the recipe for the dressing: a heaping teaspoon of flour, a small teaspoon of sugar, a saltspoon of mustard, half a teaspoon of salt, half a teacup of vinegar; stir all together and boil. When cold, add half a cup or more of cream, sweet or sour, and pour over the cabbage cold. Mix thoroughly. If you have no cream, use buttermilk. This will dress slaw enough for 10 persons. "What shall we have for dessert?" is always a question when a dinner party is on the *tapis*. Heavy, substantial pudding on the top of a hearty dinner should never be tolerated. What one wants is something fresh and dainty. Sponge cakes, with canned peaches, and coffee, make a nice dessert. Blanc-mange or plainly cooked corn starch served with preserved strawberries, or pine apple, with cream, is another very nice dessert. The Southern style of passing cream with preserved fruits, is now quite generally adopted, so that a pitcher of cream is much more essential to a dinner than is butter. (The French never serve butter with a "meat" dinner, and many of the more fashionable Americans are following the custom which is a good one). Unless the number of guests is large, two varieties in dessert are sufficient. Sponge cake is a favorite with gentlemen, and most, but not all, women like it. Apples and nuts are always in keeping with dessert; the apples should be made bright with a good rubbing, and the nuts be nicely cracked.

Apropos of coffee, although customary to serve it only with dessert, it is still in the best taste to serve it with the dinner when the guests are elderly persons who are accustomed to have it; there should be tea also for such as prefer it. A certain amount of formality, or order, rather, is necessarily observed in serving a dinner in order to prevent confusion, but unnecessary formality is stiff and unpleasant. There should be no hurry, and so long as the conversation and inclination of the guests warrant it, remain at the table. Two hours at dinner are not an over-prolonged meal, as "the feast of reason and flow of soul" is never more happy than after one has dined well.

About salt: if you are to invest in receptacles for salt, do not choose the "individual" salt dishes, but buy the salt boxes with perforated nickel, or silver covers, out of which the salt is sifted, like pepper out of a box. One feels tolerably sure then that the salt is clean, and has not been plowed into by the knife of his predecessor at table.

Napkins—never starch them in the slightest degree. Only a trifle of starch is permissible in a table-cloth. A napkin is a table towel, and a *starched* towel,—one might as well wipe himself on the back of an irate porcupine!

A long chapter might be written on the art of dinner-giving, but most RURAL readers understand how suitably to prepare and serve the meal; if not, they can overcome their ignorance by asking Domestic Economy any number of questions pertaining thereto and *by inviting the neighbors to dinner!* For there is nothing like practice and familiarity in such things to do them well. I cannot too strongly recommend dinner parties, especially in country neighborhoods where the social element needs development. One talks of better things, and is in a way ennobled by meeting with people dressed in their best bib and tucker. One never has too fine a frock to wear as a guest to a dinner party. Name guests whom you know to be "congenial to each other."

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

THURSDAY.—When I awoke this morning from a troubled dream the rain was pattering against the window, and the blinds rattled with a dismal shake. Over and over there rhymed through my brain a verse I had been reading the night before, that seemed to suit my mood.

"So chill the wind, and barren is the soil.
So weary am I that I fain would cease
From scattering seed. It seems a fruitless toil.
And a voice answered "God shall give increase."

I went into the kitchen before breakfast and found that by some mischance Janet had broken a large piece out of my best meat platter—at which she was looking with a helpless, puzzled air. "I'm no vara bad at breakin' delf" she exclaimed, as I entered, "I dinna ken hoo it happened." At that moment Lonsdale came in, threw his cap on a chair and sitting down a little too near the north window, he raised his arm with a jerk and succeeded in pushing his sharp elbow through a pane of glass. We had hardly time to exclaim, when little Alex. toddled in from the piazza with a large pot in his hand, that held my pet rose "Pearl of the Gardens" on which were half-a-dozen buds just opening that I had watched and tended carefully. He had never noticed it before, but now carried the trophy toward me, exclaiming joyously, "Mamma, here are some roses *a-rosing.*" It was a lovely plant; the pot too was fanciful and I started to catch it—but too late. It fell and the buds were either broken or spoiled. I felt like scolding. I think there is a new wrinkle started in my forehead, but just then Nora came in with quiet step, and a face full of sympathy, and I merely said "A Chapter of Accidents!" and lifted the "Pearl"; took the pruning knife and resolutely cut it up into four plants. So the present enjoyment was destroyed, but we will hope for the rose's future beauty. To Lonsdale I said "You must take the measure of the glass, and buy a pane, and then you can try your hand at glazing." I think this the best punishment a child can have for carelessness and I have always found it to work like a charm. The rain poured down unceasingly all day; the mud and damp clothes and leaden skies had a depressing effect, and not till evening, when we were fain to "stir the fire and close the shutters fast," did we recover from the effects of the day. But the peace and calm of evening restored our equanimity, and we could smile over our disasters while Alex. slept and Janet sang with Lonsdale to Karen's accompaniment that sweet and touching melody "Oh wert thou in the cauld blast."

REPAIRING TIN-WARE.

WE mend all our own tin-ware, from fixing a leaky pan to putting a spout on the tea kettle, both as a matter of convenience and economy. We used to do the work with a pair of tongs heated to melt the solder. Now we have a tinner's iron (which is not iron at all, but copper but, what's in a name). Our outfit consists of the iron, a bar of solder, a lump of resin and an old knife for a scraper. Sometimes we use muriatic acid in place of the resin, but if the articles to be repaired are not too much worn, or have been well scraped around the leak or broken place, the resin—which should be rubbed on before the solder is applied—will answer as well. To make repairs which will look as well as those done at the shops, requires practice, but by having the iron heated just enough to melt the solder readily, holding it—if you are a novice—directly over the place to be mended while it melts, even a child can do it very well. How much better to fix pans and the like in this way than to stop the leaks with putty or beeswax, as is often done! A. E. S.

QUESTIONS ANSWERED.

Haricot of Mutton.

I wish to learn through the RURAL, the art of preparing that excellent dish called *Haricot of Mutton*, which at one time could only be found at first-class restaurants in New York City. It was then regarded as one of the best dishes prepared by French cooks.

R. W. LUDLOW.

ANS. Two pounds of loin of mutton, or leg rounds, half pint of gravy, one medium-sized onion, carrot and turnip, or in place of the turnip substitute one cup of green peas, one dessert-spoonful of mushroom or tomato catsup, one glass of sherry or port wine, two tablespoonfuls of butter, a little browned flour, pepper and salt. Cut the mutton into strips three inches long by one wide, and fry with the sliced onion and butter till a nice brown. Have the gravy in a stewpan, and put in the fried meat. Simmer, tightly covered one hour. Then add the carrot and turnip, parboiled and sliced, or the peas, and boil twenty minutes. Thicken the butter used in frying with a little browned flour; add catsup, pepper and salt, pour into the stew, boil three minutes, add the wine, boil up and serve in a deep dish.

The Solid South, to a woman, are for Hop Bitters, using them as their only family medicine.

News of the Week.

HOME NEWS.

MONDAY, Jan. 10, 1881.

JUDGE OSBORN of Catskill has just rendered a decision against county Judge Thornton, of Sullivan, who was elected in 1878 for a term of six years. During the canvass, Thornton announced that he would serve the county if elected, for $1200 per year, the regular salary being $2,500. Thornton was elected and true to his promise has drawn only $1,200 a year salary. The unsuccessful candidate did not take his defeat kindly and brought a quo warranto suit against Thornton, claiming his offer to serve the voters of the county for less than the regular salary was in the nature of a bribe, and that he (Bush) should be installed in the office as the one who received the greatest number of legal votes. The case was tried last Summer but decision has just been rendered. Judge Osborn holds that the promise to take $1,200 only, was in the nature of a bribe, but he refuses to place Bush on the county bench, so that Gov. Cornell will have to fill the vacancy until another election...The New York Press Club gave their annual dinner at the St. Nicholas in this city last Thursday night. Speeches were made by Mr. Beecher, Gens. Grant and Sherman, Mayor Grace, and other notables ..The botanical department of Cornell University has recently received a gift of $10,000 from the Hon. H. W. Sage of Ithaca, N. Y.

Col. John H. George, a good authority, claims that New Hampshire's summer business foots up $6,000,000 a year. He bases his estimate on the railroad receipts from this business of $600,000, which he thinks is 10 per cent. of the whole. Other estimates place the aggregate amount at $2,000,000 per annum. One thing is sure, the business is great and growing. .....Chicago's prosperity is very remarkable. The past year has been marked by an enormous increase in its business. The bank clearings were greater than for the previous year by $336 000,000, the total sum being $1,693,000,000. The increase in grain shipments was very great; twenty-three millions of bushels more of cereals were handled than in '78..... A barber named Black went from Omaha to Sydney, Neb., with the avowed purpose of killing Detective James L. Smith, for having caused an article to be published in the Sydney Plaindealer reflecting on him. Black found Smith at the Lockwood House and fired two shots at him, whereupon Smith drew a revolver and shot and mortally wounded his assailant.....The plow manufactory of B. D. Buford & Co., at Rock Island, Ill., is burned, involving a loss of $250,000 on stock, machinery and buildings, besides throwing 400 employes out of work. The loss is one-fourth insured.

E. H. Luther, for some years prominently connected with the press of New England and lately a well-known member of the corps of Washington correspondents, died at Worcester, Mass., aged about 30 years. .....A grocer of Boston left $70 to be annually expended in caring for his dog, and that fortunate animal now eats sirloin steak three times a day and sleeps on a spring bed.....Lizzie Burton, the Illinois horse thief of 17, is very handsome, and in appearance perfectly modest; but she has been stealing horses ever since she was 10 years old.....The Yorktown celebration committee has selected Hon. Robert C. Winthrop, of Massachusetts, for orator, and James Hope, of Virginia, to deliver the poem.

Professor Felix Adler in his lecture at Steinway Hall on "Rational Education" made an earnest appeal to the audience to do their best to spread intelligence among the working people, asserting that upon the enlightenment of their children depends the safety of our institutions..... ..A fatal railroad collision took place recently at Lamokin Station in Pennsylvania, owing to a misplaced switch. Quite a number of the passengers were seriously injured, and in point of damage to railroad property it is said to be the worst accident that ever occurred in this country.

William A. Lightall, the oldest marine engineer in the country, died at Brooklyn last week, aged 76 years. He was born at Albany. He was engineer on the first Hudson river steamboat, the Clermont. .....The annual sale of pews in Plymouth church occurred in Brooklyn, Tuesday evening. The first was bought by Horace B. Claflin for $700 The high priced pews brought higher prices than last year. The total amount realized was $42,000 against $40,000 last year.....The frame spinners of the Webster mill, at Suncook, N. H., struck on Tuesday, and later the weavers of the Webster and Pembroke mills, numbering 200, also struck work. The strike was caused by a cut down of 10 per cent. on the 1st of January. It is likely that more will follow.....At Lockport, the magnificent Hodge Opera House building and the Gargling Oil building adjoining, burned early, Wednesday morning. Loss $150,000. The Opera House building was owned by John Hodge, and the Gargling Oil building by the Gargling Oil company, John Hodge, president.....The census returns are nearly enough complete to show that the population of the country exceeds 51,000,000 which is somewhat more than most people supposed. The increase in the last ten years will be about 13,000,000.

In New York City last year there were 344 failures, with $8,146,291 assets, and $19,291,582 liabilities.....Mrs. Harriet N. Cooper, a colored woman, died at Cheltenham, one of the suburbs of St. Louis, Mo., on New Year's day, aged 115 years. She weighed 400 pounds. Mrs. Cooper was the mother of 25 children, the youngest of whom is 62 years old. Her husband is 101 years of age and is still living.....Right Rev. Thomas Atkinson, Bishop of the Episcopal Diocese of North Carolina, died at his residence in Wilmington, N. C., Tuesday evening, aged about 73 years. He had been in feeble health for some months, but his death was unexpected.....Rev. O. H. Tiffany, Rev. Jacob Todd, and Mr. J. B. Long have been designated to represent the Philadelphia Conference in the Ecumenical Council of the Methodist Church, which meets in London, England, in September next..... ....At Wheeling, W. Va., the strike of the coal miners has caused the iron mills and glass factories to suspend, throwing 5,000 workmen out of employment.....Negotiations are in progress for the transfer of the Kentucky Central to the C., L., St. L. & C. management. The plan is to connect these two lines with the Knoxville & Ohio, running into Knoxville, and make a through line from Chicago and Cincinnati to the Southeastern railroad system.

The court-martial in the case of Cadet Whittaker has been ordered to convene on Tuesday, Jan. 18. Following is the detail for the court: Brigadier-General N. A. Miles, President of the court; Colonel M. A. Morrow; Lieutenant-Colonel Pinckney Lugenbell, First Infantry; Lieutenant-Colonel J. M. Brannon, First Artillery; Major Lewis Morrill, Seventh Cavalry; Major E. B. Sumner, Fifth Cavalry; Captain R. T. Frank, First Artillery; Captain Merritt Barber, Sixteenth Infantry; Major A. B. Gardner, Judge Advocate of the court..... Mr. Philo Parsons, of Detroit, Michigan, has given $50,000 to Olivet College, in that State.....Gen. Joseph R. Hawley, of Connecticut, has been presented with a handsome silver vase, at Washington, D. C., by the members of the late Centennial Commission.....The Rev. H. H. Hayden, the alleged murderer of Mary Stannard, is now working for the Folding Chair Company in New Haven.

[Walla Walla Watchman.]

Wise Words of a Willing Witness.

At the close of a mass meeting, according to the report of the same published in a La Grange paper, reference was made to the phenomenal efficacy of St. Jacob's Oil in the many painful diseases to which mankind is subject. We refer to the above as showing how strong a hold the Old German Remedy for Rheumatism has on the experience and good wishes of the great public.

FOREIGN NEWS.

England is about to withdraw from Candahar before the Ameer is firmly seated on his unstable throne. Blanqui, the chronic revolutionist, has just died in France. In Germany there is a national movement against the Jews, supported, it is said, by Bismarck, who does not favor it openly however. The Germans strongly object to the fact that the Hebrews are accumulating most of the money in the Empire; obtaining prominent places in the press, the theater and the government and generally pushing offensively aside their Teutonic neighbors. The movement will probably end only in temporary exasperation on both sides. Greece and Turkey are still disputing upon the territory demanded by the former of the latter. By last accounts the Powers had ceased to offer arbitration and Greece had determined to go to war with her far stronger neighbor, in the expectation that, in any event, Europe would not allow her to be badly thrashed.

In South Africa the Boers have rebelled against the British and driven away most of the troops stationed in their territory. They are the descendants of the original Dutch settlers of the Cape of Good Hope, who until lately maintained their independence by retreating northward as the British extended their dominion since their conquest of the Colony in 1806. When the South African diamond fields were discovered in their country—the Transvaal Republic—a few years ago, the British seized upon it, on the plea that the Boers could not control the turbulent diamond hunters—and now the sturdy Dutch Republicans are seeking to regain their independence. It will probably be a vain effort, as England is sending fresh troops to reconquer the land, and never willingly gives up a territory once acquired, however unjustly.

In Ireland the political trials of the Land League leaders still continue. Parnell, however, and the other Members of Parliament who have been indicted with him, have left Ireland to take their seats in Parliament where they have already begun to give the House of Commons a good deal of trouble by obstructing all business, by means of technical parliamentry motions. On the opening of Parliament the Queen's speech foreshadowed that the Government will ask for powers to inforce coercive measures in the disturbed districts, and at the same time introduce a bill for the relief of tenant farmers. Meetings of the Land League have been prohibited. The Pope has been writing to the Irish bishops, sympathizing with the people, but counseling peace and conciliation.

[Danville (Ill.) News.]

John Stein, Esq., City Brewer, referring to its valuable qualities, said to a News representative: "I have used St. Jacobs Oil in my family and recommend it to my acquaintances. It has always given the best satisfaction and is truly a wonderful remedy."

AGRICULTURAL NEWS.

THE French Commission on the Phylloxera lately held its final sitting under the presidency of the Minister of Agriculture and Commerce. It decided that no one had gained the $60,000 prize for an efficient remedy against the vine pest, although there had been a good deal of competition for the award. The remedies formerly approved by the Commission are still recommended—submersion, sulphur of carbon and supercarbonate of potassium. The introduction of American stocks into the Department of the Gironde was also authorized, and the continuance of State aid was recommended, to those Departments that are trying to reconstruct their vineyards by the use of stocks from this country. In certain Departments such attempts have hitherto proved very successful..... ....An insect destructive to the olive is fast spreading in France. In '78 its ravages were confined to Provence, but in '79 they extended to Languedoc and the Department of Herault. The egg is deposited in the olive. The larvæ gnaw the pulp, and make passages through it. The olive conveniently withers and falls, and the larva passes into the soil, there to transform itself into the shape of a chrysalis.....Texas is importing large quantities of Merino sheep. Importations during the past season have been much larger than ever before.....All over the South, indeed, especially in hilly districts, there has been a very considerable increase in the number of sheep the past year, and the movement is growing. Unusual attention is also being paid to the quality of purchases.....An imported Durham cow, the property of a farmer near Aurora, Ill., has given birth to six calves in less than two years. The bovines were born in pairs....Shanghai Pierce, the cattle king of Jackson County, Texas, lately sold 7,000 cattle for $16 per head.....Mr. Pierre Lorillard recently purchased in England the famous French stallion Mortimer, paying for him the sum of $40,000. The magnificent animal arrived here the other day on the steamship Italy.....The largest pair of mules received in St. Louis during the season, weighed 6,000 pounds together, and the height of each was 18 hands..... The amount of gate-money collected at the Birmingham, England, fat stock show, usually the largest in the country, was about $5,000. Nearly 50,000 visitors were present..... ..The Glucose Sugar Co., of Geneva, Kane County, Illinois, have just put in operation their large sugar works. The main building is five stories high, built of brick, is 66 feet by 180 feet. In addition to this is a stone wing, 60 feet by 60 feet, making one of the largest establishments of the kind in the State. At present, the company is using two thousand bushels of corn per day....

The American Pomological Society will hold its eighteenth biennial session in Boston on Sept. 15 '81 .....The National Farmers' Alliance is spreading in a satisfactory manner to judge by the number of local alliances which, it is claimed, have already been chartered. Twenty-five such organization are reported to have been already chartered in Kansas alone—which number entitles that State to a State organization.....There is more grain now awaiting shipment in Buffalo, N. Y., than has been there in forty years before at this time of year. The price which England is to be called upon to pay out of the pockets of the English, Scotch and Welsh taxpayers in order to settle forever the disquieting Irish land question, is, according to the Statist, the very modest amount of $1,500,000,000.....The Annual Farmers' Institute, under the auspices of the College of Agriculture of Illinois Industrial University, will be held at the University, January 26-28, 1881. It will be similar to those which have met with such favor in past years....Reduced railroad fare is expected. Programmes are being issued..... At the annual meeting of the International Dairy Fair Association, to be held in this city, February 8-9, an effort will be made to hold in connection with the meeting a dairymen's convention, in which prominent dairymen and cattle breeders will read essays or deliver lectures..... The annual meeting of the State Agricultural society will be held in Albany, January 19..... ....The manufacture of the little round Dutch cheese made from sweet milk, so popular in the retail trade, weighing from three and a half to four pounds each, is being undertaken in Illinois.

From Jan. 1 to Dec. 23, 1880, both inclusive, Kansas City received 244,216 cattle, 652,794 hogs, and 48,928 sheep.....New Zealand is said to be making great agricultural progress. The Government are introducing foreign fruit trees. Vine and tea growing will be tried in certain districts..... Shortly before his death the late Mr. Mechi became a bankrupt, not through his farming operations—although in the last few years of agricultural depression he lost money by his farm—but on account of failure in a business he had started in his old age in London. In his petition to the Court of Bankruptcy he described himself as of 439, Strand, dressing-bag and case manufacturer and cutler, and of Triptree Hall, Essex, farmer. The debts were upwards of £13,000, or $65,000, and the assets comprise stock to the value of £2,500 or £2,700, or $12,500 or $13,500, at Triptree Hall..... Advices from Buenos Ayres, dated Nov. 16, state that the wheat harvest promises to be the most abundant ever known on the Platte. An estate extending over 70 square leagues has been bought for a Liverpool merchant, and large purchases of land continue to be made on English account.... ....In New South Wales, according to advices of Oct. 16, prospects for the Summer were very favorable, and the crops were looking well. Pleuro-pneumonia was troublesome in the North and foot-rot in the West, but with these exceptions the stock of the colony was healthy and thriving.... ....In Queensland at the same date reports from pastoral districts are very encouraging.....In South Australia, according to advices of Oct. 30, the weather was variable, and complaints about rust in the grain crops were prevalent. "Take-all"—whatever that may be—was also causing anxiety to farmers.

The tenth annual convention of the North Eastern Bee Keepers' Association will be held in the city of Utica, N. Y., on the 2d, 3d, and 4th day of February, 1881. Four Gold Medals will be awarded for the best essays on "Wintering Bees," "Marketing Honey," and other very important and interesting subjects. Essays upon all the leading topics will be contributed by some of America's most eminent apiarists.

Mr. Joseph F. Armour, who died in Cincinnati on Wednesday, and whose funeral took place in Chicago on Saturday, was one of Chicago's best known and most active business men. He was born in Oneida, Madison County, N. Y., 58 years ago, and went to Chicago about 20 years ago. He was a member of the firm of P. D. Armour & Co., of Armour & Co., bankers, and of the firm of Planketon & Armour, the most extensive hog packers in the world. His brother, P. D. Armour, still remains to get up "corners" in pork. He leaves a wife, but no children.

The exports of Wheat and Wheat Flour have been from July to Dec. 1880, as follows:

	Bushels.
Oregon, July 1 to Dec. 20, 1880	1,272,254
California, July 1 to Dec. 22	10,362,463
Atlantic ports, July 1 to Jan. 1, 1881	103,042,886
Total, bushels	114,677,886

The Agricultural Department estimates the annual consumption for food and seed at 275,000,000 bushels, and available for export on the basis of its estimate of crop, 205,000,000 bushels.....The Grain trade at Odessa, per advices December 14th, 1880, was in a state of calm. The supplies this year had been less by 60 per cent. of Ghirka Wheat, by 55 per cent. of Rye and 30 per cent. of Barley than in 1879.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND has rapidly made its way to favor among druggists, who have observed its effects on the health of their customers. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Tropic-Fruit Laxative, an agreeable substitute for pills and nauseous purgatives. One lozenge is the dose. Physicians prescribe it. Sold by druggists.

"My mother drove the paralysis and neuralgia out of her system with Hop Bitters."—Ed. Oswego Sun.

BURNETT'S COCOAINE is the best and cheapest Hair Dressing in the world. It kills dandruff, allays irritation, and promotes a vigorous growth of the Hair.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Jan. 8.

Boston.—WOOL—The market has been quiet this week, the sales comprising only 1,300,000 lb. of all kinds, and prices indicate no change. The large stocks in New York, Boston, and Philadelphia—some 50,000,000 lb.—make buyers hold off; but at this time last year there were very large supplies on the way, against a very limited quantity now. Of 95,000,000 lb. of foreign Wool received at New York and Boston last year there is very little left, and our manufactures must have consumed at least 100,000,000 lb. of foreign last year, while at the present time there is no margin for importation, or likely to be, unless prices advance. There is more or less English Combing coming forward, as the mills have been driven to purchase in Great Britain on account of the small stock of this grade on hand. The prices of X and XX Ohio and Pennsylvania have ranged from 47@48c.; Wisconsin and Michigan at 42½@44c., and Combing and Delaine at 48c@50½c. for Delaine and 50@55c. for Combing, as to quality. Unwashed Wools remain the same, with a moderate business, and Pulled Wool has been selling at 37@52c. for common and choice supers. There is no movement of any consequence in foreign. Holders are very confident that manufacturers will be in the market in force in a week or two, and that full prices will be realized.

Chicago.—WHEAT strong; No. 2 red Winter, 96½@97c; No. 2 Chicago Spring, 98½@98¾c; February 99¾c; March, $1.04½@1.05, May; No. 3 do., 85@87½c; rejected, 71@73c. CORN active and firm at 37c. cash; 37½c. February; 42½@42¾c. May; rejected, 33½@34c. OATS active and firm at 31c cash; 31½c. February; 35¾c. May. RYE firm at 87@88c. BARLEY easy at $1 12½. FLAXSEED in good demand at $1.18. PORK active and firm at $12.80@12.85 cash; $12.85@12.87½ February; $13 02½@13 05 March. Lard strong and higher at $8 62½@8.65 cash; $8.67½@8.70 February, $8 80 March. Bulk-meats active, firm and higher; shoulders $4 25; short rib $6.80; short clear $7 05. BUTTER—Creamery 32@34; dairy, choice, 25@28; dairy, fair to good, 22@24; ladle-packed 18@21; packing stock 13@16; roll butter 14@20; grease 8@10. CHEESE—Full cream, Sept. and Oct., 12@12½; Full cream, Aug., 9@9½; part skim 8@9; low grades 3@5. WOOL—Dealers look for a good trade as soon as as buyers are through taking an account of stock. Coarse to choice medium tub 47@50; coarse and dingy tub 33@44; fine unwashed fleece 21@30; coarse unwashed fleece 20@26; medium unwashed fleece 29@34; medium washed fleece 40@45; fine washed fleece 39@42; coarse washed fleece 35@37.

Cincinnati.—Wheat scarce and firm. No. 2 red Winter, $1.06. Corn heavy; No. 2 mixed, 41½@42c. Oats strong; No. 2 mixed, 36c. Rye dull; No. 2, 96½@97c. Barley in good demand; No. 2 Fall, $1. Pork dull and nominal at $13. Lard strong and higher at $8.60@8 65. Bulk meats in fair demand; shoulders, 4½c; clear rib, 7c. Bacon quiet; clear rib, 7¾c; clear sides, 8¼c. Butter is quiet and there is very little demand for Creamery, the fresh-made Northwestern being too high priced, and the Ohio stock has lost its fine flavor. Fancy Northwestern Creamery sells at 38@39c; good to prime Ohio do dull at 30@32, choice Dairy at 23@25, choice Western reserve at 22@23c, choice Central Ohio at 18@20c; premium to prime do at 16@17c, and common at 11@12c per lb. Cheese—Prime to choice factory at 12@21½c per lb, but some good late-made selling at 11@11½c, and Northwestern at 10c.

St. Louis.—WHEAT fairly active; No. 2 Red Fall, $1.00½@1.01 cash; $1.01½, January; $1.02½@1.02⅝, February; $1.04½@$1.05¼, March; $1.07, April; $1.07¾@$1.08¾, May; No. 3 do., 95c. bid; No. 4 do., 90c. bid. CORN, 36@39¼c., cash; 39½@39¼c., January; 38¾@39½c., February; 39¾c., March; 40¾c., April; 41½@41¾c., May. OATS, 30¾@31c., cash; 32¾@32¾c. February; 35¾@36c., May. RYE, 87c. PORK strong but slow at $12.75 asked, cash and January; $12.75, February. LARD, $8 45@8.50. BULK MEATS held higher; shoulders, $4 50; clear rib, $6.60; clear sides, $6.80; long and short clear active at $6.71½@6.75. BACON dull and unchanged. BUTTER—a light city trade only, mainly in choice. Dairy-packed and sweet, fresh well-handled roll. Creamery and inferior packed quiet, while near-by make (in rolls or pails) was very hard to place, and in large supply. We quote: Creamery at 29@32c., favorite brands held higher; dairy-packed—choice and selections at 23@25c.; medium to prime at 14c. to 20c.; common, 11@13c.—roll—Northern at 20c., country at 13c, for low to 17c. for choice. CHEESE—Full cream factory, 15c.; half creams, 12c.; skims, 11c. WOOL—Tub-washed—choice at 46@46½c.; fair at 44@46c.; lamb at 42½@43c.; dingy and low at 37@40c.; fleece-washed at 32@34c. Un-

washed—Choice at 29c.; inferior at 20c. for very poor to 28c for fair; Kansas, 22@26c. for light and 16@18c. for heavy; Texas at 23@26c.; merino—light fine at 20@22c; heavy do. at 17@18c.; Southern burry at 12½@13c. Burry, black and cotted, 5@10c, off.

PRODUCE AND PROVISIONS.

NEW YORK. Saturday, Jan. 8 1880.

BEANS AND PEAS.—Receipts of beans are lighter and prices are fairly firm for prime straight marks of white. The heavy end of the crop is said to be here and sellers look for an early revival of trade. Peas plenty and dull: Wis. green $1.65@1.75, Southern B. E. $3 per 2-bush. bag.

Marrow beans prime $1.80@1.82, do. other $1.65@1.72, medium prime $1.70, do other $1.55@1.65. pea $1.60@1.75, white kidney $1.85@2.00, red do. prime $1.55@1.65, do. other $1.45@1.50, black or turtle soup $1.50@1.60; Lima $4.50@5.

BEESWAX.—Demand is confined to small lots, with 23½@24½ quoted.

BUTTER.—The stock of butter has been estimated for the first of January at 92,486 pkgs. There is not much variation in the situation of the market compared with last week. Wholesale trade has not actually opened, but there is more feeling of inquiry than has been noted for a month or so. Shippers in this way clearly indicate that prices for the under grades they can use must come down to their bid before they will take hold freely. It is quite certain that they will be met in lines that have been dragging with the weight of not being good enough for steady home use and at the same time have been held too high for exportation. In fine grades of dairies transactions show a break: 25c. have been accepted and would again be for property quoted at 27 a short time back. Western dairy is not showing as well as is to be expected in quality, and factory calls away a good deal of the cheaper class of buyers, especially at the relative quotations. Roll butter lower.

Comparative receipts of butter for the following periods:—

	Rects. pkgs.	Exp'ts, firkins.
June 1, 1880, to Jan. 1, 1881...	1,000,128	203,351
June 1, 1879, to Jan. 1, 1880...	1,025,415	252,279
June 1, 1878, to Jan. 1, 1879...	944,129	184,854

Creamery, choice 33@33½c: good to prime, 30@31c; poor to fair 20@26c. State dairies, entire choice, 24@26c.; other, 23@25c.; firkins, 18@24c.: State pails and half tubs, choice, 27@28c. fair to prime, 22@26c.; poor 18@20c.; Welsh tubs, choice, 24@26c.; other 17@20c.; Western imitation creamery, 23@27c; dairy, fine, 23@24c; other 16@22c.; factory, fine, 20@21c.; other 13@18c. very poor western, 12@13c.; rolls 18@20c.

Receipts for the week 15,391 pkgs.

Exports for the week, 2,920 pkgs.

CHEESE.—The market has not shown new features, holders firm on a fairly active trade. Exports for the week, 24,755 boxes. Quotations are:

State factory, fancy, at 13½c.; do. good and prime, 12@12¾c.; do. fair to good, at 11½@12¼c.; do. h'f skimmed, 5½@10c.; Wisconsin factory, fine, 12½@12¾c. do. good to prime, 11½@11¾c.; do. fair to good, 10½@11½c.; Ohio factory, fine, 12½@12¾c.; do. good to prime, 11½@12½c.; do. flat, fair to good, 10@11½c; do. poor to fair, 7@10c.

Comparative receipts and exports for following periods:

	Receipts, pkgs.	Exports, lbs.
June 1, '80 to Jan. 1, '81	2,330 502	103 034,314
June 1, '79 to Jan. 1, '80	2,156,414	92,421,716
June 1, '78 to Jan. 1, '79	2,087,165	105,042,208

Receipts for week, 8 617 boxes.

Exports for week, 24,826 boxes.

Liverpool cable, 66s., firmer.

Steam to Gt. Britain 30@35s.

Stock of cheese in this city Jan. 1, 214,200 boxes.

COTTON—There is a strong and fairly active market. Latest prices are for

January at 11.95@11.97c.; February at 12.11@12.12c.; March at 12.28@12.29c.; April at 12.42@12.43c; May at 12.56c.; June at 12.66@12.63c.; July at 12.76@12.77c.; August at 12.82@12.84c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	9	9	9
Strict ordinary	9⅝	9⅝	9⅝
Good ordinary	10⅜	10⅜	10⅜
Strict good do	11	11⅛	11⅛
Low middling	11 9-16	11 13-16	11 13-16
Strict low middling	11 13-16	12 1-16	12 1-16
Middling	12	12¼	12¼
Good middling	12⅜	12⅝	12⅝
Strict good middling	12¾	13	13
Middling Fair	13⅛	13⅜	13⅜
Fair	13⅞	14⅛	14⅛

STAINED.

Good ordinary	8 11-16	Low middling	10 7-16
Strict good ordinary	9 9-16	Middling	11 5-16

Receipts for the week, 37,202 bales, Exports do. 10,032 do.

DRIED FRUITS.—Business has been of a moderate character on account of the holiday period, with prices without marked change. Quotations are for Evaporated apples at 8½@9½c. for the better qualities; sliced apples at 5@6½c. for good to choice North Carolina; 3½@4½c. for Va. apples, 4@4½c. for Tenn. do; 4½@5½c. for State do; 4½@5½c. for western Ohio and Mich. Peaches at 30@32c. for evaporated peeled; 16c. for unpeeled do.; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6½@7½c. for halves and 6½@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 17½@18c. Raspberries at 25c. Whortleberries at 12½@13c.

Receipts for the week, all kinds, 1,750 pkgs.

Exports for the week, 4,890 pkgs.

EGGS.—Receipts for the week 1,173 bbls., do last week 2,778 do. The market is higher than it has been for about seven years. Even limed have reached a scale that would be regarded as high winter rates for fresh: and there is no saying where the latter would have advanced to if a good offering of limed were not here. Selected State limed have been quoted nearly up to fresh on extra scant days. At the close the market is not so excited as the attractive figures it is thought will bring in all available stock. Near Points, doz., 43@45c; State and Penna, 37@38; Western fresh 37@38; Northern 38@39c; seconds or held 30@33c, State limed 30@31c; Western and Canadian 29@30c; Fall fresh eggs quoted at 3@4c. under late laid.

FRESH FRUITS.—Exports of apples, 3,626 bbls. Apples are dull and a trifle easier. The fine quality of evaporated draws away much of the cooking demand and retail and table wants are moderate with bad walking in the streets.

Mixed lots on the wharf, $1.50@1.75; Baldwins $1.75@2; Greenings, $1.62@1.75 Spitzenbergs, $1.87@2 12; Lady apples $3@4. Cranberries are nominal this weather, but prime are well held; Cape Cod bbls. choice $8; other, $4@7; N. J. crates $1.62@2.25. Grapes are not wanted; Catawbas. 2@5c. Florida oranges continue dull and prices are full for average stock. Prime pkgs. have to be made so here. Some of the arrivals are in bbls.; these find no favor as the trade prefers the regulation half-bbl. case. Choice ½ bbl. boxes, 2.50@3; other, $2@2.25. Peanuts firm with a light supply: Va. hand-picked 4½@5c, other 3½@4½, shelled 3½@4½c. Hickory nuts quiet, $1.50@1.63 ₩ bush. of 50 lbs, Black walnuts 40@50c. Pecans 8½@9½c., which is lower.

FLOUR.—There is a freer trading for export and home trade use, with prices firmer.

Latest prices are: $3.00@3.75 for very inferior to very fancy superfine State and Western: $4.00@4 40 for poor to choice extra State and Western, odd lots and lines; $4 40@4 65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 15@5.10 good to choice do. at $5.10@5.85; (very choice up to $6.25;) red and amber winter wheat, inferior to choice trade and family, at $4.15@5.85; round hoop Ohio, $4.25@4 75; and trade and family brands of do at $4.80@6.25, the latter for fancy: St. Louis $4.40@5.25 for inferior to good extra; $5.25@6.25 for good to choice, Minnesota clear, inferior to very choice at $4 25@6.00; Minnesota "straight," poor to fancy, at $5 25@6.675, and patent inferior to fancy at $5.75@8.25; city mill extra at $5.10@5.35 for ordinary to very choice for the West Indies; do. for England, $4.15@4.50 for poor to very choice spring wheat, and $4.65@5.50 for winter wheat product; do. trade and family extras, $5.55@6.75; do. for South America, $5.45@5.75; the latter for very choice; No. 2 at $2 85@3.50 for inferior to fancy.

Receipts for week, flour, bbls. 109 682; corn meal, do. 2,400; wheat, bush. 289,325; corn, do. 115,028; oats do. 99,600; rye, do. 17,050; malt, do. 37 500; barley, do. 36,000; beans, do., 12 752; rice, pkgs. 3,000

Exports for week, flour, bbls. 91,750; corn meal, do. 1,350; wheat, bush 537,890; corn, do. 121,075; oats, do. 2,000; peas, do. 18,233; beans, pkgs. 695; rice, 350.

CORN MEAL.—Sales at $3.35 for Brandywine and $2.60@3.12 for yellow western.

GRAIN.—Wheat is in stronger demand for export and closed stronger. Latest prices are for

No. 1 white at $1.15@1.16, do. January at $1.14⅞@1.15⅛, do. February at 1.16@1.16⅛, do. March at $1.17⅞@1.18⅜, do. May at $1.18@1.18⅞; do. steamer at $1.14, No. 2 white at $1.14; ungraded white at $1.12@1.16; No. 2 red at $1.16@1.18, do January option at $1 16⅞@1.17⅛; do. February at $1.18⅞@1.19⅛; do. March at $1.20⅞@1.21⅛; do May at $1.21@1.21⅞; No. 3 red at $1.14⅞@1 15, ungraded red at $1 12@1.19⅛, No. 2 Spring at $1.15.

Rye at 98@99.

Corn is higher on fair demand; latest sales are of New York No. 2 at 56@57c, do. January at 55⅞@56⅛, do. February at 56@56⅛, do. March at 56⅞@57, do. May at 54⅛@55; No. 2 new at 55@55½c; ungraded mixed Western at 53@57, No. 3 at 53@53¾; New York steamer mixed at 51@54½. New York No. 2 white at 57c.

Oats are realizing an advance, with a fairly active demand: latest sales are of

No. 1 white 47@47½; New York No. 2 white at 45⅞@46⅛; No. 3 white at 43½@44⅛; New York No. 1 at 43 New York No. 2 at 42⅞@43¼, do. January at 43, do. February at 44⅛@44⅜, do. March at 45⅛@45⅜, No. 3 at 42@42⅛, ungraded white Western at 43@46⅛, ungraded mixed Western at 42@42⅜, No. 2 Chicago at 43⅛.

HAY AND STRAW.—The offerings are larger; low prices are well sustained.

Selected retail State hay $1.20@1 30 per 100 lbs. other grades of timothy at $1.20@1.25 do, grades for railway and shipping wants at $1.05@1.10, clover mixed at $1.05@1.10, clover clear at $1@1.05 salt hay at 65@70c. Straw—long rye. $1.15@1.20, short rye, wheat and barley 85@90, oat at 80@85.

Exports for the week 1,875 bales.

HOPS.—Demand has been slack this week, exporters especially indifferent, with prices essentially as quoted in our last.

Receipts for the week, 1,225 bales.

Exports for the week, 1,312 bales.

HONEY.—The holidays did not impart any snap to the market, and there is an urgency to sell, particularly for owners' account. Prices lower.

White clover, single, comb, 16@17c.; larger pkgs. do. 14@15c.; buckwheat 11@12c.; extracted 6@10c.

LEATHER.—Quotations for hemlock sole are 22½@23 for light 23½@25 for middle, 23½@25 for heavy and 21@22½ for good damaged.

MILK —Commission lots at Harlem R. R. platform have exceeded the demand and prices are low, especially for Winter. Cans of 40 qts. have ranged at $1.50@1.90.

OIL-CAKE.—Western is active at $29 per ton.

PROVISIONS -Have tended higher on an active inquiry.

Mess pork quoted at $14 for new, $13 75 bid: $14 asked for February. $ 3.90 bid and $14 asked for March. Bacon at 7½ for long clear and 7.65 for short clear. Beef at $9.50 for extra mess, $8 50 for plain mess, Beef hams at $17@17.50. Stearine at 9@9½. Tallow at 6⅜. Lard $9 @9.02½ for spot lots of steam: 9.10@9.12½ for January, 9 17½ for February, 9.22½@9 25 for March.

Receipts for week, beef, bbls. and tcs., 405; pork, 2,900 bbls.; cut meats, 35,111 pkgs.; lard, 22,888 pkgs.

Exports for week, beef, bbls. and tcs 1,504, pork, 4,275 bbls.; cutmeats, 12,371.153 lbs.; lard, 6,675,687 lbs.

POULTRY AND GAME.—Dressed poultry has fallen into ordinary Winter demand: large turkeys are slow. Frozen stock begins to afflict the market as the demand is not sharp enough to move even cheap stock readily. N. J. turkeys range 12@13½c.; Phila 12@14c.; State, 11½@13c.; Western, 10@12½c., chickens, Phila. 15@16c.; other prime, 13@15c.; poor to good, 8@12½c.; fowls, 8@12c.; duck, 10@15c.; geese, 8@12c., the latter Phila.

Live poultry is plenty for Winter but brings good figures. Chickens 11@12c. fowls, 9@10c; roosters, 6@7c, turkeys, 12@14c; ducks, best, 75@87c, other 5@70c. Geese, extra, $1.87@2; other $1.50@1.75. Pigeons ₩ pair, 20@25c.

The supply of game is ample for all wants and fair prices are ruling.

Canvas back $1.50@1.75, mallard 50@60c, black 40c, teal 40@45c. (blue wing); 25@30c. green do., common 25@30, quail ₩ doz trapped $1.75@1.87½, poor $1.25@1,50, partridges, ₩ pair 40@75. Grouse prime $1.12, drawn 80@$1; Rabbits, 20@25, hares, 20@30.

SEEDS.—Clover is quiet and firm: Western quoted at 9@9½c, the latter for fancy; Timothy at $2.75@2.85.

TOBACCO—Export demand is very moderate and the home trade fair, with prices steady and unchanged.

SEEDLEAF.	Crop of 1879.
New England Havana seed	18 @25
do. seconds	10 @13
do. fillers	5½@ 7
Penn. assorted lots, fine	18 @22
Ohio assorted lots	7½@10
Wisconsin assorted lots	7 @10
Wisconsin Havana seed	16 @18

VEGETABLES.—Exports potatoes for week, 11,244 bbls. A good demand for export and local use has given the market considerable steadiness. Supplies almost stopped; stock here not oppressive.

E. Rose Eastern d.-h. $2@2.25, do. State. $1 87@2; do. in bulk $1.75@1.87; prolific do. $1.50@1.75; Burbank do. $1.50@2.00; snowflake do. $1.75@2; peerless State $1.50@1.75; N. J. $1.25@1.63, sweet Del. $2.75@3, Onions firm with some advance. Cabbage higher. White onions, $5@5.50 yellow, do. $3.25@3.50; red do. $3 25@3.50; Chester, $3.00@3.50; marrow squash, 40@50; Hubbard do. 75c.@$1; W. and R. turnips, 50@75c.; carrots, $1.25@1.50, cabbages, ₩ 100. $3@5; red, $7@9; celery ₩ dozen, $1@1.75.

WOOL.—The market is without much life as yet, but it is presumed that when the trade is fairly prepared for the new year's work, or when books have been balanced and last season's affairs wound up, a good degree of activity will set in. Prices are steady.

LIVE STOCK MARKETS.

NEW YORK, Friday, Jan. 8, 1880.

BEEVES.—Receipts for the week 11,171 head; do last week 9,775 do. The market was strong for all grades of cattle as late wants were only thinly supplied Nothing left over. Bulls and dry cows sold at 2¾@4c. live weight, and 7@7¾c; to dress 54@55 lbs; common to fair steers 8@10c; to dress 55@56 lbs; choice 11½@11¾c; to dress 57@58½ lbs. One fancy steer made nearly 13c, to dress 60 lbs.

SHEEP AND LAMBS.—Receipts for week, 28,365 head; do last week, 22,159 do. Good sheep are in demand; at this season the pelts have more or less to do in sales. Last month there were considerable losses for buyers of sheep owing to poor quality, and butchers have become very careful buyers. Poor sheep consequently dull. Many large dealing butchers pull the wool latterly. Sheep range 4@7c: lambs 6½@7c.

SWINE.—Receipts for the week, 3,133 head; do. last week, 22,490 do. Market for live dull and weak, $5.40 extreme; sale at $5 37½ for 103 lbs.

Country dressed pork light 7½@7¾c.; medium, 7@7½c.; heavy, 6½@7c.; city dressed State 6½@7½, city dressed Western 6½@6¾, Western dressed 6½@6⅝. Pork tenderloins 11½.

COWS AND CALVES.—There has been a fair demand at $30@60 ₩ head for good common to prime State milkers. Receipts moderate but filling all wants.

VEAL CALVES.—Live have been scarce and prime have generally brought good prices. Coarse, heavy calves slow.

Live choice fed 8c. good to prime 7@7½, poor 6@6½, Mt. Holly range 5@8, heavy to prime light buttermilk, 4@5, grassers, 2½@3. Dressed calves have been plenty, as the weather is fine for shipping; choice 10@10½, other 8½@9½, very poor 4@8.

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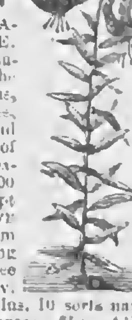

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Reading for the Young.

THE WINDMILL.

BEHOLD, a giant am I!
Aloft here in my tower
With my granite jaws I devour
The maize, the wheat and the rye,
And grind them into flour.

I look down over the farms;
In the fields of grain I see
The harvest that is to be,
And I fling aloft my arms,
For I know it is all for me.

I hear the sound of flails
Far off from the thrashing-floors
In barns with their open doors,
And the wind, the wind in my sails
Louder and louder roars.

I stand here in my place,
With my foot on the rock below,
And whichever way it may blow,
I meet it face to face,
As a brave man meets his foe.

And while we wrestle and strive
My master the miller stands
And feeds me with his hands,
For he knows who makes him thrive,
Who makes him lord of lands.

On Sundays I take my rest;
Church-going bells begin
Their low and melodious din:
I cross my arms on my breast,
And all is peace within.

HENRY W. LONGFELLOW.

FARMING FOR BOYS AND GIRLS.—NO. 9.

HENRY STEWART.

Methods of Draining.

WHEN the soil is found to be so wet that it cannot be worked in a proper manner and the crops grown upon it suffer, the farmer must take means to get rid of the water. This may be done in various ways, as by plowing the land into ridges, leaving hollows between the higher parts in such a manner that the water will run off from the ridges into the hollows and from these into a ditch at the lower part of the field, or by digging open ditches which gather the water from the surface and convey it away, or by tile draining, which consists in laying earthen pipes called tiles in deep ditches and covering them up so that the surface is made level and smooth as before. For some purposes the first is the best plan and it is a very cheap and easy method. In farming it is proper to look well to the spending of every dollar, but the cheapest is not always the best way. Sometimes it is better to spend more money at first that more may be saved in the end. It is the farmers' business to know when money may be spent with the greatest benefit, and the better he knows how this may be done the better farmer, and the more prosperous he will be.

The first method of draining may be used for meadows and grass lands that are not to be plowed, or for other lands that lie low but that have an open subsoil. It must not be lost sight of that some lands do not need expensive draining and that every purpose may be served by the cheapest method. To spend more money than is needed then, is waste. One cannot lay down rules for

FIG. 29.

every case. Something must be left for the farmer's own judgment and he should be able to apply general rules to special cases as they may occur. If a piece of land is so low and flat that there is no good outlet for the water, it may happen that the best thing to be done is to lift the land out of the water instead of vainly trying to draw the water from the land. This is what is done by ridging the land. For if a piece of level, smooth land is raised into ridges, as is shown in figure A, any water that may fall on it will run off into the hollows, and the land that is raised above these will actually be lifted out of the water and will be comparatively dry even when the hollows are wet. If the ridges and hollows are made in the direction in which the land slopes, however small that slope may be, the water will in time run off, although the fall or slope may not be more than a few inches on a whole field. With such a small fall open ditches or tile drains would be useless, so that in such cases this manner of draining is the best that can be used.

Where the fall is more than three feet, ditches or tiles may be used. Where land is cheap and open, ditches are not dangerous, or in the way, these may be used. Swamp meadows or rough pasture or meadow lands may be thus drained. Where land is valuable and is to be plowed every year closed drains are the best. These are dug three feet deep, very even in the bottom, so that there is no bend or hollow in the line of the pipes, the pipes are laid with the ends close together and then covered up and the ditches filled even with the surface. If there is any bend in the line of the pipes, sand or mud will collect (see fig. B) in them and close the drain. Such a fault should be avoided with the greatest care.

Water enters the tiles at the joints, and no matter how close they may be placed, the water will find its way into them. To prove this, let the ends of two tiles be ground smooth and fitted together as carefully as possible. Close the end of one tile with a cork and set the two on end, one upon the other, and try to fill them with water. The water will escape at the joint almost as fast as it can be poured in. And where water can get out of anything, it can get in with the same ease.

As an example of the benefit of draining, and also of the advantage of knowledge to a young man, the early history of a well-known farmer may be mentioned. John Johnston, late of Geneva, N. Y., began to farm more than 50 years ago. The first crops he raised were poor. He saw that the soil was too wet. He knew something about draining land, and procured tiles at a great expense, borrowing the money to pay for them and to do the work. He drained one field, and the next crop paid for the whole cost of it. Then he drained other fields until his whole farm was free from water. Fifty years after this he remarked to a friend, "I never made any money until I began to drain my land." He soon became a very successful farmer and a rich man. In his old age he loved to talk to young men and to give them advice about farm work. He did not boast of his success as being due to his own skill or wisdom, but would say that it was due to the use of drains in a very large measure. Thus he modestly gave the credit to the means he used, rather than claimed it for his own superior wisdom and enterprise. It is so with all great men, who are as modest as they are successful. Mr. Johnston, although he was a farmer, was a great man, and has done more good in his own modest way than many men whose names have made far more noise in the world. Mr. Johnston died recently at a ripe old age, but his name will ever be held in esteem by those who knew or have heard of him, because of the good which he has done by his example of skillful and intelligent farming, for he has pointed out the path by which any farmer, young or old, may reach success in his work, if he will only choose and determine to follow it.

THE HORTICULTURAL CLUB.

WELL, the holidays are passed, and were, doubtless, enjoyed by all the nephews and nieces. I shall be very much surprised, yes, and disappointed too, if I do not receive many letters from members of the Horticultural Club, telling all about the nice presents which Santa Claus brought them, and what gay times they had. Now the new year is with us, and let us one and all try to make it a "happy year" throughout.

The years pass away very rapidly, and it won't be long before the RURAL cousins will be men and women, but even then, we do not believe they will quite forget our pleasant Horticultural Club.

During this year we hope, and expect, to add many new names to our list, and we shall try to make the children's page more interesting than ever. UNCLE MARK

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I would like to belong to the family of cousins, will you accept me? I have three real cousins but no brothers or sisters. Eddie is the only little boy cousin in our family; he is two years and a half old, and we think him very bright. I would like to tell you about my dear cousin Alice and our uncle Henry. He is 22 years old, but he plays with us and makes as much fun as if he was as little as we are. I would like to tell you, also, about my dear, good grandpa and grandma, but mamma said I must not write too long a letter or you would not print it. Grandpa lives on a farm and I am there a great deal of the time. I like to ride the horses to water, and yesterday I helped to haul pumpkins. Oh, it was such fun; uncle Henry calls me Tommy, but I don't like that name, for I am a girl and that is a boy's name. Grandpa has taken the RURAL for five years and thinks he can't do without it. We thank you very much for the seeds. They all grew nicely. There is one plant which we are not sure of, as the name is rubbed off the box, but think it is the iris, the leaves look like gladiolus but there is no bulb, the roots being fibrous.

Mercer Co. GRACE BEATTY.

[It is the iris. Please give me the names of your town and State. Your letter should have been published before.—U. M.]

DEAR UNCLE MARK:—We are two children of an ex-Union soldier, living in Virginia. Our father came here from Ohio two years ago for his health. We live 17 miles from a railroad, and sometimes get pretty lonesome. We have taken the RURAL one year, and have always taken a great interest in the cousins' letters, and have long wished to join the Horticultural Club, and we would be two happy girls if you would please include us as members. We live in a northern settlement. We had a garden of our own this year, and intend to have one next. Father has plowed a small piece of ground for us, in which we have planted onions and potatoes. We plant them in the Fall here and cover them with leaves and brush till Spring. We had a very nice flower garden this year, but wish to improve it. The seeds we got from the RURAL did not do very well, but we planted them in the shade, which was the reason, I think. We each have a pet sheep and lamb. We like Virginia. The climate is much warmer in Winter, and the birds sing all the year round. They live in the thick pines and cedars. We like the RURAL very much, and all hands rush for it as soon as it comes in the house. Your would-be nieces,

Mecklenburg Co., Va. LIZZIE AND JOSIE.

DEAR UNCLE:—It seems to me a good time to report, now that the season's work is finished up, and one can see what the harvest has brought him. We usually have pretty good luck with the seed we receive from the RURAL, although the soil is not adapted for some, and others do not get the proper situations. We raised a barrel of Hebron potatoes this year, and our oats and cow-peas did well. The cow-peas are delicious eaten green; the only fault with them being that there was not half enough of them, but we saved seed enough, so that we will have plenty next year. Yours,

Mass. C. A. BUTTERWORTH.

P. S. The Phlox Drummondi and Chinese Pinks which you sent us had very fine flowers, and the musk-melon was almost ambrosial in its flavor.

DEAR UNCLE MARK:—I have just been reading the letters from the cousins. I didn't have any little garden, but my father has a large farm and I have to put in all my time on it. I go to school in the Winter, but in the Summer there is no school. I like flowers very much. I have a pair of very pretty pigeons, a shepherd dog and a pig. It has been very cold and we have had six inches of snow. One of our chickens got out of the chicken-house and walked around in the wet snow which froze into ice an inch thick on its feet. Last Summer we planted 25 acres of corn, but the drouth and the chinch-bugs destroyed it. I raised some peanuts last Spring, and they were very nice. I have not written for so long that I am afraid my letter will be thrown in the waste basket.

Your nephew, GEORGE.

Wash. Co., Ill.

[Will George please sign his name in full next time, and also give the name of the town in which he lives?—U. M.

DEAR UNCLE MARK:—My papa takes the RURAL and we like to read the cousins letters very much. We have a good many flowers and a large flower garden. We have also about 100 plants in pots. I have two brothers and three sisters, and we all love flowers. I do not go to school for we live two miles from town where the school is held. The seeds you so kindly sent last Spring to papa have all done well. Please may I ask you some questions about some house plants? When you send seeds to the cousins in the Spring, please remember me. FLORA.

Pella, Marion Co., Iowa.

[I shall be very glad to answer any questions, about flowers and plants, which may be asked.—U. M.]

UNCLE MARK is mistaken about callas requiring "thorough drainage." I used to think so, and have had tolerable success with callas in drained pots; but the first real triumph has been since we have grown the calla in a tight tub and kept at least an inch of water above the surface of the soil (mixed garden earth and fine peat) all the time. A plant in a bay window, within reach of my hand as I write, is a wonder of luxuriance in growth and foliage, and has been almost constantly in bloom for a year. It has a fine show for the holidays. Lately, to keep the two-year-old baby from playing in the water, we have covered the surface with moss (sphagnum) from the swamp.

Newport, Vt. T. H. HOSKINS, M. D.

UNCLE MARK:—If it will not be intruding, I would like to tell you what a thirteen year old girl has been doing through the Summer. I took the RURAL's advice and bought seeds; dahlia, gladioli, catalpa, etc. I now have twelve nice dahlia roots. The gladioli did not come up. The Chinese yam did not either, but I have twenty-five catalpa trees some three feet high, and they are quite a curiosity here. Now, if you can tell me where I can get some chestnut trees I will try them. I have planted chestnuts several times, but rabbits take them. ETTA A. SHAFFNER.

Wellman, Wash. Co., Iowa.

UNCLE MARK:—I am a boy thirteen years old, and have a list of four subscribers. I have worked hard to get them. It seems to me that a man can do better in getting subscribers, for people seem afraid to sign for a boy. I would like a scroll saw. How much more money will I have to send to get it, than the four subscriptions amount to? CHARLES POOLER.

Meridian, Cayuga Co., N. Y.

P. S.—My father has taken your paper for twenty years. C. P.

[We can send you a very fine scroll saw, all complete, for a club of ten subscribers. U. M.]

DEAR UNCLE MARK:—I am eleven years old and go to school and like it very much. I live in Western Kansas, but my mother says she don't like it as well as New York State because we have so many hot winds. Father planted a good many garden seeds, and so did I, but it was so dry that they didn't come up. I love flowers and so does mother. The seed you sent out did not grow. Mamma had five old hollyhock plants which bloomed last year and were very pretty. Father has 100 chickens and some cows. He has taken the RURAL all but one year, since I can remember.

Ellis Co., Kansas. JEROME BRIGHTMAN.

DEAR UNCLE MARK:—My brother takes the RURAL and I like to read the letters from the cousins. I am a Connecticut boy, but have lived in Kansas ever since I was two years old, I am nine now. There are some very pretty flowers on the prairie, and I like to gather them and make bouquets. We have in the Spring a great many kinds of roses, red, yellow, pink and scarlet, and some little tiny white ones. I would like to join the Horticultural Club, and when you distribute flower seeds, please remember me. HOWARD T. ACKLEY.

Coffey Co., Kansas.

DEAR UNCLE MARK:—I am a little girl ten years old. I would like to join your club. My papa has been taking the RURAL for sixteen years. I have a canary bird, and my mamma has quite a number of house plants. Please remember us when you send seeds. Your niece, LILLIE M. THOMAS.

Davenport, Scott Co., Iowa.

DEAR UNCLE MARK:—I am a little girl seven years old and would like to join the Horticultural Club. I have no little brothers or sisters like so many of the little cousins, but I have some pets. I have a cat named Tom that I can dress up with my old apron. I also have a nice doll that I call Jessie. I have never raised any flowers, but my papa says if you will send me seeds that I may have a little garden of my own. My papa has taken the RURAL a long time, and mamma reads me all the letters from the cousins.

West Camden, N. Y. MARION CURTISS.

Malarial fever, Ague and Biliousness will leave every neighborhood as soon as Hop Bitters arrive.

Sabbath Reading.

WAIT TILL TROUBLE COMES.

BY R. E.

We sit down, way-worn and weary,
And think of the days to be,
And forget there's a silver lining
To all the clouds we see.
We fret over care and trouble
Before it is begun,
And think of stormy weather;
We forget the warm, bright sun.

It were better to wait, my brother,
Till the trouble and care is here;
Why should we cloud the sunshine
When the day is bright and clear
By dreading what may await us?
Better to laugh and sing,
And bid the bird of foreboding
From these hearts of ours take wing.

What was the sunshine made for
If not to make us glad?
We are doing wrong to waste it
In repining, idle and sad.
We are doing wrong to squander
The sunshine of to-day
In foreboding that to-morrow
The sky may be cold and gray.

Then I pray be wise, my brother,
As you climb the hill of life,
Enjoy the time to the utmost
That is free from care and strife,
Thinking only of blight and failure
We would sow no seedtime grain:
Make use of to-day's glad sunshine,
And for to-morrow's rain.

To-day is ours, but to-morrow,
Perhaps we may never see;
Then why should we borrow trouble
For a time that may not be?
Leave to the future, brother,
The trouble it may bring;
In the sunshine that God gives us
Be glad of heart, and sing.

DR. ARMITAGE'S ADDRESS.

EXTRACT FROM THE ADDRESS DELIVERED AT THE FUNERAL OF DR. CHAPIN AT THE CHURCH OF THE DIVINE PATERNITY, NEW YORK CITY.

EVERY thoughtful and careful reader of the life of the Lord Jesus will gather this great truth to his own spirit; that the teaching of the Lord Jesus in the doctrine of the virtues which he established and the great principles which he laid down for the government of the Church and the world, were the outcome of his own nature, the embodiment of his own characteristics. And so in a true Christian spirit and a true Christian doctrine you have the true Christ life. I apprehend that this is true of all men, but pre-eminently true in the case of the loved disciple of Jesus who sleeps at our feet this morning. Sometimes you can find in the acts and utterances of men a simple act or a simple utterance which is the embodiment of the existence of that man. And in dropping my eye yesterday upon the first book that was published as the product of Dr. Chapin's mind, a volume of sermon's, I find just such an epitome as this in the preface. It seems to me that if you will look at a few sentences you will see that they embody a biography of the man, although they were written as far back as the year 1841. This great preacher says:

"The great end of preaching is to reform the life, to reconcile man to duty and to God. The great principle to be propagated and established in the souls of men is not this or that particular *ism* but the spirit of Christ. Without this no denomination can be right, no society can flourish, no soul can live."

Those utterances were the outcome of his life. That is the text that he wrote in 1841, and here, to-day, we have the comment of his work in 1880. And I don't think, if you should fill a volume with his biography, you could find the principle that moved him, the convictions that held him in a normal inspiration, the broad philosophical or deep and high motives and purposes that controlled him, so perfectly illustrative of his inner life as these words uttered when a young man, and the corresponding work of his life throws a brilliant ray upon every syllable.

Two weeks ago to-day, just before the setting of the sun, I went from the side of a loved friend whom I had buried, to the bedside of Dr. Chapin, not supposing that a couple of brief weeks would bring us to the parting and him to the dust. As is my custom in entering a sick chamber, especially the sick room of a friend, I enter very cheerfully, trying to carry a beam of sunshine if I think it is possible, and utter a word of cheer. How beautifully he greeted that visit. After a short conversation I said, "Doctor, do you realize now the sweetness of the promise of Christ in your broken condition?" He looked at me with the simplicity of a babe; but I saw a tear moisten his eye and a little tremulousness mingled with his voice, and he said, "My dear brother, what should I do without Christ. Christ is everything to me now." So he spoke of the loving Redeemer; I said, "Well, then, may I have this consolation, Doctor, of knowing that you who have been in the ministry so long, labored so hard, done so much to lift up other minds and pour consolation into disconsolate hearts, that you to-day realize the same breadth and fullness and sweetness of consolation in Christ that you have ministered to others?" He simply made this answer: "Doctor, Christ to me, is all in all."

CHRISTIANS are the light of the world just in proportion as men see their good works, that their works are good. Not works done to be seen of men, but works so manifestly good that men cannot help seeing them. They attest the saving and divine power of the gospel, and thus convince men and lead them to Christ. As the beams of the moon tell us of the unseen sun, so do such lives reveal to men the unseen God. The divinest, the most supernatural thing connected with Christianity in the world, is a godly life.

PERSONAL ITEMS.

Adelina Patti will come to the United States next fall for a concert or opera tour.

Ex-Senator Patterson has hung up his carpet-bag in New Hampshire, where he is State Superintendent of Public Schools.

General Hazen is a cousin of Mrs. General Garfield, their mothers being sisters. These sisters were daughters of a Vermont Methodist clergyman.

Colonel James G. Fair gave $6,000 in Christmas presents to the various charitable associations of San Francisco and a check for $5,000 to a governess in his family who made Christmas her wedding day.

Sojourner Truth, now well over a century old, declares that she shall not die until American women can vote, for she couldn't bear to go into the heavenly kingdom without being a full citizen of the American Republic.

Reuben Springer, of Cincinnati, indulged in Christmas gifts of unusual size; he gave a United States bond for a thousand dollars to each of eight charitable institutions in his city; each of the faithful servants of his household also received $1,000.

With the retirement of General McClellan, New Jersey will have seven living ex governors, the others being Price, Newell, Parker, Ward, Randolph and Bedle. Only four ex-governors of the State have died since 1842, namely, Stratton, Haines, Fort and Olden.

Mr. J. R. Keene has purchased a farm in Shenandoah county, Va. It is one-third of the old Mount Airy estate, once owned by General Gilbert S. Munn, but now known as Strathmoor. There are about four hundred acres of meadow land in white clover, blue grass and timothy.

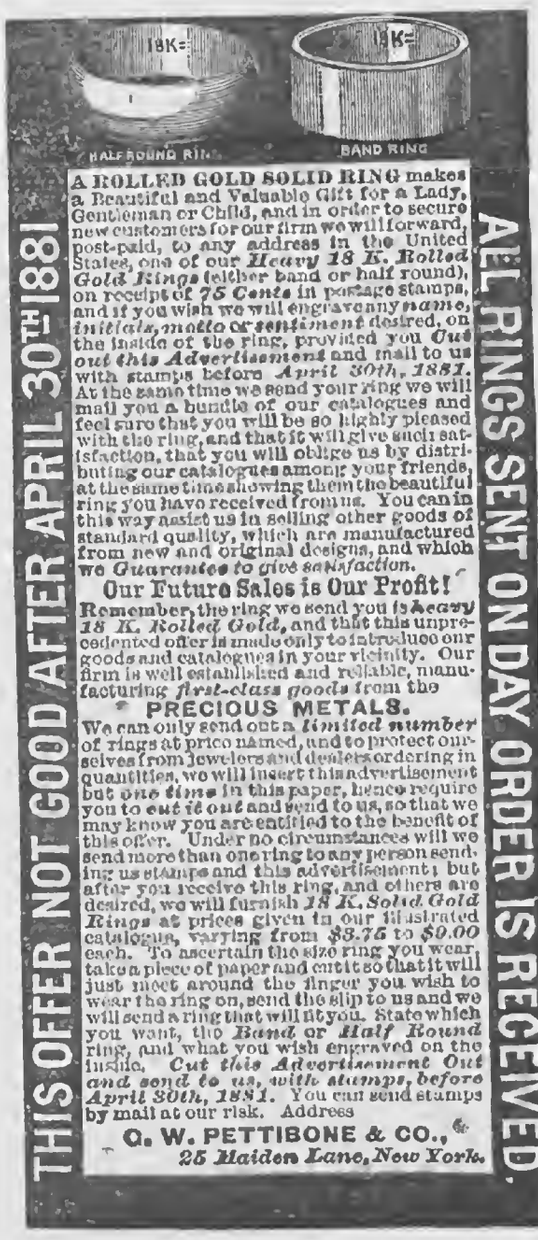
Colonel W. F. Elkin, who died in Illinois a few days ago, was the last but one of the famous "long nine" of the Illinois Legislature of 1839–40. Abraham Lincoln was the tallest of the nine, whose aggregate hight was precisely 54 feet. Ninian W. Edwards, of Springfield, was the one survivor.

The Rev. Mr. Mayo, of Boston, had an interview with the President in regard to his contemplated tour in the South, in the interests of a movement for strengthening the common school systems of that section. The President signed a strong letter of commendation of his plan. Mr. Mayo also had extended consultations with ex-Governor Brown and Alex. Stephens, with Randall, Gibson and Mr. Atkins, and all expressed thorough sympathy with his purposes.

PHYSICIANS OF LONG PRACTICE.

In regard to the administration of "Compound Oxygen," the new remedy for chronic ailments, which is attracting so much attention, we wish to say that we are physicians of long practice and experience, not venders of a patent medicine. Our business is to cure diseases. There has come into our possession a knowledge of the way in which to combine oxygen and nitrogen, the two elements which make up our common or atmospheric air, in such proportions as to render it much richer in the vital or life-giving quality. It contains no medicament, unless the elements of pure air are medicines, and its administration introduces nothing into the body which the system does not welcome as a friend, accept with avidity, and appropriate as entirely homogeneous to itself. You will find many of these results recorded in our Treatise on "Compound Oxygen," which is sent free. Address Drs. Starkey & Palen, 1109 and 1111 Girard St., Philadelphia, Pa.

Miscellaneous.



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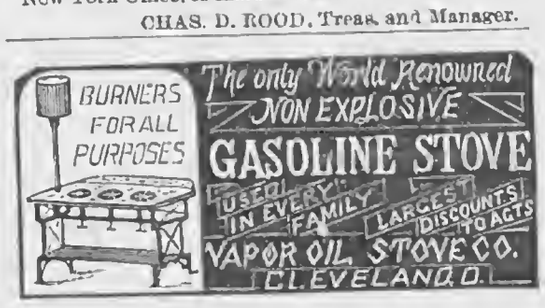

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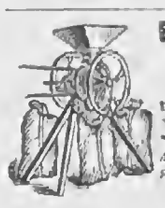

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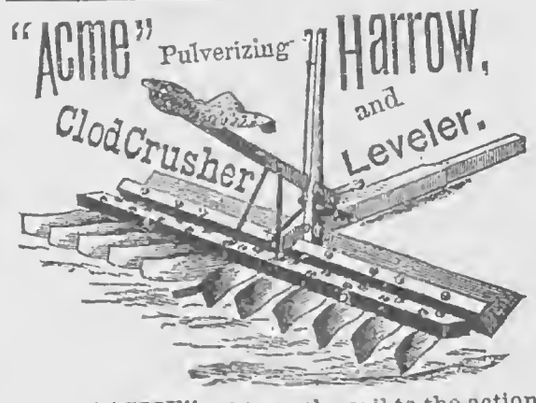

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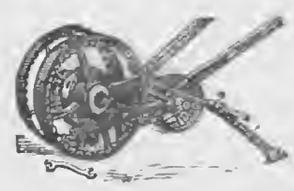

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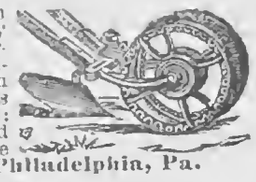

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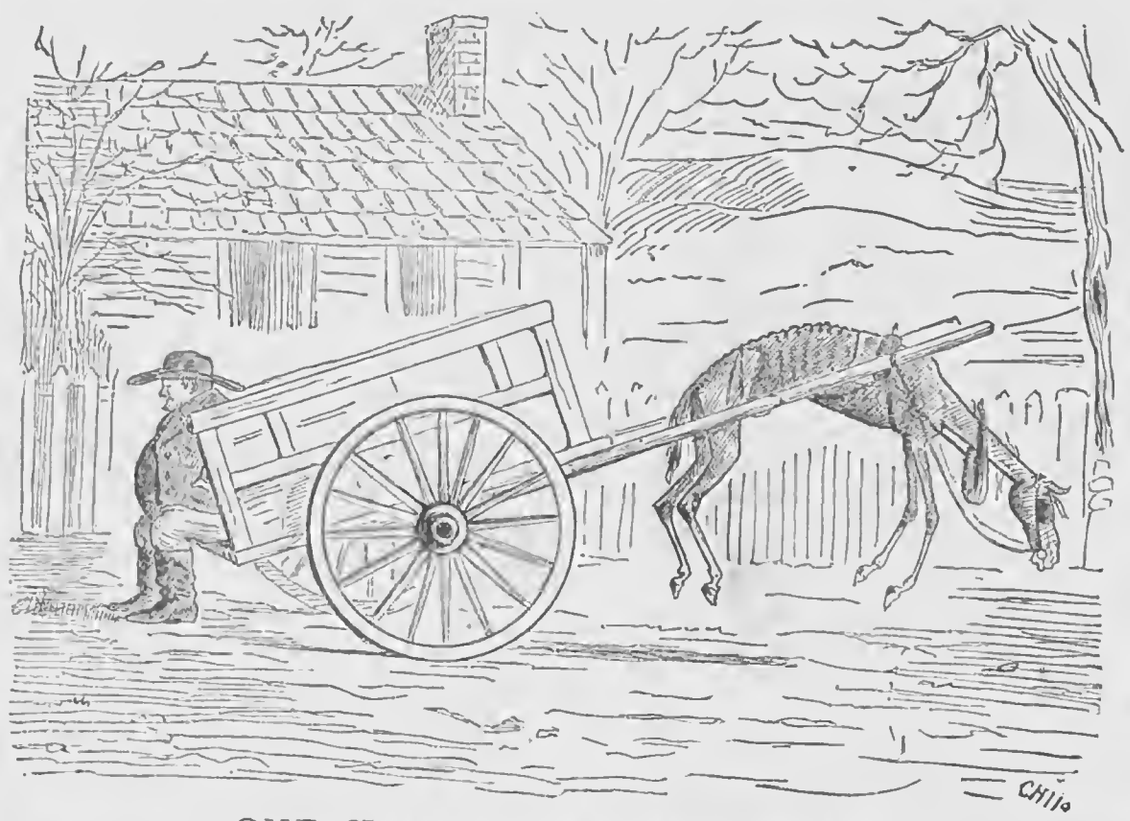

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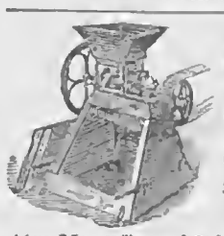

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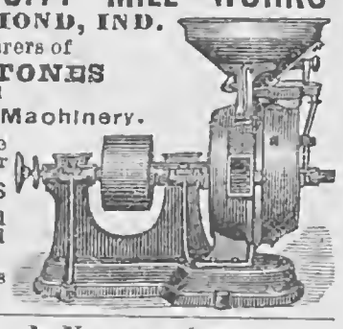

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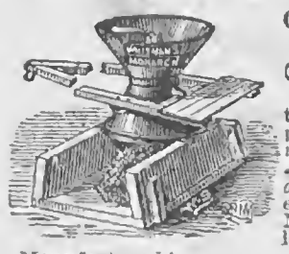

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34th SEMI-ANNUAL STATEMENT OF THE

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Paid-up Cash Capital, - - $600,000.

ASSETS.

Real estate	$911,389 77
Cash on hand and in bank	211,216 69
Loans on bond and mortgage, real estate	2,101,410 50
Interest on loans, accrued but not due	51,314 61
Loans on collateral security	87,500 00
Deferred Life premiums	52,854 86
Premiums due and unreported on Life policies	34,844 80
United States government bonds	281,520 00
State, County and municipal bonds	393,2 0 00
Railroad stocks and bonds	670,240 00
Bank stocks	705,703 00
Hartford City Gas Light Co., Stock	18,000 00
Total Assets	$5,519,194 23

LIABILITIES.

Reserve, four per cent., Life Department	$3,454,212 00
Reserve for re-insurance, Accident Dep't	369,562 72
Claims unadjusted and not due, and all other liabilities	227,818 00
Total Liabilities	$4,051.592 72
Surplus as regards Policy-holders	$1,467,601 51

Statistics for the year 1880.

LIFE DEPARTMENT.

Number of Life Policies written in 1880	1,743
Whole number of Life Policies in force	11,914
Amount Life Insurance in force	$19,098,639 00
Gain in amount in force in 1880	$916 507 00
Total claims paid in Life Department	$1,630,200 43

ACCIDENT DEPARTMENT.

Number of Accident Policies written in 1880	73,241
Gain in Policies over 1879	18,701
Gain in Premiums over 1879	$284,738 24
Whole number Accident Policies written	645,766
Number Accident Claims paid in 1880	11,774
Amount Accident Claims paid in 1880	$544,171 57
Whole number Accident Claims paid	53 368
Whole amount Accident Claims paid	$3,981,801 81
Total Losses paid, both Departments	$5,612,002 24

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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The Herdsman.

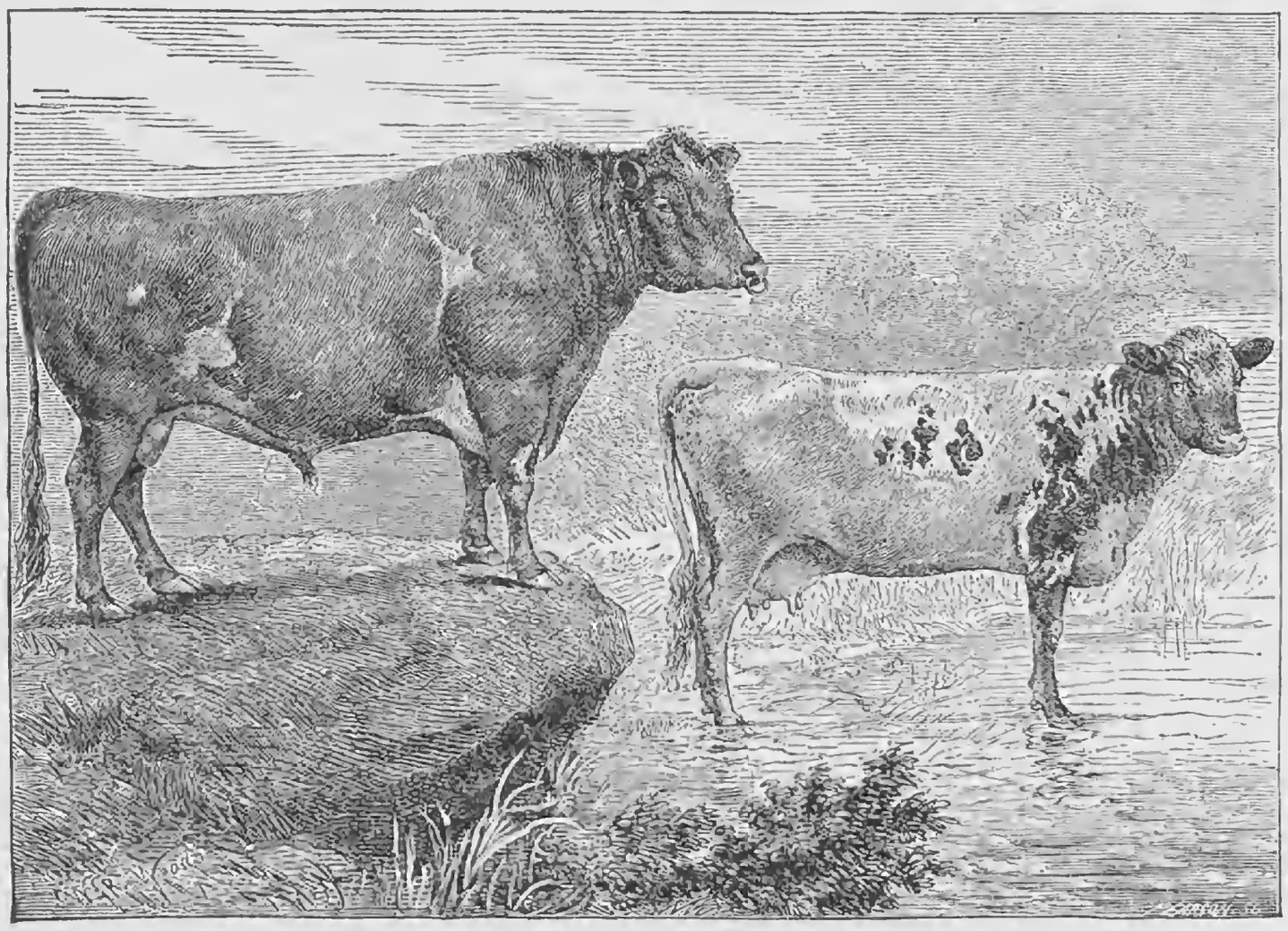
OUR ANIMAL PORTRAITS.

The Jamestown Breed of Cattle.

While America has produced several breeds of swine acknowledged everywhere to be of high excellence, she has hitherto been strangely backward in producing native breeds of other species of live stock. Among horses, although great attention has for years been paid to the breeding of trotters, it is still a question whether we have yet produced a distinct breed of roadsters, even if the Morgan horses are included under that head, while no attempt seems to have been made to form a native breed of other kinds. In sheep Mr. Scott, of Kentucky, is said, on good authority, to have formed a native breed, but hitherto little has become known to the general public of its merits or distinctive characteristics. In poultry, the Plymouth Rock is so excellent a specimen of what can be done in the production of native breeds, that a natural regret arises that so little has been done in that direction. In cattle, despite the paramount importance of obtaining prime stock for the dairy and the shambles, and notwithstanding the great care and skill employed by a multitude in the breeding of animals adapted to the needs and conditions of the country, the only native breed that has been produced is that known as the Jamestown, a couple of specimens of which are represented in the accompanying illustration.

The Jamestown, like the Galloway, Angus, Norfolk and Suffolk breeds, is polled or hornless, and originally sprang in Massachusetts from the cross of a pure-bred Jersey bull on an imported Norfolk cow. The sire was from Motley's Flora, a very famous Jersey cow, imported by the Massachusetts Society in 1851, and the dam was brought over from Ireland on the United States relief steamship Jamestown, on her return after conveying a cargo of provisions to the starving inhabitants during the famine of 1847. The progeny of this cross was the bull Jamestown, dropped, in 1854, and called after the vessel on which his mother came across—a remarkable sire that has given his name to the breed descended from him. From the first his progeny attracted a great deal of local attention, the females being deep and rich milkers, and the males hardy, thrifty and gentle, while, both sexes were generally polled, from whatever dams they were begotten. The family was kept up by crosses on Ayrshires and Jersey cows, the polled calves alone being retained, until it became numerous enough to perpetuate itself without further admixture of other blood. So rapidly did the Jamestowns increase in numbers, and so uniform in appearance and good qualities did they become, that in 1878 the Norfolk Agricultural Society (Mass.), recognized them as a separate class in its premium list. In that year the most noted of the bulls was St. Patrick, owned by A. W. Chcever, of Sheldonville, Mass., who has a fine herd of cows, mostly descendants of this excellent sire who is represented in our engraving. His companion is the cow "Susie," belonging to the same herd, and six years old at the time the photograph was taken from which the engraving has been made. She usually gave 14 to 16 quarts of milk a day at her best, and for months gave ten quarts a day right along.

Combining, as it does, the Jersey, Polled Norfolk, and Ayrshire blood, the new breed could not have a better ancestry for dairy purposes. For quality and quantity of butter the Jersey cannot well be surpassed, neither can the Ayrshire for cheese and milk for the market, while experience has shown that a cross of the former on the latter produces an exceptionally valuable cow for all purposes except beef-making. The Suffolk breed is descended from crosses of the Polled Scotch Galloways on the Norfolk Duns, famous in olden times for their deep milking qualities, which they have transmitted to their descendants, which are considered in England hardly inferior to any breed for the quantity of milk they yield.



SPECIMENS OF JAMESTOWN CATTLE.

RE-ENGRAEVD FROM PROF. SHELDON'S "DAIRY FARMING."—Fig. 29.

STOCK NOTES.

There is a great future for American breeders as soon as they cut loose from their present system and become what they are and must always be—American breeders. We don't want to raise *English* cattle and sheep here. We can do better. We can improve on them. We are now producing better beeves on the Colorado and Montana pastures than are found on the ordinary English pastures. But they are not English breeds. They are our true native stock, the Texan, to begin with, crossed by Kentucky-bred Short-horns, that have been acclimated and Americanized on our blue-grass pastures for many years and some since the days of the ancient "seventeens." And if we want to see a lustrous fleece that will compare with that of a modern English long-wool sheep, we can find it in the improved Kentucky sheep that has been bred for many years by Mr. Robert Scott. Let us give up the desire for "foreign airs" and be content with our "native graces." It is better to be original than an imitator, and always playing second fiddle; the more so when we can "take the rag" from the whole world combined, when we confine ourselves to our own special business.

THAT notable phrase of Horace Greeley "Go west, young man," is ridden to death. The most recent instance of this is some advice given quite gratuitously to young men to go to Montana and engage in raising horses, netting 50 per cent. on the $17,000 to be invested in the business, each year. Advice is cheap and the poorest man can afford to give away any quantity of it freely; but what costs nothing is often worth no more than its cost. It is so in this case. To keep sheep is easier than to keep cattle and these are more easily kept than horses; but it needs considerable skill and experience that *must* be paid for in some way before a man can become a successful shepherd. To succeed in taking care of a herd of brood mares, with a number of stallions, and to raise colts, one must be a practiced and experienced horseman. For a city paper to induce inexperienced young men to embark in an enterprise in which they can never hope to succeed, is a crime, and to tack such a scheme as this on the tail of Horace Greeley's well-meant and sound advice is an absurdity. Young men with $17,000 lying loose in their pockets can find plenty of good use for their money without scattering it over the plains of Montana in enterprises of which they know nothing at all.

Sheep Husbandry.

NOTES BY A STOCKMAN.

COMPLAINTS are now unusually prevalent in regard to losses among young sheep and lambs by obstinate diarrhea. On examination of the dead animals the intestines are found to be infested with hair worms in large quantities. It has been supposed that these and other parasites which affect sheep disastrously in other countries—the fluke especially being referred to—are not indigenous in this country and that we are therefore exempt from them and the diseases which result from their ravages. It is unfortunate that this idea should have prevailed, because it averts attention from the true cause of what are the most fatal diseases among sheep.

FOR some years past I have been closely observing the history of some of these parasites and am certain of their wide-spread existence among our native wild animals. The fluke is very common among hares and deer from Long Island to Western Minnesota; the hair worm is prevalent in every State west of the Missouri River, and not only affects sheep and lambs but rabbits and squirrels as well. Not long ago I examined a dead rabbit which I found upon my farm with no indication of the cause of death except extreme emaciation. On opening the animal its stomach and bowels were filled with the same kind of hair worms which I have several times taken from sheep and lambs in Michigan, Pennsylvania, New York and New Jersey.

SHEEP owners should be on the lookout for these hair worms. The indications of their presence are, profuse and stubborn diarrhea, emaciation, paleness of the visible membranes and whiteness of the skin, the appearance of the animal being such as would naturally suggest the common name of the malady, viz.: "the bloodless disease." The worms may be taken into the system by means of eggs adhering to grass or hay, and these eggs possess so much vitality that they may remain in a dormant condition upon hay for a long period. The eggs are discharged in the dung and become attached to the herbage, in all probability, and are thus transferred to the stomachs of other sheep. Older sheep are rarely troubled with them, being sufficiently vigorous to resist their effects; but lambs pasturing after old sheep, are frequently attacked; very rarely, however, when pasturing upon fresh grass where older sheep have not run.

KNOWING the nature of the trouble, remedies suggest themselves. To avoid pasturing lambs after old sheep; or the use of sheep manure upon grass lands; or the feeding to lambs of hay that has been cut after sheep have run over the grass, will generally secure immunity. The usual remedy common among shepherds is to mix one pound of salt with four ounces of finely pulverized copperas, and to give a heaped teaspoonful to each lamb before feeding in the morning. If any sheep of mine were affected, I would try an ounce of linseed oil with half a drachm (half a teaspoonful) of chloroform given on an empty stomach. I think it would be effective, but have not tried it.

IT is surprising that breeders will continue the attempts to reproduce English breeds in this country when they know our circumstances are entirely different. A writer on this subject says: "Many of the breeds of sheep and cattle of England have inhabited the localities where they are now found, from time immemorial, and if we are successful with them in this country, it must be in similar localities." This writer cannot know anything of what he professes to talk about. Where in the whole continent of America can a similar location to the South Downs of England be found; or the Cotswold Hills, or the Lincoln Meadows? The English climate is insular, moist, cool, nearly equable the year round, and productive of such grass as will never be produced in America, where the climate is continental, and therefore hot and dry in the Summer, cold in the Winter, remarkably rig-

orous and severe in its sudden and extreme changes and not suitable for the growth of perennial, succulent pastures.

The Merino will not thrive in England. It is the sheep of hot climates, and Central Europe with a climate similar to ours is peculiarly adapted for it. It originated in Africa and was brought to perfection in Spain. It thrives to perfection in America and the American Merino is at the very head of its race over the whole world. Where the Merino will thrive, the large, long-wool English sheep wilt and deteriorate. The wool loses the softness and silkiness which are encouraged by a cool, moist climate, and becomes dry and harsh; and the sudden change of weather is fatal to the constitution of the imported sheep, enfeebled by high breeding and feeding. Where, then, can we find similar locations and conditions to reproduce these sheep? We cannot do it, and may as well stop trying to force nature into artificial methods. Man can do a good deal, but he cannot change natural laws.

THE COMING SHEEP.

UNDER this head, the English Agricultural Gazette of December 13, takes the same ground that I did in the RURAL many months ago, and that is that the large, long-wool sheep are now rapidly being neglected for mutton sheep, because they produce coarse tallow in place of lean, tender, juicy meat, and the various Down sheep are rapidly supplying their place. "Take, for example," it says "the Leicester. Fifty years ago this breed might appropriately have been said to rule the roast. Now, except in a very few counties, and among a small minority of farmers, the Leicester has been superseded. The Cotswold sheep is said to be going out, even upon his own hills, and does not seem to be spreading rapidly in any other locality."

The Gazette then goes on to speak highly of the South Downs, adding—"Scarcely a breed was not improved by his touch, and for this reason alone, the South-Downs will always hold a high position in the history of British flocks."

But now comes the point which I have repeatedly told our American flock masters. If they wish to take precedence in the British market with a mutton sheep, they must breed a still larger variety of the Down class, and I pointed out the Oxford Down as the first to be sought after, and the Hampshire Down as second. The reason of this preference is that the generality of the English butchers prefer a large to a small animal, provided it is about as fine in all its points, and that the flesh is nearly equal. This is the case with the Oxford and Hampshire contrasted with the South Down, and for that reason the two former will prove the most popular and profitable sorts of mutton sheep for our flockmasters to breed, not only for the foreign, but also for the home market. But at the same time they should keep up and extend the South Down considerably, as the butchers have a class of customers who invariably prefer its mutton, and they are always willing to pay an extra price for it. This is also the same in England, and will probably ever be the case. Thus there is no danger of multiplying them too rapidly. A. B. ALLEN.

The Swine-Yard.

SALT FOR PIGS.

Preventives of Disease. Natural Instincts. Sanitary Laws.

COL. F. D. CURTIS.

IT is not a general practice with farmers to give salt to pigs, or to mix it in their food. Salt is no more injurious to a pig than to a person. The stomach of a pig and its digestive functions are more like those of a human being than are those of almost any other animal. A hungry pig would probably eat enough to injure itself if its food was strongly mixed with salt, just as a hungry man would be likely to eat too much of salted fish or meat.

Salt is used to make human food more palatable and seems necessary to supply the wastes to the system caused by the animal secretions. The instincts of horses and ruminating animals lead them to desire salt: hence in a wild state they seek for salt springs or "licks," where they may satisfy this natural craving, and in a domesticated condition it should always be accessible to them, and then they never will injure themselves by eating too much of it. Pigs do not seem to have this natural craving for salt to the same extent as other animals; but I have known them to eat it when given to them while in pasture, and also while confined in pens; and I have made it a practice to put salt where pigs could help themselves to it.

When pigs are fed cooked food of any kind, and especially vegetables, the food can be improved and made more palatable so that the appetite may not flag, by moderately salting it. The proportions of salt should be the same as for human food. Too little attention is usually given by farmers to the stomachs of pigs. They are expected to eat anything and everything, or perhaps to live a long time on only one kind of food. This want of attention is the cause of frequent diseases among pigs, chief of which are diarrhea and constipation. Regular feeding of salt in moderate quantity, and of sulphur, with an occasional feeding of charcoal (once a week) will serve to make a good appetite, promote digestion, and prevent disturbance of the bowels, which is more likely to occur without these precautions. The health and digestion of pigs would undoubtedly be promoted if they had access to prepared chalk, or if a small amount of magnesia was given them in their food.

Pigs suffer much from indigestion caused by over-eating, and if they had the remedies accessible, their instincts would teach them to make use of them, and thus prevent the frequent result — diarrhea. In Summer-time, when pigs have access to the ground, they cure themselves, or, in other words, prevent diseases of the stomach by eating grass which is laxative, or earth, rotton wood, or bits of charcoal which seem to check this condition, or to prevent extremes. The best medicine for any animal is preventive, hence their food and surroundings should be such as to promote health. The opposite is too frequently the case, as they are often kept in filth, and their food is prepared for them regardless of sanitary laws, their physical wants or natural instincts. This inconsistency is all the more remarkable when we consider that pigs are always reared only for human food, and are the most liable of almost all animals to possess parasites in their bodies, and are susceptible of a great variety of diseases, and among them those of a scrofulous nature, which may be transmitted to the human family when the pork is eaten. I never eat random pork, as I am afraid of it. When carefully raised and properly fattened, however, pig meat is healthful food. The omnivorous nature of pigs makes them more dangerous food than beef or mutton, as neat cattle or sheep will not naturally eat anything but grain or vegetables, while pigs are kept sometimes on putrid food, or the refuse of slaughter-houses. Cattle may be taught to subsist on fish, and be made to consume swill, but the number of such animals which are turned into beef in this country is extremely limited, while "swill" hogs are much more plentiful. A butcher, or any person who cuts up such animals, can readily distinguish them, as the flesh is soft and flabby. It should be made a misdemeanor to sell such meat, as it is not healthful food. Pigs from the country are almost always fattened on grain, and the firmer the flesh the nearer it is to perfection and health.

The Poultry Yard.

WINTER FEED FOR FOWLS.

"IT is well known that fowls are omnivorous and require, to keep in good condition, that they be fed a variety of provender. The three distinct articles needed are vegetables, meat and grain. In Summer, if allowed a reasonable range, insect life furnishes them with the meat class of food. Birds that do not migrate to climes where insects propagate themselves the year round, but remain where the weather becomes cold enough to destroy all active insect life, contrive to find the larvæ of the insects that remain in this form during the Winter. Fowls in confinement are debarred from this resource and must be furnished a flesh diet in some other form. A not very neat but still a successful method is to hang up the offal of hogs or beeves for them to peck at. If the weather is warm, this is apt to decay and produce a not very pleasant odor, and should it become too rank such food will injure the edible quality of the eggs laid by the hens fed on it or the flesh of fowls intended for market. The haslets of hogs—the heart, liver and lungs joined together—may be procured in most markets for a mere trifle. These, chopped up fine and about five of them fed during the week to a flock of 100 fowls, will answer admirably. I have tried chopping them with a hatchet and with a cleaver, but find the best and most expeditious way is to use a sharp butcher's knife, with which the stuff should be cut nearly as fine as grains of corn.

Another good meat diet is what in these parts is known as "scraps" and at the West and South as "cracklings." It is the refuse of lard-rendering establishments, and is pressed into cakes of the shape of flat cheeses, weighing 5½ pounds. It is sold at three cents a pound and forms a very rich, egg-producing food. It is so firmly pressed together and it requires so much labor on the part of a chicken to get off a piece that it is a good plan to place the cake within reach of the flock and allow them to help themselves, as there is but little danger of their eating too much. If, however, it is thought better to feed it, then it should be fed mixed with bran—a pound and a half a day to 100 hens.

The meat scraps from the table should, as far as possible, be utilized, the bones constituting the best part if properly prepared. To do this take a hatchet or ax and mash them fine enough for the hens to swallow. The bones of all fowls are hollow and therefore easily mashed, while hens are exceedingly fond of them, as they are of fish bones and fins, and one need not fear their becoming choked on them. What a hen cannot swallow she can easily scratch out of her mouth, while every one knows what sharp pieces of stone and even glass she will take down without wincing.

A certain amount of fresh vegetable food should be given every day, and it matters very little what variety is chosen. Some they refuse in the raw state, as potatoes, while they will eat them ravenously if cooked and slightly salted. Others, as cabbage and turnips, are probably best fed raw, being hung up where the hens can peck at them. The exercise while in confinement is good for them and seems to amuse them. A hundred hens should have two fair-sized heads of cabbage a day, or their equivalent in other vegetables. If roots are fed, there is no need of cutting them very fine, as a little work for the hens at this season is good for them. As fowls are not very choice in their selection of vegetables, it is best to feed those kinds of which the greatest bulk can be procured for the least money, and here I would suggest pumpkins as probably the cheapest hen diet that can be procured. In the Fall small pumpkins, only fit for stock feeding, can be had for little more than the cost of hauling, while chickens are very fond of them. The only drawback is the necessity of storing them where they will remain in an atmosphere constantly above the freezing point and not too dry, or they will shrivel up. It might be here remarked that when the ensilage fever is over, the silos can be used for this purpose. Ensilage itself may make good chicken food. Has any one tried it?

The choice of grain food may also range over a large number of varieties. Among those kinds that are most popular for feeding, are wheat, barley, oats and corn, with buckwheat a high favorite when it can be procured. But here, again, the largest bulk for the least amount of money should be held in view, and this rule is almost certain to point the choice to corn. I am not altogether certain that this is not decidedly the best feed for Winter, as it is rich in oil and is a heat-producing food. I am not an advocate of cooking grain of any kind in Winter, believing it to do better in the hard state. A flock of 100 hens will consume about 20 quarts of corn a day, besides the regular warm feed in the morning, in very cold weather when their whole attention is given to the feed box. Along with the corn should be given a supply of broken oyster shells. These answer a double purpose—they grind the food so long as the edges are sharp enough, and the parts that wear away are utilized in making bone and egg-shell. Restaurants at this time are only too glad to furnish these shells to anyone who will cart them away.

The books all tell us that the first feed in the morning should be a warm mash. Now let us see. In order to have this feed ready and warm when day-light first appears—when the fowls leave the roosts—one must either stay up all night, or, what is worse, get up an hour or two before day-light. Neither of these plans will be followed by one in a hundred of those who breed fowls. I find the most practical plan to be to leave some corn within their reach when the hens first leave the roost; and after breakfast, or about eleven o'clock, I mix the warm feed consisting of bran, potato peelings, and other scraps, or if these are not to be had, then whole vegetables of some kind boiled until soft enough to squeeze with the bran between the fingers, and with this I put all the pot-liquors I can get; also a good supply of red pepper water and sufficient salt to give the whole a relish. I keep constantly on hand for this purpose a large stone jar filled with water and red peppers. When this warm feed is prepared I roust out all the hens, whether in nests or sunning themselves or otherwise engaged; put them all together and see that one gets as nearly as possible as much as another. This is necessary; for this feed is never fed in such an abundance that any will be left. It is a sort of "constitutional" and should go round evenly. The main feed is corn, and the most successful managers I have seen keep this before the fowls all the time. I have no doubt it would be better to feed only just enough so that all of it should be eaten up clean; but, like many other good theories, this will not work in practice. No man has hens enough to pay him for standing and feeding them all day, and if he does not do this, or keep a supply within their reach, they are sure to suffer at some time from neglect, for the simple reason that often more important interests will command the owner's time and attention. The above system of feeding is with a view to making the hens lay eggs in Winter when extra care is necessary if they are expected to do any thing more than barely exist until warm weather comes again. L. S. H.

FANCY FOWLS.

IT seems very strange that the occupation of raising fancy fowls should be of sufficient importance to support numerous weekly and monthly journals devoted exclusively to that industry, and yet so few can make the raising of common poultry pay. Is it that the fancy breeds are so much better in every way? Or is this a little private enjoyment that men indulge in, like driving fast horses or sailing yachts, without the least regard to the cost of the matter? So far as mere feather is concerned I am sure this is the case. In relation to flesh and eggs, there is something of an open question. But even here, I have great faith in feed and proper management with the common fowl to bring about the best results. While it is true that the French have produced excellent breeds of fowls for the table, it is equally true that no man ever ate a perfect broiler outside of Paris, and the chickens of France from which the large stock that supplies the common market is drawn, are no better or more specially bred than are our American fowls. The foreign breeds have been in this country so long that it is now hard to find the old barnyard fowl in his simplicity. He invariably struts about with some kind of foreign toggery about him—a drooping comb that he borrows from his half-bred Leghorn mother, or feathers on his legs *a l'* Asiatic. Perhaps he has a Polish crest upon his head, but certain it is he has enough foreign blood in his veins to turn him to a good account for the table if he is properly fed. So it is with the hens—they have inherited more or less of the everlasting laying qualities of the Mediterranean breeds, and if properly housed and cared for will give a remunerative return in excellent eggs POULTRYMAN.

Dairy Husbandry.

THE DAIRY COW—NO. 22.

HENRY STEWART.

Working and Packing Butter.

IT used to be considered that butter required to be worked over, cut, squeezed, and pressed; worked even with the hands at one time, almost in the manner in which a brickmaker works his clay to fit it for the mold and make it tough and plastic; or, more recently, with butter workers which have almost the same effect. Working butter, if it is at all necessary, is a necessary evil; because it is an injurious operation required to avoid the more injurious presence of easily decomposed impurity (milk) in the butter. But there is no necessity for working butter at all. When it is made so as to come out of the churn in small grains, it may be washed perfectly free from the buttermilk with the greatest ease, and the salt may be mixed in with it in the most even and intimate manner, without disturbing the texture in the least by the slightest degree of working. At figure 30, is a representation of a small quantity of butter lifted out of the churn at the moment when the buttermilk had been drawn off. The mass is composed of small granules, most of which are no larger than cabbage seed; and the remainder of the size of grains of wheat. Some of this butter washed in three waters was packed in brine in glass jars for customers who wished it in this condition. The brine is perfectly clean and the butter taken from it is put upon the table in an elegant and convenient form for use, and as sweet and fresh as when taken from the churn. In domestic dairies there can be no more delicious butter—to some tastes—than when it is so made. If salt is required, that can be added to suit the taste, when it is consumed. When packed in this manner, butter will keep for years.

It is a mistake to suppose that washing butter injures the flavor. It cannot. Butter is an oil or fat, totally insoluble in water, and all its flavors are component parts of the fat, which cannot possibly be separated from it by contact with water. In washing granular butter it is necessary to use cold water which sets or hardens the granular atoms and prevents them from combining in a mass. When butter is taken from the churn in masses, the water should not be so cold as to harden these, otherwise the milk cannot be removed easily, and then the butter will not keep for any length of time, in spite of all precautions. In such a case the butter placed in the bowl is to be worked down with the ladle in thin slices, so as to provide outlets for the buttermilk to escape. The milk which escapes and flows to the bottom of the bowl should be poured off, and the butter washed with clear, pure water; the butter is then turned in the bowl and sliced in the opposite direction and again washed, and if the work has been skillfully done, this

is all the working that is necessary. A marble slab is an excellent thing to work the butter on. A thick plank, or block of hard maple or beech, not less than twelve inches square and four inches thick, placed upon folded towels or in a large pan to collect any moisture that may escape, is convenient. There are several convenient butter-workers made for use in dairies, all of which serve their purpose very well, and between which there is not much to choose. The main point to be observed in working butter is to avoid *plastering* it with the implement used, whether it be the hand, the ladle, or a lever, or a rotary crusher. The butter may be squeezed with impunity, to a considerable extent, but if it is plastered or the impiement is drawn over it with a sliding motion, it is seriously damaged and the texture destroyed.

Butter is salted as a means of preservation. Some persons prefer it unsalted when it can be procured fresh. In this condition are preserved all the most delicate flavors which are lost when salt is added. In the domestic dairy, butter may be sent to the table in this way or even direct from the churn without washing, and with all its native buttermilk adhering, as an unusal delicacy. But for ordinary purposes about six per cent. of salt is added to the butter; this is equal to one ounce to the pound. The salt is sprinkled evenly over the butter at the last of the working when it is sliced or gashed. The butter is then loosely gathered together and it is set away in the dairy for 24 hours. During this time some milky water usually escapes from it, and this is poured off at the final working. This is done in the same manner as before, and is continued until any streakiness in the butter is removed, and the whole is brought to an even and regular color and consistence. Some persons color their butter when working it, but this is not to be advised, for the color cannot be made even, and the butter will be streaky and patchy in spite of the most prolonged and injurious mixing. Some frightful examples of such butter are often seen at rural hotels and railroad restaurants. Coloring should always be done in the churn by mixing the proper quantity of prepared color in with the cream. The usual quantity is one teaspoonful to three gallons of cream. This is sufficient with the best Jersey and Ayrshire cream; but each dairyman should test this matter for himself, as the natural color of the cream varies with the cows, the feed and the manner of keeping the milk and cream.

The salt used is of greater importance than might easily be considered. The usual impurities of salt are chloride and sulphate of lime and chloride and sulphate of magnesia. Lime mixed with fats combines and forms an insoluble white soap. When lime is present in salt, small, white specks of soapy substance, are formed in the butter, thus injuring its keeping qualites. Magnesia is bitter, and if this is present the flavor is injured, so that it is of the greatest importance to have the purest salt. Unfortunately, our American salt is not of sufficient purity or uniformity for dairy purposes, and the best qualities only of English salt should be used. Of these there are two kinds on the market, known as the Ashton, and Higgin's Eureka. The latter is fast superseding the former on account of its perfect, purity, uniformity of grain and freedom from objectionable scale. As the difference in price between good and bad salt is very small and the difference between good and bad butter is very large, the extra cost of a sack of the best salt may easily be saved upon one pail of butter. A hundred pounds of salt will pack 1,600 pounds of butter, and two to five cents a pound on this quantity may easily be lost by means of bad salt, making a loss of $30 to $80 to offset the gain of one dollar, or less.

LARGE YIELDS OF DAIRY COWS.

L. S. HARDIN.

It is a good sign of the times to see men who own extra-good cows bringing before the public systematic statements of their yields, not only for a few days in flush times, but a continuous record from calf to calf. Just now the dairy world is startled with the records of two cows that seem so far to surpass other cows that the race to the hindmost appears hopeless. In the business of dairying a cow that yields 350 pounds of butter a year is considered a superlatively good one. She stands at the head of the herd, and it is generally considered that men who follow a calling for a livelihood know best how to manage it. Here at least it has always been thought that experience was valuable; but the records, so far as at present made up, say no. Two men who follow callings totally distinct from dairying, have carried the art of butter production practically beyond all competition. The owners of Eurotas and Belle of Scituate are in no sense dairymen, though one at least owns a small herd of dairy cows. They come upon the stage comparatively strangers and produce yields that startle the community. Jersey Belle of Scituate made 705 pounds of butter in a year, while Eurotas followed with a total yield of 778 pounds.

As already stated in the RURAL of December 11, '80, this remarkable yield of butter is from 7,525 pounds of milk, or about nine and a half pounds of milk to the pound of butter. The best work I ever witnessed with the milk of native cattle was in the Chautauqua trials between so-called deep-setting and shallow pans, at a high temperature. With the milk of native cows in Summer, each method required 21½ pounds of milk to one pound of butter. In the trials between Mr. Eastburn Reeder, of Pennsylvania, and myself, with the milk of Jersey and Guernsey cows, I reduced the yield to 17 pounds of milk with deep cans, and Mr. Reeder to 19 with his half-shallow pans. The above trials were with the mixed milk of herds; but though each one of the above Jerseys had been often tested singly, so far as cream yield was concerned, there had never been found any great variation in the quality of the milk from single cows. I remember once a most reliable gentleman told me his imported Jersey cow had made a pound of butter from 10 pounds of milk. We lived near each other, and he wanted me to verify the statement. On investigation I found all hands were laboring under a mistake. The cow was approaching parturition, and the whole milk, after standing a while, seemed to settle into a thick mass like yellow cream-cheese, and a little stirring separated the water from the curd, leaving an article not merchantable as butter.

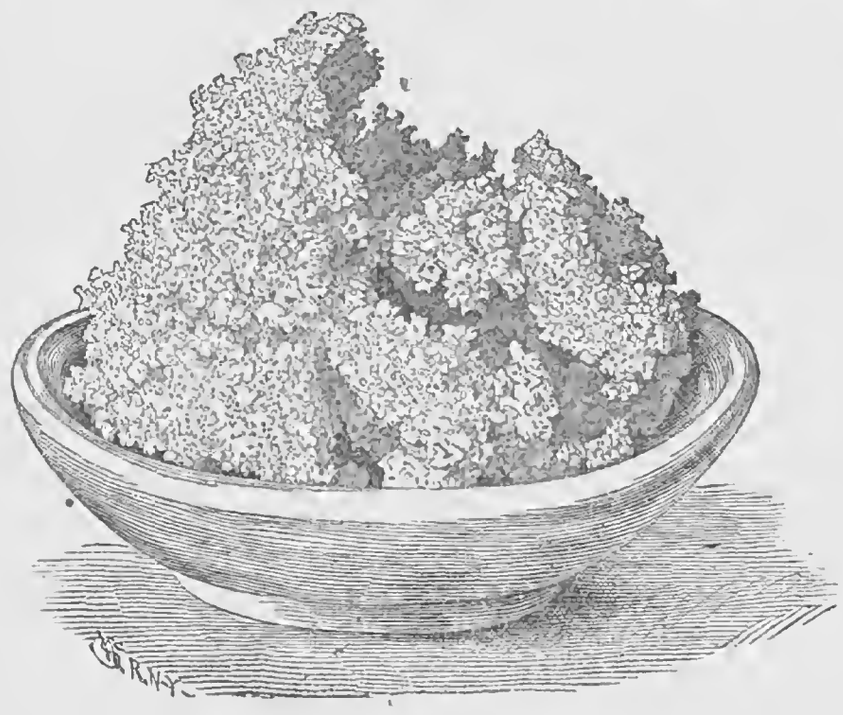


FIGURE 30.

I have often heard men claim to have owned cows that yielded almost pure butter. It is a common occurrence to find little soft pellets, like the cream that first comes in churning, on the sides of the pail while milking. Some cows may yield this article, whatever it is, to just about the consistency of butter that may fairly be worked into a merchantable article. It is thus only that I can account for a continuous yield of one pound of butter from nine and a half pounds of milk, and yet the science of testing cows is so decidedly in its infancy that it may be presumption on my part to question what at present appears phenomenal.

We have seen the speed of trotting horses increased, lowering the record to "two-forty," without pedigrees. After that the science of breeding took a hand, and, step by step, in the course of long years and after great effort and long-continued experiments in certain lines of breeding, we have seen Maud S. cut the record down lower than any of her predecessors. This was done, not at one swoop, but horse after horse lowered the record second by second, until Maud S.'s great achievement outdid all former efforts, though probably not all future ones. Now, if we group the horses by their present performances we find them growing more numerous at almost every second as we recede from the best record. With cows, so far as we know, the butter yields of the above "queens of the pail" stand nearly 100 per cent. above those of all rivals. To be sure, there are some old records giving a gross yield of some 400 pounds a year, but the above are the only continuous records; and Eurotas I believe is the only cow that has ever made so much butter from so little milk during the flood of her yield. All of these suggestive doubts may be owing only to the absence of a greater number of records. The whole matter of testing yields is only in its infancy, and we are in comparative ignorance of what many of our cows are doing every day, and after the keeping of accounts becomes a more common practice we may discover many yields that approach to these.

It will be noted from the record given in the RURAL of December 11th last, that this test of Eurotas was wisely begun in the Fall, giving her the advantage of a maternal stimulus during the Winter and the revival of her flow when she came on green grass in Summer; yet, as before stated, the yield of milk is not remarkable. Herds of Holsteins and natives have equaled it time and again, while the food she consumed could not have altered the ordinary Jersey yield from, say, 17 pounds to 9½ for one of butter. This must be an idiosyncrasy of the cow herself, and it may be one well worth preserving, for this quality of turning a small amount of milk into a large quantity of butter need not have the exhausting effect of yielding a heavy flow of milk, like Col. Hoffman's Holstein that gave over 16,000 pounds in a year.

Eurotas seems to have strangely varied her yield during the year, in December nearly doubling the yield of November, while in February, March and April she fell below her yield in January. Then again, in September she gave 454½ pounds and only 123½ in October. This may have been owing to the quality of feed, as she may have required certain elements to form her peculiar yield; for, in the absence of further explanation, we must call this not only a wonderful, but an exceedingly peculiar yield. I would like very much to see an analysis of her milk compared with that of her stall companion, to discover, if possible, in what consists this great yield of butter. It might be that science would point out in her milk some peculiarity that could be discerned in other cows, and thus a new breed be started with a butter tendency that would leave even the best Jersey as far behind as Eurotas now does the average Jersey. Her owner, Mr. Darling, is wealthy and enterprising, and I hope he will have his cow's milk analyzed to facilitate the discovery or formation of a new breed. I see no reason why the new butter-yielding capacity could not be combined, at least to a large degree, with the capacity for deep milking, as I think it often has been in the case of the native cow where both qualities have been bred for. Then, if the progeny of Eurotas and the Hoffman cows could be so crossed as to produce an offspring capable of giving the milk yield of the latter and the butter yield of the former, what a wonder we would have—something like 1,700 pounds of butter a year from one cow.

The plain, practical dairymen, with their years of hard experience, cannot be blamed for some lack of confidence in these remarkable yields, and it is therefore all the greater pity that we have not some accepted method of public trial that would enlist general confidence to the extent of setting these large yields up as standards for others to work to; but instead of agreeing upon some simple and inexpensive method of testing and recording these yields, the sole use they are put to is to make them the excuse for writing flaring articles in praise of some gentleman's herd containing the blood of the famous cows so lauded, and then in a month or two the sequel follows in a flaming advertisement of a public sale of this gentleman's herd, as though he had labored all his life and spent all his money to the end that any one who chooses to become a purchaser may profit by his labor and pecuniary sacrifices. There has been such a commingling of large records and big auction sales of late, coupling sensational prices with animals of ordinary capacity, that a slight film of incredulity causes one to wonder how far one is to be dependent upon the other.

It would be a good thing if our State Boards of Agriculture would take this subject of testing cows under consideration, and see if testers could not be chosen with skill enough to correctly measure a cow's capacity; honesty enough to give her the full measure of her performance, and independence enough to tell exactly what she does, without fear of harm or hope of reward. The need of some trustworthy method of testing the yield of milk of dairy cows, as well as the butter and cheese products from that milk, is acknowledged on all hands; but so long as the establishment of such a method is left to private enterprise few farmers will avail themselves of it, as its employment must entail some expense.

Farm Economy.

COOKING, TING AND GRINDING FOD DER AND GRAIN.

S. B. PECK.

It never seemed to me good economy to cut straw, hay or corn fodder for horses or cattle, for the finer the fodder is made the less it will be masticated, the less gastric juice will be mixed with it, and the less nutriment extracted. Neither do I think there is any possible advantage in forcing this fodder down the animal's throat by mixing with it the more palatable ground grain. Both the horse and the ox need something more bulky than grain, and if there is anything before them in the stall, even though it be nothing more palatable than poor straw or the leafless stalks of corn, they will, after eating their grain, eat of this coarse fodder till their wants are satisfied.

From 1845 to 1860 I lived in a community of farmers, and I noticed, as I visited their barns and sheds, that every one had a cutting-box set away in some out-of-the-way place, but I scarcely ever saw one in use. They had been highly recommended in the papers and all had bought them, but soon got tired of, or out of conceit with, them. During that time there came out in the papers an analysis of the corn-cob, showing that it contained considerable nutriment, and there were statements of experiments with feeding corn and-cob meal, showing a great benefit from the cob. Well, "it took," and our miller gave verbal notice that he would get up a corn and-cob grinder, and that he was having a sign painted to put on his mill, "*Corn in the h'ear ground 'ere.*" The sign was put up, all translated into plain Yankee language, and everybody (minus your humble servant) took corn in the ear to be ground. Soon my nearest neighbor asked me to look at his old horse, Billy. Well, Billy did look sorry and ashamed of himself, and I soon learned that what I suspected was true—the old horse had been cheated with corn-and-cob meal, and I said to my friend, "I have no doubt that what you have read about the nutriment in cobs is true, and the same thing is true of sawdust, but the question for you is, can your twenty-year-old horse extract this nutriment out of such a mass of rubbish? Give your corn-and-cob meal to your chickens, they will show 'which is which,' and give Billy honest food." Billy was soon cured. It was always a question with me whether any quadruped could take into its stomach with impunity the sharp, cutting edges of a broken corn-cob.

There have lately appeared in our markets hand-bills highly recommending cooked feed for horses and cattle, and offering to sell it for *only* ten cents per hundredweight over the price of raw. My neighbor tried it, and was pleased. I asked him if he knew how much water there was in it. "Oh, it is perfectly dry," he replied. I said, "So is your bread dry, but chemists say there is 45 per cent. of water in it." The question with me is not so much whether it is better for the feeding as whether one gets as much nutriment for the money in the cooked as in the raw. If wheat flour takes up 45 per cent. of water in the process of bread-making, it is quite likely that ground corn and oats will take up some water in cooking, and probably enough to pay the expense.

Those who have paid no attention to chemistry can hardly understand that water in plants, vegetables, and in many other substances is not necessarily liquid, or even wet to the touch. Gypsum in the stone is as dry as any other stone, but when subjected to heat in the process of making stucco, about 22 per cent. is driven off in steam or vapor. Limestone, after being subjected to heat and its carbon driven off, takes readily over 30 per cent. of water in slaking, and is still dry. The potato and other cultivated roots, with all our fruits and even animal flesh, are said to contain from 70 to 95 per cent. of water combined with their other constituents, the combination of which forms a solid.

THE ICE TRADE OF THE ST. LAWRENCE RIVER.

The ice trade of the St. Lawrence River has, within the last few years, grown to almost fabulous proportions. This river is really one of the finest ice-fields in the world. No other river has water so pure that makes ice of such fine quality. While the Hudson between Albany and New York may present a scene of greater activity while the season lasts, yet the season for harvesting ice is much longer upon the St. Lawrence and the ice is of a superior quality, making it desirable for shipping to Southern points. Dealers in ice all along the St. Lawrence never resort to any place but that river for their supply, and in later years quite an extensive jobbing trade has sprung up in shipping ice to the lake ports. In securing a good crop it is very often necessary to let the ice break up at least once, and perhaps oftener, in order to

secure perfect quality. The cause of a poor one is the great quantity of floating or anchor ice that lodges in the coves or bays, the places where ice-fields are usually staked out, and this floating article forms ice deficient in solidity. After a break-up, the ice formed in two or three days' freezing is of superior quality. During very cold weather the ice forms from two to three feet in thickness, and is very transparent.

The *modus operandi* of harvesting ice has been reduced to a science. In former times a single farmer when he wanted to fill his ice house, would cut his ice with a cross-cut saw, and the task was slow and unpleasant. Accidents sometimes happened, both dangerous and disagreeable, as, for instance, in the case of the man who found it easier to work where he stood, on the block he was cutting, and sawed it entirely off, happily with no worse result than a cold bath. But a single farmer never can make the elaborate preparations for harvesting ice made by men with whom it is a business. It is slow and laborious cutting ice by hand and handling it without proper tackle. Where men make a business of dealing in it the principal part of the cutting is done by horse-power, and very rapidly, by means of an ice plow. The ice-field is plowed its entire length in strips of a suitable width, by horse-power. The strips are cut in suitable blocks by large hand-saws, and floated to a particular point for loading. For convenience this is usually done at a point farther down stream than that where the ice was cut. At this point, by means of a long slide with one end in the water and the other high enough to drop the ice on the sleighs, smart men with pikes can load a team in a very few minutes. Care in cutting, that is, to have all the blocks of equal size and square in shape, greatly facilitates the packing of the ice. It is very often advisable, if time and opportunity allow, to dress the blocks with an axe where they are of awkward shape. In all the towns of any considerable size on the banks of the St. Lawrence there are men who make a business of dealing in ice, either for the local market or as jobbers engaged in shipping it, and when these men with their improved facilities for cutting and loading commence their ice harvest, farmers who wish to secure their year's supply, can usually purchase it already loaded on their sleighs, for forty or fifty cents per cord, a much lower figure than that for which each farmer could cut the few cords he would require.

A good team will usually draw at least half a cord at a load, and if the farmer is at all ingenious in making arrangements for unloading, the task of securing the year's supply becomes comparatively easy. It is always possible to slide the ice from the sleigh to wherever it is wanted by means of plank, and ice can be handled very easily in this manner by using long hooks made of good bar-iron. A great many erroneous ideas are entertained in regard to storing and keeping ice. Nearly all men with whom I have any acquaintance, invariably lost their first year's stock of ice owing to their neglect of proper ventilation. Others, again, think it necessary to provide an expensive building for keeping the commodity, while others omit to provide suitable drainage. Let it once be thoroughly understood that the cheapest building possible is good enough if there are only sufficient drainage and ventilation, and the job of storing ice will not appear nearly so formidable as it now does. Ten dollars are quite sufficient to erect a building good enough for any farmer. The trade in ice is already an important industry; a large capital is employed in it and it furnishes employment to a great number of men and teams. The season of 1881, commencing about the first of January, bids fair to be a prosperous one, as the ice is of excellent quality.

F. K. MORELAND.

St. Lawrence Co., N. Y.

Farm Topics.

SEASONABLE HINTS.

WHILE a relaxation from pressing work may be found now, such as can be found at no other season, there is much that may and should be done by all who desire to practice system and economy in farm management. With the coming of the new year we are reminded that a new campaign of seeding, cultivation and harvesting is drawing near, and it is often not without a certain feeling of dread that we contemplate its approach, and we are not disposed generally to spend much time in reviewing the one just closed. Still I think a few hours may profitably be spent in retrospect. If a daily or weekly record is kept, let an evening or two be spent in reading it over and refreshing the memory with the details of the struggles and triumphs of the past year. If no written record is kept, let the family talk it over and call up the principal incidents, each member contributing his or her share to the history of the year. This will assist in utilizing the experience of the past which should be to us all a part of our "stock in trade." Then let some time be devoted to taking an "account of stock"—an inventory of farm live stock, tools, fixtures, grain on hand, etc., and their values should be tabulated. If we are out of debt the result will show our resources, or, in other words, how much we are worth. This inventory, revised each year and compared with those for the previous years, will show whether we are gaining or losing, and how much.

An accurate account of all expenses should be kept, and if this has been done for the past year an estimate may be made for the coming year. This should include the amounts needed for the purchase of new tools and for repairs upon old ones. It should also be decided what improvements, if any, are to be made and what is to be their character and cost. A plan of farm operations should be marked out, and, with the experience of past years before us, we can usually see where improvements can be made. If our financial exhibit of the past year proves unsatisfactory, we must try and ascertain the cause, and endeavor as far as possible to correct it. If there has been careless or unwise management or if petty leaks have occurred here and there, the former must be amended and the latter be stopped. If the fault is in the season, if frosts, floods, or drought have baffled us and cheated us of the rewards we have justly earned and expected, all we can do is, like a disappointed fisherman, to hopefully try again. It will be found advisable to anticipate the coming busy season and study how we can make a day now count for one in seed-time or harvest.

We may do this by putting tools in order, rigging hay forks, repairing fences, trimming orchards and hedges, etc., etc. It is a part of good farming to have things convenient around barns and stables, so that teams and stock may be watered, fed and cared for with the greatest economy of time and labor. The farmer no less than the merchant or banker, to achieve the greatest success, must devote his whole time and talent to his business. He must in Winter live, so to speak, with his stock; in Summer, with his crops. He must study not only to make the most of fair weather and propitious seasons; but prepare for accidents and failure also, and strive to reap some benefit even from adversity. He should as far as possible, make the elements his servants and make the winds, the sunshine and the rain all contribute to his success; but, ever keeping in mind their treachery and variableness, he should obey the old injunction "never trust the weather." Thus while we sit by the fireside with the temperature at zero, if our land has been well drained or fall-plowed, we can take comfort in the thought that the frost is doing for us now what no effort of ours could do in Spring in mellowing and loosening the soil. If the winds sweep uncomfortably, they should pump our water, grind our grain and do many other jobs for us through the instrumentality of a good windmill. If crops have been short over a considerable extent of country, we should know this fact, and if possible profit by it. If our dairy products are a drug in market in Summer, we should let the cows go dry through the season of heat and flies, and milk them in Winter, and if rings and corporations combine to fleece us, we must combine also, and turning what seems our greatest obstacle—our numbers—to our advantage by the ballot, enforce justice and respect.

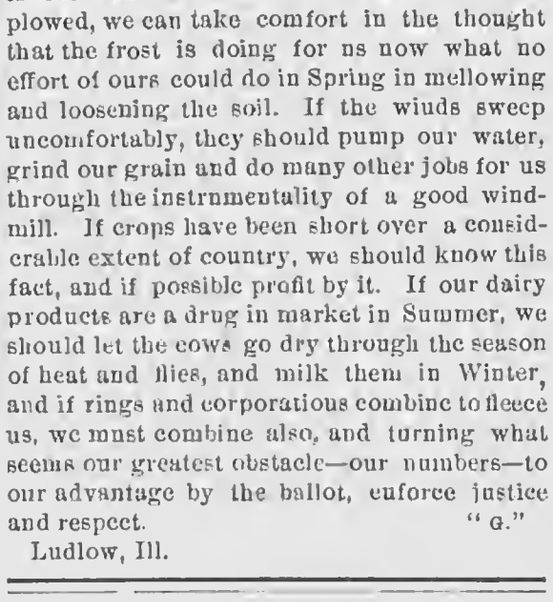
"G."

Ludlow, Ill.

Floricultural.

SOME NEW PLANTS OFFERED BY GERMAN FLORISTS.

AMONG the new plants which may minister to the delight of all lovers of flowers next



MEGARRHIZA CALIFORNICA.—FIG. 31.

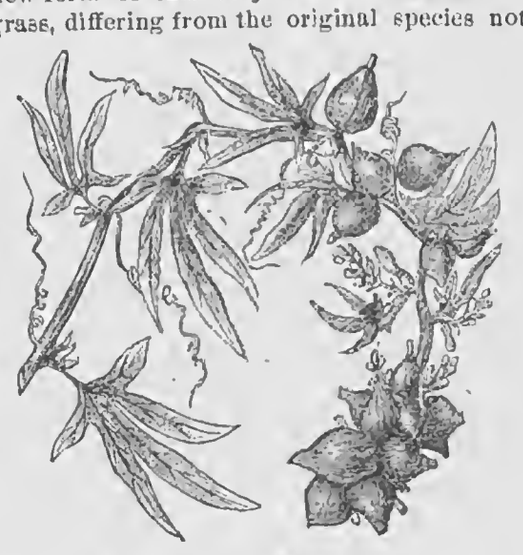
Summer, we take occasion to notice the following:

MEGARRHIZA CALIFORNICA, Fig. 31, is a new and very rapid-growing member of the Cucurbitaceæ family, of the same elegant habit and handsome appearance as Pilogyne suavis, but of much larger dimensions, the stems often attaining a length of 20 to 30 feet in one season. The beautiful, glossy, silvery leaves, about three to six inches in diameter, bear short, scattered hairs, the small, white sterile flowers appearing in slender racemes, while the fertile ones grow singly and are somewhat bigger; the oblong-shaped fruits, about

BROMUS PATULUS NANUS.—FIG 32.

two inches long, are densely covered with stout, pungent spines similar to those of the Cucurbitaceæ introduced up to the present time, being of about the same size and form as a Broad Bean and germinating as easily and surely as pumpkin seeds. The plant becomes fully developed when grown as an annual, but it can also be cultivated as a perennial, as it produces long and large tuberous roots.

BROMUS PATULUS NANUS, Fig. 32, is quite a new form of this very valuable ornamental grass, differing from the original species not



RHYNCHOCARPA GLOMERATA.—FIG. 33.

only in its lower growth, being scarcely half as high, but far more in its much more graceful, thinner and shorter panicles. By comparing a panicle of Br. patulus to the one shown in natural size in the figure, the superiority of the above-named sort may easily be noticed. This variety has already been cultivated for several years and has proved perfectly true from seed. It represents a valuable addition to the assortment of ornamental grasses grown on an extensive scale for bleaching purposes or dry grass bouquets.

RHYNCHOCARPA GLOMERATA, Fig. 33, is a charming and interesting climbing member

BEGONIA DAVISII.—FIG. 34.

of the same family, from Brazil, growing 12 to 15 feet in hight. Its branching habit and thickly-set, abundant foliage make it specially well adapted for covering arbors and fences or for garnishing festoons. The whitish flowers, as is mostly the case in this tribe of plants, are not very conspicuous, but the deeply cut, five-lobed leaves, together with the numerous hazelnut-like fruits appearing in dense clusters, render this plant one of the most attractive climbers for out-door culture. To judge by the tuberous-like root it may be treated as a perennial, but it succeeds well in any warm border as an annual.

BEGONIA DAVISII, Fig. 34, is a beautiful free-flowering new tuberous-rooted species of dwarf habit. The flowers are of the brightest scarlet imaginable, standing well out of the foliage as the above figure shows plainly. Undoubtedly it is one of the finest introductions amongst the tuberous-rooted class.

PARLOR GRASSES.

THE beauty which is all around us we neglect, while for that which is foreign we will pay the highest prices. I claim that our own grasses are quite as beautiful as most of the exotics. They are, at least, more suggestive. The sight of them leads us in imagination to pleasant river banks, to flowery meadows, or perhaps to mountain tops whence we viewed the kingdoms of the earth. We begin to gather grasses and sedges in Spring, and keep it up through the Summer, as the different species succeed each other, until at last we are prepared to arrange them.

With the grasses one can combine the delicate inflorescence of the Sea-lavender (Statice Limonium) the pearly heads of Immortelle (Antennaria margaritacea), a few bleached ferns, and a few that retain the glory of the setting sun. Then an exquisite addition is Cotton-sedge (Eriophorum). Its downy tufts are, like the breasts of the Birds of Paradise, of changeable, silk-like sheen.

An extremely beautiful grass is the Glyceria Canadensis which has open, drooping panicles of straw-yellow spikelets. There are as many colors in our grasses as there are hues in the forest, delicate greens, purples, and maroons. The habits are as various as the colors, from the upright spike of the sea-side Calamagrostis to the gauze-like film of Sporobolus. The more one studies grasses the more entranced he becomes, for the beauty is not alone in the growth, but the minute blossoms are pretty beyond description. I commend both grasses and sedges to those who love the woods; although their study is hard, they reward one by many an undreamed-of wonder. We marvel indeed, more at the elegance of little things, than at the vastness and magnificence of the great. The striations on a diatom, or the stigmatic feathers of a grass are as wonderful in their way as the craters of the moon. The difference is in degree not quality. Nature neglects no detail even in her hidden architecture. We find everywhere and always a directing hand. An opening rose-bud is a wonder, but so also is a budding grass.

W. W. BAILEY.

Brown University, Prov., R. I.

ENGLISH NAMES FOR GARDEN PLANTS

THE London (Eng.) Garden has taken a decided stand in favor of English names for garden plants, and I think rightly, too. In ordinary conversation who would ever think of talking about Convallaria majalis, Reseda odorata, Boussingaultia baselloides, Polygonatum giganteum, Narcissus Pseudo-Narcissus, and Nymphæa odorata, when we mean to speak of Lily-of-the-Valley, Mignonette, Madeira Vine, Solomon's Seal, Daffodils, Pond Lilies? There is a simplicity, beauty and sweetness in the common names not found in botanical ones. True, verbena, lantana, abutilon, fuchsia, aster, oxalis, and many others in common parlance, though really botanical, generic names, are, by their every-day use, understood as common English ones; in fact, the majority of the people who use them do not know them to be botanical names.

The English names that seem to me the most appropriate are those that have an obvious and descriptive meaning, as Pond Lily, monkshood, buttercup, blood-root, twin-leaf, sweet pea, snow-drop, golden rod, Evening Primrose, foxglove, cockscomb, and the like. But, after all, perhaps the prettiest names are the poetical ones, as the roses and lilies, daisies, pinks and pansies. Then there are many pretty imaginative ones, as Lady's-delight, Wandering Jew, Mother-of-Thousands, Bachelors' Buttons, Mourning Bride, Love-in-a-Mist, Love-lies-Bleeding, Venus's Looking-glass, Babies' Breath, and Star of Bethlehem.

Are we to relinquish these happy names, the names our children speak, the names our forefathers as children used, in favor of a harsh and formal botanical lore, and call an Iron Weed, Vernonia Noveboracensis; a Sun-flower, Helianthus annuus; a Snap-dragon, Antirrhinum majus, and a Sweet-William, Dianthus barbatus? Who speaks of Quercus, Acer, Fagus, Betula, when they merely mean to mention the oak, the maple, the beech or the birch?

A recognized botanical name is indispensable for every species among plants, and there are times when it must be used; but in every-day general use, when practicable, let us give high preference to the good old English names.

WILLIAM FALCONER.

Field Crops.

INFLUENCE OF MANURES UPON THE POTATO DISEASE.

PROFESSOR F. H. STORER.

IT has often been remarked by European farmers, and sometimes by American, that the manure employed upon potato fields may have no inconsiderable influence in pro-

moting the appearance and progress of the potato rot.

Hurtful effects have been noticed to follow in some instances the application of heavy dressings of farm-yard manure, and sometimes to be produced by Peruvian guano and by other "forcing manures"; and one or another explanation has suggested itself according as the natural or the artificial fertilizer appeared to be at fault. It has been supposed by some that spores of the rot-fungus might be harbored in some common plant eaten by cattle, and that these spores might be tough enough to pass unharmed through the animals and so be carried to the fields in the dung; while other observers have held that the increased luxuriance of the plant, brought about by the use of guano or other nitrogenous manure, was of itself a sufficient reason why the potato rot fungus should develop more freely in such plants than upon the less succulent vegetation of adjacent fields which had not been so strongly manured. It is a fact of familiar observation that those manures which contain much active nitrogen tend to develop the leafy parts of plants and to produce a rank vegetation of loose texture and juicy character such as is particularly well-fitted for the growth of the fungus which causes the potato rot. The advocates of the latter view have always had in their favor the well-known fact that the potato rot is specially liable to prevail when there is moisture enough either in the air or the soil to keep the plants in a succulent condition. The second view has the advantage, moreover, of being more general than the first, and indeed of including it, since it is plain that the nitrogen in stable manure may make the plants grow rank and succulent as well as that in the artificial fertilizers. That the second view is really the correct one seems to be borne out by some of the results of field experiments on potatoes made recently in Germany by Maercker, which show that the application of nitrate of soda tended very decidedly to increase the ravages of the disease. Thus, while the crops harvested from plots dressed with stable manure contained no more than five and six per cent. of diseased potatoes, crops taken from plots dressed with nitrate of soda showed from 11 to 12 per cent. of the diseased tubers.

No increase in the disease was noticed on plots manured with mixtures of stable manure and plain superphosphate of lime, and of stable manures and small quantities of ammoniated superphosphate, but when large dressings of the ammoniated superphosphate were used, in connection with stable manure, the proportion of diseased tubers was increased, in some instances to eight per cent. of the total yield.

In these experiments several plots manured in each of the different ways, were distributed and repeated in different parts of the field, and the results obtained from the different plots showed a remarkable agreement, as above stated. The influence of moisture was well shown in another set of experiments, made in another locality, where the disease happened to be much more prevalent. In this case the proportion of diseased potatoes varied from four and a half to 17 and a half per cent. of the total crops, on plots that had been manured alike. But it was noticed that the cause of these variations could justly be attributed to moisture which had collected in little hollows or depressions in the soil of some of the plots.

STOOKS, SHOCKS, STACKS.

THE criticism of your good-natured correspondent, "Kit," in the Corn Number, page 9, is by no means exempt from an error similar to the one he would correct. Although lexicographers have failed to record the proper distinction between stook and shock; yet intelligent farmers all over the country agree in the appropriate signification of the two words as employed by the producers of Indian corn. A stook of Indian corn consists of the stalks set up on the butt ends, in the form of a large gavel and bound at the tops. This cannot be properly denominated a stack, or a shock. A shock consists of a number of sheaves or bundles placed together on the butt ends. A shock may be long, round or of a square form; made up of a few, or a goodly number of sheaves. When buckwheat is raked up in gavels and placed on the butt ends of the straw and bound at the tops, the bunches are called stooks. A stack may be made of stooks, or shocks, or bunches, or sheaves, or of loose straw or haulms. Farmers do not call cocks of hay, stacks, but cocks. But if several cocks are placed one above the other, the pile is called a stack. Yet, one *may* call a cock of hay a stack, although it would not be using language in accordance with the most approved custom. Hence, persons who are accustomed to use the more appropriate words in the right places, say *stook* for a collection of stalks of unhusked corn, or a gavel of buckwheat, and *shock* for a small number of sheaves of any kind. There is just as much difference between a *stook* of corn and a *shock* of corn, as between a *cock* of hay and a *stack* of hay. Intelligent corn-raisers, the States over, will concur in the foregoing signification of stooks, shocks and stacks. CRITICUS.

Courage under Disappointment.

In answer to a circular from a Philadelphia seed house I got from them a package of what they called South American Corn—five kernels at two cents each. I planted them in the garden and nursed them carefully, but they turned out a failure. I also got a packet of "Canton Corn," which proved to be what I call very "small potatoes." Some "Hiawassie Corn" which the firm claimed to be "the most productive variety in the world," was a handsome white sort. For it I plowed up a piece of clover sod which was as rich as any soil on my farm—so rich that wheat or oats would have all lodged there. I put it in the best order and planted the corn, and tended it well. It grew 10 to 12 feet high without showing a sign of tasselling or earing. When my field corn—not over five rods from it—was in good roasting ears, there was not a sign of an ear on "the most productive corn in the world." My field corn gave 60 bushels per acre of as fine corn as you would wish to see, while on the promised wonder there were only a few little nubbins. It was all stalk and no ears. A package of Spring wheat from the same firm was sowed on a corner of the same piece of ground. It came up all right, but though I kept the ground clean not a stalk of it headed. Both the corn and wheat were put in before my own corn in May. Last Fall I received from the same parties 105 kernels of Australian Winter Wheat for which I prepared a piece of ground very nicely, planted the stranger, and am now waiting the result. I also got some White Russian Oats from a firm of grain dealers in Buffalo, and have high hopes with regard to the yield. I am by no means discouraged at the failures I have met, for my motto is the Scriptural injunction "Try all things and hold fast to that which is good.

Dixon, Ill. W. G.

Desirability of Stronger Winter Wheats.

As I am an old miller and still in the business, I wish to call attention to the importance of improving the quality of our wheat—Winter wheat. I think there has been too much attention given to increasing the yield regardless of quality. Our Winter wheats have been losing in strength, particularly the new varieties which are very deficient in that essential quality. If we could get a variety of Winter wheat that would yield well, and approximate in strength the hard Northwestern Spring wheat, it would be very desirable; and I have thought that this end might be accomplished by taking this Northwestern Spring wheat as a basis to start from, and either propagating new varieties from it or gradually changing it into a Winter variety. I make these remarks merely to call attention to the subject. W. J. Mc.

Steubenville, Ohio.

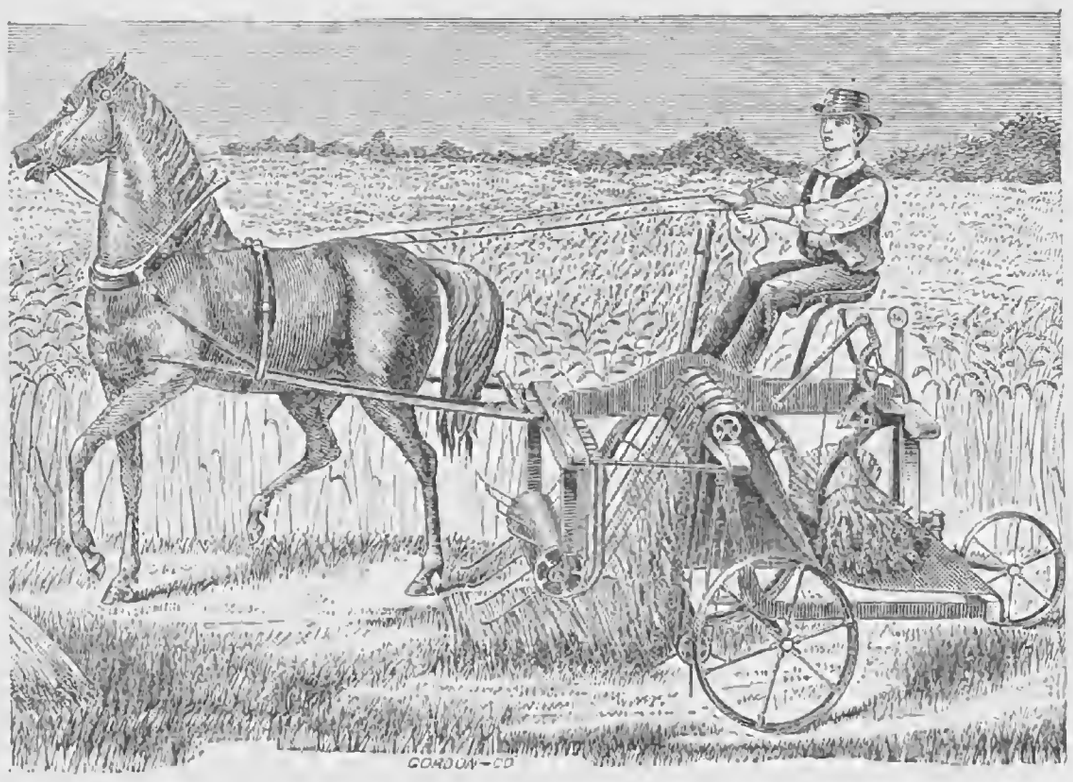
[Our friend will see that that is just what we are doing at the RURAL FARM.—Eds.]

Entomological.

ŒSTRUS BOVIS—THE OX BOT-FLY.

IN the issue of the RURAL for November 27, reference is made to this insect, with an estimate of the annual loss occasioned by it to those who raise cattle or furnish hides to the tanneries. The same article spoke of the ease with which the injuries might be checked provided all would take hold of the job. This led me to think that something on the habits of this insect might not be out of place.

All who have had the care of them have noticed that if the hand be passed over the backs of cattle at this season, a greater or less number of bumps or swellings are perceptible. These bumps are always found to be open, and inside is found a footless grub or maggot. These grubs are the cause of both the swellings and the holes, the latter of which cause the depreciation in the value of the hides, referred to in the article mentioned.



GLEANER AND BINDER OF THE JOHNSON HARVESTER CO. —FIG. 35.

The eggs that produce these grubs are deposited on the backs of cattle during the Summer by a large fly known as the ox bot-fly. They probably stick to the hairs like the eggs of the horse bot-fly, hatch in due time, when the grubs eat their way into the skin where they pass the whole of the larval period of their lives, reaching their maturity with the return of warm weather in the Spring. It is probable they do not cause a great deal of pain to the animal, though the swollen condition of the parts and the purulent state of the interior of the bumps indicate that they are a source of irritation to the system. The grub always keeps an opening to the hump because it must have air for its respiration, and it is through this opening that the air is obtained. The bumps are scarcely perceptible till the beginning of Winter, on account of the small size of the occupants up to that time. In the Spring these work their way out, fall to the ground, secrete themselves in the most sheltered place close by, and undergo their transformation to chrysalids. From these the flies in due time emerge. One writer describes the fly as "having a very hairy body, a large head, the face and forehead covered with light-yellow hair, the eyes brown and the antennæ black. The throat is yellow, barred with black, the abdomen of a grayish-white at the base, covered with black hair on the third segment, and the remainder of an orange-yellow. The wings are smoky-brown."

The remedy for these is very simple. During the Winter the grubs may easily be pressed out of their holes with the thumb, or the two thumbs, when they can be killed or left on the ground to freeze. The bumps will be found to vary in number from one or two to 30 or 40. If the grubs were removed from the backs of all of a herd, they would be found to be much less numerous the following Winter, but there would still be a few from the flies hatched from other herds. If all the owners of cattle in a community were to remove the grubs from the backs of their cattle this Winter, there would be scarcely one found in the same herds next Winter. It is hardly probable that more than a community would unite in an effort to exterminate the insect, but, as there is but one brood in a season, it is evident that if all owning cattle were to kill all the grubs, there would be no more trouble from them—at least for a long time. G. H. FRENCH.

Normal University, Carbondale, Ill.

Industrial Implements.

The Johnston Harvester Co.'s Gleaner and Binder.

We here present to our readers what promises to be one of the most valuable labor-saving machines in the country. As will be seen by the illustration, fig. 35, this is an independent binder and gleaner, and has the advantage that the grain can be bound at once or left in the field until cured, or until a more convenient time for binding it. It is simple in construction, binds with twine, making a secure knot that will not slip or give out. It has an adjustable gathering apparatus that can be easily adapted to the varying conditions of crop or ground, and it will bind after any reaper. We have watched the different successive improvements made in this implement until at last the manufacturers are prepared to put a limited number of them upon the market, confident that intelligent farmers can now use them successfully. This machine was thoroughly tested last season and made a good record. Its great utility will be recognized by farmers, as they can now get a binder without discarding their old reapers, and also can buy a reaper and independent binder for about the present price of a self-binding harvester. The orders for the line of regular machines made by the Johnston Harvester Co. are already so large that the number of these new implements must necessarily fall short. They will be put out in connection with the celebrated harvesters of the company, who will also fill such outside orders as their capacity to manufacture will admit.

Miscellaneous.

"TELL KNOWLEDGE—NOT GUESSES."

WHAT'S the matter with General Noble? He writes under the above heading as if he was in "a real state of mind." He reminds me of that old hypochondriac writer, Montaigne, who once wrote as follows: "I would have every one write what he knows; and as much as he knows; and no more. For such a person, having some particular knowledge and experience, as to other things knows no more than what everybody knows; and yet to keep a clutter with this little pittance of his, he will undertake to write the whole body of physics," etc., etc.—and yet he himself was full of whims and fancies.

Now, on to the wickedness of that "sap-sucker" writer, the General tacks a whole column of what I would fain call ill humor, only I cannot bring my mind to charge him with that. But he is mad about something evidently, or he would not say that these persons who so well express their ideas in the RURAL "write crudely and thoughtlessly." There, I say, General Noble is mistaken. Further, I think he is mistaken when he says that "no one has any right to declare what follows an event is its logical result." Because a man killed bark lice on his trees with linseed oil, the General painted his trees from top to toe and killed them, as well as the lice. Well, the logical result was proved, and the General ought to have been satisfied. That he laid it on too thick was his mistake. It reminds me of a man who asked me if salt was good for pigs. I told him, "Yes; pigs' need some salt as well as other animals and I always put salt in their slop barrel." The man having a beef barrel to empty, poured the brine and salt from it into the pigs trough, and the pigs being starved for it, ate several quarts and forthwith died. And the man was mad with me and talked precisely as the General does. Was that my fault or the man's? He should have used his reason, and so should we all when any man tells us what he has done and the result of what he did. All experiences are valuable, but they must be applied rationally. And so I say, "tell us not only what you know, but what you think you know, and I will consider over it and judge of it and make a sensible and rational use of it as far as possible." But if we are to tell only what we know of some things, we come to this—what do we know after all? The more one learns, the more he discovers how little he knows. What I thought I knew many years ago I am continually finding out was not of general application, but related to very narrow circumstances.

But should a person keep all that he thinks he knows to himself, lest his knowledge may be, after all, but a shrewd guess? How is it in scientific matters? How many things are being taken back by scientific men? and how much of a dozen years' old knowledge is exploded and dissipated to-day? But if those men had not published what they then knew, or thought they knew, we should not have reached the truth now. But is it the truth, after all? We cannot say. When a close, careful investigator found crawling and twisting things in certain liquids, he could not account for them excepting under the theory of spontaneous generation. When that notable book the "Vestiges of the National History of Creation" appeared, the scientific world was taken all aback, and a new theory of life was announced, based on certain facts. Some things were known and the logical result was, of course, unavoidable. Life was spontaneously generated. But when Pasteur took hold of the matter he found those facts were not facts, and gave us other facts which confounded them. Whether these new facts are facts, who can say? Time only will show. But some persons are very sanguine about them and so make out logically that General Noble and I and all of us come from some kind of stuff which they call protoplasm, climbing by degrees through infinite ages from insensible matter up to such intelligence as enables us to berate the poor man who believes the sapsucker really sucks sap. I don't blame the man who believes that. I don't know myself what that lively bird is after when he makes those curious rings of holes around a sound tree, but I do know positively that he will make holes in perfectly sound bark on young trees where no borers have been. Why may he not want to get his sweets or his bitters from under the bark; or why

may he not be amnsing himself as the bower birds do when they build up just snch "baby houses" as young children do?

The General is all wrong. Let us know what people think. I don't like to hear people say we know, and we know. I want to say I think I know, and I wonld have General Noble himself say the saine about the English sparrow. This is a nuisance certainly; but we don't know the good he does. Two years ago I berated him soundly for tearing open the ends of the corn ears. The past year I blessed him because he picked out of the corn ears the young worms which have been a thousand times the worse pest. I don't know but when I shot him two years ago, when he depredated on my corn, I helped to encourage the worms which last year spoiled thousands of ears. I would like to have the General's permission to say that I think this same sparrow, *in moderation*, is a serviceable animal and does actually kill off this corn worm if we will let him: and that when he tears open the ears, he is, like the General's sapsucker, after his grub. But I don't know it; in fact, there is not much that I do know, and therefore I wish, with General Noble's permission, sometimes to say what I think. H. S.

RURAL BRIEFLETS.

THERE are statements going the rounds of the press to the effect that the farm of the Stewart estate (Garden City) is highly productive. "From 2 500 acres," this is the gist of the statement, "formerly believed to be worthless, there were obtained last year 20,580 bushels of oats, 31,500 bushels of shelled corn, 5,000 bushels of buckwheat, 600 bushels of wheat," etc. The above figures, if the product per acre be figured out, give little to boast of. We rode over this farm when the harvest was close at hand, and we have rarely seen poorer crops on any part of Long Island.

MR. J. J. PRYOR writes us from Nashville, Tenn., that the most delicious potato he has ever eaten in Winter is "second crop" Beauty of Hebron. . . . . .

NOT enjoying a personal acquaintance with Marshall P. Wilder, the veteran horticulturist of Massachusetts, we have sometimes wondered why he inspired in such an unnsal degree the affection and respect of all who know him. We fancy that the following extract from Mr. Meehau's account of a visit to his home reveals the secret: "But among the greatest of all pleasnres was it to halt every once in a while and listen to his tales of his contemporaries. He would now have a word of praise for this one for what he had done, or some sort of commendation for another. Now he would start to show how this one had scarcely had enough credit for this, or that he should always be remembered for something else. What a pleasure it is to be with one who brims over with good-will to all and malice towards none. . .

WHAT a pity it is that all of us cannot so forget ourselves as to be both willing to appreciate the merits of others and to do justice to them. How charming—how altogether lovely is benevolence! . . . . . ,

E. E. THORNE, the Superintendent of the Farm Department of the Ohio State University, writes as follows:

EDITOR RURAL NEW-YORKER:—"The annual "Lecture Course," of the Ohio State University began on the 11th. We expect an attendance of 100 to 200 farmers. In preparing a lecture on "wheat" for this course I have found more valuable material in my files of the RURAL NEW-YORKER for 1879 than in all the other agricultural papers I receive." . . .

What Others Say.

A NEW LINE OF FARMING.—Dr. Hoskins tells the Home Farm (Maine) that he has grown seeds for upwards of a dozen years, and his sales have ranged from $100 to $800 per year. He has a single contract to grow peas next season for a New York party, that, with a fair crop, will net him $400. And yet he has only 12 acres, on which he has 1,400 fruit trees in orchard, 1,000 currant and gooseberry bushes, one-half acre of strawberries, one acre in nursery, etc.

MR. CLARE SEWELL READ'S ADDRESS on a late occasion, says the London Live Stock Journal, contained one or two points worth noting; this, for instance—that the Eastern States of America are already beginning to feel the competition of the West almost as folks do in England; and, again, that changes in agriculture are going on in those Eastern States very similar to those English papers have so often discussed as being desirable at home. Some lands have almost gone out of cultivation. There is a general desire to grow less corn and more grass.

INFECTED MILK.—The British Medical Journal reports a serious epidemic of typhoid fever at Worthing, due to infected milk. In all there were 44 cases, eight proving fatal, all of them occurring among the consumers of milk from a certain dairy, where a case of typhoid fever had occurred. It was noticed also that those who habitually drank large quantities of cold milk were the chief sufferers. Those who had only a small amount in their tea or coffee, or who drank the milk after it had been boiled, seemed to have escaped the disorder. The epidemic was at once arrested on discovering the source, and the place is now free from the disease.

CANADIAN VS. UNITED STATES APPLES.—The following is from a writer in the London Garden: "In Covent Garden I heard a very good account of Canadian apples, and was surprised to learn they were beating the American produce out of the field. There seems some reason for this, as the Canadian apples are better packed; the American barrels are usually "topped up," in market parlance—a layer or two of good fruit at the top, and then fruit of poor quality below. On the other hand, the Canadian fruit is generally fairly good throughout, the barrels are well packed, and considerably larger than those of the Americans. A very excellent apple which has been coming in large quantities is the Golden Russet; it has a high and rich flavor. In some sales lately, Canadians, when compared with Americans, were in the proportions of over six to one. This must be very encouraging to the Canadians, and should teach the Americans to pack honestly if they wish to keep their trade.'

BERMUDA POTATOES.—There are many persons who think that the so-called Bermuda potato is a distinct variety peculiar to the island, says the N. Y. Sun. This is not true, however, for Bermuda has to depend upon the United States for a supply of seed annually. Of late years the Garnet Chili is the variety principally planted; nearly all the stock is sent from this city, and in a few months they come back to us under the name of Bermuda potatoes. The climate of Bermuda is not favorable to the keeping of potatoes; consequently, no stock for seed is preserved; in fact, the inhabitants of Bermuda and nearly all the West Indies have to obtain their supply of potatoes for Summer and Winter use from our Northern States.

Everywhere.

RURAL SPECIAL REPORTS.

N. Y., Waterville, Oneida Co., Jan. 4.—This is a fine farming country. Hops and dairy produce are our chief productions. The past season has been exceptionally good for all crops, except hay, which is now selling at from $16 to $18 per ton. Hops have brought a fair price—from 16c. to 21c. per pound. One farmer, Mr. J. J. Bennett, has about 70 acres of hops, and sold his crop this year for about $20,000. I am a market gardener, and at no time since I have been in the business—six or seven years—has the season been so favorable for all kinds of vegetables. I have sold, from seven-eighths of an acre, $365 worth of truck, besides all the vegetables used in a family of six, and I have $75 worth yet to sell. I do all the work, with the exception of the help of a small boy for about a month in the busiest season. I "work out" "some" myself, and have earned about $100 working for others the past year. I enjoy work, and am never happier than when in my garden with a hoe or rake in hand, and when my day's work is done I like to take up the RURAL and read about the work of others. A. W.

N. C., Brookston, Warren Co., Jan. 2.—Up to November 15 the weather was all that could be desired, and those farmers who drove their work along were fortunate in securing their corn and cotton; but we were looking for our usually fine weather during the last part of November and well along towards Christmas. From the 7th of December to the 15th we had clear weather, which gave those who had their crops still in the field an opportunity to partially "catch up." With this exceptional week we have had no time suitable for any kind of farm work since the middle of November, as we have had either rain, sleet or frozen soil all the time. Very little wheat has been sown, and any sown after this will be too late to make more than half a crop. The wheat crop of this State at best is but "a drop in the bucket" compared to that of the country, yet if we are obliged to buy nearly all we need it will be a considerable drain upon our people. Fortunately we made a heavy crop of corn, and indications point to good prices for those who have a surplus. Prices for products are fair, with an upward tendency. Bright tobacco brings more money than for several years so early in the season. Cotton flits up and down about every day, averaging for the three months about 10c. Corn is worth 45c. to 50c.; wheat, $1.25 for white; cow-peas cannot be bought for much less than $1, though I believe the merchants are buying in a small way for less. Fodder, $1 per 100 lbs.; eggs, 20c. to 25c. Stock went into Winter in much better condition than usual, but Spring will undoubtedly find them thin enough, though I am happy to be able to note a decided improvement in the attention and care given our cattle and hogs in the past few years. M. B. P.

VA., Palneville, Amelia Co., Jan. 4.—Since my last letter of Oct. 4th, we have had rough weather for the season in this section. We had ice three inches thick in November and many persons half filled there ice-houses. On December 20, snow fell to the depth of six inches, and on Christmas Day it snowed again thick and fast, but I look on it as a blessing, as we had so much dry weather for the last three months that it was quite a serious matter. The farmers at this time are a little downcast as we failed almost entirely with tobacco, and wheat was a short crop, and these are the money crops, so that, of course, farmers feel a little discouraged, but the distress is more imaginary than real among those who have lived within their incomes. But the trouble is there are so many that go far beyond their means and then look for abundant crops and high prices to bring them out of the difficulty; so that when failure comes, they are ruined. We made an abundant crop of corn which is selling for 30 cents per bushel locally; but it was worth 50 cents in Richmond which is our chief market, and some farmers are now shipping there to sell. My Ovoid Mangels were the wonder of the neighborhood. I sowed them too thick, and it was very dry weather, and yet I got 96 roots weighing a fraction over 500 pounds. The wheat was put in quite early last Fall, generally, and was looking very well until the cold, dry, freezing weather set in which injured it somewhat; but I think the present snow will bring it out all right. I did think of giving you some of my experience with corn; but after your great yield I am almost ashamed to do so; however I will tell you what I made on three and half acres of land. It was creek bottom that had been in constant cultivation for 30 years, as far as I can learn, without fertilization of any kind whatever, and two-thirds of that time it was in the hands of tenants who cultivated it in corn exclusively, and allowed the water to deposit sand over one-third of it; the rest was well set with wire grass. I plowed it thoroughly in January with an Oliver chilled No. 20 plow, seven to eight inches deep, and let it lie until April 17, when it was again plowed and harrowed, the rows being struck off four feet, and the corn dropped by hand thirty inches, as near as may be, and covered with a one-horse cultivator. It was cultivated three times with plow and cultivator, and twice with the hoe, and without one ounce of fertilizer I harvested one hundred and fifty and a fraction bushels of good corn. This, although not a large yield for the acres, will do pretty well, I think, for poor old Virginia land like this. One of my neighbors on good new bottom land made as high as seventy bushels to the acre. J. W.

VA., Nokesville, Prince William Co., Jan. 3. We have had unusually cold weather, and now there is over a foot of snow on the ground—more than has been seen here for the last 25 years. Our crops were good—wheat over an average; corn good; oats light. Barley is not much grown hereabouts. Amber-cane was just introduced for the first time this year, some of us having made a trial of it on a small scale. We expect to raise more the coming season. Live stock went into winter quarters in good condition. We have a heavy stock of light, scrubby horses in our county; but our worthy brother Clark, Master of Nokesville Grange, went to Ohio this Fall and purchased a Norman Percheron stallion, and so we have hopes of better horses in future. In cattle we have Short-horn grades—fair animals. We also have Down sheep and Berkshire hogs. Land is cheap here. We want more immigrants of the laboring class. We have room for thousands of people here. L. Y. A.

The Querist.

ANSWERS TO CORRESPONDENTS.

ANSWERS TO MANY READERS.—We cannot sell Rural Branching Sorghum, Chester Corn, the White Elephant Potato or the foreign Asparagus, or anything else except the RURAL. If our friends would scan the advertising columns, some of the above questions would there find an answer. For the rest, we commend them to the catalogues soon to be noticed.

Losing the Cud—"Hollow Horn."

U. T. S., Sedalia, Col., asks, 1, whether there is such a thing as a cow losing the cud, and on that account becoming sick and dying; 2, is there any such disease as "hollow horn?"

ANS.—There is a disease known as losing or dropping the cud. It arises either from indigestion due to feeding on unwholesome food and acrimonious plants, or to over-feeding on rich, succulent pastures. Sometimes, however, it is caused by a diseased state of the liver. In the early stages the bowels are somewhat irregular, the animal appears dull, the coat is rough, and though the appetite may be as good as usual, the food is dropped more and more from the mouth as time goes on. Often quite a quantity of a thick green fluid is dropped in ruminating. As the disease advances the appetite diminishes and becomes capricious; dysentery comes on; the animal ceases chewing the cud; the eyes and mouth appear yellow, and a general unthrifty condition supervenes, and if the liver has become much affected, the disease terminates fatally. A cure should therefore be attempted at an early stage. If there is any costiveness, mix and give in a quart of warm ale, if convenient, if not, warm water will do: Epsom salts, 12 ounces; gentian, 1 oz.; ginger, 1 oz; carbonate of soda, 1 oz.; or:—Castile soap, 6 drachms; ginger, 3 drachms; Barbadoes aloes, half an ounce; Cascarilla bark, 2 drachms, warm water, one pint—mix. Often the bowels are loose, but the dung has an unhealthy appearance; then give morning and night the following drench in a pint of ale:—Carbonate of soda, 2 drachms; ginger, 3 drachms; Cascarilla bark, 3 drachms. The animals should be kept warm at this season. 2, There is no such disease as "hollow horn," although a few intelligent farmers here and there, and a greater number of "old fogy" farmers still believe in this exploded fallacy. Very early in life a cavity begins to form in cattle in the bone of the skull beneath the horn, and penetrates this, continuing to enlarge during the life of the animal. In old animals the horns consist of a thin shell of bone with a large cavity inside, divided, perhaps, by a thin, bony partition, and lined with a delicate, sensitive mucous membrane. This is the *natural* condition of the horn, designed by Providence to lighten what would otherwise be heavy and cumbersome. Attention was probably directed to the horns as the seat of the disease because in all serious troubles the extremities—the ears, horns and limbs—are cold, or alternately hot and cold. On boring they were found to be hollow, while it was supposed they should be solid, and it was therefore mistakenly supposed they were the chief seat of the disease, and the wretched animals, already ailing, have over and over again, been subjected by ignorance and quackery to keen suffering on account of their horns being pierced with gimlets and filled with irritating matter.

Quince Culture, etc.

O. C. Y., Liberty Center, Ohio, having planted several hundred quince trees last Spring, asks, 1, how to treat them so as to secure the best results as regards health, strong growth, and the size, quantity and quality of the fruit. Should they be kept dwarfed in a spreading bush form or trimmed up as standards, and do they need salting to make them vigorous bearers. 2. He has also a young pear orchard and he wishes to learn what to do to prevent blight, some of the trees having been already attacked by that pest, the second year after having been set out.

ANS.—If the ground is not such as would produce a good crop of grain, make it so by dressings of manure. Keep the soil mellow and free of weeds—cultivate shallow. We prefer the "spreading bush form," only cutting out all stems that are too close together or cross each other. As to the use of salt—most people *suppose* that it is beneficial to the quince. We know of no experiments having been made which offer any *proof* in the matter. We may say that quinces may grow vigorously and bear abundantly *without* salt. 2. It is our belief that a wash of carbolic acid, lime, sulphur, etc. (such as we have often recommended), applied in May, August and November, is an excellent preventive of blight. Prof. Burrill, as we have stated, finds that bacteria cause pear blight, and he believes that the yellows of the peach is also caused by these minute organisms, though specifically different, probably, in the two cases. Prof. Burrill made experiments last July by inoculating healthy trees with the bacteria procured from diseased trees. These inoculations are made by inserting a knife or needle "smeared with the living bacteria" in the bark of healthy trees, and observing carefully the results from day to day. More than half of the branches thus treated were affected with blight in from eight days to six weeks. Now, the question is, whether a tree covered with such a wash would be attacked by these minute organisms.

Queries About Apples and Pears.

"*Apple Tree*," *Brooklyn, N. Y.*, asks, 1, what is the best season for planting apple trees; some, he says, make a short trench and fill it with stones, over which they place a little earth and thereon plant the trees, with this drain under them, and our friend asks, 2, if that is the proper way to do the job; 3, which would it be best to plant most of—apples or pears; and which would be the best varieties of each for the above locality; 4, what kind of soil is best adapted for apples and pears—is high ground better than elevated soil; 5, is

the soil of New Jersey as well adapted to these fruits as that of New York; 6, what is the best way of storing apples and pears.

ANS.—1. Spring. 2. It is a senseless plan. The drain is no drain at all. One might as well set a barrel in the soil and call that a drain. 3 Most of pears—Bartlett, Belle Lucrative, Beurre Bosc, Beurre d'Anjou, Beurre Giffard, Clapp's Favorite, Doyenne d'Eté, Duchesse d'Angouleme, Howell, Josephine de Malines, Lawrence, Seckel, Sheldon, Urbaniste, Winter Nelis. APPLES—Baldwin, Early Harvest, Fall Pippin, Fameuse, Golden Russet, Gravenstein, Hubbardston Nonesuch, Jefferis, Large Yellow Bough, Mother, Northern Spy, Peck's Pleasant, Red Astrachan, R. I. Greening, Roxbury Russet, Talman's Sweet, Twenty Ounce Apple 4. They will do best in soil that will grow 75 bushels of shelled corn to the acre. We do not understand the difference, perhaps, between "high ground" and "elevated soil." Certainly a well-drained soil is needed for successful pear or apple culture. 5. Yes Of course, the *varieties* would need to be changed. 6. The best way to store apples, so far as we know, is to place them in a dark place where the temperature may be maintained as nearly as possible at 32 deg., never going below.

Jersey Cattle and Cotswold Sheep.

J.S., Twin Oaks, Ky., asks, 1, what is the scale of points of Jersey cattle and, 2, also a distinctive description of Cotswold sheep.

ANS —1, Scale of points, as adopted by the Royal Jersey Agricultural and Horticultural Society, as given in the Herd Register of the J. C. C., Vol. I., 1871.

BULLS.

ARTICLE.	POINTS.
1. Head, fine and tapering	1
2. Forehead, broad	1
3. Cheek, small	1
4. Throat, clean	1
5. Muzzle, fine and encircled by a light color	1
6. Nostrils, high and open	1
7. Horns, smooth, crumpled, not too thick at the base, and tapering, tipped with black	1
8. Ears, small and thin	1
9. Ears, of a deep orange color within	1
10. Eyes, full and lively	1
11. Neck, arched, powerful, but not too coarse and heavy	
12 Chest, broad and deep	1
13. Barrel hooped, broad and deep	1
14. Well-ribbed home, having but little space between the last rib and the hip	1
5. Back, straight from the withers to the top of the hip	1
16. Back, straight from the top of the hip to the setting-on of the tail; and the tail at right angles with the back	1
17. Tail, fine	1
18. Tail, hanging down to the hocks	1
19. Hide, mellow and movable, but not too loose	1
20. Hide, covered with fine, soft hair	1
21. Hide, of good color	1
22 Fore-legs, short and straight	1
23. Fore-arms, large and powerful, swelling, and full above the knee, and fine below it	1
24. Hind-quarters, from the hock to the point of the rump, long and well filled up	1
25 Hind-legs, short and straight (below the hocks), and bones rather fine	1
26. Hind-legs, squarely placed, and not too near together when viewed from behind	1
27. Hind-legs, not to cross in walking	1
28. Hoofs, small	1
29. Growth	1
30. General appearance	1
31. Condition	1
Perfection	31

COWS AND HEIFERS.

ARTICLE.	POINTS.
1. Head, small, fine and tapering	1
2. Cheek, small	1
3. Throat, clean	1
4. Muzzle, fine and encircled by a light color,	1
5. Nostrils, high and open	1
6. Horns, smooth, crumpled, not too thick at the base and tapering	1
7. Ears, small and thin	1
8. Ears, of a deep orange color within	1
9. Eye, full and placid	1
10. Neck, straight, fine, and placed lightly on the shoulders	1
11. Chest broad and deep	1
12. Barrel-hooped, broad and deep	1
13. Well-ribbed home, having but little space between the last rib and the hip	1
14. Back, straight from the withers to the top of the hip	1
15. Back, straight from the top of the hip to the setting-on of the tail; and the tail at right angles with the back	1
16. Tail, fine	1
17. Tail, hanging down to the hocks	1
18. Hide, thin and movable, but not too loose	1
19. Hide, covered with fine, soft hair	1
20. Hide, of good color	1
21. Fore legs, short, straight and fine	1
22. Fore-arm, swelling and full above the knees	1
23. Hind-quarters from the hock to the point of the rump long and well filled up	1
24. Hind-legs, short and straight (below the hock), and bones rather fine	1
25. Hind-legs, squarely placed, not too close together when viewed from behind	1
26. Hind-legs, not to cross in walking	1
27. Hoofs small	1
28. Udder full in form i.e., well in line with the body	1
29. Udder, well up behind	1
30. Teats large and squarely placed. Behind wide apart	1
31. Milk-veins, very prominent	1
32. Growth	1
33. General appearance	1
34. Condition	1
Perfection	34

In the scale of points adopted by the N. Y. State Agricultural Society the above scale has been copied almost *verbatim*, but 10 instead of one is the mark of perfection on each point, and lower numbers are used as each is thought to approach more or less to perfection, while the Jersey Society gives no mark unless sufficient perfection is reached on each point. The N. Y. Society also adds 10 for pedigree on the sire's side and 10 for pedigree on the dam's, making the aggregate of perfection on bulls 330 and on cows 360, instead of 31 and 34, as in the Jersey scale.

2. The description of a well-bred Cotswold is as follows: The face and legs are white, but sometimes dashes of brown or gray derived from the original stock, may be found on both face and fore-legs. The head is strong and massive, with sometimes a Roman nose, without horns, and having a thick forelock of wool upon the forehead. The neck and fore-quarters are not so square and heavy, nor the brisket so prominent as in the best Leicesters, but the hind-quarters are square, full and broad, and the thigh solid and heavy. The back is straight and broad, and the ribs well sprung, giving a round body; the flanks are deep; the legs are clean, of moderate length, but the bone is not so fine as in the Leicester. The general style and appearance are good and attractive, and indicative of a vigorous, active, and hardy animal and a prime mutton sheep. They are active and well fitted for gathering a living upon a pasture in which a Leicester would hardly thrive. The lambs are active and hardy, and the ewes are good mothers. The fleece is closer upon the back than that of the Leicester, and only in aged rams exposes the skin along the middle. The wool sometimes reaches a length of nine inches, and although coarse, is soft and mellow. In some of these sheep, the fleece is beautifully waved.

Leveling uneven Sloughs, etc.

C. W. C. L., Davenport, Ia., asks, 1, the best way to level uneven sloughs; 2, what will be the result of applying salt to barley as a preventive of rust.

ANS.—1, the best method depends very much upon the character of the ground. If the sloughs are ever dry, they should then be plowed and scraped with a horse shovel and leveled. If always wet, they must be drained in some way. Drainage is the best treatment for these wet spots: for once drained they become rich ground and soon pay for the work and expense laid out upon them. 2, Salt can only exert an effect in the way indicated, by strengthening the straw and enabling it to resist the disease which produces the rust. This is doubtless caused by a weakness in the cellular tissue of the straw, which permits the sap to exude and furnish an opportunity for the rust spores to germinate. Salt has the effect of invigorating the straw, and may thus enable it to avoid this trouble. Whatever strengthens the even vigor of the plant acts favorably in preventing disease. On rich soil an uneven vigor may be produced and disease be encouraged; lime, salt and potash, all alkaline substances, supply the needed elements to counteract this tendency to over-luxuriance that is unbalanced, and consequently a source of weakness.

Cranberries on Uplands.

E. E. B., Windham Co., Conn., wishes to know if cranberries can be grown profitably on upland and without water; if they can be grown on upland, what variety is best, and is there anything difficult about raising them in that way.

ANS —About the year 1840, when cranberry cultivation first began to attract public attention, and a few years later, several parties in Massachusetts and New York experimented with them on uplands, using the same sorts as were cultivated on flooded meadows. At first they thought they were successful, but after a few years of trial, they were given up, so far as we have been able to learn. This was not because cranberries could not be grown on upland, but because the vine and fruit there were subject to so many more casualties than when flooded, and the yield of fruit was so much less, they could not be grown at a profit. It might be an object for any one particularly fond of this fruit, who resided where he could not obtain it at a moderate price, to cultivate a small patch of it in his garden. For the best method of planting the vines and their cultivation, see the RURAL of Dec., 4, page 799, with this slight difference—after the plants commence growing, treat them exactly as you would corn or any other hoed crop.

Hen Manure.

L. Y. A., Nokesville, Va., asks, 1, how much hen droppings should be drilled in with wheat to produce the same fertilizing effect as 300 lbs. of ground bone; 2, what can be mixed with the droppings to increase their bulk without lessening their fertilizing value; 3, what should be add to 50 or 60 bushels of cattle droppings, so as to make enough manure to go over 15 acres of corn.

ANS.—1. Three hundred pounds of bone contain about 70 pounds of phosphoric acid, and it would require about 2,500 pounds of hen manure in the partly dried state in which it is generally used, to supply 70 pounds of phosphoric acid. 2, Nothing can be added to the droppings to enrich them, as they are already the richest manure made on farms: 2,500 pounds would contain about 80 pounds of nitrogen which would be equal to that contained in the same amount of bone; so that while the half-dry hen manure is not so rich in phosphoric acid, it is about equal in nitrogen to bone. 3, The 50 to 60 bushels of cattle droppings would be about sufficient to give a small shovelful to each hill of corn on one acre. Rather than go to the trouble of mixing anything with this, it would be better to use it as far as it will go and then procure some corn fertilizer for use in the hill or broadcast. Read over our Corn Number carefully again.

A Sterile Cow.

M. B. P., Brookston, N. C., has a three-year-old grade Jersey heifer that dropped her first calf when two years old, and then gave promise of becoming a superior cow. Last Spring, however, she aborted—on account of an accident—a month before the calf was due. She has been milked this Summer and is yet giving three quarts a day; but though she has been "served" twice she is not with calf, and as our friend has never before owned an aborting cow, he asks the best treatment for this one.

ANS.—It is quite probable the cow is all right: unless the accident which caused the trouble did some permanent injury, there is no reason why the cow should not breed again. It would be well to keep milking her and have her served regularly until she becomes in calf or is found to fail altogether. In the latter case she may continue to milk along, and should be well fed to increase the quantity of milk. It is not unusual for cows, especially in a dry season, to require repeated services before getting with calf.

Miscellaneous.

J. J. P., Nashville, Tenn., asks, 1, from whom did we buy the fertilizers used at the Experiment Farm on our late large corn crop: 2 from whom can he buy seeds of the Rural Branching Sorghum and the Golden Ovoid Mangel.

ANS —1, From the Mapes Fertilizing Co., 158 Front St., N. Y. 2, The Rural Branching Sorghum is not for sale *anywhere*. The RURAL has all the seed known to have been produced from last year's crop, all of which, so far as we can learn, was grown upon six acres. Notice is given to subscribers who succeed in raising seed from the seed which we shall send out, that a ready market in N. Y City is waiting for them. The Mangel is offered in several of the catalogues which will be noticed in this journal in a few weeks.

G. H. A., New Haven, Conn., asks "whether Iris Kæmpferi should be transplanted in the Spring or Fall; 2, does it belong to the bulbous iris tribe; 3 what is the distinctive peculiarity of the *suffruticosa* section of the Perennial Phloxes?

ANS'—1, The Iris may just as well be transplanted in the Spring. There is no plant of the Iris, Amaryllis, or Lily family, whose cultivation we can more heartily recommend. 2, Creeping tuberous roots, not bulbs. 3, As distinguished from *decussata*, the stems are more dwarf and slender—the leaves more glossy.

A. A. P., St. Mary's, Canada, says that a man has been traveling thereabouts selling Yellow Hackberry Corn at $3 per bushel, and professing that it would ripen in from 90 to 110 days, and our friend inquires whether it is a good sort and if it will ripen in the time stated.

ANS.—We know nothing about it. The value of any new variety of corn in a given place can be ascertained only by trial. We should not pay such a price for seed corn unless we had full confidence in the person offering it.

C. W. C. L., Davenport, Ia., asks how to can green peas for Winter use.

ANS.—The peas should be put in the cans with sufficient water to cover them only. The covers are then soldered leaving a pin-hole for the steam to escape. The cans are then boiled for two hours and, as they are removed one by one, a drop of solder is put on the pin-hole to close it. The cans are then put in a boiler and boiled for one hour longer. Then they may be stored away.

E. H. P., has some fine Brahma hens, but they are not good layers, and he asks what breed are the best layers and the most profitable in all respects.

ANS —No matter what the breed, excellent care is necessary to make them lay. The Leghorns are probably the best layers—the Black Hamburghs also rank high in this respect. For all purposes, we have never found any breed more satisfactory than Plymouth Rocks.

C. M., Albion, N. Y., Address the Pope Manufacturing Co., 595 Washington St., Boston, Mass., for circulars respecting the Columbia Bicycle, which will be promptly forwarded. We have ourselves examined these bicycles. They are of first-class workmanship and are all that they are represented to be.

Subscriber, Park Ridge, N. J., asks whether salt mixed with food for pigs, is, or is not injurious.

ANS.—This query is answered under "SWINEHERD."

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 15.

W. H. E.—F. H. S.—G. E. N.—R. J. D.—E. J. R—G. A. G., Jr.—G. W.—H. W. R. We have hardly time to draw and engrave it; would like specimens later.—G. W. F—R. H. C.—F. D. C.—J. G. B It may be that we shall reserve this for "Small-fruit Special."—T. T. L.—G. S. C.—R C. McW. The RURAL is always pleased to receive interesting facts in the experience of its subscribers.—W. G. W.—E. F. D.—C. E. C.—D. M. H.—J. W. L.—G. E. N.—W. B.—W. M.—B. F. J.—F. H. S.—E. W. B.—C. C.—T. H. H.—O. W. D.—G. M. D.—J. P.—J. P. R.—W. G—R. S. P.—A. B. A.—Kate M. F., Ray Clark, or Emily Maple would be glad to hear from you. We do not care much for poetry.—U, T. S.—A. B O.—Albert Turner reserved for small fruit number.—A. L. J., Is Rhus cotinus hardy with you?—B. F. J.—P. B. M.—T. H. H.—O. W. D. —W. M.—C. C —F. H. S.—C. G. C.—S. B.—C. M. T. R J.—N. W. K.—M. W. F.—W. V. A —L. A. T. C. M.—J. J. B.—A. A.—T. J. W.—L. D. N.—W. M.

Industrial Topics.

COMMISSIONER LE DUC'S ACTION WITH REGARD TO PLEURO-PNEUMONIA.

A Charge Refuted.

IN the course of an article contained in the Ohio Farmer of the 1st inst, under the caption of "Is Gen. LeDuc to be Removed?" occurs the following language:—

"Gen. LeDuc is proposed for the Secretaryship of Agriculture in the Cabinet. That should demand wise foresight and a thorough, intellectual and business grasp of the entire situation, and wisdom to counsel wise legislation. He who fills that place should be a leader. Has Gen. LeDuo proved himself to be one? Take the case of pleuro-pneumonia. He gave no public proof of knowledge of its existence, magnitude and dangerous character till private, State and national interference had definitely marked and mapped its territory and hemmed it in. He showed no appreciation of its influence on our export trade in cattle till President Hayes sent a special Commissioner to England to inquire what could be done."

The writer of the above is wrong *in toto*. To show the great injustice which he has done the Commissioner of Agriculture in the above charge we have but briefly to recall the action of Gen. LeDuc in the investigation of diseases of farm animals—an investigation which he instituted, as the published records show, almost immediately on his accession to office. No other Commissioner had done anything in this direction, and to him alone is due the present interest manifested in the subject of the suppression of that terrible disease known as contagious pleuro-pneumonia of cattle. And now to the record:—

Investigation Commenced in '77.

As early as August, 1877, during the second month of his administration, he caused the following circular letter to be forwarded to each member of the House of Representatives:

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., Aug, 1877.

SIR: This Department is making a thorough investigation into the causes of the many diseases now, and for some years past, prevailing, with such fatal effect, among the farm animals of this country. In order that this work may be facilitated, and the Department put in possession of information that will enable it to form a correct understanding of the extent, nature and character of these diseases, and of the remedies indicated therefor, I would thank you for the names and post office addresses of some of the more prominent stock and poultry dealers and breeders of your district, and also the addresses of respectable veterinary surgeons who have had experience in this direction. The names should include those of persons residing in localities where diseases of a general and local character prevail, either among horses, cattle, sheep, hogs or poultry.

I remain yours, very respectfully,
WM. G. LE DUC, Commissioner.

Members of Congress seem to have promptly responded to the above request, for we find that during the same month the Commissioner forwarded the following circular letter to one or more correspondents in every county of the United States:

DEPARTMENT OF AGRICULTURE,
Washington, D. C., Aug. 1877.

SIR:—This Department, being desirous of making an investigation into the causes of diseases now, and for some years past, prevailing among all classes of farm animals, desires your assistance and co-operation in the proper consideration and determination of a subject of such great importance to the stock breeders and growers of this country. With the view of saving millions of dollars annually by the timely use of such remedies and preventives as are now known or may be discovered by this investigation, the Department desires, as speedily as possible, to be put in possession of such facts as may have come under your observation in relation to diseases affecting horses, cattle, sheep, hogs and fowls, either in your own neighborhood or in adjacent localities. Have the kindness to give as complete a diagnosis of the disease as possible, stating the duration of the attack, its average fatality, what remedies, if any, are used, and with what success. In localities where diseases prevail among more than one class of animals, separate statements should be made under the name of the animals affected. Very respectfully, &c.,

WM. G. LEDUC, Commissioner.

Early Results.

This circular letter elicited a vast amount of information, which was called for by resolution of the Senate on February 20, 1878 and was forwarded to that body by President Hayes, accompanied by a short message, on the 27th day of the same month. This information was speedily published by order of the Senate, as Senate Executive Document No. 35, 45th Congress, Second Session. In the letter transmitting this information to the Senate, Gen. DeDuc says:

"For some years past the local press, and especially the agricultural journals of the country, have been calling attention to the increase of diseases among farm stock, and the consequent heavy losses annually sustained by our farmers and stock breeders and growers. I regarded the subject as one of such vast importance to the productive industries of our country as to demand the immediate attention of this Department."

(Continued on page 57.)

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, JAN. 22, 1881.

WE want the Director of the New York Experiment Station, as the Ithaca Club says, to be a man who has clear conceptions and a just appreciation of science. Such a one can *suggest* lines of scientific experiment that may be more valuable than any the scientist can suggest.

SEVERELY just criticisms on the sins of commission and omission of public officials are not only the privilege but the duty of the public press; but a fair measure of care should be taken in investigating the subject discussed before attributing blame, lest in the desire to benefit the public, injure a public functionary, or advance some private interest, injustice may be committed. Elsewhere in this issue, it is clearly shown that the charge made by a highly esteemed contemporary against the Commissioner of Agriculture, with regard to his action concerning pleuro-pneumonia, is entirely unfounded.

THE RURAL ILLUSTRATIONS.—Thus writes Col. F. D. Curtis: "The new departure of the RURAL NEW-YORKER in furnishing its readers with life-like or exact pictures of animals, as nearly as they can be transferred to paper, is an enterprising and honest attempt in the right direction. These pictures may not *flatter* the animal, but they are real, and on this account valuable, because they give a correct idea of the animal or breed, whereas the common illustrations of animals and breeds are often fanciful—purchased cuts which are made to sell and are used for different animals and different breeds. These cuts, always 'on hand,' are much cheaper, but coupled with their cheapness there is delusion and fraud. They deceive their admirers and are not what they represent. The attempts of the RURAL to right this wrong are praiseworthy, and should be sustained by all honest breeders."

A SAD LOSS.—Fires in country places seem to be unusually numerous and disastrous this year, but the most lamentable that has come to our notice is the horrible destruction of the splendid herd of Jersey cattle at the Elizabeth farms near Brickville, Pa., between 12 and one o'clock last Saturday night. The herd numbered 52 registered Jerseys, including the bull Coxswain, valued at $3,000, and was the finest Jersey herd in Pennsylvania, if not in the entire country. It belonged to the estate of the late G. D. Coleman, of Lebanon, and was under the management of Colin Cameron. The barn in which the animals were stabled, together with a large amount of hay and other property, was entirely consumed. Above the roar of the flames rose the agonized groans and bellowings of the cattle as they were roasted alive chained in their stalls. The fire was decidedly incendiary, and the money loss about $40,000. In some of the States arson is still a capital offense—does not the cruel, malicious wretch who caused so much suffering and loss deserve the halter?

A DESIRABLE BEGINNING.—The weather warnings of the Signal Service have hitherto been of practical use almost exclusively to the shipping interest, which has been largely benefited by the forewarnings of approaching storms, given at the chief ocean and lake ports. We have frequently called attention to the great benefit agriculture and kindred industries might derive from similar forewarnings, and are therefore pleased to learn by a telegram from Washington last Saturday, that the first step has just been taken in this direction. The Texan "northers" have frequently proved exceedingly destructive to the flocks and herds of the Lone Star State, and General Hazen, the new Chief of the Signal Service, has given instructions, we are told, to have the approach of these storms telegraphed in time for the shepherds and herdsmen to take measures for the protection of their charge. How this is to be done with herds and flocks scattered over the prairies or wide ranges is not any plainer than how forewarnings are to be sent to those regions. The important point, however, is that the first step has been taken in rendering the Signal Service of advantage to those who make a livelihood by land, as well as to those who make fortunes by sea.

STOCK-RAISING OR AGRICULTURE—WHICH?—A measure is to be introduced into Congress giving 650 acres of the public land to any person who will sink an artesian well on the Great Western Plains, and thus secure a permanent supply of water. The cost of such work would render it impossible for the ordinary agricultural settler on the frontier to accomplish it, whereas stockmen desirous of extending their ranges would find the outlay an excellent investment, and by sinking wells in the names of their hands, they might soon seize upon all the most eligible localities. Already there is much complaint by small farmers along the frontier that the wealthy stock-owners are monopolizing all the springs and water-courses on the plains by a somewhat similar trick, and should this measure be adopted doubtless such complaints will be louder and more numerous. Stockmen, however, claim that the plains between the 100th meridian and the Rocky Mountains are unfit for tillage and suitable only for grazing. This question should be promptly investigated, and should it turn out that that vast, but at present arid, region is fit only for pasturage, it would be wise in the government to favor the above plan as likely to foster the great cattle interests of our Western territories.

ROOT-PRUNING VS. SHALLOW CULTURE FOR CORN.

Dr. Sturtevant, in a late N. Y. Tribune, speaks of the yield of corn of Mr. Bowditch, of Massachusetts, and how it was produced. On 17¼ acres of land he raised 100 bushels per acre. The land was in "fair—not high condition." It received for dressing 123 bags (200 pounds each) of "corn manure," or about 8 bags per acre. "After the plants were from one-and-a-half to two feet high, the cultivator was used—one of those which straddle the rows and whose discs cut deeply and lift the soil." It was "run frequently and as close to the plants as was possible and as deep as it would go." By such means the plant, whenever it obtained a rampant growth, was at once checked by the severe 'root-pruning,' and reminded, so to speak, that its purpose was to grow grain and not leaf.

Dr. Sturtevant concludes that this root-pruning was one of the secrets of the large crop. He cites as evidence that a neighbor (in friendly rivalry) used more manure and planted a smaller field; using greater labor in hand work and ignoring root-pruning. But he secured but "78½ bushels of crop."

At the RURAL's farm we raised, as has been shown, over 150 bushels of shelled corn on one acre, with but 350 pounds of "corn manure" in one instance, and over 130 in another, with 500 pounds of concentrated fertilizer. The cultivation was confined as nearly as possible *to the surface*. The plants were in no case reminded that their "purpose was to grow grain and not leaf."

Now, a neighbor upon a field but one field removed from us, used 1,200 pounds of special fertilizer broadcast, besides a small quantity in each hill, and used the sort of cultivator which Dr. Sturtevant describes, viz., one which "straddles the rows and whose discs cut deeply and lift the soil." His crop, as we have ascertained within the last few days, was between 75 and 80 bushels per acre on three-and-a-half acres. Is not our evidence, as given above, as forcible against "root-pruning" as Dr. Sturtevant's is in its favor?

THE WORLD'S FAIR.

In view of the unanimous election of General Grant to the presidency of the World's Fair Commission, and the promptness with which subscriptions are being handed in, we may confidently look for a successful Exhibition in 1883. Though the time for preparation is short and the work to be done is great, yet, we have no doubt but that, with zeal and persistence in pushing on the work, it may be all accomplished in due time.

Large sums of money have already been subscribed, but most of it conditionally. It seems as if the capitalists of the city and country should come out fearlessly and give a certain amount positively, not hypothetically, and thus the lingering doubt as to whether there is to be sufficient financial support may be removed. Mr. Vanderbilt promises $250,000 provided $4,000,000 are raised, and others agree to give $10,000 if two hundred similar subscriptions can be secured. If these $4,000,000 are not raised within three months it will be wisdom on the part of the commissioners if they postpone the time for holding the Exhibition a year or two.

But $4,000,000 will be far from sufficient to complete the work; it will be simply enough to insure a beginning. At least $10,000,000, and perhaps $12,000,000 will be expended by the Committee before the close of the Exhibition. Considering the fact that the receipts, after the Fair is opened, will defray the expenses in part, that should not prevent a hearty response to the present call for funds.

A failure to carry out the proposed plans for the Exhibition where success depends almost solely on financial considerations, would justly invite the sarcastic sneers of our foreign friends, and be somewhat humiliating to us as a nation on whom the sun of prosperity is shining in full effulgence; but we believe that our capitalists and the people at large have the good name and the best interests of the country too much at heart too allow any such issue of affairs.

With regard to the proposed site at Inwood, there are some objections, but not more than would be connected with any other site in the vicinity of the city, and many of these objections may be removed or greatly modified if no time is lost in the preparatory work.

A GIGANTIC MONOPOLY.

During the past week the commercial world, which from necessity largely patronizes the telegraph, has been greatly disturbed by the announcement that the Western Union, American Union and Atlantic and Pacific telegraph companies have formed a scheme of consolidation on the basis of a largely increased nominal capital. The present capital by which these companies are represented is much greater than the actual outlay made by them, and the projected increase will certainly entail higher rates in order to earn dividends on the floating capital, while the gigantic monopoly of the telegraphic facilities of the country will enable its managers to levy whatever tax they please on the public at large who may find it necessary to use the wires. A project is on foot for the formation of another telegraphic company so organized as to prevent its being absorbed by, or consolidated with, any other company; but even if such a company is formed it will be years before its lines are so extended as to be of benefit to the general public, as its rival will certainly obstruct it in every way.

Legislation, State or national, should promptly protect the public welfare from the odious tyranny and exactions of this and other huge monopolies. Already the prospective consolidation of the three chief lines in the country has strengthened the feeling in Congress in favor of adopting the postal telegraph system under control of the government, and it is reported that several bills providing for its establishment will be introduced into the House to-day. Although we are strongly opposed to the meddling of the government in undertakings that should be carried on by private enterprise, still the protection of the citizen against his foes is the chief end of all governments, and the most formidable enemies of the American citizen to-day are the monopolies that are constantly extending their baneful influence. If it is necessary therefore in order to protect the public from the exactions of monopolies that the government should take control not only of the telegraphs of the country, as in England, but also of its railroads, as in France, we shall heartily support the measure; for the best interests of the public are ours.

BREVITIES.

LADY Apples are now selling for $5.50 per barrel.

THE announcements of seedsmen, nurserymen, etc., may from now on be looked for in our advertising columns.

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

WE receive some compliments that we value more than others. Here is one from Prof. E. W. Stewart: "I am glad to see strong evidence of your prosperity. Your paper is an honor to journalism."

OUR respected contributor, B. F. Johnson, of Illinois, writes:—"I have seen some large specimens of corn, but the ear of Chester Mammoth you gave us a cut of in the Corn Number is ahead of anything I have ever seen."

A CITRON was brought to the office by Mr. E. Williams who received it from Florida, measuring 7x12 inches in diameter. It is said to be the largest citron on record. The weight is ten pounds.

LET the 18th session of the American Pomological Society be the grandest thing of the kind ever held. President Wilder, as we have already announced, appoints the 14th of next September as the day—and Boston as the place.

THERE is a Yellow Calla Lily (Richardia hastata), a colored plate of which is figured in a recent London Garden. Although introduced into England 23 years ago it is yet quite rare, the stock being held by Hooper & Co. of Covent Garden, who are now sending it out.

WE understand that Ex-Governor Furnas, of Nebraska, is being strongly supported as the successor of Gen Le Duc at the head of the Agricultural Department, should the latter, like the heads of the other Departments, go out of office on the accession of the next President. A better man for the position could scarcely be named.

WE see a marked difference now from an advertisement in the RURAL, as compared with four or five years ago. The letters from our advertisers are more than double, which is the best proof we can get that the paper has a good circulation with a good class of people.

Ft. Atkinson, Wis. CORNISH & CURTIS.

A BOY, a visitor at the late Fat Stock Show in Chicago, on returning home was asked to describe in his own words some of those wonderful fat steers of Mr. Gillett, of which the newspapers had so much to say. He hesitated a while, and then said:—"Gillett's red steers looked more like a street car, with a head and a tail to it, than anything else I can think of."

EUROTAS'S yield of 778 pounds of butter a year, or about 15 pounds per week the year round, does not seem to gain a hearty credit across the Atlantic, to judge by the remarks thereon in our English exchanges. Well, we have a few doubting Thomases here at home; and faith in wonders naturally grows less with distance of place as well as of time.

How accounts do differ! The official report of the French Government places the yield of wheat in France for '80 at 279,200,000 bushels, and the average yield at 32 bushels per acre. Moreover, it is stated that for the past 10 years the average yield has been 31.3 bushels, and the average annual production 267,933,600 bushels, while the country has for the last decade imported 34,110,400 bushels, making the average annual requirement 302,044,000 bushels. English authorities have been putting the average yield of wheat in France at 15 bushels, whereas it thus appears it is greater than the English yield.

MANY singular discoveries have been made among manufacturers by the census enumerators in the course of their investigations. For instance, it has long been known that dealers are in the habit of adulterating honey with glucose on the plea of thus improving its keeping qualities. In Boston, however, there is a firm doing a large business in making honey entirely from glucose much in the same way as manufacturers elsewhere make butter from suine and oleomargarine. The comb is molded out of paraffine in excellent imitation of the work of bees; then the cells are filled with pure glucose and sealed by passing a hot iron over them, and the product is sent to Europe as our best clover honey. The busiest Italian bees couldn't compete with this firm in turning out honey, any more than could a Eurotas-like Jersey breed compete in butter making with our deft manipulators of lard and tallow.

DURING the week an effort is to be made in the House of Representatives to pass a bill giving to the head of the Department of Agriculture a seat in the Cabinet. The RURAL NEW-YORKER has been, for years, an earnest advocate of such a measure, confident that good results to the agricultural interests of the country must accrue from its adoption. We have in the past so frequently advocated the measure, that we shall confine ourselves here to wishing success to the approaching attempt to secure its passage. The present Congress will come to an end in a few weeks, without having hitherto greatly distinguished itself by the wisdom of its legislation; but should it raise the Department of Agriculture to the dignity due to the vast interests it represents, it will have done much to make up for its legislative shortcomings. That the elevation of the Department of Agriculture to the level of the other Departments is only a question of time—at most of a few months—seems to be generally conceded, and if the present Democratic Congress fails to reap the credit of passing the measure, the next Republican Congress is pretty sure to do so, thus bespeaking the good will and support of the vast agricultural community.

ARE we not in danger of having too many agricultural societies of national scope. Last year the American Agl Association which was to take charge of the agricultural interests of the nation, was founded in this city with much *eclat;* the other day the National Farmers' Alliance, which is to cover the same ground, and branch out a little into politics, was started in Chicago by an enterprising local paper; and last Wednesday a dozen or so highly respectable gentlemen assembled at Washington and revived the old United States Agricultural Society, which was founded 20 years ago, or so, to take charge of the farmers' interests everywhere in the Union. This venerable society, however, with the wisdom of age, passed two excellent resolutions:—First, it resolved that its congratulations should be conveyed to the Hon. Marshall P. Wilder, "the founder and friend" of the Society; and, second, it resolved that the question of its consolidation with the A. A. A., should be referred to the President and Secretary with full power to act as they might deem proper. One vigorous society would, in our opinion, be of more benefit to the farmers of the country than a trio of semi moribund ones. Can any of these societies do more for the farmer than the Grange has done; or is any of them more capable of benefiting him, socially, educationally or politically?

(Continued from page 55.)

This langnagc occurs on the first page of the above-named Executive documeut. Following it are the circular letters quoted above. Out of 2 447 (the number of counties composing all the States and Territories of the U. S. at that time), returns from 1,125 were received, from which a tabnlar statement of losses for the year was compiled. This statement may be found on page three of Executive Document No. 35, and is the more valnable because of its being the first statement ever made relating to the annual losses of farm animals by disease. The 1,125 counties reported the following losses for the year 1877:

No. of hogs raised	18,987,342
No. affected with various diseases	2,599,543
Proportion of those attacked that died	.5889
Money value of losses among swine	$10,091,483
Money value of all other classes of farm animals annually lost by disease	$6,561,945
Total value of annua! losses of all classes of domestic animals	$16,653,428

Again (quoting from the Commissioner's letter of transmittal, page three of the same document), we find him using the following language:

"Our wide extent of country and its great diversity of temperature and variation of climate, the severity of frosts in some sections, and the intensity of heat in other localities, render farm stock liable to the attacks and ravages of almost every disease known in the history of domestic animals. * * * * This interest is too great to be longer neglected by the general government. Not only the health of its citizens, but one of the greatest sources of our wealth demands that it should furnish the means for a most searching and thorough investigation into the causes of all diseases affecting live stock."

And now as to the character of this Senate Executive Document No. 35, 2d Session, Forty-fifth Congress. It is a volume of 150 pages of closely printed type, and contains all the letters of any importance received from nearly 1200 practical farmers in all sections of the country. Of the information contained in these letters the Commissioner says that, if heeded by the farmers and stock growers of the country, "it will result in a better sanitary condition, and a consequent diminution of disease among all classes of domesticated animals." As but a small edition of this work was issued by the Senate. Gen. Le Duc considered it of sufficient importance to reprint the more important portions of it, together with much valnable information received subsequently, in the annual Report of the Department for 1877. As 300,000 copies of this work were published, no editor of an agricultural journal should plead ignorance in regard to what it contains.

First Official Notice of Pleuro-Pneumonia.

Among other things contained in this Executive Document No. 35, are several letters giving information as to the prevalence of the disease known as pleuro-pneumonia of cattle. This was the first information of an official character published in relation to the existence of this disease among our cattle, and it not only attracted the attention of our own people but alarmed foreign governments, some of which at once commenced an investigation through agents sent to this country for the purpose. The Agricultural Committee of both the Senate and House of Representatives began to see the importance of some action on the part of the general government, and on the 14th day of February, 1879, after American cattle had been scheduled by the British Government, the Senate asked for additional information on the subject. As General Le Duc's letter of transmittal, which may be found commencing on page 219 of Special Report No. 12 of his Department, and of which 115,000 copies were printed in accordance with a special Act of Congress providing for the same, was one of the most valuable works ever issued by the government, our excellent contemporary should not be ignorant of its contents. The letter is addressed to Hon. A. S. Paddock, the then Chairman of the Senate Committee on Agriculture. It would fill scarcely less than three pages of this journal, so that its publication here is out of the question.

The evidence it offers, however, would seem to be sufficient to disprove the unwarranted and unjust assertion of the editor of the Ohio Farmer that Gen LeDuc gave no public proof of knowledge of the existence of contagious pleuro-pneumonia among our cattle, but we have something to offer in rebuttal of the declaration that he did not comprehend the "magnitude and dangerous character" of the disease "till private, State and national enterprise had definitely marked and mapped out the territory" over which it prevailed and "hemmed it in."

Commissioner Le Duc Ahead.

In August last the Department issued its Special Report No. 22, being one of a series of Reports relating solely to an investigation of diseases of domesticated animals. One hundred thousand copies of this report were also printed by Special Act of Congress, but the information it contains was regarded as of sufficient importance to be embodied in the annual Report of the Department for the year 1879. As this gives an edition of 400,000 copies, surely no editor of a leading agricultural journal ought to plead ignorance of its contents. This Special Report, No. 22, contains all the information attainable up to the time it went to press touching the progress of measures for the eradication of pleuro-pneumonia in the States where it exists. As no "national" action has as yet been taken by the government for the suppression of the disease, one can see what truth there is in the statement that Gen. LeDuc took no action "*till* private, State and *national* enterprise had definitely marked and mapped the territory and hemmed it in."

Bear in mind that Gen. LeDuc's investigations commenced in August, 1877, and that in the month of February following he forwarded to Congress a communication informing that body that this dreaded disease of contagious pleuro-pneumonia existed at several points in the United States. He not only furnished this information to Congress at that time, but he followed it up by urging in the strongest possible language immediate action upon the part of the General Government. At that time not one of the infected States had a law on the subject. It was not until April 15, 1878, that the State of New York passed a law for the suppression of the disease, and no measures for the enforcement of this were attempted until Feb. 12, 1879. New Jersey passed a law on the subject on March 13, 1879; Pennsylvania, on May 1, 1879, and Maryland in the Winter of 1880. For the text of the laws of some of these States, and the progress of the measures for the suppression of the malady, the reader is referred to Special Report No. 22, Department of Agriculture, pages 152 to 163 inclusive, and the Annual Report of Department of Agriculture for 1879, pages 446 to 455 inclusive. If the editor of the Ohio Farmer has not these volumes in his library, he of course, is well aware he can procure them by writing to the Commissioner of Agriculture. On page 163 of Special Report No. 22 commences the report of Dr. Chas. P. Lyman, who visited, under the direction of the Commissioner, the localities where the disease prevailed at that time, and he is the only one who has thus far "mapped out" the infected districts.

EXTENDING THE FERTILIZER TRADE.

MR. L. L. CROCKER has put up large and extensive works at Indianapolis, filled up with the latest and most improved machinery for drying and handling animal matter for his fertilizer works in Buffalo, N. Y. He has made contracts to last during the next three years for the products of over 1,500,000 hogs every year from Bloomington and Peoria, Ill., Louisville, Ky., Indianapolis, Ind., and several other points. The general advance in the material used in the making of commercial fertilizers the present season over the prices last year is from five to six dollars per ton. By this enterprise Mr. Crocker will be enabled to put his fertilizers on the market at the same price as last season, and at the same time retain fully as high an analysis and their former value. At Bloomington, Peoria and Louisville, the firm has in full operation steam presses for extracting the moisture and grease, after which the tankage is forwarded to Indianapolis to undergo the final treatment in the driers. Mr. Crocker has lately contracted with Eastern buyers for 500 tons of ammoniacal matter at $60 per ton, delivered in New York. This will show the great advance in this material. The advance in everything entering into the manufacture of commercial fertilizers has been very great, excepting only South Carolina and other rock phosphates. While enterprises of this sort contribute largely to the prosperity of the firm that undertakes them, they are also of decided advantage to the public, inasmuch as they enable the manufacturers to place upon the market within reach of all who may need them, strictly first-class goods at reasonable prices. One of the greatest evils the farmer has to encounter, is the sudden fluctuations in the prices of the goods he has to buy, due mainly to speculative movements on the part of dealers or manufacturers, and it is a decided benefit to the agricultural community that his present enterprise will enable Mr. Crocker to supply them "with a first-rate article at a steady price. The Honest Fertilizers" must have a greatly increased sale during the current year. W. H. K.

"Of Making Books there is no End."

During the year 1880 the American Book Exchange alone manufactured in their binderies nearly 750,000 volumes and put into type and electrotyped about 40,000 pages of new books. As many as 300 pages, containing nearly half a million printer's "ems," went into type in a single day. The cash sales for the year foot up to $414,248.15. Surely Americans *must* be a reading people.

B. S. WILLIAMS & Co., Kalamazoo, Mich., have just received an order from South Africa for five Stover Wind-Mills. They have also lately made several shipments to South America and their foreign trade is rapidly increasing.

Literary Miscellany.

DEATH OF THE OLD YEAR.

ALFRED TENNYSON.

FULL knee deep lies the winter snow,
And the winter winds are wearily sighing.
Toll ye the church bell sad and slow,
And tread softly and speak low,
For the old year lies a dying.
Old year, you must not die;
You came to us so readily,
You lived with us so steadily,
Old year, you shall not die.

He lieth still; he doth not move;
He will not see the dawn of day;
He hath no other life above.
He gave me a friend and a true, true-love,
And the old year will take em away.
Old year, you must not go;
So long as you have been with us,
Such joy as you have seen with us,
Old year, you shall not go.

He frothed his bumpers to the brim;
A jollier year we shall not see
But though his eyes are waxing dim,
And though his foes speak ill of him,
He was a friend to me.
Old year, you shall not die;
We did so laugh and cry with you.
I've half a mind to die with you,
Old year, you must not die.

He was full of joke and jest,
But all his merry quips are o'er,
To see him die across the waste,
His son and heir doth ride post haste,
But he'll be dead before.
Every one for his own,
The night is starry and cold, my friend,
The new year blithe and bold, my friend,
Come to take up his own.

How hard he breathes!
I heard just now the crowing cock,
The cricket chirps; the light burns low;
'Tis nearly twelve o'clock.
Shake hands before you die,
Old year we'll dearly rue for you;
What is it we can do for you?
Speak out before you die.

His face is growing sharp and thin,
Alack! our friend is gone.
Close up his eyes, tie up his chin;
Step from the corpse, and let him in
That standeth there alone,
And waiteth at the door.
There's a new foot on the floor, my friend,
And a new face at the door, my friend.
A new face at the door.

INMATES OF LESTER HALL.

(Continued from page 26.)

CHAPTER XXXIII.

"And she?" said Sister Monica, eagerly, her fair face flushing as she leaned forward.

"She? She laughed him to scorn!" he laughed bitterly.

"Ah! cruel! how could she? how dared she?" said the gentle nun, clasping her hands eagerly. "It was very wrong."

"There was one excuse for her," he said, hurriedly. She had a brother, whom she loved dearly, and he had been led astray by the brother of this man who loved her; he died a broken down ruined man, and she vowed to revenge his death. To keep this vow, she won the doctor's love -to avenge her brother's death, she scorned it!"

"It was cruelly unjust!" said the nun, gravely.

"No, no!" he said, quickly. He could not hear Cecil blamed. "She thought that he, the doctor, was the guilty man who had ruined her brother."

"Did he not undeceive her?" asked the nun.

"Chance did afterwards," he answered, wearily. "Perhaps I ought not to say chance to you, my sister; and she, in her nobility, wrote to the man who had loved her so madly, and asked his forgiveness."

"And he?"

"He forgave her," he answered, feebly. "He had no room for anger in his heart against her, it was too full of love——"

"Well, and then?" said Sister Monica, with her bright, eager eyes full of tears at his pathetic words.

"When she wrote to him," said Lawrence, his face contracting with pain, "she was the promised wife of another."

Sister Monica uttered a little broken exclamation, and there was a silence.

"That is not quite all," he continued, in a moment. "It so happened that they met again; they were staying together at the same house, and the man whose wife she was to be was there also. They met daily, although they had but little intercourse with each other. How that madman suffered when he saw her with the man to whom she had given a right to love her, and who had permission to touch her hand, her cheek, her lips! One night she came to him and they were alone, and she told him that, betrothed to another though she was, she loved him—loved the man whom she had scorned—loved him with her whole life and being! Can you guess what the temptation to him was then? He resisted it fiercely, and rejected that love, refusing even to touch her hand—because, poor fellow! he dared not. Was it not another's?"

"That was very noble of him," said the nun, gently. "Well?"

"They never met again; the doctor came abroad; he dared not trust himself to look upon her face again."

"And she? Is she married?"

"I do not know. The day was fixed for the wedding, but she was taken ill—not dangerously, but sufficiently to prevent any marriage taking place."

He closed his eyes wearily, and Sister Monica said no more, but when she next glanced at his face large drops of water were shining on the long eyelashes, and rolling down the hollow cheeks; and as she left him, going to prostrate herself before the altar in the little chapel, and while she prayed that the dark shadow might be lifted from Lawrence Carewe's life, there mingled with her prayers a chord of thanksgiving for the calm and peace of her own existence.

CHAPTER XXXIV.

A STRANGE RETURNING.

Sorrow rarely kills. It is wonderful how much this frail humanity of ours can bear without sinking under the burden which at first threatened to overwhelm us. At first, when the trouble comes, it seems as if we should never know joy or peace again—as if for us the sun was darkened, the earth had lost its beauty, the flowers their fragrance; but by-and-by we lift up our heads again. Much has been taken from us, but much has been left, and we discover that

"Life has more things to dwell on
Than just one useless pain!"

And we go about our usual tasks, and resume our usual occupations, heavily indeed, it may be, but even the effort is beneficial to us."

The shock of Lawrence Carewe's terrible death did not kill Cecil Lester, although those who loved her at first feared that it would do so; but when she first left her room after the nervous illness which prostrated her for a time, those around her were surprised how well "she bore it." She neither wept nor wailed: no word of lamentation or moaning escaped her lips. She was very quiet indeed, but more gentle, more patient, than she had ever been before. Thus she was outwardly; it was when she was alone that she suffered an inconceivable anguish.

During the day she tried hard to be calm and composed—she drove out with Mattie, saw a few visitors, who accounted for her altered looks by her late illness, and who never dreamed that the illness was caused by the announcement, which some few had noticed, of Dr. Carewe's death in the East. She was never idle; she tried to read, she tried to work, she tried to practice, with a feverish desire for occupation, but she could fix her attention on one subject but for a short time; she grew dreadfully restless, and grew thin to emaciation, pale and haggard.

I think what saved her reason, if not her life, was a faint glimmer of hope which lay deep in the inmost recesses of her heart—unconfessed even to herself, but living. There might have been some mistake—a case of mistaken identity, perhaps; such things had happened ere now. And there never came a knock at the hall door—a carriage never stopped before the house—but Cecil started to her feet with a sudden eager, hungry light in her eyes, and a wild hope in her heart, that when the door opened she would see the tall proud figure, and the grave, gray eyes she loved so well. It went to Mattie's heart to see how despairing the great eyes would look when the hope proved as it always did—fallacious.

Once, seeing the effect this endless excitement was having upon her health, Mattie gently remonstrated with her. They were sitting together in the boudoir, where they had spent so many happy hours during their girlhood, and Mattie had her baby in her arms, and made as pretty a picture in her dainty motherhood as eye could wish to see. They had been silent for some moments, and Cecil was watching her sister with sad, tender eyes, and a little smile on her lips, the book she had been reading lying unheeded on her lap, when suddenly there came a peal at the bell which rang through the house; and Mattie saw how her sister started, and pressed her little hands to her heart, and bent her head forward to listen, and then, when a servant came in with some trifling message, how she sank back wearily on her cushions, white and still, exhausted by the agitation she had undergone.

"Cecil, dear," Mattie said softly, speaking in an undertone out of consideration for the sleeping child on her lap, "do you know that you make us very unhappy?"

"Unhappy!" said the voice; "I am sorry, dear. How?"

"Cecil, do you not think," Mattie replied, answering one question by another, "that it would be wiser to give up hoping as you do? Dear, if he lived, do you suppose we should not have heard it ere this?"

It was the first time she had ever mentioned the subject, and Mattie's voice was very unsteady as she spoke.

"Do you think that I hope, Mattie?" Cecil said, wearily. "Do you think that I dare hope—and yet—oh! Mattie!" a sudden passion breaking up the stony calm of her face, "if I did not, I should die!"

She rose from her seat and knelt down by Mattie's side, speaking in a low, hurried tone of anguish.

"I do not hope," she said, faintly. "I know how vain such a hope would be—but sometimes I cannot help thinking I shall see him again—such strange things happen! We have known it, have we not, dear, that people have come back from wars, from captivity, so many years after, that their own relatives did not know them?"

"But not from death, Cecil!" said Mattie, her eyes filling with tears; and Cecil's head sank until it rested on her sister's knee.

"Think how hard it is for me, Mattie," she said, in a moment. "I loved him so passionately, and he never know it! When I told him so, passionately, he never knew it! When I told him so, he did not believe me. We never had even one happy day together! If I could have seen him once—if I could have heard him say he forgave me—if I could have been with him when he died, I should not have felt it so hard, but as it is, Mattie, I cannot bear it!"

She flung herself away from Mattie and on the rug, lying there on her hands for some minutes; while Mattie sat silent, powerless to console, powerless to help, with tears running down her cheeks, and falling on the baby's dimpled hands.

"It is not often I make such a moan," Cecil said after a pause, raising herself from the ground, and pushing back her hair wearily from her brow. "Forgive me, dear!"

"Dear Cecil," said Mattie, gently, "you are so brave and patient, it makes us love you all the more, and grieve all the more, that you should let yourself hope at all.

"When my hope—if hope you can call it—dies, I shall die too! Oh! Mattie, how strong I must be! Do you remember how ill I was in the Spring, and how I recovered? Nothing seems to kill me," she went on wearily, with a little sorrowful smile. "Other women would die under the trouble—under half the trouble which I have borne, and live!"

"We cannot spare you, darling," murmured Mattie, softly. "What would Uncle Henry do without you? You are the light of his eyes, Cecil!"

"Poor dear uncle! Such a dim light now!" she said, smiling, and took up her book again and began to read.

There was some minutes' silence, then Cecil looked up with a smile.

CHAPTER XXXV.

"You are fond of poetry, Mattie," said Cecil. "Shall I read you something I found in this book of poetical selections Edgar brought you the other day?"

"If it will not tire you, dear," said Mattie, gently.

"It is called 'Returned'—'Missing,'" said Cecil. "And underneath, in parentheses, are the words, 'Five years after.'"

"Do you think you had better read them?" said Mattie, looking a little alarmed at the title. "They may upset you, Cecil, dear."

Cecil shook her head.

"I should like to read them to you, dear," she said, and without more ado she began, in her soft, pathetic voice, two stanzas of which were as follows—:

"Yes, I was sad and anxious,
But now, dear I am gay;
I know that it is wisest
To put all hope away.
Thank heav'n that I have done so,
And can be calm to-day!
* * * * * * * *
"Not that I dream or fancy
You know all that is past;
Earth has no hope to give me,
And yet—time flies so fast
That all but the impossible
Might be brought back at last!"

"All but the impossible!" said Cecil, softly. "Is that impossible, Mattie?"

There was a silence, broken at last by the entrance of a servant, who came to replenish the fire and to inform Mattie that Mr. Eleston was in the drawing-room, and wished to see her or Miss Lester.

Cecil looked up eagerly.

"Ask him to come up here, Jenkins," she said, quickly. "Mattie, don't send baby away—Ernest will like to see it."

Ernest entered the room with some embarrassment; it was the first time he and Cecil had met since that stormy interview occasioned by the breaking off of their engagement, and he looked a little pale and nervous as he shook hands with Mattie first, and then turned to Cecil, who gave him her hand with a little smile, which Ernest could not return, he was so shocked and startled by her altered appearance.

"You have been ill," he said, helplessly. "You have been very ill?"

"Yes, I have been ill," she said, smiling. "But I am better now; much better—almost quite well—and I am very glad to see you. When did you return?"

"Only this week; I heard you were in town, and"—looking at her deprecatingly—"I thought I might come."

"It was very good of you to come," she said, gently. "We have heard of you sometimes indirectly, she added, with a smile, and Ernest colored slightly under his sunburn, and turning to Mattie said something complimentary about the baby; and while the young mother smiled and answered, Cecil sat dreamily looking into the fire

"Have you brought no news?" she said, abruptly. "No, of course you could not, I forgot. Will you have some tea, Ernest?"

"I am going to take baby to his nurse," said Mattie, rising. "I will tell them to bring some Cecil. Ernest likes afternoon tea, I remember of old."

Mattie went away. Ernest having closed the door looked down at the wan face of the woman who was to have been his wife.

"Why do you look at me so sorrowfully?" she said, smiling. "Do you think I look very ill? Do you think I am going to die?"

"Cecil," he exclaimed, in a voice of pain; then conquering his agitation, he sat down beside her.

"What has been the matter with you? Have you had advice?" he said, a little huskily.

"Advice! what for? I have not been ill for some time now," she answered.

"Not been ill—not ill! Good Heavens, Cecil, look at your hand."

"Do you think that illness alone could make it so thin?" she said, sadly. "Did you ever hear of a great trouble killing one? Oh, I hope—I hope—I pray that my trouble will kill me."

"Cecil!" he exclaimed.

"Do you remember that last time we met?" she said. "I told you then that I had given away my heart to a man who cared little for the gift. But I loved him, and he is dead."

"Dead!" he repeated. "Poor Cecil! Poor child!"

"I only tell you this, that you should not worry yourself or me with suggestions about my health," she said, hastily; "we will not talk any more about it. Tell me about yourself; you returned home this week, you say? Have the Tyrrell's returned?"

"No, but they return shortly," he said, hastily. "Cecil, have you forgiven me for my brutal conduct to you when——"

"Nay, you were quite right," she said, gently, "I deserved every word of reproach you gave me, Ernest. But we will not talk of that now," she went on. "You have quite forgiven me, Ernest, have you not?"

"It was I who needed forgiveness," he said, brokenly. "I was never worthy of you, but I loved you, Cecil, you know that?"

"Yes," she said, sadly. "But all that is over, you know. I want to hear all about yourself and ——and Lottie."

The handsome, sunburnt face flushed slightly.

"About myself," he answered, with a slight degree of embarrassment (it is not a very pleasant thing to tell one woman to whom you were once betrothed, of your engagement to another,) "there is but little to tell. I have been traveling about you know. At first I was very miserable, Cecil, but by-and-by I got over it."

"Well," she said, smiling.

"Well, then I fell in with the Tyrrells, and the General gave me permission to join their party and—it was very pleasant," he concluded, lamely.

"Very pleasant," said Cecil, with her soft, sad smile. "Is that all?"

"Not quite," he answered, coloring and smiling, "Well, Lottie and I saw a good deal of each other, and ——"

"And you made up your minds you could never see too much of each other?" said Cecil. "Ernest, I am so glad. She is one of the sweetest, truest girls I ever knew. You are a very fortunate man to have won her."

Ernest's face flushed, and he required but little encouragement to become eloquent on the subject of his new happiness.

"Do you remember last year at this time, when we were at Mrs. Brayburn's?" he said eagerly; "you thought Lottie had a fancy for Dr. Carewe; but she says she always cared for me even then. By-the-way, what a shocking thing that dreadful death of his was."

"Yes," said Cecil, calmly, although her very lips paled at the careless mention of his name; and before Ernest could speak again, Mattie entered the room.

(Conclusion next week.)

THE EYE-OPENER.

Now for the names of the "parties" outside New York City, to whom the Post Office refuses to deliver letters or money orders on account of the more than doubtful honesty of their mode of conducting business—and first for the New England sharpers:—Boston shelters L. A. Kendall; alias L. A. Ashman; alias Bay State Organ Co.; alias Eastern Gun Works; alias Enterprise Publishing Co.; alias Home Delight Co.; alias Hub Manufacturing Co.; alias Hub Watch Co.; alias Inventors' and Manufacturers' Association; alias Japanese Curiosity Co.; alias New England Scientific Works; alias New England Manufacturing Co.; alias Paris Art Co.; alias Parisian Photograph Co.; alias People's Paper Publishing Co; alias The Welcome Guest. Kendall, you see, has a multitude of irons in the fire with which to burn his patrons. The Paris Novelty Co. has dens at Boston, Mass., Rockland, Mass., and Chicago, Ill. Another firm with many aliases, and hailing from the same three cities, is E. Ellsworth Slocumb; alias Agents' Union; alias American Book Co.; alias E. G. Cramco; alias Eels & Co.; alias Royal Piano Co; alias D. P. Eels & Co.; alias Solar Watch Co.; alias Solar Manufacturing Co; alias D. P. Suydam; alias P. W. Williams & Co. After this many-named concern here are a few others, whose spider-webs are set in other parts of Yankeeland:—Edgar W. Jones, Ashland, Mass., and South Framingham, Mass.; alias Harry J. Littleton & Co.; alias Union Purchasing Agency; alias Union Publishing Co.; alias Magnetic Watch Co. Union Publishing Co., Ashland Mass; Union Publishing Agency, South Framingham, Mass.; Harry J. Littleton & Co., Ashland, Mass., and South Framingham, Mass.; Magnetic Watch Co., Ashland, Mass. Ashland, Mass., seems pretty well stocked with doubtful characters—eh? A couple more are left for other places, such as Hugh McKay, alias Hugh McKay & Co., of St. Stephens, New Brunswick, and Calais, Me., and the Magnetic Watch Co., South Framingham, Mass. Other parts of the country will be heard from next week.

MAGAZINES FOR JANUARY.

ST. NICHOLAS.—Contents—Frontispiece, "Firelight Phantoms;" The Wrong Promise, illustrated, "George entertains the baby;" One of his Names, verses; Going Home for the Holidays; The Children's Fan Brigade, illustrated, "Playful," "Majestic wave," "Position for bows," "Fans spread," "Inviting;" Out of Style, verses, illustrated; Stories of Art and Artists; Handel, poem, illustrated; How the Aristocrats Sailed Away; The First Tooth; Fire-light Phantoms, poem, illustrated by the Frontispiece; In Nature's Wonderland, Chapters II. and III., illustrations by H. Faber, "Mrs. Yegua takes leave of her enemies," "Breaking a grizzly;" The 'Thing-a-ma-jig, illustration, "The Thing-a-ma-jig;" "The King of France and Four Thousand Men;" Every Boy His Own Ice Boat; New Year's Day, verses, illustrated, "A Happy New Year to you!" Phaeton Rogers, Chapters III. and IV.; Nedawi, An Indian Story from real life, illustrated; Brier-Rose, poem, illustrated; A Snow Battle; A Dear Little Girl of Nantucket, Jingle, illustrated; New Year's Calls, illustrated; Mystery in a Mansion, Chapters V. and VI.; For Very Little Folk, The Fast Goat Line; Jack-in-the-Pulpit; The Letter-Box; The Riddle-Box.

This, the first of the new year's numbers, is presented in equally as attractive, if not an improved form. The illustrations are stories in themselves, increased in interest by able descriptions.

THE AMERICAN NATURALISTS.—Contents: The Ancient Glaziers of the Rocky mountains; The Discovery of Iron Implements in an Ancient Mine in North Carolina; On the Fertilization of Calamintha nepeta; Comparative Neurology; Botanizing on the Colorado Desert; The Method of Distinguishing Species of Populus and Juglans by the young naked branches; An address to the Fossil Bones in a Private Museum; Editor's tables; Recent Literature; General Notes; Zoology; Entomology; Anthropolgy; Geology and Palæmontology; Geography and Travels; Microscopy; Scientific news; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

THE DISCOVERY OF IRON IMPLEMENTS IN AN ANCIENT MINE IN NORTH CAROLINA.—In Western North Carolina are found many evidences of prehistoric mining operations, such as open cuts, tunnels, shafts and dumps. The latter are covered with a forest growth of several hundred years and in the excavations has accumulated the debris of centuries.

About ten years ago a new industry was inaugurated in the State, that of mica mining, and strange to say the best and most profitable mines have been those located upon the sites of the "old diggings." In clearing out the ancient works very few implements have been found which throw light upon the original miners. The opinion, now generally held, is, that they belonged to the Mound-builders, whose mounds are also found, but sparingly, in the river basins. That this is, for the most part, correct, I think has been clearly shown by Prof. Kerr in his Report on the Geology of North Carolina for 1875. He there states that he learned in a conversation with Col. Whittlesey, and subsequently from numerous publications on the subject of the mounds of the Northwest, that mica was of common occurrence in the tumuli of the Mound-builders, among the utensils and ornaments which such rude people are in the habit of inhuming with their dead owners. And upon further inquiry, he ascertained that cut forms, similar to those found in the mounds were occasionally discovered among the rubbish and refuse heaps about and in the old pits.—*Frederick W. Simonds, in Am. Naturalist.*

LIPPINCOTT'S MAGAZINE.—Contents: Gigi's: A Cosmopolitan Art School; Titian's Venus; An Old New England Seaport; Lilith, a Story; The Wanderer's Bell, a Poem; Out-door Life on the Rhine; Opposites; The Called Meeting, a Story; Madame De Stael; The Occultation of a Honey-moon, a Story; Race in Brazil; My Mining Investment; Which is Best? Our Monthly Gossip; Literature of the Day.

This number opens a new series at a reduced price, and presents itself in an artistically designed cover that pleases the eye. This favorable impression is more than confirmed by an examination of the contents, which are generally light and of a thoroughly popular character, while marked by a literary excellence of a high order. The illustrations, too, are carefully executed, the new arrangement of the editorial matter cannot fail to prove attractive, and altogether the number is promising.

DEMOREST'S MAGAZINE.—Contents: Marie Antoinette (portrait in oil); Bubbles (steel engraving); Valentine in Oil; Seed-time and Harvest Tapestry; Marie Antoinette; Women of History—Madam Roland; The Higher Education of Women. H. F. R. Some Account of its Progress in Europe and America; Talks with Girls; Small Causes vs. Great Events; Economy; A Revolution; An Easy Place; A Valentine; Heartsease; The Ebb of Love; Two Photographs—A Story of St. Valentine's Day; Song; Sam's Stratagem; I Love You; Josie's Grandmother; Mr. Hayford's Beau-Bake; Kith and Kin; A Valuable Gift; My Housekeeping Class; About Horns—Items; Correspondents' Class; The Spelling Reform; Advice to Girls; Answer to Rebus; Influence of Associates; The Rich Mouse; Window Shade in Mosaic—Knitted Lace—Scrap Basket—Knitted Fringe—Monogram, N. G.—What Women are Doing; Hobbies—Bubbles—Decorative Art in the Household—Miss Alcott's New Story; What We Live For—State Reformatories for Women—Modern Improvements in Business Houses—Kith and Kin; Current Topics; Scientific Items; Kitchen; Answers to Correspondents; Review of New Books, etc.; Good Words—Life Insurance—A Literary Thief—Diamonds of Thought; Spice Box.

The combination of fashion and literary matter, together with the many illustrations, make this a popular and attractive periodical.

ECLECTIC MAGAZINE.—Contents: Steel Engraving—"Marguerite," after the painting by Bertrand; The Sabbath, An Address; Lady Hester Stanhope, the "Queen of Lebanon;" Some Strangely Fulfilled Dreams; Animal Instinct in its Relation to the Mind of Man (The Unity of Nature, No. III.); Social Life among the Ancient Greeks; A Letter from Newport; Decorative Decorations; Fiction—Fair and Foul, IV; Trevelyan's "Early History of Charles James Fox;" Recent Science; Through Siberia by Way of the Amur and the Ussuri; Life and Death, three sonnets; The Mystery of the Pezazi, a Sketch from Ceylon; Plain Speaking, 1, a Little Music; The Bugle, from the French of Paul Dolourede; The Natural History of Dress; The Wages of Literature; Three Wishes; Literary Notices; Foreign Literary Notes; Science and Art; Miscellany.

The frontispiece is a great addition to this issue. The selections are good and the general production equal to former issues.

DEAN STANLEY told a good story recently. He said a minister of one of the younger branches of the Church was calling the attention of a member of the Established Church of Scotland to some of the great abuses in that venerable Church, to which the Scotch minister replied: "When your chimney has smoked as long as ours, perhaps it will have as much soot in it!"

For Women.

CONDUCTED BY MISS RAY CLARK.

THE FAMILY RECORD—AN INCIDENT OF ENUMERATION.

EDGERTON.

"This notched stick, suspended here
Beside the great hall door,
Hides many a quaint and curious page
Of unwrit family lore:
It holds the record of our lives,
Each notch a story tells,
And in its mystic marks and signs
Our family history dwells.

"'Twas not as now, when we were young,
Our schools were precious few,
And also very far between—
Our county numbered two—
And fifteen miles in winter time,
Was rather far to go;
Remembering that the Winters then
Were not devoid of snow.

"And so the schooling we obtained,
(Myself and husband Dick,)
Consisted all in marks and signs
And notches on a stick.
I blush not here to own this fact,
The blame, if blame there be,
Must all attach to circumstance,
And not to Dick and me.

"This preface on the end, we notched
Just sixty years ago,
Where we had built our little hut
And moved in, through the snow;
The worldly wealth we then possessed,
I'll not essay to hide,
Consisted in a yoke of steers,
A log-chain, axe and slide,

"But we were young and hopeful, and
Esteemed our prospects fair,
The richness of our mutual love
Relieving every care;
We dwelt within a little world
All sacredly our own,
Basking in smiles and johnny-cake
Living on love and pone.

"This notch, denotes the day and date
When little Dick was born,
The first of June, in twenty-nine,—
Just fifty years this morn,
Poor boy! he was not with us long,
His sands of life were few!
For here we notched him off again
In April, forty-two.

"With doubtful, trembling hand, I made
This ugly notch myself,
When Daisy married wild Jack Jones,
And moved off to herself;
I had no confidence in Jack,
He'd lived a reckless life,
'Twas only under my protest
That he obtained his wife.

"But Daisy brought about a change,
As good wife ever can,
And Jack has long since settled down
And proved himself a man;
They own five hundred acres of
The very best of land,
And have a genteel balance left
Of ready cash on hand.

"Our cash account, we've always kept
Upon this separate stick—
I make no entries here myself,
But leave it all to Dick.
Each notch a thousand represents,
In all, just sixty-four,
And should the crops prove fair this year,
We'll add about five more.

"We've always kept our business square,
And straighter than a string,
Have fairly dealt with all the world
And owe no man a thing.
We've labored honestly and well,
For every cent we've got,
And old age finds us happy and
Contented with our lot."

CONCERNING SELF-RELIANCE IN GIRLS

MARY WAGER-FISHER.

For Fathers and Mothers to Read.

I THINK I may say, that, as a girl, being mother-orphaned at a tender age, and from the force of other circumstances, I was more self reliant, or grew to be more so, than are the majority of girls. But when my father died—I was then past twenty—I felt as if the earth were swept out from under my feet. I had been liberally educated, had been made familiar with many things, but I knew almost nothing of business. I believe I did not know how to make use of a check or draft without being told. I knew nothing of the management of property, or of property laws. I had an idea that the business of a lawyer was to "fleece" his client, and so I trusted my pecuniary welfare as a great many women do with relatives. In short, I was, after a fashion, my own lawyer. There's an old adage which I illustrated finely. "When a man is his own lawyer, he has a fool for a client." (As I have married a lawyer, it is reasonable to infer that my opinion of the guild has changed since I was a girl.") I suppose I learned something from my ignorance and folly, for it is a strange experience from which one does not reap some benefit. But why should women, from generation to generation go on garnering the bitter fruits of similar folly and ignorance? Why should a girl, any more than a boy, when orphaned; or a wife, any more than a husband when widowed, be helpless and unarmed against the misfortunes, and suffer as they so frequently do from the bountiful "advice" and "kindness" and "management" of male relatives? Simply because they are trained in ignorance of certain things that they should well know, and pre-eminently because they have not been taught habits of self-reliance. I have known a few men, and I have reason to believe that there are many such, who buy every article needed for the family, even to corsets, calicoes, stockings and winter cloakings and the "women folks" have become so accustomed to being "pro-

vided for" even to their pocket handkerchiefs, that they actually dread going to town to shop, or to "trade."

There is such a thing as to fall so far from the grace of moving about in the world, as to live very much like a vegetable—to grow up, or to be planted in a certain spot, and to remain there until nipped by the frost of Death. There are *women* who become just such vegetables from a continued habit of staying at home. It may be comfortable, and it may be easy, for the father and husband to attend to the entire business of the family, but it is a kindness of such texture that sooner or later parts into shreds of a very poor sort.

Some one writing from Mentor not long ago, mentioned having seen Mrs. Garfield standing in her kitchen door, giving directions to the "hands" in regard to the marketing of half a dozen or more barrels of cider. Whether the stated occurrence was true, or not, one feels certain that the wife of the President-elect is fully capable of transacting business intelligently and in a business like way, and no one doubts but that she possesses womanly qualities of a high degree.

I mention this, as some young women pride themselves upon their ignorance and their helplessness. They imagine that to be purely womanly, they must be helpless, and delicate, too. Such persons are not womanly in the true sense! they are simply effeminate. A girl should be taught self-reliance from her infancy, and from an early age should regulate her own expenses so far as it is practicable. If a frock of calico or gingham is to be bought for her, take her to "the store" with you, and let her select it and pay for it herself. Habituate her to expending money carefully and discreetly. By choosing for herself, she learns to decide for herself. It is better that she decide for herself, and make a poor decision a great many times in unimportant things, than grow up to be an undecisive women. The man who wrote "Frailty, thy name is Woman," would have hit the truth more nearly, had he put it "Indecision, *thy* name is Woman." Business men dread to do business with, or for, women, because the latter so rarely know what they want, and are so slow in coming to a decision. They fail to distinguish between important and unimportant matters, and daily as long over the one as the other. This defect in character of many women is by no means innate; it is the result solely of their education and training. They have not been accustomed to decide for themselves, and the narrow scope of their lives, has forced them to regard even trivial matters as important ones. They look as long before they leap in deciding between two pieces of black silk, as in committing matrimony. But then it sometimes happens that husbands are more easily to be had than are silk frocks.

It is always a good training and an essential part of a child's education, to have a bank account, however small. It is not always practicable to give a child a real bank account; but you, yourself may be the banker, receive the small deposits of the child, oblige it to draw out its savings when desired by means of checks, and so far as possible, transact the business as at real banks. Interest may be allowed on the deposits which the child should compute. Of course, the child should be aided as much as possible in making deposits, and in spending the withdrawals judiciously. Care should be taken to inculcate a spirit of generosity, as well as one of frugality, and to teach that money has but one value the use to be made of it. The investment and security of money form a good topic of talk with children, occasionally, and girls especially should be made to understand the meaning of bonds and of mortgages, and the value and requirement of securities.

The custom in France of giving a *dot*, or dowry to a girl when she marries, is a most excellent one. French parents, no matter how poor they are never expect their daughter to marry without a *dot*, and the various members of the family, somehow manage to secure it. Of course, it is often very small—one or two francs maybe—but it is *something*—and it is to belong to the young wife exclusively; is duly invested and secured for her sole use. The custom I am glad to see, is being imitated in this country. A young California lady who was recently married had an income of fifty thousand dollars secured to her; half by her father, and half by her prospective husband. Of course, that was an exceptional case in amount, but the principle is a good one. Every married woman ought to have a certain income which is secured against all probable misfortune, and which no one but herself can control. It ought to be regarded by every father and mother as their duty to see to that their daughter, when she marries, has such an income as it is possible to give to her thoroughly secured to her. It should be made a genuine matter of business, legally arranged, and in no way be left to a matter of sentiment. Sentiment is all right in its way; women are over-much guided by it, but a well-certified legal document is apt to befriend one better in the long run. It is much better to give a daughter a frugal "out-set" and a *dot*, than to make the former sumptuous and the latter altogether lacking. Secure to her an income at all events, I would say, and the man to whom she is to be married should be given the opportunity to contribute to the fund. A wife is worth as much now-a-days as when Abraham sent his servant to bargain for a wife for Isaac. If husbands and fathers were sure of living forever, there would be no need of post-mortem provision for their families. It is not pleasant to talk of death, or to keep the possibility of it ever present to one's mind; but how much trouble might be saved if there was a clear understanding by the elder members of the family as to what would be best to do in the case of the death of a parent—whom to consult, by whose judgment to be guided, what disposition to make of the property, etc. In case of the death of the husband and father, or of the mother—if the only parent—the family then, would not be plunged into such rayless perplexity, not knowing what to do, whither to turn, and in their grief taking the first hand proffered, and living to regret it ever after.

That all people have confidence in their near relatives is right. They should have; the world would be a sorry place without such trust and confidence. But as regards the management and trust of property, there are two reasons why they should not be entrusted with one's relatives. In the first place the business is not conducted in a businesslike way, whereas it should be regulated precisely as it would be with a stranger. In the second place, if the management is bad and money is lost, hard feelings are engendered, and few things are more deplorable than anger between kindred. It is a common remark that if you wish to retain the honest affection of a person, don't put him under pecuniary obligation to yourself; for if he finds himself unable to discharge it, he never thereafter feels comfortable and happy in your presence. It is always better in matters of finance to be guided by the advice of a competent lawyer (not a "pettifogger") than by the gratuitous advice or suggestion of the best and dearest relative in the world, unless the relative chances to be an entirely disinterested party and a person of experience and good judgment in business matters. Even then there is safety in having a good lawyer.

My great aim in referring to this matter at all is to urge upon parents—especially upon husbands and fathers—the necessity of educating their wives and daughters in matters of business, obliging them, so far as they can, to become familiar with the common details of financial transactions, and to have a tolerably clear comprehension of what they could do, and what they should do, in case of necessity, and to urge upon young women the advantage of thinking and acting for themselves.

OLD MAID.—No. 2.

I NEVER read "Twaddle," stuff that women write, about cooking, etc,, but in turning from the Agricultural news to "Inmates of Lester Hall," my eye fell upon a letter which attracted my attention. Since then I have look on with some interest, and as that "Young Bachelor" is about to get the worst of it, I step upon the arena, for my share of—Oh! what shall I call it? No. 2's antipathy or approval? I am older than Bachelor No. 1, I meet ladies with a *frown* and I'm crusty.

I like the ring of No. 2's metal. Give me always and forever a woman who thinks she hates men, and my interest to win her is excited.

OLD BACH. No. 2.

ABOUT WOMEN.

MISS MORSE, the daughter of the inventor of the telegraph, is about to be married to Mr. Rummel, the pianist.

THE DUCHESS OF MARLBOROUGH will send 16 Irish families, with complete farming outfits, to Manitoba, in the Spring.

MRS. ELLEN GRANT SARTORIS has now three children—two little girls and a boy. The fourth—her eldest son—is dead.

ADELINA PATTI is undoubtedly, says Mrs. Hooper, coming to this country next Autumn to remain two years. All arrangements are made, and the contract signed.

MISS SCHOONMAKER, of Kerhoneson, New York, at the age of 24, inherited a large farming property very heavily mortgaged, and had at that time, five helpless people dependent on her. In the 14 years that have since elapsed, she has taught school, managed the farm, going into the field herself out of school hours, has paid off the mortgage, improved the property, and become an extensive stock-raiser.

FASHIONS.

THE skirts of walking-costumes are certainly as a rule, much fuller than they were last Winter although the bodice is quite as clinging as ever.

Bonnet crowns of copper-colored plush are made very effective by amber-beaded appliques.

Silver jewelry is very much a la mode, and shows very effectively with the rich, dark dresses of the season.

Sleeveless polonaises of figured materials over velvet skirts and sleeves form not only very fashionable, but convenient toilets.

Plush is the queen of materials this winter but still many ladies prefer brocaded silks and satins, which not being so thick, are more becoming to all but very slight figures.

Woolen fabrics are innumerable; tartan plaids in dull colors are much worn, mixed with plain materials for ladies, but by themselves for little girls and children. Other woolens, such as cashmere, vigogne, camel's hair, armure, rep, beige, and diagonal, are mostly trimmed with fancy wool and silk brocade, velvet, or plush.

The Marguerite gauntlet sleeve is very fashionable and stylish. The top is made of the material of the dress, and the long cuff which reaches to the elbow is made of plush velvet or satin. The cuff fits closely to the arm, and is buttoned or laced up the back.

As regards colors gray is not much worn this Winter; black toilets are always very *distingue*. The shades most fashionable for dresses are dark greens; garnet, always in favor; violet, very becoming to blondes; lapis-blue, seal-brown, prune, and all shades of deep red; the latest name for copper-red is *tison*, or ember-red.

Fashion is very full of whims and fancies this Winter. Upon fur cloaks, caps, and muffs she has decided to place the paw of some wild beast—lion, tiger, or panther—with gilt claws. In artistic jewelery we see the most fantastic devices—beetles, cockroaches, spiders are the favorites; the latter especially is just now the pet of the season. It is made of gold, silver, diamonds, and every kind of precious stone, and used as eardrops, brooches, charms, and ornaments for hats and bonnets.

Ice water is rendered harmless and more refreshing with Hop Bitters in each draught.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

GOOD MANNERS AT THE DINNER TABLE.

Good manners, when carefully heeded at home,
Will carry politeness wherever you roam.

Gaze not at a guest, nor at any one's plate,
Nor boorishly hold up your knife and fork straight.

Forbear at the table to mimic the ape,
Nor spread out your limbs in an uncomely shape,

Rest not on your elbows, nor knife and spoon lick,
Nor finger the forelock, nor use a tooth-pick.

Speak never of sickness, nor death of a friend,
Nor nauseous nostrums, till dinner shall end.

Beware, when at home, or abroad, of the fault
Of thrusting *your* knife in the butter or salt,

Smack not with your lips, neither glower around,
Nor swallow your coffee with gurgling sound.

One should never be guilty, wherever one goes,
Of hemming and hawking and blowing the nose.

Raise not an unsavory dish to the nose,
Nor turn it to scan it suspiciously close.

If knife, fork, or spoon chance to fall to the floor,
Defer not to wipe, and unsullied restore.

When butter is furnished with insipid hair,
Remove it, unnoticed, affecting no care.

Cut thin and small slices; but eat with a fork;
And turn from the table when drawing a cork.

The carver, when carving and serving the meat,
Should deem it unskillful to rise from his seat.

When serving the courses, distribute the best
To matrons and sages, or some honored guest.

Let gourmands and gluttons beware of the sin
Of ending *their* courses ere others begin.

Mince not between courses, when you've had enough;
And turn from the table to stifle a cough.

Sip not your hot coffee, nor blow your hot meat,
Nor gulp them untasted, nor surlily eat.

Good manners at dinner forbid one to look
At letters, or papers, or read in a book.

Be cheerful, feel grateful whenever your food
Is wholesome and fragrant, all steaming and good.

When one cannot eat what is dry as a stick,
True etiquette warrants the plea, "I am sick!"

When leaving, untimely, say "Will you excuse?"
Thus honor your manners, nor credit abuse.

Suck not your soup with a bubbling sound,
Nor heedlessly spatter the gravy around.

Encircling the table, *say* something; yet fear
To speak in a whisper what others may hear,

Say something; yet, after another's begun,
Forbear interrupting before he is done.

Say *something*, if naught but "This sugar is sweet,"
Or coffee is fragrant, or juicy the meat. S. E. T.

ONE WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

FRIDAY.—This morning Janet undertook to give the children's bed-room an extra cleaning while about the regular up-stairs work, so Nora and I did the baking, which, if possible, is done up on Friday to last three or four days. I often think what folly it is for us to be always over the oven and baking board, and there is as much need of economy in that direction as anything else to which we turn our attention. Economy in work means a saving of strength, and the saving effected in this respect means more to spare for mental labor and the development of our children. When Alex. comes to me, as he often does, and says, "Mamma, how do the leaves come?" or, "What makes the leaves fall off?" if I am thinking of him and his naturally inquiring infant mind, I tell him in the simplest language the story of Nature and of Nature's God. But if I am tired with over-work or worry, I very likely say, "Run out and play; don't ask so many questions." Am I not right, mothers? While we were all very busy Karen undertook to sweep the living-rooms, and when I went in to go to my bed-room to dress, my first thought was that they looked neat and tidy. But, alas! a further examination proved disastrous to this opinion—for the *corners* had been neglected. I called the little girl and gave her a word of advice, telling her that it would never do if papa only plowed the middle of the fields; and what would happen if those corners were left dusty every day? Why, they would grow heaps and heaps of dirt and have to be shoveled out, at which Karen laughed gaily and went for the broom to try again. And now I find that my thoughtless words said the other day are about to be put to the test, for Janet came in just before dinner, and, with her honest eyes looking shyly away, told me that Sandy Muckleman, who is just out from the Highlands, has asked her to be his wife; that she hesitated because he was going off to Nebraska and she "couldna' thole ta leave the weans." And then she told me for the first time the history of their long waiting, how his parents depended on him for support, and she came to America to earn money a few years and then go back to Saudy. But now he was alone in the world and had sold his possessions and bought a farm in the West. I am very sorry to lose her; we shall miss her honest face and helpful ways, for we have *trusted* in her, since she came to us. But we are glad her future is assured, and think that Sandy Muckleman is a lucky fellow to win such a wife; for she will make a home wherever she goes and give it the adornment of her presence, while the touch of her busy hands will beautify the plainest of furnishings. And for us, I think there will be no trouble. Equally divided work the "many hands" make light, and if I have any doubts I shall lay them aside and say:—

"Yes, leave it with Him, the lilies do so, and the grow—
They grow in the rain and they grow in the dew. Yes they do."

And I shall not fear for our future while health and loving hearts are left to help us."

DOMESTIC RECIPES.

Apple Pudding.

Four large apples pared, cored, and chopped fine, two-thirds of a cup of raisins, seeded and chopped, two tablespoonfuls of minced suet, one-half cup of sugar, a pint of sweet milk, some slices of light, stale bread, two eggs, nutmeg. Line a shallow pudding dish with slices of stale bread well buttered, put in the apples, raisins, suet, sugar and nutmeg. Scald the milk and pour slowly over the beaten eggs, sweeten with two tablespoonfuls of sugar and pour over the ingredients. Cover and bake in a moderate oven three-quarters of an hour. Eat cold with powdered sugar.

Potted Fowl.

Cold roast fowl, a little lean ham, two spoonfuls of butter, salt and pepper. Cut all the meat from the bones, rejecting skin, shred, then pound in a mortar till a paste, add the butter, season, mix thoroughly, put into little pots, and tie down with thick paper or bladder.

Sweet Rusk.

At night make a sponge with a pint of warm milk, two spoonfuls of yeast and flour for a batter. Keep in a warm place. In the morning mix in one cup of sugar, half a cup of butter, two beaten eggs, a teaspoonful of salt, and flour for a soft dough. Mold into little balls, put into a greased pan and let them rise until very light. After baking, you can, if you please, wash the tops with sweet milk, egg, or molasses and water.

MRS. J. L.

Butter Crackers.

One quart of flour, four tablespoonfuls of butter, two large cupfuls of sweet milk, salt, and half a teaspoonful of soda dissolved in hot water. Cut the butter up in the flour, add the other ingredients, mixing well. Work into a ball and pound with the rolling pin half an hour or longer, turning the dough often. Roll into an even sheet a quarter of an inch thick, cut into little rounds, prick deeply and bake in a moderate oven.

Lady Cake.

One pound of sugar, one-half pound of butter, whites of ten eggs, one half pint of milk, one-half pound of flour, a teaspoonful of cream of-tartar, and one-half teaspoonful of soda. Flavor with bitter almond and bake in squares. Flavor the frosting with vanilla.

Marble Cake.

One cup of butter, two cups of granulated sugar, four eggs, one cup of milk, two even teaspoonfuls of baking powder, three cups of flour. After mixing the cake take out a teacupful and into it stir two tablespoonfuls of grated chocolate wet with a very little milk. Into your cake-pan pour in the yellow batter until an inch deep, then drop in a spoonful of chocolate mixture in two or three places. Give to the brown spots a little stir with the spoon and pour in more yellow batter. Again drop in the brown mixture, pouring over the yellow.

Orange Snow.

Juice of four large sweet oranges and grated peel of one, juice of a small lemon, a coffee-cupful of powdered sugar, a package of gelatine soaked in a cup of cold water, whites of four eggs beaten until stiff, a pint of boiling water. Mix the juice and grated rind of the oranges and lemon with the soaked gelatine, add the sugar and let stand an hour. Then pour in the boiling water, stir and strain. When the liquid becomes cold whip in the whites and pour into a wet mold.

M. B.

QUESTIONS ANSWERED.

Frozen Fruit.

E. H. P., Racine, Wis., says that a friend has a large supply of canned and preserved fruit—peaches, pears, jellies and jams, which lately froze. As they are in sealed glass jars he fears they will burst, or at least become spoiled when they thaw out, and our friend asks will either of these mishaps occur, and what should be done.

ANS.—If the glass jars had been filled "to the top with fruit," they would necessarily have burst. As they did not burst while freezing they are not likely to do so afterwards. The flavor of the fruit will not be injured and it will keep as well hereafter, if air-tight, but the pears and peaches will become soft from the freezing and thawing process.

Keep the kidneys healthy and unobstructed with Hop Bitters and you need not fear sickness.

News of the Week

HOME NEWS.

MONDAY, Jan. 17, 1881.

The mercury stood at 52 deg. below zero at Stevens' Point., Wis., Monday morning. A water famine has reached Galesburg, Ill., owing to the long-continued drought and cold, which have dried up or frozen the wells, cisterns and ponds supplying the city with water. In consequence of the lack of water the Chicago, Burlington and Quincy Railroad Company had to withdraw some of their engines, and on Thursday paid $50 for ice to melt in order to supply their engines with water. Brown's Cornplanter Works and many individuals are melting ice, which is obtained from the Mississippi River. The cold averages about 10 deg below zero every night.....A Japanese coasting steamer, with 60 passengers and a crew of 22, has foundered in the Inland Sea and 64 lives were lost. .....Houtzdale, Pa., has had a number of deplorable visitations. Since 1877 it has experienced two conflagrations, a great flood and a big riot, and now the diphtheria is taking off the children at the rate of a score a day..... ...Bjornstierne Bjornson, the great Norwegian poet and statesman, has had a grand reception at Chicago..... Prof. Alphonso Wood, the well-known botanist, died a few days since at his home in West Farms, N. Y. He was the author of several works on Botany.

The International Committee for the proposed World's Fair in 1883, assembled on the 10th inst.. at the City Hall, to prepare the work before them, Sixty-seven commissioners were present at the first day's proceedings, more than one-half of them being from outside States and Territories. The Inwood site was discussed, and a resolution finally adopted accepting it as the location for the Exhibition. Mr. Vanderbilt offered to subscribe $250,000 providing $4,000,000 can be raised. The work of getting subscriptions has been delayed but will now be pushed with persistence..... The resignation of ex-Mayor Cooper from the Commission was accepted and Cornelius Vanderbilt was chosen in his place. General Grant was elected permanent President of the Commission....

Nathan O. Greenfield, the several times respited Oswego (N Y.,) wife murderer, was sentenced on the 10th inst., to be executed on Thursday, February 17, 1881, in the Onondaga County Penitentiary.....Mrs. Alice Williams of Alpine township, Kent county, Mich., cut her tongue out with a razor. She was a devout Catholic and imagined a sacrifice to the Lord was demanded of her. Death will follow..... .....The strike of ice gatherers at Verplanck's N. Y. has been amicably settled .....A fire at St. Louis, which originated in the shoe store of Joseph Eade, 1114 Broadway, extended to a row of one-story shops and saloons, north and south, consuming them all. The wind carried the flames to the extension building of the Broadway Foundry, in the rear of these small houses, doing great damage to the valuable machinery and patterns as well as the foundry building.

G. H. Wales has paid $30,000 for the seat of W. C. Williams on the New York stock exchange. It is the highest price ever paid.....In Chicago 3,900 buildings were erected the past year, costing over $9,000,000.... ...In the Illinois Senate on the 10th, a bill was introduced to cede the Illinois and Michigan Canal and the improvements on the Illinois River to the United States, on condition that the National Government agree to convert them into a water-course for ships from the Mississippi to Lake Michigan.....Charles M. Phelps, ex-State Treasurer of New York and defaulter, who was convicted in October, 1875, of forgery and larceny on three counts and sentenced to five years' imprisonment on each, died of consumption in the Albany Penitentiary this week. He would have received a pardon in a few days had he lived. .....Thomas J. Kirk, a prominent iron merchant of Chicago, residing at Lake Forest, has committed suicide by shooting .. ....The boiler of a steam thrashing machine at Lucan, Ont., exploded, killing George Brumen and injuring a number of others.....On the 13th inst., it was officially announced that the consolidation of the Western Union and American Union telegraph companies was perfected and articles signed that day. The consolidation is said to be on the basis of the Western Union and American Union at par and Atlantic and Pacific at 50, with an entire new stock to be issued, and after the consolidation is permanently effected the lines are to be sold to the government.....A newspaper published near Elmira advertises to take buckwheat cakes and honey on subscription, and a limited amount of apple-butter.....Conrad Meyer, senior member of the firm of Conrad Meyer & Sons, probably the oldest maker of pianos in the United States died at his residence in Philadelphia on Tuesday evening at the age of 88 years. Mr. Meyer was born in Germany, and in the war of 1814 served in the campaign against Napoleon .....The old home of President Lincoln in Springfield, Ill., is now a cheap lodging house.... The boiler in the Union Flouring Mills of Detroit Mich., exploded on the 12th inst. with terrific force, tearing out the side of the building, completely wrecking the structure. Engineer Young and a man named Whittier, fireman, were instantly killed and buried under the debris. Three horses were killed.....

Rev. William Shelton, D. D., who for fifty-one years has been rector of St. Paul's Episcopal Church, has resigned for the reason of old age and ill health. Dr. Shelton is over eighty-three years of age. The parish have unanimously voted him a life lease of the church rectory.....The Regents of the University of this State met in annual session in the Senate chamber Thursday night Henry R. Pierson, Vice-Chancellor, was unanimously elected Chancellor, and George W. Clinton, of Buffalo, Vice-Chancellor.

Paul Sweet, residing about six miles south of Marshall, Ind., shot and killed F. M. Craig, familiarly called General Craig. The men met in the road, near the residence of the latter, when Craig said that the time had come for one or the other to die, and commenced firing Sweet at once returned the fire, killing him instantly.....Four hundred hands from the Grand Trunk works at Montreal are on strike. It seems that some 25 of them wished to attend a funeral, and asked permission to do so. Mr. Herbert Wallis, the superintendent refused. The men went on their own leave, and the next morning were discharged. Nearly all the men in the works at Point St. Charles threw down their tools and walked out, giving as their ultimatum the return of their comrades to work. As the company has been working night and day to complete the large works, the men will doubtless succeed in their demands.

The National Association of veterans of the Mexican War will hold its annual meeting in Louisville February 22.....At Jersey City, the Adirondack Steel Works are embarassed. Liabilities, $75,000; nominal assets, $50,000.....Rev. Edward Crowley, convicted of cruelty to little children in the Shepherd's Fold, at New York, of which he was manager, and who, on February 28, 1879, was convicted of ill-treating Louis Victor and sentenced to the penitentiary for one year and fined $250, has been released on the expiration of his term and the payment of his fine.....Jean Baptiste Narbonne, who confessed to the murder of his brother Dan, with his father and stepmother, at whose instigation he committed the deed, were each sentenced to be hanged on the 25th of February, between eight and ten A. M.....Warren Longmore, aged nine years, was, Thursday, found guilty of manslaughter in causing the death of Freeman Wright, aged eight, at Pembroke, Me. He has been sentenced to the State Reform School during his minority.....A terrible snow slide occurred in Wahsatch Mountains, Utah, on the 16th inst, by which several persons were killed and a town partially destroyed.

Dr. Theodore Christlieb, professor of theology at Bonn university in Germany, is to deliver a course of lectures on preaching before the students of the Yale theological school in 1882.....The Secretary of the Interior recommends an appropriation of $50,000 for the survey of Yellowstone reservation with a view to the allotment of the lands in severalty to the Indians.....The Board of Supervisors of Niagara county have adopted resolutions opposing the proposed International park at the Falls, and even the appointment of a commission to value the property that would be required for it. They assert that 80 per cent. of the voters of the county agree with them..... .A clerk in Andrews & Co.'s store, at Climax, Mich., while weighing out powder for a customer, somehow ignited the powder and one hundred pounds exploding the store was blown to pieces. Twelve persons were injured, nine of them badly. It is thought that the clerk and two others will die. Loss on the property, $3,000.

The will of the late J. F. Armour, of Chicago, brother of P. D. Armour, was admitted to probate on the 14th inst. It bequeaths to the heirs $7,500,000 and the executors gave bonds of $3,000,000. He bequeaths $100,000 for building a mission church and school in memory of his first wife, Amelia G. Armour.....The only survivor of a party of ladies who assisted in the construction of the "Star-Spangled Banner," which stirred up the patriotic fire of Francis S. Key and created a national anthem, Mrs. H. S. Sanderson, is living in Baltimore, aged 83.

The Supreme Court of Iowa, at Des Moines, has given a decision in a novel bank case, the point having never before, it is said, been decided in this country. It appears that a suit was brought on a note which required payment at B. F. Allen's bank. The note stipulated that it was to be placed in the bank, and the maker appeared at the bank when the note was due, and paid to the bank the principal and interest. The bank failed the next day, while the note was in transit from Indianapolis to the bank for collection, and the Court held that the payment to the bank was the payment of the note.....A new railway company has been organized at Evansville, Ind., to build a road from Evansville to Dayton, Ohio, 240 miles in length. The capital of the company is $6,500,000.....The United States has 24.77 miles of railroad to every 10,000 inhabitants. This is eight times as much as Europe, which has 3.29 miles to the 10,000..... ....The Wabash Railroad has announced the withdrawal of its claim to different rates between Chicago and all points on its line, and that it would sell tickets at the same rates as other lines. The Alton Railway upon learning this at once raised the fare from Chicago to St. Louis to $4.50 and to Kansas City $7. This rate was adopted by the Wabash and other competing lines..... New York musical circles are enthusiastic over a young violinist of a dozen years or so, named Mauricio Dengremont, whose performance is declared to be good for a mature player and marvelous for a lad.

The earnings of the Central Pacific Railroad Company for December were $1,853,000, as against $1,335,870 for the same month last year. The total earning for the year 1880 were $20,410,424, being an increase of $3,257,261 over 1879.

FOREIGN NEWS.

In Ireland the trial of the leaders of the Land League has become tame and uninteresting, five of the principal defendants being in London giving Parliament a world of trouble by obstructing all legislation. The League is still busy, chiefly in extending its membership by threatening evils to those who refuse to join it. It is also adding to the number of those landlords and land agents whom it is punishing by "Boycotting" them. The most prominent "tyrant" now undergoing this sort of excommunication is Bence Jones Esquire, a rack-renting landlord and agent at Clonakilty, County Cork. For years this "fraud" has been "posing" before the English public as a model Irish landlord earnestly doing good to an ungrateful, lazy, lying, drunken, treacherous tenantry. This is the character he has been trying to fasten on the whole Irish peasantry, in magazine articles, letters to the London newspapers, and a book he has published, while everywhere the fellow has been loud in puffing his own praises. On investigation, however, it turns out that Bence Jones Esquire—as he is fond of calling himself—is the meanest, most tyrannical, exacting and rack-renting of all the landlords in his county, and as the facts become known sympathy for him disappears. Wishing to ship his stock to England since he has been overtaken by the Boycotting Nemesis, the railroads refused to carry the animals, the Cork line of steamers declined to transport them, and after they had been taken to Dublin, it was only after much delay and loss that he secured their passage. From all accounts, Bence Jones Esquire richly deserved "Boycotting." The government is arresting large numbers of Land Leaguers for "terrorizing;" about 150 were arrested last Saturday in different parts of the island.

A split has taken place in the Irish Home Rule party in Parliament, Mr. Shaw, member for Cork, having seceded, with a few others, from the Parnell radicals. The Commission on Agricultural Depression recommend for Ireland a governmental scheme of emigration; also one of migration from over-peopled districts; a plan for the reclamation of waste lands, and a court of arbitration for fixing rents. They generally approve a modified form of peasant proprietory. The minority of the commission consider these measures as not sufficiently strong.

In England an attempt has been made to blow up the barracks at Salford. The explosion is believed to have been effected by dynamite, and is attributed to the Fenians. In the House of Commons all legislation has been blocked since the opening of Parliament by the obstructive tactics of the Parnellites, who are determined to prevent as long as possible the introduction by the Government of a coercive bill for Ireland. The war with the Boers in South Africa still drags along, with a few outpost skirmishes. England has sent a lot of troops and cannon to the scene of hostilities; but although Sir Bartle Frere while in charge of the Cape Colonies advised that the independence of the Transvaal Republic should be restored, the Government refuses to consider the subject until England's supremacy shall have been reasserted.

The latest report is that Greece will declare war against Turkey by the first of next month, unless the latter concedes the territory the Berlin Conference thought Greece should receive. France has already informed the bellicose little kingdom that while the Conference urged Turkey to cede the territory, it conferred no right on Greece to claim it by force of arms, and that if she goes to war she must not expect aid from the Great Powers. Turkey has sent a note to the Powers asking them to mediate in the quarrel between her and Greece, and suggesting another conference on the matter, hinting that she might be induced to yield a larger territory than she has hitherto acknowledged to be possible. It is most likely that a conference of the Ambassadors of the Great Powers at the Porte will settle the difficulty amicably. None of the Powers seems to want war just now, and the Grecian threats are mostly bluster.

In France but little of general interest has occurred of late. The moderate Republicans have been steadily gaining in all the elections that have been held, local as well as national. The army is now considered in a finer position—better disciplined, armed and more numerous than *ever* before, even in the days of the first Napoleon. For the last ten years the chief interest of the nation has been to prepare the army for any contingency.

[Keokuk Constitution.]

Every Time.

A man, or even a piece of machinery that does its work right every time, is, we think, very correctly judged "valuable." And certainly none the less valuable is any article designed to relieve the ills of mankind, and which does so every time. Mess. Jones, Cook & Co., Bay State Brewery, Boston, Mass., write: We have used St. Jacob's Oil among our men, and find that it helps them "every time." We therefore heartily recommend it as a pain-healing liniment.

AGRICULTURAL NEWS.

Alexander Hyde, of Lee, Mass., the well-known writer on agricultural topics, died in Boston on Tuesday, Jan. 11. A fall on the pavement on leaving the State House caused his death before he reached the hospital to which his friends were carrying him.....Representative Geo. B. Loring, of Massachusetts, the well-known writer on agricultural topics, is spoken prominently of as the successor of Gen. LeDuc as Commissioner of Agriculture, should the latter be removed from office. But of this removal there are no present indications.....The State Agricultural College at Manhattan, Kansas, has about 200 pupils, nearly half of them ladies.....The annual product of beet sugar in France amounts to the value of $55,000,000. The number of persons to which this industry gave employment in 1879, exclusive of those who raised the beets, was 68,582, of whom 51,023 were men, 9,365 were women, and 8,192 were children.....Extensive experiments in irrigation have been made in Kansas this season, and have proved very successful, one acre producing 1,000 bushels of sweet potatoes. It is proposed to utilize the waters of the Arkansas on the plains of Western Kansas, and stock companies are forming to take charge of the work.....The recent heavy snows have made it impossible for quail and partridges in different parts of the country to get their accustomed food, starving hundreds of them and driving others to farm-houses for something to eat.

For the week ended Dec. 18 there arrived at Liverpool from America and Canada 312 live cattle, 162 sheep, 150 pigs, 4,996 quarters of beef, 650 carcasses of mutton, and 301 dead pigs.....The famine in Russia, it is predicted, will assume proportions altogether beyond previous estimates, but no steps have been taken to meet it. The Russian peasant cannot afford at the best of times to eat wheat, and this grain has been sold long ahead to the Jews and other middlemen. What is wanted is an immediate importation of cheaper grain.....There was an auction sale of 62 head of Short-horns at York, England, Dec. 9, at an average of about $100 per head.....The annual report of Secretary McGlincy, of the Elgin Board of Trade, shows that the total number of boxes of cheese sold on that Board during 1880 was 233,940, and the total number of pounds of butter sold on the same Board was 2,670,877. The value of the entire product of both cheese and butter was $1,801,303.09. This is $281,270 less than the transactions of the Utica Board during the season of 1880 for cheese alone. The butter product of the Elgin district ranks deservedly high, and does honor to the State in which it is made. .....Much gratification is felt at St. Heliers, Island of Jersey, at the steadily increasing demand from the United States for Jersey cattle. The farmers are obtaining the unheard-of price of $1,000 each for their cows.... ....Kansas harvested 25,000 acres of Egyptian or Rice Corn last year, the average yield being 25 bushels to the acre. This corn was among Egypt's exhibits at the Centennial, and, as it thrives in the driest soil and under the intensest heat, and is preferred by cattle and fowls to Indian Corn, its widespread introduction is predicted.

The Nebraska State Farmers' Alliance met at Lincoln on the 6th, completed its organization on the 7th and adjourned. They "resoluted" against railroad exactions; against excessive bridge tolls on the Missouri; in favor of Congress improving the channel of that river; in favor of farmer legislators, and against the diversion of the Western part of the State from tillage to stock-raising..... The new Indiana State Board of Agriculture organized on the 6th by the election of President, R. M. Lockhart, Waterloo, De Kalb County; Vice-President, B. H. Hancock, Fredericksburg, Washington County; Secretary, Alexander Herron, Indianapolis; Treasurer, James A. Wildman, Indianapolis; General Superintendent, Fielding Beeler, Indianapolis; Executive Committee, Jacob Mutz, Shelby County; Robert Mitchell, Gibson County; W. H. Ragan, Hendricks County; and S. R. Quick, Bartholomew County. The time for the State Fair was fixed for Monday, Sept. 26, 1881, and to close on Friday evening, Sept. 30..... On the 6th also the Indiana Wool Growers' Association elected the following officers: President, Fielding Beeler, Indianapolis; Secretary, J. W. Robe, Greencastle; Treasurer, S. W. Dungan, Franklin. Notice was given of an amendment to the constitution providing for electing a Corresponding Secretary. It was resolved that next January the meeting be held on the same week with the annual meeting of the State Dairymen's Association, the Swine-Breeders' Association, and the State Agricultural Society. The Association adjourned until the regular semi-annual meeting in May.

A Michigan farmer has been detected in selling rolls of butter which had been made hollow, filled with water and frozen solid.....The exports of grain from the port of New York during the year 1880 reached 107,000,000 bushels, an excess of nearly 18,000,000 bushels over the exports of any previous year.....The agrarian outrages in Ireland during December, 1880, numbered 866, which was more than for the whole of 1879, and little less than the aggregate of the three preceding years.....The sales of wool for 1880 in the Boston market foot up a little rising 100,000,000 pounds against 128,000,000 for 1879.

The Ill., State Board of Agricultural resolutes against the manufacture of oleomargarine and suine, and Gov. McCullum of that State in his message to the Legislature urges it to amend the criminal code on the subject of adulteration of food, referring to these concoctions.....Connecticut has one farmer in her Legislature in the Senate and 63 in the House out of a total of 245—more farmers than men belonging to any other calling .....In Ireland wheat in 1880 was fully 3s. per 280 pounds or 5s. per quarter better in quality than in 1879; but the present price is 2s. per 280 pounds under last year, or 3s. 6d. per 480 pounds. The production per acre was no larger in 1880 than in 1879. ...The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports, and on rail from Western lake and river ports and frozen in on New York canals.

	1881 Jan. 8, bush.	1880 Jan. 10, bush.
Wheat	28,892,132	30,309,361
Corn	16,651,479	11,864,045
Oats	3,732,855	3,292,516
Barley	3,215,885	4,401,210
Rye	816,442	1,152,102
Total	53,338,793	51,012,234

Lazy and dull feelings are sure precursors of sickness, which nothing but Hop Bitters will banish.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 to 60c. per box.

LYDIA E. PINKHAM'S Vegetable Compound will at all times, and under all circumstances, act in harmony with the laws that govern the female system. Address Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for circulars.

Burnett's Cologne is of the best quality, and is filled in elegant bottles of superior finish and beauty. It is offered in POPULAR sizes and at POPULAR prices. This refreshing perfume is thus brought within the reach of every one. It is prepared from the purest and best materials, and with the utmost care.

In quarter and half pints, pints, and quarts. In basket style, cork and glass stoppers.

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Jan. 15.

Boston.—CORN, high mixed, 61@62c ₱ bu; yellow, 60@61c; No. 2, 60c; steamer, 58@59c; rejected, 56c. OATS, extra white ₱ bu, 51@53c; No. 1 white, new, ₱ bu, 49½@50c; No. 2 white, new, ₱ bu, 48@48½c; No. 3 white, new, ₱ bu, 47c; No. 2 mixed, ₱ bu, 46c. RYE, $1.05. BARLEY, No. 2-rowed State, 90@$1; No. 6-rowed State, $1.10@$1.20; No. 6-rowed C. W., $1.20@$1.30; barley, rejected, 75@85c. MILL FEED.—Shorts, $16.50; feed, $18; middlings, $20. BUTTER.—Choice creameries sell at 30@33c for western, and 28@30c for nothern. Fall made New York and Vermont butter ranges from 25@27c, and straight dairies from 20@23c. Western dairy, freshly made, sells at 22@25c, and choice factory butter at 19@22c. Common western butter is dull at 15@17c, and common winter northern butter at 17@19c. CHEESE.—The best factory is firm at 13½c, and medium sells at 12@12½c, with fair lots at 11½@12c. EGGS.—Eastern, choice, 32@33c ₱ doz; northern, choice, 32@33c; western, choice, 32c; limed, 23@25c. HAY AND STRAW.—North'n and eastern prime, $22@23 ₱ ton; do. do. medium, $20@21; swale, $13@14; straw, rye, $22@23; do. oat, $13. VEGETABLES AND DOMESTIC FRUIT.—There has been a fair demand for potatoes, and Whites have sold rather better than a week ago. Peerless and Jacksons have brought 50@55c; Chenangoes, 45@50c; Vermont Rose, 60@65c; New York do. 58@60c; Maine Central, 60@65c, and choice Houltons, 70c. Onions remain firm at $3.50@$4.25 for red and yellow. Choice lots of Baldwin apples are in demand for export, and sell readily at $1,75 per barrel, as the market the other side is firmer. Cranberries rule from $4@5 per barrel for country, and $6@7 for Cape.

Chicago.—WHEAT dull and weak: No. 2 Red Winter, 97@97¾c; No. 2 Chicago Spring, 97¾@98c, cash; 98¾c@98¾c, February: 99¾@99¾c, March: $1.03¼, May; No. 3 do. 83@87c. CORN dull weak, 37c, cash; 37¾c, February; 42½@42¼c, May; Rejected, 35c. OATS steady and firm at 31@31¼c, cash; 31¼c, February; 31¼c, May. BARLEY strong at $1.05. FLAXSEED, $1.18. PORK fairly active at $13.25, cash; $13.27½@$13.30, January; $13 32½@$13 35, February; $13.45@$13.47½, March. Lard in fair demand at $8 80, cash and bid, February; $8.90@$8.92½, March. Bulk-meats active, firm, and higer; Shoulders, $4.50; Short Rib, $7.05; Snort Clear, $7.35. BUTTER—Creamery, $0@33c ₱ lb; dairy, choice, 24@26c; dairy, fair to good, 20@23c; ladle-packed, 17@19c; packing stock, 13@15c; roll butter, 14@19c; greace, 8@10c. CHEESE—Full cream, September and October, 12@12½; full cream, August, 9@9½c; part skim 8@9c; low grades, 3@5c. SEEDS—Timothy was active and firmer, prime being about $2.45@ and strictly do. $2 50. Sales were reported at $2 15@$2 50. Clover was in demand for export and firmer, selling at $4.80@5.10, and mammoth do. at $5.25. Flaxseed sold at $1.17½@$1.18. Millet was firmer, selling at 08c, and German millet at 62c. EGGS—Are still scarce, fresh being quoted at 30@33c, packed, 27@28c, and pickled at 20@24c. HAY—A good shipping demand prevailed for Timothy. No. 1 Timothy, $14@$15.75 ₱ ton; No. 2 do, $13.50@$14.50; mixed do. $12@$13; upland prairie, $10@$11; No. prairie, $9@$5 50; No. 2 do. $7.50@$8.50. Small bales sell for 25@50c ₱ ton more than large bales. HOGS—Good demand; mixed packing, $4.-65@$4.95; light, $4 75@$5; choice heavy, $5.10@$5.40. CATTLE—Market slow and very weak; a few of medium export grades, at $5.20@$5.30; good to choice shipping, $4 60@$4 85; common to fair, $3,60@$4 30; butchers' slow and weak; common to $1.75@$2 50; good, $2 75@$3 25; stockers 15c lower; demand mainly for feeders at $3.25@$3.80; stockers, $2.50@$3 25. SHEEP—Market dull; common to good, 34@$4.75; choice nominal, at $5@$5.20; none offered.

Cincinnati.—WHEAT No 2 Red Winter, $1 05¼@$1 06. CORN strong; No 2 mixed 37c. RYE dull; No. 2 97¼c@98c. BARLEY quiet; No 2 Fall, $1. PORK firmer at $13 75. Lard strong at $8 85. Bulk-meats firmer; Shoulders, 4¾c; Clear Rib, 7¼c. Bacon quiet; clear rib, 7¾c; clear sides, 8¼c. BUTTER, Fancy Northwestern Creamery sells at 36@37c, good Ohio do is dull at 30, choice Dairy at 23@25c, choice Western Reserve at 22@23, choice Central Ohio at 18@20c, medium to prime do at 15@17c, and common at 11@12c per lb. CHEESE, prime to choice factory at 12@12¼c, per lb but some good late-made is selling at 11@11¼c, and North-western skim at 10c. HAY, common sells at $15@16 prime do at $17@18 per ton in bales on arrival. Wheat and rye straw are firm at $9 and oats straw firm at $10. Mill Feed, bran sells at $13.50. Shipstuffs at $14@15 50 and middlings at $15@19 per ton in bulk and 50 more in sacks on track. Hogs active and firm; common $4@4 50 light. $4.60@4.90; packing, $4 80@5 20; butchers' $5 25@5 30.

St. Louis.—Wheat dull; No. 2 red Fall, $1.02¾, cash; $1.03¾@1 04¾, February; $1.05¾@6¾, March; $1.07¾@1.09¾, May; No. 3 red Fall, 98c asked; No. 4, 81@92½c. CORN—40@40¼c. cash; 40¾@40¾c, January; 29¼c, March; 40¾40¾cc, April; 41¾@41¾c, May. OATS—31¾@32¾c, cash; 33c, February; 34c, March; 35c, April; 45¾@36c, May. RYE 87c. HOGS—Yorkers and Baltimores, $4.25@4 45; mixed packing, $4.50@3.75; butchers' to fancy, 44 80@4.35. Cattle steady and scarce; export steers, $8.25@5.65; good to choice, $4.80@5.25; fair to good, $4.40@4.75; light, $4@4.25; fair to choice cows and heifers, $2.50@3.50; stockers' sheep dull at $4 25@4.50.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 15, 1880.

BEANS AND PEAS.—The bean market is quiet and round buyers can obtain go ds at the inside or shaded quotations. There seems to be no urgency to sell; the crop yield for '81 is believed to be smaller than the previous one, and if another European demand sets in sel ers will have a strong position. Eastern yellow-eyed eans dull at $1.75@1.80. Green peas plenty, not moving, and offered lower at $1.60@1 65. Southern B. E. steady at $2 per 2-bush. bag. Marrow beans prime $1.80, do, other $1.60@1.72, medium prime $1.70, do other $1.50@1.65, pea $1.60@1.75, white kidney $1.80@2.00, red do. prime $1.50@1.60, do. other $1.25@1.45, black or turtle soup $1.50, Lima $4.50@5.

BEESWAX.—There is a fair amount of stock on offer and a steady market; quoted at 23½@24½c. for Western and southern.

BUTTER.—Supplies continue moderate and with the possible revival of the export demand, prices keep close to last ranges. The present week makes a good showing in this way. The stock is estimated at about 2 150,000 pounds, but this is not deemed heavy, in view of a long winter. Still, if the interior holding is large dealers will not feel disposed to mark stronger prices than the year opens with, if, indeed, current quotations can be sustained. Very common styles of stock will be apt to drag in any event, as there is a surplus of that class reported on the continent and in England. At this season some very fancy State, Chenango and Delaware stock comes forward which exceeds general tub figures 2@3 ₱ lb. Western has about the best local run of buyers, fine grain-fed creamery leading the high class of trade, and the weather favors the exhibition and trying of useful cheap grades. Rolls are unusually plenty, as it is a convenient mode of packing at very cold points. They should be always cloth wrapped and there is no objection to the muslin being new or scrupulously clean.

Creamery, fine Western, 31@ good to prime, 31@33c; fair to good 27@30c State ranges, 20@30; State dairies, entire choice, 25c; fair to prime 22@24c.; firkins, 19@24c; State pails and half tubs, full, 28c, fair to prime 26@27c.; poor to fair 19@21c.; Welsh tubs, choice, 26@27c; other 19@23c; Western imitation creamery, 25@27c.; dairy, fresh, 23@24c; other 15@22c.; factory, fine, 21@22c.; other 14@20c, low quality, 12¼@13c.; rolls choice 18@19c, fair to good, 17@18c.

Receipts for the week, 21,050 pkgs.

Exports for the week, 8,527 pkgs.

CHEESE.—There is a better market on a decidedly freer export demand, moderate receipts and reduced stock. Exports for the week, 42,137 boxes. Quotations are for

State factory, fancy, at 13¾c.; do. good and prime, 12¾@13¼c.; do. fair to good, at 11¾@12¾c.; do. h'f skimmed, 9@11c.; Wisconsin factory, fine, at 13@13½c; do. good to prime, 12¾@12¾c.; do. fair to good, 11@12c.; Ohio factory, fine, 12¾@13¼c.; do. good to prime, 12@12¼c.; do. flat, fair to good, 10¾@11½c; do. poor to fair 8@11c.

Receipts for week, 39,804 boxes.

Exports for week, 45,223 boxes.

Liverpool cable, 67s.

Steam to Gt. Britain, 35@40s.

COTTON.—There has been a very good demand and the market closed steady.

January at 11.80@11 82c.; February at 11.95@11.96c.; March at 12.28c.; April at 12.28c; May at 12.40@12.41c.; June at 12.51@12.52c.; July at 12.61@12.62c.; August at 12.65@12.67c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas*
Ordinary	8 15-16	8 16-16	8 16-16
Strict ordinary	9 9-16	9 11-16	9 11-16
Good ordinary	10 9-16	10 11-16	10 11-16
Strict good do	10 15-16	11 1-16	11 1-16
Low middling	11¼	11¾	11¾
Strict low middling	11¾	12	12
Middling	11 15-16	12 3-16	12 3-16
Good middling	12 7-16	12 11-16	12 11-16
Strict good middling	12 11-16	12 15-16	12 15-16
Middling Fair	13 3-16	13 7-16	13 7-16
Fair	13 13-16	14 1-16	14 1-16

STAINED.

Good ordinary	8¾	Low middling	10¾
Strict good ordinary	9¾	Middling	11¾

Receipts for the week, 31,227 bales. Exports do. 8,830 do.

DRIED FRUITS.—Domestic dried apples have a fair demand and prices generally steady. Peaches are quiet unchanged. Small fruits have a light margin. Quotations are for

Evaporated apples at 8¼@9c. for the better qualities; sliced apples at 5¾@6¼c. for good to choice North Carolina; 3¾@4¼c. for Va. apples, 4@4¾c. for Tenn. do; 4¾@5¼c. for State do; 4¼@5¼c. for western Ohio and Mich. Peaches at 30@33c. for evaporated peeled; 16c. for unpeeled do; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6¾@7¼c. for halves and 6¾@7c. for quarters. Plums at 15@16c. Blackberries at 3c. Cherries at 17¾. Raspberries at 25c. Whortleberries at 12¼@13c.

Receipts for the week, all kinds, 3,624 pkgs.

Exports for the week, 4 203 pkgs. dried apples.

EGGS.—Receipts for the week 1,500 bbls; do. last week, 1,175 bbls. Business is light and there is only a limited supply to trade in. Scarcity seems to prevail in all points, at least our high prices have not had the customary effect of bringing in lots from Philadelphia or other places. Limed are still doing wonders in the price-list for owners. It should be remarked that any liberality in receipts would reduce quotations. This is one of the most sensitive markets in this city. Near Points, doz., 40c; State and Penna, 35@37; Western and Southern fresh 35@37; Fall-laid stock 33@34c; stored fresh 30@32c.; State limed 30@31c; Western and Canadian do. 29@30c.

FLOUR.—As a rule buyers have had the advantage this week on full supplies and the easier course of the wheat market.

Quotations are: $3.00@3.75 for very inferior to very fancy superfine State and Western; $4.00@4 40 for poor to choice extra State and Western, odd lots and lines; $4 40@4 65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 15@5.15; good to choice do. at $5.10@5.85; (very choice up to $6,25;) red and amber winter wheat inferior to choice trade and family, at $4.15@5.85; round hoop Ohio, $4,25@4 75; and trade and family brands of do at $4.80@6.25, the latter for fancy; St Louis $4.40@5.25 for inferior to good extra; $5.25@6.25 for good to very choice; Minnesota clear, inferior to very choice at $4 25@6,; Minnesota "straight," poor to very choice at $5 25@6.75, and patent inferior to fancy at $5.75@8.25; city mill extra at $5.10@5.35 for poor to strictly choice for the West Indies; do. for England at $4,15@4.90 for poor to choice spring wheat, and $4.65@5.50 for winter wheat product; do. trade and family extras $5.65@6,75; do. for South America, $5.45@5.75, the latter for very choice; No. 2 at $2 85@3.40 for very inferior to fancy.

Receipts for week, flour, bbls. 135 950; corn meal, do. 1,500; wheat, bush. 435,700; corn, do. 162,850; oats do. 115,350; rye, do. 18,000; malt, do. 24 350; barley, do. 36,100. beans, do., 7,532; rice, nkgs. 1,120.

Exports for week, flour, bbls. 107,850; corn meal, do. 4,775. wheat, bush 727,300; corn, do. 147,850; oats, do. 2,961; peas, do. 4,200; beans, pkgs. 424; rice, 1,050.

CORN MEAL—Quoted at $3.35 for Brandywine, and $2.65@3.25 for yellow Western.

FRESH FRUITS.—Exports of apples for week, 8,750 bbls. The apple market is without animation: buyers carry only small lots and then have to pick out a safe day for transportation. Stored Greenings and Baldwins fill most wants. Railroad deliveries are unsettled unless in marvelous good condition.

Baldwins $1.75@2; Greenings, $1.62@1.75 Spitzenbergs, $1.87@2; Lady apples $3@4. Cranberries quiet but not pressed for sale; holders calculate upon a long season; Cape Cod fancy bbls., 48; other $4@7; N. J. crates, $1 75@2,25. Florida oranges still overstock the market and the first heavy crop has met with a poor opening. Repacked standard half bbl. boxes $3@4,50; ordinary to good as they run, $2.50@3 50. Best in boxed pears are scarce and bring fancy prices, $7@8; Californias selling only in a small way. Peanuts have got into a strong position and close firm; Va. hand-picked 4¾@5c, ₱ lb; other 3¾@4¾, shelled 3¾@4¾c. Hickory nuts dull; $1.25. Black walnuts 40@50c. Pecans 8¾@9¾c.

FURS AND SKINS—Unbreased; prices too high for treaty under the discouraging advice from Europe.

GRAIN.—Wheat has felt the increasing visible supplies and has tended lower; exporters have taken 740,000 bushels for the week. Latest prices are for

No. 1 white at $1.16@1.16¾, do. January at $1.16@1.16¾, do. February at 1.16¾@1.17, do. March at $1.17¾@1.17¾, do. May at $1.17¾@1.17¾; No. 2 white at $1.15; ungraded white at $1.13@1.16; mixed winter at $1.16@1.16¾. No. 2 red at $1.18¾@1.19, do January option at $1.18¾@1.18¾; do. February at $1.18¾@1.19¾; do. March at $1.20@1.21, do May at $1.20¾@1,21¾; No. 3 red in lots at $1.16@1.16¾, ungraded red at $1.11@1.18¾. New York No. 3 Spring at $1.08; rejected spring at 93c

Rye at 97@$1.01.

Corn has ruled easy and moderately active: latest sales are of

New York No. 2 at 56¾@57c, do. January at 56¾, do. February at 56¾, do. March at 56¾@57, do. May at 54¾@55; ungraded mixed Western at 54@56¾, No. 3 at 54; New York steamer mixed at 54¾@54¾, New York steamer yellow at 55; No. 2 white at 58¾@59; steamer white at 56; yellow Jersey at 53¾@55.

Oats have been in active demand and closed with extra white at 50c; No. 1 white 49@50; New York No. 2 white at 48¾@49¾; No. 3 white at 46@47; New York No. 2 at 44¾@44¾, do. January at 43¾@44, do. February at 44¾@44½, do. March at 45¾, do. May at 45¾, No. 3 at 43¾@43¾, ungraded white Western at 45@48, ungraded mixed Western at 42¾@44, white State at 48@50@, mixed State at 46. No. 2 Chicago at 44¾.

HAY AND STRAW.—Receipts are fair but demand good and prices firm. Quotations:

Hay, prime timothy at $1.15@1.50 ₱ 100 lbs.; medium timothy at $1,10 do.; shipping grades at $1@1.05 do.; clover mixed at $1@1.10, clover at 90@95c. do. Straw—No. 1 rye at $1.20@1.30 ₱ 100 lbs.; No. 2 rye at 70@75c, do.; oats and wheat at 65@70c. do.

Exports for the week 994 bales.

HONEY—Remains quiet at the easier rates.

White clover, single, comb. 16@17c.; larger pkgs. do. 14@15c.; buckwheat 11@12c.; extracted 8@10c.

HOPS.—There is a generally firm market, and demand moderately active. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	21 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Pacific coast, new	20 @24

Receipts for the week, 1,632 bales.

Exports for the week, 357 bales.

LEATHER.—Quotations for hemlock sole are light at 22@23 middle, 23@25; heavy at 23@25, and good damaged at 20½@22.

MILK.—Supplies are smaller but ahead of Winter wants. Commission cans of 40 qts. sold during the week at an average of $1.71½.

OIL-CAKE.—Western is quoted at $29@29 50 per ton.

POULTRY AND GAME.—Dressed poultry shipped by express is doing well: freight-shipped turns out more or less frozen and buyers will not bid high for it. Large turkeys very slow of sale; more chickens than fowls wanted. Prime ducks and geese sell well. Drawn poultry similar to that dressed for eastern use is in no favor here.

Turkeys, N. J. small, 13@13¾c; other, 12@13c, State, small, 12¾@13c.; other, 11½@12c.; Western, small, 12@12¾c.; other, 11@12c.; poor to fair, 8@10c.; Philadelphia d.-p., 13@15c.; chickens, choice, 15@16c.; good to prime, including scalded, 12@14c.; poor 9@11c.; chickens and fowls W. 9½@12c.; cappons, 20@21c; slips, 16@18c.; fowls, good to prime, 10@13c.; do. poor, 8@9c.; ducks, choice, 14@16c.; other, 10@13c.; geese, choice, 11@12c.; other, 8@10c.; squabs, dark ₱ doz., $1.50; light, $2,75@3.

Live poultry is in fair demand and in good supply for winter.

Fowls, 10@11c. ₱ lb.; chickens 8@9c.; roosters, 5@7c, turkeys, 9@11c which is lower; ducks, best, 75@87c, other 50@70c. Geese, extra, $1.87@2; other $1.25@1.75. Pigeons, 20@25c.

Game is bringing good prices in a rather restricted way. All prime birds firm.

Canvas back duck $1.50@2, red-head 50@87c, mallard 50@60c; blue wing teal 40c, green do., 35c common 20@30c, quail ₱ doz trapped $1.87@2; poor $1.50@1.75; partridges, ₱ pair 60@90. Geense prime $1.12@1.15, drawn 80@$1; hares, 25@50, Rabbits, 25@30.

PROVISIONS.—Hog products have been active.

Mess pork quoted at $13@13 25 old on the spot. Bacon at 7½ for long clear and 8 for short clear. Lard—Western steam at 9.33½ for spot lots. 9.30 for Jan., 9.30@9.32½ for Feb., 9.40 for March. Stearine at 9¾@9¾. Tallow at 6¾@6¾ for prime. Beef hams at $18@18.50. Beef—extra India mess quoted at $21@22 for city; $10.50@11 for extra mess; $9.50@10 for plain mess; $13 to $14 for family mess; packet at $12.

Receipts for week, beef, bbls. and tcs., 650; pork, 2,150 bbls.; cut meats, 40,100 pkgs.; lard, 23,700 pkgs.

Exports for week, beef, bbls. and tcs., 2 668; pork, 8,014 bbls.; cutmeats, 15,469,075 lbs.; lard, 6,192,000 lbs.

SEEDS.—Clover is quiet; Western is quoted at 7¼@8½c.; Timothy has a light demand; quoted at $2.75@2.85.

SUNDRIES.—Cider jelly 8@ ₱ lb; feathers, prime, 45@50c; maple sirup $1 ₱ gal.; pop corn 2@3c; no large quantities wanted.

TOBACCO.—Exporters are doing little and trade is moderate; prices are steady.

SEEDLEAF.	Crop 1879.
New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5½@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @15
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7½@10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	14 @18

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4¾@ 5	5¾@ 5¾
Good lugs	5¼@ 5¾	6 @6¾
Low leaf	6 @ 6½	6½@ 7
Medium leaf	6¾@ 7¾	7½@ 8½
Good leaf	8 @ 8½	9 @10¾
Fine leaf	9 @11	11 @12½
Selections	12 @15	12¾@15

VEGETABLES.—Exports potatoes for week, 4,555 bbls. The market is stronger for prime Eastern and State potatoes. Holders do not fear supplies by rail while the weather is cold.

E. Rose Eastern d.-h. $2@2,25, do. State, $2@2.12; do. in bulk $1.87@2 00 prolific do. $1.62@1.75; Burbank do. $1.75@1 87 Burbank d.-h. $1.87@2, peachblow do. $2.50; snowflake do. $2@2.13; do. bulk $1.87@2; peerless State $1.62@1.87; N. J. $1.50@1.75, sweet Del. $2.75@3. Onions too high for general use, market closes weak. Celery lower. A few West Indian tomatoes have sold at $1.25@1.50 per small box. Russian bbl. turnips, 50@75c.; white 50@75c.; beets, 75c@$1; Hubbard squash, 75c@$1; marrow do. 40@50; onions, white, $5@5.50 yellow, do. $3.25@3,50; red and Chester, $3,00@3.50; carrots, $1.25; cabbages, ₱ 100, $5@8; red, do. $5@9; celery ₱ dozen, $1@1.50 hot-house tomatoes, ₱ lb. 50c.; cucumbers, choice, ₱ doz. 13; do. culls, 75c.@$1.50; lettuce, best head, ₱ doz 40@60c.; do. other, 12@25c.; radishes, ₱ 100 bunches, $4; rhubarb, ₱ doz. $1.

WOOL.—Demand is increasing and the market is firm. Quotations are for

XXX Ohio, Penn., and W. Va. fleeces quoted at 48@50c, XX 46@48c., X, at 46@48c, No. 1 at 49@52c., No. 2 44@46c.; course at 37@40c.; combing at 47@53c.

N. Y., Mich. and Wis. XX 40@44c., X 40@44c., No. 1 48@51c., No. 2 41@43c., course 35@37c., combing 45@52c.

Ind., Ky. and Tenn. XX at 38@43c., X 38@43c., No. 1 47@50c., No. 2 40@43, coarse 33@37c., combing 43@50c., coarsings unwashed 30@37c.

Ill., Iowa and Minn. XX at 37@40c., X 37@40c., No. 1 45@49c., No. 2 37@41c., course 32@34c.

Ga., Ala., Miss. and La. nne unwashed at 35@37c., medium do. 42@60c., coarse do. 27@32c. burry 17@22c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Jan. 15, 1880.

BEEVES.—Receipts for the week 13,451 head: do. last week, 11,171 do. The market opened well on Friday, but the later sales were slow and there was enough decline to call it a ½c. compared with Wednesday's market. Market closes weak with heavy prospective supplies. Common to medium steers, 8@9¾c., dr. 55@56 lbs.; fair to good, 9¾@10¼c., dr. 56 lbs.; prime to choice, 11@12c., dr. 57@58 lbs. The run of quality unusually heavy.

COWS AND CALVES.—Latterly supplies have exceeded the demand and prices are now weak for any quality under choice. The range is $55@60 ₱ head, the latter for singles above prime.

VEAL CALVES.—Common calves are slow; primo in good demand.

Live choice fed 7¼@8c. poor to prime 6@7¼. Mt. Holly 5@8, buttermilk, 4@5, grass, 2¾@3¾, hog dressed choice 9¾@10, fair to good 8¾@9, common 4¾@6¾.

SHEEP AND LAMBS.—Receipts for week, 29,359 head; do. last week, 28,365 do. Market slightly overstocked with sheep; prices easier. Common to medium, 4¾@5¾c.; fair to good, 5¾@6¾c.; Lambs, 6@7¾c.; a few Canadian, 7¾c.

SWINE.—Receipts for the week, 42,728 head: do. last week, 31,331 do. The demand is active for live or dressed, cold weather favoring packers. Live corn fed, $5 05@5.15 ₱ 100.

Country dressed pork light 7@7¼c.; medium, 6¾@7c.; heavy, 6¾@6¾c.; city dressed State 6¾@7¾, city dressed Western 6¾@6¾, Western dressed 6¾@6¾. Pork tenderloins 12@12¾.

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Reading for the Young.

A LITTLE STORY TELLER.

WHAT do you think
Has happened to Rover?
The most dreadful thing
The whole world over—
If anybody else had told me so
I wouldn't have believed it—no no, no!

Oh, dear—let me see—
I suppose I must tell—
You know our folks
Have got a big well;
It's dark and it's big, and, oh, such a place!
I've told him so to his very own face.

He's a bad, bad child;
He wouldn't mind;
He would go on the edge
As if he were blind;
And, oh! don't you think, he's tumbled way over,
And the water's all covered my poor little Rover!

See, here comes Rover now!
See, he ain't dead!
Now *can't* I make up things
Out of my head!
I guess if the editors knew what was smart
They'd take *my* stories instead of yours, Uncle Mark.

FARMING FOR BOYS AND GIRLS—NO. 10.

HENRY STEWART.

Harrowing.

IT will be plain, to one who knows how plants feed and grow in the soil, that the finer the soil is, the better the plants can feed and grow. Every little rootlet is a mouth pushed out to find food. If it meets in its course only fine particles, through which it can penetrate with ease, it throws out branches in its course until it occupies the whole soil. In this way the roots of a plant soon form a close net-work of fibers, which grasp and surround the soil and suck up from it its moisture, in which is dissolved the plant food. But if the soil is in hard lumps, the root pushes on with all its strength, vainly trying to enter these masses, and becomes merely a single thread, gathering no food, but really tiring out itself until it is starved or greatly weakened.

Again, when the soil is in lumps and clods, there are large air spaces between these and the surfaces become dry, because the moisture evaporates from such soil or sinks down into the subsoil too quickly. Then the root perishes, and the plant not only fails to find food, but all the work it has done is lost, and it is to that extent weakened.

From this it will be seen how necessary it is to break up the soil and reduce it to as fine a state as possible. This is done by harrowing the soil, immediately after it is plowed and while it is fresh and soft, and can be easily broken up. But there is a right and a wrong way to do everything, and the harrow may either not be well adapted for its purpose or it may not be properly used. A harrow is usually a wooden frame provided with iron or steel pins or teeth, set upright in the frame or slanting backwards. Recently an improvement has been made which consists of using sharp-edged discs or wheels mounted on a frame instead of teeth, and for some purposes this is very useful. For instance, when a sod has been plowed and turned under, it is very difficult to use a straight toothed harrow without tearing up the sod, and this has a bad effect, and prevents the farmer from reaping the most advantage from his work, as we shall see when we come to think about the plowing under of sod. The sharp wheels of the disc harrow, cut up the surface into very small pieces and as they are placed a little sideways on the harrow, they scrape the soil to one side a little and turn it up into small ridges of soft, loose soil and thus prepare a very excellent bed for the seed. The same effect is produced, but only to a smaller extent, by the sloping-tooth harrow which passes easily over the surface without tearing up the sod under it, and for some purposes, such as covering seed, this kind of harrow is very useful.

The common kind of harrow works the best on stubble land and when drawn across the furrows. It should always be drawn from a corner or near the corner, as this brings the lines of the teeth close together and breaks up the soil more thoroughly. When a harrow of this kind is drawn across the furrows, the teeth break up the furrow-slices very completely, and as they break these and stir the ground they fill up all the loose spaces between the lumps with fine soil, and make the ground compact as well as soft, and fit it precisely for the needs of the roots which are to grow in it. But when drawn along the furrows it is very clear that it cannot break up the ground nearly as well, because hard slices cannot be penetrated by the teeth.

To produce the best effect the harrow should be drawn by a short chain, which permits it to vibrate from side to side with a sort of zig-zag motion, and also causes the harrow to lie flat, so that every tooth does its work and none of them are lifted out of the soil, which would be the case if the harrow was hitched short and close to the traces. Harrowing is thought to be a very simple thing and is too often slighted on this account. But if we consider its purpose and what is gained by it, and watch a harrow at work and examine the soil before and after harrowing, we shall find it a very important business, and one that should be done with the greatest care and attention. In fact, by such consideration we shall learn that there is no work on the farm, but has a deeper purpose in it than appears at first sight, or to one who does not think; and that thinking about the work will help us very much to do it in the best manner.

A WORD TO YOU, BOYS.

FIRST: Be honest. By which we do not mean, simply, not to steal. That goes without saying. The young man who, before his beard is grown, thinks it clever to cheat his tailor, or to sneak out of his little debts at college, has already laid a sure foundation of ill fortune. Nothing is known so quickly or sticks to a man so long as the reputation of dishonesty. It is the fleck of mildew which eats and grows blacker and spreads from year to year.

Boys are fatuously blind to the lengthening shadows which these faults of sharp-dealing and lying in their earliest years throw down their whole future. In a year or two they will be asking for patronage from the public or a chance in the business world, and they will find that in damaging their character they have already squandered their only capital. No merchant would take a boy even as porter into employ who was not known to be honest.

We take it for granted our boys are honest, in the coarsest meaning of the term. But there is a finer honesty that enters into a man's nature and lifts him above his fellows. He is no sneak nor sham, neither to his companions, his God, nor even to himself.

As the boy begins, so the man will end. The lad who speaks with affectation, and minces foreign tongues that he does not understand at school, will be a weak chromo in character all his life; the boy who cheats his teachers into thinking him devout at chapel, will be the man who will make religion a trade and bring Christianity into contempt; and the boy who wins the highest average by stealing his examination papers will figure some day as a tricky politician.

The lad who, whether rich or poor, dull or clever, looks you straight in the eye and keeps his answer inside of the truth, already counts friends who will last all his life and holds a capital which will bring him in a surer interest than money.

Then get to the bottom of things. You see how it is already as to that. It was the student who was grounded in the grammar that took the Latin prize; it was that slow, steady drudge who practiced firing every day last Winter that bagged the most game in the mountains: it is the clerk who studies the speciality of the house in off-hours who is to be promoted. Your brilliant, happy-go-lucky, hit-or-miss fellow, usually turns out the weight of the family by forty-five.

Ready for you in your early manhood, there are plenty of pleasures waiting for you to conquer—applause, money, society, this and that kind of philosophy or faith. Take nothing on trust; weigh it, see what it is worth. You will have rough disappointments, but you will come to the granite underneath at last.—Tribune.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK AND RURAL COUSINS:—I have long cherished a wish to write to you and tell you how much I love and appreciate the dear RURAL. It has been a constant and welcome visitor to me for the past three years, and in renewing my subscription, I must say that I cannot afford to do without it.

I remember the first one that I ever saw some 25 years since; it had the deaf and dumb Alphabet in it which I took great pleasure in learning. I would like to join the Horticultural Club, as I am a great lover of flowers, and the beautiful in general. I admire the artistic taste displayed by woman in arranging her flower-pots and in flower culture. I admire her devotedness not only at home, but on the battle-field administering to the wants of the wounded and dying soldiers, as only a woman can, and in carrying the Gospel to the benighted heathen and in many other ways her devotedness is exhibited. How many sad hearts have been cheered and strengthened for life's battle in the perusal of the RURAL'S pages? Who can tell?

I think that the free Plant and Seed Distribution cannot fail to be of great value in disseminating new and choice varieties of plants and seeds. It gives children an interest in cultivating the beautiful in Nature and is far more valuable than the so called "Chromos" and "Oil Paintings" which are "given away" as Premiums.

I have taken great interest in the seeds which you so kindly sent me from time to time. I received the Cuthbert Raspberry some time ago, for all of which accept my sincere thanks. The reliability, trustworthiness and honesty of the RURAL places it in the front rank of Agricultural Journals and I hope that nothing will ever creep in to mar its fair pages, and that the same sympathy and patronage may be extended to it in the future as it has had in the past. VIOLET.

Oxford Co., Canada.

DEAR UNCLE MARK:—I think it is about time I wrote and thanked you for the seeds you so kindly sent me last Spring. I wrote a letter some time ago but as it was pretty long, I did not see it in print and I supposed it found the waste basket where a great many letters go. I had pretty good luck with my seeds last Summer. The musk melons were just splendid, one weighing seven pounds. As a general thing they were not very large but I had a great number of them, they were of such a delicious flavor that every one admired them that tasted them. Out of the five okra seeds I received only three grew. The pinks, portulacas and phloxes were very nice and flowered until the frost killed them. Every thing was nice but the mignonettes; they grew and covered the ground all over but they did not have any sweet smell at all. I did not receive any coxcomb seeds. I have three hybrid penstemons, one magnolia tree and one grape vine. My brother had a lot of mangolds one weighing sixteen pounds. The oats also were nice. Out of the three willow cuttings two grew. I am a great lover of flowers and have a great number; among them, I have eight different kinds of roses. Grandma has a lemon tree about thirty years old. It is about four feet high and its leaves are about six inches long. She puts it out in the garden in the Summer time and keeps it in the house in a big box in the Winter; it never blossoms nor bears any fruit. I wish to ask if it was grafted would it bear fruit, if so where could she get grafts. L. H.

Oshawa, Ontario.

[The lemon tree can be successfully grafted. Grafts may be obtained of Parsons & Sons, Flushing, L. I., also of P. J. Berckmans, Augusta, Ga. —U. M.]

DEAR UNCLE MARK:—Many thanks for the seeds you so kindly sent me. They grew finely and flowered beautifully, especially the phloxes, and pinks. We have just been having a long California rain lasting three weeks, which some of the cousins will think is awful, but it is not. The weather is nice and warm; the plants out-doors are growing and blooming nicely; the grass is green, and the mercury is up to 58 deg. this morning. We have boquets of roses and other flowers all the time. My brother takes the RURAL he likes it very much. He received his potato in good condition. I am afraid my letter is getting too long so will close. ALICE SNYDER.

PENTZ, Butte Co,, Cal.

UNCLE MARK:—I have a corner in our garden that I have for wild flowers. I have some Bloodroot and Wild Phlox, Wild Anemones, both single and double Hepatica, Dutchman's Breeches, two species, and some ferns. I would like to join the Horticultural Club. My brother takes the RURAL NEW-YORKER and we like it very much. I have a parrot, it is so tame we can handle it most any way we please; it talks some. I want to ask you a question: is it natural for Roman Hyacinths to come up now, in this climate. ELSIE.

Bucyrus, Ohio.

[Hyacinths sometimes come up in mild Autumns, but this weather will cure them of that.—U. M.]

UNCLE MARK AND RURAL COUSINS:—I have read the letters from the cousins to my little brother, and he has been teasing me to write, so I venture for the waste-basket. One of my older brothers has taken the RURAL for three years and would not part with it. I am fifteen and my little brother is nine years old. It is so cold in Winter that we can only raise annuals. We have a few house-plants. If we can join the Horticultural Club please put our names on the list.

Grundy Co., Iowa.

ROSY AND ANDREW BENTON.

DEAR UNCLE MARK:—I am a little boy nine years old. My pa takes the RURAL and I like to read the letters from the cousins very much. I want to join the Horticultural Club and be one of the cousins. I cultivate a garden every year, and raise beans and peas, beets, radishes, tomatoes, cucumbers etc. I grafted some wild goose plums last Spring, and some of them grew and are doing well. I have lots of pretty flowers too, such as portulaca, balsam, petunia, phlox and lark spur. Please send me some seeds next spring.

Dallas Co., Texas. EMMANUEL C. HATCHER

The Puzzler.

HIDDEN PARTS OF A HOUSE.

1. Urban is terribly plain.
2. How Allie grows.
3. I need proof.
4. He shall not go.
5. Too flat, he said.
6. Graft Ernest's orange tree.
7. Try corn ice-cream.
8. Please do, or sorry you'll be.
9. Do win Dow's premium.
10. Flo, order must be preserved.
11. Trace "I L" in green.
12. Philip last, Erling first.
13. Come Tom, or terror may ensue.
14. Use spar, Loring.
15. Such a din in grooms.
16. Kit. Chenango is a county of N. Y.
17. Bob Athroo moved.
18. That ticking is too loud.
19. The cigar retches me.
20. Is the parcel large?
21. Hear the clock strike.
22. Ben Bolt sang of Alice.
23. Thou hast air surely.
24. Shut Tersie's door.
25. The man tells two tales.

☞ Answer in two weeks. LITTLE ONE.

A PYRAMID PUZZLE.

A consonant; a river of England; part of a wagon; a god-parent. Centrals form a bird.

☞ Answer in two weeks.

NAME PUZZLE.

Place three female names so as to form a fourth.

☞ Answer in two weeks. L. O.

A SQUARE.

1, Seasoning; 2, an Eastern country; 3, to halt. 4, a narrow fillet. GUS.

☞ Answer in two weeks.

PUZZLER ANSWERS.—Jan. 8.

HIDDEN DANCES.—1, Reel; 2, march; 3, saraband; 4, polka; 5, hornpipe; 6, minuet; 7, jig; 8, ballet; 9, waltz; 10, quadrille; 11, redowa; 12, Le German; 13, can-can; 14, gallop; 15, fandango; 16, Cotillion; 17, quickstep; 18, schottish; 19, the lancers.

SQUARE WORD.—

M I T E
I T E M
T E R M
E M M A

CROSS WORD.—Hieratic.

Sabbath Reading.

ONE DAY AT A TIME.

Only one day
To bear the strain
Of living, and to battle with the pain.

Only one day
To satisfy
With food and covering, as the hours slip by.

Only one day
To-morrow's care
To-morrow, if it comes, itself shall bear.

Only one day—
Then waste it not
In futile planning where the Lord is not

Only one day
God gives to me
At once. Oh, may I use it faithfully!

A NEW COMMANDMENT.

EXTRACT OF A SERMON, BY JOHN STOUGHTON, D. D.

COMMENTATORS are not agreed as to whether our Lord intended that his new commandment should be taken as an addition to the ten delivered on Sinai. Be that as it may, even if it be a misnomer to call it the eleventh commandment, we shall all agree that it points to something in the Gospel of our Savior which goes beyond the Law of Moses. That something, I shall endeavor at once to illustrate.

It is a new commandment. In a certain sense it is from the beginning—the law as well as of the Gospel—yet also it is new, as to its form. There was a compression, a terseness, a pungency in our Lord's teaching quite original. He did not deal in a multitude of words, a thick forest of verbiage in which a listener is presently lost. No crowd of particulars, no host of minute specifications, such as learned casuists have been wont to suggest, do you find in his lessons—but that which is to the point—that which strikes into the heart of a subject, cleaving it and laying it open.

Compared with the wearisomeness of Rabbinical teaching, our Lord's method was obviously new. Even the old ten commandments, delivered on Sinai amidst lightnings and an earthquake, and which pealed out, one after another, in slow solemn grandeur, the great teacher condenses into two brief sentences—"Thou shalt love the Lord thy God with all thy heart, and with all thy soul, and with all thy mind. This is the first and great commandment. And the second is like unto it Thou shalt love thy neighbor as thyself. On these two commandments hang all the law and the prophets." Here we have a new and abridged edition of the Sinaitic code. One of the ten precepts might easily be dropped out of the enumeration, but these two contained the essence of the whole, and no drop of either could be ever lost. It is true, each of the epitomes just cited may be found in the writings of Moses, but there you do not find the two compactly brought together as in the words of Christ: so entwined here are they in the most portable of forms, that they can hardly ever, through fault of memory, be rent asunder. Our Lord's summary was something new. The text is in exact keeping with the second saying—"Thou shalt love thy neighbor as thyself," only it presents the law of charity under a new aspect in this way.

It is not addressed to the world at large—not to the mere citizen, who may live in the same street, next door to another who has only a common claim on his regard; but it is addressed by the Savior to his own disciples—to those whom he had called out of the world, and brought into select fellowship with Himself, to those whom he addressed by the endearing epithet "little children"—an expression we can scarcely help uniting with his words on another occasion: "Except ye be converted, and become as little children, ye shall not enter into the kingdom of heaven." These men to whom he spake were within the kingdom, they had bowed down their heads and entered the low strait gate as little children—they had been new born into his own new family of love; and now, looking on them with a smile of affection, he bids them be brotherly, he bids them be united, he bids them clasp hands together in his presence, and swear a league of undying friendship. "A new commandment I give unto you," members of a new spiritual family such as were never seen on earth before—"that ye love one another."

It is *new* in point of *example*, and here we get closer to the true idea of its newness. He exemplified it Himself—as Moses had never done, as the prophets had never done. A pattern of perfect love had never before been beheld in this selfish world. The love of Jacob for Rachel was very beautiful and tender; the love of Jonathan for David was passing the love of women; the love of the Maccabees for their country was noble and heroic; so was the love of certain Grecks and Romans—but Christ's love rose above that of wife, or friend, or country, was of another order, of another stamp, of another spirit, went more entirely out of self, so as to carry not the faintest shadow of self where it went. Such other loves, as those just touched on, fall back again, if I may say so, on the lover. The wife, the friend, are part of self, and are essential to the lover's enjoyment, without them he cannot live. They minister to his felicity, he is lost without them—so with his country to the impassioned patriot; he pines away and dies apart from it.

A GOOD conscience is the palace of Christ, the temple of the Holy Ghost, the paradise of delight, and the standing sabbath of the saints.

WHEN the winds of applause blow fresh and strong, then steer with a steady hand.—M. Henry.

Why be sick and ailing when Hop Bitters will surely cure you?

PERSONAL ITEMS.

General Hawley, the new United States Senator from Connecticut, was born in North Carolina.

Ex-Governor Warmoth, of Louisiana, will get from his plantation a million pounds of sugar this year—it is said.

Ex-Governor Horatio Seymour is in ill health and says that he "will have to nurse himself until Spring."

President-elect Garfield is said to be fond of horseback exercise and at Mentor rides every day several miles.

The late Dr. Chapin was very much worried during the last years of his life by the rattle of his false teeth while he was preaching.

"R. B. Hayes, President of the U. S." is flanked on one side in the Washington directory by "R. H. Hayes, barber," and on the other by "T. J. Hayes, shoemaker."

President Hayes and the White House during 1880 cost the government $119,964, $50,000 of which Mr. Hayes received as his salary, the other $69,964 being for White House expenses.

Queen Victoria has placed Osborne Cottage at the disposal of the Empress Eugenie for a few weeks. The Empress will take up her abode at her new residence in North Hants in the Spring.

Ex-Confederate Generals are, many of them achieving fame and fortune in rosier paths than of old. Major General Marmaduke is a Missouri railway commissioner, and, as a bachelor, lives comfortably in St. Louis on a salary of $5,000 a year. General J. B. Gordon, as counsel for the Louisville and Nashville road, gets a salary of $14,000. Major General F. B. Cheatham has a handsome farm in Tennessee. General Toombs practises law, and is very rich. General Basil Duke is a lawyer in Louisville, and has a good income; General Bradley Johnston is also getting rich in the same profession in Baltimore. All the sons of Robert E Lee, except one, are moderately successful farmers in Virginia. The exception, Custis Lee, succeeded his father as president of Washington-Lee University. General Jubal Early is living quietly at Lynchburg in comfortable circumstances. General J. C. Pemberton has become a resident of Philadelphia, is an invalid, and has written a book on Vicksburg.

[Cairo (Ill.) Radical Republican.]

What We Know About It.

"What do you know about St. Jacob's Oil?" said one of our oldest subscribers. This was a fair question, and we answer that we are reliably informed that a gentleman of this city who has suffered untold agony, and spent a mint of money to get relief from Rheumatism, in desperation bought some and tried it, and declares that it is the best remedy for Rheumatism he ever heard of.

Trees, Seeds, Plants, &c.

THORBURN'S SEEDS.

Our General Catalogue of

VEGETABLE,
FLOWER,
FIELD and
TREE SEEDS

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J. M. THORBURN & CO,
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BEST VARIETIES

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Also the Largest Establishment in the world for Thorough-bred Poultry.
Send for catalogues,
GEO. S. JOSSELYN.
Fredonia, N. Y.

SEEDS

I will give you the best Seeds for the least money of any firm in America or refund. Western Seeds are best. Mine take the lead. Gardeners say they never fail. I used 6000 lbs paper to print 50,000 pretty Catalogues illustrated with $2000 worth of engravings. It beats the world, worth many dollars. FREE. Prices below all. R. H. SHUMWAY, Rockford, Ill. Best Seeds cheap pretty Book Free.

SEEDS! TRIAL Order: for only 25c. in stamps, we will mail *our new Box* of 8 packets choice Vegetables, or 10 packets Flower Seeds. **Burpee's Farm Annual for 1881**, beautifully illustrated, sent free. *Write for it.* W. ATLEE BURPEE & CO., 219 and 221 Church St., Philada., Pa.

Miscellaneous.

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TRADE MARK.

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Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
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No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

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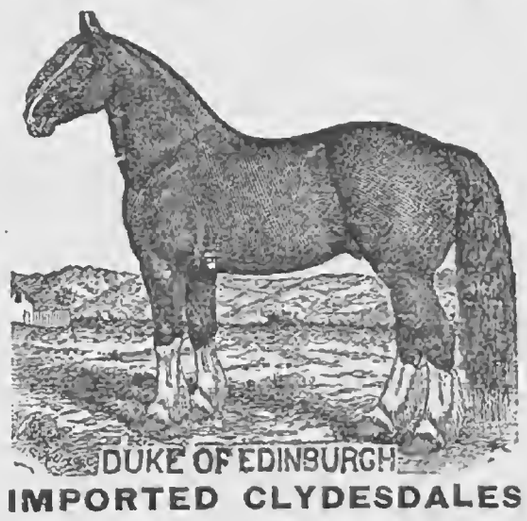

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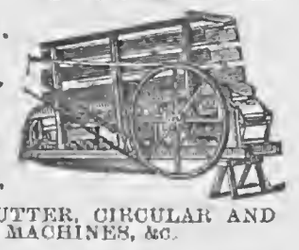

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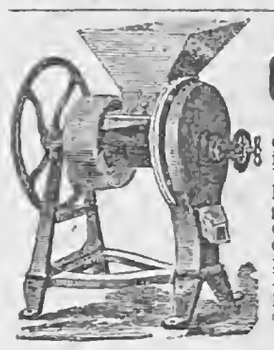

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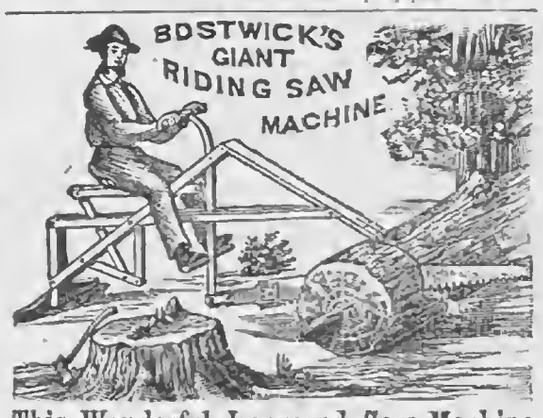

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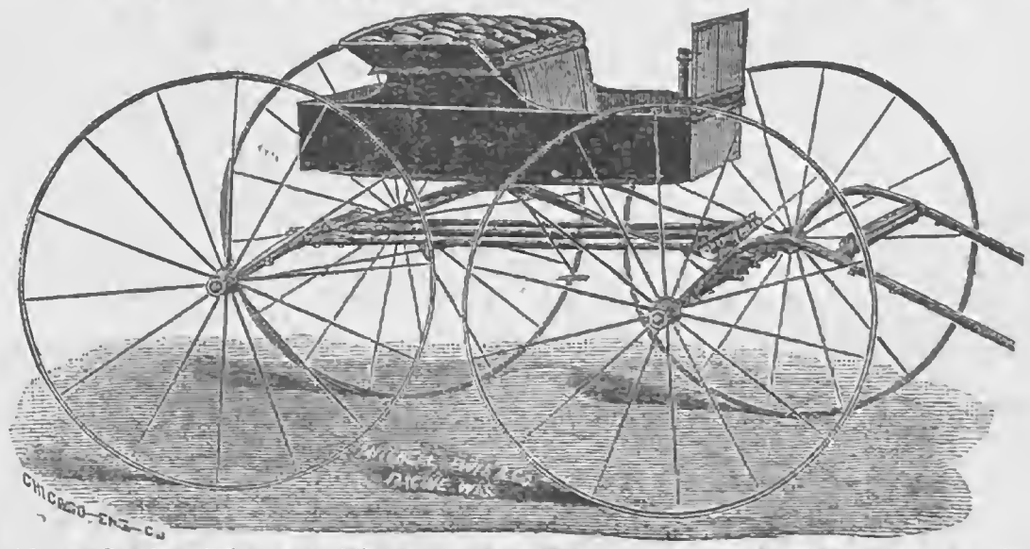

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BRIC-A-BRAC.

A LOVER'S INDECISION.

Do I love her?
Dimpling red lips at me pouting,
Dimpling shoulders at me flouting—
No, I don't!

Do I love her?
Prisoned in these crystal eyes
Purity forever lies—
Yes, I do!

Do I love her?
Little wild and willful fiction,
Teasing, torturing contradiction—
No, I don't!

Do I love her?
With kind acts and sweet words she
Aids and comforts poverty—
Yes, I do!

Do I love her?
Quick she puts her cuirass on,
Stabs with laughter, stings with scorn—
No, I don't!

Do I love her?
No! When to my arms she flies,
Filling me with glad surprise—
Ah! yes, I do!

Will. Speir, having occasion to cross a bridge where a penny toll was exacted for foot passengers, pleaded poverty, and begged to be allowed to pass free. The tollman was inexorable. Will protested. "Wee'l, I canna pay you." "You cannot pass then." Maun I staun still here like ane o' the stoops o' your yett?" "Yes, or return the way you came, or beg a penny to pay the toll." "Gang back! you gauk," said Will: "would ganging back hain your brig, wonld it no wear't just as muckle as my coming alangs't it did—I hinna time to gang back the noo—there's your penny to you man; an' the neist time I come this way I'll gang a whole day on't atween the inside o' the yett there and the tither end, and take my pennyworth oot o' the brig."

THE funniest man in all the town
He thought himself did Mr. Brown.
While at the club one night he saw
A new silk tile upon the floor,
And winking to the crowd so slick
He gave the hat a gentle kick;
And then another, just to show
That wit from empty heads can flow.
All caught the humor of his fun—
To kick the hat they vied each one,
There ne'er was such a joyful crowd,
And Mr. Brown felt very proud,
And when leave-taking came broad smiles,
All wore while putting on their tiles,
Save Mr. Brown, whose mirth was flown—
The hat so crushed was all his own.

"What do you learn at school?" asked Uncle Tom. "Nawthin," said Bill, working away at a tangle in his fishline. "What do you study then?" asked the uncle again. "Nawthin," replied the nephew. "What on earth do you go to school for?" roared the astonished uncle. "Same thing, I reckon," replied Bill; the assistant is young and pretty, and the principal is a bachelor, and that's about all there is of it."

A WISHBONE.

HE held one side and she the other;
What did he wish? I could not tell;
He pulled, she pulled, and then her mother
Came in; perchance 'twas just as well.

For after it was passed he told me
His wish, a wish I should not name,
'Twas for a kiss; a bird sang near me
And told me hers; it was the same.

A BLOTTING PAD.

"HAVE a blotting pad, sir?" asked a peripatetic dealer, reaching out one of those absorbents.

"How do you fasten the thing on?" inquired Jones, after turning it over and over.

"Fasten it on!" exclaimed the peddler; "what do you mean?"

"What do I mean?" cried Jones, looking up. "Young man, I've had experience in this pad business. I've bought them for the head, stomach and liver, and this is the first one I ever saw with no tackle on it. No, I don't want it. Good-day."

The man saw it was no use to argue with Jones.—Boston Transcript.

THEY sat together at the grate,
And merry jokes were telling:
She shook the popper o'er the coals
And he the corn was shelling.

How beautiful it looks cried he,
Don't think I tell a whopper;
I wish I had it in my hand
And you were in the popper.

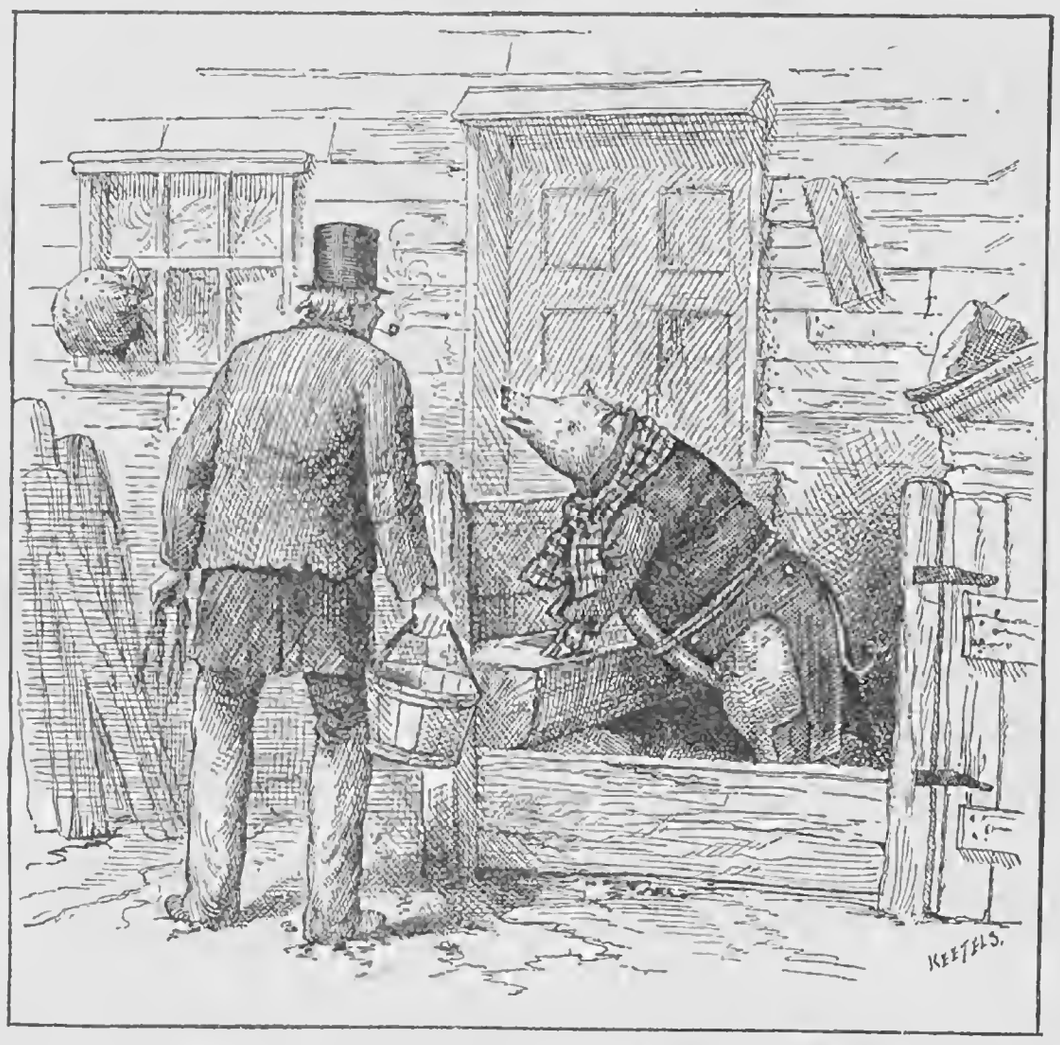
Pray, what have I so evil done,
Said she, to merit roasting?
I don't believe that just for fun
You'd give me such a toasting.

But don't you see my Mary Ann
How swiftly leap year's hopping
And if I had you in the pan,
Why then you'd do the popping.

A VULGAR FOP called to a bootblack to polish his shoes, and showered vituperative epithets upon him for his slowness, till at last the little fellow stopped his work, and looking up exclaimed; "See here, mister, 'taint no use to work on your shoes any more till somebody polishes your tongue!"

OBEDIENCE.—"Don't waste your time clipping off the branches," said the woodman to his son, "but lay your axe at the root of the tree." And the young man went out and *laid* his ax at the root of the tree, like a good and dutiful boy—and then went fishing. Truly, there is nothing so beautiful as filial obedience!

THE reason why the poets speak of October as "sober" is because sober is the only word they can find to rhyme with October.



PREPARED FOR A SEVERE WINTER.

Humorous.

"WHAT have you been drinking, or eating?" exclaimed his wife, as he returned late at night. "Liquor-ish," he responded, and then he winked at himself in the dark and breathed thin till he got asleep.

ONE of the most provoking episodes we can just now think of is to meet a lady friend, and in endeavoring to raise your soft hat by the crown, find yon have on your Derby, and claw all over the top of it before recalling the change in head-gear. In the meantime the young lady glides by, wondering what the mischief is the matter, and if you are losing what little mind you once possessed.—Lockport Union.

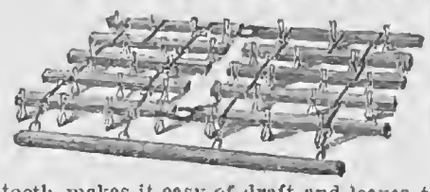
THE nervous mother of a bright little boy was alarmed lest he should take the whooping cough, which prevailed in the neighborhood. She talked so much about it and worried over it, that she had infected the child with her fears to such an extent that he would scarcely leave her side. One night after the little fellow had been put to bed and asleep, a donkey was driven past the house, and when just opposite set up his he-haw. With a shriek the little fellow was out of bed, screaming at the top of his voice, "The whooping-cough is coming, mamma; the whooping-cough is coming."

"TOMMY, my son, what are you going to do with that club?" "Send it to the editor, of course." "But what are you going to send it to the editor for?" "Cause he says if anybody will send him a club he will send them a copy of his paper." The mother came near fainting, but recovered herself sufficiently to ask: "But, Tommy, dear, what do you suppose he wants with a club?" "Well, I don't know," replied the urchin, "unless it is to knock down subscribers as don't pay for their paper. I suppose there are plenty of such mean people." That boy stands a chance for the Presidency if he lives.

The Rapidity of Progress toward Health,

Even when a good remedy for disease is selected, depends in some measure upon the manner in which it is taken. Irregular, interrupted doses can afford no fair test of the efficacy of any medicine, however salutary. Taken in proper doses at prescribed intervals, a reliable curative will effect the object of its use. Among remedies which, systematically and persistently used, accomplish thorough and lasting cures, and prevents the recurrence of periodic disease, Hostetter's Stomach Bitters ranks specially high. In cases of dyspepsia, debility, rheumatism, fever and ague, liver complaint, inactivity of the kidneys and bladder, constipation and other organic maladies, it is a tried remedy, to which the medical brotherhood have lent their professional sanction, and which as a tonic, alterative and household specific for disorders of the stomach, liver and bowels has an unbounded popularity.

THE VIBRATOR HARROW.



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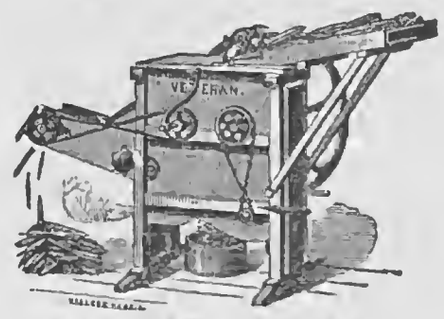

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Our No. 1 Plantation Saw Mill is designed to be run by 8, 10 or 12 horse-power Agricultural Engines. With this power from
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of lumber can be cut in a day. A product 25 to 50 per cent. greater than can be cut with any reciprocating saw mill. The mills are complete except saw, and will be put on the cars in Cincinnati for the low price of $200, and warranted in every particular. Saw Mills of all sizes, Engines and Boilers, Shafting, Gearing, etc.
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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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The Herdsman.

OUR ANIMAL PORTRAITS.

Imported Holstein Bull "Ebbo"—The Property of Messrs. Smiths & Powell, Syracuse, N. Y.

We present to our readers this week an accurate copy of a photograph, taken for the Rural at the Albany Fair Grounds, of Messrs. Smiths & Powell's superb two-year-old bull "Ebbo," which won for them the first prize in his class.

"Ebbo" is a black and-white bull, two years old in April, 1878, of excellent form and majestic size, a fine handler, and in every way a most attractive and promising animal.

He was imported from North Holland by George C. Brown in his dam, which proved a superior milker. He is fine in bone, with a remarkably small head, excellent escutcheon, and will prove, we have no doubt, very valuable as a getter of milch stock, and in this class he most creditably upheld the credit of the herd, of which we gave a somewhat extended notice on page 816 of last year's volume.

NOTES BY A STOCKMAN.

It is certainly very curious to see how much reasonable men may be blinded by prejudice. One may get a very clear idea of this failing in a few minutes' talk with a lawyer. The client, filled full of the justice of his case, as it appears to himself, is nettled when his lawyer quietly says to him:—"But, my dear sir, the other side feels and talks just as you do. The Court is just as likely to take his views of the facts and the law as to take yours." And this is the delightful uncertainty of both law and facts.

And this applies very pertinently to those persons who so fiercely decry close breeding and who declare that it ruins the stock. The same charge has been made against Mr. Booth as against Mr. Bates, and the system practiced by the former was precisely the same as that of the latter. But the whole force of the objection seems to be thrown upon the Duchesses. Well, they can stand it.

A neighbor who was reading these notes in the Rural of January 8th (ignorant, however, of the authorship), in discussing it with me takes a peculiar view of it. I remarked to him that from the accepted belief in the origin of the human race we must admit that even this was closely bred at the start. "Well, yes, I suppose it was; Cain and Abel married their sisters, I expect." But, with a joyous twinkle in his eye, he remarked:—"But the breeding was bad, for Cain killed his brother, and even now see what a bad lot we are, and how the bad blood breaks out." I commend this reasoning to my adversaries.

The Agricultural Gazette, of London, is amused at a note of mine in regard to the possibility of American breeders producing as good Jerseys as can be imported. It quotes the note with evident relish as a specimen of what may appear to an Englishman as American brag. Well, we have something to fall back on. We have more good Jerseys here than are in the Island of Jersey; we have more Short-horns than are in England, and English breeders have paid us larger prices for our animals than were ever paid in England; we have the best Merinos in the world; our horses have beaten the English racers on their own turf; no other trotting horses can approach the American-bred horses. England has 5,912,000 horned cattle in all, and 26,619,000 sheep, while we have more than 13,000,000 milch cows and over 21,000,000 of beeves, and nearly 41,000,000 sheep; not to mention 34,000,000 hogs, 11,200,000 horses and nearly 2,000,000 mules. There are nearly as many horned cattle in Texas as in all Great Britain—England, Scotland, Ireland and Wales united.

With all this raw material, and as good, pure animals as exist anywhere and as skillful and intelligent breeders, why should not America become the first in regard to excellence of type and quality of live stock; and why should it be continually neglecting its own opportunities and employing other breeders to do the work which can be done at home as well, or better?

There is always a good reason for "the milk in the cocoanut." I quote from the Agricultural Gazette in another place: "Nobody opens his purse so freely as Brother Jonathan when he has a mind to buy." This is a fact, and Americans are too good customers to foreign breeders to be lost; and so they are "amused" to hear an American say that as good animals can be bred in America as in the Island of Jersey or elsewhere.

England has been the mother of nations. But when a man sets up for himself he cuts loose from his mother. We have cut loose from our mother country and set up in business for ourselves. We have even gone into competition with the old lady, who shakes her curls and her frills at us as we take her customers from her. Nay, the old lady is forced to come to our shop to buy her bread and cheese and bacon and beef, or a good portion of them, and is glad to get even by selling us her high-bred cattle and sheep. As long as the delusion exists that we have not as good of our own and cannot produce more than we need, and may not even sell some that we can spare, we shall go on throwing away our money which we could just as well put into the pockets of our own breeders.

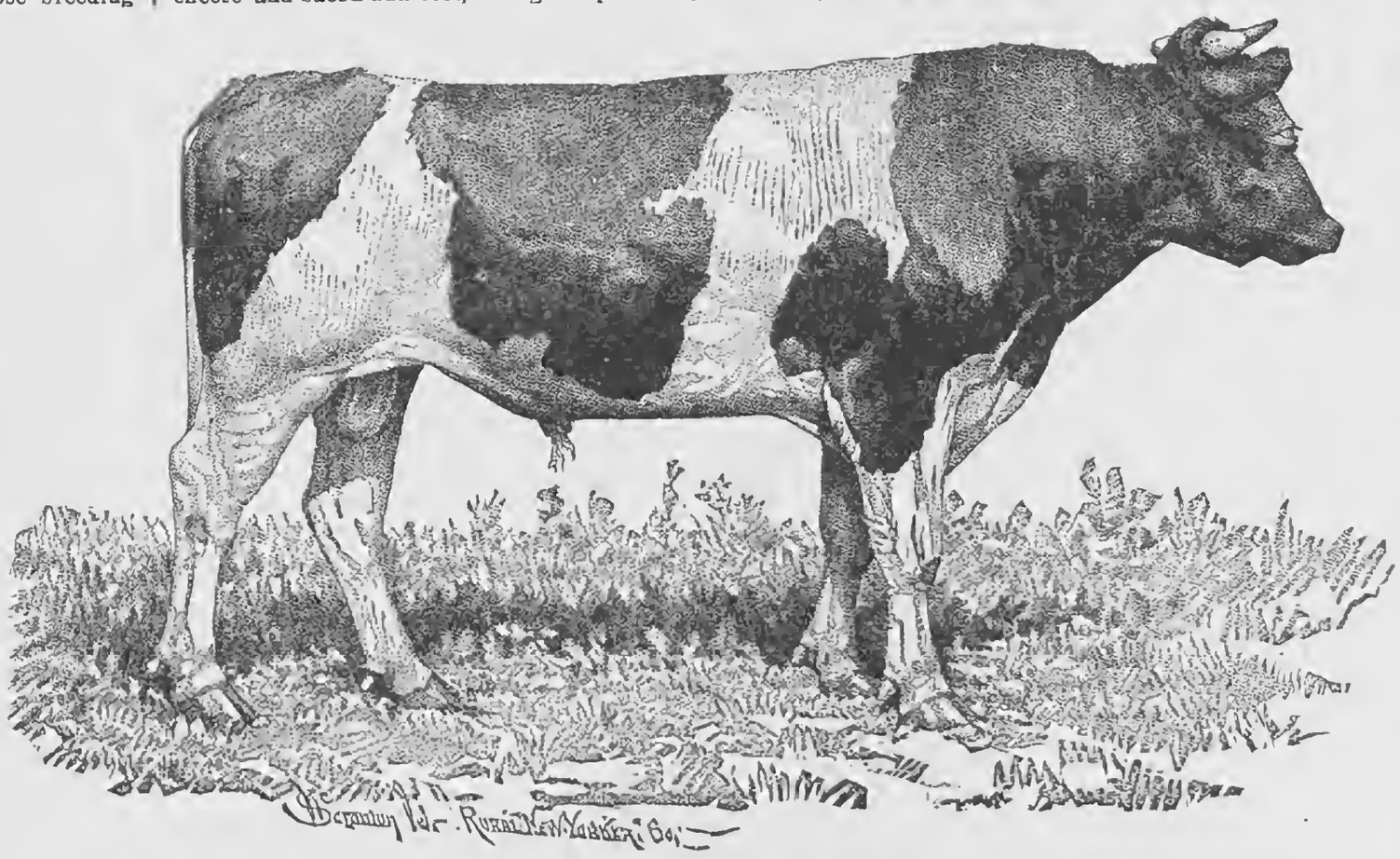
There has been an evident effort of late to give a boom to foreign cattle. The cablegrams that come to the daily newspapers are even enlisted in the work. There lately appeared among the items of important news a statement that some Jerseys had recently been bought in the island for an American breeder at unprecedented prices—$1,500 each was named. But there are cows here that could not be bought for twice that sum.

Is the money value, then, the measure of the real value? If it is in one case as in the other, then I was right, and we have better cattle here than in Jersey, for I think I could lay my hand on a dozen cows that could not be purchased for $1,500 each, and this sum is by no means an unprecedented price here. By-and-by we shall be exporting Jerseys. I prognosticate that, although that respected journal, the Agricultural Gazette, may be "amused" by it.

Large Importation of Thoroughbred Horses and Jersey Cattle.

On the 9th the steamship France arrived at this port having on board 40 thoroughbred horses, mares and colts, and 12 head of Jersey cattle. The horses, we understand, were all on consignment. 15 having been shipped for sale here by Mr. Cowie, three of which died of disease, not accident, during the voyage; while the remaining 28 were sent out by Mr. E. Tattersall. The Jerseys were also bred by him near London and sent hither for sale. The following is a list of them:

Name.	Sire.	Dam.
Mrs. Elmer, heifer	Highfield	Busy Body.
Young Bridesmaid, heifer	Highfield	Bridesmaid.
Molecule, heifer	Highfield	Mole.
Quadrille, heifer	Metadore	Old Cow.
Chrysalis, heifer	Highfield	Moth.
Eugenie, heifer	Metadore	Napp 2d.
Darkie, heifer	Metadore	Black faced heifer by Highfield
Iodine, heifer	Metadore	Blister
Paul Pry, bull	Brown Bread	Busy Body.
Basingstoke	Mr. Pain's Young Napp	Red Cow.
Molehill, bull	Metadore	Mole.
Bitter Beer, bull	Metadore	Bitter Girl.



IMPORTED HOLSTEIN BULL, "EBBO."—From Life.—Fig. 36.

Signs.—In the Ohio Farmer of December 4th, Mr. Stephen Powers, referring to "signs," asks whether lambs castrated at certain phases of the moon do not bleed more than if the operation is performed at other times in the month. I answer, "No." I have castrated hundreds, and done so at all times, and I have never found any difference in the amount they bleed at any of the various phases of the moon. Some bleed more than others at all times, at what are considered "favorable times" as well as at unlucky ones. Last season I went to a neighbor's to trim his lambs, and was told that they would all die—the sign was in the heart, and so they were fated. So it was; but I don't go by signs, so the job was done. My neighbor says that he never had any lambs that did better. R. Greenbank.

Stark Co., Ohio.

The Swine-Herd.

AN EXPERIMENT TO CHEAPEN THE PRODUCTION OF PORK.

Col. F. D. Curtis.

During the past year we tried an experiment to determine whether pork could be produced on a considerable scale at cheaper rates than those at which we had been in the habit of making it. Pigs are in this section of the country usually wintered on corn and summered on milk, kitchen slops and corn. Sometimes they are allowed to run in the pasture and this feed is supplemented with corn. Corn is the great staple food of pigs.

We have been satisfied for years that on the above basis there was no profit for us in making pork; hence we have given the subject considerable study with a view to devise some plan to cheapen production. The foundation of our plan is a warm pig-house—so warm that when the pigs are in it, it does not freeze. Here the breeding sows are wintered on raw roots, which are the cheapest feed we have any knowledge of. The roots are stored in the cellar underneath, where they are handy, as labor is an important item and must be reduced as much as possible. The sows are allowed to have their young the last of April or the first of May, as we calculate that as soon as the pigs are old enough to be turned with the herd they and the mother may be put out in the pasture.

Last Summer we had a clover pasture for our pigs into which they were turned, young and old, the former when from three to four weeks of age, or as soon as the clover was up large enough for a good bite. In this field there was a spring of water where the pigs could drink and a shed into which they could go during the warm part of the day for shelter, or at night. The old hogs were not fed anything, but the pigs were taught to come into an inclosure in which corn was given to them three times a day. At first they ate but a few kernels each, but the quantity was increased as they grew older, until they consumed a quart a day. By this time—the middle of August—a patch of sweet corn, planted for the purpose, was ready to be cut up for feeding. A quantity was cut twice a day, as much as the herd would eat up clean, and strewn about the fields. A severe drought had diminished the growth of the clover, so that the sweet corn did not add to their growth as much as we had intended. We expected it to serve as extra feed over and above a good supply of clover; but, instead of this, it was comparatively all the feed which they had for a month. This corn had been planted in drills and sufficiently scattered so that most of the stalks contained small ears. The crop averaged seven feet in hight, and, notwithstanding its rankness, it

was all eaten up. The feeding began as soon as the corn was in the milk, which was its sweetest stage.

When the sweet corn was exhausted we had a crop of Early Amber Sugar-cane for feeding, which was cut up and scattered in the pasture. The pigs ate this with as much avidity as they had the sweet corn. The sugar-cane was a splendid crop, and a quarter of an acre fed all our pigs for fully three weeks. At the end of this time the whole herd, 138 (we had sold 25), were turned into the orchard to eat the fallen apples and to forage upon a crop of mangels which had been grown in that field. Here they remained until the roots were gathered—the first of November—when they were turned into the root field to eat the leaves and refuse roots and a patch of two acres of turnips which had been put in expressly for them. This field furnished food for that portion of the herd which remained in it until Winter set in. At the middle of November the larger pigs were taken out and shut up by themselves, and fed all the boiled corn they would eat. The old hogs were left in the root field until the first of December, when they were also shut up and fed boiled corn. Among these were a number of breeding sows which we desired to turn off, which had been suckled down very thin during the Summer, as they averaged eight pigs each. When taken from the turnip field these animals were in fine condition, having made their entire growth without a single particle of grain. After being fed corn for three weeks they were slaughtered. The pigs were fed a month, when they were slaughtered, and ranged in weight from 100 to 150 pounds. We hold that it will not pay for us both to raise and fatten pigs on corn. But it will pay to raise pigs on cheaper food and finish off on corn.

The roots left our pigs in good growing condition. They had the bodies, bone, and constitutions to eat and digest and assimilate a good deal of corn in a short time. As soon as they were fat enough to butcher, without being excessively so, they were killed. The flavor and character of the meat were perfect. Under our system of feeding and fattening there could be no feverish condition of the animal, for it was not fed long enough, and with the range the herd were given during the period of growth, with only spring water to drink, and the wholesome and fresh vegetable food which they had, coupled with the exercise and pure air which they always breathed, their condition could be no other than perfect for human food.

We are satisfied that this system of raising pigs will develop more lean meat, and hence make them more desirable for human food, than the usual custom of confining in close pens when there is a much larger proportion of fat (blubber), which is not so much in demand for food as formerly, and which is not desirable. The drought made our crop of sugar beets and mangels both backward and limited, or else we should have begun to feed them the first of September by carting a load daily into the clover field. If we could have spared these roots, they would have lessened considerably the quantity of corn required to put the pigs in condition. It was a part of our plan to feed roots during the whole of the Autumn and not feed corn more than ten days, but the want of plentiful pasture and roots kept the hogs so much leaner than we intended that it took twice the amount of corn to put them in condition which it would have done had the season and growth been an average one. Our sows all bore large litters of healthy pigs, and they were free from disease the entire season.

There is economy in the production of succulent foods, such as corn-stalks, sugar-cane and roots. Our corn-stalks and sugar-cane were hoed only once, although frequently cultivated, and the cost of these crops was but a trifle as compared with that of a regular crop of corn. These crops may be economically used to make the growth of animals and to put them in good condition, which plenty of beets will make certain, and then they may be topped off profitably with a little corn.

Dairy Husbandry.

THE DAIRY COW—NO. 33.

HENRY STEWART.

Butter Preservatives.

As fresh butter is a very perishable product, and to a large extent in both small and large dairies is required to be preserved in good condition for lengthened periods, the methods of preserving it are worthy of notice. At the outset it is necessary to utter a caution against all the so-called butter powders which are offered for sale and pressed upon public notice as agents for increasing the quantity of butter as well as for preserving it. Some of these deserve to be called frauds, for they are not what they are set forth to be, and the stuff produced by them is not butter, but a mixture of butter and curd made by means of alum, saleratus and other similar substances, with sufficient coloring matter to give it some appearance of butter. But it is not butter by any means, and can only be disposed of by false representations. As a matter of course, no person would make such stuff for his own use; but many might be deceived by the delusive advertisements into purchasing and trying these butter powders to their own disappointment and injury. As a general rule, all these mixtures by which the quantity of the butter is proposed to be increased, may be considered as injurious, because the butter cannot be increased in any manner whatever, except by the addition of milk, curd or water, and any one of these is hurtful to the butter, and to the extent that the additional weight and bulk are not butter, it is a deceit and a fraud.

Salt as a Preservative.

The action of salt in preserving butter is due to its antiseptic properties. Butter is composed of several substances, and contains, when as nearly pure as may be, some remaining milk, or caseine which is known to have the property of converting sugar into lactic acid, and is also strongly suspected of inducing chemical changes in the pure fat of the butter itself. This conversion of the sugar of milk contained in the butter, has the effect of setting up a fermentation in the latter by which carbonic acid and hydrogen gases are given off and butyric acid is produced. The chemical change by which lactic acid is transformed into butyric acid may be expressed in the following manner:—

The formula by which lactic acid is expressed chemically is	C6	H12	O6
Butyric acid	C8	H16	O4
Therefore			
4 atoms of lactic acid	= C24	H48	O24
3 atoms of butyric acid	= C24	H48	O12

All that is required to transform four atoms of lactic acid into three of butyric acid is to take oxygen from the former to the extent of one-half. Without going into intricate formulæ to express the results of the change by which this abstraction of oxygen is effected, it may be necessary only to say that in the escape of the carbonic acid and hydrogen above mentioned as being given off in the production of the butyric acid, 1½ atom of lactic acid may combine with these twelve atoms of oxygen forming nine of carbonic acid; twelve of hydrogen and three of water; the carbonic acid and hydrogen escaping as gases, the water remaining in the butter, and the oxygen, freed from the 1½ part of the lactic acid, combining with four other parts, enables these to be transformed into three parts of butyric acid.

The butyric acid thus produced is a colorless, transparent, volatile liquid which emits an odor of vinegar and rancidity. Its presence even in a very small quantity gives to the butter a well known undesirable odor, and in larger quantities the offensive scent and taste of rancidity. To the impossibility of preventing this transformation, to some extent, with lapse of time, even in the very best made butter, is due the peculiar scent of the butter after having been kept a few days only, which, however, may exist without affecting the flavor. To prevent the chemical changes above noted, it is necessary to make use of some anti-ferment or antiseptic, and to pack the butter as soon as possible in such a manner that it may be preserved from contact with the air. Salt is the commonest substance used for this purpose. But it is only most effective when it is pure chloride of sodium, and reduced to extreme fineness of division. Salt often contains some salts of lime and magnesia, and these in their direct action give a bitter flavor to butter, which is quite appreciable to an expert; and in their decomposition, may easily assist in producing the chemical changes above referred to. To use only pure salt in its most soluble state, that is, ground as fine as possible, is indispensable; for the salt exerts no preservative effect until it is dissolved and then only in proportion as it is intimately diffused through the mass of the butter.

Other Preservatives for Butter.

Saltpeter, sugar, borax, and some preparations of borax have been and are used in packing butter. Saltpeter and sugar are both antiseptics and add an agreeable flavor to butter. On this account they are used with salt to repack butter that has been badly packed at first, or to mix with inferior and poorly made butter as a means of disguising its bad qualities. They are really for the use of the poor dairyman or for the professional packer of "store-butter," who gathers from all sources butter of all qualities of badness and repacks it for sale. For this purpose, one part of saltpeter and one part of white sugar finely powdered are added to four parts of salt, and an ounce and a quarter of the mixture is used with each pound of butter previously well washed with pure water.

The use of borax in dairying is somewhat new. There is no doubt that this salt—borate of soda, which is a combination of 36.58 per cent. of boracic acid, with 16 25 per cent. of soda, and 47.17 per cent. of water—is an excellent antiseptic; but its effect upon the human system is said to be injurious. Some experiments have been made in Europe with borax as a butter preservative with no positive ill results; and it seems that its suspected disadvantages may, after all, be more fancied than real. It has been used as a substitute for salt in the usual quantity, viz., about six per cent., having first been freed from the water of crystallization by heating it on an iron plate and then reducing it to a fine powder.

Several other butter preservatives are in the market and are offered to dairymen. Of these one known as glacialine is a powder, the base of which is probably borax. Another is a liquid used by the Aylesbury Dairy Company of England in their business, and is said to be an excellent substitute for salt. A trial with this preparation has so far been satisfactory, a pail of butter packed with it, after five months being in unusually good condition, and the butter having no objectionable qualities. Certainly, the butter seems to keep better than with salt under the same circumstances. One liquid ounce of the preparation is used for 16 pounds of butter along with one-fourth of the usual quantity of salt. The liquid is first thoroughly well incorporated with the butter spread out upon a slab or the bowl and roughly indented with the ladle, the indentations being then closed over carefully to prevent escape of the liquid, and salt at the rate of one ounce to four pounds being then added and the whole well mixed. Butter so prepared is said to keep perfectly well even when exposed to the air.

Field Crops.

EXPERIENCE WITH AN ACRE OF POTATOES.

IRA J. BLACKWELL.

Here I give the results from one acre of potatoes planted the past season with different varieties. All were planted about the middle of April on the same day in soil that was in good condition. About eight loads of barn-yard manure were applied broadcast and 600 pounds of Mapes's Potato Manure were sown in the furrow with the seed at the time of planting. At the first working, after the potatoes had come up, 200 pounds of the same manure were sown broadcast and cultivated in with an ordinary one-horse cultivator. The land had been used for corn the previous year. The potatoes were planted about four inches deep every third furrow after the first plowing. The ground was rolled and harrowed twice before the potatoes came up. When about two inches high the vines were plowed under and covered about three inches deep. Next day we harrowed across the rows once; after which we cultivated once and then plowed to the row once. About one-third of the patch was cultivated after the potatoes had begun to set. No hoe was used at any time, but the ground was kept clear of weeds. Next to the hedge, which injured them to some extent, was the first of the following varieties; the others followed in order:

	Rows.	Yield. Bush.
Early Vermont	5	12
Trophy	1	4
Surprise	⅔	3
Superior	⅔	1⅓
King of the Earlies	10	44⅔
Centennial	⅓	⅔
Beauty of Hebron	⅔	4
Early Vermont	6	29
Burbank's, or White Rose	4	24
Early Ohio	2	5
Brownell's Beauty	1	3
St. Patrick	⅔	3
Bliss's Triumph	1	2
Dunmore	1⅓	7⅓
Peachblow, Bliss's Improved	1	3
	35	134

The six rows of Early Vermont, yielding 29 bushels, were planted for Early Rose, but turned out to be Early Vermont.

Trophy—Medium-sized seed; ripens about two weeks after Early Rose; a strong grower; a handsome tuber; rotted considerably last year; a good cropper; quality fair to good.

Surprise—Seed medium to large; ripens about 20 days after Early Rose; color almost black; vines strong; a straggling grower; quality superior, boiling very white and nice. Bad as regards the "bugs" on account of the vines spreading so much.

Superior—Unless this is better elsewhere than it is with us, it is not worth planting.

King of the Earlies—Seed medium-sized; ripens about a week earlier than Early Rose; keeps well; quality good. Early Vermont is a few days earlier than the King of the Earlies.

Centennial has never been productive for us—seed small or medium.

Beauty of Hebron—The seed was produced from seed sent out by the Rural. The four bushels are the second year's crop from six ounces of seed. The yield was very poor the first year on account of the dry weather and moles or mice. This potato is second early, or with the Early Rose; quality good—one of the promising potatoes.

Burbank—Medium to large seed; a very strong grower; tubers large and tolerably smooth; quality medium to fair; ripens about two weeks after Early Rose—a promising variety.

Early Ohio—Medium to large seed; a very weak grower, top seldom a foot high; quality superior; potatoes run smooth and even-sized; ripened 3d of August, or three weeks ahead of Early Rose.

Brownell's Beauty—Medium-sized seed; formerly our most productive potato; it is now growing rough, comes up poorly, and about nine plants out of every ten are unhealthy; quality best; looks now as if it would have to be abandoned.

St. Patrick—Seed extra-fine; a great grower; ripens about two weeks later than Early Rose; quality good, cooking dry and mealy.

Bliss's Triumph—Medium-sized seed; a weak grower; ripens with Early Ohio; quality not so good.

Dunmore—Medium to large seed planted; a strong grower: ripens about two weeks later than Early Rose; a large, white potato of fair quality—an improvement on the Peerless.

Peachblow (Bliss's Improved)—Medium seed planted without cutting; crop all small to medium; they seemed to blight about the time they should grow. This applies to all the varieties of the Peachblow. We raised three bushels from one pound of seed three years ago—all large tubers.

The season was not a good one for potatoes in this section, as May and June were extremely dry, following a wet Spring. Our potatoes were planted on a red shale loam, which was in good condition to work at the time of planting. A heavy rain followed within a day or so, packing the ground pretty hard. Very little rain fell after this until the last of July. It will be seen that the early potatoes had a hard time of it, the soil being comparatively dry until the Ohios and Triumphs were ripening. Following the dry spell we had a deluge that was nearly as bad as the drought, causing the potatoes to make a second growth, particularly injuring the St. Patrick.

Our experience shows that one year's comparison will not be conclusive evidence for or against a potato. For example, the Beauty of Hebron the first year was a failure; this year it is among the most productive and saleable of all the varieties grown. The St. Patrick was in just the right stage to make a second growth when the rains came. Our potatoes are keeping well this year, being quite free of rot. We applied London-purple three times to all of the vines, except the Ohios and Triumphs. The following had four applications: Dunmore, Burbank's, St. Patrick, Peachblow, Surprise, five pounds of the Purple and two pounds of plaster having been used to the acre.

Cost of the Acre of Potatoes.

8 loads of barn-yard manure at $2	$16 00
800 pounds of Mapes's Potato Manure	19 20
12 bushels of seed potatoes at 50c. per bush	6 00
5 pounds London purple at 20c	1 00
1 team one day planting	2 00
3 men one day planting	3 00
Rolling	50
Harrowing twice	1 00
Plowing once	75
Cultivating once	75
Cultivating half the patch once	38
1 team digging 1 day	2 00
4 men digging 1 day	4 00
Interest on land	6 00
To total outlay	$62 58
By 134 bushels of potatoes at 50c	67 00
Net balance	$4 42

Thus there is a clear profit after paying for all the work and for the manure, while the land is left in condition to raise a crop of wheat with very little cost for manure or labor.

Titusville, N. J.

SUPPLEMENTARY NOTES ON THE INDIAN CORN CROP.—No. 1.

B. F. JOHNSON.

Where so much is to be said, and there are so many to say it, as in the Rural Corn Number, it is imperative on every one to be brief, and therefore I withheld the relation of facts and the expression of opinions on the subject, which seem to me to be of value; and they may appear so to others. I confine myself to two sides of the subject this time, viz: What are the best manures and fertilizers for Indian corn? and what weight are we to allow the thoroughbred idea and the prepotency and fertility of some varieties over others?

1. What are the best manures and fertilizers? I answer for the black soil prairie, and for it only, so far as my observation and experience may go. It is notorious, and I think, therefore, it will be generally admitted, that this soil is extravagantly provided with humus when new; has an abundance of it when considerably worn, and that when it has become partially exhausted even, the amount of humus is considerably in excess of that in average soils of the same age outside of the prairie belt. But where humus abounds there is never a lack of nitrogen, and therefore the best manures and fertilizers for the corn crop are not nitrogenous but non-nitrogenous. And the relation of the outcome of certain corn experiments made in the Summer of 1875 will perhaps illustrate and enforce these ideas.

The experiments were undertaken with the object of ascertaining what are the conditions

necessary for growing 100 or more bushels of corn to the acre on prairie soil which had been in cultivation for 20 years, but which within a few years had been tile-drained, manured and cropped. The work was conducted pretty much as follows:—The land was plowed deep some time late in April; harrowed thoroughly a few days before seeding, the first week in May; and the seed—a good variety of large yellow Dent—was drilled in, the rows standing four feet apart and the stalks nine to twelve inches in the row. The Spring of 1875, was cold, backward and dry, and so much out of the common in this last regard, that neither rain nor storms interrupted plowing for the entire month of April. In fact, the great drought which began early in 1874, was not fairly broken till in June the following season. The soil being cold, for the reasons above, the corn on the experimental acre made a poor stand and had to be replanted, and, as is almost always the case, the replanting was far from satisfactory. In the matter of cultivation, the corn was harrowed as soon as the rows could be distinguished, and the cultivator was set to work immediately thereafter, and put through the field two or three times. Meantime, to secure absolute freedom from weeds, they were cut out twice with the hand-hoe just before cultivation. But between the first and second plowing, and when the young corn was about six inches high, a lot of old but unleached ashes was procured from a saw-mill in the neighboring timber, and a full quart was given to each corn stalk.

After a dry, cold Spring followed a cool and very wet Summer, and so great and so continuous was the rainfall during harvest, that the small grain and the hay crops were more than two-thirds lost. But in spite of the advantage of drainage, the experimental patch suffered with all other crops, but never very seriously, except during the heavy and protracted rain and wind storms of the 31st of July and 1st of August, in which six inches of water fell and the wind did immense damage by prostrating the corn in many places. Frost came some time in September and found the experimental crop ready for it. In October the entire crop was husked from the field, weighed on scales near-by, and the corn not being dry enough to be marketable, 80 pounds of ears were allowed to the bushel, and the total crop for the whole acre was found to be 85 bushels and a few pounds.

If the stand had been good in the first place, if the season had been warm and moist, and if the wind and rain storms had not happened, and if the land had been plowed the previous Autumn, it is probable the yield might have been 100 or 110 or even 120 bushels. On the other hand, it is probable if it had not been for the copious and incessant rains of the Summer, the benefit the crop received from the wood ashes would have been very much less, and it is altogether likely that if the Summer had been a hot and dry one, the effects of the ashes would have scarcely showed at all.

There having been a difference of opinion, whether wood ashes or stable manure were the better for the corn crop, another experiment was conducted at the same time in the same way, except that before plowing and in course of the Winter the ground was covered with fully four inches of stable and pig-pen manure, hauled from a town close-by. Though not tile-drained, this field had a nice slope for surface drainage, and a good stand was obtained and the crop was carefully cultivated to the end. The seed in both fields was the same; but while the ashes seemed to dwarf the stalks as to their hight, they enlarged their diameter at the base and increased the size of the ears; while the stable manure appeared to show in the length and stoutness of the stalk and in placing ears out of reach. At harvest the manured field yielded 55 bushels per acre, in face and eyes of the fact that average judges, before husking, thought there would not be a great difference in the yield. It is probable, however, that if the rains had been less heavy and continued, there would have been less stalk and more ear growth in this field and that in the event of a moderately dry season, there would have been less than thirty bushels' difference in the two crops.

If these experiments teach anything in respect to the best manures and fertilizers for corn, it is that where humus abounds, there will be nitrogen and probably organic forms of plant food enough to make sufficient stalk growth, and therefore for the black soil prairies the best fertilizers are those as nearly allied in substance to wood ashes as possible, because they contain every inorganic element the corn crop needs.

Champaign Co., Ill.

EXPERIMENTS IN CORN GROWING.—For my last corn crop I plowed half of a 17-acre field in the Fall and again in the Spring, while the other half was plowed only in Spring. The corn on the land plowed in the Fall and Spring gave a much heavier yield than that on the other portion of the field and looked much better during the whole season. I think a great deal is gained in every way by plowing for corn in this manner. Had my whole field been so treated, my crop would have been from 50 to 60 bushels more than it was.

In applying plaster to the corn, I sowed it on a quarter of the field after I had harrowed it, and on the rest of the field I applied it between the first and second plowing. Applying it at the latter time I find does most good, and returns most profit for one's labor. J. A. H.

Kearneysville, West Va.

COMMENTS ON THE CORN NUMBER.

AFTER getting so thoroughly "corned" as we are, I am not sure that it will be admissible to try and get another "nip." Some one wisely concludes that each farmer must experiment on his own soil, and I judge thousands of valuable experiments will result from the most excellent Corn Number of the RURAL now before me. I suggest that we be more careful in the use of relative terms. B. F. Johnson thinks deep plowing may lessen the chances of a good crop immediately following. In this part of Nebraska there are no reports of a corn crop being injured by deep plowing. But what is deep plowing? C. E. Thorne seems to think no deep plowing is done unless we get down more than 12 or 13 inches. With him 12 inch plowing gave better immediate and remote results than eight-inch plowing. Spring plowing seems to be at a discount. Our farmers do some Fall plowing only because it is feared there will not be time enough to do it in the Spring. We prefer a "fresh seed-bed" for corn, though not for wheat. If this is the greatest error, we must fall to experimenting more carefully. Friend Mason, of Dodge County, is correct in his deep culture, according to the testimony of Nebraska corn raisers.

Professor Roberts says, "Root-pruning in rich soil in moist or wet weather, when growth is very rapid, is apt to be beneficial; in dry, hot weather it is quite apt to be injurious." Just so my Dodge County friend would "root-prune;" would make a deep, mellow soil while it is moist, so that the roots will have a good natural mulching when the dry weather comes.

Here is an experiment of mine:—In '78, after my corn was "laid by," late in July and early in August, I took one horse and a corn plow and passed once in each row for 40 rows, running east and west on the south side of a corn-field. I plowed at least six inches deep, and until compelled to desist by a heavy fall of rain. Late in August a hot wind from the south struck the field. In a few days corn-fields all around me looked as if suddenly ripened; so did mine, save the aforesaid 40 rows. Standing two miles away one could see a green strip on the south side of my field. The south side was most exposed and least injured.

We are advised to "cultivate with cultivator and hoe." We of the West, like Uncle Ned, have "laid down the shovel and the hoe." We can hoe with our horses better than with that implement used by hand and known in the East as a hoe. Our implements are sometimes called horse-hoes, but more frequently corn-plows, because on our deep soil they must go *deep*. R. H. CRANE.

Harlan Co., Neb.

Farm Economy.

FODDER VALUE OF FROZEN POTATOES.

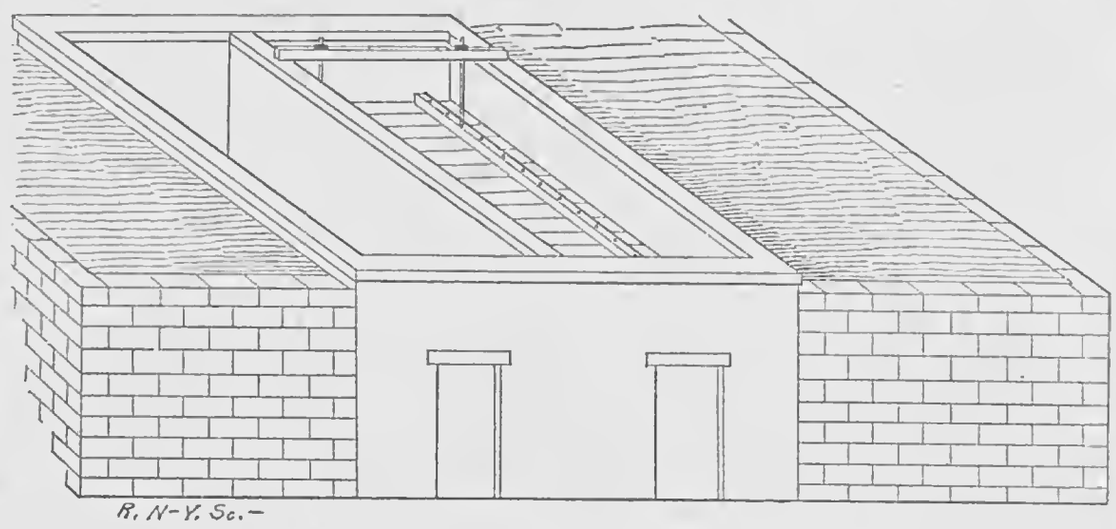
PROFESSOR F. H. STORER

A NOTABLE instance of the comparatively feeble power of vegetable matter to resist fermentation and decay when it has once become disorganized, is exhibited by potatoes which have been frozen and thawed. On the continent of Europe, where large quantities of potatoes are fermented and distilled, it is a matter of practical experience that the amount of spirit obtained from potatoes which are frozen, is scarcely any smaller than that from the sound tubers, provided the frozen potatoes are not allowed to thaw until they have actually been brought to the mashing tubs. But a very different result is obtained in case the frozen tubers are allowed to thaw and are then left to themselves in heaps for a few days, or even for 24 hours, before being subjected to the mashing process. If such delay be permitted, the decrease in the yield of spirit is so great that, as distillers say, there is hardly enough alcohol obtained to pay the excise duty.

Potatoes become wet in thawing, especially if they are lying in heaps, and they soon heat, as the term is; they are then apt to pass quickly into a condition of active decay. The sweet taste which a frozen potato takes on in thawing indicates the beginning of decomposition. In the process of freezing, the cells and tissues of the tubers are lacerated, torn asunder and disorganized; and the starch and other matters which the cells contained are left in such a condition that they react upon one another chemically, and fermentation ensues. As in the germination of barley and other grain, so in the thawed potato one of the first results of this chemical action is the conversion of a large part of the starch of the potatoes into sugar. It was noticed by the chemist Schmidt, that as much as 33 per cent. of the starch in potatoes may be changed to sugar in the process of freezing and thawing; and he found nearly six per cent. of sugar in the sweet juice obtained by squeezing potatoes which had been frozen and thawed. The decay of potatoes is a subsequent process which succeeds the change of the starch to sugar and quickly destroys the latter.

In experiments where starch was made from sound, from frozen, and from thawed potatoes there was obtained 15 3-5 per cent. of starch from the sound tubers, 15 per cent. from frozen potatoes which were thawed at the moment of the experiment, and only nine per cent. from potatoes which had been left for 24 hours in a warm room after thawing; and very much smaller yields of starch than this were obtained from frozen and thawed potatoes which were left lying in heaps until they heated.

From all this chemical evidence it is fair to infer that, apart from the trouble of thawing them, the fodder-value of frozen potatoes is as great as that of the sound tubers. In this view of the matter, boiled frozen potatoes would have the same value for feeding animals as potatoes which were boiled before freezing. Even thawed potatoes must be good fodder when they are fed out immediately after thawing, but they deteriorate rapidly when left to themselves in the thawed condition.



DESIGN FOR FROST-PROOF SILOS.—FIG. 37.

SILOS IN THE COLD NORTH.

T. H. HOSKINS, M. D.

THE success which has followed the experiments made during the past two seasons in the ensilage of green crops for Winter feeding, and the evident value of this preserved fodder to those, especially, who are making a specialty of Winter dairying, have made its general adoption upon the dairy farms of Vermont almost a certainty. The particular problem and difficulty of our latitude is the prevention of freezing, both before and after the silo is opened. I send you herewith a sketch of a pair of silos which it is proposed to build in this neighborhood, and which, it is believed, will solve the problem above referred to in a satisfactory manner.

The location selected is a slope facing south. It is proposed to excavate a pit 32 feet square, at the top of this slope, scraping the dirt down-hill, and building a bank wall in front 20 feet each side of the silos, which are to be floored and lined with brick, and smoothly cemented on the inside. A middle wall of division is also to be built of brick, the silos being each, when finished, 30 by 15 feet square, and 15 feet deep. Against the front of the silos and bank wall the stable or tie-up is to stand, and a framed barn, of which the tie-up will constitute a basement, is to be built over the whole. The silos open upon the feeding floor of the tie-up, directly in front of the cattle, while the wall behind the cattle, facing south, is to be nearly all windows. There will be a manure cellar under the tie-up, and thorough provision for saving all the manure, both liquid and solid. The "lay of the land" enables all this to be done at a minimum of cost.

The peculiarity in the plan of these silos is their thorough protection from frost, both before and after they are opened. This it is proposed to effect as follows:—After the silo is filled (having been firmly trodden, allowed to settle, and then refilled, according to the plan of Mr. O. B. Potter), previously prepared planks, three by eight inches in size, planed and jointed, with dowel-pins on one edge and corresponding holes upon the other, are laid upon the carefully leveled ensilage. If necessary, to get a smooth surface, it is proposed to spread a thin layer of long straw lengthwise over the ensilage. Each plank will have, at one foot from each end, a slot cut through it in the middle to admit a 10-inch bolt, the edges of the slot being counter-sunk on the under side to admit and hold the head of the bolt. When the planks are all laid down, (the dowel-pins in the edge of each being carefully entered in the corresponding holes of its neighbor, but not driven up very closely) beams, say four by six inches in size, with corresponding slots, are dropped over the ends of the bolts, and nuts with washers applied to draw them together, though not too tightly at first. Slots, instead of round holes, are made in both planks and beams so as to allow for the swelling of the planks; and for the same reason the planks are not to be driven closely together. The beams may be in sections, according to the length of the silo. The planks are then weighted, and it is proposed to use for the purpose either bags of sand or hard-wood logs sawn to convenient lengths for handling. In preparing the beams two long bolts with either an eye or a hook upon their upper ends are inserted in each beam, about a foot from each end. After the contents of the silo have settled all they will, and just before the coming on of severe cold, timbers are laid across the silo above the long suspensory bolts previously inserted in the longitudinal beams attached to the planks, and linked rods are used to suspend the continuous plank covering to these timbers. The space produced by the settling of the ensilage is then filled with chaff, sawdust, or any suitable non-conducting material.

It is easy to be seen that with a set of silos thus constructed the contents can all be fed out through the doors opening into the tie-up, the suspended planking above, with its packing of sawdust or chaff, remaining as a frost-proof ceiling. When the silos are emptied the packing may be removed, the planks detached by loosening the bolts, and the whole covering with its suspending timbers taken off for refilling. It is intended to remove the weights at the time of putting in the suspensory rods. It is also proposed to put in a movable floor over the silos, and use the building overhead for the storage of hay, straw, etc.

Orleans Co., Vt.

Farm Topics.

SEASONABLE FARM NOTES.

COAL ASHES AS MANURE. It is often a question as to which is the best way of disposing of coal ashes. Their manurial value, unmixed with other matter, is very slight, as has been shown by competent scientific experimenters. This does not prove, however, that they are altogether worthless or injurious when applied to the soil, as many people suppose. On the contrary, coal ashes have been found to work positive benefit when applied to certain soils. The advantages derived from their use do not come from the manurial qualities of the ashes so much as from the mechanical effect which they have upon the soil. I have found them most valuable when applied to heavy clay soils which are liable to bake or become lumpy. When used on such soil, their use renders the soil much more loose and friable, making it easier to work and in better condition for the production of most crops. But I have found a still better use for coal ashes, or rather a way of using them which makes them still more valuable as a fertilizer. Let them be thrown in a heap convenient to the house, and let the slops from the house be applied to the heap. The ashes should be slightly spread, so that the slops, as they are thrown upon the heap, will all be absorbed by them. In the Spring let them be applied to the garden or field, and their use will prove of decided value. There should always be a convenient place to deposit house slop, and if that place is the coal-ash pile, both the ashes and the slops will be turned to good account when applied to the soil. Coal ashes are useful for mulching young trees and bushes. They prevent the soil from drying out, and keep down grass and weeds.

ECONOMY IN THE CELLAR.—In the majority of cellars there has been stored for family use, for feeding domestic animals, or for future marketing, a quantity of fruits and vegetables, such as apples, turnips, beets, pumpkins, etc. A certain portion of these fruits and roots, will, during the Winter, commence to decay, especially if the condition of the cellar is not favorable for keeping them. Another portion will be found, upon assorting them over, to be

unfit for market or for table use. These affected or infirm specimens should not be allowed to remain in the cellar to pollute the air in rooms above with noxious odors, but they should be turned to good account by feeding them to stock.

MANURE.—Winter is the season for making and saving manure. There is no more cheap or convenient way of increasing the manure supply than by the use of an abundance of absorbents. It has been repeatedly proven that the liquid voidings of stock are nearly equal to the solid in manurial value, and yet we find in the majority of barn-yards, the larger portion of them wasted from neglect to use sufficient absorbing material. I prefer straw as an absorbent for general use. It should be used in abundance in both stable and barn-yard. Keep the barn-yard clean and dry by frequently littering it with dry straw. This will make it more comfortable for the stock, and add largely to the quality and quantity of the manure. G. A. G., JR

Elmira, N. Y.

Horticultural.

RURALISMS.

THE editor on page 24, gives some excellent and timely advice to farmers in regard to setting apart an acre or so for fruit, and how a selection should be made. One very important item of advice, however, is overlooked, and one that the editor is as familiar with as anybody can be. After consulting the best catalogues, and getting the advice of your neighbors as to the kinds best suited to your locality, the most difficult thing of all remains to be done, and that is, to get the kinds you want true to name. My advice is, avoid the tree peddler as you would a den of rattlesnakes. Do not be allured by his fine pictures and glib tongue. Dealing with him, the chances are that you will not get more than two trees in ten of the kinds you want, and all are likely to be the refuse of some nursery lately cleaned up (or out.) If the trees should happen to grow, imagine your feelings at the end of eight or ten years, when you find that you have not only not got what you wanted, but instead kinds that are quite worthless to you. You have been robbed of ten (yes, twenty) years of precious life that can never be renewed. This has happened to thousands, and prevented the planting of fruit trees to a very considerable extent. Send your order to a reputable nurseryman, and request him not to substitute other kinds for those you have named, and the chances are altogether in favor of your getting healthy young trees, and all true to name.

I like Kit's protest against stooks, and the introduction of foreign terms when we already have those that answer the purpose, with the advantage of being understood by everybody. Many so-called Americanisms are pointed and expressive, and have as good grammatical forms as most of the foreign terms. Moreover, it is at least in bad taste to multiply terms to express the same thing. If the foreign term, however, is really better, let us adopt it; otherwise let us keep to our own. I "go in" for the best of everything.

A new carnation was shown me a few days since with which I was very much pleased. It is a seedling belonging to the tree or perpetual blooming class, and was raised by Mr. John Reid, who has given a good deal of attention to this class of plants. It has been named Firebraud. The flower is large, very full, of excellent form, of a bright scarlet in color; a color much needed in this class. The buds were abundant on all the shoots, showing it to be a free blooomer. It is to be hoped that Mr. Reid will place the plant in the hands of some florist for distribution. It is too good to be kept private.

I want to suggest another plant for the RURAL'S list of shrubs. I allude to Styrax Japonica, introduced a few years since from Japan, where it has the common name of Snowflake tree, on account of the appearance it presents when in bloom. I have grown it three years, starting with a plant two inches high, and it has thus far proved to be hardy. It has small foliage, is very symmetrical in growth, and makes a pretty tree-like shrub, growing about four feet high. Mr. Thomas Hogg informed me that there is another species of Styrax growing in Japan much larger than this, and even finer in its bloom; but I have forgotten the name. I would suggest that the soil for this Styrax be not enriched.

A very good plant for the RURAL'S shrub list is the Climbing Hydrangea (Schizophragma hydrangeoides). This is another recent introduction from Japan, and I have found it to be quite hardy. The best place for it is at the foot of some rough-barked tree, and I know of none better than the Elm. The plant is thickly furnished with air roots, and it clings to the bark like an ivy. It will also grow on a brick or stone wall or house; and it will handsomely carpet the ground or rocks, but in this case the flowers will not show well. A tree, however, is the most suitable object upon which to grow it; moreover, it will grow very much faster upon a tree than it will trailing the ground. The flowers are about the size of those of the common hydrangea, and resemble them very closely. I consider it a valuable acquisition, and worthy of wide distribution. It should go on the RURAL'S list, since we have comparatively few ornamental plants that will climb and cling at the same time. The young shoots being fastened in their place on the tree, they will thereafter take care of themselves.

HORTICOLA.

[Horticola is possibly not aware that the RURAL presented, Feb. 15, 1879, a portrait of this vine, the first published in this country, with very full notes regarding it. It has since been growing at the Rural Grounds, but we cannot say that we prize it as highly as he does.—EDS.]

IN our "want" column will be found a call for a gardener. We know this to be an unusually desirable one, especially for a young man who desires to educate himself in Botany and Entomology.

Scientific and Useful.

AN ATMOSPHERIC PHENOMENON.

ONE of the most beautiful astronomical phenomena ever seen in this latitude was witnessed December 31, 1880. Just before the sun arose above the horizon there appeared four sun-dogs, two north and two south, rivaling it in brightness. The sky was clear, but the air was filled with frozen mist that sparkled like diamonds. About 10 A. M. there appeared a circle around the sun, the outer edge a spectrum, and the circle divided into four parts by light bands. East and west of

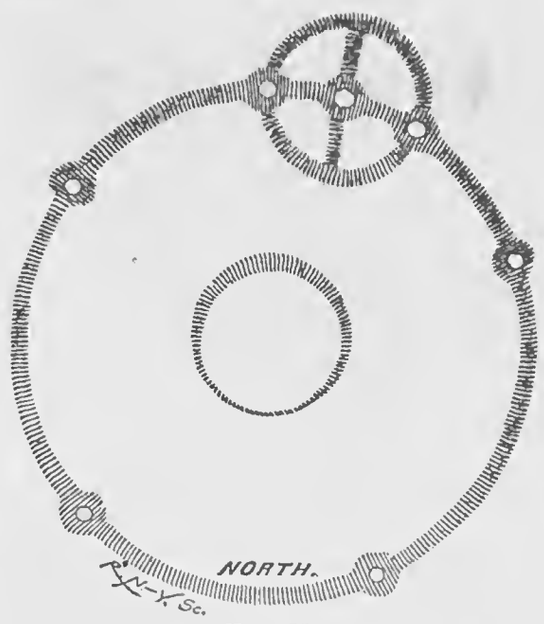


FIG. 38.

the sun, at the intersection of band and rim of circle, were sun-dogs. From these extended a luminous belt encircling the heavens about 30 degrees above the horizon, and on this circle were four other sun-dogs, the two farthest from the sun being the brightest. In the zenith there appeared a beautiful solar spectrum in the form of a crescent, though a faint luminous line completed the circle. The accompanying rough diagram will give a better idea than words of the wonderful sight. With the back to the north, imagine this suspended a vast distance overhead. It will show three circles, one around the sun divided into quarters, a grand circle enclosing two-thirds of the visible heavens, a magnificent rain-bow in the zenith, and six sun-dogs. This grand display lasted about three hours. C. C. CONE.

Chilton, Calumet Co., Wis.

The Poultry Yard.

YOUNG CHICKS IN WINTER.

L. S. HARDIN.

I HAVE always been a constant and diligent reader of poultry journals and of books, pamphlets, standards and other printed matter made up in the interest of breeding fowls; but, after all is told, how little real, true information can be gathered from these sources! To be sure, all that is pleasant and bright and of a seductive nature about the business; all that will lead the unsophisticated to embark in the charming industry, is told in glowing terms. But when it comes down to the real facts, hard labor and unprofitable returns, we hear never a word; nor do we of the dirt, disease and innumerable deaths in the flock of the average breeder; nor of low prices when he wants to sell, and extravagant rates for feed that he must buy. But all this, true as it is, is not what I started out to complain of.

It was always a wonder with me why chicks were not raised all the year round, Winter as well as Summer, and, as I could gain no information on the matter from the books and papers, I determined to find out for myself, so I started that incubator in the Fall and was getting along finely, with everything flourishing, until the "blizzard," or cold wave, struck us, when the hottest fire in my stove failed to keep the temperature of the chicken-room above 70 degrees, and the low temperature had a marked effect upon the chicks. As the cold weather continued, though the thermometer never reached the freezing point and the room was comfortably warm in the day-time and nearly all night, yet almost every one of the chicks, from the oldest to the youngest, was attacked with leg weakness—cramp or rheumatism, whichever it may have been There was no sign of sickness among them, their appetites remaining good as long as they could creep to the feeding-dish; but as the weaklings were run over and trodden upon by the other chicks and injured at night, they were sure to die in a week or two. The trouble was not confined to the older ones, but attacked all alike, even those only two or three days old. Out of more than 100 chicks probably not one dozen were free from this trouble when I concluded to close out the experiment and took their heads off only in anticipation of their early death by the slower action of the weather. Many of them had attained market size and proved of the finest quality for broilers for our own table, but I did not choose to start a market reputation with stock not free from every blemish. Then again, while the incubator was turning out chicks every day, the cold weather had nearly frozen the hens up, so that it was next to impossible to procure eggs at all, and for those that could be got the exorbitant price of 40 cents a dozen was asked, and as it required three of them to make a chick, and that chick was sure to die of rheumatism, I concluded to hold over for warmer weather. With my experience, I am satisfied chicks cannot be raised in an atmosphere that is allowed for any length of time to remain below 70 degrees, and I should want it most of the time about 75. In support of this opinion, I may say that I have looked into the management of a man who tried to raise Winter broilers several years ago in this neighborhood. He used a hot-house, with sash over manure beds for runs, and in this way raised the young chicks as he would tender plants. He abandoned the business because it was so hard to procure enough sitting hens. That was before incubators had been perfected.

The question was, of course, raised in my mind whether the trouble with my chicks did not come from the incubator, as has often been claimed. Fortunately for my case, only a few doors from me the experience with chicks hatched and brought up by a hen was the same as my own with chickens hatched by an incubator and fostered by the artificial mother. A woman had a hen with seven chicks that were nearly two months old when the cold weather came on. By that time two had already died from leg weakness and two more were showing signs of it. Since then all have died. They were kept in a very warm cellar that was dry for a cellar, and the hen was given every attention, having food before her all the time. The warmth of her body could not be perfectly utilized by the large chicks as they increased in size, and it was only then that they succumbed to the cold. I believe the rapid growth from high feeding had much to do with the disease in my flock, rendering them "weedy" and soft in the bone for chicks of their size. If the precautions taken this Winter had been put in practice last Winter there is but little doubt that, owing to the mild weather, the experiment would have proved a success. As it is, the experience gained is valuable, and will point out the precautions to be taken this Summer to prepare for a Winter's campaign. The important question is going to be—can a heat of 70 degrees be maintained without a cost in excess of profitable management. With proper precaution and rooms admirably adapted to the purpose, I think it can be done, though I should hope for a less severe Winter than the one we are now passing through.

What I started to complain of was the false teachings of some contemporay periodicals on this subject. I find the last issue of the Poultry Bulletin saying: "Artificial heat is necessary in rearing very early birds, and this can be supplied better with a medium-sized coal stove, which keeps up a more regular heat than a wood fire, and it is less dangerous. As it is only necessary to keep up a low or slow fire, a half ton of coal should last eight or ten weeks, all that is really necessary being to keep the chill off the room, more than that being injurious rather than beneficial." This advice will lead the breeder into trouble. Men should sometimes practice things before they preach them.

TIME TO BEGIN WITH THE SITTERS.

IT is time now to mature plans for the coming year's campaign in the chicken yard. It matters not whether your purpose be to raise only common fowls for home use and market or whether you are of a more ambitious turn of mind and have some pet projects among the higher types of fowls, by the middle of January a selection of eggs for hatching should commence. If the eggs are kept in bran and placed in a room where the thermometer will not mark lower than 40 deg., they will keep several weeks and make a fair hatching. If they are to be purchased, then order them from breeders living as near to your home as possible, so that freezing weather may not catch them in transit. With reasonable precaution on the part of the shipper, weather for shipping can be selected that will reduce the chances of a severe freeze to the slimmest possibility.

After the eggs have arrived the next thing is to get a hen with a brooding fever on her. If your own flock is large, a week or two may be risked in waiting for one to show signs of brooding, and to detect this condition it is well to fill a nest with a half dozen artificial eggs. Eggs for this purpose I always preferred to get turned out of soft wood. They cost but little and never break and are not apt to crack real eggs when laid in the same nest with them as those made of hard substances often do. If a hen must be procured from a neighboring or distant farm, a little extra trouble will go a long way towards insuring success in getting her to stick to her work after she begins the incubation. By strictly pursuing the following plan, I have succeeded, in nine cases out of ten, in getting out of the strange hen the best work she was capable of performing. A box is made,

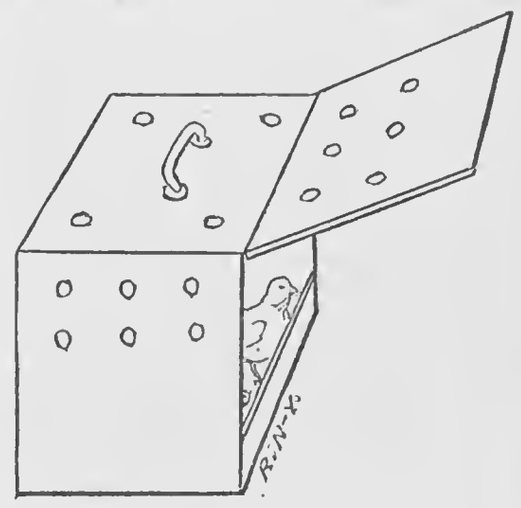


FIG. 39.

fig. 39, and a nest made in it of short cut straw. In this nest are put eight wooden eggs. Late in the afternoon when brooding hens are always on the nest, I get the wagon and start out with several of these boxes. After dickering with the farmer about the price of purchase or hire—for the hen can be returned when the chickens are taken from her—until the hen is mine I place the box as near as can be to her side, with as little noise and fuss as possible. Then place both hands under her, lift her gently but quickly on to the nest of wooden eggs in the box, and close down the lid. By the handle on the top of the box it is carried and placed in the wagon, and I move on to the next farm. At home an empty room is used as a place for the sitters. At this time of year a cellar is a good place, though with plenty of straw and a reasonably close room a good hatch may be looked for. In this room place the boxes as far apart as the size of the room and the number of boxes will admit, so that the hens may remember their own nests. Let them sit at least 12 hours in the boxes without raising the lids; then 24 hours longer on the wooden eggs with the lids up. By this time they will have become perfectly accustomed to the new order of things, and will settle down to regular business, so that it will be safe to put the setting of eggs under them.

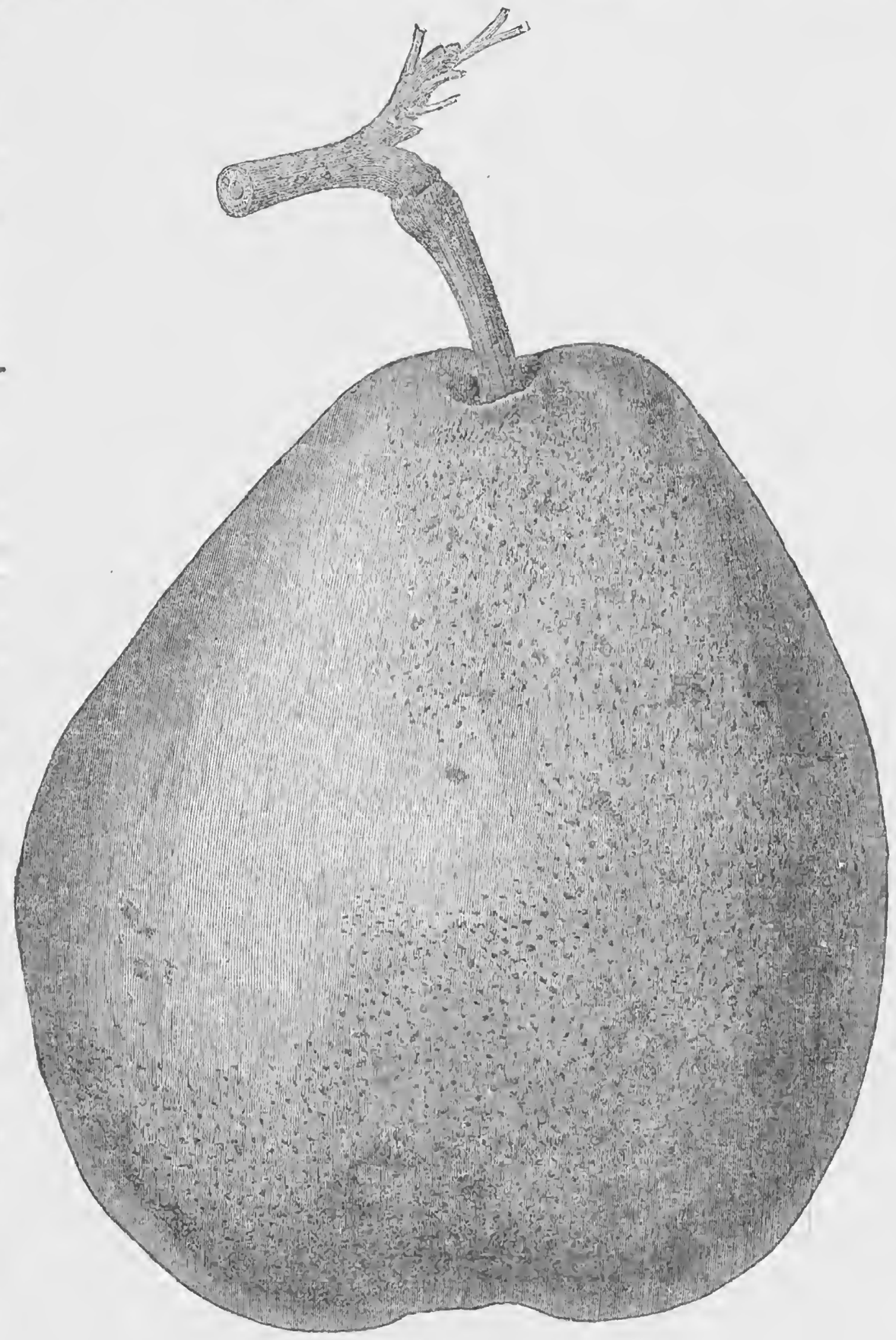
In the room should be placed an abundance of shelled corn. It is better than soft feed as it remains in the crop longer and thus keeps the hen satisfied. The dust bath in a box is a great thing, but is not so much needed at this season of the year as in warm weather. A dish of water must be at hand, and the floor should be sprinkled liberally with dry ashes. The nest and eggs should be examined every two or three days to see that no broken eggs are befouling others and to see that the hen does not scratch or work too much of the straw out of the nest. It is well to watch a hen for the first day or two, and if she leaves the nest too often or stays off too long, put her on and close the lid down, otherwise if she behaves herself the lid may be kept up all the time. The hinges being made of soft leather, allow the lid to be turned back and laid on top of the box. Holes must be bored in the sides and top for ventilation. The lid can be fastened by a button or cleets at the corners.

In handling sitting hens there must be no fear of their pecking, or trouble will be the result of it. The most vicious hen will be subdued by a fearless operator, while the peck is generally more alarming than dangerous. If

the hen sees you are afraid of her, she will keep up the fight. Quarrelsome hens should as far as possible be avoided, as they are generally the poorest sitters and injure their own and other hens' chicks when feeding together. Having tried nearly all breeds I much prefer the Brahma both as a reliable sitter and as a good mother, though she does tread on the little chicks if confined in a pen. She does not roam too much, however, or fight the chicks of other hens, and an abundant fluff makes her admirably adapted for raising chicks in very early Spring.

The number of eggs to the hatch should be regulated by the size and feather of the hen. In cold weather from eight to ten are enough for small and medium-sized hens and not over thirteen should be placed under the largest. This will insure more chicks than a larger number of eggs, as the hen moves them constantly from the center to the outside of the nest and, if the outer circle of eggs is not sufficiently heated, all will in time feel the effects of the cold and be injured. Then the size of the eggs should have something to do with regulating the number to the hen. Good judgment is of prime importance in arranging these matters. It has always been my practice in hot or cold weather to fill the corners of the box with dirt to prevent the eggs from working back into them. This also gives everything a tendency toward the center. It is also well, when the hens are strangers, to examine each carefully under the wings to see that she is free from vermin. This may be deferred until she has become somewhat accustomed to her new quarters so that she will bear handling without becoming panic-struck. The application of a mixture of lard and sulphur will generally cure this trouble when found to exist.

Hens with bad cases of scaly legs should not be used as sitters, for we are told by many authorities that the disease or affliction is certain to be conveyed to the chicks, and as it is caused by a small insect there is probably a large measure of truth in the statement. As a rule, aged hens are more reliable sitters and better mothers than pullets, though this is denied by some high authorities; but it can hardly be disputed that the older a hen is, the less likely is she to be timid and nervous, while her experience must count for something. To be sure a young Brahma is as tame as an old game hen, and I would prefer her for a sitting hen; but, as a rule, all other points being equal, I have found the old hens the best. In choosing the eggs for a hatching, get those as near the same age as possible, or they will not hatch out together, the fresher ones hatching perhaps two days before the old eggs, and the early chicks will coax the hen from her nest before all are out, thus causing a loss which might have been avoided if the proper precaution had been taken. Chicks raised or hatched in January or February make the earliest broilers, and the best show birds in the Fall; but May is early enough to get them out; for chicks hatched then lay just when eggs are dearest in the market.



THE NEW PEAR, DIRECTEUR ALPHAND.—FIG. 40.

The Naturalist.

SAP-SUCKERS AND WOODPECKERS.

JOHN W. ROBSON.

THE reading of the paper by your genial correspondent Gen. Noble, in the RURAL of December 25, afforded me much pleasure. It is so gratifying also to meet with one so versed in horticultural lore, so anxious and willing to learn the truth and so ready with all true humility to confess his ignorance concerning the subject he discusses, that I feel tempted to write a short *personelle* of the sap-sucker.

This species may be known by the bright red spot on the head; and in the male bird there is also a red spot on the throat—this spot is lacking in the female—a black spot in the center of the breast; belly, light yellow; tail black, the two central feathers white on their inner vanes, and spotted with black. The tongue of this genus is quite unlike that of any of the wood-pecker species, the tip, or horny portion, being rounded at the point, and highly developed, while the length of the tongue renders it incapable of being protruded much beyond the point of the beak.

The sap-sucker is migratory in its habits, usually arriving in Northern Illinois about the middle of April when it wages a vigorous war on the maple, birch, silver poplar, apple, and cherry. It attacks the most thriftily growing trees, preferring in the orchard the following varieties of apples:—Yellow Belleflower, Red Astrachan, Rambo, Talman Sweet, and other varieties of the same class. The wounds made by the sap-sucker penetrate to the hard wood, and a portion of the inner bark and cambium layer is eaten out. These holes are from one-eighth to a quarter of an inch in diameter, and are generally close together, in regular lines, running around the tree, girdling the trunk and larger branches with one or more rows. The sap-sucker is a very silent bird, seldom uttering a note when feeding. An occasional "kewee" "kewee," when flying from tree to tree, is its only utterance. I never lost a tree, or had one injured to any extent by these birds during my twenty years' ownership of a large orchard in Illinois; and I still think a long row of Yellow Belleflowers were rendered more fruitful by their yearly perforations. I never joined in the perpetual crusade against them carried on by my brother horticulturists. I never gave them a bad name, or pursued them with the shot gun, and the large number of well filled barrels standing beneath the trees in the Fall of the year, bore ample testimony that the protection afforded them was abundantly rewarded.

The Hairy Woodpecker (Picus villosus), is no doubt the bird to which the General refers as the "fellow that makes the splinters fly." It is about the size of the sap-sucker, and is too often mistaken and destroyed for that bird. The head is black, with a broad, red band; breast white; wings, black spotted and tipped with white; outer tail feathers, white. The tongue will protrude two inches or more beyond the point of the beak, and is provided with a narrow, sharp, horny point, plentifully supplied with recurved barbs, a most perfect instrument for abstracting borers from their burrows. Cheerful and industrious, he is always on the lookout for the larvæ of the order Buprestidæ, that burrow in the substance of the wood, or under the bark of trees. As he explores suspicious localities with gentle taps of his beak, he quickly detects the evidence of unsoundness, and is not slow to learn the cause. Borers are his hobby; soon he chips an opening, and with his long slender tongue, armed with its lance-like barbed point, he soon extracts the enemy. While engaged in his beneficial work, he now and again utters his cheerful "Pliek" "Plick," in a sharp key, as if conscious that he is engaged in a good cause, and is not ashamed to own it. You can always tell where he is at work. He asks no pay for the valuable work he performs. Horticulturists—protect him, for he is your friend. May that gun ever hold fire that is directed against the Hairy Woodpecker.

The Downy Woodpecker (Picus pubescens,) is the smallest of the species. In color, markings and voice he is precisely like his hairy brother, differing only in size, being a mere pocket edition of the Picus villosus. He is an industrious little fellow, destroying the pupæ of moths injurious to trees, busy during the long Winter months searching for and destroying the borers which infest the raspberry and the currant. Doubtless this is the *wee chap* Gen. Noble saw "flitting through the currant bushes." He is another of our friends—spare him.

There is another useful bird which is often mistaken by orchardists for the sap-sucker. By some he is erroneously called by that name; but his true name is the white-breasted Nuthatch—Sitta Carolinensis. He may be readily known from his habit of running around the trunks of trees, with his head down. He feeds on insects lurking beneath the scales of bark, also on the seeds of the elm, maple, and beech. He is especially fond of pumpkin seeds. A few of these stuck on the trees or at the root will induce these industrious workers to remain in the orchard.

During a long life spent in the culture of fruits, I have never killed a bird, as I have always esteemed them as friends. Busy workers they are during the Summer and Fall months; and even in the gloomiest season when the sleep of nature so closely resembles death, we have birds which are actively engaged prying into the private affairs of the insect world, often laying waste the prospects of a promising family by one stroke of the bill, and hunting up and destroying insect life so diligently as to entitle them to the honor of being the friends and co-laborers of man.

Dickinson Co., Kan.

Pomological.

THE NEW PEAR, DIRECTEUR ALPHAND.

IT seems by the London Garden, from which we have had our illustration re-engraved, that the Messrs. Croux, of Sceaux, near Paris, are the introducers of this showy pear. It is spoken of as being always large, measuring between six and seven inches in length and sometimes more, by three to four inches in diameter. Its skin, which is yellowish-green, changes to a gold color, spotted with red and sometimes possessing a rosy tint on the side next the sun. The eye is small; flesh white, firm, close and slightly gritty towards the center—very sweet and delicate in flavor. It is further described as being "altogether one of the best pears of its season which is from February to April." As this pear is now offered for sale, we presume it will be tested at once in this country.

Entomological.

THE ARMY-WORM.

PROFESSOR CYRUS THOMAS.

THE public is indebted to Professors Riley and Comstock for recent able and important articles on that erratic but occasionally very troublesome pest, the Army-worm—that of the former in the July, August and September numbers (1880) of the American Entomologist; that of the latter in his last report as Entomologist of the Agricultural Department. While the importance of these articles is cheerfully conceded, they contain some statements and present some views which I cannot let pass without a mild protest.

Number of Annual Generations.

The first of these statements to which I call attention is a statement found in both. In the article by Professor Riley it is as follows: "From the time Fitch wrote so fully on the species in 1861, until the record of our observations in 1875 and 1876, it was the prevailing belief among entomologists that there was but one annual brood of the species, no absolute evidence of a second brood having been obtained." In Professor Comstock's it is in these words: "The number of generations in a season varies greatly with the climate. It has always been supposed that there is but one in the Northern States, but there will probably be two on Long Island this year," etc.

Although Dr. Fitch does not discuss this point in his article on the species (Sixth Report 1861), it is apparent to every one that he proceeds upon the assumption that it is double-brooded. He speaks of the growth and perfection of the Summer brood. Further on, in giving his theory of the cause of their multiplication, he uses this language: "The Spring and early Summer of this year were exactly the reverse of last year, unusually wet, and the water high in all our streams. Hereby the swamps have all been over-flowed, and this insect has been drowned out of them. The moths or millers coming out of their chrysalides, found it impossible for them to get at the roots of the grass there to deposit their eggs." With these statements before us, I think we must conclude that he believed the species to be double-brooded.

Dr. Packard's language in his Report to the Maine "Board of Agriculture," 1861, also appears to indicate a belief at that time that it is double-brooded even in the Eastern States, though his subsequent writings express an opposite opinion. His language in reference to Illinois shows clearly that he believed it to be double-brooded there: "In Illinois the moth lays her eggs in April and May, from four to six weeks earlier than in the Eastern States; so the larva appears earlier; the moths lay their eggs for a second brood in June and July."

In the Prairie Farmer of June 20, 1861, I expressed my belief that it is two-brooded; and this, in fact, was one of the chief points of the long controversy between Mr. Walsh and myself, as Professor Riley properly states in his second and eighth reports. In the same paper, August 22, 1861, I cited one instance in this county where the second brood of worms was observed in such numbers that they cut out all the grass in a corn-field and even attacked the hard leaves of the ripening corn. In 1874 I also noticed at Carbondale, Ill., in September, an army of these worms marching across the road to a field of young rye which had been sown very early.

Professor Riley's saving clause "prevailing belief" may be intended to cover the exceptions, and Professor Comstock's application of the term "Northern" may exclude Illinois; but the expressions are rather too sweeping to be allowed to remain unnoticed, as they are calculated to lead astray those not acquainted with the literature of this subject.

Proper Home of the Species and Character of the Seasons favorable to its Development.

In Professor Riley's article of 1880 above referred to (Am. Ent. Sept.), we find the following statement. After mentioning certain facts, he remarks: "These facts clearly disprove Fitch's theory, and we must believe that the Army-worm is most likely to appear after dry seasons, regardless of the wetness or dryness of the season in which it occurs." He then proceeds to criticise somewhat severely Dr. Fitch's theory, and concludes that he was "hard pressed for argument" to support his theory.

If we turn to Professor Riley's Second Report (1870), we find him expressing his opinion very decidedly, as follows: "The Army-worm delights in fact in cool, moist and shady situations, and from the passages already quoted from Mr. Kirkpatrick, where it is shown that the worms which swarmed on the Cuyahoga

flats, did not attempt to remove to land a foot or so higher; and from further facts recorded by Dr. Fitch, it becomes evident that its natural abode is in the wild grass of our swamps, or on low lands. During an excessively dry Summer, these swampy places dry out, and the insect, having a wider range where the conditions for its successful development are favorable, becomes greatly multiplied. The eggs are consequently deposited over a greater area of territory, and if the succeeding year prove wet and favorable to the growth of the worms, we shall have the abnormal condition of their appearing on our higher and drier lands, and of their marching from one field to another * * * * * * Thus the fact at once becomes significant and explicable that almost all great Army-worm years have been unusually wet, with the preceding year unusually dry, as Dr. Fitch has proved by record. The appearance of the insect last Summer of 1868 was unusually dry and hot, while that of 1869 was decidedly wet."

In his eighth report (1876) he reaffirms the same view with emphasis. "It is a well established fact that all great Army-worm years have been unusually wet, preceded by one or more exceptionally dry years; and the widespread appearance of the insect in 1875 formed no exception to the rule. The explanation of this fact originally given by Fitch is beyond doubt correct in the main, but needs further elucidation."

Here, then, we have his assertions based upon his own investigations during two Army-worm years, that "it is a well established fact that all great Army-worm years have been unusually wet." In 1880, all this evidence, so positively affirmed, is thrown aside, Dr. Fitch's theory, formerly pronounced correct in the main "beyond doubt," is also pronounced erroneous. He even adds that "the view that the Army-worm has its proper home in the wild grasses in the swamps, as Dr. Fitch has assumed, must also be considered erroneous—an opinion which he also affirmed in his former writings.

When we find by new evidence that an opinion formerly given is incorrect, candor requires that we should abandon it and acknowledge our error, and Professor Riley is generally free to confess the changes in his own views, though in this particular point not so fully as justice to Dr. Fitch required. But the point I desire to urge in bringing forth these facts is this: as Professor Riley expressed his opinions so positively heretofore, based on a much larger amount of evidence than he has for his present view, and as his changes in reference to many of the most important characters and habits of the species have been so repeated and radical, can we feel satisfied with his present views in reference thereto? And more especially are we disposed to hesitate when we find his new views based upon such slender evidence, and differing in some most important respects from those expressed by Professor Comstock.

As to the last point, I am inclined to hold, as I always have done, the same view that he expressed in 1870, because the facts sustain it. The year 1855 was wet in Ohio, as the testimony of Mr. Kirkpatrick shows: Schott's Rain Tables not only confirm it, but show that this was a wet year in all the Northwest. That the Spring of 1861 was not only wet, but cool, in Illinois and the Northwest is seen by reference to the "Record of the Season" in the Prairie Farmer of April and May, 1861. The following records of annual rainfall in the East also correspond with what is well known to have been the fact in the West:—

	Inches.	Inches.
Burlington Vt., average	34.15	1861—42.56
Boston, Mass., "	44.99	1861—50.07
Providence, R. I., "	41-54	1861—44.25
Penn Yan, N. Y., "	28 42	1861—32.74
Marietta, Ohio, "	42.70	1861—46.41

In the West the chief rainfall of this year was in the Spring, many of the stations, taking the whole year, not rising above the average. To the fact that the Springs of 1869 and of 1875 were wet Professor Riley bears testimony in the extracts already quoted. In the year 1817, so far as the few records made show, the annual rainfall in the New England States was slightly below the average, while in Eastern Pennsylvania and Maryland it was slightly above. But it is a somewhat singular confirmation of Dr. Fitch's theory that at New Bedford, the only monthly record we have, the rainfall in June, 1817, was more than double average. (Blodgett's Climatology, '58 and '81.) The year 1816 was dry, but was unusually cold, being equaled (during the first half of the century) only by 1812. The facts, therefore, so far as they can be ascertained, are largely in favor of Dr. Fitch's theory.

Before the questions as to the number of broods at different latitudes and the method of hibernating can be definitely settled, it will be necessary to ascertain the average length of life of the individuals from the time the eggs are deposited until the resulting moths deposit their eggs; also, whether they appear in definite broods. I have collected facts bearing on these points, but will defer their discussion to a future paper.

Miscellaneous

CATALOGUES, ETC., RECEIVED.

LARGE SALE OF JERSEY CATTLE.—Catalogue of 45 head of imported Jersey Cattle for sale at public auction at Degraaw Farm, at Jamaica, Long Island, on Wednesday, February, 9th. These cattle were imported from the island of Jersey last October and are all entitled to register in the American Jersey Cattle Club.

QUARTERLY REPORT of the Kansas State Board of Agriculture for the quarter ending December 31, 1880

MISAPPREHENSIONS CORRECTED.

A FRIEND from Preble County, Ohio, writes us: "Those subscribers whose names I sent in were surprised when they received their potatoes—they look so much like a small Early Rose. The picture in the Fair Number of the RURAL looked so large and fine, and those tubers we received so small!"

[We beg to say that in our "Plant and Seed Distribution" announcement it was stated that a White Elephant Potato of *medium* size would be sent to applicants. It will appear that the postage on each is five cents, not to speak of the cost of box and packing. Now we charge our subscribers but six cents on the *entire* distribution. Were we to send a larger specimen, we should have charged our subscribers more postage. No matter what the size, we guarantee them to be true White Elephants.—EDS.]

"I do not know whether you have the history of the Blount Corn; but about the year 1858 there was great excitement in the agricultural papers about Peabody's Branching Corn. I have seen as many as eight small ears on a stalk of it. A good many paid very high prices for seed, but soon abandoned it. It was too late for this climate and was too tedious to husk. Is the Blount Corn the Peabody Corn on its periodical rounds?—[Oh, no.—EDS]. I think from the picture of your Chester County Corn that it would be too late a corn for this country. We try to get a large ear with a small cob necessarily, and a long, slim grain—more of a gourd-seed or shoe-peg style.

[We do not pretend to know whether the "Chester" is worth growing in your climate or not. We do not recommend it to anybody or for any section of country. It is so with Blount's. We would not advise our next-door neighbor to grow it. We have merely told what it has done at the Rural Farm and our methods of treating it. We have no interest in either variety beyond that which attaches to our tests. Our earnest advice to our friends is, touch all untried things cautiously.—EDS.]

KIND WORDS FROM RURAL FRIENDS.

I COULD not farm without your valuable advice. N. B. BOOTH.
Pittsburg, Ind.

WITHOUT any idea of flattery I can truly say the RURAL NEW-YORKER is improved in an extraordinary degree, for it is interesting to everybody, old and young, rich or poor, and it is at the same time instructive and amusing. It is such a cheap publication, too! Just consider how superior it is to some monthly papers, each number having more valuable information every week than the others have every month, and yet, not reckoning the seeds distributed, etc., it costs less to have 52 lively papers than 12 dry, laboriously common-place ones full of old and uninteresting advertisements.
GEORGE GARDNER.

I THINK the RURAL heads the list as an agricultural journal. The contents are well selected and reliable, and are well printed on good paper. Then, too, it always arrives on time.
Ft. Atkinson, Wis. D. B. MORRISON.

THE RURAL is either growing more valuable from week to week or else I am becoming more interested through better acquaintance.
C. E. THORNE.
Farm Manager, Ohio State University.

THE RURAL NEW-YORKER is the best agricultural journal in existence.—Vindicator, Cameron, Mo.

THE RURAL NEW-YORKER is certainly one of the best agricultural papers published, and a general circulation of it in this county would do much towards developing the agricultural resources of the county.—Messenger, New Martinsville, W. Va.

THE RURAL NEW-YORKER is one of the foremost agricultural weekly journals of the age. It is worth its weight in solid gold.—Planter and Farmer, Richmond, Va.

BEING a farmer, I feel most interested in—the whole paper. My wife says she cannot do without it, and the children cry for it.
Covert, N. Y. A. H. COLE.

THE RURAL has come to be a necessity to us. Its suggestions, positive instructions, experiments, advertisements, and everything about it are a constant help, and invest agricultural pursuits with fresh interest E. P. ARTHORP.

THE lady of the house, Mrs. Wallis, says the RURAL is the best paper of the bunch we receive, and I have never disputed it.
WILL N. WALLIS.
Prop'r Exp. Farm, Collin Co., Texas.

THE RURAL is the best of papers.
Cortland Co., N. Y. J. G. BINGHAM.

I CONSIDER the seeds, etc., you have sent me worth several times the subscription money I have sent you; and then there is the paper itself! 'Tis a store of useful information which far surpasses all the "farm books" I have ever seen. Can't you give an index to each number? I suspect this is asking a great deal. I save every number, and when I want to refer to a recipe or article I am obliged to look over many numbers sometimes, page by page, till I find it—frequently overlooking it, especially if the article is a short one. I can't tell you which department of the paper I like best. Each member of the family is eager to read it when it comes. W. MANNING LEMEN.
Shepherdstown, W. Va.

I RECEIVED the sewing machine works three days later, all right; am very much pleased with the machine. Many thanks. I feel well paid for all my trouble.
Suffolk Co., N. Y. L. BEECHER HALLOCK.

THE reasons I give for taking the RURAL NEW-YORKER another year are, first, its perfect truthfulness and reliability—when a promise is made I know it is as sure as a note—also its instructive and moral reading.
Clinton, N. Y. B. ELPHICK.

I HAVE been taking the RURAL for 16 or 17 years. It is without a doubt the best paper of its class in existence. I can see but little room for improvement, if any. C. W HAMILTON.

WE cannot do without the RURAL. We have taken it for at least 12 years.
Bergen, N. J. J. H. SPOFFORD.

THE RURAL suits me exactly, or at least the nearest of any agricultural, horticultural, floricultural, or any other 'cultural paper that I have seen, and I have quite a wide range of reading in these lines. Your original engravings are very good, and the articles from the leading writers in the country are what make it my favorite. FRANK MCMAHON.
Red Bank, N. Y.

IT does one good to see the variety of experience in fruit growing from all parts of the country as described in the RURAL. We look for its opinion, and *trust* to it, particularly in its full and varied information regarding our own specialties—apples and grapes, and the cultivation of flowers. ANNIE L. JACK.
Prov. Quebec, Canada.

THE RURAL is one of the best agricultural and household journals in the world, and it gives away to every subscriber each year, free, more than the worth of the subscription price in valuable farm and garden seeds.—Observer, Pembroke, Ont.

I HAVE been reading the RURAL NEW-YORKER nearly a year, and I like it much better than any similar publication I ever read.
Norton, Kansas. D. E. STEVENS.

I HAVE been a reader of the RURAL for about 20 years, and do not intend to do without it as long as I can raise the money. I have sent in a club this year. N. L. CARTER.
Marshall Co., Iowa.

THE RURAL NEW-YORKER is one of the best agricultural papers published, and should find a home in every farm-house in the country. Its managers work 82 acres of land as experiment grounds, not only giving through their journal the result of these experiments, but also distributing free to their subscribers many valuable and rare seeds.—Journal, Wyoming, Iowa.

IT is now generally conceded that the RURAL NEW-YORKER is the leading agricultural and horticultural authority of this country. Its experimental grounds of 82 acres, which are worked in the interests of subscribers; its free distributions of new and valuable plants and seeds, have greatly added to its popularity, while its pages, filled with original contributions from the best writers in the world, profusely illustrated with drawings from nature, render the paper invaluable to every farmer, gardener or fruit grower in the land.—Patriot, New Lisbon, Ohio.

I AM highly pleased with the very valuable knowledge for the farmer and gardener gained from the Rural Farm and Experiment Grounds. It is almost invaluable. I would suggest that each plant be thoroughly tested, and that you should then state whether it is hardy or not in the latitude of New York. This I consider a point of much value to beginners in farming and gardening, also to the more experienced. Our plant and seedsmen fail to do this, and consequently thousands of persons yearly lose their money and time by buying seeds and plants that will not stand their climate.
Glens Falls, N. Y. E. W. KNIGHT.

What Others Say

CANNED MEAT.—A writer in the Maine Farmer frightens us in the following manner: "There have been men all through this country buying what they call 'canners,' which consist of old sheep, no matter how much diseased; anything that could stand alone, such as were so poor that the farmers could not Winter them; also old diseased cows and old bulls with wolves on their jaws—anything does to can. I was at the village the other day and saw a large amount of these old sheep's carcasses that were being shipped to Portland, and they did not look fit for dogs to eat; and in fact, I think it dangerous for any one to eat such meat."

WHAT POWER FOR CHURNING?—During a recent meeting of the Elmira Farmers' Club, as reported in the Husbandman, the question, "What is the best power for propelling a churn?" was discussed:

J. BRIDGMAN—The cheapest animal power is a calf, I think, where the dairy is no more than six or eight cows. There is a dairyman in my acquaintance who milks from a dozen to 16 cows and churns with a yearling calf to which he feeds the buttermilk liberally, but in other respects the animal fares the same as the yearlings at pasture. The one that does the churning always outstrips the others in growth.

CHARLES HELLER—The churning for a dairy of 13 cows on my farm, last Summer, was done by a sheep. But there is an objection to the use of sheep and calves for churning in the bad odor they impart to the room.

G. W. HOFFMAN—Do you use a wheel power, or the endless chain principle?

CHARLES HELLER—The endless chain tread power. All things considered it is better than the wheel—more convenient and easier for the animal.

J. BRIDGMAN—When a calf or a sheep is used, the wheel or machine should be placed where the odor of the animal will not enter the churn room. There is one rule that I would lay down as imperative—that some force besides man power should be used for churning. If I had but two cows I would employ something besides human muscle to do the churning. A farmer can make a calf do the work without trouble, and the power will then make no cost beyond the machinery for using it. That is a better way than any other in most dairies where not many cows are kept, but with large dairies a larger animal must be employed.

PYRETHRUM.—From an interesting and important paper read by Professor Cook before a Michigan Horticultural Society, is taken the following parts which should be found instructive to all persons:—This substance has long been in the market under the name of Persian and Dalmatian Insect Powder and sold as a destroyer of house flies, roaches, etc. But, owing doubtless to the fact that the effective element is a volatile oil, the foreign substance often failed to destroy, as it did in my hands. The essential element had escaped.

In 1879 Mr. Wm. Saunders, of Ontario, experimented with the Persian Insect Powder, the pulverized flowers of Pyrethrum carneum and P. roseum, and the Dalmatian, the powdered flowers of P. cinerariæfolium. He found the latter the most efficient. It only kills by coming in contact and seems to paralyze the insect at first and finally kills it outright. Mr. Saunders experimented with house flies, blue-bottle flies, grasshoppers, plant lice, etc. He found that all fell upon their backs in from two to six or eight minutes. The insects remain paralyzed sometimes for two or three days before they die, and a few were seen to recover so far as to walk or fly away.

Professor C. V. Riley has also attacked this problem. His experiments show that this substance is equally effective against nearly, if not quite, all our insect foes. He has found that mixing the pyrethrum with flour in the proportion of one part of the pyrethrum to twenty parts of flour, in no way injures the value of the application, and that when mixed with water at the rate of one tablespoonful to one or even two gallons of water, it still is potent to destroy.

The great argument in favor of pyrethrum is its harmless nature as affecting man and other animals of the mammalian branch. When breathed it is no more disagreeable than any vegetable dust.

Heretofore the cost of pyrethrum has been a bar to its general use. It has been sold at

$1.25 per pound; but Mr. Mileo, of Stockton, California, who has for the last few years grown this plant very successfully, has informed Professor Riley that he has grown 147 pounds to the acre, and that the whole expense of putting it on the market need not exceed six or seven cents. When its culture becomes common, then we may expect that the price will not exceed that of London-Purple. Mr. Milco grows the P. cinerariæfolium, and so manufactures the Dalmatian powder under the name of "Buhach." It is probably true that this plant can be grown in the Southern States, and very probably in all sections of the United States; if so, we may expect very soon to find it in the market at rates within the reach of all.

During the past season I have tried this pyrethrum, "Buhach," which I received through the kindness of Professor Riley, on the larvæ and imagos of the potato beetle, on the cabbage caterpillar (Pieris rapæ) on squash bugs, on plant lice, on house flies, and on mosquitoes, and found it speedy death to all except the squash bugs, which even lived in the powder for three days before dying. I also found that one tablespoonful of the powder to forty of flour was effective in killing the cabbage caterpillars, and that the same amount of powder to two gallons of water was even better, owing doubtless to its more thorough application. The result seems to depend more on actual contact than upon the amount of powder.

The significance of these facts is fairly startling. We have a cheap, non-poisonous insecticide, by use of which noxious caterpillars are brought low, beetles and their grubs exterminated, flies and their maggots put *hors de combat*, plant lice overcome, parasitic lice—of course I mean those affecting sheep, cattle, fowls, and other of our domestic animals—exterminated house flies and mosquitoes sent where mankind has long wished them.

To apply this substance to insects which destroy vegetation, we can best mix with water and apply with a fountain pump. To kill house flies we have only to throw the dust about the room by use of a bellows. To destroy vermin on our domestic animals we can wash them with the liquid mixture, or dust it well through their hair, wool and feathers, and in case of close rooms like poultry houses, fill the room with the dust.

THE MILLSTONE of October has the following:—"A most commendable enterprise of the RURAL NEW-YORKER is its experimental farm. Upon this farm scientific tests are made with the numerous plants about which farmers dispute, and development is given to discoveries that are results of the experiments. An unimpeachable authority for the editorial opinions of the paper is thus practically set forth, making it a thoroughly reliable, interesting and invaluable publication. An illustrated article showing a comparison of the wheats most in favor among farmers, is about as interesting reading as we could select, and coming from the source it does, we have no doubt will receive the earnest attention of every reader."

Everywhere.

FACTS ABOUT IOWA.

HERE are a few facts concerning Iowa, gathered during a trip through different sections of the State. The surface of Iowa is generally undulating, and in some places almost hilly; yet I think it has less of waste land in proportion to tillable land than any other State in the Union. The soil in the eastern part of the State is a rich black loam, intermixed in some localities with sand, and in other places, with gravel and clay; while that of Western Iowa is known as the "bluff deposit," peculiar to the Missouri slope. I wish to draw special attention to the superior advantages Iowa enjoys for the successful breeding of all kinds of stock, for, while the plains abound in rich, nutritious grasses, affording excellent pasturage during the Summer, these grasses may be cut and cured for hay at a small cost. Then again, as this State ranks second in the production of corn, it will be seen that plenty of feed can be had for Winter use. Another essential to the keeping of stock is water, which can be had in great abundance here; for if there is no stream running through or adjoining one's farm, water may be had by boring wells varying in depth from ten to forty feet, according to locality. The State now ranks first in the raising of hogs, and fifth in the number of milch cows, while the raising of sheep is fast assuming vast proportions; and we confidently believe that Iowa in the near future, is destined to become the first State in the Union in the production of both wool and mutton.

Among the counterbalancing disadvantages of the State may be mentioned the high rates of interest; taxation of live stock, which, however, is light, as the valuation is put at a low figure; the chinch bug, which is not as destructive as is generally believed, a large acreage of wheat having been harvested the past season; and occasionally in the Fall a heavy wind and snow storm called in the West a "blizzard." But there are disadvantages to be met with everywhere, and here the chances are greatly in favor of men of energy, who wish to invest their all in a home, becoming independent in a few years. There are yet thousands of acres of first-class land in Western Iowa for sale on reasonable terms. Land of this sort is fast being taken up, however, as the immigration to the State is immense, and is composed mostly of the better class of citizens of the United States and Great Britain. M. L. F.

RURAL SPECIAL REPORTS.

ARK., Poteau, Scott Co., Jan. 1.—We have had some very cold weather the past two weeks for this country. On the morning of the 29th ult. the thermometer was below zero. There has been but little snow since November. Crops of nearly all kinds were good the past season, except wheat. It was very poor. Corn averaged from 25 to 50 bushels per acre; cotton on good land yielded a bale per acre. Prices are about as follows: cotton, 10 to 10½c.; corn, 50c.; wheat, none selling; pork, 3 to 5c.; oats 50c.; eggs, 15c.; butter, 20c.; honey, 12½ to 16⅔c. N. C. B.

ILLS., Champaign, Champaign Co., Jan. 8,—With the exception of five or six days, the earth in this part of the country has been covered with a light, dry snow since early in November. This means that the Winter has been dry and cool—but not very cold, except the last week in December, when a northern blizzard, or a "Manitoba cold wave," came down upon us with great force and sent the mercury down to 24 degrees below zero. Since, it has snowed a little every other day or so, and the temperature has been only seasonably winterish. In its generally moderate temperature, its many but light snows, its freedom from thaws and rainfalls, this Winter very closely resembles that of two years ago, after which we harvested the phenomenal Winter wheat crop of 1879. The feeding season has been a very favorable one for stock of all kinds, except on the occasions named, when cattle and hogs suffered very much and shrunk severely. It is not the degree of cold that stock suffer from so much as the force of the wind, 10 degrees above zero, with a gale of wind, being far worse to bear than 30 degrees below, in a still atmosphere. Fancy then, how stock must have suffered on the 29th of December, exposed to a strong wind and the mercury ranging from 24 deg. at sunrise, to 10 deg. or 15 deg. below zero in the evening. This blizzard made itself felt over the entire country, killing the orange trees to a certain extent in Florida, and making skating in southwestern Texas, where such a thing was never known before since "Americans" have lived there,—that country having been only lately settled in 1835, when there was a sudden storm similar to the one under notice. The peach trees and all the blackberries but the Snyder, are reported mostly destroyed as far south as 38 deg., and the tender raspberries and half-hardy grapes have gone in the same way. In this latitude, I have never known the apple and the pear crops seriously injured by the frost, and what we lack in one direction, may be made up in another. But the Winter wheat crop, which is now next to corn the great crop of the country, having gone into winter-quarters in an excellent state of preservation and having ample snow protection, at this time promises a crop equal to that of 1879, with the added advantage that its acreage has been nearly doubled. B. F. J.

KAN., Clay Center, Clay Co., Jan. 6.—The holiday week was extremely cold here—19° below zero on December 29. An inch and a half of snow on our smooth roads made tolerably good sleighing, which was made use of by every one who could find anything in shape of a sleigh or a pair of runners on which to mount a dry goods box. A. E. S.

N. C., Henderson, Granville Co., Jan. 5.—On examining my large orchard of peaches this morning I find an almost entire destruction of the fruit buds of all kinds of budded varieties, while the seedlings and common peaches of the county are not yet hurt. The thermometer on the 30th and 31st of December sank here to about 3° below zero, and in some places to 10° below. This is a greater degree of cold than ever known here before in the memory of man. This is the third consecutive year in which we have had no peaches for market, but a Winter destruction of the buds was never before known. It has always been due to the late Spring frosts. H. S.

OHIO, Toledo, Lucas Co., Jan. 11.—Thermometer this morning 6° below. W. H. K.

PA., Northumberland, Northumberland Co., Jan. 10.—This county is noted for its agricultural and mineral wealth. The Shamokin coal is known wherever coal is used, whilst another part abounds in iron ore and limestone, and the northern part of the county is a finely improved farming country, devoted principally to a mixed husbandry, so that we never have a total failure of crops. The hay crop was very light last year, as was the oat crop, while wheat and corn were heavy. Most of the corn has changed hands at 50 cents per bushel. It is now but 45 cents. The Winter has thus far been very severe, and as the cold weather set in early it found a good many farmers unprepared for the change, and hundreds of bushels of potatoes and apples were frozen. Farmers that have suitable land are turning their attention to raising tobacco, of which about 1,000 cases were raised this last year. Most of it is on the poles, on account of the cold weather, which prevents it from being taken down. R. C. M'W.

PA., Lineville Station, Crawford Co., Jan. 10.—We are having nice Winter weather. There has been good sleighing since some time in November. There was fully as much wheat sown this Fall as in previous years, if not more. Owing to the dry weather corn was not more than an average crop; potatoes were rather below the average. Feed promises to be scarce before Winter is over. Hay is selling at $10 per ton. Wheat is worth $1 per bushel; corn, 30 cents per bushel in the ear; oats, 35 cents. R. H. S.

PA., Derry Church, Dauphin Co., Jan. 8—The weather has been extremely cold. On December 30 the thermometer stood 8 deg. below zero, and on January 1, 12 deg. below. The fields, however, are covered with snow to the depth of about nine inches, so that the grain does not suffer. Wheat sells at $1 05; oats, 40c.; corn, 50c., and rye at 80c. per bushel. Hay is worth $25 per ton; butter, 25c. per pound; eggs, 25c. per dozen. E. E. B S.

WIS., Chilton, Calumet Co., Jan. 8—The weather has been intensely cold here; the thermometer has been at zero, and below most of the time for the past two weeks, the lowest point being 25° below zero. This morning it is 15° below. We have had no snow to speak of—three or four inches in all. C. C. C.

The Querist.

ANSWERS TO CORRESPONDENTS.

Splinter in a Horse's Foot.

W. H., E. New Market, Ind., says a four-year-old mare of his kicked a board down in the stable, and after a few days he noticed that her leg was somewhat swollen in the mornings, but the swelling would go down after she had been used a little. She did not appear to be lame in the least. After some time he found that a large splinter penetrated right through the frog into the fleshy part just above. After it had been removed, he poulticed the place with flax-seed and worm-wood, as there was considerable fever in the leg from the foot to the gambrel joint. He washed the place with castile soap and water and then used weak carbolic acid water and blue vitriol, but the inflammation continued. He then bandaged the leg at night, using warm vinegar and sometimes warm alcohol, and the trouble seemed to settle in the gambrel joint, which becomes swollen on the inside when the animal is not used. Our friend has used several remedies, but, not having effected a cure, he asks what treatment should be employed.

ANS.—Our correspondent could not have done better than, directly after withdrawing the splinter from the frog of the foot, to poultice with warm flax-seed. He should have kept this on, if the wound suppurated, till it ceased running, then applied sweet oil or mutton tallow, and bound up with linen cloth till healed. The fever and swelling of the leg which followed were in consequence of the pain and irritation of the wound. This swelling would probably have ceased soon by merely bathing the parts swollen with water as hot as the hand could bear, and then wrapping it up warm with bands of white cloth or uncolored woolen cloth of any kind. Colored cloth should not be used, as its dye might prove injurious to the leg. This treatment may be used now. Then bed the mare well, so that she can stand on something soft, and keep her in a comfortable stable till she gets entirely well. Blue vitriol, corrosive sublimate, turpentine, or kerosene oil, are very bad to apply to a wound. The two former are poisonous to raw flesh and we fear have injured the limb, but it may have escaped.

Miscellaneous.

C. E. C., Forestville, Ia., asks the best work on cattle, horses, sheep and swine—their diseases, breeding, etc.

ANS.—We know of no single work that embraces all the above information. The best work on diseases of domestic animals, which can be got at a reasonable price, is Law's Farmers' Veterinary Adviser, price $3. Allen's American Cattle, price $2 50 is an excellent work on cattle. Mayhew's Illustrated Horse Management, price $3, is a good work on the subject of which it treats. Stewart's Shepherd's Manual, price $1.50, is the latest and best work on sheep. Coburn's Swine Husbandry, price $1 75 is a late and good work on swine. Miles's Stock Breeding, price $2, gives the latest information on the principles and practice of stock breeding. The above works would be very useful in every farmer's library. All can be obtained from the American News Co., N. Y. City.

P. T. J., Victoria, British Columbia, asks whether any of the fruit driers noticed from time to time in the RURAL could be used for drying cones of the native conifers, of which he collects a considerable quantity; and if fruit driers are suitable for this purpose, whether we know of any made in Canada, as it would be desirable to save the 25 per cent. of import duty levied on American machinery introduced into the Dominion.

ANS.—The fruit driers would answer perfectly for drying fir cones or any kind of seeds, care being taken not to run the fire too high. To be safe in this particular, a thermometer should be hung in the shaft near the lower trays and the heat should not exceed 125 degrees. We cannot learn that fruit driers are made anywhere in the Dominion.

J. E P., Braidwood, Ill, asks how the milk of Holstein cows would compare with that of Jerseys for butter making.

ANS.—We do not remember the particulars of any experiments made to decide in a definite manner the relative proportion of butter obtainable from the milk of Holstein and Jersey cows. The Jersey, however, is the "butter cow" *par excellence*, her milk usually yielding a larger percentage of butter, and that of a better quality, than the milk of any other breed. The Holstein milk is better for cheese-making or marketing than for butter-making; as the yield is large and pretty rich in caseine. A good deal, of course, will also depend on the feed of the cows.

J. W., Rock Falls, Ill. sends specimen leaves of a plant which he thinks may be either a magnolia or a hibiscus, and asks our opinion.

ANS.—It is either Hibiscus militaris or H. Moschentos—we cannot tell which from the specimen.

C. M., Marquette, Kan., kindly furnishes figures to show that our yield of Chester Corn could not have been as great as represented. But he overlooks the facts that it was planted in drills; that many grains produced more than one stalk and that the drills were not four feet apart.

C. M. H., Pleasant Grove, Minn., asks where can he get cranberry plants in the Spring, and how to set them out.

ANS.—In noticing the nurserymen's catalognes just about to be issued, we shall call attention to those parties who sell cranberries. A full account of the manner of planting them, etc., was given in the RURAL of Dec. 4th last, under the caption "The Cultivation of the Cranberry." We must refer our correspondent to this article, as it is really too soon to repeat the instruction given therein.

W. W., Utica, Dakota Territory, asks whether Blount's Corn and the Chester County Mammoth Corn would be likely to ripen in that latitude, and where can he get seeds of both.

ANS.—Trial alone can decide the matter definitely. Only a small patch of each should be planted at first. In noticing seedsmen's catalogues, we shall mention those who will have seed for sale. It will also, no doubt, be advertised in the RURAL in ample time before the season for planting.

C. C., Damascus, Pa., asks for a full history of the Chester County Mammoth Corn.

ANS.—We have told all that we know respecting "Chester" Mammoth. It was bred in Chester Co., Penn.—by whom we know not. It required last season not less than 110 days to mature. The cobs are large, the stalks heavy and tall—perhaps they will average nine feet.

L. H. E., Chapman, Kan., asks how to get the seed out of Osage Oranges without using a machine.

ANS.—The seeds of the Osage Orange can be obtained by rotting the orange and washing away the pulp.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 22.

J. B. W.—J. T.—D. S. D.—D. Rtee—thank you. The corn is not yet received.—M. H. C.—N. J. S.—S. E. V.—B. F. T.—W. E V., we can not furnish prices—we do not sell—A. B. A., for Hardy Shrub and Tree Number—W. C. H.—A. S S, Waco, Texas, many thanks. We shall give the corn a good trial—C. M. H.—M. L F.—H. S.—G C. C, for wheat number—H. S.—S. R. N, for hardy tree and shrub number—P. M. A.—I J. B.—J. S. H & Son—S. R. M.—J. E. J.—J. F. A.—G. W.—J. T.—O. W. F.—I. D.—J. S W.—E G., thanks—F. D. C.—J. A. M.—E. P. P.—P. B. M.—E. C.—R. B. A.—W. S. P.—J. F. A.—J. T.—J. S W.—T. H. H.—S. R. M.—J. E. J.—S E. V.—B. F. T.—J. T.—J. B. W.—J. H. P. S.—D. R.—G. W.—N. J. S.—H. C. B.—A. L. J.—E. W. S., yes—W. C. B.—S. F.—W. H. S.—D. E. S.—S. E. V.—M. W. F.—S. R. M.—F. E. S.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, JAN. 29, 1881.

The present Free Seed and Plant Distribution of the Rural New-Yorker will be begun in a few weeks. It is our desire and intention to begin it earlier than we were enabled to do last year. We are now only awaiting the arrival of seed from France ordered a long time ago. We have already sent out the White Elephant Potato to many, availing ourselves of warm spells. If not received in a perfect condition, friends will please notify us by postal card.

The Hardy Shrub and Tree Special will be (probably) the second number in February. In it we do not propose to speak of new plants—except incidentally—but merely of those good, well-tried hardy trees and shrubs which have proven themselves to be, for general purposes, the best in cultivation.

The next Rural Special will follow in about three weeks. This will treat of Small Fruits—especially of strawberries, grapes and raspberries.

The next Special will be our Wheat Number, to be published in August next.

LABOR AND CAPITAL AT THE SOUTH.

The Mississippi Valley Cotton Planters' Association is marking out a new line of action for Southern planters and their hired help, that must commend itself to the judgment and good wishes of all. At the meeting of this Association held at Vicksburg, on the 18th, a paper was read explaining the effort the society is making to discard the present system of labor whereby the crop is raised on shares, and to adopt one of wages only. The former plan has always worked to the disadvantage of the colored laborer by encouraging his too willing disposition to discount his future prospects. The plan proposed to replace the present unsatisfactory labor system is to have each county bordering on the Mississippi River choose one white and one black man from among the ablest representative men of their respective classes to attend the May meeting. The other matters for consideration will be the best cotton machinery, and, above all, the best plan by which the white man and the black can make more money planting cotton. This Association was organized in May, 1879, for the purpose of remedying the existing evils in the labor system of the South, and the members are to be commended for their good sense in adopting this truly American method of remedying existing evils by joint action between those who own and those who work the soil.

DANGER FROM IMPORTATIONS OF FOREIGN CATTLE.

Foot-and-mouth disease is again spreading in England. Stringent measures of prevention have been adopted in Norfolk, Suffolk, Essex and Middlesex, forbidding the holding of the weekly fairs or the movement of live stock without license. It is feared the present outbreak will prove the most memorable of epizootics. This disease, though not usually fatal, is highly contagious and belongs to the group of eruptive fevers of which cattle plague, small pox and pig typhoid are the more formidable and destructive members. When this malady once becomes epizootic, its march is almost irresistible. In the county of Suffolk alone in one week, 1264 head of cattle, 719 sheep and 157 pigs were reported as attacked. The number that died is not stated, but the loss to the farmer consists not so much in actual death as in great depletion of flesh and loss of milk. Every precaution consistent with the public interests should be taken by our law-makers to prevent this disease from reaching these shores. We understand that the consignment of Jersey cattle whose arrival in this port is mentioned elsewhere in this issue, show unmistakable signs of this disease, and they have been quarantined for 90 days.

AN IMPORTANT PATENT DECISION.

Experience has shown that by far the best method of conveying meat in refrigerator cars or on board ship, is one by which the meat is subjected to a continuous and equable current of cold air. The Bate Refrigerator Company of this city claim the exclusive right, under their patents, to ship meat in this way, and some time ago instituted a suit against Toffey Brothers, the extensive Jersey shippers of dressed meat, for infringement of their patents on the system. Last Wednesday, the 19th, Judge Nixon, in the United States Circuit Court of New Jersey, held that the Bate Refrigerator Company's patent gives it the exclusive right to the above process, and entered a decree against Toffey Brothers. From this decision the case may be taken on appeal to the United States Supreme Court, and in view of the vast dimensions which the transportation of meat on railroads and steamships has reached, and the large interests involved in the case of a multitude of shippers, it is not improbable that an appeal will be made, should there be any hope of success. In any case, the Bate Company should charge only a moderate royalty for the employment of its process; for any impositions which would virtually give it a monopoly of the trade, would be against the public interest, to promote which is the design of our patent laws. Should the Company's greed induce it to make any exhorbitant charges, the Courts should see to it that the public welfare is not injured by the Company's rapacity. In cases where, as in this, national interests are involved, the patent laws should be so amended that the rights covered by a patent should become public property at once on the payment to the patentee of a fair compensation for his labor, outlay and ingenuity, out of the National Treasury.

DESTRUCTION OF SEEDED WHEAT BY A FUNGUS.

One of the most extraordinary cases on record of the non-germination of Winter wheat is reported to have occurred in Europe. A field of this grain, which had been sown the previous Autumn, having manifestly failed, the owner set about plowing the land in the Spring, and to his surprise turned up ungerminated grains of wheat which were as large as horse beans—say more than half an inch long. Even after these great, swollen kernels had dried they were considerably larger than ordinary wheat, since they measured from one-third to one-half an inch in length and two or three-tenths of an inch in breadth. This abnormal grain was of a grayish-yellow color and was shaped something like an elongated pear, the thinner end or neck being sometimes a tenth of an inch long. It was easy to peel off the skin of the grain in spots. In many cases a bundle of slender roots, half or three quarters of an inch long, were attached to the thin end of the grain.

Under the microscope, it appeared that the mycelium of a fungus (that is to say the thread-like organ which is to the fungi what rootlets are to ordinary plants) had invaded the grains and consumed their gluten, starch, and other nutritive constituents; and that the presence of the great mass of mycelial threads had caused the wheat-kernels to swell to such unnatural size. There was reason to believe that the advent of dry weather in the Autumn had been unfavorable for the full development of the fungus so that its growth was arrested before it had reached maturity, otherwise the wheat kernels would have been more fully destroyed, and the mycelium itself would have shrunk away more or less completely when the fungus had reached the period of fruition and the object of its life had been fulfilled.

AGITATION NOT ENOUGH.

The adulteration of food has deservedly attracted a great deal of attention of late. Boards of Trade all over the country have been passing resolutions against the evil; associations have been formed in some of out chief cities with the special object of combatting it; the National Board of Health has offered a premium for the best draft of a law to suppress it; the Governors of several States, in their messages to the Legislatures, have urged more stringent criminal legislation to suppress it; a number of bills directed against it have been introduced into the Legislatures of some of the States, and others have already passed similar measures; Congress, too, has a couple of bills before it; but in the face of this widespread agitation the evil is increasing steadily and boldly. Oleomargarine and suine, its newly discovered congener, have been objects of special denunciation, but the manufacture and sale of both have been growing rankly.

It is to be hoped that the present agitation will not subside until some effective method has been devised for punishing not only adulterations injurious to health, but also the foisting upon the public of goods under false and deceptive names. The passing of laws, however stringent, is not enough to accomplish this end, unless precautions are taken that they shall be rigidly enforced. In this State the law requiring the seller to have packages of oleomargarine marked with the name of the concoction is virtually inoperative from negligence in enforcing it on the part of the officers whose duty it is to see that the requirement shall be carried out. The dealers in genuine butter, also, should not confine their efforts against the fraudulent sale of the spurious article to mere denunciation and spasmodic prosecutions of offenders, but in every town they should imitate the example which, we learn, is now being set by all the reputable butter dealers of Chicago, who have pledged their word not so sell a pound either of hog or bullock butter.

THE FALL OF LIMA.

Lima has fallen. The Peruvian capital has been captured by the Chilians after a fierce battle in the suburbs, and the victors can now dictate terms of peace to the vanquished. At the commencement of the triangular contest between Chili and the allied republics of Bolivia and Peru in April, 1879, the population of Chili was only about equal to that of Bolivia, while Peru's was considerably larger than that of either. The standing armies of the allies were double Chili's. The navy of Peru was powerful in contrast with that of her opponent. Nearly every civilized nation had an interest in the products of her mines and her niter and guano beds, and might be relied on to advance money liberally and to impede the success of her antagonist.

It was doubtless these considerations that induced her to support Bolivia in her breach of treaty with Chili with regard to the Atacama niter beds and the guano deposits of the Bay of Mejillones. By a treaty, ratified in '74, both republics were to share equally the guano deposits, and for 24 years the Chilians were guaranteed the liberty of exporting niter and other minerals from between the latitudes of 23 and 24 without an increase of export duty.

On the alleged failure of the Chilian contractors to comply with the terms of their bargains, the Bolivian Congress, in February 1878, laid an export duty of ten cents per 100 pounds, upon the Chilian exports of niter. The protests of Chili were disregarded, and the plucky little republic at once seized upon Antofagasta, the chief Bolivian port from which the nitrates were exported. Peru, jealous of the spirited rivalry of Chili in the fertilizer trade, sided with Bolivia, in the confident expectations of an easy victory and a monopoly of the niter and guano resources of the country. Chili, not a whit daunted, promptly declared war against this new enemy, anxious to defer hostilities until she had made better preparations for the contest.

From the outset the armies of the Chilians have been uniformly successful on land, and, with the exception of the early brilliant achievements of the Peruvian iron-clad Huascar, and a few losses from torpedoes, their fleet has been equally victorious at sea. While their army pushed vigorously northward, gaining victory after victory and forcing the defeated Bolivians to seek shameful safety in their own country, the fleet devastated the Peruvian coast and levied heavy contributions on its panic-struck inhabitants. Their brilliant successes, crowned by the triumph of January 17th, considering the poverty of their resources and the small number of their population, place the Chilians high among the military nations of the world, and give them the hegomony, or leadership, of all the South American Republics.

A few months ago an attempt was made, through the mediation of the United States, to conclude a peace between the belligerents, but as the Chilians insisted on the cession to them of the territory of Atacama, about which the dispute arose, as well as on a pecuniary compensation for the expenses of the war, the terms were deemed too severe, and were consequently rejected. Although many of the wealthiest provinces of Peru are east of the Andes, and therefore still untouched by the ravages of war, yet there is little doubt that peace will be soon forced upon the humiliated people. After the additional outlay and bloodshed the terms imposed by the victors will be hardly less severe than those formerly offered, and will probably include the cession by Peru of the Province of Tarapaca, with its great mineral and fertilizer wealth, in addition to the annexation of the part of Atacama claimed by Bolivia, together with several of the Peruvian seaports.

Such an agreement would give to Chili almost an entire monopoly of the vast nitrate resources of South America and a preponderating share of its guano wealth, and must therefore be of interest to the agriculture of the world. Foreign nations, however, may interfere in the settlement of the terms of peace, in defence of the interests of their subjects, who have made large loans to Peru on the security of her nitrate and guano deposits. There is a report in this city that a syndicate of wealthy speculators have within the last month concluded an agreement with Peru by which they obtain entire control of all her guano deposits for a term of twenty years for twenty million dollars, five millions of which have already been paid. Should the report prove correct, as Americans we may rejoice that our own citizens have superseded the English in control of this lucrative business; but as farmers we shall probably have no cause for exultation, as experience has taught us that American capitalists are as eager as the greediest foreigners to wring the greatest profit from the American farmer.

BREVITIES.

Correspondents will greatly oblige us if, by postal, they will state what effect the extremely cold weather of the past few weeks has had on fruit buds and trees.

The Board of Control of the New York Agricultural Experiment Station at their meeting held at Albany on the 19th inst., adopted a report embracing the feeling of the Board to establish the station upon a farm, and to give field experiments a higher place than laboratory work. The Board is now ready to receive proposals from those who have farms to sell or give away.

A new disease, locally called "black plague" is proving very fatal among hogs at Floyd's Neck, Long Island, near this city. None of the affected animals have hitherto recovered, all having died a few hours after the beginning of the attack. Some suppose it to be one of the several forms of disease grouped under the name "hog cholera;" while others prefer the expressive name of "black plague." It has created quite a commotion among neighboring farmers, who are taking stringent precautions to prevent it from spreading.

Hildreth & Sons, large sugar refiners of Philadelphia, last year contracted with farmers of Cumberland and Cape May Counties, New Jersey, for 250 acres of Minnesota Amber Sugarcane for refining purposes. This was in an experimental way only. The results were so favorable that they have this year contracted for 2,500 acres more, and intend to plant 2 500 acres on their own account, and have put up new machinery for the purpose of working up this immense quantity of cane. They pronounce the cane grown in New Jersey much sweeter than that grown at the West, and it can consequently be worked up more economically.

Hot house Strawberries sold here at the opening of the season, a few days ago, at $7.50 a quart wholesale; but they have since fallen to $6 wholesale and $8.50 retail. A cup containing about 20 berries sells for $2 wholesale and $2.50 retail. As sold in the stores, the berries cost about fifteen cents each. The fruit is raised chiefly in New Jersey and brought to market by special messengers, it being too precious to be trusted to the express companies. Champion and Jucunda are the principal varieties raised. The demand is greater than the supply just now, as may be inferred from the prices. Private citizens are the chief purchasers, as the best restaurants and hotels will not buy until prices have dropped to about $3 per quart. The season is late this year, the previous one having opened about the middle of December. It will last until early in May, though Florida berries are expected to come into competition about the first of March. Last year they came into market early in February, but owing to the cold weather in the South, they will be later this year.

Rumored "Corners." There is a report in this city that a "corner" in oats either has been completed or is in course of formation. Prices, however, have not advanced as they usually do when the "bull" movements which result in "corners" occur. The price of oats, however, is high now, and it may be that the upward rush may be deferred until the "shorts" are being squeezed at settling time. All that is certain is that several large operators in the Produce Exchange have lately been heavy buyers of oats. This may have started an idle rumor about the "corner"—or a correct report. From Chicago comes another rumor about a prospective "corner"—in wheat this time. Now that the needs of foreign markets, and the surplus supplies of other countries are pretty accurately estimated, it is thought that speculators have sufficient data on which to manipulate the market. There is a great deal of capital idle or drawing only a very small interest, the speculative feeling throughout the country is unusually lively, and both *may* find employment in trying to corner wheat. It seems to us, however, that there is too much of this still in the hands of producers and dealers to be controlled by any syndicate. Moreover, the outcome of last year's corner, despite the short crops in Europe, was not such as to encourage a similar movement this year in face of an increased production at home and abroad, and hence a less demand.

Literary Miscellany.

WAITING.

With waiting and wishing our courses we pave;
We wait for the port as we battle the wave;
'Tis waiting forever from cradle to grave.

Waiting for morn, so serene in its light;
Waiting for noonday, so brilliantly bright;
Waiting at eve for repose in the night.

Waiting for zephyrs in Springtime that blow;
Waiting for Summer and flowers that grow;
Waiting for Winter and swift-falling snow.

Waiting is ever the bosoms's refrain,
In moments of pleasure and moments of pain;
Waiting, though stricken again and again.

Waiting in childhood for youth's joyous time;
"I'm waiting," says Youth, "but I'll certainly climb
To the top of the ladder on reaching my prime."

In manhood awaiting the time when he may
Find rest on a calmer, a happier day,
When age shall relieve from the worrying fray.

Waiting when fortune sheds brightly her smile;
When choice are the pleasures the pathway beguile,
There always is something to wait for the while.

Waiting in poverty, anguish and grief;
Waiting for heaven to send us relief,
Telling the heart that the trial is brief.

Aye, waiting for joys that will never appear;
Waiting for voices we never shall hear;
Waiting for moments that never are near.

Waiting when sinning and worn in the strife,
With penitent throbbings the bosom is rife,
Waiting the dawn of a holier life.

Waiting at last for the spirit's release;
Waiting a rest in the dwelling of peace,
Where waiting and longing forever will cease.

INMATES OF LESTER HALL.

NOTICE.

[The installment of the story which belonged in the "Corn Number" but was crowded out to admit of practical matter, was also omitted in the two succeeding issues, making an omission of three chapters; we now insert them. "Mistakes will happen in the best regulated families;" this is the consolation we give ourselves, hoping for equal consideration from our patrons. R. C.

CHAPTER XXVII.

Mr. Edgar's house was tolerably well filled. There were eight pretty bridesmaids, who were to follow Cecil up the aisle of the pretty village church, in wonderful costumes of cream and blue, with hats to match—the attendant groomsmen, and the usual complement of aunts, and uncles, and cousins, who were anxious to see the bride and the presents, and how Ernest would comport himself under these trying circumstances.

The presents, which were numerous and costly were arranged for general view in the dining-room; and the guests went into raptures over the suite of diamonds and the superb Indian shawl, which were the gifts of the prospective father and mother-in-law. Mr. Daton, too, had loaded his niece with gifts, and altogether the display was a very costly one; while as for the trousseau, it was perfect.

Dresses from Worth, bonnets from Elisé, boots from Pinet's, and gloves from Jouvin, were among its beauties; for greatly to Mattie's surprise, Cecil had gone into the business of her trousseau with feverish energy after cool deliberation.

It was only when the wedding-day drew near that her spirits seemed to get so uncertain; although she had altered in appearance, and the beautiful color which had made her so lovely had entirely disappeared, leaving her white as marble.

Ernest was to arrive on the evening before in time for dinner; and when Mattie received him in the hall, she whispered to him that Cecil was in the boudoir alone, and that there was still ten minutes before the dressing-bell; Ernest thanked her smiling to himself as he went upstairs. At the head of the stairs he met a dainty little figure already dressed for dinner, and looking up he saw a sweet young face, which blushed under his admiring gaze.

"An unexpected pleasure, Miss Lottie," he said, gaily, as he held out his hand. "I did not know you were here."

"Did you not?" she answered, smiling: for pretty Lottie Tyrrell had battled with her feelings for Ernest, and was able to give him a greeting frank and friendly as his own. "Did not Cecil tell you?—we are great friends, and she wishes me to call her Cecil—that I was to be one of her bridesmaids?"

"No, she did not tell me, but I am delighted to hear it. Is Cecil in Mrs. Edgar's boudoir?"

"I think so, some one said that she was," said Miss Tyrrel, as she went on her way, and Ernest went on his, entering the boudoir where Cecil awaited him, with his face all aglow with love and eagerness.

"Well, my darling," he said, as he took her in his arms, and turned her face to the light; then he started back in alarm. "Cecil, what have you been doing to yourself?"

She smiled a strange, forced smile.

"How? In what way, Ernest?" she said.

"You look so white and ill! Dearest, you have not been ill? How dared they keep it from me?" he said, passionately. "What have they been doing to you here?"

"My dear, Ernest," Cecil said, laughingly, "try and be reasonable, even if to-morrow will be your wedding-day. I have not been ill—I never was better—so they kept nothing from you—and they have been doing nothing but petting and spoiling me, and sending us so many presents, that we shall be able to stock a jeweler's shop and a fancy repository."

"But, Cecil, how pale you are!"

"Am I? well, am I not always rather livid?" she said, gaily. "Ah! there is the dressing-bell, and the bride elect must make a favorable impression to-night, you know; so *au revoir!*"

She loosed his grasp on her hands, and fluttered away out of the room; and when he saw her again, it was in the drawing-room, surrounded by her friends, and there was no chance of private conversation.

Cecil was feverishly gay all that evening—so gay, that more than one compliment was paid her on her high spirits; and Mattie's eyes followed her anxiously as she moved about the ball-room—very pale, but with feverishly bright eyes and bright smiles, which to Mattie's tender scrutiny seemed forced; she grew so uneasy at last, that she went over to Ernest, who was standing a little apart from the dancers.

"I am afraid Cecil is overdoing it," she said, in a low voice. "Take her into the conservatory and make her rest a little, or she will be quite overcome."

And Ernest obeyed her request so well and promptly, that in a few moments Cecil found herself seated in a cushioned armchair in the conservatory, with Ernest alternately scolding and caressing her.

"I wish I had a right to order, and that you were bound to obey," he said, smiling.

"What would you do?" said Cecil, languidly.

"I would order you off to bed," he said, "A very disinterested prescription, is it not?"

"I should not obey you—I don't want to go—I want to make the most of my freedom," said Cecil, with a dreary laugh. "Ernest, are you in a great hurry to put yourself in bondage?"

"To such a gaoler—yes," he answered, smiling tenderly. "Cecil do you know that I am very anxious about you? You used to be a substantial little woman; now I should not be surprised if you were to melt away before my eyes. Just look at your hand."

"Almost like a claw," she said, laughing. "Never mind, Ernest, by-and-by I shall astonish you by recovering quickly. And now, like a good fellow, go and get me some lemonade or something cold to drink—I am parched."

When Ernest returned with the lemonade, Cecil had disappeared; and in a few moments Mattie told him that she was very tired—had gone to her own room, begging that she should not be disturbed again.

And while the dancing went on down stairs, and Ernest was thinking of the great happiness in store for him on the morrow, Cecil Lester—the happy bride-elect, the envied, admired beauty—lay prone upon the floor of her dressing-room, burying her head in her hands, and moaning in an agony too deep for tears.

How that night passed she never knew; the girl's brain seemed on fire. She threw open the window; it was a wet night and the rain poured down upon her bare head and uncovered shoulders, as she leaned out, unheeded. Her head burned, her temples throbbed; fears, recollections, buried hopes, surged round her like the waves of a troubled sea. She tried to grow calmer; she at last retired, but she had no power to arrest her thoughts. The remembrance of her last interview with Lawrence Carewe continually came before her, and the bitter thought of the terrible wrong she was about to commit haunted her. But it was too late to draw back now—she could not, she dare not do it! Once or twice she started up with the intention of seeking her uncle, or Mattie, or Ernest, and praying them to put off the marriage; but she sank back weakly on her pillows, faint and terrified at the very thought.

The dawn broke, the sunshine stole into the room, but Cecil's aching eyes were wide open; sounds of the household moving about with unaccustomed activity and bustle reached her faintly. By-and-by her maid came in with some tea, from which Cecil turned in loathing, and then Mattie entered, on her way down to breakfast, and stooped over her, kissing her fondly, and whispering "I hope you will be very happy, my Cecil," and told her, smiling, that she must not appear until she came down to go to the church; and went away with an ache at her heart, for Cecil had answered nothing, but her eyes had followed Mattie with an unutterable wretchedness, which it was fortunate or unfortunate Mrs. Edgar did not see.

CHAPTER XXVIII.

"May I come in, Cecil? You said I might put on your wreath, you know," said Lottie Tyrrell's voice at Cecil's door a few hours later; and Lisette opened the door, admitting the young lady with a rather dissatisfied countenance, as if she resented this encroachment on her privileges, took the wreath of orange-blossoms from its box, and handed the lace veil to Miss Tyrrell.

Cecil was seated before her dressing-table, dressed in the rich white satin and Brussels lace that formed her bridal-robes, and she did not move or look round when Lottie fluttered in, looking "as pretty as a picture," and very like one in her quaintly-made dainty costume. All through the dressing operations she had remained silent and passive as now, allowing the maid to have her will in all things—neither suggesting, nor taking any heed of the Frenchwoman's rapturous exclamations of admiration. Her eyes were fixed on the glass before her, but she saw nothing of the beautiful face reflected there; and once or twice Lisette had been startled by the ghastly pallor of her young mistress, and the heavy inertness of all her movements. Lottie also noticed her extreme pallor, and glanced at the maid with some alarm; then, having consoled herself by the reflection that brides are generally pale, Lottie took the veil, and began arranging it on the glossy braids of hair over which Lisette had expended so much time and pains. The beautiful filmy material fell in soft, fleecy folds over the motionless form, and with a delighted exclamation, Lisette took up the wreath and settled it into its place.

"Oh, how lovely!" she said, rapturously. "Cecil, how beautiful you are!"

Cecil did not speak for a moment; then she rose unsteadily, lifting her hand with a troubled gesture to her brow.

"How heavy it is!" she said, and her voice had a strange, hollow sound. "Lisette, open the window!" she added sharply; "I am stifled here!"

Lisette rushed to the window, too much startled to open it immediately; and when her trembling fingers were fumbling with the fastener, Cecil cried again, in the same hoarse, strained voice:

"Quick! give me air! Do you not see that I am choking?"

Her voice failed; her hand, which had been clutching convulsively at her throat, fell heavily on her side; she made a step or two forward towards the window; then stopped, swaying to and fro.

"Lisette! Lisette!" said Lottie, in terror, "she is ill! Oh, come, come!"

Lisette rushed to her mistress's side, and both girls tried to support Cecil as she sank back, her beautiful flower-crowned head falling inert and heavy against Lottie's shoulder; but their strength was not equal to the heavy weight of a person in a dead faint, and they were obliged to lay her on the floor, where she lay in all her bridal finery like one dead.

"Oh, Lisette, what shall we do?" said Lottie Tyrrell, bursting into tears. "How dreadful she looks! Do you think—do you think—do you think she is dead?"

"Dead!" echoed Lisette, contemptuously, as she caught up a bottle of salts and held it up to Cecil's nostrils; "of course not! She has fainted, mademoiselle; I have seen mademoiselle faint like this before once or twice. Rub her hands, Miss Tyrrell. Give me the cologne."

But all their efforts were vain; water was dashed on her face, to the destruction of the soft lace about her throat; her forehead was bathed with cologne, strong ammonia was held to her nostrils without effect; and, thoroughly startled and alarmed, Lisette rushed off for Mrs. Edgar, who had fortunately not started for church, and who came hurrying along the corridors, white and trembling in her pretty velvet dress, and who fell on her knees beside her sister's still form with a little cry of despair.

"Oh, Lottie, this is terrible!" she sobbed. "Run and find Edgar and tell him to send a groom for Dr. Collins at once. I am afraid she is very ill."

Lottie flew off, and in a very few moments the whole house was in confusion; most of the guests had already started for church, but those who remained were full of all kinds of suggestions and advice; the maids were running about in equal activity and confusion, and when Edgar had sent one mounted servant for the doctor, and another to Mr. Daton, who was already at the church, he went upstairs to his wife.

Cecil was still perfectly unconcious on the floor, but with Edgar's assistance she was lifted on to the bed, where she lay like a drooping flower, broken at the stalk, without the slightest gleam of consciousness on her marble face. With very gentle hands Lisette removed her veil and wreath. It was but too evident that there would be no wedding that day.

As quickly as it was possible Dr. Collins came galloping up the avenue, riding the horse of the man who had been sent for him; and almost simultaneously a carriage dashed up, out of which sprang Mr. Daton and the bridegroom-elect, both of whom followed the doctor into the room where Cecil lay.

CHAPTER XXIX.

CECIL'S TRIAL.

The gray evening shadows had come, and a mournful silence spread over the house which that morning had been so full of pleasant confusion and excitement. The greater number of the guests had departed, and the very few old friends who remained were gathered in the drawing-room, talking with grave faces and low voices of the untoward event of the morning. Outside Cecil's door, crouching on a low window-seat, sat Lottie Tyrrell, weeping and watching and within a mournful group were gathered round the bed on which Cecil still lay, white and motionless.

They had removed the heavy white satin robe, and replaced it by a wrapper of pale blue flannel; one hand lay by her side; Ernest, seated at the bedside, looking the picture of despair, held the other, and now and again he stooped and pressed his lips to it; Dr. Collins, grave and absorbed, stood at the foot of the bed; and Mattie leaned over her sister, watching for the first sign of animation on the lovely marble face. The room was very still and silent, and had been so for some time, when Dr. Collins, with a little sigh of relief, said, softly:

"She is coming to herself. Stand back a little, my friend, she must not see you."

Ernest drew back slightly as the heavy eyelids quivered a little, and then were lifted slowly from the large eyes, which looked straight up vacantly at the ceiling for a moment; then they fell upon Mattie's anxious face.

"What is it?" she said, faintly. "Where am I?"

"Here at home, dear," whispered Mattie, with a break in her voice.

"With you, Mattie?" said Cecil's white lips.

"With me, darling."

"I am not married?" with a quick look of alarm and terror.

"No, dearest!"

And with a faint, sobbing gasp, Cecil fell back on her pillows again, white and still.

"You had better leave us, Mr. Eleston," said Dr. Collins, quietly. "When Miss Lester comes to herself she must be kept perfectly quiet, or I cannot answer for the consequences."

Ernest rose immediately and left the room, his face pale, his lips quivering. As he paused outside the door to regain some semblance of composure, a little figure sprang up from the window-seat, and put a small trembling hand on his arm.

"Is she better?" said Lottie, tremulously.

"She has spoken," he answered hoarsely.

And looking into his white, suffering face, Lottie's eyes filled as she said, softly:

"Oh, I am so sorry for you!"

He looked down at her sadly, and took the little hands in his as he stood silent, his pale face working with pain; then he moved away taking Lottie with him.

"Dear Ernest," she said, gently, "do not grieve so. She will be better soon and all will be well."

In a few minutes he raised his head.

"I feel as if I had lost her," he said, brokenly. "Thank you, little friend. Forgive me for having distressed you."

He stooped down again and touched the little hand lightly with his lips, and went away, while Lottie ran off to her own room, excited and trembling.

All that night Cecil Lester was very ill; she recovered from one long fainting-fit, only to fall into another, and the next morning her weakness and debility were so extreme, that Dr. Collins peremptorily forbade any visitors in the sick-room, except Mattie and Lisette.

"I have been questioning Miss Lester's maid," he said to Mattie, when they were alone, "and I am not at all surprised at her mistress's illness. The state of excitement and sleeplessness in which she has been for days—nay, weeks past—is more than sufficient to account for it. Extreme quiet is the best medicine for her now."

Cecil made no opposition; indeed, had she wished to do so, she was too weak. She lay still and passive, hardly ever speaking, and taking nourishment from her sister's hand without a word. She seemed to have lost all interest in outward things; but once, when Lisette made some lamentation about the magnificent wedding which had been spoilt, and the beautiful wedding-dress from Worth, which was damaged by the water which had been sprinkled over it, a quick shudder ran through Cecil, and she turned hastily to her sister.

"I am too ill to be married, Mattie," she said, petulantly, "much too ill."

"Yes, yes, my darling," said Mattie, reassuringly, although her heart ached for Ernest, who was anxiously expecting a summons to Cecil.

On the third day Cecil was able to be lifted from her bed to the sofa in her dressing-room, and on the following day Dr. Collins gave permission to receive visitors—to Ernest's great delight and Cecil's chagrin.

"I wish he had left me in peace," she said, pettishly. "I am not strong enough. Mattie, don't leave me alone with Ernest."

Mattie made no answer for a minute or two, but fidgeted uneasily about the room for a moment; then she came to her sister's side and knelt down beside her.

"Cecil," she said, gently, "are you behaving quite fairly towards Ernest? Dear, if you have anything to say to him, had you not better lose no time?"

Cecil's lip quivered.

"Mattie—if I could spare him," she said, brokenly. "Oh, sister, how hard it is that others should suffer for our sins!"

"It is hard, my darling," said Mattie, tremulously, and although no other word passed between them, Mattie knew that her sister would never be Ernest's wife, and her eyes filled as she saw the look of delight which flashed into his face when she told him Cecil could see him.

"He is very young; that is his only chance of forgetting," said Mattie to herself, softly, when she was alone. "But as it is, it will go very hard with him."

(Concluded from page 58.)

CHAPTER XXXV.

Her appearance was followed almost immediately by that of Jenkins with the tea-tray, and Cecil went over to the little gipsy-table, and began to pour out tea in silence. The red gleam of the fire playing over the room fell upon her as she sat there in her somber black dress, on the beautiful weary face, and on the white thin hands, which were moving among the dainty china and glittering tea apparatus. The pretty room itself looked very comfortable and homelike; Mattie, in her low chair by the fire, looking so bright and pretty, was glancing occasionally at the clock to see how soon she might expect Edgar, who had gone to the city with Mr. Daton. Ernest was standing by Cecil, taking his cup of tea from her hand, when there was a sound of steps on the stairs, and Cecil half rose, trembling, with the red, hectic flush on each cheek.

"There is some one with Uncle Henry," she said faintly, and Ernest glanced at her, surprised at her agitation and manner.

"It is Edgar, dear," said Mattie, hastily. "You know they were to return together."

But Cecil did not answer; she stood erect by the little gipsy-table, leaning one hand upon it, the other pressed against her heart, while her breath came in quick, short gasps from her pallid parted lips. The footsteps came nearer; there was a pause, and the sound of talking on the landing without, then silence, and Cecil turned to the tea-table again.

"I beg your pardon," she said, faintly, "I am so absurdly nervous!"

She lifted a cup of tea in her weak hands to give to him, but at that moment the door opened, and Mr. Daton came in quietly, but his ruddy face was looking pale and agitated as he went forward to Cecil's side.

"Cecil," he said, hurriedly; but before he could continue, Cecil screamed out as if she had been shot, rushed forward, and the next moment she was in Lawrence Carewe's arms, clinging to him and uttering inarticulate sounds of joy; and while she was looking up into the beloved face, a blinding mist came before her eyes; the white lids drooped; the dainty head fell upon his shoulder—Cecil had borne her sorrow, but she had not strength to bear her joy—she had fainted away!

CHAPTER XXXVI.

NOT A DREAM.

Cecil's swoon was not of a long duration: in a very few minutes the white lids were lifted from the beautiful eyes, and she looked up questioningly at Mattie as she bent over her; then her eyes

went to her uncle's face, as he stood at the foot of her sofa.

"Forgive me," she said, faintly, "Uncle Henry, I was very foolish; but I thought—oh! it was such a happy dream! Mattie," with a faint, slow smile, "why did you waken me?"

"It was no dream, my child," said her uncle, tremulously.

And Cecil started up from the pillows, and found herself supported in Lawrence Carewe's arms.

"It was no dream, my darling," he whispered, tenderly.

Cecil put her arm round his neck like a tired child, and wept her heart out on his breast.

When she lifted her head at last she met the grave gray eyes she had never thought to see again fixed with tender anxiety upon her. She felt his arms around her, and there came a wild wish into her heart that moment—that she might die thus in his arms, with his lips pressed to hers his face the last sight on which her eyes should rest.

"It is no dream," she said at last, in a low, hushed voice. "You have come back to me, Lawrence; it is you—yourself!"

"Even so, my darling," he answered, gently. "It is no dream. Oh, Cecil," he went on, brokenly, "such a welcome almost breaks me down! Are you really so glad?"

"Glad," she repeated. "Lawrence, you know—"

She leaned her head upon his arm, with a long, blissful sigh, and they were silent—silent in such happiness as falls but seldom to our lot here; and surely when it comes it shadows forth the perfect joy of that other world of which we know so little, but from which we hope so much.

"Lawrence," she said, "are you sure, are you quite sure, that you have forgiven me? You have not come back to me from pity—they have not brought you here by telling you that I was dying for your love, dying for you!" The beautiful face was rosy with shame. "Oh, do not interrupt me—let me tell you how I have suffered, how I have suffered—as if I could tell you—as if I could tell you!"

"My darling, forget it," he answered, brokenly. "Forget all but that I love you—that I have never ceased to love you—that I will never leave you again, Cecil—if you will allow me to stay——"

"If I will let you stay! Oh, Lawrence, why did you ever go? Do you remember—ah, if indeed you love me a little still, you will not have forgotten last Christmas eve. I was broken-hearted—I could not bear your coldness and indifference; for I loved you—I loved you even when I sent you away from me with such bitter words. Oh, how I hated myself!"

"My darling—cease."

"No, I must tell you. I loved you even then, but I thought—how could I be so blind!—that it was you who had led poor Rex into sin; and I wanted to revenge my brother's death—but, even then, though I hated myself for loving you, I could not conquer that love; I thought I should be able to forget, but I could not—I could not. Then Mattie's letter came, telling me of the great mistake I had made, and you may guess what my life was then. Well, I wrote to you, and you forgave me—but I felt from the tone of your reply that you loved me no longer."

"If you knew—if you knew what it cost me to write to you so coldly, Cecil! I was too cruel, Cecil, and yet I dared not be otherwise; the temptation was so great. You remember"—smiling—"how I fled from it the next day, Christmas-day though it was?"

"When I thought you had gone away because you disliked the sight of me," she said, simply. "Oh, Lawrence, I never thought you could leave me like that! I was sure you would come back to me! Oh, how I waited and watched all those weeks! Although I could not break off my engagement, because you had told me to 'be pitiful,' But, at last, as my wedding-day drew near, and you had never come nor written, I was almost desperate; I never had a happy moment, except when I used to dream that we were together—you and I. Somehow, I never dreamed of you as angry with me. You always loved me, and your eyes looked at me as they look now; and I was so happy until I awoke—and oh! the awakening! To sleep, and dream that you loved me!—to awake, and find myself alone and desolate!"

'Cecil, Cecil, cease! It is over—we shall be happy now."

"Does it hurt you?" she said, gently. "Lawrence, did you think very badly of me that night? You said—you said you despised——"

"Do you care to know how much I love you?" he said, in a moment. "Ah! Cecil, I could not put it into words. When I was alone, and, as I thought, dying in the forest, my last thought was for you—my last effort was to try and find a photograph of you, which had never left me, and which I have still. If you had known that I treasured this above everything else I possessed, would you have believed, I wonder, those bitter words for which I cannot forgive myself?"

As he spoke he took from his coat the pocket-book which he had with him in the East, and from it extracted the photograph and the faded, blood-stained silken ribbon.

"Do you recognize them? The photo I bought; the ribbon you wore at your neck that night when I—I was so presumptuous," he concluded, rather at a loss, and unwilling to wound her.

"Oh, Lawrence!" and her lips quivered as her eyes met his, "did you love me so much, even then?"

He smiled as a man smiles in some sweet, happy thought, and Cecil went on, with passionate self-reproach:

"And you did not cease to love me when you knew how unworthy I was! When I had wronged you so deeply that no other love but yours would have outlived such a wrong! Oh! my dearest, how wicked you make me feel—how small my love seems beside yours! Lawrence, if I had known you as I know you now—if I had not been the veriest madwoman in my thirst for revenge—I must have known that you could not—you could not," she added, passionately and vehemently, "have done that which I thought you had done. Lawrence, how can you forgive me for all I have made you suffer?"

"Far easier than I can forgive myself for being so harsh, so cruel, so unjust. My darling, my own Cecil, it was very hard to see you at my feet—to hear your voice whisper 'Forgive,' and not to take you in my arms and pour out all my mad love for you."

"And what has that love brought you?" she whispered, softly—"exile, suffering, sorrow!"

"No, you shall not say so, Cecil," he answered, eagerly. "It was my own fatal pride which exiled me, not my love for you. As for the suffering, that is over now. I am well and strong again, and we need not dwell upon those weary months. Tell me rather of yourself. They tell me you are ill, and indeed I think you need looking after. I cannot have such a little white face as this, Cecil," taking it into his two hands and regarding it with loving, wistful eyes. "You must get well and strong for my sake, my darling. I could not"—he turns from her abruptly—"I could not lose you now."

"I could not leave you, Lawrence," she whispers, clinging to him fondly. "I could not die now, although I have been so happy to think I was ill; but there is a new life in me now, Lawrence—you are my life. How could I live if you were taken from me?"

How long these two foolish young people would have continued in a similar strain I do not know; but as a rule lovers are rather heedless of the lapse of time when they are together, and in the joy of such a re-union. Lawrence Carewe and Cecil Lester may well be forgiven for not hearing the dressing-gong, and for being entirely absorbed in each other, and quite above such mundane matters as dinner. But by-and-by Mattie came in, hurried Cecil off to change her dress, and then putting her two hands in her embryo brother's said heartily:

"There is no one to whom we could so willingly entrust her. I think if you had not returned Dr. Carewe, we should have lost her; but she looks a new creature, to-night, already."

And a new creature indeed Cecil looked, as she came down to dinner in her white robes, with a red rose in her hair, all sign of mourning laid aside; and though her cheek is still pale and her hand thinner than her lover likes to see them, but he is too clever in his profession to have any doubt as to Cecil's recovery, so that he is able to give full rein to his happiness, and is more brilliant and expansive than any one present has ever seen him.

* * * * * * * * * * *

The season that year, was an exceptionally gay one, and there were several lions eagerly sought after in society—an Eastern prince, the fame of whose jewels had become a byword; two belles whose triumphs recalled Cecil Lester's first season, an explorer who had been to the Arctic Ocean, and had penetrated farther north than any of his predecessors (although even he had failed to attain the great *desideratum*); and a foreign *prima donna* about whom every one raved. But numerous as the calls on the public attention were, Dr. and Mrs. Carewe had their fair share; and the man who had done such distinguished service in the Turko-Russian war, who had been laid at death's door by banditti in the wild hill-country of the Carpathians, who had fought so desperately for his life in the little convent on the borders of the forest, could not fail to be a remarkable personage; and on the fair Spring morning when he and Cecil were made man and wife, the church was crowded to excess, not only by the rich and titled, but by those poor people whose welfare Lawrence had made his special care, and whom he had never neglected even when his practice had become so vast and his name famous; and many a murmured blessing fell upon Cecil's ear as she left the church on her husband's arm, and her heart throbbed and her cheek glowed at the thought of how he was loved and reverenced.

The wedding tour was but a short one, for Dr. Carewe had already been absent too long, and he and his beautiful wife returned when the gay season was at its hight, to be feted and caressed, and to be present at the marriage of Ernest Eleston and pretty Lottie Tyrrell, which gave Cecil unqualified delight.

But pleasant as it may have been to be the lions of the evening, pleasanter far were the quiet hours Cecil and her husband passed together in the home, which had been made so beautiful to receive its fair young mistress; and the brightest moment in Lawrence Carewe's life is that when, his day's work over, the carriage turns homewards, and he sees his wife's face, as she stands waiting and watching for him at the window, growing bright and radiant with the joy of his return.

Mr. Daton is a very frequent and welcome guest in that house; and people say that Lester Hall has been restored to all its former beauty, and that the estate has been re-purchased by the wealthy merchant for Cecil's eldest boy, Henry Lester Carewe, who is a wonderful favorite with his great-uncle. It is said, too, that Dr. Carewe has resisted all entreaties from Mr. Daton to give up his practice and reside at Lester Hall, and Cecil agrees with his decision. Self-pleasing has never formed a great part of his existence, and he feels that he can be more useful in his day and generation—can have a wider field of influence for the good of his fellow creatures in that great city, where joy and sorrow, riches and poverty, jostle each other check by jowl; and when he sees faces brighten at this approach—when he sees pain alleviated and distress lessened by his presence—he is amply rewarded for any sacrifice he has made; although every year their holiday is spent at Lester Hall, and Cecil is very happy showing her old home to her husband, and going over with him the favorite haunts of her girlhood. Side by side too, they stand at Reginald Lester's grave, where "after life's fitful fever he sleeps well;" and they talk in hushed, tender tones of his last hours, and hope that he, and the man through whom, in a great measure he sinned, are at peace; for there is no limit to the mercy of Heaven, and for the greatest of sinners there is love and pity there, "in that beautiful, veiled world."

"Where we may, I trust, meet them both some day, Cecil love," says her husband, tenderly, as they stand in the light of the setting sun, and Cecil draws nearer to his side, and leans her head against him—a little saddened, perhaps, at the recollection of her brother, but perfectly happy and at peace in the love of her husband and children.

So we will leave them; and in the west the setting sun sheds a golden glory over them—a promise, as it were, of that beautiful world of which Lawrence speaks.

THE END.

THE EYE-OPENER.

In all large towns there is a class of sharpers ever on the outlook for country folks upon whom to prey. The "confidence game" is the means by which they usually try to "take in" the stranger and "do for him." A specimen of one of the ways in which this is worked came prominently to public notice during the week, because the "operators" were for once caught and punished. Miguel L. Thimion was about to start for Galveston, Texas, and while standing on the pier near the steamer shortly before she was to start, an elderly man of good address and respectable appearance entered into conversation with him, in course of which he said that he, too, was going by the same vessel. While they were talking, a younger man, looking like the driver of an express wagon, hurried up to the elderly man and said:—"Your baggage is aboard, sir. I'd like to have my money." The elderly man seemed much annoyed, saying that all of his ready money was in his trunks. He took out what purported to be a $1,000 bond and a check for $550 upon the Butchers' and Drovers' National Bank. He asked Mr. Thimion to lend him $50, offering the check as security until he could go to the store of a friend and get some money. Mr. Thimion gave him the money and he hurried away, followed by the expressman. Of course, he failed to return, and the check turned out to be worthless. The duped Thimion deferred his trip, contrary to the swindler's expectations, and from his description the detectives arrested two well-known "confidence men," Edward Lillie, alias Morgan, the venerable old fraud, and "Red-handed Smith," the false expressman. They got 2½ years' imprisonment each. In nine cases out of ten, however, such rascals escape, because the victim has to leave town, or for other reasons. The above is only one of 1,000 ways of "scraping acquaintances" and "plucking pigeons" practiced by these fellows, the most common of which will be noticed from time to time as specimens come up in our police courts.

The sharpers against whom the Post Office is waging war are now operating mainly through the Express Companies, so that our friends must still keep watchfully on their guard against their allurements. Here are the names of a few more of the slippery tribe.—Byron H. Robb, Cincinnati, O., alias The American and European Secret Service Co., alias The American Detective Newspaper, alias The Co-operative Commercial Co., alias The Commercial Reporter Newspaper, alias The Electro-Magnetic Brush Co., alias The Incina Co., alias The Monitor Lamp Co., alias The Monitor Publishing Co., alias The Singapore Tobacco Co, Peter W. Williams, Chicago, alias E. G. Napa & Co., Victor Napa & Co., alias The Paris Importing House, alias The Paris Book and Novelty Co., alias John Catlin & Co. Kentucky State Lottery, Covington and Louisville, Ky., and New York. R. C. Wintersmith, Louisville, Ky. J. C. Wilson, Ladonia, Texas, alias A. J. C. Wilson. Clarence W. Miller, Glens Falls, N. Y. Murray, France & Co., Louisville, Ky. W J. Hill, alias C. W. Whitney, Elkhart, Ind., Augusta, Mich., and Battle Creek, Mich. J. C. Henry & Co., alias Clarence W. Miller, Glens Falls, N. Y., and Chester, Pa. Great Western Distribution Co., alias Matthews & Co., alias Kunnecke & Co., Cheyenne, Wy. Ter. E Gustavus & Co., alias F. E. G. Lindsay, Holston, Va. Rev. James Murray, D. D., Haddonfield, N. J., alias The Livingstone University of America. H. H. Hull, alias United State Agency, Mt. Winans, Md. Chas. E. Hunt, alias Nettie W., Philadelphia, Pa. C. Wade, Elkhart, Ind., Augusta and Battle Creek, Mich., alias C. H. Walker. Henry G. Watterson, alias F. G. Watterson, Calais, Me. Giovanni Patront, Philadelphia, Pa., and Camden, N. J. J. M. Pattee, Manager, Cheyenne, Wy. Ter. Jorda & Puig, New Orleans, La. John P. Joyce, Covington, Ky. A. Henry, alias Michael & Co., Atlanta, Ga. D. A. Kratzer, Burlington, Ia. C. W. Whitney & Co., Glens Falls, N. Y., and Chester, Pa. Philadelphia Stamp Co., Philadelphia, Pa., and Camden, N. J. John W. Magee, Laramie City, Wy. Ter. Wilcox & Co., Windsor, O. George R. Smith, Covington, Ky. Jace Marks, La Crosse, Wis. How true it is that no part of the country is without rascals, though, it is true, this sort of rascality seems to flourish with special rankness in large cities, and a few small hot-beds here and there in rural regions. By the way, a Dr. Brown, who styles himself a "veterinarian," is fleecing the villagers out West thusly:—Like many another charlatan, he enters a town in a painted wagon, makes arrangements for a course of lectures on veterinary subjects, collects the tuition fees, and "clears out." Michigan folks have been his latest victims of whom we have heard, though there may be later ones. In Decatur he gathered up $70; in Dowagiac, $80; Pokagon, $100; Niles, $90, and considerable in other places. The fellow may change his name in other places, and give a new coat of paint to his wagon—he deserves a coat of tar himself, and perchance may get it.

NEW PUBLICATIONS.

Sunlight and Shadow: or, Gleanings from My Life Work. By JOHN B GOUGH. Hartford, Conn.: A. D. Worthington & Co., publishers. Price $3.25, $4.00 and $5.00.

"Sunlight and Shadow" is a remarkable book by a remarkable man, who through all these years of varied experience has been a keen and careful observer of men and things. The recollections of his own bitter experience have made him ever ready to lend a helping hand to others, and the very nature of his life-work has brought him into close contact with poverty, crime, destitution and vice. His ready sympathy has gained for him access to the hearts of the most degraded, and he has listened to life-histories of the most thrilling nature, and witnessed scenes that testified anew to the truth of the adage, "Fact is stranger than fiction."

This book is not altogether a record of dark experiences. It has a bright and sunny side. Mr. Gough's stories and descriptions of the humorous side of life, as he has seen and experienced it, portray many amusing scenes. His remarkable faculty for seeing the ludicrous side of everything, and his talent for humorous description, are well known. No one can tell more amusing things and in a more irresistably humorous way than John B. Gough. The comedies from life, absurd blunders, laughable mistakes, comical incidents, embarrassing situations, mostly drawn from his own experience on the platform and among the people, as told in "Sunlight and Shadow," will provoke the mirth of the most serious.

He also gives the reader his personal opinions upon many of the most important questions of the day, coupling the sharpest censure of everything weak and wicked, with a hearty and generous praise of everything good and true.

The paper, printing, binding and illustrations are excellent. The steel-plate portrait of Mr. Gough will be highly prized by tens of thousands in all sections of our country who have listened to the eloquence and who admire the genius of this famous man.

My Wayward Pardner. By Josiah Allen's Wife, Hartford, Conn.: Published by American Publishing Company.

To those familiar with this author's writings, the nature of this book will suggest itself. To others we recommend a perusal if the taste runs in the humorous line.

The theme, to use the author's own words is "Winnen and Josiah," Josiah being the wayward pardner. The subjects are "Josiah Allen Goes Astray, Kitty Smith and Caleb Cobb, Josiah Goes Into Business, Moralism and Episodin', Josiah Undertakes more Business, A Visit from Miss Rickerson, Cassandra's Tea Party, The Lords of Creation, A Exertion for Pleasure, A Visit to the Children, Tirzah Ann to a Watering Place, Miss Bobbett Lets the Cat Out, A Serenadin' Episode, Etc., Ju'ia Wart and Sufferin' Women, A Crisis with Ke up.

In point of amusement from beginning to end the object is gained. The characters are clearly drawn and treated of with an easy flow of language.

Drifting Round the World. A Boy's Adventures by Sea and Land By Capt. C. W. Hall, Boston: Lee and Shephard, Publishers.

Nothing better can be said for this interesting book, than to quote a portion of the preface. "So many books have been written upon the usual routes of European and Asiatic travel that it is difficult now to excite the interest of young readers without going out of the beaten track. The adventures related in this volume are novel and picturesque, and they follow a comparatively new course. The hero, Rob Randall, ships on board the "Racer" a Cape Ann schooner, bound to the coast of Greenland for halibut. He visits Iceland, and beholds its grand and desolate scenery, its famous geysers and its simple inhabitants. Many other countries are passed through, and in the description of the long journey, devious and broken by various accidents, the reader is introduced to new and striking scenery, and to people little known and seldom described in modern literature. The book has nearly two hundred illustrations, which place the scenes vividly before the youthful reader. The author has aimed to supply knowledge, as well as to minister to the pleasures of the imagination."

The Anthem Harp.—By W. O. PERKINS. Published by O. Ditson & Co. Boston, Mass.

The Anthem Harp is a book of ordinary church music book size, and seems to contain an excellent variety of "Opening Pieces," or Anthems, for the use of common choirs. It is designed to be a successor to "Perkins' Anthem Book," by the same author. As the former book was very popular, we may confidently predict good success for a new one on the same plan.

One is pleased to see old "Jerusalem" revived from its long sleep, and provided with first-rate new music. "Savior, breathe an evening blessing," and a few other choice hymns, are preserved, but most of the words, as they always must be, are from the Scriptures.

Catalogue of Books. Published by Houghton, Mifflin & Co., Boston, Mass.

This catalogue contains much valuable information and is alphabetically arranged by author's names, and by titles of books anonymously. The index gives the names of both authors and books and classifies nearly all works. It is sent free upon application as above.

Wild Roses of Cape Ann and other Poems. Boston, Houghton, Mifflin & Co.

The very pretty collection of poems, mentioned above, is from the pen of the well-known authoress, Lucy Larcom. The poems, with the exception of the "Flowers of Cape Ann," are all brief, and the topics treated are of wide variety. It is a book which will be penned with pleasure, and its appearance at the holiday season was opportune.

For Women.

CONDUCTED BY MISS RAY CLARK.

A QUAKER SERMON.

It was the first-day meeting,
And the group of gathered folk
Sat touched by the hush of a voiceless spell;
No sound the silence broke,

Until in her place on the woman's side,
With a sweet and tender face
That bore the pure and peaceful sign
Of the inward spirit's grace,

A white-haired woman rose with the word
That was laid on her heart to say—
The word that the gathered people
Were awaiting that sunny day.

"Sister Tabitha all to pieces
My best china teapot broke;
But I kept my soul in patience
Nor a word of anger spoke."

That was all: and down with the sunshine,
The silence again fell sweet,
Till the elder people gave the sign
That the service was complete.

Do you say that the hour was wasted!
That the sermon was trivial, vain,
Textless, devoid of logic,
Unthrilled by one eloquent strain?

Not so; for that gospel is sweetest
That is won through life's fret and its pain,
That softens the jar of its friction,
And lightens the stress of its strain,

And the love that is over the erring,
The peace untouched by surprise,
The quiet that keeps its sweet patience,
Are dear in the Master's eyes.

While many a rhetorician
Might learn from this homily brief,
A truth that the wearied people
Would hail as a glad relief—

That the lesson is most enduring
Close to life's practical lines,
And not the length, but the fitness
The heart of the hearer inclines.

And we all in our plain home duties
Find the thoughts in this first-day word,
That the least of our trials and triumphs
Has a worth in the sight of our Lord.

HEALTHFUL UNDER-CLOTHING.

MARY E. BURROUGHS.

THE last decade has witnessed a great revolution in woman's dress, not so much in outward appearance as in comfort and healthfulness. The old-time fashion of suspending all garments from the hips so that every woman looked like an hour-glass, is fast passing away. The idea of individuality in figure is essentially a modern one; only the modern woman has the courage to preserve her natural figure and adapt her dress to it so as to bring out the best features. The reluctance with which women are accepting the reformed style of under-clothing, is due to several causes. Many clung to the notion that a tiny waist, sloping shoulders and broad hips, are the chief characteristics of a beautiful figure. Many are too ignorant to know how fatally injurious to health their clothing is, and many find the reformed underclothing so complicated with tapes, straps and buttons, that it is almost impossible to remodel their old-style clothing into the new, or if remodelled it is too troublesome to wear and to take care of.

Like every American invention, it has been continually improved; the knowledge of physiology and hygiene which has of late years become an essential part of a good education, particularly of woman's education, has dissipated and modified the first two objections and the last, has been removed by the reformers themselves. At last we have a style of under-clothing, at once pretty, comfortable, simple and healthful. To many women who would be willing and glad to reform their style of clothing, the "how" is the difficult question, and an almost insurmountable one. For the benefit of such we propose to describe a complete suit of under-clothing which we know, practically combines all the characteristics which we have mentioned.

For winter under-clothing, the suit next the skin may be made of white canton flannel, cut reform style; that is, all in one length, including the legs, high at the neck, gored, and with darts fitting to the figure like a basque. It is buttoned down the front about six inches below the waist and there are two large buttons on the back for the necessary opening. The legs should be made to come down to the shoe-tops and should be left open six inches up, so that they can be lapped over and the stocking drawn over them. It is best to have the stocking long enough to come comfortably over the knee. Shoulder suspenders of which a great variety can be found in the stores, are very good for holding them up, but a better contrivance is a short piece of rubber elastic with snaps on each end such as are used by gentlemen to hold up their sleeves, which may be snapped into the stocking, and then into the under-clothing a little higher up. Over all there should be a suit of colored flannel cut precisely like the undersuit and ornamented as much or as little as one's taste requires. With these two suits only one light flannel skirt is needed which should have sewed to the band, a couple of wide tapes passing over the shoulder with a cross piece of tape to keep them from slipping off. Thus, there is no weight upon the hips and the figure is improved because every garment fits precisely like the dress.

Slender women adopting this clothing can do without corsets without detriment to the appearance of their figures, while those who still think they must wear corsets will find a great improvement in the fit of their clothing and some relief from the weight of it. For Spring and Fall, muslin suits made in the same way, can be worn over the white flannel suits and in Summer worn alone. Of the colored suits only two are positively necessary, since they do not require washing so often as the white. Those who do not care to take the trouble of making the white undersuits, can buy very nice ones, woven in the same style; but the heavier colored flannel ones cannot be boughten.

VANITY FAIR PAPERS.—No. 2.

Window Furnishings—Scrym—Cretonnes—Inexpensive Screens—A Misplaced Puppy—Grid-iron Decoration.

No one feature of a room exercises a greater influence on it than the window-hangings, and yet it is only within the last three or four years that women have attempted to arrange this class of draperies with an eye to *artistic* effects. We have had window "fixings," such as they were, but how utterly devoid of taste have they been in most instances. Who of us does not remember the dark shades of other days? A dreary expanse of brown or gray, unrelieved by a spot of color, was presented to the room; whatever there was of ornamentation being made to face the street. Then followed the era of whiteness. White shades, white paint, white curtains, white cord and tassels, a dead, uncompromising monotony of white. Not even a half-tint was permitted to impart the faintest tinge of color. Probably nothing more trying to the complexion than colorless hangings at the window could be devised.

However, unadulterated whiteness has had its day; the lady of the period, whether of high or low degree, decorates her windows with color. Sometimes only with touches of it here and there, and again it is made to sweep in graceful folds from ceiling to floor.

A little money judiciously expended will modernize the most old-fashioned of windows. If the shade is of white linen it can be dyed cardinal, "æsthetic" red or crimson. If for any reason it is not desirable to color the shade, a band of embroidery in bright-colored crewels, placed within three or four inches of the lower edge, will make a charming finish. Dark shades are to be avoided.

Curtains of Swiss, tied back with gay tinted ribbons, add much to the attractive appearance of a room. Scrym, a comparatively new fabric, is extensively used for window-hangings. It is uniform in width, but varies in price from 40 cents to $1 per yard. The higher priced grades come with bands of insertion, but the quality sold at 50 cents can be made to look very rich by the addition of squares and edgings of antique lace. Embroidery shows to excellent advantage on scrym. A design of wild roses and forget-me-nots, worked in natural colors, looks exquisitely on curtains of this material. The design is placed across the top and bottom and the whole length of the inner side of the curtain.

Cretonnes are shown this season, not only in the bright colors and designs to which we have been accustomed, but, in addition to these, manufacturers have attempted Oriental effects and with excellent results. When hung these cretonnes resemble heavy woolen fabrics very closely. Trimmed with insertions and edgings of antique they are beautiful and expensive looking.

I do not mean to exhaust the subject of curtain materials now, but hope in a future article to have something to say on the subject of momie cloths, felt, canton flannel, raw silk for window curtains and portierres.

A word or two in praise of cretonne will not come amiss, perhaps. It is now presented in such a variety of exquisite tints and beautiful designs that one is tempted to embalm all the household furniture in cretonne. A few yards of it will make a dingy room blossom into a bower of beauty. Hung at the windows, used as table spreads or bureau covers, it can be made to do excellent decorative service. It also makes a good screen covering. By the way, the rich should not be allowed to monopolize that most useful of articles—a screen. Draughts from windows and doors can be warded off by means of it, and with its friendly aid one can improvise a retiring nook. In many ways it can be made serviceable in a home. It need not be a costly piece of furniture. Ebony frames with hand-pointed silken hangings can be left to the wealthy, but the poorest among us can get a frame of some sort and cover it with a half-worn dress. A common clothes-horse, covered with pretty calico or cretonne, makes an acceptable addition to the furniture of a bed-chamber or the family living room.

In these days it is imperative that one should be decoratively inclined. Societies devoted exclusively to the advancement of the decorative mania are springing up all over the country, and our homes fairly teem with creations in worsted, felt and satin, born of our devotion to "art." It is to be expected that eccentricities of taste should come to the surface, and they do—that most prosaic of domestic utensils, the smoothing-iron, is transplanted from its native sphere of usefulness. Brought to my lady's chamber, it is turned on end, decorated with some dainty design, and we are expected to consider this nondescript affair in the light of an artistic ornament.

A gentleman I know of, who has lately taken to possessing himself of old bits of furniture, until it seems likely that his modest little dwelling will present the appearance of an auction shop, has adorned his office with a fifty-year-old gridiron! At present writing it is in a nude condition, but doubtless before long some artistic lady will line it and hang it with tassels, or perhaps gay ribbons will be twined about its ribs, and another decorative monstrosity will be ushered into existence.

Through the parted curtains of satin which adorn the windows of a handsome house in this city the passer-by sees a richly-carved ebony stand, on which rests a china dog of the English bull-pup type. Satin, ebony, and a $5.00 china dog! When the art-shops display such quantities of exquisite bric-a-brac of all kinds; when statues and statuettes can be bought for such comparatively small sums, what must one think of the taste which selects a miserable caricature in china as a window ornament? FAITH RIPLEY.

ABOUT WOMEN.

MRS. JOHN JACOB ASTOR has sent a font with basin of solid silver to the mission chapel which she has established in Nebraska.

OWING to the death of the Duchess of Westminster, aunt of the Marquis of Lorne, no entertainments will be given at Rideau Hall until after the new year begins.

MRS. CHARLES Stewart Smith has given $3,000 to endow a life-bed in the Hahnemann Hospital in memory of her parents, John Caswell and Mary Caswell.

CORRESPONDENTS' CORNERS.

WHAT is Grace Greenwood's real name; how old is she at present, and at what age did she marry? Answers to the above will be kindly received by a constant reader of the RURAL. MRS. S. L. W.

ANS.—"Grace Greenwood" is Mrs. Leander K. Lippincott. She was born at Pompey, Onon. Co., New York, Sept. 23, 1823, and was married in 1853.

Mothers with sickly, fretful, nursing children, will cure the child and benefit themselves by taking Hop Bitters daily.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THOSE CARELESS BOYS.

O. W. DAY.

MARY WAGER-FISHER has won my gratitude. She has voiced, or rather penned, the trials of my life for years in her article entitled "Concerning Careless people." I thought my case was an exceptionally severe one, and it has lightened the burden to know that some other person has a like experience. I called the attention of two male members of my family to the article in question. Each read it. One of them good-naturedly went up-stairs, and in a quiet manner put a few of his scattered belongings to rights. There is hope of him! The other did not feel "hit," and when I mildly pointed to two or three articles he owned, in places where they ought not to be, he argued the matter, trying to convince me they were "all right," were handy, etc., etc. I sighed audibly and gave it up. It has been "line upon line and precept upon precept" with that incorrigible youngster since he was old enough to "sense it." I wrote out rules in very plain letters concerning his bureau and closet arrangements, and tacked them up in his room. They were entitled—very appropriately—"How to Keep Peace in the Family." He read and heeded—*one day*. He lost, successively, his "Sunday hat," his sealskin cap and his every-day hat, and actually had to wear a hood to the barn, when he did the chores. They all turned up, however. His sisters don't like to wait on him, naturally, and they play tricks with his misplaced garments. He finds his hair brushes in the middle of the bed: his hat gets flour on it, and his shoes are wet inside. Lately every article belonging to any member of the family found out of its place, is placed in his or her chair at the table. This morning the contents of the several chairs were as follows:—"That Boy's" chair held his overcoat, his best hat, a pair of mittens and a flageolet. The head of the family's chair contained a pair of shoes; the other male member's a hat and cane. (Those boys keep a sharp lookout for our shortcomings. To-night I sat down on my knitting work). I shall persevere, in hopes my persistence may mend, if not cure matters, and on reading this, some other worried housekeeper may see that she has a common grievance. A boy should be made to clean his boots well, in order to save the newly-washed kitchen floor; to put the paper, folded, in the paper holder when he is done with it; to put away pens, ink and paper when through writing; to put his chair in place when he goes to bed, and many other things that may lighten mother's burden of care. I know a man who, in hiring an office boy (his office was connected with a sitting and bed-room), always set the applicant for the position to making his bed. If the result satisfied him he took the boy into his service. He argued if the boy had not been taught to make beds he had slept in before that if he had observation sufficient to accomplish the details required in the process of bed-making, he was a "handy" boy that would soon learn to be useful and trustworthy.

INSECTS IN BEDS.

MARY WAGER-FISHER'S article on "Beds and Bedding" reminds me of my own experience when I first went to housekeeping. The housekeeper who presided over these bachelor quarters considered the dairy *her* province, and the servants under her charge considered doing as little work as possible *their* province, and in spite of new paint and paper, I was disgusted to find insects in the up-stairs bedsteads. Though young and inexperienced, I was persevering, and ordered the offending furniture to be let down from the windows, not allowing it to pass through the house. Then, after a good washing, the parts were well soaked with coal oil and left out-of-doors for a week, at the end of which time the treatment was repeated. During the 16 years since that time I have never seen a vestige of the pests, and consider coal oil a thorough remedy if persevered in ANNIE L. JACK.

DOMESTIC RECIPES.

Bread Pudding.

One quart of milk, three cups of fine, dry bread crumbs, three eggs, a teacupful of sugar, two tablespoonfuls of butter, lemon peel or extract. Soak the crumbs in the milk, stir in the beaten yelks, butter and sugar. Add the lemon last. Cover and bake a half hour, then beat the whites stiff, add a little sugar, spread over the pudding and return to the oven until a delicate brown.

Fried Potatoes.

Cut into dice cold boiled potatoes and fry in two spoonfuls or more of good beef drippings. Salt, and when the mass is well browned, serve.

Corn Fritters.

Drain the liquid from a can of corn and chop the grains fine. With this mix two beaten eggs, a cup of milk, salt and pepper and two tablespoonfuls of flour with a half teaspoonful of baking powder mixed with it. Beat thoroughly and fry by the spoonful on a greased griddle. M. B.

To Dry Figs.

The fruit should be gathered when it begins to crack. Make a strong lye, dip the fruit into the hot liquor and at once take out. (A wire basket is good for this purpose.) Expose to the air for a few minutes and dip again. Place upon trays and expose to the sun for a few days, putting them under shelter at night. Pack in small wooden boxes. L. B.

No good health with thin, impure blood. Hop Bitters makes rich blood, good health and strength.

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THE WEEKLY GLOBE-DEMOCRAT (St. Louis, Mo.), the leading secular and political newspaper west of the Mississippi River, ably edited and in every respect a first-class weekly journal, price $1.00, will be sent one year, with the RURAL NEW-YORKER and the RURAL'S free seed and plant distribution, for only $2.75.

Specimen copies of any of the journals here announced as clubbing with the RURAL NEW-YORKER *will be sent without charge to all who apply. The application, however, must be made to the journal of which specimen copies are desired. Send for them!*

Thousands die annually from some form of kidney disease that might have been prevented by a timely use of Hop Bitters.

News of the Week.

HOME NEWS.

MONDAY, Jan. 24, 1881.

THE Standard Oil Co.'s works at Point Breeze, Pa., were consumed by fire on the night of the 17th. The scene of the fire is the same as that of the disastrous fire of 1879, which entailed a total loss of $500,000. The origin of the fire is unknown, though it is supposed that in filling the tanks from the still, the oil became heated in some way, and, coming in contact with the gas in the tank, caused the explosion. The entire loss will reach $150,000.....George Lawrence, a farm hand, living nine miles from Springfield, Ill., was given a diseased pig by his employer, Mr. Simpson After keeping it several weeks Lawrence killed it, and himself and family ate of it. His wife became sick, her limbs swelled and burst and mortification set in, causing death. Mr. Lawrence is lying at the point of death, his body and limbs being swollen to twice their usual size, and having a whitish appearance and as hard as marble. The children ate but little of the pork and have not suffered severely. Portions of the meat have been analyzed and show it to be alive with trichinæ.

The Whittaker court martial organized on the 20th inst. in this city and then adjourned until Feb. 1, in order to allow the counsel time to prepare the case.....A new narrow-gauge road is to be constructed from Steubenville, Ohio, to Carrolton, there connecting with roads of northern Ohio.....Prof. Wm. C. Fowler, son-in-law of Noah Webster and editor of the university edition of Webster's dictionary, died at Durham, Conn., on the 15th inst., aged 87.....Mr. E. White, who has been for many years prominently identified with the Eastman Business College of Poughkeepsie, N. Y., has been elected Mayor of that city. We congratulate our friend White, and also the City of Poughkeepsie, upon the wise choice they have made.....It is now proposed to have a committee of three appointed to consider the charges respecting the Halifax fishing award, the committee to consist of one person from the United States, one from Great Britain, and the third to to be selected by both nations.

The coal companies of Pennsylvania have under consideration the question of resuming work at the mines on full time, but no understanding has been reached. All the companies, with one exception, have agreed to this proposition, but it has been determined to take no action on the programme for February until the latter part of this month.....Joseph Diroch, who shot and killed Thomas H. Trelvar a few days ago on account of a difficulty concerning Trelvar's wife, was captured six miles from Bodie, Cal., on the 17th. He had a preliminary examination which established his guilt, and about one o'clock the next morning he was taken from jail and taken to the scene of his crime and hanged. Five hundred men witnessed the execution.....Peter Pitchlynn, delegate of the Choctaw Indians, died on the 17th inst., aged 75. He had been in conference with every President since Andrew Jackson, with business pertaining to his people.....Capt. Eads will ask Congress to aid in the construction of his proposed ship canal by guaranteeing six per cent. dividends on the $50,000,000 of stock which he will issue, and he expresses the utmost confidence that his petition will be granted.

Newport, R. I., has voted by a large majority, to cede Coasters' Harbor Island for a site for a United States naval training school.....There were 1,000 disasters on the great lakes last year, involving the loss of more lives than for several years past.....The Chicago ice companies will gather 1,500,000 tons of ice this season, 75 per cent. more than last year..... .The stock of flour in California January 1 was 78,000 barrels; wheat, 19,895,000 centals; barley, 1,652,000 centals.....The Finance Committee of the United States International Commission adopted by-laws and appointed sub-committees Tuesday. William L. Strong and Thomas Barbour have subscribed $10,000 each to the fair fund .....The sun shining on a brass sign has led to litigation between two Philadelphia shop-keepers, in which the party suing claims $5,000 damages. Henry D. Plung is the claimant and Partridge & Richardson, of No. 17 North Eighth Street the defendants. In an affidavit filed recently Plung declares that in May last a small metallic sign was placed below one of the windows of No. 17 North Eighth Street, and that at certain times in the day the sun's rays were reflected by means of the polished surface of the sign, and the rays so reflected passed through plaintiff's window, greatly to the annoyance of his customers, and deprived him of the gains and profits which he could have made had the light not shone on his goods. This is the foundation of his suit.

The Oriental Tea Company, of Chicago, made an assignment on the 17th. Their liabilities are estimated at $40,000, and their assets at $14,000 ..... The Rochester, N. Y., branch of the Irish Land League has passed a resolution protesting against the persecution of the Jews in Germany.....At the annual meeting of the Boston Marine Insurance Company, on the 17th, it was voted to increase the capital of the company from $500,000 to $1,000,000.....The Chicago City Council has passed an ordinance permitting the South Side Street Railway to use an endless cable under ground for motive power for cars. The cost of the cable will be over $2,000,000.

Prof. E. S. Holden, of the Naval Observatory at Washington, has accepted the managership of the Washburn Observatory in Madison, Wis., the position made vacant by the recent death of Prof. Watson. Prof. Holden will enter upon his duties in a few weeks.....The new Albany Capitol Commissioners' report, transmitted to the Legislature Tuesday, gives the following financial exhibit:—Expenditure for the year ending December 31, 1880, on contracts and for material and labor, $1,299,197.84. Expenditures for the new Capitol from commencement to December 31, 1850, for lands, $628,447.62; for interest, $56,935.04; construction expenses, $10,914,516.40.

The obelisk was successfully raised to its foundation at noon on Saturday, Jan. 22.....Mr. E. A. Sothern, the celebrated actor, is dead. He was born in Liverpool, April 1st, 1830, and at the age of 22 he made his first appearance in this country at the old National Theater, Boston, as Peter Pangloss, LL.D. and A. S. S., in the "Heir at Law." His name is inseparably connected with the comedy "Our American Cousin," in which he appeared as "Lord Dundreary." His last appearance in New York was in November, 1879.....The first annual banquet of the Press Club of Chicago, at the Palmer House, was one of the most successful affairs of the kind ever given. Covers were laid for 160 members, guests and ladies, and after the menu had been disposed of, addresses were made by many of the lights in journalism and kindred professions.....A singular and shocking murder was committed recently at Lapeer, Mich. While the people were at church Mrs. Barnard, wife of a prominent lumberman at Greenville, went to the residence of the Rev. E. Curtis, attacked his wife, threw her down, poured gasoline over her clothing and set her on fire. The unfortunate lady was terribly burned, and died within a few hours. As there was no apparant motive for the crime, it is believed the murderess is insane.....A Masonic lodge at Fredericksburg, Va., being the one in which George Washington was initiated in 1752, has determined to build a Washington memorial Masonic temple. The Grand Lodge of Virginia will assist.....Outside of the California delegation the general sentiment in Congress is favorable to the Chinese treaties under which it is thought that the United States will reap substantial advantages. It is understood that they will be ratified.

P. A. Goddard, county auditor elect of Wabasha county, Minn., committed suicide while temporarily insane.....In Chicago three new cases of dangerous sickness from trichinæ have been discovered. A man, aged 70, will probably die.... .. The Boston and Albany Railroad has for several weeks been selling one thousand mile tickets at the rate of one cent a mile. The Fitchburg Railroad has just adopted the same policy. This, in both instances, is a substantial reduction to habitual patrons of the roads, and is probably, as it has been in other cases, a step toward a permanent reduction of regular rates.....In Chicago, Timothy Cooper, colored, has obtained a verdict of $2,000 against the People's Omnibus and Baggage company. Cooper was ejected from an omnibus by the driver because he was colored..... Judge Bond, of the U.S. Circuit Court, at Baltimore, refused to grant an injunction in the suit of the Pullman Palace Car Company against the B. & O. railroad for infringement of patent in using the Pullman sleepers on that road.....Bruno Hillage was brutally murdered by Juane Ray near San Antonio, Texas, Monday. Hillage had refused Ray the use of his team and was shot and then chopped to pieces with an axe as a result.. .... The buildings owned by J. O. Proctor and Mr. Ferris, of Brighton, Ontario, were destroyed by fire recently. Loss about $18,000; insurance; $9,000.

[Galveston News.]

The Madison, (Wis.) Democrat, in endeavoring to treat the wounds received by the candidates for the presidency, wisely prescribes St. Jacobs Oil. Of course we could not expect our worthy contemporary to do otherwise than recommend that famous Old German Remedy,—which "heals all wounds but those of love" and soothes all pains,—save those of political disappointment.

FOREIGN NEWS.

Last Saturday the news reached here that Lima, Peru, had been captured by the Chilians, and today comes the intelligence that Callao, a strongly fortified town of about 30,000 inhabitants, the seaport of Lima, from which it is six miles distant, has also been taken. The cause and course of the war are briefly sketched editorially, so that here it is necessary to say only that the Province of Atacama, about which the war arose, was considered a worthless desert of extreme barrenness until a few years ago, when a large area of niter beds was discovered in it, making it at once an object of desire by Bolivia and Chili, the latter of which claimed the southern part of it, which turned out much poorer than the northern. At the capture of Lima the Chilian army numbered about 40,000 men, chiefly veterans, and the Peruvians about 50,000, mostly recruits.....

The English government is still making numerous arrests of Land Leaguers on the ground of intimidating those who are not members of the League. Very slight causes suffice to justify an arrest. Miss Gardiner, of Ballina, County Mayo, is the last prominent landlord—landlady?—Boycotted. She is represented as an amazon of an "old maid," very abusive, harsh, exacting and tyrannical to her tenants and disagreeable to her neighbors The Grand Orange Lodge of Ireland has sent a band of men to her relief, and these will be guarded in their turn by a detachment of "horse, foot and artillery." The coercive bill that will be brought before Parliament "for the protection of property" in the distracted island will empower the Viceroy, with the advice of the Irish Privy Council, to declare the districts in which the act is to be enforced, and a subsequent clause will suspend the habeas corpus by empowering the Viceroy, upon reasonable suspicion, to arrest any person deemed an offender within the terms of the act. It will also provide that persons so arrested cannot be released, tried or bailed without an order of the Privy Council or the Viceroy. Another clause will in certain cases substitute trial before two judges for trial by jury. It is possible that the suspension of the habeas corpus will continue until the 1st of August. The trial of Parnell and his followers is still in progress.

The severest storm that has visited England for 20 years ravaged the country last week, causing a loss of $10,000,000 in London alone, owing to an unexampled rise of the Thames, which flooded all the low-lying districts on both banks. ....Immense damage has also been done throughout the whole of the United Kingdom. The loss to the farmers is extremely heavy. The storm also swept over most of the Continent causing woeful loss and havoc. In the Spanish Peninsula the hurricane is reported to have destroyed half the crops of oranges and lemons, besides doing an enormous amount of other damage. The loss to agriculture is put down at $40,000,000. In the Mediterranean the gale was extraordinarily violent, and of course so it was in the Bay of Biscay, which has a goodly share of all the bad weather of Western Europe. Shipwrecks are said to have been very numerous and disastrous.

[St. Louis Republican.]

It is very rare that the Republican consents to editorially forward the interests of advertisers of what are known as patent medicines, as it does not frequently fall out that we can have positive knowledge of their merits. However, we take pleasure in saying of St. Jacobs Oil from individual experiment, that it is a most excellent remedial agent, and as such we can heartily recommend it.

AGRICULTURAL NEWS.

A review of the cotton crop and its movement, just issued by the Bradstreet agency, estimates the number of acres planted in cotton this season at 16,500,000. This is an increase of 3,000,000 over last year. Since November the weather has been very unfavorable. In Texas, Alabama, Mississippi, Louisiana, Arkansas and Tennessee rains, snow, sleet and very cold weather have retarded picking and caused great loss. On the low grounds the fields have been submerged, and the crop is still unpicked. The indications point to a crop distributed as follows:

	Bales.		Bales.
N. Carolina and Va.	417,000	Louisiana	630,000
South Carolina	425,000	Texas	1,125,000
Georgia	800,000	Arkansas	387,000
Florida	55,000	Tennessee	688,009
Alabama	660,000		
Mississippi	700,000	Total crop	5,887,009

Adding 50,000 bales not sent from plantations till after the beginning of the present crop year, the total receipts for the season will be 5,937,000 bales. The crop of 1877-8 was 4,774,000, that of 1878-9 5,074,000 bales, that of 1879-80 5,761,252 bales. The statement shows, as compared with the first four months of last season, an increase in receipts at Gulf ports of 47,367 bales, an increase at South Atlantic ports of 341,585 bales, a decrease at North Atlantic ports of 76,935 bales, an increase at all ports of 312,017 bales, a decrease in the overland shipments of 56,105 bales, and a net increase of cotton in sight of 255,912 bales. A large increase in acreage is predicted.

A short time ago Dr Lyman, the veterinarian who had been commissioned by the government to investigate pleuro-pneumonia among American cattle, landed at Liverpool, reported to the President that most of the cases occurred among Western cattle that had passed over routes along which no disease existed in the Middle or Eastern States, and therefore that pleuro-pneumonia must already be prevalent among the herds of the West. Up to the date of this report the opinion was general that the disease had not extended westward beyond the Atlantic States, and Dr. Lyman's statement was received with incredulity in most quarters. Professor Law, of Cornell University, probably the best authority on the subject in the country, emphatically denies the Doctor's statement, and maintains that not a single case of pleuro-pneumonia has come from the West either to the East or to Europe. When such authorities disagree who shall decide the question?

The exports of horned cattle from Canada to Great Britain in 1879 numbered 23,273, valued at $1,767,801; in 1880 they numbered 32,800, value $2,292,150. Sheep in 1879 numbered 54,721, value $325,099; in 1880 they numbered 110,143, value $629,062.....Export steers have been very scarce in Toronto recently, and could only be obtained by picking one or two out of a load.....A farmer at Clintonville, Ky., has a Short-horn cow which is prolific indeed. She produced triplet calves last year and twins this year—five calves in eighteen months and five days.....Sixteen car-loads of calves and yearlings have been shipped from Canisteo, N. Y., the present season to points west of the Mississippi River, to be there grown and fattened and finally returned to the New York market.....Cattle-skinners are at work near San San Antonio, Texas. They kill cattle belonging to others, steal the hides, and leave the carcasses to decay.....The Wool Growers' Convention that met at Washington on January 15, resolved that the General Government should own a farm for breeding the best varieties of stock, to be distributed among farmers as seeds are now.

Negotiations are in progress for the purchase of land in Eastern North Carolina whereupon to settle a colony of Swedes who are expected to arrive at New York early in the Spring. The location is near the Pamlico river in Beaufort county.....The annual meeting of the Pennsylvania State Dairymen's association will be held at Meadville, January 26 and 27,.. ....The Agricultural Department estimates the tobacco crop of the entire country to be 342,972,777 pounds, against 391,278,350 pounds in 1879. The seed-leaf growing States from Massachusetts to Pennsylvania have increased their acreage 14 to 15 per cent over that of 1879, the average yield for all being about the same, while Pennsylvania, the most important of these as a grower of seed-leaf, reports 18 per cent increase in acreage, with an average falling off in yield of about 150 pounds per acre, making her crop about 31,000,000 pounds, against, say 29,600,000 in 1879... ....Durham, N. C., expects to handle 18,000,000 pounds of this year's tobacco crop.

The eighth annual meeting of the New York State Grange takes place at Utica to-morrow, Wednesday and Thursday. Bagg's Hotel will be head-quarters.....The Illinois State Tile-Makers' Association began its annual meeting at Springfield on January 18th, with a respectable attendance in point of numbers. The evening session was spent in hearing a paper upon "Road Drainage," by C. G. Elliott, of Tonica, Ill., who strongly advocated the use of tile as the only means of solving the road problem in Illinois. A number of members of the Association gave in their testimony as to its thorough efficiency where tile had been used for road purposes.

The N. J. State Horticultural Society will hold its Sixth Annual Meeting at the Board of Trade Rooms, Newark, on Thursday and Friday, February 10th and 11th. Instructive addresses will be read by Dr. F. M. Hexamer, J. T. Lovett, J. A. Hale, C. W. Idell, G. W. Campbell and others. E. Williams, Secretary, Montclair, N. J.....According to the New South Wales Agricultural Grazier of October 30, there was then in Melbourne a pig which weighed nearly 1,400 pounds live weight, whilst in mere store order, and "rather out of flesh than otherwise." The animal measured nearly nine feet from snout to tail, and stood over four feet in hight.

The Mark Lane Express of January 11th, says "The lower temperature, with the protection afforded by the snow, benefits the growing crops. The dry frost favors thrashing. The deliveries of bread stuffs were greatly improved in quality and quantity, and consequently trade was little changed during the week. The demand was slow, and an attempt to raise prices failed. In London prices were maintained, but trade throughout was dull and limited. Other descriptions of British grain exceptionally quiet. Foreign breadstuffs were dull and quiet. Off coast hung on hand till Saturday when there was a better inquiry. Cargoes were slow and weak, but rather firmer at the close. Spot demand was a little improved but rates unchanged. Business has been of the quietest. Foreign flour was unchanged. The expected supplies from America and Russia largely exceed the consumptive demand. Rates, therefore, are likely to decline.

A FINE SHOWING. The thirty-fourth semi-annual statement of the Travelers' Insurance Company, of Hartford, Conn., speaks well for the successful management of that excellent institution. With a paid-up capital of $600,000, its gross assets amounted, on January 1, to $5,519,194.23, while its liabilities were only $4,051,592.72, leaving to its credit a balance of $1,467,601.51. Thus it is seen that after deducting the paid-up capital and all its liabilities, it still has a net surplus of $867,601,51. In insuring one's life nowadays, the doubt whether the company will be able to pay the amount insured when it falls due, is often a source of no small anxiety, from which those are free who deal with a company so prosperous and well-managed as this appears to be.

For the delicate and complicated difficulties peculiar to the female constitution, LYDIA E. PINKHAM'S VEGETABLE COMPOUND is the sovereign remedy. It aims at the cause, and produces lasting results. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Philadelphia Police Department.

The Philadelphia Ledger of December 29, 1880 mentions, among many others, the case of Chief of Police of that City, Samuel H. Given, Esq., who says he used St. Jacobs Oil in his family, for various painful ailments, with excellent results. He has also heard from many who have used it for rheumatism, that it alone of all remedies did them good.

The best periodical for ladies to take monthly and from which they will receive the greatest benefit is Hop Bitters.

Frank Leslie, Esq., of the "Illustrated Weekly," says: "For some time past I have been using your COCOAINE, and think it far preferable to anything I have ever used for the hair."

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Jan. 22.

Boston.—BUTTER—Fine Western creameries at 33@34c.; freshly made fine Western dairies at 24@26c.; imitation creameries at 22@25c., and ladle at 20@23c. Fine Northern creameries at 30@33c., and some fine Fall ends of Vermont butter have sold at 26@28c; Summer-made Northern butter ranges from 20@25c., and long dairies for 22@25c.; common Winter-made butter is dull at 17@19c., and early made ladle butter is dull at 15@17c. CHEESE—Fine September and first half of October cheese is firm at 13½@13¾c., and some fancy lots are held higher. Fair to good cheese is held at 12@13c. EGGS—The demand is not large, and dealers buy just as wanted for present use, but there is no surplus. Eastern, choice, ₩ doz., 36c; Northern, choice, ₩ doz., 35@36c.; Western, choice, ₩ doz., 35c.; limed, ₩ doz., 25@28c. PEAS AND BEANS—Beans, Pea, Northern and Eastern, choice, ₩ bush., $1 80@1 90; Northern and Western good, $1.70@1.75; choice mediums, $1.75@1.85; fair to good mediums, $1.70@1.75; yellow eyes, $1 80@2.10; peas, Canada, common, 75@80c.; peas, Canada, choice, $1@1 05; peas, Canada, green, $1@1.50. VEGETABLES AND DOMESTIC FRUIT—POTATOES—Northern white stock has sold quite readily at 55c. for Jackson and Peerless; 60@65c. for Prolifics; 65c. for Vermont Rose, and 65@70c. for Eastern, including choice Houlton stock. ONIONS are in steady demand at $3.50 for red and $3.25 for yellow. There is a steady market for choice apples at $1 50@1.75 ₩ bbl., and choice lots of No. 1 fruit would command the latter figure. CRANBERRIES remain dull, with moderate sales at $4@5 ₩ bbl. for country and $6@7 for Cape. HAY AND STRAW—Northern and Eastern, prime, ₩ ton, $21@23; Northern and Eastern, medium, ₩ ton, $20@22;

swale, ₹ ton, $13@14; straw, rye, ₹ ton, $23@24; straw, rye, machine threshed, ₹ ton, $16@17; straw, oat, ₹ ton, $13@14. MILL FEED—Shorts, $17.50@18; feed, $17; middlings, $19@20.

Chicago.—WHEAT steady, with a fair demand; No. 2 Chicago Spring, 98c, bid cash; 98¾c, February; 99½c, March; $1 03¼@1 03¾, May. CORN easier at 36¾c, cash; 36¾c, February; 41¾c@41⅞c, May. OATS inactive at 30¾c, cash; 30¾c, February; 35c, May. BARLEY firm at $1 05. PORK easy at $13 25@13 37½, cash; $13 27½@13 30, February, $13 45, March. LARD active, firm and higher at $9 02½, cash and February, $9 10 bid, March; $9.20 bid April. Bulkmeats steady and unchanged. BUTTER, creamery, 27@32c; dairy, choice 22@24c; dairy, fair to good 18@20c; ladle-packed 15@17c; packing stock 12@14c; roll butter 13@17c; grease 7@9. CHEESE.—The recent advance in Liverpool from 65s to 68s and a corresponding hardening of prices at New York stimulated both the Eastern and export demands, and stocks at this point have undergone a rapid depletion. Exporters have bought largely of poor to fair grades at 3@8c. Market strong with an advancing tendency. Full cream, 11½@12¾c; part skim choice 9@9½; part skim, fair to good, 7½@8½; part skim, hard, 6@7; low grades 3@5c. EGGS.—Are firm at 30@33c. for fresh, and 24@28c. for pickled. HAY.—No. 1 timothy per ton on track $14@15.50; No 2 timothy, 13@13 50; mixed 12@12 50; upland prairie $10@11; No. 1 prairie, $8@9. POTATOES.—The market is quiet at 75c for Peachblows, and 65c for Early Rose. HOGS.—market moderately active; mixed packing, $4 80@5 05; light, $4 80@5 05; choice heavy, $5 20@5 50; market closing 5c. lower. CATTLE.—Market steady and fairly active, common to fair shipping, $3 70@4 50; butchers' steady at $2@3 50; stockers 10c. lower, at $2 65@3 85; heavy feeders wanted. SHEEP common to medium, $3 25@4 50; choice, $5@5 50.

Cincinnati.—WHEAT steady; No. 2 red Winter $1.03@1.04. CORN quiet but firm; No 2 mixed 42c. OATS quiet; No 2 mixed 37c. RYE dull; No. 2 97@98c. PORK $14; lard in good demand at $9 05; bulkmeats firm; shoulders $4 75, clear rib $7.25; bacon quiet but firm; clear rib $7.87½, clear sides $8.25. BUTTER.—Fancy Northwestern creamery sells at 35@36c.; good Ohio do. at 25@30c.; choice dairy at 23@25c.; choice Western Reserve at 22@23c.; choice Central Ohio at 18@20c.; medium to prime do. at 15@17c., and common at 11@12c. CHEESE.—Prime to choice factory at 12@12½c., but some good late made is selling at 11@11½c, and Northwestern skim at 10c. EGGS—The market is bare of fresh eggs, no wholesale trade. The few lots received during the week sold up from 30c to 35c. The few small lots offered sell in a retail way at 38@40c per dozen. SORGHUM is in better supply and the demand being light prices are barely sustained. Good to choice sells at 32@35c per gallon in lots. POTATOES—Choice Burbank are held at $2 50, and prime to choice Early Rose at $2 25@2 40 ₹ bbl. Early Rose sell in a small way from store at 80@85c, and Peachblow at 75c ₹ bushel. HAY—The market rules steady for all kinds. Common sells at $15@16, prime do. at $17@17 50 ₹ ton, and Prairie hay at $11@12 per ton, in bales on arrival. Wheat and Rye straw are firm at $9, and Oat straw firm at $10.

St. Louis.—WHEAT opened higher, but declined No. 3 Red Fall, $1 02, cash; $1,02½@$1.03¾, February; $1 05¾@$1.08¾, March; $1 06¾@@$1 07¾; April; $1.07⅝@$1.07⅞, May; No. 3 do., 92¾@93c., No. 4 do., 88½c bid. CORN. 41@41½c, cash; 41½c, January; 38¾@38¾c, February; 39½@39¾c, April; 40¾@41c, May. OATS opened higher, but declined to 32¾@33c, cash; 33@33½c, Feb.; 33¾c, March; 34¾c, April, May. RYE quiet at 87c. PORK strong at $8.35 asked 35½, cash and January; $13 47½ bid, March. Lard higher at $8 90@8 95. Bulkmeats strong and higher; Shoulders, $4.35; Clear Rib, $6 90; Clear Sides, $7.15. Bacon dull and unchanged. BUTTER—Creamery, 29@33c; dairy-packed—prime to choice, 20@22c; selections, 24@25c; low to medium, 11@16c; roll—Northern, 15@20c; country at 11@13c for poor or poorly handled to 13@15c for choice—round lots 12½@13c CHEESE—In lots, full cream 13@14c, part skims 8½c to 9½c poor skims 5c to 6c. EGGS—Very scarce: market bare of fresh stock. Sales of only a few boxes and cases fresh at 30c to 32c. Frosted dull at 23c to 25c; frozen nominal at 20c. POTATOES—Sound Western in bulk and in car lots at 65c to 75c—wagon receipts at 70@72c for Rose and 75c for Peerless; Eastern at 80c to 90c—couple cars New York Burbank in bulk and del. sold at top figure; inferior and damaged nominal at 25c to 50c. ONIONS—In limited demand, but firm. Sound at $3.75@4 per barrel, and $1 50@$1.60 per bushel; inferior or damaged less. HAY—Common prairie at $9.50, prime do at $10, choice do. at $10.50, fancy, do. at $11, mixed at $13.50@14, prime do. at $14.50, prime Timothy at $15, strictly prime do. at $15,-50; choice do. at $16, fancy do. loose pressed at $17. CATTLE—Supply light; at $4.25; butcher steers and good to choice cows and heifers, $3@4; stockers, $2.75@3 50. HOGS strong and active; Yorkers and Baltimores, $4 70@4 90; mixed packing, $4.65@5; butchers' to fancy, $5@5.25.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 22, 1880.

BEANS AND PEAS.—The market is quiet for white beans, but there seems to be no urgency to sell, as prices are named with steadiness for the lots now going into use. Red kidneys weak and drooping. Green peas dull at $1.60@1 65. Southern B. E. steady at $2 per 2-bush. bag.

Marrow beans prime $1.80, do. other $1.60@1.72, medium prime $1.70, do other $1.50@1.65, pea $1.60@1.75, white kidney $1.80@2,00, red do. prime $1.50@1.60, do. other $1.25@1.45, black or turtle soup $1.50, Lima $4@5.

BUTTER.—The export demand is a favorable feature, and the call for good to fine table American abroad accounts for the appearance of shippers, while the market here is ruling high. The home trade is steady and if not large in accordance with the season, there is enough doing to harden prices. Dairies and round lots of firkins are scarce, and a buyer who wants a perfect one will pay a trifle above last week's full figures. Western butter is in good demand and not plenty in the styles wanted for good local use. It must be understood that top prices are in a measure exceptional; at this season a good deal of retail trade has to be humored and buyers who have a steady run can obtain many goods at inside figures, especially when quality grades down.

Creamery, fine Western, 31c good to prime, 31@33c; fair to good 27@30c. State ranges, 20@30; State dairies, entire choice, 25@26c; fair to prime 2@24c.; firkins, 20@24c.; State pails and half tubs, full, 28@29c, fair to prime, 23@24c.; poor to fair 20@23c.; Welsh tubs, choice 26@27c; other 19@23c. Western imitation creamery 20@27c.; dairy, fresh, 21@25c; other 16@22c.; factory, fine, 22@23c.; other 14@20c. low quality, 12½@13c.; rolls, choice 18@19c, fair to good, 17@18c.

Receipts for the week 29,824 pkgs.

Exports for the week, 9,727 pkgs.

CHEESE.—Export demand continues very good, and the home trade fair, with prices strong. Low grades of cheese are materially helped in the new movement.

State factory, fancy, at 13½c.; do. good and prime, 12¾@13¼c.; do. fair to good, at 11¾@12¾c.; do, h'f skimmed, 9@11c.; Wisconsin factory, fine, at 13@13¾c; do. good to prime, 12¾@12¾c.; do. fair to good, 11@12c.; Ohio factory, fine, 12¾@13¼c.; do. good to prime, 12@12¾c.; do. flat, fair to good, 10¾@11¾c; do. poor to fair 8@11c.

Receipts for week, 33,300 boxes.

Exports for week, 45,325 boxes.

Liverpool cable, 68s.

Steam to Gt. Britain, 30s.@37s. 6c.

COTTON—The market has varied little in price and demand moderate; latest prices are for

January at 11.60@11.62c.; February at 11.71@11.72c.; March at 11.90@11.91c.; April at 12.05c.; May at 12.18@12.19c.; June at 12.30@12.31c.; July at 12.40@12.41c.; August at 12,44@12,46c.; September at 11.92@11.95c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 13-16	8 13-16	8 13-16
Strict ordinary	9 7-16	9 9-16	9 9-16
Good ordinary	10 7-16	10 9-16	10 9-16
Strict good do	10 13-16	10 15-16	10 15-16
Low middling	11⅜	11⅜	11⅜
Strict low middling	11¾	11¾	11¾
Middling	11 13-16	12 1-16	12 1-16
Good middling	12 5-16	12 9-16	12 9-16
Strict good middling	12 9-16	12 13-16	12 13-16
Middling Fair	13 1-16	13 5-16	13 5-16
Fair	13 11-16	13 15-16	13 15-16

STAINED.

Good ordinary	8¾	Low middling	10¼
Strict good ordinary	9¾	Middling	11¾

Receipts for the week, 28,245 bales. Exports do. 5,140 do.

DRIED FRUITS.—Apples are in fair demand, exporters buying sun-dried stock chiefly, with prices steady. Peaches are moderately active. Small fruits are quiet. Quotations are for

Evaporated apples at 8¾@9c. for the better qualities (some lots held higher), sliced apples at 5@6¼c. for good to choice North Carolina; 3½@4¼c. for Va, Tapples, 4@4¾c. for Tenn. do; 4¾@5¼c for State do; 4¼@5¼c. for western Ohio and Mich. Peaches at 20@32c. for evaporated peeled; 16c. for unpeeled do.; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6¾@7¾c. for halves and 6½@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 17½c. Raspberries at 24@25c. Whortleberries at 12½@13c.

EGGS—Receipts for the week 1,029 bbls.; do. last week, 1,060 bbls. The market is almost bare of stock, in fact there are not enough limed left to piece out common wants, and almost "war prices" rule for the limited offering. Prospects of better supplies very slim.

Near Points, ₹ doz., 45@46c: State and Penna. 43@44; Western and Southern fresh 42@43; stored Western and fall laid 38@40c.; State limed 37c; Canadian and Western 36@37c.

FLOUR.—Buyers have found rather easy prices on very fair receipts.

Quotations are: $3.10@3.75 for very inferior to very choice superfine State and Western; $4.10@4 50 for poor to choice extra State and Western, odd lots and lines; $4 50@4 65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 25@5.10; good to choice do. at $5.10@5.90; (very choice up to $6 25;) red and amber winter wheat inferior to choice trade and family, at $4.20@5.85; round hoop Ohio, $4.25@4 65; and trade and family brands of do at $4.30@6.25, the latter for fancy; St Louis $4.40@5.25 for inferior to good extra; $5.25@6.25 for good to very choice (fancy brands quoted higher); Minnesota clear, inferior to very choice at $4 15@5.; Minnesota "straight," poor to very choice, at $5 25@6.75, and patent inferior to fancy at $5.75@8.25; city mills extras at $5.20@5.35 for fair to choice for the West Indies; do. for England at $4.10@4.50 for poor to choice spring wheat, and $4.85@5.50 for winter wheat product; do. trade and family extras, $5.85@6.75; do. for South America, $5.45@5.85, the latter for very choice; No. 2 at $2 85@3.50 for very inferior to fancy.

Receipts for week, flour, bbls, 111,525; corn meal, do, 2,850; wheat, bush, 546,850; corn, do, 174,750; oats do, 265,600; rye, do, 14,200, malt, do, 15,116; barley, do, 88,200; beans, do., 8,748; rice, pkgs, 2,836

Exports for week, flour, bbls, 95,900; corn meal, do, 2,600, wheat, bush 627,250; corn, do, 127,215; oats, do, 3,473; peas, do, 5,664; beans, pkgs, 726; rice do, 740.

CORN MEAL—Sales at $3.35 for Brandywine, and $2.65@3 25 for yellow Western.

FRESH FRUITS.—Exports of apples for week, 11,325 bbls, The home demand for apples is moderate and prices are only steady. There is an improved trade in England and prime lots may again have a movement here for export if prices do not impede. Cranberries quiet with what is thought to be a manageable stock. Florida oranges are still in that unsatisfactory condition where good ones have to make up for damaged: this causes conflicting figures and the market is reported poor. Peanuts are easier at the South and the market here is not so sharp as it was. Dealers look for a decline here.

Apples, Baldwins $1.75@1.87; Greenings, $1.62@1.75; Spitzenbergs, $1.75@2; mixed apples $1.50@1.75. Cranberries, Cape Cod fancy bbls., $8; other $4@7; N. J, crates, $1 75@2.25. Florida oranges, repacked standard cases $1@1.50, ordinary to good as they run $2@3. Peanuts, Va. hand-picked 4¾@5c.; other 3½@4¾, shelled 3½@4½c. Hickory nuts $1.00@1.12. Black walnuts 40c. Pecans nominal.

FURS AND SKINS.—The market is quiet and the early January sales are looked for with some solicitude. Thus far there has been no shipping encouragement, but the severe snow storm of last week in England may help to "boom" some items.

GRAIN.—Wheat shows shipments for the week of 513,000 bush.; prices have ruled easy on the moderate export demand; latest sales are of

No. 1 white at $1.14¾@1.15¾, do. January at $1.14¾@1.15, do. February at 1.15¾@1.15¾, do. March at $1.16¾@1.16¾; do. May at $1.16¾; do, steamer grade at $1.13½; No. 2 white at $1.13¾@1.14; ungraded white at $1.12¾@1.15; mixed winter at $1.16@1.16¾; No. 2 red at $1.18@1.18¾, do January option at $1.17¾@1.17¾; do. February at $1.18¾@1.18½; do. March at $1.19¾@1.20¾, do, April at $1.20¾@1.20¾; do May at $1.20¾@1.20¾; No. 3 red at $1.16@1.16½, ungraded red at $1.13@1.18, New York No. 2 Spring at $1.13¾@1.13¾, No. 2 Milwaukee spring at $1.17; No. 3 spring at $1.07¾@1.18; rejected spring at 85@88c.

Rye at 97@$1.01.

Corn is fairly active latest prices are for

New York No. 2 at 55¾@56c. do. January at 55¾, do. February at 56, do. March at 55¾, do May at 54¾, ungraded mixed Western at 53@56, New York steamer mixed at 53¾@53¾, New York No. 3 at 52¾@53, steamer yellow at 54¾; low mixed a 56½; steamer white at 56¾c.

Oats are easy in price; latest sales are of

No. 1 white 48¾@48¾; New York No. 2 white at 47¾@48; No. 3 white at 44¾@45; New York No. 2 at 43¾@43½, do. January at 43½, do. February at 43¾@44, do March at 44¾@44¾, No. 3 at 42½@43, ungraded white Western at 43½@47¾, ungraded mixed Western at 42@41, white State at 45½@48¾, No. 2 Chicago at 43¾.

HAY AND STRAW.—A good degree of activity and prices well maintained. Quotations are for

Hay, prime timothy at $1.20 ₹ 100 lbs., medium timothy at $1.10@1.15 do. shipping grades at $1@1.05 do.; clover mixed at $1.05@1.10, clover at 95c@$1, do. Straw—No. 1 rye at $1.25@1.30 ₹ 100 lbs.; No. 2 rye at 75@85c, do.; oats and wheat at 70@75c. do.

HONEY—Market almost nominal at recent figures. White clover, comb, single, 16@17c.; larger pkgs. do. 14@15c.; buckwheat 11@12c.; extracted 6@10c, as to color.

HOPS.—There is a moderate export movement only and brewers buying sparingly. Prices steady and unchanged. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	21 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Pacific coast, new	20 @24

Receipts for the week, 4,322 bales.

Exports for the week, 1,208 bales.

MILK.—Supplies have been light, and though the market has fluctuated the average has been in farmer's favor. Closing rate for commission milk, $2 ₹ can of 40 qts., after having sold at $1,75 up to $2.25.

OIL-CAKE.—Western is quoted at $29 per ton.

POULTRY AND GAME.—Supplies of dressed poultry are moderate and there is no call for heavy receipts, Western dry-picked turkeys do not sell much better than scalded; buyers of dry-picked at this season generally want near points and these have regular purveyors, Fowls and chickens generally sold at inside rates. Ducks scarce; geese steady.

Turkeys, N. J. small, 13@13½c.; other, 11½@12½c.; State, small, 12@12½c.; other, 11@13c.; Western, small, 11½@12c.; other, 10½@11c.; poor to fair, 8@10c.; Philadelphia d.-p., 12@14c.; chickens, choice, 14@15c.; good to prime, including scalded, 11@13c.; poor 9@10c.; chickens and fowls, W. 9@11c.; capons, 20@21c; slips, 16@18c.; fowls, good to prime, 10@12c.; do. poor, 9c; ducks, choice, 16c.; other, 10@15c.; geese, choice, 12c.; other, 8@11c.; squabs, white, ₹ doz., $3.50; do. dark $1.50@2.

Live poultry is in small supply and prices are steady.

Fowls, 10@11c.; chickens 8@9c.; roosters, 5@6c.; turkeys, 9@11c; ducks, best, 75@87c, other 50@70c. Geese, extra, $1.37@2; other $1.25@1.75. Pigeons, 20@25c.

Game is not plenty, but the general want is small. Prices firm for all prime lots suitable for hotel, steamer and first-class city use.

Missouri wild pigeons, ₹ doz., $1.12; canvas back ducks $1.25@2, red-heads 50@75c., mallard 40@50c.; teal 30@40c, black do. 40@50c.; common do, 25@30c.; quail prime trapped ₹ doz $2@2.25; do. inferior $1.62@1.75; partridges, ₹ pair 70c.@$1; Grouse prime $1.10@1.15, do. drawn 90c.@$1. Hares, 30c, Rabbits, 25@30.

PROVISIONS.—Hog products have been in moderate demand and prices generally steady.

Mess pork quoted at $13.25@13.50 for spot lots; $14@14.25 for February, and $14.20@14.30 for March. Bacon at 7¾ for long clear and 7.75 for short clear. Lard—Western steam at 9.42½ for spot lots, 9.40@9 42½ for Jan. and Feb., 9.50 for March, and 9.57½ for April. Stearine at 9¾. Tallow at 6¼ for prime.

Receipts for week, beef, bbls, and tcs., 1,100; pork, 1,250 bbls. cut meats, 39,917 pkgs.; lard, 22,914 pkgs.

Exports for week, beef, bbls, and tcs., 1,700; pork, 5,100 bbls.; cutmeats, 17,994,013 lbs.; lard, 6,941,574 lbs.

SEEDS.—Clover is in moderate demand; quoted at 7¾@8¾c.; Timothy is quiet at $2.75@2.85.

TOBACCO.—Export trade moderately active and the home demand fair, with prices generally as last week.

SEEDLEAF.	Crop 1879.
New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5½@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12¾@16
Ohio assorted	7½@10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	14 @18

KENTUCKY LEAF.

	Light.	Heavy
Common lugs	4¾@ 5	5½@ 5¾
Good lugs	5¾@ 5¾	6 @6¼
Low leaf	6 @ 6½	6¾@ 7
Medium leaf	6¾@ 7¾	7¾@ 8¾
Good leaf	8 @ 8½	9 @10¾
Fine leaf	9 @11	11 @12¾
Selections	12 @15	12¾@15

VEGETABLES.—Exports potatoes for week, 6,310 bbls. The market for potatoes is steady at very satisfactory prices; holders are free sellers at the rates, and a fair export one need helps to stiffen quotations. Stock in round-hooped flour bbls. sell quickest. Other items have only a fair Winter run; onions too high for activity.

E. Rose Eastern d.-h. $2.12@2.25, do, State, $2@2.12; do, in bulk $1.87@2 00 prolific do. $1.75@1.87; Burbank do. $2 Burbank d.-h. $1.75@1.87, peachblow do. $2.25@2.50; snowflake do. $2@2.12; do. bulk $1.87@2; peerless State $1.87@2.00; N. J. $1.75 Chili red bulk $1.75, Del, sweet $2.75; onions, white ₹ bbl. $5@5.50 yellow do. $3.25@3.50; red $3.25@3.50, Chester, $3@3.50; carrots, $1.50; beets, 75c@$1; R. turnips, 50@75c.; W. turnips 50@75c.; marrow squash 50c; Hubbard do. $1; cabbages, ₹ 100, $4@6; red, do. $6@9; celery $1.25@1.50.

WOOL.—A moderate trade only this week, with prices easy. Medium Ohio fleeces sold at 50@51 spring California at 25@35, spring Texas at 25@28, fall Texas at 25@30.

LIVE STOCK MARKETS

NEW YORK, Saturday Jan. 22, 1880.

BEEVES.—Receipts for the week 11,523 head: do. last week 13,451 do. Butchers were evidently in want of cattle from the numbers that attended in the almost unprecedented storm of yesterday. Cattle were generally of good quality, which helped trade. Supplies were small owing to the storm. The bulk of the sales were at 9@10¾c., dr. 56@57 lbs.; nothing below 8¾c., to dr. 55 lbs. A few extras sold at 6¾c. live weight. All rates higher than last Wednesday.

COWS AND CALVES.—The market is an undecided one, now and then a prime milker bringing $80 and even $85; but the general buyers will not pay over $50 for prime straight car loads; the range for the week may be called $35@60.

VEAL CALVES.—Live have been scarce and firm prices have ruled; dressed active and firm for unfrozen lots.

Live choice fed 8¼c. poor to prime 6@8 Mt. Holly 5@8, buttermilk, 3@4, grass, 2½@3, hog-dressed choice 11, fair to good 9¾@10¾, common 4@7.

SHEEP AND LAMBS.—Receipts for week, 24,612 head; do, last week, 29,350 do. Market now with smaller supplies. Common to fair sheep 4½@5¾c.; good, to prime 5¾@6¾. Common to choice lambs 6@7¾.

SWINE.—Receipts for the week, 26,786 head: do. last week, 42,728 do. No live hogs on sale; tendency of the market down. Nominal price for corn 5¾c.; Country dressed pork light 7¼@7¾c.; medium, 7@7¼c.; heavy, 6¾@6¾c.; city dressed State 6¾@7¼, city dressed Western 6¾@6¾, Western dressed 6¾@6¾. Pork tenderloins 12¾.

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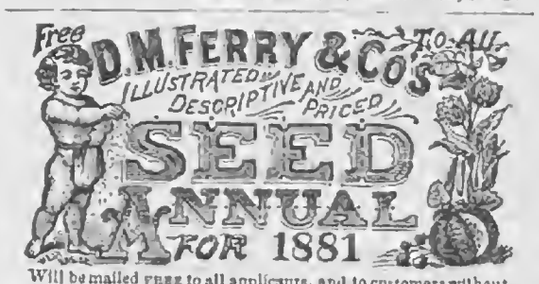

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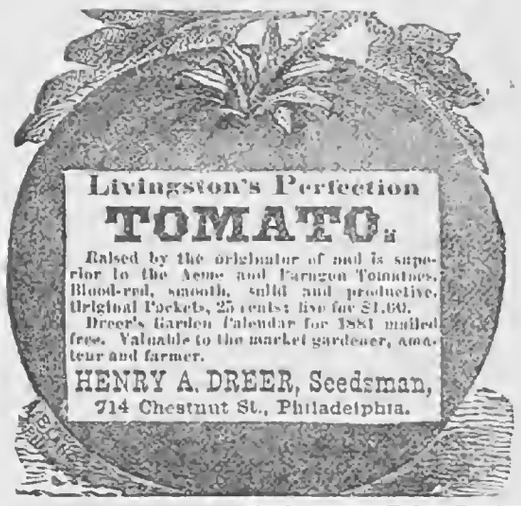

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Fertilizing the Soil.

ALTHOUGH the soil is a vast storehouse of plant food, yet it is easily exhausted by a few years of poor farming. One may take a piece of the richest land and grow crops on it for several years without putting any manure on it; but the end will be, sooner or later, that the crops become lighter year by year until they become so small that they will not pay the farmer to work them. This has been the history of thousands of farms in this country. The farmer has found his income too small to maintain his family and his children have been obliged to leave home, the boys to go West to work for their living and the girls to seek employment wherever they may be able. This unfortunate result has been due to poor farming. Thousands of other farms, now rich and productive are rapidly approaching the same fate, and unless this unwise practice is stopped in time, many places in the West will become as unproductive as some parts of the older States now are. And yet by looking at the soil of an exhausted farm, one cannot see any difference between its present appearance and that when it was in its first productive state. The soil is there, no grass grows upon it, poor weeds and stunted bushes may alone appear in place of rich crops of wheat or corn, but the soil itself has not changed so far as can be seen. When some of this soil, however, is taken to a chemist he will find that it contains no potash, no phosphoric acid and no nitrogen that can be taken out of it by steeping it in water. He will tell us that it is deficient in soluble or available potash, phosphoric acid and nitrogen, and as plants can take up only such food as is soluble, they starve in the midst of plenty which they cannot reach. If one were to put a quantity of corn in small bottles or tin boxes, and mix it with some loose corn, and give the whole to a flock of fowls, they would pick out the loose corn until that was all eaten, and then, although there might be plenty of food in the bottles or boxes, the fowls would go hungry and starve, in time, although there was plenty of food there; but they could not get at it. In almost a similar manner the fertile elements of the soil are presented to the roots of plants. These pick out all that they can reach, and when that is consumed, they can get no more; although every little particle of the soil contains plenty of food for them, but so locked up that they cannot avail themselves of it. If the fowls could wait until the tin boxes rusted away, or if we should go among the glass bottles and break them up, there would be more food for them; so if the farmer could wait until the air and water wear away the surfaces of the particles of the soil, or if he goes with his plow and harrow and works the soil and breaks it up so as to hasten this effect of the air and water, or if he puts lime or ashes, or other substances which help to produce the same effect, he could increase his crops to some extent.

But this process would be too slow and he must find some better plan than that. He is then obliged to fertilize the soil in some manner. He can do this in various ways. He can avoid growing one crop year after year, and growing a variety of different crops in successive years, taking care that one or more of these shall leave on the ground a quantity of roots, or stems, or leaves, such as grass or clover, a sod in fact, which he can plow in. Then with the addition of some lime occasionally, he may put off for many years, the time when the soil may be worn out. This is one way of fertilizing the soil, and is known in farm practice as the rotation of crops. When skillfully applied this practice is of great use, because as one crop takes less of potash or phosphoric acid from the soil than another, while this is growing, time is given for the soil to let loose some of these elements and store them up for a future crop which needs them. Another way of improving the soil is by plowing under clover which is more easily grown than a grain crop, and which has a very beneficial influence on the soil, not only by adding its own substance to it, which has been derived from the soil and which consists to a large extent of the same substances as the soil, but it has a useful effect in dissolving part of the soil so that other plants can feed upon it. Another way of improving the soil is by feeding some of the coarser portions of the crops to cattle or sheep, and by using the straw as litter, and saving the dropping of these cattle with the soiled straw and spreading the whole on the land. With all these helps together, viz., by growing crops in rotation, by plowing in a sod, by using lime occasionally and by making and using manure, and by plowing and working the soil so as to cause it to dissolve as much as possible, the land may be kept in a fertile and profitable state, and the farmer can support himself and his family comfortably. This is good farming, and the man who knows how to do all this in the best manner is a good farmer.

If the whole of a crop of wheat, of 33 bushels, or one ton of grain, and two tons of straw, were burned, there would be left 240 pounds of ashes; the wheat would leave 40 pounds and the straw 200 pounds. This ash all comes from the soil and there would be from the wheat 12 pounds of potash, 18 pounds of phosphoric acid; five pounds of magnesia; 1½ pounds of soda and 1¾ pounds of lime; from the straw there would be 23 pounds of potash; six pounds of soda, five pounds of magnesia; 12 pounds of lime and 10 pounds of phosphoric acid. So that before we can grow a crop of 33 bushels of wheat to the acre, the soil must be able to furnish all this mineral matter in a soluble condition. The heat, smoke and vapor from the burning, would contain the nitrogen and carbon. The nitrogen only is taken from the soil; the carbon is supplied by the air, and we need take no care about that; but we must see that the nitrogen is supplied, if we would have the wheat. There would be in the wheat and the straw about 60 pounds of nitrogen and this *must* be in the soil, although all the others are there; if this is wanting and there is plenty of the potash and phosphoric acid these will be of no avail, the wheat cannot grow without the nitrogen. In fact the soil must contain every element needed, for if one only be absent, the crops will not grow. So that for the complete fertilizing of the soil the farmer must not only know what each crop demands from it, but how he can best supply these demands, as well as to provide the requisite elements to provide for them.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

BY ALICE P. ADAMS.

The Arrival.

IT was a pleasant afternoon in early March, and a boy of sixteen with a girl two or three years younger waited at the San Gabriel station for the train from Los Angeles.

"Dear me! it seems as if that train never *would* come. I know it's behind time. What if they have had an accident!" and Miss Violet's rosy face lengthened visibly at the bare thought.

"Oh fudge! Don't be a goose, Violet Erman. I told you we would be too early, and it's just three to a second." Bertram consulted his watch of which he was very proud—"no better timepiece in the world" if we do not doubt the authority of the owner.

His sister was convinced, though by no means contented. "Fifteen whole minutes to wait! I never can do it! (How will you help yourself?" put in Bertram, parenthetically.)' You needn't laugh now, Bert. I know I'm excited, and I don't care. When I think of that darling Daisy Heberden that I havn't seen for over three years, and know she's coming on this very train, it seems as if I should fly!"

"Oh I wouldn't, my darling," said Bertram in a wheedling tone; "I'm afraid you would have no better luck than the renowned Darius Green."

"You provoking boy to make fun of me so! If that lanky John Thomas was coming you would be in just as great a hurry as I am!"

"Well, supposing I drive on a little. The time will pass quicker, and you will have a chance to cool down; for you don't want to smother the girl the minute she steps off the cars, and her life is certainly in danger from present indications."

"No, no, don't you stir a step; for the train might come in, and what would she think if none of us were here to meet her?" So Violet fussed and fidgeted while the time wore away, and an almost imperceptible rumble grew louder and louder until the train finally swept in sight, and at last stopped at the station.

Bertram was on the platform ready to assist the stranger, while Violet held the ponies. What, if Daisy had not come after all, she thought as she waited in painful suspense. There was old Mr. Smith getting off, and two or three of the neighboring ranchman, and some of the winter visitors at the Mission, and then a pale-faced girl in an ulster and dark felt hat. Could that be Daisy? Yes it must be, for Bertram was talking with her; and he soon brought her to the impatient watcher who dropped the reins, jumped down without any assistance, and hugged her friend, regardless of time, place and spectators.

"Oh, you darling girl, I was so afraid that something had happened and you hadn't come. It is rather mean in me, but I can't help feeling glad that you were not very well, and I could embrace the doctor for advising your father to send you here. I don't see though, how they made up their minds to let you come." Violet stopped for a breath.

"Mother said, at first, that she never could consent to my going so far away; but when she found that I didn't grow any stronger after I left school, and I had the headache so much, she finally said she would agree to the plan. If the doctor thought the change would help me."

"I wish the rest could come, too."

"Oh, they couldn't leave home, and they never would have let me come if your family hadn't been here. You know we lived next to each other as long as I can remember, until you moved here, and mother said she would rather trust me with your mother than any one she knows."

"I must remember to tell mamma that; she will consider it quite a compliment," said Violet, smiling. "We don't intend to let you be homesick a minute. Here comes Bert. I suppose he has been to look after your trunk; so let's get in. We brought the wagon so that we could take your baggage right home."

The trunk and satchels were bestowed in the spring wagon, Bertram touched up the ponies, and away they trotted. "Where did you leave Mr. Ford and his wife?" he asked, referring to Daisy's traveling companions, who were old acquaintances and had taken care of her during the overland trip.

"They stopped in Los Angeles. Mr. Ford wanted to come out here with me, but I told him that I could come alone this little way."

"When did you get in town?" asked Violet.

"About two, I should think, for it was only a short time before I took the train for San Gabriel; so I have seen nothing of the city."

"Then we shall have the pleasure of showing you all the 'lions,'" said Violet.

On trotted the ponies through the Mission—the Mexican village—whose strange sights made Daisy's eyes open wide.

"Here is the church—over a hundred years old. Some day when we are down for the mail we'll go inside. You will have a chance to learn the Mission by heart, for some of us come every day."

"How queer everything seems," said Daisy. "And the Mexicans look so fierce—I should think you would be afraid of them."

"Oh, dear no!" laughed Violet. "I used to be when we first came here, but they seldom molest any one. They fight among themselves, and the most of them steal whenever they get a chance, but they never have any pitched battles with the white people."

"Well, Daisy, did you leave such weather as this at home?" asked Bertram.

"Indeed I did not. It has been pretty cold there all Winter, and we started right in the middle of a raging snow storm. It seems perfectly wonderful to me, notwithstanding all you have written, to see the hills and plains so green, and the flowers blooming out doors. I can hardly believe that this is the first day of March. It is more like the first of June!"

"I suppose we have become so accustomed to the weather that we don't appreciate it as you do. But it certainly is delightful; and I cannot see how you manage to exist back East with the wretched weather you have," and Violet gave vent to a sigh as she considered the doleful condition of the unhappy people who dwell east of the Rocky Mountains. "You freeze in the Winter, and have sun-strokes in the Summer, and when you have a few really pleasant days, you are so proud of them."

"Oh-h!" A little scream from Daisy interrupted Violet's rather needless tirade. They had reached a long hill, and Bertram put on the brakes and let the ponies trot down.

"What is the matter?"

"I'm afraid to go down here so fast. Won't the horses run away?" inquired Daisy, anxiously, holding fast to the seat.

"Why, there is no danger," said Bertram. "Don't you see the brake? When I move it forward with my foot see how those pieces of wood hold the hind wheels; and I can put it on so far that the wheels will be locked and can't move at all."

"What makes you have those old shoes on the blocks of wood?" asked Daisy, breathing easier now that they had reached level ground.

"We have to put on something to protect the wood, for the wheels would soon cut a hole in it; and a cast-off shoe, minus the heel, seems to answer the purpose better than anything else."

"That's one way," said Daisy, laughing. "But I thought it hurt horses to go so fast down hill."

"It don't hurt these *broncos;* they are tough as sole-leather."

"What makes you call them *broncos?*" asked Daisy.

"That is the name given to the Mexican horses to distinguish them from the American breed. Now that bay pony"— Bertram commenced a disquisition upon this particular *bronco*, which was interrupted by Violet:—

"Here's our house! Rather different from the one back East, isn't it, Daisy?"

They left the main road and drove up the avenue, at the end of which stood the cottage, half hidden by trees and vines; and in the door, hospitably open, stood Mrs. Erman, who welcomed Daisy with a motherly hug and kiss, saying, "How glad I am to see you, dear child!"—To be continued.

CURIOUS TREES.

There is a tree which grows way off on the island of Madagascar, called the Traveler's Tree, or, as botanists would say, it is Ravenala Madagascariensis. But that is such a long name we will call it by the former. The Traveler's Tree rises from the ground with a thick, succulent stem, and grows to the height of eighty feet or more. The leaves are very long and broad, sometimes reaching a length of five feet, and these are borne on a stem or stalk from 6 to 8 feet long. These spread out in a fan shape and present a very beautiful appearance. But the strangest thing about this tree is that it contains in its leaves a great quantity of water which the traveler over the arid regions may easily procure. Sometime ago, a missionary who was on the island, thought he would see whether or not there was any hoax about this "water-bearing" tree, so he went to a grove, and, with a spear or sharpened stick pierced the lower part of one of the leaf-stalks, and sure enough, a small stream of water spurted out to his great surprise. It was found on examination that on the inner side of each of the stalks there was a narrow channel running down from the base of the leaf to the body of the tree. This seemed to collect the water condensed from the atmosphere by the large, cool surface of the leaf, and conducted it downwards. Thus a cooling draught is ever ready for the thirsty traveler though springs and wells are not at hand.

The Cow Tree is another curious member of the vegetable family, and probably receives its name from the fact that it furnishes milk much like a cow's. Whenever the inhabitants of Venezuela (for it is there that this tree grows) wish a little milk for their tea, instead of going out to the cow for it, as farmers' boys are accustomed to do, they take a knife or some other sharp-edged tool and make a little incision or cut in the bark and from it flows a milky juice. This milk, unlike most vegetable juices, is very wholesome and nourishing, possessing an agreeable taste like that of sweet cream, and a pleasant, balsamic odor, its only unpleasant quality being a slight degree of stickiness. So, in nature, man's wants are provided for in many ways, and therein the wisdom of the Creator is made manifest.

UNCLE MARK

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I go to school and read in the fourth reader. My grandpa takes the RURAL, and I like to read it, especially that part containing the cousins' letters. I would like to join the Horticultural Club, if you will permit me. I am very fond of flowers, and we have quite a variety of house plants, some of which are now in bloom. Will you please remember me when you send seeds? Your niece. IDA.

Mountain View, Passaic Co., N. J.

DEAR UNCLE MARK:—I thought I would like to be one of the little cousins. I am a little girl nine years old. I was born in Arizona but afterwards we moved to Texas. Mamma takes the RURAL and I think it is a very nice paper and I love to read the little cousins letters. I have been to school 15 months. Papa owns a flock of sheep and I have seven head of my own. I would like to have flower seed to sow next Spring. I don't dare to write much for fear my letter will go into the waste basket. JENNIE CURTIS.

Fort Griffin, Texas.

DEAR UNCLE MARK:—I am a little girl six years old last May. I cannot write so I have got mamma to write a few lines for me. I have a brother about nine years old. We love flowers very much, especially the RURAL'S. We wanted ma to write last summer so you could put us on your list but she did not. No more this time but if I see this in print you will hear from me again.

CORA MAY WARD.

[Will Cora please send her address. U. M.]

Sabbath Reading.

"LET THY WILL BE DONE."

"Thy will be done!" Not lightly be it spoken,
To fall like tinkling cymbals on the air;
Beyond all other words are these the token
Of resignation conquered from despair.

Not all who say "Lord! Lord!" can tell what measure
Of heavy cost it takes their depth to learn;
What loss of ease, what sacrifice of treasure,
What exile, out of which is no return.

He who has proved this saying bears the traces
Of furnace-fires that spare the gold alone;
His conversation is in Heavenly places;
His life is lived as God's, and not his own!

His soul in restful patience he possesses,
Nor sighs for hopes that vanish unfulfilled,
As one who meets with loss, yet still caresses
Regretful dreams with spirit half self-willed.

No more in things of time his heart is centered,
For he has seen their preciousness decrease;
Has weighed the world, and proved it void, and entered
The upper chamber of abiding peace.

"Thy will be done!" O! utterance magnetic!
That thrills anew the soul's diviner chord,
With deep compassion for that woe prophetic
Which filled the anguished chalice of our Lord.

Behold in that sublime self-abnegation,
What lowly path the Man of Sorrows trod
And know that out of thy humiliation
Shall know the grace to stand before thy God.

Then not with lip irreverent be spoken
The hallowed words of God's all-suffering Son;
But say with contrite heart and spirit broken,
Through loss, through sorrow, "Let Thy will be done!" —Frances E. Pope, in Advance.

"NEARER, MY GOD, TO THEE."

This language was the heart-utterance of Mrs. Sarah Flower Adams, who was born in Cambridge, England, in February, 1805, and whose history has been but very slightly known to the great public, who have cherished her hymns as one of the most sacred treasures for nearly half a century. Her father was the editor of a weekly Cambridge paper. Her mother was a woman of fine gifts and culture, and she herself was the youngest child. She was noted in early life for the taste she manifested in literature, and in maturer years for great zeal and earnestness in her religious life. She contributed prose and verse to the periodicals of the day, and her art criticisms were valued. Married at an early age, and of frail constitution, she still, amid many bodily sufferings, kept her pen busy, her thoughts and writings always tending upwards. At what time and amid what circumstances she caught the inspiration from which evolved that wonderful hymn which has since echoed round and round the globe, is not known; but it was probably during some period of peculiar trial, when her spirit was uplifted through sorrow almost above its earthly body. She little dreamed that her hymn, like those of Toplady, Charlotte Elliot and Ray Palmer, would be heard through the ages.

It was first published in 1841, in a volume of sacred lyrics issued by Mr. Fox, of England, just eight years before the death of the gifted authoress, who only lived to the age of 44, and thus never knew the fame which was to attach to her hymn and her name. The hymn soon began to appear in various collections, and was everywhere received with delight. It was given the tune "Bethany," which became very popular in this country. Everybody who has grown up in a Christian land knows it by heart, and in many countries which do not float the banner of Christ, it is almost equally familiar.

"Last year," says Dr. Culyer, in his "Heart Life," "Professors Smith, Hitchcock and Park, as they wound their way down the foot-hills of Mount Lebanon, came in sight of a group of fifty Syrian students, standing in a line, singing in chorus. They were the students of the new 'College of Beirut' at Abieh, and they were singing in Arabic to the tune of 'Bethany.' As the procession drew near they caught the sublime words:

"'Nearer, my God, to thee!
Nearer to thee:
E'en though it be a cross
That raiseth me,
Still all my song shall be,
Nearer, my God, to thee,
Nearer, my God, to thee,
Nearer to thee.'

"'I am not much given to the weeping mood,' said Professor Hitchcock, when describing the thrilling scene; 'but, when we rode through the ranks of those Syrian youths, I confess that my eyes were a little damp.'

"If it be permitted to the departed people of God," continues Dr. Culyer, "to witness the transactions of earth we may imagine with what rapture the glorified spirit of Sarah Flower Adams heard her heart-song thus chanted in the land of sacred story."—Boston Musical Herald.

PERSONAL ITEMS.

Professor Legate, of Nevada, says that the moon's rays spoil fish, and that his experiments prove it.

Of the seventy-six United States Senators only thirty-three were born in the States which they represent.

General Garfield's step-father, William Belden, died near Grand Rapids, Mich., on Friday night week, aged seventy years.

Mr. Gladstone is reported by his wife as singing every morning in his bath, and the inference is that he is not much worried by the Irish agitation.

General Grant has engaged an architect to make such repairs upon his cottage at Long Branch as are necessary, and put it in complete order for his occupancy next Summer.

Judge Gere Black, who is seventy-one years old, is a great favorite in Washington society. He says that he is a pretty old man, but that he did not write Coke's law books.

Alvin Hawkins was inaugurated Governor of Tennessee at noon last Tuesday before a large assemblage of people. He is the first Republican Governor that State has had for ten years.

Olive Logan, writing from New England, says that cold pork and beans for breakfast, bean porridge for dinner and warmed-up beans for supper constantly remind her of the part of the country which she is visiting.

United States Senator McDonald, of Indiana, after his term expires next March, will return to his old profession as a member of the law firm of McDonald & Butler, at Indianapolis. He is quoted as saying: "The practice of my profession has been my life business and politics but an episode."

Dawson habitually whipped his wife at Paducah, Ky. Wyatt, his neighbor, said to him, "If you don't stop the practice I'll kill you." The next time Mrs. Dawson screamed, Wyatt went in and kept his promise by shooting her husband through the body, though the wound did not prove fatal until a week later.

Mr. Philip Armour, the wealthy Cincinnati merchant, and Manager Carpenter, of Chicago, both of whom died a few days ago, lost their lives through overwork. Mr. Armour was thirty-eight years of age and worth, it is variously estimated, from $2,000,000 to $7,000,000, and Mr. Carpenter was successful at thirty-six years.

DR. LUCY S. PIDGIN of Boston, who graduated last March from the United States Medical College, of New York, being number two in a class of sixteen, has been elected secretary of the West Side Medical Association, of New York City. This is probably the first instance of a woman being elected to such a position in an association composed almost entirely of men.

Catarrh of Eleven Years' Standing Cured in Three Months.

The President of the Wisconsin State Normal School, Mr. William D. Parker, says, in a letter to Drs. Starkey & Palen, under date of Sept. 4th, 1879: "After enduring post-nasal catarrh for eleven years, at times greatly annoyed and sickened by the abundance of the secretions, in the full belief that catarrh is incurable, I procured your *Compound Oxygen*, and after three months' steady application *the secretion wholly ceased* and has not yet returned, *six months having elapsed since I have used the Oxygen.* I therefore commend your specific to the thousands of sufferers from catarrh with its attendant ills. I shall take pleasure in testifying for the benefit of any inquirers." Our Treatise on Compound Oxygen, which contains a large number of testimonials to remarkable cures, is sent free. DRS. STARKEY & PALEN, 1109 and 1111 Girard St., Philadelphia, Pa.

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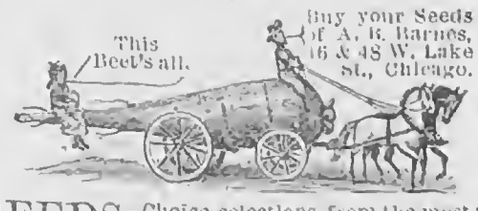

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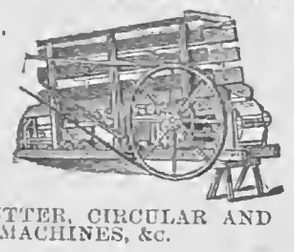

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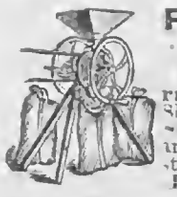

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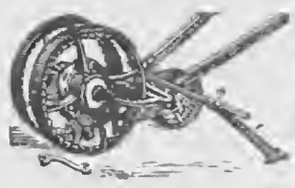

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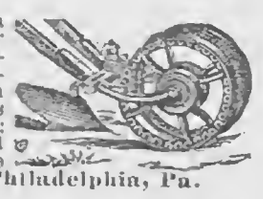

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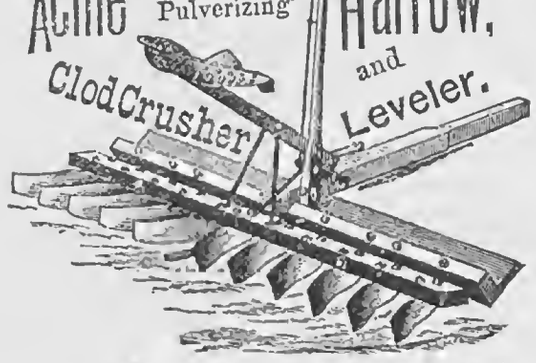

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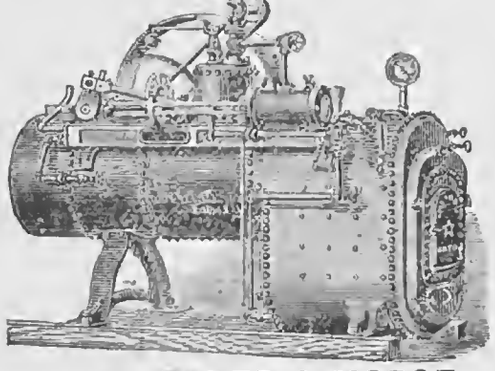

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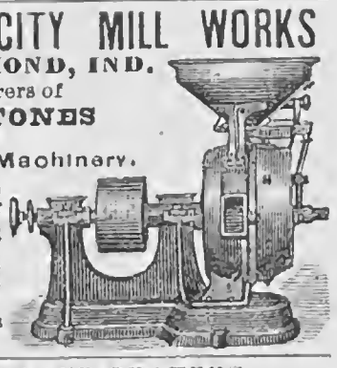

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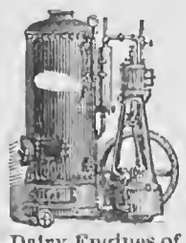

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XL. No. 6. Whole No. 1619.

NEW YORK, FEB. 5, 1881.

Price Five Cents. $2.00 Per Year.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

NEW ROCHELLE RASPBERRY.

PETER B. MEAD.

The New Rochelle Raspberry is an undoubted seedling of the Catawissa, raised about eleven years since by Mr. S. P. Carpenter of New Rochelle, N. Y. (who also, a little later, raised the Caroline), and was first sent out in 1877, after about eight years of trial. I have grown it some three or four years. I first saw it in full bearing three years ago at Mr. Wm. S. Carpenter's of Rye, where it seemed to be perfectly at home, as do all the small fruits. Up to that time I had seen nothing in the way of a berry plant that bore such an enormous crop; and I have seen nothing since except the Snyder Blackberry, and perhaps the Caroline Raspberry, and from the latter I think I can gather more fruit, taking plant for plant. I have seen the New Rochelle since at the originator's, where it also bore a wonderful crop; and my own plants, on a much lighter soil, seem to have done about as well. It is not only very productive, but a rampant grower, and is as hardy as any wilding growing in the woods. It is propagated from the tips.

The berry is large, dark-red, covered with bloom, rather firm, with a sprightly subacid juice grateful to many, and carries well to market. Mr. C. of Rye, has realized 15 cents a quart for it. The ripe wood is a bright red, thickly covered with a fine bloom. Though not a fruit of the first quality, it might for a time hold the place of a poor man's berry, since it will grow and produce a large crop of good fruit under almost any conditions of soil and culture.

Mr. Downing and some others have noticed an imperfection in some of the pips, which they suggest may be owing to mildew. It is seen chiefly in bad seasons like the past, mostly on the late berries, and is owing to imperfect fertilization and not to mildew. It disfigures the fruit, but seems not to be otherwise hurtful.

If Mr. Williams and a few others who are not afraid of a failure, would undertake to grow a few plants of the top-rooting raspberry by a method which I have not yet tried sufficiently to warrant me to speak of it publicly, but which would seem to promise success, I will gladly explain it to them. It would save much time in proving it. My own failures have been quite as interesting and instructive to me as my successes, and would make entertaining reading.

The New Rochelle Raspberry.

The New Rochelle originated from seed of the Catawissa at Mr. S. P. Carpenters, of New Rochelle, N. Y., and was introduced to the public three or four years ago. The plant is a strong, vigorous grower, and an abundant bearer. The fruit is of the Black Cap type in habit and shape; is one-half to five-eighths of an inch in cross diameter; of a dull purplish-red color (a decidedly objectionable feature in some markets), and will bear transportation as well as the Black Caps. The quality or flavor of the fruit is only medium, and will bear no comparison with that of Brinckle's Orange, Clarke and the finer varieties of the Antwerp class.

It propagates from the tips of the canes, the same as the Black Caps. On my grounds it has shown a tendency to be affected by the fungus so destructive to the Black Caps over a wide extent of country, and the past season the fruit was also defective after the first picking, many of the pips failing to swell, or else they had been punctured by some insect and the juice extracted, causing them to dry up, thereby marring the appearance of the fruit, and virtually destroying its use for dessert or market purposes.

As a market fruit in localities like New York, where a bright, attractive color is of the utmost importance, I apprehend the New Rochelle would be a failure; yet there are localities where pleasing the eye is not so important or difficult. For instance, a friend of Westchester County, N. Y., wrote me July 19, 1880, as follows: "I am now picking my new raspberries, Caroline and New Rochelle. I commenced 21 days ago, and from appearances will pick a week or two longer. I have nearly two acres of the New Rochelle and have had an enormous crop; I contracted it at Port Chester, White Plains and Rye to parties that have had it for several years, for 15 cents per quart. The product with me is about three times as much as that of any other kind. I have discarded everything in the raspberry line but these two, and the latter is the berry of all berries for the million."

In such a locality, with such prices and heavy crops, his enthusiasm is not to be wondered at. At such prices and with a ready demand, the grower need not "care a fig" for color or flavor, a "*big crop*" shou'd be his ultimatum, and the profit would surely follow.

E. Williams.

THE NEW ROCHELLE RASPBERRY. (From Life.)—Fig. 41.

The New Rochelle Raspberry.

Of the new raspberries, after several years' trial, the New Rochelle is decidedly the finest variety I have yet tested, and I believe I have had nearly every kind that has been offered for trial. I have now two acres, of the New Rochelle which fruited the past season. The yield was very large; the entire crop was sold at the villages within three or four miles, at 15 cents per quart. I think this variety will yield three times as much as any other kind in cultivation except the Caroline. This is a very promising new variety. It is thought by good judges to be about as good as Brinckle's Orange. It is wonderfully productive, and, being entirely hardy, will make a most valuable addition to our list of hardy raspberries. It is not as firm as the New Rochelle, and consequently will not bear long shipment. The berry is very large and of a fine orange color.

Wm. S. Carpenter.

Rye, N. Y.

Mr. Charles Downing, in reply to our inquiry, states as follows:

"The New Rochelle Raspberry is very promising and worthy of cultivation."

RURALISMS.

On page nine, a correspondent suggests that the statement in regard to the yield of the Blount Corn in connection with flat culture, would have been more satisfactory if the editor had earthed up half the lot, and given the result. It would certainly have been interesting and instructive, but it is a mistake to suppose that such experiments have never been made. I am able to say, of my own knowledge, that they have been made a number of times by careful and intelligent farmers, and particularly by one who had, at the time, the reputation of being the model farmer of his county, and famed for his golden butter. At my suggestion he grew about half his corn crop on the flat system, while the other half was earthed up in the usual way. The season proved to be a dry one, and the difference between the two was so great as to be observed from the roadside. I could mention a number of other cases where the two methods have been carefully compared; and it is not many months since a correspondent of a Western horticultural journal stated that he and his hired man made an experiment in flat culture at the suggestion of the latter (the employer evidently supposing the method to be quite new) and this correspondent candidly admitted that

"his hired man beat him." I have myself repeatedly made the experiment, not only with corn, but with all the field and garden crops usually earthed up, and the result has always been in favor of flat culture. The difference in favor of flat culture has always been greatest in a dry season, and for obvious reasons. Besides, a crop is produced at less expense in this way, and this is a very important point, even if there were no material gain in the crop. I repeated these experiments yearly for some five years before I began to talk much about them. A single year's trial might convince the experimenter in such matters, but would hardly satisfy the farming community.

WHILE on the subject, I will say that, so far as I know, the late Judge Buell, when he edited the Cultivator, before it was merged into the Country Gentleman, was the first to bring to public notice and advocate the advantages of this method, as being peculiarly adapted to our country and climate, and I have always called him the "father of flat culture," which now has not a few followers. It is a system that should be more generally considered by Western farmers who have no home market, and who should naturally wish to produce large crops at the least expense. As for myself, I have not for at least thirty years earthed up any plants except those that I wish to blanch. I cannot afford to do it.

A LADY of St. Louis having asked me by letter for information in regard to the Epiphyllum, or Crab's-claw Cactus, as she calls it, it may be useful to ladies elsewhere if I state here that there are few finer winter-blooming plants for room culture than Epiphyllum truncatum and its varieties. They are but very little trouble at any time, are easily grown, and bloom when quite small. They are charming also in the greenhouse and conservatory. I have upwards of twenty kinds; and coming into flower, as they do, at different times, I have a succession of beautiful flowers from November till March; and yet people are advised to dry them up during the Winter. I advise the readers of the RURAL to grow Epiphyllums, and to water them very much as they would any other plant, especially when they begin to show bud.

A YOUTHFUL correspondent in another part of the RURAL said, with evident pleasure and surprise, that her cleander produced seed last Summer, and wanted to know if that is a rare thing. The question shows an observing mind, and is promising for the future. I judge from her letter that this little girl is animated by the right spirit, and I would like to send her some seeds for her garden next Summer. It is just such cases that the RURAL should speak encouragingly to. They are small, but the future is all before them; and it is a great thing to have the privilege of giving a right direction to a child's mind, even in horticulture. I read with pleasure the letters of the little ones to Uncle Mark.

Experience with Peas.

I have been busy to-day gathering pea brush. I used to think it did not pay to brush peas; but I have since found that nothing pays better where brush can be had. Aside from the increased yield, which is at least one-third, it is only about one-half as much work to pick brushed peas. They are also ready to pick about four days earlier than those grown upon the ground. I make the same brush last three years. As soon as the peas are harvested, I pack the brush away under cover where it remains until another season. This year I raised about 75 bushels of peas in the pod from one and one quarter bushel of seed. I planted half a bushel of Alpha, half a bushel of Champion of England, and a quarter of a bushel of McLean's Advancer. The Advancers did poorly; I shall not try them again. I think the Alpha for an early pea is about right. I plant as early in the Spring as I can work the ground. It being a deep sandy loam, I am not particular about its being very dry. I put the seed in about five or six inches deep, usually sowing a little phosphate in the row before I sow the peas, the ground having been well enriched for celery the year previous. The Alpha I plant in rows about four feet apart, and the Champion five, taking care to have the rows as long and straight as possible, so that they may be cultivated with a horse. With me the Alphas require brush from three to four feet high, and the Champions, from five to six. I cultivate them twice, once just before I set the brush, and once pretty soon after. I don't think they should be cultivated after they commence to blossom, unless it be to give them a very shallow hoeing. Having read in the RURAL, or some agricultural paper, that early peas would sometimes make a good crop if planted the first week in August, I tried the experiment with four quarts of Alpha, and although the weather was favorable, the crop was very light, most of the pods having only one or two peas in them. I have come to the conclusion that peas cannot be profitably grown when planted later than the first day of June. Peas brought, on an average, $1 20 per bushel during the past season.

Oneida Co., N. Y. ADELBERT WAKEFIELD.

Arboricultural.

THE PRESERVATION OF OUR FORESTS.

BY CLINTON.

I WAS highly pleased to notice, in the recent Report of the Secretary of the Interior, that he takes decided ground in favor of the adoption of measures for the preservation of our timber. His suggestions are timely, and it is to be hoped that they will not be permitted to pass entirely unheeded. The subject is one which, it would seem, cannot by any possibility be construed into one of a partisan character, and I disclaim any intention of considering it in any such light in my present remarks. It is a matter which for years has attracted my attention, and with reference to which it has seemed to me important that our government should not be indifferent, but should at least endeavor to devise more energetic and effectual measures than any which have been adopted; and for years I have availed myself of opportunities to call public attention to its importance and to the necessity of prompt action if we have any desire for the future welfare of our country. But the public attention has seemed too wholly engrossed by matters promising more immediate results and profits, to give heed to any matter apparently so remote in its results as people seem to deem this to be.

It is therefore specially gratifying that an officer of our general government should call the attention of Congress directly to the subject, and urge upon that branch of the government the importance of giving it immediate attention. He says, in substance, "Our forests are disappearing with appalling rapidity, especially in that part of the country where they will not renew themselves when once indiscriminately destroyed. Like spendthrifts, we are living, not merely upon the interest, but upon the capital. The consequences will be inevitably disastrous, unless the Congress of the United States soon wakes up to the greatness of the danger and puts this ruinous business upon a different footing by proper legislation." The Secretary does not speak in language one particle too strong or emphatic, as any one will see who gives attention to the subject. But the difficulty is to induce our people to give attention to and examine this subject. No intelligent person who will do that can fail to see that our American forests are disappearing with a rapidity which is unnoticed, and not even *dreamed* of by a majority of the people. But to one who has given the matter any attention or study the subject presents a view which, as the Secretary says, is truly "appalling." To the agriculturist, particularly, this subject is one of deep interest, and for that reason, it is thought, its consideration cannot be deemed out of place in the columns of the RURAL. The climatic and sheltering influences of forests, not only on vegetation, but on the health and comfort of mankind and the animal kingdom generally, are too well known to require any discussion here. We find that the normal condition of our portion of this continent was that of a *wooded* country; its forests, with comparatively few exceptions, stretched from the Atlantic coast to the Mississippi River, from the great lakes on the north to the Gulf on the south.

Probably no people have ever surpassed, if they have even *equaled*, its first settlers and their descendants in boldness of enterprise and in active industry. They have, within comparatively a brief period, leveled the forests and let in the sunlight on many thousands of square miles of territory. They have built cities, established churches and seminaries of learning, have opened canals, have constructed railroads, have built a navy, and have become, in reality, a powerful and prosperous people. But unfortunately their enterprise has not always been sufficiently discriminating. The original necessity for sweeping off the forests imparted to too many a propensity for cutting and slashing, which did not stop within reasonable bounds, and which, I fear, still continues. The rapid disappearance of our forests should therefore excite the serious attention, not only of the owners of cultivated lands, but also of other classes generally, for it is a matter in which all of our citizens are more or less interested. The observing man can now readily see, in passing through the country, with what improvidence and seeming want of thought the first settlers conducted their operations.

In their haste to get their lands under cultivation they girdled or burned large tracts of magnificent forests, seemingly without any thought beyond the immediate present—certainly too often without any intelligent, definite plan for the future. With no reference whatever to the general beauty and health of the country, and even without any reference to their own future interest and comfort in leaving sufficient protection, in belts of standing timber, to shield their houses and crops from the sweeping blasts of Winter, the work of destruction went inconsiderately on, while, with a little proper consultation and understanding among neighbors and intelligent concert of action with reference to some general plan, the advantages to which I refer might have been easily and permanently secured. It was too frequently found, when too late, that the reserved wood lot was on the wrong side of the clearing to furnish any perceptible protection to the buildings or cultivated fields, while the house and farm buildings proved to be located in the most exposed and bleak situations, involving, consequently, an increased consumption of fuel, food and fodder. After one or two generations have passed away the error becomes palpably apparent, and a score or two of years are found necessary for the growth of trees planted with a hope to supply in some small degree the shelter that had been so injudiciously destroyed.

But, independent of the havoc and waste of timber by the early settlers, other causes always have been, and still are, in constant operation to diminish the supply, and the consumption of timber seems to be constantly increasing, while the supply is rapidly diminishing. Among the causes constantly operating to lessen our supply are: First, the constant and necessary demands of wood for fuel. Notwithstanding the general use of coal for fuel in cities and populous places, yet a certain amount of wood is found necessary even there, while a large majority of the population of country places is composed of farmers' families depending almost entirely on wood for fuel, and who will, while the supply lasts, continue to use it with great freedom. Second, in the increased demand for lumber for building purposes. This includes not only what is necessary for the erection and finishing of buildings, but also what is used in the construction of fences, railroads, bridges, etc., and what has been and is constantly being used for the building up of our navy and the keeping of it in repair. Third, the consumption of timber for purposes of mechanical industry. This includes furniture of every description, carriages and vehicles of all sorts, whether for rail or other roads, farm implements generally, important parts of mechanics' tools and of machinery in general, besides the supply for the cooper, the trunk and the box manufacturer, and some thirty other classes of operatives, depending wholly or in part upon lumber or wood as an essential part of their material for work.

Fourth, and the last I will stop to particularize, is the amount of lumber exported to other countries, which is a constant drain upon the resources of our forests. The most valuable oak and pine trees are generally selected for this purpose. Not only the quantity actually *used* should be taken into the account, but also the quantity *wasted* and destroyed in the selection and preparation. In the selections for all these various uses the most valuable of our timbers are sought, as already stated, including more than thirty varieties, and the quantity of waste to which I refer, far exceeds anything of which the uninformed have any conception. In consequence of all this destruction of our timber, careful estimates, made by those competent to do the work, go to show that it is certain that *three millions of acres* of our forests are swept off in each year to supply the various demands, or 10,000 acres for each working day. Is not the Secretary justified in his assertion that the rapid destruction of our forests is truly appalling? Moreover, in addition to this great intentional destruction of our forests, thousands of acres are annually destroyed by fires, started either by the carelessness of man or by lightning.

But I find I am exceeding the limits I first proposed for myself, and have only attempted to call attention to the danger that threatens us, without proposing any methods of averting or retarding the progress of that danger, as I originally intended to do. But that branch of the subject must be deferred till a later opportunity.

How to Grow Telegraph Poles.

This is a very simple operation, and as there is a growing demand for them, they might as well be grown properly and economically. A tree planted out by itself, having nothing to interfere with its natural growth, will spread out its arms at will. Trees planted in close rows, and closely in the row, become cramped for room sideways and shoot upward as straight as an arrow, and the lower limbs are soon overshadowed by the tops and die off, leaving the trunks bare and all the branches growing nearly upright. The dense tops shade the ground so as to prevent the growth of grass and weeds, the roots are never scorched by the sun's heat, because it cannot reach them. The same tall, straight, bean-pole style would result from a course of persistent pruning, but that is labor, while close planting saves all labor, and produces an enormous crop on a small surface.

The top of a tree is very nearly the shape, spread and character of the roots, if the soil is not so hide-bound as to cramp them. Trees grown singly spread their roots out as far as their branches, but when grown closely they have no room to spread, and, finding food scarce, descend into the lower depths, exactly as the tops ascend into the atmosphere above.

Plowing corn deeply in a dry season "drives the roots downward to seek food," by this species of root-pruning, or root crowding, or whatever it may be called.

If, by the above, I have answered a query of an editor, inserted in my article in the January Corn Number, and shown how to grow poles, too, I have killed two birds with one stone. S. RUFUS MASON.

[Thanks to Mr. Mason for his answer. We would remark that the extent to which the roots of annual plants are driven down by cutting off the lateral roots is a subject worthy of experiments. We would suggest that a grain of corn be planted in a bottomless keg sunk in the earth.—EDS.]

Pomological.

APPLES FOR PROFIT.

E. P. POWELL.

IT would be impossible to give a list of apples, that would apply for either quality or profit to all parts of the country; but a few varieties may be specified that will generally give satisfaction through the Northern States.

Premise that no early apples pay to raise for market except the very early, and it will narrow our list of profitable early varieties to Red Astrachan and Harvest Bough. It is possible that special seasons may render September apples worth the picking, but this is unfrequent. Every one needs for home use the Porter and Gravenstein, as well as Early Rose, Summer Queen and a few more; but not for market. Passing to Winter fruits we have for

Early Winter Apples.

1. BELMONT, a noble apple in quality and most abundant in bearing. The tree is naturally well spread and capable of sustaining an enormous crop. This is sometimes called the Waxen Apple.

2. SNOW, a handsome fruit of superior quality, that keeps well till April, although it is prime for table use in early December.

3 HUBBARDSTON NONSUCH, a very large, finely-colored, agreeable apple that will not keep well beyond December. Old trees, like most that bear heavily, become quite brittle.

4. POUND SWEET. This apple pays better at one dollar per barrel than most varieties at two dollars. The fruit is so large and the trees so low-growing that four barrels are filled while one is gathering a bushel of many other kinds. The crop is always extraordinary and reliable, on alternate years.

5. BALDWIN. If the trees did not split and break so readily, this would be almost unrivaled as a good market variety.

6. R. I. GREENING. Here is another naturally low-growing, spreading tree, easily handled and bearing nobly.

7. JONATHAN, a remarkably fine, handsome apple and very prolific, although small. It is very salable and sure to grow in popular estimation.

8. GRIMES'S GOLDEN. This is perhaps the most profitable of the pippins over a wide range of territory, although the Newtown is unrivaled in some localities, and the White Pippin in my own orchard is superb in size, color and bearing.

9. NORTHERN SPY. Taking ten years successively, the profit of an orchard will be found to depend mainly on the long keepers. The cultivator can store such safely until he is sure of a good market in May. The Spy is in every way a wonderful apple. It is a superior bearer, superb in quality and in appearance.

10. KIRKLAND. This apple is but little known, and has one decided disadvantage—its color is yellow. But it keeps well, even longer than the Spy. The trees bear every year and on alternate years the crop is enormous. They are remarkably tough, never breaking down with their burden. I sold my Kirklands in May, 1880, for $1.56 per bushel.

The chief secret in making profit from an orchard lies in the careful handling of the fruit. Apples must be handled with sympathy and as lightly as eggs. They should never be tossed or dropped a single inch; nor poured. A little more care during picking, and there will be less labor and loss afterward. The average loss on apples, as ordinarily gathered, is one-half. This is a useless and reckless waste. No crop gets as little proper attention. The speculator hires raw hands who thrash, and toss, and tumble about the tender fruit, and then, without intelligent sorting, pack it to swindled purchasers.

Another serious evil in raising apples for

profit, is the habit of planting trees too closely together. An apple picked from a dense orchard is a wholly different thing from an apple that has had its share of sunshine and good air. Try the Greening as an example; in one case a "greening" clear through, in the other it is golden in flesh and almost unrivaled in flavor. A well grown and well ripened apple is also a better keeper.

To the above list of tree varieties for Winter might be very well added the Roxbury Russet, which, however, fails to be profitable on old trees; the Ben Davis, which is both productive and handsome, and Peck's Pleasant. These are valuable in all sections of the North. With the two Summer varieties we thus get fifteen first-rate market varieties, or they may be reduced to ten.

Oneida Co., N. Y.

NOTICES OF PEACHES
FROM NOTES TAKEN AT MATURITY.

T. T. LYON.

SERRATE EARLY YORK.—Forty years ago this was a popular garden fruit, largely, no doubt, for the reason that it was at that time the earliest good peach. Notwithstanding its liability, in common with serrate varieties generally, to the influence of mildew, it may be said to have held this position till it came to be supplanted by Hale's Early, since the introduction of which it has been in a great degree ignored and forgotten in consequence of its relative lateness and comparative unproductiveness.

EARLY TILLOTSON, another serrate variety, came before the public about 1845 to '50, with quite a flourish of trumpets, and was alleged to be earlier than Serrate Early York, and likely to supplant it; but it soon showed itself even more subject to mildew than its predecessor, proving nearly, or quite, valueless at the North, although farther South it seems fairly successful. I was amused at receiving this from my friend, L. E. Berckmans, of Georgia, in response to a request for specimen trees of such Southern varieties as would be worthy of trial at the North.

COLE'S EARLY, HAINES'S EARLY AND LARGE EARLY YORK seem also to have, to a considerable extent, lost their hold upon the partiality of planters and are now but little called for. They are quite similar in season, as well as in general qualities. Indeed, Mr. Downing seems to doubt the right of the latter two to be regarded as distinct varieties.

TROTH'S EARLY RED, a New Jersey market peach, has the merits of productiveness and good handling qualities; but it is deficient in juice, flavor and richness, besides which it is a pale-fleshed peach, which alone renders it less popular in the market, especially at the West.

MOUNTAIN ROSE is a comparatively recent introduction, which, doubtless on account of its bright color and the vigor and productiveness of the tree, is becoming popular. Coming in with several of the foregoing, and with little to commend it beyond others of similar season, it will be to me surprising if it shall long maintain a high position among planters.

BARNARD, sometimes called Early Barnard, or Barnard's Early, is thought by Mr. Downing to be identical with Yellow Alberge; or otherwise a seedling from it, with too slight a variation to entitle it to distinct recognition. However this may prove, the variety, at one time, in the estimation of Michigan market planters, occupied the post of honor. For the past four or five years, however, it has been steadily losing prestige here, till at the present time it stands as low as fifth or sixth in the list of popular sorts. It was never worthy of such eminence; hence I hail the change as an indication that education is doing a legitimate work upon both the consumers of fruit and the planters of trees.

SNOW'S ORANGE originated in Van Buren Co., Michigan, doubtless from seed of the Barnard, which it very closely resembles, although it is a little brighter in color, and by many alleged to be slightly later in ripening. As is the case with several other varieties, the Barnard seems occasionally, if not even generally, to reproduce itself from seed. In fact, this is the most probable explanation of the fact that differences exist in the fruit as grown upon different trees. Snow's Orange has glands very distinctly reniform; while those of the Barnard are very obscurely such. Both varieties ripen with Early Crawford.

WHITE IMPERIAL, which originated in Central New York forty or fifty years ago, possesses most of the qualities required in a market peach, excepting, perhaps, that it lacks color. It is, in fact, decidedly superior in quality to market peaches in general, while it is abundantly productive and of fine size. It is especially desirable for culinary uses generally, including canning, preserving and drying. For these purposes, it should find a place in every garden. Ripe in September.

WINTER CRAB APPLES.

IN reply to a correspondent the RURAL says, referring to a specimen crab apple:

"We have seen specimens of Hyslop, Meader's Winter and Lady Elgin as large and handsome, but as to the average merits of the various sorts, as compared with this, we cannot, of course, say anything."

I have long grown the three varieties here referred to, and my judgment regarding them is as follows:—

HYSLOP; of good size (one and a half to two inches in diameter) and great beauty, but not strictly a Winter fruit. It rarely keeps beyond the middle of December. Quality fair for cooking or preserving. The tree is worth more for ornament than fruit. It is a fine, symmetrical grower, with remarkably large and fragrant blossoms, and the fruit is glorious to look at.

LADY ELGIN.—Smaller than Hyslop, yellow, with a red cheek. Quality, as regards flavor, very good, but it never becomes really mellow. It keeps better than Hyslop, and is a better canning or preserving fruit, though not so high-colored.

MEADER'S WINTER.—This is a true Winter apple, keeping well through March. Size about the same as Hyslop; color yellow, nearly overspread with dark red. Quality not inferior to a Baldwin, and something like it. Tree thrifty and productive. Decidedly the best Winter crab I have. T. H. HOSKINS M. D.

Orleans Co., Vt.

Ice-Coated Fruit-Trees.

ONE of the wrong ideas which has a very general lodgment among the opinions and beliefs of orchardists, and which keeps its place in the face of all the flood of light that the press is now throwing upon all the theory and practice of the farm, is that of supposing that a coating of ice or of hoar-frost on the branches and twigs of trees is destructive to them or to their fruit-buds. It is, on the contrary, preservative, unless its weight is so great as to cause breakage. Hoar frost is dew, freezing, crystallizing as it condenses; and whenever it occurs the air is warmer than the objects which receive the condensation, and is at the same time saturated with moisture which it deposits on cooler surfaces. Now, plants in general, enjoy moist air, and dryness of the air is by far the most frequent cause of their death; and it is when the sky is dry and clear that heat radiates freely from every surface into space, and during the long clear nights of Winter very much more heat is lost than the short days and dim sunshine enable plants, etc., to absorb. Blasts from colder districts are dry as well as cold, and attack the life of plants by both weapons.

TYRONE.

EXTRA-HARDY APPLES.—Referring to the list of apples under the above caption, taken from our catalogue, we are now satisfied that the Rubicon should be dropped from this list. It does not prove as hardy as anticipated. We also have a new early variety to add to the list—Yellow Transparent. This apple, of Russian origin, has been tested in Vermont, and, like all of its class, the tree is very hardy and comes into bearing very young. The fruit is in size medium to large, of a fine, rich yellow color; flesh, fine-grained, juicy, rich, sub-acid. It ripens ten days to two weeks earlier than Early Harvest and Tetofsky, and is undoubtedly a valuable addition to our list of early apples.

Geneva, N. Y. R. G. CHASE.

Floricultural.

THE PETUNIA.

THIS old, well-known annual still holds its place among the favorites of the flower garden, and is well adapted to our climate. The petunia is much used in Europe in decoration, and, indeed, is one of the finest winter-flowering window plants. It has many just claims to holding a prominent place among the choicest bedding and pot plants, some of these being its very plentiful formation of seed; the comparative certainty with which the seed germinates; the long continuance of the flowering period, which, out-of-doors, extends until frost comes; its endurance of dry weather, and the little care that is required for its cultivation.

PETUNIA HYBRIDA FLORE-PLENO.—FIG. 43.

A new variety, which has just been introduced by Mr. B. S. Williams, of London, is Petunia hybrida robusta flore-pleno. The plants of this novelty are very compact and of symmetrical growth, and attain a diameter of 14 inches by about 11 inches in hight. The flowers, of which a large number belong both to the smooth and the fringed-petaled, large-flowering, double sections, comprise the whole of the beautiful shades of color, and so freely are they produced that a fully developed plant has all the semblance of an artificially made bouquet. This is a robust race of petunias, and will, from its convenient hight, be found especially suited for the open ground. It is, however, admirably adapted for pot-culture.

BLEEDING HEART.—Here is a seasonable item of value to those who like flowers for their windows. As soon as our January thaw comes (I believe Mr. Vennor has promised one) go into the garden, if you can find it under the besetting snow-drifts, and with a spade dig up, with plenty of earth adhering, a bush of the Dicentra spectabilis or Bleeding Heart, as it is sometimes called; plant it in a box or pot; set it in the sun-light in the living-room; give it water, and within a few weeks it will break out in beautiful flowers. It is an old-fashioned plant, so old-fashioned that some folks won't have it in their garden, but old-fashioned people can so brighten up their windows with this that it will make them the envy of some of their neighbors. G. S. W.

Rochester, N. Y.

Rural Architecture.

HAY BARNS.

W. G., West Troy, N. Y., asks for a plan for a hay barn, to be about 30 by 60 feet, with 22-feet posts and vertical sides, arranged for horse-fork and hay-carrier. Some of his neighbors who intend building such barns are also waiting for hints through the RURAL.

ANSWER BY PROFESSOR I. P. ROBERTS.

It is impossible to construct so large a building as W. G. wants, without moderately larges-ized timbers. The pressure of hay is not only to be provided for, but the building must be strong enough to resist the winds. As he intimates that several want similar plans, I suggest that they club together and employ an experienced architect to draw a plan, which may be modified to suit all parties; for it is impossible to give anything more than general suggestions in a short newspaper article.

The sills, if laid on a wall, may be 4x8 inches; if on piers, 7x7 inches, with posts and beams of the same size, except the intermediate side posts, as at I, which may be 4x7. It will readily be seen that the intermediate side posts are used in order that the side timbers may be reduced in size and shortened one-half in length. One entire belt of girts—fig. 45—should be tenoned and pinned. They may be of 5x6 timber placed flatwise. The nailing girts, just above and below the belt girt, and the braces may be of 2x5, *all* spiked in—the braces first and the girts afterwards—thus making one help the other, as shown at E. The building may be further strengthened by spiking short braces across the corners of the sill, as shown at *b*. To prevent it from spreading, braces should be thrown across the corners from plate to beam and secured by bolts, as at *a*. It is far better to secure braces by bolts where there is much strain, or by spikes where there is little, than by the old and expensive method of mortising, which frequently seriously weakens the timbers. By using 3x4 plate-beam braces and framing the top of the beam three inches lower than the bottom of the plate, the top side of the brace will coincide with the bottom of the plate, and the bottom side with the top of the beam—see end of braces *a*, *a* in fig. 44.

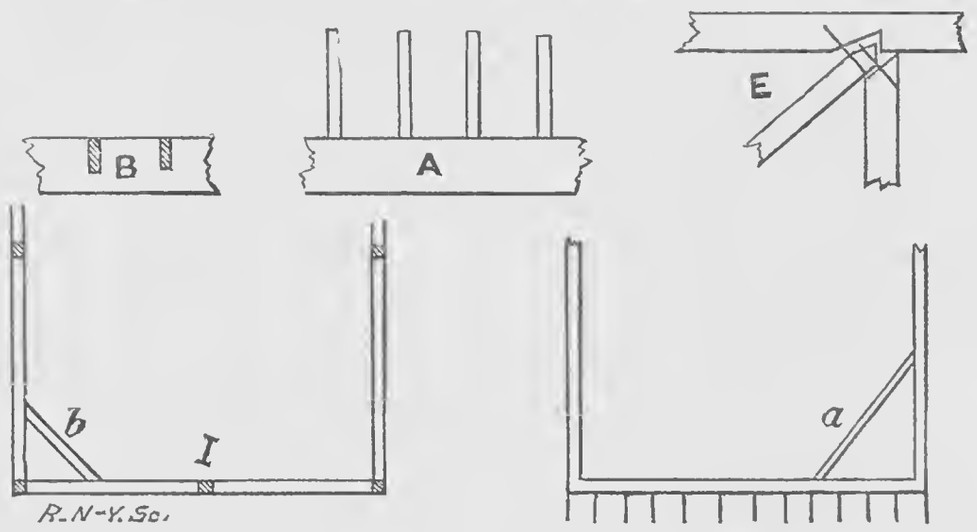


FIG. 42.

The floor should be 12 feet wide if it is proposed to drive through the barn; if not, then it should be at least 14 feet. The floor joists should run across the floor; this brings the floor planks so as to drive on them lengthwise. The sills should *not* be "gained," as shown in in the small section, B, but the construction should be as shown at A, as this preserves *all* the strength of both sill and joist.

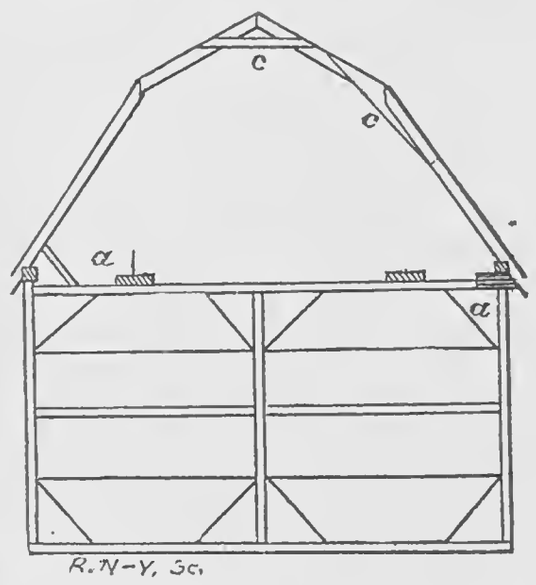


FIG. 44.

Lastly comes the roof, the most difficult and expensive part of the building. The self-supporting roof, as shown at fig. 44, is becoming quite common in this locality. I have had no experience in constructing a roof of this sort, but I have examined several, and they have every appearance of being both strong and durable. There are several things to be gained by this mode of construction. The expense and annoyance of all roof supports are avoided; the posts may be shortened and yet the capacity of the building be preserved. It stands the wind better, because it presents less perpendicular surface. It removes much of the thrust of the roof on the plates by the steep pitch of the rafters. Strength is gained, because it approaches very nearly to the form of an arch. There is said to be a patent on this roof, though I doubt if it can be maintained, as the

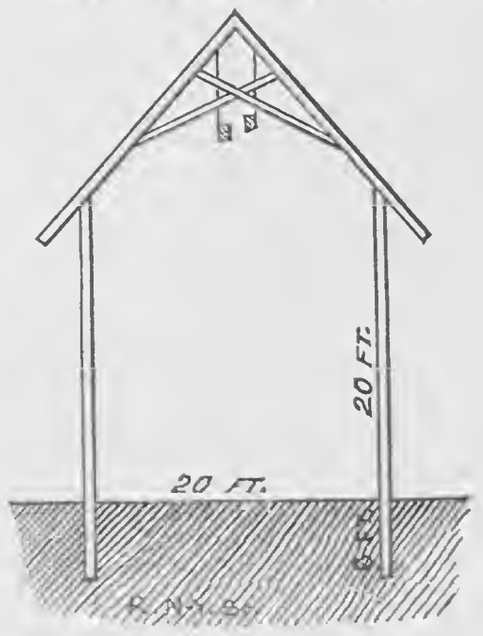


FIG. 45.

principle has been used in the construction of domes and arched-roofed churches from time immemorial. If light timber is used in the frame, the ends of all beams should be secured by an iron stirrup, as shown at *c*. The rafters should be 2x5 inches, placed two feet apart, and they should rise about 12 feet perpendicularly to every eight feet they depart from it, as shown in fig. 44, which represents a building 60x32 feet, with posts 18 feet. If the building is placed two feet from the ground, it will give an available space to *c*, which would be 32 feet from the ground. To secure the rafters and give strength, triangular boards should be securely nailed on both sides of them at *c c*. A practical carpenter—with a head on him—might, I think, construct a building of this size and use timbers only 6x6 inches, by mismatching the girts and beams so that no two mortises pierce the post at the same hight, and by using a little ingenuity in bracing and preserving the strength of the timbers.

But if these buildings are to be used only for *storing hay*, why not build a far cheaper and almost equally good structure (for the purpose designed), the hay barrack—see fig. 45. I have discarded all horse-hay forks for the *hay sling*, which not only unloads long hay, but short oats, barley, corn-stalks and wheat, bound or unbound. A load of 3,000 pounds can be deposited in the mow with four slings, in an average of less than ten minutes. I consider

the hay sling as far in advance of the horse-fork as the horse-fork is in advance of the hand-fork.

Cornell University, Ithaca, N. Y.

The Herdsman.

IN-AND-IN BREEDING AS EXEMPLIFIED IN THE DUCHESS SHORT-HORNS.

JONATHAN TALCOTT.

In asking "Stockman," in the RURAL of December 18, to give the number of animals of the Bates Duchess family now in existence, in order that farmers might judge of the theory of in-and-in breeding as advocated by him, my desire was for information, and I had no idea that he would take the course he has taken in order to avoid an answer; for, either through prejudice or ignorance on my part, I can look at his replies in no other light than as shifts to avoid a direct answer in one way or another. I did not ask in how many herds of cattle was the blood of the Duchess tribe of Short-horns intermingled, but how many and where are the descendants of Duchess of 1804, also of Duchess 1st, purchased as a two-year-old at Mr. Charles Colling's sale of cattle in 1810. Mr. Bates bred them in-and-in all he thought best, no doubt; and if that is a successful method of breeding, there should be thousands of that family to-day in England and America. But if that is not a successful method of breeding, the breeders of to-day should know it.

At Mr. Thomas Bates's sale in 1850—40 years after he had purchased the two-year-old heifer at Mr. Colling's sale—there were *eight* females sold of the Duchess family and six males. These were all descendants of Duchess 1st, purchased at C. Colling's sale as a two-year-old in 1810. Ketton the 1st is the only animal noticed in Bell's History of Improved Short horn Cattle as descended from the Duchess of 1804. If there was any breeding cow or heifer of the Duchess family sold by Mr. Bates during his life, I wish "Stockman" would tell the readers of the RURAL NEW-YORKER when it, or they, were sold, and to whom. I do not know of any one having been sold by Mr. Bates to any other breeder during his life; if not, then certainly the number at the sale was very small for 40 years' breeding of the Duchess family. Mr. Bates himself resorted to some out-crosses in his life, in Norfolk (2,377) and Belvedere (1,706); the first bred by Mr. Whittaker and the second by Mr. Stephenson. The last-named bull gave the Duchess family by his get on them their greatest excellence, and the great mistake of Mr. Bates was in not selling the Duke of Northumberland (1,940) to some other breeder, to whom his services no doubt would have been of great value on other herds not in-bred, and in not having kept Belvedere as long as he was useful as a sire. He was the sire of the best animals Mr. Bates ever bred, while the Duke of Northumberland, from his near relationship to Mr. Bates's herd, was of little value to him as a sire.

Suppose we look after the Bates Duchess family now, and see whether they are as numerous as "Stockman" intimates. I say "intimates," because he does not tell where any of them are to be found, but says, of the Duchess blood, "It is not confined to the central concentrated receptacles, the numerous Dukes of this and Duchesses of that, that may be pointed out wherever Short-horn breeding is carried on; but it spreads everywhere."

At the New York Mills sale, September 10th, 1873, of the 13 Duchesses from these females, that were sold, eight were kept in the United States, and if in-and-in breeding is the true course to be pursued in the raising of healthy and prolific breeders, there should now be a numerous progeny as descendants of those females; if not, why not? They were purchased at extravagant prices, and no doubt all the proper care was exercised toward them that our breeders of Short-horns know so well fine cattle require. Of these Duchesses one living animal now remains, the 10th Duchess of Oneida. Never having bred, she is at her purchaser's, Mr. Alexander's, in Kentucky. The bulls sold at that sale are all dead except the 7th Duke of Oneida. He is also owned by Mr. Alexander. The 7th Duke has a Booth and Knightley cross. The writer saw them both in 1875 while visiting at Mr. Alexander's in the Fall of that year. The Dukes and Duchesses sold at that sale and retained in America cost the purchasers nearly $160,000. Have the purchasers got, or did they ever have, the value of their money in those Dukes and Duchesses purchased at that sale? I think they did not; but they did help to inflate a bubble which has burst, and no doubt some of them have seen the folly of chasing a shadow where the substance is wanting.

The Airdrie branch of the Duchess family has a Booth out-cross, which many breeders feign to despise. There are a few members of this branch, but they are not considered the aristocracy of the Short-horn race. If, however, as is extremely probable, the Bates Duchess tribe shall soon become extinct in the United States, the Airdrie branch may thenceforth step to the head, and take a higher rank than heretofore.

Suppose we look at the Duchesses in England and see what is to be seen of them in their native home. The herd of Col. Gunter has been, I believe, considered one of the best, if not the best, in England. He made his first purchases at the sale of Earl Ducie's herd on August 24th 1853, buying two females of the Bates' Duchess family. In a late visit to the herd by G. E. M., as published in the National Live Stock Journal, he says there were five Duchesses and two bulls; four of the Duchesses he saw and both the bulls, together with two Short-horn bulls that did not belong to the Duchess family. He went with conscious prejudice in their favor, but he was disappointed. He says: "The average merit as individuals of the six members of the family seen is fair, but that is all. No one of them would be selected as an especially good Short-horn; no one is an especially poor Short-horn. Neither of the bulls is as good as either of the two not Dukes. No one of the females would be put anywhere near the top of the herd. These seem the simple facts, judging without regard to pedigree."

Now I wish to ask "Stockman" where, if any, is the encouragement for the breeders of the present day to follow in and-in breeding by the example of Mr. Bates with his Duchess family, as shown in this letter. If, however, I have erred in the statements made, will he please to show wherein the error, or errors, consist. I have endeavored to be candid and to give a correct statement; if I have not done so, the misstatement is not intentional on my part. If "Stockman" wishes to accuse me of being prejudiced, I shall not deny the accusation, but simply claim that all mankind are subject to the failing.

In regard to the Bates families of cattle, so-called, I freely admit that I have been strongly in their favor, and had I had the wealth of some of the earliest importers of Short-horns, I should have purchased of Mr. Bates and brought to America a Duke and Duchess long before his death, if he would have sold them to me, and, with a different course of breeding, that family might now have been healthy and prolific breeders. I am not vain enough to think that I should have done any better than other breeders have done, but the bull in those early days would have been valuable on what is called plainer-bred Short-horns. There is no doubt but the long-continued in-breeding has deteriorated the bulls of that family as sires very much more than many Short-horn breeders will admit. Had Mr. Bates combined the Duchess with the Old Daisy and Princess families—as at his commencement in 1810 he might have done—and then added the Matchem Cow afterwards, as he did, he would doubtless have added greatly to the good he did the public in his career as a breeder of Short-horns, and at his death have left a herd of vastly more real value than was the case, from their increased hardihood and greater fecundity.

Rome, N. Y.

NOTES BY A STOCKMAN.

Your very intelligent contributor, Mr. W. I. Chamberlain, of Ohio, has already done excellent work in his office as Secretary of the Ohio State Board of Agriculture. His report is the most useful document of the kind I have ever read and is worthy of careful study. Those parts of the report which may be pertinently mentioned in these notes are those which refer to the sheep interest of Ohio and to the losses by diseases of cattle. In 1876, Ohio produced 24,844 601 pounds of wool from 7,622,495 sheep, but in 1879, only 18,671,427 pounds of wool from 4 267 261 sheep. Two things are noteworthy here—the decrease in sheep and the increase in the weight of fleece per sheep. Ohio has lost 40 per cent. of her sheep, and has raised the average weight of the fleece from a little over three pounds each to nearly 4½ pounds. This increase in fleece is doubtless due to the more general use of pure-bred rams. But what is the cause of the loss of sheep?

Dogs!—There is enough to every sheep owner in that one word to make this note complete without another.

I maintain that no other farm stock will pay so well as a flock well chosen and well kept. But here in Ohio, which is eminently a dairy and a sheep State, 28,700 sheep were injured and 23 629 were killed by dogs in 1879, with a money loss of nearly $140,000. The loss to the State by the prevention of a profitable business may be readily estimated at $16,000,000; for the increase which has occurred in the dairy and in wheat and corn-growing might reasonably have happened with the sheep, and instead of eighteen million pounds of wool being produced, there might have been nearly fifty millions and much mutton and lamb besides. And all this loss is chargeable to the dogs.

But what are you going to do about it? To complain seems to be like "the voice of one crying in the wilderness." To put the loss in figures, as has been done in this report, and to keep pegging away at the subject, are about all that can be done in the matter.

Page 52 of the report aforesaid is a melancholy exhibit. Permit me to give the figures as follows:

ANIMALS DIED FROM DISEASES IN 1879.

		Value.
Hogs	152,590	$544,032 50
Sheep	59,440	179,613 50
Cattle	18,816	360 384 00
Horses	10,074	677,198 00
Total	240,920	$1,761,228 00

Here is a self-inflicted tax of enormous amount levied upon agriculture in one State, and that one of the least suffering in this respect. Brought up on a farm and a farmer for 25 years, I have never yet had any animal larger than a hen die from disease, and this exemption from loss has been due to constant care. I venture to assert that 75 per cent. of all the losses which occur throughout the country might be prevented, if only the owners would learn how to exercise common sanitary precautions, and knowing how, would use the requisite care and caution to prevent them.

The more we know of diseases of animals, the more we know that they are caused by want of the commonest sanitary precautions—by neglect and filth, in fact; and they are, therefore, avoidable.

Another valuable contribution to agricultural knowledge is the report of the Commissioner of Agriculture, Hon. Wm. G. De Due, for 1879. This contains an exhaustive report on the contagious diseases of the domestic animals, elaborately and beautifully illustrated, and which is of the utmost value to every stock owner. This report will fully bear me out in the above judgment as to the possibility of avoiding these destructive diseases, for the numerous examples given of the arrest of disease, as well as of the spread of it, by care on the one hand and by neglect on the other, completely sustain this view.

When in one State a million and three quarters of dollars' worth of stock die of disease in a year, there ought to be a great field for the employment of veterinary surgeons. And yet this field is at present almost wholly unoccupied.

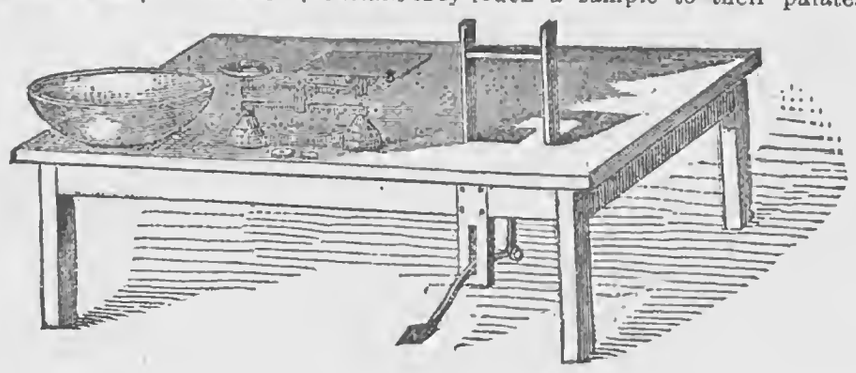
Dairy Husbandry.

THE DAIRY COW—NO. 24.

HENRY STEWART.

Butter Packages.

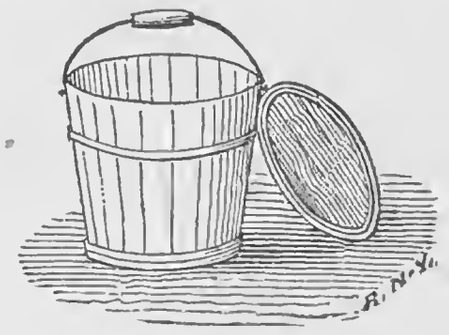
The marketing of butter is an important part of the dairyman's business. A good deal of money is lost by mistakes in this respect. Good butter is thrown away when put up in ill looking, frowzy, unsavory and repulsive packages. A good package will often sell butter of doubtful quality. Buyers are very much impressed with the *sight* of what they buy. To judge of butter requires a delicate sense of taste and smell, and but few persons are so expert in this way as to decide about the quality of what is shown to them, on the instant they touch a sample to their palate.



DAIRY TABLE.—FIG. 46.

But if any hesitation or doubt is felt, the sight of an unexceptionable package will help to determine this in favor of the butter. It is very much in this respect as a person is judged by his clothes—a well dressed man and one with an agreeable presence is treated with more consideration by a stranger than one who comes in shabby dress or unclean person. The dairyman who is desirous of opening new outlets for his product must be very particular as to his packages, so that the first impression created by his goods may lead to a closer examination.

The package, too, has much to do with the preservation of the butter. If it is ill-made, of timber with a bad odor, or worm-eaten so that the moisture of the butter will soon dry out and air will get in, the butter will soon spoil and become rancid. In the family dairy the package is to be considered as much as in the business dairy, because there are times when a surplus product needs to be put away for use when the supply falls off or is suspended altogether for a time.



FAMILY BUTTER PACKAGE.—FIG 47.

The staple trade package is the firkin which holds 100 pounds. This is the most desirable for shipping. It should be made of the soundest white oak and hooped with round hoops, fastened with tinned nails. No iron or copper nails should be used in butter tubs; but, if any should be used, they should never be driven through to the inside. The half tub, which holds about 30 pounds made precisely like a firkin cut down to about one-third of the hight, and covered with a head nailed down on to the top, is a desirable package for the private dairy and is greatly in demand by the retailers. The 50-pounds pail, of which the old-fashioned Orange County pail is the original type, is an excellent package. The best of this kind is one called the "Return Butter Pail" made of white oak, with galvanized iron hoops, and smoothed and varnished outside. The cover is made to fit closely and is secured by clasps which can be keyed tightly. If well packed and covered with paraffine paper and then with dry salt, and this with a piece of white muslin and the cover forcibly pressed down and secured, the butter may be kept perfectly well for a year, if it was as good as it should have been when it was packed.

BUTTER MOLD.—FIG. 48.

To show the effect on the market value of the butter by such a package and such packing I might mention a case which occurred once with myself. I had been sending butter to a New York dealer in the common blue-painted Orange County pails, and had been getting 40 cents per pound, when I heard, through an advertisement, of the Westcott return pail and sent for a sample lot, and one I put away in the cellar. The one sent out sold at 50 cents a pound, and I got an order to pack all my product in the same kind of pails and secured a regular contract, which continued for three years, and until I removed from the locality to another farm. The second pail was opened a year afterwards in perfect order, and was shipped with a lot of fresh ones. Just here I might remonstrate against a very unfair attempt made sometimes by dairymen to deprive their commission agent of the just fruits of his labor. When a good customer is found by the agent for a particularly good line of butter, the purchaser will often find out the dairyman and induce him to make a contract directly with him, unknown to the agent, at lower prices, saving the commission. This is a despicable meanness and a cheat. The dairyman who does such a nefarious act, without the knowledge of his agent or without compensating him for his trouble in securing the customer, is dishonest. These are plain, but true words. If such a favorable business transaction should be made, the dairyman would do a very unsafe thing to carry it out in an underhand manner, for, taking into account the risks of the retail grocery trade, he might very easily get into trouble and lose considerable money by the failure of the grocer to pay his bill. It is better to be safe than sorry, and one is generally sorry after having done a mean or dishonest action. Yet such an action is by no means unknown in the experience of the much-abused and much and often unjustly maligned "middlemen," who do both seller and buyer a valuable service.

To return to our packages—a large business is done with private families, either directly or

through dealers, and for this trade small packages are required. I use three kinds—one of 25 pounds, measuring 9¼ inches in depth and 11¼ in width at the top; one of eight pounds, 5¾ inches deep and 7¾ wide at the top, and one of six pounds, 5¼ inches deep and 6⅛ wide at the top. These are made of white oak hooped with two galvanized iron or brass hoops and provided with a handle and cover, as shown at Fig. 47. The cover is made double of three-sixteenths inch stuff, with the grain crossed, to prevent warping and splitting. When filled and protected as above described, the cover is tied down with twine and the pail can be carried in the hand very conveniently. After many trials of various kinds of packages, these have been found the best for supplying grocery stores and private families, who can have a size to suit their wants and can have a supply lasting one or two weeks, as they may desire.

The 25-pound pails are liked by persons who desire a supply to last two or three months, and are handy for family dairies where two or three months' supply is required ahead while the cow is dry. These pails should all be sand-papered and varnished on the outside, which fills the pores of the wood and makes it air-tight; as the varnish wears off it should be renewed. For a family dairy a desirable manner of putting up the butter is in quarter, half or whole pound cakes pressed in a mold, as shown at Fig. 48. This is turned out of beech, birch or soft-maple wood and made of different sizes. A convenient dairy table is shown at Fig 46 This is provided with a pair of scales and a foot-press for making the cakes. The butter, weighed, if necessary, is put into the mold, which is first dipped in cold water and placed on the plunger of the press; the foot placed on the step presses the butter in the mold and forms the cake. Molds may be made of any shape, round, oval, square, oblong, hexagonal or octagonal, and any device may be cut on the block or plunger. A good deal of first-quality butter is put up for market in this way. Cakes put up in this way are wrapped in paraffine paper and packed in boxes for shipment, the boxes being divided into compartments or nests to prevent damaging the cakes, and ice receptacles are required to keep the butter cold in hot weather. The packing-box should be made of scentless wood, such as spruce, or of well-seasoned ash or white wood.

Sheep Husbandry.

CLOSE CONFINEMENT OF SHEEP.

In the RURAL of January 15, G. G. writing on the above subject, advises the driving of sheep to distant fields that they may paw out and eat a little scanty grass, for fear that "close confinement and idleness" might injure them, especially breeding ewes. I am quite sure G G. has never tried the experiment of housing his sheep, breeding ewes and all, in warm, *well ventilated* stables or barns, or he would have no such fears, nor would he have given such bad advice. How can sheep be injured by being kept housed and warm? What are the ill effects of idleness? Does "Satan find some mischief still for idle" sheep as well as "hands to do?"

I am keeping this Winter over 500 sheep—wethers, breeding ewes, and last Spring lambs. Without an exception they were all placed in pens on November 12, and not one of them has been out-of-doors since, nor will they go until they go to market, or until such as are kept over are turned to pasture at the proper time. They are all liberally fed on corn, bran, oil meal, mangels and plenty of good bright straw that has been kept in the barn since it was thrashed. Hay being scarce and high, they have not tasted it this Winter sofar. Now, if G. G., or, any other RURAL reader will call, I will be happy to show him around, and a healthier, more contented lot of sheep he never saw, or one that looked "more bright and happy;" besides, they are thriving splendidly, and the ewes are dropping as fine a lot of lambs as he would wish to see.

I often wonder at the advice so often and freely given to let sheep run loose and unrestrained over the pastures, to get a bite of green food, when it is so much easier, cheaper and better for the sheep and owner, to raise plenty of roots (mangels or turnips), so as to give them in their warm quarters, all the green food desirable for them to have. Persons giving this advice, don't seem to consider the great damage done to pastures by eating off every spear of protecting grass and gnawing down into the very roots during the dormant frozen season when all this protection is very much needed; nor do they realize that cold affects sheep as well as other animals injuriously, or that much more food is expended in maintaining the warmth of animals than in promoting their growth during the Winter season; nor do they think that allowing the sheep to run at large, only makes them restless and less disposed to quietly eat their Winter's food; this is peculiarly noticeable in the warm days towards Spring. As a rule, not one-tenth the length of the staple in wool is made during the cold of Winter, while, properly housed and fed, a larger proportionate length should be made than during Summer. My sheep are placed in pens or yards about 18 feet squares 20 in each, and I have never yet seen any "ill effects of idleness," and I should be glad to be told what they are. My greatest desire is to keep them as quiet as possible, to make them eat as much food as they can properly digest, and make the largest gain of mutton and wool for the food eaten. We should realize that all exercise takes muscle, that muscle costs food, and food costs money. The pertinent question, the one that must determine whether we keep sheep or not, is whether we *make* or *lose* money by so doing.

Again, we should remember that all exercise tends to harden muscle; in other words, to make meat tough and dry. If we keep sheep healthy, the less exercise they have the finer is the grain, the higher the grade of the meat, and the more money it is worth if designed for the shambles. There is no trouble in keeping sheep healthy in close quarters if properly fed. No man in these Eastern States should attempt to winter sheep unless he has provided plenty of roots for winter feeding. If he has these, and will carefully try the experiment of close housing in warm stables or barns, *well ventilated*, he will find it to pay much better, and will be very unlikely to go back to the old barbarous way of letting them roam over the fields during Winter; nor will the trees and fences be half as likely to be ornamented with dead sheep and lambs.

J. S. WOODWARD.

The Swine-Herd.

CORN vs. MAST FOR HOGS.

HERE, where we have plenty of wood range, a number of farmers are in the habit of relying to a considerable extent upon the mast to fatten their hogs. They feed corn enough only to induce the animals to come home regularly at night, and perhaps give some a few days before selling, and that is all. Whether this style of feeding pays or not is still an open question. Whether the amount of corn saved is sufficient to cover the difference in the price of hogs fattened on mast and that of those fattened on good corn we are not able to determine fully. This much we know—that hog buyers make a difference between the two, and oftentimes when the hogs are to be driven a considerable distance the difference is such as to make quite an item in the aggregate amount. Buyers also discriminate between hogs that have been fed in a pasture and allowed to run and those that have been confined. In case of these and the mast fed hogs they claim that both kinds will not stand driving, that the loss in weight of these two classes is considerably more, in driving the same distance in the same time, than in hogs that have been fattened on good corn or on a good pasture.

In a year like the present there is no question that there is a great saving of feed in allowing hogs to run at large. We had a good heavy mast, and as corn was a poor crop and the price ruled high, there seemed a disposition among farmers to make the most they could from the mast, and in that way economize in their corn. In fact, some farmers raised no corn at all, and depended almost solely upon the mast to fatten their pork: these cases, however, were isolated, the majority deeming it better to feed corn at least once a day. Just how much this affected the profit is hard to determine. Buyers made a difference of between 20 and 30 cents on 100 pounds between mast-fattened and closely-penned hogs and those that had been fattened by feeding corn in pastures.

Of course, in the case of stock hogs that are to be kept over, it no doubt pays to let them run in the woods as much as possible. They are healthier and seem to do better than when closely confined, while the saving in food is considerable. This I can see perceptibly in case of my own hogs. I have two sows I am keeping for breeding purposes, that have had the run of a very large wood pasture all the Fall and so far this Winter. I have fed them one or two ears of corn nights and mornings, with part of the slops from the kitchen, more to keep them in the habit of coming to the house than because they are needing it, and they are doing first-rate, are as fat as I want them, and although the ground has been covered with snow for nearly four weeks they get all the mast they want to eat. At the ame time I have a pig that I am keeping up, and trying to fatten—which I confess is slow work in cold weather—and with all the corn and slop he can eat he is really in no better condition than the sows that are allowed to run, while what I feed him in one day would feed the two sows for three days.

Buyers also claim that mast-fed hogs do not yield so much lard in proportion to weight as those that are corn-fed, and that the meat will fry up more, or lose more in cooking, than that of corn-fed hogs, and this is another reason they give for not paying so much for them. It seems best, however, to do as a large number have done this year, when corn is scarce and high; but with a good corn crop I prefer fattening my hogs with corn, only giving the stock hogs that I purpose to keep the benefit of the mast.

Miller Co., Mo. N. J. SHEPHERD.

The Apiarian.

LIGURIAN HONEY BEES.

In the RURAL of Dec. 11, 1880, under "What Others Say," we read, under the above heading, that "a year or two since many of our apiarians were quite enthusiastic in regard to the merits of Ligurian honey bees, as it was claimed that they were more industrious than either the common bee or the Italians," etc. This, I believe, was taken from the New York Sun. As it conveys a wrong impression I wish to say that Liguria is simply a province in Italy, and therefore Ligurian bees and Italians are one and the same thing. The correspondent of the Sun farther states, giving Mr. Taylor's book as his authority, that these bees gather more honey by robbing the hives of common bees. This is contrary to the testimony of all practical apiarists—not apiarians as the correspondent of the New York Sun would have it. Practical experience in the apiary shows that the Italians are not as likely to rob as the blacks or hybrids, while they will defend their stores as long as there is a handful of them left. That they gather more honey is a fact, and their chief value is in their perseverance, in a poor honey season, in toiling on day after day for the little honey they can obtain, while the common bees seem to think *that little* is not worthy of notice. To illustrate:—In 1872, at the close of the season for basswood blossoms, from which our main honey crop is obtained, we did not have a single box of honey finished. At this time we had both the Italian and common, or black bees. Soon the seed crop of red clover commenced to bloom, on which the Italians went to work at once, but not a black bee was to be seen. As a consequence we took from some of our Italian swarms 60 pounds of box honey, while the black bees had eaten up half their stores from the basswood and had to be fed for Winter. After this we were not slow in introducing Italian queens to all our stock. We now have in the United States Cyprian and Holy Land bees, which were brought from the Island of Cyprus and Palestine, last season, by D. A. Jones, of Canada, and some predict that these will be superior to the Italians. Time will prove which are the best.

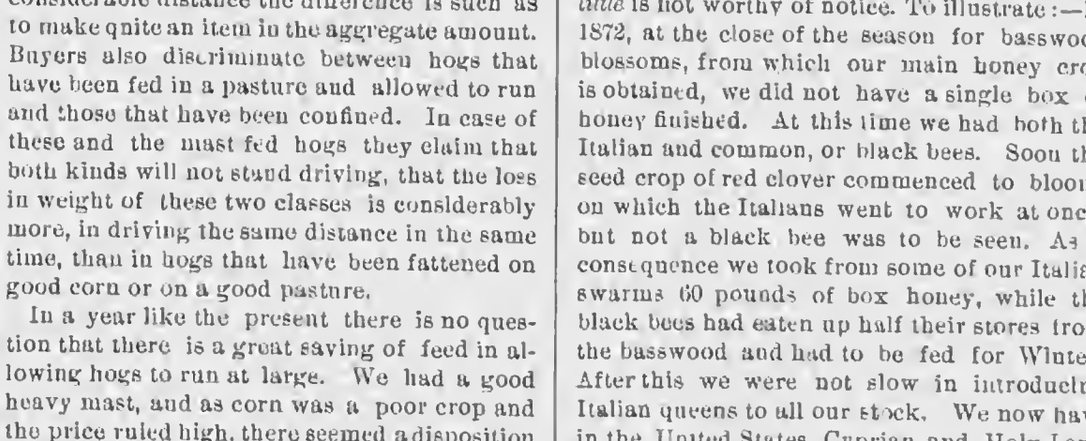
Borodino, N.Y. G. M. DOOLITTLE.

Field Crops.

Experience with Cereals.

I SEE the RURAL says Chester County Mammoth Corn has only one ear per stalk. I have raised it two years and find about one-tenth with two ears. Last season there were three stalks with three ears each, all growing at different points. It yields better than any other variety raised here, but about one-half of it has been caught by frost both seasons. I would therefore consider this as far north as it would be safe to plant it for a field crop. I raise Blount Corn to cut up, it making more and better fodder than other corn. The ears are too small for a field crop. Defiance Wheat is doing splendidly. If it does as well everywhere as the RURAL seed has for me, it will be the coming wheat. I shall try it as a Winter wheat next Fall. I planted five seeds of Cuzco Corn and raised three nubbins, one having grains about half-grown when frost came.

Atlantic, Cass Co., Iowa. W. C. W.



THE VIBRATOR HARROW.—FIG. 49.

Industrial Implements.

THE VIBRATOR HARROW.

THIS harrow, made by the Phelps & Bigelow Windmill Co., Kalamazoo, Mich., and represented by the accompanying illustration, Fig. 49, was introduced to the public late last season. It had previously been tested by a number of practical farmers and nurserymen and pronounced by them to be all its manufacturers claimed for it. Uninterested parties who have used it testify strongly as to its simplicity, durability and ease of draft, and that it cuts the entire ground, leaving it light and smooth. The harrow is made of the best seasoned oak, the teeth are fastened on the front side of the bar by an iron clamp, and are made of Bessemer steel shaped (similar to a cultivator-tooth in front) under furnace heat, and oil-tempered. They are so attached to the bar that with a common wrench they can easily be adjusted to cut any depth from two to six inches, and are so set to the bars that they must cover all the ground. The bars making the frame are connected by heavy wrought-iron hinges, which give it a vibratory motion when cutting hard ground, dead furrows, back furrows, cradle knolls, etc.; and each bar being independent of the others, causes it to clear itself and avoid clogging. It has draw irons on each end, and when drawn backwards makes an excellent and effectual smoothing harrow. It is spoken of very highly for covering small seeds, harrowing wheat, etc., and it combines in this respect the cultivator and smoothing harrow in one tool. It is very compact, as the points of the teeth all fold inward for shipment. We have seen a number of uninterested parties who have used and tested it, and they speak highly of it and think that it must prove a valuable implement. W. H. K.

IMPORTANT PATENT DECISION.—After five years' litigation the barbed wire fence suits have at last been decided in favor of the Washburn & Moen Manufacturing Co., the decision fully protecting them in all their patents and also protecting the Thorne Wire Hedge Co., of Chicago, who have been manufacturing under the Kelly patents. This decision compels all other manufacturers of barbed wire or band wire with barbs, to either discontinue manufacturing them or obtain licenses of the above firms. This celebrated suit has been hotly contested and has caused a great deal of trouble. Farmers and parties who use barbed wire fencing will be glad to hear that it is at last ended. W. H. K.

Scientific and Useful.

EXPERIMENTS IN CATTLE FEEDING.

THE object of this bulletin is to call the attention of the intelligent farmers of this State to a rational system of stock feeding. For illustration a ration for milch cows has been computed, its cost estimated and its practical value shown by a feeding trial which has now lasted over fifty days.

A farmer feeding a good quality of clover hay will find that nearly thirty-five pounds per day will be necessary to maintain the flow of milk and prevent loss of flesh in a cow of about 1,000 pounds live-weight. Now, according to an analysis recently made at the Station, thirty-five pounds of second-growth clover hay from the College Farm contained 4.6 pounds protein; .9 pound fat; 13.9 pounds starchy matter; 10 0 pounds woody; 1.7 ash; 3 9 water. These constituents, however, are not all digestible. A chemical examination of the solid excrements of the cow would show that 1,85 pounds protein; 40 pounds fat; 10 70 woody and starchy matter had passed through the animal undigested, and, as far as nutrition is concerned, had been lost.

If now we subtract from the food eaten, the amount of indigestible matter found in the manure, we shall know how much digestible food there is in thirty-five pounds of clover hay. It will be found to be 2¾ pounds protein, ½ pound fat and 13 2 10 pounds starchy matter.

The cow then which consumes thirty-five pounds of clover hay daily, lives, increases perhaps a trifle in live-weight, and produces its milk from 2¾ pounds protein, ½ pound fat, and 13 2 10 pounds starchy matter. German agricultural chemists have shown that an ordinary milch cow of 1,000 pounds live-weight does not require more than 2½ pounds digestible protein, 4-10 pounds digestible fat, and 12½ pounds digestible starchy matter daily, and

German farmers have proved the correctness of these figures by years of practical experience. Of course, if a cow gives an unusual amount of milk, an unusual quantity of food will be necessary, if loss of live-weight is to be avoided. In such cases the quantity of digestible matter can be increased to 2¾ pounds of protein, ½ pound of fat, and 13 2-10 pounds starchy matter. It will rarely be found profitable, however, to feed more than this amount.

The farm should supply an abundance of digestible starchy matter in the form of fodder-corn, straw, chaff, turnips, &c. The digestible protein and fat can probably, in most cases, be bought at a lower price than the market value of that raised in New Jersey.

The following table will give an idea of the wide range of prices between farm products and such commercial articles as cotton-seed meal, oil-cake, brewers' grains, etc.

100 lbs. of	Cost.	Contain of digestible Protein.	Fat.	Starch.
Timothy hay	$1.00	3.02	1.37	48.58
Clover hay	.75	7.68	1.48	39.71
Corn meal	1.12	6.23	2.89	66.90
Brewers' grains	.25	4.73	1.50	14.29
Cotton-seed meal	1.30	33.00	10.89	12.62

One hundred pounds of digestible protein, fat and starch, cost in

	Protein.	Fat.	Starch
Timothy hay	$6.70	$6.70	$1.40
Clover hay	4.30	4.30	.90
Corn meal	4.90	4.90	1.00
Brewers' grains	2.80	2.80	.60
Cotton-seed meal	2.80	2.80	.60

The second table shows that digestible protein in brewers' grains and cotton-seed meal can be bought for about $2 75 per hundred pounds, while in corn meal it costs nearly $5 per hundred pounds, and in timothy hay $6 70 per hundred pounds. A farmer who can sell his Indian meal at $1 12 per hundred, will see that he is receiving five cents per pound for his protein, and can buy for his own use the same material for 2½ cents per pound.

The point now to be explained is how to use cotton-seed meal in place of corn meal. By looking at the first table it will be seen that 100 pounds of cotton-seed meal contain 33 pounds of digestible protein; that, we know, is enough to last a cow over thirteen days; it contains, too, fat enough to last twenty-one days, while the digestible starch in one hundred pounds is just enough for one day. To express the same idea in another way, we would need only eight pounds of the cotton-seed meal to furnish the cow with the 2½ pounds of protein, while the eight pounds would give twice as much fat and only about 1-12 as much starch as is necessary. We see then that the cotton-seed meal must be mixed with something which contains a large quantity of digestible starch, and a very small quantity of protein and fat.

Wheat straw which contains in one hundred pounds only 3-10 pounds of digestible protein and 3-10 pounds of digestible fat, while it yields 37½ pounds of digestible starchy matters would seem to answer our purpose exactly. It would do exactly, if a cow were simply a milk machine, but a living creature is much more complicated than any machine can possibly be. One objection would be a difficulty to induce the animal to eat such a large amount of coarse fodder. Another would be a fact not yet mentioned, viz: the digestible food should be contained in a ration which, when perfectly free from all traces of moisture, should not weigh more than from 24 to 28 pounds. If the food be mixed with a larger amount of indigestible matter, it is scarcely to be expected that it can be digested and assimilated. Now our ration of eight pounds of cotton-seed meal and thirty-three pounds of wheat straw would contain nearly thirty-five pounds of dry matter, nearly ten pounds more than is allowable.

The ration fed to a herd of six mixed grade cows, at the College Farm, has given perfect satisfaction; it was made up as follows, the calculation being for 1,000 pounds live-weight per day:—

	Containing pounds of digestible Protein.	Fat.	Starch.
6 lbs. clover hay	0.47	.09	2.27
13 lbs. wheat straw	0.11	.04	4.88
20 lbs. brewers' grains	0.99	.33	2.86
20 lbs. turnips	0.26	...	2.06
2 lbs. cotton-seed meal	0.66	.22	0.24
Total	2.49	.68	12.31
The total dry matter was			25.5 lbs.

The total weight of the six cows, taken with all usual precautions, was 5,770 pounds. To find the amount of fodder and feed needed for the herd, we have therefore to multiply the weights, which, as above stated, are for 1,000 pounds, by 5.77. For example:—

6 lbs. clover hay	x 5.77 = 34⅔	pounds.
13 lbs. wheat straw	x 5.77 = 75	"
20 lbs. brewers' grains	x 5.77 = 115	"
20 lbs turnips	x 5.77 = 115	"
2 lbs. cotton-seed meal	x 5.77 = 11½	"

The daily cost of the ration for six cows can now be easily computed:—

35 lbs. clover hay, at $15 per ton	= 26c.
75 lbs. wheat straw, at $7 per ton	= 26c.
115 lbs. brewers' grain, at $5 per ton	= 29c.
115 lbs. turnips, at 10c. per bushel	= 19c.
11½ lbs. cotton seed meal, at $26 per ton	= 15c.
	$1.15
Daily cost for each cow	.19c

The straw was passed through a cutter and thoroughly mixed with brewers' grain, cotton-seed meal and turnips. The mixture was fed in equal portions morning and evening. The hay was fed at mid-day.

The cows were mixed grades taken from a herd of 24 head. They were milked twice daily—the milk of each cow being carefully weighed, and a sample of the mixed milk, together with the record of the yield, sent each day to the Station by Mr. Theodore West, Farm Superintendent.

The following table gives a description of each cow and her total yield of milk:—

Name of cows	Strawberry.	Starface.	Daly.	Dominie.	Sutphen	Carnel.
Age of cows	6 years.	6 years.	4 years.	7 years.	9 years.	7 years.
Weight of cows	965	1,000.	825	917	880.	1,230.
Date of calving	Oct. 23, '80.	Oct. 10, '80.	June 12, '80.	July 15, '80.	Oct. 8, '80.	April 15, '80.
Next calf expected	Aug. 29, '81.	.....	July 15, '81.	Aug. 1, '81.	.....	April 1, '81.
YIELD OF MILK.						
	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.	lbs. oz.
From Nov. 16-Nov. 26—11 days	273.8	274	166	256	279.12	223.8
From Nov. 27-Dec. 7—11 days	292.8	251	185	259	273	218
From Dec. 8-Dec. 16—8 days	199.8	185.8	147.12	190	199.8	160.4
Total yield for 30 days	765.8	720.8	498.12	705	751.4	601.12

The total yield for the entire herd is 4,042 pounds and 12 ounces.

The weight of a quart of milk for practical purposes may be taken as two pounds. The total yield, then, for 30 days is 2,021 quarts, or 67 3 quarts daily, an average yield for each cow of over 11 quarts.

1. From the experiments it appears, then, that the cows have gained a little in flesh by being fed on this ration, and that their flow of milk has not diminished.

2. It is fairly proved that the ration saved directly 30 per cent. on the cost of a full ration of clover hay, and still more than this on one of clover and Indian meal.

3. The ration also saved indirectly by turning to profitable account the straw and coarse products which are ordinarily only used for manure.

4. The whole experiment shows that the live stock on a farm can be kept in good condition, and a much larger amount of its high-priced products sold than it is now the practice to sell, or that a greatly increased amount of live stock can be profitably kept while consuming all the food products.

The above is but a single example of the use of a computed ration. It was made for a special purpose; and there might have been others calculated which would have been quite as economical. The Station has analyzed a number of the commercial articles used as cattle food, such as Indian meal, Egyptian corn, cotton-seed meal, oil-cake meal, brewers' grains, starch waste, timothy hay, clover hay, Hungarian grass, wheat straw, wheat chaff, etc. These will be published, together with rations computed from them, in the next bulletin. GEORGE H. COOK.

Director Ex. St'n, New Brunswick, N. J.

Miscellaneous.

CRATES.—F. H. D., page 34, is quite right concerning the convenience of crates for carrying apples, etc., into the cellar; but I do not agree with him that they are the best thing to store them away in, because they "admit of a free circulation of air." I think apples will keep better without a free circulation of air. I never had apples keep better than those I had last Winter (a bad Winter for keeping fruit) in bins in a cellar, holding 30 to 70 bushels. Careful picking is the best thing to make apples keep well. I have been astonished to notice how much cold weather it takes to freeze an apple, and after freezing how much freezing it takes to injure one. I think apples will not freeze with the thermometer indicating 28 deg. But about the crates. They are particularly valuable for carrying in potatoes. I am quite sure I saved some of mine by having two sets of crates and two wagons to draw them in one cold night last Fall. They are also valuable for carrying apples and potatoes to market. They should be made large enough to hold a bushel when a little less than even full. Thus one crate can be set upon another and a good-sized load can be easily inspected and carried. It is well in building them to have them made of the right size, so that two, side by side, will fit the wagon-box. G. S. W.

WHISKEY FOR DIPTHERIA.—The RURAL has given what are reported to be valuable preventives in cases where diptheria was to be feared. But it is now said that whiskey is one of the best of these, to be administered freely as soon as the soreness in the throat makes its appearance. At least, this is the treatment now adopted in the towns and cities along the river and canal, south of Chicago, where the sewerage of that city has so contaminated the water of the river, as to give rise to epidemic and in many cases fatal diptheria. It is now thought that the poison which produces the disease is a septic one, which leaves the vitality like the venom of poisonous snakes and insects, and that the best remedy is a stimulant in the first stages, and that whiskey is the best form in which this stimulant can be found. J.

Everywhere.

RURAL SPECIAL REPORTS.

N. Y., Waterville, Oneida Co., Jan., 20—The weather since Jan., 1, has been about all that farmers could desire. The sleighing is splendid, and although there is quite a heavy body of snow on the ground, it is spread so evenly that there is little trouble in getting anywhere with a team. A. W.

OHIO, Ripleyville, Huron Co., Jan. 6.—We are having the nicest Winter that we have had for many years. We have had good sleighing most of the time since Thanksgiving. Wheat was looking fine when the snow came. I see no reason why we should not have as good a crop as last year. Wheat is worth 95c.; corn, 45c.; oats, 30c.; hay, $18; butter, 18c.; Clover seed $4.50. R. K.

CHAMPAIGN, Champaign Co., Ill., Jan., 20.—There has been no break to the uniformity of the Winter since it set in early in November. But it looks to day as if a thaw was coming up from the South and coming up to stay. Heretofore south winds during the Winter have only blown for a few hours before they were driven back by other stronger ones from the north and northwest. There is still some snow on the ground over the entire State, and it is a mercy there is, for snow is the only resource the stock have for water over great portions of this and States adjoining. In fact, the water famine has developed into a serious business, if not into alarming proportions, and if the snow leaves slowly, without filling the streams, and they continue frozen solid as at present, in some sections stock water will be so scarce that stock must suffer severely and the dry murrain and kindred diseases do immense damage to flocks and herds. Just how to meet this sudden apparition is now the problem before us; and all the more difficult it is, because in many sections the earth beneath for several feet is as dry as a green bone. Concerning the outcome of the corn crop there is a great difference of opinion; but no one claims the crop of 1880 nearly equal to that of 1879. And as to future prices there are still greater differences. Some say we are on the eve of a period of high prices for corn, or something more, and remind us there are now six distinct markets for corn, where there were only three, a few years ago. Ten years ago the home market, the Eastern market and the Southern market took the surplus; the foreign taking only ten million bushels in 1870, against 100 millions in 1880. The six markets of the present are: 1, Home market, 2, the Eastern market, 3, the Foreign market, 4, the Southern market, 5, the Western market made by the rapidly developing mining regions east of the Rocky Mountain Range; and, 6, the Northern market for corn to supply the bonanza farm region north of the limit of successful corn cultivation. Up to this time we have heard nothing of the Winter wheat crop, that is not favorable. There has been practically no thaw since the first freeze up, early in November, and the snow covering the ground almost uninterruptedly, a condition very similar exists to that of 1879. If a dry, cold Winter is one of the best assurances of abounding crops the succeeding Summer, there is a fine prospect before the farmers of Illinois, and the entire West also. B. F. J.

ILL., Baileyville, Ogle Co., January 21.—The weather had been extremely cold here at times this Winter—from 22 deg. to 32 deg. below zero, on certain days, and for several days in succession not rising above zero. I find from various reports that thermometers differ several degrees at only short distances apart, observations being taken at or about the same time. This variation may be owing to the different situations of the thermometers, or to some difference in the instruments; so it is difficult to ascertain the true temperature of a place, except through the careful observations of the Government Signal-Service Bureau, on uniform thermometers, at stated hours each day; and even these are not always as correct and reliable as they should be. Though the weather has been cold, there had been but little snow in this locality until a week ago. On Thursday, 13th inst., about six inches of snow fell. The next day, Friday, was clear and cold, our thermometer registered 26 deg. that morning at sunrise. This was followed on Saturday and Sunday by another snow-fall of some six inches, making the snow over a foot deep and fine sleighing, as it has not drifted, and the roads are smooth and solid. The Winter grain will be greatly benefited by its present covering of snow and may yet do well, though fears were entertained that it was injured by the previous dry, hard freezing and bare condition of the ground. Cloudy this morning, and 26 deg. above zero. All who can do so are enjoying the time sleighing, etc., and business seems brisk, but there is not much grain selling, as prices continue low here and unsatisfactory to the farmers. Wheat, 60@85c; corn, 30c per 60 pounds shelled; oats, 28c; barley, 30@40c; rye, 80c, but little here. Butter (dairy), 18c; eggs, 28@30c per doz. Beef (live), $2 50@$3 50, and pork (live), $4 @$4.50 per cental. Dressed beef sells at 4@6c per pound by the quarter. Hay is scarce at $10 to $15 per ton. W. B. D.

ILL., Franklin Grove, Lee Co., Jan. 10.—We are having an old-fashioned Winter out here; but we have had very little snow. Winter wheat was badly frozen, but I don't think it is entirely killed yet. Stock is wintering through nicely. Hay and coarse feed are rather scarce, but corn is plentiful, worth now 33c. and 40c. for May delivery. S. W. R.

IOWA, Dakota, Hmnboldt Co., Jan. 13.—Last year the crops hereabouts were good. wheat yielding, on an average, from 20 to 25 bushels per acre, and corn, from 40 to 60. Oats were an immense crop. J. S. H.

MO., Buckln, Linn Co., Jan. 20.—We have had but a few inches of snow at a time, though the weather has been cold, especially during "holiday week." I have seldom seen a more beautiful sight than presented itself to our view just as the sun was rising one morning. Two sun-dogs appeared, each as radiant as the sun. Either alone would have made daylight. Of course, when they rose from the horizon they were not so bright, but they kept in the sky all day long, and were with the sun at his setting. Our weather for the past week has been playing "snap and catch 'em"—warm one day and cold the next. J.

MO., Pleasant Mount, Miller Co., Jan. 12 —So far we have had an extremely cold Winter, Between Christmas and New Year's the weather was extremely cold, the thermometer getting as low as 23 deg. below zero, lower than it has ever been in this section, so far as I can learn. Happily for wheat, the ground is covered with a good depth of snow, else Fall-sown grain must have suffered. Farmers are doing nothing but trying to keep warm. Nearly all fat stock has been marketed, and the remaining corn is being saved for feeding through the Winter what stock is being kept over. N. J. S.

N. C., Asheville, Buncombe Co., Jan. 18.—We have had a rather severe Winter—thermometer as low as 8°, and four snow storms. The snows were light—two to three inches at a time—when, strange to say, there was four or five times as much in the warmer parts of the State. It is now warmer (50°) and raining. D. E. S.

KANSAS, Manhattan, Riley Co., Jan. 19.—The weather has been so unusually cold that we have reason to anticipate the ruin of our peach crop. This morning the thermometer registers 8° below zero, and it has been down to 21° below. E. G.

TEXAS, San Antonio, Bexar Co., January 10.—We have very cold weather. Wheat and oats are killed. We had a regular snow storm yesterday. Farmers are busy plowing and sowing small grains. This is a curious climate—there is not a month all the year round in which some kind of a crop is not planted or harvested. Some are gathering corn; others picking cotton whenever the weather permits. Prices are very good; corn, 70@80c; hay, $12@14 per ton; cotton, 10c. per pound; eggs 25@35c. a dozen, butter 25c. G. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

Preparation of Bones, etc.

H. N. L., address mislaid, asks a cheap way of converting old, dry cattle bones into manure; and their value in comparison with that of barn manure.

ANSWER BY PROFESSOR E. W. STEWART.

The method of reducing bones depends upon their condition. Green, tough bones are very difficult to grind, and the appropriate mills are too expensive for individual use. But "old, dry cattle bones" which have lost nearly all their animal matter from long exposure to the air, will be found more brittle and can often be ground, after having been broken with a hammer, in a bark mill, or in a strong

corn mill. The most important ingredient for which bones are used as a manure—phosphate of lime—still remains in the old dry bones, but they have lost nearly all of their nitrogen in the decay of the gelatine and other animal matter. Various methods have been employed to reduce bones to a proper condition for use as a fertilizer.

Dissolving in Acid.

The best way, that is the way by which the best condition is obtained, is by dissolving them in sulphuric acid, when a superphosphate of lime is formed which is soluble, dissolving in water, ready for absorption by plants. When sulphuric acid can be obtained for two cents per pound, any intelligent farmer can afford to use it. In dissolving with acid, take any tight cask (the most substantial is a large linseed-oil cask, or petroleum-oil barrel); remove one head; fill it one-third full of water; then pour in one-third as much acid as there is water and stir together. Now take these old dry cattle bones that have been broken with a hammer, and fill the tub or barrel nearly full of them, stirring them about in the acid water; when the barrel is full, cover it so as to exclude all the air you can. Stir these bones every day for two or three days, then remove the coarser pieces into another barrel; pour off the acid into the other barrel letting it drain, and the fine bone will be found in the bottom. This fine bone will be the very best quality of superphosphate of lime. It may be dried by mixing it with fine, dry earth, such as road dust, dry, sifted muck, etc. One ton of these old dry cattle bones, dissolved in this way, will be worth about as much as three tons of the commercial superphosphate.

Boiling in Lye.

Another way to prepare them for use where wood ashes are cheap, is to leach the ashes and boil the bones in the lye. This hot lye will eat them up rapidly, and the bone is made finer than ground bone. This fine bone reduced with lye is not quite as soluble as that dissolved in sulphuric acid, but the potash from the lye will be found an excellent addition to the manure. Soils are nearly as often deficient in potash as in phosphoric acid. I have found this bone dissolved in lye to be a special fertilizer for potatoes, and also for grass and grain crops. This work may be done at the rate of 1,000 to 1,500 pounds of bone per day in two four-barrel kettles or in a large pan.

Fermenting Bones.

The earliest method known for disintegrating the particles of bone, was by mixing bones in compost with earth, ashes, horse manure, etc. Place a layer of horse and cattle manure, then a layer of broken bones, another of horse manure, and so on till the bones are all used, wetting each layer with urine. Now keep this pile moistened with urine from the stable, and the heat and fermentation will soon cause the bones to crumble and become fine enough for use. If wood ashes can be had cheaply, then ashes should be mixed with the bones and will assist in their decomposition; besides, the ashes will be worth all they cost as an addition to the bones.

Steaming Bones.

Bones may also be reduced to fine bone dust by steaming under pressure, and if large amounts of bones can be had cheaply, it would pay a few farmers to join and purchase a boiler to steam them. The best form of boiler for this purpose is that used for extracting glue from bones. It is a simple cylinder 2½ to 4 feet in diameter, 10 to 20 feet long, hung on trunions at the ends, so that it may rotate over the fire. This is required to be strong enough to stand 50 to 80 pounds pressure to the square inch. The boiler itself is filled with bones and then half filled with water. It is then rotated slowly over a brisk fire and is soon brought to a pressure of 60 pounds; and green bones are quickly deprived of their gelatine, and solid bones will crumble between the fingers. This fine bone is much more readily soluble than ground bones not steamed.

Bones vs. Barn-Yard Manure.

The comparative value of bones and cattle manure is not easily determined, since the quality of manure varies so widely, dependent upon the food and purpose for which the animal is kept. If the cattle are poorly fed, the manure per weight has less value. The manure made by milch cows has less value than that from fattening cattle, if both are fed the same. We will compare bones with cow manure when the cows are highly fed. Prof. Horsfall, one of the most intelligent English experimenters, had the liquid and solid excrements from six cows analyzed by Prof. Way, getting as complete an average for the six cows as could be obtained for 27 weeks. The average was as follows:

	Per cent.	In 2,000 lbs.
Moisture	84.85	1,697.00 "
Phosphoric acid	.39	7.8 "
Potash	.58	11.6 "
Soda	.22	4.4 "
Other substances	13.96	279.2 "
	100.00	2000.00 "
Nitrogen	.41	8.20 "
Or ammonia	.49	9.80 "

This would make this cow manure worth, at the commercial prices charged for nitrogen, phosphoric acid and potash, $3 34. Those dry cattle bones have lost the principal part of their nitrogen, but as the animal matter has decreased, the phosphate of lime has increased. If, then, we estimate the nitrogen at two per cent or 20 pounds in 2,000, and the phosphoric acid at 25 per cent. or 500 pounds; and if the phosphoric acid is estimated as half soluble and half insoluble, this would give the value when prepared as $51.10, or more than fifteen times the value of this first quality of barn-yard manure. But it is safe to say that a ton of dry cattle bones, after preparation, is worth as much as 20 tons of ordinary barn-yard manure.

Many Questions.—The Distribution will probably be begun in two weeks.

We cannot substitute seeds or plants of any kind for those announced in the present distribution.

The RURAL does not *sell* seeds or plants to subscribers under any circumstances.

Blount's Chester Co. Mammoth Corn will be found in the catalogues of seedsmen whose announcements may be found in our advertising columns.

The Argenteuil and Dutch Asparagus seeds cannot be procured in this country except through the RURAL'S Distribution. The RURAL also controls the Rural Branching Sorghum.

We have kept a careful account of those who have applied for our Seed Distribution sending their share of stamps (six cents) When the Distribution shall have been completed, due notice will be given so that those who, from mail irregularities or from any other cause, have not received it, will have the opportunity of advising us by postal card.

Dropping the Cud.

G. T. C., Belden, N. Y., has a 20-months-old steer which was lately taken sick, vomiting all he had eaten. His horns are warm, and eyes a little dull. On vomiting he acts as if about to raise the cud to chew it; but instead of chewing it, he lets it run out of his mouth, drooling most of the time. During the Winter he has been fed corn-stalks twice a day, with some corn and hay once a day, and our friend asks what ails him and how to treat him.

ANS.—This is known as dropping the cud, described in the RURAL of January 22, and is not vomiting. It is a frequent result of indigestion, which may result from feeding too much dry feed, or smutty fodder. It may also occur in young animals from soreness of the gums incident to the shedding of the teeth and the growth of the permanent ones. This should be learned by examination. If the teeth are all right, the cause will be dyspepsia. There is generally no appearance of ill health in mild cases, except, perhaps, a roughness of the coat. It occurs with sheep as well as cattle, and should be treated as advised in our issue of January 22, or as follows:—Give one pint of linseed oil and repeat it the third day. Then give each day for ten days half a tablespoonful of carbonate of soda, with one teaspoonful of ground ginger in a mess of scalded bran or linseed meal.

Feeding Cows Before Calving.

M. H. C., Orange Valley, N. J., asks the safest way to treat cows during the month or six weeks before they calve. Our friend has been told they should be fed upon hay only; but the man in charge of the cows says he always feeds grain up to the last day before calving; yet as one cow has already been lost, owing to what the neighbors insist on calling his mismanagement in this matter, our opinion is asked.

ANS.—As a cow approaches the period of calving the system becomes much disturbed and the circulation is considerably increased; the cow is taxed to the utmost to keep up the extra quantity of blood which supplies the calf, and is in such a condition that a very slight cause, as cold, indigestion or over-feeding, may do much mischief. It is therefore very dangerous to feed any grain to a cow in this state for several weeks before she comes in. Good hay is all that is required; a few roots would be advisable, but even a bran slop is to be given with caution and only when it is required as a laxative. To feed grain stimulates the milk organs unduly and is almost always productive of garget, or congested udder. After calving, too, for at least a week, grain food should be given with extreme caution.

Leather as a Fertilizer.

E. F. D., Lynn, Mass., asks the value of leather ashes as a fertilizer.

ANS.—It is an enormous waste to burn leather. It leaves but one per cent. of ash and the volatile part contains nearly 12 to 15 per cent. of nitrogen, which is more than is contained in blood by at least three or four per cent. The difficulty in using leather is that the tanning has made the gelatine of the skin, which contains the nitrogen, insoluble and it is difficult to decompose it. Usually, the leather available for this purpose is in the shape of clippings which are more easily handled. They may be composted with stable manure or with moist earth and lime, or moist wood ashes. The lime or ashes decompose the leather, and the earth holds the escaping ammonia. Or the leather is made very brittle by treatment with sulphuric acid, and may then be reduced to powder with ease. One ton of leather clippings would contain about 250 pounds of ammonia, or even more, worth at market prices about $60 to $75. This is, of course, the theoretical value; but it goes to show the value of this waste matter. The ash is mostly potash and a ton of the leather would contain but 20 pounds, worth $1 or thereabouts. This shows the waste made by burning it.

No Substitute for Glass for Hot-Beds.

D. M. H., Richmond, Va., asks whether we can recommend a substitute for glass in making hot-beds, sashes being dear there.

ANS.—We are sorry to say that no substitute for glass for a hot-bed has yet been discovered. So-called substitutes have sometimes been recommended; we have tried them, and many others, but they all fail of their purpose, and we should only mislead you in recommending them. Plants that are forced (as they are in a hot bed) must have a clear light, which glass alone can give; otherwise they become blanched and drawn, and useless. Glass may be dear in Virginia, but you will assuredly find it much cheaper to buy it than to attempt the use of the best substitute that we could name. For a cold-frame, oiled paper may be made to answer tolerably well, if you have plenty of time to spare.

Miscellaneous.

O. W. F., Blackstone, Mass., sends some specimens of Blount's Corn; there were three ears on a stalk; one was flint and the other two dent, and our friend, asks, 1, whether the corn is likely to change to flint as far North as his place—near the boundary line of Rhode Island and Massachusetts; 2, what is the value of bone-black as a fertilizer after it has been used in case-hardening tools.

ANS.—1. The specimens sent would seem to show that it would soon turn to "flint." Only a longer trial can answer your question. Should you again raise it next season, we would be pleased to learn the result. We would like also to have seen specimens of the flint ear. 2. The bone-black is merely phosphate of lime; all the organic matter has been driven off in the carbonizing of the bone, leaving all the phosphate. All that is needed is to treat it with sulphuric acid in the same way as other bone-black or bone ash, when it will be pure superphosphate without any ammonia or nitrogen.

S. A. C., Queens Co., L. I., asks several questions which the following answers will explain.

ANS.—Yes. We are happy to answer all questions under this department, which seem to be of interest to the general reader. It *sometimes* occurs that our space is insufficient to do this, in which case we endeavor to answer by mail. We are always glad to give any information in our possession respecting our advertisers or the articles advertised in our columns. Any complaints from our subscribers as to unfair dealings are at once investigated, and if ascertained to be well-founded, the facts are placed before our readers if satisfaction to the complainant is not at once made.

H. D. F., Palmer, Mass, asks whether there is any legal standard for a barrel of apples or potatoes.

ANS.—We do not know what the law with regard to the matter is in the Old Bay State, but in the Empire State there is no law anent it. An effort was made last year to have a law passed regulating the size of a barrel of apples; but though it got through both Houses, it failed to receive the Governor's signature. We learn, however, from Assemblyman John Shanley that he intends to press a similar law during the present session of the Legislature. There certainly ought to be some legal standard.

J. W. S., Smith's Grove, Ky., asks, 1, whether land that has been cleared and cultivated seven years will do for planting cabbage; 2, what kind of seed should be used for market cabbage.

ANS.—1, That will depend on the richness of the soil. It cannot be too rich or too thoroughly pulverized before planting. The cabbage is a rank feeder and requires a deep, rich soil to bring it to the highest point of profit. If your soil is rich and strong you can profitably raise cabbage, especially if it is a sandy loam. 2, Wakefield for first; Early Flat Dutch for second, and Silver Leaf Drumhead and Drumhead Savoy for late.

D. S. D., Crown Point, N. Y., asks, 1, where can he get instruction about budding and grafting nursery fruit; 2, do we think it any benefit to whitewash young trees in Spring.

ANS.—1, We shall give full instructions as to grafting in the Hardy Shrub and Tree Number which will be our next issue. Budding is usually performed in Summer. 2. Yes, we do. And it is well to add to the whitewash a little sulphur, soft-soap, carbolic acid, etc. Lamp-black may be added to give a color to the whitewash nearly resembling the color of the bark.

M. T. A., Hopeville, Iowa, asks, 1, our opinion as to the practical value of barometers to farmers, and, 2, what make we would recommend.

ANS.—A good barometer is doubtless of much value to the farmer, but a poor one is worse than none. It requires considerable experience, however, in studying the variations of atmospheric pressure, as indicated by the barometer and thermometer, before the former can be relied upon as a weather prophet. 2, Chas J. Tagliabue, 53 Fulton Street, N. Y., makes a good article.

W. R., Jeromesville, O., asks how to make a persimmon bear fruit.

ANS.—Persimmons—when they bear at all—usually bear in six or seven years from seeds; by grafting, however, they can be made to bear earlier, like other fruit. Perhaps one-fourth of all persimmon trees never bear at any age, as they are males which bloom profusely but never bear fruit. A friend from Tennessee writes us under date of the 13th inst., that he had then some large trees with bushels of fruit on them, and that after the hardest freeze the trees do not drop their fruit until February.

John A. Morse, Halcotville, Delaware Co., N. Y., says:—"I have looked over your advertisements in vain for what I want; that is, a small steam boiler which can be set on a common cooking stove in the kitchen, and that will generate steam enough to cook about one bushel of ground feed. If you know where something of this sort can be got, let me know. If there is nothing of the kind I shall have to invent one, as I know of other farmers that want one also."

N. T. M., Parkersburg, Ia., asks, 1, for a description of the Waushakum Corn; 2, where seed can be had; 3, in selecting corn for seed, do we reject the small grains on butts and tips of ears.

ANS.—1, We suppose it to be a variety of the eight rowed Canada Yellow Flint. The ears are eight-rowed and average nine inches long. Kernels broad and rather shallow. 2. Address E L Sturtevant, South Framingham, Mass. 3. Yes, for seed we always reject the tips and butts.

G. G. B., Manchester, Vt., asks where can he buy a dog churn such as that illustrated in the RURAL of January 6.

ANS.—The "power" referred to can be attached to *any* churn. The form of churn in the illustration was not designed to represent any particular churn, but only to show the *modus operandi*. The motive power may be either a dog, sheep, goat, calf, donkey or horse, according to convenience or the requirements of the case.

W. M., address mislaid, asks the name of a good publication on fish culture.

ANS.—The best we know of are the Reports of the U. S. Commission of Fish and Fisheries, to be had through the Congressman for the applicant's district or the Senator for his State; and Fish Hatching and Fish Catching, by Seth Green, price $1 50, to be had of the Am. News Company, N. Y.

J. D. L., Jacksonville, Ill., asks where can he get a book on the cultivation of flowers—such a one as would be of use to a plain farmer's family.

ANS.—Breck's New Book of Flowers, price $1 75, and Henderson's Practical Floriculture, price $1 50, are good works, and may be obtained of the American News Co. of New York.

E. C., Menardville, Texas, asks where could he get punches made like nippers to cut his "initials" on sheep's ears.

ANS.—No such a punch is made that we know of. The nearest approach to such marking is the metallic ear marks made by C. H. Dana, West Lebanon, N. H.

O. P. G., Kingston, Ohio, asks where information can be obtained concerning the National Farmers' Alliance.

ANS.—Write to W. J. Fowler, its President, Pittsford, N. Y.

W. H. E., E. Setauket, L. I., asks what is the best kind of sweet corn to plant for all purposes, as late as July.

ANS.—Probably the Concord.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JAN. 29.

C. H. S.—N. R.—T. D. B., thanks. The last word of the rebus has not yet been guessed.—M. H.—Every one of our readers should send for the catalogues announced. They cost little or nothing, and all should compare one with another before making out orders. Much is to be learnt by a study of these catalogues.—H. S.—A. H.—E. F. P.—J. V. D. P.—W. M.—E. P. R.—L. S. H.—H. S.—S. E. T.—F. H. S.—F. D. C.—G. W., thanks—A. B. A.—S. P., Jr.—H. C. B.—W. C. W.—G. S. W.—J. G. B., Small Fruit Number—S. E. V.—L. D.—W. H. C.—We do not know at present where Silver Chaff wheat can be procured.—S. R. M.—D. E. S.—S. W. R.—B. F. J.—E. C. J.—Helen—G. W. C., thanks—A. W.—A. C. G.—C. M. H.—L. W. G.—M. Y.—A. C. M.—W. D. I.—W. B. D.—F. M. G.—G. G. B.—C. D. M.—A. H.—T. D. B.—"Buckeye"—E. W.—C. B. B.—S. R.—J. R.—S. B.—M. H.—W. D. I.—L. W. G.—G. W. C.—S. R. B.—J. E.—M. S.—H. J. S.—J. N.

THE
Rural New-Yorker,

PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, FEB 5 1881.

NEXT week's RURAL NEW-YORKER will be the Hardy Shrub and Tree Special. The Small Fruit Special will be published in about three weeks thereafter, or early in March.

CATAWBA grapes are selling to-day (Jan. 27) for four cents per pound. They are sound and excellent. Where is the kind among our much-talked-of new grapes with keeping qualities and excellence like this!

HORSE SHOES KEPT ON TOO LONG.—THERE seems to be no doubt that this causes more injury to the feet of a horse than any thing else; for as soon as the shoe is fastened on a double action begins, as his hoof grows down and presses against the shoe, and the shoe is hammered forcibly up against the hoof every time the foot is set back on the ground after being raised. This makes the double action which is so apt to prove injurious. To obviate this, it becomes necessary to have the shoe fit nicely and easily at all times to the horse's foot. To insure this, it should be taken off and reset about once a fortnight; and in doing so care should be taken to first file off the clinching part of the nails outside of the hoof, so they cannot make large holes or tear the hoof as they are withdrawn. Some let shoes remain on the horse two or three months. Nothing can be more injurious to keeping up a sound, good foot than this. The change twice a month or so, allows the foot to expand, and keeps it in a healthy, natural form.

BEEF AND MUTTON IN ENGLAND.

NOTWITHSTANDING the constant large importations of these from America and Australia, the English papers inform us that the prices not only keep well up there, but are likely to continue to do so. This is owing mainly to the increasing population, and the increasing prosperity in the manufacturing districts. Moreover, those people who formerly got meat of a poor quality only about once a week, on account of its high price, now that abundant importations have placed before them a superior quality at a lower price, can afford to have it nearly every day on their tables, and hence this greatly increased consumption of meat in the United Kingdom. As to mutton more particularly, the liver-rot has again broken out among the flocks of Great Britain causing many deaths in them from the disease, and this again assists to keep up the price of mutton as well as of beef and pork.

American flock-masters will see that the above enforces what the RURAL has repeatedly said to them—that various causes have contributed for years past and would continue to combine probably for years to come, to keep up the prices of sheep, wool and mutton in America. Let them go on now with a good heart and prosper.

AN EXCELLENT EXAMPLE.

FLORIDA, it is reported, has closed a contract for draining Lake Okeechobee, a name under which are included a small, shallow lake and an extensive adjoining swamp, both together covering an area as large as Massachusetts and Connecticut. The reclaimed land will, it is said, be admirably adapted for the cultivation of the sugar-cane, and the drained acreage will be large enough to produce all the sugar the United States are likely to need for years to come. Bright as are the promises of abundant sweetness from the Florida swamps, however, it would hardly be wise to allow the distant prospect to interfere with the growing industry of sorghum sugar-making. The most praiseworthy feature of the enterprise is that the State has undertaken the work, without appealing to the National Treasury for aid. Hundreds of thousands, aye, millions, of acres excellently adapted for sugar-cane culture, now lie either pestilentially reeking in the swamps of Louisiana, or equally waste along the lower Mississippi, all of which could be permanently reclaimed for profitable cultivation at a cost of much less than the profit therefrom in a single decade. For years the General Government has been importuned in vain to undertake the construction and repairs of the Mississippi levees in order to make these wastes bloom like a garden; isn't it time that the States which would chiefly profit by the improvement, should follow Florida's example and straightway accomplish the work themselves, assessing the cost, or the greater part of it, on the land-owners benefited most by the undertaking. State rights and State duties are inseparable. We have heard much of the former and would like to see a little more of the benefits of the latter.

GREATER CAPACITY FOR HANDLING GRAIN NEEDED.

THE wheat raisers of California are in a distressful condition owing to the insufficiency of shipping on the Pacific coast. Freight charges are consequently so high that farmers who have to sell their wheat now must do so at a loss, and the banks cannot foreclose the loans they have made on the crop, without creating a panic. At San Francisco there is not a sea-going vessel of any kind disengaged. Those under charter are either loaded, or the necessary amount of wheat to load them is received. All, or nearly all the ships to arrive within the next three months are under charter, and the tonnage expected is very light, as freights are good everywhere. The storage capacity in the city is crowded, and owing to the slow rate of shipment room for fresh arrivals can be made only very gradually. A convention of farmers is about to be held in San Francisco in a few days to devise some means by which they can sell their grain, if not at a remunerative rate, at least so as to avoid a loss. Negotiations are now pending with the Central and Southern Pacific Railroads for the transportation of the crop across the continent to the Atlantic tide-water. The general impression seems to be that, in case it cannot be transported overland, the correct course is to hold it until next July, when it is confidently expected it can be sold at paying figures. At all the chief railroad termini there has been a great deal of trouble the past season on account of insufficient storage room for the enormous crops of the country, and measures should be promptly taken to remedy this source of inconvenience and loss before next harvest. Neither transportation facilities nor storage capacity is increasing as rapidly as production.

NOT THE MAN BUT HIS WORKS.

IN the Prairie Farmer (of Chicago, Ills.) of Jan. 22, we find the following:

"The RURAL NEW-YORKER of Jan 15., takes us to task for "magnanimously" offering the use of our columns to Mr. Le Duc to purge himself from the charge of a "crooked" proposition relating to the importation of live stock, which appeared in the National Live Stock Journal a short time previously. Men possessing a decent self-respect and honest motives are not apt to pass quietly over an accusation so direct and grave as this, coming from a reputable source. The Prairie Farmer offered Mr. Le Duc an opportunity to defend himself. But the RURAL NEW-YORKER thinks that he would belittle the important office he holds were he to return an answer to what it pleases to call "a vague charge of this sort." The source of the accusation, and the manner in which it was made, remove it from the category in which the RURAL NEW-YORKER would place it; still the Commissioner is as silent in regard to it as a graven image; and so he will remain. The difference between the National Live Stock Journal and the RURAL NEW-YORKER is, the former knows what it is talking about, and the latter does not.

It may be true respecting what we have said of Gen. Le Duc, that we have not known what we were talking about. Our acquaintance with him is very slight. It was not the man but his *work* that we desired to shield from what seemed to us unfair—unjust criticism. His *work*, so far as we are capable of judging, speaks for itself—and it speaks loudly—powerfully in his praise. As to the *character* of Gen. Le Duc, the Prairie Farmer *must be* in possession of facts of which we are utterly ignorant, else, if actuated by good motives, it could never have brought itself to publish the serious charges it has repeatedly made against him. It may be that we have quite overlooked the Commissioner's character in our appreciation of his good work; but when it is plain that the agricultural interests of our country have been and are being benefited as they have never been benefited before by government instrumentality, one is not over-anxious to reveal flaws when little has appeared to indicate their existence. The editorial above quoted concludes as follows:

"The alacrity of our Eastern contemporary to rush to Mr. Le Duc's defence is not surprising. Its editor has always been 'sweet' on the Commissioner, and it is not probable that these 'glucosities' are all one-sided."

We hope that, unless the editor of the Prairie Farmer simply desires to injure the RURAL NEW-YORKER or its editor personally, it will, upon reflection, be willing to recall the insinuations of the above paragraph.

OUR GROWTH IN POPULATION.

THE complete census returns show that we are now a nation of over 50,000,000 people,—a nation second to but one in Europe, Russia. What a wonderful advance has been made since the enumeration of 1870! In these 10 years the population of the United States has increased over eleven millions and a half, or three times the population when the first census was taken in 1790. Increasing in the same ratio, in 1890 we shall number 65,000,000 souls, in 1900, 85,000,000, and in 1950,—a year which some now living will doubtless see—we shall be a nation of over 300,000,000 souls, and all that when our Republic—for this may it ever be!—shall be but in the last half of the second century of its existence.

But the growth of our cities has been most remarkable. The enormous influx of population to these centers, both from our own fair hills and vales, and from foreign shores, has increased their population far more rapidly than our total population has been augmented, and, with this arise great social and moral problems which call for speedy solution. Four European cities—London, Paris, Vienna and Berlin—outnumber our first four—New York, Philadelphia, Brooklyn and Chicago,—and decades of years must pass before we can compete with them, but while all Europe has but 75 towns of over 100,000 souls, America has already 20 of that number of inhabitants, and each the metropolis of its own district.

The increase in the number of immigrants who are to-day making a large proportion of our city population, is a factor to be considered. During December last, 24,000 foreigners came to our shore, and during the six months ending December 31, 277,000, made America their home—an increase of 132,000 over the corresponding six months in 1879, while the total number of newcomers during last year amounted to 550,000!

Whether we can continue for years to assimilate this vast annual addition to our numbers, is a debatable question. What a future is before us! What wisdom will be needed to maintain our present course as a Republic! How grand the service we may render to mankind if the world shall be taught that a Republic can exist, and not only exist, but be prosperous, with a population so large, yet exalting the individual, granting equality to all, and vouchsafing freedom and happiness to every one who accepts our principles and abides by our laws.

AMERICAN WEEDS IN ENGLAND.

WE are so familiar with the spread of foreign weeds in this country that we are sometimes half inclined to believe that there must be some special power of attraction on this side the Atlantic which distinguishes America from other countries. But every once in a while statements appear which go to show that the game is not by any means all on one side, and that, in this regard as in others, we have sometimes given hard knocks as well as taken them.

The rapid spread of the aquatic weed Anacharis Canadensis in the canals and brooks of Europe is a case in point, which has often been noticed. In England and in many places on the Continent this "American Weed," as it is called, has become a perfect pest. It is cordially detested by watermen with good cause. Our common Evening Primrose (Œnothera biennis) is another plant which is now scattered far and wide over Europe. Specially interesting is the spread in the vicinity of London of the common Spotted Touch-me-not (Impatiens fulva) of our brooksides, since the course of its dissemination there can be traced with a good deal of certainty. It appears that the Touch-me-not was cultivated some sixty or more years ago in the gardens of Albury Park in the County of Surrey, whence a small stream runs into the River Wey above Guilford, and this little river in its turn falls into the Thames near Shepperton. Starting from the garden in question, the seeds have been carried by the water current and by barges, etc., throughout the Thames valley, as far down as London. The plant was first seen growing wild in 1822 near Albury, and since then it has completely established itself in so many places that were it not for a knowledge of its history its exotic character would not be suspected.

Another foreign plant abundant in fields and by road-sides just above London, whence it is gradually working its way outward, is the Peruvian annual, Galinsoga parviflora, which is supposed, to have escaped from Kew Gardens in the first instance and is now one of the commonest weeds in the district.

One of the most curious instances, however, among all the known cases of immigration into England is that of a shell fish. The fresh water clam or mussel Dreissena polymorpha, which came originally from Russia on logs of timber, has spread itself almost as rapidly as if it were a weed. It was first noticed at certain docks in London, in 1822, but is now so thoroughly acclimated and diffused that it has even been found in the city aqueducts.

BREVITIES.

A FRIEND writes frem Ostemo, Michigan: "The severe cold has killed the peach buds."

WE would commend Prickly Comfrey to Doctor Bailey (him of Billerica; him of Blount Corn fame) as a fine plant for ensilaging!

ONE of our subscribers who last year tested many different kinds of potatoes, thinks that the St. Patrick and Burbank, if not identical, are closely alike. We have never raised either. It is scarcely possible if they had been the same that Mr. Henderson would not have detected it.

ACCORDING to one of the members of the Elmira Farmers' Club, the cost of making molasses, after the cane is supplied, with small apparatus, is about two cents per pound, or 22 cents per gallon. It was found that it required six hours to crush cane enough to yield 200 gallons of juice. A crusher should, to work economically, do that work in an hour. It appears that the *quality* of the molasses made from Amber Cane is rated with that of New Orleans molasses, to which it is superior for cooking purposes.

IN looking over the catalogues which are now coming in freely and which will be noticed next week, we find that "Cuzco" Corn is still offered in several of them as a great and glorious novelty. Our old readers cannot have forgotten what we have said as to this great corn-humbug; but new readers may need to be advised that it is worthless for this or, so far as can be ascertained, for any other climate. The RURAL sent seed to a dozen different persons in the South and West. All report the same, viz.: that it is substantially good-for-nothing.

IT is said that animals on a sea voyage more often die for want of water than from any other cause. Their deaths are usually attributed to sea-sickness in a stormy time, and to being shook about so roughly by the constant heavy rolling and pitching of the vessel. At such times it is very difficult to water animals, and the duty is consequently much neglected. Thus they suffer in two ways—first by the extra exercise a ship gives them in stormy weather, inducing extra heat and perspiration; second, by obtaining a less quantity of water than usual for drinking at the time they really require much more.

IN the RURAL NEW-YORKER for September 4th last, in an editorial under the caption, "The Drought and the Corn Crop," after a careful comparison of various estimates and accounts of the growing crop, we ventured to prophesy "the aggregate corn crop of 1880, despite the early promise of an immense yield, will turn out somewhat less than that of '79;" giving briefly our reasons for the faith that was in us. In the "Agricultural News" this week, we give a tabulated statement of the past season's corn crop, carefully prepared by the Statistician of the Department of Agriculture, which shows that our prediction "hit the bull's-eye," the crop of '80 being estimated therein at 7,363,353 bushels less than that of '79.

DURING the past week and especially toward its close, there has been a growing excitement in the Chicago produce market. A good deal of interest was shown in wheat, and a strong upward movement occurred in nearly every branch of trading, but especially in provisions. This was due to the enormous demands of foreign trade upon the packing capacity of the Western Metropolis, rather than to any combination to force up prices, although there is an unsupported report that such a combination exists with regard to lard. Hogs have been coming in steadily, but the demand greatly exceeds the supply and prices have been going up from five to fifteen cents at short intervals. Last year the state of the market was feverish, with prices controlled by a powerful ring; now prices are steadily mounting as the natural outcome of national prosperity and of a demand in excess of the supply.

AT last the attention of the country seems thoroughly awakened to the danger our herds are exposed to from pleuro-pneumonia. The injury to the country from the restriction on the importations of American cattle into the United Kingdom is trifling in comparison with the calamitous loss that must be incurred should the plague spread among the vast herds of the West and Southwest. Owing chiefly to the repeated warnings of the agricultural press, and a good deal to the action of the Agricultural Department, Congress has at length before it a bill designed to check the spread of the pest, and stamp it out wherever it has obtained a foothold. The Legislature of this State has promptly appropriated another sum of $10,000 to extirpate it from among us, and other States seem fully alive to the emergency. In view of the energetic crusade that will probably soon be inaugurated against the plague everywhere, it is hardly likely that the English Privy Council will adopt any more stringent measures against the importation of cattle from this country, although last Thursday a motion was made in Parliament to prohibit absolutely the landing of American cattle in the United Kingdom on the ground that slaughtering them at the ports of debarkation was not sufficient to prevent the spread among the native herds, of the disease from animals suffering from pleuro pneumonia.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE CHILDREN.

FOUND IN THE DESK OF CHARLES DICKENS AFTER HIS DEATH.

When the lessons and tasks are all ended,
And the school for the day is dismissed,
And the little ones gather around me
To bid me "good-night" and be kissed;
Oh, the little white arms that encircle
My neck in a tender embrace!
Oh, the smiles that are halos of Heaven,
Shedding sunshine and love on my face!

And when they are gone I sit dreaming
Of my childhood, too lovely to last;
Of love that my heart will remember,
When it wakes to the pulse of the past,
Ere the world and its wickedness made me
A partner of sorrow and sin,
When the glory of God was about me,
And the glory of gladness within.

Oh, my heart grows weak as a woman's,
And fountains of feeling will flow,
When I think of the paths steep and stony
Where the feet of the dear ones must go:
Of the mountains of sin hanging o'er them,
Of the tempests of fate blowing wild;
Oh, there's nothing on earth half so holy
As the innocent heart of a child!

They are idols of hearts and of households,
They are angels of God in disguise,
His sunlight still sleeps in their tresses,
His glory still beams in their eyes:
Oh, those truants from earth and from Heaven,
They have made me more manly and mild,
And I know how Jesus could liken
The Kingdom of God to a child.

Seek not a life of the dear ones
All radiant, as others have done;
But that life may have just as much shadow
To temper the glare of the sun:
I would pray God to guard them from evil,
But my prayer would bound back to myself;
Ah! a seraph may pray for a sinner,
But a sinner must pray for himself.

The twig is so easily bended,
I have banished the rule and the rod;
I have taught them the goodness of knowledge,
They have taught me the goodness of God.
My heart is a dungeon of darkness
Where I shut them from breaking a rule;
My frown is sufficient correction,
My love is the law of the school.

I shall leave the old house in the Autumn,
To traverse its threshold no more,
Ah! how I shall sigh for the dear ones
That meet me each morn at the door.
I shall miss the good nights and the kisses,
And the gush of their innocent glee,
The group on the green and the flowers
That are brought every morning to me.

I shall miss them at morn and at eve,
Their song in the school and the street,
I shall miss the low hum of their voices,
And the tramp of their delicate feet.
When the lessons and tasks are all ended,
And death says the school is dismissed,
May the little ones gather around me,
To bid me "good-night" and be kissed.

DESCRIPTION OF CUTS.

FIG. 50.—BORDER EMBROIDERY.

This design is intended to be used for trimming dresses; it is worked with silk in chain-stitch and small jet beads.

FIG. 51.—TRIMMING: CROCHET AND MIGNARDISE.

As will be seen from the illustration, this pattern is worked diagonally.

Commence with twenty-one chain, pass over five chain, one treble into the sixteenth, keep the top loop on the hook for the next and following trebles, turn the cotton twice round the hook, work off as for a treble, leaving the top loops of each on the hook; the trebles are worked into every other stitch of the chain; take a length of mignardise, * work a treble as before described into two picots together, repeat them * three times more, work an ordinary treble into the two next pieces together, then work off each loop on the hook as one stitch.

2d row: Four chain (as all the trebles are worked as described in the last row, we shall not repeat the directions), pass over the first treble, one treble into the top of each of the six next successive treble, one ordinary treble into each of the eight next successive stitches, and one into the two next picots of mignardise together; keep the top loop of each on the hook, and work off as described in first row.

3d row: Four chain, pass over the first treble one treble as described into each of the five next successive stitches, one ordinary treble into each of the eight next successive stitches and into the two next picots of mignardise together; work off as described for previous rows.

4th row: Four chain, pass over one treble one treble as described into each of the four next successive trebles, one ordinary treble into each of eight next successive stitches and into the two next picots of mignardise together; work off the same as previous rows. Repeat from the first row, working into the stitches of last row instead of into the chain, as described for first row.

FIG. 52.—Home dresses for young ladies from twelve to fourteen years of age, is of myrtle-green cashmere, woven striped borders of dull red; it is trimmed with a kilting, and scarf draperies fastened at the back under a bow of ribbon.

The other is of hair-brown vigogne; it is trimmed with two deep kiltings; collar and scarf drapery of woolen plaid.

FIG. 53.—MUFF.

The muff is of chocolate satin, gathered in small puffs; it is lined with old-gold satin, and is trimmed with coffee-colored lace and loops of ribbon.

FIG. 54.—PELERINE.

The pelerine is of black satin, trimmed with a narrow gold embroidery design, and black lace, embroidered with colored floselle.

FIG. 55.—RUFFLE.

The ruffle is of cream-colored lisse, encircled by a wreath of pale pink and blue flowers; it is finished in front by loops of pale blue ribbon and drooping flowers.

FIG. 50.

FIG. 56.—INSERTION: DARNED NET. (BRETON LACE.)

This lace is very much used for trimming evening dresses, fichus, cravats, &c., and it is especially effective when worked with colored floselle upon white or black Brussels net. The design must first be traced upon transparent linen or paper. The net should be firmly tacked over it, and the pattern worked to tracing. The open holes are made by sewing over two or three meshes of the net, and then outlining in darning stitch; all the remainder of the designs is worked in darning-stitch. When the lace is required to be washed, it should be worked with white linen flossette on white Brussels net.

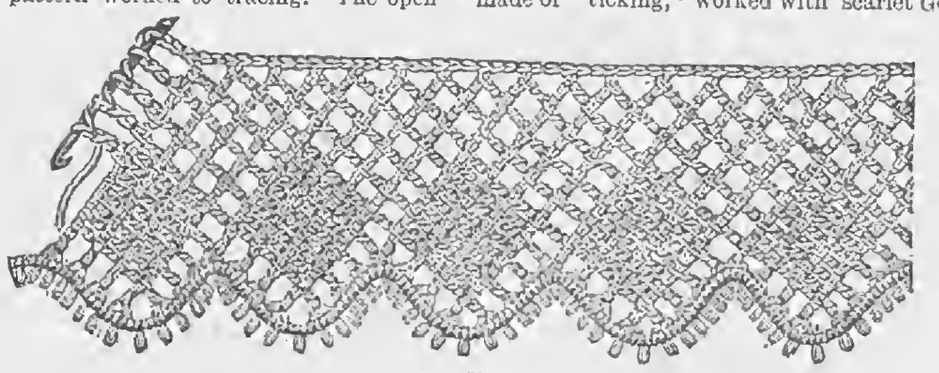


FIG. 51.

FIG. 57, 58.—SPRAYS: EMBROIDERY.

These sprays are worked in long and cording stitch, with crewels or embroidery silk; they are suitable to be dotted about antimacassars, cushion covers, work-basket-covers, &c.

FIG. 52.

FIG. 59.—POMPADOUR SATCHET.

This satchet may be made in a variety of pretty materials, such as satin, velvet or plush. The one illustrated is of olive silk, ornamented with a ruby velvet applique design; it is finished with cord and rich fringe, and is suspended from the waist by means of a double cord of silk.

A LETTER.

DEAR MISS CLARK:—Many obligations to Mary Wager-Fisher for her directions for constructing a "Japanese quilt." I wish every one of the ladies of the RURAL would give directions for making some useful or ornamental article, for there are sure to be some to whom it would be new—whatever may be written upon—even if familiar to many.

Just now I can think of nothing but *bed-ticking* and some of the uses to which it may be put. By working the white stripe with some colored wool, in cat-stitch, you have a handsome cloth.

An acquaintance of mine has a pretty scrap bag made of "ticking," worked with scarlet German-town wool, the edges whipped together and bound with scarlet skirt-braid; a tassel made of the wool fastened on each end of the four corners at the top and one on the bottom, and suspended by a piece of the braid.

Another useful article is a shoe-bag that was hung on the inside of a closet-door; a large square of the ticking was worked with dark-red wool and bound with braid to match; then there were six smaller squares worked and bound like the large one and firmly sewed on it, three squares above and three below. It was pretty and useful for slippers, best shoes, rubbers, etc.

Several years ago I met a young lady from Nashville, Tenn., who was the possessor of a handsome wardrobe. She frequently wore for street wear a short, double-breasted basque of navy-blue, the collar, cuffs, pockets, etc., being of plush the same color, and a double row of large white pearl buttons. The cloth was different from anything we had seen, and what was our astonishment to learn that it was "nothing but bed-ticking."

A couple of Winters after that they were "quite the rage" among the school girls in our city, and I worked one for my sister, in dark purple, making the collar, etc., of cashmere the same shade. It was very much admired. Those worked in cardinal colors, however, are the handsomest.

In making anything of the kind, the article must be cut out, merely allowing for deep seams, as it does not readily ravel. "Grandmother" writes such good articles, can she not tell how to make something pretty and useful?

Hastily, MRS. W. V. A.

IS THERE ANY MONEY IN IT.

ANNIE L. JACK.

A NEW neighbor made us a call of ceremony the other day, and of course we discussed the usual topics that int rest our sex.

Coming from a country village where the people think themselves advanced, because they are replete with social gossip and live in communities, she chafed against the isolation of our quiet life. Having no taste for reading she has a house full of fine furniture but without any books. We made various but vain attempts to enter into a conversation on any subject we could think of, but resigned ourselves at last to an unlimited account of the small details of her past village life. Our eldest daughter was painting our Christmas cards, having bought the plain gilt edged cards, and arranged her own designs, with appropriate sentiments. We thought this, while good practice, would add to their value to friends, and had amused ourselves some dull December afternoons devising appropriate mottoes for the different recipients. Our visitor with the slightest possible show of attention examined the work and then turning to me, asked in a half scornful tone, "Is there any money in it?"

The question has occurred to my mind a great many times since, in view of the many ways in which people spend their time. While I admire the farmer's wife, who while her husband is struggling and poor, bears her share of the burden, and helps him to the independence they both desire, I cannot agree with the grasping spirit, that after competence is gained, continues to feel that the life is "more than meat, or the body than raiment."

"We could live on the interest of our money" my visitor took pains to inform me, yet she had brought up her daughters without a single accomplishment and took only the local weekly newspaper; not one magazine, or horticultural journal with which to brighten and improve their leisure hours.

It is this bareness of living, that helps to drive the youth of the rural districts to the city, and robs the country of its attractiveness. And so high and low, rich and poor, bow down to the golden calf. But be not misled, oh, prudent housewife! to look for your happiness in wealth gained at the expense of all else life has to give; for that which gives us most pleasure, and lasts longest in our memory—the gift we prize most, and the treasure we hold in highest esteem—is likely to be something with no "money in it."

REMODELING.

THE full last years style of polonaises make over very easily and are much less trouble to drape and fit than when made new.

The gray or drab ladies cloth I shall describe was originally made up with black velvet, which was put on in revers and a vest front. It was very full, drooping in the back.

The back is cut princess and long enough to reach the top of the shirt flounce or about 32 inches in length from the waist. The seams left open 10 inches at the bottom and faced with the cloth. The side seam trimmed with velvet revers. The vest is cut off at the waist and a wide velvet belt sewed in the seams of the second dart and passing over the first, finishes the bottom of the waist in front. The front of the polonaise below the waist is cut, in the form of a coat—leaving a wide apron shaped drapery that is slightly full and fastened in with the side seams to cover the under skirt. The front breadths of the polonaise are trimmed also with revers. The front breadths are of a uniform width from the waist to the bottom of the polonaise, and fit smoothly and without draping anywhere. A velvet trimmed under skirt finishes the suit.

A Turban to match the dress made of ¼ yard black velvet and ⅛ yard black or drab satin is easily made by any one at all used to "doing for themselves." Take an old bonnet, shape and cut the size required for the band, and put a full crown of any stiff material or bonnet net, and sew the wire that was on the old bonnet around it to keep it in shape. Put the satin in the crown exactly the same way and size as the net, and roll the velvet around the band. To take away the stiff look, bend the wire into "crooks" our little milliner called it, and pinch in the crown. There will be enough velvet for a loop or two. An ostrich tip will finish it beautifully. MRS O. W. D.

REPLY TO OLD MAIDS.

DEAR me! what a letter from Alline Ray; the replies she makes to the "Old Maid No 2," and Dr. A E. S., must amuse the readers of the RURAL. It seems that Alline Ray has pitched into me and I suppose she is going to drag me over the coals for the answer I made to "Old maid No. 2" and Miss Irene.

Now Alline, you say "just wait until Dr. A. E. S., and old maid No. 2 are twain." I must say in reply that I desire you to know that I am not in haste to marry. I am strongly inclined to believe that your husband is like the one you suppose I will be when No. 2, and myself are one, so you had better drag him over the coals and teach him

common sense and then relate your success to the RURAL sisters.

There are no farmers in Delaware that need reforming. I presume you are of some Eastern town as your ideas are very poor indeed in regard to farmers wives; they usually dress well and the majority of them are always in good health and cheerful. Alline Ray tells the RURAL sisters that Dr. A. E. S. will be faithful and kind until he gets married. Indeed Mrs. Ray I am not a farmer, neither the kind of man you speak of in your letter.

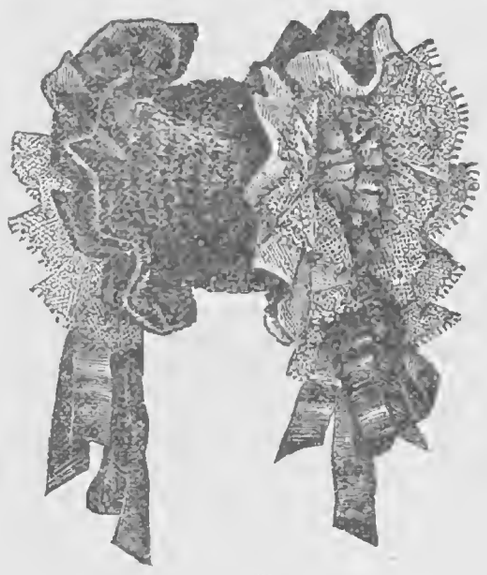


FIG. 53.

As I am not in the farming business, I am not able to give you any ideas for making tomato catsup. No. 2 and myself, neither of us have high tempers but I suspect that you have. You must not get snarly at "Old Maid No. 2; it affords me satisfaction to know that you are pleased with Miss Irene's letter on dragging husbands over the coals. I hope you and she will live to enjoy a a vigorous old age. I also hope to hear from you again on the "coal dragging." Yours truly,

Delaware. DR. A. E. S.

FASHIONS.

FOUR-LEAF clover is one of the favorite designs for jewelry.

The latest handkerchief is of deep brown, with a gold-colored border.

Opal-tinted plush is used for many opera bonnets.

Gloves for the deepest mourning are of undressed kid.

Bouquets of tulips, or of holly, or else of poppies, are chosen to wear in the corsage of black dresses.

Fans at weddings are carried by bridesmaids, ornamented with silver monogram, the initials of the bride and groom, and with each lady's Christian name painted on them.

New pocket handkerchiefs of sheer linen lawn have the initial in hemstitching, usually in block patterns. The hems are either very narrow or else of medium width.

FIG. 54.

A new material for evening and home wear is a serged flannel, made only in white. It is trimmed with white satin ribbons. For young girls and young married ladies it is exquisite.

Kerchiefs of black bernani, edged with fringe, are worn with mourning costumes.

Crochet buttons are preferred for black silk costumes.

Combs, if worn at all, are now placed on the left side of the head.

There has not been a Winter for years in which warm-looking dresses are so fashionable.

The French custom of ornamenting reception rooms with flowers is coming into use in New York.

Black satin reticules are considered in better taste than any other. They are fastened to the belt by a fancy brooch.

Pond lilies embroidered on blue or peacock blue velvet make the prettiest of sofa cushions.

There are rumors in the air that the coiffure is to be high again. Possibly powder may return with the revival of the antique in costumes.

Stamped velvet is a good deal employed for the princess cut of dress, but has a less dressy effect than the plain velvet when used in black.

The prevailing style—and it is to be admired—is for severe plainness in street dress. Materials can be of cloth, but the fit must be perfect.

A corsage bouquet is always pretty, and among recent novelties gilt wheat ears are shown, mixed with lace and bows of fine Indian mull, to be worn at the neck. Quantities of lace are twisted around the neck, either white or black, and the dressing of the neck is now entirely to one's own fancy and as one's own good taste dictates.

Small muffs are a marked feature of Winter costumes. They should be made of the material of the dress and edged with frills of lace. Some shapes are like a hand bag scantily drawn up with heavy cords and tassels. The opening at each side is trimmed with lace, as is the top of the bag. Flowers may be used as ornaments.

Many of the richest brocades of velvet on satin have the velvet flowers edged, veined, and ribbed with gold, jet, or iridescent beads.

CORRESPONDENTS' CORNER.

WILL you please explain through the "RURAL" the "Eastlake," style of lambrequins. I never have seen any and would like to understand the style. COUNTRY GIRL.

ANS.—The "Eastlake" style is perfectly strait. Lambrequins made after this pattern differ from others in the absence of scollops, points, etc. They may be ornamented with fringe or other trimming.

WILL you kindly reply to the following particulars:

Which in your judgment is the best family Encyclopædia, also second best and expense of each. I would also like to know the expense of a *fine* steel engraving of the "Madonna." Is it "artist's proof" that are considered finest? Could you procure one for me if I desired?

Will you mention some engravings or photographs pretty for parlor decoration, and their cost. What books after a Dictionary and Encyclopædia would you recommend as a *foundation* for a family library? I will be grateful for answers.

Mo. E. A. W.

ANS.—As far as possible, allowing for individual taste, etc., we comply with the above request.

If not answered to the letter we hope to confer some benefit.

The best Encyclopædia is Appletons' costing $96. It comprises 16 volumes at $6 each.

Another is published by the American Book Exchange, costing $11 50. Price of engraving of "Madonna di San Sisto" by Raphael $7.50. "Murillo's Madonna" are inferior copies costing $2.50. Artist's proof are always the first that come from the plate and of course are much the best. Only a few are printed—rarely exceeding two-hundred—and it is almost impossible to get an artist's proof of some engravings at any price; in any case they are more expensive. Night and Morning, by Lansier, The Seasons and R. Ansdell's engravings all costing about $3.00 are among the many that might be mentioned for parlor decoration.

FIG. 55.

Macaulay's History of England, Guizot's France, Green's Short History of England, "Analysis of Government" by Bancroft (very useful), Dickens's novels such as "Bleak House," "David Copperfield," "Pickwick Papers," etc. Mrs. D. M. Craik's novels, "A Brave Lady," "Young Mrs. Jardine," "John Halifax," etc., are a few of the many good productions worthy of place in a family library. The Bible of course should be remembered.

We will accommodate by procuring the engraving should it be desired.

WILL you, as soon as convenient, tell me through the RURAL's columns of a pretty way to make up all wool dresses for a little girl eleven years of age? I have plaid stuff for trimming—would like a late pattern. Do young girls wear the hooded costumes. An illustration makes it plainer to us than almost any amount of verbal description.

MRS. F. B.

ANS.—In the current issue we give an illustration which we think will meet your requirements. Young girls do wear the hooded costumes. In a future issue will be given a cut of hood.

WILL you please tell me through "Correspondents' Corner" of the "RURAL NEW-YORKER," where to address Wilkie Collins, the novelist, and oblige a friend? J. J.

Va.

ANS.—Address Wilkie Collins, care of Chatto and Windus: Publishers, London, England.

ABOUT WOMEN.

MISS MARION MURDOCK, formerly a student of the Northwestern Female College, and a graduate of the Boston School of Oratory, has acquired an enviable reputation as an elocutionist in Iowa and Minnesota. She has been engaged with Superintendent Parker in conducting a teachers' institute at Independence, Iowa.

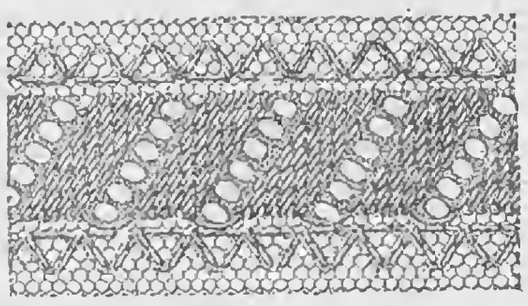


FIG. 56.

MRS. HAYES possesses an art for entertaining her guests which is worthy of study. With a dozen guests on her hands and others constantly arriving, she is always mistress of the situation. Although full of animation, yet she is cool and self-possessed. Her eyes do not wander while engaged in conversation with a single individual, yet she appears to know the movements of every one in the room. She is very ready in conversation, always leading, and very frequently contributing more topics and comments than any one present. She entertains, and does not exact entertainment from her guests.

Literary Miscellany.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

CHAPTER I.

A STRANGER IN A STRANGE LAND.

WHEN I was a young man I gave much attention to sociology and all questions relating to the amelioration of man's condition as a physical, moral

FIG. 57.

and intellectual being. I had a young friend who was much given to disputation, and we often met for the purpose of exchanging our ideas on the important topics connected with man's relations to his fellows, and to the other beings and objects of the world in which he has been placed.

On one occasion our discussion was unusually vigorous and prolonged. My friend had come to my room early in the evening, and the hour of midnight found us still in hot debate, with no more prospect of unanimity than when we first began. He left me at one o'clock, having risen to go at twelve, with the promise of continuing the discussion when we should meet again.

With my brain tired and feverish from the prolonged mental excitement, I threw myself in my easy-chair to gain some degree of mental composure before attempting sleep. But the stimulus to my intellectual faculties being removed, the reaction seemed to throw them into a whirl of confusion. There was a ringing in my ears, as though the echoes of our voices remained about the walls of my room. I felt a strange, benumbing insensibility stealing over me, and in my efforts to overcome it everything in the room seemed to be whirling about me, and my mental confusion was only increased. The restful quiet of this benumbing feeling seemed so grateful that I soon ceased to struggle against it; as I sank under its influence I seemed to awake suddenly to consciousness in the brilliantly lighted street of a most magnificent city. I looked around me, dazzled and bewildered. It seemed as though some dream of enchantment had suddenly become a reality, and that I enjoyed the rare privilege of conscious existence and its captivating scenes.

FIG. 58.

Having become accustomed to the light, and recovered somewhat from my bewilderment, I began to look about me with an observing eye.

The street was very wide, with a row of grand old elms running through its center. Between them fountains were playing and beautifully-sculptured statuary were placed at frequent intervals. The pavement was the most perfect that I had ever seen, and fairly shone with cleanliness, having, as I afterward learned, been just washed by the water of the fountains, which it was the custom to turn on every evening with sufficient force to carry away every impurity.

As I walked along I noticed that pleasant residences with ample grounds were interspersed among the places of business. This surprised me somewhat, as in my travels (though I had never seen anything to compare with the magnificence of this street) I had found that any which approached it were the thoroughfares of wealth, fashion and dense population. I passed into another street, and from that into another, and still the same general features of the first were presented to my view. Grand old trees, sparkling fountains, beautiful statues, elegant dwellings, and stores brilliant with their display of goods; while everything gleamed with that brilliant light which, though artificial, nearly rivaled the sun in brightness.

There were few persons on the street, but the appearance of those whom I met struck me forcibly. Finer men and women I had never seen. They seemed the very embodiment of physical perfection, while from their countenances shone an intelligence, a purity and a benevolence of character which seemed to indicate that their minds were as completely and harmoniously developed as their bodies.

I had an opportunity of observing the people of this enchanted place more at their leisure, and under more favorable circumstances, as I now came to a spacious and delightful park, in which groups of men, women and children seemed to be enjoying themselves in social pastimes. I was sufficiently surprised and delighted with what I had already seen, but when this magnificent scene burst upon my view I felt as though I would like to sink into the earth from a sense of my own inferiority and insignificance. Still there was a fascination about the scene which riveted my attention; so, keeping myself as much as possible in the shadow of the trees and shrubbery, I endeavored to contemplate the scene with the eye of a curious stranger.

The place seemed to combine the best features of the conservatory and the pleasure ground. Rare plants and flowers, tastefully arranged in clusters and beds along delightful avenues, bloomed in tropical luxuriance. Here a fountain bubbled up from the center of a pile of rocks, and flowed over their moss-grown sides. There, a cascade leaped from a lofty cliff, and dashed along a foaming brooklet till its waters became quiet in the bosom of a peaceful lake. There were caves, grottoes secluded nooks, valleys and hillocks, fountains, statuary, and a thousand curious objects from nature's laboratory, all arranged with such picturesque effect that they afforded the mind one continual feast of wondering delight.

I sat down upon a rustic bench to feast my eyes upon the heavenly scene. There were few people in this portion of the park, but those who passed me, gazed upon me with a curious, and I thought a pitying look. At last an old man of venerable and benign appearance, but erect and vigorous in body, paused in front of me as he was passing and addressed me.

FIG. 59.

"I beg your pardon, sir," said he, "for intruding upon your thoughts, but you seem to be a stranger, and, judging from your appearance, I fear you are ill."

"I feel myself, indeed, a stranger here," I replied. "As much so though I were an inhabitant of the moon just dropped to earth, or rather an inhabitant of the earth suddenly landed upon some delightful planet. As for being ill, my appearance has deceived you, for I never felt better in my life. May I ask, sir, in what place I am?"

"This, sir," he replied, "is one of the parks in the city of Goodwilltomen."

"Goodwilltomen!" I repeated. "I do not remember to have ever heard of a city by this name. Where is it located?"

"In the land of Peaceonearth," he replied. "But come sir, let me introduce you to some of our people. We never allow strangers to be so long in this country."

"You are very kind," I rejoined, "but while feeling truly grateful for your kindliness, I must beg to be allowed to continue a stranger for a while yet.

To tell the truth I felt oppressed with a sense of my great inferiority in the presence of these superior beings. I however acquiesced in the proposition of the old gentleman to accompany him across the park to where the people were engaged in their evening recreations.

"This is but one of the many pleasure grounds," said he, in answer to my inquiries, as we walked along, "which are laid out at regular intervals throughout the city for the purpose of giving the people convenient places for social meeting and pleasant recreation. These parks are frequented at all hours, but especially in the evening it is the custom of our people to meet together for a few hours of social intercourse."

We now drew near where the people were congregated. Embowered amid the trees and a tropical luxuriance of lesser foliage, with silvery cascades and sparkling fountains glistening in the brilliant electric light, there were numerous pavilions and rustic arbors in which various social entertainments were in progress.

We came first to a pavilion in which a company of children were engaged in a game, which, while affording them an infinite amount of merriment, seemed to be wanting in that rude and boisterous hilarity which I had so often observed among children at their games. I was always very fond of children, but this group interested me beyond any that I had ever seen. I had often gone into ecstacy over a plump, healthy, sprightly, and sweet-tempered child, but here were at least forty of such children all in one company, so it may be imagined that I was full of appreciation.

I looked over the company, and narrowly observed each little one, but I could not discover a single one of that pale, nervous, sickly, or gaunt and tall class which is always so well represented in every gathering of children in my own country. On the contrary, they were all so well grown, so finely developed and so healthy in appearance that, but for their number and the variety in their more prominent features, I would have taken them all to be children of one parentage. What was more delightful to me than any other feature of the scene was the unvarying courtesy and the unselfish respect for each other's rights and feelings with which their sport was conducted. They bore themselves like perfect little ladies and gentlemen, while acting with the unconventional freedom of children.

We came next to a large pavilion in which a company of young men and maidens were engaged in such miscellaneous pastimes as might be observed among a social gathering of young people in my country.

Here was a group seated around a table engaged in a game of chess, there a knot was gathered round a work of art, discussing its merits and admiring its beauties. Another group seemed to have in their possession some curiosity which greatly excited their wonder and admiration. Others were promenading, and others still were engaged in earnest conversation, while here and there a couple moved or set apart from the rest, whose tender looks and countenances suffused with an internal content and pleasure told the old story as plainly to the observer as their lips would utter it to each other. The middle of the floor was occupied by many sets of dancers, who moved with the utmost precision in complicated evolutions to the most delicious music that ever greeted my ears. I gazed in rapture upon the moving figures; such beauty of form and grace of carriage seemed little less than divine. While the absence of that ostentatious display of finery and those affected ways by which so many young people attempt to lighten their charms, seemed to set off to the best advantage those graces with which they were all so richly endowed by nature.

"Surely, sir," said I, turning to my companion, "this must be an exhibition of the best specimens of your people gathered from all parts of the country."

He looked at me in mute surprise, while his expressive countenance seemed to say: "Surely, sir, your mental equipoise must be seriously disturbed or else you are woefully green."

"Now, in my country," said I, in an explanatory manner, "there could scarcely be collected so many splendid specimens of young men and women as are here assembled, while if they were gotten together people would come by tens of thousands to see them."

"Your country," said my companion, smiling facetiously, "must be in a very out of the way place, where it remains unaffected by the progress of our age. This company of young people is by no means remarkable, but such as might be found at this moment in any of the many parks of the city. And, further, I would agree to travel with you over the whole extent of our country and find you in every section of it as fine looking men and women as the best of those who have here excited your admiration."

"Indeed, sir," said I, "I grow each moment more insignificant in my eyes; and yet I must see more of your wonderful country and people if I dwindle to the condition of a miserable, deformed pigmy."

"I hope," replied my conductor, a benevolent smile lighting up his noble face, "that your visit among us will have a directly opposite effect, namely, to inspire you with loftier aspirations by giving you visible proof of what your nature is capable."

"There, sir," he continued, pointing to a venerable looking man whose magnificent head and face at once riveted my attention, "that is Professor Cameron. He is explaining a recent discovery which he has made in electro-magnetism to some of his scientific friends. If you want to study a really fine specimen of the human race, look at him. In his younger days he was regarded as the finest man both physically and mentally, that the city contained. He has not lost any of his mental energy yet, while he is as hearty and fresh, physically, as many a man of a hundred."

"A hundred what?" I mechanically inquired.

"A hundred years of age. I know you will scarcely believe me, but that worthy man is one hundred and thirty years old, and he has every prospect of living to be a hundred and seventy."

"Indeed," said I, "then longevity is another of the remarkable characteristics of your people."

"I do not know that you can call it a remarkable characteristic of our people," he replied, "since it is only occasionally that one reaches a hundred and seventy. While the average of human life among us is only one hundred and twenty-five. Doubtless, in the course of time it will improve, as the people learn greater self-control and the laws of hereditary transmission become more thoroughly obeyed. In my young days the average was only a hundred and ten, now it has reached a hundred and twenty-five, and I should not be at all surprised but that in two or three generations more, it will have reached a hundred and fifty."

At this juncture a chime of bells rang out a most delightful piece of music. Immediately the play of the children, the dancing, the games, and every other occupation at which the people were engaged, ceased, and they all stood up in their places and became reverently silent. Then a choir in a conspicuous pavilion led off in a hymn of praise in which all the people joined. And such a hymn of praise, I thought, never swelled to heaven. In the pauses of the hymn I could hear the chimes and voices of other quarters of the city, and I conjectured, as my companion afterward informed me, that this was the closing exercise of the social entertainments in the different parks throughout the city. Promptly at nine o'clock, the chimes began to ring and then, after the hymn of praise was sung, the people dispersed to their homes.

My companion gave me a very pressing invitation to become his guest, but I politely declined, and requested him to show me to the nearest hotel. This he consented to do with hospitable reluctance, and following in the wake of the populace from the now deserted park, we soon parted at an elegant hotel.

I stepped up boldly to the register among a crowd of those who had just returned from the park. I felt that I was an object of no very flattering curiosity to the grand people among whom I had fallen, and I resolved to show them that I was indifferent to their criticisms. My bold, confident air must have caused them much amusement, for they might justly consider me a mere pigmy both in mind and body, as compared with themselves. Yet I could not discover a disposition on the part of any of them to resent my assumption of importance. Even the hotel clerk, proverbially scornful to the man of indifferent appearance, treated me with the utmost courtesy.

The guests had soon all retired, it being an invariable rule with this people to be in bed by ten o'clock—and I found myself alone with the clerk and other employees of the hotel who seemed preparing to follow the guests. I felt jaded, dispirited and generally dissatisfied with myself, and as I had often found beneficial results in such a condition, from a glass of brandy, I inquired of the clerk where the bar was.

"The bar!" he repeated with a puzzled look. "There is probably one out in the storeroom; but I cannot conceive what use you can have for a bar. Is it an iron or a wooden one you want?"

To be continued.

THE EYE-OPENER.

THE excellent Report of the Kansas State Horticultural Society, just received, says that at its ninth semi-annual meeting frauds and humbugs received the strongest condemnation. The proprietors of the Hill Home Nurseries, of Tadmor, Ohio, and of the Rose Hill Nurseries, of Iowa City, Iowa, were specially scored for their efforts to swindle the people of Kansas with such frauds as the Conover's Seedling Grape, and statements "meant to deceive" about Hybrid Russian apple trees and many other worthless articles. A fellow named Fulhart was also "handled without gloves" for selling the Lombardy and Broad-leafed Peaches as valuable fruits, and also such frauds as the Sweet Rhubarb, Tree Strawberries, Grape-vine Raspberry, and monster pears, "originating in the swamps of France"!!! The sense of the Society was that sensible men should not be duped by wily agents or by fine-colored fruit books, or even by bottles of specimen fruit grown elsewhere, and if gudgeons are caught by such bait, why, they are apt to learn some wisdom, though they pay pretty dear for the lesson.

At the change of life nothing equals Hop Bitters to allay all troubles incident thereto.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING THE SAVING OF LABOR.

MARY WAGER-FISHER.

I THINK actual housekeepers, who keep house well, must often be amused at the substance of many of the articles which from year to year appear in the "household" column of newspapers, telling women how to do their work in order to get through with it quickly, have plenty of leisure, and be always bright and unfatigued; for they well know that in housekeeping, as in most other businesses, "eternal vigilance is the price of liberty," and that for every day of neglect there is always a "day of reckoning." At all events, that has been my own experience. I find that, in order to keep affairs running smoothly and well, there is always a great deal of work to be done and always a great many steps to be taken.

In economizing labor, both for myself and those whose work I direct, I aim chiefly at two things—to make the various tasks of the day "dove-tail" into each other, and to *save steps*. The latter, I think, is of very great importance, and the most difficult to compass, because it requires constant forethought. Aside from the architectural conveniences of a house—on which a long chapter might be written—there are some arrangements, simple in themselves, but which contribute largely to "keeping things in order," at little cost of trouble or expense. In the kitchen hang a bag so that the mouth be always open, in which put all rags of every description—especially worn-out house-cloths that drift to that part of the house. Have another bag, with mouth ajar, for paper of every description. Allow *never a rag or paper to be thrown out of doors*. When a broom is utterly worn out, chop off the stump end and put it in the fire; put the handle in the work shop. Have a box or drawer in the kitchen for needles, thread, thimble and shears; they are always needed at times. Have in every occupied room in the house a similar outfit, for scarcely a week passes but a stitch needs to be taken in something. A half dozen steel thimbles, with needles and thread and scissors, judiciously placed, will save five thousand steps a year.

The same may be said of dust-pans and dust-brushes. In a large house there should be from two to three on each floor. They will wear for years, and in the end cost no more than when one is made to do for the entire house, besides saving all the steps. To come down-stairs for what should be up-stairs, and *vice versa*, should be accounted an intellectual sin. True, one cannot always go about with the mind charged with small matters, but there is an old saw about killing two birds with one stone, that is worth remembering. If there is a shelf or chair by the stairway, on which articles are placed that are to go up-stairs, many steps can be saved in that way. The same for the cellar, if there is a shelf put in the cellar-way on which things may be placed temporarily that are either to be carried down or to be brought up, and left until required.

What is needed in the kitchen, have in the kitchen, so far as possible. If there is no place for these things, *make a place*. So of the dining-room. Have your table-cloths and napkins there, and not up-stairs in a bureau drawer. In brief, put the requirements of an office *in the office*, and, as I said of the kitchen, if you have no place for them, make a place. A small cupboard may be hung against a wall, which will prove a great convenience. Instead of talking and wishing for conveniences, *have them*. In nine cases out of ten, if you want a thing in downright earnest you'll get it. Only, never ask to have an extension to the back part of the house when you have front rooms that you don't use! American women have a mania for extensive houses, until they are worn out in their efforts to take care of them.

One way to "get on" with work, and so economize in labor, is to have a goodly number of irons in the fire at the same time. I find that a thing once begun is half done; then, too, one does not always feel like doing certain tasks at all times, and a diversity of work is more pleasant. One may lack materials to finish one article, or a certain piece of sewing is up-stairs and one is too tired to go for it, so, if there is other work at hand already begun, it will probably receive attention. Sewing and repairing for Spring and Summer wear should now be attended to, so that when the warm, relaxing days of Spring come there will be no need of over-work for the sake of having something to wear.

Apropos conveniences, a lamp hung from the middle of the ceiling in the kitchen will light the whole room, be out of the way and out of danger from breakage. Plain hanging lamps are now among the least expensive of lamps, and with a good top piece, or shade, are very useful.

For cleaning frosted lamp globes, wet a bit of cloth in kerosene and rub the glass. Use no water in cleaning lamp chimneys and the breakage of them will be almost nothing. For plain chimneys I know of nothing better than soft paper and human breath. Put the paper over one end of the chimney, blow into the other, which warms and moistens the glass, and then rub with the paper. Some steam the chimney slightly at the spout of a teakettle. Whether the way in which lamp chimneys are cleaned has actually something to do with their breakage or non-breakage I don't know, but I do know that in my own housekeeping the chimneys that are washed with soap and water have to be replaced three or four times as often as the chimneys that are cleaned with steam and paper or with kerosene. Have a shelf on purpose to set lamps on.

Have plenty of hooks all through the house to hang things on—hooks in the hall for hats, coats, rubbers, shoes, and everything wearable that can be hung up; that is, if you can afford nothing better than hooks. In the kitchen hang up everything "hangable." In this way tables, shelves, chairs and the floor will be kept clear of obstructions; you can tell where everything is at a glance, and sweeping, dusting and cleaning can all be done with the greater facility. Four dozen hooks, well screwed in the right places, will prove great sources of convenience and comfort. If bedrooms have no closets, or only small ones, put hooks on the back of the doors to hang night-gowns on, as they should be aired throughout the entire day.

Have a high stool in the kitchen to sit on when tired, to continue your work if necessary. Perched on its top you can wash dishes or iron, clean windows or "can" fruit with ease. A low stool placed in a wooden chair forms a substitute, but a poor one.

I find a carpet-sweeper as necessary as a clothes-wringer. It saves greatly in strength and raises almost no dust at all. I think it wears a carpet *less* than do brooms. It costs about $3.00, and will last a great many years. A child can operate it.

DOMESTIC RECIPES.

Soft-Soap.

PUT one and one-half pail of lye that will bear up an egg into your soap barrel and to it add eight pounds of melted grease, free from sediment. Thin with weak lye as it is obtained from the leach. Stir occasionally. It should thicken and be ready for use in two or three days, providing the weather is warm or the barrel stands in a warm place. This method makes very good soap and it is a saving of time, strength and fuel, which is sufficient to justify one in throwing away the scraps, which may not be quite so thoroughly "tried out," as in the old method. As to the scraps, the best use they can be put to, is to throw them to the hens,—they will repay you.

FARMER'S WIFE.

Rusks.

One quart of light bread sponge, two cups of sugar, one-half cup of shortening and a beaten egg. Make into a soft dough. When very light, roll out an inch thick and cut into rounds. Let rise again and bake in a moderate oven—a heat that will not form a hard crust at top or bottom. These are very nice with coffee or tea. When stale, split them, toast slightly, butter and eat at once.

Soda Crackers.

Fourteen teacups of sifted flour, half a cup each of butter and lard, two cups of milk or water, two teaspoonfuls of cream-of-tartar and one of soda. Mix, do not pound, roll thin, cut into squares, prick with a fork and bake in a moderate oven.

Good Doughnuts.

Seven coffeecupfuls of light bread dough (it should be sponged with milk). Into it mix one and one-half cupful of melted shortening, one of sugar and a teaspoonful of saleratus. When this has again become light, roll it out—not too thick—cut into small squares, or any shape you please, and cook in boiling fat.

Cookies.

Two cups and a half of sugar, two cups of butter, four eggs, half a teaspoonful of saleratus, caraway seed if you please, flour to roll thin. Cut round. MARY B.

Salt in Starch.

"Salt should never be used in starch. Although it gives the linen a good appearance and makes it iron smoothly, it surely destroys the fabric. I have tried it to my satisfaction, and know it is not a fancy." Thus writes a friend.

Potted Meats.

It sometimes happens from unforeseen circumstances, that large quantities of cooked meats remain on hand. How to preserve them is the question many ladies are unable to answer. *Pot them.* Cut the meat from the bones, chop *fine*, in fact, it should be rubbed to a paste, season highly with cayenne, salt, cloves or any spice you like, moisten with melted butter, wine, vinegar, cider or Worcestershire sauce, according to the kind of meat, and pack into small stone jars. Cover the top with half an inch of melted butter and keep in a cool place. It will keep weeks and is very nice for lunch or tea. J. R. J.

Cold Buckwheat Cakes.

If any cakes are left from breakfast, soak them in warm water or milk, rub them *fine* and put with the fresh butter. It is as much an improvement as it is a saving.

Bread from Grown Wheat.

Add several potatoes to the bread—three to each loaf, boiled and mashed fine. It restores the starch and makes excellent bread.

Potato Salad.

Thin slices of cold boiled potatoes, thin slices of hard boiled eggs, minced pickled onion. Into a salad dish put a layer of potatoes, cover with the eggs and strew over a few bits of the onion. This alternate until all are in. Make a dressing in the proportion of one tablespoonful of vinegar to three of salad oil-one teaspoonful of salt to one-third teaspoonful of pepper and the same quantity of made mustard. Mix thoroughly and pour over. Let stand half an hour before eating.

MRS. E. L. C.

NOTE.—The article in a late paper by Mary Wager-Fisher is especially valuable to young housekeepers' and even those of experience may learn something new from its practical hints on dinner-giving. To readers in the country removed from contact with those who see the oft changing style of table etiquette, it is of special value and its perusal cannot be too highly recommended. ANNIE L. JACK.

With children strive to inspire love not dread—respect not fear.

No hospital needed for patients that use Hop Bitters, as they cure so speedily at home.

News of the Week

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

HOME NEWS.

MONDAY, Jan. 31, 1881.

Public opinion is loud and earnest all over the country against the consolidation of the three chief telegraph companies. Protests from Chambers of Commerce, Cotton Exchanges and other commercial bodies strongly deprecate the resulting monopoly; while the public at large is well represented by the press of the country which, as a rule, is earnestly opposed to the imposition. The consolidation is against the laws of Pennsylvania, which, in giving its franchise to the American Union Company a few years ago, stipulated that it should not be amalgamated with other companies. It is said the law officers will rigidly enforce this provision; but similar violations of the law have been made by other companies—notably by the Pennsylvania Railroad—without legal interferance, and its hardly likely that the law officers will persistently oppose the present outrage unless public opinion forces them to do so. In this State injunctions have hitherto prevented consolidation, but with vast capital and *influence* at their backs, the companies are likely to win. Jay Gould is said to be on the point of clearing $5,000,000 by the scheme; Vanderbilt will net nearly as much; other heavy capitalists will also feather their nests deeply, and they are bound to stick to the measure unless the dominant voice of the People forbids it. Measures looking to its prevention have been introduced into the Legislature of this and several other States, and a resolution has been brought before Congress to investigate the cost of the various telegraph lines under oath. It is proposed by the companies to raise the present capital of some fifty or sixty million dollars to eighty millions, the addition to be pure "water," on which, however, the public are to be forced to pay from five to ten per cent a year, as if it was a genuine investment. Much of the present capital also represents "water;" for it seems that all the lines which will represent $80,000,000 if the "deal" is made, could be built by the Government to-day for from $18,000,000 to $20,000,000,. and public opinion is growing strongly in favor of such a measure as a permanent protection of the people against the unscrupulous greed of capitalists; for it is becoming clearer and clearer each day that *unless where protected by the criminal laws, the public now have no rights which monopolists are bound to respect.*

THE following bills of general interest were introduced into Congress during the week: To construct a bridge over Niagara River.... To print 30,000 copies of the Entigical Report on the Cotton Worm....To assign land to the Indians "in severality"—that is to give each head of a family so many acres to be his own, instead of all having the land in common, as now. The present system is supposed to foster idleness and improvidence, as no one can feel that he is working for himself and his own family....To enable planters to furnish their laborers with tobacco without first obtaining a retail dealer's license. ...To construct a double-track railway from New York to Council Bluffs. This is designed as a competitor against the present monopolies.... To appoint a commission to examine and report upon the adulteration of food. .... On the 25th a bill reported in the Senate by Mr. Johnston, of Va., from the select committee on the subject of pleuro-pneumonia and other contagious diseases of domestic animals, was ordered printed and recommitted to the committee....The bill provides for the organization of a Bureau of Animal Industry in the Department of Agriculture. It authorizes the Commissioner of Agriculture to appoint a chief of this bureau, who is to be a competent veterinary surgeon approved of by the National Board of Health, and whose duty it will be to investigate and report the value and condition of domestic animals and also the causes of contagious diseases among them, and to provide for the prevention and cure of the same. The Commissioner of Agriculture is authorized by the bill to purchase and slaughter diseased animals, provided the sum paid for them shall not exceed two-thirds of the market value of healthy animals. Two hundred thousand dollars are appropriated to meet the expenses incurred in carrying out the provisions of the act....Among other matters discussed either in the Senate or House has been the re-appointment of Gen. Grant to the position of General of the armies, to be retired with full pay, in acknowledgment of his great services to the country; the President being authorized to call him to active duty should the country ever need his services. This was supported vigorously by all the Republican Senators and opposed by all the Democrats except Lamar of Miss. and Judge Davis of Ill., who were in favor of the measure ...The telegraph monopoly was discussed, showing it has many bitter enemies—but then the friends of such rich schemes that can afford to buy men, find it safer and equally profitable to favor them by their votes without calling attention by making fuss about the matter ..... The bill appropriating $500,000 for completing and compiling the Census returns was passed with little discussion... The Commissioner of Pensions has written a letter to the chairman of the Senate committee on appropriations, in which he estimates that more than $500,000,000 will be required to pay all claims under the arrearages of pensions. ....A special Congressional committee has discovered that tons of political matter were sent free through the post office at the last election, thus charging the country with party expenses. Several boxes containing 80,000 documents still remained in the P. O., all of which were sent by Democratic Congressmen, Cox of N. Y., being credited with 52,000. The Democrats were caught this time; but the Republicans probably were just as sinful when they were in a majority....A committee of five has been appointed to look after diseases among live stock....Nebraska has elected to the U. S. Senate, C. H. Van Wyck, a farmer, and, of course, an anti-railroad man. Good for Nebraska!....On Thursday, the "Women Suffragists" had "field day" before the Senate, when a motion was made to appoint a standing committee upon the rights of women—pigeon-holed by reference to the Committee on Rules by a vote of 26 to 23.

The Refunding Bill, after having been for weeks discussed in the House, has finally passed that body. It provides that to pay off the bonds bearing five and six per cent. interest, now amounting to $650,000,000, a batch of new bonds shall be issued bearing only three per cent. interest, to the amount of $400,000, and also $300,000,000 worth of three per cent. certificates in denominations of $10, $20 and $50. Various provisions are attached in order to put these bonds into circulation; for it is hardly believed that capitalists will invest their money in bonds that pay only three per cent interest. The certificates, being for small sums, it is thought will be taken by the people at large as safe investments.

In the Pennsylvania Legislature there has been a deadlock for a week or more over the election of a U. S. Senator. The term of Wallace, one of the two present Senators and a Democrat, expires on March 4, and as the Legislature is Republican, a representative of that party is expected to succeed him. Mr. Oliver, a large iron manufacturer of Pittsburg, was nominated by a caucus of the Republican members of the House and Senate, but a considerable number objected to him so strongly that they "bolted"—refused to abide by the decision of the caucus—and without their votes the Republicans haven't a majority, and so can't elect the "regular" nominee. There are 239 votes, making 119 necessary for a choice. Of these H. W. Oliver has 85 by last ballot, Galusha A. Grow, the "bolters'" candidate, 57, and Wallace 86 solid Democratic votes. The two Republican factions are obstinate: the "Oliverites," because they are "regular," have the majority, are backed by Cameron and the "machine," and hope to win ultimately; the "Growers" because they are anti-machinists, and therefore supposed to represent the steadfastness and all the other virtues of the party....Down in Tennessee there was also, for a week or so, a pretty obstinate deadlock over the election of a U. S. Senator, during which Maynard, the present Postmaster General, came within three votes of being elected; but finally Howell E. Jackson, a State-Credit Democrat, was elected, most of the Republicans joining with most of the Democrats at the close. He is against repudiation of the State debt or any part of it....General W. J. Sewell has been elected U. S. Senator from N. J., to succeed Randolph, the present Democratic Senator. The new man is a Republican, and is said to have been elected through railroad influence, as he has always sided with railroads against all opponents....Wisconsin sends Philetus Sawyer to the U. S. Senate. He has yet to make a name known away from home....A. D. Maxey has been re-elected U. S. Senator from Texas on the first ballot, by 73 votes, against 42 for Throckmorton, 1 for Reagan, all three Democrats, and 6 for Davis, Republican.

Father Purcell, brother of the Roman Catholic Archbishop of Cincinnati, died last Thursday, aged 73. It was he who mismanaged the Bishop's savings bank, which failed for upwards of $3,000,000 about three years ago. Folks are out of their money yet.....Severe storms visited various parts of the country on Friday, Jan. 21st. New England and the Middle States were covered with a thick coating of ice, caused by the freezing of rain as it fell. Hundreds of miles of telegraph wires were broken down and many poles fell under their heavy burdens. Telegraphic communication was suspended between a number of cities. Five inches of snow fell in Mobile on Sunday night. The snow in New Orleans continued to fall during Sunday night and Monday morning, until it lay two or three inches deep on the house tops in the city and three to four inches deep on the ground in the suburbs. It was the heaviest snow-fall in New Orleans since 1852. Snow fell at Augusta, Georgia, on Monday, for eight hours—a thing unprecedented there—but it melted as fast as it fell. The heaviest snow-fall in fifty years is reported in South Carolina, and heavy snow is also reported in North Carolina.....President Hayes has nominated Edward C. Billings, of Louisiana, to be United States Judge for the Fifth Circuit, to succeed Judge Woods, promoted.

The World's Fair Commission are busy "laying pipes" to commence operations. Already nearly $1,000,000 have been subscribed *positively*, and about twice as much conditionally on a certain minimum sum being raised. A lease of the Inwood site of the Fair has been signed, and everything looks as bright as can be expected in such gloomy weather. This fair is to be a national affair, so that the whole country should at once join in making it a national success. After all, that little Philadelphia concern of '76 was really useful—it gave some hints for the Great American Exhibition of '83.....A certificate of the death of Mrs. Sally Hunter, aged 115 years, was received at the Health Office at Washington the other day. Mrs. Hunter was born in Westmoreland County, Va., in 1766, and belonged to the Washington estate, being one of the servants manumitted by the General's will. She lived in that county until the war, when she and her children went to Washington, where she has since resided. This is supposed at Washington to be the last of the servants of George Washington, but we all know that G. W.'s servants are bound to turn up alive here and there for at least the next 50 years.

The Permanent Exhibition at Philadelphia—the *souvenir* of the Big Show of four years ago—is about to be sold and so the concern comes to an end. To keep up a thing of that sort was too much to expect from a provincial town like Philadelphia, especially when our Big Show here is about to dwarf into insignificance the affair of which the collapsed exhibition was a memorial.... ....A bill has been introduced into the Legislature of this State establishing the whipping post for wife beaters. Mr. Bergh, of the Society against Cruelty to Animals is its author. Hitherto, all his efforts have been in favor of brutes; shouldn't he, therefore, in the present case, be on the side of the wife-beaters..... Ben. Franklin's original papers—or some of them—are for sale, and Secretary Evarts advises the government to pay $20,000 for them. ....Congress proposes to spend $3,000,000 for a Congressional library building. If the casket shall be so costly, what must be the price of the inclosed treasures?..... .Judge Swayne has resigned his position as Associate Justice of the United States Supreme Court, on account of old age, and Stanley Mathews, of Ohio, has been nominated by President Hayes, in his place..... This was a foregone conclusion—some are wicked enough to call it a bargain. Mathews was born in Cincinnati in 1824, and is an excellent lawyer. On the resignation of Sherman as Senator for Ohio to become Secretary of the Treasury in '77, Mathews was elected to succeed him as the stoutest of Hayes Republicans. Two years afterwards the Democrats carried the State and Pendleton was sent to sit in Mathews's chair in the Senate. Big hopes were entertained of him as a Senator by his friends and others—the others, at least, were disappointed.

Three ships with fifteen hundred Chinamen for railway work, will arrive at Victoria, in April, and an equal number in June.....At Cincinnati, the Expressmen's Mutual Benefit association adjourned, Thursday. S. M. Shoemaker, of Baltimore, was re-elected President. The executive committee includes T. T. Wallace, of Elmira, N. Y. Sutherland Dewitt, of Elmira, was re-elected Grand Secretary and Treasurer. The next biennial meeting will be in Baltimore..... . At the request of Thomas Hughes, Bishop Quintard, of Tennessee will make the new Rugby settlement his official and private home, and will build a residence in the Spring.

[Indianapolis Daily Sentinel]

No More Gossip.

If we are correctly informed, St. Jacobs Oil is now the usual tea-party topic in place of the former staple—free gossip. How wise and how much more beneficial!

FOREIGN NEWS.

In Ireland the jury that sat at the trial of Parnell and the other leaders of the Land League have disagreed, and all the island, barring parts of Orange Ulster, has been ablaze with bonfires and red-hot enthusiasm. It is hardly likely that the Government will try again to secure a conviction. Indeed, it is not unlikely it is glad to get out of the difficulty in this way. Meanwhile, the principles of the Land League have become more widely known through the trial, and its power been more firmly consolidated. In England the Government has introduced into the House of Commons a bill to coerce Hibernian discontent—or rather the violent expressions of it. It provides for the arrest of all parties in the disturbed districts, against whom there is a reasonable suspicion that they are engaged in measures opposed to public tranquility, and their imprisonment without appeal to *habeas corpus*, as well as their trial by judges instead of juries—in certain cases. Parnell and the other Home Rule Members of Parliament have hitherto prevented action on the bill by their "obstructive tactics," and say they are pretty confident of being able to prevent its becoming a law, unless some unprecedented means are taken to silence their opposition. The "Irish National Directory," a Fenian organization, caused placards to be posted on the doors of chapels, churches, police barracks, etc., throughout the whole of Ireland, last Saturday night, counseling patience, vigilance, and readiness on the people. It is feared that an armed outbreak may occur which would be promptly suppressed. All the armories, dock-yards and other government military and naval repositories, not only in Ireland, but also in Great Britain are guarded nightly lest Fenian conspirators should blow them up or burn them down.

In South Africa Gen. Sir George Colley with upwards of 1,000 men, attacked the Boers in the Drakenberg Pass in the Transvaal, and was completely routed, losing several valuable officers and about 200 men killed beside a large number wounded. The victors are said—by the vanquished of course—to have lost 500. The British garrisons in the Transvaal are in a critical position and will probably be captured. The English Government is hurrying forward reinforcements.....Greece has 80,000 or more troops under arms and threatens immediate war on Turkey. The latter, to placate the great Powers, still seeks their interference; but says sternly that, should Greece begin the war, the Turkish fleet will exercise all the rights war confers, bombard and ravage the Grecian seaports and extended coast, and do a world of mischief. The Greeks are showing much more manhood than it was supposed ages of oppression had left in them. Should the war break out, no modern prophet can foretell where it will end. England being hampered by the Irish troubles, Russia may again "pitch in," in which case it may become a general European scrimmage.

AGRICULTURAL NEWS.

During the four weeks ended November 27th, 66 outbreaks of pleuro-pneumonia were reported in Great Britain, and 165 cattle were attacked. In the corresponding period of last year there were 104 outbreaks reported, and 303 cattle attacked.... ...In Denmark pleuro-pneumonia has broken out among the cattle at Holback in Zealand. Of 47 head of cattle that were killed, five were found to have been suffering from this disease.....In the four weeks ended November 27th, 88 outbreaks of swine fever were reported in Great Britain, and 368 animals attacked. In the corresponding period of last year 190 outbreaks were reported, and 968 animals attacked.....French farmers are extremely satisfied with the present condition of the young wheat. Owing to the mildness of the weather during December, it has acquired sufficient strength to be able to withstand the frosts which have set in with the new year. Field work is also forward, and there is no cause of complaint, except slight inundations in some districts. ....From Banda Oriental the accounts about the wool clip and prospects of the wheat crop could not be better. The wool trade had only begun—out of 250,000 bales, estimated as last year's clip, only about 35,000 bales had been shipped. Prices for wool were higher than in any previous year ....In Queensland, Australia, according to advices of November 20, rains had fallen and the colony was looking well, generally. Shearing was nearly completed, most of the clip being shorn in the grease, and on the whole was considered to be a heavy and a good one. Accounts of the wheat crops were mostly favorable..... A farmers Co-operative Society, for shipping wheat on growers' account to European markets, is projected at Melbourne with a capital of £100,000. The promoters include several members of Parliament .....

Very disastrous stock news comes from the Western plains. The snow is extraordinarily deep, the cold unusually severe, and vast numbers of cattle are reported to have either starved or been frozen to death.....Those imported Jerseys that are affected with foot-and-mouth disease are strictly confined in this city, and will be kept quarantined until all danger from contagion is over. The malady yields slowly to treatment, so that the animals will not be a dead loss—unless they "eat their heads off" before they can be cured.....An importation of three Clydesdale horses belonging to Reeside Bros., arrived at this port a few days ago. .....Last week a batch of Jerseys arrived in Halifax, Nova Scotia, on their way to the Sandwich Islands—Jerseys will soon be dispersed as widely as Short-horns.....Heavy rains are telegraphed from the Vuelto Abajo district in Cuba. The tobacco crop, it is said, will be heavy, but mostly of a light description suitable for the European market.....A new manufactory for making sugar from beets commenced work near Wilmington, Delaware, about New Year's. The beets thus far received produce from 8 to 14 per cent. of saccharine matter, and cost the company from $3.50 to $4 per ton. Fifty tons per day are worked up. The company propose to work by a "new and improved process," and expect to produce 275 tons of raw sugar, 100 tons of molasses and 1,700 tons of pulp, the latter worth $1 per ton for cattle food, in 1881.

The following is the statement of the corn crop for this year as compared with last year's, made by Col. C. Worthington, Statistician to the Department of Agriculture. It has only just reached us.

	1880. Bushels.	1879. Bushels.
Maine	1,800,000	1,585,950
New Hampshire	2,309,800	1,857,895
Vermont	1,847,700	2,037,950
Massachusetts	1,472,200	1,886,000
Rhode Island	277,200	268,800
Connecticut	2,218,500	2,218,500
New York	24,602,500	22,705,650
New Jersey	11,458,500	8,970,560
Pennsylvania	66,880,900	44,605,650
Delaware	5,760,000	4,560,000
Maryland	16,907,100	12,720,428
Virginia	25,027,800	19,957,600
North Carolina	27,518 000	25,677,300
South Carolina	11,660,100	9,702,200
Georgia	19,181,200	20,627,400
Florida	2,237,900	1,945,820
Alabama	21,162,650	25,403,560
Mississippi	22,745,600	24,926,730
Louisiana	16,307,900	12,593,800
Texas	70,251,100	59,198,000
Arkansas	26,245 100	22,431,840
Tennessee	48,080 900	50,856,750
West Virginia	11,892,200	11,303,360
Kentucky	51,871,900	64,736,000
Ohio	123,684,300	105,086,350
Michigan	33,165,000	30,943,500
Indiana	111,028,800	134,922,450
Illinois	283,2 5,240	309,220,650
Wisconsin	40,310,100	39,311,940
Minnesota	16,098,900	15,715,000
Iowa	07,202,500	185,19 ,720
Missouri	111,145,800	147,337,920
Kansas	72,426,000	88,719,740
Nebraska	61,381,500	62,458,580
California	3,537,600	2,814 000
Oregon	84,560	142,400
Nevada, Colorado, and the Territories	3,107,8'0	2,750,100
Total	1,537,535,940	1,544,899,293

The production of wool in California in 1880 was 46,074,154 pounds, against 46,903,360 pounds in 1879. The stock on hand in San Francisco December 31, 1880, was about 2,000,000 pounds. The California Spring clip was a good average, while the Fall wools are very poor. The quantity of fine wool seems to increase annually ..... The Mark Lane Express of January 24 says:—The young crops, protected by snow, are doing well. The threshing results show that the crop of 1880 has been greatly overestimated, while the unfortunate harvest weather has evidently ruined the condition of the greater portion. It might be found cheaper, therefore, to malt for cattle the more damaged specimens, instead of marketing it in competition with foreign. Foreign wheat was extremely dull, and sometimes stagnant. The reticence of American exporters is a matter of indifference to British consumers, as higher rates are unwarranted for the future. It appears they have missed their chances. India contributed one-third of the week's shipments, which were so small, on account of the frost, while Austria, Chili and Russia are exporting.

The peach-buds on the Peninsula have just gone through their annual experience of being killed—if the growers' reports are to be accepted.....It is now considered certain, according to a cablegram of January 29, that the Egyptian cotton crop will exceed the first estimates by about 30 per cent.

Bad reports of the Winter wheat come from Iowa and from Southern Indiana and Illinois, where the land is said to be "a mass of ice." The early advent of cold, however, prevented much injury to the crop from insects everywhere, besides lessening the egg deposits of the pests, while the severity of the Winter has been fatal to many of them, so that, on the whole, although it is about time we should have a break in the run of fine crops, there is as yet no great fear that it will occur this r.

For the delicate and complicated difficulties peculiar to the female constitution, LYDIA E. PINKHAM'S VEGETABLE COMPOUND is the sovereign remedy. It aims at the cause, and produces lasting results. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60c. per box.

The vigor of youth for the aged and infirm in Hop Bitters.

Burnett's Flavoring Extracts are used and endorsed by the best Hotels, Confectioners, and Grocers throughout the country. They are perfectly pure, and of great strength—at once the cheapest and best; and received the highest award at the Centennial Exhibition.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Jan. 29.

Boston.—Jan. 29.—WOOL—The transactions of the week were 1 550,000 lb of all grades and qualities, and still a very unsatisfactory market has to be reported. Manufacturers are carrying small stocks, and why they should hold back is not clear, as Wool can now be bought on as easy terms as it is likely to be purchased for some months at least. Fine Ohio and Pennsylvania Fleeces are a shade lower, and Michigan and Wisconsin X have also been sold at some concession, but the bulk of the stock is still held at the current rates for some weeks past, and there is no disposition on the part of holders to force the market. Foreign advices report no material change in the markets abroad, and Wool in the interior is held for higher prices than the article is now selling on the seaboard. The sales of Ohio and Pennsylvania X and XX have been at 46@48c; No. 1 Ohio at 50@51c; and Wisconsin and Michigan Fleeces at 42½@44c for X, mostly at 43c, and medium Michigan at 47@47½c. Some lots of XX Ohio can be bought at 46c., but most of the stock is held at 48c and upward. Combing and Delaine Fleeces have been selling at 44@46c for coarse; 50c for fine Delaine, and 50@54c for good and choice Combings. The sales of Unwashed Fleeces have been some 300,000 lb, and prices range from 15@20c for coarse and 25@38c for fine and medium grades. The demand for California Wool has been confined mostly to Fall grades, at from 18@27c, but the sales have been light, comprising only 200,000 lb. Pulled Wools continue in demand, with sales of 259,000 lb for the week at from 35@52½c for common and choice Supers; 80,000 lb of Eastern, Maine, and New York selling at 50@52½c. In foreign Wool there has been a fair business doing, with sales of Australian at 43½@47c, and Magdalene, English Combing, Cape, and other kinds at prices indicating no material change.

Chicago.—WHEAT active, firm; No. 2 Red Winter, 98@99c; No. 2 Chicago Spring, $1, cash; $1.00⅜. February; $1 01⅜, March; $1 05⅛ May; No. 3 do. 84@87¼c; Rejected, 69@73c. CORN fairly active at 37½c cash. OATS fairly active at 30½c, cash. RYE firm at 88½@90c. BARLEY firm at $1 03@$1 04. FLAXSEED, $1 20. PORK active, firm, and higher at $14 10@$14 12½ cash and February, $14 27½@$14 30, March; $14 47½@$14 50, April. LARD active, firm and higher at $9.45, cash; $9 42½@$9 45, February; $9 52½@$9 55, March; $9 62½@$9 65, April. Bulkmeats strong and higher; Shoulders, $4 65; Short Rib, $7 40; Short Clear, $7 80. BUTTER—Creamery, 30@34c; dairy, choice, 23@25c; dairy, fair to good, 18@21c; ladle-packed, 15@17c; packing stock, 12@14c; roll butter, 18@18c; grease, 7@9c. CHEESE—Full cream, 12½@13½c; part skim, choice, 10@10½c; part skim, fair to good, 9@9½c; part skim, hard, 8@8½c; low grades, 4@6c. HAY—Prime qualities are in fair demand, while the poorer classes are dull and lifeless. We quote: No. 1 Timothy, ℔ ton on track, $15@$15 75; No 2 Timothy, ℔ ton, $13@13 50; mixed, $12@12 50; upland prairie, $11 50@12 50; No. 1 prairie, $8@9. SEEDS, were firm for most descriptions. Timothy was in small supply, good to prime selling at $2 47@$2 50; fancy commanding $2 62½, and poor to fair ranging at $2 30@2 45. Clover was inactive at $4 75@5 for prime, and $5 20@5 30 for choice. Flaxseed was firm at former rates, $1 19 being reported as bid on track. Sales were reported of 3 cars and 722 bags at $2 30@2 45 for poor to fair; $2 47@2 50 for good to prime, and $2 62½ for fancy; 44 bags of clover seed at $3 for screenings; $5 25@5 30 for choice. HOGS—Market more or less excited, and higher; shipping in good demand, quality fair, mixed packing, $5 15@5 50; light, $5 30@4 50, mainly at $5 35@5 45; choice heavy, $5 50@5 95, all sold. CATTLE, in fair demand, slow but steady; common to fair, $3 70@4 50; good to choice, $4 70@5 20; exports $5.40; butchers' fairly active and steady at $2 25@4, the bulk at $2 50@3 25; light and common stockers quiet and weak at $2 50@3; good Steers and heavy feeders, $3 50@4. SHEEP, fair demand, but dull; common to medium, $4 10@4 50; good to choice, $5@5 50.

St. Louis.—WHEAT higher; No. 2 red Fall $1.02¾@1.02⅞ cash; $1.03½@1.03¾ February; $1.05¾@1.06⅛ March; $1.07¾ bid April; $1.09@1.09¼ May; No. 3 red Fall 94½c; No. 4 88½c. CORN higher; 41⅜@41½c. cash; 41⅜@41½ January; 39⅛@39¼c. February; 39¼@39⅜c. March; 39⅞@40c. April; 40⅞@41⅛c. May. OATS dull; 33c, cash and bid February; 33½c, bid March. RYE easy at 86¾c. BARLEY steady and unchanged. PORK higher at $14 cash; $15 March; $14.25@14 30 April. Lard higher at $9 30. Bulk meats firm; shoulders 4½c.; clear rib $7.10; clear sides $7 30. Bacon held higher; no sales. BUTTER—Creamery 30@33c.; choice dairy-packed 23@25c.; medium to prime do. 14@18c.; common do. 11@13c; roll, choice Northern, 18@20c; near-by make 12@13c to 14@16c—small lots choice 17@18c. CHEESE—Choice firm and in demand; poor dull; full cream 12½@15c; part skims 10@11c; poor skims 4@6c. EGGS scarcer than ever; really no supply; sales of fresh in a small way at 43@45c.; one lot of seven cases sold at 43c. LIVE HOGS strong and active; Yorkers and Baltimores $5.20@5.30; mixed packing $5@5.30; butchers' to fancy $5 30@5.50. CATTLE dull and lower; scarce; steers of 1,350 lb. weight sold at $5; do. of 1,100 to 1,300 lb., $4.30@4 87½; butchers' steers $3.75@4.25; stockers $3@3.60; feeders $3.60@4. SHEEP steady at $3.75@5.25.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Jan. 29, 1880.

BEANS AND PEAS.—The local demand for beans is fair, but there is not enough export call to strengthen prices or enliven the market for standards. The low price of Red K dneys has attracted some export buying. Peas unchanged. Green in bbls. $1.60@1 65, Southern B. E. $2 per 2-bush. bag.

Marrow beans prime $1.77@1.80, do. other $1.60@1.72, medium prime $1.70, do other $1.50@1.65, pea $1.60@1.75, white kidney $1.80@2.00, red do. prime $1.50@1.60, do. other $1.25@1.45, black or turtle soup $1.50, Lima $4.50@5.

BUTTER.—Supplies are not plenty, and with the run of trade generally directed to prime table grades. Sellers have a somewhat stronger position. No one quotes a positive advance, as the indefinite amount of the country surplus tends to make most sellers prefer to let well enough alone. If present prices for creamery, Western and State, and other State and Western styles are supported, expectations for the date will be in many cases exceeded. Exporters are a good support for useful second-priced grades, especially for Western goods; even rolls have gained some attention for foreign use.

Creamery, fine Western, 34c good to prime, 31@33c; fair to good 28@31c State ranges, 25@30; State dairies, entire choice, 25@26c; fair to prime 20@25c.; firkins, 20@25c.; State pails and half tubs, fall, 28@29c, fair to prime, 23@27c.; poor to fair 20@23c.; Welsh tubs, choice 26@27c; other 19@24c Western imitation creamery 22@28c.; dairy, fresh, 25@26c; other 21@24c.; factory fine, 24c.; other 16@23c., low quality, 13@14c.; rolls, choice 18@19c. fair to good, 16@17c.

Receipts for the week 21,075 pkgs.
Exports for the week, 10 038 pkgs.

CHEESE.—Export demand is less active and the feeling rather less firm, but no market change. Exports for the week 40,534 boxes. Quotations are for State factory, fancy, at 13¾c., do good and prime, 12¾@13⅛c.; do. fair to good, at 11¾@12¾c.; do. half skimmed, 10½@11½c.; Wisconsin factory, fine, at 13⅛@13¼c.; do. good to prime, 12½@13c.; do. fair to good, 11½@12½c.; Ohio factory, fine, 13@13⅛c.; do. good to prime, 12@12¾c.; do. flat, fair to good, 11@12c; do. poor to fair 8@11c.

Receipts for week, 47 750 boxes.
Exports for week, 41,585 boxes.
Liverpool cable, 68s.
Steam to Gt. Britain, 30s.@35s.

COTTON—There has been a slow market this week without violent fluctuations in prices, closing at, for January at 11.50@11.52c.; February at 11.53@11.55c.; March at 11.75@11.76c.; April at 11.92@11.93c.; May at 12.07c.; June at 12.18@12.19c.; July at 12.28@12.30c.; August at 12.34@12.36c.; September at 11.83@11.85c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 13-16	8 13-16	8 13-16
Strict ordinary	9 7-16	9 9-16	9 9-16
Good ordinary	10 7-16	10 9-16	10 9-16
Strict good do.	10 13-16	10 15-16	10 15-16
Low middling	11⅜	11⅜	11⅜
Strict low middling	11⅝	11⅝	11⅝
Middling	11 13-16	12 1-16	12 1-16
Good middling	12 5-16	12 9-16	12 9-16
Strict good middling	12 9-16	12 13-16	12 13-16
Middling Fair	13 1-16	13 5-16	13 5-16
Fair	13 11-16	13 15-16	13 15-16

STAINED.

Good ordinary	8⅜	Low middling	10¾
Strict good ordinary	9¾	Middling	11⅜

Receipts for the week, 27,874 bales. Exports do. 6,540 do.

DRIED FRUITS.—Apples have a very fair inquiry and prices steady. Peaches are in moderate demand. Small fruits are quiet.

Evaporated apples at 8½@9c. for the better qualities (some lots held higher) sliced apples at 5@6½c. for good to choice North Carolina; 3½@4½c. for Va. apples, 4@4½c. for Tenn. do; 4½@5½c for State do: 4½@5½c. for western Ohio and Mich. Peaches at 30@32c. for evaporated peeled; 16c. for unpeeled do.; N. C. peeled at 20@21c.; for the better qualities, unpeeled peaches at 6½@7½c. for halves and 6½@7c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 17½c. Raspberries at 24@25c. Whortleberries at 12½@13c.

Receipts of all kinds for week, 1,760 pkgs.
Exports, including evaporated, 5,755 pkgs.

EGGS—Receipts for the week 1,206 bbls.; do. last week, 1,019 bbls. At one time during the week extras brought 51@55c. Prices are still extremely high, but there is not supply enough here to make a market. The demand is only from buyers who cannot get along without some stock. If there are any eggs obtainable, holders are making the most of the present range by sending in very small lots. Limed have proven a bonanza for last owner this season.

Near Points, ℔ doz., 50c; all other fresh 47@48c; some fall laid quoted 43@50c.; the remnant of limed quoted 42@44c.

FLOUR.—There has been a very fair export demand the past week and a better home trade, with prices stronger.

Quotations are: $3.15@3.90 for very inferior to very choice superfine State and Western: $4.20@4 60 for poor to choice extra State and Western, odd lots and lines; $4.60@4 75 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 35@5.25; good to choice do at $5.25@6.00; (very choice up to $6 25 and fancy at $6.50@6 75;) red and amber winter wheat inferior to choice trade and family at $4.30@6; round hoop Ohio, $4.35@4 75; and other trade and family brands of ..., $4.80@6.25, the latter for fancy; St. Louis $4.50@5.35 for inferior to good extra; $5.35@6 25 for good to choice (fancy brands quoted up to $6.50@6.75). Minn. clear, inferior to very choice at $4 25@6; Minnesota "straight," poor to very choice, at $5 25@6.75, and patent inferior to fancy at $5.75@8.25; city mill extra at $5.25@5.45, for fair to choice for the West Indies; do. for England at $4.20@4.60 for poor to choice spring wheat; do. trade and family extras, $5.65@6.75 do. for South America $5.50@5.65, the latter for very choice; No 1 at $2 90@3.50 for very inferior to fancy.

Receipts for week, flour, bbls. 104 175; corn meal, do. 1,350; wheat, bush. 376,650; corn, do. 216,642; oats do. 186,100; rye, do. 31,810; malt, do. 59,244 barley, do. 41,510. beans, do. 4,776 rice, pkgs. 2,000.

Exports for week, flour, bbls. 101,700 corn meal, do. 3 250, wheat, bush 760,441; corn, do. 219,167; oats, do, 2,000 peas, do. 7,950; beans, pkgs. 474; rice do 1,050.

CORN MEAL.—Sales at $3.25 for Brandywine, and $2.65@3 25 for yellow Western.

FRESH FRUITS —Exports of apples for week, 8,700 bbls. Apples are dull and the market is easier. Greenings are not keeping well. The export run is upon prime stored Baldwins. Spitz. scarce. Late arrivals of mixed lots on wharf, $1@1.63, many of poor, frost-touched quality.

Baldwins $1.62@1.75; Greenings, $1.50@1.62; Spitzenbergs, $1.75@2. Holders of cranberries are a little nervous over the light trade to date and prices may fall off if trade does not revive. Cape Cod fancy bbls. $8; other, $4@7 N. J. crates, $1 75@2.25. Florida oranges of low grade are plenty; selected bring good prices, say $4 50@5 ℔ half-bbl. case after repacking; lots as they run, best $3@3.50; other, $2@2 75. Peanuts very quiet; cold weather restricts retail use, and that is an important feature in New York's trade; Va. hand-picked 4¾@4¾c.; other 3½@4¾, shelled 3½@4¾c. Hickory nuts down to $1.00 ℔ bush. of 60 lbs. Black walnuts 40@50c. Pecans mostly out of first hands; a few lots have lately arrived, but we learn of no new quotations. Some fine hot-house strawberries are quoted in the fancy stores at $5@6 per quart. Black Hamburg grapes at $4 ℔ lb.

FURS AND SKINS.—Beaver has advanced here under London advices. At the late sale in London beaver advanced 20 per cent. large, 10 per cent. small. Market declined 10@15 per cent.

GRAIN.—Wheat has a stronger export demand and a fair speculative trading, and prices are higher. Exports for the week 765,000 bush.; latest prices are for

No. 1 white at $1.16½@1.17 do. January at $1.16¼@1.16½ do. February at 1.16½@1.16¾, do. March at $1.17¾@1.17¾; do. May at $1.18@1.18¾; No. 2 white at $1.15¾@1.15¾; ungraded white at $1.1@1.16; mixed winter at $1.17@1.17¾. No. 1 red at $1.21¾, No. 2 red at $1.18½@1.19¾ do January option at $1.18¾@1.18¾; do. February at $1.19@1.19¾; do. March at $1.20¾@1.21¾, do. April at $1.21¾@1.22; do. May at $1.21@1.21¾; No. 3 red at $1.17, ungraded red at $1 05@1.21.

Rye at 97@$1.01.

Corn is in freer demand and firm; latest prices are for

New York No. 2 at 55½@55¾c do. January at 55¾, do. February at 55¾@55¾, do. March at 55¾@56, do. May at 51@54¾, ungraded mixed Western at 53¾@55¾ New York steamer mixed at 54¾@55, New York No. 3 at 54¾@54¾, No. 2 white at 57@57¾ steamer white 54¾@55¾ New York yellow at 57; steamer yellow at 55¾; yellow southern at 55¾c.

Oats are in fair demand and firm: latest sales are of No. 1 white 48; New York No. 2 white at 45¾@46¾; No. 3 white at 43¾; New York No. 2 at 43¾@43¾, do February at 43¾@43¾, do. March at 44¾@44¾, do. April at 44¾@44¾. No. 3 at 43, ungraded white Western at 43@48, ungraded mixed Western at 42@43, white State at 46¾, No. 2 Chicago at 43¾.

HAY AND STRAW.—Demand is liberal and prices strong. Latest prices are for

Hay, prime timothy at $1.20 ℔ 100 lbs.; medium timothy at $1.10@1.15 do.; shipping grades at $1@1.05 do.; clover mixed at $1.05@1.10, clover at 95c@$1. do. Straw—No. 1 rye at $1.20 ℔ 100 lbs.; No. 2 rye at 75@80c, do.; oats and wheat at 70@75c. do.

HONEY.—The season is regarded as an unprecedentedly dull one. It looks as if many parcels of comb will be carried over.

White clover, comb, single, 16@17c.; larger pkgs. do. 14@15c.; buckwheat 11@12c.; extracted 6@10c.

HOPS.—Export demand slack here and home trade moderate, with prices unchanged. Quotations are for

	Cents per lb.	
New Yorks, crop 1880, prime and choice	21	@23
Do. medium	19	@20
New Yorks, crop 1880, low to fair	16	@18
Eastern, crop 1880	18	@22
Wisconsin, crop 1880	18	@22
Yearlings, crop 1879, choice	14	@20
Olds, all growths	4	@12
Bavarians	30	@35
Pacific coast, new	20	@24

Receipts for the week, 4,322 bales.
Exports for the week, 1,208 bales.

LEATHER.—Quotations are for hemlock sole, 22@23c. for light: 23@24½c. for middle: 23@24½c. for heavy.

MILK.—Supplies have exceeded the Winter demand. The closing average price for commission cans, $1 89½ ℔ can of 40 quarts. Lowest and highest price, $1.80@2.

OIL-CAKE.—Western is quoted at $29 per ton.

PROVISIONS.—Hog products have an active demand and prices advancing.

Mess pork quoted at $14: new at $15; prime mess at $14, and extra prime at $15. Bacon at 7.70 for long clear and 8 10 for short clear. Beef at $21@22 city extra India mess. Beef hams at $19.50@20.50. Lard—Western steam at 9.85@9.87½ for spot lots, 9.85 for Jan. and Feb., 9.92½ for March, 10 for April, and 10.05 for May. Stearine at 10. Tallow at 6⅜ for prime.

Receipts for week, beef, bbls. and tcs., 733; pork, 4,900 bbls.; cut meats, 38,742 pkgs.; lard, 26,525 pkgs.

Exports for week, beef, bbls. and tcs. 2,432; pork, 5,175 bbls.; cutmeats, 20,340,977 lbs.; lard, 5,612,617 lbs.

POULTRY AND GAME.—With moderate supplies of dressed poultry the movement is quite steady, fancy near-points not selling much quicker than good, bright other lots. Squab higher.

Turkeys, N. J. small, 13½@14c; other, 12@13c.; State, small, 12½@13c.; other, 11@12c.; Western, small, 12@12½c.; other, 11@11½c.; poor to fair, 9@10½c.; Philadelphia d.-p., 14@11½c.; chickens, choice, 14@15c.; good to prime, including scalded, 11@12½c.; poor 9@10c.; chickens and fowls, W. 9@11c.; capons, 20@21c; small and slips, 16@18c.; fowls, good to prime, 10@11½c.; do. poor, 8@9c.; ducks, choice, 15@17c.; other, 11@13c.; geese, choice, 12c.; other, 8@11c., squabs white, $4@4.50, do. dark $2@2.50.

Fowls and turkeys are firm with the limited offering of dressed. Few geese reach the extreme.

Fowls, 10@11c.; chickens 8@9c.; roosters, 5@6c.; turkeys, 10@12c; ducks, best, 70@80c, other 55@65c. Geese, extra, $1.87@2; other $1.25@1.50. Pigeons, 20@25c.

With quail, grouse, rabbits and hares going out after Jan. 31 the market has been unsettled during the week in the anxiety to close out. The game season has not been a money making one.

Canvas-back ducks $1.50, red-heads 75c., mallard and black 50c.; teal 30@40c., common do. 25c.; quail prime trapped ℔ doz $2; do. poor $1.62@1.75 partridges 70c.@80c.; Grouse prime $1, do. drawn 80@90c. Hares, 30@35c. Rabbits 50c.

SEEDS.—Clover is quiet at 7½@8½c.; Timothy is dull and nominal.

TOBACCO.—The feature of the market this week has been the large export demand, the Regie buyers taking some 10,000 hhds. at prices showing steadiness. Seed leaf is active and strong.

VEGETABLES.—Exports potatoes for week, 1,028 bbls. A steady demand and only light additions to supplies of potatoes cause a firm market for all stock in order.

E. Rose Eastern d.-h. $2.12@2 25, do. State, $2@2.12 do. in bulk $1.87@2 00 Prolific do. $1.75@1.87; Mercer do. $1.75@1.87; Chili Red $1.75; Burbank State d h. $2@2.12 Burbank bulk $1.75@2, peachblow d.-h. $2.25@2.50; snowflake do. $2@2.12; do. bulk $1.87@2; peerless d.-h. $2.00; do bulk $1.75@1.87; Del. sweet $2 50@2.75; onions tending lower. Russia turnips, ℔ bbl. 50@75c.; white turnips 50@75c.; beets, 75c@$1; Hubbard squash $1; marrow do. 50c.; onions, white ℔ bbl. $4@5.50 yellow do. $3.25@; red $3.25, Chester, $3@3.25; carrots, $1.25@1.37; cabbages, ℔ 100. $4@6; red, do. $6@8; celery ℔ doz. $1.25@1.50; West Indian tomatoes 50c@1.25 ℔ box. Hot-house product—Tomatoes ℔ lb. 50@60c; cucumbers, choice, ℔ doz $3 do. culls 75c@$1; lettuce, Boston, ℔ doz 75c@$1; do. N. J. 4@50c; do. culls, 12@25c; radishes, ℔ 100, $1@5; rhubarb ℔ 100; $6@10.

WOOL.—There has been a very light trade this week, and prices rather easy. Quotations are for

XXX and Picklock Ohio, Penn., and Va. domestic fleeces quoted at 48@50c. XX 46@48c., X at 43@45c.; No. 1 at 49@50c, No. 2 44@46c.; common at 40@41c.; combing at 50@52c.

N. Y., Mich., Ind, and Wis. XX 43@44c. X 43@44c., No. 1 38@42c., No. 2 42@44c, common 38@40c., combing 48@50c.

Iowa, Vt. and Ill. X and XX at 40@43c., No. 1 45@46c., No. 2 42@44c., combing 45@46c.

Mo., Ky. and Tenn. washed fleece at 42@48c, unwashed fleece 30@37c., unwashed combing 30@38c.

LIVE STOCK MARKETS

NEW YORK, Saturday, Jan. 29, 1880.

BEEVES.—Receipts for the week 12,121 head: do. last week, 11 322 do. Trade has been steady enough all the week to make a good average. The run of cattle was unusually good and prices again show a close range. The poorest sold at 8½c., to dress 56 lbs.; medium to good, 9¾@10½c., to dress 56 lbs.; prime and above, 10¾@11½c, to dress 56@57 lbs.

COWS AND CALVES.—Sales are slow at 35@60c. ℔ head. Dealers do not look for a revival of trade until Spring.

VEAL CALVES.—Scant supplies of live and dressed have run up prices. Extra live sold temporarily at 9c.

Live fed choice 8½c. poor to prime 6½@8 Mt. Holly 5½@8½, buttermilk, 3½@4, grassers, 2½@3 hog-dressed, prime, 11½@12, fair to good 10@10½c.; common 5@7½c.

SHEEP AND LAMBS.—Receipts for week, 26 783 head; do. last week, 24,762 do. Market steady with moderate supply and a good demand for dressed at the various markets. Sheep ranged 5¾@6¾c.; lambs, 6½@7½c.

SWINE.—Receipts for the week, 31,637 head: do. last week, 26,186 do. Supplies are large but seem to be wanted. The last turn of prices at the yards was rather high for city cutters. Live closed strong at $5 70@5.95 per 100 lbs.; for some lots $6 was asked.

Country dressed pork light 7½c.; medium 7½@7¾c.; heavy, 6¾@7c. city dressed State 6¾@7½c. city dressed Western 7¾@7¾. Pork tenderloins 11½.

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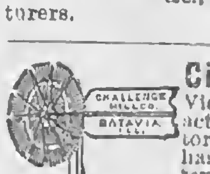
25 Years in Use.
GUARANTEED SUPERIOR To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWER
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$3,500,000 worth now in Use.
Send for Catalogue "B" and Price List.
U. S. WIND ENG. & PUMP CO., Batavia, Ill.

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

CHALLENGE WIND MILLS



Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free. CHALLENGE MILL CO., Batavia, Ill

50 Gold Figured, and Actress Chromos, 10c. Ag 's Sample Book, 25c. SEAVY BROS., Northford, Ct.

10 NICE CONCORD GRAPE-VINES for $1, by mail post-paid. *Think of it!* Order now for early Spring shipment. *Circulars free.* Wm. B. Reed, Chambersburg Nurseries, Chambersburg, Pa. Mention this paper.

THREE MONTHS ON TRIAL for 10 cents THE PEOPLE'S JOURNAL, Hagerstown, Md.

STRAWBERRIES AND ROSES
IF YOU INTEND TO PLANT Small Fruits, Roses, Shrubs, Vines, Flowering or Vegetable Plants, send for my free Catalogue *full of information.* STRAWBERRY CULTURE for a 1c. stamp. GEORGE S. WALES, Rochester, New York.

BEST VARIETIES
Grape Vines, Strawberry, Raspberry, Blackberry. Currant and Gooseberry Plants.
Also the Largest Establishment in the world for Thorough-bred Poultry.
Send for catalogues.
GEO. S. JOSSELYN. Fredonia, N. Y.

NORTH STAR Seed Farms
Fifth Annual Catalogue now ready, free on application. Former correspondents will be served without application. The product of these Seed Farms, the most Northern in America, have established beyond controversy the great organic law "that the further North seeds are grown, the earlier their products will mature."
Our St. Paul Tomato, Early Minnesota Sweet Corn, Red River of the North and Squaw Corn, Pure Scotch Fyfe Wheat (seed stock), Carrots, Beets, Onions, Minnesota Amber Sugar Cane, and nearly everything in Vegetable List, cannot be equaled in America.
The Seed Grower IS THE LEGITIMATE SEED DEALER!
T. M. METCALF, SEED GROWER AND JOBBER. ST. PAUL, MINN.

SEEDS NORTHERN GROWN
sent by mail to any part of the United States duty paid.
CATALOGUE for 1881 free to all intending buyers.
WM. RENNIE, Seedsman, Toronto, Canada.

SEEDS

I will give you the best Seeds for the least money of any firm in America or refund. Western Seeds are best. Mine take the lead. Gardeners say they never fail. I used 6000 lbs paper to print 50 000 pretty Catalogues Illustrated with $2000 worth of engravings. It beats the world, worth many dollars, FREE. Prices below all. R. H. SHUMWAY, Rockford, Ill.
Best Seeds cheap pretty Book Free.

Reading for the Young.

FIVE HUNDRED CATS.

"O mamma come to the window, quick!
Come to the window and see;
Five hundred cats are in our yard,"
Said little Willie Lee.

"O no! my son," the mother said,
"I'm sure you can't be right;
Five hundred cats! why, that would be
A most terrific sight."

"But ma,' the yard is *full* of cats,
Three hundred I should think,"
"My son, where could so many, find
Enough to eat and drink?"

"Well, *fifty* then!" "Count them my child,
And see if ten you'll find?"
"Well, anyway mamma, there *is*
Another cat and *mine*."

FARMING FOR BOYS AND GIRLS—NO. 12.

HENRY STEWART.

Manure.

It is to the manure made on the farm that the farmer looks for the means of keeping his land fertile and productive. Manure is the refuse of the crops after the farm stock has been fed. When a horse has eaten a ton of hay and 50 bushels of oats part of this food has been spent in keeping the animal alive; part has been spent in giving him strength to work, and the rest is in the manure, so that if all the crops grown on a farm should be fed on it, and the manure of the animals returned to the soil, there would be very little lost, and the soil would recover the larger part of what had been taken from it in the crops. This must be evident because we know that all that has been taken from the soil is in the crops, and whatever part of these is not used up in making flesh or fat, milk or butter, will return to the soil those substances of which it was made up and which were taken from the soil. But an animal uses up a very small portion of those parts of its food which were taken from the soil to sustain its life. A horse will consume about 22 pounds of hay and oats in a day; of this only one pound and a half is mineral matter taken from the soil, 4½ ounces only are nitrogen which comes from the soil, and the remainder, 20¼ pounds, is derived from the air. But a large portion of this matter is returned in the manure; for instance, of the pound and a half of the mineral matter consumed, the whole will be returned by a full-grown animal that is not gaining in flesh—that is, lean flesh and not fat; of the 4½ ounces of nitrogen, 3¾ are returned, and of the remaining 20¼ pounds, 7½ pounds will be returned. The horse, therefore, uses up to support life only that part of the food which was taken from the air, leaving all the mineral matter and nearly all the nitrogen to be returned to the soil in the manure. It is nearly the same with a cow, but she uses up a little more of the mineral matter, which goes into the milk, so that when the crops on a farm are fed to horses, cows or sheep, and the manure is saved and returned to the land, the land loses so little that it would not be felt in a great many years.

But the farmer must sell something to procure money to purchase clothes and meet other expenses. If he is a dairyman and sells milk or butter only, the farm will become better year by year, because nearly everything that is taken from the land is returned to it, and the constant working of the soil and the effect of the manure upon it, tend to free a larger quantity of the fertile elements of the soil than are needed to supply the growth of the crops. If he is a grain grower and sells wheat and corn, he must make good the loss of these grains by buying some cheaper food and feeding this to his stock to make his supply of manure good, or he must procure some artificial fertilizer for the same purpose. If the farmer sells hay and grain and animals which are supported on pasture, and wastes or burns the straw, as has often been done in the West, the farm will soon become worn out and useless, and crops can no longer be grown. As manure is the support and food of the land, the farmer should exert every effort to procure all he possibly can; he should care for it in the best manner and should know how to make the best use of it.

Many farmers waste a large portion of the manure. It is left to lie in the yard, where it is soaked and washed by the rains, which carry off in dark streams the best part of it. Others, more careful, but equally wasteful, put it up into heaps in which it heats and dries until it loses its most valuable qualities, and becomes a light, dry, whitish substance that is almost without value. It is best kept in low, flat heaps, in which it may be moistened by the rain and yet not made so wet as to be damaged. One ton of the best kind of manure contains 1,500 pounds of water, and only 12½ pounds of potash, five pounds of phosphoric acid and ten pounds of nitrogen; 100 pounds of good artificial fertilizer therefore contains as much useful matter as 2,000 pounds of manure.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS

Violet's Home.

Eight miles east of Los Angeles, the principal city of Southern California, lies the ancient mission of San Gabriel. Three-quarters of a mile to the northwest is a gradually sloping tract of land, which was, to all appearances, desolate and worthless until five years ago, when its enterprising owner constructed reservoirs for the purpose of irrigation, surveyed the land, divided it into five and ten-acre lots, and christened the whole the Alhambra Tract.

Intelligent people seeking rural homes heard of the Alhambra, only an hour's drive from the city, and located there. First among these came Mr. Erman; but perhaps you would prefer to hear Violet's impressions rather than to listen to a tiresome description.

"Yes, we were the first people on the tract. There was a little house on the place, and that was all except the live-oak trees. Everything about the house and on the ten acres has been done in three years and a half, and all the houses on the tract have been built in the same time."

"I don't see how it is possible for everything to grow so fast. Why, in a few years you could not see out at all if it were not for the avenue. Let us go out-doors; everything seems so strange, and I want to get acquainted as soon as I can."

"Are you sure that you are rested?" inquired Mrs. Erman. "For I am afraid Violet will forget that you are not strong, and will hurry you around as if you were to leave on the train to-morrow morning."

"I do not feel at all tired." "Oh, mamma, I'll be careful and only show her the flowers and things about the house," came from the lips of both girls as they went out on the veranda.

The house—one of the cottages which Californians seem to prefer for dwellings—had a broad veranda extending around three sides, and this was supplemented by a profusion of flowers and vines.

"What a lovely view you have!" exclaimed Daisy, as they stepped out on the veranda. "And those mountains! I would like to sit and watch them all day long."

"Yes," answered Violet; "when we first came it seemed as if we spent most of our time here on the veranda, talking about the view and watching the mountains. They seemed to change continually, yet were never twice alike. It was all so new to Bert and I, for you know Illinois is not noted for its mountain ranges."

"I should think not," laughed Daisy. "Now I want to see the flowers. These geraniums look rather different from those mother was putting in the bay window. What quantities of blossoms! Would you care if I picked a cluster?"

"I want you to understand, Miss Daisy," said Violet, solemnly, "that you are not to ask if you may pick the flowers. If you see a blossom that you want, break it off. That is the way people do in California."

"Vastly different from our habit a. home. Whenever we picked a cluster from the geraniums, mother always cautioned us to be careful not to pick one with buds on it."

"Ah, but your geraniums are not covered with blossoms twelve months in the year as ours are; neither do your roses grow to be such trees. Come down here on the grass and tell me if you ever saw a heliotrope like this."

"Why it is clear up to the veranda roof! Isn't that magnificent?" and Daisy buried her face in some of the fragrant clusters.

"Mamma grew it from a slip. Some of the plants and shrubs we bought; but the greater part of them came from cuttings. For a year or so after we came it seemed as if we couldn't go anywhere without bringing home the wagon full of cuttings and branches and roots that kind friends had given us; and then such a time as mamma had trimming, dividing and planting. But that is all through with, and mamma has plenty for all the new comers. Now I want you to pick a bouquet from what we would call house plants, in Illinois, and we will see how many flowers you can get on this first day of March. Begin with the heliotrope."

"I hate to pick it. It seems almost wicked."

"Well, I haven't any scruples"—and Violet began breaking off the fresh young sprays. "Then you must have a Marechal Niel rose. Here is a bud for beauty, and here is a bouquet in itself." As she spoke Violet reached up and picked a full blown rose whose dimensions were those of a saucer.

"Oh, oh!" cried Daisy in astonishment, "that's simply immense! I have seen Marechal Niel roses before, but they never looked like this."

"And I don't believe you ever saw seventy-five at one time, which I have counted on this very plant. Here are the carnations and geraniums. Help yourself to any amount of them, and you need not be particular about the buds."

Daisy was especially enraptured with the half dozen varieties of ivy geraniums which she had never before seen.

"Now I want you to see the abutilons. Here is one; see how many feet higher than the veranda roof it is. And there is the one with red blossoms just around the corner. But the prettiest of all is the trailing variety with spotted leaves."

"It is perfectly beautiful! How different the flower is from the other kind—almost like a fuchsia!"

"Here are the fuchsias on the north side of the house," said Violet. "But San Francisco is the place to see them in their beauty. It is too warm for them here in the Summer."

"I don't see how you can ask for anything finer than these. What are the little blue flowers?" asked Daisy.

"English violets; see how sweet they are, and then come over to the rose bed, or mamma will call us in before you have any roses; she is so afraid that you are tired."

Nearly all of the roses were pruned into tree form, and this was wonderful in Daisy's eyes, for the roses at home were bushes; and these sturdy brown trunks with their spreading heads were something of a revelation.

"There's a stalk bigger than my wrist! How long have these been growing?" asked Daisy.

"All of them have been grown from cuttings within three years. This large rose is the Safrano, and though it is one of the most common kinds, I think it one of the prettiest."

"Do these roses bloom all the time?"

"Nearly all the time. They do not blossom as full in very cold or very warm weather; and they must have some time for rest; but I don't believe there are half a dozen days in the year when we can not find roses of some variety."

While the girls chatted they went here and there gathering the prettiest buds until Daisy cried, "Oh, don't pick any more! My hand is so full I can't hold another flower. How I wish mother could see this! When I go home I'm afraid I shall turn up my nose at her precious house plants."

"Now, I want to show you——"

"Come, girls!" called Mrs. Erman from the dining-room door, "supper is almost ready."

"Oh dear!" sighed Violet, "I suppose we must go in, and you haven't seen anything but part of the flowers."

"Never mind; I don't want to see everything to-night. I have seen enough now to last me for a week."

"So Daisy has picked her first bouquet," observed Mr. Erman, as the girls entered the house. "I wonder if you can guess the name of this place?"

"I should think 'Rose Cottage' might be as appropriate as any," said Daisy, glancing at the wealth of roses she still held.

"Pretty well done!" Mr. Erman exclaimed, while the others smiled. "That is what my wife christened it three years ago when she commenced putting out cuttings. We all laughed at her then, for the place looked so forlorn and desolate, but I think she was about right after all."

LETTER FROM THE COUSINS.

Dear Uncle Mark:—Will you please enroll my name on your list as a Rural cousin? My mother is a subscriber, and is much pleased with your paper. I would like to tell the Rural cousins about my California home. We live now in the country but have been living in San Francisco. The woods here abound with game, such as deer, grouse, quail, hare, and now and then a bear or panther by way of variety. My mother writes for the papers, and has traveled considerably, and I have nearly always accompanied her. Did space permit, I would be pleased to tell the boy who "has never seen a railroad," of my adventures by land and sea. I have much fun hunting deer, though I do not kill a great many, as I am just learning to shoot. I set traps for quails, but catch more pigs than quails. I have a puppy I call Ranger, I am going to train him for a bear dog. My mother and I have begun our gardening; we have a nice lot of plants in a sunny, south window. We call our home "Sunny Side." Please Uncle Mark do not forget us in your free seed distribution. I am thirteen years old. California Boy.

Sunny Side, Cal.

The Puzzler.

CHARADE.

When in our town my first you see,
You need not pause to look;
Nothing it has to gladden thee,
Its gloom thou canst not brook.

But still by many poor 'tis sought,
To whom earth's love is cold;
By them small comforts can be bought,
They have no glittering gold.

My next the rougher sex admire,
If covering something neat;
Ungainly, 'twill not them inspire
Their glances to repeat.

Our lovely maids oft gently raise,
Oft gently put it down,
Abandoning quick such dainty ways
Should heaven's cloud o'er them frown.

Look! run! my whole comes on the scene,
All grace the fair deriding,
They in my last escape, I ween,
And to my first go hiding. R. J. D.

DOUBLE CROSS WORDS.

In cope, not in strive;
In coast, not in drive;
In nut, not in grape;
In twist, not in shape;
In bees, not in birds;
In noun, not in words;
In test, not in see.
How many of us try to be? G.

A SQUARE WORD.

1. A species of earth; 2. an inclosed space; 3. to know fully; 4. the mouth of a river.

☞ Answer in two weeks. Gus.

PUZZLER ANSWERS.—Jan. 22.

Hidden Parts of a House:—1. Banister; 2. wall; 3. roof; 4. hall; 5. lath; 6. rafter; 7. cornice; 8. doors; 9. windows; 10. floors; 11. ceiling; 12. plaster; 13. mortar; 14. parlor; 15. dining-room; 16. kitchen; 17. bath-room; 18. attic; 19. garret; 20. cellar; 21. locks; 22. bolts; 23. stairs; 24. shutters; 25. mantel.

Name Puzzle:—Europa, Victoria, Asenath. Initials form "Eva."

Pyramid Puzzle:—

W
U R E
W H E E L
S P O N S O R—Wren.

Square:—

S A L T
A S I A
L I M P
T A P E

Indigestion, weak stomach, irregularities of the bowels, cannot exist when Hop Bitters are used.

Miscellaneous.

RURAL BRIEFLETS.

In the course of a well considered article in Scribner's Monthly for February, we find the following reference to the Rural Experiment Grounds:

"There are also several private experiment stations. Notable among these private stations is one owned and conducted by the Rural New-Yorker. This consists of a farm on Long Island and a garden and nursery in New Jersey, which are maintained solely for experiment; manures are tested, new seeds and plants are cultivated, new tools are tried, new methods of culture are examined, and, in short, new questions are asked of Nature. The results are for the exclusive use of the subscribers to the Rural New-Yorker, yet it is a real experiment station, and its work is of value to the general public. The subscribers ask questions concerning matters they have neither the time, skill, nor money to answer for themselves, and the paper puts the matter to practical test on its farm, and prints the result for the benefit of all. We have only to substitute the State for the newspaper, and the public for the subscribers, and we have a State agricultural experiment station." . . . .

Mr. Roe sends us a little box of his Highland Beauty (Jan. 20), a seedling of the Lady Apple, of great beauty. An illustration of it was given in the Rural New Yorker of April 19, '79—but the specimens sent are nearly twice as large. The skin is a golden yellow with crimson streaks and blotches. The flesh is tender—neither sweet nor sour—and agreeable. Mr. Roe, says: "I have no proper place to keep apples, and these have been kept in a room where they have been subject to alternations of heat and cold. Properly cared for, they may be had in good condition until May." . . . . . .

Mr. J. A. Foote, of Terre Haute, Ind., writes us:—"Your Corn Number is of great value, worthy the attention of any farmer in the land, and worth in itself the cost of a year's subscription. It puzzles me to account for the immense yield on your farm. Here on the finest corn soil a crop of over 75 bushels would be counted as extraordinary. The variety must have had something to do with it." It puzzles us, too. We have no doubt the variety had *something* to do with it. And yet the common eight and ten-rowed yellow flint yielded heavily, though raised without manure and planted too far apart for a kind that grows no taller. Let us see what light can be thrown upon it by another year's observations. . . . . .

We have received the following letter from John S. Harris & Son, of La Crescent, Minn.:

"We congratulate you on the success of the late Corn Number. Your new departure in devoting an occasional number to a special crop will accomplish much good. The great amount of information collected upon a certain crop at one time will attract attention and lead to better cultivation. Your distribution of seeds cannot help but be a lasting benefit to the country. The Beauty of Hebron Potato is the best early potato I have ever grown, and it is now better known and more extensively disseminated than it would have been in ten years had not the Rural brought it to notice in such a manner. I failed to receive my potato through the distribution but had so much faith in the Rural that I procured three pounds, planted four eyes; a hill, hoed them once, and dug 290 pounds, 4 5-6 bushels—all of good size and none hollow. Owing to the drought they did not yield quite as well last season as they might have done; but on the same soil and planted the same day they turned out one-fifth better than the Early Rose or Vermont, matured fully as early and sold for a better price. Hotels would use no others while the Hebron could be had. Our seeds received last Spring gave very satisfactory results, but were somewhat injured by drought. Is the Edible Pine hardy enough to endure Minnesota Winters? We are keeping ours in pots in the greenhouse."

We do not think it is known how cold a climate these pines will stand. Our own seedlings have stood 20° below zero without the slightest harm. If but for the sweet nuts alone (about the size of a hazel-nut) this pine is worthy of cultivation, and the Rural's distribution of it must in a few years test its hardiness and adaptability to the various climates of this country and Lower Canada. . .

We are very sorry to learn of the continued indisposition of Conrad Wilson. We have received the following announcement of the Business Farmer, of which he is editor:—"In consequence of a relapse that has unexpectedly overtaken its editor, his work is again interrupted by physical prostration brought on as before, by unremitting application. In his anxious desire and purpose to improve and extend the plan of his work, and in the further effort required to regain the time thus lost, he has entirely overtaxed his power of endurance. As this, of course, involves a still further interruption of the work in hand, it only remains for us to bow to the necessity that calls for a change of plan. Discouraging as such trials may well be to Mr. Wilson and his friends, it is yet gratifying to say that the most serious stage of his debility has passed, and that nothing more seems now required than an interval of rest. But for this untoward event, the first year's work of the "Business Farmer" would have been completed within the time. How soon the work will be resumed, and under what conditions, will shortly be more fully explained, and the whole matter will be arranged to the satisfaction of all parties. This point being assured, there is every reason to believe that the editor will soon be able to continue his investigations, though of course, under such conditions as will relieve the pressure of his labor." . . . . . .

PERSONAL ITEMS.

Fair, the new Nevada Senator, is assessed on $42,000,000 in Nevada alone.

General Joe Johnston has a good insurance business and considerable property.

Webb Hayes, who went to Washington thin and gawky, has become spruce and gallant. One old lady says that he is almost handsome.

Secretary John Sherman's handwriting puzzles even the printers. His face has lost its former look of care. He enjoys a good cigar.

M. Gambetta, who was re-elected President of the French Chamber of Deputies last week, received 262 votes, which was only three more than he received in 1880.

Mr. Budgett, a well-known merchant in Bristol, England, is colonizing a large property he possesses to the south of Lake Superior with emigrants from the neighborhood of Bristol.

M. de Lesseps counts on Italian laborers to dig the Panama Canal. They bored the Mounts Cenis and Gothard tunnels, and are considered the most steady, frugal, and intelligent in such undertakings.

The frontier telegraph office at Williams's Ranch, Brown County, Texas, is managed by Hallie Hutchinson, a little girl 9 years old. She handles her instrument with the precision of an old operator.

General Garfield is the first active Knight Templar who has ever been elected President, and encampments of the order in different parts of the country are talking of taking part in the inauguration ceremonies.

The friends of Congressman A. H. Stephens, of Georgia, do not expect that he will regularly attend the sessions, but that he will be present on important occasions to vote, or that, in case of extreme ill-health, he will pair with some Republican.

After all the assertions and contradictions anent the matter, it seems that the Baroness Boudett-Coutts is going to marry Ashmead Bartlett, some day this week. The marriage is to be strictly private, at her own residence—if it takes place at all.

The President is getting fat, and his neck is wrinkling redly over his collar. His beard is becoming that sort of gray which seems to be a commingling of orange and white. His hair is a kind of sherry-and-straw color now, and is as sleek as it can be brushed. His favorite gloves are black, as becometh a President.

[Milwaukee Sentinel.]

That wonderful remedy for rheumatism, St. Jacob's Oil, has been used by a large number of people in this city, and with effect truly marvelous. Frequent reports are made where sufferers have been afforded relief, and the sale is growing largely. The fact that it is an external remedy, commends it to many who would not otherwise think of going out of the beaten track to find a remedy.

Miscellaneous.

GENESEE VALLEY FARMS FOR SALE.—Some of the finest residences in the Valley, near R. R. Inquire soon of JOHN SHELDON, Fort Collins, Colorado.

KIDNEY-WORT

PERMANENTLY CURES KIDNEY DISEASES, LIVER COMPLAINTS, Constipation and Piles.

Dr. R. H. Clark, South Hero, Vt., says, "In cases of Kidney Troubles it has acted like a charm. It has cured many very bad cases of Piles, and has never failed to act efficiently."

Nelson Fairchild, of St. Albans, Vt., says, "It is of priceless value. After sixteen years of great suffering from Piles and Costiveness it completely cured me."

C. S. Hogahon, of Berkshire, says, "One package has done wonders for me in completely curing a severe Liver and Kidney Complaint."

IT HAS WONDERFUL POWER. WHY?

Because it Acts on the LIVER, the BOWELS and the KIDNEYS at the same time.

Because it cleanses the system of the poisonous humors that develope in Kidney and Urinary diseases, Biliousness, Jaundice, Constipation, Piles, or in Rheumatism, Neuralgia and nervous disorders.

KIDNEY-WORT is a dry vegetable compound and can be sent by mail prepaid.

One package will make six qts of medicine.

TRY IT NOW!

☞Buy it at the Druggists. Price, $1.00.

WELLS, RICHARDSON & CO., Proprietors,

12 (Will send post paid.) Burlington, Vt.

Liquid KIDNEY-WORT

In response to the urgent requests of great numbers of people who prefer to purchase a Kidney-Wort already prepared, the proprietors of this celebrated remedy now prepare it in liquid form as well as dry. It is very concentrated, is put up in large bottles, and is equally efficient as that put up dry in tin cans. It saves the necessity of preparing, is always ready, and is more easily taken by most people. Price, $1 per bottle.

LIQUID AND DRY SOLD BY DRUGGISTS.

WELLS, RICHARDSON & CO., Prop'rs,

A Burlington, Vt.

Miscellaneous.

ST. JACOBS OIL

TRADE MARK.

THE GREAT GERMAN REMEDY.

FOR

RHEUMATISM,

Neuralgia, Sciatica, Lumbago,

Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,

Baltimore, Md., U. S. A.

LANDS AND HOMES

Short winters, low taxes, *good* society, convenient markets, superior schools, healthful climate. Excellent for Stock, Fruit, and Farming. ☞The *best Tobacco Region in the West.* 1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from $2.50 to $8 per acre *on seven years' time.* Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.* W. H. COFFIN, Land Commissioner, Temple Building, St. Louis, Mo.

IN SO. WEST MISSOURI

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

FOR SALE.

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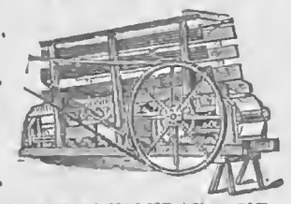

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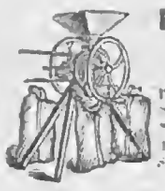

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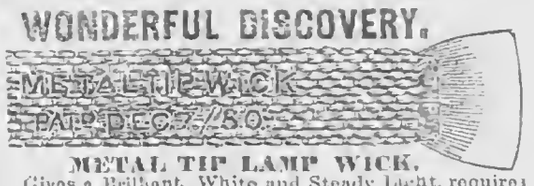

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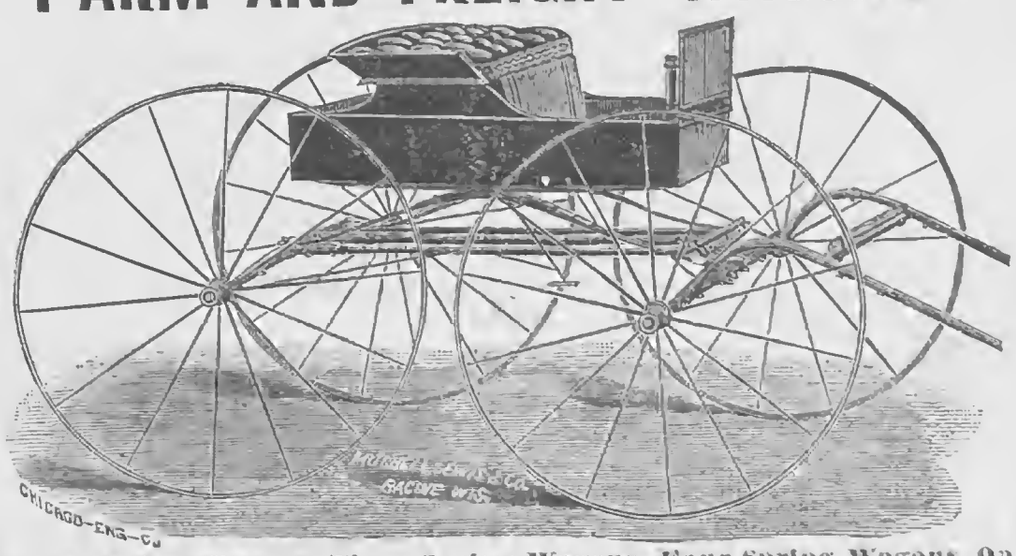

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A gentleman once remarked to a witty lady of his acquaintance that he must have been born with a silver spoon in his mouth. She looked at him carefully, and, noting the size of his mouth, replied, "I don't doubt it; but it must have been a soup-ladle."

It is mighty embarrassing to a man who has some religious friends staying with him, to have his dog, which has been very quiet during week days, begin right after breakfast Sunday to run to the gun in the corner and turn to his master and wag his tail, and then run back to the gun again.

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Kansas Orange, for northern culture, prices same as Early Orange.

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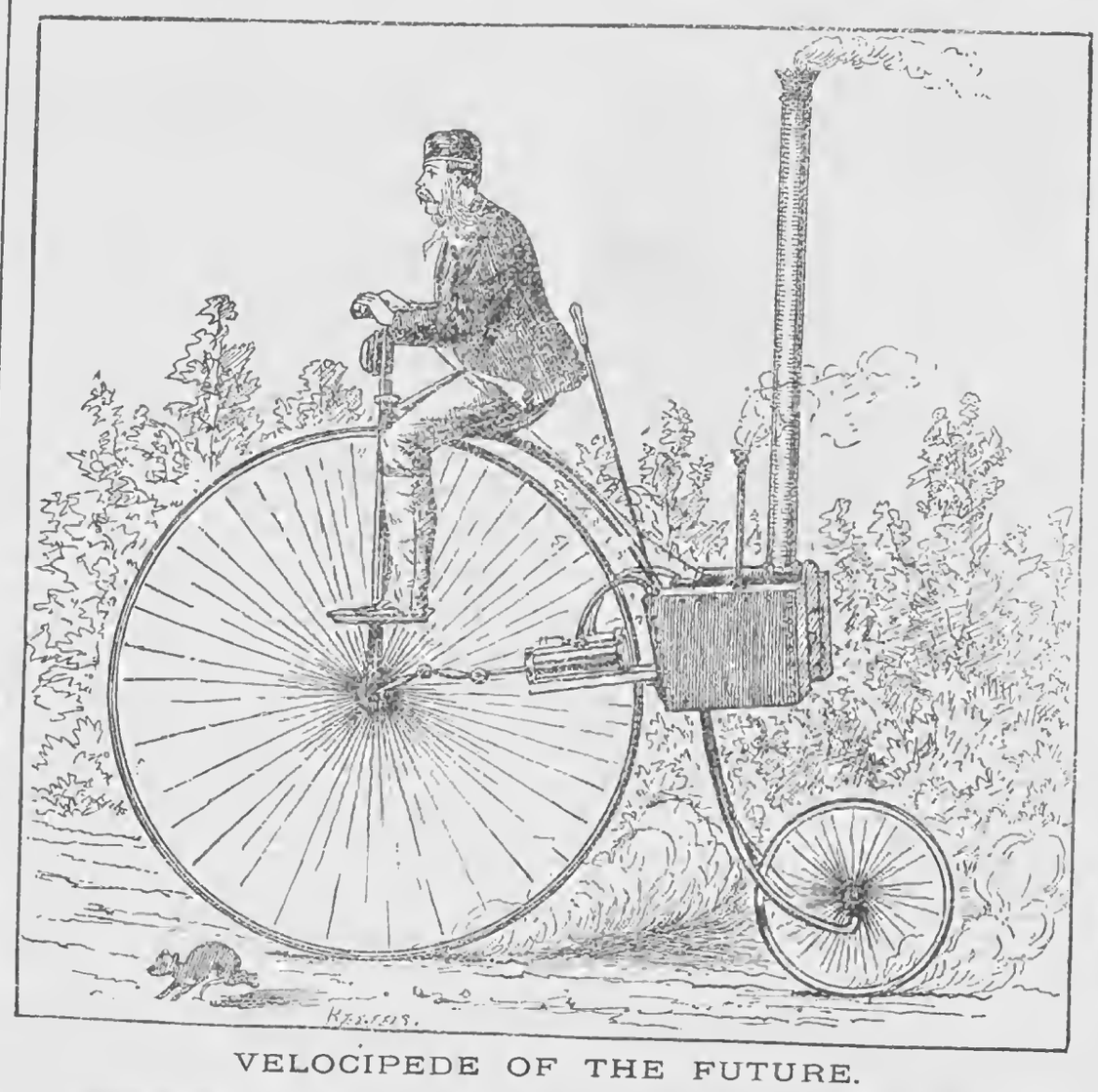

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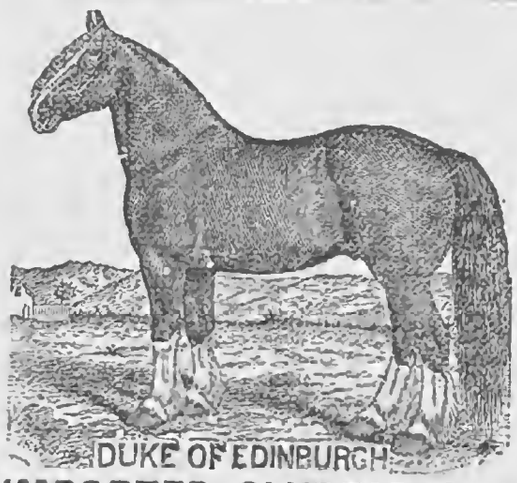

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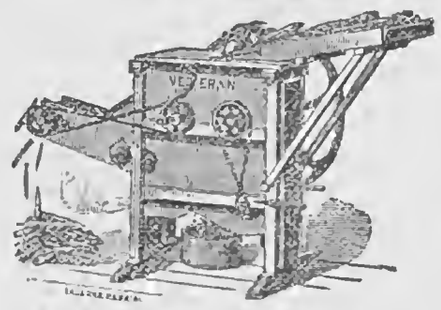

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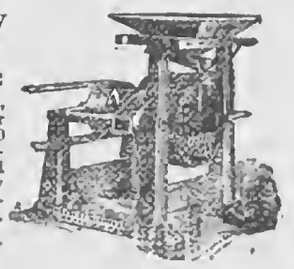

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THE
RURAL NEW-YORKER
A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XL. No. 7. Whole No. 1620. | NEW YORK, FEB. 12, 1881. | Price Five Cents, $2.00 Per Year.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

OUR HARDY SHRUB & TREE SPECIAL.

They are suited to special wants and require special care. The descriptions are necessarily brief and imperfect, so that, unless the intending purchaser has already a knowledge of the plants desired, he is as likely as not to order those which, after several years of patient waiting, he finds are not at all suited to produce the effects which his imagination had painted. In many cases, such disappointments end in discouraging people from further endeavors, while a better selection might have proven the beginning of that love of beautifying the home grounds, which, more than many are aware of, has to do with a love of the home itself.

Let us think of two country homes in all respects alike, except that one is surrounded by shrubs and trees, and the other is not. Let us ask the disinterested passer-by—"In which would you rather live?" Think you his answer would be long delayed? It is the same with our children. A naked, treeless country home engages not the affections. Beauty invites approach, contact, association; while ugliness, like neglect, decay, danger, drives us away. And yet, as between the two country homes above alluded to, is the *cost* of planting and raising those trees and shrubs greater than the benefits to be derived from them? If this were so, there would be a valid, a forcible excuse for the naked, cheerless, wintry farm homes everywhere to be seen. To show that the judicious, economical planting of shrubs and trees about the farm house is one of the most profitable, beneficent, satisfactory investments the farmer can make is one of the purposes for which this special number of the Rural New-Yorker has been written and presented to its readers. We have made most of the following notes from our own careful experience through many years. For the most part they have been derived from experience here at the Rural Grounds, which, being in a valley running north and south, are exposed to unusual vicissitudes of climate. There is rarely a Winter passes during which the thermometer does not reach 10° below zero; while we rarely escape the latest frosts of Spring and the earliest of Fall.

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HOW LITTLE IT WILL COST To Beautify the Grounds Abou the Country Home.

Easily Transplanted Trees and Shrubs that Grow in the Meadows and Woods About.

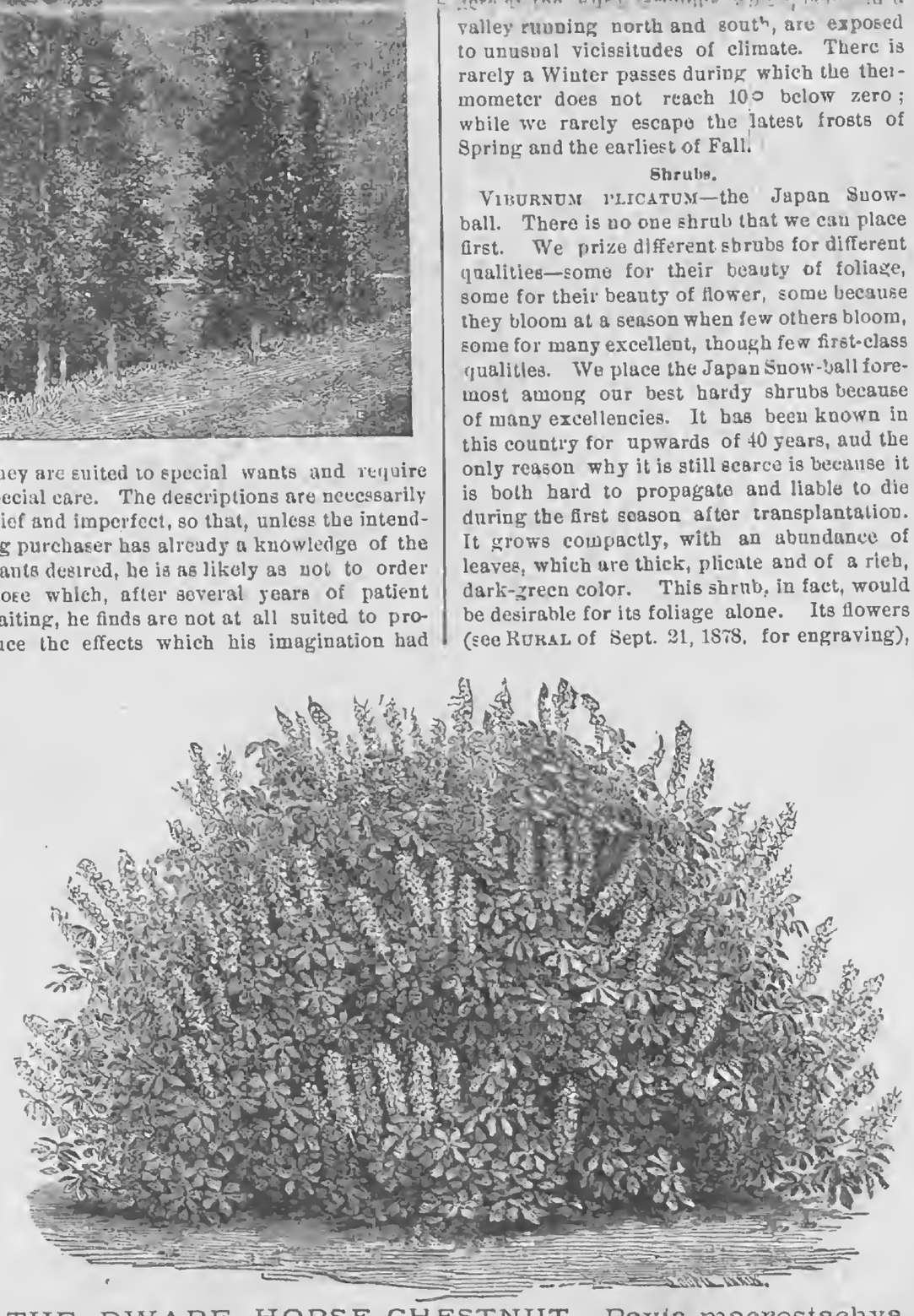
What Excuse is there for Treeless, Naked Door-Yards?

The Duty which Farmers owe to their Families to make their Homes Attractive.

NOTES FROM THE RURAL GROUNDS.

Select Hardy Shrubs and Trees for the Country and Suburban Home.

There is not a shrub or tree mentioned in this paper which may not be found in the nurserymen's catalogues which are noticed in the columns of the Rural New-Yorker from time to time. But such lists present hundreds of plants which, for one reason or another, are not well adapted to country homes in general.



THE DWARF HORSE-CHESTNUT.—Pavia macrostachya. Fig. 60.

Shrubs.

Viburnum plicatum—the Japan Snow-ball. There is no one shrub that we can place first. We prize different shrubs for different qualities—some for their beauty of foliage, some for their beauty of flower, some because they bloom at a season when few others bloom, some for many excellent, though few first-class qualities. We place the Japan Snow-ball foremost among our best hardy shrubs because of many excellencies. It has been known in this country for upwards of 40 years, and the only reason why it is still scarce is because it is both hard to propagate and liable to die during the first season after transplantation. It grows compactly, with an abundance of leaves, which are thick, plicate and of a rich, dark-green color. This shrub, in fact, would be desirable for its foliage alone. Its flowers (see Rural of Sept. 21, 1878, for engraving), or balls of flowers, are larger than those of the Guelder Rose (Viburnum Opulus) and more compact, of a white color slightly tinted with green, and they remain upon the bush for a month or more and finally drop while still in a well-preserved condition. It has proven here perfectly hardy. See fig. 75, p. 103.

Viburnum lantanoides is the American Wayfaring-tree, or Hobble-bush, found in cold, moist woods from New England to Pennsylvania and in the Alleghanies. It is not to be compared with the Japan Viburnum in any way, except that it bears fruit of a red color at first, turning darker as it decays. It is of rather straggling habit naturally, but this is partly overcome by seasonable pruning. The cymes of flowers are broad, flat and possessed of little beauty.

The Guelder Rose (V. Opulus) is also well known by the name of High Cranberry Bush in its wild state. In this the inner flowers bear an acid fruit which has been used as a substitute for cranberries—whence the name. It loses its fruitfulness under cultivation, all of the flowers becoming sterile.

Hydrangea paniculata grandiflora—the Great-panicled Hydrangea. This shrub has emphatic merits and emphatic faults; but it

Wier's Cut-leaved Silver Maple.—Fig. 61.

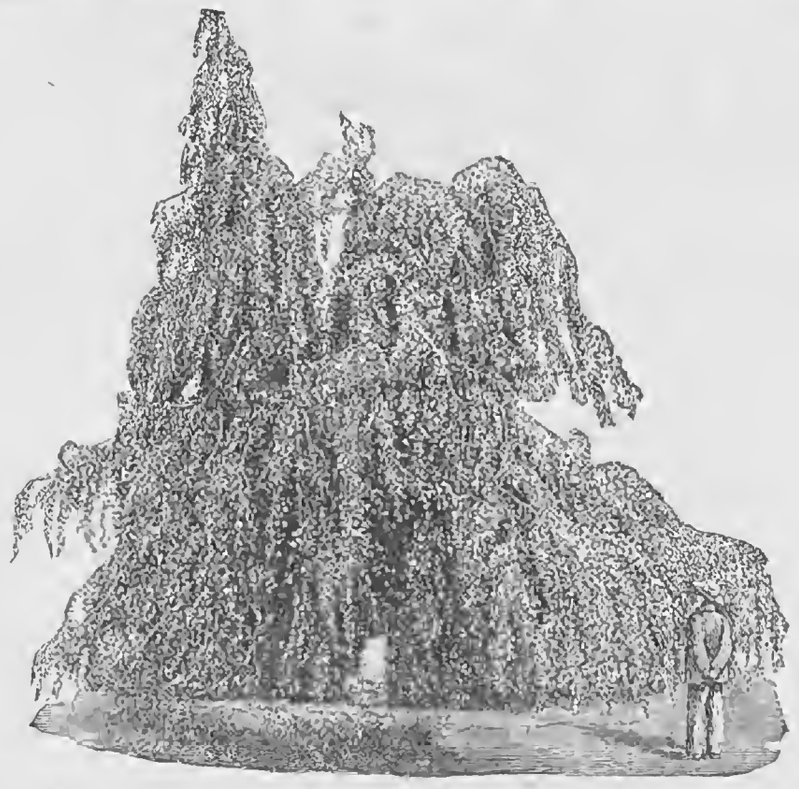
is, nevertheless, worthy a place in every garden. It is perfectly hardy. Indeed we do not know of a hardier shrub or one that will thrive with less care. It propagates freely from green wood, and the branches, which are borne to the ground by their weight of immense terminal panicles of flowers and there held in contact during a week or so, will often be found to have become well rooted plants. These may be separated from the rest of the stem at any time, planted in any convenient place, and they will bloom the next season. It may be mentioned that, though many shrubs fail to bloom the season they are transplanted, this hydrangea never fails, and the immense size of the flower heads often bears an almost ludicrous disproportion to the littleness of the plant itself. It is a fierce grower, and one has not to wait patiently for several years to see it in all its glory. A plant 18 inches high has borne with us 12 panicles—thyrses properly. The flowers begin to bloom in early August and continue until frost. When first unfolding they are of a greenish-white color—never purely white—which finally, when cold nights occur, changes to a faded-rose color. These flower head, or thyrses, sometimes measure two feet in circumference and 14 inches in convex length—we mean from the base to the apex of the cone. We once counted upon six plants 125 panicles. Their showiness may be we judged by such a display. There are two kinds of flowers which make up these masses of bloom. The showy ones are about one inch in diameter and the calyx is the only showy part. In the center of this is a little ball the

size of a pin's head, which consists of the true petals enveloping the stamens. The *perfect* flowers—those having both pistils and stamens—are borne beneath the others and are scarcely a quarter-inch in diameter. But we have never known them to bear seed.* This hydrangea is one of the *showiest* plants in existence. There is nothing choice about it in any particular—nothing that invites a daily call or inspection. The leaves are thin and coarse and droop under a hot sun. We admire it at a distance without ever caring to pluck the flowers or go near them. It fills a gap in Summer when flowers are sadly needed, and so we welcome the Great-panicled Hydrangea's showiness without caring ever to cultivate an intimate acquaintance.

THE CALIFORNIA PRIVET.—Of the half-dozen species of privet which are well worthy of cultivation, we have now to speak mainly of the "California" Privet—the best of all. Why this has been called the "California" Privet, we are unable to learn. The botanical name is Ligustrum lucidum or ovalifolium, and it is a native of Japan. It is thought by some to be merely a variety of Ligustrum Japonicum, but this species will not stand even an average Winter of this climate. The California Privet cannot be praised for its flowers; for, though white and as pretty as those of the lilac, they are not borne every season and rarely in abundance. Upon poor, sandy soil, we have known them to bloom profusely, but in such soil the plant itself loses in foliage and vigor more than is gained by the flowers. It may surprise our readers to learn that we esteem this common, cheap shrub, that is usually spoken of only in connection with hedges, in all other respects as scarcely inferior to any other. The smooth, broad leaves are thick and semi-evergreen, remaining fresh and unharmed until after Christmas. They grow closely together and opposite, so that the bush presents a full, clean, regular shape, while its switch-like stems are as straight and pliant as those of the Basket Willow. Occasionally a very severe Winter kills the wood of the preceding year; but the roots are never harmed and its growth is so rapid that it very soon attains a size larger than which it is scarcely desirable it should grow. We have this privet growing upon sandy hillocks, in clayey bottoms and along the banks of the lake not over a foot above its surface water; we have it growing under the eaves of the house within a foot of a brick foundation, and it thrives everywhere. It seems alike pleased whether the season is wet or dry, never having been appreciably harmed by excesses of either. It is propagated so freely that one could easily raise in one year hundreds of plants from cuttings of a single plant.

THE SHRUB, OR LONG-RACEMED, HORSE-CHESTNUT.—This is an excellent shrub for a farmer's front yard. It spreads out from the neck of the root, the branches hugging the ground for a foot or more, and then curving upward, forming a splendid hemispherical bush, greater in width than in hight. Thus our best specimen, now seven years old from the nursery, is about four feet high and not less than 15 feet in circumference. This specimen, last Summer, bore 55 racemes from six to 16 inches in length, bearing slender, whitish, fragrant flowers with stamens twice as long, crowned with pale-red anthers. It is a beautiful sight, blooming, as it does, in July when few shrubs are in bloom. For two or three years after transplanting, this shrub seems to remain stationary and is not an object of striking beauty. But if growing in a rich soil with plenty of room, it afterwards grows rapidly, sending up shoots thickly, the foliage of which quite covers the stems, forming a peculiarly beautiful shrub. Its botanical name is Pavia macrostachya, and it may be found on the lists of almost any nurseryman. It is a native of America, found mostly in South Carolina and Georgia, though showing in its wild state scarcely any of the many beauties which develop under cultivation. It is thoroughly hardy in this climate and, we believe, for a considerable distance north. We have already presented life-size engravings of the flowers and leaves. Our little cut is re-engraved from Mr. A. J. Downing's work on Landscape Gardening.

STUARTIA PENTAGYNA.—This very hardy, beautiful shrub belongs to the Camellia family, and has no familiar name that we know of. Stuartia (after John Stuart, Lord Bute) is itself an easy, agreeable name and may stand as well for the "common" as for the botanical name. It blooms in late July and early August, and thus adds another flower to the dearth of shrub-blooms of the Mid-summer. Its flowers average larger than those of Stuartia Virginica, (three inches across) of which an engraving is given; they are of an ivory-white color and borne in profusion upon mature plants. The Stuartia is no novelty, being a native of the Alleghanies of Virginia; but it is seldom seen in ornamental grounds, though it is one of the most desirable hardy shrubs that grow in this or any other country. It grows from six to twelve feet in hight; thrives in almost any soil, and we know of specimens 15 years old within a few miles of us, that have never been harmed in the least by Winter's cold or the sometimes more trying changes of early Spring. Nevertheless, we have heard that it is sometimes harmed at Rochester, though we should be glad to have the report strengthened by those who have tried it thoroughly. The Virginian Stuartia is less hardy, and is a smaller, more slender shrub.



WEEPING BEECH, (Fagus sylvatica pendula.)—FIG. 62.

THE WHITE FRINGE—Chionanthus Virginica. If but for the oddity and grace of its flowers we should find a place for one specimen of this large shrub, or little tree, among our selection. They are borne in loose, drooping panicles, and the linear petals, of a snowy whiteness, grow upon slender pedicels, so that the white, filamentous leaves seem to be floating in the air. The leaves are large and firm without a cleft or lobe. Our specimens have proven perfectly hardy here. It is found on river banks in Pennsylvania and southward.

THE JAPAN QUINCE — Cydonia Japonica. Among the showiest of garden shrubs, this well known plant must not be forgotten. It cannot be spared from any collection. The blossoms are almost unequaled by those of any other shrub for brilliancy, while the leaves are fresh, glossy, and green from early Spring till after frost. In selecting the Japan Quince, our readers should choose the different colors as described in nurserymen's catalogues. There are pure white flowers, scarlet, dark-crimson, orange-crimson, and one (Mallardii) with crimson center and white towards the edges of the petals. There is also a scarlet double-flowering variety. One of each kind, if planted in a clump, makes a brilliant contrast, while if planted here and there each is showy enough to command admiration for itself. For hedges as well as for the purpose of shutting out unsightly places, or for imparting an easily-maintained beauty to the less frequented parts of the grounds, this Japan Quince is almost unrivaled.

KALM'S ST. JOHN'S-WORT (Hypericum Kalmianum) is a fine, round little shrub, that is found wild about the northern lakes. The narrow, bright, leathery leaves are nearly evergreen and they will stand severe droughts without injury. It blooms early in July, the golden flowers, remarkable for their great number of stamens, standing out boldly and enduring for a long time the fierce sun of this hottest month of the year.

THE SPIRÆAS are too numerous to mention in detail. The Nine-bark (Spiræa or Neillia opulifolia), though less prized for its flowers than many others, is very pretty in fruit, which covers the bushes with inflated pods of a red color. The leaves resemble those of the currant. Young plants grow upright; but the branches become recurved in older ones which are often ten feet high. The Golden Nine-bark is very showy when the leaves first unfold; but the golden color soon fades away and there is nothing to distinguish it from the species.

SPIRÆA PRUNIFOLIA, fl. pl., a Japan species bearing double flowers, is one of the best. It suckers rather freely when young, but this is not objectionable later, for the reason that the plant assumes a balloon shape that one has no desire to attempt to improve. The flowers appear about May 30, and soon the bush is a mass of white, lasting until June. We estimated upon a specimen three feet high, that there were not less than ten thousand of these little white rosettes. As the buds break, we find an involuere, or whorl, of four or five small leaves. From these from two to five thread-like peduncles grow an inch in length each bearing a flower. These whorls of leaves are scarcely a half-inch apart, so that the bush is really a mass of flowers. The little flower itself is well worthy of a close examination.

LARGE-LEAVED MAGNOLIA, (Magnolia macrophylla.)—Fig. 63.

First we find an outer star-shaped calyx, or involucre; then an inner whorl forming a second star alternating with the first; then the whorls of roundish, white petals forming an oval, white flower like an agate button, half an inch in diameter. The whorl of leaves from which the flowers spring remains stemless until the flowers begin to disappear, when the nodes lengthen and the wood forms for the season. The leaves are beautifully glossy during the Summer, changing in Fall to a rich bronze. It is very hardy.

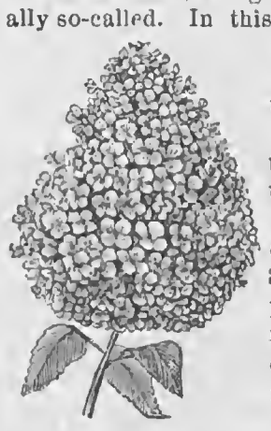
S. sorbifolia is always the first of the Meadow-Sweets to leaf out. In fact, it often takes advantage of mild periods during Winter to unfold its buds. It blooms in early July, bearing its little flowers in compound racemes a foot in length and of a soft, feathery, plush-like white. The habit of the plant is spreading and lawless. The leaves are from six to ten inches long, compound and unequally pinnate, with eight pairs of leaflets which are handsomely veined and doubly serrate. This spiræa is better suited to parts of the garden where less rampant growers might not thrive so well.

S. salicifolia, ulmifolia, Nobleana, Reevesii, callosa, Thunbergii are all good kinds.

Spiræa Aruncus, Goat's-Beard, is one of the hardy herbaceous spiræas, blooming early in June. The flowers are in spikes resembling catkins, and there are so many of these spikes as to form large and showy panicles of creamy-white.

Spiræa Fillpendula. The double variety of this is a great improvement. It is peculiar for its variously-cut leaves. Its root is tuberous; the flowers appear in early June, as with the foregoing and the following, and are of a pinkish white color.

THE ASTILBE, though not a spiræa, is generally so-called. In this the flowers are larger than in the preceding, blooming at the same time. It is valued for forcing in the greenhouse, though less at present than in years past.



HYDRANGEA—(paniculata grandiflora.)—FIG. 64.

HIBISCUS SYRIACUS, often called Rose of Sharon, is one of those plants that we deem as necessary to the flower garden as strawberries are to the small-fruit garden. The little cut, page 101, about one-quarter life size, shows the single-flowering kind which, to our fancy, is much prettier than the double. This Shrubby Hibiscus is one of the latest shrubs to unfold its buds in the Spring, for which tardiness it compensates by blooming late in Autumn. The flowers are white, rose, purple, violet, yellow and striped. This plant grows readily from seeds and the seedlings so vary as to render seedling cultivation extremely interesting. They may also readily be crossed. The Variegated Double-flowering Rose of Sharon must rank among the first variegated shrubs. The leaves are creamy-white and light-green. The only objection to it is the double flower which rarely opens. The half-open buds look as if they were blighted.

WEIGELAS (Diervilla, botanically) are profuse-flowering shrubs, but the flowers are somewhat dull in color, which, with the fact that their foliage is not particularly engaging, places them, if not in the list of second-rate shrubs, rather low in the first-class. The White-flowering Weigela (Diervilla hortensis nivea) bears pure white flowers which bloom more or less during the entire season, though not at any one time as profusely as the others. The catalogues alluded to in this number will furnish full lists from which those who desire may select. We would recommend simply Rosea and a variety of it known as Desboisi. Let us call the attention of our readers to the fact that this, too, may be raised very easily from seeds, though they are finer than those of portulaca. A few years ago we crossed Rosea with Nivea (the pure white.) We raised about 20 plants. All of the flowers were various shades of rose, while the foliage of several of the plants was distinctly variegated.

DEUTZIAS are also free bloomers, though their season is shorter than that of weigelas. We have the objection to deutzias that the foliage is dull and scanty, and that it suffers during very dry weather. The double-flowering kinds are best. This plant also is readily raised from seeds. We have raised many seedlings here, and can assure our readers that a fair percentage (not less than one-quarter) of double or partially double flowers may be looked for from seeds of double flowers.

EXOCHORDA GRANDIFLORA should have been mentioned under spiræas, since it is now classed under this genus. Its flowers are

* It may be interesting to those who examine little matters in their floral occupations to know more of the peculiarities of the flowers of this plant. The *perfect* flowers are borne upon *short* pedicels. Those of the imperfect or showy flowers are longer, and seem as if they were elongations of the fleshy pistils of the little perfect flowers. Some of the calyxes of the imperfect flowers have three and some four sepals. The little perfect flowers bear 10 anthers of a pink color, and five petals and five sepals. Five of the stamens are long—five short. The pistil is 3-fid, fleshy and short. The imperfect flowers bear but eight stamens. It is rather queer that these latter, when they have but three sepals, have three little bracts upon the pedicels, while those having four sepals—the usual number—have but *two* of these bracts. There are other coincidences between these imperfect and perfect flowers which cannot fail to interest those who study botany.

larger than those of other spiræas, white and borne in axillary, few-flowered racemes. It comes from China, is very hardy, grows to the hight of 10 feet in as many years, flowers in May when the shrub is nearly as white as a bank of snow. The bark exfoliates as in Nine-bark though not so freely.

THE JAPAN MAPLES. These must be classed as shrubs. We should be pleased on account of their beautifully cut and colored foliage to commend them as suited to those general purposes which alone we are at present considering; but their exceedingly slow growth and high price forbid.

CERCIS JAPONICA—the Japan Judas-tree. We have spoken of this shrub in another place, and reference is again made to it here because it should not be omitted in any collection of shrubs, however small. A fine engraving of the leaf, stem and fruit was published in this journal, December 18, of last year. In these grounds there is but one specimen, about six years old from the nursery. It is now but six feet high, having been injured occasionally by severe cold. It has never failed, however, to wreathe its lower branches in rich, rosy-purple flowers in May, nor to cover itself with a wealth of large, thick, glossy, deep-green, heart-shaped leaves. It is propagated with some difficulty, but grows readily from seeds which, however, are in this climate rarely produced.

FORSYTHIA VIRIDISSIMA. Among the sturdiest and worthiest of early blooming shrubs is this—the Golden Bell. Its long shoots remind one of willow shrubs—its flowers, of our Dog's-tooth Violet. It begins to bloom here usually about April 20th, before the leaf buds break. It is in full bloom usually about May 1st, when it resembles a bush of yellow stars. The flowers fade away about the middle of May, when the fine, serrated foliage is fully developed. This lasts until early Winter, changing to a deep purple.

HALESIA TETRAPTERA, or Silver Bell, is a symmetrical little tree or large shrub, which is found wild in parts of Ohio, Virginia, North Carolina and southward. The white bell flowers droop from slender pedicels in small racemes, but they last for two or three days only. The stems of this tree are clean and shapely, the wood very hard, the bark gray and dark-brown handsomely striated.

Hardy Shrubs with Variegated or Colored Leaves.

There are hundreds of them, and yet there are few we can place in our present selection. The variegated Cornelian Cherry (Cornus mascula variegata) is one of the best. The leaves are yellowish-white and green; the plant very hardy. It grows from five to eight feet in hight. The variegated double-flowering Hibiscus Syriacus already mentioned; the variegated-leaved Coral-berry (Symphoricarpus vulgaris); the Golden leaved Elder (Sambucus nigra aurea); the Silver-leaved Elder (Sambucus nigra argentea); the Purple-leaved Filbert) Corylus Avellana atropurpurea. This and the Golden Nine-bark look beautiful together in early Spring. The Purple-leaved Barberry.

Other Hardy Shrubs Worthy of a Place in Any General Collection.

Standard Honeysuckles should not be omitted in any general collection. They are desirable for their leaves, some of which last until February; for their flowers, which are often fragrant; for their fruit, which in different kinds is black, red and white. Ledebour's, Standish's, White and Red Tartarian Honeysuckles are among the best. The Honeysuckles, both vines and shrubs, are easily raised from seeds. Standish's bears sweet-scented flowers before the leaves appear—often indeed in Mid-winter during warm periods.

The Philadelphus (Syringa or Mock Orange) is a large shrub, bearing white, fragrant flowers from June 1st till the 20th, varying, of course, with the season. We have raised a number from seed, but the seedlings are much the same as their parents. The Garland Syringa (P. coronarius) is perhaps the best. There is a variety of this with partially double flowers.

The Japan Kerria (double-flowered), or Globe-flower, is well known in most gardens, bearing its yellow "roses" from April to July. The bark is of a lively green color.

The Double-Flowering Plum (Prunus triloba) is magnificent for a day or so while in bloom. We have never observed anything else about it that deserves praise.

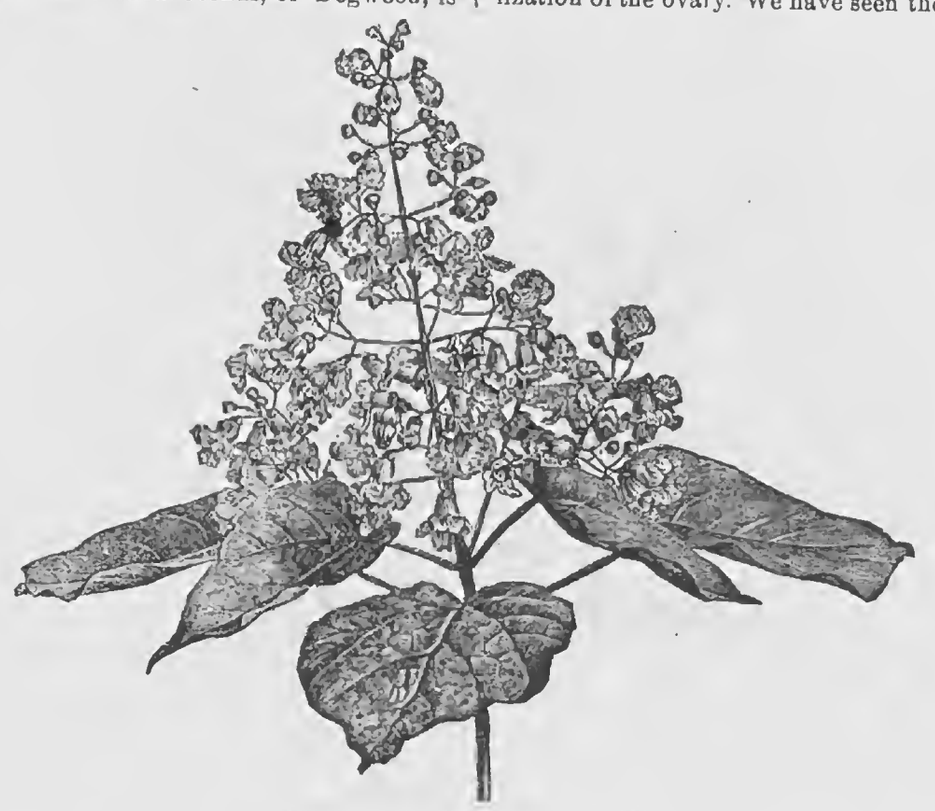
Rhus Cotinus receives justice elsewhere in this number. This is the Smoke or Purple Fringe-Tree. There are thousands of people who have this shrub growing on their grounds, that have little idea of its varied, changing, exquisite beauty under good treatment.

Should the lilac be forgotten? Yes, we answer, if it is not deemed worthy of better places and care than are usually given it. The lilac is always neglected, and yet there is no shrub that more heartily responds to care. There are few pleasanter sights in Spring than an assortment of different-colored lilacs in full bloom. The colors are white, lilac, reddish-purple and bluish-purple.

The Barberry works in very nicely among taller-growing shrubs. Its orange blossoms of early Summer or late Spring, its berries in the Fall and its leaves all the while are interesting and pretty.

The Sweet-scented Shrub bears queer flowers of a chocolate color and a fruit odor. It grows very well under other trees. This is easily raised from seed, though it does not always bear fruit from which to procure the seed.

The Red-Branched Cornus, or Dogwood, is



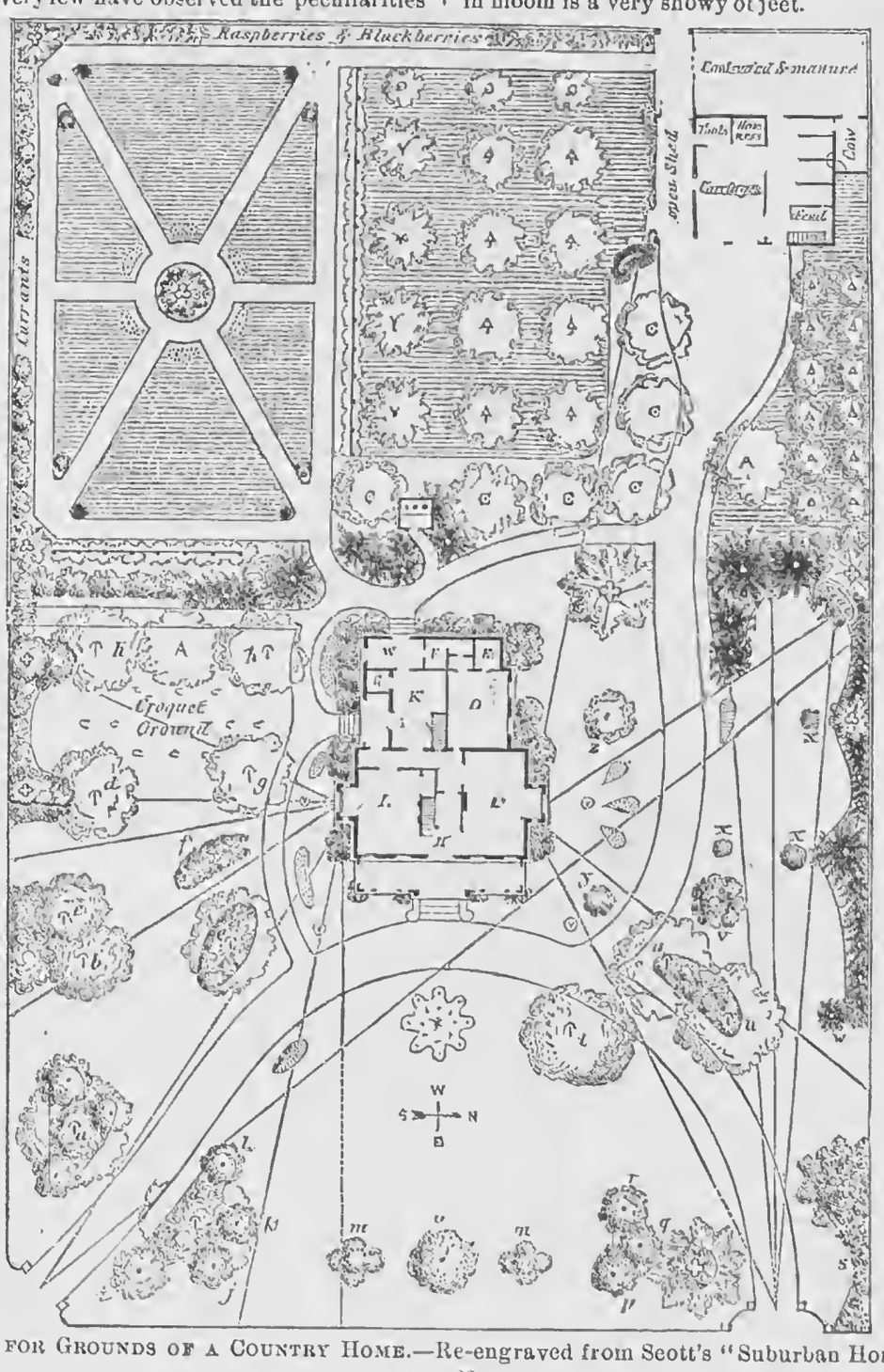
CATALPA BIGNONIOIDES.—FIG. 65.

desirable for its blood-red stems of Mid-winter, if for no other reason. By early May the branches lose entirely their blood-red color and become of a dull greenish-yellow, like willows in early Spring. The shrub is in full bloom by about June 1st, and the flowers are very showy from numbers, though individually small.

Broad-Leaved Evergreen Shrubs.

KALMIA LATIFOLIA, the Calico-Bush or Mountain Laurel, is found in damp woods or rocky soils from Maine southward. May we not call this the queen of evergreen shrubs? The foliage is leathery, dark-green, and, if the shrub is properly pruned, rich and ample. The flowers are singularly constructed, and it is a remarkable fact that though everybody has seen or gathered the flowers of the Calico Bush, very few have observed the peculiarities to which we refer. Near the top of the tube of the flower is a distinct line of crimson or rose. The anthers, upon curved filaments, rest in 10 cavities or little niches or pockets, which on the outside of the flower form so many spurs, or protuberances. Above these pockets on the inside are 10 dark-red spots. These spots and lines give it a calico look, and have no doubt suggested the name. The anthers rest in the pockets while the flower is in the bud. When it unfolds, the anthers are carried outward and downward, which curves the filaments (stalks of the stamens) like a drawn bow, until finally the corolla has so far expanded as to liberate the anthers. They then shoot off, generally striking the stigma of the pistil with one or more pollen masses, thus pollenating it and accomplishing the first step towards the fertilization of the ovary. We have seen the pollen projected from the anthers, from the elasticity of the spring, two feet or more. It has been said that the liberation of the stamens at the right time for fertilizing purposes was due to insects in search of honey. But any one who will watch and wait among blooming kalmias will find that they will all shoot and project the pollen without the insect aid.

The color of the flowers varies from white, through rose, to light red. The *buds* are generally of a deep rose color, one eighth of an inch in diameter, much resembling little furrowed, conical crowns. As they unfold they become whiter. Nearly every branch terminates with a corymb of flowers. Each corymb consists of from three to six umbels of from five to fifteen flowers, so that the entire bush in bloom is a very showy object.



PLAN FOR GROUNDS OF A COUNTRY HOME.—Re-engraved from Scott's "Suburban Homes." FIG. 66.

It is next to impossible to transplant wild plants unless it is rightly done. They should be taken up with as much soil as practicable and all of the fibrous roots it is possible to obtain. When there is no soil preserved and the roots are mutilated, the tops, stems and leaves *must* be cut off.

Rhododendrons need no praise. But the improved kinds cannot be considered hardy north of this latitude, and, as they require somewhat careful treatment even when they *are* hardy, we must reluctantly pass them by as not adapted to our present purpose. Those who desire them, however, will find full lists in several of the catalogues elsewhere mentioned.

Trees.

If we were writing for grounds over one acre in extent, we should begin with the maples and place probably the Norway first. But this must be allowed too much space to be admitted, if variety here, as in more extensive grounds, should never be lost sight of. We have just been walking over these grounds, looking at and dwelling upon every tree that is here growing, or that we could recall in other places with a view to answering the question "Which do you prefer?" The question is not a fair one, or rather it is one which cannot be satisfactorily answered. Our regards are pretty equally divided between several, and if our soil, situation and climate were somewhat different, others might impress us still more favorably. *Among* the best, however, we do not hesitate to place,

THE YELLOW-WOOD—Cladrastis tinctoria or Virgilia lutea. It attains a hight of 30 feet with mature age and under favorable conditions. In 10 years small trees from the nursery will grow to be about 15 feet in hight by as many in breadth. The bark is smooth, gray and clean. The tree inclines to branch low, forming a roundish, though somewhat balloon-shaped head a little larger on one side than on the other—a defect easily corrected. The leaves are borne on switch-like petioles with a swollen base like a horse's foot. Under this the bud for the next year is concealed and protected for a greater part of the Winter. The leaflets are of a soft, pleasing shade of green—from seven to eleven upon each stalk—and of an ovate shape. They retain their fresh green in all its purity until Fall when they change to a golden color—the lower ones first. The leaves fully clothe the graceful form and set off strikingly the pendulous racemes of white, pea-shaped flowers, drooping from the ends of the branches a foot in length. The Yellow-Wood leafs out about May 1st and blooms in May and June.

THE EUROPEAN PURPLE BEECH (Fagus sylvatica purpurea) is one of the most brilliantly beautiful trees that we have any knowledge of, and were it not that it is by no means easy to transplant successfully, or rather to establish in new quarters, we should unqualifiedly recommend it to every reader. We learn that there are many places where no such trouble is experienced; but even in the other cases the beauty of the tree can hardly fail to compensate for many failures. The buds break about the first of May, and by the middle, the tree is in its fullest beauty, lasting until July, when the bright purple changes to a deep green which is itself peculiar and pleasing. Again in the Fall, the purple color returns. There is a great difference in different trees of the so-called Purple Beech. We have seen specimens that were not deserving of the name. The variety known as Rivers's Purple Beech is that which we should advise our readers to select.

THE WEEPING BEECH (Fagus sylvatica pendula) is a tree of world-wide celebrity. A coarse, but true sketch of the beautiful specimen on the grounds of Mr. Parsons, of Flushing, as it appears in Winter, was given in the RURAL of June 29, '78. The present sketch is re-engraved from Mr. F. J. Scott's fine work entitled "Suburban Home Grounds" "Grandly eccentric"—"the most curious tree of our zone"—"a great mound of dark-green, glossy leaves"—"a gigantic bower of vines"—are phrases which have been applied to this Weeping Beech.

Our best specimen is now seven years old from the nursery, and is 12 feet high. We have been told that not until it has been 10 years transplanted does it begin to assume its beautiful eccentricities. The Parsons' Beech is now about 40 years of age, and is about 40 feet in hight. It is, indeed, the very embodiment of all the odd freaks of growth that make trees picturesque and of the vigorous healthfulness of foliage that makes them beautiful.

THE MAPLES.—As a class of trees for ornamental purposes, the maples are doubtless entitled to rank first, and there are several species among them of which as individuals the same might be said. While in this special number of the RURAL NEW-YORKER we cannot dwell upon the different kinds, we may at least designate those which seem to be the best suited to grounds of about an acre in extent. First let us mention

The Dissected-leaf Maple—Acer platanoides dissectum, is a synonym for one of the Japan species, viz., palmatum; sometimes called polymorphum. But this is evidently a seedling of the Norway, as shown in many ways, conspicuously by the buds and leaves. But the leaves are more deeply cut. Our only specimen is now six years old from the nursery, and it is not six feet high. But it is full of vigor, shaping itself into a round-headed, com-

pact tree that, with its singularly cut leaves' everybody that sees it admires.

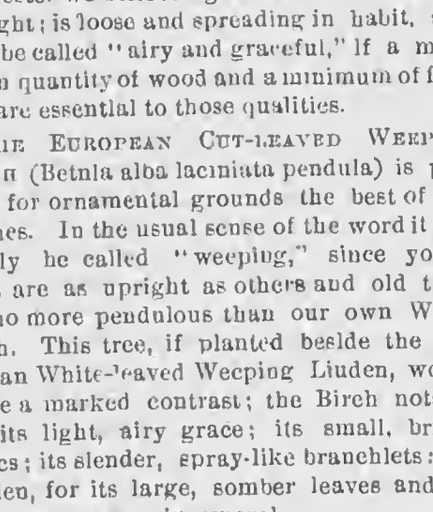
The Silver Maple (Acer dasycarpum) is one of the trees which persons who are in haste for foliage and shade usually select Its leaves are prettily cut and their silvery color contrasts well with leaves of a deeper hue. For small places, however, we should omit this in our selection. There is too much wood about it. The branches are too long and spreading. We have tried cutting it back severely, but its growth has been so rapid afterwards that the branches would break almost of their own weight.

The Sugar and Scarlet Maples are, it seems to us, far more desirable in many ways. There are also several variegated maples of which that called Acer tricolor is the most permanent and decided of any with which we are acquainted. There is a new variety of the Silver Maple originated by Mr. Weir and called Weir's Cut-leaved Silver Maple. Ellwanger & Barry, who introduced the tree a few years ago, speak of it as possessing a habit almost as graceful as that of the Cut-leaved Birch, and as being easily adapted to small places, if occasionally cut back. Engraving of the leaf, p. 97.

SALISBURIA ADIANTIFOLIA.—Gingko or Maiden-hair tree. This is in a marked manner different from all other trees; and this difference, viewed as to its ornamental qualities at least—is in the leaves, which are fan-shaped, leathery, parallel-veined and of a dull green color. The leaves are as if fifty or more of the "needles" of the White Pine had been flattened and pressed together into one. It combines several of the qualities of the cone-bearing with those of deciduous trees, and so is said to be a connecting link between the two. It is said to be a rapid grower and to be improved by cutting back occasionally, which statements are not supported by our own specimen, which, though it has been growing in its present place for eight years, is but nine feet high. It was cut back the second year, from the bad effect of which it was slow to recover. Aside from its really curious and beautiful leaves and the botanical interest which attaches to the tree, we see very little about the Gingko to commend it to general use. It bears no flowers in this country and, of course, no fruit. The leaves appear not until the middle of May and they are dropped early in Fall—points which must have escaped Downing and other writers when they selected near the house as the appropriate position for this tree. It is a native of Japan; quite hardy here—and in Rochester we believe—grows from 35 to 75 feet in hight; is loose and spreading in habit, and may be called "airy and graceful," if a maximum quantity of wood and a minimum of foliage are essential to those qualities.

THE EUROPEAN CUT-LEAVED WEEPING BIRCH (Betula alba laciniata pendula) is perhaps for ornamental grounds the best of the birches. In the usual sense of the word it can hardly be called "weeping," since young trees are as upright as others and old trees are no more pendulous than our own White Birch. This tree, if planted beside the European White-leaved Weeping Linden, would make a marked contrast; the Birch notable for its light, airy grace; its small, bright leaves; its slender, spray-like branchlets: the Linden, for its large, somber leaves and its heavy appearance in general.

We have found the Cut-leaved Weeping Birch of rather slow growth from the time it was planted in these grounds until now—a period of eight years. It is now about 15 feet in hight, though cut back three years ago two feet or more, to induce a more stocky growth. This birch is a very pretty tree as we have seen it in other grounds, and, except that branches die out occasionally from the attacks of an insect which bores the stem and that it is not very long-lived, it is in every way to be commended.



AS A TREE SHOULD BE PLANTED.—FIG. 67.

Of late years a variety of the White Birch with purple foliage has been introduced. The leaves are as deeply colored as those of the Purple Beech and they retain this color just as well. The contrast between such foliage and the white stems hightens its beauty. This "Blood Birch," as it has been called, has not thus far proved hardy here, losing during the cold season the entire growth of the Summer.

We pass by the lindens as not well adapted to our present purpose. The oaks would need a Special Number to themselves to touch upon their striking dissimilarities and several merits. Among all of them, however, there are very few kinds, which, for our acre we should prefer to the other trees mentioned in these notes. We may, however, speak a good word for the Golden Oak which is treated more at length by Mr. Parsons. It has here proven of rapid growth through four years, entirely hardy, and its leaves in early Spring are of the richest golden color. A part of this reappears in the Fall.

THE LIQUIDAMBAR, OR SWEET GUM.—L. Styraciflua. The very name has always had a charm for us, and there is that about the tree—in its star-shaped fragrant leaves; its queer corky bark; its shapely, elegant form—that hightens the charm and really inspires a feeling of attachment. It is found in moist woods from Connecticut to Illinois and southward, but our readers must not, therefore, conclude it will thrive only in moist soils. One of the best specimens we have ever seen grows in a sandy soil with a sandy sub-soil so little retentive of moisture that the grass burns up in the Summer. In fact, it may be said there *are* no trees which will not grow to finer proportions in a well-drained soil than in one upon which water stands or from which it slowly disappears. The superb hues which liquidambar foliage assumes in Autumn, are referred to in another place. The sexes are in different flowers (see illustration). This is not an easy tree to transplant. As in the case of the tulip, young trees should be selected and, unless the roots are uninjured, the stems should be severely cut back.

THE SWEET BUCKEYE (Æsculus flava) as it grows here is one of our handsomest lawn trees. It has been cut back for several years and is now sufficiently supplied with secondary branches to conceal by its large, smooth, glossy leaves, the heavier branches which, in specimens not cut back, are prejudicial to its appearance. The flowers are borne in long racemes of yellowish-white flowers which are not so showy as those of the white or red. The new growth surprises one with its rapidity. One day we find the buds just breaking, while in a few days after, the new shoots are a foot in length, and the sudden increase in the size of the tree surprises the beholder. There are few trees that surpass it in freshness, symmetry or general beauty. It blooms in middle-May.

But all of the horse-chestnuts are noble trees and their hyacinth-like flowers, if their foliage were but ordinary, would suffice to command a fair share of admiration. There are a double-flowered white, and a double-flowered red; there is a variety with narrowly cut and crimped leaves; another with the leaves dotted with white, all of which may be found in the catalogues of our nurserymen.

We have faint praise to bestow upon the willows in general. A Weeping Willow (S. Babylonica) is, to our view, entirely out of place about a country home. It requires too much space; it is too infested with insects; too short-lived; too sorrowful-looking.

THE ROSEMARY-LEAVED WILLOW, if cut back every year, forms a round, compact head of narrow leaves, that some may admire; but if left unpruned it loses every vestige of beauty in a few years.

THE LAUREL-LEAVED WILLOW (Salix pentandra) (?) is the only willow we should prize about our home. This has been disseminated by the RURAL NEW-YORKER, and our old readers have little to learn regarding it. It thrives everywhere. Its leaves are of the glossiest, reflecting the light almost like mirrors. Its long, smooth branches sway in the wind as if they would be broken in pieces, though they never are. It is one of the first to unfold its leaves in Spring, and one of the last to lose them in the Fall. It may be cut back to any extent without harm, though if left to itself it forms a small pyramidal tree 20 feet or more in hight, full of a graceful elasticity, and nearly all that could be desired in a tree that is necessarily somewhat formal in its habit.

Magnolias.

The large leaves of tropical vegetation are the admiration of Northern people. Hence we

THE HEMLOCK SPRUCE—AFTER SCOTT.—FIG. 69.

have Summer beds which we call "tropical," and no end of pains is taken to cultivate the canna, ricinus, calladium, etc., all for their leaves. Why has it not occurred to all that there are kinds of magnolias that rival those tender plants in luxuriance of leaf and form, while they bear flowers almost unrivaled for size, beauty and even fragrance! We would not, could not, be without magnolias—bless them! They have a grand beauty all their own.

We know not how far north of New York LENNE'S MAGNOLIA is hardy. But for this place we prize it as the choicest of the low-growing kinds. Soulange's Magnolia has been considered the best of the foreign kinds; but Lennei (a supposed hybrid between Conspicua and Purpurea) is in several important respects to be preferred. Foremost is the fact that it is hardier. While the stems and flower buds of Soulange's have been harmed during the cold season, those of Lenné's have not been touched. The flowers are a dark reddish-purple (claret) outside and nearly white within. It blooms about the first of May, and previous notes show that we have counted upon a single specimen, but five feet high, fifty flowers more or less opened, while half as many buds were at the time still to unfold. This was before the leaves were much developed. But occasional flowers appear during the entire season. In August we counted upon the same tree 15 buds, six of which were showing the petals. These flowers continue until frosts. They are very large—at least six inches across—with nine petals of a balloon shape about four inches long. The leaves are firm and leathery, of an obovate shape, acuminate at both ends, and about eight inches in length, and generally suffused with a bronze color of great richness. The little tree grows rapidly, four-year-old plants being eight feet in hight and oft-times blooming two years after being grafted. A new magnolia called

M. STELLATA should have been mentioned under shrubs, since, judging from our own specimen, it can scarcely ever hope to attain a size which would entitle it to the name of a tree. It bears small white, fragrant flowers of several rows of petals early in the Spring, and is a charming little scrubby, branching object.

THE CUCUMBER TREE (Magnolia acuminata), is a native of many States of the Union, and grows to a hight of 75 feet or more. But it may easily be restrained by a free use of the pruning knife, which will at the same time greatly improve its appearance by giving it a more compact form and a closer spread of leaves. The flowers appear in June, of a pallish-yellow color with a faint fragrance. The fruit, about three inches long, resembles a cucumber, whence the name. It gives to nurserymen the stock upon which most of the other species of magnolia are worked.

MAGNOLIA GLAUCA is the Sweet Bay, and is nearly evergreen here, and, like M. grandiflora, completely so in the South. It forms a small tree bearing wax-like, white flowers, three inches broad, which perfume the air in the swamps where they bloom. It is found wild from Massachusetts to Florida near the coast, and thrives in any garden soil not too sandy.

MAGNOLIA FRASERI—The Ear-Leaved Magnolia, is found in Virginia and Kentucky and southward, though sparingly. It flowers in June, bearing yellowish flowers, and sometimes again in Autumn. It forms a small tree, never very shapely, with large leaves, ear-shaped at base (hence M. auriculata of some), about 10 inches long, clustered at the summit of the branches. The flowers, though large, are loose and short-lived, lasting but two days.

MAGNOLIA GRANDIFLORA, the Great Laurel Magnolia of the Southern States and the Queen of large-leaved evergreen trees, is world-renowned for its majestic beauty, for its sweetly-scented flowers and shiny, thick leaves. It is not hardy north of Virginia.

HEART-LEAVED MAGNOLIA (cordata) is a good deal like M. acuminata, though the leaves are not so large and the tree never grows so tall. The leaves are four to six inches long; flowers (in May) four inches wide, of a yellowish color. This is hardy as far North as Wisconsin and Massachusetts—possibly further North. The

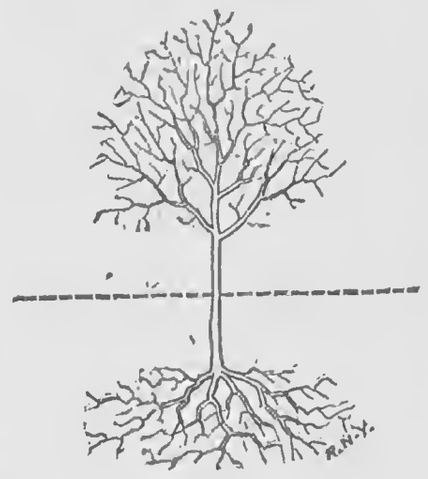
UMBRELLA TREE (M. umbrella or tripetala) is of rapid growth, small size (say 20 feet), bearing leaves often two feet long and an abundance of large, white flowers in May or early June. The petals are three to four inches long, narrow and elliptical, without fragrance and partly closing at night. The fruit forms in beautiful rose-colored cones of an oblong shape, four or five inches long, a very valuable quality of this tree. Left to itself, it sends up several shoots from the main stem near the ground, or from the root, which if permitted to remain, change the character of the plant from a tree-form to a spreading bush. This native tree is hardy in Ohio, Southern Michigan, Iowa, etc.

As a *tropical* tree, though not quite hardy north of Southern New York, the

GREAT LEAVED MAGNOLIA—M. macrophylla—stands quite unrivaled. The leaves sometimes measure 40 inches in length, while the immense flowers are often one foot in diameter. They are of a bell shape, nearly white, with a dark-purplish spot at the base, and fragrant. This tree grows rapidly, finally attaining a hight of 20 feet or more. We have just been examining the leaf buds of our specimen. They are three or four inches long and, though snugly folded up, are green in color and so naked and exposed that we wonder how they can stand the icy storm that prevails; the 19 deg. below zero which prevailed in this valley but a few days ago. This magnolia blooms in June; is found wild in Kentucky, North Carolina and, we believe, southward. It is one of the easiest of the family to transplant.

There are many other magnolias—some of them new—which for one reason or another we have not mentioned. Our readers should be advised that all of the magnolias are difficult to transplant. Either they must be grown in pots or have been often transplanted in the nursery grounds, to insure a fair measure of success. Exposure of the roots to wind or sun *must be* carefully avoided. They will not stand transplanting in the Fall in this climate, or indeed too early in the Spring.

PICTURE THIS LANDSCAPE WITHOUT TREES OR SHRUBS.—FIG. 68.



PLANTED TOO DEEP.—FIG. 70.

CATALPA—INDIAN BEAN. Of all quick-growing trees, we should choose this—the Catalpa bignonioides of botanists. It is, we think, for this purpose, in every way, preferable to the Silver Maple remarked upon above. It is more spreading in its habit; the leaves are larger; the flowers are no less handsome than those of the Horse-chestnut. It will not however, stand the Winters north of New York. A variety called Speciosa of late years has been much talked of. It would seem, from excellent testimony, to be hardier than the species, and to differ from it in flower and in the character of its growth. See illustration, page 99.

Evergreens.

We must not in planting our acre forget *evergreens*—those "friends indeed" that cheer us when all besides is bare and shivering, and we have but them to depend upon for a bright relief to the cold, cheerless landscape about us. These should be so distributed among the deciduous-leaved plants as to provide, as it were, a Winter garden. We should not, therefore, as is often done, separate the one kind from the other. It is an easy matter so to intersperse them that the deciduous trees may be the more prominent in Summer, while, as their leaves fall in Autumn, the evergreens seem to march into their places and supply the loss.

With hardy evergreens, as with deciduous plants, we are constrained to confine ourselves to a reference to the few that are admirable rather than dwell on the many which are desirable; and our readers should benevolently bear in mind that "tastes differ," and that what is most prized at the "Rural Grounds" might, for a number of reasons, be looked upon indifferently elsewhere. Of all evergreens, our choice is

THE HEMLOCK SPRUCE (Abies Canadensis) although, unfortunately, it can never be of service to our Southern friends. The prettiest hedge, by far, that we have ever seen was one of this hemlock, and the nearest approach to perfection in single trees are several specimens we recall in different parts of the country. Most of the sprnces are stiff, unyielding, formal; so are most of the pines and firs. But the Hemlock Spruce is as graceful, light and airy as a willow; while its leaves in Winter are as green as those of any other conifer. We have specimens which we have cut back. This changes the form from one that is naturally conical, as shown in the cut, to one that is oblong, dwarfing the tree in hight by what it adds to the spread of the lateral branches. There are several varieties which, though very valuable in a collection, are not, as single plants, equal to the species. One is the Weeping Hemlock; another, the Broad-leaved, and another, the Little-leaved Hemlock.

CALICO BUSH—(KALMIA LATIFOLIA.)—FIG. 71.

Should we mention the Norway Spruce next, and then the Balsam Fir? No, we do not propose to mention these two popular trees for our acre at all. We cannot look at our many other kinds of spruce without the conviction that they are decidedly superior to the former, and must, as time permits, take its place for ornamental grounds. As for the Balsam Fir, bright as it is during youth, it begins to lose its beauty when 12 years of age, and is ugly in most cases at 16.

THE ORIENTAL SPRUCE (Abies orientalis) is far better adapted to small grounds than the Norway. It is hardier, never being injured here as the Norway is upon those of its lower branches exposed to the northwest. Its foliage is probably more compact than that of any other spruce which attains to its size, which is, as we learn, not over 60 feet at its best. We have seen but one tree of this species, that was old enough to display its mature habit, and that, we think, is one of the finest evergreen sprnces of any kind we have ever beheld. It is solid, heavy, dark, with none of the horizontal layers of branches which characterize the Norway.

The oddest evergreen that we know of is a seedling of the Norway called the

CONICAL SPRUCE, and it is odd for its singular regularity. It could not with the shears be cut into a more perfectly conical shape than is the specimen growing in these grounds. The branches grow closely together so that it is compact and the color of the leaves is brighter than that of the species. It is mentioned as a dwarf spruce, but ours is now growing at the rate of nine inches a season, so that it bids fair to become a sizable tree in a few years. Speaking of dwarfs,

GREGORY'S SPRUCE, also a seedling of the Norway, is one to be recommended. The branches grow so closely together that were it not for the sharpness of the leaves one might sit upon the rounded headed as upon a cushion. Our specimen, seven years from the nursery, is now two feet high and four broad.

THE INVERTED SPRUCE, another variety of the Norway, is remarkable from the fact that the branches grow almost directly downwards. We are not aware that there are any specimens of this taller than seven or eight feet. Our only plant, seven years from the nursery, is now between four and five feet in hight. Among the newer evergreen trees of high promise are

ROSE OF SHARON—(HIBISCUS SYRIACUS.)—FIG. 72.

ENGELMANN'S AND MENZIES'S SPRUCES. What they may become ten years hence we cannot say. They have thus far proved extremely hardy, and their sharp leaves, which are of a steel or grayish-green color, more especially those of Engelmann's, contrast well with the darker-foliaged evergreens behind them. Respecting this gray or blnish tint, seedlings vary and it is a question how long this pleasing shade will remain. These two trees, and also the Douglas Spruce, are natives of the Rocky Mountains, and it is only within a few years past that we have known that by seedling cultivation we could raise plants which would endure the climate of the north. The Norway Spruce is often used for hedges, but, on account of the more rigid, pointed leaves of Menzies's Spruce, we should think when it can be sold so low that it would be used for that purpose instead of the Norway.

THE SWISS STONE PINE (Pinus Cembra) among the pines is of slow sturdy growth very distinct in appearance. One thing in its favor is that it will grow in very poor soils and in almost any situation.

For the furthest corners of our acre of ground, we may plant one or more of the Scotch Pine, which by disbudding in Summer can be forced into a much closer and handsomer form than that it naturally assumes. These vary in their silvery appearance owing, many think, to the soil. But we should select from the nurseries those showing most decidedly the silvery color.

THE WHITE PINE, treated as pointed out in another place, is well worthy of more frequent employment.

THE JAPAN RETINOSPORAS.—Of these the Golden Retinospora, (R. plumosa aurea.) has now been well tried and found wanting in no respect that we know of. It is a dwarf plant with very dense, flexible, feathery branches. In Spring and Summer the new growth is of a very delicate, pleasing light green. This in Autumn changes to a yellow color, so remaining during the entire Winter. A variety with silver variegation is less desirable, the silver leaves looking in Winter rather dull or discolored above the snow. Both, however, are very hardy.

Retinospora obtusa and pisifera are beautiful evergreen trees, and have stood our Winters through six years. But we hesitate to recommend them to our readers, for the reason that, being comparatively new in this country, they have not been tested under the widely different conditions which such a recommendation would subject them to.

We must not forget, while considering evergreen trees, the

AMERICAN ARBOR VITÆ.—True, its Winter color is not so bright as that of a few other conifers, but, when compared side by side, the difference is not so great as might be supposed. True, its form is not spreading, and, whether left to grow naturally or cut back, it still assumes a monumental, formal appearance. Nevertheless, a specimen here and there helps to make up *variety*, which in our selection of plants should never be lost sight of. From the window at which we write may be seen several arbor-vitæs 15 feet in hight, of such a narrowly conical shape that they are scarcely wider than one's body, at their base. One specimen, which has been cut back occasionally, is of an egg-shape, the broader end resting nearly upon the ground. Another, which has been cut back to within 18 inches of the ground every year, spreads out in a circle about eight feet in diameter.

The American Arbor-vitæ is easily transplanted, grows rapidly, will bear any amount of pruning, is easily propagated, is very hardy and requires but little space; for which reasons, if not too freely used, it is especially well suited to small places.

ABIES POLITA.—This is a new, very distinct Japan Spruce with leaves three quarters of an inch long, which are stiff and sharp as needles. It has proven with us extremely hardy and of quite fast growth. Why would not this serve as well for hedges as the arbor-vitæ, Norway Spruce, locust or Osage Orange? It would certainly prove as effectual in turning animals as either.

FOUR HANDSOME SHRUBS.

C. M. HOVEY.

VIBURNUM PLICATUM.—Everybody admired the snow-ball so common in old gardens, where its huge balls of snowy whiteness were so ornamental and contrasted so well with that other old and neglected shrub, the lilac. But its proneness to attacks of insects, which spoiled its foliage, caused it to be overlooked. This new Japan species not only has clusters of the whitest blossoms quite as beautiful, but its thick plicated foliage is also very handsome, and with its free flowering qualities renders it a grand substitute for our old cospecies, and one which should find a place in the smallest collection.

HYDRANGEA PANICULATA GRANDIFLORA.—Perhaps this may be too well known to need further mention or commendation, ranking, as it justly does, among the best of all shrubs, new or old. For a small or large garden, for an eight by ten yard city plot, or a demesne of 50 acres, it is equally well adapted; or indeed, for pot culture for the lawn or as a standard or dwarf. Easy to transplant, free to grow, perfectly hardy, abundant in bloom, and massive in its great heads of white flowers, which bend to the ground, fading off to a pinkish tinge, it must claim the most prominent place in every garden.

EXOCHORDA GRANDIFLORA.—While the hydrangea exhibits the massive beauty of flowers, this lovely shrub may be said to show all that is delicate and refined. Its growth is slender and regular, and the profusion with which it garlands every little twig with the whitest of blossoms surmounted with the pearliest of buds, makes it a fit companion for the most *recherché* of greenhouse plants. Indeed, it is difficult to imagine a more attractive object than an Exochorda about five feet high, in full bloom. It is not so easy of propagation as we could wish, but it well makes up for this slight defect, which will cause it to be less common than it otherwise would.

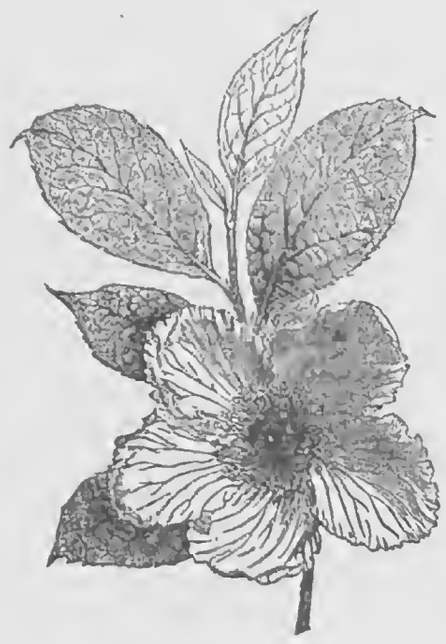
AZALEA MOLLIS.—What a grand acquisition! We thought the Ghent Azaleas, as they are called, were beautiful enough, as in fact, they are. But this Japan species treads close upon them, if it does not surpass them. For size of bloom and freeness of flower in a young state, they certainly are their superiors. What they will do as they acquire age remains to be seen. They are certainly lacking in fragrance; but with the knowledge of what has been done in improving the Ghent Azaleas, we may expect equal, or greater, results with this Japan species. For massing for small beds, they have no equal not only in profusion of bloom, but in the varied and novel tints of apricot, orange, amber, lemon and yellow. Truly, Japan has been prolific in garden treasures.

Boston, Mass.

A SELECTION OF THE BEST HARDY PLANTS.

SAMUEL PARSONS.

THE editor of the RURAL has asked me to



STUARTIA VIRGINICA.—FIG. 73.

name, and give reasons for naming, the five best deciduous trees, the five best deciduous shrubs, and the five best evergreens for a lawn of, say, an acre in extent. That means, I understand, that I must select this number of plants as well as I can from a general collection of favorites comprising many more varieties; for I should be sorry to confine my lawn-planting efforts to only fifteen kinds of hardy plants. Such a restriction would necessitate my sacrificing the enjoyment of too many interesting varieties. If I must, then, select only fifteen kinds (and I am loath to thus dishonor by neglect a score of others), I will take only varieties that are *every-day plants*, hardy, enduring, and vigorous in growth and striking and effective in color and form. They must not be novelties, they must not be small, exquisite gems; but their beauty must be useful in the highest practical as well as artistic sense, useful to the economical farmer as well as to the rich owner of parks or lawns.

Best Five Deciduous Trees.

THE NORWAY MAPLE—Acer platanoides. That I should pass over the American Elm, the Sugar Maple and the White and Pin Oaks may surprise some; but I choose the Norway Maple because it is a richly endowed tree in all ways, both practical and ornamental. It is not only beautiful with its large, shadowy, rich green foliage piled in broad, rounded masses; but it has excellent every-day qualities in the way of hardiness in all exposures, moderate and yet vigorous growth, and, above all, a regular, healthy habit that retains it many years in shapeliness and beauty with little or no pruning. One scarcely ever sees the Norway Maple exhibiting its full beauty on the lawn, because it is scarcely ever allowed to grow branches from the very ground upward. People have an unfortunate fancy for trimming up lawn-trees. If left to itself the Norway Maple spreads out into a globe of massive green foliage of the most unique and imposing character. It is, moreover, an excellent shade tree on wide avenues, for it needs room to spread abroad its massive foliage.

LIQUIDAMBAR.—(After the London Garden.) FIG. 74.

WHEATLEY'S ENGLISH ELM—Ulmus campestris Wheatleyii. It will doubtless seem strange to many that I should pass over the American Elm for an English Elm, when it is well known that the English Elm is not popular in America; but remember I am selecting lawn trees and not street trees. The American Elm is somewhat coarse and too spreading in habit to suit a place of only an acre in extent. As an element of landscape-gardening effect, the European Elm is invaluable for the picturesque way in which a mature tree piles rounded masses of foliage one upon the other. It is lofty, too, and even spirey on occasion. This Wheatley's Elm, for instance, will grow six feet during the first two years after grafting, which is no bad growth for any elm. Then the American Elm loses its leaves early in Autumn, while Wheatley's Elm holds its foliage particularly late. The foliage of the latter is rich and effective and the form erect and pyramidal. It is, indeed, in many respects, only an excellent variety of the ordinary English Elm, but its excellence is so great that I believe it fully worthy of the high rank I have given it. We neglect these European Elms on our lawns unjustly.

THE PURPLE BEECH—Fagus sylvatica atropurpurea. All kinds of beeches are alike beautiful in foliage, branching and trunk formation. They are slow-growing, long-lived and richly and even exquisitely endowed in every way. Their shade is unsurpassed, and they frequently hold their foliage far into December. The Purple Beech, however, is shapely, pyramidal and sometimes spreading, an elegant and stately tree. It is unquestionably the most attractive purple-leaved tree known on our lawns. The variety, Rivers's Purple, is the richest in coloring, and in May and June the young growth, seen against the sun, fairly glows with the most splendid rosy tints.

THE WEEPING BEECH.—Excellence of form rather than special beauty of foliage characterizes this tree, although the leaves of all beeches are very beautiful. The behavior of the branches of the Weeping Beech is literally wonderful. They curve and weep in every shape imaginable, and reach up and down and about in the most grotesque, and yet graceful manner. Always beautiful, the Weeping Beech is now merely pointed and drooping and again entirely cathedral-like and spreading—altogether the most splendidly endowed ornamental tree on the lawn.

THE RED-FLOWERING HORSE-CHESTNUT. I hesitate, I acknowledge, in choosing the fifth tree. It is the last chance and there are so

many one would like to select. Magnolias should not be passed over; but, then, they are difficult to transplant. The Weeping Sophora and Gingko are most curious and interesting trees. What shall I do? At the risk of being unjust, I will name the Red-flowering Horse-chestnut. It is, at least, a striking, hardy tree of recognized value. A round mass of large, finely-tinted, light-green leaves is set all over in May with veritable bouquets of rose-colored flowers. The combination of foliage and bloom is unique in appearance, and loses none of its beauty as we examine it more closely. The tree itself is medium-sized and vigorous-looking though slow and regular in growth. It has always been choice and rare; but to be effective it must be grafted on a stem five to six feet high. The Red flowering Horse-chestnut is entirely hardy, but much prefers low ground. It will do well, however, on level, rich, loamy soil. At a considerable distance on the lawn this tree, with its rounded, massive, light-green foliage and prominent red flowers, continues to be very striking.

The Best Five Deciduous Shrubs.

THE JAPANESE SNOW-BALL. This Snow-ball has been accorded, in the RURAL NEW-YORKER, for September 21, '78, the highest rank among deciduous shrubs by a majority vote of the best judges. Nor can any one fail, one would think, to recognize at a glance its great excellence, and experience will only serve to confirm the correctness in this case of first impressions. Its round balls of flowers are white and solid and very unique and charming, and the dark-green, crinkled or plaited leaves and brownish shoots piled in picturesque masses, impress one even at a distance, and near-by their excellence is not impaired by anything coarse or unattractive. It remains beautiful in foliage or flowers, as the case may be, throughout the season, and is always specially effective. The flowers hang on sometimes six weeks, and then drop off undecayed. Its dense masses of foliage are, however, rendered doubly picturesque by systematic pruning.

HYDRANGEA PANICULATA GRANDIFLORA. This plant has been awarded very high, if not the highest praise among shrubs; but is none the less coarse in appearance on close examination. Yet its great, bending trusses of flowers a foot long, changing from white to red and crimson until frost turns all a pale-brown tint, alone entitle it to high rank among a selection of the best shrubs. It grows vigorously, is perfectly hardy, and very imposing at a distance. Unquestionably a group of these hydrangeas is one of the most splendid features to be seen on any lawn. Remember, too, it is an autumn-blooming shrub, which is a significant fact when we consider that there are very few fall-blooming shrubs, and none approaching this hydrangea in excellence.

EUONYMUS EUROPÆUS. The lawn wants bright-color effects sadly in Autumn before the leaves of maples and oaks brighten with incipient decay. I choose, therefore, the Euonymus as one of my five shrubs for its abundant display of showy scarlet berries, although in strictest sense it is a small tree. Its foliage and erect and positive form are alike beautiful. The leaves, retained late in Autumn, are shining-green, and its reddish-brown branches are adorned in an indescribable manner by numberless large, scarlet, four-hooded seed vessels. No flowers could be finer or enliven the landscape more than the fruit of this well named Strawberry-Tree.

SPIRÆA THUNBERGII. For the finest spray-like effects of deciduous shrubs we must turn to S. Thunbergii. Early in May, and even in April, its masses of pure white wreathes of flowers rest or enfold the drooping, graceful branches, like drifting piles of snow. The small, dainty leaves come out fully only after the flowers disappear, and take on at once the most tender and delicate green. These leaves are numerous and very small. Later on in Autumn, when they hang late, the delicate beauty of their crimson-and-gold tints is very striking.

THE WHITE FRINGE—Chionanthus Virginica. I wish I could include the Japan Judas-tree and Stuartia pentagyna. They are unsurpassed in their way; but since I can only take five shrubs, their defective hardiness as compared with that of the White Fringe, must secure the honor to that plant. Chionanthus Virginica, or the White Fringe, becomes almost a tree in time—is actually a tree in strict parlance. It is of medium growth and has firm-looking, rounded contours and shining, effective foliage, very beautiful even without its flowers. But what a crown of glory its masses of lace-like, white flowers are in June, as they rest lightly on the rich, solid-looking foliage. Near-by the effect is delicate and exquisite; at a little distance it is an impressive and delightful surprise. Please note that I am particular to select shrubs which bloom at different seasons.

Best Five Evergreens.

THE CONICAL SPRUCE. Evergreens are perhaps less important in this climate than deciduous trees or shrubs, because they are harder to transplant and harder to keep alive after they are transplanted, beset, as they are, by the peculiar conditions of our American climates. The most popular of all the finer evergreens, although not neeessarily therefore the best, is the Conical Spruce. Its symmetry is its strong point, and perhaps the fact that it is a perfect form of the familiar and favorite Norway Spruce. It needs no prnning and does well in most situations; in fact, it behaves with credit where more exquisite hardy evergreens fail.

ENGELMANN'S SPRUCE. Another evergreen, as yet very little known but equally worthy of renown, is the Engelmann's Spruce. It is as hardy as the Conical Spruce, less symmetrical and more picturesque in outline, and, above all, luminously bluish or grayish-green. The contrast it affords to other evergreens would alone give it title to rank high on our list.

THE GOLDEN RETINOSPORA — Retinospora plumosa aurea. The special charm of this evergreen is its contrasting beauty. It is bright-golden all the year, deepening in yellowish tint towards Winter, and showing most green during the full growth of June. In habit it is picturesque, feathery and dense. It is very easily transplanted and is kept down by pruning to the most dwarf size without loss of beauty. Indeed, it must be thoroughly and regularly pruned to keep it fine and bushy. Hardy in most places and easily propagated, there are few, if any, of the new Japan evergreens that are likely to grow in popularity more in the future.

THE NORDMANN'S SILVER FIR. And now for our king of evergreens—Nordmann's Silver Fir! What can be more majestic, imposing, picturesque and symmetrical than its masses of dark-green foliage, with beautiful silver linings? Set out a tree that has been transplanted and pruned in some proper fashion, and you will find it the most magnificent and generally satisfactory evergreen on the lawn. It is slow-growing, and will long suit the dimensions of small places, if properly pruned, while it will equally well adorn the largest park.

THE WEEPING HEMLOCK. I close with what is, in some respects, the most beautiful of all evergreens. The common hemlock is sometimes, during youth and early growth, as beautiful in the form of its weeping sprays; but on the true Weeping Hemlock the most attractive of these forms is permanent. Add to this a peculiarly picturesque, evergreen, fountain-like form attained in mature age, and you certainly have an excellent evergreen. It still remains rare, though introduced by Mr. H. W. Sargent a score of years ago; but it is somewhat difficult to propagate, and therefore has not received as much notice from growers, as it would if it could be grown as readily as a Hovey's Arbor-vitæ or the Golden Retinospora.

GARDEN VINES.

WILLIAM FALCONER.

ORNAMENTAL VINES as garden plants are craved by poor and rich. They are for use as well as show; they give us shade in Summer, act as wind-breaks for more tender nurslings and screens to hide unsightly objects, rob the garden of a formal look, and with their drapery add a furnished show, and, where trees are wanting, serve well *pro tem.* as substitutes. And to their graceful forms and greenery is often added a wealth of lovely blossoms; for instance, clematises and roses, golden bells and clusters of wistaria. Most of them are of rapid growth, tough constitution, easy cultivation, and among them are subjects available for almost all positions. Poor, indeed, is the garden without a vine. The round-sheared shrubs, the closely-shaven lawn, the glowing beds and fancy fence cannot atone for those bare walls, that shadeless veranda, that naked porch, that unclad, green-painted lattice fence, set there to hide the back yard from the front. Vines give a cosy look unto a dwelling—a far more "homey" feeling than any vineless house can have.

Woody Vines

are the most useful, ornamental and permanent. They are especially available for covering long distances, such as the whole length of a house front or arbor; ascending to the tops of high pillars, their laterals depending all around in easy grace; or furnishing, in like manner, the long, bare trunks of trees. Once planted and in good soil, their after care consists in regulating and training the branches, and sometimes thinning and shortening them. In Europe house walls are often beautifully clad in ivy-fashion with pyracantha and the small-leaved cotoneaster, the shoots being tacked to the walls like vines. Both flourish under such circumstances and produce exceptionally large crops of flowers and showy fruits. Myrtles (Myrtus), Edwardsias, Berberidopsis, Azara and other somewhat tender shrubs are used in the same way. But I cannot recommend the use of shrubs as wall-vines in America. Among woody vines the following are hardy and good:—

ROSES.—The Prairie Roses are the best; they are very hardy, copious, and come into blossom when other roses are mostly past. The Ayrshires are rampant growers and flourish on poor soil, and the Climbing Hybrid Perpetuals are well fitted for training to pillars or against walls, and have as large, double and beautiful flowers as their dwarfed namesakes.

CLEMATISES.—Free-growing, copious, showy and most of them hardy. Our woods teem with white-flowering ones. C. graveolens, from Thibet, is yellow; C. coccinea, from Texas, glowing scarlet; and among our garden varieties are many shades of white, blue and purple, also single and double flowers. The "patens" type blooms in the Spring; the "florida" and "lanuginosa" in the Summer, and the "viticella" and "Jaekmanni" in the Summer and Fall.

CHINESE WISTARIAS.—Showy and much admired, and useful anywhere where a long-reaching vine is needed. The white-flowering variety is less appreciated than the blue.

GOLDEN BELL (Forsythia).—Bears a profusion of yellow blossoms in Spring before the leaves appear; a rapid grower; does well in sunny places, and is fitted for door-posts, pillars or trellises.

HONEYSUCKLES.—Special favorites. Some have yellow, others red flowers; some are fragrant and a few evergreen; the golden-netted is prettily varicgated.

PIPE VINE.—An excellent shade or shelter; has a rank growth of massive leaves. In hot, dry places the leaves often get seared by red spider.

TRUMPET VINE.—Quick-growing, handsome on high pillars where its branches can hang out around it. Old plants bloom more freely than young ones.

AKEBIA.—Pretty for fences, pillars, porches, or strings against the wall; hardy, fast-growing, retains its deep-green leaves till nearly Christmas.

VIRGINIA CREEPER —Good for screenery or drapery; thrives in light or shade.

PERIPLOCA GRÆCA.—A pretty twiner from Southern Europe; old plants are hardy in the North, but young ones barely so.

CLIMBING WAX-WORK.—Its showy fruit in Fall claims for it a garden place. It likes a moist but sunny spot.

Herbaceous Vines,

as a rule, are hardy, rapid growers, and, although available as screens, are mostly grown for their ornamental drapery and pretty flowers. They are more lasting than annuals and of the easiest culture; good soil and a sunny position prolong their growth and multiply their blossoms.

CLIMBING HEMP-WEED—Delights in moist and partly shady places and to scramble over bushes; a fit companion to the Virgin's Bower; has flowing wreaths of whitish Eupatorium-like flowers.

GROUND-NUT—Grows where the Hemp-weed does; bears brownish-purple, violet-scented flowers in great profusion in late Summer and Autumn.

CHINESE YAM or CINNAMON VINE.—Quick and dense-growing, neat, handsome in leaf and fragrant in flower. Multiplies itself by axiliary tubers. Old tubers reach deep into the earth.

HOPS.—Ready growers, but often defaced by insect vermin.

BRACTED BIND-WEEDS—Calystegia.—Fast growers; will crawl or climb; have pretty flowers, but vile spreading roots. The Chinese double-flowering sort is a good and showy garden plant.

MAN-OF-THE-EARTH CREEPER.—A strong-growing Morning Glory, whose bulky roots reach very deeply into the ground.

THLADIANTHA.—A Chinese member of the Cucumber family; very hardy, fast-growing and profuse, bearing bell-shaped yellow blossoms all the Summer long. It has chain-like tubers like the Ground-nut; best naturalized in half-wild places.

EVERLASTING PEAS.—In open places and rich land, and trained to stakes or branchy pillars, these (white and purple) are among the choicest of garden flowers.

Annual Vines

are showy-flowering plants, and some of them are useful as a hasty covering. They need but little care beyond good feeding, lots of water in Summer to prolong their growing and blooming period, and strings, stakes or other means of support. Some of them, as maurandias, Cypress-vines and ornamental gourds, may be started in a hot-bed in Spring for earliness' sake, but all of them should prove satisfactory if sown out out-of-doors in April or early May.

CLIMBING FUMITORY.—Handsome in leaf and flower; a rapid grower; self-sows itself; annual or biennial.

QUAMOCLIT COCCINEA.—Like a Morning-Glory in leaf and Cypress-vine in flower; a good grower; a late bloomer.

NASTURTIUM.—Everybody's flowers.

CYPRESS-VINES.—Sown in little circular patches and trained up strings in sharp pyramidal fashion, they are great favorites.

CANARY VINES.—Pretty vines with many yellow blossoms; need a cool, moist place.

MAURANDIA BARCLAYANA.—Exceedingly profuse and free-growing; likes good feeding and an open, sunny exposure.

MORNING-GLORIES.—Common but pretty.

ORNAMENTAL GOURDS.—Rapid-growing and far-extending plants, whose chief ornamentation is their variously formed and colored fruits.

WILD BALSAM APPLE.—Free-growing; likes damp, rich ground and a sunny exposure; in late Summer bears a copious crop of bunches of little white flowers.

SWEET PEAS.—On moist, rich land they grow freely and bear great crops of lovely, fragrant flowers.

SCARLET RUNNERS.—Ornamental and useful.

Clinging Vines.

American houses, by means of any plant yet discovered, cannot be clothed in evergreen as are the ivied buildings of the Old World; but in Summer we can cover them with as bright a green and in Fall with as glowing a red as Europe's walls can show. The following vines, by means of rootlets all along their stems and branches, stick closely and tenaciously to walls of mason-work or wood:—

ENGLISH IVY.—Evergreen, hardy in cool, open, comparatively sunless situations, as on a north-facing wall.

AMPELOPSIS TRICUSPIDATA (Japan Creeper, like our Virginia Creeper).—Its thrifty growth, neat and compacted habit, profuse, bright and glowing leafage, tenacity to the wall, which it will thickly cover to a hight of 40 feet, and hardiness, have secured for it a place no known rival can usurp.

CLIMBING HYDRANGEA.—Its merits in America are yet untested, but it is quite hardy.

EUONYMUS RADICANS.—This and its variegated form are true evergreens, hardy, neat in growth, and fine for covering boulders in the rockery; or well cut-back plants of it make a pretty bordering. Some assert this euonymus is good for covering walls; our plants do not grow quick enough.

Barely Hardy Vines.

In the Southern States many vines can be enjoyed that will not survive our Northern Winters, uncathed, unless protected. Among them are Aranja albens, that in great profusion bears its white, rose-tinged blossoms all the Summer long; Passion-flowers of various hues of flower and fruit; Solanum jasminoides, of graceful habit and all Summer through abounding in clusters of white; Tea Roses, the glory of the Spring and Fall; Bignonia capreolata, evergreen and floriferous; jessamines of several sorts; the bold-leaved Stanntonia hexaphylla—almost hardy here; fancy ivies for the cool and shady nooks, and many other pretty things.

Other Vines.

Besides the above are many lesser vines—as Thunbergias—as great or greater; for instance, the sterile grape-vines. And were I to include the many tender vines that thrive far better when planted out-of-doors in Summer than when nursed in rooms or greenhouses, the list would be very much extended. Among these tender vines may be mentioned Passion-flowers, cobæa, mignonette vine, ipomæas, bignonias and dioscoræas.

THE RESOURCES OF OUR FORESTS.

PRES. E. GALE.

IN a new country, when urging home ornamentation and rural improvements generally, we are often met by the plea of want of means, or if not by that, at least by ignorance in regard to the varieties of trees, shrubs, creepers, and twiners, that will endure our climate. But these excuses reveal only ignorance of our own resources. We have in our own forests and along our own water-courses a variety of shrubs, creepers and twiners that can be obtained for the labor of collecting them, which, if properly planted, will make an attractive rural picture of any prairie home. Not only can those shrubs and vines be obtained in abundance without cost, but their hardiness is settled. It is difficult to repress the conviction that it is only from ignorance that men neglect our native flora for the costly and half-hardy exotics with which our grounds are often filled. Not that it is unwise to gather the beautiful productions of the entire temperate zone, but the pioneer planter will find it necessary to experiment cautiously in this direction. When we have made all we can of our native shrubs, vines creepers and twiners, we can safely go further.

We might begin with the Red-bud, that *avant-coureur* of the early Spring; and the Buckeye, with its delicate green, responding to almost the first Spring sun. Then we could go on to the Dogwood, Button-bush and Buckthorn, White Thorn, Prickly Ash, Alder, Red Osier, Black Willow, Elder and even Sumach, and, last to name here, the charming Wahoo, a beautiful plant always, but most attractive in Winter.

It may be no special compliment to the plant-

er that some of the following shrubs are imported under their botanical names and sold somewhat extensively, while our own forests abound with hardier varieties just as attractive. For bare walls, or the trunks of trees, or pillars, there is no more attractive plant than our own Virginia Creeper—Ampelopsis Virginiana. It needs no artificial training. It is, all things considered, the best vine for ornamenting houses in city or country, for it makes everything to which it clings picturesque. The native variety clings to all structures, while an imported variety needs much training and is quite inferior otherwise. [We presume Pres. Gale refers to Veitch's Ampelopsis.—EDS.] We can, if we will, find special attractions in the Trumpet Creeper, Bitter-sweet, or Staff-Tree, Greenbrier and Climbing Rose. To some more favored it may seem that we have a meager list; but still nature has given us enough for a good foundation, and when we have used these to the best effect we shall find in our native and hardy annuals a charming addition to our picture. To the pioneer planter, then, I would say—always select for your beginnings those trees and shrubs which nature has placed at your disposal.

Manhattan, Kansas.

THE FARMER'S LAWN.

A. B. ALLEN.

IF it were more generally known among farmers how cheaply a handsome lawn could be made and planted with beautiful trees and shrubs, and how easily it could be kept up after its formation, I am confident that few in our land would be found without this charming appendage in front of their houses. What is more cheering and lovely, as one rises in the morning and looks out of his chamber window, than to behold a choice variety of trees and shrubs scattered here and there over a moderate-sized grass plot, loaded with bright, sparkling flowers! What a pleasure also to all who pass by during the day to look upon it! However plain and humble a house may be, it never appears so when viewed fronted by a well planted lawn; and if I were obliged to choose between this and a much finer and more commodious house standing up staring and naked, without either trees or shrubs in its surroundings, I should infinitely prefer the former to the latter.

One may form quite a pretty lawn from a quarter of an acre of land; but a half or whole acre is still better, as a greater variety of fine trees can then be mingled with the shrubs.

I will now give a list of a few of the deciduous shrubs which I have found can be as easily planted and cared for as a blackberry or a currant bush. These are entirely hardy in the latitude of 40 to 41 degrees north; and most of them will endure the still longer and colder Winter two or three degrees higher, and, of course, flourish anywhere in a more southern latitude. For the benefit of any to whom these shrubs are unknown, I will name them in the order of their blooming, and the whole or a part may be planted according to the means or inclination of the farmer. Blossoming in

APRIL AND MAY, the forsythia comes first, usually about the 20th of April, with a rich yellow color. Then follow rapidly azaleas, Pyrus Japonica (Japan Quince), deutzia, weigela, hawthorn, snow-ball, flowering-currant and the spiræa. These vary in color from pure white or yellow, to pink and scarlet, while some show a mixture of all. Lilacs in addition to the common color, are also now found of a pure white. Wistarias are also of two colors, the one a pale purple; the other a pure white. They can be grown as climbers or as shrubs. A few of the above hold their blossoms into June, and occasionally, somewhat scattered, even into July.

JAPAN SNOW-BALL, (Viburnum plicatum).—FIG. 75.

JUNE—Tamarix displays a profusion of delicate pink blossoms. Honeysuckle, more generally a climber, is very fragrant, with a mixture of pale yellow, pink and white flowers. It continues in bloom into October; and the foliage usually remains green nearly all Winter, which makes it very desirable for ornamenting the pillars, and hanging beneath the roof of a veranda.

LEAVES OF THE GINGKO TREE, (Salisburia adiantifolia).—FIG. 76.

JULY—Syringa and the Japan Hydrangea produce white blossoms, the latter bearing a profusion of magnificent long trusses, very different from those of the small, common blue hydrangea. The Trumpet Creepers are bright orange, streaked with scarlet. They may be grown as shrubs or climbers. Of them the Tecoma radicans bears the greatest profusion of gorgeous blossoms I know. The petals are from three to four inches long, and of the same diameter at the top of the cup. One of these on my lawn, about five feet high with six feet spread of branches, showed for days in the hight of its season, from 350 to over 400

COMMON WHITE-FLOWERING HORSE-CHESTNUT.—One-fourth natural size.—Fig. 77.

flowers, completely covering the shrub. One may judge of the magnificent beauty and splendor of such a display! It continues blooming from the forepart of July to the middle of August, or for nearly six weeks, and a few flowers again appear in September.

AUGUST.—The althæas open their blossoms early this month, the different sorts varying in color from white to pink and purple, and a slight mixture of these. They continue blooming occasionally into October.

SEPTEMBER.—Now the hawthorn and the Euonymus atropurpurea, or Burning Bush, commence showing their scarlet berries, the head of the latter shrub, or small tree, forming a glowing mass of bright red, equivalent to so many flowers, for which at a short distance from the eye, each berry may be taken. The callicarpa is covered with bright purple, and the Virginia Creeper with dark-blue berries. All these continue into December, and if the Winter happens to be mild, during nearly the whole of that season. In addition to its berries, the foliage of the Virginia Creeper begins to assume a bright scarlet in September, and continues it late into October, thus making it equivalent to thousands of flowers. It is a beautiful climber for the pillars and along the edge of the roof of a veranda, hanging down in thick, graceful festoons, as low as may be desired. Another quality which greatly endears it to me is, that its berries are attractive to the lovely blue-birds, coming daily in flocks to feed on them, and repaying me with a sweet, plaintive song. The birds are then so tame I can almost lay my hand on them.

There are many deciduous shrubs which grow wild throughout our country, which may be transplanted to a lawn and be greatly improved there with proper cultivation. The farmer will do well to mark these as they blossom and, if then desirable, he can transplant them in the following Autumn or Spring.

SOME TREES AND SHRUBS

For Shelter, Shade and Ornament in Central Illinois.

B. F. JOHNSON.

I RATHER like that plan of the RURAL which devotes the main portions of a single issue to special subjects. Notified beforehand that these issues are to appear, the reader gives his mind to the subject, thinks, reads and observes in that line, and is prepared for something new or old facts represented in a new light. If he anticipates too much, he will be apt to be disappointed, but generally the sum of instruction received, and the gratification resulting, will put the measure of disappointment out of sight.

In recommending what I consider the best trees for planting in Illinois (and what is true of this section is equally true for the entire prairie section between, say 39° or 42° north, and from Ohio in the east to the Missouri River in the west and south), I shall confine myself to rather narrow limits and advise the planting of no tree which is not, in the first place, perfectly hardy and which has not one or more striking merits in its favor. Further, I shall leave the evergreens or the conifers (with the exception, perhaps, of one or two of the deciduous sorts) out of the account, because my experience with them has not been satisfactory, and because they are not indigenous to the country. Further, I shall advise the planting of no tree which I have not observed to possess a strong constitution and great vitality, which will enable it to withstand the changes and intensities both of heat and cold of the climate, and, moreover, every tree mentioned must have great powers of recovery from mutilation and accident. Last, but not least, all must submit as saplings to being transplanted from the forest, or as seedlings from the nursery.

For the hard-wood trees I set them down in the following order, ranking them in merit as they stand:

The Sugar Maple (Acer saccharinum); the Blue Ash (Fraxinus quadrangulata), first of all, and then the ashes in variety; the Black Walnut, and the Butternut (Juglans nigra and cinerea); the Honey Locust (Gleditschia triacanthos); the Osage Orange (Maclura aurantiaca; the Black Cherry (Prunus serotina). To which might be added two which seldom grow to large proportions, yet are larger than shrubs—the Red Bud (Cercis Canadensis); and the native crab-apple (Pyrus coronaria).

For the soft woods my list would include the the Lime or Basswood (Tilia Americana); the Cotton-wood (Populus monilifera); the Yellow Poplar (Liriodendron Tulipifera); the Black Willow (Salix nigra). To which I might add, under certain circumstances, the Pawpaw (Asimina triloba); the Persimmon (Diospyros Virginiana), and that evergreen conifer the Red Cedar (Juniperus Virginiana), and the two deciduous ones, the Bald or Swamp Cypress (Taxodium distichum), and the European Larch (Larix Europæa). With the exception of this latter and the Osage Orange, the above-named trees are all natives and to be found growing wild, though of the 81 indigenous forest trees of Illinois, 61 are common to the whole State, 14 to the southern part and six to the northern.

Perhaps no tree is better entitled to stand at the head of the list to be planted in Central Illinois, for shelter, shade and ornament, than the Sugar Maple, and, next to the Soft Maple, it has perhaps been more generally set out than any other. It can be said in its favor that it is readily and safely transplanted; quickly recovers from the shock of removal; grows fast; makes a broad and dense shade with its foliage in Summer, which turns to crimson and gold in the Autumn. It seems to regard with equal indifference the heat of Summer and the cold of Winter, heavy or limited rainfall, and grows vigorously on all soils, whether moist or dry, provided they are strong, loamy and deep. Besides, insects rather avoid it. Its timber is among the best for fuel and for many mechanical uses, and, finally, when it has achieved size and age enough, it becomes the sole reliable source for the production of sugar in these latitudes. The Sugar Maple is to be seen in its best form as a tree for shade, shelter and ornament in Jacksonville, Ill., and other early-settled towns. Nevertheless it is met with in almost every town and village in the State.

Of all the trees on my list, I know of none more worthy of being extensively planted than the Blue Ash. Indeed, if we leave the Black Walnut, the Burr Oak and the best of the hickories out of the account, the Blue Ash is the finest timber tree that grows on Western soil. Where the soil and the situation suit, it attains magnificent proportions and furnishes timber which has nearly every excellence—size, length, toughness, elasticity, hardness, weight, extraordinary strength, and durability almost without limit. No other handspike cut from timber saplings has the strength of the Blue Ash and no timber for axle-trees and other wagon and carriage work is superior to it. Besides, it is not uncommonly found growing in low lands and moist bottoms, where the young saplings develop a mass of fibrous roots near the surface, which make the transplanting easy and the after-growth sure. No young tree develops a sturdier or more shapely trunk, or forms a more regular head or throws out more vigorous limbs, and where some age has been attained, no tree has a more striking and picturesque habit. It bears seed keys in great abundance when 10 or 15 years old, which require to be planted immediately after maturity in September or October, in order to insure germination the succeeding Spring. I have given more space than I otherwise should to the Blue Ash, because, beyond its narrow native habitat, its many excellencies are so little known and understood.

The Black Walnut has such a splendid reputation, and its merits are so well known it requires but few words at my hands. It is transplanted not without difficulty. Beyond its claims as the most valuable of our timbers for elegant and costly purposes, when used as a fence post it outlasts everything but Red Cedar. Rebuilding a fence two years ago, which had been set through a low and moist prairie 24 years before, I found the walnut posts sound enough to be reset for a temporary fence; but the Burr and White Oaks were gone to the last one. In planting out the walnut, it should be placed where it will not be interfered with by the tramping of cattle, or where the soil will not be disturbed over its roots to any considerable extent, because it is impatient of such interference and has its growth thereby retarded, and if there is much of it, the tree will at 20 or 30 years die.

DUTCHMAN'S PIPE (Aristolochia Sipho).—One-sixth natural size.—FIG. 78.

As a mere shade tree the butternut is preferable to its half-brother, and its nuts are preferable, too; but its chief value is that its timber is in demand second only to that of its noble relative, the Black Walnut

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The Rural New-Yorker begs to offer in articles of its own selection, for the longest and heaviest five heads of wheat from the next crop, $50.00, to be divided into first, second, third, fourth and fifth premiums. The awards will be published in our Special Wheat Number, and drawings presented of the prize heads.

Farmers, is there any valid, forcible reason why you should plant shrubs and trees about your homes; why you should, according to your means, seek in this way to render them as pleasant—as attractive as possible? If so, what are they? While reading this number of the Rural New-Yorker, we ask you to give this question due consideration.

The Mangel prize-takers will be announced next week.

It will be remembered that the next special Rural New-Yorker *will be devoted to* small fruits. *We hope to be able to present it in three or four weeks from this date. The next Special thereafter will be the* wheat number.

Our White Pine—Pinus Strobus—has the decided advantage over the popular Balsam Firs, viz., that whereas the latter are handsome in youth, growing ugly in age; the former is not handsome in youth but it improves as it grows older.

Why not plant an occasional dwarf fruit tree upon lawns among the ornamental trees? The Seckel upon the quince stock forms a shapely tree ten or twelve feet in hight. It is handsome in flower, handsome in fruit, is it not? The apple upon Paradise stock is also a handsome little tree. Are the flowers or fruit any objection that they should be excluded?

Among Hardy Vines, we should by no means forget the Golden Honeysuckle—Lonicera brachypoda aurea. This is really one of the finest of all variegated plants, as the golden coloring remains quite constant through the Summer. It may be used as a climber or grown to cover old stumps or to spread over the ground.

We commend the "Laurel-leaved" Willow to our friends as not only a handsome tree by itself, but as well fitted for wind-breaks or even hedges. It will stand a great degree of cold without injury (40° below zero, at least.) This willow does not sucker, and we are at a loss to know why it is not selected by nurserymen as a stock for the Rosmarinifolia and Kilmarnock.

Many farmers, in the kindness of their hearts, are full of anxiety for their stock, and the out-buildings are conspicuous for their neatness and order. No doubt the animals would thank them heartily had they reason and could they speak. Well, it would be well for such farmers to consider that their daughters, sons and wives *have* reason, and that they would in good time thank them if they would take the same pains to beautify the yards or inclosures about their homes.

For a permanent bedding plant, the clematis (in variety) may be used with great effect. Let the vines run as they will—only confining them to the space intended. For this purpose, the following kinds may be commended: Jackmanni, violet-purple; Lanuginosa, pale blue; Mrs. James Bateman, lavender; Veluntina purpurea, very dark mulberry; Sophia, pale blue; Henryi, white. For covering arbors, trellises, stumps, pillars, there are other hardy vines more desirable for their foliage, but none more desirable for their flowers.

We have never seen a hedge of the Ornamental Quince in bloom. If the plants constituting the hedge were of different varieties, bearing differently colored flowers—white, red, deep-red, chocolate, rose—they would present a rare sight when in full bloom. The Japan Quince is a beautiful shrub anyhow. Its leaves are glossy and of firm texture, its flowers—borne, too, in abundance,—are bright and of a peculiar softness rarely seen in other flowers. For groups, for single specimens, for hedges, this hardy shrub has few superiors.

We like Yucca filamentosa—Adam's Needle or Bear's-Grass—because it is different from other forms of hardy vegetation; because its leaves are evergreen; because in July it bears hundreds of white, lily-like flowers; because it will grow in almost any situation or soil; because it is hardy and easily propagated from seeds or divisions of the root-stocks. It is pretty alone, or with other plants of any kind. It will grow in moist situations, as along lake-banks, or it will thrive in light, sandy soil. Every garden should have this yucca.

People are very apt to judge too early of the shrubs or trees they purchase—when they first bloom, for instance. Usually then they are somewhat disappointed and ready to exclaim, "It is not so fine, after all!" But they should wait a few seasons. Most shrubs and trees, if attended to, continue to improve through several years. To this there are a few exceptions. The Great-panicled Hydrangea, so much praised in this number, is one. It is never prettier than during its *first* season, if growing in a soil not too hot or sandy.

The seed of many ornamental and useful trees ripen in Spring, and if once planted will produce young trees by Fall, that will safely pass the Winter. The Scarlet Maple, for instance, ripens its seed in late May. If planted at once, they would grow to a hight of at least eighteen inches by Fall. A Silver Maple will grow in four years from seed large enough to make considerable shade. Such seedlings may be raised by anybody, or bought of the nurseryman for two dollars per thousand. Still, thousands of well-to-do farmers have no trees either for shade, ornament or shelter! May we not hope that this number of the Rural may set such people to thinking?

The Rural's advice as to evergreen trees is to transplant in the Spring as soon as the frost is out of the ground, and no fear is entertained of a return of exceeding cold weather. If we could be assured of a wet Spring and early Summer, probably later planting would answer as well. It is very plain that as soon as buds start, the plant must receive a supply of sap from the roots to make good the loss by evaporation from the new growth of leaves; otherwise a loss of vigor must be sustained. The earlier trees and shrubs—be they deciduous or evergreen—are planted, the better they will be prepared to support the new growth and thus fortify themselves against early droughts.

The roots of shrubs and trees dug up from the woods or fields, should be carefully covered to shield them from the sun and wind while they are being carried home, and, indeed, until planted. They should also be severely cut back. The only reason why nursery trees are more safely transplanted than those from the fields and forests, is that a more abundant root growth has been secured by transplanting. The old, long, woody roots are cut away and a more compact growth of fibrous roots is induced.

A tree in the woods is supported by long tap or surface roots, extending far away from the stem. These, in transplanting, must be sacrificed. The inequality, then, between what remains and the stem and branches is great. The latter must be cut back to create a new equilibrium. Unless so treated, most forest trees will fail after removal.

We trust that many of our lady readers may be induced to practice grafting from a study of the article on page 107, which, with original engravings, gives every needed instruction upon the subject. Let them graft the lilac upon the privet—different colored lilacs upon the same bush; different colored Japan Quinces upon the same bush; the pear upon the quince, making dwarf pears. In Summer they may practice budding, which is merely a form or variety—so to speak—of grafting. The bud is simply a little cion *planted* between the bark and the wood.

Try grafting first, lady friends. Should you succeed, as no doubt you will if you learn your lesson well before you attempt to recite it, tell us if you do not take pleasure, if not a little pride, in pointing out your success to your parents and friends.

SOIL FOR TRANSPLANTED SHRUBS AND TREES.

When, eight years ago, we planted the Rural Grounds, holes from two to five feet in diameter were dug for trees and shrubs, according to their size, and they were filled in with muck—fresh-water muck—taken from low-lying, springy grounds which were afterwards converted into a lake. The thrift of all of our hardy plants is the remark of all who visit the place. Azaleas, rhododendrons, vines of all kinds, roses, herbaceous plants, shrubs and trees of all kinds have grown equally well in this soil, and we therefore commend its use to all. The use of manure, even though well rotted, about the roots of plants, is not, we think, advisable. We should not treat a plant during the first season after its removal to stimulating food. It is checked and weakened by removal and needs a plain diet.

THE SECRET.

The vigor of the many hardy plants at the Rural Grounds has led many a visitor to ask, "How do you do it?" The answer is easily given. For every plant an ample hole was dug. *Muck*, accumulated from a low, springy valley, which was converted into a pretty little lake, as stated above, was used to fill in. Circles about them ranging from two to three feet in diameter, according to the size of the tree or shrub, are kept free from weeds and raked often enough to preserve the surface smooth and mellow. These circles about the plants have been enriched with stable manure and slight dressings of of raw ground bone twice during seven years. This is the entire secret of our success with hundreds of different genera of shrubs and trees. Evergreens are treated in the same manner. For the latter we have always chosen early Spring as the best period of the year for transplanting.

CATALOGUES.

We would respectfully urge it upon our readers that they send for the catalogues announced in this and future numbers of the Rural New-Yorker. They are in fact epitomes of all useful information appertaining to the farm, garden and ornamental grounds. Besides the lists of well-known kinds of seeds and plants, as well as those of recent introduction from all parts of the world, concise directions for the cultivation of vegetables and flowers; for making hot-beds and cold-frames; for sowing all kinds of seeds, with an immense amount of condensed valuable information, are so presented as to render them of great value to those who really wish to learn and to make the most of their time and labor. Before the opening of Spring and the beginning of farm, garden or nursery work, most of our readers may find ample opportunity to study these catalogues, and, by careful comparisons, to determine not only what kinds it is best to purchase, but where to purchase them. If, indeed, no purchases are to be made, the catalogues may at least serve to awaken thought and interest, and to assist the judgment in a more judicious selection of seeds or plants for another year.

CUTTING BACK EVERGREENS.

But a few years ago it was considered the ruin of an evergreen tree to cut off its leader. If by accident it was broken, the symmetry of that tree was thought to have departed forever. How things change! The beauty of many evergreens in their maturity *depends* upon cutting back the terminal shoots or pinching out the terminal buds. Many of our readers—possibly all of them—may be ignorant of the fact that the White Pine (Pinus Strobus), if treated in this manner from the time it is four feet high until it reaches a hight of ten feet, becomes a tree of great beauty, symmetry and compactness. The firs, hemlocks, spruces, retinosporas, arbor-vitæs, are all greatly improved by being persistently cut back while young, and, notably in the case of the Balsam Fir and Norway Spruce, their lower branches are preserved many years longer than when the tree is permitted to grow at will. Our Red Cedar, as it grows in the fields, soon loses its lower branches and with them its beauty. Cutting back changes its nature. It becomes more dwarf, but more spreading and compact, and in this way is made a tree well worthy of a place in ornamental grounds.

THE LAWN.

"In a fine garden the first thing that should present itself to the sight should be an open lawn of grass, which in size should be proportionate to the garden. The width of it should be considerably more than the front of the house." So wrote an English gardener 130 years ago, says the London Garden, and so, since then, have thought and think the greatest of landscape gardeners. "Few scenes," wrote Loudon, "have a more beautiful effect in pleasure grounds than a velvet lawn, presenting a surface of uniform smoothness and verdure." In his excellent instructions "How to lay out a Garden," Mr. Kemp writes, "A Garden will always look meager without a good open lawn. One broad glade of grass should, therefore, stretch from the best windows of the house to within a short distance of the boundary, with as little interruption from walks as possible. The plants and groups may be arranged irregularly on either side of this opening, and where the space will permit there may be smaller glades through and among those at varied intervals."

Mr. Scott considers that a smooth, closely shaven surface of grass is by far the most essential element of beauty on the grounds of the suburban or country home. Dwellings, all the rooms of which may be filled with elegant furniture, but with rough, uncarpeted floors, are no more incongruous, or in ruder taste than shrubs and trees mingled in confusion with tall grass and weeds.

BREVITIES.

Catalogues of several of our most prominent nurserymen are not yet ready for announcement.

A Handsome Group.—The Golden Ninebark, the Purple Hazel and the Golden Elder together.

To meet with success in transplanting the Tulip tree from the woods, plant the *roots* only leaving but an inch or so of stem.

We beg to remark that those who need information as to catalogues—where to purchase etc.—will find it in our advertising columns of this issue.

The young shoots of the Buttonwood Tree (Platanus occidentalis) are very hard and are good for fagots. This tree is easily grown from cuttings.

Probably there is no better mixture of seeds for a lawn than Red-top and White Clover, in the proportion of three of the former to one of the latter.

It may be well to remember that such shrubs as kalmias, hollies, box and our native rhododendrons will do well under the shade of other plants.

Do not prune in the Fall or Spring such hardy plants as lilacs, magnolias, azaleas, etc., because the flowers are borne on wood of the previous year's growth. The time to prune them is just *after* they bloom.

If you want your ornamental trees to grow luxuriantly, dig for them large holes and fill in with rich earth. Then keep about the trunk a circle from three to five feet in diameter free of grass and weeds and the soil mellow.

A friend of ours has a hedge of considerable length of different-colored altheas (Rose of Sharon—Hibiscus Syriacus) on one side of his lawn, and we know nothing more attractive or more to be admired in landscape gardening, in our northern climate, than this beautiful "old-fashioned" shrub.

Forget not the beautiful hardy herb, Bleeding Heart. In early Spring, nothing is finer than its bold mass of light-green leaves and its long racemes of curious white and rose flowers. Botanically it is called Dicentra spectabilis. It is easily forced into bloom in the Winter. This is a native of North China, while Dicentra eximia is a native of the Alleghany Mountains. The latter does not grow so tall as the first, but its leaves are as graceful as those of a fern and it blooms during the entire Summer.

The Paulownia Confined to one Shoot.—Several years ago a strong root of the Paulownia imperialis was planted in the Rural Grounds, in the center of a flower bed about 12 feet in diameter. One shoot alone was permitted to grow. It made a growth of eight feet the first Summer, which was cut back nearly to the ground. The next Spring (1877) the stump budded May 24. As before, all the buds but one were rubbed off. On June 1st this bud had grown one foot. Afterwards, to ascertain its rate of growth, it was measured on August 5th, and again on August 12th. The growth was precisely 13 inches. September 23, the stem had attained a hight of 14 feet. The stem one foot from the ground was three inches in circumference. The leaves were about nine inches apart and the largest measured two feet three inches across. All of the leaves were nearly as large, except those at or near the top. They are heart-shaped—nearly round. The leaf-stalks averaged 16 inches in length and nearly an inch in diameter, remaining until frost quite green. The leaves stood many hard winds without being much torn. It towered up during the middle and later part of the season above the surrounding foliage—a singularly attractive object. The annual shoot has since been cut back every Spring, though it has not since in any season made so tall a growth as in 1877.

SOME TREES AND SHRUBS.

[Continued from page 103.]

The chief merits of the Honey Locust are that it is perfectly hardy, rapidly recovers from injuries and accidents of every kind, is readily propagated from its seeds, will serve as a hedge plant where the Osage Orange fails, makes lasting fence posts, is prodigal of honey at the time of blossoming, and affords a broad-spreading, thin shade and a very attractive adornment. It is not well suited to street planting, but it is admirable standing apart on lawns, or on low-land pastures there sheltering from the sun's rays in the Summer time.

The Osage Orange, introduced less than half a century ago, by the venerable Professor Turner, of Jacksonville, for the sole purpose of a hedge plant, has not only served that purpose in almost every respect, but has developed so many excellencies that its introduction must be considered a benefaction to the prairie country. It is as easily grown from seed as Indian corn; transplants when small or large, almost as readily as the willow; makes an impervious hedge when small and kept trimmed; is the best of all wind-breaks when suffered to grow large; produces fruit, containing seed which germinates better than that procured from the trees; furnishes the most lasting of all vine stakes when small, and when large the most durable fence posts as well as the handsomest of timber of a color between lemon and orange. Besides, its leaves are only second to those of the Red and White Mulberries for the feeding of silk-worms, and when planted apart it makes a round-headed tree resembling considerably in form, foliage and fruit, the Sour Orange of the South. Its habitat is in Arkansas.

The Red-Bud and the native crab apple, if tap-rooted and somewhat difficult to transplant, nevertheless quickly recover and grow into shapely small trees which are attractive late in the season; but early in it, are so surprisingly beautiful, charming and fragrant with their red buds at first, and with their masses of bloom thereafter, that any and every lawn and garden which does not possess them may be set down as deficient in adornment.

First in the order of soft wooded trees comes the Lime or Basswood. The chief and striking merits of this tree are its hardiness; the ease with which it is transplanted and made to grow afterwards; its indifference to the tramping of cattle; the rapidity of its growth; and, perhaps, best of all, its two or three weeks of abundant bloom, which, occurring immediately after the first flowering of white clover, furnishes bee-food and honey of nearly equal excellence to that from the latter. When taken from the timber or from the nursery, it is apt to have a straggling and unshapely form, which it retains for some years; but if a little attention is given early to pruning and shaping, it rounds up into tolerably regular proportions. It is readily propagated from seeds sown as soon as ripe in August or September, the plantlets appearing the following Spring.

The Cotton-wood is recommended on account of its extraordinary vitality and rapid growth even under the most discouraging circumstances. The formerly bare prairies of Illinois are dotted over with volunteer Cotton-woods. They were the first to lead off in the partial wooding of the prairie country, which has taken place within the last quarter of a century—an improvement which, if it goes on as it has begun, will transform that formerly treeless region into something that will resemble a tolerably well wooded country. Like the Lime, the Cotton-wood is wholly indifferent to the tramping of cattle, and I know of specimens standing on commons, under which cattle have congregated in the heat of the day for the last fifteen years, which have reached something like great dimensions. The Cotton-wood should be planted in pastures and meadows, wherever shade and shelter are needed for cattle. The trees may be readily propagated by large or small slips or cuttings; or limbs of one or two inches in diameter and convenient length, buried a few inches deep in rich, moist earth, will be sure to grow.

Were it not for the rare beauty and florid grandeur of the Yellow Poplar (Tulip) when it has attained full growth and is covered with blossoms; and were it not that it is the nearest Northern relation of the Magnolia grandiflora, the most magnificently beautiful of all flowering trees; and were it not, when in a state of health, the cleanest and nicest-appearing of all young saplings, I should hesitate about advising its planting, because, though grown from seeds after the manner of the Lime, the saplings require to be very carefully root-pruned, one or two years before transplanting, and even then, where the work is done with great care and the mass of soft fibrous roots very gingerly handled success is often a matter of doubt, unless after planting there occur several weeks of warm and moist weather.

The Black or common, indigenous Willow, is just the thing for continuing fences across sloughs and wet places where the Osage Orange refuses to thrive. It may be made to attain large growth by cutting off from well grown trees limbs from three to four inches in diameter and six or seven feet long, and setting them in moist places in course of the late Fall, or early Spring season. The willow throws out a multitude of surface roots which wholly occupy the ground as far as its limbs extend, and these, in connection with the abundant foliage of the top, assist in drawing off the surplus water, and in course of a few years make the wettest land dry.

THE COUNTRY HOME THAT KEEPS THE BOYS ON THE FARM.—FIG. 79.

The Pawpaw and the Persimmon may be dismissed in a few words. They are both very difficult to transplant, whether as saplings from the timber or as seedlings from the nursery, and in neither case is the work practicable unless they are carefully root-pruned the previous year. But they are wild fruits, common to the country, and as such are greatly underrated, and therefore they invite the attention of all lovers and propagators of native trees. Besides, both are no doubt capable of being greatly improved, and the same measure of improvement can be made upon them that has rewarded those who have made efforts in the same line with the native strawberry, blackberry and crab apple.

Of the evergreen conifers, the Red Cedar, it may be said that it is really our sole indigenous evergreen tree; that it is astonishingly hardy, and will flourish in almost all soils; that it makes the best of hedges of the kind, and is the most durable of all timbers we have, and when of sufficient size it brings a larger price for ornamental purposes and cabinet-work than any timber we have.

The larch is surprisingly hardy, as well as a fast-growing tree, and, next to the Red Cedar, it is the conifer which resists all the inclemencies of a climate whose changes are intense in Summer and Winter both.

As for the Bald Cypress, it may be grown as an illustration of how a tree which in its native habitat is rarely found except in swamps, and which is the only one that will flourish with its entire root system under water, will, when transplanted to high and dry land and left standing apart by itself, develop into a cone of foliage as large and well-formed as the largest and handsomest hemlocks. And in so doing it affords a good example of the truth that many trees affect or grow only in low and wet situations, because there only are to be found those permanent conditions of moisture and temperature which are essential to the the germination of their seed and the early growth of the young plants.

SHRUBS FOR COLOR.

E. P. POWELL.

It is desirable to have our shrubs so selected and arranged as to make our lawns bright with color, especially early in Spring and late in Autumn. The following list will be of use in that direction.

1. Red Dogwood.—This is deep blood-red in April and again in November—[? Eds]. If given a moist spot, it will spread over a large space, making a dense mass of shoots rising from five to ten feet. It may also be grown as a small tree ten feet high. In either case it is invaluable for rich warmth of color.

2. Mahonia is a rich glossy evergreen shrub that gives fine golden blossoms, but it is especially notable for the rich colors of its young growth, these being mottled crimson, gold and green. It is one of the finest of all shrubs. It needs to be sheltered from wintry suns and from drying west winds. Give it a northeast angle of the house.

3. Forsythia viridissima.—This is handsome when in bloom in April; but its special value is in giving rich purple foliage in Autumn. It resembles in color the autumnal hues of the White Ash; and these two are the only trees or shrubs giving a good purple.

4. Purple Barberry, a hardy and exceedingly handsome shrub, giving a crimson-purple all Summer. There is nothing finer, but it has a rival in the

5. Purple Filbert, a shrub that grows about as large as a hazel bush. It does not retain its depth of color all Summer, but is charming in Early Spring and late Autumn.

6. Spiræa prunifolia.—This is not only one of the loveliest shrubs while in blossom in May; but it is even more beautiful late in Autumn, with its exceedingly unique shades of crimson and scarlet.

7. Euonymus.—The American variety, with blood-red fruit or seeds, and the European with roseate fruit, are both fine, the American being the better. During November, these shrubs fairly blaze with brightness when all else is dull. They may be planted in profusion without detriment to the finest lawns. Branches picked as soon as the buds burst their pods will keep fine all Winter for home decoration. Now, add for variegated-leaved shrubs the Variegated Althæa, very fine; the Variegated Weigela, dwarf and excellent; the Variegated Elder, handsome and hardy; the Variegated Dogwood, quite clear and pretty, and the lovely Cissus for a vine, and you get an exceedingly choice addition to your lawn. The Golden Yew and the Golden Arbor-vitæ are hardy and make two evergreens all should have. The yew may need slight protection.

NUT TREES AT KIRBY HOMESTEAD.

COL. F. D. CURTIS.

I always loved trees and as soon as I was big enough I began to transplant them. Our entire road-side is lined with maples, and every spot and corner in the grounds has its tree. Our life insurance is a pear orchard; and the rocky and abrupt side-hills are utilized and ornamented with groves of locusts. When the babies were born, we thought of nut trees for them. A modest little grove was planted at first, but we did not stop with this, for our thoughts went on to the future when there might be profit as well as pleasure to them in nut trees. We found a very early and large variety of chestnuts which we obtained and planted, and now we have an incipient chestnut grove. Butternuts and Black-walnuts are almost ready to bear, numbered by scores.

The nuts were planted among the rocks where the soil was so scanty that the seed-beds were dug up with a pick. These trees, which really cost nothing, we prize highly. We have all the indigenous nut trees growing, having been raised from seed dug in between the rocks or steep places. Not satisfied with these, three varieties of hazel-nuts have been planted, two of which are bearing; we have also some Spanish Chestnuts some of which blossomed last year. These, although growing in this strange latitude, 43° north, have never died down in Winter, as we feared they would. An English Walnut has been growing for four years without freezing since it was planted in a protected spot, and we have allowed it to grow up stocky with the branches near the ground. Seed of these, our favorite nuts, were obtained from Newark, N. J., where we found them growing. These were planted at different points so as to secure a favorable location where they might do well. They came up and have grown nicely so that we are looking forward with ardent expectations of soon gathering a crop of these delicious nuts.

We do not know of any of these trees nearer than a farm of Hon. Waldo Hutchins, Westchester Co., N. Y. We have succeeded best in starting our different varieties of nut trees by putting the nuts, as soon gathered, in the ground where we wanted them to grow. The only difficulty we have experienced has been from the depredations of mice and squirrels. To avoid this trouble we have sometimes spread the nuts, when gathered, in grass near the house and covered them slightly with coarse manure or leaves and then planted them in the Spring before they started to grow.

Growing nut trees is so easily done that we wonder they are not more generally cultivated. They would help to make the farm attractive as well as profitable, and give to the children an interest in the homestead, which is so often lacking in American families. We are glad to see that the Rural devotes so much space to home adornments and the growing of trees. It is a most commendable work which all parents should heartily encourage.

RURAL BRIEFLETS.

The Belgian Monthly Honeysuckle—Lonicera Periclymenum Belgicum—is one of our oldest honeysuckles, always prized for its clusters of fragrant flowers. It blooms all Summer, the buds being red, the flowers white at first, changing to orange. Its foliage is not so pretty as that of Hall's Japan Honeysuckle, and is more liable to the attacks of the aphis.

Tecoma radicans is our well-known, useful and beautiful Trumpet Creeper, with its large, heavy, home-like, orange, trumpet-shaped flowers. If but to insure the frequent visits of the humming-bird, we should have this. It begins to bloom in July, and its canoe-shaped fruit or "beans," in clusters of three or more, hang on the vines all Winter. This is a native of the Middle and Southern States. . . . .

Dutchman's Pipe—Aristolochia Sipho—is a noble vine, with immense heart-shaped leaves, which so thickly cover the pliant, rubber-like stems as to remind one of the shingles on the roof. Its flowers are simply queer. We value the vine chiefly for its giant leaves, which enable it in a few years to entirely conceal any object over which it grows. It is perfectly hardy, and when once established needs very little care. In company with other hardy vines, such as clematis, Akebia, Trumpet-Creeper, Moonseed, etc., the leathery leaves of the Dutchman's Pipe, from seven to twelve inches in diameter, stand out in bold and beautiful relief. Our picture is re-engraved from the work of Decaisne & Naudin. A life-size engraving of the flowers appeared in the Rural of Aug. 30, 1879. . . . . .

In late May or early June the little evergreen shrub, Daphne Cneorum, is covered with clusters of pretty pink flowers. This is a native of the Alps of Europe, and is the best of the daphnes for out-door cultivation. It is easily propagated by layers in the open ground or cuttings under glass. The plants usually bloom in the Fall again, and occasionally during the Summer. . . . . .

For five or six years we have had one plant of the Dwarf June-berry, Shad-bush or Service-berry, a variety of the Amelanchier Canadensis, viz, alnifolia. In its bloom it is fully as pretty as many of the spiræas, while in fruit it is an object of general interest, as well to grown people as to children and birds. It bears racemes of fruit nearly as large as gooseberries, and in the same raceme the color varies from green to green and purple, red, and a deep plum-color, according to the stage of ripening. The first ripen about June 1st, and the berries continue to ripen during a greater part of the month. These berries are mealy and juicy, though rather insipid. Still—we eat them. The Shad-bush must be known to most of our readers, who can scarcely fail to have noticed its welcome white flowers during late April and early May along streams and low-lying woods. It varies so much that half a dozen different varieties are recognized. Among them is the Dwarf June-berry, of which we write. It is found in all of the Western States. . . . . .

Seeds of such evergreen trees as the Hemlock Spruce, Norway Spruce, Black Spruce, Balsam Fir, Silver Fir, White Pine, Scotch Pine, Arbor-vitæ, etc., may be sown in the Spring in beds or boxes of mellow or sandy loam. They should be covered lightly, kept moist and shady. . . . . .

The seeds of the Norway Maple may be sown in the Fall as they ripen. Unless buried in sand or soil during Winter, they would, if not planted until the next Spring, be slow to germinate. The sycamore, Red or Swamp Maple, Sugar Maple, beech, ash, locust, Kentucky Coffee-tree, halesia, hibiscus, philadelphus, weigela, deutzia are all easily raised from seeds. Unless the seed matures early enough to give them a good start during the Summer and Fall, it is better to keep the seeds over Winter in sand sufficiently moist to keep them from drying out. Magnolia seeds, for example, will often germinate in two weeks if planted just as soon as they ripen. If permitted to dry, they may not germinate in years, or at all. The grape gives a good illustration of this. . . . . .

The birch is easily transplanted from the woods. Even sizable trees may be removed successfully. Seeds may be sown in the Fall and covered with leaves. . . . . .

The seedling cultivation of trees and shrubs ought to be familiar to every farmer and to his children. Many seem ignorant of the fact that some of our best shrubs and trees are easily raised from seeds. We may add to those already mentioned the Fringe Tree, Elæagnus, Kœlreuteria, dogwoods, Sassafras, Liquid-ambar, horse-chestnuts, catalpa and Red-bud.

Horse-chestnuts should be gathered as they fall and placed in boxes of sand for the Winter. In Spring they may be planted in drills of well

prepared soil, six inches apart, covering them fairly. They may be transplanted in the Fall to two feet apart, and there left to be used as wanted. . . . . .

PROFESSOR THOMAS MEEHAN says:—

"Nothing is more remarkable, when you come to consider, than the way one plant can can be grafted with another, and yet retain its individuality. Take a grape-vine that bears black fruit, and two feet above the bud, graft with white; and two feet above the white bud graft with a black variety, and then with a white, and keep on grafting as high as you choose, yet each one continues on bearing its kind, without any change."

But, in fact, is this any more strange than that, growing in the same soil, different trees should bear different stems, leaves, flowers and fruit? Is it any more strange than that, growing in the same flower-pot, the Deadly Nightshade is poisonous—the tomato good to eat? . . . .

MR MEEHAN truly remarks, in his Handbook of Ornamental Trees, that a little extra expense in the selection of trees, a little extra thought in giving to each its appropriate soil, and a little care bestowed upon their removal and replanting, will be amply repaid in the future beauty, variety, health and luxuriousness of shade trees. The saving of a dollar in a gratification which is expected to last for life is a consideration which will have little weight when duly reflected on. . . . . .

THE chief reason why trees from nurseries transplant better than those from the fields or woods is that the former have more fibrous roots near the stem from having been previously transplanted or root-pruned. The roots of forest trees extend in every direction, and it is impracticable in removing them not to leave the greater part in the ground. To meet with success, either they must be removed while very young, or the stems must be severely cut back. But even in the latter case there must be a certain amount of small or fibrous roots, or else the tree amounts to pretty much the same thing as a mere cutting. . . . . .

As a rule, large trees, if ever so carefully transplanted, grow with far less vigor than small ones. . . . . .

IS IT not strange that one of the most beautiful trees of America is so seldom seen about the farmer's home?—the Liquidambar. It is referred to under Notes from the Rural Grounds. The following is what Mr. A. J. Downing said of it:—

"We hardly know of a more beautiful tree than the Liquidambar in every stage of its growth, and during every season of the year. Its outline is simply beautiful. During the Summer the leaves preserve unsoiled that dark, glossy freshness which is so delightful to the eye. But in Autumn it assumes its gayest livery, and is decked in colors almost too bright and vivid for foliage, forming one of the most brilliant objects in American scenery at that season of the year. The prevailing tint of the foliage is then a deep purplish red, unlike any symptom of decay. This is sometimes varied by a shade deeper or lighter and occasionally an orange tint is assumed. When planted in the neighborhood of our fine maples, ashes and other trees remarkable for their Autumn coloring, the effect is almost magical."

F. J. Scott adds one trait of its Autumn coloring, which Mr. Downing overlooks. It is its peculiar golden-bronze tone, caused by the mingling of green, yellow and red leaves in its head. Trees sometimes fairly glow with these rich colors. . . . . .

THE "Sunray" Pine is, we learn, being propagated as fast as possible. It is to be hoped it will soon be offered for sale. It seems to us the finest of variegated evergreens, and can scarcely fail to become popular. . . . . .

THE Silver-variegated Euonymus radicans is a unique little bush that holds itself together as closely as a mattress, by the stem rootlets, like those of the Virginia Creeper. Our specimen, which has never been pruned, has grown into the shape of a boot about three feet high.

THE Smoke Tree, Venetian Sumach, Wig Tree (Rhus Cotinus), as it is variously called, when grown in congenial soil (sandy loam, well drained), is one of the finest shrubs or small trees in cultivation, if judged while it is in bloom. In middle-May the buds usually break. The young leaves are tinted with purple and the flower-buds then resemble young racemes of grape flowers. The early inflorescence envelops the tree as in a fine spray of pale, delicate green, the leaves only breaking through here and there. Later (June 15) it begins to change to a soft, pleasing pink or deep flesh-color, when the entire shrub seems a cloud or mist of light-green and rose, each shading off into the other. It is then a grand sight, especially when the dew still rests upon the clouds of hairy pedicels before sunrise. . . .

AS OUR own specimens occasionally suffer during Winter, we were somewhat surprised to learn, through our valued contributor, Mrs. Jack, of Canada, that it there reaches a hight of eight or ten feet, flowering profusely. In her note she remarks:—"Year before last it bore a late crop of October flowers. Last year late-grown wood was injured for the first time; but it was an exceptional season." . . . .

WE have been greatly interested in the movement of the branches of the Weeping Beech. Years ago, as already noted in these columns, one of our two specimens lost its leader. The next year the branch immediately underneath, then growing directly downward, began to move upward. This branch is now the *upright* leader. Not less than three other branches, which then drooped almost directly downward, have since been moving upward, until now they have moved through from 15 to 30 degrees towards a perpendicular. Such movements are common enough where there is a disturbing cause while the wood is comparatively young; but the branches of this Weeping Beech seem to be wandering about as if they were not contented to remain in a fixed position. . . . . .

HERBACEOUS PÆONIES are showy and hardy. The columbines [aquilegias] are among our best hardy herbaceous plants. The larkspurs [delphinium] should not be forgotten. Their colors—especially the blue—are scarcely equaled by any others of this class. The Dicentra spectabilis should be found in *every* garden. This is the well-known Bleeding Heart. . . . . .

AMPELOPSIS QUINQUEFOLIA is our Virginia Creeper, Woodbine, or American Ivy, as it is often called. Sometimes, by means of its foot-like tendrils, it ascends trees to the hight of 50 feet. It is found wild nearly everywhere. It bears its little greenish flowers in June, and, later, its dark-blue berries. Nothing is better for arbors, walls, bridges, than this. . . . .

THERE is now a double white bouvardia, which is a handsome acquisition among house plants. . . . . .

ALL interference with roots had better be done in the Fall or early Spring. As soon as buds push, the roots are needed to do their share of the work in supplying the entire plant, through the leaves, with material for its growth.

WE think there is much truth in the following lines from a writer in the Garden:

"The farmer who has a neat and well-kept garden, is almost sure to have a neat and well-kept farm, a comfortable and well-appointed house, tidy outbuildings, and stock in good condition, and the housewife who takes pride in her garden, generally has a home to take pride in and to be proud of."

CUT cherry cions now—preserve them in sand in a cool cellar.

Transplanting.

For a tree or shrub—whether evergreen or deciduous—remember the following items in transplanting:—

1. Dig the holes wider and deeper than is necessary to admit the roots, so that they may rest in a natural position.
2. Cut off all dead or injured roots.
3. Firm the soil as it is thrown in, either with the feet or a wood pounder.
4. Do not set the tree deeper than it grew before transplanting.
5. Level the soil and keep it mellow during the Summer.
6. Cut the branches and stem, if need be, back in proportion as the roots have been injured. Whether they have been injured or not, it is advisable to cut the branches back more or less according to the size of the plant.
7. Carefully avoid exposing the roots to the wind or sun during trasplantation or at any other time. No other neglect is so prolific in causing failures as this.

Depth to Plant Trees.

The roots of trees must be accessible to air. It is as easy to kill a tree by burying the roots too deep as to smother an animal. The object of *compacting* the earth about the roots is to insure *contact* of the roots and soil—not to exclude air. Tap-roots which extend deeply into the earth have little to do with nourishing the tree. They serve chiefly to hold it securely in its place against high winds and the weight of the trunk, branches and foliage. Deep planting does not protect a tree against droughts. For this purpose a coarse mulch of manure, leaves, hay or straw or even stones, would best serve.

ANNOUNCEMENTS OF CATALOGUES FOR 1881 RECEIVED UP TO DATE.

The RURAL NEW-YORKER *begs to state that it will announce the Catalogues of all reputable seedsmen, nurserymen, etc., as they are received. Readers are referred to our advertising columns for particulars not stated under such announcements. It is plainly desirable on all accounts that our readers, in sending for such Catalogues, should mention the* RURAL NEW-YORKER. *This should insure due attention to their requests, while it seems an act of respectful appreciation of this journal. In future issues, we shall take pleasure in referring to specialties offered in the Catalogues received, respecting which our readers have made inquiry.*

JAMES M. THORBURN & Co., 15 John Street, New York. A catalogue of 96 pages. Seeds of all kinds for the vegetable and flower garden; for the lawn, farm and nursery. This trustworthy establishment *controls* the entire *sale* of the White Elephant Potato.

ALFRED BRIDGEMAN, 876 Broadway, N. Y. A catalogue of 50 pages, profusely illustrated with life-like, original engravings of plants. This good concern was established in 1824.

JAMES VICK, Rochester, N. Y. Vick's Floral Guide—120 pages. Among the beautiful illustrations are a colored plate of annuals and a finely executed portrait of Mr. Vick.

B. K. BLISS & SONS, 34 Barclay Street, N. Y. Illustrated Hand-Book for the Farm and Garden and Catalogue of Garden, Field and Flower Seeds—140 pages. Hundreds of fine illustrations among the many novelties and a beautifully executed colored plate of German Pansies.

J. T. LOVETT, Little Silver, New Jersey. Illustrated Catalogue of Trees and Plants. Choice Small Fruits a specialty. We like the originality and truthfulness of this catalogue. The illustrations are true to life, the comments trustworthy.

HIRAM SIBLEY Co., Rochester, N. Y., and Chicago, Ills. Catalogue for 1881 of Garden, Field and Flower Seeds, &c.—72 pages, finely illustrated with many engravings, including a colored plate of verbenas and a second of onions.

PETER HENDERSON & Co., 35 Courtlandt Street, N. Y. Catalogue of Everything for the Garden and Farm—120 pages, fully illustrated. Excellent hints and instructions; vegetables, rare plants, implements.

A. D. COWAN & Co., 114 Chambers Street, New York. A handsome catalogue, well illustrated, of 60 pages. Novelties in vegetable and flower seeds.

J. J. H. GREGORY, Marblehead, Mass. A comprehensive catalogue of 60 pages. Farm and garden seeds of all kinds, including many desirable novelties.

PARSONS & SONS Co., Flushing, Long Island, N. Y. Catalogue of Hardy Shrubs and Trees of all kinds.

R. H. ALLEN & Co., 189 and 191 Water Street, New York. Descriptive Catalogue of 80 pages of choice Farm, Garden and Flower Seeds, Roots, Plants and garden requisites.

ROBERT BUIST, JR., 922 and 924 Market Street, Philadelphia. Almanac and Garden Manual designed to furnish concise hints to cottagres, farmers and planters. Instructions for every month in the year—192 pages.

R. H. SHUMWAY, Rockford, Ills. Seed Catalogne—40 pages full of illustrations; a short lecture on planting.

BENSON, MAULE & Co., 223 Church Street, Philadelphia, Penn. Illustrated and Descriptive Catalogue of garden, field and flower seeds—60 pages—novelties and specialties.

THORBURN & CARSON, 125 Chambers Street, N. Y. A handsome, illustrated catalogue of 65 pages. Vegetable, flower and farm seeds, &c.

WILLIAM RENNIE, cor. Adelaide and Jarvis Streets, Toronto, Canada. Illustrated Catalogue of 80 pages. Seeds of all kinds. Mr. Rennie also issues a wheat circular.

TUISCO GREINER, Naples, New York. Catelogue of select, warranted vegetable and flower seeds—20 pages.

BAIRD & TUTTLE, Bloomington Nurseries, Bloomington, Ill. Plant novelties, Roses, Bulbs, greenhouse and bedding plants, etc.—40 pages. Also wholesale price-list of trees, shrubs, etc.

GEO. S. WALES, Bannockburn Farm, Rochester, N. Y. Catalogue (16 pages) of small fruits, shrubs, vines, roses, &c.

COLE & BROTHERS. Pella, Iowa. Catalogue and Guide (40 pages) to the Flower and Vegetable Garden.

W. ATLEE BURPEE & Co., 219 and 221 Church Street, Philadelphia. Farm Manual, garden, farm and flower seeds, blooded stock, illustrated.

ELLWANGER & BARRY, Rochester, N. Y. Catalogues of Shrubs, Trees, etc., as announced in advertisers' columns.

A WORD TO TREE PLANTERS.

WILL W. TRACY.

I WISH I could gain for a few moments the ear of every one who intends to set out a shade tree the coming season, and I know of no way in which I can come nearer to the realization of my wish than to say my say through the columns of the RURAL NEW-YORKER.

There is nothing in the vegetable world which has more individual character and expression than our native trees. Every one possesses a form and expression peculiarly its own, distinct from that assumed by any other even of the same species, and it is this wonderful variability which gives such an indescribable charm to the natural landscape—a charm which rarely exists to the same degree where the trees have been transplanted. I attribute this inferiority of transplanted trees largely to the method of pruning or cutting back at the time they are set out. For the most part, the trees that now ornament our village streets and country roads were hastily taken up from the neighboring fields and forests, and the greater portion of the top was cut off until what was a tree became a simple pole or stick with a few stubs projecting like the pegs of a hat tree—a resemblance which doubtless suggested the name for this useful article of furniture. They were then drawn, with exposed roots, to the desired point, where the roots were crowded into a hole, into which earth was shoveled, and straightway the men were ready to move on to the next. If the tree grew, it threw out a few leaves and shoots distributed irregularly and without form about the top, and the next season these grew vigorously into a dense ball of foliage little resembling the graceful spray of its brother left undisturbed in the fields, looking rather, as a "chemical" friend aptly said, like "gigantic green swabs," and furnishing good models for the trees of wire and green cotton that we find in our children's "Noah's arks." I admit that ultimately the tree outgrows its mutilation, but it takes long years to do it, and it rarely regains its individuality, so that transplanted trees of the same species are in a great measure counterparts one of another.

How immeasurably superior the result would be if trees were used which had been grown for the purpose rather than those from the fields, and if such care were taken that all this cutting back would be unnecessary. This is a subject, on which we need not dwell; for, if we insisted upon this, not one tree would be set where dozens are planted now, and we need all and more than all our people can be induced to plant. But the bad result for the first few years can be avoided, as I have found by experience, by a little attention to the cutting back—a work which seems to me so feasible that I want to urge it upon every tree planter in our land. If the tree selected has a central main stem or leader, cut this back to some small branch springing from it at as slight an angle as can be found, and so growing nearly erect. Cut this back to a similar branchlet growing from its upper side, and remove all other twigs or buds. If necessary, cut off all the lower-side branches close to the main stem; but, if any can be left, select those which are symmetrically disposed about the trunk and cut them back in the same way as the central one.

The simple rule is:—always remove a branch altogether or cut it back to a branchlet from it which has the same general direction and character, and remove all other branchlets or twigs. Even if the condition of the tree requires the pruning to be so severe that the branchlets left are very few and small, still, if they are well selected, it is astonishing to see how much they will do towards directing and molding the future development of the tree, and it will be a pleasing surprise to one who has been used to trees cut back in the usual way, to see how quickly a tree pruned on this plan will assume a graceful form. Evergreens should be cut back on the same principle. Usually there will be found growing from the upper side of the branches shoots having the same direction as the branch itself, and if we cut back to one of these the mutilation will scarcely be noticable even the first season.

I hope that every tree planter will try this method, which is not presented as something new; but as that practiced by experienced gardeners for ages; but which they frequently so obscure by "wise" talk and assumptions of special skill, that the ordinary planter fails to catch the principle involved, which I repeat for the sake of emphasizing it:—In all pruning of ornamental trees, cut off the branch entirely or cut it back to a branchlet which will most easily assume the general direction and character of that removed, treating this branchlet, if necessary, in the same way, and removing all others.

Detroit, Mich.

THE SHRUBS OF OUR EXPERIENCE.

ANNIE L. JACK, (CANADA.)

WHAT is the reason farmers do not surround their homes with hardy shrubs and trees suitable to the climate where they live? This question presents itself to every beauty-loving mind in passing through many parts of the country. Neither first cost nor subsequent care can be the reason, and we can only think that it is a matter that has never occupied thought or attention. Apart from the dear old-fashioned lilac that our grandmothers loved, and the snow-ball that gives us such masses of snowy blossoms in early Summer, there are others less known, that for thrift and hardiness deserve a place in our grounds. I find myself thinking of the Lonicera Tartarica, or Tartarian Honeysuckle, that from a little twig planted a few years ago has grown to an immense shrub ten feet in hight, which is covered in June with a profusion of pink blossoms. It seems to thrive in any soil or situation and never fails in its bouquet of beauty. We have several varieties of the spirea, which are hardy and easy to cultivate, with feather-like trusses of white or pink. I have tried the daphne and deutzia, but they need protection in this climate, although one of the latter, given me by the RURAL some years ago, does not fail to give me a few lovely bells in Spring.

The Flowering Currant is hardy here, as is the Snowberry and some kinds of clematis. The Syringa or Mock Orange, is a shrub hardy and of strong growth here. The flowers, of delicious perfume and great beauty, are most profuse in the time of roses. Later in the season we have the Rhus Cotinus or Smoke-Tree, that with graceful clusters of flowers in airy masses, reminds one of puffs of smoke emerging from the leaves. I have tried rhododendrons with small success; but find the Hydrangea paniculata grandiflora a valuable addition to our flowering shrubs. Its graceful and immense trusses are a thing of beauty in early Autumn when other shrubs are scarce. Just now we have been having an experience with the Mahonia or American Holly, the leaves and sprays of which adorned our rooms this Christmas-tide and vied with English Holly. This is, indeed, worth a trial, staying green and dark amid the snow. The Barberry is a satisfactory shrub; the yellow flowers in Spring are pretty and the red berries hang on the spray till Winter, and are very ornamental for house decoration, mixed with the leaves of the Mahonia. While there are many others that are worth a trial, I have only mentioned what we have proved and found satisfactory in our home.

GRAFTING.

THE question often arises, why is it that so few of our farmer friends understand the theory and practice of propagating fruit trees by grafting? As a general thing there are not more than one or two persons in any given community who make a practice of setting cions, and they are in great demand whenever any grafting or budding is to be done. The writer well remembers the kind old gentleman who, many years ago, was accustomed to make his annual visits at the farm, carrying in one hand a little basket, wherein were carefully laid the cions to be set, the wax, knives, twine, etc., while in the other were the indispensable saw, hatchet or chisel. Then we wondered why he was the only one who understood grafting when the process seemed to be so simple, and we wonder still that so few practice this useful art. We hope that the instructions we are about to give—though the story is a threadbare one to many of our readers—will encourage and enable many to "try their hand" at grafting.

Given all the necessary materials and utensils, the object is to make a cleft or slit in the end or side of the stock, and in this to fit one end of the cion so neatly that the bark of the cion may correspond with that of the stock. When this is properly done there need be no fear but that the sap of the old stock will rise into the cion and produce growth. The tools needed for grafting are few and simple. A light saw, a small and a large chisel, or, better still, a combined knife and chisel—as seen in Fig. 80—a mallet and a small knife, will enable one to do the mechanical work, while a supply of bast, or any soft, strong material, and wax will fill out the complement. A good recipe for making the wax is:—resin, three parts, bees-wax three parts, and tallow two parts. Grafting-wax in cakes may, however, be purchased of any seedsman. There are several different methods of grafting, but we shall here notice only those most commonly practiced and most likely to prove successful.

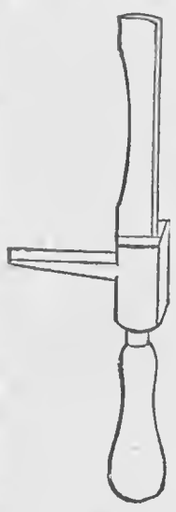

FIG. 80.

CLEFT-GRAFTING is illustrated at Fig. 81. This method is used generally on stocks of a diameter of from one to three inches. First saw off the stock, *b*; shave the end of it so that the point of union between the bark and wood may be readily seen. Drive the blade of the grafting knife, shown at Fig. 80, into the stock to split it then remove the knife and insert the wedge or chisel to keep the cleft open while the cions are being set. The cions should be previously made slightly wedge-shaped at one end, as shown at *a*, to fit neatly into the cleft, in order to secure a close union. In case the stock closes too tightly on the cions, a small wooden wedge should be inserted and left in the cleft. The wax may now be applied by filling all the crevices and covering the end of the stock with it. Care must be taken not to move the cions after they are properly set.

FIG. 81.

SPLICE-GRAFTING is the method by which small trees are often grafted, and is illustrated at Fig. 82. A cion bearing two or three buds, and about two inches long, is fitted to the stock. If care is taken to make the cuts true and the two parts are properly fitted, growth will almost surely follow. After the cion is bound to the stock by bast, yarn or something of the kind, wax must be applied so that no moisture can enter.

WHIP-TONGUE GRAFTING is illustrated at Fig. 83, where *a*, *b*, represent a stock prepared for the cion *o*. At *d*, they are united; at *e* the binding is applied, and at *f*, the wax is shown. This method is more difficult to carry into effect than those previously mentioned, as the joints must be fitted more exactly. In a few days after the cion has begun to grow draw a knife through the wax, cutting the ligature, otherwise growth will be obstructed.

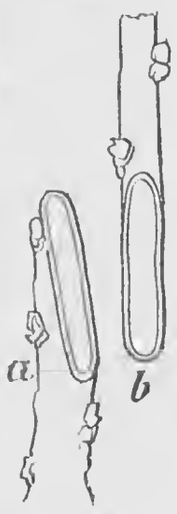

FIG. 82.

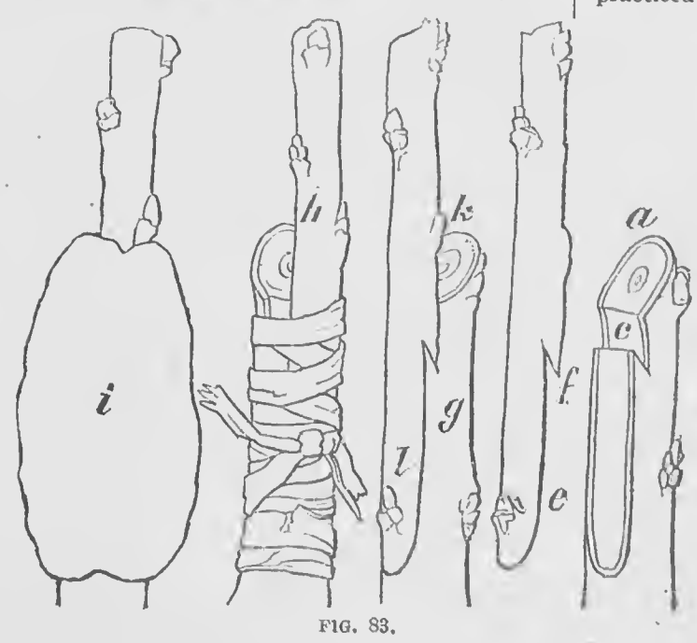

FIG. 83.

SADDLE-GRAFTING, Fig. 84, is but little practiced, yet it is a very effectual method. The accompanying cut will explain itself. This style of grafting requires no bandage, if the wax is carefully applied. Yet one may be used, as shown in the figure.

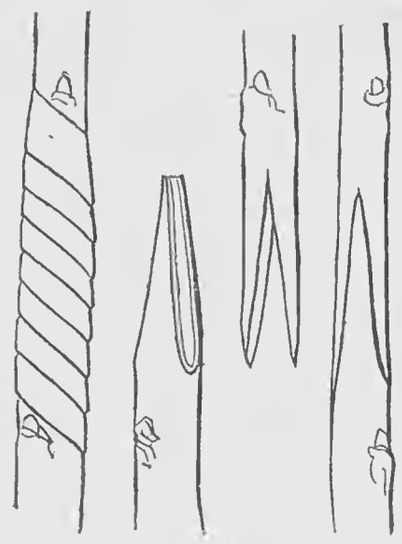

FIG. 84.

SIDE-GRAFTING is considered by many as superior to every other style, yet but few practice it. Where a cion is to be set on the side of a branch or small tree, make a slit in the stock as shown at Fig. 85, just as if a bud were to be inserted. Raise the bark on each side so as to admit the lower end of the cion. Crowd the cion into the slit as if inserting a bud, and be sure that the end of the cion fits neatly. Bind the parts together and put on a covering of wax. This is an excellent method to use in making a a tree symmetrical; in filling up with limbs any naked branch.

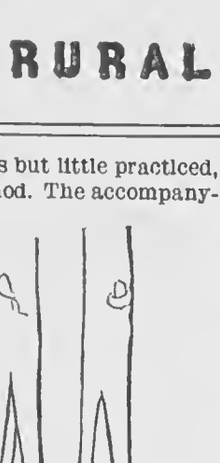

FIG. 85.

AMERICAN WHIP-TONGUE GRAFTING.—This method, which is similar to tongue-grafting as shown in Fig. 83, is more generally practiced among nurserymen. The cion and stock being first cut as for splice-grafting, the knife is passed upward in the cion *a*, Fig. 86, and downward in the stock *b*, forming a tongue which serves to hold the cion and stock more firmly together when united, as at *c*. To complete the work, wind a narrow strip of waxed cloth around the graft and stock, covering the splice.

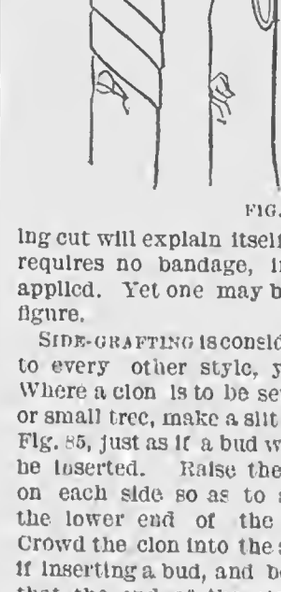

FIG. 86.

The proper season for grafting fruit trees is in the Spring when the sap begins to flow, which is earliest in the cherry and plum, and latest in the pear and apple. Straight, thrifty shoots of last year's growth should be cut either very early in the Spring or in Winter, and these may be kept in sand in the cellar until they are wanted; then the cions may be selected from them. The cion should have two or three buds upon it, though a cion with a single bud sometimes does just as well. The stock should be a tree which has stood on the spot where grafted for at least a year, as success is not as sure to follow grafting on newly moved trees.

Every member of the country home should understand grafting. It is very easy to raise almost any kind of fruit trees from seeds, to be used as stocks upon which to "work" the best varieties into cultivation. We commend the above plain instructions to our young readers both male and female. While the former may improve the fruit trees of the farm, the latter may busy themselves with grafting hardy ornamental shrubs, or indeed lemons, oranges, geraniums, roses, abutilons and scores of others. It is a delightful pastime and one which may lead by a very short route to a closer study of plant life and a wider, more intelligent and appreciative view of the blessings of farm life when rightly conducted.

GRAFTING AND BUDDING ORNAMENTAL TREES.

The operation of budding and grafting is widely practiced wherever fruit and ornamental trees are valued. It is considered more or less difficult, according to the favoring conditions of soil, climate and peculiarities of any special tree. Many trees, particularly ordinary fruit trees, may be grafted with little difficulty, provided the conditions relating to maturity of wood and sap in both stock and cion are considered.

With the different sorts of ornamental trees the operation is more difficult. A successful grafter requires faculties, experience, and, above all, devotion to his work, that few possess. To such men particularly the dissertations on the best style of grafting with which essays and books on plant propagation teem, appear of very little importance as compared with the deeper import of the relative actions of the functions and affinities of the plants with which he proposes to deal. A true expert will invent peculiar methods of grafting for himself and think nothing of it. It is simply his way of getting at the end he has in view, and he well knows that the very next problem he undertakes may require the adoption of an entirely different and equally novel method. For instance, I know a distinguished grafter who finds he can use, with the best results, in a great many cases, what he calls the side graft, whereby the flow of sap in the stock is comparatively little disturbed, and a union is secured with a minimum of shock to the regular functions of the plant. But he does not always employ this side-graft by any means, and is perfectly aware that with different plants in other climates and soils a totally diverse method would often be necessary.

I have expressed myself thus fully as to the difficulties of grafting and budding, not with the object of discouraging any one from seeking to learn the art, because a fair knowledge of it is unquestionably within the reach of any one who will pursue it persistently and with some degree of attention. It has simply been my wish to correct the common misconception that a few general directions and suggestions in essays and books are alone likely to do very much towards developing experts in budding and grafting—the most difficult department of propagation. Hints and the statements of particular facts bearing on the practice of grafting, I believe to be useful as an assistance and stimulus to those striving to learn the deeper things of the art for themselves.

To this end I propose to name a number of prominent ornamental trees, with something about the peculiarities of their grafting, in the neighborhood of New York. West and north, the peculiarities mentioned may in certain cases be entirely wanting. I shall mention genera rather than species, because, as a rule, the members of one genus may be treated in the same manner by the budder and grafter.

MAPLES.

All the species of this genus cannot be grafted alike on the same stock, and they form, therefore, an exception to the rule just stated. It is a question whether we shall not find so many exceptions to this rule as to destroy its value, unless we strain the meaning of the old adage, "the exception proves the rule," to its utmost limit. To the grafter the maples divide themselves into special and distinct types. Norway Maples must be *worked*, that is, budded or grafted on Norway Maples; Sycamore Maples on Sycamore Maples and Silver Maples on Silver Maples. The sap of maples moves early in Spring, hence the operation of budding or grafting, to be successful, must be performed as soon as practicable during late March or early April. The Sycamore varieties may be budded about the end of July, as the proper movement of sap for budding begins earlier in this case than in other species, the budding of which must be delayed until August. Maples, elms and sundry other ornamental trees are liable to develop too exuberant a flow of sap in the stock during what is usually considered the most favorable season for budding. In such cases the eyes of the stock are said, in technical terms, to be drowned with sap. The remedy is delay until the stimulated pulse of the plant has subsided a little to a more moderate beat.

BIRCHES.—Budding in early August preferred. May be grafted successfully during the beginning of Spring.

HORSE-CHESTNUTS.—Budding in July preferred, because their sap rises very early. May be grafted also in the beginning of Spring.

CATALPAS.—May be grafted during April and budded in August.

BEECHES.—Budding so difficult as to be practically out of the question. As a *tour de force* budding beeches is possible, of course, but not worth striving for, since excellent plants are readily obtained by grafting in April. The cions used in this case should consist of one-year-old attached to a portion of two-year-old wood, instead of merely the one-year-old wood generally used.

THORNS—May be budded in July or grafted in Spring, like pears, to which they exhibit an affinity.

ASHES.—It is a curious fact that the European Ash (Fraxinus excelsior) makes the best stock on which to graft all ashes, even American species and varieties. The explanation of this is hard to give. When we remember that maples can be only grafted each on its own type within very strict limitations. Such perplexing behavior of plants puzzles the grafter continually, and teaches him to be humble and not to dogmatize, be his experience ever so great. Ashes may be grafted and budded in April and August, like so many other trees.

MAGNOLIAS.—Budding in August preferred.

OAKS.—Grafting in April preferred. Budding very difficult and seldom attempted. Some varieties must be grafted with cions consisting of one-year-old attached to a portion of two-year-old wood, like those used for beeches.

SOUTHERN CYPRESS.—May be grafted at the end of April or early in May. Seldom, if ever, budded.

Elms, lindens, chestnuts, poplars, willows, locusts and sophoras may all be grafted and budded in April and August. On account of the early flow of sap in the Spring, it is wise to cut well-selected cions in Fall, after one or two sharp frosts have matured them, and bury them in a dark cellar for future use. Budding evergreens is not to be thought of, and grafting evergreens out-of-doors can be done only with great difficulty and uncertainty.

SHRUBS generally are grown readily from cuttings; but sometimes grafting is employed for the sake of making a stronger and more shapely plant. I may mention as prominent illustrations of the use of grafting, as applied to shrubs, certain varieties of the euonymus, althæa, lilac, viburnum, &c. In all these cases, the stock employed is a readily obtained form of the same genus. Two genera of shrubs present notable instances of the advantages of grafting in certain cases over other methods. Rhododendrons and Hardy Azaleas, when grafted, make more shapely plants and attain well developed foms sooner than by any other method of propagation; but to propagate them in this way is no easy task in the climate of America.

In recommending budding and grafting for many trees and shrubs, I have not given the preference to either, and perhaps after three or four years, when the grafted plant is established, it would be hard to say which produced the most satisfactory results. The experienced propagator, however, recognizes that one produces quantity most readily and the other quality. Budding is done far more quickly and with less effort, while grafting produces a vigorous growth the first year, better fitted in every way to bear the strain of the following Winter than the comparatively weak early growth of the budded plant. It is no little advantage, moreover, in favor of grafting, that a well-established tree for transplanting may be thus obtained in half the time. For fruit trees, and certainly for easily budded plants, we need seek no better method of propagation than budding; but for most ornamental trees, especially for those difficult to propagate under any circumstances, grafting is greatly to be preferred. S. P.

HARDY ORNAMENTAL TREES AND SHRUBS FOR NEW ENGLAND.

As a few among many hardy trees and shrubs adapted to ornamental grounds I desire to call attention to the following as deserving the attention of planters.

THE TULIP OR WHITE-WOOD TREE.—This is a hardy tree though somewhat difficult to transplant, especially when taken from the forest. It is therefore better to get choice, well grown specimens from the nursery; those at least twice transplanted are best. This tree needs great care until well established when it rivals in symmetry and beauty of foliage and flower any deciduous tree, and will withstand our climate successfully.

THE YELLOW OAK.—This is another tree difficult to transplant, but one of rare value and beauty, and when finely grown, it is admirable for its fine, glossy foliage, its excellent proportions and its handsome cluster of acorns. Withal, it makes a rapid growth and is worthy of the highest praise.

THE WHITE OAK AND PIN OAK are also handsome trees, each having its distinctive character and beauty.

THE MAPLE FAMILY is deservedly popular and among its members perhaps none surpasses the Sugar Maple, a tree of compact growth making a dense shade, and from the bursting of the vernal buds to the beautiful hues of October it is a continuous beauty. The Silver Maple is a rapid grower, making a grateful shade. The Scarlet Maple is beautful in Spring, with its scarlet bloom, and in Autumn with its brilliant red. The Purple Maple is also a distinct and handsome variety well adapted for ornamental planting. The Norway Maple, with its strong growth and its dense foliage, is also popular.

ASHES.—The White Ash is also a beautiful tree which has not been properly appreciated. The Black Ash is also desirable for moist land.

THE AMERICAN WHITE ELM for grandeur and majestic proportions is surpassed probably by no forest tree. New Haven, Connecticut, "The City of Elms," furnishes a notable example of the beauty of this tree. There are, however, fine specimens of mature elms all through New England, which add wonderfully to the landscape, but the trees always need ample room from the outset to develop their grand proportions. This elm and all the maples transplant safely and grow rapidly.

THE AMERICAN DOGWOOD is a tree of great merit which has been, to a great extent, overlooked. When well grown it is pretty in form and foliage, handsome in bloom in early Spring and surpassingly beautiful with its brilliant hues in Autumn.

THE BLACK, YELLOW, AND CANOE BIRCHES are all fine in form and foliage, and for street or park planting should not be omitted.

THE NORWAY SPRUCE I consider by far the best tree for wind-breaks, as it is of rapid growth, very hardy and very effective for that purpose.

THE HEMLOCK I place in the first rank for hedges, although the American and Siberian Arbor-vitæs are hardy and good.

EVERGREENS FOR LAWN-PLANTING. Among the best trees for this purpose are the White, Scotch and Austrian Pines; the Norway, Hemlock, White, Eastern and Conical Spruces; the Japanese Retinisporas plumosa, aurea, squarrosa, pisifera and filifera. These I find reasonably hardy and beautiful.

CHOICE DECIDUOUS SHRUBS.—Rose and White Almonds, althæa in variety; hardy azaleas; Calycanthus floridus; Cydonia Japonica or Japan Quince; Deutzia crenata, fl. pl; Deutzia gracilis; forsythia; Hydrangea paniculata grandiflora; Lilac, common, Cut-leaved and Persian; Spiræa prunifolia and Reevesii; Weigela rosea and variegata.

EVERGREEN SHRUBS.—Rhododendron roseum elegans, and roseum superbum for colors and album elegans and album grandiflora for white.

FOR CLIMBERS the following are excellent:—Akebia quinata, Ampelopsis quinquefolia, A. Vietchii togother with clematis, honeysuckles and wistarias, all in variety.

All the above, properly arranged, will be found hardy and excellent. The list might be greatly extended.

The Seckel, Tyson, Beurre Superfin and Doyenne Boussock Pears; the Lombard, Quackenboss and German Prune Plums; the Governor Wood, Biggarreau and Downer's Late Red Cherries may also be tolerated on the lawn as combining the useful with the beautiful.

Middlesex Co., Conn. P. M. AUGUR.

SOME OF THE BEST HARDY ROSES,

With Brief Hints as to Culture.

W. C. BARRY,

I KNOW of no hardy plants which will render a garden more interesting and attractive than a choice collection of roses. There are many persons who suppose that rose culture is exceedingly difficult, and who for this reason are unwilling to attempt it. This is an error, and the object of this article is to demonstrate how easily the rose may be grown, as well as to call attention to some of those varieties which are best adapted for general cultivation.

LOCATION.—One of the principal requisites of the rose is a genial situation. We should select the best spot in our garden; a place which is protected from bleak, cutting winds, and sheltered from the full force of a mid-day or afternoon's sun. Too much shade must be avoided, as well as proximity to hedges or overhanging trees. An eastern aspect, where the full benefit of the morning sun may be obtained, is the best. A hedge, wall or fence on the north, south and west sides will afford the necessary shade and shelter. Fences and walls, usually unsightly, may be rendered very ornamental by covering them with climbing vines and running roses. S. Reynolds Hole, the well-known rosarian, says:—"The rose garden must be both exposed and sheltered, a place both of sunshine and of shade. The center must be clear and open, around it the protecting screen. It must be a fold wherein the sun shines warmly on the sheep and the wind is tempered to the shorn lamb—a haven in which the soft breeze flutters the sail, but over which the tempest roars, and against whose piers the billow hurls itself in vain."

To secure the best results our roses should be kept together and planted in rows in a prepared border, or in beds; when scattered about the garden it is difficult to give them the care which they require. If we are content with moderate results, we can plant them here and there in the garden, where they will produce a fine effect; but we must not expect such fine blooms as can be obtained from those plants which have the benefits of rich soil and shelter.

SOIL.—It is absolutely necessary that the soil should be well drained. The rose is a great feeder and luxuriates in a rich, stiff loam, such as is found in a well cultivated garden. If the soil is sandy and light, it should be made heavier by the addition of cow manure, clay or loam. If too heavy and stiff, lime, leaf mold and stable manure should be applied.

MANURES.—No plant that I am acquainted with shows so quickly the advantage of a well prepared soil as the rose. In rich ground it makes a luxuriant growth and yields flowers in the greatest profusion. In poor soil it makes no growth and quickly becomes the victim of disease and suffers from the attacks of various insects, so that it becomes necessary, if you wish success with your roses, to plant them in good ground, properly enriched in advance with well decomposed manure. Fresh manure incorporated with the soil just before planting, is apt to injure the roots of the plants, and unless suitable manure can be obtained it is better not to use any until after the plants have started; then the manure can be applied on the surface of the ground as a top-dressing and be left as a fertilizer through the Summer. It will keep the soil cool during the hot, dry weather, and will prevent the plants from suffering from drought. Then in the Fall, say in November, give each plant a liberal supply of the best cow manure, leaving it around the plants during the Winter and turning it under in April. Of all the manures which I have experimented with cow manure shows the best effects—spent hops mixed with cow manure add value to the dressing. This mode of manuring should be practiced every Autumn. Liquid manure is very beneficial and can be applied occasionally during the Summer, but care must be taken that it be not too strong; make it weak and apply it frequently.

PRUNING.—This is an operation of great importance. We find the early Spring, before the plants have commenced to grow, the best time to prune. Some varieties require to be cut back more than others; but a rule which will apply generally is to shorten the strongest stems of last season's growth to about 18 or 24 inches and cut out all weakly growth. We take it for granted that the bushes make a growth of from five to seven feet during the season. In my garden several varieties make an annual growth of eight to nine feet, that is, when not summer-pruned. A great many are afraid to use the knife vigorously and their plants suffer materially on this account. In order to obtain flowers in Autumn the plants may be slightly pruned in July after the flowering season is over. The plants will then produce a quantity of blooms again in September and the shape of the bushes will be improved.

PLANTING.—The Spring is the best season for planting, although where the Winters are not severe it can be done in Autumn. It is highly important to plant early, as roses suffer extremely if set out after the growth has started. April is the best time in this locality. Secure your plants early, and if they are budded on the Manetti, plant them so that not only the stock but also a portion of the bud will be covered with earth. This will enable the plant to send out roots above the bud, and in a short time the bush will be on its own roots. This point is worthy of serious consideration. If you do not set out the plants yourself see that your gardener observes this suggestion. I prefer budded plants, except for beds, to any others, as you obtain a stronger growth and larger and finer flowers than you do from plants on their own roots. Some object to budded plants on account of the suckers they send up. These suckers will not appear if the planting is properly done, and any one who loves roses will soon learn to distinguish the stock from the plant, and as soon as a sucker appears it will quickly be cut out.

PROTECTION IN WINTER.—To protect against injury from severe weather in Winter, I would recommend laying down the shoots in the Autumn, the same as is done with raspberry canes. In bending the stems be careful not to break them and cover with a few inches of earth, leaves or branches of evergreens. Sometimes the shoots make such a strong growth that it is almost impossible to bend them without breaking. In this case it is better to tie them to stakes and cover them with straw. A little practice and experience, however, will enable any one to lay down roses without injuring them.

CARE AND MANAGEMENT DURING THE GROWING SEASON.—Having procured strong, thrifty plants, and having set them out properly in well prepared soil and in a good situation, your roses ought to make a good growth. If dry weather should prevail, liquid manure, well diluted, will be very beneficial. One of the greatest secrets of success in rose culture is to keep the plants in a thrifty condition. As long as the plants are in robust health they easily resist the attacks of insects, and with a little assistance from us they gain the battle every time.

We hear it said frequently, "If I could only keep off the insects, my roses would thrive." At the outset I am going to be plain and tell you that insects are numerous, that they are great foes and can be conquered only by great industry and perseverance. Now, if we esteem our roses as we ought to, we will be willing to devote some time to them every day. To the ardent lover of the Queen of Flowers, nothing is pleasanter than each morning to make a tour of the rose garden while the plants are yet sparkling with myriads of dew drops. How can we pass an hour more pleasantly than in examining the variety of growth which the different kinds exhibit, in comparing the peculiarities of habit, in noting the marked vigor of some sorts, the thorny shoots of others and the beautiful foliage with which some varieties are clothed, and, while engaged in this examination, let us keep on the lookout for the rose caterpillar, which in May makes its appearance rolling itself up in the leaves. Its presence is easily detected, and we must at once make up our minds to put an end to its career by crushing it between our thumb and fingers. Go over every plant every day and rid them of this pest. The rose slug appears in July and August, and eats the leaves. It can be disposed of by hand-picking and by syringing the plants with a weak solution of whale-oil soap. White hellebore, sprinkled over the plants while the dew is upon them, will keep off other insects.

ROSES IN BUSH FORM.—The bush form is the one usually adopted and is perhaps, on the whole, the most satisfactory. Roses grown in this way produce the finest blooms and furnish flowers a longer time than when pegged down.

ROSES PEGGED DOWN.—This is a method of bending the shoots so as to make the plants low and dwarf. It is practiced to great advantage when making beds of roses upon the lawn. Plants intended for growing in this way should be allowed to make their first season's growth in the usual way. Early the following Spring shorten the longest and strongest shoots a little and cut away the weak stems. Then, before the buds start, bend the shoots toward the ground and fasten them to it by wooden pegs or hooks such as you can obtain at any pile of brush. It is surprising what a quantity of blooms will appear on each shoot making a superb display; but there is this disadvantage, that all the flowers appear nearly at one time, and there is not that succession of blooms that there is on the bush plant. Pegging down must be attended to every Spring, preserving and bending down the best wood and cutting out weak growth. For beds on the outer edges of borders where tall growth would be objectionable, this method can be practiced.

Varieties.

I shall recommend only those which can be grown to the best advantage by the amateur cultivator.

ALFRED COLOMB—I name first because I regard it as the peer of any rose. It has a vigorous habit, fine foliage, and it produces carmine-crimson flowers of beautiful forms and delightful fragrance. That famous raiser of roses, Lacharme, at Lyons, who rarely, if ever, fails to give us a good rose, originated this one.

ANNE DE DIESBACH is one of the older roses, which the newer sorts have not yet displaced. It lacks fullness of flowers, but its brilliant, carmine shade is unequaled and renders it one of the most effective roses.

LA FRANCE, now claimed among the Hybrid Teas, is a rose the beauties of which it is difficult to portray. Possessing in an eminent degree the delicious fragrance and perpetual-blooming qualities of the Tea Rose, it has also sufficient hardiness to endure severe cold, when it receives a little extra care. It generally produces its choice blooms so abundantly and continuously that great injury is done to the plant unless some of its buds are removed. It is a most valuable variety, and should be included in every collection.

JOHN HOPPER, one of the old favorites, has hardly an equal as a rose for general cultivation. It is a model of healthy habit and robust constitution; its flowers are large, full, of a bright rose-color with carmine centers. Among many varieties in my garden, it has given the best results with the least care.

GENERAL JACQUEMINOT, another old and well-known sort. It is hardy and vigorous, and its blooms, though not so well formed as might be desired, are of a brilliant crimson color, which always attracts and pleases.

MADAM VICTOR VERDIER is a most beautiful, finely-formed, very fragrant, free-blooming rose, of a carmine-crimson color.

COMTESSE CECILE DE CHABRILLIANT, though not large, is the admiration of all connoisseurs for its symmetrical blooms of a delicate pink shade.

MARIE BAUMANN on account of its unequaled beauty, ought to have been placed first on the list. It resembles Alfred Colomb and is finer, but it is probably not quite so valuable, being less vigorous. Perfect blooms such as it usually yields, possess the highest qualities which could be sought after in a rose, and in competition with other sorts of its class almost invariably takes the prize.

CHAS. LEFEBVRE is rapidly becoming one of the greatest favorites. Its large, well-formed, reddish-crimson flowers never fail to excite admiration, while its good habit and fine foliage commend it to those who appreciate desirable qualities.

COQUETTE DES BLANCHES and MADAME ALFRED DE ROUGEMONT are valuable free-blooming, white roses, and yield an abundance of flowers during the Summer. There are many other white roses propagated which produce exquisite flowers, but which are of no value, as they make such a poor growth.

LOUIS VAN HOUTTE is a variety which I esteem next to La France. Its elegant form, rich, velvety maroon color, and fragrance, form a combination of desirable characteristics rarely found in a single rose. I do not hesitate to call it the best dark rose we have.

PAUL NEYRON is a real curiosity among roses on account of its immense size. Although very large, its blooms are not coarse, but handsome and showy; the plant has ample foliage, is a free grower and very vigorous; color deep rose.

BARONNE PREVOST, one of the oldest sorts, is still much admired. Its flowers are of a pure rose-color, and its habit is all that could be desired.

LA REINE, surpassed by many others in beauty of flower, is valued chiefly for its hardiness. The flowers are large, moderately full, and of a glossy rose-color.

VICTOR VERDIER is a choice sort resembling John Hopper, but devoid of fragrance. Its habit is good.

MAURICE BERNARDIN is a fine free-flowering variety, producing vermillion-colored flowers.

CAROLINE DE SANSAL bears pale flesh-colored flowers. It is one of the best of the light roses.

MADAME BOLL, an American rose, is much prized for its large carmine rose blooms and its rich, glossy foliage.

PRINCE CAMILLE DE ROHAN and BARON DE BONSTETTON are the two sorts upon which we have to depend mainly for our very dark flowers.

FRANCOIS MICHELON is a superb variety, of a deep carmine rose-color. It yields an abundance of flowers in Summer, when the other varieties are out of bloom.

MARGUERITE DE ST. AMANDE distinguishes herself as an autumnal bloomer, producing a profusion of rose-colored flowers in Autumn.

MARQUISE DE CASTELLANE verifies the adage "no roses without thorns." Its shoots are remarkably thorny; its flowers are noted for their bright carmine rose color.

BARONESS ROTHSCHILD is a charming sort—flowers large, of fine globular form and of a pale, flesh color.

MAD'LLE EUGENIE VERDIER is a beautiful and graceful rose with large, finely formed blooms of a silvery rose color.

MAD'LLE MARIE RADY bears superb, bright-red, fragrant roses.

COUNTESS OF OXFORD produces very showy carmine-colored flowers, and is the most valuable and effective variety.

GENERAL WASHINGTON, one of the older kinds, still merits a place in collections. It bears an abundance of bright red blooms shaded with crimson. Among

CLIMBING ROSES Baltimore Belle, bearing white flowers, and Queen of the Prairies, producing red blooms, are still favorites. The new hybrid climbing rose, Jules Margottin, bids fair to become valuable. Among the

SUMMER ROSES which bloom but once, yet seem indispensable, are Madame Hardy and Madame Plantier, with pure white, well-formed flowers, and the Persian Yellow, bearing beautiful bright yellow blooms. Prominent among the

MOSSES are the common Glory of Mosses, Crested and Salet.

All the roses in the above selection are valuable and desirable. Any one who is willing to observe the cultural directions given can succeed in growing superb roses. For further information on this subject S. Reynold Hole's "Book About Roses," and Mr. Hibberd's "Amateur Rose Book" are strongly recommended.

Rochester, N. Y.

ORNAMENTAL TREES AND SHRUBBERY FOR THE SOUTH.

H. W. RAVENEL.

IN accordance with your request for an article on the best evergreen and deciduous trees for the South, I propose to speak of our native trees and shrubs specially—those which are in reach of every one who wishes an attractive and pleasant home. But the "South" embraces a vast region, with great variety of temperature, soil, and other requirements of vegetation; and also a diversified flora, more or less suitable for various localities, from which selections may be made. I must necessarily confine myself to the region of which I can speak from personal knowledge, and direct attention only to those which may be useful for ornamental purposes; for improvement and decoration of lawns; for gardens, hedges, shrubberies and household surroundings. Of our

Evergreens,

THE LIVE OAK (Quercus virens), a majestic tree and king of the forests, holds the first rank. Unfortunately for the interests of horticulture, its habitat is rather restricted, and beyond the damp, rich soils of the Southern seaboard, it seldom attains to its imperial proportions. The shape and form of this tree are peculiar. With a trunk sometimes four to five feet in diameter, it rarely reaches beyond 50 to 60 feet in hight. The trunk soon becomes forked and divided into gigantic limbs, which extend on all sides around the base, almost touching the ground, and covering a space of 50 or 60 feet in diameter. The upper portion is again subdivided, until the main axis of growth is scarcely recognizable, the whole tree forming a compact, oval or rounded head. In the vicinity of Charleston, for some 15 or 20 miles around, there are many magnificent avenues of these trees, considerably over 100 years old, planted out in colonial times by the wealthy proprietors at their country-seats. Some of them are nearly a mile long and consist of four rows of these veterans, throwing out their huge limbs on all sides, and intercrossing each other so as to form a dense shade. These trees are the favorite resting-place of the Long Moss (Tillandsia), and are often so much covered with this long, gray drapery as to present a sombre aspect at a distance.

THE "BIG LAUREL" (Magnolia grandiflora).—This splendid tree, with its thick, glossy leaves and huge white, fragrant flowers, attaining a hight of 60 to 80 feet, is one of the finest evergreens known. Its native range is along the seaboard, from North Carolina to Florida, and beyond the Mississippi into Texas; but it is now in cultivation all through the South, and improved varieties are already known. Unlike the Live Oak, it has a bare, smooth trunk, and a regular pyramidal head. I have seen splendid specimens of this tree in the neighborhood of Darien, Ga., in Florida, and in Texas, near Houston, with trunks two to three feet in diameter.

WILD ORANGE—WILD OLIVE (Cerasus Caroliniana).—This favorite evergreen is extensively cultivated along the Atlantic States. Though not as large as the Live Oak or Magnolia, rarely exceeding 30 or 40 feet in hight, it is so easily propagated by seeds, and of such rapid growth, that its cultivation has extended all over the country, and in certain sections one will find every homestead surrounded with trees of this kind. It bears excessive pruning and may be brought into any required shape. For tall hedges, or any fanciful form, it is peculiarly adapted. The rich, glossy leaves in Winter, with racemes of white, pendant flowers in early Spring, give it a cheerful aspect. Hedges or low-branching trees should be protected from cattle, as they are fond of the leaves, which, if eaten too freely, are poisonous. Although called Wild Orange or Wild Olive, it has no affinities with either, but belongs rather to the Wild Cherry family.

We have other evergreens of smaller size, but none as suitable for home decoration as those above named. The Sweet Bay (Magnolia glauca) is an evergreen in this latitude; but the form of the tree and the foliage are defective. I have seen the Loblolly Bay (Gordonia Lasianthus) and the Red Bay (Persea) used for that purpose, but they want compactness of form to render them attractive.

Our ornamental evergreens are mostly confined to the broad-leaved species; but the Red Cedar is highly prized in certain localities, and I have seen two "Old Field Pines" (Pinus tæda and P. mitis) used for large lawns with good effect, by placing them far enough apart to encourage the growth of the lower limbs, thus giving a pyramidal form of compact growth, instead of the tall, bare trunks which are seen in the woods. Of

Deciduous Trees

we have a much greater variety, and for the average country home there are always many good kinds in every neighborhood from which selections can be made.

THE OAKS hold the first rank, and are so universally distributed that there need be no difficulty in obtaining fine shade and ornamental trees in every region of country. The Water Oak and the Willow or Laurel-leaved Oak are probably the favorites on account of their symmetrical form, compact heads and dense foliage. As a general rule, the small-leaved trees are to be preferred for the lawn, as more attractive for beauty of form and a more perfect shade than those with large leaves. These do not attain to so great a size as the Black Oak, the Scarlet Oak, and the Red Oak, which three last I have seen used with fine effect upon the strong clay soils of the middle and upper regions of the Atlantic States.

THE ELMS are also favorite trees for the lawn, both the common and the Feathered Elm. The former is the larger tree, and on rich, damp soils will attain a hight of 50 to 60 feet. The spreading limbs, drooping branchlets and dense foliage make it one of the most graceful trees. The Feathered Elm is a smaller tree, of more compact and rigid growth.

MAPLES, POPLARS, the SYCAMORE, and the TULIP TREE are often used, and there are many others which may be employed to advantage where the oaks and elms cannot be had.

THE PRIDE OF INDIA (Melia Azedarach), though an exotic, is so thoroughly naturalized and now so extensively used throughout the South as to deserve notice. For gracefulness of foliage there are few trees more ornamental. The clusters of lilac flowers open in Spring just as the young leaves are expanding, and the yellow berries hang on the trees all Winter. It grows readily from seed, is of rapid growth, and makes a compact, well-formed tree of some 30 to 40 feet in hight. The wood of old trees, though coarse-grained, is of a dark-brown, and I have seen cabinet-work made of it that would compare in beauty with that from the walnut and maple.

Hedges for fencing purposes are not common at the South. I have seen the Cherokee Rose, the Osage Orange, and two or three species of Thorn (Crataegus) used, but they are all more or less unsatisfactory—perhaps for want of the proper management. For

Ornamental Shrubbery

and hedge work about gardens, the beautiful exotic,

EUONYMUS JAPONICUS, has become the general favorite. It strikes readily from cuttings, grows rapidly and soon forms a dense, compact mass of dark-green foliage. It is easily pruned into any desirable shape, and preserves its rich, glossy foliage throughout the year. The older plants mature seed abundantly, and the scarlet berries in Winter give additional attractiveness.

THE WILD ORANGE is also extensively used for hedging and ornamental shrubbery, by cutting back the plant when young and by pruning afterward.

THE RED CEDAR is also very much used for

hedge work and for training into shape, and so also are the Arbor-vitæ and Tree Box. Among

DECIDUOUS SHRUBS often seen in Southern gardens may be mentioned the Fringe Tree (Chionanthus), the Sweet Shrub (Calycanthus), the azaleas, and the different species of styrax. Of course, there are many more native shrubs that could be brought into cultivation, and the flora of every section of country could furnish many kinds well worthy of a place in the garden. Of the

CLIMBERS, our fragrant Yellow Jessamine (Gelsemium) is found in almost every garden. The two Trumpet Vines, Bignonia and Tecoma, are also freely used. Among evergreen climbers, special mention must be made of our native China Briar (Smilax Pseudo-China). It gives a dense foliage of rich, dark-green berries, which are specially beautiful in Winter, and the sprays of graceful foliage are used for Christmas decorations, in preference even to the ivy.

Aiken Co., So. Carolina.

COUNTRY-HOME GARDENS IN CALIFORNIA.

W. C. L. DREW.

MANY years' experience in the flower garden, and careful observation of the house gardens of El Dorado County, have made clear to me three great facts in regard to the beautifying of the grounds, large or small, surrounding the homes of the middle classes in California. The first of these facts is that shrubs of a flowering nature particularly, and those remarkable for handsome foliage, are a necessity in all such grounds. Those bearing conspicuous flowers, as a rule, furnish their blooms at a period when, without them, the garden would be almost bare of floral treasures wherewith to build a bouquet, to decorate the room or to charm the eye of the passer-by.

In the early Spring, immediately following in the wake of the hyacinth, tulip and crocus, we find the Spiræa prunifolia, Syringa or Mock Orange, lilac and cydonia. These and several others furnish us with flowers during the two weeks, or more, between the flowering of the early Spring bulbs and that of the earlier annuals and bedders. During a lull in the blooming of our bedders in the late Summer, the shrubs again come to our rescue, and we have the Hydrangea grandiflora, Spiræa Douglasii, and others equally desirable.

The second fact which has come under my observation is that by a careful and judicious selection of shrubs, flowers may be had the entire season, from January to December, in a much less space than would be required for the cultivation of any other class of plants known to me.

For this reason alone the growing of flowering shrubs is to be highly recommended to those having home grounds. In our climate I find the list of shrubs requisite for this continuous blooming in the open ground, would be in order of flowering: laurestinus, Spiræa prunifolia, weigela, lilac, Syringa or Mock Orange, Jessamine, Spiræa Billardii and callosa, shrubby clematis, Althea, or Rose of Sharon, Deutzia gracilis and crenata, Hydrangea hortensis, and grandiflora, the bright berries of several other varieties closing the Christmas season. It may not be out of place here to state that our laurestinus is now—Jan. 20,—in bloom and loaded with buds in the open ground. I would particularly impress on the reader that the above list has been made out with reference to the time of flowering in El Dorado Co., Cal. and this might not be exactly the same in other localities. In order to prevent any disappointment in selecting therefrom, the list should be varied according to locality.

The third fact which I would endeavor to bring to the mind of the reader is that shrubs will furnish the greatest amount of pleasure at a minimum of outlay in money and labor. The first cost of shrubs for planting is about one-third that of bedders or other plants; the labor required in their care and planting is almost nothing compared with that demanded by annuals and bedders.

But let not the reader misunderstand me. I do not mean to say shrubs require no care: they must be well attended to; they must be trimmed in proper season and have a liberal supply of fertilizing material, and an occasional drink of pure, fresh water. Without these requisites no plant can give satisfaction. Nor would I have the reader understand I have named all the desirable shrubs, but merely a few of those sure to give satisfaction.

El Dorado Co., Cal.

ORNAMENTAL TREES AND SHRUBS IN NEBRASKA.

THE embellishment of dwellings and their surroundings in both town and country, is becoming quite fashionable. Everything which is at all hardy grows well here, although our temperature ranges from 31° below zero to 129° above. Dooryards protected from our high winds by hedges, show to good advantage at all seasons. Our Cotton-woods, Box Elders, Soft and Silver-leaved Maples, White Ash, and Kentucky Coffee-tree, as well as our dear little Scrub Oak, the scrubbiest of all scrubs, are native, and, being easily obtained, form the majority of our ornamental trees. Few dwellings are without some of them, and when age gives them their crowning beauties, they impart an air of antiquity to this new country.

The taste for trees, beyond the mere fire-wood necessity, is growing, and many are attempting a little landscape gardening on a small scale, which attracts much attention, and excites rivalry. Willows in variety, Osage Oranges and Honey Locusts are used as hedges, while evergreens, which come out of a man's pocket (the others only come out of their native wilds, excepting the Osage Orange) are employed sparingly—just as one can spare the money. The only native shrub, the Barberry, is not appreciated here, to my surprise.

However, we have a small tree, native to the hills and river bluffs, which I have but seldom seen anywhere else. In its wild state it is a rusty, bronzy green, grows wherever it can get a chance, and won't grow anywhere else; yet thousands are to be found around every house. Traditionally, it is called Cupressus thyoides. (?) It is generally supposed to be an evergreen, though neither white nor green, and as soon as it is transplanted to civilized quarters, it shows its abhorrence of its new condition by turning a dirty, rusty, yellowish-brown, and staying so. At once the women take up this exponent of stubbornness, and whenever "company" calls, begin (after the weather and the babies are exhausted) to talk about how "Jake dug 'em up, an' set 'em out, an' they all died." This tribe of underbrush is one of our most valuable plants (after corn and "'taters"), as it furnishes food for conversation in the driest and dreariest of seasons, while its "pecooliar" color is at all times a pleasing contrast to our beautiful green prairies, or our snow-clad bottoms.

I call them "nevergreens" and have applied for a patent for the name. S. RUFUS MASON.

Dodge County, Neb.

Hardy Ornamental Grasses.

A bed made up of the handsomest of the hardy ornamental grasses, all plainly labeled, becomes an interesting and instructive part of any garden. While for the purposes of the present special number of the RURAL NEW-YORKER, so great a variety is not to be thought of, there are yet several kinds of grasses which we think are entitled to a place among the best of hardy shrubs and trees. We have had the Zebra-striped Eulalia (pictured, March 23, 1878) ever since it was first introduced, and our opinion is that it should be placed at the head of ornamental grasses. The leaves, as they first appear in Spring, are green. Later a cross bar of creamy-yellow appears here and there until at length the alternations of green and white have assumed some regularity. It blooms in late August forming plumes from one foot to eighteen inches in length which, like those of the Pampas Grass, may be preserved from year to year. There is also a longitudinal-striped Eulalia that has been known among us for 10 years or more. The Zebra-striped has proven entirely hardy at the Rural Grounds. Erianthus Ravennæ is another perfectly hardy grass we can fully recommend to our readers. The flowering stalks grow eight feet tall, bearing dense feathery plumes often two feet in length—equaling in beauty those of the Pampas Grass as grown in this climate.

Twenty Best Hardy Roses.

A very charming rose may be a very poor grower and therefore not adapted to general cultivation. After recognizing the merits of many new varieties, I find myself coming back to my old favorites, and were I planting twenty varieties of hardy roses for myself, I should choose the following:

HYBRID PERPETUALS: Gen. Jacqueminot; Caroline de Sansal; Baronne Prevost; Madame Louise Carique; Duchesse de Caylus; La France; Coquette des Alpes; Prince Camille de Rohan; Glory of Waltham; Charles Lefebvre; Reynolds Hole; Jules Margottin; Auguste Mie; Stanwell.

JUNE BLOOMING—Madame Plantier; Yellow Eglantine.

Moss—Princess Adelaide; A Feuilles Pourpres.

CLIMBING—Queen of the Prairies, Baltimore Belle. S. B. PARSONS.

Plan for the Grounds of a Country Home.—After "Suburban Home Grounds," by F. J. Scott.

A (on the left), Arbor-vitæ; h, Laurel-leaf Willow; d, g, Magnolias; f, Red-bud (Cercis Canadensis); e, b, Hemlock Spruce; a, Norway Spruce; i, j, k, l, different varieties of evergreen trees; m, n, White Pine; o, Scotch Pine; p, q, r, shrubbery clump; s, Shrubbery clump; t, Yellow-wood; u, u, Shrubs (dwarf), evergreens; y, Virginia Fringe; X, X, Great-panicled Hydrangea and Stuartia Pentagyna; A Catalpa speciosa; C, C; Y, Y, Fruit trees. See page 99, fig. 66.

Progress of the Revolution.

THE story of the march of this very remarkable enterprise, which is told on another page, is attracting wide attention and arousing the enthusiasm of many of its patrons and the anticipations of thousands who have been curiously watching the movement. Among the new books lately announced and in press for immediate publication are, Green's Larger History of the English People, reduced from $10 to $1; the Useful Dictionary, containing more than one-third as much as Webster's Unabridged, for 80 cents; Irving's Sketch Book, and Irving's Knickerbocker, in very handsome form, for 35 and 30 cents; Cooper's Last of the Mohicans, 30 cents; and Plutarch's Lives, 60 cents. Their most important work, the Library of Universal Knowledge, a cyclopedia in large type, containing 10 per cent. more matter than Appleton's Cyclopedia, has reached its eighth volume. At its nominal cost of $15, in elegant and substantial cloth binding, 15 volumes octavo, it is, of course, meeting with an enormous sale. The new version of the New Testament, in large type, at a nominal price, is promised immediately upon its publication in England, which is now daily looked for. To answer the demands of those who may be curious to compare the new with the old, an edition will be published in which the two versions will be given upon opposite pages.

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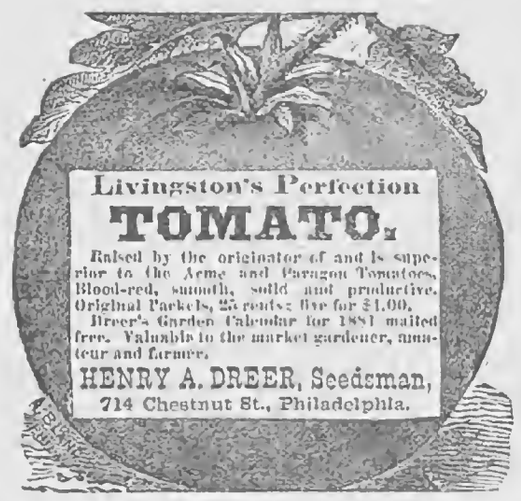

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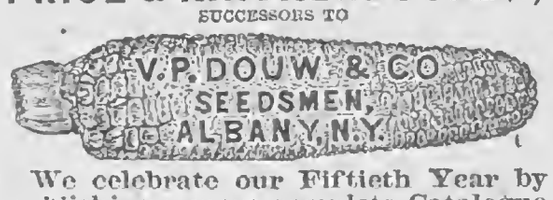

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The Literary Revolution.

Story of the March.

The foundation of this enterprise was laid in New York, by the manager of the American Book Exchange, in September, 1875, the capital in hand consisting of about fifty volumes of old books, about $70 in cash, and a favorable acquaintance with some thousands of READERS throughout the United States, with whom he had had dealings previously. For nearly three years the business was limited to *exchanging* second-hand books and selling miscellaneous new books. In March, 1878, the business had grown to such extent that the American Book Exchange was organized as an incorporated company, and the business already established was transferred to it.

The entire business transactions of the year 1878 aggregated about $30,000. In the autumn of 1878, it was decided to enter into the business of *publishing* as well as selling books.

In January, 1879, the first volume was published, being volume one of "Chambers's Cyclopædia of English Literature." The cash sales for the year 1879 aggregated about $100,000, including second-hand books, and miscellaneous books of other houses as well as its own publications.

During the year 1880, the business of the company has grown beyond all precedent in publishing. Transactions have been limited almost entirely to publishing and selling its own books. Nearly 750,000 volumes have been manufactured in the binderies of the company; over 1,000,000 volumes have been printed, and about 40,000 pages of new books put into type and electrotyped. As many as 300 pages, containing nearly half a million printers' "ems," have gone into type in a single day. For a period of more than three months, during the busy season of manufacturing, an average of over forty steam-presses were constantly printing the books. The cash sales of the year foot up $414,243.15.

This remarkable growth of the business has not even approximately kept pace with the demands of the public upon us. The limit has been our resources for manufacture.

The public has so long been taught to believe books to be expensive luxuries and low prices impossible, that incredulity has from the first been the greatest obstacle to the progress of the Literary Revolution. It was easier to make good books cheap than it was to make people believe it could be done. We could readily have made prices even lower than they have been, but for the terrible tax we have been compelled to pay to this incredulity. During the past year we have paid $77,824.85 for advertising—an item which has to come *out of the profits* we make on the books sold. Perhaps a thousand times during the year we have heard how rival publishers, who wished it might be true, have said that we *could not afford* to make books so cheap, and we *must fail*, and our friends have continually asked—can you do it?—*how* can you afford it?—*will* you continue?

As one step toward the removal of this incredulity, and thus further increasing the possibility of multiplying good books at low prices, we will give a few simple facts and figures:

"Geikie's Life and Words of Christ" was published in 1879 by D. Appleton & Co. at the price of $3.00 per copy for the cheapest edition. In December of that year we published an edition which cost:

For making the electrotype plates	$882 16
26,000 copies Acme edition printed, cost for paper and printing, at 12 cents	3,120 00
Binding of the same in cloth, at 9 cents	2,340 00
8,000 copies Aldus edition, printed, cost for paper and printing, at 17 cents	1,360 00
Binding of the same in half Russia, gilt top, at 20 cents	1,600 00
Total cost of 31,000 copies	$9,302 16
26,000 Acme edition, estimating all sold at greatest club rate of discount, 50 cents each, less 15 per cent	$11,050 00
8,000 Aldus edition, ditto at $1.00	6,800 00
Total receipts for 31,000 copies	17,850 00
Gross profits in one year from an investment of $882.16	$8,548 00

"A Dutchman's 10 per cent" profit! Do *you think* we can afford it?

As the price of paper has varied considerably during the year, the above figures are based upon the *present* cost of paper. There must of course be some further deduction made from the gross profits named to cover expenses of handling, and some small necessary expenses for advertising to customers that the book is published, but the figures given sufficiently illustrate the possibility of this Revolution.

The unexampled success of this Revolution has resulted from the fact that it has met the real wants of the public. Urgent calls are every day being made upon us for cheap editions of scores and hundreds of other good books which we have not yet published but which will in time be added to our list. There is a limit to what can be done in a year, and a very much smaller limit to what can be done in that time with our present capital. We have decided to extend this limit by enlarging our capital. Do any of the friends of the Literary Revolution want to have an interest in this enlargement? We do not *solicit* investments from them, but until $100,000 additional stock is taken, preference will be given to applications for shares of capital stock in small sums. Because the personal influence of every stockholder is sure to result in strengthening the enterprise, we would much prefer to receive $10.00 from each of 10,000 persons scattered throughout the country, than to receive $10,000 from each of ten persons.

The stock will be issued in shares of $10 each, and is offered at par value in cash, and is *not* subject to assessment.

Dividends are declared once a year, in January, of profits accruing during the previous year. Stock issued after February 1, will receive a pro rata dividend from the full year's earnings, estimating from the time of its issue till the end of the year.

Each stockholder of the company may order, if he wishes to do so, for each share of stock which he holds, *one copy* (only) of each book which is or may be published by the company, at a reduced "stock-holders' price," viz., at a discount of one-third from the retail price-list. To illustrate: the "stockholders' price" of "Geikie's Life of Christ" would be—for the cloth edition, 33⅓ cents; for the half Russia, gilt top, 66⅔ cents; and for the "Library of Universal Knowledge," large type edition, cloth binding, 66⅔ cents per volume, or $7.92 for the set of fifteen vols., orders being received Feb. 13, the price of this work now being advanced two cents every day until the full list price is reached.

Upon this basis, a stock-holder who would wish for himself or his friends one copy of each of the 108 volumes now on our list, in cloth binding, would get all of them for $43.95, whereas the same would cost other purchasers $65.92. Thus his $10 invested in capital stock would not only earn him a yearly dividend, but would *save* him or his friends more than its face.

The number of people who can avail themselves of this advantage is limited, of course, to the number of shares, only 10,000 offered for sale. "Uncle Sam's Farm" is an immensely large one, and there will be enough people *not* stockholders remaining who will want books, from whom we can earn "profits" for "dividends."

Remittances for capital stock should be made to

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TRUSTEES: Chas. M. Whitney, G. Edw. Langdon, John B. Alden.
OFFICES: Counting Room, Sales and Editorial Rooms, Tribune Building.
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Friends of the Literary Revolution are cordially invited to visit the various departments, and see how books are made and handled. Our type-setting and printing are done under contracts in nearly a score of different offices, in one only of which is "type-setting by steam" carried on—that also can be seen by an introduction from our office.

BANKERS: American Exchange National Bank, Broadway and Cedar street; National Park Bank, Broadway and Park Row, New York City; Orange National Bank, Orange, N. J.

Reinforcements.

I predict that in a very short time the Literary Revolution will become the most popular publishing house in the world. Its patrons will include every intelligent man in the country. Herewith I hand you $10 as a subscription to capital stock. C. F. HUTCHINGS, Osage Mission, Kan.

Philadelphia, 1 mo., 22, 1881.—Respected friend: Thy postal received, and I herewith inclose a check on Girard National Bank for *One Hundred Dollars*, indorsed over to thy order. My first impulse was to take ten times this amount, but as I do not *need* to make money, and don't want to cultivate a grasping spirit, I decide to let others have the chance. But I want *ten shares*. Very truly, E. L. S.

I am a poor clergyman with a salary of about $300 per annum, yet I feel for my own sake, and also for the sake of your grand enterprise, that I can spare the above ($20) for two shares interest in the work. I wish you every success in your more than laudable undertaking. (Rev.) W. FULLER, Stephentown Center, N. Y.

I wish I could send you $500. I have full confidence in your integrity, honor, and success. For the inclosed $10 please enter my name as a stockholder. E. O. STILES, Preston, Md.

I have in my home already quite a number of your books, and my whole heart wishes you God-speed in so noble an enterprise. Inclosed please find $10 for one share of stock. MRS. JENNIE S. SQUIRES, Cortland, N. Y.

I have been a patron and friend of the company for three years. I propose to become a stockholder by sending P. O. Order, $10. L. W. BAGLEY, Scotland Neck, N. C.

Being heartily in sympathy with the Literary Revolution, and desiring to help it and myself at the same time, I inclose $10 for one share of stock. (Rev.) E. P. CLARK, Vassar, Mich.

I look upon your enterprise as one of the most beneficent educational agencies of the nineteenth century. You are certainly doing wonders in elevating the literary tastes of the people of this country. Inclosed find $10 for one share of stock. S. MANSFIELD, Wappinger's Falls, N. Y.

May your noble efforts be the means of blessing many, many thousands more than have been yet reached. I inclose $20 for two shares. (Rev.) JOHN NOON, Amherst, Mass.

I am full of enthusiasm over the Revolution. I envy the man of his glory who organized the movement. He will be immortalized by the appreciative readers of good books. Inclosed find $10. I wish I could invest $100. J. F. DOBB, Martinsburg, Ohio.

I have taken great interest in your company ever since its first publication, and think it a wonderfully good thing. I send you $30. WM. H. GOVE, Salem, Mass.

I cordially accept your proposal and will take ten shares, for which I inclose $100. CHARLES CLARK, Greenville, Ill.

You are doing a grand work. Inclosed find $10. I wish I could take more. I find your paper a perfect gem. B. F. LEGGETT, Concordville, Penn.

It seems to me you have already done more to disseminate good reading, among a class of people who stand most in need of it, than all the rest of the book firms in the country. Inclosed find $10 for one share of stock. CHAS. E. UTTER, Cuba, N. Y.

Your circular offer of stock is too tempting with privileges attached, and here is $10. I think your proposition is a "hit." (Rev.) S. M. FREELAND, Thomaston, Conn.

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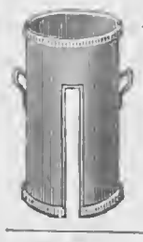

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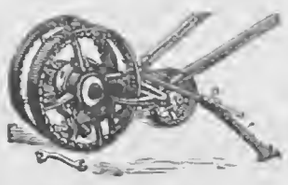

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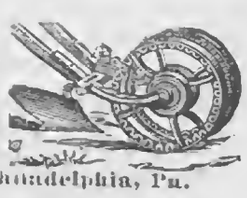

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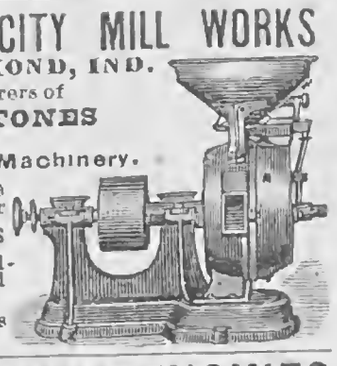

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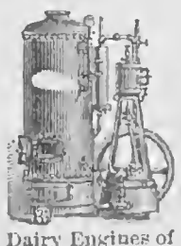

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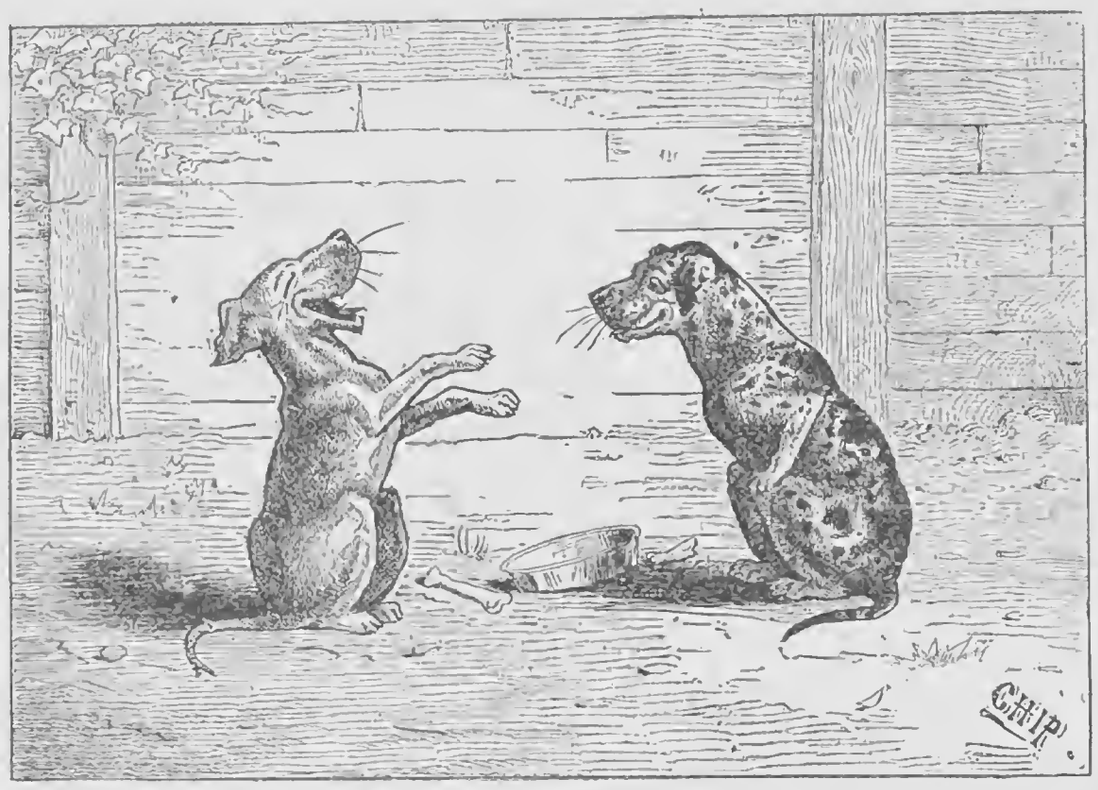

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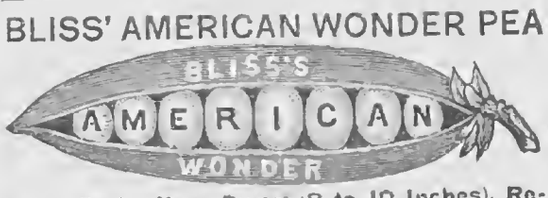

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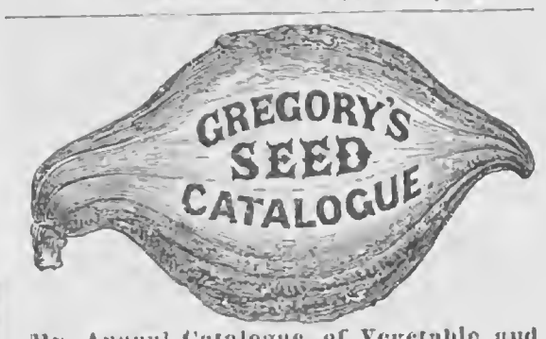

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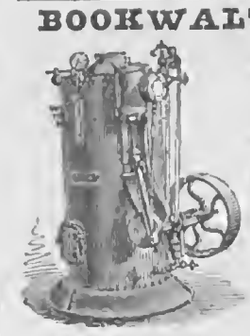

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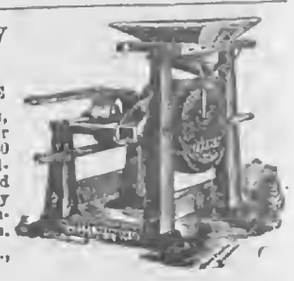

THE RURAL NEW-YORKER

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Ralph Evans

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The Herdsman.

CLOSE BREEDING.

BY A. STOCKMAN.

Mr. Talcott does me great injustice, when, in his communication (page 84), he says my replies "are shifts to avoid a direct answer in one way or another." He says he asked the question "how many, and where, are the descendants of Duchess, for information. I did not so understand him, but knowing that this is a stock question put by the opponents of what is called close breeding, as a sort of knock-down argument, a "sockdologer" in fact, which finishes up an opponent and lays him out sprawling, I took it in that sense, and declined to be laid out by it. Now Mr. Talcott says he asked for information only. I don't think he requires any information, as he probably knows enough of the present history of Short-horns to satisfy himself that what I have said of this noted family of them is perfectly true. If he knows nothing of it, he should not have written in the manner he did and tried to convey a distinct impression that the Duchesses have gone to the "bow-wows" because of their too close and faulty breeding. If he knows all about it he cannot ask for information. But I don't want to discuss this matter in any but the kindliest spirit with Mr. Talcott—for whom I have great respect—and in the broadest spirit both as to the simple statement I originally made and as regards the family of Short-horns brought into dispute.

It is taking a narrow view of this very important question to confine it to the breeding of this particular family. I did not. I referred to Mr. Bates's breeding generally, not to this one particular strain, and object strongly to the attempt made by Mr. Talcott to deprive me of the broad ground on which I placed myself, and to drive me into a supposed corner, and then to try to shut me in that corner by confining me to the narrowest line of "the Bates Duchess family," and ignoring all the branches of the family. I claim that a line of breeding is to be judged by its full effects, and not by the condition of a particular family, from which the breeder made his chief reputation. Looking at the Duchesses in this light, all the offshoots of that family should be taken into account, and not only the direct line of it. Besides, Mr. Bates left the Duchesses in very good shape at his death and with the highest reputation among Short-horns, and whatever may have happened to them since then—if they had become extinct even—should not be laid to his charge or to the charge of his system of breeding. It is true he left but 14 head, all told, of this family; but they were certainly the best Short-horns in existence then and sold for the highest prices under adverse circumstances. Four of the Duchesses anyhow were good enough to be brought to America a few years afterwards at what were then extreme prices.

But the family have by no means become extinct and have yet a reputation to be proud of. It is a very short time since (1877) two of them were sold from Hillhurst at 4300 and 4500 guineas, about $22,500 and $23,600, to go to England, and the man who bought them was no fool. Notwithstanding there have been but few crosses on this family, there are nearly 40 Duchesses in England, and some are still left on this side of the water in spite of the desire of English breeders to possess them. The reason why Mr. Bates left so few at his death, I might say in reply to Mr. Talcott's question (which I don't want to avoid in any way) is that that gentleman bred his Short-horns for reputation; it was a passion of his and he gave his life and work to it. Desirous of proving the wisdom of his method, he, doubtless, as many other breeders have done and do, fed and slaughtered every animal that did not come up to his ideal. That he would sell any inferior animal is not to be supposed for a moment or that he would keep one for breeding. If money making was his business, he might have done that. But it was not, and his success cannot be doubted although there are persons now who think they could have done better with his stock than he did, and could have taught him some things about breeding.

But all this is wide of the point I wished to make, which is, that under certain circumstances, close breeding is not only advisable but absolutely necessary to fix a type of character that may be desired. I know this is a disputed point among breeders. I may be wrong and Mr. Talcott may be right. I may be prejudiced, but I don't think it, for I can change an opinion when I see that I have been wrong. But I see nothing to weaken my faith. Not even the defects of the Duchesses have this effect; their "shy breeding;" their "constitutional weaknesses" and other faults so charged by their adversaries, but not admitted by their friends, and not very apparent to me. On the contrary, I consider that the Duchess family has not only added directly a vast amount of money value to our live stock; but that its example has indirectly greatly stimulated the best methods of breeding by other stock breeders and has thus largely added to the wealth of the world. But Mr. Talcott has no right to pick out the Duchesses as his "frightful example" of what he considers injurious breeding, nor to found his objection to Mr. Bates's system of breeding solely on his disparagements of this family, or their failure since Mr. Bates's death to come up to his, and other judges', ideas of excellence. I would offer as encouragement for breeders of the present day (in reply to his question again) not only Mr. Bates's success with the Duchesses, but with his other families, and as well the success of other noted breeders. Goldsmith's Maid might be mentioned as an example of close breeding and she has shown no want of vigor or power in consequence. She is all Messenger blood on both sides except one cross of Bellfounder in the grandsire and both her grandsire and dam were sired by Abdallah. Mr. Atwood's renowned flock of Merinos were bred from one sire, and he never used any but pure Humphrey rams; and the Humphrey flock was close bred. Mr. Hammond bred his flock in-and-in and never went outside of it. His noted ram Gold Drop, for which $25,000 was offered and refused, was full of "old black" blood; and his dam Old Queen was the granddam of his sire and consequently his own great grand dam, and Sweepstakes was the sire of both his sire and his dam; for his dam Beauty was by Sweepstakes out of Old Queen, and his sire California was by Sweepstakes out of Beauty his own daughter. The history of the best and most successful stock breeding is full of such examples and yet Mr. Talcott finds fault with me for complaining that the great bugbear of farmers is close breeding. It is only because they are uninformed of the facts. But Mr. Talcott is informed and therefore if he sins at all it is against light. Now I ask Mr. Talcott to give us some examples on his side as illustrious as those I have given, and not to "make any shifts to avoid giving a direct answer."

IN-BREEDING DISCUSSED BY A BREEDER.

Practical Lessons and Suggestions.

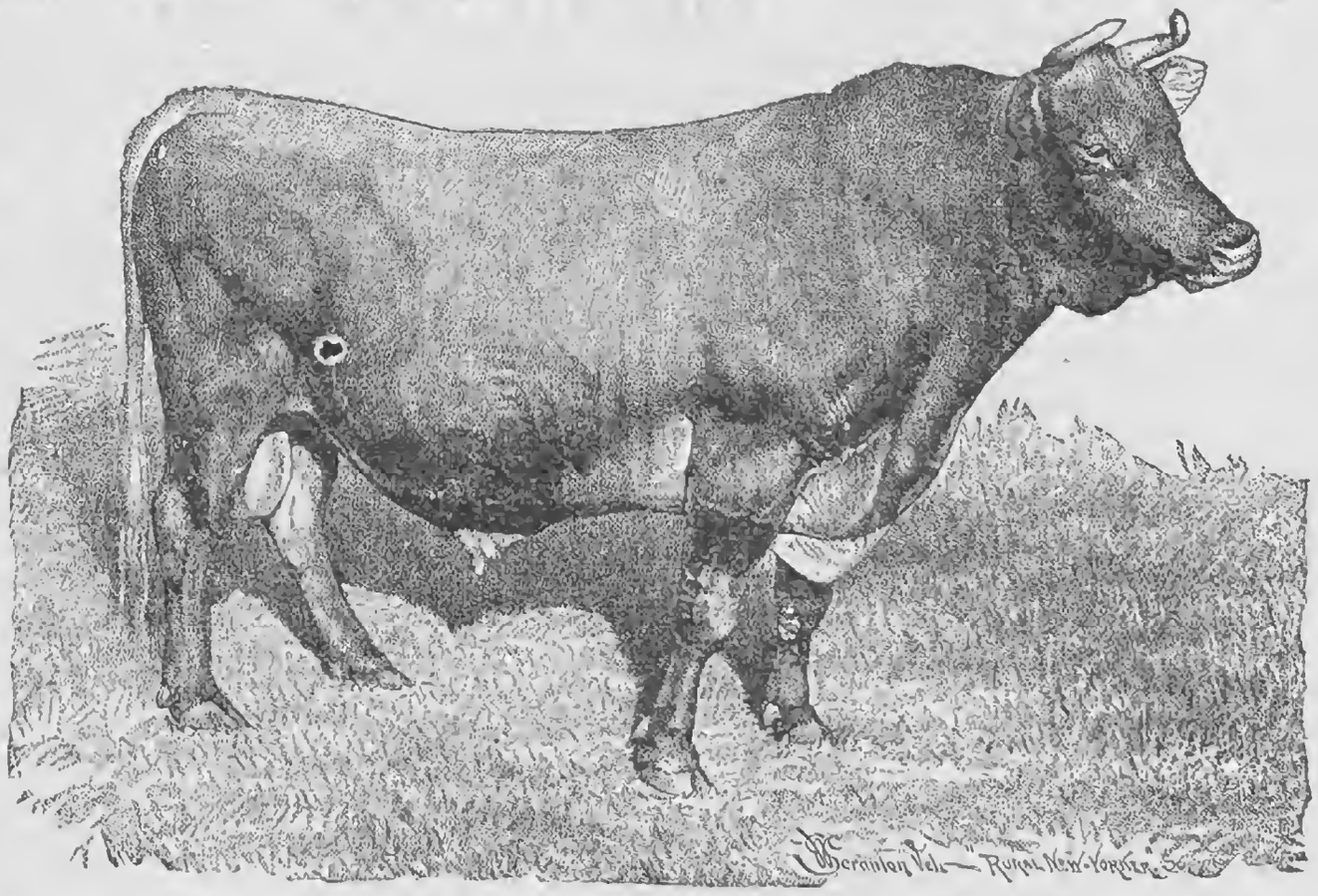
COL. F. D. CURTIS.

The discussion between "Stockman" and Mr. Talcott is interesting, because both are right and both may be wrong. "Stockman" is right when he asserts that both cattle and sheep have been improved by in-breeding. This is the way that all improved breeds of these animals have been brought to perfection, and those special types of the breeds or families have been established. There is no other way in which it can be done. We are now engaged in forming a family or special type of Jersey and Ayrshire cattle by the in-breeding system. A valuable Jersey cow, "Princess Caroline," is being crossed by her own offspring, in order that her characteristics may be thoroughly established in her descendants. She has been bred to her son, and we intend to follow this line of in-breeding until a family and a race of "Princess Carolines" shall be established. In this way we expect to perpetuate not only her form, which is a perfect model of a cow, but other points of excellence. An out-cross with another family would introduce other features, not so valuable, in our judgment, or, at least, destroy the *intensity* of the blood, which is one of the constitutional qualities which we expect to incorporate in it. This intensity of blood or thoroughbred principle is what gives a thoroughbred its value, and just so far as it is established the thoroughbred is superior to the cross-bred, either of breeds or families. We are also trying to establish a perfect family of Ayrshires by breeding together the offspring of the cow "Polyanthus." A son of "Polyanthus" has been used as the sire, and a son of this union will again be used as a sire. So far there has been no evidence in either of these experiments of a want of constitutional vigor, but there is a decided similarity in type and characteristics.

It is true, as "Stockman" remarks, that the most successful breeders of sheep in England have perfected them by in-breeding. The same system has been practiced by the Merino breeders in this country, and in no other way have they attained success and established the different families of improved Merinos. In France the same law has governed the Merino breeders, and the famous French Merinos owe their pre-eminence to careful in-breeding.

Pigs will not bear close in-breeding. They will rapidly degenerate. They may be in-bred for two or three generations of blood relation, but beyond that it cannot be carried without physical weaknesses. An out-cross of new blood will correct these deficiencies, but at the same time change the type and destroy the thoroughbred principle. Thoroughbred breeds of pigs can only be established by having a number of families similar in blood and characteristics, but of sufficiently remote relation to admit of being bred together. An in-and-out crossing of these families must be frequently made to keep up the standard and prevent degeneracy. No doubt the same rule would improve the constitutional vigor of cattle or sheep, if it could be carried out as readily with them, but as their posterity is more limited, it is not so easily done.

Breeding to improve stock is an intricate work, and requires not only close observation, coupled with careful study, but a great deal of experience. The theorist will find himself baffled frequently, and any one is liable, even with years of effort, to signally fail. Americans have always been in the way, with very few exceptions, of depending upon Great Britain for their improved animals, except, perhaps, Merino sheep and trotting horses; and a great deal of money has crossed the Atlantic for thoroughbred stock which should have been produced on this side. This want of confidence in ourselves should give way, as a matter of economy and as a basis for inspiration for American farmers, to a determination to improve the native stock, and also to improve the thoroughbred animals which we already have. It is an unpatriotic, if not a senseless idea, that American farmers should be dependent upon foreign breeders, or that foreign stock should out-sell home-bred. We hope to see the day when American-born thoroughbreds shall out-rank, in fashion and in price, imported.



JERSEY BULL, STOCKWELL 3d.—Fig. 87.

Advantages of Polled Cattle.

Polled cattle are so uncommon that they are considered unsightly in appearance. But if the case were reversed and horned cattle were rare, then these would appear equally odd; and the question might arise, do not horns mar their appearance? They certainly have no utility and are often so ill-shaped as to destroy the animal's beauty, and when broken or torn off, which is frequently the case, they

are painful to the sight. Polled cattle are to be commended because they are not dangerous to each other or to those having them in charge. Cattle with horns are constantly liable to gore each other and to produce abortion, which would not happen if they were deprived of horns. They can be confined closer together, thus economizing space, and are proverbially more quiet and tractable in their nature. They cannot throw down fences, as they have no levers (horns) with which to displace rails or to push them over. On this account a slight fence is sufficient to keep them in subjection.

A hornless bull would never endanger life, a peril too often caused by others. This consideration is an argument in their favor paramount to all others, and gives them a great value, as severe injuries and frequent loss of life occur with horned bulls.

They could never be accused of having "horn-ail," and the barbarous practices of the "cow doctor" could not be inflicted upon them. They would fatten more readily as, lacking the weapons for attack and defense, they would not be inclined to fight either in play or in earnest, and thereby decrease their growth, owing to excitement and severe exercise. With all these advantages polled cows are fully as good as horned for milk. F. D. C.

OUR PRIZE ANIMALS.

Jersey Bull Stockwell 3d.

We present the readers of the RURAL with the spirited engraving of this famous bull, with the feeling that it is a credit to photographer, artist and all concerned. One rarely sees so characteristic and excellent a picture of an aged Jersey bull, and it is seldom indeed that an artist has so good an animal to portray.

Stockwell 3d was bred by John C. Godfrey, of St. Saviour's Parish, Jersey, and dropped in 1873, his sire and dam being of the registered Foundation Stock of the Island. He was imported by his present owner, Hon. Erastus Corning, of Albany, at the head of whose herd he has long stood. He is of a solid gray, fawn color, rather dark, the spots which appear white in the engraving are so only in contrast to dark surroundings, and because they are in a strong light. He is exceedingly fine in bone, head and horn, very level above and below, extremely deep and thick through the heart, indicating the grand constitution possessed both by him and by his get. His hide is soft and plastic and his coat like broadcloth. He has been exceedingly fortunate as a prize winner, having won the highest honors wherever shown, and at the last State fair, where he was photographed for the RURAL, winning *first* and heading the prize herd. See first page for illustration.

Dairy Husbandry.

THE DAIRY COW—NO. 25.

HENRY STEWART.

Breeding Dairy Cows.

A DAIRY cow is an artificial production. The original cow was merely the mother of the calf and when the calf was able to eat and digest grass the maternal functions of the cow ceased. But when the cow became subservient to the purposes of the dairyman the maternal function was only a part of her business. It was necessary to produce calves to continue and increase the stock; but the cow was made a machine, not only for the production of an improved progeny, but also for the production of milk and butter. She was then necessarily brought under the strictest discipline in regard to breeding for both these purposes, so that her progeny should be made to serve the purposes of the most exacting dairymen. By many years of careful breeding the dairy cow has become a wonderful animal. Her milking capacity has become increased until she is able to rear or feed four or five calves in the year in place of one, and many cows are regularly used for this purpose only, another calf being given to each as soon as she has reared one to weaning age. Her capacity for producing butter has been developed to a still larger degree, for it is by no means uncommon for one of the best class of cows to give in a season a weight of butter almost equal to her own, and some cows have even equaled their own weight in a year. This has been done by a process of long-continued, skillful breeding, by which the character of the animal has been greatly changed in every respect—in form, in digestive and assimilative power and in secretive capability, so that the present well-bred dairy cow is made to concentrate all her vital force upon the consumption, digestion and assimilation of food, and upon the extraction from it of as large a portion as can possibly be turned to the production of milk and butter, and not only this, but her whole physical structure has been remodeled that it may serve the end in view in the best manner.

But we have by no means exhausted our efforts in this respect. On the contrary, there are not five cows in ten thousand that come up to the desires of the advanced dairyman, and not one in a hundred, or in a thousand perhaps, that may be called a really good cow. All we have gained so far in our breeding of dairy cows is a certain improvement, which is far from satisfactory, in the general run of certain classes of cows, and an approach only to perfection in a very few; so that there is a vast amount of patient and persistent work yet to be done before we can say that we see the beginning of the end in view. It is our misfortune that owners of cows either can not or will not see their interest in this matter; that they go on year after year violating all the rules of good breeding, and neglecting the simplest means of improving their herds. They do not seem to realize that it would be profitable to them to spend so small an amount as five dollars per cow in each herd to double the productive value of their cows. The average product of a good cow now is about 2,500 pounds of milk and 100 pounds of butter in the season between calves. The average product of a cow in a dairy kept for milk or butter, may be one-half more than this; and yet there are plenty of cows that will double it; many that will treble it, and some that will do even more. The rarity of the latter kinds of cows is so great that money can scarcely tempt their owners to sell them. And these cows are the product of breeding.

Every dairyman may go into this business of breeding and improving his herd, if he will. Every owner of a single cow should do it. It is not difficult; on the contrary, it is an easy thing to do. It requires a system, a plan, and persistence and patience in following it out. If a dairyman has one or two cows better than others, he should select these and begin a course of development with them. They should be bred to a pure-bred bull, the progeny of as good a pure-bred cow as can be procured. In selecting this bull, it should not be taken at random. Its pedigree should be examined and scrutinized. The dam and granddam and the sire should belong to good families. When it is considered that one begins a life work when he begins to improve a herd, and that a false step will ruin all, the beginning should be made carefully and with the best judgment. The cows bred to such a bull should be managed with care. They should be well fed and every effort made to stimulate the milking capacity while carrying the calf. Thus the calf undergoes training before its birth, for it will partake of whatever character is given to the mother. In laying a basis for improving a herd, after procuring good animals to start with, the rearing of the progeny is of great importance. This will, however, be treated of in another place; we are now discussing breeding only. But it is not out of place here to mention incidentally that this is to be well done so as to fix a second step in the progress.

The first breeding of the young heifer is the critical point, for it is a fact that this *does* affect every after breeding to some extent. Now if the bull is found to be a good one, and the progeny promises to be better than the dam, it should be bred to the sire. This would be much more likely to fix the good points of the parents on the offspring, than to bring in new blood, which might upset all, and very easily too. If the young cow should be found better than her dam, the same course should be pursued and thereafter the best bull calf from the best cow should be retained to replace the the first sire, or, if prejudice should create an objection to this course, a bull may be selected that was less closely related to the first sire, but, if possible, it should be brought from the herd from which the latter came originally. In a herd of ten or twelve cows, there will be scarcely need to go outside for new blood for six years or even twenty; but when this is done, great caution should be exercised. Every step should be upwards. When an improvement is secured it should be made permanent and another planted upon it. This cannot be done without study and observation. The breeder must have a standard of excellence of his own for his guidance, and he must not depart from it. The best this year must be the best next year, and the next year, or no real progress will be made.

In general, the standard of excellence will be the pail and the churn. The handsome cow is the one that handsome does, and form and color are all subsidiary to the main point—the profit. In using this term subsidiary, it should carry all that it implies for form and color, have a certain value; because when a good animal transmits one point it is likely to transmit all; so that if one's best cow has some peculiar traits of form, color or feature and her calf has these, the calf will be likely to have the other good points. This I believe to be the only value attaching to the much vaunted escutcheon.

The profit in the case is clearly seen. If a cow gives an average of four pounds of butter a week, and butter is worth 25 cents a pound, the cow returns $30 for the 30 weeks of her productive season. If she gives seven pounds a week her product will be $52.25. If she gives 10 pounds weekly, or 300 pounds in the season, her income will be $75 and she will cost no more to feed and keep than the four pounds cow. The difference in a herd of 10 cows would be $450 yearly, or the interest at ten per cent. on $4,500 and taking the useful life of a cow at ten years, the herd would be worth precisely $4,500 more than the four pounds cows, or $450 each. So that if the farmer were to pay $225 more for such cows than for common ones, he would get his money back in butter alone, with 100 per cent. profit in 10 years; and the extra value of the calves would be a sort of extra dividend or bonus. There is surely sufficient inducement in the probability of soon reaching such a profitable improvement in a dairy herd to attract the attention and enlist the interest of all owners of dairy cows.

Farm Topics.

THE CARBON UNIVERSAL MANURE.

The abounding charity manifested by the people of England has devised, among other excellent measures, County Societies for aiding the industrious, by procuring, near large cities, portions of land divided into allotments of various sizes, for growing vegetables, etc., and by supplying good seeds, manure, implements, etc. on convenient and easy terms. These truly beneficial societies have been in operation now many years, and are perhaps not exceeded in real deep and wide usefulness by any, unless by some later ones which go a step further by inducing the utterly idle and dissolute, or those tending to become so, to take up with independence, self-reliance, self-respect and self-sustenance.

The Hereford Society for Aiding the Industrious was established in 1841, and soon became prosperous. In 1848 a steam flour mill was built, in part with borrowed money, in order that the poor might get the means of making their own bread from their own small grists, of good quality and without delay. This also prospered. The debt was paid and no more contributions were solicited. The managers of the society receive no remuneration but the satisfaction of success in a line of great good to a great number. They now let out above 500 allotments annually near the city of Hereford, the population of which does not exceed 25,000.

Some years ago they entered upon a promising line of economy, which proved a disappointment and a great loss. It was resolved to undertake the cultivation by spade-husbandry and with earth-closet manure. This was when the late Rev. Henry Moule's invention, invaluable in a sanitary point of view, was expected to bring soil-culture in England up to the same measure of great productiveness with as little outlay as that of China. It was not found until later that whereas the Chinese—who depend almost wholly upon the waste of their own houses to feed the soil—apply this powerful means of fertility in a fresh and liquid state, the dry and porous earth and lapse of time that apply to the Moule system, allow of such oxidation as locks up and renders inert, at least for immediate profit, the same matters dessicated by dust and ashes.

A capable gardener was appointed superintendent of this culture of the seven acres, and he did all he could to secure the success of the undertaking. He died about two years after being appointed, and another year's trial proved what was already seen—that the scheme was a failure, owing to the manure proving far less valuable than was expected. An agricultural and sanitary chemist of established reputation, Mr. G. A. With, was then engaged, and a laboratory and study provided with apparatus for investigation and a plot of land for experiment. It was proved that the Moule system failed as to manurial results, and the aim then was to discover what other available means of manure could best be used. The investigations and trials led to the composition, by Mr. With, of what is called the Carbon Universal Manure, which has been used successfully on the society's ground and elsewhere for three years, and for which Mr. With first, and the society next, generously publish the formula, viz.:

	Pounds.	Cost.
Sifted dry earth	1,600	$0 75
Sifted coal ashes	1,100	75
Kainit, finely pounded	80	1 00
Nitrate of soda, finely pounded	80	3 00
Best Peruvian guano	200	7 00
Bone meal	150	3 00
Pure dissolved bone	325	7 25
Superphosphate of lime	100	1 50
Coprolite, or phosphorite powder	120	1 20
	3,735	$25 45

The proportions are to be strictly adhered to. The cost, including the labor of breaking, mixing, sifting, etc., is set at about $15.80 per ton, and the manure is said to be far superior to anything of the kind purchasable at present for $38.80 per ton. It will keep, without deterioration, in a dry place for any length of time; is free from any unpleasant effect in handling; does not exhaust the land, but, on the contrary, adds to its fertility, and is adapted to all forms of vegetation. Apparently it fully restores the capability of the soil for a crop of the same kind as has been continued year after year—potatoes, for instance—until the soil can no longer produce it. It advances the germination of seeds and the growth of the plant from the first.

These are the statements published by the society, which only manufactures enough of the mixture to supply its poorer tenants. The report of a committee of the managers of the society, who inspected comparative growths of various things with and without this manure and with substitutes, gives a highly favorable account of its effects. The only allusion to the amount used is that, as the average cost of a top-dressing of artificial manure for one acre is 32 shillings, the carbon manure made by the farmer himself would cost but 12 shillings.

TYRONE.

PRACTICAL ENSILAGE.

Our contributor, Professor E. W. Stewart, has sent us the following account of practical experience with a silo, sent to him by Mr. B. A. Avery, a progressive farmer, who keeps 100 cows, of which about 80 are constantly in milk:—

PROF. E. W. STEWART:—The interest you have always manifested in everything that pertains to agriculture, and especially the friendship you have shown toward me, prompts me at this time to write you in relation to an enterprise I entered into last Summer—with not a word of encouragement from any farmer, and with not a few sneers and almost universal prophesies of a complete failure from the whole community, except from my friend and neighbor in Syracuse, Hon. Daniel Bookstaver, who gave me the benefit of his reading and thinking on the the subject, and a considerable amount of supervision after the work was in progress.

I constructed a silo for ensilage, following as nearly as I could the instructions as given in the book written by Mr. Goffert. The silo is 70 feet long, 12 feet deep and 12 feet wide, with a second silo on the side of this 30x12x12. I had prepared specially for this purpose between 11 and 12 acres of fodder corn, drilled, which was very thrifty, reaching, on an average, about 12 feet high and very thick on the ground. On the 3d of September I commenced cutting the corn with one team, and hauling it a distance of about 80 rods to the silo, where I had a stationary steam engine and two Daniel's cutters so arranged that it took six teams constantly to supply material to the two machines, with two men at each. The stalks were cut, on an average, into about half-inch pieces, and dropped into the silo, and then spread over the surface as evenly as possible. The lengths were tramped down by men and boys the first day; but, fearing that it was not sufficiently packed, at the suggestion of my friend I put a pair of mules in the pit and kept them constantly treading and packing the corn as it was spread, until the work was done in an entirely satisfactory manner, the close sides and ends where the mules turned having been trodden down by men as well as it could be done.

After the silo was filled I covered with planks and weighted the covering heavily with large boulders as the most convenient source of pressure then obtainable. Some wise men, *who think they know all about farming*, gave me 10 days, some, more charitable, gave me 30 days, to see it all rotted and fit for the manure heap, as they said. But Bookstaver, noticing the pit weekly, was still more and more confident of success, and I must say never for a moment from the day the silo was filled until it was opened by me, on the 1st of December, did he doubt its perfect success. He always answered every objection which was thrown at me with—"It has succeeded in France; it will succeed here," "Somebody must have nerve and enterprise to try it, and you are the man to do it." "You will succeed."

Now for results:—On the 1st of December last I opened the silo and commenced feeding my cows and horses. The food was fresh, green, with only a slight alcoholic smell, and all my stock ate it at once with the greatest avidity, and seemed to grow more fond of it the longer they ate of it. There is none wasted, and all my cows have averaged *over a quart of milk more per day since* the food was given them, after the third day, and I am still looking for even a better yield. The cattle do excellently well on it, and I am well repaid for the experiment after listening to all the croakings of those who dare not step from the beaten path, and I can now laugh to a good purpose when I see the increase of milk of my herd of 80 cows and witness their enjoyment of the food which I hope all farmers' cows in a few years will enjoy.

Now you will naturally ask, "Does it pay?" Well, I will give what the cost has been to me, and you can judge for yourself. The silo cost me, ready for filling, just about $100. I had only one concrete wall to put up, on account of having the walls of the barn already on

three sides, and the silo is still good for many years to fill again. The labor of gathering the corn and filling the silo and covering, all complete, without details, cost a trifle under $200. I have been a farmer almost my entire life, and never have secured so much or such good feed at so little expense. As proof, I intend the coming Summer to build another silo as large as, if not larger than, this one, and fill them both; and I predict that in less than five years silos will be common and found as necessary as a chimney to a house, if comfort and profit are studied. B. AUSTIN AVERY.

Pres. Onondaga Co. Milk Ass'n. Syracuse, N. Y.

Farm Economy.

LITTLE HELPS.

EVERY little helps. When one is in a hurry, by and by, and work presses, he may be glad of the help of some little contrivances which may save time and labor and which may be made in a few hours in the tool-house or shed or in the barn on a stormy day when the weather forbids out-door work, and the housewife wants the house to herself. This month the orchard will need to be pruned, and to climb the tree on a sloping rail and to sit on a limb to cut off superfluous branches are neither safe nor agreeable.

A Tree Ladder

may be made very easily in the following manner. Procure a straight pole 18 to 20 feet long or a strong 4x4 scantling of straight-grained timber and two pieces half as long. Bore these with one-inch holes so as to make a ladder of the kind shown at fig. 88. Make a sufficient number of rungs of strong white oak or hickory, one inch and a quarter thick in the middle and tapering to the ends, as if made for a

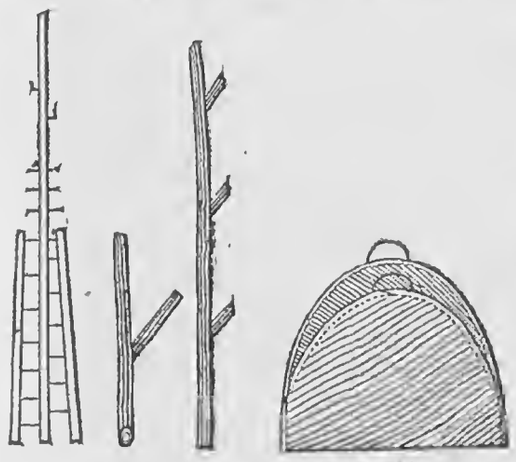


FIG. 88. FIG. 89. FIG. 90.

common ladder, and put these in, on alternate sides as shown. This is all that is necessary, but the rungs may be put in on each side alike if desired. These should be wedged on the outside in the usual manner. A few extra ones may be put through the center pole above the double ladder and some hooks should be fastened above these near the top. The hooks should be blunt-edged screw hooks made for use in pantries, and not sharp ones for obvious reasons. This ladder may be rested in the fork of a limb so that one may get to the outside of the tree to prune the end growth which cannot be reached by ordinary ladders or methods.

A Tool Bag

to hold pruning saws, chisel and knife will be useful. Make this of a piece of sacking or carpet, cut in an oval and doubled as shown at fig. 90. The edge is bound over a piece of small rope or fence wire and three or four inches at the bottom on each side are sewn together and strengthened with pieces of leather. The ropes are extended at the top on each side to form loops for handles. This bag with the tools can be hung on to the hooks of the ladder or on to a limb by an S hook of wire.

Plow Shoes.

When a careless person takes his plow from the shed to the field he permits it to make an unsightly furrow the whole distance, digging into the yard, the road, and sometimes into the sod of a meadow which he crosses. Every plow should have its own shoe belonging to it. It should be placed on it in the shed and should be drawn on it to the field and home again. A shoe may be made of a piece of plank fig. 91, *a*,

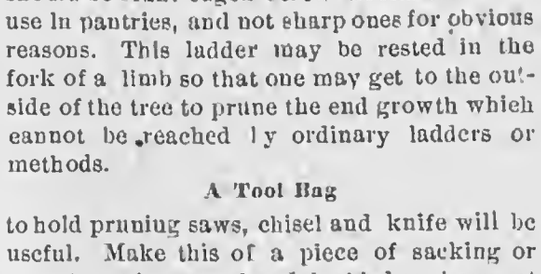


FIG. 91.

or a slab of timber split from the end of a log, fig. 91, *b*, and having the bark smoothed off. A piece of worn-out leather tug-strap is strongly fastened on to the front of either of these shoes and the point of the plow-share is thrust under this. The plow glides easily over the ground when resting on this shoe.

Another shoe, fig. 91, *c*, can be made of a crotch from the wood pile. The upper part is flattened, except at the point, which is hollowed out with a chisel to fit the point of the plow-share; a crossbar is fastened at the rear end upon which the plow sole rests. A great variety of such shoes may be made. The mention of the wood pile reminds one that all those pieces of wood having spurs of small limbs on them may be turned to good account in the stables and barn as

Hooks for Harness,

tools, bags, chains, clevises, and other things too numerous to mention. It does not pay to be running to the store with one's hand in the pocket, or, worse, running up a bill, for every thing one may want, when it can be made at home. A dime saved is a dime earned and a dime a week will pay for a copy of the RURAL NEW-YORKER and one other good paper. These spurred pieces of wood as shown at fig. 89, should be flattened behind the spur taking care to leave them strong and longer above the spur than below, because the strain of the weight comes there, and to give plenty of room for two strong screws above and below. The long pieces will be useful in tool sheds and far better than nails or hooks to hang things upon.

A Tool Sled or Boat

will be useful to carry a harrow, bags of seed, and other matters to and from the fields. In making fences it will carry rails, posts and tools. In fact, it is one of those things which a person misses more after he has once used one, than before. One very easily made is shown at fig. 94. Two pieces of 2x6 plank (hard wood is preferable) are cut about six feet long, rounded at one end and sloping at the other. Boards three feet long are then nailed with twenty-penny nails on to these runners. A second pair of runners are made; the sled is turned up on these, placed just within the lines of the others but on the other side, and these are nailed as the first pair were. This strengthens the sled, and furnishes sides which serve to hold on the load. This sled or boat is a sort of *multum in parvo*. It is drawn by hooking a chain through the holes in the front end of the runners. If the load needs to be dumped quickly it can be turned over by turning the horses sharply to one side and can be drawn back on the upper runners, and then reversed again when required. When snow covers the paths and roads a piece of board may be nailed to the sloping ends behind, and by drawing it backwards it makes an excellent snow plow, or road breaker; the slope of the board prevents the sled from rising on the snow. If two boards are fastened in the form of a V at the front the snow will be pushed off on each side. It makes an excellent corn marker, using the three-feet-wide runners; and for potatoes or beets, by using the 30-inch runners on the other side. It may be fastened to the harrow, and the field marked one way while it is being harrowed, the driver riding on it to steady it. It makes an excellent scraping table to dress hogs on and in many ways will be found of use.

Clamp for Setting Bean Poles,

In setting bean poles in a market farm, hop poles in a hop yard, or stakes in a vineyard, it is always a troublesome job to get them placed firmly. A very handy contrivance is used in the French vineyards for pressing the stakes in the ground. It is made of iron, fig.

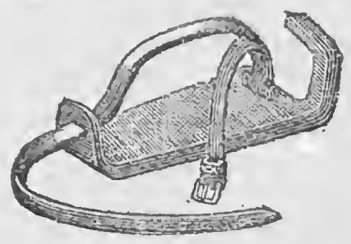


FIG. 92.

92, and has a claw at one end. It is fastened to the hollow of the boot sole by a strap as shown at fig. 93. The stake is held by the claw and the harder the foot presses down the tighter the claw holds the stake. A hole is first made in the ground with a pointed bar and the stake or pole, sharpened at the point, is then thrust in the hole until it is firm.

A Bushel Box.

Now is the time for making crates or boxes for use at harvest for corn ears, potatoes, roots, fruit, etc., etc. The use of a set of these boxes will save much more time than their cost is worth. A box to hold a heaped bushel should be 16⅔ inches long, 14 inches wide and 12 inches deep inside measure. This makes 2751 cubic inches and a heaped bushel is 2750 inches. To make the box, shown at fig. 95, procure end pieces of 12 inch-wide box boards 14 inches long. A 12 foot long board makes 10 pieces. The bottom and sides are made of 1½ inch wide strips, ¼ inch thick and 17⅞ inches long; the end boards being ¾ inch thick. Six strips make the bottom and five each side. The top strip on each side is set a quarter of an inch below the top edges of the end pieces. These are very useful for storing potatoes, apples or pears in a cellar as one box can be set upon another in tiers. In the field, corn ears may be husked into them, or potatoes picked into them, or apples gathered in them in the orchard, and they may be lifted into the wagon and lifted out, saving much time and labor in handling these crops. For lifting, handle holes are cut in the ends, by boring 1¼ inch holes close together and trimming between them with a knife or a chisel.

Industrial Societies.

VERMONT DAIRYMEN'S ASSOCIATION.

THE recent meeting of this Association at St. Albans was probably the most successful, in point of attendance, of any agricultural assemblage ever held in the State. On the second day Armory Hall, with seats for 700, was crowded, and on the first and third days the somewhat smaller hall of the Welden House was equally full. The principal subjects discussed were ensilage, breeding, feeding and selection of dairy stock, oleomargarine, and fertilizers. The chief speakers were Professors Arnold and Engelhardt and Mr. T. D. Curtis, of New York; Farm Manager Sanford, of the New Hampshire Agricultural College; Chemical Professor Sabin, of the Vermont Agricultural College; Leander Wetherill, M. Whittaker, and Editor Cheever, of Massachusetts; Captain Morton, General Thomas, ex-Governor Smith, Governor Farnham, and George W. Whitney, of Vermont.

Undoubtedly the most valuable contribution to dairy knowledge was the paper of the latter gentleman, a painstaking, intelligent, practical dairyman of the town of Williston, who gave the figures of a series of tests continued through the year upon a family of cows, to ascertain the results, in point of profit, from liberal grain feeding for butter production. These tests resulted favorably, the product being increased so as to give a liberal profit upon the extra feed, aside from the gain in the quality of the manure.

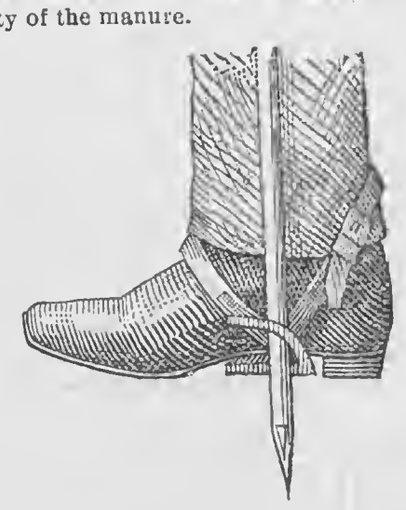


FIG. 93.

In regard to ensilage, Captain Morton and General Thomas both reported entire success in the preservation of finely-cut green-corn fodder by this method, the acceptability of the ensilage, not only to cows, but to swine and other stock, and satisfactory results in the flow of milk, quantity and quality of butter. Captain Morton sells all his butter at 35 cents to a dealer who supplies the tables of the naval officers of the United States navy yard at Boston, whose customers are entirely satisfied with ensilage butter. The feed of his cows is not, however, entirely of ensilage. Their food is mixed in the proportion of 250 pounds of ensilage to 180 pounds of chaffed hay and 75 pounds each of corn meal and wheat-bran. This constitutes the ration, thrice repeated daily, for 27 head of stock, large and small. He tried both the Blount and Southern Gourd seed corn, and rather preferred the latter. He plants in rows two feet apart, and cultivates entirely with the Thomas smoothing harrow and a horse-hoe.

General Thomas, whose methods and results were quite similar, expressed the belief that he could grow 40 tons of ensilage material to the acre, and thought it would equal, as feed for cows, 20 tons of hay. The General did not hesitate to express the opinion that Dr. Bailey is a good deal of a humbug, in which Captain Morton concurred.

Farm Manager Sanborn, a most intelligent and earnest young man, spoke strongly for a new departure in New England husbandry, to be inaugurated mainly by the fitting of all suitable land for machine tillage and the cultivation of large areas by that means. He had found that in this way, with the labor of one man, he could grow 16 acres of corn, which gave a net profit of over $600. He regarded it a waste of labor to grow roots for stock when corn could be grown. He used large quantities of artificial fertilizers with profit, but was particular to know what his soil required so as to avoid waste. He did not believe early-cut hay so profitable, either for milk or meat, as late-cut fed in connection with grain, and regarded cotton seed meal as especially valuable, first as a feed, and then as a fertilizer.

Professor Arnold spoke concisely of the necessity of a close and business-like management of dairy farms, and thought that by careful attention to economy in manures, by skill in the feeding, selection and breeding of dairy stock, by thorough farming and careful, intelligent manufacture the cost of butter and cheese might be much reduced to the producers, and that they might then be afforded with an equal profit at a considerably lower rate than now, the result being a wider and steadier market, both at home and abroad.

Mr. Curtis read a thoughtful and well-considered paper upon the economy of the dairy, in which he pursued a somewhat similar line of thought to that of Professor Arnold.

Profs. Englehardt and Sabin gave very valuable instruction regarding the nature, manufacture, application and economy of both natural and artificial fertilizers. Such addresses do not admit of the condensation required in this brief notice. The most important single feature of their remarks was the insistance upon a careful preservation of both the liquid and solid excrements of domestic animals.

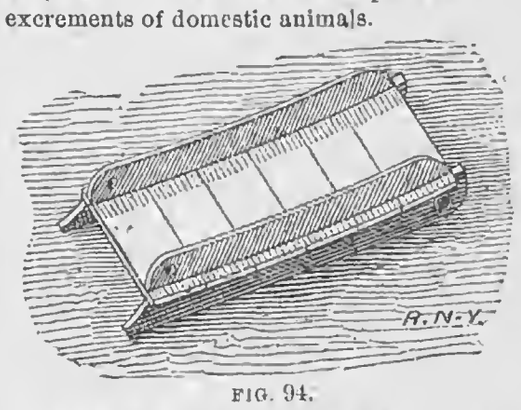


FIG. 94.

The two Governors complimented the farmers handsomely (our public men all know how to do that), and Governor Farnham thought strong efforts should be made to extend the benefits of these agricultural meetings to the farmers of the back towns, who need them most. They were good citizens, he thought, but poor farmers. Governor Smith (who, as President of the Central Vermont Railroad, is our principal railroad manager) is a very eloquent and interesting speaker, and withal a good farmer, whose great farm on St. Albans Point, Lake Champlain, testifies to his intelligent interest in agriculture. In his short address he referred to the agricultural distress in England and Ireland, and prophesied a large increase of immigration to America from those countries, a considerable proportion of which New England ought to retain. He thought the example of English farmers among us would be beneficial, and he urged all Vermont farmers to renewed efforts to improve their methods and thus hold their own in the fierce competition with the West.

Mr. Wetherill made a savage raid upon the fraudulent makers of oleomargarine, suelne, etc., and a hardly less severe one upon the makers of dairy butter who use artificial coloring. Mr. Whittaker combatted the opinion advanced by some speakers that there was little progress in New England agriculture, and by comparisons of the present with the past he demonstrated that this section of the country fully holds its own with the rest of the nation.

Mr. Cheever gave a summary of the present state of knowledge regarding abortion in dairy herds, favoring the idea that it is contagious or infectious, and requires isolation of diseased animals and thorough purification of stables where the disease has occurred. T. H. H.

Orleans Co., Vt.

MEETING OF THE N. Y. HORT. SOCIETY.

[Rural Special Report.]

THE twenty-sixth annual meeting of the Western New York Horticultural Society was held in Rochester Jan. 26th, the sessions continuing through two days. The morning session of the first day was occupied in organizing, nominating officers and other routine work. In the afternoon the first business was raising by subscription the sum of $317, this being the debt of the society. The association raised $500, which places them on a stronger financial basis than they have ever before occupied.

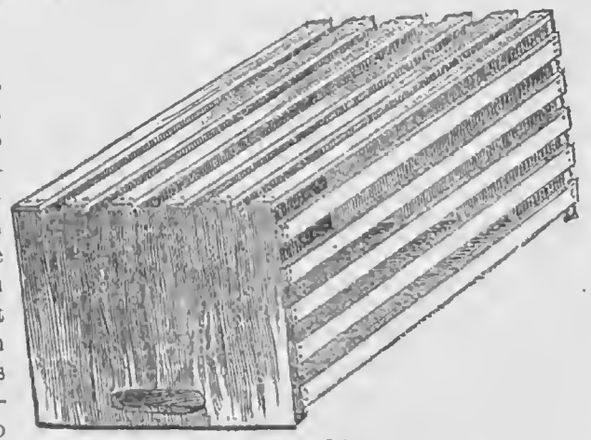


FIG. 95.

Mr. W. C. Barry then read a paper upon "The New Fruits," after which the question, "What is the experience of the last year with the different varieties of fruit?" was discussed. Dr. Beadle, of Canada, from one year's experience with the Moore's Early Grape was much pleased with it. It ripened a day or so ahead of the Champion, was as good as the Concord, and seemed to be hardy. Mr. Green had ri-

pened the Lady Washington and had found it fine in appearance, of good quality and a little later than the Concord. Mr. Willard spoke highly of the Vergennes, which was a little later than the Concord, of good quality and a fine keeper. Mr. Fowler had eaten specimens of the Niagara on Oct. 2d, when they were picked from the vines, and he had found them good. Mr. Thomas regarded the quality of the Niagara about half-way between the Concord and the finer sorts. Mr. Hooker said the Pocklington was a good grower, but not so strong as the Niagara; it was hardy, as early as the Concord, and of better quality than he had thought. W. C. Barry was agreeably surprised in the Pocklington.

The question of new peaches was then taken up. Mr. Bronson said that the very early sorts were not giving satisfaction, and to recommend them as profitable sorts would be very misleading. Mr. Hooker said that May's Choice was a beautiful peach of Crawford character, but he was not sure it was a valuable acquisition. The Downing and Wilder were like the Alexander and Amsden. Mr. Younglove had found the Salway to be a profitable late variety.

In the evening Mr. Zimmerman, of the Committee upon Entomology, read a report describing the insects which prey upon the plants and trees, which was followed by a paper upon the subject of destruction of noxious insects by Prof. Wm. Saunders, the celebrated entomologist of Canada.

The morning of the second day was devoted to the hearing of the reports of the different county committees upon visiting orchards. Mr. V. Bogue, of Orleans County, reported the crops of that county to be:—of apples, 140,000 barrels; quinces, 2,600 barrels; pears, 1 510 barrels; plums, 3.300 bushels; cherries, 63,000 pounds; grapes, 2,500 baskets. W. S. Little, of Rochester, read a paper upon the Hornbeam as a hedge plant, regarding it as of great value for this purpose. Mr. H. B Ellwanger followed with a paper upon Typical Roses, after which the President delivered his address. A desultory discussion followed. Mr. Fowler had used saltpeter upon tender grapevines at the time seeds were forming, and with good results. Mr. Younglove thought that if fine fruits were wanted, thinning was very important. It pays well. It must be done thoroughly to secure the best results.

The subjects of canning and drying fruits, the profit and benefit of the fruit grower, were taken up. Mr. Redmond reported that Wilson's Albany was the best strawberry for canning. Mr. Hooker said that in addition to its other good qualities the Baldwin was very valuable for drying. It weighs heavy, is of good color and is acid. Mr. Woodward thought evaporating to be just what we want, and if we keep the poorest apples out, it will prove a great benefit.

The subjects of pear blight and peach yellows, preventives and cures, elicited no new thoughts. The best way to do is to keep your trees in a good, healthy condition. If blight appears cut off the affected portions and burn them; but if yellows appear dig out the trees and burn them root and branch. Mr. Wheelock, an extensive buyer of fruits, had found the Newtown Pippin to do well in but few places, and only on the east side of the Genesee River and through the valley.

The society then discussed the questions "How shall we get sufficient manure for our extensive orchards in Western New York?" "How can we increase the quality of barn-yard manure?" "Can any of the artificial manures be profitably employed in orchards?" Mr. Hooker said that two objects were aimed at by the fruit grower—1st, a good growth of wood; then fruit; but he doubted if it was economy to stimulate trees too much. Mr. Phelps used his barn-yard manure upon his orchard, while his field crops were treated to superphosphates. Mr. Barry said ground bones were good. Mr. Saunders thought a very small amount of phosphorus in manures would be beneficial. Mr. Woodward said the measure of the manure was the measure of the fruit. He would apply manure just when he had it. Mr. Reynolds told of a case where a crop of green clover turned under, produced better effects than could be seen on a neighboring field well manured.

In the evening, in reply to "Is it profitable to graft apples upon crab stock?" Mr. Bogue cited a case that had given very poor results. Mr. Dempsey had a Peck's Pleasant upon a crab stock. The union worked satisfactorily, although the graft was larger than the stock.

"What is the comparative value of wood ashes, lime, plaster and salt for fruit trees and in what way may they be applied?" was the next question discussed. Mr. Green thought ashes were much the best. Mr. Willard believed that salt was very beneficial to some trees.

The question "Is the clematis meeting public expectation as a decorative plant, and what are the best and most useful varieties?" was discussed. W. C. Barry thought it a very useful plant, and one of the best ornamental climbers. It is hardy and very beautiful. Mr. Hooker said there is everything to say in favor of the clematis.

The society then adjourned. H.

Floricultural.

PASSIFLORA PFORDTII.

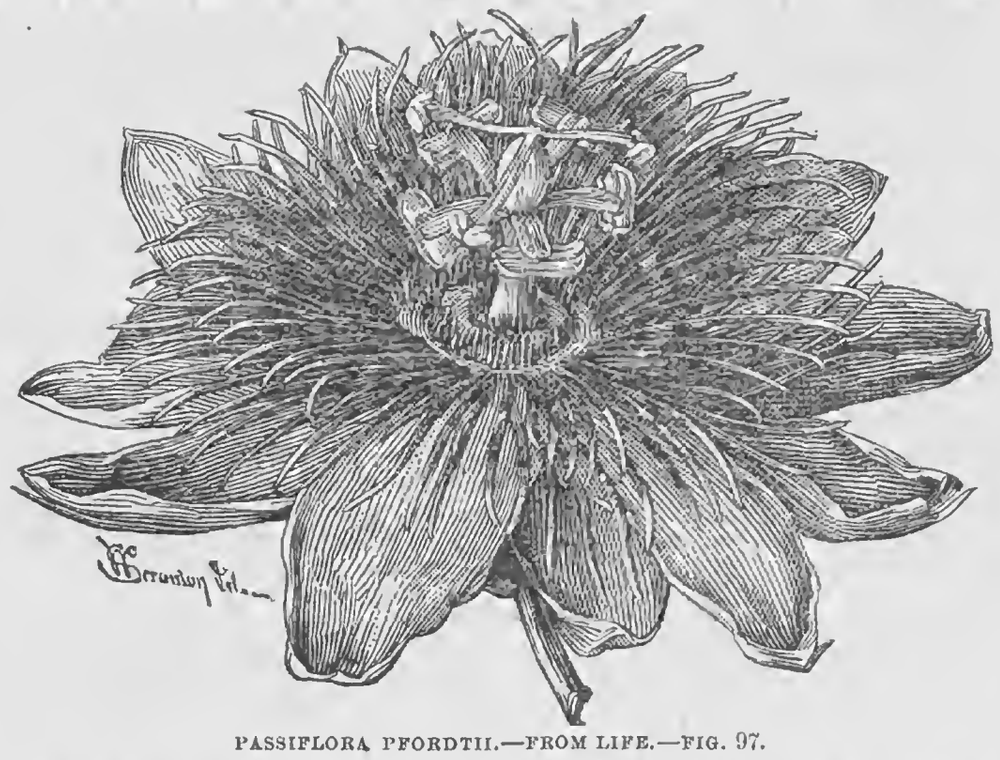
PETER B. MEAD.

THERE is scarcely a genus of any size so entirely made up of singularly interesting and beautiful plants as that of *Passiflora*. Some of them are valued in their own country as much for their fruit as their beautiful flowers. Some do best in a hot-house; others do well in a green-house, and two or three are sufficiently hardy to be grown in the open air, with a slight protection in the latitude of New York or none at all in some cases. The tops die off, or rather are killed off, during the Winter, but the crowns send up very strong shoots in the Spring. To the latter class belongs Passiflora Pfordtii; but it is not so hardy as either Buist's seedling or the old P. cærulea and incarnata, though very much finer in the abundance and beauty of its flowers. It is a strong grower, with mostly three-lobed leaves, the lower ones sometimes being entire. The flowers are produced in the axils of the leaves, and are of a bluish-purple color, the sepals being sometimes edged with white.

The accompanying portrait is a faithful one, showing the average size of the flower, as well as the remarkable form common to all the Passion Flowers and Tacsonias, a closely allied genus. In the green-house it will bloom constantly and abundantly all Winter, but to me its chief value consists in its usefulness as an ornamental flowering plant for the open air. It will soon cover a large space, and may be grown on the piazza, against the side of a house, on a fence, or wherever wires or strings can be placed for its tendrils to cling to. It delights in an open, sunny exposure. An old plant will bloom more abundantly than a young one.

Beginning with a young plant, it should be turned into the border early in the Spring, or into a large pot or tub, if that be preferred. Let it make four or five feet of growth, and then cut off five or six inches of the end, which will secure three or four leading shoots instead of one. The flowers are borne in the axils of the leaves, and more abundantly on the laterals than on the main shoots; it will therefore increase the number of flowers if the ends of the leading shoots be pinched off as soon as the laterals make their appearance. A young plant, like the one started with, will come into flower about August, (an old plant sooner,) and will continue to bloom till stopped by freezing. When the ground gets a little hard I cut the plant back to about four feet, bend the canes to the ground, fasten them there with pegs, and cover the whole plant, crown and all, with two or three inches of sand or light soil, and finish off with a covering of five or six inches of leaves or long litter. The plant may be grown in a tub during the summer, (in which it will flower freely), pruned late in the Fall, and kept in a cool cellar or room during the winter.

The flowers of P. Pfordtii are fragrant, as are others of this class, but not all. The flowers of others remain open only a day; but in September, when the nights begin to get cool, I have often known the flowers of Pfordtii to remain open thirty-six hours, and then seem to close reluctantly. It is a plant that I do not hesitate to recommend for general cultivation; if not in the border, at least in a tub, to be wintered in the cellar. It strikes readily from cuttings in September, which can be easily wintered in the house. It is too subject to the mealy bug and red spider for a room plant; but is free from these pests in the open air.



PASSIFLORA PFORDTII.—FROM LIFE.—FIG. 97.

COAL OIL FOR MEALY BUGS.

Two or three years ago I wrote to some horticultural journal, recommending, from my own experience, undiluted coal oil for the destruction of the mealy bug. Since that time I have tried all the various remedies mentioned in the "papers," but I am sure I could not keep my little greenhouse free from the pest without that little bottle of kerosene and a feather to apply it with. I use a pail of hot water whenever I wish to give my plants an "overhauling," and holding my hand to keep

NEW DOUBLE WHITE BOUVARDIA.—FIG. 96.

the soil from falling out, I sonse the plant in water as hot as I can bear my hand in, and have never injured any plant, except mimulus. Afterwards I use the same water to wash the mold from the pots, and in this way one pailful of water will clean twenty or thirty three to five-inch pots. I then take all the pots which are too large to be dipped in the pail and search them carefully for mealy bugs, and if I find anything suspiciously white, I touch it with oil, when, if it is mealy, it will turn red. I apply the smallest possible quantity of oil and brush with a feather around the axils of leaves and branches which give any appearance of being infested. If the plant is tied to a stake or trellis, the pest is sure to be under the string or on the wood, and I am quite certain that an old trellis will harbor the family for years, even without a plant near them. This thorough treatment will last for a month, but every time I handle a fuchsia or bouvardia I look for mealy bugs and have my coal oil convenient.

I think there are not many greenhouses free from this pest, from the fact that I often find plants, and even cut flowers which I order, white with the filthy things.

I should not dare to use coal oil mixed with water and applied with a syringe, as has been lately recommended; for where I have applied it to growing or tender leaves it has sometimes killed them, while I use it on the stems or the older leaves with impunity. Besides it would never completely destroy the mealy bugs if used in that promiscuous way, for it does not kill unless it touches them. For that reason neither hot water, soap-suds, carbolic acid, tobacco or any other solution or compound applied with a syringe will do any more than hold the bugs in check. I know of quite a number of florists and amateurs, who use coal oil as I do, and they all agree that they have found nothing better. G. W.

Rock Falls, Ill.

A NEW BOUVARDIA.—A new, double-flowered white bouvardia is offered in London by William Bull of which the accompanying illustration may serve to give some idea. Bouvardias are delightful plants either under glass or for the Summer border, for which latter purpose they are not as much employed as they deserve to be.

We have mislaid Mr. Bull's catalogue from which our cut is reproduced. Is this the "Alfred Neuner" of Nanz & Neuner of Louisville, Ky.? Or are there two double white bouvardias? In the latter case, it appears that one engraving answers for both, since Messrs. Nanz & Neuner's cut is the same as Mr. Bulls.

Scientific and Useful.

THE PREVENTION OF INFECTION.

PROFESSOR F. H. STORER.

IT is noteworthy that many points of interest for agricultural practice might be gained by an attentive examination of the conclusions of medical men with regard to the so-called "Germ-theory of disease;" for, taken in its widest sense, this theory assumes not merely that various diseases but most kinds of fermentations and decay, are produced by the action of microscopic organisms. Whatever the doctors may have gained in the way of destroying such organisms or of checking their increase may well be taken to heart by the farmers; not because such knowledge can always be made immediately useful at the farm but because some of these practices of the physicians are likely to be analogous to what is needed by farmers, and because they indicate very clearly what kinds of methods the farmer may fairly hope for and search for to meet his own peculiar needs. Thus, in the case of wounds, it was noticed long ago by surgeons that wounds healed much more rapidly in the country, even at a distance of but a few miles from the city, than they did in city hospitals. Apparently, the air of the hospitals was at fault; and pains were taken in some places to purify the hospital air to the utmost. Buildings were constructed with a special view to having the air within them pure; and perfected ventilating arrangements were introduced, without regard to cost, by means of which all unpleasant odors and even the carbonic acid, which results from breathing and from lights, should be kept down to almost or quite as low a proportion as exists in country air. But all to little purpose, for the disparity between country and hospital practice, as regards the healing of wounds, remained. Then, the idea was broached that something in the wound itself must be the cause of the difficulty; something which by passing from one wound to another should propagate the hurtful influence and maintain it in spite of the purest air. There is now good reason to believe that this is the correct view, and that the trouble is really caused by minute organisms which find fit feeding place upon disorganized animal matter, and which may be carried from one wound to another by way of inoculation, as it were.

In order to destroy these organisms and to keep them at bay also, as they come floating through the air, as well as to guard against the risk of inoculation when the wound is touched with anything, surgeons now use disinfecting agents, and notably carbolic acid, when dressing wounds. One device is to throw, by means of an "atomizer," a fine spray of diluted carbolic acid upon the wound while dressing it. So too, the sponges used for washing wounds are soaked in the same liquid, as well as the bandages and dressings; and, in addition to these precautions, care is taken to protect the wounds from all unnecessary contact with the air. Carbolic acid is freely used also for cleansing all kinds of surgical instruments and apparatus before use; the idea being to destroy any and all germs which may have attached themselves to the implements. In cases where so powerful an agent as carbolic acid is inadmissable some milder chemical, such as a solution of borax, for example, is substituted.

Now the question of preventing the spoiling of milk, cheese, butter, flesh, or what not, is a problem of the same general order as the foregoing; and although carbolic acid is manifestly not a good agent for the farmer's purpose there is every reason to believe that there are many chemicals which would serve him admirably well, much better, for example, than the time-honored salt which now takes precedence of all things.

Yet again, the methods employed by physicians for preserving anatomical and pathological specimens point most emphatically to the conclusion that analogous methods for preserving food must eventually come into general use. A considerable number of disinfectants have approved themselves to anatomists and the practice of dissection has been not a little simplified by their use. At the agricultural schools, for example, the horses and other animals that are to be dissected by the students are prepared for this purpose by pumping into their veins, immediately after death, mixtures of glycerine and carbolic acid with the addition in some cases of arsenic, or alum, or the like; and it is found that the flesh of animals thus treated remains sweet and soft for months. The effect of these preservative materials is so eminently satisfactory for the purpose in hand, that it is impossible to escape the conviction that in the near future some of them, or agents of similar character, will come into practical use for the preservation of flesh for food. Indeed many things have been proposed already, and they are now on trial in some sort, but it will be seen at a glance that much more study, and more careful and more extended experiments

are needed in order to prove that a disinfectant is worthy of being used upon food, than will serve to teach the anatomist from mixing a dozen different chemicals, any, or all, of which may be poisonous; and he cares but little which of them preserves the flesh so long as it is preserved to his liking. But in cases where the preserved flesh is to be used as food, careful and long-continued research must be made with each and every chemical put upon it, in order to be sure that it is innocuous.

One of the plans which have latterly excited some attention, viz., the pickling of meat with a mixture of boracic acid and alum, has been carefully studied in this country by Endemann, who finds that the use of boracic acid can hardly be considered as involving any new principle. He esteems it to be merely a variation of, and by no means an improvement on, the time-honored method of pickling with vinegar. By using other acids instead of the boracic, he obtained the same results that were got by means of it; and he finds, indeed, that the preservative power of the boracic acid really depends on its action upon phosphates naturally contained in the flesh or other material treated with it. It is an acid phosphate produced by the action of the boracic acid, which is the real preservative agent, and unless phosphates are present the boracic acid does little or no good, whence it appears that this use of boracic acid is really a roundabout way of applying acid-phosphates, and in point of fact Endemann's best results were reached by using phosphoric acid, either by itself or admixed with muriatic acid. Many of the acids are powerful disinfectants, in that they kill the bacteria, whose presence would cause decay. By special trials, Endemann found it very difficult to develop bacteria in a fluid that contained acid-phosphates, and on adding one part of muriatic acid to 64 parts of a liquid charged with bacteria the latter were completely destroyed. The only peculiarity recommending the use of boracic acid is its insipid taste and the insipidity of the acid phosphates which result from its use. But since boracic acid is neither contained normally in foods nor in the animal body, the propriety of using matters preserved with it continually for long periods may well be questionable, although experiments have shown that they are harmless at first. The last point well illustrates the difficulty of determining offhand whether or not a new process of pickling or preserving is to be heartily commended. The real test of excellence is long-continued use, and it is precisely this kind of evidence which the new candidate—no matter how worthy—cannot possibly offer.

THE WATER FAMINE AND THE REMEDY.

ALL over Western New York hundreds of wells and springs are entirely dried; the ponds and streams were never before so very low; but, judging from the reports in every paper I pick up, ours is no exceptional case; the inquiry on every hand is "What are we going to do for water?" When we consider that all food to be assimilated by the animal system must be in the form of liquids, and that at least 70 to 75 per cent. of the whole animal is water, we shall see that to be healthy, contented and thrifty, a full supply of water is as essential to all farm stock as good food. Especially is this the case in Winter when their main supply is dry food, and it is doubly important if we have not an abundance of some green food such as swedes, mangels or carrots. However rich and nutritious the food, we must have water as the solvent and agent for introducing it into the system.

Although so very important, yet how very deficient most farms are in their water supply! Even in our very best farming regions it is no very uncommon sight, in connection with a fine mansion and extensive barns costing thousands of dollars, to see the stock driven to some half-dried pond or stream, often far away from the barn, to get a scanty supply of half-frozen, dirty water, and this only once in 24 hours, causing them to fill themselves uncomfortably with this mixture of water, dirt and ice, and to stand on tip toe shivering for hours before they again get warm enough to try to eat. This is all wrong. No man who expects to make his living by farming can afford to so treat his stock; better by far sell them and the food they are expected to eat than to try to keep them without an abundance of pure water.

But says a farmer sitting near-by, "If you have not a spring or stream so situated that it can be conducted to the barn in pipes, what will you do?" Dig or bore a well sufficiently deep that an abundance of water may be secured. The depth of wells makes but little difference, for by using a good force pump attached to a wind-mill, water in abundant supply for almost any number of stock can be easily and cheaply brought from almost any reasonable depth; a large trough can be placed close-by the well and protected on all sides by saw-dust, straw, or any other non-freezing substance. Fit a cover to the whole top, with a lid or door at one end that can be opened to permit the stock to drink. By having a spout so placed that when the trough is full the surplus water can run back into the well or away in a drain the mill can be run pretty nearly all the time in severe weather and thus no fear of frost need be felt. The better way, however, if the well is on higher ground than barn or stables, is to adopt the following plan:—By its side build a frost-proof room, and in this, or in some other convenient frost-proof place, erect a tank large enough to hold two days' supply of water, and from this arrange so as to have the troughs always kept full; or, what is still better, have water in stables and barns always accessible to the stock and kept as far above the freezing point as possible. Of course, this will cost money; so does a barn and a house, and the whole expense of suitable water arrangements to supply a large farm need not be over $200 or $300, and the investment will pay a good interest in the increased comfort and thrift of stock; in the avoiding of labor of boys and men in shoveling snow and in cutting open the drinking holes, and in the saving of loads and loads of valuable manure that are usually dropped by the road-side or on the ice, to be washed away and lost in the Spring floods.

I have a wind engine, pump, tank and system of water pipes, carrying water all over my cattle barns, sheep pens, horse barn, into the house, besides hydrants in the flower garden, by the roadside, in the barn-yard and in the orchards, supplying an abundance of pure water for all purposes. It has been running over three years, and could easily furnish four or five times as much water as it now does, and in all that time it has not cost a cent for repairs. Although my cows in Summer run by the side of a large stream, they always stop at the trough going to and coming from pasture and drink heartily, seeming to like the tank water much better than that from the stream. My whole apparatus in position cost less than $350, and I would not now do without it for ten times that sum.

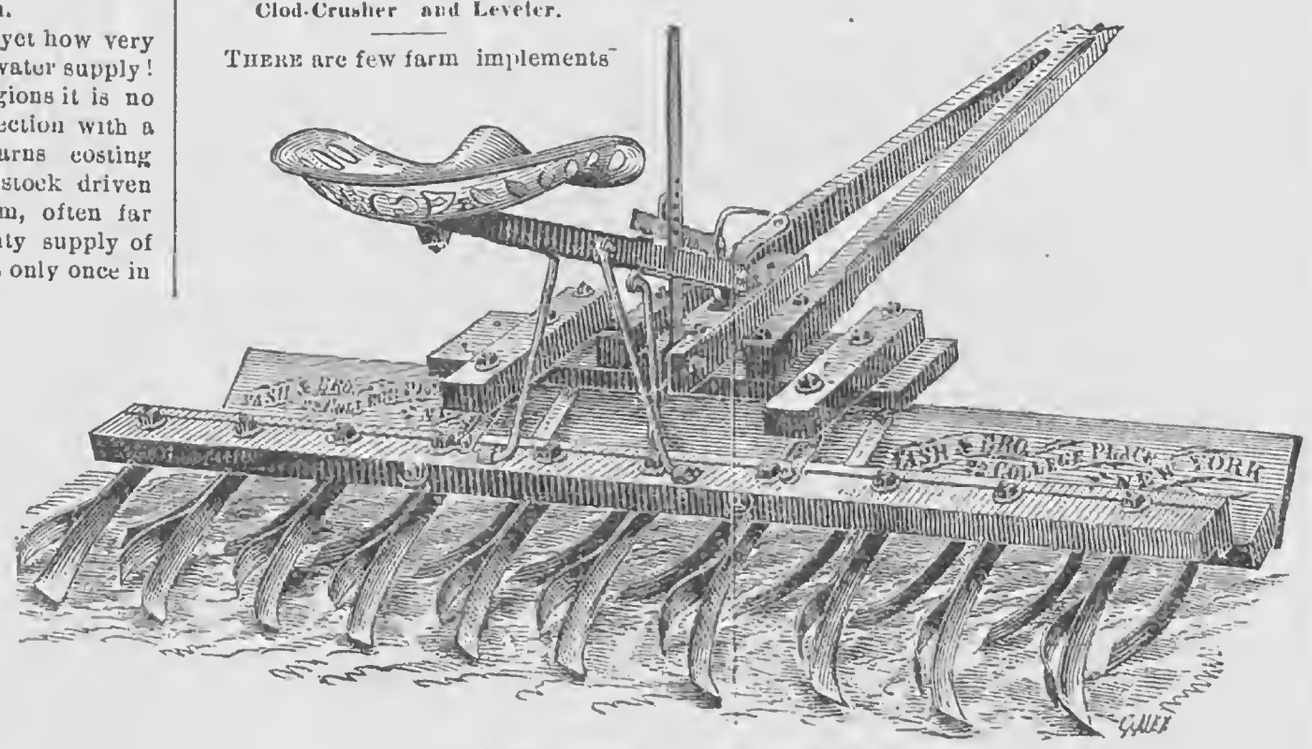
It is surprising to me that so few farmers—and some of them worth thousands, too—avail themselves of this very cheap and reliable means of water supply when they cannot but know how much of their success with stock depends upon their having plenty of pure water. In building barns they often incur more expense for a cupola and other extra trimmings than it would cost to secure a never-failing supply of water. I am not opposed to their making their barns look finished and nice, but I am opposed to their stopping short of securing so necessary a means to their full success in stock keeping and stock feeding. There may be, and undoubtedly is, a great difference in wind engines, but almost any one is much better than none, and will give all the water needed at a very moderate cost, and will pay over and over again in the improved condition of stock and in the saving of wear and tear of muscle, and patience. To save answering many inquiries, I will just say mine is the Iron Turbine, made by Mast, Foos & Co., of Springfield, Ohio, and if not the best engine made, it is good enough for me. J. S. WOODWORD.

Industrial Implements.

ACME STEEL PULVERIZING HARROW,

Clod-Crusher and Leveler.

THERE are few farm implements which have been so greatly improved as the harrow. What in the youth of an elderly man was still a crude contrivance which did laboriously and imperfectly its narrow line of work, has since been made by study and skill an efficient device for accomplishing easily and economically a much wider round of farm work than could have been attempted with the old-fashioned machine. In their eager search for improvements in this as in other implements, inventors have followed various lines of thought and consequently have reached various results, differing more or less from each other; but all which have embodied genuine merits have met with popular favor, the measure of their excellence being guaged by the extent of their favor with the public. However strong the claims put forth by the inventors and manufacturers of various machines, the real test of their economical efficiency lies in the degree of appreciation they have met with from the public, and judging by this criterion alone, the Acme Harrow now holds a foremost place among such implements. Early last year we described this harrow and from a careful examination of its construction and the highly complimentary reports made of its efficiency by a large number of farmers who had practically tested its merits in various parts of the country, we predicted a wide popularity and large sale for it. The event has justified our predictions; for it is now in use all over the country. To the fast decreasing number of those who do not know its merits we may briefly say that it is an efficient pulverizer, clod-crusher and leveler combined. As seen in the accompanying cut, fig. 98, it consists of an adjustable, diagonal leveling bar and clod-crusher, permanently attached to the pole, and provided on its rear edge with a series of steel coulters. To the leveling bar is hinged a tooth bar provided with another series of steel coulter teeth, curved and beveled to a sharp edge. The peculiar form and arrangement of these coulters give great cutting power while at the same time they lift and turn the soil which is, in turn, subjected to the action of the crusher and leveler and to the cutting, lifting and turning action of double rows of steel coulters. A seat is provided for the driver and a lever within his reach enables him to control the position of the crusher and at the same time to raise or depress the coulter so as to regulate the depth of the work, which varies from a light surface working to a complete pulverization to a depth of three or four inches. The machine is made of the best materials and in a thoroughly workman-like manner; is light, durable and cheap, and from all we have heard with regard to its efficiency, we can strongly recommend it to our readers. Full description, etc., will be promptly furnished by the manufacturers, Messrs. Nash & Bro., 22 College Place, N. Y. G. E. B.



ACME STEEL PULVERIZING HARROW.—FIG. 98.

Miscellaneous.

A Scientific Farmer.

Oh, my! what a natural curiosity he'll be some of these days. Now my idea of the scientific farmer of the future—for the tribe does not yet exist—is, that he will be a man of common sense, of an inquiring mind, bound to have a reason for everything he does, eminently practical, and great on applying to his land and the treatment of his crops, stock, etc., etc., the pure and unadulterated result of his scientific knowledge. He will read abstruse works by closet philosophers, blow away the chaff which always envelopes their ideas, and apply the facts to practical use. He will utilize their hints and lucubrations far better than they could possibly do themselves; for a philosopher, my friend, is a being whose brain is in such an agitated condition that unless he has a "matter-of fact man" at his elbow to act as a separator, his ideas and his chaff would all scatter to the four winds together. Mere brute strength alone nowadays will not extract a living from the land; there must be some positive, absolute truths and facts known, and there must be discernment enough in the farmer to select and apply them. When that is done by any farmer, he becomes scientific. This term, at present among the majority a term of derision, will some day be the most honorable handle to a farmer's name, and "Sci. Far." will indicate a man who has won his honors by cultivating his brain as well as his broad acres. S. RUFUS MASON.

Dodge Co., Neb.

RURAL BRIEFLETS.

THUS writes our friend Mr. Richard Goodman:

"The agricultural community, interested in animal portraiture, has become doubly indebted to the RURAL NEW-YORKER of late. First, because of its most praiseworthy enterprise in giving the American public portraits of American animals, and, second, because of the admirable qualities in these portraits. Your artist has shown a power as unusual as it is important, of preserving not only the individual but the breed characteristics in each of his pictures and at the same time making them enjoyable works of art. He shows us not only a pleasing, natural, life-like picture of a bull, but it can be seen at a glance whether it is a Jersey or a Holstein, or a Durham bull, and, finally, if the observer is acquainted with the particular animal represented, he will immediately know that it is "Ned" or "Sir John" who stands out on the page before him. I know of no series of animal portraits in which the artist, with black and white only, has marked so distinctly and satisfactorily the *race* the *breed* and the *individual* characteristics.

In this department of animal portraiture, you at present, certainly stand "first, and without a second" in this country, and the foreign agricultural journals have already much to learn from the RURAL NEW-YORKER.

Let me take this occasion to express my high sense of the value which your paper derives from its connection with the Rural Experiment Farm. It is of course of tenfold value to the community having the paper for its mouthpiece; and certainly the paper, like the old giant Antæus, draws new life and strength and power for good from its frequent and close contact with mother earth. The RURAL NEW-YORKER occupies a place in the community as unique as it is important." . . . . . .

WE have received the following letter and appended printed circular:

"I want to get some of that Chester County Mammoth Corn for the trade. I want your price also, and one of the largest and longest ears. I inclose circulars showing two kinds of seeds which I handle; think I can sell your corn. Perhaps the Rural Farm might want some of my seed. Please let me hear from you. J. A. FLETCHER.

Oneida Co., N. Y.

The circular, with unimportant parts left out, is as follows:

CUZCO OR GIANT FLOUR CORN.—This wonderful and famous corn has attracted great attention and caused universal wonder, owing to its size and quality, the grains being soft and full of flour. The grains in size are from three to four times the size of ordinary corn and look like small, well-baked crackers. This corn is raised by the Indians in the province of Cuzco, situated 450 miles from the sea, and having an elevation of over 12 000 feet. The climate in Winter, which is very long, is severe and cold, with heavy snow. The Summers are short, cool and temperate.

The yield of this corn is unquestionably many times greater than that of any other known variety. In the cold latitude of Minnesota it is reported that a farmer raised from 20 hills, 80 pounds of shelled corn. If such reports are true this new variety will soon be very generally raised in all the corn-producing States and stand at the head. This corn is a rapid grower in our warm soils, growing to the hight of 15 feet, with two fine, well developed ears on nearly every stalk, which measure from 12 to 16 inches in length and from nine to 11 inches in circumference after the husks have been removed. Notwithstanding its mammoth proportions it matures equally early as ordinary dent corn, when planted at the same time, as is reported by those who have seen it grow, and it ripens in four months from the time planted. The grains are a solid of pure flour, with a thin coating of bran. As food for stock it is superior to any other variety, being soft, rich and easily masticated.

This corn is put up in packages of 50 grains each, which will plant 25 hills, four feet apart. Two grains are sufficient for each hill. Fifty grains will give a yield of nearly 100 pounds of shelled corn. I will send one package by mail, post-paid, to any address on receipt of price, $2 50 a package. For special rates and terms to agents, as well as for seed, address

J. A FLETCHER.

We are willing to presume that Mr. Fletcher has been deceived—especially as he seems to be a reader of the RURAL NEW-YORKER. He must, however, have overlooked what we have said respecting this "wonderful and famous corn," not only from our own trials during two seasons, but from trials made in several different parts of the country from seeds which we mailed to friends. If heavy stalks are wanted with few leaves—then the Cuzco will suit. For grain it is not adapted to any part of this country and, indeed, so far as we are informed, it produces very small ears and few of them when cultivated in South America. . . . . .

WE have received the following note from our respected friends, Messrs. Smiths & Powel of Syracuse, N. Y., touching upon our engraving of the handsome Holstein Bull "Ebbo:"

"We were surprised to see yesterday in your paper the cut of "Ebbo." We regret that you published it, for we consider it a perfect burlesque of the bull, and while no doubt you intentions were all right, we consider it a damage to us to have it published, and you will remember we expressly requested you

not to publish it. It was a miserable photograph in the first place and the cut looks like a monstrosity rather than a fine animal as he was." . . . . . .

We have received the following which explains itself:—

Dear Sir:—The first number of the journal of the A. A. A., is now in preparation and will be furnished free of expense to all who join the association. It will be in book form of three to four hundred pages, and will contain articles by the ablest writers in America and Europe on agriculture and kindred topics, together with the proceedings of the association, the constitution and by-laws and other interesting matter. The association has been regularly incorporated, and is in excellent working shape, free of debt, with its Life Membership Fund intact. Soliciting your very best and prompt efforts, Yours very truly,

J. H. Reall, Secretary.

P. S. Annual dues for this year $2.00, covering all expense.

The following interesting letter from Mr. Robert Douglas, of Waukegan, Ill., in reply to our questions, has been overlooked for a considerable time. It is, however, as timely now as then to most of our readers:—

Eds. Rural:—I know of no tree that can be so easily made to grow as the Catalpa. It is not however, so easy to grow it from the seed, or, rather, to get the seed started, as it is very liable to bake in the ground if this is not very mellow and loose, and loose ground dries quickly, in which case the seed fails to germinate. In my opinion, no other tree is better deserving of distribution anywhere south of 43 degrees. It is valuable and must become popular. Dr. George Engelmann wrote me that he has thoroughly examined the tree, and is ready to publish it as a distinct species, and proposes that it retain the name of Speciosa, as named by Dr. Jno. A. Warder 26 years ago. Dr. Warder had only claimed it as a variety at the time he named it. Some of our Eastern friends who have not had an opportunity to examine both kinds seem to doubt there being any difference in the two sorts, either in hardiness or otherwise; Dr. Engelmann sets that matter at rest by describing two distinct species, and as there could be no higher authority, skeptics will now feel disposed to examine into it more closely. The difference in hardiness is patent to any one who will look into the matter, and the difference in appearance is altogether in favor of the Speciosa. Dr. Warder and I examined the Bignonioides in Boston, New York and all along to Washington and found that the further south it grew the better it looked; but it was nowhere fit to be compared with Speciosa as an ornamental tree, and the flowers of Speciosa are much finer than those of Bignonioides.

What Others Say

Mules.—The Agricultural Editor of the New York World has this (and we fully indorse it) to say about mules: The chief objections urged against mules are two in number, and these have proved sufficiently strong to keep the animals from becoming universally popular. Their appearance is unprepossessing, and they are unpleasant to handle, owing to nimble and vicious movements of their hind legs. Concerning their kicking propensities the prejudice is gradually disappearing before an intelligent understanding of their disposition and management. Planters and trainers of large experience contend that the kicking propensity is due mainly to ill treatment, and that mules bred from parents of good temper—if kindly handled and broken when young—are but little, if any, inclined to this vicious habit. The average life of a mule is about 30 years, and many perform good service at a more advanced age. Mules mature earlier than do horses and in addition to their powers of endurance are as sure-footed as goats. They are excellent pullers, and when judiciously handled are admirably adapted for teaming and farming. The peculiar formation of their hoofs exempts them from many of the diseases of the feet to which horses are subject. Their skin is less sensitive to the bites of fleas and other insects, and they can endure great extremes of heat and cold.

Carp.—The New York World, in an article upon this fish which is now exciting so much interest, says: "Carp spawn in May and June, and, under some circumstances, throughout the entire Summer. They are very prolific and the eggs of the female adhere tenaciously to whatever they touch; for this reason it is important that a new pond be provided, with floating weeds for such attachment. The eggs hatch out in a few days and the young grow very rapidly. A Nevada exchange, in illustration of the prolificness of carp, cites the experience of Mr. Moshier, of Stockton, who from 17 young carp gained in one year 5,000 carp from five to seven inches long. His pond was 70 feet in diameter and six feet long. The bottom and sides of the pond were cemented to render it water-tight. The water was supplied from a well 70 feet deep; it was pumped into the pond by means of a windmill. The cost of this pond was $100. Farmers who feel interested in growing carp can, of course, raise all that would be required for family use in a much smaller pond than the one described."

Said Mr. Beal in an address before one of the meetings of the Farmers' Institute of Michigan:—"If our grandmothers of fifty years ago were here to-day and I were to tell them that we were making great improvements over their methods of making butter, they might justly refer me to the tons of sueine or lard-butter manufactured in Chicago, and the seven million pounds of oleomargarine sent abroad from New York City within the past year and palmed off on the unsuspecting public as pure butter. They might say to me that if our butter was so poor that it could not be distinguished from lard or tallow, they did not think we had improved much on the quality. But I could answer them that it was not that our butter was so poor, but that Yankee ingenuity had so perfectly imitated the genuine article by the manufacture of spurious butter. Butter is not the only commodity that is counterfeited.

The closing remarks of the above meeting were made by Thos. F. Moore. The speaker aimed to point the way to a higher elevation in the social and intellectual scale of the large class engaged in the noble industry of farming. Education was the great lever. He suggested three practical ways for the better intellectual and material advancement of the farming community: First, better district schools, by giving women a voice in their management; 2d, by the establishment of graded schools in every town; 3d, by the admission of farmers' daughters into the State Agricultural College. These were privileges farmers might enjoy, and it was their duty to secure them. Among other duties was the eradication of the liquor traffic, to be brought about by giving the ballot to woman; and the regulation of railroad transportation rates, to be achieved by sending farmers to Congress.

Hot beds.—Instructions for hot-beds have been given in these columns so many times that we had intended to omit them the present season. Mr. I. F. Tillinghast, however, gives the following instructions in his little work, "Seed-Time and Harvest," which are notable for their simplicity and accuracy:—

Manure beds are most commonly used, horse manure being preferable to any other readily available substance. Fresh manure recently removed from the stable is best, but if it is made in too small quantities it should be frequently spread through the Winter in order to keep it from heating and spoiling before Spring. If a good proportion of fine straw or forest leaves are used in the bedding it improves the manure greatly for hot-bed purposes. When ready to begin operations the manure should be forked over, shaken out finely, and thrown into a high conical heap to heat; if anyways dry it should be watered until well dampened throughout the heap. Leave it standing in this heap about a week and it will surely heat and begin smoking like a small volcano.

There are now two methods for forming the bed, some digging a pit and sinking the manure in it, and others simply building the manure up into a square bed and setting the frame on it. The first-named method requires more labor, the second more manure; so we will let labor vs. manure decide which shall be adopted. After leveling the manure there should be three or four narrow boards laid across it, on which to rest the hot-bed frame, so that after the manure heats all will be settled together evenly, otherwise the weight of the frame and sash will force it down into the manure, and the center of the bed will appear to raise and perhaps displace the plants. Of course, a spot for the bed should be selected which is sheltered as much as possible on the north and west by some building or high board fence. The sash should slope gently towards the south or east, both in order to carry off the rain water readily and to catch the sun's rays and gain light and warmth.

The most common sashes are 3x6 feet. The frame should therefore be made six feet wide and as long as necessary to accommodate the number of sashes to be used. A vital point always to be observed in making a hot-bed is to spread the manure down while hot; it then continues to heat; but if spread down cold it will heat very slowly and unevenly, or perhaps not at all. Early in Spring, when considerable cold weather may yet be expected it will be necessary to use about a common wagon box full of manure to each sash, but later in the season, when forming beds in which to transplant seedlings, one-half that quantity will suffice. The soil to be used should be prepared in advance. It must be light, loose and rich. Good sods placed in a heap with alternate layers of cow manure and allowed to stand and decay for about one year, make a fine compost for starting a hot-bed.

Soil should be placed on the manure to the depth of from four to six inches, and the glasses adjusted properly. After the soil becomes warm, sow the seed in rows about four inches apart and scatter them quite thickly in the rows. Never sow broadcast, as the labor of keeping free from weeds is much greater. When the seedlings are about three inches high, they should be transplanted into rows, say 3x6 inches, and as soon as these need more room or are in danger of running up spindling, transplant again.

In transplanting tomato plants, the stem should be set down well into the soil, and will take root wherever covered. The object sought is plenty of fibrous roots on a short, stocky stem.

The temperature of the beds must be closely watched, though it may vary considerably. The mercury may run from 50° to 80°, though the mean, 65°, should be as closely kept as possible. This for tomatoes, peppers, etc. Cabbage and cauliflower plants require much less heat and should never be placed in the same bed with tomatoes. In fact, very little or no bottom heat is required to produce good early cabbage plants. Fit a frame as for a hot-bed except to omit the manure for the bottom heat; cover it with sash and sow the seed in February, or early in March, and better plants will usually result than if bottom heat is used.

We find the following in the Mark Lane Express (London):—"Another equally incredible record is that of the cow Eurotas, the property of Mr. A. B. Darling, a New York hotel keeper, which is stated to have given a yield of 778 pounds of butter in a little over 11 months; and almost a similar marvelous result is claimed for another cow, which is said to have produced 705 pounds of butter in a year. The milk of the cow Eurotas is said to have been so rich as to have yielded an average weight of one pound of butter from nine and a half pounds of milk, whilst it takes from 23 to 25 pounds of good average milk to produce one pound of butter. One motive for the promulgation of these astounding records appears to be the enhancement of the value of calves from these marvelous cows. As the Rural New-Yorker remarks:—'Before we should pay $1 500 for a calf, it would be at least safe to know that the record is genuine, and free, not only from fraud, but also from too enthusiastic figuring.' We do not think the reputation of American dairy farmers for truth and honesty can fail to be injured by what is at present occurring in that department of American industry. Whilst oleomargarine and bosch butter of American production are poured into our market, cheese, as we read in last week's paper, is being concocted of sour skim milk and animal fat, and gross falsehoods are circulated as to the produce of individual dairy cows." Again it remarks, with forcible truth: "Those stock owners who undertake the trouble of accurately registering the yield of individual cows in milk or butter, under varying circumstances, as to feeding, etc., and who give to the public the result of their labors, which may often prove of practical value, are entitled to our thanks; but those who, from the vulgar desire of telling the biggest tale, or a wish to increase on false grounds the demand for their cattle, give to the public exaggerated, false, or misleading statements, with a deliberate intention to deceive, are only worthy of contempt." The Rural thinks that "right here" a strong word might also be said against the "high-spiced" portraits which appear in illustrated stock journals from time to time.

Application of Liquid Manure to Roses.—Mr. George S. Wales tells of an experiment he made last season which proved highly satisfactory. About June 1st he planted out 12 small sized plants of different varieties, about a foot apart each way, in rich, heavy soil. After every heavy rain he took from the barnyard the leachings of the manure pile; with a pointed stick he punched four or five holes in the ground a few inches from each plant, and poured in the water; the next day, or as soon as the ground was dry enough, he stirred the surface with a hoe, and kept it loose by frequent hoeings until again watered during the season. He applied the liquid manure probably eight or ten times during the season. The result was wonderful. They began in five or six weeks to bloom, and until October 1st, when they were taken up, there was hardly a day but that beautiful buds might have been picked.

How Little Food a Plant Requires.—There hangs before me as I write, says Prof. S. W. Johnson in the N. Y. Tribune, a wheat plant raised from a kernel of the "Michigan Southern" variety, which was planted January 1, 1877, in a bottle of solution containing to one gallon of pure water the following substances and quantities: 45 9 grains of muriate of potash; 9 5 grains of sulphate of magnesia; 18 6 grains of phosphate of soda; 88 9 grains of nitrate of lime, and a few drops of a solution of muriate of iron. The plant was harvested July 2, 1877. It tillered well, and had some dozen ear-bearing stalks, and ripened 62 fairly formed and plump kernels. It is found that such solutions *must be very dilute* in order to obtain a vigorous and abundant growth. In this instance the gallon of solution contained 58,385 grains of water and 163 grains of the above-named salts, or 1,000 of water to somewhat less than 3 of salts. Experience in this kind of culture has demonstrated that if the proportion of salts be but slightly increased, the result is a diminished growth. In most cases two or even one part of the suitable salts to 1,000 of water give the best results. With our usual grain crops four or five parts to the thousand would greatly hinder, and ten parts would be nearly fatal to growth.

At the late meeting of the Pennsylvania Fruit-Growers' Association an experiment was stated showing that Paris-green, in solution, syringed over a bearing apple tree, entirely destroyed the codling moth. It was shown that when the fruit was ripe all traces of the poison had passed away, and consequently no danger could ensue from its use. However, as there is a likelihood of this application proving dangerous, the suggestion was made to substitute other ingredients in its place, as, for instance, pyrethrum powder, which, although fatal to insects, is innocuous to the human family.

The N. Y. Tribune, in answer to a question, says that 123 pounds of the corn-fodder must be given to supply the same nutriment as 100 pounds of hay would contain. This may be considered as a fair approximate statement of the relative value of the two fodders, based on their chemical composition; as to statements of relative value based on experiment or experience, they are exceedingly scarce, while there is an abundance of testimony to the effect that corn-fodder is very valuable for Winter feeding.

Apples for Missouri.—We commend Prof. Husmann's list of apples for Missouri—ten for Winter, five for Fall and five for Summer:—

Winter.—Huntsman's Favorite, Ben Davis, Lawyer, Winesap, Jonathan, White Pippin, Rawle's Janet, Willow Twig, Missouri Pippin, and Small Romanite.

Autumn.—Grimes's Golden, Maiden's Blush, Fulton, Fameuse, and Rambo.

Summer.—Williams's Favorite, Lowell, Red June, Red Astrachan, and Early Harvest.

The editor of the Industrialist, published at the Agricultural College at Manhattan, Riley County, Kansas, under date of January 1, 1881, has the following to say of the "Grange Store" in Olathe:—"While at Olathe last week we became much interested in the co-operative Grange store of that place. This institution commenced business four years ago, with less capital than $1,000. It now does an enormous cash business, which it shows by the fact that during its existence it has divided net profits among its stockholders amounting to $28 000. The secret of this great success seems to be the strict adherence to the cash system, a very fortunate selection of the manager, and the existence of a wide-awake farming community about Olathe."

It is all very well to talk poetically about the slender thread of fate, but the ugly truth is that a man's fate generally depends upon the number of hours of honest work he puts into every day. . . . . .

It is truly said that there is only one way not to get cheated in a horse trade, and that is not to buy the horse. . . . . .

Dr. Boynton calls ensilage "Cow-krout. .

The Toronto Globe mentions a dairy where the churning power is supplied by a black bear of 100 pounds weight, which seems to really enjoy the treadmill and always when the butter comes gets a pan of milk as reward for his faithful tramp. It would be a good idea to reward other animals used for the same purpose in the same way. . . . . .

It was very hard on a celebrated physician to say that when he went hunting during his holiday it was the only time in the year when he didn't kill anything.—N. Y. Herald. . .

Erskine uniformly answered all begging letters as follows:—"Sir, I feel much honored by your application to me, and I beg to subscribe (here the reader had to turn over the page) myself your obedient servant." . . .

Mr. Pierson is proud of his own great State of Michigan. "Though younger than her sisters, she is now a grown and beautiful girl. She is withal a thrifty, prudent girl; keeps money in her pocket and is always ready to pay her debts. . . . . .

We see by the Michigan Farmer that Mr. Hiram Sibley owns the largest farm in the world, viz., 40,000 acres situated in Ford Co., Illinois. Mr. Sibley is now past 70 years of age though still energetic and in fine health. .

Prof. Husmann of the Rural World speaks of Green's Golden as a new seedling grape of deep golden, almost bronzy tint. He thinks it will prove a fine grape for family use It is a great bearer, very healthy; berry as large as the Concord, sweet, juicy and fine flavored. .

Mr. Boardman of the Home Farm (Maine) tells us a Mr. Burleigh is expected back from England the present month with a choice herd of the Aberdeen or Polled Angus cattle.

CATALOGUES, ETC., RECEIVED.

Proceedings of the Inter-State Agricultural Convention held at Springfield Nov. 30 to Dec. 2. J. K. Hudson, Topeka, Kansas, Secretary.

Everywhere.

RURAL SPECIAL REPORTS.

ALABAMA, South Lowell, Walker Co., Jan. 28.—The cotton season is about over. Owing to the continued wet weather, much of the staple was picked wet, and consequently much of the seed has heated and is spoiled for planting, and possibly a poor stand will be the result of next planting. B. A.

CANADA, Listowel, Perth Co., Feb. 1.—Very little can be said about the prospects here. There was a large acreage of wheat sown in the Fall and a moderate growth was attained, but not like the year before. The snow fell early and the ground has been well covered since. The farmers are doing more logging than for many Winters previous and prices for farm products being good, they are in good spirits and doing well. A. J. C.

CONN., South Glastonbury, Hartford Co., Jan. 31.—The extreme cold of the past month has severely tested the hardiness of our raspberries. The only varieties that have escaped are the Turner and Caroline, they showing no signs of injury. Brandywine, Cuthbert and Doolittle are badly damaged, but not entirely killed. All other varieties—some 15 in all—are killed to the snow line. Peach buds all right so far. The thermometer was 32° below zero here on the morning of January 1st and 10° below on the 24th. J. H. H.

ILLINOIS, Villa Ridge, Pulaski Co., Jan. 31.—The lowest temperature here was 6°. The snow has protected the strawberries. Young peach stock is badly damaged. There will be very few white and yellow peaches, while the red ones are nearly uninjured. I planted a half peck of Blount's corn first of June '80, three kernels to the hill, and in spite of a drought just as it was tasseling and shooting, with no extra cultivation, no manure, have harvested 37½ bushels of shelled corn. Average number of ears to a stalk, three and four, although quite a number had seven and eight ears and a few had nine. I consider the Corn Number invaluable. H. R. W.

ILL., Ludlow, Champaign Co., Jan. 24.—We have had steady Winter weather, without much variation for a couple of weeks, thawing little neither freezing hard. With a drizzling rain on the 18th, and since then signs of snow nearly every day but none falling to speak of. Roads good. Corn 30 cents; oats, 28 cents; live hogs, $4 25 per cwt.; butter, 18 cents. A. M. G.

MINN., Hawley, Clay Co,, Jan. 30.—As the weather and the amount and kind of crops produced in any section of country are always interesting to farmers, I will give you a few items. We have had steady cold weather with but little wind and snow. It has been very comfortable compared with what we sometimes get here. Wheat is our main money crop, but this year it was hardly up to an average yield. I hear of some who had 30 bushels per acre, while many others did not have half that amount. The trouble I believe is in poor farming, or in trying to cultivate too much land, and in many cases the seed is not adapted to the soil. Oats have been a good crop here; so has barley although there is but little of that grown. Potatoes were small and few in the hill; corn is but little grown; but let us get our land in good tilth and I see no reason why it will not do as well here as in northern New England. We have good success with cattle, and they must here, as every where else, be the foundation of successful farming. Our pasturing is practically unlimited. Hay of an extra quality can be put in the stack for two dollars a ton, and with our large straw piles for the cattle to run to, it will not require more than a ton and a half per head, to winter an average lot of cattle. Wheat is worth 80 cents per bushel; oats, 30 cents; barley, 45 cents; butter, 25 to 30 cents per pound. J. H. B.

N. J., Titusville, Mercer Co., Feb. 1.—Peach buds are nearly, if not quite, all destroyed, so that the peach crop must be very light in this section. I. J. B.

N. Y., Clinton, Oneida Co., Jan. 28.—The first cold snap, about December 1st, killed peach buds and all the cherries, except Early Richmond and other sour varieties. Trees are not injured. They went into Winter with wood well ripened, which is the all-important point. The cold of December was more fatal to buds from the dryness of the atmosphere. E. P. P.

N. Y., Himrods, Yates Co., Feb. 3.—We are having a fine Winter, with good sleighing. The cold has not hurt the buds yet; 13° below zero is the coldest it has been here. We are in need of water, as many wells are dry. Hay is scarce and straw is being fed up. Most farmers are selling off all the stock they can in order to winter through. G. A. B.

N. Y., Eddytown, Yates Co., Feb. 1.—February starts out right royally for Winter. The thermometer has stood at 3° to-day, and towards night is falling. We have had the finest run of sleighing I ever knew—snow enough for a good run and yet not enough to make it bad getting about in the fields and woods, and but a little drifted. I have examined only a few peach buds, but I find them nearly all killed. It was in a severely exposed locality. Other fruit I have not examined; I might say grape-wood is in good order. W. H. O.

OHIO, Garrettsville, Portage Co., Feb. 1.—Stock is doing well. Last season crops of all kinds were better than the average except potatoes which rotted badly. R. H. B.

PA., Pughtown, Chester Co., Jan. 29.—The weather has been very cold here, and the ground has been covered with snow since December 21. Ice is 15 inches thick. All the ice houses in this vicinity are filled. Our hay crop was a light one, but the rest of the crops were good. Wheat brings $1.10; rye, 70c; corn, 58; oats, 35; potatoes, 75; apples, $1.; butter, 35c; eggs, 38c; chickens, 13c. Hay is worth $20 per ton and hard coal $5. H.

VIRGINIA, Naffs, Franklin Co., Feb. 2.—We have had cold and snowy weather for five weeks. Dec. 20 snow fell to the depth of 17 inches and the thermometer dropped from the freezing point to eight or ten degrees below zero for several days. It has snowed to the depth of three or four inches several times since. Alternate freezing and thawing, snowing and raining have been the programme. The ice harvest has been bountiful. No farm work of any consequence has been done since Christmas and for once we miserable farmers could do nothing but get a little firewood, attend to our chores, eat our hash, toast our shins, burn our boots, read the dear old RURAL and all the other papers we could get. A word here for the RURAL. I candidly believe that, if each family in the U. S. would take it and read it, we would be a much better and happier people. Stock of all kinds are wintering badly, even with extra feed and care. Owing to very late seeding, wheat is looking very bad. The prospect is the poorest we have had at this season for several years. Wheat is worth from 90c. to $1.00 per bushel; corn, 40 to 45c; oats, from 33 to 35c; green apples 75c. per bushel; pork $5.50 to $6.00 per cwt; beef $3 50 to $5 00. Horses very low. Butter 15 to 25c. per pound; eggs, 20c. per doz, potatoes dull. J. W. N. & BRO.

VT., Newport, Orleans Co., Feb. 7.—We have had 75 days together now without a drop from the eaves. Thermometer, to-day, 25 degrees below. T. H. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

Manure Against Humus.

M. Y., Cincinnati, Ohio, asks whether commercial fertilizers or manure will furnish the humus in the soil which authorities state are "necessary and indispensable to vegetable growth, if it can be supplied to the soil in that manner, can it also be supplied through liquid manuring; would not liquid manuring be more available? Being in a soluble state, would not liquid manuring, other things being equal, give as good results as applying commercial fertilizers or manure to be plowed in.

ANS.—Humus, Liebig describes as "*vegetable matter in a state of decay* always containing ammonia in combination." A large amount of this vegetable matter renders stiff soils porous and easily pulverized. It absorbs and holds moisture and is therefore a protection against drought. It furnishes carbon to plants and furnishes the mineral elements of plants in a soluble form. It absorbs ammonia from the air and holds it for the use of crops. The carbonic acid of humus furnishes a solvent for many compounds in the soil, such as silicate of potash and phosphate of lime, rendering these available to plants. It may be considered a storehouse of plant food, and is a most important part of the composition of a soil.

But our correspondent seems to suppose that there is much soil devoid of vegetable matter, and is querying as to whether this may be replaced by commercial fertilizers which contain all the elements of the crops to be raised. Now, there is very little soil on any of our cultivated farms, however badly exhausted, devoid of humus. The value of humus, where the elements of crops are furnished by commercial manures or farm yard manure, is in its mechanical effect, and as an absorbent. The friability of a soil is important, but with plenty of the chemical elements of plants furnished to the soil in manure, and properly worked into a thoroughly pulverized soil there will be no lack of crops.

As to a judicious use of mineral fertilizers we can refer to Mr. John Prout's practice, on a stiff soil in England, for the last 20 years. This has as little vegetable matter as can be found upon almost any farm in this country. His farm of 340 acres has paid as good a profit as any farm in England for the last 17 years of continuous cropping with no aid save commercial fertilizers; and the crops have been sold off the land—nothing of them is returned to the soil.

He grows immense crops, and has applied from $10 to $13 worth of raw bone dust, superphosphate and guano per acre annually—sometimes applying dressings of potash or sulphate of ammonia. Humus is produced by the decay of vegetable matter, and if Mr. Prout applies the elements to grow his large crops every year, then the roots of those crops are left in the soil as an addition to what it possessed before. His crops are now double what they were at the start of his present practice, which would seem to prove that the humus of his soil has been constantly increasing.

Liquid manure, containing all the elements of fertility, is in the best possible form for application. But this is usually more difficult to handle, and cannot stand transportation. If a farm were so situated as to have liquid fertilizers convenient and cheap, they should be used; and liquid manure will distribute itself more evenly through the soil than in any other form.

But we believe, in this country of cheap land, it is more profitable, generally, to feed animals, and obtain the extra manure by purchasing food, than to pay money for commercial fertilizers. More pounds of nitrogen, phosphoric acid, and potash can be applied in the manure made from one hundred dollars worth of grain, linseed meal, cotton seed meal, and wheat bran fed to animals, than if the hundred dollars were paid direct for commercial fertilizers. And besides this the hundred dollars paid out for food may be received back in the growth or fattening of the animals, and the manure really costs little or nothing. It would extend this answer too long to give examples, but this is the direction that our farming on depleted land should take.

Miscellaneous.

W. H., Salem, N. Y., asks, 1, whether the catalpa and European Larch will prove hardy as far north as Troy, N. Y., and what is their value for posts as compared with chestnut; 2, what kind of locusts are used for posts and where can he obtain the young trees.

ANS.—1, Yes, the European Larch is hardy still further north—in Canada, if we mistake not. It needs a high, well drained situation to do its best. It is probably the most enduring timber we have. Experiments have been made to test the relative powers of this larch and the oak. Posts of each were driven in the water where they were alternately covered with water and then left dry. The oak posts were twice renewed while the larch posts remained almost unimpaired. As to the catalpa, it is thought a Western variety known as Speciosa is hardier than the species (Bignonoides). But, from our best information, it would not prove entirely hardy north of 42 degrees. As to the durability of the wood of the catalpa for posts, as compared with chestnut, unquestionably the former is far more valuable. 2, The Common and Clammy Locusts—Robinia Pseudacacia and viscosa. The first is best because the tree grows larger and the timber is heavier. You can obtain the young trees by planting seeds or from the nurserymen whose advertisements appear in our columns.

E. E. W., Cherokee, Iowa, 1, wants to know what kinds of apple trees to select for northwestern Iowa for Fall and Winter; 2, Is the Lady (Pomme d'api) suitable.

ANS.—The Report of the Western Iowa Horticultural Society for 188[illegible] (Geo. Van Houten, Lenox, Iowa, Secretary) gives the following revised list of apples for that section. *Ben Davis*, Jonathan, Wineasp, Roman Stem, Domine, *Talman Sweet*, Janet, *Iowa Blush*, *Walbridge*, Lowell, *St. Lawrence*, *Fameuse*, Chenango Strawberry, *Cole's Quince*, *Gros Pomier*, or *Haas*, *Red Astrachan*, *Duchess of Oldenburgh*, Early Harvest, Red June, Sweet June, *Sops of Wine*, *Wealthy*, Crabs, Hyslop and Whitney's No. 20. The hardiest of the above list are put in italics. Chenango Strawberry and Early Harvest are probably too tender for the northern part of the State. Lady Apple would also be likely to fail. Meader's Winter is a good substitute for it, and is perfectly hardy.

L. R. B., Benton, Oregon, asks, 1, whether cranberries will grow in a marsh flooded with tide-water, or must it be fresh water; 2, where can good plants be had; 3, how much a thousand do they cost; and how many will be needed to plant half an acre.

ANS.—1. The cranberry meadow must be flooded with fresh water; salt water is destructive to the fruit. For method of planting and cultivation, see RURAL of December 4th of the past year, page 798. 2. Good plants can be had of J. T. Lovett, Little Silver, N. J., but perhaps our inquirer can find them of good quality growing wild in Oregon, or in Northern California; if so, they can be got there. 3 The price varies. It is now $3 50 per thousand. 4. Plant six cuttings, every 12 inches, in drills three feet apart.

A. J. C., Listowel, Canada, asks, 1, whether it is any use to keep old Malvas for blooming; 2, how to make geraniums bloom in Winter; 3, the name of the best book on out-door vine culture, suitable for one who has no previous knowledge of vine culture and who lives so far north.

ANS.—1, We do not know what Malva is referred to. 2, By striking cuttings in August or potting in September. 3, Husman's "American Growing" is as good as any. American News Co.

H. O. B., Poteau, Kansas, asks when is the best time to sow buckwheat for early blooming for bees, and when for late blooming.

ANS.—Buckwheat is a poor honey plant, as the honey is very dark, and so it would seem poor policy to sow it for early crop of honey. It could not take the place of White or Alsike Clover. It blooms about six weeks after sowing, and is usually sown the last of June, so it comes into bloom in August. Bees will work on it two or three weeks if the weather is favorable. It would be well to sow at two or three different dates, at intervals of four or five days, commencing June 15th, and thus prolong the period of bloom.

J. T. S., Fountain, Ill., sends us a lock of wool from an 11-months-old lamb, and asks of what quality is it; whether it is a salable sort, and a good kind for growers to raise.

ANS.—The sample of wool is a coarse delaine wool or a fine worsted wool as graded in the market, and is a salable kind. It seems to be a mixed Cotswold and Merino grade and would be classed as combing wool. It should be a profitable kind to grow, having a staple over five inches long which is very good for a 11-months old lamb.

T. I. E., Pleasanton, Texas, asks whether the newly revised Bible has yet been published, and if so, where can he get a copy.

ANS.—No, it has not yet been published either here or across the Atlantic. As soon as it has been given to the press, several editions will doubtless be given to the public. An advertisement in last week's issue shows that the "Book Exchange" intends to publish two cheap editions.

J. W., Dry Saw Mills, Pa., asks full practical details of the process of taking tobacco from the poles in the shed and packing it in cases or boxes for market, as well as how the cases should be made and of what size.

ANS.—This question will be fully answered in our columns.

J. M. S., Jericho, N. Y., asks how to make factory cheese.

ANS.—The manufacture of factory cheese cannot be explained satisfactorily in the limits of a reply to an enquiry. After this week this subject will be treated fully in the series of articles entitled "The Dairy Cow."

J. C., Mattapan, Mass., asks who offers for sale the new pear, Directeur Alphand.

ANS.—It is this season offered only in France. We have no doubt our nurserymen will import and offer it for sale in due time if found suited to this country.

C. D. M., Wellsville, N. Y., having three tons of bones, asks how to make bone dust or manure out of them.

ANS.—This and several similar queries were fully answered by Prof. E. W. Stewart, in the issue of the RURAL for Feb. 5.

O. S. F., Blackstone, Mass., asks which potato is the earlier—Beauty of Hebron or Dunmore, and whether there is an earlier sort.

ANS.—We were not aware that the Dunmore was very early. Alpha is the earliest potato we know of.

S. S., Aurora, Indiana, wishes to learn where he can get Blount's corn, the white Elephant and other seeds.

ANS.—We refer our friend to the catalogues which from now on till Summer will be announced in our advertising columns.

D. N., Oakville, Washington Ter., sends three kinds of beans for name.

ANS.—No. 1, Dwarf Horticultural; 2, Royal White Riding; 3, Horticultural Pole or Speckled Cranberry.

W. M., Lexington, N. Y., asks whom he should address in sending articles for the domestic department.

ANS.—They may be addressed to Emily Maple at this office.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, FEB. 12.

G. S. S.—E. H. C.—D. B. M.—J. B. V.—Mrs. Bingham.—S. E. M. C.—N. A.—H. S.—A. L. J.—S. R.—W. C.—I. J. B.—B. P.—D. T. S.—W. C. H.—R. G., Jr.—L. S. B.—A. J. C.—V. B.—Jor.—M. C.—T. T. L.—W. [illegible], T.—J. B.—M. W. F.—A. B. A.—T. R. D. J. C.—E. E. W.—E. P. P.—M. S.—G. A. G. W.—"Old Maid No. 3."—J. T. S.—J. S. W.—J. W. N. and Bro., thanks.—E. H. C.—D. B. M.—[illegible]. W,—W. W. T.—D. N., seeds not yet come to hand.—T. H. H.—Shrub No. will, we fear, delay the report too long.—W. V. A.—R. G.—T. P. D.—T. T. L.—W. P. S.—E. P. P.—N. R.—C. P. F.—J. B.—L. B. and E. P.—E. W. E.—J. F.—C. L. R.—J. W. K.—A. B. A.—Mrs. L. R.—J. J. V.—A. J. C.—E. W. S.—F. D. C.—J. H. H.—P. B. M.—J. H. [illegible].—D. A. V.—L. V R. S.—J. H. S.—P. H.—G. S. W.—T. T. L.—C. S.—F. W. S.—W. K. E.—M. L. R.—F. McH.—A. D.

THE
Rural New-Yorker,

PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, FEB. 19, 1881.

WE may now announce that the SMALL FRUIT SPECIAL of the RURAL NEW-YORKER will be dated March 5th. By small fruits we mean Grapes, Strawberries, Raspberries, Blackberries, Gooseberries and Currants.

THE present Free Seed and Plant Distribution of the RURAL NEW-YORKER will be begun in a few weeks. It is our desire and intention to begin it earlier than we were enabled to do last year. We are now only awaiting the arrival of seed from France, ordered a long time ago. We have already sent out the White Elephant Potato to many, availing ourselves of warm spells. If not received in a perfect condition, friends will please notify us by postal card.

CORRESPONDENTS sending us specimens of fruit, grain, flowers or, indeed, of any kind, will confer a favor by writing their names and addresses in full upon the outside of the package. This is now permitted by the Post-office Department.

IT IS A FACT worthy of some thought that the apple which, through the West is considered the most popular and most profitable for the orchardist—which sells most readily to dealers and to the people, should be one which, to use the Prairie Farmer's words, "is neither fit to eat nor to cook." We refer to the Ben Davis.

AS BETWEEN German and English Chiccory, we learn that our coffee houses prefer the English, but that they import the German because it costs less. The very best article can be sold here for from four to five cents the pound. We do not know why every farmer should not raise his own Chiccory. The quantity of this mixed with ground coffee and often sold as pure ground coffee is immense. But the adulteration in this case is less harmful than coffee itself of the best and purest quality.

OUR "Everywhere" correspondents will kindly bear with us that, owing to our Special Numbers, their communications have not received the usual prompt attention which we are always glad to give them.

For the same reason we have also been obliged to neglect the "Querist" Department, as also for the additional reason that we are receiving a greater number of questions than it is possible to answer without enlarging the space which we have devoted to them, thus trenching upon other Departments which may be deemed of equal value by our readers.

THE AMERICAN MAGNUM BONUM POTATO was sent to us by the originator last Spring for trial. It was tested at the Rural Grounds—not at the Rural Farm, as it should have been—and no record was kept either of the quantity of seed planted or of the yield. But this we may say: The yield was large and the quality of the potato excellent. We learn that this has been tested in many parts of the country, and that the reports are generally very favorable. It is rather unfortunate, in view of its becoming a standard variety, that there is an English Magnum Bonum, which, besides being much thought of in England, is likewise favorably reported upon here. Both kinds are now offered by American seedsmen.

MANY writers upon horticultural topics recommend smearing the trunks of trees with meat or blood, the use of tarred paper, tying laths, &c., about them as a protection against the depredations of rabbits.

Our attention was called a week or so ago to the fact that rabbits were gnawing and biting off the smaller branches of our low-growing young fruit trees. The main-stem was in no case harmed. These stems had previously been washed with a mixture of lime, whale-oil soap, &c. Attributing their escape from rabbit attacks to this wash, we at once washed all of the branches within reach of the rabbits with the same wash. So far as we can ascertain the rabbit depredations have ceased.

FROM his reply to a letter of ours, written to Dr. J. B. Lawes, of England, respecting the extent to which our corn was influenced by the fertilizer used, we take the liberty of printing the following:

"I am disposed to hold the same opinion as yourself that the bone has little to do with the immense yields. At the same time the food must come from somewhere. All our experiments are tending more and more to draw the line between the food which plants obtain from the atmosphere and that which they obtain from the soil. When once this is done; when we cease looking up to the air for the fertility which is all the while lying under our feet, we shall then see plainly very much which is at present obscure. England is experiencing the most severe Winter which has occurred since 1838–9. I think there is sufficient snow to protect the wheat."

SHORT-HORN CATTLE SALES AT AUCTION IN ENGLAND FOR THE YEAR 1880.—We find a report of this in the London Live Stock Almanac, by Mr. Thornton. The total sales were 46; the number of animals sold 1,738. The highest price obtained was 2,000 guineas ($10,000); the lowest price two and a half guineas ($12.50); the average price of each £35, 4s. 6d. (about $170); the total amount £61,220, 4s. 6d. (about 294,000). We do not know how this compares with the American auction sales for 1880, but presume Mr. Allen will give them to us in his forthcoming volume (the 20th) of the Short-horn Herd Book, which will be published in a few weeks. But there is this difference between English and American sales to be considered, in estimating the whole number of Short-horns sold on each side of the Atlantic the past year, those in England being chiefly at auction, while those in America were largely made privately, of which no record is made or can be obtained.

THE FOOT AND MOUTH DISEASE.

THIS has again become very virulent in England, and is doing great injury to the herds there. Up to the middle of January it had already appeared in 29 counties, and was rapidly spreading over the kingdom. The effect of this will be very disastrous to horned stock, and lessen the production of calves materially for the two coming years at least. This is a deplorable calamity to English farmers, following the disastrous weather and short, bad harvest of the years 1867, '8 and '9. The effect will be to make a greater demand for American dead meat and cattle, which we shall do well to strive to meet with an improved quality of beef. At the same time we have to look out sharp to see that the disease does not spread in our herds at home. It is to be hoped that Congress will not adjourn till a general effective law is passed to meet this danger. It may save us ultimately from great disaster and terribly heavy losses. Without such a law no man's cattle are safe in America, for single State laws cannot prevent the spread of the disease.

OUR GREAT CROP.

THE Iowa State Agricultural Society has recently published some curious facts with regard to the productions of that great Western State. Among the figures those relating to corn are the most curious. The product of corn last year was over 230,000,000 bushels, grown on nearly 5,750,000 of acres, yielding an average of 40 bushels per acre. The value of the crop was more than 50 per cent. greater than that of wheat. But estimating the quantity consumed in the State at the very liberal amount of 40 bushels per head for horses, mules and horned beasts, cows included; 10 bushels for every hog; half a bushel for each person, and 5,000,000 bushels for manufactures (whiskey chiefly), there is left more than 100,000,000 of bushels for disposal in other directions. As the whole of the foreign export was only 100,000,000 bushels last year, clearly all the surplus from Iowa could not have gone abroad. Where then did it go? How much was purchased in the Southern, Middle and Eastern States and used by farmers there? Probably the disappearance may be explained in that way. There is an ample outlet in foreign countries for all the Western corn that can be grown. Our exports are growing enormously and the more the Europeans get of our corn the more they want of it. In 1879 the exports were 77,000,000 bushels; in 1880, there were more than 100,000,000. What they will be in five or ten years who can guess?

THE COTTON INDUSTRY.

THE late census report exhibits some interesting figures concerning cotton manufacture in this country. The greatest increase in the number of looms is in the New England States, where in 1870 there were 114,982, and in 1880 185,743, an increase of 70,761, and the number of spindles now in operation being 8,806,317 against 6,498,308 ten years ago.

The increase in the consumption of cotton in the different portions of the Union is noticeable.

In New England the increase in ten years is 83 per cent.; in the Southern 146 per cent.; in the Middle States 18 per cent. and in the Western 150 per cent., and the whole number of pounds of cotton consumed by the manufacturies as shown by the last report is 304,893,650 greater than in 1870.

The Middle States, it appears, are falling far behind the others in cotton manufacture. Pennsylvania actually consumes less cotton than in 1860, while the South, although laboring under a protective tariff on machinery of 37½ per cent., now manufactures more than all the Middle and Western States together. The business which the South is destined to do in the line of raising and manufacturing cotton will be unrivaled. An enormous amount of capital can be saved by manufacturers there as soon as they possess the advantages which New England has in improved machinery, and as long as their management is economical and skillful.

The saving in labor, freights, commissions and cost of material will enable them to compete with the sisters States, and could the oppressive duties on cotton machinery be removed, mills in the South would be greatly increased in number and efficiency.

FOOD ADULTERATION.

THE adulteration of food, condiments and beverages, has become an immense business from which some very respectable people derive very respectable profits. But all this is so artfully done that in many articles of diet it is quite impossible for the majority of people to detect the "cheat," and we are inclined to praise the skill displayed in this work at the same time that we denounce this policy of deception.

Many people would not seriously object to eating oleomargarine, knowing it to be such, but they do object to eating it for butter. When sold as oleomargarine it is well enough, for when properly manufactured it is much more wholesome and nutritious than poor butter.

Pulverized sugar has many properties that would not make it "half so sweet" if we knew what they were. The presence of certain acids is necessary in order to correct the dull, yellow color of the cane sugar, and glucose is now largely used in sugar manufacture, so largely, indeed, in one instance that it is said a single firm in one year realized as profits $1,000,000 on a capital of $400 000. Glucose sirup mixed with low grade molasses makes an excellent golden sirup, which sells well in market, or when allowed to harden it can be ground up and mixed with low-grade dark-brown sugar, and a substance results having the appearance of a refined, light-brown sugar, though not quite as sweet.

Is it necessary to speak of milk adulteration? What did the analysis of 45 cans of milk in New York show? Simply that the quantity of water extenuation was about one quart to three and that in this way water was bringing the comfortable price of eight or ten cents per quart. Not much, indeed, if one were dying of thirst on the Great Desert, but rather high here. And so we might go on through the list, finding in confectionery almost every metallic poison known to science; in coffee, various quantities of chiccory and other substances; in certain teas, 35 per cent. of poisonous substances; in pickles, blue vitriol and alum; in pepper, mustard husks, etc., to the extent, in an extreme case, of 98 pounds to two pounds of pure pepper, and in vinegar corrosive sublimate was found. It is gratifying to know that, in some sections of the country, not only individuals but corporations are becoming thoroughly awakened to this kind of fraud and imposition, and are waging an unrelenting warfare against it, and we trust that at no distant day such preventive means will be used as that no article shall be sold, in quantities large or small, under any other name than its proper one.

BREVITIES.

THE present Winter will prove a severe test as to the hardiness of the Japan Maples. Ours are not harmed as yet.

ALL accounts, thus far, from those who have constructed silos and are feeding the ensilage, are favorable to the system.

WE see that a sovereign for three or four miles was not an uncommon charge by the cabmen of London during the late snow obstructions.

OWING to a press of matter in this week's issue of the RURAL, the reports of the Mangels have been crowded out. They will be presented next week.

THOSE of our small fruit growers who have had any *experience* with the Bidwell Strawberry would oblige us by communicating the results of such experience.

MR. W. A. WESTCOTT, of Vienna, is the only one who has correctly read the Rebus in the Corn number of the RURAL. "Thistle bee acorn a dish on"—This will be a corn edition.

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

GENERALLY speaking, we have a liking—not to say a respect—for "old-fashioned" things. But the present Winter has been quite too old-fashioned to suit us. It has gone to an extreme—and "extremes meet."

A PETITION has been signed by many praying the Legislature of Massachusetts to investigate the whole question of ensilage—what crops are best for the purpose and at what stage to cut them. Our agricultural colleges, especially that at Lansing, Mich., should test the question.

THE New York Sun in its agricultural columns expresses the opinion that the best thing to be done is to abolish the Department of Agriculture at once, for the reason that good and efficient men have never been selected as Commissioners. Working upon this plan throughout, what should we do for a Government?

LOST NATION and White Russian Spring wheats seem to have done well in Western Canada. Some of our *Winter* Lost Nation was, as an experiment, planted (by hand) about a foot apart each way upon a finely-prepared seed-bed. If there is any weakness about this variety, the present trying Winter will be very likely to reveal it.

CHICCORY does best in land suitable for, and treated the same as, carrots. It is best to sow in drills about two feet apart on well-prepared land. It is just as important as with onions that the land should be kept rid of weeds until the chiccory is well started. Afterwards it is as well able as any plant we know of to "take care of itself." In the drill the plants should be thinned to about a foot apart. The roots should be washed and dried; then roasted and ground. It is said that chiccory is a valuable plant as forage for sheep. We should like to hear from some of our sheep husbandry writers on the subject, as we have had no experience ourselves.

PREMATURE CALVES.—The late Earl Spencer, registered the result of pregnancy of 764 cows, and found that no live calf was born under the 220th day from the service of the bull; and that he had never been able to rear one born under the 242nd. day. A writer in the English Agricultural Gazette, adds to this, that he has a calf dropped the 240th day after service, and it is as fat and lively a calf of its age as one commonly sees, being three months and seven days old at the time of his writing. This birth was two days less than the record of Earl Spencer. It was the produce of a Herd Book Short-horn cow, which tells something in favor of this fine, high bred race of cattle.

A REPORT on the varieties of cane best adapted for sirup and sugar, made to the Mississippi Valley Cane Growers' Association, states that Early Amber is the earliest of all, and is valuable for its light-colored sirup which is rich in sugar. But there are objections to it south of the 40th parallel. Early Hybrid ripens five to ten days later. It has a large cane and is well adapted to poor soils, but it is liable to lodge on rich soils. The Kansas Orange is superior to the Amber as to yield and quality of sirup—200 gallons being a fair yield. This ripens about ten days later than the Amber. The Early Orange is at least 15 days later than the Amber and yields 50 per cent. more. Its sugar is superior. This and Kansas Orange are recommended in the report for the main crops in the latitude of 40 and south and for trial north.

OSTRICH farming is taking the place of sheep husbandry in some parts of Cape Colony. Advices of a late date from Port Elizabeth tell us that thereabouts farm after farm is being cleared of sheep to make room for ostriches which had become "all the rage" as no other industry is so profitable. Recently several joint-stock companies had been started for working the farms on a large scale. The exports of feathers from the above little port during the first nine months of last year amounted to over half a million pounds sterling, or about $2,500,000. The demand was fully up to the increased supply, and while prices were excellent for ordinary feathers, there was the keenest competition for choice specimens. The method of ostrich farming at the Cape of Good Hope was fully described in a profusely illustrated article in the RURAL, for April 27, 1878. We have not heard that any one has embarked in the business in this country, though it might be found profitable in some sections.

For Women.

CONDUCTED BY MISS RAY CLARK.

"THE NAME OF MOTHER."

THERE are words that speak of a quenchless love
Which burns in the hearts we cherish,
And accents that tell of a friendship that proved,
And will never blight or perish.
There are soft words murmured by dear, dear lips,
Far richer than any other:
But the sweetest word that the ear hath heard,
Is the blessed name of Mother.

Oh, magical word! may it never die
From the lips that love to speak it,
Nor melt away from the trusting hearts
That ever would break to keep it.
Was there ever a name that lived like this?
Will there ever be such another?
The angels have reared in Heaven a shrine
For the holy name of Mother.

TO THE SWEETBRIER.

OUR sweet, autumnal, western-scented wind
Robs of its odor none so sweet a flower
(In all the blooming waste it left behind)
As that the sweetbrier yields. And the shower
Wets not a rose that buds in beauty's bower
One half so lovely; yet it grows along
The poor girl's pathway—by the poor man's door.
Such are the simple folks it dwells among,
And humble as the bud, thus humble be the song.

I love it, for it takes its untouched stand
Not in the vase that sculptors decorate—
Its sweetness all is of my native land;
And e'en its fragrant leaf has not its mate
Among the perfume which the rich and great
Buy from the odors of the spicy east.
You love *your* flowers and plants, and will you hate
This little four-leaved rose that I love best.
That freshest will awake, and sweetest go to rest?

DESCRIPTION OF CUTS.

FIG. 101.—CHILD'S BONNET.

The bonnet is of blue plush, trimmed with satin ribbon. Cap of cream-colored lace.

FIG. 102.—HOOD.

This hood is of pekin. It is lined with satin, and is ornamented with cord and tassel.

FIG. 103.—PELERINE.

THE pelerine is of pale blue plush, trimmed with cream-colored pleated Bretonne lace.

FIG. 104.—KNITTED SOLE WITH TOE.

Materials required: 3 oz. white lambs-wool and four knitting-pins.

This sole is intended to be worn inside the slippers during cold weather. Commence at the heel. For an ordinary ladies' size, cast on 15 stitches, knit backwards and forwards for 20 rows, increasing one at the beginning of every row; from the 21st to 40th row decrease by knitting two together at the beginning of every other row; from the 41st to the 50th row knit without increase or decrease.

51st to 61st rows: Increase at the beginning of every row; now take two other pins and cast on 20 stitches on each; knit two and purl two on the 40 stitches, knit the sole stitches plain; continue thus for ten rounds, then knit all round for five rounds. Now commence the decrease for the toe by knitting two together in every third round, at the beginning of the first front pin, at the end of the second, and at the beginning and end of the sole pin; continue to decrease until only ten stitches are left; slip the stitches from one of the front pins on to the other, place the pins two together, and cast off both rows of stitches together.

FIG. 105.—FIRE-SCREEN.

The frame of the screen should be made the size to suit the room. The balls on which the screen stands, and the ornaments at the top, are gilt. The screen is of quilted satin, to match the drapery of the room for which it is intended, with a stripe of poonah painting, on white velvet, in the center of each fold. Embroidery may be substituted, if preferred, for the poonah painting.

FIG. 106.—HOME-DRESS.

The dress is shown in different materials. Fig. 1, showing the back, is of two shades of brown checked material, with woven border which forms the trimmings; it is laced at the back. Fig. 2, is of dark-green plaid; fichu of coffee-colored lace.

ALLINE AND I AGREE.

WE are all glad to know that Alline Ray's husband is "one of the exceptions who does not need to be pulled over the coals." We hope he is not in the situation of that good man who said he had been married twenty years and never given his wife a cross word yet. The neighbors said, "he didn't dare to."

However the case may be, we all feel sure Alline dares to speak up for herself if oppressed. Not being a farmer's wife, and having nearly always had help in the kitchen for twenty years I cannot be accused of "speaking in meeting," on my own account—when I do reiterate what Alline says about the sin and shame of farmers wives working on as they do single-handed, under burdens that might crush an elephant.

I am convinced that the fault is in the beginning. Young husbands are very pliable and can be made to see that help is really one of the necessities of the household, the same as flour and one that must be provided for. Let a wife drudge on a few years without this help and he will begin to think that she always can.

The fault too often is with the ambitious young wife; she wants to please Mrs. Grundy, she wants to be thought just as smart as her next neighbor and she will show that she is, whatever the sacrifice. Where there is a smart woman in the case do not lay all the blame on the poor husband. Many wives will not have help, except in a case of life and death. They will not "put up" with their shiftless ways. It is a trial to any of us, but it is always wise to choose the better of two evils. Be sure you start right. OLIVE.

MARRY A GENTLEMAN.

"MARRY a gentleman, girls, if you can," was the heading of a little poem which appeared in the RURAL some weeks ago. I do not remember anything else about it, but I want to add emphatically if you cannot, do not marry at all.

A gentleman, that is not merely a man above the need of work; there are scores of those who

FIG. 105.

are anything but gentlemen; but a man who knows how to work, who has self-respect enough to keep him from low habits both of speech and action; who is courteous and honorable; who is not afraid of soiling his hands; the farmer, the blacksmith, the carpenter, any man may be a gentleman under dust and soot and chips, but if he is not, girls, don't marry him at all!

There is enough trouble in life without increasing it in any way. Do not subject yourself to the mortification that would be sure to come with a husband who would continually cause you to blush for his lawless actions, for his coarseness and roughness, for his slippery dealings or for his hypocritical polish. And you, whose youthful heads are full of romantic ideas, do not let your susceptible hearts be taken by flashy clothes and an "air," by a show of wealth or by flowery compliments. The true man does not indulge much in that kind of thing. Wealth is a good thing, but it is not all; poverty is bad, but it is not the worst trial we can have.

There is many a woman who apparently deliberates more over a new hat, or the cut of a dress, than she does over the character of the man who asks her to marry him. Do not rush into it without due consideration. Make yourself worthy of a gentleman, and if you cannot marry one, do not marry at all. R. B.

CORRESPONDENTS' CORNER.

IN reading Mary Wager Fisher's communication in RURAL of Jan. 8th, concerning the use of scraps of silk and velvet, I was much interested, as it seemed easy and sensible. After collecting and smoothing out my stock, I was puzzled to know how to begin, and, seeing you answer inquiries, I have written to ask if she would illustrate a black one of the many she has made, and truly oblige

N. Y. A. NEW SUBSCRIBER.

In Mrs. W. V. A.'s letter mention is made of cat stitch. I would like an illustration of the stitch if convenient. By so doing you will oblige a constant reader and admirer of the "Old RURAL."

N. Y. MRS. R. S.

Will Mrs. W. V. A. accommodate? R. C.

DISCOURAGED.

YES, I really feel discouraged, after reading "Female Farming Extraordinary," and it is enough to make any ordinary woman feel so.

I have been over all those sixty-five acres of corn, those acres of millet, wheat, etc., and tried in vain to satisfy my mind that it could be legitimately done, I have thought about that house, and wondered how many beds there were to be made up each morning and if the *extra*-ordinary female did them all. Wondered if she got the breakfast and washed the dishes. Wondered what she cooked for dinner, and how much washing and ironing she had each week. Wondered if she did all the sewing and if she copied her serials herself. Wondered—well I wondered until my head ached and I said—"pshaw! I can't believe it.

Now, "W. F. Jr." do let us hear from you immediately; tell us that you wrote that article for a joke, or that you are a relative of Eli Perkins or Mark Twain, and we'll forgive you and let it pass—for what it appears to be.

I wish you had stated more explicitly what the "dirty work on the farm" consisted of, what the little girl did, and how old she is.

I can imagine "Edgerton" exclaiming, with tragic gesture as he viewed those luxuriant fields and saw the flutter of his wife's skirts as she followed the plow or harrow, "Othello's occupation gone!"

No wonder she is a fragile looking creature after doing all that work it would not be surprising if she were "gaunt and bony."

ALLINE RAY.

1. FIG. 106. 2.

Literary Miscellany.

THE OLD YEAR AND THE NEW.

THE year whose hours have lately closed
Both cheer and gloom have brought,
Yet we are privileged to view,
With hope the future fraught.

Sickness and sufferings, painful hours,
Our cherished ones have tried,
Yet has a sympathetic friend
Been ever at our side.

Thus though affliction's bitter pangs
Our anguished hearts may wring,
Of God's great mercies in the past
We gratefully may sing.

And as the bright New Year begins
We would devoutly pray
That God would grant us needed strength
Sufficient for each day.

We may not pierce within the veil
Thy future will to see,
But we can safely trust our lives,
Our all, O, God, with Thee.

Though parted, lonely and perplexed,
Without a fixed abode;
Unite us daily as we bend
Before Thy throne, O God.

So bless, and so support our souls
Midst coming joy and woes,
That we may through the year be Thine
Until its moments close.

If joy or sorrow, life or death,
By God's decree be given,
On Christ our Rock be all our trust
The Lord of Earth and Heaven.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Concluded from page 91.)

I looked fiercely at the fellow, throwing all the fire of my diminished soul into my eyes, for I thought him the most coolly and genteelly impudent hotel clerk that I had ever met. He returned my gaze with a look of such unperturbed and benignant dignity, mingled with so much surprise, that my heart quailed before his commanding impudence, and there was nothing left for me to do but to swallow my indignation and walk away like an injured man. As I did so my eye caught what I took to be a vender of cigars in a distant corner stowing away his wares for the night. I had always found something soothing in a smoke before retiring, so I stepped up to the man and asked him for a cigar.

"Cigar!" he repeated, "I haven't it, sir. Who is the editor of it or where is it published?"

As I saw nothing but papers and magazines on the counter, it struck me that I had made the mistake of confounding a dealer in news with a dealer in cigars, and that the fellow was disposed to make a joke out of my mistake at my expense. I felt indignant, but knowing at what a great disadvantage a man in anger is always placed, I resolved to preserve a calm exterior. "And you have no tobacco either, I suppose," said I, looking fiercely at him.

"Pardon me, sir," said he, "but I deal exclusively in papers and magazines."

"As you have a perfect right to do, if you choose, I suppose," said I, "but in my country it is not considered at all disgraceful to sell smoking utensils by the side of papers and magazines; and peculiarly, very advantageous."

"May I ask, sir," said he, "what you mean by smoking utensils?"

Why, pipes, tobacco, and cigars," I replied.

"Do you never make use of these articles for smoking in this country?"

"I have never heard of them being used for that purpose," he replied. "Or, yes; come to think, I believe florists and agriculturists sometimes make use of a substance called tobacco to smoke the lice off of plants."

I did not know what to make of the fellow; he seemed so thoroughly honest in all he said, and was so courteous and gentlemanly in his manner that I could scarcely believe that he was as deliberately insulting in intention as his words seemed to imply. After thinking the matter over, and reflecting that I had not seen a single smoker among the people whom I had observed, I came to the conclusion that tobacco using as a personal habit was unknown in this country. But that a person connected with a fashionable hotel should confound "cigar" with a paper or magazine struck me as being exceedingly funny.

Without being permitted to enjoy the solace of a cigar or a glass of brandy, I retired to my room. This was a good-sized apartment, tasteful and neat in its appointments, and furnished with every convenience that could be desired. I sat down by the window which overlooked a principal street. The light, which was blazing with all its power when I entered the hotel was now reduced to a mere glimmer, sufficient to light an traveler on his way whom necessity might compe

to be abroad. There was no rumbling of cars; no tramp of feet, no rattling of carriages, and clatter of horses hoofs upon the pavement; but everything betokened that quiet repose to which it was the custom of the city to devote the hours of night.

There was little to interest me at the window, so I soon turned from it and went to bed. It was a long time, however, before my mind ceased to revolve the events of the evening, and I composed myself to sleep.

CHAPTER II.

BREAKFAST HABITS OF THE PEOPLE.

I awoke in the morning quite refreshed, and quickly making my toilet, I sought the breakfast-room, for my long fast had made my appetite ravenous. The large hall was already filled with guests—noble-looking men and women—who gazed at me as I passed down the long hall with much the same curiosity that I suppose we would look upon a harmless and respectable inhabitant of the islands of the Caribbean sea. I affected to be indifferent to their observation, however, and took the seat proffered me by a waiter with an air of much importance.

"Coffee, porter-house steak and a hot roll," said I, sententiously, taking no notice of the bill of fare which the waiter placed before me. He looked at me and shook his head dubiously. Evidently he thought I was speaking in a foreign language, for, without saying a word, and looking at me significantly, he pointed to the bill of fare. I looked it over. It was meagre and plain enough to suit the most abstemious habit. So far as I could understand the dishes, they were composed chiefly of grains and vegetables. Mush seemed to be the favorite dish with the guests, for as I looked over the hall nine-tenths of the breakfasters were engaged with bowls and spoons.

I called for a dish of *oatrena*, at a venture, and was about to supplement my order with several other dishes in order to give variety to my repast, but when I looked up the waiter was gone. A minute afterward he returned, bearing a bowl of milk and a dish which proved to be oat-meal. For oat-meal it was certainly very palatable, but my taste was not simple enough to relish it in the same degree that I saw those around me doing. I craved my cup of coffee and my hot roll.

FIG. 101.

"Can you not give me a cup of coffee?" I asked of the waiter.

"Coffee!" he repeated. "No, sir; I have never heard of that dish."

"Never heard of coffee!" I exclaimed, "and a waiter in such a grand hotel as this."

"I must confess that the dish is quite unknown to me," he replied, "and I doubt if you would be able to find it in the city. Perhaps, however, it may be a dish well known among us, but called by another name in your country, for I judge you to be a foreigner."

The fact is," I said, "it is not a *dish* at all, but a drink."

"A drink!" he exclaimed. "Then it certainly cannot be known among us; for we never drink anything in this country but water and milk."

"You don't say so!" I exclaimed. "Milk and water, eh! Really now, my good fellow," I continued, in a sly and confiding manner, "you don't mean to say that you never take a nip now and then when you are out of an evening, skylarking with your friends"

"Excuse me, sir," said he, with an air of dignity which would have become a statesman. "You use terms which are quite incomprehensible to me. But so far as I am able to judge from your manner, the idea which you intend to convey is not at all complementary to my personal worthiness."

I looked at the fellow in surprise. His appearance was all that this language seemed to imply. Indeed, he had so much the look and manner of a true born gentleman, that I felt constrained to ask his pardon for being so familiar.

"Is it not the custom of this country to eat meat at breakfast?" I asked, glad to change the subject into another channel.

"Meat!" he repeated with a puzzled look, as though he did not comprehend the meaning of the word

"Yes, meat," I replied, "the flesh of animals."

He looked at me with a horrified expression, as though I were a cannibal with my knife drawn to whip off a tidbit from his plump, finely developed person.

"It is not the custom of our country to eat the flesh of animals at all," said he.

"Well! well!" I exclaimed. "Vegetarians, and yet a race of vigorous, muscular, and finely developed people! Surely you must have some substitute for meat beside the fruits of the earth. Why in my country meat is considered the very juice of life among articles of food."

At this juncture the waiter went off to serve a newly arrived guest, and my query was left to be answered by my own observation. The substantial part of the meal seemed to be now pretty generally finished, and the waiters were distributing among the guests dishes of various kinds of fruit, the largest and most luscious in appearance that I had ever seen. Though I had arrived late in the breakfast hall, I was ready for the dessert as soon as any, for I was always a rapid eater, while the other guests seemed to devote themselves to the meal with a deliberation, which, for the morning repast, seemed to indicate that business was not at all pressing. They talked and joked and laughed much after the manner of invited guests at an evening repast, after the cares and labors of the day have been concluded. But my surprise at the

FIG. 102.

want of impatience to get off to business which characterized the guests was increased when, the last course of the meal being scarcely finished, the room was suddenly filled with the most delightful music, which held the people to their seats for a full half hour after the meal had been concluded. I looked about me in every direction for the source of the music, but it was so etherial that it seemed to pervade equally every portion of the room. To me, at least, its influence was delightfully soothing. Every mental faculty seemed lulled to repose, and, scarcely conscious of the existence of bodily organs, every necessary function was performed without a disturbing influence.

As soon as the music ceased the guests left the hall with one consent and departed to their various avocations. There was no lounging about the office of the hotel, smoking and gossiping, but each one seemed to have business to do and went directly about it.

CHAPTER III.

WHAT I LEARNED OF THE PEOPLE FROM THEIR NEWSPAPERS.

I stepped up to my friend, the news-dealer, and asked him for a morning paper.

"Which will you have," he inquired, "the Chronicle, the Messenger or the Intelligencer?"

"What are their politics?" I asked in return; for it had always been the pride of our family that we never read any but Republican papers.

"Politics!" he exclaimed, with a look of surprise. "They have no politics; that is, if I have a correct apprehension of the term. You refer, I suppose, to their opinions upon questions of government."

"Exactly. And do you mean me to understand that there is no diversity of opinion upon questions of this character among your newspaper men?"

"None whatever. Our government is very simple, and founded upon axioms to which all the people give a unanimous assent."

"Indeed," said I. "Happy, then, must be your condition as a people. But pray, sir, what do your newspaper men find with which to fill up their columns?"

"They deal mainly with questions of science. In recording discoveries, sifting opinions and discussing hypotheses they find abundance of entertaining information to impart to their readers."

"And do the people in general take an interest in these scientific discussions?"

"Certainly. They have their preferences, of course. Some are particularly interested in what is transpiring in the worlds about us. These take the Chronicle; for, aside from the general news of the country, this is peculiarly the organ of the Astronomers Others take a special interest in the pre-adamite world and its inhabitants. These read the Messenger, as it is devoted to the discussion of questions relating to the early period of the earth's existence. So every leading paper is the special organ of some branch of science, at the same time that it is the chronicler of the general news of the country."

A dozen questions at once arose in my mind relating to this peculiarity of newspaper enterprise, but, having some pride in not wishing to show my utter ignorance of such common matters, I bought the three leading papers and sat down to give them an examination.

I first took up the Chronicle. Its leading article on the first page was an account of recent discoveries in the planet Jupiter. It seemed that a certain ingenious and astute astronomer had lately perfected an improvement in astronomical instruments by which the heavenly bodies were brought some millions of miles nearer the earth than they had ever been before. Thus the planet Jupiter, which had been enlarged from a twinkling star to a great disk, with valleys and mountains clearly discernible, was now brought so much nearer to the earth that moving objects could be discovered in the dark ground between the shining belts of the planet.

Owing to the rapid revolution of the planet, and the obscurity doubtless arising from the shadow of its rings, or the mists of its atmosphere, it was a difficult matter to get a view of these moving objects sufficiently clear and continued to obtain a reliable idea of their forms and natures. Occasionally they would come out in strong relief, probably when a direct aspect was favored by a clear atmosphere, and a favorable conjunction of light from the planet's satellites. Then a rapid observation brought out their outline with sufficient distinctness to make certain that they were largely made up of hideous-looking monsters of the saurian order, something like those which inhabited the earth in one of its geological periods. They seemed to swarm in countless numbers, especially on the borders of what looked like glistening plains, which was probably the water or other fluid peculiar to the planet.

There were beside these, immense creatures which moved upon the land, and which seemed to appear and disappear among what was undoubtedly the foliage of the planet; and others were more hideous and uncouth still, which seemed to move with much rapidity over the face of both land and water. From this fact, and the striking peculiarity which they presented of alternately diminishing and increasing in size as they moved across the face of the planet, as well as the fact that they sometimes appeared as a moving mass behind which, as it moved along, every other object on the planet disappeared, it seemed reasonable to conjecture that they must be winged monsters, analogous to the Pterosauvians of our own primitive world.

In other respects the appearance of things on the planet seemed to indicate that it was in a very early period of its existence. There were great ranges of mountains, dark with forests, and great rivers flowing in the valleys, while now and then, as the planet revolved on its axis, a volcano, belching forth fire and smoke was brought into view. What appeared of the planet outside its rings was of a glistening brightness, variegated with darker shadings, which told of glaciers and great fields of snow and ice. But nothing which came within range of the teleseope spoke of an inhabitant possessed of reason and intelligence.

Such in brief was the gist of the article. I had to read it over several times to get a clear impression of it, it was so incumbered with scientific terms which I did not understand, and contained so many allusions to matters of which I was wholly ignorant.

The inhabitants of Mars and the condition of things generally on that planet were spoken of in such familiar language that it certainly appeared to me that some sort or telegraphic communication must have been established between the astronomers of these two neighbors in the planetary system; while from many allusions to Mercury and Venus, I inferred that the physical peculiarities of these planets were almost as well known as those of the earth itself.

Turning from the Chronicle to the Messenger, I found its leading article to be a long-winded and to me quite unintelligible dissertation on the remains of extinct animals of prehistoric time. I marveled that such articles should be found of as much interest to the general public as their place in a great daily paper seemed to imply. But I was continually forgetting that I had fallen among a very superior people; whose vigorous minds were capable of digesting such mental pabulum with the same facility and gusto that the general public of my own country devoured the political tirades, party glorifications, and public and domestic scandals with which they were daily regaled.

I next took up the Intelligencer to learn something of its peculiarities. But it was devoted to a science of which I had never even heard. It seemed to have some relation to the solar and lunar rays of light in connection with malarial emanations from the surface of the earth, but it was as profoundly dark and deep to my mental vision as a dessertation in protoplasm would be to a Goshoot Indian. I therefore turned for relief to the general news of the day. And, marvelous to relate, in each of the three great dailies, which were much greater in size, though printed in much larger type than the leading papers of my own land, the news of the country which was not distinctively scientific was included in a single page. And it was tame and uninteresting enough to accord completely with the other matter of the paper. The blood curdling murders, and brutals assults to which whole columns were devoted in the periodical of my country; the drunken lawlessness, the suicides, the robberies, the defalcations, the fires and other catastrophies on land and sea, by which human life is destroyed and

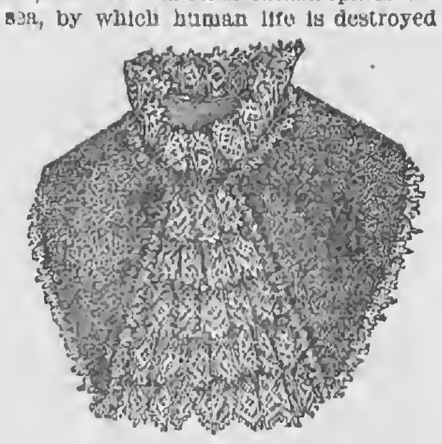


FIG. 103.

happy homes made desolate, the domestic scandals which the news mongers roll as sweet morsels under their tongues, the party jealousies and animosities; the scurrilous attacks upon men of an opposite political faith, in fine all those items of news gathered from near and far, with much assiduity and at great expense, which makes the newspapers of my own country in so large a degree a record of crime, human misery, human weakness and the activity of the debasing passions of our nature, all these were entirely excluded from the news columns of the papers before me.

Is it possible, thought I, that there can be none of these events to record, or are they excluded because popular sentiment disapproves of their publication. I inclined to the latter opinion, for great as was my regard for the virtue and intelligence of this people, I could not believe that they were raised so completely above the common accidents of life, and the common frailties of our nature, as the exclusion of such matters from their daily papers seemed to imply.

What, then, was the character of the general news of the country? It was made up of such dry information as marine intelligence, mercantile intelligence, agricultural intelligence, aerial intelligence; for it seemed that in this country travel by air-ships was as common as that by boats and railroads in my own. Death and marriage notices of eminent persons, discoveries and inventions of things generally useful, social items of popular interest, and matters relating to the municipal and state governments.

I could not but express surprise at the character and meagreness of this last class of news to which so much importance is given in the papers of my own land, and which too often pays but a poor compliment to the charitableness, purity and integrity of human nature.

Here is a sample or two from the Chronicle: "Mr. Jasper J. Praiseworthy, who has filled so acceptably the position of treasurer to the city of Hopewell for fifty-seven years has resigned on account of the increasing infirmities of age, and has appointed his son, who has been associated with him in the performance of his official duties for the past eight years, his successor."

"We learn from the semi-annual report of Governor Boyle that a surplus of $10,000 remains in the treasury after all claims against the government have been satisfied; and that he purposes devoting half of this amount to the relief of the sufferers by the recent hurricane in the province of Ventrolin. The remainder will be divided among those persons who sustained damage from the freshet on Hello Creek during last Spring, *pro rata*, to the amounts which they have severally reported."

"In accordance with the recommendation of the people of Menlith township, Governor Wendell has made such a modification of the regulations respecting the aerial postal service as the peculiar topography of that township seems to render necessary.

My mental comments on these items of government news may be easily imagined. They certainly corroborated the statement of the newsdealer that the government was very simple, and founded upon axioms to which the people give a unanimous assent. Such wonderful powers as seemed to be granted to the rulers, certainly appeared to me to betoken great unanimity among the people.—[To be continued.

A REMINISCENCE OF BOOTH, THE ACTOR.

One day, while Booth, the father of the present world-renowned actor, was rusticating in the country, enjoying much-needed rest, he was accosted by a friend, and after the usual salutations were passed, conversation naturally turned to acting, recitation and kindred subjects. The friend remarked, "Now, Mr. Booth, I would like to ask if you have ever heard the Lord's Prayer read or repeated with anything like the earnestness and heart-felt devotion which ought always to characterize the rendering of it?" "No," replied Booth, "I have not. No one seems to enter heart and soul into it as they ought." "Well, Booth," said his friend, "I should like to hear *you* try it some time. As one who has devoted much time and study to a proper rendering of both prose and poetry, you must have your ideas about this."

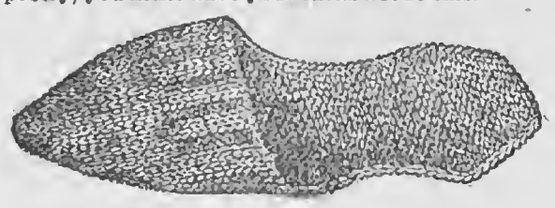


FIG. 104.

After a moment's consideration, Booth replied: "Now, sir, I do not know that I could do it with any greater effectiveness than a thousand others, but I have my ideas about it, as you say, so I'll tell you what I'll do. A while ago I overheard some of the church people of the village saying that they would like to raise some money for church purposes, so, to help them a little, if you will get their consent to open the church one week from to-night, I'll recite the Lord's prayer there. However, I must have the privilege of arranging the platform, desk, lights, etc., as I wish. Put the admission fee at a dollar; they won't lose much, if there's no gain." So, presently, the friend departed, talked the matter over with the village people, and advertised the reading of the Lord's Prayer by Booth, the actor.

The evening came, and the church was crowded to its utmost capacity. Booth's world-wide reputation assured him of a hearty welcome wherever he might go, and in whatever *role* he might appear. On the platform, in the center, stood the small pulpit-desk, and on it, a single flickering lamp cast a somber light over the scene. No other light was in the house, and a heavy twilight, approaching darkness, rested upon the audience. Precisely at the appointed time, a human figure, clad in the long, black vesture of a monk, came slowly and reverently upon the platform, from a side door, and moving toward the desk, knelt down before the open Bible, lying upon it, so that the lamp-light shone full upon the upturned face and eyes. The prayer began and all through from the "Our Father" to the last "Amen," no sound was heard save the solemn, awe-inspiring voice, repeating those precious words.

A solemn stillness prevailed! No one seemed to breathe, lest a single syllable should be unheard! Every eye was riveted upon that almost divine face, and every ear was strained to catch the faintest whisper.

The "Amen" came, the last faint sound was wafted to those who listened in almost painful suspense, the mournful figure glided back to the entrance door and was lost to sight. Not until the click of the latch was heard, as the door closed behind him, did the audience recover from this almost superhuman influence, then, as one present said, a great sigh rose from every breast, as if a weighty burden were removed, and the people

went home that night, feeling that there was a power in those wonderful words, they had never known before. Such was Booth's rendering of the prayer, and such its effect on the audience. That the surrounding circumstances added much to its effectiveness, there is no doubt, yet the soul of it all was Booth. J. W. D.

BRIC-A-BRAC.

THAT obelisk should have no fears,
It passed through all the ages dark.
No doubt another thousand years
Will find it safe at Central Park.—Puck.

HASH.

WHEN all the world is young, lad,
And all the trees are green,
And every goose a swan, lad,
And every lass a queen,
Then hey for boot and horse, lad,
And round the world away,
Young blood must have its course, lad,
And every dog his day.

JOSH BILLINGS WISDOM.

THE man who gets bit twice by the same dog is better adapted to that kind of business.

There is a great deal of religion in this world that is like a life preserver, only put on at the moment of imminent danger and then half the time put on hind side before.

Experience is a school where a man learns what a big fool he has been.

There are two kinds of fools in the world—those who can't change their opinions and those who won't.

A good doctor is a gentleman to whom we pay three dollars a visit for advising us to eat less and exercise more.

Out in the world men show us two sides of their characters; by the fireside only one.

The world is filling up with educated fools—mankind read too much and learn too little.

Every man has his follies and oftentimes they are the most interesting things he has got.

THE TURKEY.

PROUD bird of the barnyard, blithesome and free,
A murderous bludgeon is hovering o'er thee—
A fleet-footed urchin, a hard-hearted bub,
Will hit you a rap with more'n a stuffed club.

Make the most of thy time, for soon thou'l't be caught,
And thine own precious head to the block'll be brought.
Then gobble! and gobble! and gobble away,
Thyself will be gobbled at no distant day.

A rest to thy soul and peace to thy ashes,
A dinner thou'l't make and cheap sundry hashes;
A breakfast, perhaps, and a light supper, too,
And then be dissolved in a thin carcass stew.

EMMA ABBOTT tells a St. Louis reporter that the stage kiss is "a cold, dim, pale phantom, unsatisfactory, elusive, and empty." Miss Abbott ought to substitute a Hawkeye reporter for that tenor. If there is anything the staff of this paper can throw soul into it is a radiant kiss.—Hawkeye.

STUFFING A BOY.

"YES, I'm going to skate," he answered, as his teeth rattled together and his ears stood out like sheet-iron medals. "They tried to stuff me with a story of a boy who froze to death on the rink at the park, but I wouldn't take it,"

"Did one freeze to death?"

"Naw! Come to find out about it he just froze his ears and nose and fingers and toes, and the rest of his body wasn't touched at all! They can't scare me with any of their tales of horror:"—Detroit Free Press.

A LITTLE girl being asked what charity was, answered: "It is giving to the poor all the old stuff you do not want yourself." There was no mocking satire in her tones, and she did not realize that her words contained any bitter sting of truth. She was simply giving the necessary inference from her observations. It was the clothes that she had always seen given away—gifts that required no sacrifice.

Paralytic, nervous, tremulous old ladies are made perfectly quiet and sprightly by using Hop Bitters, daily.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING PIE; A "SCRAPPY" PAPER.

MARY WAGER-FISHER.

IT would undoubtedly be a useless attempt to undertake to convert the mass of the American people from pie-eating. Pie is one of the idols to which they are wedded, and the best that can be done under the circumstances, probably, is to endeavor to bring about a reform in the manufacture of the article. One of the chief objections to pie is that the under-crust is apt to be soggy and indigestible, either from being underbaked, or from being soaked with the "filling." This difficulty can be avoided by making the pie with but a top crust or with a bottom crust baked before the fruit is added. In "our house," with the exception of pumpkin, pies are always made in one of the above ways, and from the way in which they disappear among the pie-eaters, it is natural to suppose that they are well relished. To make a good pie of canned peaches, put a layer of the fruit in the bottom of a pie dish of stone-ware; put a half-inch strip of crust on the inside rim around the top, and a top crust, with two gashes in the middle, crossing each other at right angles. It is eaten as soon as cold. When you serve it, cut as usual, loosen the crust from the edge of the plate with a knife, then with a spoon lay the crust on the dessert plate, and add the fruit that belongs to it. Any sort of fruit pie made in this way, is incomparably better than when made with an under crust. Try it.

If you wish to make pie to last for a week or ten days, line the pie-dishes with crust and bake. When cold, slip all the crusts from the tins, and pile them on the top of each other, with an earthen plate at the bottom. When you want a pie, fill one of these crusts with stewed apple, and grate over the top a bit of nutmeg, place in the oven, until heated through. You will find it delicious, provided of course, both crust and stewed apples are good. These crusts can be filled with any sort of cooked fruit, and if the crusts are kept in a nice, cool place, they will keep fresh for several days; try this way, too. By this method "leavings" of preserves and jellies can be toothsomely utilized, as spread in the crust, they make of it a large "tart."

So much for pie, and now a word

Concerning Amusements.

A game which interests both old and young, which is entirely innocent and at the same time very instructive, is called the game of "words and sentences." It is simply a box of letters, each letter of the alphabet printed separately on a square of paste-board and each letter duplicated a number of times. Directions for playing the game come with the box. Adults like it as well as do younger people—it teaches them spelling, new words, and quickens the perceptions. Little children learn to read from it, by arranging the letters into words. All in all, it is a capital game, and I heartily recommend it for the social, or family circle. It costs but little, and is to be had, I judge, of most stationers and at book-stores.

Where children are not turned into a nursery with their playthings, it is well to limit their playground in the living-room of the house by giving them a certain part for their own. The boundary line may be a seam, or line, in the floor or carpet. By being firm, they very soon learn to keep on their own territory and to arrange their playthings and possessions in due order in their own special corner at night. If a child has a mania for cutting paper, the room can be kept free from the litter, by giving him a square of oil-cloth, or a rug to cut on.

Train the children to use a tooth brush from the earliest possible age, I began to use a brush on my little boy's teeth when he was twenty month old, and now at the age of three and a half years he brushes his own teeth. The use of the brush hardens the gums and it is altogether a mistake to neglect the first teeth. The health of the child, as well as of the adult, depends in a measure upon having the teeth clean and sweet, and it is always a sorry sight to see a child with decayed teeth. Some parents are so particular that they have the first teeth of their children plugged before becoming loose for the second teeth. A small, soft tooth-brush costs from fifteen to twenty cents, while a dentist's bill is often three times as many dollars.

Concerning the Hanging of Pictures.

The majority of people hang pictures too high on the wall. Whatever the hight of a room, the pictures in it should be hung on a level with the eye of an adult when standing, an adult of average hight. Pictures are hung upon the wall, supposably to be seen with both ease and pleasure; but when they are perched up nearly to the ceiling they can be viewed neither with the one feeling nor the other. When you have occasion to buy picture cord, buy, instead, wire, for hanging picture frames. Cord wears out, becomes moth-eaten, and some day down come your pictures with a crash. Hang your pictures so as to be nearly, if not quite flat against the wall. People who understand the art of hanging pictures *well*, no longer hang them so that the top leans out from the wall.

Tapestry rugs that have become worn out at the edge, may be tastefully renovated by binding them with wide woolen braid.

The Elder—Sambucus Canadensis.

Speaking of shrubs, there is nothing of more value than the common *elder*. The flowers are an excellent lotion for sunburn and roughness of the skin, and I remember when a child the pleasant taste of the elderberry wine that can be made with the ripened berries in the same manner as the expressed juice of any other fruit. It is considered a cooling laxative, and yet when taken hot, produces a copious perspiration. As a collyrium for the eyes the flowers as a wash are of great benefit. So while grown for beauty it can also be made of great use to the housewife.

ANNIE L. JACK.

DOMESTIC RECIPES.

Rice Fritters.

SOAK two-thirds of a cup of rice three hours in enough warm water to cover. Put as it is into a farina-kettle (or tin pail), set in an outer vessel of boiling water. When it becomes dry, add two cups of milk and cook until it is all absorbed. Stir in a spoonful of butter and take from the fire. When cool mix in two well beaten eggs, three tablespoonfuls of corn-starch or flour, a little salt and nutmeg. Flour your hands, make into flat cakes, dip into flour and fry in hot fat. Eat hot or cold with hard or liquid sauce. Very nice.

Puff Puddings.

One pint of new, rich milk, the whites of four eggs beaten to a froth, one coffee-cupful of flour, a large teaspoonful of yeast powder, a small cup of powdered sugar, a little salt and the grated peel of half a lemon. When the whites are beaten stiff, whisk in the sugar and add, by degrees, to the milk with the flour (the yeast powder sifted with it.) Beat hard for a few minutes, and bake in buttered cups. Try with a small splinter. When done, turn out, sift sugar over the top and eat with sweetened cream or lemon sauce.

Jellied Tongue.

A large beef's tongue, boiled and cold, two ounces of gelatine dissolved in one-half pint of cold water, one pint of liquor in which the tongue was boiled, a tablespoonful sugar, a little burnt sugar for coloring, juice of a lemon, a pint of boiling water. To the liquor, sugar, juice, and burnt sugar dissolved in a little cold water, add the dissolved gelatine, mix well then pour in the hot water and strain. The tongue must be skinned and cut into slices thin as a wafer. Wet a mold or fancy dish large enough to hold all, in cold water and when the jelly begins to thicken put a little in the bottom of the dish then a layer of tongue, more jelly and tongue until both are used. Cover and set in a cool place. When you wish to turn it out, dip the mold for an instant into hot water before inverting. Garnish with the blanched leaves of celery. This is a very handsome dish for an "extra" occasion.

Codfish and Cheese.

Just bring to a boil, a pound of freshened codfish, chop fine, and stir in a cup of drawn butter, season with pepper and a little minced parsley or celery leaves and two tablespoonfuls of grated cheese. Turn into a baking-dish, strew fine bread-crumbs on top, and brown in the oven.

Fricassee of Sweetbreads.

Procure four nice sweetbreads, wash them carefully, removing skin and gristle. Cover with boiling water and boil 15 minutes, then plunge into ice-cold water, to which you have added a little salt. Leave them in this 20 minutes, take out and cut into crosswise slices, quarter of an inch thick. Have ready three or four tablespoonfuls of butter heated in a frying pan and fry the slices until nicely browned but not burnt. Into a sauce-pan turn two cups of strong broth, seasoned well with salt, pepper, a dash of Cayenne, cloves, a little chopped onion boiled in it and strained out, and thickened with browned flour. Put in the sweetbreads, cover and simmer 15 minutes longer. MARY B.

Apple Pie a la transcendental.

Make an apple pie with two crusts, but without sugar or spice. Bake it, and when nearly done, beat up two eggs, with sugar, spice and butter or any other seasoning preferred. When the pie is done, take it out of the oven, slip off the top crust on to another plate, stir in the egg and seasoning till it is well cooked put on the top crust exactly as it came off, and serve. Everybody will want two pieces.

CHIEF COOK.

Mountain Cake.

One pound of flour, one pound of sugar, one-half pound of butter, one teacupful of sour milk, six eggs, one teaspoonful of soda, two of cream-of-tartar. Bake as jelly cake and spread frosting between and on top.

Ginger Cookies.

Two cups of molasses, one of sugar, one of fried pork drippings, one cup of buttermilk, one-half cup of ginger, one tablespoonful of saleratus. Careful not to mix too stiff. Cut in square cakes.

Fried Cakes.

Two cups of buttermilk, two eggs, a lump of butter the size of an egg, two cups of sugar, one teaspoonful of saleratus, a pinch of ginger. Fry in hot lard.

Pork Cake.

One pound of salt pork chopped fine. Let boil two minutes in a half pint of hot water. Add one cup of molasses, two of sugar, three eggs, two teaspoonfuls of soda, one teaspoonful of cinnamon, one of cloves, nutmeg, one pound of raisins, chopped. Flour to make a stiff batter.

Sugar Cookies.

One and one-half cup of sugar, one-half cup of butter, two eggs, tea-spoonsful of soda dissolved in two tablespoonfuls of sweet milk, one teaspoonful of cream-of-tartar in the flour. Cut into round cakes. M. J. STEWART.

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Wanted.
The address of a good honest working man, that would be willing to come to Ohio. A man of a family, and under 35 years of age. To such I would give steady employment.
O. F. BENTON, St. Marys, O.

News of the Week.

HOME NEWS.

MONDAY, Feb. 7, 1881.

Great preparations are being made in Washington for the inauguration ceremonies. The money necessary for carrying out the plans of the Inaugural Committee has nearly all been subscribed. The new National Museum, in which the ball is to be given, is a building of one room but little less in size than the National Capitol, covering 3¾ acres of ground. A fine dressed-pine flooring is now being laid throughout the hall, which will be waxed. The limit of the number of tickets of admission—8,000—provides for about six square feet for each person, which will prevent the hall from being overcrowded as is generally the case. A band of 150 musicians from the East has already been contracted for. In view of the expense attending the preparations no complimentary tickets will be issued, excepting to President-elect Garfield and family. The work on the decoration of Pennsylvania avenue will be commenced at once, $10,000 having been given for that purpose. The escort of the President-elect will consist of about 2,000 militia and 14 companies of regular troops and marines. Previous to the ball a reception will be held in the museum building by General and Mrs. Garfield, President and Mrs. Hayes and General Grant and Mrs. Grant. General Hancock has also been invited to take part in the reception, and it is thought, from assurances received by the Committee, that he will accept. General Sherman will be Grand Marshal of the parade, and will make the presentation at the reception.

Now, while our law-makers at Washington are taking a moment's respite from cabinet speculations, they are devoting their spare moments to a consideration of who shall be Speaker of the next House. Mr. Kasson, now Minister to Vienna, has been a prominent candidate; Mr. Robeson would like to be consoled with the Speakership, but he is a temperance man; Mr. Burroughs, the comic man from Michigan, would like to tickle the house from the Speaker's chair; Mr. Kelley (not John) of Pennsylvania, would not object to the place, while Mr. Frye hardly knows which to aim for—the Speakership or a Senatorship. If no one else will take the office under consideration, New York will humbly propose the name of Frank Hiscock.

In the Senate Mr. Wallace has introduced a joint resolution proposing an amendment to the Constitution of the United States changing the mode of electing the President and Vice-President of the United States. The bill dispenses with the Electoral College and provides for an election by the people by secret ballot, by direct vote, in districts. Each State is to have as many districts as it has Senators and members in Congress, and each district to have one vote. The vote to be canvassed by a State Board of Canvassers, consisting of the Governor, Chief Justice and Secretary of State, their returns to be made to the Speaker of the House, and to be conclusive proof of the result. The votes are to be counted by Congress in joint convention, and a plurality vote to elect.

A special Committee of the Senate has had under consideration a bill providing that the principal officers of the executive departments may occupy seats on the floor of the Senate and House, with the right to participate in debate on matters relating to the business of their respective departments, and that either House may require their attendance at its pleasure.

A fire in Philadelphia recently destroyed the Beth Eden Church, Horticultural Hall and private residences. Loss, $213,000, insurance, $60,000.

Gov. Cornell, has been to Mentor, but his visit there, he says, had no political significance, but was simply of a social nature. Mr. Garfield, probably, had not the least suspicion a year ago that he had so many friends, who were so extremely anxious for his welfare.

The managers of the late pedestrian contest in this city, have paid the five men, entitled to a share in the proceeds. Hughes, the winner, received a check for $4,220, Albert, was made happy with $2,414, Vint got, $1,207, Krohne, $804, and Howard, $402.

It is stated that several English bicyclists are to visit this country next Summer, for a run through the principal cities. Our masters of the wheel will doubtless extend them a cordial welcome. Bicycling is the coming sport, and next season some fine parade riding may be expected.

The Sacramento River has this Winter reached the highest point ever known, viz., 26½ feet, or one inch higher than the flood of 1878, the water on the Colo side washing over the levees and cutting them out badly. Above Sacramento City the water poured over the levee through a break of 200 feet. A short distance below the city there was another break of 100 feet, and below the city for eight miles the water poured over the levée, putting the whole country under water. The damage will amount to fully $1,000,000, principally to orchards and vineyards.

Gentlemen interested in the reform of the present divorce laws met in Boston Monday afternoon and organized a New England Divorce Reform League. Governor Long, Paul Chadbourne, President Woolsey of Yale, President Chamberlain of Bowdoin, Judge Jeremiah Smith of Vermont, and other prominent gentlemen were selected as members of the League.

The census shows that the people of New York City own over $176,000,000 worth of the four and a half and five per cent. bonds; Chicago, about $6,000,000; Philadelphia, $26,000,000; Brooklyn, $4,500,000; Boston, $20,000,000; St. Louis, $3,000,000; Baltimore, $6,000,000; Cincinnati, $4,000; San Francisco, $10,000,000, and New Orleans, $2,000,000.

Elisha Gray, the inventor of the telephone, is said to be receiving an "enormous revenue" from his invention. As he is a remarkably generous man, he finds no difficulty in getting rid of a good deal of it. He is about to give a course of lectures on dynamic electricity at Oberlin, Ohio.

At a late meeting of the World's Fair Executive Committee an address to the different States was presented urging prompt action in the various State Legislatures concerning proper representation at the Exhibition.

It is hoped that a street of States, similar to the street of Nations in the main building at the Philadelphia Exhibition, may constitute an imposing feature. A statement of the subscriptions to date will soon be made public.

The death of J. Lewis Diman, D.D., Professor of History and Political Economy in Brown University, Providence, R. I., is announced. He was born at Bristol, R. I., May 1, 1831, graduated at Brown University in 1851 and at Andover Seminary in 1856. After several years of travel in Europe, and after having filled two pastorates in Massachusetts, he was elected Professor of History and Political Economy in Brown University. He has taken high rank as a scholar and orator, and many of his addresses and articles have been published in the leading reviews.

Mr. W. A. Ingalls, of the Ingalls Man'f Co., Providence, R. I., sailed on the steamer Britanic, White Star Line, Feb. 5, for a trip across the ocean, and for the purpose of establishing a manufacture of some of his inventions on the other side.

The joint convention of Senate and House of Representatives met on Wednesday last to count the electoral votes for President and Vice-president. The certificates of election were taken up, by States, in alphabetical order. The voting passed off quietly until Georgia was reached when Mr. Springer demanded that the certificate of that State be read in full. The vote of Georgia was cast on a day other than that fixed by law, wherefore, under the concurrent resolutions, this vote was not recorded until it was ascertained whether the counting or omitting to count its vote would change the result of the election. The remaining certificates were read without interruption and when the list was completed Senator Thurman who was one of the tellers made the following announcement: "The tellers report that the whole number of Electors appointed to vote for President of the United States was 369, of which a majority is 185. Were the votes of the Electors for the State of Georgia, cast on the second Wednesday of December, 1880, being the 8th day of said month to be counted, the result would be: For James A. Garfield, of the State of Ohio, for President of the United States, 214 votes; and for Winfield S. Hancock, of the State of Pennsylvania, for the President of the United States, 155 votes. If not counted the result would be: For James A. Garfield for President of the United States, 214 votes; and for Winfield S. Hancock for President of the United States, 144 votes. In either event James A. Garfield has received a majority of the votes of the whole number of Electors appointed" Senator Thurman then made a similar statement relative to the vote of Vice-president. Immediately following this announcement the Vice-President made proclamation of the result and the convention adjourned.

The Pennsylvania Railroad Company sent a letter to the Emigrant Commissioner at New York, stating that they will reduce the immigrant passenger rates to Chicago to $3. This shows what a little competition will do.

Mr. Blair has introduced in the Senate a joint resolution proposing an amendment to the constitution, which was read. It prohibits, after the year 1900, the manufacture and sale anywhere within the United States and Territories of distilled alcoholic and intoxicating liquors, or any intoxicating liquors mixed or adulterated with ardent spirits or with any poison whatever, except for medicinal, mechanical, chemical and scientific purposes. It also prohibits the exportation and importation of such liquors and their transportation through any part of the United States, except for medicinal and scientific uses, &c.

The Ætna Life Statement.

We extract, from the comments of the Hartford papers upon the Ætna Life Insurance Company's annual statement, the following:

The Courant says:—"The figures speak volumes of commendation for the excellent management. The year has assuredly been a prosperous one with the Ætna, and the showing of figures is sound proof that there is no better company in the country in which to insure. Such an institution as this is one for which Hartford may be justly proud."

The Times says:—"The stupendous business of the Ætna Life has been built up by the most energetic but at the same time cautious methods, and sound principles of finance are the foundation upon which its colossal success has rested"

The Post says:—"The past year has been a continuation of the Ætna's successful career With its efficient management, it may reasonably be expected to continue the increase of its large and prosperous business. The Ætna is unquestionably one of the strongest and best life insurance companies in existence. Its management from the outset has been eminently conservative, giving it a reputation that any company in the world might honestly feel proud of. Successful as its past has been, its future career will ever exceed the past in point of success."

[Muscatine Journal.]

Two Days' Work.

Two day's moderate application of the means in question, enabled Mr. Otto Eichhorn, 1413 N. Ninth street, St. Louis, Mo., to thus write us: I had been a sufferer for the past six weeks with severe pains in the shoulder and spine so that I was unable to do my work. Advised by a friend I used St. Jacobs Oil. With the second application relief was had and a cure effected in two days.

AGRICULTURAL NEWS.

Harriet Beecher Stowe is reported to have lost all the orange trees on her Florida plantation, amounting to about 100,000, by the late extreme cold. Doubtless this is somewhat exaggerated. .....The cotton-seed oil manufacture is now the leading industry of New Orleans, its six mills employing 1,525 persons and producing $2,742,000 worth of oil annually. There are nine mills in both Mississippi and Louisiana, eight in both Tennessee and Texas, four in Arkansas, two each in Missouri and Alabama, and one in Georgia. They all can crush 1,785 tons of seed daily. The 47 mills in the whole country only crush an eighth of the seed available for oil, their annual oil product being valued at about $6,000,000. Oil-cake is also a valuable product of these mills.....Albany, N. Y., is to have a new grist mill to grind according to the Hungarian process. T. O. Shepherd owner..... ...Minnesota has appropriated $3,500 in five years to encourage tree planting, and the State Forestry Association reports that millions of young, thrifty forest trees, standing in hundreds of artificial groves, are now scattered over their broad prairies.....An English company, with a capital of $2,500,000, has been organized for the purpose of establishing a line of ocean steamers for the tranportation of cattle from this country to England. Four steamers of the proposed line will be built soon..... ..... Mr. Chamberlain, Sec. for Home Affairs, stated in the House of Commons last Wednesday, that there was no law under which the importation of oleomargarine and like compounds into Great Britain could be prohibited.....The Minn. Cane-Growers' Convention resolved to send a barrel of sorghum sugar to President-elect Garfield, with an appropriate resolution.

The seeding of Fall wheat in South Russia was effected under generally favorable conditions, but the luxuriant growth of the wheat plant and the want of snow caused some apprehension, but not, however, very serious.....During July, August, September, October and November we exported of wheat, and flour calculated as wheat, 97,424,198 bushels, against 103,951,889 bushels in the same period last year.. .....Reports of the Illinois Department of Agriculture, obtained from 500 points in the State, show that the growing Winter wheat crop covers 3,049,631 acres, against 2,790,080 acres in 1880. It is believed that the crop, as a whole, is in excellent condition, and, from the present outlook, it will be a good fair average at least, and perhaps will be better than the average.... ...The sorghum product in Minnesota last year was about 50,000 pounds of sugar and 50,000 gallons of sirup, the former selling in market at nine cents a pound and the latter at 55 cents a gallon.

David Dows and some other large grain dealers say there is no "corner" in oats here, or in wheat in Chicago. Well, probably not.....Some of the Chicago papers contain long lists of the leading buttermen, who pledge their words never to sell any of "the vile compounds" oleomargarine and sucine....A Mass Meeting of Wisconsin farmers was held at Madison from January 31 to February 4.....The Wisconsin State Grange held its annual meeting at Milwaukee last week. It was advocated that the head of the Department of Agriculture should have a seat in the Cabinet; that railroads should make no discrimination in freight against persons or places; that they should receive no more grants of land; nor should their land be exempted from taxation; that the patent laws should be thoroughly revised; and a graduated income tax imposed; and that taxation on morigages on land should be credited to the notes or mortgages.

Mr. Aaron A. Degrauw, Jr., sold at his farm in Jamaica, L. I., at public auction, on Wednesday last, a large number of imported Jersey cattle. All the animals had undergone the ninety days' quarantine required by the United States authorities, and buyers were furnished with certificates of health and permits for removal. Forty-five head were disposed of, which realized in the neighborhood of $8,700, the prices paid, however, being considered quite low in many instances. Among the largest buyers were Benjamin Albertson, Jamaica, L. I.; Thomas S. Willetts, Flushing, L. I.; Dr. James Bathgate, Morrisania, N. Y.; N. T. Sprague, Brandon, Vt.; F. C. Havemeyer, N. Y.; John A. Cone, Great Barrington, Mass.; C. A. Willetts, Flushing, L. I.; A. C. Wheelwright, Boston; D. A. Givens, Cynthiana, Ky.; A. A. Degrauw, Sr., Jamaica, L. I.; J. D. Risher, Pittsburg, Pa.; E. P. Collin, Pittsburg, Pa., and W. E. French, Boston.

Burnett's Cocoaine,

The Best and Cheapest Hair Dressing.

It kills dandruff, allays irritation, and promotes a vigorous growth of the hair.

Burnett's Flavoring Extracts are invariably acknowledged the purest and best

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 50c. per box.

For the delicate and complicated difficulties peculiar to the female constitution, LYDIA E. PINKHAM'S VEGETABLE COMPOUND is the sovereign remedy. It aims at the cause, and produces lasting results. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Liver Coughs often taken for Consumption are cured almost instantly with Hop Bitters.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Feb. 12.

Buffalo.—FLOUR unchanged. WHEAT dull and nominal. CORN steady and unchanged; sales 19 cars No. 2 Western, on track, at 47@47½c. OATS quiet but firm; sale, 1 car of Mixed Western at 41c. BARLEY quiet; no sales. RYE quoted at 95c; very little here. Railroad Receipts—Flour, 2,300 bbls; Wheat, 17,000 bushels; Corn, 46,000 bushels; Oats, 13,000 bushels; Barley, 800 bushels. Railroad Shipments — Flour 1,900 bbls; Wheat, 17,000 bushels; Corn, 34,000 bushels; Oats, 13,000 bushels; Barley, 800 bushels. CATTLE—Market—nothing doing except, sales of two loads of butcher stock at $3 75@4 20. SHEEP and LAMBS—market steady, with a fair demand; best grades disposed of; sales of common to fair Western Sheep at $4 30@5; good to best, $5 20@5 65; Western Lambs, $5 25@6. HOGS—market—very few here; the bulk of fresh arrivals is consigned through; sales of light to fair Yorkers at $5 70@5 85; good to choice, $5 90@6; medium heavy, $6 10@6 15; fair to good ends, $4 25@5 80; coarse and common, $3 40@4 75.

Chicago.—FLOUR quiet and unchanged. WHEAT fairly active and a shade higher; No 2 red Winter 97c@$1; No. 2 Chicago Spring, 98½@98¾c cash; 98¾@98¾c. March; 99¾@99½c. April; $1.02¾ May; No 3 do 83@87c; rejected, 70@73c. CORN active, firm and higher, at 37c. cash; 37½c. March; 41¾c. May; rejected, 35c. OATS fairly active and a shade higher, at 29¾c. cash; 29¾c. February; 30c. March; 34¾c. May; rejected, 30c. RYE steady and unchanged. BARLEY firmer at $1 01. PORK active, firm and higher, at $14.75@14.87½ cash; $14 75 bid March; $14 92½@14.95 April LARD strong and higher at $9 65 cash; $9.67½@9 70 March; $9.77½@9.80 March. HOGS—Market active and firmer; common to fair mixed packing, $5 15@5 50; light, $5 30@5.55, mainly at $5 50; choice heavy, $5 75@6 25; all sold, market closing firm; shippers are buying freely; packers are backward CATTLE—Market active, with a good demand at full prices; export, $5.40@5 80; one line car sold at $6.10; good to choice shipping, $4 85@5 20; common to fair, $4 20@4 60; good inquiry for butchers' at $2.50@4; steer calves ₱ head, $10.50@12. SHEEP—Moderate demand, full supply; common to medium, $3.50@4.25; good to choice $4.75@5.25.

Cincinnati.—FLOUR steady; Family $4 70@4 90; Fancy, $5 15@5 75. WHEAT dull; No. 2 Red Winter, $1 05; receipts, 6,000 bushels; shipments 500 bushels. CORN in active demand, No 2 Mixed, 42½@43c. OATS firmer; No. 2 Mixed 37@38c. RYE firmer; No. 96@98c. BARLEY in good demand: No. 2 Fall, $1. PORK in good demand at full prices; held at $14 75. LARD in good demand at 9½c. Bulk-meats strong; Shoulders, 4¾c; Clear Rib, $7 52½ for loose; Bacon scarce and firm; Shoulders, 5¾c; Clear Rib, 8¼c; Clear Sides, 8½c. BUTTER in fair demand and higher. choice Western Reserve 23@24c; choice Central Ohio, 21@22c. HOGS active, firm, and higher; common, $4 56@5 35; light, $5 40@5 70; packing, $5 45@5 80; butchers', $5 85@6 15; receipts, 2,400 head; shipments, 1,400 head.

St. Louis.—FLOUR steady and unchanged. WHEAT unsettled, but generally lower; No. 2 Red Fall, $1 01@1 01¼. cash; $1 01¼ February; $1 02¾@1 03, March; $1 04¾@1 05. April; $1 06@1 06¾ May; No. 3 Red Fall, 96½c; No. 4 91c. CORN dull, but a shade better, 37½c, cash; 37½@37¾c. February; 38@38¼c, March; 38½@38¾c. April; 39¾@40c. May. OATS dull, 33½c, cash; 33¾c. asked, March; 33½c, April; 34½c. May. RYE steady, 87c. BARLEY quiet; choice to fancy, 80c@$1. PORK higher, $14 75, cash and bid, March. LARD higher at 9½c, April. Bulk-meats higher; Shoulders, $4 70@4 75; Clear Rib, $7 50; Clear Sides, $7 70@7 75. Bacon held higher. Receipts—Flour, 6,000 bbls; Wheat, 21,000 bushels; Corn, 17,000 bushels; Oats, 7,000 bushels. Shipments—Flour, 5,000 bbls; Wheat, 8,000 bushels; Corn, 2,000 bushels; Oats, 7,000 bushels. Hogs lower for the lower grades; light shippers', $5 35@5 50; mixed packing, $5 20@5 50; butchers' to fancy, $5 65@5 90. CATTLE in fair demand; market a shade easier; exports, $5 25@5 65; good to choice shipping, $1 50@5 15; fair to good $4@4 50; choice butchers' Steers, $4 10@4 50; fair to good, $3 50@4; stockers, $2 50@3 25; feeders' scarce and wanted at $3 50@4 35. SHEEP steady and unchanged; receipts, fair to good, $4@4 75; choice to fancy, $5@5 40.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Feb. 12, 1880.

BEANS AND PEAS.—During the past fortnight a decidedly better feeling has been developed in the standard white grades of beans; all good marks are held at the outside figures. Red kidneys are very dull and have the unusual chase of being the lowest item in the bean market. Green peas stronger; $1 70@1.72½ for Wisconsin. Southern B. E. peas steady at $2 per 2-bush. bag.

Marrow beans prime $1 95@2 00, do, other $1 80@1.90, medium prime $1 90, do other $1 70@1.80, pea $1.70@1.90, white kidney $1.80@2.00, red do, prime $1 50@1.60, do, other $1.25@1.45, black or turtle soup $1.50.

BEESWAX.—Transactions are small and prices unchanged: sales at 23½@24½c.

BUTTER.—The market is fairly strong for all table grades for local use and considering the scale of prices shippers are taking hold quite freely. There is considerable stock yet to come forward, but in the opinion of the trade almost all of the best State dairies have been picked up. Supplies come forward moderately but sufficiently for the present wants of the trade. State farmers this season have made a profit by holding, and unless the spring comes suddenly here is still a chance on fine quality receiving support at at least present prices. Western butter is arriving very good figures.

Creamery Western choice 34 good to prime, 31@33c; fair to good 28@30; State dairies, 25@30; early packed creamery, 29@25c, State dairies, choice entire, 25c; other, 20@24c; Orkins, 18@23c; pails and half tubs, fall, 28@ 9c; other, 18@23c; Western tubs, fall, 26@27c; other 18@21c Western imitation creamery, 3 @ 23c; Western dairy, fresh, 25@26c; good, 23@24c; other, 16@20c; factory, best, 23@24c; other 16@22c; very poor, 13@15c; roils slow with a light demand, 17@20c.

Receipts for the week, 21,075 pkgs.

Exports for the week, 10 0.8 pkgs.

CHEESE.—Export demand has been moderate only this week, the shipments being only 28,1.0 boxes. Prices have been fairly steady on strictly fancy stock, but otherwise buyers have had rather the advantage. Quotations are for

State factory, fancy, at 13¾c.; do, good and prime, 12¾@13¾c.; do, fair, at 11½@12c.; a, half skimmed, 10@11c.; Wisconsin factory, fine, at 13¾@ 13¾c.; do, good to prime, 13¼@13¾c.; do, fair to good, 11½@12¾c.; Ohio factory, fine, 13c.; do, good to prime, 12@12¾c.; do, flat, fair to good, 11@12c.; do, poor to fair 8@11c.

Receipts for week, 47,750 boxes.

Exports for week, 41,585 boxes.

Liverpool cable, 68s.

Steam to Gt. Britain, 30s.@35s.

COTTON—There has been a fair degree of activity and the market closed firm at, f'r

February, 11.25@11.27c. March, 11.37c. April, 11.52c.; May 11.66c.; June, 11.77@11.78c.; July, 11.86@11.88c.; August, 11.91@11.93c.; September, 11.46 11.48c.; October, 10.99@11.02c.; November, 10 84@10 85c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N Orleans and Gulf.	Texas.
Ordinary	8 5-16	8 5-16	8 5-16
Strict ordinary	8 15-16	9 1-16	9 1-16
Good ordinary	9 15-16	10 1-16	10 1-16
Strict good do	10 7-16	10 9-16	10 9-16
Low middling	11	11¼	11¼
Strict low middling	11¼	11⅝	11⅝
Middling	11 9-16	11 13-16	11 13 16
Good middling	12¼	12⅝	12½
Strict good middling	12⅝	12⅞	12⅞
Middling Fair	13⅛	13⅜	13⅜
Fair	13⅞	14⅛	14⅛

STAINED.

Good ordinary	8¼	Low middling	10
Strict good ordinary	9⅛	Middling	11

Receipts for the week, 27,874 bales. Exports do. 6,540 do.

DRIED FRUITS.—Apples showed light sales of evaporated stock, with prices steady some dried lots are in fair demand and firm. Peaches are quiet, as also small fruits generally.

Evaporated apples at 8½@9c. for the better qualities; sliced apples at 5a6¼c. for good to choice North Carolina; 4@4½c. for Va, apples, 4@4½c. for Tenn. do; 4¼@5c. for State do; 4¼@5c. for western, Ohio and Mich. Peaches at 30@32c. for evaporated peeled; 14@15c. for unpeeled do.; N. C. peeled at 20@22c.; for the better qualities, unpeeled peaches at

6¼@6½c. for halves and 6@6¼c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 17¼c. Raspberries at 24c.

Receipts of all kinds for week, 1,760 pkgs.
Exports, including evaporated, 5,755 pkgs.

EGGS—Receipts for week 3,423 bbls; do. last week, 1,663 do. Supplies begin to show again and the market, with its usual sensitiveness responds with lower prices. One favorable feature is the fact that few off quality lots will afflict the trade this Spring after the cleaning out the market had during the "famine."

Near Points, ₱ doz., 30c; State and Penn., 29@29c.; Southern and Western, 27@28c.

FRESH FRUITS—Exports of apples for week, 5,114 bbls. The market for apples is irregular; stored stock is firm but the seeming bargains in fresh receipts restrict the demand. Mixed lots at station range $ @1.75.

Baldwins $1.75@2.00 Greenings, $1.50@1.75; Spitzenbergs, $2.00@2.25; Russets not generally opened. Cranberries quiet; extreme prices supported only in a retail way. Cape Cod fancy bbls, 48; other, $4@7; N. J. boxes 1.50@2.25. Florida oranges have a better inquiry for fruitless lots, but the remainder of the season will not compensate early bad movement; choice lf. and boxes $4; other, $3@3.50; frost-touched are at buyers' option. Hot-house strawberries, 60 per quart. Black Hamburg grapes, $1. Peanuts quiet with a liberal offering. The retail trade has been curtailed by bad weather. Va hand-picked, 4¾@4¾; other, 3½@4; shelled, 3¾@4¼. Hickory nuts now have no large buyers; nominally $1 per bush. of 50 lbs. Pecans begin to arrive freely; market easier, 6¾@8c.

FLOUR—Has been more freely offered at easier prices, but closed firm and active.

Latest prices are: $3.60@4.00 for very inferior to very choice superfine State and Western; $4.25@4.50 for poor to choice extra State and Western, odd lots and lines; $4.55@4.65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.35@5.25; good to choice do at $5.35@6.10, (very choice up to $6.25@6.50 and fancy at $6.50@6.75;) red and amber winter wheat inferior to choice trade and family at $4.35@6; round hoop Ohio, $4.40@4.75; and trade and family brands of [illegible] $4.80@6.25, the latter for fancy; St. Louis $4.00@5.00 for inferior to good extra; $5.50@6.35 for good to choice, and up to $6.75@7 for very fancy brands; Minnesota clear, inferior to very fancy at $4.30@6; Minnesota [illegible] poor to very choice, at $5.25@6.75, and patent inferior to fancy at $5.75@8.25; city mill extras $5.35@5.60 for fair to choice for the West Indies; do. for England at $4.25@4.65 for poor to choice spring wheat; do. trade and family extras, $5.65@6.75; do. for South America $5.70@6.85, the latter for very choice; No 1 at $3.15@3.65 for very inferior to fancy.

Receipts for week, flour, bbls, 104,175; corn meal, do, 1,350; wheat, bush, 355,850; corn, do, 216,612; oats do, 186,100; rye, do, 31,810; malt, do, 39,744; barley, do, 41,510; beans, do., 4,776; rice, pkgs, 2,660.

Exports for week: flour, bbls, 101,760; corn meal, do, 3,250; wheat, bush, 760,441; corn, do, 219,167; oats, do, 2,000; peas, do, 7,200; beans, pkgs, 474; rice do 1,050.

CORN MEAL—Sales at $2.65@3.10 for Western, and $3.25 for Brandywine.

GRAIN—In wheat exporters have taken this week 570,000 bush, demand has been very fair on speculative account, and at the close prices are strong; latest sales are of

No. 1 white at $1.15¼@1.16 do. February at 1.15½@1.16, do, March at $1.15¾@1.16¼, do. April at $1.16¼@1.17; do, May at $1.16@1.16¼; ungraded white at $1.12@1.16; No 2 red at $1.17@1.18½; do. February at $1.17@1.17½, do. March at $1.18@1.18¾; do. April at $1.18½@1.20; do. May at $1.18½@1.19½; No. 3 red at $1.15½, ungraded red at $1.16@1.20; No. 2 Chicago Spring at $1.15 afloat.

Rye is quiet at 97@99c,

Corn is in freer demand and closed firm at for New York No. 2 at 56½@56¾ do. do. February at 55¾@56¼, do. March at 55½@55¾, do. April at 55½@55¾, do May at 51½@54¾, ungraded mixed Western at 55@58; New York steamer mixed at 56¼, New York No. 3 at 55@56¼, No. 2 white at 58½@59 New York yellow at 51¼.

Oats are in very fair demand and prices ruling firm; latest sales are of

No. 1 white 49c New York No. 2 white at 47¼@47¾; No. 3 white at 45¾@46 New York No. 2 at 45@45½, do February at 45@45¼, do. March at 44¾@44½, do. April at 44½ do May at 44½ No. 3 at 44@44¼, ungraded white Western at 44@49, ungraded mixed Western at 43@45¼, white State at 47½@49¼, No. 2 Chicago at 45c bid.

HAY AND STRAW.—For hay demand is good and prices well sustained. Straw is plenty and freely offered. Quotations are for

Hay, prime timothy at $1.20@1.25 ₱100 lbs.; medium timothy at $1.10@1.15 do. shipping grades at $1@1.05 do.; clover mixed at $1.05@1.10, clover at 95c@$1. do. Straw—No. 1 rye at $1.5 ₱ 100 lbs.; No. 2 rye at 75@80c. do.; oats and wheat at 70@80c. do.

HOPS—Prices are very regular and without important change. Exporters have been buying moderately only, and brewers are doing little. Shipments for the week 363 bales, which includes parcels on through consignments; this makes the exports since the commencement of the crop year (Sept. 1) 81,796 bales, against 41,291 bales in the previous year for the same period. Quotations are for

	Cents per lb.
New Yorks, crop 1880, prime and choice	21 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Pacific coast, new	20 @24

Receipts for the week, 4,322 bales.
Exports for the week, 1,208 bales.

HONEY—Continues dull at the late decline. White clover, comb, single, 14@15c.; larger pkgs. do. 12@13c.; buckwheat 8@9c.; extracted 6@9c.

LEATHER—Quotations are for hemlock sole, 22@23c. for light: 23@24½c. for middle: 23@24c. for heavy.

OIL-CAKE.—Western is in moderate demand; quoted at $29@29.25 per ton.

PROVISIONS—Hog products have been in good demand and tending stronger.

Mess pork quoted at $14.75@14.87½ for old and $15.25@15.50 for new. Bacon at 8¼ for long clear and 8¾ for short clear. Beef at $2@22 for city extra India mess, $9.50 for extra mess and $9.50 for plain mess. Lard—Western steam at 10.07½@10.10 for spot lots, 10.07½ for Feb., 10.07½@10.10 for March, 10.1@10.17½ for April, and 10.17½@10.20 for May. Stearine at 10¾ for choice.

Receipts for week, beef, bbls, and tcs, 733; pork, 4,900bbls.; cut meats, 88,712 pkgs.; lard, 26,525 pkgs.

Exports for week, beef, bbls, and tcs, 2,452; pork, 5,175 bbls.; cutmeats, 20,340,977 lbs.; lard, 5,642,617 lbs.

POULTRY AND GAME.—Supplies of prime turkeys have run light and prices are higher. The weather, however is mild and thawing, and there is no security for the continuance of good rates for any sort of dressed.

Prime turkeys, near by, range, 15@16c; other, 12@14½c, poor, 11c. Chickens almost the same as turkeys. Fowls, good to prime, 10@12c.; do. poor, 8½@9½c.; Ducks, 14@18c. Geese, 9@12c. Squabs, white, $4.50@5.00 do. dark $2@2.50.

Live poultry fluctuates according to the irregular supplies of Winter; early in the week sales were low, live fowls selling down to 8½c. Closing rates:

Fowls, 9@10c.; near by, 11@12c.; turkeys, 10@12c., roosters, 6@8c.; ducks, 50@85c. ₱ pair. geese, extra, $2; other $1@1.75; pigeons, 30@38c.

Wild ducks comprise the chief offering.

Canvas-back ducks, $1.50@1.75 ₱ pair, red-heads, 75c.@$1, mallard 60@75c; teal 40@50c, widgeon, 40@50c; common do 30@40c.

SEED.—Clover is firmer and in demand, quoted at 7¾@8c. Flaxseed quoted at $1.45, pure basis. Timothy is wholly nominal.

VEGETABLES—Exports potatoes for week, 335 bbls. It is expected that supplies of potatoes will soon be liberated and the market is a shade easier in consequence.

E Rose Eastern d.-h, $2.50@2.62, do. State, $2.37@2.50; do in bulk $2.25@2.37; Prolific do, $2@2.11; Mercer do. $1.87@2; Burbank d h, $2.25@2.37; Burbank bulk, $2.25; pearl blow d.-h. $2.50@2.62; do. bulk, $1.87@2; snowflake d.-h $2.37@2.50; do. bulk, $1.87@2; peerless d.-h, $2@2.12; do bulk $1.87@2; sweet $2.25@2.75. The season is growing into for stiff prices to rule for other vegetables; onions, usually the strongest item, have fallen off in price materially. Russia turnips, ₱ bbl.75c. white turnips 75c. beets.75c@$1; carrots, $1.25@1.50; marrow squash 50c; Hubbard do. $1; onions, white ₱ bbl $5.00@6 yellow do. $3.25@3.50; red $3.25; Chester, $3@3.25; cabbages, ₱ 100, $8@10; red, do. $9@11; celery ₱ doz. 75c@$1. Hot-house product—Cucumbers, choice, ₱ doz. $1@1.50; do. culls $1@2; lettuce, Boston, ₱ doz.75c@$1.12; do. N. J. 40@50c; do. culls, 12@25c; radishes, ₱ 100 bunches, $4; rhubarb, ₱ 100, $5@7.

WOOL.—Demand has been moderate this week with prices showing no important change, but ruling rather easy. Quotations are for

Ohio, Penn. and W. Va. fleeces 46@47c. for X, and 47@48c for XX 48@50c. for XXX and picklock.

Mich., Ind and Wis. at 42@44c, for X and XX, 47@48c. for No. 1, 38@43c. for No. 2 and common

N. Y. N. H, and Vt, at 39@42c. for X and XX, 45@47c. for No. 1, 37@42c. for No. 2 and common, 44@46c. for fine delaine.

LIVE STOCK MARKETS

NEW YORK, Saturday Feb. 12, 1880.

BEEVES.—Receipts for the week 9,109 head; do. last week, 11,955 do. The market has had only a light representation of stock since Wednesday until today. Although the arrivals included what should have been here on Friday, the market was extremely active, unusually so for Saturday, and a wet Saturday at that. Buyers evidently feared detention of trains next week, and rather than be caught short they endured upon usual purchases. The yards were cleared at an advance on Wednesday's figures. Common cattle 8@8½c. to dress 56 lbs; medium to good 8¾@9¼c. to dress 56 lbs; choice 10¾@11¼c. to dress 57 lbs. The market makes the best average of a long period.

COWS AND CALVES.—The feature of the week is a sale of a car-load to a Long Island farmer within the range $30@55.

VEAL CALVES.—Supplies have been liberal and prices are easier than for last week.

Choice fed live, 7½@8c.; good 7c.; poor 6@6½c.; Mt. Holly 4@8c.; buttermilk 3@4c. grassers, 2½@3c. dressed, hot, 10@11c.; other, 8@9½c., very common, 5@6c. "Bobs" or calves under 60 lbs. live, are seized by the sanitary police.

SHEEP AND LAMBS.—Receipts for week, 22,342 head; do. last week, 27,321 do. There has been a good general trade and prices are satisfactory. Sheep 5@6¼c. Lambs 6¾@8¼c.

SWINE—Receipts for the week, 32,844 head: do. last week, 23,785 do. Demand fair, market steady.

Corn-fed live, $5.75@6.20 ₱ 100 country dressed pork, light, 8@8¾c.; medium, 7½@7¾c.; heavy, 7@7½c.; city dressed State, 7½@8c., city dressed Western 7¾@7¾c; Western dressed, 7@7¾c. Pork tenderloins, 11@11¾c.

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1 Althea, variegated	35c	1 Weigela, variegated	35c
1 Clematis Jackmanni	$1	1 Wisteria Chinese	50c
2 Honeysuckles	50c	1 Deutzia	50c
5 Roses, 1 yr, dormant plants, 30c. each, (La France, Gen des Alps, John Hopper, F. Michelon, Gen Jacqueminot)		Total	$1.50 $5.70

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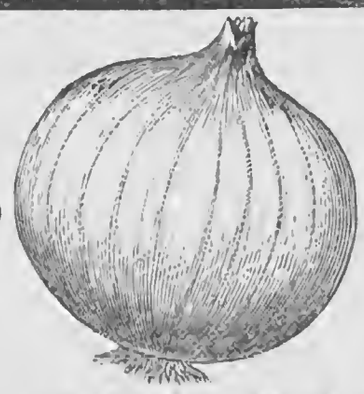
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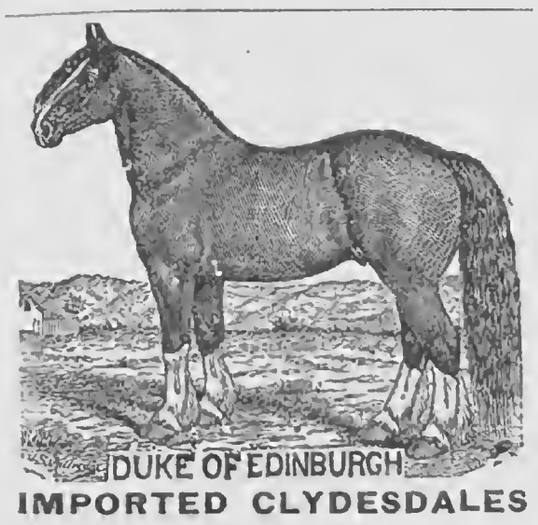

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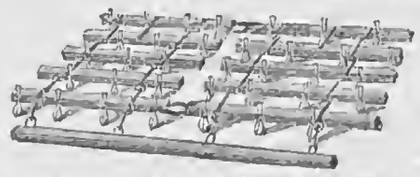
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THE SATURDAY EVENING POST, 726 Sansom Street, Philadelphia, Pa.

Reading for the Young.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

Live-Oaks and Other Trees.

"I HAD an idea," said Daisy one afternoon, "that there were woods all around you. On the contrary, I see there are very few trees on the Alhambra that have not been planted."

"Yes," replied Mrs. Erman smiling, "before it became civilized the Alhambra was a nearly treeless plain. There were a few scattering live oaks, but nothing else relieved the barrenness. A little north of us, however, you will find plenty of oaks. At Pasadena there is a fine grove on the slope of a hill, and in Wilson's canyon there are grand old trees wreathed in wild grape vines. Violet, we must take Daisy through the canyon the next time we go to Pasadena."

"Very well, mamma, we'll remember and go that way. But Daisy need not wait till then to see a live oak. Ours in the *corral* is nearly as large as any in the canyon. Come on and see it." So out of the house the girls skipped into the delightful March sunshine.

"There were six oaks on the place," Violet explained, "but five of them were out in the orchard, and papa was afraid they would injure the orange trees, so he had them cut down, and we have only this one left."

"This one" was a handsome, well-proportioned tree with spreading branches, standing in the middle of the *corral* or "barnyard" as Daisy insisted on calling it.

"I don't know what we would do without this tree. It is so nice and shady for the horses in Summer."

"What makes it so even on the under side?" asked Daisy. "It looks as if it had been trimmed."

"Ha, ha!" laughed Violet, "it *has* been trimmed, but the old cow did the pruning! She is very fond of the leaves and young branches, and nips them off as far as she can reach."

"It doesn't look at all like an oak tree. The leaves are so small and such a different shape. Does it have acorns?"

"Yes," answered Violet, "but they are longer and more pointed than common acorns. The horses like them very much, and will follow me all around the *corral* if I hold out an acorn to them."

"Why should the tree be called a *live*-oak?"

"I suppose because it is never bare. The old leaves stay on all Winter, and fall in the Spring after the new ones come. The old leaves are falling now; in a few weeks they will all be gone, and the tree will be twice as pretty, the new leaves are so bright and glossy and free from dust."

"What do you call those tall slim trees?" inquired Daisy, pointing to a row that surrounded the *corral* fence.

"Those are Eucalyptus trees; people commonly call them "Blue Gums." The leaves have a peculiar odor; come and see if you like it."

Daisy picked a few and presented them to her nose, but dropped them quickly while her nasal member assumed an expression of disgust.

"Ugh! Isn't it horrid? I shouldn't want those trees very near the house!"

"Oh, I have become so accustomed to it that I don't mind the smell; papa uses the leaves for rheumatism and I believe he thinks they are a panacea for every ill. But do you notice, Daisy, the two kinds of leaves on the tree?"

"So there are. I was taken up with that delightful perfume, and didn't think of anything else. Why should there be two kinds?"

"I'm sure I don't know, only such is the case. The lower leaves, which you see are rather broad, are the growth of the first year or two; while the long slender leaves do not appear, usually, until the tree is about two years old."

"How old are these trees, Violet?"

"A little over three years old, and you see the tops are way above the oak tree. Papa planted the seed the Thanksgiving Day after we came. I think the Eucalyptus trees grow faster than any others, and that is probably the reason so many are planted."

"Violet!" called Mrs. Erman, "where are you?"

"Out here by the *corral*," answered Violet. "We are talking about the trees."

"Well, Daisy, if you want to see something beautiful, come here and look at my pepper tree."

The girls walked toward the house. "I wanted to ask about that tree," said Daisy, "but everything is so new, and I have asked so many questions that I should think you would be tired of answering."

"Mamma is always ready to talk about pepper trees," interposed Violet; "I believe she likes them better than any others."

"Yes, I do," said Mrs. Erman, "orange trees not excepted. Nothing can be more graceful than a fine, well-proportioned pepper tree. Its red berries, drooping branches, and delicate leaves, which sway in every passing breeze, have a charm for me that no other tree can give."

"I always admired weeping willows, but this is a great deal prettier," said Daisy.

"Yes, and it has an advantage over the willow. This is an evergreen, while the willow looks most desolate in Winter when stripped of its leaves."

"Do the berries always come in the Spring?" inquired Daisy, reaching up to pick some of the crimson beauties.

"No," replied Mrs. Erman, "if you were to observe a row of street trees, next to the one bearing berries you might find one laden with the small, white blossoms, and very likely, the next might have green berries."

"Do the pepper trees grow as fast as the Eucalyptus trees? You see, perhaps, we may come to California to live, and then we shall want to know all about these things.

"I wish you might all come, dear child. No, the pepper trees do not grow as fast. This was planted at the same time the Eucalypti were, and you see it is not more than half as tall. Still it grows rapidly compared with trees in the east. Now, Daisy, whenever you feel like it, go down in the orchard, and ask Mr. Erman about the orange trees. He can show you the different varieties, and tell you about them much better than I can."
—To be continued.

FARMING FOR BOYS AND GIRLS—NO. 12.

HENRY STEWART.

Composts.

No farmer ever yet had enough of manure. It is the trouble of every careful farmer to supply this want which never can be satisfied in the usual way. He gathers from swamps, from woods, from roadsides, and every other source that he can reach, and the muck, the leaves and the scrapings which he thus collects, he works up into composts in such a way as to cause them to decay and become fit for plant food. The term compost is derived from a latin word *compositum* which means put together and expresses precisely the action of the farmer in this business of making manure of substances which alone would be of no value to him. The effect of this action depends upon a natural law the result of which is the conversion of organic substances into their elements. This process is what we know as decay or decomposition. The meaning of the word decomposition is, a taking apart of a compound substance. It is always accompanied by heat which is always produced by chemical action and decay or decomposition is the effect of chemical action. Decomposition is in fact a slow process of burning as much so as if fire were used to produce the result. The final effect is the same in both cases, the mineral matter or ash only being left.

When the farmer forms a compost he gathers these substances and makes them into a heap, and to hasten the end which he has in view he adds to it, evenly mixed through the heap, a certain quantity of fresh manure. This begins to heat very soon, and just as the yeast mixed with the bread sponge of the baker, starts the fermentation through the whole mass, so the small quantity of manure starts the heat and fermentation through the whole of the heap of the compost. But to produce the best effect there must

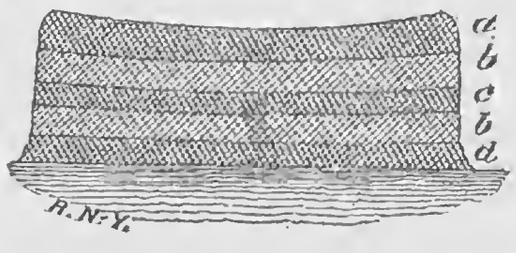

FIG. 105.

be a certain supply of moisture, for unless there is sufficient water in the mass the process of decay will not go on. Dry matter may be preserved, and will not decay, for many years; and until it is moistened with water it will suffer no perceptible change. The compost heap must, therefore, be made of such a shape that it will hold as much moisture as possible.

It is usually put up about four feet high and as long and broad as may be convenient, with the top made flat and hollow to collect and hold the rain which falls upon it. Lime is often added to compost heaps and is very useful, because it helps to decompose the vegetable matter in them and makes the compost fit for use sooner than it would otherwise be.

The usual time for making compost heaps is in the Fall, so that there may be ample time during the Winter for it to be made ready for the Spring work. By carefully gathering and saving all the materials mentioned, and working them up into composts, the quantity of manure may easily be doubled and the crops enlarged in proportion. One load of well-made compost may be as useful as the same quantity of common manure, and as it is always in a well broken and fine condition, it is the most valuable fertilizer that can be procured for spreading upon grass lands.

Composts may be greatly enriched by the addition of the manure from the poultry house, by the wastes from the house, and by ground or burned bones. In this way very valuable manure may be made for gardens or fruit trees, if nothing else can be procured for the basis of it than common soil. The soil is an excellent absorbing material for the richer qualities of the other substances, which by themselves would be too strong and rich for use. In making a compost heap the farmer first spreads a quantity of the coarse materials, such as swamp muck, leaves and sods, on the ground, of an even thickness, but more than a foot in depth. Upon this is spread some fresh manure, well broken up with the fork; then a layer of the coarse stuff and some lime or wood ashes may be mixed with it. Upon this more manure is placed, and then the heap is finished with some coarse stuff and some manure mixed together. The top is then leveled off and hollowed so that the rain that falls upon it will remain and be absorbed. The above engraving shows the right shape for a compost heap.

A PROPOSITION.

I AM sure there are good letter writers among the RURAL Cousins, and there are, doubtless, some young artists and mechanics among them also. Now in order to bring out this "latent talent," I propose to give a nice book of poems as a prize to the member of our Club, who, within three months, sends the best drawing (outlines simply) of any useful or ornamental farm or household article. If the diagram represents something invented by the one who draws it, this fact will be taken into consideration in awarding the prize. A description must accompany each drawing, clearly explaining the construction and use of the article represented, and accuracy in drawing must be the aim. The diagram and description which best fulfill all conditions, will be inserted in the RURAL, over the name of the successful competitor. Now, boys and girls, sharpen your pencils and your wits and let's see who'll win the prize. UNCLE MARK.

LETTER FROM THE COUSINS.

DEAR UNCLE MARK:—I have long wanted to join the Horticultural Club, so if you will let me I will do so. I like so much to read the letters from the cousins about their flowers and pets. My mamma had a good many flowers last season, such as roses, hollyhocks, phloxes, portulacas, geraniums, &c. Pa takes the RURAL, so we got the seeds that you sent us last Spring. But we had bad luck with them; the dry weather caused all of the flower seed to perish after they were planted. The oats were very fine, but the telephone peas did not amount to much on account of the drought. One of the Cuthbert raspberries lived. We were so much disappointed in not saving the magnolias and Dutchman's Pipe, as we expected to have an arbor over our front door made of the latter. I hope we will have better luck the next time. We have some pets also. Our big dog Carlo is very wise. We can send him to the house (if we are in the field) any time we want him to go. He will carry a large basket or bundle anywhere we want him to; he is very good-natured. Pa has a colt that used to open the kitchen door every time we let the string of the latch be on the outside. She would put her head into the door and beg (in her way) for salt or bread, which the children would give her. Kitty used to have to keep the string inside to have any peace while at her work.

We have on our place an old stone chimney which is nearly 300 years old. The fireplace is so large that we can sit in the corners of it while the fire is burning. It would hold half a cord of wood. It is called Powhatan's chimney, and was built by old King Powhatan, by order of Capt John Smith, the same who had his life saved by the young and pretty Pocahontas. My little cousins can read about these things in the history of our country. Pa has an old history that gives the account of the building of the chimney and everything about it. A good many people come here to see it; it is considered a great curiosity. CLAUDE IRWIN.

Hayes Line P. O., Gloucester Co., Va.

DEAR UNCLE MARK.—We live in the Rocky Mountains about fifty miles from Denver and South Park railroad. Papa takes the RURAL and we like it very much, especially the letters. I am very fond of gardening but I leave my little sister to raise most of the flowers as she likes them so much. I am very fond of hunting and fishing. I have a Winchester rifle with which I killed my first deer last Fall. We have some wild animals about, sometimes the wolves and mountain lions come around the house at night, but we do not often see them. I am thirteen years old and sometimes have considerable work to do.

CHARLEY M. TAYLOR.

Deer Valley, Park Co., Col.

The Puzzler.

HIDDEN FISHES.

1. Buckle on your sword, Fisher.
2. The price of the sheep she added.
3. Even Turnbull pouted.
4. Juno saw a peri wink. Leon's Mythology says so.
5. In Connaut I lustrous silks did wear.
6. Why, Poll! okra is a vegetable.
7. I care not a whit—Ef is hateful.
8. Drink is a sad evil, Fisher.
9. To write in this hubbub, reams of paper would be wasted.
10. This pawn eases the power of the knight, and I checkmate.
11. This quill is useless.
12. Helstarf is her husband.
13. 'Tis a resue kernel.
14. The line is too taut, Ogden.
15. Let Estace and Fanny go.
16. With rash Erving I joined the club.
17. I'll tell Torp, Ed only teases him.
18. I have the third ace and queen.
19. Simon Arwha left school yesterday.

☞ Answer in two weeks. LITTLE ONE.

A QUADRUPLE CROSSWORD ENIGMA.

My first is in Michillimackinac but not in Ontonagon;
My second is in Choctawhatchez but not in Livingston;
My third is in the Adirondacks but not in Lehigh;
My fourth is in Enniscorthy but not in High.
My whole are three counties of Michigan and one of Florida. L. O.

☞ Answer in two weeks.

CHARADE.

The whole is discordant,
The last is to sound;
That the first is a vessel
I'll surely be bound.

☞ Answer in two weeks. C.

WORD SQUARE.

1. A mistress. 2. A genus of Trees. 3. To design. 4. The osprey. "GUS."

☞ Answer in two weeks.

PUZZLER ANSWERS—Feb. 5.

SQUARE WORD.—

N A O
A N N
O N E

CHARADE.—Alley-gaiter.

DOUBLE CROSSWORDS.—C

Sabbath Reading.

SERMON OF THE SNOW.

With the softness of silence, unceasing, though slow,
In the low, leaden light comes the crystaline snow.
So untiring it seems, so impartial withal,
And so chastening to all that it touched in its fall
It appears as if dropped by the kind Father's hand
As a mantle of charity over the land!
While its thick woven webs hide the Giver on high,
Every stain on the earth is concealed from the eye;
And so bounteous the benison to mortals below,
From the earth to the sky there seems nothing but snow;
Since the sweet boon of Charity, never alone,
But in multiplied blessings is dropped from the throne,
So the snow that to-day robes the earth in the pride
Of a blooming young maiden arrayed as a bride,
Will to-morrow be torn by the boreal blast;
Will be worn by the wanton south wind wooing past;
And its beauty be lost and whiteness undone,
By the light, loving smile and warm kiss of the sun;
Then, resolved into tears—as the new life is found—
It will faithfully serve the great need of the ground,
And at length, in the rounds of the fleet-footed hours
Come to bless us again in the birth of the flowers?

A SUNDAY AT VERONA.

IT was on a rainy Saturday towards the end of September, that a party of English travelers arrived at the venerable town of Verona, in Northern Italy, intending to spend the Sunday there. The guide-book had mentioned that there was Protestant service held in the town, and this was in itself an inducement to choose Verona for the Sunday's resting place; for the uncertainties of traveling incline one to embrace with special readiness all opportunities of public worship.

Upon inquiry it proved that the Protestant service spoken of was in connection with the Italian Vaudois. The next day was gloriously fine and bright, as towards mid-day we set out on our quest for the Vaudois church. The sun beat down fiercely, but it was only in the open squares that one became aware of its full power, the narrow streets and projecting roofs affording elsewhere a grateful shelter. On we went for some considerable distance, passing under the shadow of the immense amphitheater, that glorious old building which for more than fifteen centuries has stood overlooking the city. Now, the crannies of the massive firey stones are being filled up with tufts of the little common maiden-hair—an innocent-looking covering enough for a building originally destined to such savage uses as an amphitheater.

Passing through one or two streets we found ourselves in a narrow alley, on the right-hand side of which was an archway leading into a garden. We mounted the stairs, and at the top found ourselves in a not very large room, fitted up something after the manner of a lecture-room, with a platform at one end and rows of desks facing it. Here some thirty or forty people were assembled, belonging mainly, to judge from their appearance, to the respectable middle classes. Whole families were there—fathers, mothers, and children. The occupants of one of the seats readily made room for the strangers, and placed at their disposal some of the Bibles and hymn-books with which each seat seemed to be amply provided.

The absence of all ornament whatsoever, the austere plainness of the room, was in striking contrast with the Romanist churches of the town, all of them highly decorated in some form or another, but one or two of them going to a point of elaborate tawdriness unusual even in continental churches. One could well understand that the excessive attention paid all around them to the externals of worship, should have driven the Protestants to the other extreme of excessive simplicity.

In a few moments the pastor entered and took his place at the raised desk, from whence he began to read aloud Psalm cxviii., the congregation diligently following in their Bibles. A long extempore prayer was then offered up, the congregation all standing for this, and sitting during the singing of the hymns, as in the French Reformed Church.

A chapter from the Second Epistle to Timothy was then read, and after another hymn had been sung, the pastor began his sermon. Taking his text from the chapter just read. "The Lord knoweth them that are his," he drew out at some length the difference between the "sons of God" and the "daughters of men." Calm and quiet when first he began, his kindling enthusiasm showed itself in voice and manner; his utterance becoming more rapid, his gestures more impassioned; reaching a climax at the end of a sentence and subsiding into quietness, only to rise again as before. The close of his sermon was tender and beautiful, as he depicted the blessed security of those sheep upon whom the Shepherd hath set His seal, that seal which causes Him to know them for His own whatever the sorrows and cares to which they may be for a time exposed. The sermon ended, the pastor once more prayed, first for the nation and for all in authority, and afterwards for the spiritual welfare of all men, and more especially of those now present, that they might receive forgiveness of sins and be fulfilled with all heavenly blessings. One more hymn brought the short service to a conclusion, and then a buzz of conversation arose, as friends greeted friends, and the pastor began to speak to one and another of the little congregation.

Slowly we left the shady up-stairs room, and passed out into the brilliant sunshine, carrying with us lasting memories of the earnest, simple worship of those "two or three" gathered together in the name of Christ. F. A.

Those old people whose blood has become thin and steps feeble are praising Hop Bitters for the good they have done them.

PERSONAL ITEMS.

Henry Lame, who acted as body servant to Gen. Mercer during the Revolution, died on Wednesday week at Mount Vernon, Ind., aged 123 years.

Victor Hugo looks well, but old age is beginning to show its effects. The white hair is thinning on the crown of the head, and the broad shoulders show a stoop.

Mr. Gladstone has been requested by 50 Liberal members of the House of Commons to leave the House early in the evening, and not participate in dilatory debates, owing to his poor health.

Mrs. Garfield is described as a graceful and slender woman, with brown eyes, brown hair dressed stylishly, a clear skin and delicate features. She has a good deal of personal dignity, but no obtrusive self-assertion. She is something of an artist herself and very fond of pictures.

The Infanta Isabella, the eldest sister of King Alphonso, was seriously hurt the other day while out with the hounds. Her horse stumbled and she fell off, striking on her head and being much bruised. She was plucky enough, however, to remount after her hurt had been dressed, and took an active part in the chase during the whole of the afternoon.

[Peoria National Democrat.]

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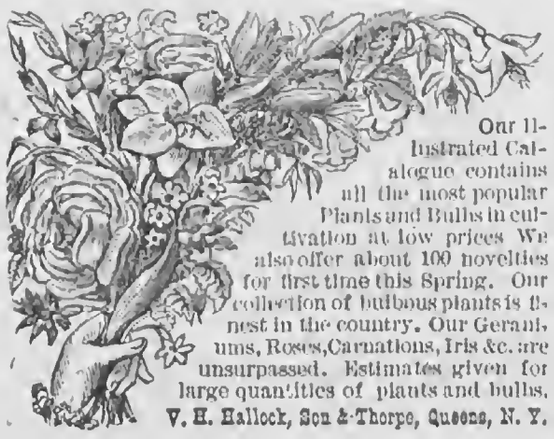

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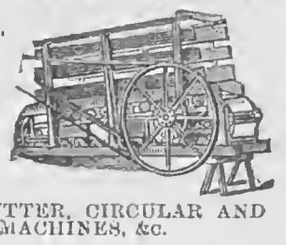

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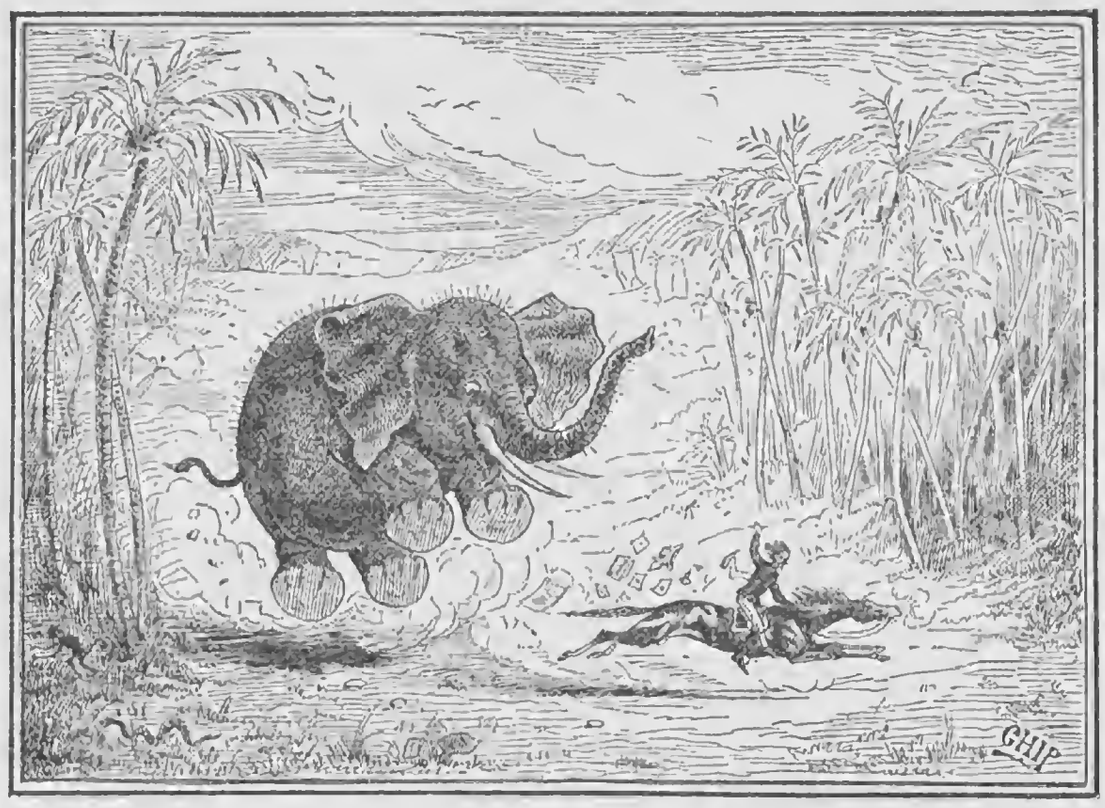

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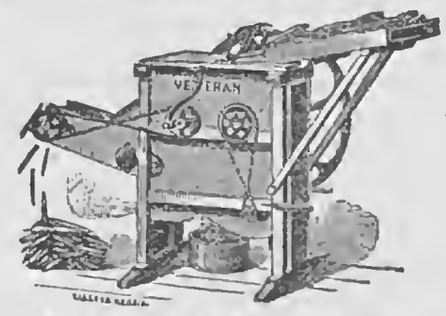

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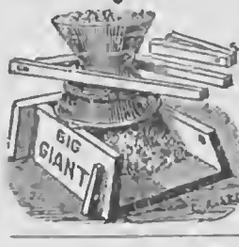

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THE RURAL NEW-YORKER

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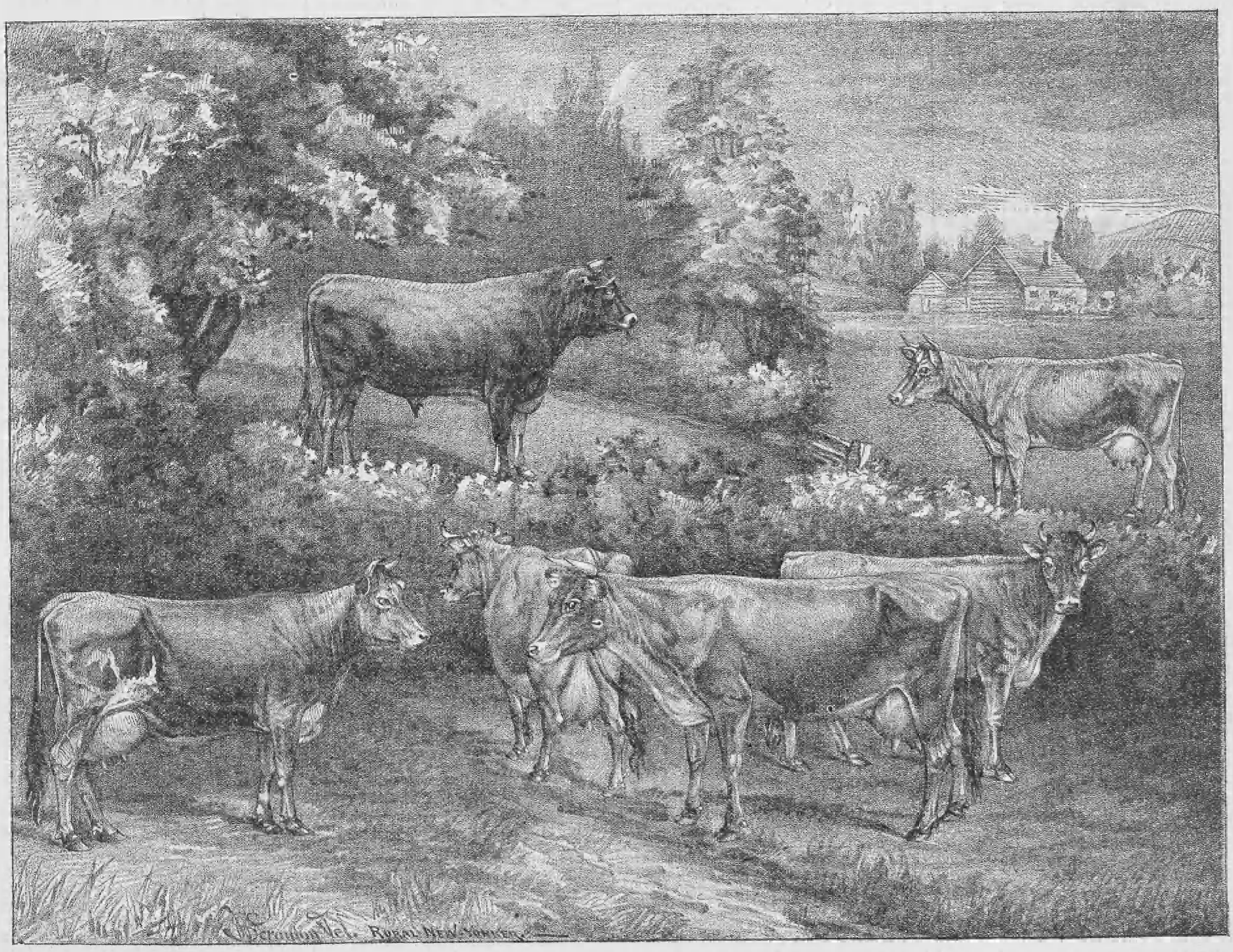
Ralph Evans

The Herdsman.

OUR ANIMAL PORTRAITS.

A Herd of Jersey Cattle.

We have much pleasure in presenting our readers with a fine picture of a group of Jersey cattle. All the animals represented, except the one on the left, belong to Mr. Simpson of Wray Park, Reigate, who had the group photographed. "Prince Albert Victor" occupies the elevated position; "Her Majesty" is in the background on the right; "Alice Gray" is next and faces front; "Luna" is in the foreground; "Jersey Lily" on her right, and "Young Panzy" occupies the extreme left.



A HERD OF JERSEY CATTLE.—Suggested to our Artist by a Colored Plate in Sheldon's Dairy Farming.—Fig. 106.

Doubtless all admirers of the famous Jerseys will take pleasure in examining our artist's faithful representation of their favorites.

JERSEY AND GUERNSEY COWS.—ABORTION.

In replying to a correspondent, page 71, about the quality of Holstein and Jersey milk, the writer says, "the milk of the latter usually yields a larger percentage of butter, and that of a better quality than the milk of any other breed." Does he forget the Guernsey, or is he not acquainted with its merits? I am informed by those who have kept both breeds for years side by side, and on the same food, that the Guernsey generally surpasses the average Jersey in richness of milk, and high color for butter, especially in the Winter. Single individuals equal each other often, but *the general average is in favor of the Guernsey*. She also possesses another advantage over the Jersey—when dried off, she fattens, more easily and rapidly, and makes a better quality of beef.

As to abortion, the writer does not state one thing which I have found vantageons in all kinds of domestic animals, and that is, not to permit the aborter to take, or even go near the male for at least three months, and it is sometimes better that the time should extend to six, nine, or even twelve months. After abortion the womb is in a feverish and unhealthy state for sometime, and totally unfit for a strong, healthy conception. By following the above rule, it has a chance to get well, and the female, kept back a proper time, never again aborted with me, but bred regularly a strong, healthy, thrifty offspring, as long as I wished her to keep breeding. B.

STOCK ITEMS.

Ponies in Great Britain.—We find a list of no less than six different breeds of ponies in England, varying in hight from the size of a good Newfoundland or St. Bernard dog, say 30 inches, (7½ hands) up to one of 58 inches 14½ hands. Anything above the latter we believe does not come under the head of Pony. The various breeds named are the Shetland, the Welsh, the New Forest, the Exmoor, the Dartmoor, and the Yorkshiremoor. These are all tough, serviceable animals, and quite as useful as the larger sorts of horses for various purposes.

The advantage of breeding ponies, which is done in large numbers in Great Britain, is, that they can be reared on waste lands of so poor a soil, that they are able to sustain little else. Moreover, the ponies are so hardy, they can usually shift for themselves without care, Winter as well as Summer. These ponies originally are generally rather coarse in their points, but good travelers and workers, and very enduring. The late Prince Albert, we have been told, was the means of considerably improving the ponies in some of the districts of the south of England, by sending down from his stables in London fine, compact, Arabian stallions to serve the mares.

In some of the Indian territories of America, as far north as Canada, down south to Florida and Texas, large herds of ponies are grown up wild. Those in Canada subsist in the Winter, chiefly like the deer and moose, on browse, moss and even to some extent, we are told, on lichen, when hard put to it for want of other sustenance, or to vary their fodder.

English Importation of Wool.—From foreign countries and its own colonies, the chief of which is Australia, England imported in 1878, 395,461,286 pounds of wool; 1879, 411,106,627 pounds of wool; 1880, 460.

337 412 pounds of wool. It has been supposed by some, owing to the great competition England now meets with on the Continent of Europe, in the manufacture of woolen goods, that this consumption of wool was diminishing with her; but the largely increased importation shown above in 1880, speaks to the contrary, just the same as it has for a few years past in the United States. This holds out great encouragement for us to augment our flocks as rapidly as possible, and the more so, as the consumption of mutton is constantly increasing with our people.

CALVES SUCKING EACH OTHER.—As this is an injurious practice, we shall be obliged if any readers of the RURAL can point out a preventive. By sucking the ears of each other, or the neck, or any parts of the body, they sometimes pull out hair and swallow it. This forms a ball in the stomach in process of time, and is very injurious to the calf occasionally causing death.

We have thought it possible by salting their milk or other food a little, that this might obviate the desire of sucking, the same as it does that of poultry picking at the combs and heads of each other. There is a natural craving of all animals for salt, and it ought to be gratified without injuring them.

SALE OF AMERICAN HORSES IN ENGLAND.—Thirty horses were sent over last December, and having a very rough voyage, arrived in England in bad condition. They were sold at Tattersall's auction, January 13, and brought an average of £73 17s. (about $355) each. The highest price was 165 guineas—(say $1,776). We cannot say whether these figures obtained resulted in a profit or loss to the American consigner; but this we know, if he wishes to have future horses cross the Atlantic with any kind of comfort and safety, and arrive at their port of destination in good condition, let him ship them in milder and pleasanter months, say from April to October—neither earlier nor later. Sling and pad horses in their stalls in the best possible manner, still, in rough weather, they suffer badly, as they can neither be well-fed, nor especially well-watered, so essential is the latter to them; and moreover, the rolling and pitching of the ship, and the unusual noise and clatter on board frightens and seriously affects their nervous sensibility.

GOATS' HAIR IMPORTED INTO ENGLAND.—It is only a few years since this article began to be imported to any appreciable extent. It amounted in 1830 to £1,196,909, (say about $5,750,000). No wonder the people of England wish to encourage the breeding of goats of an improved kind, when they have such a valuable home market for their fleeces: to say nothing of a still greater value of their milk, when bred also for a superior quality and quantity of this, as well as for the hair. Goats can be kept and thrive on the poorest kind of land, and the most humble cottager can keep them as well as the wealthiest farmer,—that is, in numbers according to his means.

A. A.

Dairy Husbandry.

THE DAIRY COW—NO. 26.

HENRY STEWART.

Cheese Making.

CHEESE making depends upon the existence in milk of a peculiar substance known as casein. This substance may be procured in a pure state by the following process. A certain quantity of milk is deprived of the cream in the usual manner and then coagulated by the addition of a small quantity of vinegar or dilute acid and moderate heating. The milk will form a stiff, jelly-like substance which consists of the casein intimately mingled with the whey. In course of a short time these separate, when the whey may be poured off and the curd left. If this be washed and kneaded with pure water, repeatedly poured off and renewed, the casein may be procured nearly pure. For its perfect purification it may be dissolved in a weak solution of carbonate of soda and left to stand for 12 hours when any cream that may arise may be poured off. The casein may then be precipitated by the addition of vinegar and washed and boiled in pure water. By repetition of this process it may be procured free from fat and the milk salts. When thus prepared it is acid, as may be shown by its reddening of litmus paper or any vegetable blues. It is only slightly soluble in water; one pound requiring 400 pounds for its solution of carbonate of soda or potash. These solutions may be coagulated by the addition of an acid which neutralizes the alkali and the curd may be again thrown down by heat; if, however, the acid be used in large quantities the casein will be redissolved.

This curious behavior is of great interest and of very wide pertinence to the dairyman, and its application may be made valuable in a great variety of emergencies that are always occurring to dairymen. For instance, from a knowledge of this behavior under the circumstances mentioned, may be indicated the action of an acid condition of the blood in causing the coagulation of the milk in the udder and milk ducts and the nature of the remedy to be applied, viz.: the use of solution of carbonate of soda injected into the udder to dissolve the curded milk or the use of alkaline salts medicinally as an alterative for the condition of the blood. Also it explains some of those mysterious troubles which are always happening in dairies that are not skillfully managed and those accidents which may happen even in the best regulated dairies. Common sense and a little consideration will help to apply the knowledge of the character of this important constituent of milk to the remedy of many of the troubles of the dairyman which are too numerous to mention here, but which will be taken up as they may occur. Milk caseine is identical in composition with the fibrin of wheat; the legumine of the bean and pea and the albumen of egg or vegetable substances. It is declared by some chemists that they are convertible into each other in the animal system. It is known that they are physiologically isomeric, that is, they contain the same elements in the same atomic proportions although the ultimate combined atom or molecule may differ in each substance. The chemical composition is as follows: in 100 parts there are carbon 53 5; hydrogen 7; oxygen 22; sulphur 1 6; phosphorus 0 4 and nitrogen 15 5.

The acid used in curdling milk may be of any kind; muriatic or hydro-chlorie or chloro-hydric as it is variously called, is used in the making of Edam and Gouda cheese in Holland; in other countries common vinegar, tartaric acid, lemon juice (citric acid) cream of tartar and salt of sorrel (oxalic acid) are occasionally used and in the renowned "Schabzieger" cheese of Switzerland, lactic acid, and caseine itself, in the shape of sour milk are used for procuring coagulation. The action of heat operates on the curd by causing it to shrink and become solid, and so expresses the whey from among the particles, and not only hastens the action of the acid in causing coagulation, but also the separation of the curd from the whey. The heat should be gentle, else the curd is so much solidified and toughened as to become unfit for the manufacture of cheese; indeed by the use of excessive heat, curd of milk has been made the basis of an artificial ivory and with a mixture of some other substances may be made of great hardness and elasticity. The agent generally used for procuring coagulation is rennet. Although this is a well-known substance yet it is very little understood and deserves some special consideration which however must be left for another article.

The Swine-Herd.

BREEDING SOWS.

COL. F. D. CURTIS.

MUCH loss often occurs with breeding sows. This is generally the result of bad management. Sows are kept in small pens during the Winter when they cannot obtain any exercise, which has a tendency to make the young pigs weak and feeble at birth. It is natural for pigs to root and work for food. When confined in cramped quarters with plenty of food they get too fat which inclines them to stir about but little. They should always have a roomy pen or, what is better, two apartments, one for a bed and the other for a feeding room. This will make it necessary for them to move about more and will also aid in keeping them clean.

Too little attention is often paid to their cleanliness. A dirty hog besides being disgusting to look at cannot possibly be healthy. A coat of filth on the body shuts up the pores and the orifices on the inside of the legs, through which, it is said, a pig perspires, and which should never be closed, as they are apt to be when a pig is compelled to wallow and lie in a dirty pen. Filth is liable to make the udders and especially the nipples sore. When this is the case the mother will not allow the young pigs to suck and is often made ferocious by their attempts to the extent that she will turn upon them and destroy them, as she imagines that they are the cause of her pain, whereas, the primary cause arises from the fact of neglect on the part of her owner. This trouble, which is quite common, may be known by the sow jumping up as soon as the pigs begin to suck. She often treads upon the young ones, when thus excited and injures them in this way. It is an excellent and safe plan to examine the udders and nipples before the birth of the pigs and wash them with soapsuds and grease them if they are found inflamed or cracked. If a hog gets dirty it should be washed, and, if the skin is scabby, it should be smeared with kerosene oil and lard mixed and well rubbed on. We know of nothing so good to cleanse and heal the skin as this.

After a clean, roomy pen is provided the next important consideration is the food. Fatal mistakes are made in this respect. Stimulating and heating food should be given if at all in small quantities especially when the mother approaches the period of parturition. The bowels should never be allowed to become constipated which may be discovered by the hard and dry condition of the excrement. If the young are born when the sow is in this condition which is productive of fever and inflammation, she will very likely be an unnatural mother and destroy her young. The remedy lies in preventives. When proper precautions are taken in their food, trouble, of this kind which is very common, may be avoided. Vegetable food is the healthiest and safest. We have always had the best success with pigs when nothing but this kind of food was given to the mothers. If roots are not to be had then we should recommend wheat bran or shorts as preferable to any other feeding of grain. The most objectionable of all is corn or corn meal.

Breeding sows are generally kept too fat. They will not bear when in this condition either so large or healthy pigs, and they are also more liable to a wrong presentation which is alike dangerous to both mother and young. A breeding sow should never be fed so liberally that she will attain her full growth. This is a condition for a porker and not for a breeding animal. A condition of half fat or thrift is the right one. There is a large loss in making unnecessary growth with breeding sows in food which is thus wasted and in causing the sow to be too large and unwieldy which makes her more liable to lie upon her pigs and crush them. Such sows will be slow to move whereas, if they were lighter and consequently more active, they would get up quicker when they heard the cry of a little one.

Sows should be fed lightly for a few days after the pigs are born or else there may be a surfeit of milk which will cause the pigs to scour, taking more than they can digest and also causing caking of the udders and fever which will check the flow of milk and make it dry up. We have known instances of such excessive swelling of the udder, or caking by so much feed that the milk would not flow at all. When this is the case they should be thoroughly bathed with water, or vinegar, which is better, as hot as it can be applied. Thorough rubbing is also beneficial. Sometimes the mother's milk will not flow for a number of hours after the pigs are born. This condition may be known by the pigs appearing hungry and unsatisfied and not lying quietly in the nest after suckling. It can be easily made certain by squeezing the udder.

When the milk does not flow the pigs should be fed cows' milk from a spoon. When this is done they should be taken from the nest and then quietly returned to the mother. They will require at least a half dozen teaspoonfuls of milk at a time and should be fed every three or four hours. The effort of the pigs at suckling will help to cause the milk to come. Whenever a nipple is found to be cracked or sore the pigs may be kept away from it by smearing it frequently with coal tar, but, if the trouble continues, it is better to cut the nipple off rather than jeopardise the whole litter. We have done both successfully.

Before the birth of the pigs care should be had to have a small bed or at least one in which the young pigs will not get entangled. A feeder of plank should be constructed on the sides of the pen about ten inches above the floor against which the back of the sow may rest and under which the pigs may be protected as this will prevent the mother from crushing them.

When a sow is kept in a close pen and does not have access to the ground or grass it is an excellent plan to give her frequently cinders of coal ashes, which she will eat greedily, charcoal, sulphur and salt which all help to promote digestion and keep her stomach in healthy condition. Warm drinks should be given for twenty-four hours after parturition.

A breeding sow should be made tame when young so that she may be handled. Sows will breed well for a number of years and old ones are much preferable to young ones as the pigs will be larger and grow faster. It will pay to take considerable trouble to make them docile.

Field Crops.

THOROUGHBRED CORN.—No. 2.

B. F. JOHNSON.

WHAT weight are we to allow to the thoroughbred idea in the case of seed corn, and the claimed prepotency and fertility of some varieties over others. If a given variety of seed corn is grown separate and so far apart from all others that there can be no fertilization from abroad, I am ready to admit that like will produce its like more nearly than where the common and average circumstances of corn growing prevail. But I fail to see why the most prepotent seed will not be cross-fertilized from abroad, where corn is the dominant crop of the country, and where it is quite impossible to prevent the transfer of pollen from one field to another, by winds, by birds, by insects and in many other ways and means of communication. And in the matter of fertility of a given variety, is there one which will produce an ear on each stalk, when they stand as close as they do, in case of having been broadcasted for a forage crop? It is probable indeed, that a variety of corn, which had been grown on a dry, a thin, or an arid soil, might in a long course of years, develop a large and strongly absorptive, or feeding radicle system, and that when transferred to richer soils, it would ear better than these kinds, natives and to the manor born, but still the fact remains to be proved. And then, in opposition to this assumption, we have the fact that when corn, the product of the poor and worn soils of the east, is taken to the richer soils of the west, the yield is lessened in almost every case.

I am strongly of the opinion that the barren or non-fertile stalks one meets with in the average corn field, and they are seldom barren as to the production of pollen, is due to too thick seeding or perhaps to the lack of the right kind of food in the soil to perfect development. In no variety of corn common to the country, have I ever found barren stalks, except those I thought to have been made so by over seeding or by asking of the soil to produce more grain than there was plant food in it to make grain out of. In fact the over seeding of the corn crop is a common vice of the country. We plant three or four kernels in the hill where we should put but two, and we crowd both the rows and the hills altogether too much, and in doing so, get from 10 to 25 per cent. barren stalks where we ought to have none and the ears on the fruitful stalks are lessened accordingly. On this point I find many thoughtful farmers to agree with me among whom I quote Mr. E. S. Lawrence, late head-farmer of the Illinois Industrial University, whose opinion is to be found in the Report of that Institution for the year 1879.

But there is something very curious in the fact, that given two soils of equal productive capacity, so far as we can judge, the one, say under latitude 42 deg., the other 36 or 37 deg.—the distance apart in the seeding, must be widely different, in order to procure a full crop from both.

If the best average under latitude 42 deg. requires that corn shall be planted three feet each way, with three or four kernels in the hill in order to produce the largest crop, under latitude 37 deg., the distance must be increased to four feet with two stalks in the hill, or the plants will refuse to ear, and this, too, on such rich soils as the Mississippi River bottoms above Cairo and below latitude 37 deg. As we go farther south, and the soil gets thinner, the seeding is reduced to one stalk in the hill, and the distance ranges in the hill, from three feet to four.

These things are very clearly seen on the trip from Chicago in latitude 42 deg., to Cairo, in latitude 37 deg., and further demonstrated as one moves along a north and south line to New Orleans, something near latitude 29 deg.

In the case of the corn crop, it seems natural and reasonable to think, that the richer the soil and the warmer the climate, the nearer the plants should stand together, in order to get the greatest yields; but practice and experience teaches us just the contrary in this, as in many other things. And in this may be the explanation of the many failures complained of in the Cuzco Corn, widely disseminated last year. It grew in every case when planted, but in many, refused to ear because it was crowded together like the common corn of the north; whereas, being a tropical variety, it was used to be planted, a single stalk in a hill four or five feet apart and on a soil which is nothing if it is not of the richest, in every element of plant food. If the Cuzco Corn had been treated to a bushel of half fresh wood ashes and half old stable manure to the hill of a single kernel when planting, and thereafter each stalk made to stand four or five feet apart, the result would have been different indeed.

What answer then have we to make to the question, "What weight are we to attach to the thoroughbred idea in the case of seed corn, and the claimed prepotency and fertility of some varieties over others?" First, that no variety is so thoroughbred that it will not cross with others, which dominate the country, and finally absorb and perhaps obliterate them—and, second, no variety is so fertile as to be able to overcome close planting and fertility of the soil, and, thirdly, probably the whole matter of fertility, depends on just the right measure of, and neither too thick nor too thin, seeding.

TOBACCO CULTURE IN CHEMUNG CO. N. Y.—No 1.

Its History up to the Present Time.

AMONG the tobacco-growing sections of the north, famous for producing superior cigar-

making or seed-leaf tobacco, is the place known commonly as the "Big Flats" district, but more appropriately called the Chemung; for it is in Chemung Co., along the valley of the Chemung River that the bulk of the tobacco called "Big Flats" is grown. Twenty years have passed since tobacco was first grown to any extent as a farm crop in this county. Previous to 1856 tobacco growing here was but an experiment. Our farmers were ignorant of the correct modes of cultivating and handling the plant and the product was sold at so low a figure as hardly to repay the cost. But these experiments were sufficient to demonstrate the fact that the soil was capable of producing a superior quality of leaf, of great value to the tobacco trade. At the breaking out of the war, which so interfered with tobacco production in the south, farmers found greater profits in the crop, which increased until it was declared that tobacco growing was decidedly remunerative.

But the majority of our farmers hesitated for a time to engage in a business, which required a considerable outlay of capital, in the shape of buildings, etc. Some argued that the war would soon close and tobacco would cease to bring profitable returns; while others said it would ruin the soil if the production was continued. As time advanced, however, and the war got under full headway, prices were offered for our tobacco that seemed fabulous. It was found that a single acre of tobacco properly managed, would yield an income, sufficient to purchase two or three acres of good farm land. This fact was sufficient to overcome the prejudices of the majority of farmers and the business of tobacco growing became a rage. Up and down the rich valley of Chemung and the narrow valleys of its affluent streams, tobacco sheds were erected and our valley was dotted with tobacco fields. The production continued until the Summer of '64 which season was decidedly unfavorable for tobacco growers. A severe drought occurred in the Spring, during "setting" season, which made it extremely difficult for growers to start their plants in the field. Those who succeeded with great perseverence, in starting their plants, met with other disasters. Grasshoppers were very numerous during the summer, which damaged the crop very seriously. During the month of March of the following year, while the crop was yet in the sheds, our whole valley was inundated with water from the overflowing river, caused by the melting of a vast quantity of snow in company with a heavy rain storm. This flood did great damage to the tobacco lying in sheds which were mostly situated in the low lands of the valley.

These disasters, in company with a sudden falling off in the prices of the product, dampened the enthusiasm of tobacco growers, and as the result the acreage devoted to the crop decreased greatly. But in a few years prices again ruled high, and growers sometimes realized as high as thirty cents a pound for their entire crops. The acreage again increased to its previous extent and tobacco growing again became a rage. Stable manure was eagerly sought after and farmers frequently paid $3 cash per load for it. Since 1870 prices have ruled lower, having ranged all the way from seven to twenty cents per pound. Labor has also been more plentiful and cheap, and our growers have found profit in tobacco growing at 10 cents per pound.

The crop grown the past season in this tobacco growing district is undoubtedly the largest ever produced here. It has been estimated at not less than 11,000 cases or about 4,400,000 pounds. It has already been entirely bought up by New York packers mainly. The prices paid have ranged from 10 to 14 cents per pound according to quality. Our growers now look upon the tobacco growing business as a permanent industry. They do not expect to grow rich from it, yet they find more profit in it than from ordinary grain growing, and with our small farms of high priced land, it enables us to expend a vast amount of labor at a fair profit. In other words, tobacco with our farmers, is a crop well calculated for fertile, high priced land. I propose in the following articles to give in brief, what I have learned from experience and observation, of tobacco culture in Chemung County. The methods of culture and of handling the plant, differ somewhat from those followed by growers in other tobacco growing districts. The methods which I shall describe are those most popular here.

THE CULTURE OF PEANUTS AT THE NORTH.

ALMOST every one is aware that peanuts as a profitable farm crop can only be successfully grown in the Southern or border States, and in a sandy, light-colored soil, where the shells will be of a bright light color and free from dirt. But it does not seem to be generally known that they may be grown on a small scale as a garden crop for family use in favorable soils and situations in many parts of the North or at least as far as latitude 42°, and at the West where there is much hot Summer sunshine probably still farther, and that almost as easily and surely as potatoes. [We have grown them and seen them grown on Long Island farms repeatedly. Eds.] The yield of riper nuts will here be light compared to that in their favorite latitude and in our dark, adhesive soils the shells will present a dusky, dirty appearance; but the flavor is the same, and the yield I think sufficient to warrant their culture by those who have the time and taste to cultivate a variety of garden products. A rich sandy, or at least mellow, loam in a dry warm situation, should be selected. They endure heat and drought well. The soil should be loose and mellow, and if not rich, should receive a dressing of fine, well rotted horse manure. Plant the latter part of May in drills three and a half feet apart and two inches deep. Take the kernels out of the shells, but do not break the thin, red skin surrounding the meat. Plant the kernels a foot apart in the drills and cover with fine earth. [By experiment we found it was better to plant the entire fruit, that is, shell and all. Eds.] Keep the ground mellow and absolutely free from weeds, and when the vines begin to blossom sprinkle a little fine earth over them to hasten the rooting process. As the nuts grow on the roots which strike down under the blossoms, the earlier and more freely the vines take root, the greater the yield of ripe nuts maturing before frost. [Our friend is a little mistaken here, we think. They are not roots at all. If the blossoms (ovules) are fertilized, what seems to be a growth of the receptacle or head of the flower stalk, takes place, carrying the ovary downward which makes its way into the ground and at once begins to enlarge, forming the peanuts.—EDS.] After frosts have killed the vines pull them up and pick off the nuts, those well developed, that have the rough, wrinkled shells which indicate ripeness, spread in a warm, dry place under cover and stir frequently till dry, when they may be roasted as wanted. The children will attend to the roasting, but may need some instruction as some experience is required to get them baked just right. They may be spread in a dripping-pan, and roasted in the oven like coffee, stirring often to prevent burning.

"G."

THE PROGRESS OF VEGETABLE LIFE.

A SINGLE potato plant is probably as good an exponent of most vegetable growth, as it is well known to observing agriculturists. The dormant seed (the eye from a healthy tuber) is planted, say, in April, and almost at once the combined influence of darkness, moisture and warmth causes the bud to grow. The effort to reach the light, and to propagate its species, seems to be as strong in the vegetable world as in the animal, and the result is, the foliage, of full green, shoots above ground, while the young roots go below to forage for the general good of the whole plant and to escape the impending heat of the advancing season.

The ever-spreading roots below feed the foliage above, and the "top" soon shields the roots from the sun's direct rays—a measure of mutual benefit, as neither could go to maturity under reversed conditions. The season passes, and as the roots and tubers mature, the top assumes compactness, strength and that *tone of green which is the coolest*, thus again, by another means, providing for the healthy progress of the newly-formed seed.

At last, when the tubers are mature, they announce to the foliage that their office is completed, and the gradual change to yellow, brown and black withered stems and dried up leaves is the acknowledgement of the final change, which overtakes all plants in the due course of nature.

It requires but a slight study of the condition of these plants during a season's growth to discover what the cultivator must do to assist in making a remunerative crop.

Dodge Co., Neb. S. RUFUS MASON.

REPORT

On the Golden Ovoid Mangel Seed Imported and Distributed by the Rural New-Yorker in the Free Distribution of 1879.

OWING to the fact that the mangel reports received from many of our subscribers to whom seed was sent last year in our Free Seed and Plant Distribution, have been mislaid, we are not able to present as full a statement as we would be pleased to have done. Fortunately we can give the names of those whose best three mangels weighed over 30 pounds, but we shall be obliged to ask those persons named in the following list to send us their full address.

Here are the names, and opposite are given the weights of the three heaviest mangels:

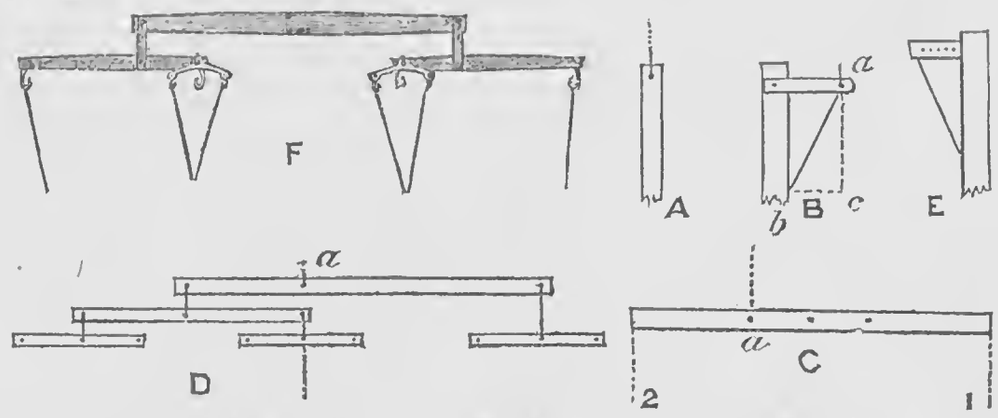
NAMES OF MANGEL CULTIVATORS.	Weights of best three.
E. Farnham	46½ pounds.
G. E. Warner	45¼ pounds.
Edwin Keeler	43 pounds.
Jasper Barnes	39¾ pounds.
T. Leete	39 pounds.
H. Patrick	38⅝ pounds.
W. L. Day	34 1-16 pounds.
W. Moore	33½ pounds.
J. L. Scott	33 pounds.
L. Singer	33 pounds.
H. R. Roberts	32 7-16 pounds.
E. P. Moon	31 11-16 pounds.
N. L. Webb	31 3-16 pounds.
W. H. Harter	31 pounds.
James Grace	30 6-16 pounds.

Farm Economy.

THREE HORSES ABREAST.

(See page 135 for query.)

THE great convenience of using three horses abreast in plowing heavy land makes it desirable to find some way, if possible, to employ the three horses without at the same time losing some of the extra power or of meeting with some obstruction or inconvenience which may greatly reduce, or even destroy, the gain. There have been very many contrivances devised for employing three horses, and by some combinations of levers it has been thought that all the difficulties have been overcome. But, in fact, there are no combinations of mechanical devices which are able to get around the simple but inevitable laws which control the application of power to move weights or exert forces. When one understands these laws, it becomes clear why many ingenious devices for the use of power or force in peculiar methods have failed. One primary law of mechanics is that the force of draft or impulse is always directed in a straight line when the force is simple or single. Another is that when two equal forces operate in different directions, not directly opposite to each other, the direction of the motion produced is precisely between the lines of the two forces; when equal forces are acting in exactly opposite directions, one neutralizes the other, and there is no motion at all.



ARRANGEMENTS FOR USING THREE HORSES ABREAST.—FIG. 107.

To apply these principles to the draft of a plow we may consider that when one horse is hitched to a plow he will draw it in a straight line; that if two horses are hitched by means of a double-tree attached to the plow by its center, the draft will also be in a straight line. If, however, the point of attachment is not in a direct line with the middle of the plow beam, the draft will not be in a straight line with the beam. This is shown in the following diagram, fig. 107. At A, the draft is from the center of the beam and the force is exerted in a straight line, as shown by the dots; at B, the draft is from the end of a rod fastened to the plow beam at *b*, and the point of attachment is at a distance from the end of the plow beam and on one side, at *a*. When the plow is started, the point *b* is at once swung around to *c*, so as to bring the line of draft in the same direction as that of the moving power. This cannot be avoided. If a man holding the plow keeps it in the furrow, he must exert a certain force or power, which then becomes directly opposite to that which moves the plow, and this exertion exactly neutralizes a corresponding amount of the horses' exertion and destroys it. This, too, cannot be avoided. Therefore, in drawing a plow by any combination of whiffletrees or other levers, the point of draft must be in the line of the middle of the plow beam, otherwise the plow will be swung around or must be held in the furrow by the exercise of sufficient force to resist the side draft.

When we come, then, to consider how three horses abreast may be used in plowing so as to have one horse walk in the furrow, or nearly on a line with the plow beam and the width of the furrow slice only out of that line, and that each horse may do one-third of the work, we find that it is impossible, unless some of the force of the horses is lost, being neutralized by the exertion of the plowman to resist the tendency to swing the plow around, and much extra and severe labor is thrown upon the man.

In hitching three horses to a plow or a wagon the principle of the balance or scale is brought into action. In the diagram, at G, a doubletree 4½ feet long is represented, having a hole in the middle and one at each third of its length. If this were used for a balance and suspended by the hole *a*, two pounds at the end of the short arm would be balanced by one pound at the end of the long arm. This is well known, but its application to the use of whiffletrees is not so well known, for a person not long ago applied for a patent on a combination of levers to do away with this natural law, which would be equivalent in its effect to making one equal to two, or twice one equal to one instead of two; and, for a wonder, his patent was not granted, but it was on the grounds that the device was not novel. Unfortunately it is not novel, for many persons have spent time and money in trying to make out the same improvement on the multiplication table.

Therefore, as there is no getting over an impossibility, one must either have the third horse walk a little outside the furrow on the plowed land, or he must plow a wide furrow, say 16 or 18 inches, or he must attach a horizontal draft plate to the end of the plow, so as to throw the draft as little as possible on to the land side, to enable the off horse to walk in the furrow, and exert the muscles of his arms and shoulders to keep the plow straight. The common three-horse evener is made 4½ feet long, and the hitching point is 1½ foot from one end (*a*, fig. D). The common doubletree is used at the short end, as shown. This brings the line of draft exactly on the plow beam. By making the evener and double and singletrees as short as possible, the outside horses are brought nearer to the middle horse. With small horses an evener of three feet may be used, in which case the equalizing side draft plate may be used, and the few inches gained with this, with the plowing of a wide furrow, will enable one to use the three horses without much inconvenience in the way of overcoming the side draft by muscular exertion of the plowman or loss of horse power, and still have the off horse walk in the furrow. A very good arrangement for three horses is shown at fig. F. The equalizing plates, or singletrees, are made quite short; very short wooden ones of the common kind will answer every purpose. The inside traces are crossed so that the middle horse pulls precisely the same as the outer ones.

Dogs.

I agree with J. S. Woodward (RURAL page 35) that something should be done to abate the "dog nuisance." Cannot our Legislature give us a law that will afford some relief to farmers? In November last, two worthless curs got into my hen-house and killed thirty Plymouth Rocks, in about as many minutes, besides frightening the balance of my hens so as entirely to stop their laying for weeks. I was fortunate enough to kill one of the dogs, the other escaped. Several of my neighbors have lately had their poultry killed by dogs. Now have we no means of redress? In a trial held in this county this Winter, it was decided that a man had no right to shoot a dog caught killing sheep, but that he might recover damage of the owner. Now it is oftentimes difficult to prove the ownership; besides, about nine dogs out of every ten belong to persons who possess no property. What is the good of a judgment against a majority of the dog owners?

We have a law taxing dogs, but what does it amount to? It is, and I suppose can only be, partially enforced and therefore it is almost useless. Several years ago the assessors found only three dogs in one ward in Syracuse, while there were actually sixteen within one block of my residence. We need a law that compels a person to procure a *license* to keep a dog, said dog to wear a collar plainly marked with its owners name, and with the number to correspond with the number of the license. All dogs not so licensed, and provided with a proper collar, should be promptly killed. Any person should be allowed to destroy them, and if necessary a reward of fifty cents per head should be offered. Personally I feel interested in this subject, and for reasons stated. NELSON RITTER.

Industrial Topics.

SORGHUM SUGAR AND SIRUP MAKING.

I. A. HEDGES.

THE frequent inquiries that reach me from subscribers to the RURAL NEW-YORKER induce me to discuss the sugar and sirup business from sorghum canes, in a practical and business manner, not so much, however, in the line of culture as that of manufacture, as the former is, or may be, summed up by saying, cultivate as for corn, either in hills or drills, and commence to cut and work as soon as the seed is fairly ripe. The experiences, as expressed at our late annual cane-growers meeting, favored allowing the cane to rest either in gavels or shocks about two days, to allow the leaves and husk of the stock to cure before hauling and heaping or even working it up. It is now generally considered better to work the cane with the leaves attached, as the labor of

stripping costs more than the loss of juice with the leaves. Then, inasmuch as the best disposition to be made of the bagasse is to use it for fuel under the boilers, the leaves will assist to increase the fire. It would be difficult to give directions for constructing such furnaces in a communication like this. The tendency at this time among those in the business is to the central factory system, the same as in cheese making, and I must say it is the only feasible plan, especially in the Northern States, where farms are small and devoted to varied crops. Recourse to this plan is made more necessary by the great deficiency of well skilled operatives as boilers; however small the works, the making of sugar is liable to be a failure without a competent boiler, and, however large the work may be, one skillful boiler may be sufficient.

Now to afford readers of the RURAL an idea of the plan that is being adopted in some of our prairie districts, I will quote one in Rice County, Kansas, a thriving town of 1,000 inhabitants, closely surrounded by a rich soil where cane has never failed. An association has there been formed of citizens and farmers, and all the facilities are offered by the corporation that it can consistently afford. Farmers sign agreements to grow cane to the required amount—say 500 acres—cultivate and handle it as required, and deliver it at the mill, leaves and seed attached, at the rate of $2 per ton or 2 000 pounds This constitutes the agricultural department of the enterprise and should be distinct from the manufacturing. This latter they are not so well prepared to organize, as cash capital is lacking, but it is thought Eastern capitalists may find a safe and paying investment for a few thousand dollars by joining these earnest workers and by employing the three or four months of the most pleasant part of the year in taking off these crops.

I will give a brief outline of the operations, presenting what is, as appears to me, a safe and reliable basis of calculation. We suppose the works to cost $10 000 all complete, capable of making 500 gallons of sirup weighing 12 pounds each in 12 hours' run, working up 42 tons of cane, costing $44. The requirements will be as follows: 12 hands at $1 per day and three more at $2 each; cost of fuel, over and above the bagasse, $2 per day; incidental expenses and interest, $3 per day, making a total of $65 daily for expenses. The income will consist of 500 gallons of sirup at 30 cents per gallon, or $150, or $140 exclusive of casks. The seed yield will equal one bushel per ton of cane, which, when fed with the skimmings and wash of tanks, boilers, etc., will considerably exceed in value one bushel of corn in fattening hogs or cattle. It is fair to estimate the pork produce from this at 12 pounds per bushel, or $500 pounds per day from the 42 bushels, worth, at three cents per pound, $15 per day. The result will therefore foot up as follows:

Total daily receipts	$155 00
Total daily expenses	65 00
Total daily net profit	$90 00

If there are 500 acres each returning 10 tons of cane and each ton yields 12 gallons of sirup, which is a low estimate—it will take 120 days' time to take off the crop.

This, however, is longer than the seasons will generally admit. Working may be begun in the latitude of Missouri and Kansas by September 1st, and continue with very little interruption until December 1st. To expedite with the apparatus of the size indicated, therefore, running the works at night is the legitimate recourse. This, in fact, is the economical plan just as soon as a sufficiently skilled force of hands is drilled to the work. Now, if the works are made still more complete by the addition of a vacuum pan, and a fair proportion of sugar is obtained, a much larger net balance will appear, as it is not difficult to swing four to five pounds of sugar, worth eight cents in Kansas, or Missouri, and still have as good a sirup as that not susceptible of granulation; for it must be understood it is only the best quality of sirup that is susceptible of crystallization. Our working now is and will be for some time, as it was formerly in Louisiana with molasses from sugar cane—we are unable to crystalize so freely as to separate the cane sugar from the sirup to that degree that our molasses is poor in saccharine, like glucose fancy sirups. I have not yet formed a sample of the molasses so separated from the sugar that it did not show over 40 per cent. of cane sugar still present, while the three samples, Boston sugar drip, Baltimore silver and St Louis white drip, failed to reveal a particle of cane sugar.

If the above shall awaken the attention of any of the readers of the RURAL who may desire further information, on this subject, I desire it to be known that one of the objects of the Mississippi Valley Cane-growers' Association is to afford information on the matter. Inquiries should therefore be addressed either to the Secretary or myself, at 2,004 Broadway, St. Louis.

AILANTHUS SILK CULTURE.

A FEW years ago an entomologist in Brooklyn N. Y. procured some of the cocoons of the Ailanthus silk worm. From these came the millers or moths. Some of them escaped or were let loose, and the chrysalides from them being hardy, there is now scarcely an Ailanthus trees in the two cities, on which more or less of the cocoons may not be found. The silk of these cocoons is not so fine as, but is stronger and makes a cloth much more durable than, that from the cocoons of the ordinary silk-worm. An obstacle formerly in the way of its use was that the silk could not be readily reeled from the cocoon; but new inventions have overcome that to a considerable extent. Beside, the introduction of machinery for the treatment of the cocoons from which the moth has eaten its way—making the silk into flock and from this into thread for weaving as is now extensively done with the perforated cocoons of the ordinary silk-worm—renders these cocoons of the Ailanthus more readily worked and they would find a ready market could they be offered in sufficient quantities.

There are thousands of acres in many states that could be profitably employed in raising the trees for these worms to feed upon. I do not forget the objection that the pollen of the male tree is said by some to be as unhealthy as it is unpleasant; but no male trees need be raised. Cuttings strike readily and these can be made from the female trees. A little care only would be necessary to have a plantation acres in extent without a single blossoming tree. Beside, the trees will be kept so thoroughly cut in that they will blossom but little. Plant the trees out when a year old. Let loose a few moths among them, and you will have turned a barren waste into a source of revenue.

The trees should be set quite close together and kept cut in to a hight easily reached by ladders. The moths would lay their eggs from which in time would come worms to feed on the leaves. These would in turn spin and affix their cocoons to the trees which could be readily seen and gathered by boys when the foliage was gone. Enough of the cocoons will be missed from which moths will escape to keep up a full supply, and the plantation once started will be a perpetual source of income with very little care and expense. Who will be the first to give it a trial? I might go on and state by measure how close the trees should be planted and how closely headed in, but exactness is not necessary. The trees should be far enough apart to admit light to their roots and the tops should be readily accessible by means of light ladders.

L. A ROBERTS.

Sugar from Amber Cane.

AT a meeting of the Chemung County Tobacco Club the discussion on subjects of tobacco interest was followed by one on the question of making sirup and sugar from Amber-cane.

Mr. Compton, who has had considerable experience in working the cane, said, in answer to numerous questions, "I consider that the business of making sirup and sugar from Amber-cane has been started successfully in our valley. I have succeeded in making some sugar which I shall show at the coming day meeting of the Elmira Farmers' Club. I have made about 1,450 gallons of sirup during the past season, and the prospect is, there will be 12 or 14 mills working in the county next Fall Those who have tried growing the cane for the purpose of having it worked up will increase the acreage if there is a prospect of having it made up, which there is. A mill suitable to work 10 acres will cost $150. I have sold my sirup for from 50 to 60 cents per gallon.

Mr. M. Compton from one-eighth to one-tenth of an acre got 36 gallons of sirup. I think 300 gallons may be produced from an acre, provided good culture is given the crop. The cane should receive better culture than our farmers have given it the past season. With such culture as is given to tobacco, 400 gallons can be produced from an acre. I think the business could be made to pay well in our valley. Last season was unfavorable for the growth and perfection of the cane, yet all who brought cane to me to be worked up, felt well paid for their trouble and expense by the sirup which they obtained. The cane should be treated more as our farmers treat their tobacco crops, if the best results are to be expected. I should plant in rows, north and south, in hills, about 18 inches apart in a row, leaving about five or six stalks to a hill. From an acre of very poor ground I got 100 gallons of good sirup. G. A. G.

Horticultural.

RURALISMS.

ENGLISH journals are complaining, and it would seem justly, of the manner in which Americans pack their apples for the foreign markets. They say, with a good deal of feeling, that the best fruit is now put on the top and the poorest at the bottom, and that the barrels are small. I suppose, however, that the barrel is the usual flour barrel. In contrast to this they call attention to the fact that Canadian apples are not only in larger barrels, but honestly packed throughout. This is a matter for grave consideration on the part of shippers as well of growers; for, aside from its downright dishonesty, it is always in the end a losing game to play. I always read such things with a feeling of shame. It is mortifying to know that such things may sometimes may be found at home, but infinitely more so to find ourselves charged with them in the markets abroad. It is not the way to gain either character or trade. From what I have seen, I am inclined to think that some shippers are more to blame than the growers. Either the grower or the shipper should be compelled to put his name on every barrel shipped, which would in a measure act as a check. There may be many men willing to commit or consent to a fraud, but very few who would be willing to be exposed. I wish some person connected with the RURAL could spare time to investigate the matter and give the facts to the public. I will do what I can in the same direction. If shippers commit such frauds fruit growers all over the country have a right to know it.

THE late Robert L. Pell, of Pelham-on-the Hudson, who was famous for his Newtown Pippins, the best of which went to Europe, used to wrap all his "best" apples separately in paper, no unsound or imperfect fruit being allowed in this selection. He employed no "middle man" or shipper, but sent direct himself, and the prices he obtained were a surprise to those who took no pains in selecting and packing. He made a reputation for himself as well as his country; and as his orchard of Pippins was a large one his profits were large, for he often received as much as $20 a barrel for some of his apples in England from private parties. I know there are more men like Mr. Pell still living; I wish all were like him in this respect. There may be some necessity for overhauling Western apples after their long and rough journey, but none for dishonesty.

I AM sorry the Editor does not quite agree with me about the Climbing Hydrangea. My praise of the plant had reference as much to its usefulness as its beauty. I cannot think of another ornamental, hardy climbing, clinging plant that can be put to so many uses. It may be remarked that there are two forms of this plant in the market; one from cuttings from a *plant* in Japan and the other from *seed* from Japan. The former has the larger leaves, with deeper and coarser serratures. The difference may disappear in time. Wherever I have put a plant, whether on rocky ground, by a wall, or a tree, it has seemed to make itself very much at home; and it is for this reason that I think it will prove to be useful as well as pretty. On the grounds of L. H. Meyer, of Staten Island, there is a very fine specimen that has grown undisturbed since it was planted, and grown very fast.

PROFESSOR COOK'S excellent report on the experiment in feeding cows is a model of its kind, and makes one wish for the establishment of that experimental station, or a section of it, that we are to have near New York, with a man like the professor at the head of it. I should be glad to see a similar report for the Winter months.

I SEE that the Frenchmen, with their wonderful fruits, etc., formerly alluded to in this column, have gone West, and that their character seems to have gone before them, and to be understood by some. Last Winter they had a cool reception in Boston. I hope they will get one at the West sufficiently hot to make up for it. Sometimes they have a few good things, but the only safe way is to have nothing to do with them.

LAST Fall I recommended the Triteleia uniflora for in-door and out-door culture. It has been in bloom with me for over a month, and will continue a month or so more. A pot five inches in diameter has daily in bloom from 30 to 40 of its pretty white flowers tinted with blue. And then it is so easy to grow.

HORTICOLA.

The Megarrhiza Californica.

ON reading the RURAL, dated Jan. 23d, I came across the following hard name, Megarrhiza Californica, which, I think, means a beautiful vine growing all around us, particularly on the uncultivated lands, on the hills and mountain sides, among the brush, rocks, etc., etc. We find it almost everywhere. It is a *weed* which we find in our grain fields among corn, potatoes, etc.; in fact it is a *native*. There are vines of it now several feet long, fresh and green, with bunches of white, fragrant bloom, and green, thorny pods which would make a New-Yorker think of chestnut burrs, if he undertook to open one with his fingers. The seeds when ripe are of various shades of beautiful color, and the children, both Spanish and American, gather them by the thousand to play marbles with. The Spanish call them "Chila cotas;" some Americans call the root "Man-root," as it grows very large and deep in the ground. I have seen roots as large as a man, and I think they would weigh 100 pounds or more! They are very bitter, and one of those big roots, I think, would afford material enough to run Dr. Hostetter's Bitters factory a week or more! I have seen thousands of those big roots on the banks of the road where grading was done on the mountain sides. The pods open when ripe so the seeds drop out like chestnuts. The squirrels eat the seeds occasionally, but find them bitter, too. Now, Mr. Editor, if you want some of those pretty seeds when *ripe*, I will try to send you some to try in your big garden.

Santa Barbara Co., Cal. O. N. CADWELL.

[We would thank our friend for a few of the seeds. No doubt the plant he speaks of is Megarrhiza Californica, now offered for sale by prominent London seedsmen. See illustration, page 52 It is confined to the Pacific coast and very nearly allied to Echinocystis, from which it differs in its immense perennial roots.—EDS.]

Pomological.

THE PEACH.

S. B. PECK.

WHAT I have here to say under the above head, is not to describe the process of growing this delicious fruit from the planting of the pit up to the gathering and eating or marketing the product, neither shall I proceed to give its history, its natural habitat; nor to describe its many varieties with all their individual peculiarities or idiosyncrasies. No: my success, or rather the lack of it, forbids my undertaking such a task. And should I undertake in the choicest language at my command, to describe the tree when clothed in its Spring floral robe, or in its Autumn dress of rich golden yellow or blush of crimson fruit, half hidden by its lively green trimmings, it would only bring to my mind what I have *had* and *lost*. It would bring vividly to mind the fact that after clearing off the forest and planting and tending a few acres of this most popular fruit, and thanking a kind Providence for the rich reward bestowed upon me for my labors, the trees were suddenly blighted and ruined by an untimely frost, and that I have lived to clear off this same land again by tearing up and cremating these dead and decaying trees.

It has been said that there is more to be learned by our failures than by our successes. The advent of unexpected and disastrous occurrences, or startling phenomena, leads often, by a scientific examination into its causes, to valuable results. Had I another life to live I might myself profit by my own failures, but such not being the case, the best thing that opens to me, is, to describe the causes of failure in my own case and that of many others.

To insure any lasting success with this and kindred fruits in this climate, the trees *must be* planted on sloping land. The best slopes for them are to the northward, just the reverse of the best slopes for the grape and all such late blooming kinds that require the whole of the season for their perfection. This may sound empirical as coming from me without the explanation, which I shall attempt to give.

Every peach grower knows that untimely frosts are the main and, I may say, the only drawbacks to success. Every farmer knows that low lands, especially hollows, are more subject to injurious frosts than hillsides, and knowing this fact, he may deem it sufficient for his purposes; but he who is posted in climatology, the much sneered at book-farmer, looks from effects to causes. The weight of a given volume of atmospheric air depends largely on its temperature; the colder the heavier. It receives its heat by reflection from the earth, the latter being heated by the direct rays of the sun. After sundown the earth and the thin stratum of air next above it cool rapidly with an increase of density and weight in the latter which causes it to seek, like water, the lowest level open to it: thus draining off the cooled air of the hills to the valley below it. But this is not all; winds, currents of air, tend to prevent frosts by mixing this cooled air with the warmer above it, and the current of air downwards necessitates a counter current upwards of the lighter and warmer air, to prevent that vacuum which Nature is said to abhor.

My peach trees were planted on ground slightly sloping to the North, and terminating in a very shallow basin, made partially by thick grass and low bushes beyond it In the Spring when, in a few days, they should have blossomed and set fruit, I was pruning, and as I came to this hollow I found the trees all dead, but at an elevation of twenty inches all were sound. None of the trees bore that season. They subsequently bore three times in six or seven years, but succumbed entirely during the winter of 1874-5. During the same time my next-door neighbor's trees, put out at the same time, treated him still worse, because his ground was yet more level.

A friend who by my advice had planted his

trees on the high steep bluffs of Lake Michigan, rather than on the nice flat back of them, as he had intended to do, saved his trees through that trying time, that demolished all on flat grounds. If no where else in the world, the people of Western Michigan, even in this famous Peach Belt, have learned to pay special regard to what we call here "Atmospheric Drainage."

Muskegon Co., Mich.

Industrial Societies.

CHEMUNG COUNTY TOBACCO CLUB.

[Rural Special Report.]

A MEETING was held by tobacco growers of Chemung Co., Feb. 3, near Elmira for the purpose of organizing a tobacco club. After the election of officers and the transaction of other preliminary business the discussion of questions of interest to growers was immediately begun.

Mr. G N. Hoffman said "In order to make our club beneficial and practical, we should tell what we know and then stop. It is a common fault with members of such organizations to make speeches. These embarrass and confuse other members of more modest pretensions who, not being fluent talkers, refrain from giving their experience. We should tell what we *know*, not what we speculate."

N. A. Ward.—"We must educate each other. If we can increase the price of our tobacco half a cent per pound we have done great good. Practical sayings are what we want—not theory.

George Chamberlain.—"We want to know how to improve the crop. To find out which are the best varieties to grow and which fertilizers give the best crop.

Mr. Hoffman.—"Which is the best variety?

Mr. Chamberlain.—"The Lancaster is best with me."

President Miller.—"With me the Lancaster is a failure."

G. A. Goff, Jr.,—"I consider the Ohio Broadleaf a better variety."

Mr. Hoffman.—"I have a five-acre field of clover sod which I want to fit for tobacco. The only manure which I have is cow manure; how can I put the soil in good condition for a crop with only cow manure as a fertilizer?

Mr. Chamberlain.—I should apply the manure in the Spring and plow the ground shallow. Shortly before the time for setting the plants I should plow it again rather deep, then fit the soil in the usual way."

Joel Rutan.—"Manure applied in the row has succeeded well with me and I consider the method a good one when one has only a limited amount."

Mr. Hoffman.—I prefer spreading it on the surface. Cow manure when buried in the soil becomes a dry clod, rendering little benefit to the crop."

John Strouse.—"I would like the opinion of the Club in regard to raising tobacco on the same soil for successive years, without rotation with other crops. Is it best to manure heavily and employ the same ground year after year, or to change the tobacco field and seed it to grass and clover, to be followed by some other crop previous to fitting it again for tobacco?

Mr. Chamberlain.—"It is best to change. You will get better colors and greater yield. Less manure is also required when the soil is seeded to clover occasionally."

Mr. Stronse.—"I thought of sowing my old tobacco field with barley, then follow with wheat and seed to clover."

Mr. Goff.—"If the object is to get it ready as soon as possible it would be best to sow to wheat after harvesting the tobacco, and seed with clover in the Spring."

Frank Copley.—"I consider clover a great help to a tobacco crop. The great benefit of clover is from the root, which fertilizes and loosens the soil."

Mr. Ward.—"With mixed farming it is best to employ several fields for tobacco and practice a rotation. It is not wise to apply all the manure made on a farm, on one single field on which tobacco is grown year after year. It is poor policy to raise a crop that we cannot fertilize with manure made from a rotation of crops."

President Miller.—"That is true. To apply all the manure made upon a farm, on a few acres, will sooner or later ruin the farm."

Milton Beckwith.—"I would like the opinion of the Club, on the use of commercial fertilizers."

Mr. Chamberlain.—"I have tried some of them without benefit to the crop."

Mr. Beckwith.—"I have tried Bowker's and could detect some improvement in the growth."

Mr. Chamberlain.—"The use of commercial fertilizers injures the quality of leaf."

Mr. Ward asked about applying common manure in the hill.

Mr. Shappee.—"I have grown good crops from applying stable manure in the hill."

President Miller.—"This method of applying is practical when it is necessary to make a little manure go over a good deal of ground."

Mr. Havens.—"Drill manuring is too much work in a busy season."

Mr. Goff.—"A great drawback to this method of applying manure is the difficulty in obtaining that which is thoroughly rotted. It will not do at all to apply coarse manure in the row."

Mr. Crooker.—"Too much manure in contact with the roots causes poor colors of the leaf."

Mr. Ward.—"I am not in favor of hill manuring with any crop. Manure in a hill does not dissolve; the next year, it is still there. Manure applied broadcast, becomes thoroughly incorporated in the soil and there is no fear but that the roots will find it, if it is *only there*. Manure cannot make plant food until it has been dissolved."

Mr. Chamberlain.—"Those are my views."

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 50, DEC. 18, 1880.

Fertilizer Analyses.

500. Forrester's rye fertilizer, made by G. B. Forrester, 188 Pearl Street, New York, sent by M. S. Baldwin, Naugatuck.

502. Ground bone, made by Peck Brothers, Northfield, sent by S. R. Gridley, Bristol.

508. Genuine sulphate of potash.

509. Muriate of potash.

508 and 509 are from stock of A. Lathrop, sent by H. H. Austin, Suffield.

	500	502	508	509
Nitrogen as ammonia	5.00			
Nitrogen of organic matter	.33	4.06		
Soluble phos. acid	4 73			
Reverted phos. acid	.02			
Insoluble phos. acid	1.17	21.79		
Potash	9 45		27.38	53.83
Chlorine	8.75		1.24	
Estimated value per ton	$15.83	$38.40		
Cost per ton	$47.50*	$33.00	$35.00	$32 00
Cost of potash per 100 lbs			$ 6.39	$ 2.97

* In New York.

Bulletin No. 51, Jan. 27, 1881—Fertilizer Analyses.

Analysis of refuse lime from Franklin Beet Sugar Works. Sample No. 516, received Dec. 24, 1880, from Edgar Stoughton, Esq., South Windsor, Conn:—

	Pounds per 100.	Pounds per ton.	Trade val. per lb.	Est. value per ton.
Moisture	42.19			
Carbonic acid combined water and organic matter	23.99			
Lime (calcium oxide)	19 85	397.0	4-10c	$1.59
Potash (potassium oxide)	.32	6.4	6c	.38
Phosphoric acid	3.10	62 0	9c	5.58
Nitrogen	.44	8.8	20c	1.76
Total estimated value per ton				$9.31

Lime is here valued at its cost shipped in casks at New Haven, *i. e.*, $4.40 ($0 40 less value of casks) per ton of slaked oyster-shell lime with 60 per cent. of *pure lime* = 1 200 pounds. The cost is 37 cents per 100, or 4-10 cent per pound. The same lime is to be had at the kilns in bulk for 1-4 cent per pound. These are perhaps not present prices.

Sorghum Seed.

XC. Seed of Minnesota Early Amber Cane, from E. M. Dunn, Grafton, Mass.

XCII. Sorghum seed, from E. D. Pratt, West Cornwall.

COMPOSITION.	Air-dry. XC.	Air-dry. XCII.	Water-free. XC.	Water-free. XCII.
Water	15.04	16.76		
Ash	1.78	2.17	2.04	2.60
Albuminoids	8.13	7.67	9.57	9.23
Crude fiber	1.94	3.21	2.28	3 85
Nitrogen-free extract	69 65	66.81	81.88	80.30
Fat	3.51	3.36	4.13	4.02
	100.00	100.00	100.00	100.00

Probable amount of digestible nutrients in air-dry substances:—*

	XC.	XCII.
Albuminoids	6.59	6.23
Carbohydrates	62.47	60.26
Fat	2.60	2.40
Nutritive ratio	1:10.4	1:10.6
Estimated value per 100 pounds	$0.96	$0.92

* No determinations of the digestibility of sorghum seed have been reported. Its composition is quite similar to that of the ordinary cereal grains, and it is to be anticipated that it will prove equally digestible. In computing the above table, the averages of the digestion coefficient for all the cereals yet experimented upon were used.

Kiln-Dried Brewers' Grains.

Brewers' grains, *i. e.*, the residue of barley after it has been malted and used for making beer-wort, has long enjoyed a high repute as cattle food, especially for milch cows; and notwithstanding the fresh grains contain an average of 78 per cent. of water, they are much sought after by farmers living within a few miles of the breweries. During the warmer season, however, large quantities sour and spoil before they can be fed. The only plan of saving them hitherto has been by putting them into pits after the manner of ensilage. Recently it has been attempted to make them capable of indefinite preservation and of easy handling by removal of most of the water, which not only constitutes three-fourths of their weight when fresh, but renders them susceptible to damage. The sample whose analysis is herewith given has been thus prepared. This sample was brought to the Station by A. J. Ramsdell, Esq., of New Haven:—

	Kiln-dried brewers' grains. XCIII.	Oats. Average.
Water	2.57	13.7
Ash	3.97	2.7
Albuminoids	20 38	12.0
Crude fiber	11.79	9 0
Nitrogen-free extract	54.89	56 6
Fat	6.40	6.0
	100.00	100 00

The amount of water above found is perhaps smaller than can well be practically realized on a large scale. On exposure to air, the grains containing but 2½ per cent. of water will no doubt gradually absorb several per cent. of moisture. With even 10 per cent. of water the dried brewers' grains will be, so far as chemical analysis can indicate, equal or superior to any grain or seed commonly used among us as food for animals. They correspond most nearly to oats in their composition, containing the same proportion of fat, a little more fiber and ash and some eight per cent. more of the most costly and valuable food elements, viz., albuminoids. Peas, beans and flax-seed are the only seeds raised at the North which contain so much albuminoids. If experience shall show that the drying of brewers' grains can be carried on economically, the process will save a large amount of valuable cattle food from waste.

I understand it is claimed by some that the drying of brewers' grains seriously injures them for feeding purposes. This notion is in agreement with the idea put forward by the partisans of ensilage, some of whom assert that dried corn-fodder is greatly inferior to a corresponding quantity of the same put down as ensilage. In total absence of any exact comparative trials these claims must be regarded as entirely questionable. Without doubt dry brewers' grains may be considered equally nutritious with dry grains of any sort that correspond to them in chemical composition.

Paris-Green on Corn-Stalks.

Under date of Sept. 17, Mr. D. C. Spencer, of Old Saybrook, wrote the Station as follows:—"Last Spring I applied Paris-green, mixed with water, to my corn when it was about three to five inches high, to stay the ravages of the army worm. I desire to know whether you have analyzed any corn thus treated, or can inform me if it will now be safe to feed the corn-stalks and husks? If not, will the Station analyze a sample for me?"

Mr. Spencer was requested to forward to the Station a dozen or fifteen stalks taken from different parts of the field. The sample came in good order, well tied up in papers and secured with sacking. The stalks were run through a straw cutter, and all the dust, together with a good portion of the well-mixed cuttings, were examined by Dr. Jenkins for arsenic. No trace of this poison could be found by the processes which serve to detect 1-50000th of a grain of white arsenic. It thus appears that the Paris-green applied to the young plants had been completely removed by the rain. It has been well established by Dr. McMurtie that vegetation takes up into its interior no arsenic from the soil with which Paris-green has been mingled in the quantities which are used for destroying insects—a result which is fully confirmed by this examination.

S. W. JOHNSON, Director.

THE METRIC SYSTEM OF WEIGHTS AND MEASURES.

THE graphic characters representing volume, quantity and space, and increasing in tenfold proportion, are said to be of Arabic origin, and that in all written languages the same characters are used, being thus part and parcel of a universal language. What a pity that these same ingenious Arabs did not invent for us, the English-speaking people, a more rational and convenient system for the division of commonly accepted units in all measures and weights, decreasing in tens or decimals, instead of, as now, the unit gallon decreasing by 4 2.4, and the unit pound avoirdupois by 16.16, and the division of all our other weights and measures varying all the way from 4 to 24. In our legal currency the thing is perfected, the divisions of the unit dollar being in tens, hundreds, and thousands, it can be carried by the same principle of decimals as much lower as any one has occasion for. The French people, too, have carried out the decimal principle, both in their currency and in all their weights and measures, thus simplifying all calculations in which figures are concerned.

This system of the division of units by tens is in France the only legal method, but in the United States the system is simply legalized, and can be used or not as the sovereign people please: but whether this very simple, convenient and desirable method will come into general use here is a question as yet unanswered. The great difficulty in the way of a transition from our most unmitigated jumble to this simple and plain French system, is that the differences in the units of the two systems cannot be expressed either by whole numbers or decimal fractions. Thus the French meter is very nearly expressed by three and twenty-eight one-hundredths feet, but cannot be expressed exactly without the much less convenient resort to vulgar fractions; and so with the French liter, it is a little less than our quart of dry measure and a little more than our quart of wine measure, but the difference in neither case can be expressed precisely by decimals. This difficulty is likely to be always in the way of bringing this French metric, or decimal, system into general use here, however much we may lament the gross inconsistencies in the terms we use and the manner of our divisions and subdivisions of units. The French word "meter" corresponds with our word measure in some of its various uses, but while our neighbors, as far as I can see, apply it only to length and breadth, we use it in the measurement of land, whisky and potatoes. Thus the man who asked his grocer for five pounds of oysters, on being told that he did not sell them by weight, but by measure, at once changed his application to five yards.

Our word "dram," or "drachm," means the sixteenth part of an ounce avoirdupois, also the eighth part of an ounce apothecaries' weight; also what one pleases to drink at one time, more or less. Thus the Teuton, more familiar with drams than ounces, called in a Yankee M. D. to prescribe for his bad health. The doctor, readily seeing the necessity for restricting him in his potations, and foreseeing the danger of total abstinence in a diagnosis of *delirium tremens*, prescribed one ounce of brandy per day, with an earnest injunction to be very exact in the amount. Well, the doctor gone, the next thing was to measure, or weigh, this exact quantity, and in this difficulty the son, who had had a considerable sum laid out on his education, was appealed to, and very correctly informed his sire than an ounce was sixteen drams.

The word quart leads to a good deal of confusion, as well as not a little cheating, it being one thirty-second part of a bushel and containing 67 2 cubic inches, and also one-fourth of a gallon wine measure, containing 57 75 cubic inches, the difference being 9 45 inches, and still how many dealers in bushels and quarts understand that the bushel contains only 32 dry-measure quarts, while it contains 37 and nearly a quarter quarts of wine measure? When "Lo," the poor Indian, or the small boy comes in with blackberries, the grocer measures them with the half bushel or peck, but if Mr. "Lo" wants a quart of peanuts, they are measured in the tin quart cup, and it is generally "Lo" and the boy that get cheated; but now-a-days boys go to school and some of them sometimes learn something to their advantage. Thus a friend, at my elbow as I write, tells that in his boyhood he picked two half-bushels full of blackberries, but before he reached the grocer's with them they were considerably shrunken in bulk, and though the price per bushel was agreed upon, it was required of the boy that the one measure be filled up from the other, and that what remained in the half-bushel should be measured out. The boy, seeing there was nothing to measure with but the tin quart cup which the grocer sold by, consented—result, the fraction of the half-bushel turned out to be worth more than the full one.

Who among the boys who graduated at a country school 50 years ago ever understood, or even now understand, the difference in quantity between the avoirdupois and the Troy pound? Doubtless the boy then learned that the one had 13 ounces and the other 16, at the same time that he learned that three barley-corns made one inch and that four quarters of a yard made one yard; but country school-keeping kept on nearly up to the present time before Young America was taught that though the Troy and apothecary pounds were alike, it took one pound and nearly a quarter of them to balance one pound avoirdupois. If ever the metric, or decimal, system is adopted and becomes familiar here, all this jangle and confusion will be obsolete; but, if I were 60 years younger than I am, I should hardly expect to live to see this very desirable thing brought about—or the proposed spelling reform, either.

S. B. P.

Miscellaneous.

RURAL BRIEFLETS.

COMMERCIAL MANURES.—If we are to judge by the increase in the business of our leading concentrated fertilizer firms, the use of these fertilizers must in the main, give satisfaction. On this subject, we wish all of our readers were familiar with the careful and long-continued experiments of Dr. Lawes of Rothamsted, England. True, England is not America. But land there, as here, must supply plant food or crops must fail. Dr. Lawes's experiments show that concentrated fertilizers *do supply* to the soil what plants remove in a condition

available as food. A circular before us from the Bowker Fertilizer Company of Boston and New York, gives an illustration of the growing demand for commercial manures in this country. The business was commenced in 1873 when fifty tons only were sold. Several years after, the Stockbridge manures were introduced and the sale amounted to about one thousand tons for the year. In 1878 additional extensive works were erected, capable of turning out 100 tons of mixed fertilizer a day, and in July last the capital stock, as we learn, was increased to $400,000, and new works erected at New York. Last year 15,000 tons of fertilizers were manufactured and sold by this firm alone. As a rule, the value of commercial fertilizers can not be ascertained in one season. Yet in favorable seasons, their effects are ofttimes very manifest. The Rural Farm has not, as yet, made any tests with them which have either enabled us to answer the question as to what *special* fertilizer our soil most stands in need of, or to what extent any crop has been benefited by manures specially prepared for such crops. It is evident that to render such tests of any positive value, the soil *must* be uniform and an unmanured plot must be cultivated and planted in precisely the same way as the manured plot. Until farmers are willing to put themselves to this trouble, they can never arrive at trustworthy conclusions. We propose next Spring, according to the plan indicated, to test upon corn and oats at least, and possibly upon Spring wheat and potatoes, the concentrated fertilizers purchased from several of our leading houses and to publish the results whatever they may prove to be. . . . . .

Our venerable friend, Mr. S. B. Peek, of Michigan, makes the following request:—"I wish some one of the thousands of patrons of the Rural would give, in the latter, a description of the grape rot, its appearance, time of its advent, its effect upon the fruit and the plant, and whatever they may know of its causes. I have read much of its prevalence in certain sections, and of its blasting effects, especially the report of Mr. Taylor, the Government microscopist, of his examinations as to its cause in New Jersey, but have never, to my recollection, seen a full description of it." . . .

Anent the "Great Cuzco Corn" we have received the following communication which explains itself. All attentive readers of the Rural New-Yorker should remember that we tested this corn and reported that it was worthless, in time to have guarded them against its purchase:

"I see in different papers that this big corn humbug is still alive. I will give my experience with it for the benefit of Rural readers. I received twelve or fourteen grains from a man in Springfield, Ohio, for which I paid him twenty-five cents. I planted half about the 18th of April with some other corn beside some Blount Corn. After it grew to be knee-high, I could easily see differences. It grew stronger; the tassel came out differently. I watched for the ear, but no ear came. It crooked over and put out brace-roots at every joint for five feet high. I began to think the ear had changed into roots. The balance I planted about the 15th of May. It grew the same as the first, and as it stood on very high ground, I let it remain till the frost killed it. One stalk had a small ear covered by a half-inch thick husk. The cob was about three inches long, with half a dozen thick, flat grains in a milky state. Now I think that any man that will advertise such a cheat, ought to be ashamed of himself, for it is simply a humbug. GEO. KRAFT.

Litchfield Co., Mich.

What Others Say.

Fat Cattle at Fairs.—At a recent meeting of Kentish farmers in England, Lord Harris said he wished to know if the fattening of beasts as conducted at the present day was a lucrative business to the farmer, because he could not help thinking that this was a time when the pursuit of agriculture ought to be conducted on very economical principles. When at the cattle show that day, it so happened that as the fat cattle were being led around the ring a gentleman pointed out to him a very fine animal, of which he was the exhibitor. A person standing near by said he would like to know how much it had cost him to fatten that beast. The exhibitor made no reply, but held up his hands and walked away. If Lord Harris should ever happen to visit this country and attend any of our cattle shows, he would find it just as difficult to learn the cost of the fat on their bones as he does in England. The cost is seldom taken into account when our farmers are preparing stock or anything else for the show, and this is just why so little practical information is to be obtained at our great and expensive annual fairs.—N. Y. Sun.

We find the following in the London Mark Lane Express. Anyone who desires to understand the causes of the bitter feeling which most Irishmen entertain towards England and English owners of land in their country should read a pamphlet written by Mr. T. M. Healy, M. P., entitled "Why there is an Irish Land Question and an Irish Land League." It is chiefly a compilation of quotations from various writers and public speakers, and is all the more telling on that account. No more damning indictment of the treatment of Ireland by England could well be conceived. It is true that the most horrible records relate to a period long past; but feuds are often hereditary, and England has not yet half atoned for her crimes against Ireland. Moreover, since 1870 no fewer than twenty-nine Bills relating to land in Ireland have been brought forward in the House of Commons, and either rejected, dropped, or withdrawn. The pamphlet is published by Gill and Son, of Dublin, and is sold at a shilling. Of course it gives only one side of the case; but then there is only one side to a great portion of the case of Ireland.

Col. Curtis says, in the N. Y. Tribune, the farmers wonder how he can winter his pigs so well on raw roots. It is, he emphatically replies, because his pig-house is WARM! That word tells the whole story. . . . . .

Ninety-nine stables out of a hundred are full of cracks and holes, the Colonel says, and the manure freezes under the cattle's feet. What a preposterous notion that cattle should be turned out of such places to get fresh air! Equally ridiculous is the idea that they must be turned in the yard for "exercise" where they do not average a walk of 10 rods a day! He knows from practical experience that cattle are more liable to accidents while left in the yard than if kept in the stable, and he knows *that cattle will keep in as good condition in a comfortable stable on half the feed.* This is the testimony of farmers who have changed their practice from the out-door to the in-door system.

E. Y. Teas, of Indiana, has produced a beautifully variegated form of the Sugar Maple. The original tree, as we learn from the Botanical Index, has grown to a large size and still holds its variegation during the entire Summer. It is being propagated for sale. . . .

Everywhere.

NOTES FROM EASTERN OHIO.

We are having the closest Winter in Eastern Ohio that has been for 25 years. In the Winter of '55 and '56 the Ohio River was frozen over three times, and it is now closed the third time this Winter. Cold weather set in last Fall, the middle of November; since that time there has never been mud on the roads, and, with the exception of about ten days, the ground has been covered with snow. The first snow now on the ground fell on the night of December 19, and since then the sleighing has been excellent except for the past week the roads have become so badly drifted in the lanes that travel has been somewhat interfered with. The week between Christmas and New Year's was intensely cold, but since then it has been pleasant Winter weather, until this week the mercury has gone down as low as 30 degrees below zero.

I never saw more corn in the fields at this season of the year than at the present time; but farmers are commencing to haul it into barns to husk, in order to get the fodder. Owing to the dronth last Summer the hay crop was a very short one, and with such a hard Winter it will be fed up very close, and is causing people to utilize wheat and oat straw, which is fed to all kinds of stock. Sheep and cattle were sold off very close last Fall. A great many of the former were bought by Western men and shipped to Kansas and Nebraska, but with all the drawbacks which it has been subjected to of late the sheep and wool interest in Ohio was never in a more prosperous condition. The American Merino has got the lead, and is brought to a state of perfection unsurpassed in any portion of the United States. There are but few sheep or cattle being fed for market, and the prospect is certainly very encouraging for good prices in the future. Although the bulk of last year's wool clip is sold, there are yet a good many lots still in the hands of growers. The prices realized ranged from 40 to 46 cents per pound washed on sheep.

There has been an immense quantity of wheat put into market since snow fell and the bulk of last season's crop is sold. Prospects for the coming crop are not as favorable as desired, but it has been pretty well protected by the snow. I think there is danger from the heavy crust which is on the snow, of some of it being smothered.

There was a great scarcity of water for stock during the early part of the Winter, but with an occasional rain the springs have been replenished, and there is now no trouble in that direction. The general health of the county is good, with fair prospects of prosperous times, and people mostly seem disposed to make the best of everything.

Irondale, O. M. N. R.

NEBRASKA FIELD NOTES.

In 1879 four acres in field No. 1 were plowed six inches deep with a stirring plow and sown to Hungarian Grass at the rate of half a bushel per acre. A week later eight acres in the same field were sown and cultivated in the same manner save the plowing, which was not over three inches deep. The four acres yielded twelve tons of hay free from weeds and other grass. The eight acres yielded about four tons of hay, a large amount of weeds and what the renter called Foxtail Grass. The marked difference in results cannot wholly be attributed to deep plowing. After the four acres, but before the eight acres were sown, a heavy rain fell. The smaller plat was lying up loose and mellow, and it drank in a very large per cent. of the rain-fall. If there were weed seeds in the soil the rapidly-growing grass gave them no opportunity to germinate. On the unplowed ground and shallow-plowed ground a much larger per cent. of the rain-fall ran away, the grass seed was slow to come up and the weeds triumphed.

The Winter of 1879 and '80 was extremely dry as was the Spring and early Summer of '80. In March '80 I began plowing for corn these two plats, or rather the entire field, running the plow in an opposite direction. I found no difficulty in plowing six inches across the four acres, but found it almost impossible to force the plow to a proper depth where the plowing was shallow the preceding year. On the four acres the corn made a pretty even start, but was killed by subsequent drought. On the eight acres not one kernel in a hundred made a start. Seeing that the corn must prove a failure I allowed the grass to grow and took, thanks to late copious rains, about one ton per acre from the four acres, and about a half ton per acre from the eight. My neighbors thought I was ruining my land by letting the Foxtail get such a hold; but my hay this year is worth six dollars per ton I am wintering ten cows on the hay and it seems to be "A No. 1" for them. R. H. C.

RURAL SPECIAL REPORTS.

Cal., Carpenteria, Santa Barbara Co., Feb. 4.—The season has opened fine indeed for us Californians. The rains came just at the right time. Weeds, grass, volunteer grain, etc., etc., afford plenty of rich, succulent food for cows and other stock that have the privilege of picking up a livelihood. Farmers are busy plowing, sowing grain and flax seed, planting fruit trees, etc., etc. Crops of all kinds were good the past year. We had a fine crop of Lima beans, a part of which were sold at three to 3½ cents per pound, but the market has closed, so we have no chance to sell now, and if our beans are not wanted in New York, Boston, Philadelphia and other Eastern places, we are caught this time without fair wages for our work in raising and harvesting them. There has been more frost the past Fall and thus far this Winter than usual, but no harm has been done. Flowers bloom all the year, and I have some very fine roses in bud and blossom, with many other flowers too numerous to name. The tiny orange buds are beginning to show themselves—so sweetly too! I have, too, long vines of smilax, four to eight feet, so full of the sweetest little blossoms which fill the yard with perfume the most pleasant. Surely we have much to be thankful for in this fair clime, Pomona's Retreat. O. N. C.

Kansas, Parsons, Feb. 8.—A thaw set in on Saturday, the 5th, after 80 days of continuous freezing. It rained Saturday, Sunday and part of yesterday. The frost is out of the ground, except where the sun does not reach it. The wheat is all right, or, if not all right, at least as good as the average appearance at this season. Our streets are puddles of mud, and country trade is suspended. Railroad men seem more crazy than ever on the projection of new lines. In Kansas and Texas railroading seems the dominant business. It suits the yeoman if he doesn't vote bonds. Apples, half crop; pears, do.; peaches, apricots and nectarines, none; cherries, sweet, none; sour, half a crop; blackberries, young plants all safe, old plants, half a crop; raspberries, Black-cap, half a crop, red half a crop; strawberries, where mulched, a full crop; gooseberries all right; currants not grown. The apple trees that have been much cultivated, and whose growth has thereby been stimulated, are in the worst condition, as the sudden and intense cold of Nov. 15th damaged them severely. J. B.

Kansas, Chapman, Dickinson Co., Feb. 1.—We are having a long, cold Winter, with a great deal of snow, which is very good for the wheat. This had a good start in the Fall, and I expect it will come out all right in the Spring. The cold has killed a great many of the peach buds. L. H. E.

Minn., Winona Co., Feb. 5th.—Winter came on us earlier than ever known since the first settlement of this country—nearly thirty years ago. We have had a good deal of cold weather; the mercury has been down as low as thirty degrees below zero. Very good sleighing since Christmas, though we had not very much snow till within a few days. Now, we have at least, two feet of snow in the woods where the wind has not disturbed it. Our railroad extending from the Mississippi west through this State, was completed through Dakota to Fort Pierre on the Missouri last Fall. From there a stage route was established to the Black Hills, thus establishing a shorter and more direct thoroughfare to that country. The cuts on the western end of this railroad were all filled with snow last October by a very severe storm known as a "blizzard" in the northwestern prairie country. What the poor settlers along the other end of the road, who are depending upon the railroad for fuel and supplies, will do, is more than I can tell. This has been a great wheat country. All wheat, wheat! But during the past three years it has been a partial failure in Southern Minnesota, farmers are turning their attention to other pursuits. We raise good corn and oat crops. Barley the past year or two has been a great crop, and Minnesota barley is sought for and brings better prices in Milwaukee and Chicago than barley grown farther south. An immense area will be sown to it the coming Spring. Sheep do admirably in this climate and were it not for the dogs and wolves, wool growing would be one of the great industries of this State. D. B. E.

Mich., Muskegon, Muskegon Co., Jan. 31.—The Winter has thus far been very favorable for the chief business of western Michigan—that of lumber. Snow came early and in about the right quantity till about the middle of Jan., since which time there has been rather an excess. The thermometer has several times indicated a few degrees below zero, I think eight is the lowest, and that but once; fruit buds, germ uninjured; the few peach trees near my house are all right and when the peach is safe all other fruit is expected to be so. S. B. P.

New Jersey, Monmouth Co.—Peach buds in this county are badly Winter-killed—not more than a quarter at the outside remaining uninjured. In low situations they are entirely killed throughout the county. J. T. L.

N. Y., Eagle Harbor, Orleans Co., Feb. 4—Our Winter has been a very pleasant one thus far—snow for two months and only one or two warm days, and but two very cold ones. On December 30 the mercury fell to 16 deg. below zero; since then it has remained from 10 to 20 above. Fruit buds are all right so far. I have on my table a dish holding water and some wood of the cherry, plum and peach; the cherry and plum are in full bloom; the peach will be in a couple of days. A. S.

N. Y., Ithaca, Tompkins Co., Feb. 4.—Thawing rapidly; wheat looking well where the snow is off. Hay scarce and dear—$18 per ton; straw $8. Many horses and cattle have been wintered on the latter. All stock looking well. I. P. R.

Ohio, Millersburg, Feb. 13.—I am not a subscriber of your paper, but I thought a few lines from this section of the country, might interest a few of its many readers. The Winter has been exceedingly cold, throughout. The mercury was the lowest on the morning of January 12th, it being 16 deg. We had good sleighing from November 12, 1880 to February 8, 1881, when we had our February "thaw," but it is now frozen up again, and snowing at present writing. Stock look well, but if we have a late Winter, feed will be very scarce. Hay is selling now, from $12 to $15 per ton and scarce at that. Farmers as a general thing are keeping more stock this Winter, consequently there is a greater demand for feed. Many farmers are feeding their corn and fodder together, being unable to get it husked last Fall before the cold weather set in; they are compelled to do it. Wheat looks badly, frozen out in many places. It is selling at 95c to $1.; flour, $5 50 to $6 per bbl.; rye, 50c; oats, 30c; barley, 50c; corn, 40 to 45c; lard, 7c; butter, 16; eggs, 15c; green apples, per bushels 40 to 50c; potatoes, 45c to 55c. The latter are scarce. Many people had all they had frozen in their cellars. G. U. D.

Ohio, Lucas, Richland Co., Feb. 10.—The prices of stock are very low. Hay is high-priced. The peach buds have all been killed. W. D.

Pa., New Lebanon, Mercer Co., Feb. 2.—The snow is over two feet deep now, and drifted everywhere more or less. After the dry Summer, water is scarce now, as there have not been rains enough during the Winter to start the wells and springs that have failed. I think it will be favorable for the wheat that the snow has never been off since the first fall. Fruit is all right yet, as there have been no freezing rains to do any damage. The crops of last year were very good, excepting corn, which did not give a very large yield to the acre, but the fodder was very fine. Hay was very good; feed is plentiful. Farm products are selling as follows:—Hay, $15 per ton at barn; oats, 35c. per bushel; corn, 30c.; apples, 30c.; potatoes, 40c.; butter, 22c.; eggs, 28 cents. J. E. C.

PA., Shepherdstown, Cumberland Co., Feb. 4.—The intense cold of December 30, 31, and January 1 killed all our peach buds, except on high localities. This is a hilly section. At an altitnde of 350 feet above creek level one-half of the peach buds arc good. In the Cumberland Valley all are killed and no doubt many trees. The minimum temperature here was 16 deg.; at creek level 26 deg. On Jan, 30, 1873, the minimnm temperature here was 21 deg.; at creek level 33½ deg. Cherry buds are good. E. H. C.

R. I., Jamestown.—I wish to thank you for the rare seeds you have sent in years past, and to express through the columns of your paper my appreciation of its merits as a horticultural paper, as which I think it takes the precedence of all our rural and agricultural journals. Among the seeds distributed two years ago by the RURAL NEW-YORKER were those of double Hibiscus Syriacus, of which I raised quite a number of plants, three of which bloomed late last Fall, all being double and of different colors. I also raised four Dutchman's Pipe vines, some of which are over three feet high. I prize them much, as they are so different in foliage and flower from any other of our hardy climbing plants. The Beauty of Hebron potato has so increased that I now have all the seed I want for the next year's planting. I find them early and prolific. You will readily see that I gained more from the seed distributed that year than the paper cost me. It has been the advice of the RURAL to send for the floral catalogues advertised in its columns and select from those that advertised what was wanted at the most reasonable rates. Three years ago I ordered plants and seeds from no less than 13 different establishments by mail. In conclusion I will say if any one wants a nice vine for piazza, don't fail to order a Buist's Hardy Passion vine. There was one included in my collections last year which grew 20 feet, and besides being the handsomest vine I know it was in bloom for two months. I have ordered one this year, fearing the severe Winter has killed mine, which I prize ten times its cost. Again thanking you for your choice seeds and valuable paper, I remain, J. J. W.

TENN., Thompson Station, Williamson Co., Feb. 8.—I have but recently become a subscriber to the RURAL, hence, my commendation may be of little worth; yet I wish to add my testimony to that of thousands who have long known your paper, that it is, in my judgment, one of, if not the best and most ably edited agricultural journals published. Permit me to thank you for the White Elephant Potato recently sent. I shall try its virtues when the season permits. I hope you will accompany the Rural Branching Sorghum Seed with instructions as to its cultivation, and how to harvest it for fodder. (We shall. Eds.) I want it as a Winter feed for young cattle and mules if they will eat it. We have had a very severely cold and protracted Winter for this latitude. Tennessee has rarely seen so much hard freezing, so much ice and snow and cold rains. Yet I think the wheat generally, has not been seriously killed out. I do not hear any complaint of fruit-buds being killed.

I hope the RURAL will be kind enough to give us Southern farmers—occasionally—the benefit of its advice and experience; in other words, that it will not be an agricultural paper published exclusively for the benefit, and in the interest of, the Northern and Western farmers. We need all the light we can get in the South, upon every improved method in farming; and as our section is sadly behind in agricultural literature, many of us look to our more highly favored neighbors and gladly receive any suggestions which prove valuable. W. H. C.

TENN., Chattanooga, February 8.—I see in the RURAL of January 29—C. C. of Damascus, Pa., asks about the Chester County Mammoth Corn. I think if he will write to Steven Darlington, Painter's Bridge, P. O., Chester Co., Pa., he will find out all about it, for if I mistake not, he is the gentleman who, from careful selection of seed for many years, produced the variety. I sent to the old gentleman for seed five years ago when we first came to Tennessee, and our corn crop produced a great excitement in our county. We named it the Darlington Corn. The country folks in Lewis County call it Hale Corn. C. W. H.

TEXAS, Dayton, Liberty Co., Feb. 7.—The cold wave that visited us during the holidays, made sad work among my tender shrubs and roses. The few orange trees I have, though well protected by pine saplings, look sickly, and will lose all their leaves. The bark, however, is not split, and I think they will recover. The garden looks black. My Marechal Niels suffered most. That worthy, the "oldest inhabitant," says it was the coldest spell ever experienced in Texas. Ice formed on the prairie, in pools, solid enough to bear up a horse and remained so for four days. Irish potato planting is now going on. A. A.

VA., St. Stephen's Church, King and Queen Co., Feb. 1.—I was startled at seeing in the RURAL lately a statement of a North Carolina correspondent that the peach buds in that section were killed, and I proceeded at once to examine them here. I find that most of them seem to be dead; a few look as if alive. I have never known peaches to be killed in the bud but once here before, and that was in January, '56. I think the cold has been more severe this season than that, though the very severe weather continued longer then. Farmers here often do a good deal of plowing in the Winter; but the ground has been frozen now for more than two months. I have had to discontinue getting fence rails because the pine timber is frozen. I. R. G.

VA., Stafford Co., Feb. 5.—We are having the coldest weather in Virginia I ever experienced. The thermometer is frequently at zero. Snow has been on the land for last six weeks and there has been a continual freeze. I. P.

The Querist.

ANSWERS TO CORRESPONDENTS.

Fertilizers.

F. W. S., Baden, Pa., asks, 1, what would be the best way to treat a field of wheat which has been sown to wheat the second time without any manure except a clover sod being plowed under the first time; 2, would superphosphate of bone be good to broadcast on it in the Spring; 3 would plaster do as well as bone? His soil is partly clay and partly gravel, is high and dry and naturally rich; raised a good crop of wheat on it last year; 4, of what value is salt on such land; also, of what value is lime in Spring, and how would all the ingredients do mixed, and what should be the proportion. Please tell me the price of bone and plaster in New York, and if the Buffalo is best; 5, would it do to sow any or all the above ingredients with a grain drill, by removing the tubes, or would sowing broadcast by hand be better?

ANS.—1. We should risk the crop without any manure. 2. We do not think the question can be settled definitely. Probably it would help the crop if sown early. Perhaps the field does not need bone. 3. This can be ascertained *only* by experiment. Plaster has no appreciable effect in some cases. 4. We cannot say. Sow a bushel on a quarter of an acre as an experiment. Lime may have an excellent effect. We should not mix them together. Send for the circulars of Bowker & Co., Mapes Fertilizing Co., New York, and to Mr. Crocker, of Buffalo. We do not know which is the *best*. The establishments mentioned sell fertilizers which may be relied upon as being what they purport to be. 5. It could be sown more evenly by hand.

Poultry Disease, etc.

W. H. C., Thompson's Station, Tenn., asks, 1, for a remedy for what is there known as "Leg Disease" among poultry. When just attacked a weakness appears in the legs, which rapidly grows worse; the hen loses her appetite, wastes away and dies; 2, whether coal tar is useful for preserving the lower ends of fence posts; 3, are all subscribers to the RURAL required to forward postage stamps for our Seed Distribution.

ANS.—Several diseases affect the legs of fowls, but which of them is indicated by the above scanty description is hard to tell. There is a disease known generally as "Leg Weakness," which generally occurs in highly fed fowls and fast-growing chickens. As a remedy, give the affected birds animal food once a day, and in warm weather dip the legs once a day for a week in warm water. Also give them once a day three or four grains of ammonio-citrate of iron, (to be had at the drug-store), dissolved in water and mixed in their feed. Keep them from wet grass. 2, An application of coal tar unquestionably preserves fence posts. 3. All are required to send stamps except those who subscribe through any of the journals with which the RURAL clubs.

Tanning Horse-Hides.

T. H. W., Oberlin, Ohio, asks if the RURAL can give directions for tanning a horse hide with the hair left on.

ANS.—The best way is to send the hide to a tannery and have it done in a proper manner. If this cannot be done, the next best way is to tan the hide in the manner in which buffalo robes are dressed. The hide should be steeped in water and the flesh side thoroughly well scraped. It is then covered with a mixture of equal parts of salt and alum, doubled with the flesh side in and left for a week. It is then stretched out over a log or bench and scraped and again dressed with the salt and alum. This is repeated until the hide is thoroughly saturated. It is then stretched out on a frame and well rubbed with chalk and a piece of board held by one edge by which the skin is made soft and pliable. A good deal of rubbing and working will be required to make the skin soft. It may finally be dressed down with pumice stone. When $20 worth of time, labor and material have been used, you will have a very poor substitute for a buffalo skin worth $5.

A. W., Oneida Co., N. Y., would like to know the comparative value of hard and soft wood ashes; also, the value of soot in chimneys where wood is used.

ANS.—Hard wood makes more ashes than soft wood, but there is not much difference in the ash itself. For instance, the following woods contain the stated quantities of ash, and the ash contains the stated quantities of potash:

	Ash. per cent.	Potash in ash. per cent.
Birch	.31	11.6
Beech	.65	16.1
Oak	.66	10.0
Willow	1.15	14.0
Elm	2.20	21.9
Maple	2.40	20.5
White Pine	.28	15.3
Larch	.32	15.3

Pine gives less than half as much ash as beech, but the ash is nearly as rich in potash. The hard-wood ashes are about twice as rich in phosphoric acid as the soft-wood ash. The soot from wood fires is nearly all fine ashes. That from green wood contains some ammoniacal products precipitated with the condensed moisture from the wood; that from dry wood differs very little from the ash itself.

Herd Books.

Young Farmer, Camden, Del., I have a thoroughbred Alderney cow obtained from a herd formerly registered. She now has her first calf from a registered bull, and I wish to have them registered. Which is the very best herd book to enter in and how shall I proceed.

ANS.—There are two Jersey Herd Books, one is the herd book of the Jersey Cattle Club of which Geo. E. Waring, of Newport, R. I., is the Secretary and the other is the Jersey Herd Record. The latter is but little heard of and we do not at present remember its whereabouts or the officers' names. Your best plan is to find from the owners of the herds to which your cow and the bull belonged, where and how they were recorded and to write to the Secretary of the particular herd book for blanks of registry. It is probable that the J. C. C. H. B is the one you will want, and by writing to Mr. Waring you can get the desired information. This Herd Book only receives entries of cattle that are descended from animals already entered.

Miscellaneous.

A. S., Eagle Harbor, N. Y., asks if it would be advisable to build an ice-house with milk-room attached; and if so, how shall it be built. Would it do to have the drain from the ice pass through the milk-room; and if so, how should the bottom of the ice-house be built. Would the dampness be detrimental to health, in doing the necessary work in taking care of the milk in warm weather?

ANS.—Your plan will not work. Many persons have tried it and all have failed. It wastes the ice and does not cool the milk. Your best plan is to set your milk in deep pails, in a cistern, a trough, or pool covered from the air, and use the ice in the usual manner to cool the milk directly. A water-tight box is easily made of plank for this purpose. It would require many times more ice to cool the air of a milk-room than to cool the milk itself. Fifty pounds of ice will cool 200 pounds of milk to 45 deg. in a close non-conducting box or refrigerator. The box should be lined with tin.

E. E. W., Cherokee Co., Iowa, wishes to know what kinds of Evergreen trees would be best for her to plant for ornament.

ANS.—Cherokee County is well up to the Northwest corner of the State, and only the hardiest Evergreens will endure the severe winter winds. Even White Pine and Norway Spruce are sometimes browned in winter during the first two or three years after being planted out. We would recommend Norway and White Spruce, Austrian, Scotch, Red and White Pines, Red Cedar, American Arbor vitæ and Balsam Fir, as being the hardiest, in fact, about the only hardy Evergreens that can be named. The Colorado Evergreens are the best adapted to that climate, and the most ornamental, but there are few, if any, large enough to plant out.

J. R., Plank Road, N. Y., asks, what is the matter with his hens. Dried matter collects in their eyes, which blinds them and their mouths and throats are filled with foul matter.

ANS.—The disease is probably the roup. One remedy for this disease is to dip a small feather into nitric acid, then thrust it into the nostril of the sick fowl, giving it a twist while in. This should be repeated two or three times a day. Another remedy is to confine the bird in a warm, dry room, and give it a tablespoonful of castor oil every morning for a week. Feed soft food. When the bird is attacked with this disease it should be at once separated from the others.

J. V. B., Cochranton, asks, 1, whether the Gold Brothers, nurserymen, Rochester, N. Y, are reliable. 2. An apple-tree agent traveling thereabouts says the Russian Apple is propagated this year as follows:—The Russion cion is grafted on a wild crab; then dug up; then planted deeper when the cion takes root; then the crab root is cut off, and the plants are worth a dollar apiece, and he asks our opinion on the whole matter.

ANS.—1. We have always heard of the firm alluded to as honorable. 2, Russian apples have been propagated many years. We cannot see that the method as stated is anything else than senseless.

F. S., South Jefferson, N. Y., asks for the dimensions of a movable frame bee-hive.

ANS.—The size of a hive should depend upon the kind of honey to be obtained. If no comb-honey is desired the hive may contain 4,000 cubic inches, but if box-honey is wanted it should not contain over 2,000 cubic inches. If the hive is to be a two-story one, each story should be 18x13 and 12 inches deep, inside measure. If small frames or boxes are to be used above, the hive should be two feet in length.

E. W. K., Glen's Falls, N. Y., asks, 1, whether lightning was ever known to strike a building guarded by a well constructed lightning-rod; 2, what proportion of fruit gardeners make the business a success; 3, where can pure glucose be obtained; 4, where can Gray's Botany be bought.

ANS.—1, We do no not know. The question arises what *is a properly* constructed lightning-rod. 2, We do not understand the question. 3, Any wholesale grocer can furnish it, either direct or through a local retail grocer. 4, At any book store.

O. A. S., Macon City, Mo., had three chestnut trees, two of which have perished, and he asks whether the third can bear fruit by itself; that is, without being fertilized from another tree.

ANS.—Both kinds of flowers (male and female) are borne upon the same tree in the chestnut, so that other chestnut trees near it are not essential. What we call the flowers are the pollen bearing male flowers—slender, feathery catkins. The female flowers are small and inconspicuous.

J. F. B., (address not given) asks, 1, why the people in the District of Columbia do not ballot for President; 2, who in Pennsylvania is agent for the carp-fish and what sort of a vessel is suitable to send to get them in; 3, is the National Wire Company of Chicago reliable.

ANS.—1, the government of D. C. is territorial, and has the same rights and privileges that any territory has; 2, We cannot give the agent's name; 3, It is.

R. M., Oak Burn, N. Y., says that some weeks ago he sent us a paper, and now he asks whether it is a humbug or not.

ANS.—We know nothing of the publication. Papers or parcels of any kind addressed to us, unless the senders' addresses are given or letters of explanation accompany the packages, are often overlooked.

D. B. M., Woodlawn, Neb., asks whether three feet eight inches is too close to plant corn in drills.

ANS.—Whether three feet eight inches will be too close depends entirely upon the distance apart *in* the drills. We should not leave them closer than 18 inches.

H. B. S., Rockport, Ohio, says some insect eats into the buds of the Japan Lily and Lilium Auratum, and wishes to know what it is and what to do with it.

ANS.—We cannot answer positively without seeing specimens of the insect.

J. C. McC., Tidioute, Pa., asks where the Rochester and Tornado Thrashing Machines are manufactured.

ANS.—The old Glen & Hall machine is made somewhere in Canada; but we know nothing of the Tornado.

Name and address lost.—How can I so place three horses abreast as to have the right-hand horse walk in the furrow and still have each horse pull one-third, or the draft equal? Please give diagrams. See answer on page 131.

I. F., Newville, Ohio, asks the Post Office address of the American Naturalist.

ANS.—237 Dock street, Philadelphia, Pa.

J. I. Vansickle, Westtown, N. Y., would like to learn where he can get Toulouse geese.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, FEB. 19.

S. R. M.—T. H. W.—J. R. G.—W. H. C, Williamson Co., Tenn. Thank you for your communication. We were not aware any had been neglected. It *occasionally* happens we receive a greater number of communications than we can print.—C. E. D. W.—B. S.—H. W. R.—E. K. G.—J. B.—A. W., Oneida Co., N. Y., would be pleased to hear from you again.—A. S., Eagle Harbor, thanks.—R. M. L.—E. P. P.—A. B. A.—S. W. J.—O. A. S.—L. A. R.—M. G. H.—J. E. C.—S. S. S.—S. B. P.—O. N. C.—E. B. D., thanks.—D. B. R., thanks.—W. H. O.—H. R. W.—B. P. R.—W.—W. I. H.—R. G.—H. S.—N. R.—S. B. P.—E. C., Texas; we shall endeavor to ascertain.—W. C. B.—O. W. F. The paper alluded to not received. Please send a whole ear with an account of the variety and yield.—W. B.—D. A. B.—G. H. C.—Jno. P. C., Dubuque, Iowa. We can offer no further suggestions as to our corn culture. No, the firm alluded to has not our Blount's Corn.—A. F. M.—E. H.—E. A.—R. H. C.—S. R. M.—E. R.—A. R.—N. F.—G. C. C.—J. E. S.—F. G.—W. F., Jr.—E. A. G.—"Bessie Victor."—I. & A. C.—B. C. M.—A. L. J.—F. D. C.—W. C. B.—S. P.—G. E. N.—J. G.—D. B. P.—D. S. M.—M. N. R.—J. H.—W. P. P.—A. J. U.—E. K. G.—A. R.—J. G. B. P. E. J.—M. F.—J. H. H.—A. S.—G. S. S.—B. P.—C. C. G.—R. B.—E. F.—C. T.—J. G.—D. L.—J. S. P. F, M. Youngblood, we do not find your address on letter; please send it. Seeds not yet (16th) received.—R. D.—G. G.—Geo. H., thanks.—E. P. R.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, FEB 26, 1881.

WE CAN still supply Posters, Seed and Plant Supplements, Agents' Outfits, Specimen Copies without charge to all who apply.

We cannot supply back numbers.

The Seed Distribution has been delayed, owing to the fact that the Giant Red Dutch Asparagus seeds have only just been received. We shall now be able to send our subscribers the full distribution *precisely* as originally announced.

M. P. WILDER says in Green's Fruit Grower that if he could have but one of his 800 varieties of pears, it would be the Beurré d' Anjou. Col. Wilder has in effect told us the same thing.

PROF. S. W. JOHNSON, whose opinions are entitled to much respect, tells us that some of the partisans of ensilage say that dried corn-fodder is greatly inferior to a corresponding quantity of the same put down as ensilage. In the total absence of any exact comparative trials, these claims, he says, must be regarded as entirely questionable.

OUR NEXT will be the SMALL FRUIT SPECIAL. We are in hopes it may please as well as the late Special devoted to Hardy Shrubs and Trees. The American News Company were sold out of their usual supply the first day, and we could have sold 1,500 copies in the RURAL office. Unfortunately no extra copies were printed. It is gratifying to know that so lively an interest is taken in hardy plants.

IN conversation with Mr. Parsons respecting our recent notes upon magnolias we find that his experience as between Soulange's and Lenné's Magnolias is t at the former is the hardier of the two. Our own plants grow within a few yards of each other, and without exception Lenné's has stood the Winters better than Soulange's. We may say also that it blooms more freely during the Summer and Fall. But while our experience as to these magnolias is confined to two plants, Mr. Parsons has had the opportunity of observing thousands, and his words should therefore guide our readers.

SUTTON'S MAGNUM BONUM POTATO.—As our readers are aware, this is a new English seedling which has been extensively advertised and, so far as we learn, given very general satisfaction in England. It is now offered in this country, and the few tests that have been made show that, contrary to the rule with English seedling potatoes, it promises to be of some value here as well. The quality of the Magnum Bonum is very good, as we judge from having cooked and eaten a trial quantity of seed sent to us by a friend. The Early Rose, and in fact all potatoes of that class, though flaky without, become waxy within, and this sogginess increases as the potatoes grow old. The Magnum Bonum, though the outside does not crumble or flake off when boiled, is still mealy within and possessed of a richness quite peculiar to itself. We have on the one hand the "strong-flavored" potatoes; on the other the tasteless kinds, well represented by the Alpha, the Early and Late Rose, Snowflake, Early Ohio, etc. We may speak of these as mealy, pure, fine-grained, of excellent quality, etc., but really their excellence, after all, depends upon their mealiness; for they are so nearly destitute of flavor that nobody could determine one from another when cooked. The Magnum Bonum is to us a relief from such tasteless varieties, while its peculiarly rich flavor is not that which can be classed as "strong."

HISTORY REPEATING ITSELF.

THE Chicago Tribune says:—"A corner in the provision market is in progress, which dwarfs any previous manipulation, even the great one of last year. Within a week there have been purchased 25,000,000 pounds of short ribs, 24,000 barrels of pork and 10,000 tierces of lard. The parties interested are mainly the ones who ran the successful deal a year ago, and it is their intention to put prices far above present rates."

How does this differ in reality from a news item of, say, 500 years ago, to the effect that a coalition of robber-barons had been formed to lay the people of some fertile valley under contribution? In those old times the people banded together to resist such raids, and many a bold rider was brought to the ground with pikes made of scythes fastened to poles in the hands of the abused peasantry. Now, however, any attempt at self-protection against these raids of the robber barons of the corn exchange, or the produce exchange, is denounced as "communism," and as an attack upon the liberty (!) of trade. Every honest producer and every honest consumer suffers, and the profit that should have been divided between them goes into the pockets of men who have no higher moral footing than burglars, highwaymen, or train wreckers.

CONCENTRATED MANURES. A QUESTION NOT ANSWERED.

"Do you advise me to use chemical fertilizers on my farm? If so, what kinds?"

We receive this question very often and we regret that no direct answer can be given. Upon some land bone gives immediate and profitable results. On other land it seems to have no effect whatever. The same may be said of potash, nitrogenous fertilizers, lime, salt, plaster, etc. The only advice we can give to our farmers is to try each kind on separate plots, and combinations of the several kinds on other plots. In this way some indication may be obtained as to whether special or combined fertilizers are needed. Land may be infertile because it needs one or all of the elements of plant food. When, therefore, phosphoric acid fails to produce appreciable results this is not positive proof that the land does not need bone. If potash should fail, this is not positive proof that potash is not needed. The land may be exhausted of both potash and phosphoric acid, in which case, though either may fail when used separately, the use of both may be attended with entire success. Farm yard manure, if plentifully used, never fails because it supplies all the food that plants need, but not in the relative quantities which they need. An accumulation, therefore, of certain food constituents and the insufficiency of others may result from its long-continued use, which inequality may be remedied by the use of *special* concentrated fertilizers if we did but know what constituent was most needed. In this case, the test of each separately should be best calculated to answer the question. It has happened in the experience of almost every farmer that certain strips, or pieces, of land sowed to oats, wheat or rye, that have received special manures, accidentally as it were, without any special object in view, have produced crops far ahead of any other parts of the field. Here we have a trustworthy hint as to what the land most needs, and our suggestion as to test-plots is precisely of the same character. Commercial fertilizer establishments furnish special manures, such as potash, nitrogen, phosphoric acid—or "complete" manures, which are supposed to supply all of the food which a given crop needs. That is, they approximate the composition of farm manures, only that they supply the food more nearly in the proportionate quantities which, according to analyses, such plants require. Whether, supplied in this way, they are as assimilable, or whether, so to speak, plants fatten upon them as readily as when their food is placed before them in the form of farm manures, we cannot say. All should remember that we are still in our infancy as regards the use and value of concentrated fertilizers, and whether in any given case they may be profitably used or not is, with our present information, a problem that every farmer must solve for himself.

FARMERS AND MERCHANTS.

AT the time of the "Grange Movement," some eight years ago, the commercial class was disposed to regard the action of the farmers as antagonistic to themselves, and to side with the transportation interest. This was no doubt due to the protest against an excess of "middlemen," which was made by the farmers. But even the commercial journals now speak of the elimination of all unnecessary intermediaries as essential to successful commerce. The fact is that the interests of all the industrial classes, the commercial not less than the mechanical and agricultural, are substantially the same. The protest by the latter against supernumerary middlemen was simply a phase of the demand for labor-saving machinery, and the simplification of all industrial processes and methods. It is just as necessary to the progress of America, that all extra middlemen should be thrown out, as it is that the extra hands in the factory and on the farm should be eliminated by improved machinery and implements. The merchants, as a body, now recognize this truth.

But they go further than that. They have taken up the action against excessive rates and favoritism on the part of transportation corporations where the farmers dropped it (if they may be said to have dropped it at all), and are pushing it with the enterprise and vigor which their greater command of capital and better opportunities of effective co-operation give them. And they also meet the proofs of their coming success in the puerile epithet of "communist" which they threw at the farmer, and which the railroad men now throw at them.

The same homogeneity of interest which is now admitted to exist between the commercial and the producing classes will eventually (and before long, we trust) be seen to exist between them and the transportation interest. It is not for the advantage of any business man or corporation, in the long run, to cheat, abuse, or in any way wrong his or its customers. It is only because so many railway corporations are now under the management of ignorant, incompetent and short-sighted men that the public complaint is so loud against them. These men, like incompetent shipmasters, will soon demonstrate the folly of their methods, and be succeeded by those who will have sense to see that justice and honesty are the best and only policy for them; that any attempt on the part of institutions like theirs, so hopelessly in the grip of the people, and so subject to the resistless sweep of popular authority, can only be made profitable, in the long run, by treating all with whom they have to deal with the strictest equity. If this demand for equity, whether on the part of farmers or other business classes, is "communism," then communism is destined to be the law of the land, for equity the people will have.

SAVING AND SPENDING.

THE accumulated wealth of a nation is the sum of its savings. This may be in the shape of money, lands, cattle or any property which costs money or labor, or which is the direct increase of such property. If a person saves out of his income a hundred dollars and keeps it in any form of permanent property, it remains as wealth, and may be used to increase itself. But the moment the hundred dollars is expended in destructible property, that is, such as may wear out or does not reproduce itself, it begins to vanish and finally disappears. For instance, if the hundred dollars be spent for costly clothes, a carriage or a driving horse, a hunting dog or a cask of wine, it is evident that it immediately begins to wear away, to depreciate in value, or to be used up; and it is only a question of time how long, or soon, before it will come to an end. But if a cow, a workhorse, or a piece of land is purchased, or the money or its representative is spent to reclaim a marsh; to drain useless land; or to erect a building; it at once becomes reproductive, remains intact, and earns interest for its use, or it wastes but slowly, and in the wasting or wearing of it, it not only replaces itself, perhaps many times, but gives continual profit for its use. So far as money or labor is used for the latter class of purposes, it is not spent, but is saved. It is also saved and remains or reappears as wealth, when it is used for any necessary purpose, as the production or purchase of food and clothing, suitable for its owner's business; or for tools, or anything which will enable him to work to replace it. It is spent and disappears as property or wealth, when it is used for purposes of luxury or waste of any kind, giving no valuable return for its use, notwithstanding it may have been paid out as wages for laborers or artisans.

A million dollars have been squandered and have disappeared in villainous smoke and deafening noise in celebration of the Fourth of July. That money, so far as it represents labor, has gone out of existence, and is totally wasted. The money itself remains, it has gone to China perhaps, to pay for a year's labor of many men who have been making fireworks, and these have spent it for food and clothes, while they have been at work; but they have nothing to show for their labor; what has come in has gone out; and so with those who earned the money with which the fireworks were purchased, and all and every person engaged in the business of making and procuring them. This is a typical case and there are many others of which this is a type. A person, family, or nation, is wealthy or poor as it saves or spends; and if we will only look into the secret causes of many cases of poverty which are just now causes of complaint, we should find there has been too much spending; and on the contrary, those cases in which a person or family stands in better circumstances than before, will be found to have resulted from a habit of saving. Extravagance is without excuse. There is no true enjoyment in wasting anything, nor in squandering the proceeds of former work in idleness; nor in working hard for a time, that an opportunity may be secured of going on a debauch. That is a cynical and a vicious, although old, adage, "let us eat and drink for to-morrow we die;" it is repeated in fewer words in the modern, "a merry life and a short one." The true philosophy is to use our time and our opportunities that we may increase the true happiness of not only ourselves, but of those about us, and that we may leave the world when we have done with it, better off than it was when we entered it, and inherited the fruits of the labor of others who had preceded us in the same virtuous efforts. And this can only be effected by industry and a well regulated economy which is neither niggardliness nor wastefulness.

BREVITIES.

THE next RURAL will be the Special Small Fruit Number.

THE attention of our readers is called to our Report on the Golden Ovoid Mangels on page 131.

THE Japan Persimmon. The RURAL was sharply censured for giving its opinion that it would not prove hardy in the North. It is not always pleasant to be the first to condemn new and lauded plants, let the condemnation be ever so well merited. But there is a satisfaction about it in the long run.

WE have received several complaints from our subscribers that the ring sent out with subscriptions to the Saturday Evening Post, of Philadelphia, Pa., and warranted to be gold, is *not* gold. One ring, which is certainly not gold, has been sent to us as proof. We had supposed the establishment in every way trustworthy, or we should have declined their advertisement.

FROM present appearances, among the numerous sins of omission which should bring well-merited rebuke on the present Congress, will be its culpable failure to pass a bill for the suppression and restriction of pleuro-pneumonia among cattle. The urgency of this measure has been amply demonstrated in and out of Congress, but while day after day has been wasted by this body in futile wrangling over mere political questions of no practical interest to the people, this matter of vital importance to the greatest interest of the nation has been shamefully neglected. Last Friday, the passage of the Cattle Diseases Bill establishing a Bureau of Animal Industry, etc., was strongly urged in the Senate by Mr. Johnson, of Virginia. Mr. Coke, of Texas, and others; but its provisions met with bitter objections from Mr. Ingalls, on the ground that the bill was a conflicting, incoherent medley and jumble of provisions every one of which, in his judgment, was directly at war with the rights of the States. It is chiefly out of an excess of regard for State rights that the present Democratic Congress has hitherto failed to pass a satisfactory bill in this connection, and as it has only another week to live, it is hardly likely that it will in its last moments remedy the wrong it has hitherto neglected. Well, the farmers of the country will have little reason to regret the end of a Congress which has been so atrociously negligent of their welfare.

A COMMITTEE of prominent California grain merchants lately requested the managers of the Pacific railroads to state the lowest price at which they would transport not less than 150,000 tons of wheat overland to New York City. As lately stated here, the rates of freight on the Pacific Coast for shipment of grain round Cape Horn are so high as to leave no margin of profit to the producers, and even at such excessive rates the tonnage facilities are far too small to meet the demand. It was therefore thought that the railroads might be able to name a figure for overland transportation, which would at least enable the wheat growers to escape a loss on the crops. The railroads, however, it is said, fixed the overland freight on grain at 60 cents per bushel, or about $20 per long ton. As the market for California wheat is in Europe, the cost of transporting it across the Atlantic would have to be added to the above charge, which would raise the total freight to a figure which would leave no profit to the producer. But in addition to the obstacle of cost, neither the Central nor Union Pacific Railroads could engage in such an immense traffic. Both roads are single tracks with switches at long intervals—a circumstance productive of much delay in the ordinary business of the roads; but if each day from 10 to 20 wheat trains were started eastward from California, confusion would be endless, unless both roads built double tracks along their entire lines. Again, neither company possesses a tithe of the rolling stock which so enormous a grain business would demand, and it would not pay connecting roads to send empty cars to California to come back full. With inadequate tonnage even at exorbitant rates of freight, and no immediate possibility of finding a railroad outlet to market for their crops, the plight of California wheat raisers is not an enviable one, however heavy may have been their harvest.

Literary Miscellany.

THE FARMER'S WOOING.

The daisies nodded in the grass, the buttercups were sleeping,
And just across the river sang the farmers at their reaping;
Upon the hills so blue and far, the maple leaves were showing
Their soft white beauty in the breeze that from the sea was blowing.
A little maid came through the lane, with song and rippling laughter;
The buttercups made way for her, the daisies nodded after.

A strong, young farmer saw her pause beside the parting river;
She drew a lily from its depths, with golden heart a-quiver.
"Thou art more fair than lilies are," said he with head uplifted,
And threw a poppy, as the stream toward the maiden drifted.
She set the flowers in her hair, the red and white together;
A cloud grew black before the sun and rainy was the weather,
He came across the river then, the farmer from his mowing;
He minded not the water's depth, he cared not for its flowing.
"O Love!" said he, "if gleaming sun and cloudless skies o'erlean us,
The river's barring width may roll unpassed, untried, between us;
But when loud thunder fills the air, and clouds and rain come over,
I'll cross the ocean to your side—I am no fair day lover!"

And so one day the village bells rang out across the river.
Their music set the buttercups and daisies all a-quiver,
While some one drew a lily from the stream so blithely flowing,
And plucked a blood-red poppy that amid the wheat was growing;
The maiden set them in her hair, the red and white together,
With many a smile, a tear or two, and glances at the weather.

They passed beneath the chapel's side, the farmer and the maiden,
Where arches crossed above their heads, with snowy blossoms laden,
And in that place of holy calm the binding words were spoken;
He in his heart bore out the truth, she on her head the token,
The years went by, and some were bright and some were clouded over,
But ever stood he at her side—he was no fair day lover.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Concluded from page 91.)

CHAPTER IV.

THE INDULGENCE OF A HABIT WHICH CAUSES UNPLEASANT RESULTS.

Having gleaned the papers to my satisfaction, or rather dissatisfaction, I resolved upon a ramble through the town. From the force of habit I felt about me for a cigar, as I was about starting forth, and to my great delight I fished one up out of the depths of a hitherto neglected pocket. I lighted it, and stepped out on the street.

So many novel and interesting sights at once met my gaze, that I naturally stepped back into the doorway of the hotel to view them more deliberately. There was quite a crowd moving to and fro along the street, magnificent looking men and women all. On the crowded thoroughfare of the city I naturally supposed that all classes and conditions of its people would be represented, and my surprise was therefore great at the uniformity in appearance of the passing crowd. I saw none who were either flashily or shabbily dressed, none who were either oppressed with obesity or angular with leanness, none upon whom disease, poverty or misfortune of any kind had set a mark. On the contrary, they seemed all to belong to the well-to-do class of society; the men were tall, broad-shouldered, deep-chested, dignified and majestic in carriage. Of the women, it is enough to say that they possessed the beauty of form and feature; the graceful and energetic mien which is conferred by vigorous health and a pure, well-balanced, and well-cultured mind. But that which most attracted my attention and interested me in this people, was the intelligence and the nobility of mind which was clearly written in their faces. From my intuitive sense of the relation which exists between the outer form and the inner soul, I would have placed unlimited confidence in the honor, justice and integrity of any one of them. Anything mean, unkind, ungenerous, or unjust seemed utterly incapable of finding a harboring place in such noble looking specimens of our race.

I have spoken in this manner of this people before, but the reader, I hope, will pardon this repetition, as there is nothing which makes such a powerful impression upon us as an individual in whom all the elements of our physical and mental natures are completely and harmoniously developed.

What opinion these people formed of me as I stood leaning against the side of the doorway, and puffing away at my cigar with a self-complacent air, I could only conjecture from their manner. It was clear that they regarded me as a curiosity for they all gazed upon me as they passed with a look in which surprise was most prominently expressed. I also observed that they whispered to one another as they looked at me, and I supposed that they were making comments on my dress and personal appearance; for there was a great contrast between me and them in both these particulars. But I afterward learned that that which more than anything else made me an object of curious interest to them was the puffs of tobacco smoke which I was continually emitting from my mouth. This came out through an old man whose appearance indicated second childhood and decrepitude, who stepped aside from the crowd and approached me.

"I beg pardon," said he, in a broken voice, and with a fatuous expression of countenance, "but I have a great curiosity to know why you are making a chimney of your mouth."

My first impulse was to resent this impertinent speech by a contemptuous silence, but this old man being the only person whom I had seen whose condition was such as to excite my pity, I thought I could afford to treat his impertinence with civility, so I replied, that I was simply indulging in a habit very common in my country.

"And what do you do it for?" said he, "that is, what good purpose does it subserve?"

"I confess, sir," I replied, "that I cannot tell what good purpose it really does subserve. It is a habit, sir, merely a habit."

"A habit!" he repeated," merely a habit! and does not promote any good! It must be a very pleasant habit, then," said he, "will you allow me to try it?"

I was becoming disgusted with the old man, and I gave him my cigar, which was now reduced to a stump in the hope of getting rid of him. He put it in his mouth and inhaled deeply; but knowing nothing of the art of smoking, he allowed the smoke to penetrate cavities which were never designed for it by nature, and the result was a violent fit of coughing and wheezing which I verily thought would have a fatal ending. The tears rolled down his cheeks, and in his violent efforts to catch his breath, he would have fallen to the pavement had not a bystander caught him in his arms. He was supported into the hotel and laid upon a sofa quite pale and exhausted.

I was naturally looked to for an explanation of the affair, so I gave the facts as I have recorded them, to the crowd which the event had called around me. One of them had rescued the cigar stump from the street and when I referred to it, he held it up to the gaze of the crowd, who seemed to regard it as a remarkable curiosity.

The papers of the next day all contained accounts of the affair and I was referred to in them as the peculiar looking stranger who had the strange faculty, and who seemed to enjoy the operation of burning a disagreeable substance in his mouth, and emitting a smoke which was nauseating in the extreme. One of them also contained an historical account from a learned professor of the habit of tobacco using as practiced in an age long past,

"I have not seen this stranger," the professor observed in the course of the article, "but from the description of him by those who have, he seems to be an exact prototype of the people of this age. In what region of the earth can he have lingered out the intervening centuries. How is it that he now appears among us like a fossil of an almost forgotten age!"

These notices served to make me more than ever an object of curiosity. I would fain have been less so. Indeed I adopted the peculiar dress of the country with the view of making myself less conspicuous; but the inferiority of my personal appearance could not be disguised. I would not have admitted to any inferiority in this particular among my own people, but here it made me a marked character wherever I went.

But to return to the old gentleman. Being well stricken in years, the shock to his system was a severe one, but after an hour's rest, he had recovered sufficiently to be driven in a carriage to his home. I expressed my great regret. To the young man who had been summoned to the aid of the old gentleman, and who I understood was his great grand-child, at being the innocent cause of so much discomfort to his ancestor, and I would have shown my sense of self-reproach to that ancestor, also, by rendering him any service which lay in my power. But if I had been an ogre breathing forth fire and smoke, he could not have shown greater uneasiness at my presence, so that I found the greatest service I could render him was to depart from him altogether.

The gentleman who had gotten possession of the cigar stump gave it as a special favor to the hotel clerk, and that individual had a neat casket with a glass cover constructed for it, in which it was carefully deposited, to be looked upon by the people of Goodwilltomen, and the stranger from near and far, as a relic of a long past age.

CHAPTER V.

PHILLEGOMOTERS.

The excitement growing out of the innocent indulgence of my favorite habit, having subsided, I again set out on my tour of observation.

As I was passing out of the door my eye caught a glimpse of a great object flying by, about fifteen feet above the pavement, with a speed which was astonishing, but with scarcely any more noise than the whirr which naturally attended its rapid clearage of the air. I stepped quickly to the sidewalk, but when my eye next rested on this flying object it was several blocks away, and decreasing in size with a rapidity which I could scarcely believe was owing to the increase of distance.

As I gazed after it, another object on the other side of the street caught my attention which seemed to grow as rapidly as the first was diminishing. As it approached nearer, I surmised from its appearance that it must be a sort of rapid transit for long distance passengers. It bore some resemblance to a long car with a great rubber oblong bag forming its roof. It did not appear to have any wheels, but there were windows in it which allowed me to perceive that it was filled with passengers. It went by like a flash, and as it passed I observed what appeared like a great whirling disk at its hind end, which I took to be the source of its motion. I marveled that anything of this character, going with such speed, should make so little noise; but then its speed itself was a marvel, and that it should slide along so rapidly without steam or wheels was also marvelous and that people of ordinary prudence should entrust themselves to such a hair lifting means of locomotive—even to look upon—exceeded anything which I had ever yet observed in the line of the wonderful.

I stepped to the edge of the sidewalk to look at the tracks of these flying machines. They were supported on iron pillars, something like the elevated railroads of my own country, and so light were they in construction that they appeared to me like the work of some crack-brained engineer, under the control of a rascally board of directors. The iron pillars were about twenty feet apart, and consisted of a single post, with two, branching arms. These arms supported by four six-inch strips of oak, which formed the bed for the iron rails. These were bolted on the outside of the oaken strips, which, by the way, were set up edgewise upon the arms of the pillars. They were about three inches wide by an inch and a half thick, and they had a deep groove on the under side of which, was bright and smooth as polished steel. As I stood wondering at this peculiarity of construction, and thinking what could be its purpose, another car approaching, attracted my attention. It moved on a different track—and here I may observe that there were four elevated tracks along the street, two upon the left side for cars going up, and two upon the right for those going in the opposite direction. The inside tracks were for long distance passengers, while the outside tracks, or those next the sidewalks, carried cars which stopped at every cross-street. It was this latter kind of conveyance which now approached. It was much smaller, and moved much slower than that which I had first observed. When it reached the cross-street below me, it halted, and scarcely had it come to a full stop, when down it went to the sidewalk with a suddenness which took my breath away, and made me for the moment think that I was to be the witness of a catastrophe. Several passengers stepped to the sidewalk, and others who had been waiting for the car stepped on, when it rose to the level of the track almost as suddenly as it had descended, and was off again with scarcely a minute's delay in the whole proceeding.

With the purpose of gaining an idea of the principle of the locomotion of this public conveyance, I stood earnestly watching its approach, when the rattle of a carriage, and the exclamation: "In to the sidewalk there, Hero!" diverted my attention, and the next moment a most superb horse, with arching neck, majestic step, and a countenance which spoke at once of courage, intelligence, and docility, halted before me. He was neither guided nor restrained by bit or rein, his only harness being a girdle to support the thills and hold back the carriage, and a breast-collar by which to draw it. This fact conjoined with the superior qualities of the animal, so completely riveted my attention that I failed to notice the occupant of the carriage till he bade me a cheery good morning. Then I observed that it was my acquaintance of the previous evening who had been so attentive to me in the park.

"Come, sir," said he, in a pleasant, familiar manner, "jump in, and let me show you something of the city."

I looked at the horse, and then significantly at his master. "I judge you to be a person of extensive experience," said I, "and old enough to have a full measure of prudence, but before entrusting myself to that bitless and bridleless steed, I would like to ask what assurance you can give me that he will not run away with us, and break our bones, or dash out our brains in his mad career."

"The most satisfactory assurance, sir, that the most timid could require," he replied. "I have ridden behind horses in this manner for a hundred years or more, and this particular one for fifteen, and still my bones are all sound, and my brain still completely fills my cranium. If you ask further assurance, I will say that it is the common practice in this country to drive horses without a bit or bridle, and yet, during the whole course of my life, I have never heard of one running away."

At this juncture one of the rapid-transit machines came whirring along, and I instinctively jumped back several paces to be beyond the reach of danger from its lightning speed. This movement was greeted with a hearty laugh from my acquaintance.

"I hope, sir, you are not afflicted with a morbid cautiousness," said he.

"Is it an evidence of morbid cautiousness," I asked, "to get out of the range of such a lightning apparatus? Suppose it should leave the track and come down to the pavement; I would not like to be under it, would you?"

"There is not the least danger of it leaving the track," said he, "or coming down to the pavement if it did leave the track."

"I suppose, then," said I, ironically, "if it were disconnected from the track, it would take to the air like a bird and go sailing away over the housetops, bearing its unterrified passengers gleefully along with it till it should have an opportunity of landing them safely in some vacant lot, where the heads of pedestrians would not be endangered."

"That is just exactly what it would do," he replied. "But come, sir, let me prevail upon you to get into my carriage, and we will talk this matter over as we ride along."

Several turnouts having passed by while we were talking, with horses unguided by bit or rein, I was encouraged to accept my friend's invitation.

"I hope, sir," I remarked on entering the carriage, "that you will remember that I am as great a stranger to your customs and institutions as though I had just arrived from another world, and that you will make due allowance for the peculiarities which I may display. I feel the humility, the ignorance and the littleness of a child in the presence of your wonderful people and your marvels of progress in art, science, manners, etc., of which, I suppose, I have yet gained only a most crude and incomplete idea. I would like to have you talk to me as you would to a child, and allow me to ask all the childish questions I like. Now, in the first place, my curiosity is at a keen edge to know all about these machines, or whatever you may call them, for carrying passengers."

To be continued.

MAGAZINES FOR FEBRUARY.

Harper's Magazine.—Contents: The Gospel History in Italian Painting: Asleep, a Poem; The English Lakes and their Genii, III.; Pottery in the United States; The Old New York Volunteer Fire Department, II.; Literary and Social Boston; Anne, a Novel; The Fire-fly, a Story; The Early History of Charles James Fox; Puss Tanner's Defense, a Story; A Laodicean, Book the First—George Somerset; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

Paintings in the Catacombs.—The earliest works of Christian art in Italy are the wall-paintings in the Catacombs. At first these were merely abstract symbols, the Labarum, the Alpha and Omega, the fish, used as the sign for the name of Christ. Then more pictorial emblems were painted: the dove, representing the Christian soul freed from the body; the peacock or phœnix, type of immortality; the sheep, signifying the soul in the earthly life. This last emblem stands in immediate connection with the earliest representations of Christ as the Good Shepherd. This is the favorite subject of the Catacomb paintings. He is depicted as a beautiful youth in shepherd's dress carrying a lamb on his shoulders, or leaning on his staff in the midst of a flock, or playing on a shepherd's pipe, while the sheep listen to him. The idea of these pictures is certainly Biblical; but the artistic form is supposed to be taken from an old Greek statue of Mercury carrying a kid, which existed at Tanagra. For it must be observed with regard to the art of the early Church that once having gained the right to exist, it adopted without hesitation materials and forms which had been invented by the heathen. Proceeding on the principle that what God hath cleansed man may not call unclean, the Christians repeated in their religious pictures the type of face, the methods of expression, the artistic mannerisms, which are found in the wall-paintings of Herculaneum and Pompeii. They personified the sun and the moon, the earth and the sea, mountains and rivers. They even adopted heathen myths. In a beautiful painting from the ceiling of the tomb of S. Domitilla, Christ is represented in the character of Orpheus playing upon his lyre, while trees bend toward him, and wild beasts gather at his feet. Mingled with these symbols and allegories we find the first beginnings of sacred historical painting.

The spirit of all these pictures is purely symbolical. They do not depict, they simply suggest, their subjects. They presuppose in the mind of the beholder the knowledge of a certain event which they shall recall to him by a mystic sign for his comfort and encouragement. For this is the aim and temper of the Catacomb paintings: to strengthen and console. They pass by the passion and death of the Lord, to dwell upon the themes of gladness and consolation—resurrection, miracle, deliverance, hope. They are joyful and confident. They are flowers blossoming in darkness, stunted, delicate, imperfect, but full of a marvelous brightness an unextinguishable life.—Henry J. Van Dyke, Jr., in Harper's Magazine for February.

St. Nicholas.—Contents: Frontispiece; In the Tower—A. D. 1554, Poem, Thorwald and the Star-Children; Poor Jack-in-the Box—Jingle. Illustration: "Jack Speaks for Himself;" Winter and Summer, Poem. The Giant Squid; Cousin Charley's Story; Two Visions of Fairy-land, Poem; Mystery in a Mansion, Chapters VII. and VIII.; My Little Valentine, Verses; The Goose and the Nightingale, Illustrations by J. G. Francis: "The Entertainment;" In Nature's Wonderland, Chapter IV.; Johnny's Answer, Verses; How Jube Waked the Elephant; "There was a Small Maid of St. Paul," Jingle; The Peterkins Talk of Going to Egypt; The St. Nicholas Treasure-Box of Literature—The Skeleton in Armor; The Stage Coach; The True Story of the Obelisk; Which? Verses; Phæton Rogers, Chapters V. and VI.; For Very Little Folk—The Tame Crow; Jack-in-the-Pulpit; The Letter-Box; The Riddle-Box.

The Obelisk.—The work of moving the monolith through the streets was the most interesting of all. On level ground it traveled about as fast as a boy can walk, and often made six hundred feet in a day. The engine pulled easily and without jarring or straining, and, when not at work dragging itself and its load, helped the men to move the timbers in relaying the timbers as fast as it went over them. The Frenchman was a year in moving his block four hundred feet and turning it around once. The American took it nine thousand eight hundred feet and went around four sharp corners, besides eleven turns of from twelve to forty-seven degrees. The way this was done was most curious. When the stone came to a corner of the street it was run upon a curved railway, built in a half-circle. A ring of channel-bars and cannon-balls was placed on the ground, with a large hydraulic-jack in the center. Beyond it were two more curved rails, describing a quarter-circle. When the locomotive ran out on these tracks, the hydraulic-jack came under the lower end of the stone, and the engine rested on the outer quarter-circle. A rope was put out to a stake on the side of the road, and with a gentle pull the whole affair swung around the corner with the greatest ease. The hydraulic-jack here assisted to lift the end and take off the weight, and thus make a pivot on which the stone might swing around.

By the time you read this the work will be finished, and the great monolith will stand once more on its bronze crabs on its ancient pedestal. The full length of the obelisk is sixty-nine feet and two inches. This includes the point, or as it is called, the pyramidion, which is seven feet eight and one-

half inches high. At the base, just above the broken portion, the stone is ninety-two and three-quarter inches thick, and at the top, at the edge of the pyrimidion, it is sixty-three inches thick. The pedestal on which it will stand is eighty-three and three-quarter inches high, and its weight is ninety-eight thousand pounds, the obelisk itself weighing four hundred and thirty-eight thousand five hundred pounds. When finally set up, the entire monument, including the steps and pedestal, will be just eighty-one feet high. It must be the happiest stone of all, for it stands under a clear, blue sky, much like its old Egyptian sky, and it rests in peace among green fields and pleasant gardens. A stream of carriages passes close beside it under the trees, and happy children look up at its strange picture-letters, and wonder what it thinks of its final home in a land of which its old Egyptian master never so much as dreamed.—St. Nicholas for February.

ATLANTIC MONTHLY.—Contents: Friends, A duet IV., V.: The Wives of Poets; Night on the Ocklawaha; The Future of American Shipping; In the Cerlosa; The Portrait of a Lady, XV.-XVIII; German Cooperative Credit-Unions; Who are the Aryans? Reminiscences of Washington, X. The Taylor Administration, 1849-50; The Wizard Poet; In London again; Is Anything Lost? Dexter's Congregationalism; Recent Volumes of Short Stories; The Spell-bound Fiddler; Les Deux Masques of Saint-Victor; Mr. Tilton's Pictures; The Contributor's Club; Books of the month.

GERMAN COOPERATIVE CREDIT-UNIONS. — No healthy social science ever came before the public with plans which were to render labor, energy, and mental exertion unnecessary. Even if it were possible, no sound political economy would desire to make the struggle for existence less earnest. Social reforms, however, have the object of dividing material goods—and the spiritual ones to which the first serve as a necessary basis—more in proportion to useful intellectual and physical labor performed, and less in accordance to inheritance, privilege, and class; of easing the contest for the means of subsistence in some places, and giving it a better prospect of success; of rendering it really earnest in others.

Such is the aim of the credit-unions, founded and managed by a warm-hearted humanitarian for the purpose of elevating the moral and material welfare of entire classes of society. They are not charitable institutions. On the contrary, one main object is to render laborers and tradesmen independent; to give them such a consciousness of their own dignity as men, as shall make them scorn charity. Their watch-word is "self-help;" the principle upon which they are based is "that man has received from nature not only wants, but also powers, the proper use of which gives him the means of satisfying his wants." Schulze-Delitzsch comes repeatedly back to this fundamental proposition, and is unable to value too highly a manly self-reliance. "We wish no aid from the state," cries he, "we desire no public subventions! Let us alone. Give us freedom and the liberty of managing our own affairs, and we ask no further assistance." Schulze-Delitzsch does not decry generosity and the doctrine of human "brotherhood." These are noble principles of our nature, and useful in relieving individual cases of distress. He contends, nevertheless, that where classes of the people are concerned, charity, whether public or private, is powerless. Instead of strengthening, it weakens; instead of elevating the character of the recipients of its benefits, it debases it. Cooperative associations, rightly understood, have a far weightier mission than that of relieving dependent poverty, namely, that of preventing it.—Richard T. Ely in Atlantic for February.

APPLETONS' JOURNAL. Contents:—The Veterans of Yesterday. In Three Parts. Part Second. From the French of Erckmann-Chatrian; Rambles among Books. I. Country Books; Parliamentary Anecdotes; Buddhists and Buddhism in Burmah; The Irish Land Question; Shakespeare's Traducers; A Lady's Wanderings in Japan; Music. A Deadly Feud. A Sketch. From the German of Rudolph Lindau; Decorative Decorations; Romances of Ancient Egypt; The Photophone; A Strange Story: Love in Dreams. A Poem; Editor's Table; Notes for Readers.

THE assertion so frequently made, that skill in handicrafts has declined and is declining, seems to be almost universally accepted as true. Ruskin has said so again and again: hosts of other critics have echoed the charge; it is a favorite theory with virtuosos and connoisseurs, who love nothing without a touch of antiquity; and innumerable writers assume off-hand that what all these people so confidently affirm must not be questioned. What, now, if a little cursory investigation should bring us to accept this general indictment with some small measure of reservation?

In all comparisons between workmanship of the present with that of the past, the work of to-day suffers greatly by one, perhaps unavoidable, circumstance—which is, that the selected work of bygone time, that which has survived, that which has made reputation in the midst of much inferior performance, is invariably made the standard by which the average of current work is measured. Out of the past there comes down to us, for the most part, only the best work, or it is only by the best work that judgment is formed. And it is the accumulation of this superior work, covering long periods and coming from many lands, that creates the vivid impression we have of ancient skill. Many splendid buildings and great paintings, many immortal books and admirable specimens of handicraft, have come down to us, but long intervals have sometimes elapsed between them, much inferior work has been altogether overlooked and forgotten; it is like a distant landscape in which we see only the hill-tops that seem to stand piled together, unconscious or ignorant of the level plains that intervene. It is therefore necessary in comparing any kind of performance of to-day with that of the past, to select only the very best, to pass altogether by the mass of cheap and temporary productions, and confine ourselves to those things which confessedly employ our best skill.—Appletons' for February.

THE AMERICAN NATURALIST.—Incomplete Adaptation as Illustrated by the History of Sex in Plants: A Partial Biography of the Green Lizard; A New Leaf Cutting Ant; Comparative Neurology [Continued]; The Bee's Tongue and Glands Connected with It; History of the Buffalo; Editors' Table; Recent Literature; General Notes—Botany, Zoology, Entomology, Anthropology, Geology and Paleontology; Geography and Travels; Microscopy; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

A PARTIAL BIOGRAPHY OF THE GREEN LIZARD. The green lizard (*Anolis principalis*) of the Southern United States is sometimes called the American chameleon, but it is not related to the chameleon of the Old World.

Its changeable coat, however, gives it a popular right to the name. Two specimens of Anolis that I have kept for months in a wire-cloth cage have shown some interesting habits.

The female came from South Carolina in November, 1879, in good condition, but with the greater part of the tail wanting. She was placed in a small cage and supplied with flies, but refused to eat. During the Winter the cage stood among house plants, in a room heated by a furnace, and although she was lively and ran around a good deal, she ignored the flies. Thus she remained without food and water (except an occasional drop that fell by accident when the plants were watered) for four or five months.

But when the warm Spring days came, she greedily devoured the flies, and when water was sprinkled in the cage, she eagerly lapped it up with her tongue. It is said that the Old World chameleons drink in the same manner. She would not notice water that was in a small jar in the cage, although very thirsty.

Sometimes when I approach the cage she lifts her head and opens her mouth. I do not know whether she is conscious of asking for water, but I soon recognized this an indication of thirst. In April a new tail began to show itself, looking like a small black wart, and since then it has grown nearly an inch. At first it was distinct and looked like a graft on the other portion, but now, after several moultings, it is continuous, although it can be easily distinguished from the rest; the scales are smaller, it always remains darker than the rest of the body.—Sarah P. Monks in American Naturalist.

LIPPINCOTT'S MAGAZINE for February is the second number of the new series, and gives most satisfactory evidence of the improvements promised at the time of the change. Down the Red River of the North, by Alice Ilgenfritz, is a sprightly and profusely illustrated sketch of a trip through the province of Manitoba, a section of our continent that has attracted considerable attention of late. In A Celestial Colony a graphic description is given by C. Baldwin of that part of San Francisco known as Chinatown, with an account of the life of its Chinese inhabitants. The interest of the paper is enhanced by several very good illustrations. Fiction is attractively and liberally represented by the serial "Lilith," which is continued with increasing interest, and three capital short stories, viz,, Monsieur Paul's Heroism, by Louise S. Houghton; The Kourasoffs, by Vera Lapoukhyn; and A Midwinter Romance, by L. K. Black.

The more solid articles of the number—although none can be called heavy—are an analytical description of Welsh Women, by Wirt Sikes; a discussion, under the title of Power-Centres, by an old journalist, of the various types of journals, and the why and the wherefore of their existence; an able criticism of Sarah Bernhardt in her various characters, by M. G. Van Rensselaer; and "Among the Cherokees," an account of that prominent tribe, with observations made during a visit, by A. M. Williams. A bright sketch entitled A Country Tavern in Winter, by Mary Dean, two striking poems, with the usual variety of Monthly Gossip and literary criticisms, form the balance of a choice number of this justly popular magazine.

SCRIBNER'S MONTHLY.—Contents: An Old Virginia Town; Men and Spiders; John La Farge; The Silence of the Hills; His Footsteps; Notes of a Walker; Foreign Actors on the American Stage; Thackeray's Relations to English Society; Peter the Great as Ruler and Reformer; Souvenir of Italy; The Fair Barbarian; The Music of Niagara; Aunt 'Cinda Ranch; Completeness; Garrison Life at Governor's Island, New York Harbor; The Heart of a Rose; Norway's Constitutional Struggle; How the New Testament Came Down to Us; Some Quacks; Agricultural Experiment Stations; Topics of the Time; Communications; Home and Society; Culture and Progress; The World's Works; Bric-a-Brac.

The articles, as usual, are of an interesting character. One on "Experiment Stations" includes in its descriptions that of the experiment farm belonging to the RURAL NEW-YORKER.

NEW PUBLICATIONS.

Reminiscences of Dr. Spurzheim and George Combe. A Review of the Science of Phrenology from the Time of its Discovery by Dr. Gall, to the Time of the Visit of George Combe to the United States, in 1838-40, with a new Portrait of Spurzheim. By Nahum Capen, L. L. D., New York: Fowler & Wells, Publishers. 1 vol. 12 mo, extra cloth. Price $1.50

While the title of this new and seasonable work is sufficiently full to give the reader an impression of its general character, it should be said that the author, Dr. Capen, was himself a personal friend and confidential assistant and adviser of the great advocate of Phrenology during his visit to this country. Being well versed in the history of Phrenology, from its earliest introduction to American science, and a gentleman of wide learning, Dr. Capen is peculiarly qualified to prepare such a work, and by so doing, has aided greatly toward completing our biographical data touching the great apostles of Phrenology; especially Drs. Gall, Spurzheim, and Andrew Combe, and George Combe, the last being generally acknowledged one of the most eminent men in modern literature. While "Reminiscences" does not purport to be a treatise on mental science, it so clearly and candidly discusses the questions naturally arising in its course, in the relation of the brain to the mind, and the philosophy of human character, that it is a very instructive volume aside from its biographical specialty.

On the Threshold.—By T. T. MUNGER. 16-mo. Boston: Houghton, Mifflin & Co., publishers. Price, $1.00.

To a young man on the threshold of life, and to those even more advanced in years, this work is particularly adapted. We know of no other publication that is so full of sensible, judicious, sympathetic, helpful talks to young people, and the agreeable and tactful style of the author creates at once the feeling of a warm friend and wise counselor. No young man about to embark in life's great enterprises should fail to read it. It will be of great use to such, and may be the guiding element to their future destiny.

The book is divided into nine sections, viz.. Purpose, Friends and Companions, Manners, Thrift, Self-reliance and Courage, Health, Reading, Amusements, Faith, each subject of which is sympathetically and frankly discussed, and stimulates the reader with the idea that life is worth living for. It should be in every household, and we predict for it an immense sale.

How to Live in Winter. By Mrs. AMELIA LEWIS. New York: Food and Health Publishing Co. Price, 25 cents.

This little book is published in pamphlet form. It treats of "Our subjection to temperature and the influence of the cold season on life;" what food will best maintain the vital heat of the human body in the cold season;" "The management of dwellings in the cold season;" "The management of dress in the cold season;" "Winter diseases and health measures." These subjects necessarily engross our attention, and should receive greater consideration. In these times of cheap and good publications, little excuse can be made for dearth of information. This one of the many, supplies this want.

The Minor Arts: By Charles G. Leland. London: Macmillan & Co.

"Porcelain Painting," "Wood-Carving," "Stenciling, Modeling," "Mosaic Work," &c., are the particular features considered in this little work on decorative art. Its design is to instruct in these various methods. The minor arts are now resorted to in a remunerative sense to a much larger extent than formerly; consequently while imparting information and pleasure to the mere lover of art, the author has satisfied a two-fold need. The illustrations are good; the descriptions clearly drawn and as a whole, this treatise is worthy of notice.

For Women.

CONDUCTED BY MISS RAY CLARK.

CONCERNING BREATHING AND CLOTHING.

MARY WAGER-FISHER.

A LADY who had suffered from pleurisy, which malady had left her lungs with adhesions at the back and otherwise disabled, went to a skillful physician for advice. After he had examined her lungs and listened to her breathing, he said:—"You don't know *how to breathe*. The first thing that you are to do is to breathe to the *bottom of your lungs with every breath* you draw. You can, if you will, cure your lungs by breathing properly; your digestion will be improved, too. Drink four quarts of milk a day, and eat salt codfish three or four times a week. Soak the fish in *salt* water, then cook it in the usual way with cream or milk." That was the gist of the prescription to the woman who was generally debilitated, and who greatly improved under the treatment. As milk, without salt, has a constipating tendency, the salt fish was probably recommended to counteract the effect of so large a milk diet, and also for its tonic properties. Loose as she thought she wore her clothing, she soon found that it was altogether too tight for full, deep breathing.

The great thing that the patient needed was to breathe properly, and the doctor's comment is applicable to a great many people, and especially to women, whose clothing is very apt to compress the waist.

I do not suppose that any womankind who reads the RURAL, deliberately and consciously laces her waist, for to do so is intensely vulgar—inexcusably vulgar. But I suspect that there are many who unconsciously wear clothing that is much too tight. If one can breathe so as to fill every part of her lungs without difficulty, she may rest assured that her clothing is loose enough. Full-chested women are rare. Aside from the good health secured by having a full, deep chest, it is also a very great beauty. It adds dignity and grace to the form, to the carriage of it, and to the agreeableness of the voice. The size of the waist is a matter of very small consequence, and, as a rule, it is always in proportion to the rest of the body if it is allowed to grow and develop naturally. It is not an uncommon thing to hear women remark, "My waist measured 16 or 18 inches when I was married, or when I was twenty years old," as though the small circumference of it was equivalent to some marked virtue, as the possession of courage, or a fine accomplishment. The *chest* measure *is* a matter of some consequence, while the other is not.

A matter which seriously interferes with young people of both sexes forming an erect, full-chested figure is the wearing of high heels on the shoes. I never see a young person trying to walk on such stilts without a feeling of pity for the ignorance that allows it, and the ignorance that endures it.

For growing girls, high heels are diabolical. I use the word advisedly. The mischief they do is almost incalculable. There is no excuse, but dwarfness for high heels. The bootmaker will make heels of any size you order, and if you buy boots ready made, he will cut off the heels to suit your idea. Be sure too, that you have a shoe *broad* at the toe. Narrow toes are not comfortable, and happily they are no longer fashionable. To keep growing feet straight along the line of the great toe, and all the toes free and uncramped, is a most essential thing. To cramp and distort the feet, is to store up a vast amount of discomfort and suffering for the future, as well as for the present.

How to dress the body with comfort, and gracefully too, is always a serious question with women. I wish to tell you how one woman whom I know, dresses herself, and she always has an appearance of marked trimness and style. To begin with, in the Winter, she wears woven underwear just as a man does—the drawers reach to the ankle and the stockings are drawn up over them. The next garment is of canton flannel cut to fit the figure like a basque with the skirt reaching well over the knees. This buttons up the front, is high at the neck and with long sleeves. Over her knit flannel under drawers she wears drawers of canton flannel. The long skirt of the basque serves for under petticoat, and is trimmed around the bottom. These articles, with the addition of a very light felt, flannel or merino skirt, constitutes her underclothing. It is warm, entirely comfortable and light to carry. The skirt of her frock is never suspended about her waist. It is cut as nearly like a Princess, or Gabrielle frock, without sleeves, as can well be: but the part that constitutes the waist, from six inches below the waist line up, is usually of Silesia, or muslin, so that there is quite an economy in the dress fabric. The style, is much the same as if an ordinary dress skirt should be sewed to the bottom of the lining of a short round basque in a smooth, flat seam. Of course, this gives added warmth to the body, and over this the basque or "body" of the frock fits with a nicety not to be experienced in the old style of dressing with the full chemise in a pucker around the waist, while the skirt and the waist never part company. Every part of the body is well protected, and what is a great point, the warmth is equally distributed.

For Summer, the same style is carried out in materials of lighter texture, muslin being substituted for flannel ones, while for Spring and Fall there are intermediate suits. All in all, it is the best suit for women that I know of, and there is no patent upon it. It dispenses with the chemise and corset cover, and the corset too, for that matter, if you wish to do without it. It is capable of modifications to suit the wearer, or the style of dress to be worn; it can be cut square in the neck or short in the sleeve; may be made of flannel in lieu of canton flannel and ornamented *ad libitum*. I earnestly recommend the style to all women readers of the RURAL, feeling confident that when once they have adopted it they will be charmed with its adaptability and comfort. The seams of the long under basque, or basquine, should be made quite flat.

In making aprons, you will find that one width of wide goods, like gingham, muslin or linen, will make a good-sized apron, if you cut it with but one seam, and that run straight down through the middle. Measure off the length of the apron—it should reach to the bottom of your frock—and if you have no more material take a strip an inch and a half wide off one side for strings and binding. Then fold the gingham diagonally the long way, so that the width at one end will be twice as much as at the other, and rather more if the apron is as long as the frock. See that the two wide ends, at opposite ends of the fabric, are of equal width, and then cut along the diagonal fold. Put the light ends together and sew the bias edges together with a straight strip of muslin held in the sewing to stay the seam. Round out the top or small end to fit the waist smoothly, and trim the bottom suitably at the seam. You will have a smoothly-fitting apron that will please you well, and with little trouble in the making. For a garden or sewing apron, a large square piece sewed flat on the front forms a very convenient pocket.

A child's table, or eating apron, if lined on the under side of the front with a thick piece of drilling or canton flannel, cut like a bib, will prevent liquids and liquid food from soiling the frock beneath.

WOMEN'S GOSSIPS.

E. L. T.

IT appears to be a settled belief with every masculine observer that whenever two or three women meet, the result is sure to be a stream of aimless, purposeless talk, usually given the name of gossip; a collection of idle chit-chat, only to be found among women.

Why women should gossip more than men seems to be unknown and unexplained, except by the hypothesis of mental inferiority. I think it could be better accounted for on the ground of defective education. The man has his business to engross his thoughts; it brings him into contact with many men and many minds. And then he has man's prime consoler, the newspaper, to freshen his thoughts and ideas. It is a lamentable fact, that few women—that is, few in comparison with men—read the newspapers. It has been said that the papers, especially those given to too much interviewing, encourage a gossiping disposition, by their trivial details about persons and things, but in such a case, it ceases to be gossip, according to the common acceptance of the term; it does not consist of mere frivolous personal items.

The thoughts of one occupied in the regular routine of household work are apt to run in a certain groove; she is "cumbered with many cares," and her conversation very naturally consists of what is called gossip. The average housekeeper has no time for a regular course of reading, but surely the tendency to gossip would be greatly

lessened by light reading. Her culture might be superficial, but it would be a decided benefit. After all, I think the more thoroughly women are educated the less likely they are to indulge in such supposed weakness of the sex as gossip.

BANKING UP CELLARS.

SEEING this subject brought up, I thought I would tell how we managed ours.

The cellar wall is built double from the surface till it reaches below the line of frost. The outside wall is of stone and the inside is lathed and plastered, leaving a space of a few inches between the walls. The house is high enough from the top of the ground to admit of the cellar windows being placed on a level with the surface, and that admits of a large amount of light and air. As the windows are double, Jack Frost has never found an entrance, and during daylight it is never necessary to have a light to go to the cellar. We have never been obliged to bank up the house to keep the cellar warm. For ventilation, one of the chimneys is built from the bottom of the cellar, with an opening near the bottom to clear it out when necessary, and one large enough towards the floor to admit a stovepipe, if desired, proves an efficient and agreeable mode of carrying off bad odors arising from vegetables, while an outside cellar door secures fresh air when needed. The double windows are made with only one frame, with the glass put on the outside and inside of the sash. This answers the purpose as well as two frames.

AUNT RACHEL.

ABOUT WOMEN.

MME. GERSTER sends all the flowers that are given her on the stage to the hospitals.

MLLE. BERNHARDT'S first night in Philadelphia is said to have been a great social success. One of the most fashionable audiences ever assembled in that city was present.

MISS E. E. BURLEY, of Swanzey, N. H., has been invited by the Universalists of Hinsdale to preach for them.

MRS. MATTIE R. FIELD of the editorial staff of the New Orleans Times, is a rising woman journalist. Mrs. Field is young, enthusiastic, and a great favorite in New Orleans.

MISS PARLOA, in Boston, has cooking classes, which are attended on the one hand by fashionable and well-to-do people, and on the other, she has a free class among the very poor and ignorant, and is doing excellent service and supplying a great need.

MISS ANNA DICKINSON is at present a guest at the "Continental" in Philadelphia. She will soon return to the stage and her *rentree* is contemplated as a brilliant event in dramatic circles.

MISS AGNES PITMAN the daughter of Professor Benn Pitman of Cincinnati, prepares at her own home a Christmas tree for poor children every year. This year she had over one hundred of these "little ones" whom she had personally visited and invited.

MRS. LIVERMORE has recently lectured before the Unity Club in Cincinnati, with great success and the Commercial says:—"The impresston she always leaves is one so good and wholesome that it is to be hoped she may return for many a year to delight and instruct her hearers."

THE great writer whom the world has admired and revered as George Eliot, is no more. Those who had the privilege of her friendship will feel that not only is a great writer lost to the world, but a lofty, a magnanimous, and an inspiring character. In truth, artist though she was, those who knew her were well aware how the best qualities of her work sprang from the reality and depth of her interest in human life.

FASHIONS.

THE most fashionable bridal dresses are of white satin, trimmed with brocaded satin or velvet.

Ingenious girls can make their own muffs and collars by sewing guinea feathers on to silk and lining them with down and satin.

Short jackets of the gayest plaid, with hoods lined with some quiet dark color, are among the novelties.

Fans are now painted and made of brocade to match the dress.

White pine-apple silk handkerchiefs, embroidered in gold, are worn around the neck.

The old-fashioned thread lace veils that, fifteen years ago were so popular, are now utilized by being worn as collarettes around the neck.

Woolen dresses are ornamented with embroidery in crewels, or with floss in crewel-stitch. Young ladies who are adepts in this art can make very pretty costumes, as the embroidery does not need to be very fine.

Costumes of shepherd's plaid, trimmed with black velvet, are very fashionable abroad for walking dresses for morning wear. A jacket of corduroy is worn with them, showing a glint of red either in the lining of the hood or collar.

Transparent French mull is greatly used for handkerchiefs, and these are trimmed with fine lace. Drawn work, or tied work, is the most elegant novelty in handkerchief decoration. The monogram now is very small, and worked in floss silk. Yellow-white French lawn is much used for handkerchiefs.

Chenille flowers and foliage are very fashionable; they are used for coiffures and the trimming of bonnets, and are especially pretty and effective in the hair.

Black net veils with polka dots of chenille are worn in the street. The medium dots are better for wear, being more comfortable and becoming.

Buckles and clasps for belts are again seen among the fancy jewels of the day, for belts are worn not only with round-waisted, but also with basque bodices.

Young and feeble mothers with frail children will both become strong by the use of Hop Bitters.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

JESSIE SEABRIGHT'S SCRAP JOURNAL.

MAY MAPLE.

Nov. 18, 18—. While I was finishing a suit of garments for baby Alicia to-day, my thoughts wandered away to other times and other places. Suddenly they seemed to come to a full stop, as I put some tiny buttons upon a little underwaist, and then off they went—my thoughts, not the buttons—to a time, years ago, when a young mother made me a visit. She brought with her a baby boy some three or four months old; a great healthy looking fellow, with cheeks like velvet and great blue eyes as bright as stars. But he had not been in the house ten minutes before he began to fret and cry, and for two hours there was no peace with the child. The mother walked the floor with him, tossed him up and down, rocked him, trotted him, offered him milk, offered him water, talked to him, sang to him, and pitied him, but all to no purpose. And this was his habit almost every afternoon, after he had taken his bath.

I thought it was a strange freak for an apparently healthy child, but as the child for a long time refused to come to me, I could only pity him and his mother. But at last he reached out his plump little arms, showing his willingness to accept the proffered care of a stranger.

My very first impression upon handling the little bundle of humanity was that its waistbands were too tight for comfort, and I began at once to take out the pins which fastened his clothing. *Every band unclosed with a snap.* The mystery of his afternoon crying was at once solved. All the morning the child was left to kick and roll about as he pleased in a warm double-gown, and he was as happy as a Summer song bird. After dinner he was dressed for the day, and his skirts were fastened about his waist tight enough to stay in place, which would have been all very well if little Harry had been stuffed with sawdust like a big china doll. As he chanced to have a strong pair of lungs, he tried his best to make known his discomfort.

The remainder of the day the child was left with his clothes loose enough to suit his own notions of comfort, and there was no more trouble with a crying baby. We then concluded that shoulder straps and loosely buttoned waists were better for the little ones.

Instead of straps for Alicia I cut waists with arm-holes. I never put pins in her skirts or dresses, neither did I make her "long clothes" unnecessarily long. The consequences are, she is unusually playful, and is a real joy to all in the house.

HOW TO INTEREST AND AMUSE THE LITTLE ONES.

ANNIE L. JACK.

Oh! these snowy days of shut-up country life, when little restless feet cannot go out-of-doors for drift and driving storm. It is a time that every mother of small children knows, and many are the devices to keep down noise and yet have a spirit of contentment among the little ones. I found great trouble with one little girl when brushing and combing her hair until I adopted the plan of letting her play with the pins in the toilet pin-cushion, bidding her make a letter of the alphabet, and then another, until a word was spelled, and by that time the tangles were all smoothed. Ironing with a cold-handled sad-iron is very fascinating work, and a small box turned sidewise and made into a doll-house is an amusement in which children of both sexes can participate. Little Three-year-old likes a box of sand, or, better still, a lot of blocks from the work-shop with which to build houses, so early do they learn to imitate grown-up children. If given a lead pencil and sheet of paper many a child is perfectly happy and quiet, while this may not have any charm for another. If well wrapped up, there is nothing so health-giving as a run out-of-doors, and if the children of a household have each some special department of the stables to attend to, it will inculcate habits of regularity and attention and prove a good discipline. Even little children can, except in severe weather, feed fowls and in the sunny part of the Winter's day look after the domestic animals of their household.

DOMESTIC RECIPES.

Sponge Cake.

Three eggs well beaten, one and one-half cup of powdered sugar, one cup of flour, one-half cup of water, two teaspoonfuls of baking powder. Flavor to taste.

Orange Cake.

Two cups of white sugar, one small half cup of butter, five eggs, whites of four only, one-half cup of cold water, two cups of flour, two teaspoonfuls of baking powder, juice and rind of one orange. Bake in layers. Make a frosting of the white of an egg, powdered sugar and juice of an orange.

Syrup for Cakes, etc.

Five pounds of "C" sugar, one quart of cold water, white of one egg. Stir the egg into the sugar, pour in the water and stir all together. Let boil up, then skim off the top. Let boil up then skim off the top. Boil again and take from the fire.

Orange Pudding.

Peel and slice oranges until you have about a quart, put into a deep pudding-dish and cover with a half cup of white sugar. Set a pail containing a pint of new milk into a kettle of boiling water. Stir together the yelks of two eggs, one-half cup of sugar, two tablespoonfuls of corn-starch and a little cold milk. When the milk boils, stir in this mixture adding a pinch of salt. Let thicken and pour over the oranges. Beat the whites of two eggs to a stiff froth and add a tablespoonful of powdered sugar. Spread over the top of the pudding and set in the oven just long enough to brown. Any fruit can be substituted for the oranges.

MRS. B. DRAKE.

Savoy Pudding.

Three-fourth pounds crumbled *stale* sponge cake, one pint cream, yolks of six eggs, whites of two beaten well, a lemon rind rubbed down on loaf sugar, (one-fourth pound) a little salt. Serve hot after baking, with a sauce made of six tablespoonfuls of sugar, ten of water, four of butter, two of rose water. Heat and mix well and then color pink.

Fine Icing.

Whites of five eggs, one pound of pulverized white sugar. Beat well, I may say extra well. If a flavor is desired add three spoonfuls of orange or lemon juice, but plain icing is much the more delicate.

Fish Sauce.

One-fourth pound flour, one and a half pint of milk, two ounces of butter, salt and pepper to taste. Cook twenty minutes and throw in some chopped green parsley leaves when just done.

Velvet Pudding.

Beat the whites and yelks of six eggs separately. Sift one-half pound of wheat flour, make a smooth batter with milk, stir in the yelks and a little salt, then the remainder of *the* quart of milk, a large spoonful of brandy and the whites beaten to a stiff froth. Bake half an hour in a buttered pan. Serve with a brandy sauce, colored with a little Cochin eal. I know of no pudding more delicate and appropriate after a hearty dinner.

Apple Charlotte.

Mix two pounds of sour rich apples, one pound of sugar, juice of three lemons, rind of one grated. Boil two hours then turn into a mold till cool. Serve with plain cream.

Welsh Rarebit.

One-half pound of old cheese, one-half tea cup of butter, two teaspoonfuls good mustard. Heat in a pan, stir till melted and mixed well. Spread it thickly over toasted bread and serve hot.

CHIEF COOK.

Grease from Silk.

To remove grease-spots from silk dresses, ribbons, etc., rub softly with pieces of freshly-cut, stale bread—each piece absorbs a part of the grease until all is extracted.

Home-made Lemon Extract.

To three ounces of the thin yellow peel, allow one pint of good alcohol. Keep in a bottle tightly corked. Shake frequently every day for a week, then strain the liquid from the peel and it is ready for use.

Keeping Lemons.

Lemons may be kept fresh for many weeks by keeping them in a vessel of cold water. Change the water two or three times a week and keep in a cool place. Housekeepers who use many lemons, will do well to purchase them while cheap and keep them in this way.

MARY B.

QUESTIONS ANSWERED.

To Preserve Eggs.

New Subscriber asks for a pickle for preserving eggs. We can but republish directions given on page 303 in RURAL of May 8, 1880. Pack on end, cover with salt lime water and keep in a cool place. Proportions—a pound of stone lime and a pint of salt to two gallons of pure water. Be sure that the eggs are perfectly fresh, also be careful not to crack the shells.

Plain Suet Pudding.

Please give directions for a cheap suet pudding? A. B.

ANS.—Two large cups of sifted flour, two teaspoontuls of yeast powder sifted with the flour, one cupful of minced suet, two well beaten eggs, a little salt and a pint of milk. Pour the mixture into a greased mold, or tin pail set into a kettle of hot water and boil constantly for two hours. Eat with sweetened and flavored cream or a liquid sauce.

A timely use of Hop Bitters will keep a whole family in robust health a year with but little cost.

Miscellaneous.

ST. JACOBS OIL
TRADE MARK.

THE GREAT
GERMAN REMEDY.
FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,
Baltimore, Md., U. S. A.

Owing to the Failure of the Music House of Earlobach & Co., Germany, we purchased their entire stock of Musical Instruments, and offer them at half cost to make.

Paganini Violin. Celebrated for fine tone and finish. Italian strings, ebony pegs, inlaid pearl tail-piece, fine long bow with ivory and silvered frog, in violin box. Book of Instruction, with 558 pieces music, including *all* from *Pinafore*. By express for $3.50. Satisfaction guaranteed, or money refunded. A better violin cannot be purchased elsewhere for $10.
G. H. W. BATES & CO., Importers, Boston, Mass.

New Bird Warbler
And Canary Whistle.
Fifty thousand sold in ten days. A child can use it. Samples 10c., 3 for 25c. Circulars of other goods free.
New England Novelty Co.,
24 Portland St., Boston, Mass.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine.

102 **YOUR NAME** In New Type on 102 Chromos, 10c. All new styles, designed by best artists. *Bouquets, Gold Chromo, Birds, Landscapes, Panels, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

AGENTS! AGENTS! AGENTS!
JOSIAH ALLEN'S WIFE
HAS "ROTE" A THE BEST AND FUNNIEST OF ALL. **NEW BOOK.**
'My Wayward Pardner.'
AGENTS WANTED in every Town. Don't miss it, but send for Circular at once, and secure territory. Address AMERICAN PUBLISHING CO., HARTFORD, CONN.
☞ Mention Rural New-Yorker.

BURNERS FOR ALL PURPOSES
The only World Renowned NON EXPLOSIVE
GASOLINE STOVE
USED IN EVERY FAMILY
LARGEST DISCOUNTS TO AGTS
VAPOR OIL STOVE CO.
CLEVELAND O

Real Estate.

250 MARYLAND FARMS in tracts from 30 to 300 acres. Near railroad and navigable Salt water (with all its luxuries), in Talbot Co., Md. Climate mild and healthy. Titles good. New Pamphlet and map, showing *location* free. Address C. E. SHANAHAN, Att'y, Easton, Md.

LANDS AND HOMES
Short winters, low taxes, good society, convenient markets, superior schools, healthful climate. Excellent for Stock, Fruit, and Farming. ☞ The *best Tobacco Region in the West.* **1,000,000** acres well-watered Timber and Prairie Lands along the line of the St Louis and San Francisco R. R. for sale at from $2.50 to $8 per acre *on seven years' time.* Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*
IN SO. WEST MISSOURI
W. H. COFFIN, Land Commissioner, Temple Building, St. Louis, Mo.

News of the Week.

HOME NEWS.

MONDAY, Feb. 21, 1881.

Cincinnati, the center of the Union! Boston, the "Hub," will probably denounce the census system and the Census Superintendent and every one else! Gen. Walker thinks that the center of population will fall near Cincinnati. Ten years ago it was 48 miles east of that city, and the growth of the South has drawn the central point a little farther southward.

Right on the heels of the recent floods and river overflows of the late mild weather, comes the report of serious snow storms in the North-West. In some places on the plains two or three families move into a house and burn the vacated building for fuel. Traveling for fuel or anything else is quite out of the question where snow is four feet deep on the level and from 20 to 30 feet deep in drifts. One valley 20 miles long and on average 60 feet deep, was drifted entirely full of snow. A passenger train was stuck for two weeks in a drift, the passengers sleeping in the cars and foraging for food in the farm-houses near by. No trains arrived at, or departed from, Council Bluffs, Iowa, for two days; in fact all traffic was at a stand still. Similar reports come from all the principal North-west cities, while the smaller towns are, for the time, without communication with any place. But there's one consolation, the first gentle Spring month (according to the almanac) is near at hand, then these poor people may be able to "dig out."

The desire, expressed on our editorial page last week, that speedy means would be taken to investigate the adulteration of food, has already been met. The House Committee on Epidemic Diseases have reported a bill authorizing a commission of three experts to inquire into the adulteration of food in the United States. Now let the State Legislatures take the matter in hand.

Hon. Fernando Wood, member of Congress from this State, died at Hot Springs, Arkansas, on the 13th inst. He was born in Philadelphia in 1812. In 1840, when 28 years old he was elected to the 27th Congress in which he was an earnest advocate of the Morse Electric Telegraph bill. After his term expired he retired from politics until 1850, when he became a candidate for Mayor of New York, but did not receive the election. However, he was elected to that office in 1854, and again in 1858. Mr. Wood re-entered Congress in 1862 and has been there ever since. Four years ago he was appointed chairman of the Ways and Means Committee, and he held the position until his death.

S. L Allen and Co's. works in Philadelphia, have been destroyed by fire, but they announce that they will be able to fill all orders for Seed Drills promptly, and will be delayed but a short time on Hoes and Cultivators

[Potlstown Daily Ledger.]

A Michigan journal relates the following: Amos James, Esq., proprietor of the Huron House, Port Huron, Mich, suffered so badly with Rheumatism that he was unable to raise his arm for three months. Five bottles of St. Jacobs Oil cured him entirely.

FOREIGN NEWS.

IN the House of Commons, Chaplin, Conservative member from Lincolnshire, gave notice that he would move, February 22, to prohibit the importation of cattle from countries where disease is known to exist, as their slaughter on landing has proved insufficient.

The interviews between Mr. Goshen, British Ambassador to Turkey, and Prince Bismarck, have rendered it evident that an agreement has been arrived at by the Powers on a common policy aiming at the attainment of a compromise between Turkey and Greece.

The Mersey Steel and Iron Company, limited, of Liverpool has gone into liquidation. Its liabilities are £338,000. The assets, consisting principally of stock, premises and machinery, are considerable. The losses amounted to £38,000 during the last seven months.

At a dinner which he gave to Mr. Parnell, Victor Hugo pledged himself to write an appeal to the world in favor of Ireland, similar to that which he published in favor of Poland. It will probably appear next week. Mr. Parnell says, regarding the movement in America, "Although it is of great importance and capable of immense development, it depends entirely upon the stand made in Ireland. If we are worthy the occasion here the American people and the Irish nation in America will give us proportionate sympathy and practical help. If the spirit and courage of our people at home be maintained, the resources of the whole Irish race abroad will be at our disposal; while, if there is the slightest flinching or reaction in Ireland, it will produce disastrous results in America." Mr. Dillon has been requested to take Mr. Davitt's place as Chief Organizer, and has accepted the position. It was decided to begin a strong agitation among English workingmen and the agricultural classes in favor of important social reforms.

[Atchinson Champion.]

No Benefit.

An Indiana newspaper, thus writes: Mr. Geo. F. Helderle, of Peru, Ind., says that he has suffered very much with rheumatism and used many remedies without benefit. He found the desired effect in St. Jacobs Oil.

AGRICULTURAL NEWS.

Mr. Sampson of Storm Lake, Iowa, is building a creamery at that place which will cost $12,000 when finished, and will have the capacity to use the milk of 10,000 cows.....A Farmers' Club was recently organized at Hudson, N. Y., under encouraging circumstances. This is the second club of which Columbia County can boast. The first being located at Chatham, N. Y., of which Geo. T. Powell, Agricultural Editor of the *Courier* is President. We are glad that farmers are coming to realize the value of these organizations.....In 1879 Illinois produced one-fifth of all the corn grown in the United States, and, according to the latest advices, the crop of 1880 will bear about the same proportion to the corn crop of the country. The average yield per acre during the past season was 33 bushels, and in 21 years this has been exceeded only eight times, the average in 1862 being 40. The present corn crop of 251,000,000 bushels has been exceeded only three times—in 1875, 580,000,000; 1877, 270,000,000, and in 1879, 306,000,000. The profits on wheat have of late years increased the wheat acreage at the expense of corn. The average price in past years has been exceeded only twice in 21 years. The value of the hogs marketed in 1880 was $22,137,000; in 1879 it was $16,640,000. The value of cattle in 1880 was $17,026,000; in 1879 it was $16,751,000.....The State Board of Agriculture met on the 16th inst, in the Statehouse at Trenton, N. J. An address was read by T. T. Kinney, of Newark, on the advances made in agriculture. Professor Cook gave an account of the success met with in the experiment station. Dr. Hunt gave a valuable paper on pleuro-pneumonia. Gov. Ludlow was elected President and all of the old officers were re-elected.

The exports of hog product continue on a large scale, and show a further gain over corresponding time last year, and since the 1st of November, the movement of meats, including barreled pork, has reached 257,000,000 pounds, or 46,000,000 pounds increase over same time last year, and lard exports have reached 104,000,000 pounds, or 18,000,000 pounds more than last year, the aggregate of product amounting to 361,000,000 pounds, against 297,000,000 pounds last year, an increase of 64,000,000 pounds, equivalent to the product of about 350,000 hogs.

The Chinese and Japanese, it is said, excel all other nationalities in the culture of early vegetables. This arises from the fact that they use only liquid manures, hence the growth of the plants is most rapid, and as a natural consequence the vegetables are very brittle and tender. Lettuce and radishes they force rapidly, giving the plants a sprinkling once a day. Tobacco and tea plants are also treated in like manner.

During the session of the farmers' institute held at Maquoketa, Iowa, Jan., 26, 27, and 28, the following statement was made: "One car load of butter will bring to the producer as much money at 30c. per pound, in New York, as fifteen car loads of wheat at $1.20 per bushel, or thirty car loads of corn at 60c. or six car loads of cattle or hogs at 5c. per pound in New York,"

At the Minnesota Cane Growers' meeting held last week at Minneapolis a request was made of members that they furnish the Secretary the amount of syrup they had made during the season; it footed up 115,816 gallons. They have on hand 14,600 gallons. This amount of syrup, had the season been favorable, would have made, at six pounds to the gallon, nearly 700,000 pounds of sugar or 345 tons.

The steamship Lord Clive, which arrived at Philadelphia on Wednesday last, had on board 32 head of Jersey and Guernsey cattle and 44 improved Hampshire Down sheep, consigned to Messrs A. M. Herkness & Co. The British Queen, which arrived two days previously, brought over 13 head of Jerseys, consigned to Messrs A. M, Herkness &Co.; and 45 head of Guernseys, consigned to S. C. Kent, West Grove, Chester county. Taken as a lot, the cattle are probably the finest that have ever been imported to America. Dr. F. Bridge, V. S., examined the stock and found them free from contagious diseases, but under the law they will be compelled to be quarantined 90 days before they can be sold. The Hampshire Down sheep will be sold at the Bazaar, Ninth and Sansom streets, on the 1st of March.....The elevators at St. Louis are busy loading barges with wheat and corn for foreign shipment via New Orleans. From 300,000 to 400,000 bushels will be sent out early this week and more will follow.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Cleanse and moisten the dry sticky mouth of patients and refresh them with Hop Bitters diluted with cool water.

Try "Sun-Sun Chop Tea," a sample or package. It is a fine rich black tea with flavor of green. The offer is reliable. Imported only by the Great American Tea Company. [Send postage stamps.] Box, 4235. See advertisement.

Premature Loss of the Hair

May be entirely prevented by the use of BURNETT'S COCOAINE.

HOUSEKEEPERS should insist upon obtaining **Burnett's Flavoring Extracts,** they are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, Feb. 19.

Chicago.—FLOUR quiet but steady. WHEAT fairly active and a shade higher; No. 2 Chicago Spring, 980. bid, cash; 98½c. March; 99½c. April; $1.02⅝ May; No. 3 do. 87@90½c. CORN steady, with a fair demand at 37½@38½c. cash; 37½c. bid, March; 42¾@42½c. May. OATS quiet, but steady at 29½@30½c. cash; 29½c. bid, March; 29¾@29⅞c. April; 33⅞c. May. RYE steady and unchanged. BARLEY firmer at $1.02@1.03. FLAXSEED easy at $1 23. PORK strong and higher, at $15.60 cash and March; $15.70 bid, April; $15.90 bid, May. LARD strong and higher at $10.25 bid, cash and March; $10.35 bid, April; $10.45 bid, May. BULK MEATS strong and higher; Shoulders, $5.10; short rib, $8.15; short clear, $8 35. HOGS—Market fairly active and firmer; late arrivals unsold; light, $5.70@6, chiefly $5 90; mixed packing, $5 60@6; good to best heavy, $6 10@6 60, chiefly. $6 25@6 40. CATTLE—Everything snow-bound; trade light, but prices firm; common to fair shipping, $4 25@4 70; good to choice, $4 90@5 30; exports, $5 40@5 80; butchers easier; bulls declined 25c., selling at $2 50@4; Cows and mixed stuff, $2 75@3 75; stockers and feeders scarce at $2.75@4.25. SHEEP—Market, fair demand; common to medium, $4.25@4 50; good to choice, $4.75@5.25; prime nominal at $5.50@5.75.

St. Louis.—FLOUR steady and unchanged; WHEAT dull, but a shade lower; No. 2 Red Fall, $1 01⅛@1 01⅜, cash; $1 02¼@1 02⅜, March; $1 04¼@1 04⅜, April; $1 05¾@1 06, May; No. 3 do., 98⅛@98⅜c.; No. 4, nominal. CORN dull, but a shade better at 37½@38c., cash; 37⅞c., February; 38⅝@38¾c, March; 39½c. April; 40¼@40⅝c, May; 40½c. June. OATS dull at 33¾@33⅞c, cash; 33⅝c, April; 34@34⅛c, May. RYE steady at 88c. BARLEY dull and unchanged PORK higher at $15 75, cash; $16, May. LARD higher nominally. BULK MEATS higher and firm; Shoulders, $5; Clear Rib, $8; Clear Sides, $8 25. BACON higher. Receipts—Flour, 4,000 bbls; Wheat, 8,000 bushels; Corn, 14,000 bushels; Oats, 1,000 bushels. Shipments—Flour, 8,000 bbls; Wheat, 7,000 bushels; Corn, 2,000 bushels. CATTLE inactive and lower; inadequate shipping facilities have checked business; exporters, $5 20@5 70; good to choice shipping, $4 50@5 10; medium to fair, $3 85@4 40; prime to choice butchers' Steers, $4; Cows and Heifers, $3 25@4; feeders, $3 50@4 35; stockers, $2 50@3 25. SHEEP steady; fair to good, $4@4 75; choice to fancy, $5@5 50; receipts, 2,300 head; shipments, 400 head. HOGS active, but 10c. lower; light shipping, $5 25@5 75; Yorkers and Baltimores, $5 75@6; mixed packing, $5 50@5 80; choice to fancy, $6 10@6 50; receipts, 5,500 head; shipments, 3,000 head.

Toledo.—WHEAT easier; No 1 Red Wabash, March, $1 05¼; April, $1 07⅜; May, $1 09¼; No 3 do 99c. CORN dull; High Mixed, 42½c. OATS dull; No. 2 May, 37½c. Clover-seed quiet; No. 2 mammoth, $4 70; old prime $4 75, No. 2, $4 60; old do, $4 50. At the Close—WHEAT firmer; No 3 Red, February, held at $1 07¾. $1 07½ bid; sales May, at $1 09¼. CORN steady; No 2, March, 42½c; May held at 44¾c, 44½c. bid. Receipts and shipments none.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Feb. 19, 1880.

BEANS AND PEAS.—The strong tone of last week's bean market has developed into a supported advance. The best feeling is in white sorts, but even red kids and other recently neglected items are held with a better grip. The demand is light at the new prices, but receipts are not expected to prove oppressive. Green peas in small supply and firm at $1.70@1.75; Southern B. E. peas a shade better; quoted $2@2.10 ₩ 2-bush bag.

Marrow beans prime $2.05@2.10, do. other $1.90@2.00, medium prime $2.05@2.10, do other $1.90@2 pea $1.90@2.10, while kidney $1.90@2.10, red do, prime $1.50@1.60, do. other $1.30@1.45, black or turtle soup $1.40, Lima $4.50@5.

BUTTER.—The market has ruled steady for all fine and fairly useful table stock. For local average use, State meets the most regular business for daily wants. Large parcels are not active though some fine dairies are still kept entire regardless of the inattention of wholesale buyers. Common Western butter loses much of its natural Winter demand owing to the loss of confidence in quality. Quotations for Western have been ruling at points which have prompted miscellaneous shipments, and cable items have arrived here which exhibit a mixed character of stock. Even quality is one of the great helps to sales. Many invoices are not only irregular but have the disadvantage of adulteration.

Creamery choice Western, 31@ good to prime, 31@33c; fair to good 28@30c. State and early made, 2 @30c.; dairies, entire choice, 29c; good to prime, 23@24c.; other, 19@22c.; firkins, 15@24c.; Welsh tubs, fancy, 25@26c; good to prime 23@24c; other 16@22c; pails and half tubs choice, 27@29c.; good to prime 25@26c; other, 16@22c.; Western imitation creamery, 28@27c.; dairy, fresh, 25@26c; other 16@24c; factory, 23@24c.; other 16@22c.; rolls, 17@19c.

CHEESE.—The market has not varied, showing a moderate amount of trade and steady prices. Quotations

State factory, fancy, at 13½@13¾c.; do, good and prime, 12¾@13¼c.; do. fair, at 11½@12c.; do. half skimmed, 10@11c.; Wisconsin factory, fine, at 13¾@13¾c.; do. good to prime, 12¾@13c.; do. fair to good, 11¾@12¾c.; Ohio factory, fine, 13c.; do. good to prime, 12@12½c.; do. flat, fair to good, 11@12c.; do. poor to fair 8@11c.

Receipts for week, 25 874 boxes.
Exports for week, 22,120 boxes.
Liverpool cable, 63s.
Steam to Gt. Britain, 30s.@40s.

COTTON—Demand fairly active and the market closed at, for

February, 11.37c.; March, 11.48@11.49c.; April, 11.64@11.65c.; May, 11.78@11.79c.; June, 11.89@11.90c.; July, 11.98@11.99c.; August, 12.03@12.04c.; September, 11.58

THIRTY-SIXTH ANNUAL REPORT

OF THE

New-York Life Insurance Co.

OFFICE, Nos. 346 and 348 BROADWAY.

JANUARY 1, 1881.

Amount of Net Cash Assets, January 1, 1880.....38,185,431.68

REVENUE ACCOUNT.

Premiums	$7,014,819.59	
Less deferred premiums Jan. 1, 1880	367,989.02	—$6,646,830.57
Interest and rents, (including realized gains on real estate sold)	2,635,877.95	
Less interest accrued Jan. 1, 1830	317,989.11	—2,317,888.84—$8,964,719.41
		$47,150,151.09

DISBURSEMENT ACCOUNT.

Losses by death, including Reversionary additions to same	$1,731,721.37	
Endowments matured and discounted, including Reversionary additions to same	564,579.85	
Annuities, dividends, and returned premiums on cancelled policies	2,203,590.02	
Taxes and re-insurances	212,424.06	
Commissions, brokerages, agency expenses and physicians' fees	770,804.30	
Office and law expenses, salaries, advertising, printing, &c	322,910.64	—$5,806,030.24
		$41,344,120.85

ASSETS.

Cash in bank, on hand, and in transit (since received)	$852,028.10	
Invested in United States, New York City, and other stocks, (market value $16,764,968.05)	14,925,174.09	
Real estate	5,029,324.59	
Bonds and mortgages, first lien on real estate, (buildings thereon insured for $15,365,000.00 and the policies assigned to the Company as additional collateral security)	16,464,922.23	
Temporary loans, (secured by stocks, market value, $3,184,840.00)	2,491,000.00	
* Loans on existing policies, (the reserve held by the Company on these policies amounts to $2,975,000)	597,451.12	
* Quarterly and semi-annual premiums on existing policies, due subsequent to Jan. 1, 1881	387,972.13	
* Premiums on existing policies in course of transmission and collection (estimated reserve on these policies $440,500. included in liabilities)	204,852.99	
Agents' balances	34,228.23	
Accrued interest on investments Jan. 1, 1881	357,167.37	—$41,344,120.85
Excess of market value of securities over cost		$1,839,813.96

** A detailed schedule of these items will accompany the usual annual report filed with the Insurance Department of the State of New York.*

CASH ASSETS, Jan. 1, 1881.....$43,183,934.81

Appropriated as follows:

Adjusted losses, due subsequent to Jan. 1, 1881	$335,195.40
Reported losses, awaiting proof, &c	198,761.98
Matured endowments, due and unpaid, (claims not presented)	109,643.96
Annuities, due and unpaid	5,294.25
Reserved for re-insurance on existing policies; participating insurance at 4 per cent Carlisle net premium; non-participating at 5 per cent. Carlisle net premium	36,473,691.79
Reserved for contingent liabilities in Tontine Dividend Fund, over and above a 4 per cent. reserve on existing policies of that class	1,752,165.82
Reserved for premiums paid in advance	14,084.62
	$38,883,837.82

Divisible Surplus at 4 per cent.....$4,295,096.99

Estimated Surplus by the New York State Standard at 4½ per cent., over $9,000,000.00

From the undivided surplus of $4,295,096 the Board of Trustees has declared a Reversionary dividend to participating policies in proportion to their contribution to surplus, available on settlement of next annual premium.

During the year 6,946 policies have been issued, insuring $22,229,979.

Number of Policies in force	Jan. 1, 1877, 45,421.	Amount at risk	Jan. 1, 1877, $127,748,473.		
	Jan. 1, 1878, 45,605.		Jan. 1, 1878, 127,901,687.		
	Jan. 1, 1879, 45,005.		Jan. 1, 1879, 125,232,144.		
	Jan. 1, 1880, 45,705.		Jan. 1, 1880, 127,417,763.		
	Jan. 1, 1881, 48,548.		Jan. 1, 1881, 135,726,916.		
Death-claims paid	1876, $1,547,648.	Income from Interest	1876, $1,906,950.	Divisible Surplus at 4 per cent.	Jan. 1, 1877, $2,626,816.
	1877, 1,638,128.		1877, 1,867,457.		Jan. 1, 1878, 2,664,144.
	1878, 1,637,676.		1878, 1,948,665.		Jan. 1, 1879, 2,811,436.
	1879, 1,569,854.		1879, 2,033,650.		Jan. 1, 1880, 3,120,371.
	1880, 1,731,721.		1880, 2,317,889.		Jan. 1, 1881, 4,295,096.

TRUSTEES:

MORRIS FRANKLIN, WM. H. APPLETON, WILLIAM BARTON, WILLIAM A. BOOTH, H. B. CLAFLIN, JOHN M. FURMAN, DAVID DOWS, GEORGE A. OSGOOD, HENRY BOWERS, LOOMIS L. WHITE, ROBERT B. COLLINS, S. S FISHER, WILLIAM H. BEERS, CHARLES WRIGHT, M. D., EDWARD MARTIN, JOHN MAIRS, EDW. A. WHITTEMORE, HENRY TUCK, M. D. ALEXANDER STUDWELL, R. SUYDAM GRANT.

THEODORE M. BANTA, Cashier.
D. O'DELL, Superintendent of Agencies.
CHAS. WRIGHT, M. D., HENRY TUCK, M. D., Medical Examiners.

MORRIS FRANKLIN, President.
WILLIAM H. BEERS, Vice-President and Actuary.

@11.60c.; October, 11 13@11.15c.; November, 10.93@10.98c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 5-16	8 5-16	8 5-16
Strict ordinary	8 15-16	9 1-16	9 1-16
Good ordinary	9 15-16	10 1-16	10 1-16
Strict good do	10 7-16	10 9-16	10 9-16
Low middling	11	11¼	11¼
Strict low middling	11⅝	11⅝	11⅝
Middling	11 9-16	11 13-16	11 13-16
Good middling	12¼	12¼	12½
Strict good middling	12⅝	12⅞	12⅞
Middling Fair	13⅛	13⅜	13⅜
Fair	13⅞	14⅛	14⅛

STAINED.

Good ordinary	8¼	Low middling	10
Strict good ordinary	9⅛	Middling	11

Receipts for the week, 25,500 bales. Exports do, 11,000 do.

DRIED FRUITS.—Apples sell moderately, with prices steady. Peaches are quiet. Small fruits have a light demand. Quotations are for

Evaporated apples at 8½@9c. for the better qualities; sliced apples at 5@6¼c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn. do; 4½@5c. for State do; 4½@5c. for western, Ohio and Mich. Peaches at 30@32c. for evaporated peeled; 14@15c. for unpeeled do.; N. C. peeled at 20@22c.; for the better qualities, unpeeled peaches at 6½@6¾c. for halves and 6@6½c. for quarters. Plums at 15@16c. Blackberries at 7½c. Cherries at 17½c. Raspberries at 23@24c.

Receipts of all kinds for week, 2,407 pkgs.

Exports of apples for week, 4,920 pkgs.

EGGS—Receipts for week 4,118 bbls; do. last week, 3,428 do. Receivers have held out for pretty strong prices during the week, but at the close, with better though not heavy supplies, have dropped prices to invite customers. Near points 28@3.c.; Southern and Western, 28@29c.

FLOUR—Export demand is fair and there is an increased local trade inquiry, with prices well sustained.

Latest prices are; $3.50@4.00 for very inferior to very choice superfine State and Western; $4.25@4.50 for poor to choice extra State and Western, odd lots and lines; $4.50@4.65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.35@5.25; good to choice do at $5.35@6.10; (very choice up to $6.25@6.50 and fancy at $6.50@6.75;) red and amber winter wheat inferior to choice trade and family at $4.35@6; round hoop Ohio, $4.40@4.75; and trade and family brands of do. $4.85@6.25, the latter for choice; St. Louis $4.60@5.50 for inferior to good extra; $5.50@6.35 for good to choice, and up to $6.75@7 for very fancy brands; Minn. clear, inferior to very fancy at $4.30@6.; Minnesota "straight," poor to very choice, at $5.25@6.75, and patent inferior to fancy at $5.75@8.25; city mill extra at $5.35@5.40 for fair to choice for the West Indies; do. for England at $4.25@4.65 for poor to choice spring wheat; do. trade and family extras $5.65@6.75 do, for South America $5.50@5.85, the latter for very choice; No. 1 at $3.00@3.60 for very inferior to fancy.

Receipts for week, flour, bbls. 126,175 corn meal, do. 900; wheat, bush. 339,950; corn, do. 350,100; oats do. 272,850; rye, do. 10,260; malt, do. 26,000; barley, do. 65,100 beans, do., 5,043; rice, pkgs. 2,400.

Exports for week flour, bbls. 76,850; corn meal, do. 3,456 wheat, bush 705,100; corn, do. 314,610; oats, do. 2,810, peas, do. 5,900; beans, pkgs. 153, rice do. 300.

FRESH FRUITS.—Exports of apples for week, 9,260 bbls. Trade in apples continues slow Choice Spitz almost gone. A few extras were held at $3 yesterday. Of other sorts the supply is liberal and prices for loads should be shaded. Mixed lots at station $1.50

Baldwins $1.75@2.00; Greenings, $1.50@2. Cranberries dull and weaker quality begins to fall off. Cape Cod bbls. choice $6@7; other, $4@5.50; N. J. crates 1.50@2.12. Florida oranges begin to show a better movement and a better style of stock may be expected now that frost is not risked at both ends of the route; choice half bbl boxes, $4; good to prime, $3@3.10; poor to fair, $1.50@2.50. Hot-house strawberries, $3@4 per quart. Black Hamburg grapes, $3@4. It is reported that large sales of peanuts have been made speculatively, 4¼c. thought to be the price for hand-picked. Va. hand-picked, 4¾@4⅞; other, 3½@4; shelled, 3½@3¾. Hickory nuts per bush. of 50 lbs. 50@75. Black Walnuts, 25@50c. Pecans 7@9c.

GRAIN.—Wheat has been active and prices firm. Exports for the week 730,000 bush.; latest prices are for

No. 1 white at $1.15⅝@1.16, do. February at 1.15⅝@1.15⅝, do. March at $1.15⅞@1.15⅞; do. April at $1.16⅛@1.16⅛; do. May at $1.15—@1.16⅜, No. 2 white at $1.14⅜@1.14, ungraded white at $1.10@1.14⅜ mixed winter $1.16; No. 1 red at $1.23; No. 2 red at $1.18@1.18⅛; do. February at $1.17⅝@1.17⅞; do. March at $1.18⅛@1.18⅜; do, April at $1.19⅛@1.10⅜; do. May at $1.18⅜@1.18⅜; No. 3 red at $1.16⅛@1.16⅛; do steamer grade $1.07@9 ungraded red at $1.14@1.20¼; No. 2 Milwaukee spring in store at $1.17; New York No. 3 spring at $1.09.

Rye is quiet at 97@99c.

Corn has shown a fair degree of activity and closed firm; exports for the week 318,000 bush.; latest prices are for

New York No. 2 at 56½@57¼c do. February at 56½@56⅞, do. March at 55⅞@55⅞, do. April at 55½@55⅞, do May at 51⅜@54⅜, ungraded mixed Western at 55½@58; New York steamer mixed at 56@56⅛, New York No. 3 at 56⅜, No. 2 white at 62@63, New York yellow at 57⅛@58; steamer yellow at 56⅜@57.

Oats are offered lower; with demand moderate; latest prices are for

No. 1 white 47; New York No. 2 white at 45½@46, No. 3 white at 43⅞@44⅛; N. Y. No. 1 41, No. 2 at 43⅞@44, do February at 46¾@44⅛, do. March at 43⅞@43⅜, do. April at 43⅞@43⅜ d. May at 43⅞@44⅛; No. 3 at 43@43⅛, ungraded white Western at 44@48, ungraded mixed Western at 42@44, white State at 46⅞@48, No. 2 Chicago at 43⅞.

HAY AND STRAW.—There is a good demand for hay and prices well sustained. Straw is plenty and moderately active. Quotations are for

Hay, prime timothy at $1.20@1.25 ₩100 lbs.; medium timothy at $1.10@1.15 do. shipping grades at $1@1.05 do.; clover mixed at $1.05@1.10, clover at 95c@$1. do. Straw—No. 1 rye at $1.15@1.20 ₩100 lbs.; No. 2 rye at 80@85c. do.; oats and wheat at 75@85c. do.

Exports for week 729 bales.

HOPS.—Exporters buy rather more freely and there is increased demand from brewers; prices are steadily held and unchanged. Quotations:—

	Cents per lb.
New Yorks, crop 1880, prime and choice	21 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	16 @18
Eastern, crop 1880	18 @22
Wisconsin, crop 1880	18 @22
Yearlings, crop 1879, choice	14 @20
Olds, all growths	4 @12
Bavarians	30 @35
Pacific coast, new	20 @24

Receipts for the week, 2,023 bales.

Exports for the week, 1,443 bales.

POULTRY AND GAME.—The market for dressed is very steady and all supplies are, as a rule, in good order. Case frozen turkeys 14@15½c.; do. fowls, 12c.

Turkeys, choice, 16@17c; prime, 14@15c.; other, 12@14c. Chickens, choice, 16@17c.; prime 14@15c.; other 11@13c. Fowls, 9@13c.; extreme rates are for dry-picked. Capons, large, 20@22c.; small and slips, 16@18c. Ducks, choice, 18@19c.; other, 14@16c. Geese, extra, 13c; other, 9@12c. Squabs, white, $1.00@5.00 ₩ doz. do dark, $2.

Live poultry scarce and doing well.

Fowls, 11½@12½c.; roosters, 6@7c.; turkeys, 11½@13c; ducks, choice, $1: other, 55@75c.; geese, extra, $2.00; other $1@1.75.

Wild pigeons have a fair demand at very steady prices; small birds are wanted.

Canvas-back ducks, $1.75@2 ₩ pair, red-heads, 75c.@$1; mallard 40@60c.; teal 30@40c., widgeons, 35@40c.; common do, 20@30c.

PROVISIONS.—Hog products have been active and advancing.

Mess pork closed at $15.50 for old and $16.25@16.50 for new. Bacon at 8@8¼ for long clear and 9 for short clear. Lard—Western steam at 10.75 for spot lots; 10.60 for Feb., 10.62 for March, 10.65 for April, and 10.70 for May. Stearine at 10⅞ for choice. Tallow at 6⅝@6¾c. Beef hams at $20.50@21.

Receipts for week, beef, bbls. and tcs., 570; pork, 3,850 bbls.; cut meats, 52,100 pkgs.; lard, 35,600 pkgs.

Exports for week, beef, bbls. and tcs., 1,700; pork, 4,300 bbls.; cutmeats, 17,680,615 lbs.; lard, 7,989,100 lbs.

VEGETABLES.—Potatoes have not shrunk in price, but with prospective better supplies the market has an easier tone. A few second crop Bermuda bring $5.50@6 per bbl.

E. Rose Eastern d.-h. $2.50, do. State. $2.25@2.37; do. in bulk $2.00@2.25; Prolific do. $1.75@2; Burbank $2@$2.25; peachblow d.-h. $2.50@2.62; snowflake d.-h. $2.37; do. bulk, $2.12@2.25; peerless $1.87@2; Del. sweet $2.25@2.75. In garden truck some new items have an early appearance; they do not open with much demand. Bermuda tomatoes box 75c@$1.25; Nassau do. 50c@$1; Balt. spinach bbls. $3.50@3; W. and R. turnips 50@75; beets 75c@$1; carrots $1@1.25; Hubbard squash $1; marrow 50c.; onions, white $5.50@6 other $3@3.25; celery ₩ $1@1.50. Hot-house product—Cucumbers, choice, ₩ doz $4@4.50; do. culls, $1@2; lettuce, choice, doz 75c@$1; good to prime 50@62c; seconds 12@25c; radishes ₩ 100 $4; rhubarb, ₩ 100 $6@8.

WOOL.—The market has not varied, showing steadiness and a moderate trade.

Ohio and Penn. fleeces quoted at 43@46c. for X and XX; 48@50c for No 1. Wis. and Mich. fleeces at 42@43 for X, and 47@48 for medium.

LIVE STOCK MARKETS.

NEW YORK, Saturday Feb. 19, 1880.

BEEVES.—Receipts for the week 11,542 head; do. last week, 9,409 do. During the week over 100 carloads have gone direct to two wholesale slaughtering firms. The market closes weak, hardly holding Wednesday's figures: Dry cows sold at 3½@4c. live weight: Cherokees and Texans, 8½@9½c. to dress 56@57 lbs.; poor to good native steers, 8¾@10½c to dress 55@57 lbs.; prime cattle, 11@11½c. to dress 57 lbs.

VEAL CALVES.—Supplies light; all ruling high.

Live calves, fed choice 8½@9c.; fair to prime 7½@8; poor, 6@7c.; Mt Holly 5@8c.; buttermilk, 4@4½c. grassers, 3c; hog-dressed, choice 11½@12c.; prime, 11@11½c.; fair to good, 7½@10½c.; poor, 7@8c.

COWS AND CALVES.—With light supplies the market is firm for car-load styles of stock at $35@55 per head; prime singles for private use, $60.

SHEEP AND LAMBS.—Receipts for week, 23,616 head; do. last week, 22,342 do. With the late decline in wool butchers tried to obtain concessions; this made a dragging trade and many sheep were carried over. Sheep quoted 6@7¼c; lambs 6¾@7½c. A few spring lambs quoted at $9 per head.

SWINE.—Receipts for the week, 22,796 head; do. last week, 32,844 do. Live and dressed have ruled high during the week but close in buyers' favor.

Live hogs, corn 6@6¼c, country dressed pork, light, 8½@9½; medium, 8¼@8½c.; heavy, 7¾@8c.; city dressed Western 8@8¼c. Pork tenderloins 12@12½c.

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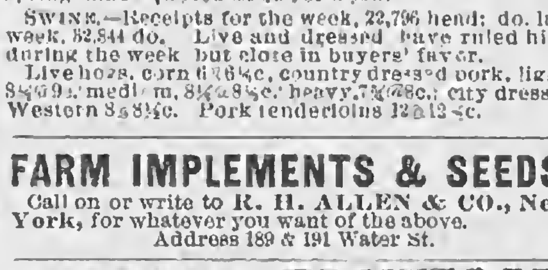

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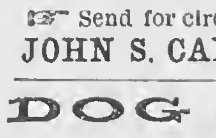

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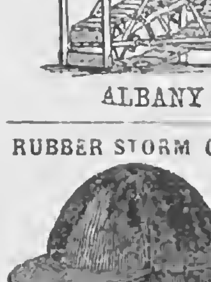

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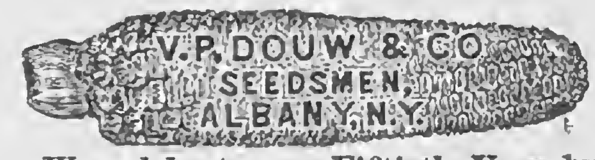

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They *believe* in the world and his wife.

Katie wanted a doll for her Christmas this year,
A doll that could do something grand;
"Not cry; that's for babies;" nor might it suffice,
That she simply could sit and could stand.

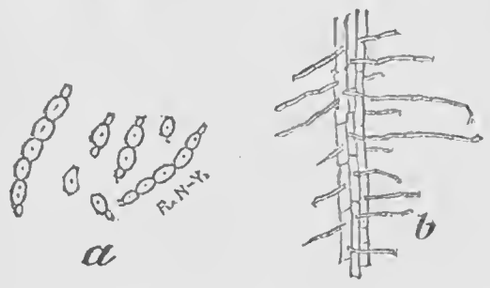
"And I don't care for eyes that will open and shut,"
"You did," "Well the care is all gone,
"I've seen 'em enough, mamma; I want a doll
With hair that takes off and puts on."

FARMING FOR BOYS AND GIRLS—NO. 13.

HENRY STEWART.

How Plants Grow.

ONE of the most wonderful things in nature is the growth of a plant. We take a seed and hang it by a thread to the cork of a bottle which contains water, very close to the water, but not touching it, and as it absorbs moisture it swells and soon puts out a tiny rootlet and afterwards a spire. The rootlet seeks the water and the spire reaches upwards into the air. The rootlet, at first, seems to be a single slender thread, but the human eye is unable alone to see of what this thread is composed. Although it is so small that a hundred of them laid close together side by side measure but one inch, yet by the aid of a powerful microscope we can easily make it to appear several inches thick and then see its whole structure. The farmer's boy or girl who owns a microscope of even a very cheap kind is, as it were, supplied with a new eye, by which some most wonderful and beautiful things can be seen; and there is nothing more interesting to a young student than the study of growing plants. By examining, then, the tiny root which starts from a grain of corn suspended by the thread, we find it is made up of what are called cells, and first we will see what a cell is. Although very small and insignificant, every living plant and every animal is wholly made up of cells. One of the lowest in the scale of plants is the yeast plant, of which the yeast used in making bread consists. If we examine a small quantity of yeast under a microscope, we can see the plant growing. We find it to consist of what are called simple cells; these are very small, round bodies which contain a fluid surrounded by a thin membrane, and are shaped something like eggs. Each one contains a central germ or nucleus in



PLANT CELLS AND ROOT.—FIG. 108.

which its vital principle or life exists. As the plant grows a new cell buds out at the end of the parent cell as shown in fig. *a*, until a string of cells is formed; when these break from each other, each cell begins business for itself. This is the lowest class of cell life, but the highest plant or animal is made up of such cells, which, however have a different method of increasing themselves.

At fig. *b*, is shown a part of the root of a corn plant magnified 160,000 times or 400 diameters. The cells of this are seen to be long and narrow. They have no separate life and do not increase by budding, but by the growth of new cells at the extremity of the tissue.

The tissue is the matter formed by the cells which adhere together in a mass and make up the substance of the plant. The cells contain water in which is held in solution the substance of which new cells are formed, the food of the plant, in fact. The spire or plumule of the plant which grows upwards and which in time forms the stem, is built up of cells in the same manner as the roots. It has been thought and said by persons who do not know, that the seed contains the whole future plant, of very small size, but fully formed and needing only to be enlarged gradually until it attains its full size. This is not correct. The seed contains the germ or the beginning of the plant precisely as an egg contains the germ or beginning of a chicken. When the seed starts into growth the cells of the germ enlarge and others are added to them, the young plant just started into life feeding upon the substance of the seed which is changed by the moisture and the warmth of the soil from starch into sugar, which nourishes the growing cells and affords material for the structure of new ones. When the seed is exhausted, or all used up by the young plant, the new roots begin to feed upon the soil, and as new food is thus found new cells are formed and the plant grows by the addition of these cells. In this manner the smallest blade of grass, the perfect wheat or corn plant, or the largest tree grows and forms itself by the force of a law or plan which never makes a mistake; the root grows downward the stem upward; the leaf, the flower and the fruit are all formed, each in its own peculiar manner, by one of those unerring and mysterious, but ever certain laws which are the wonder and the admiration of the studious person, who will take the trouble, or rather who will enjoy the pleasure of investigating the works of nature.

CLEOPATRA'S NEEDLE.

PERHAPS it would be interesting to the RURAL cousins who live far away from the great, busy metropolis, to know something about the obelisk or Cleopatra's Needle, which has lately been erected in Central Park in this city. It may seem strange that a great stone of red granite about 70 feet in length and seven feet square at the base, gradually tapering till it ends at the top in a small, pointed, four-sided pyramid, should be called a needle, but such is the name by which it is known. This Needle was erected at Heliopolis about 3600 years ago by Thothmes III., one of the ancient Kings of Egypt, but from that place it was taken by Augustus Cæsar, the Roman Emperor, to Alexandria where Cleopatra had formerly lived. It was a trophy of Cæsar's victory over the kings of Egypt.

"How did it happen," some of the children may have already asked, "that this huge stone weighing over 200 tons was brought over to America."

Well, this was the reason for it:

Our American Consul, knowing that Mehemet Ali, late Khedive of Egypt, had a peculiar liking for America, thought he would ask him for one of the many obelisks in his kingdom, but he did not suppose that the great Cleopatra's Needle would be the one given. But sure enough, the Khedive proposed to give us this one, inasmuch as it stood right on the shore of the Mediterranean, and was in danger of being undermined by the waves.

The Khedive said he would give half the money required to remove it, if the people of Alexandria would give the other half, but this they would not do. Mehemet Ali being much displeased at this, made up his mind to make the great obelisk a present from the oldest nation of the world, to the youngest. When his intentions were made known in America, one of our wealthy citizens said he would give $75,000 to pay for the removal as soon as the huge stone was erected in Central Park.

But Lieutenant-commander Gorringe, who has brought it safely over the waters to its destination, has done all this thus far at his own expense, and he deserves great credit for it. We can hardly imagine what a wonderful undertaking it has been to remove such a heavy body from its foundation away on the shores of the Mediterranean, lower it into a great vessel, transport it across the sea, unload it by cutting a great hole in the vessel through which to drag it out, and after 98 days from the time of landing, place it in an erect position in Central Park, but all this has been successfully done, without injuring or defacing the obelisk at all.

UNCLE MARK.

TOM AND FRIZZLE.

MAUDE MEREDITH.

Tom had the sharpest claws, and the wickedest teeth of any cat I ever saw.

"What a treasure," all the neighbor's said, when Tom would deposit an old rodent or fat field mouse just outside the porch door, and he was always bringing them, so you see he had lots of compliments. But Tom never thought to be vain. He was very wise anyway and could be talked to so much; if he did not understand all we said he did some of it, for when we bought Dick, a beautiful German canary, we told Tom all about it, and he never offered to catch the bird, but would drive all other cats out of the yard; first send them spinning, and how the cats would go over the back yard fence when he skurried after them; and we always thought it was to save Dick.

I think the most wonderful feat he ever performed was to catch a chicken hawk.

Wonder how?———Tom used to enjoy sitting upon the fence, and watching the little chickens. When he was small, he tried to catch one, and his mistress, to teach him better, pounded him on his head with a new tin pan. I guess it did not hurt much, but it made an awful noise, and ever after that he would shake his head whenever he saw chicks, climb up somewhere, and sit and look down. So this day he was up on the end of a pile of boards, I presume out of sight, for the hawk pounced down, and had just set its sharp talons into the poor chick, while there was a great fluttering and screaming all over the poultry yard, when down came Tom, great heavy fellow that he was, and set his teeth into the back of the hawk's neck.

Brother Charlie saw it all, and ran out and helped Tom. I made a little duster of the long white hawk feathers, and saved it in honor of Tom's bravery.

But he could also be gentle and kind, and when Frizzle came, he took him for a play-fellow and never harmed so much as a hair of his bushy tail.

Frizzle you see was a squirrel, a little striped "Chipmunk," that Tom brought in one day, and when Charlie said, "Tom! let me have your squirrel," he let go of him, and off the little fellow ran like a flash, around the stove to where Charlie had just set his boots to dry, for it was a rainy day in Spring, and down he went in one of them.

Then we sat an empty bird cage on the floor placed the boot in front of the door, rapped on it, and away went chippy into the cage.

He was wild at first, and a little lame, for Tom had hurt him some, but he soon got well, and grew real tame.

We called him Frizzle or Friz, and he would prick up his cunning little ears, and look about when we called him.

We used to set the cage on the floor, and let Tom see it; afterwards we let Friz out about the room, and in time he and the cat would play together. And such funny places as Friz would hide in, but Tom would hunt him and with velvet paws give him a pat, to let him know he was found out, then Friz would whisk off with a loud ch-u-r-r, and scamper all over the chairs and sewing-machine, and once he ran out on the top of the bird's cage, and scared poor Dick almost to death.

When Tom would curl up on the low stove-hearth in the kitchen and feign sleep, Frizzle would whisk over and over him and at last bite his ears, for which he would often get a cuff that sent him out into the middle of the floor.

We kept Frizzle for a long time but one unlucky day he ran off over the garden fence just for a race, and went very near to a great gray cat that looked precisely like Tom. There was a whisk and a snap and away went puss with poor Frizzle in her mouth and we could not catch her though we raced half across the pasture. So we never saw Frizzle again.

LETTER FROM THE COUSINS.

DEAR UNCLE MARK:—For 12 long months I have promised myself to ask admittance to your Horticultural Club, and be enrolled among the cousins of the grand old RURAL. Pa has taken the RURAL for the last year, and among some half-dozen or more papers, that he receives (several of which are agricultural), he and all of the family look more eagerly for the coming of the RURAL than any other, and the first question asked on returning from the post-office on "RURAL's day," as we call it, is, "has the RURAL come?" It is literally impossible for us to get along without it. I love to read the cousins' letters; and even Pa reads every one of them. Won't you remember me, Uncle Mark, when you distribute seeds, &c. this year? I will get Pa to instruct me, and try how well I can do with them. He is all the time experimenting with some new kinds of seeds or plants, and I tell him that he doctors his plants more than he does his patients.

MARY LEE STONEBACKER.

DEAR UNCLE MARK:—I have never written to you, but will try and see what I can do. I am 10 years old. Last May I planted a half bushel of potatoes and raised 10 bushels from them; I also raised citrons, beans, beets, etc. I have a Holstein yearling; his head and shoulders and hind parts are black, while from his shoulders to his hips is white. This gives him the appearance of being a black calf wearing a white blanket. His name is "Ellsworth." Very cold weather commenced here Nov. 21st, and we have not had a thaw since. Traveling is good, and that makes business lively, especially lumbering. My cousin, George W. Ingraham, was one of the mail agents who was burned at Tioga Center recently. The post office and firemen's hall are draped in mourning for him. I have lots of fun coasting this Winter.

Binghamton, N. Y. CHAS. W. INGRAHAM.

DEAR UNCLE MARK: If you were less obliging your numerous nieces would not trouble you so often for favors. Will you please give me the address of cousins Anna Crouse and Estelle B. Hunter, whose letters appeared in the RURAL of Dec. 25, 1880? Please remember me in your free seed distribution for 1881, I will try to have better luck with my seed this year than I did last. Cousins don't you think we ought to unite and make Uncle Mark a present on his next birthday as a token of our appreciation of his kindness? Will some of the cousins make some practical suggestion?

Russelville, Ala. ALMA ALLEN.

[Anna Crouse's address is Doylestown, Wayne Co., Ohio, and Estelle B. Hunter's is Southington, Hartford Co., Conn. Alma is exceedingly kind but Uncle Mark is content to take the "will for the deed."—U. M.]

DEAR UNCLE MARK AND RURAL COUSINS:—I am a little girl ten years old. I go to school and study Ray's Arithmetic, Grammar, Geography, and read in the Fifth Reader. We live in a small village on the B. & O. R. R. The school house is on the second lot from our house. We had a vacation during holiday week. I have a real Uncle Mark, and if you are as full of fun as he is I would like to see you. We have a jolly good time whenever my Uncle Mark comes to see us. He makes every body laugh, whether they want to or not.

I have four pets: a cat, a white rabbit and a pair of canaries. I would like to join your Club, for I am a great lover of flowers. We have a great many flowers in Summer, but not very many house-plants this Winter. If this does not go in the waste basket I will write again. Your niece,

Marshall Co., Ind. FLORENCE A. EMERSON.

DEAR UNCLE MARK:—I received the seeds that you so kindly sent me. The flowers were beautiful and bloomed throughout the Summer. We had a great many roses also. The weather was damp, so they bloomed a great deal. The muskmelon did not do so well. The fruit rotted before ripening, but we secured a couple of specimens and saved the seed from them, which we shall plant this year, when we hope for better success. The Winter has been very wet and cold. This is the first Winter in several years that we have had enough snow for sleighing. The snow is all gone and the ice is out of the lakes now, and I will have to commence work in my flower garden soon. I saw to-day that the hyacinths and Stars of Bethlehem are peeping out of the ground.

Norfolk, Va. LILLIE S. BABCOCK.

DEAR UNCLE MARK:—We all like the Horticultural Club first-rate until it comes to the reporting, and that we don't like one bit, for if one has been successful in growing the seeds and plants, it looks like bragging to tell about it, and if one fails to make them grow well, one hates to confess it. We received the seeds the first week in April, and all were planted in boxes except the mignonette. We had only seven plants of the phlox, but the other seeds all did better. They were transplanted about the middle of May, and they grew and bloomed beautifully all Summer. There were two or three of the portulacas different from any we ever had. The Chineso Pinks were of great variety and very nice. So, altogether, they have given us much pleasure, for which we wish to thank Uncle Mark most sincerely. IRENE M. SMITH.

Tangent, Linn Co., Oregon.

DEAR UNCLE MARK: I do not know whether you are related to all the readers of the RURAL or not. But I wish that you would be my uncle long enough, to tell me whether a young lady with a few acres of ground within three miles of Philadelphia could make hop growing pay, and if there is anything I could read on hop culture! If you will be kind enough to enlighten me, I will be very much indebted to you. HELEN.

[Although hop culture has not paid very well for a few years past, I see no reason why it should not be fairly remunerative in the location of which you speak. You can obtain a little book entitled "Hop Culture" of the American News Co. of this city. Price 30 cents.—U. M.]

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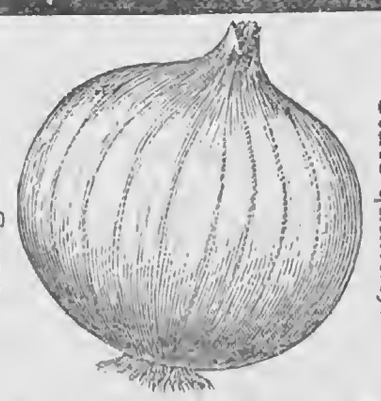

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PERSONAL ITEMS.

The long-talked of marriage between the Baroness Burdett-Coutts and Mr. William L. Ashmead Bartlett took place Saturday.

Boston papers print a rumor that Mr. James Russell Lowell is desirous of resigning the mission to England and returning to his professorship at Harvard college.

Carlyle's grave is in the old cemetery of the Scotch hamlet of Ecclefechan, in Dumfriesshire, where he was born, while his much-mourned wife's grave is in a ruined aisle of Haddington.

King Kalakaua, the Hawaiian, dresses simply, wears no jewelry and no decorations. He is a remarkably handsome man, more than six feet in height. His carriage is erect, his beard, moustache and eyes are black, and his expression is amiable.

Vennor is a man below the medium height, and of stout build, modest in manner and of pleasant address. He has a hardy, weather beaten countenance, is of sandy complexion, and presents an appearance that does not indicate a man above thirty-five years of age.

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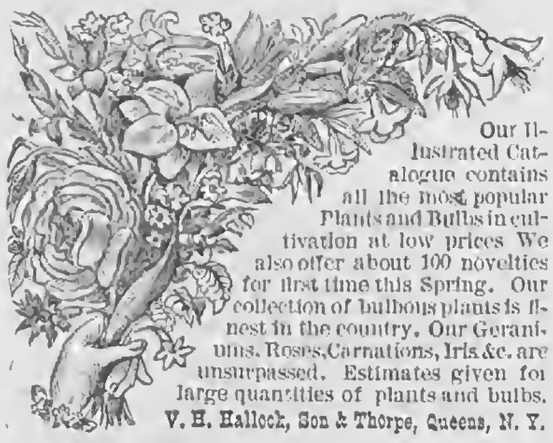

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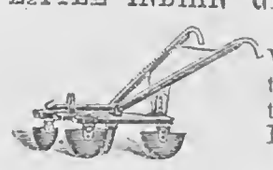

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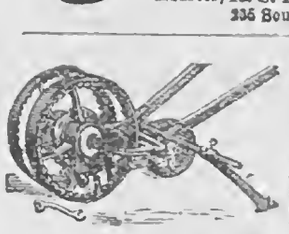

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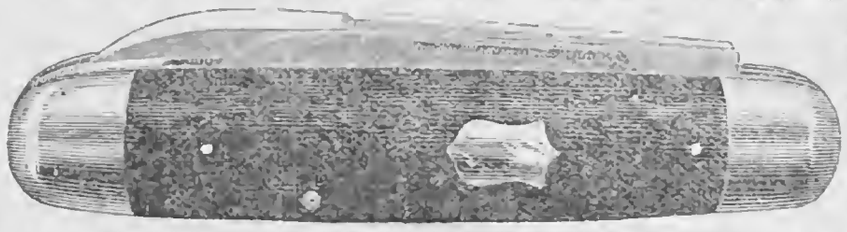

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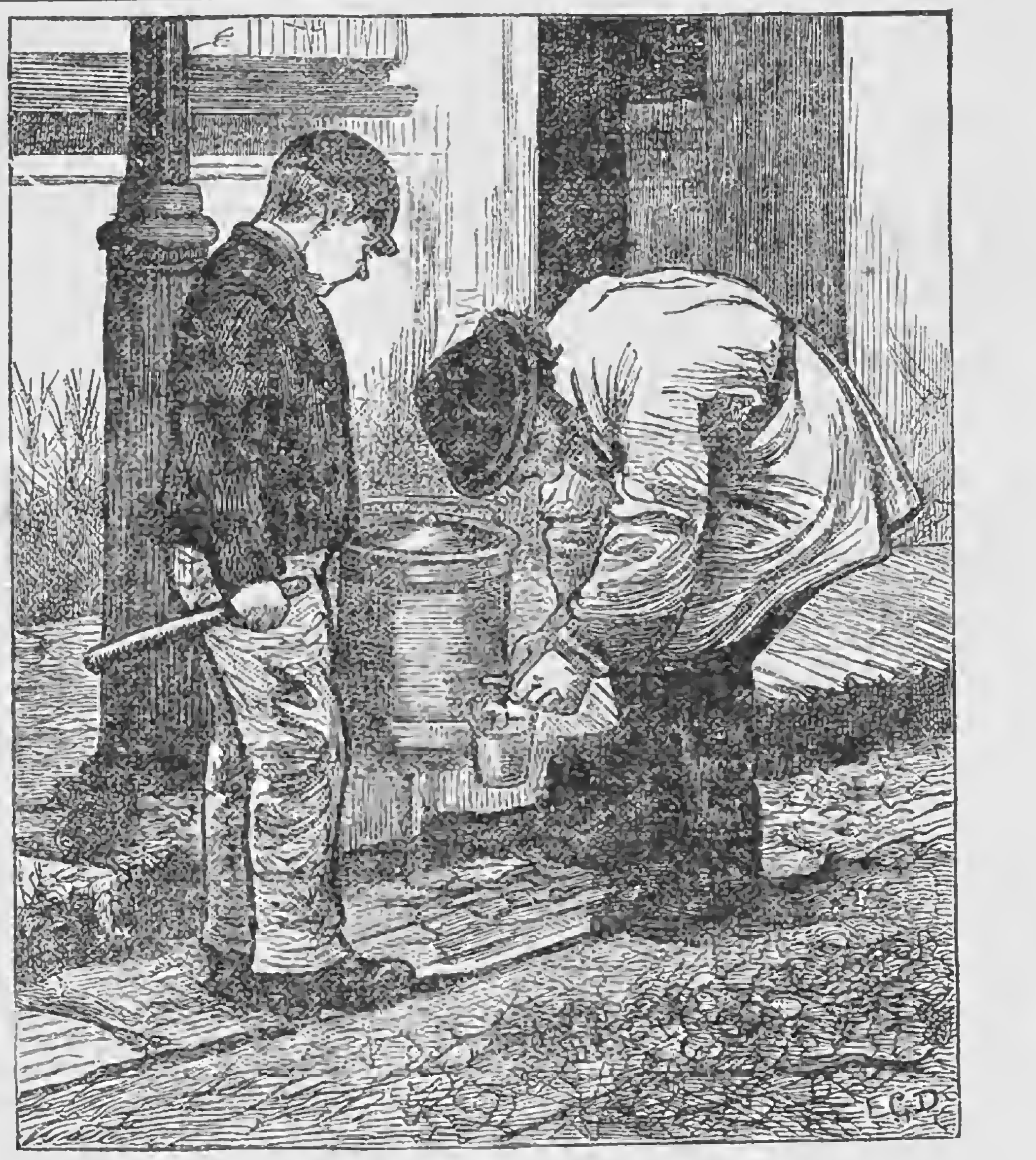
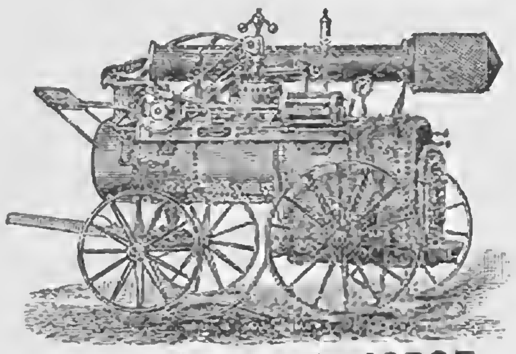


"NOT QUITE WHAT HE MEANT, THOUGH.

MILKMAN: "Tell yer Mother she 'ull 'ave to pay ready money for her milk in futur'; I ain't a-goin' to chalk up any more."
BOY: Wot are yer a-goin' to use instid then' Mr. Simpson?"



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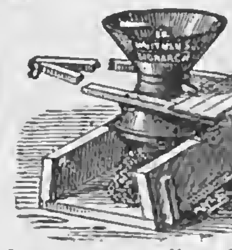

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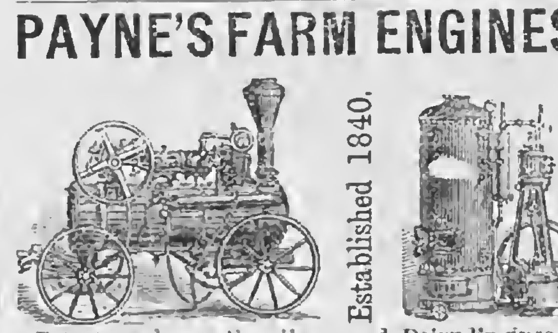

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL. No. 10. WHOLE No. 1623. | NEW YORK, MARCH 5, 1881. | PRICE FIVE CENTS. $2.00 PER YEAR.

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GRAPES.

STRAWBERRIES.

Raspberries and Blackberries.

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Trustworthy Information Respecting New Varieties by our First Horticultural Authorities.

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Timely Instructions, Hints and Suggestions for the Approaching Spring.

THE RELATION BETWEEN THE CHEMICAL COMPOSITION AND THE QUALITY OF FRUITS.

PROFESSOR G. C. CALDWELL.

THE most important constituents of fruits, that affect their quality for eating, are the sugars, the acids, and a group of tasteless, gelatinous or gummy substances belonging mostly to what chemists call the pectose group. The good quality of the fruit depends on the relative proportions of all these three kinds of substances. First in importance is the proportion of sugar to acid; secondly, the effect of this proportion may be modified by the relative quantity of the substances of the last-mentioned group; though tasteless they may so inclose the acid and mask its sour taste as to diminish its unfavorable effect when present in too large proportion. The pleasant quality of the fruit is also dependent on its aroma, due to minute quantities of volatile oils, and on the proportion of soluble to insoluble matter; if there is much soluble matter, well flavored, and much water, the fruit melts in the mouth when the cells are crushed, like a ripe peach. There is a concentration of the agreeable effect which is not produced by a drier and more insoluble fruit whose ingredients act more slowly on the palate.

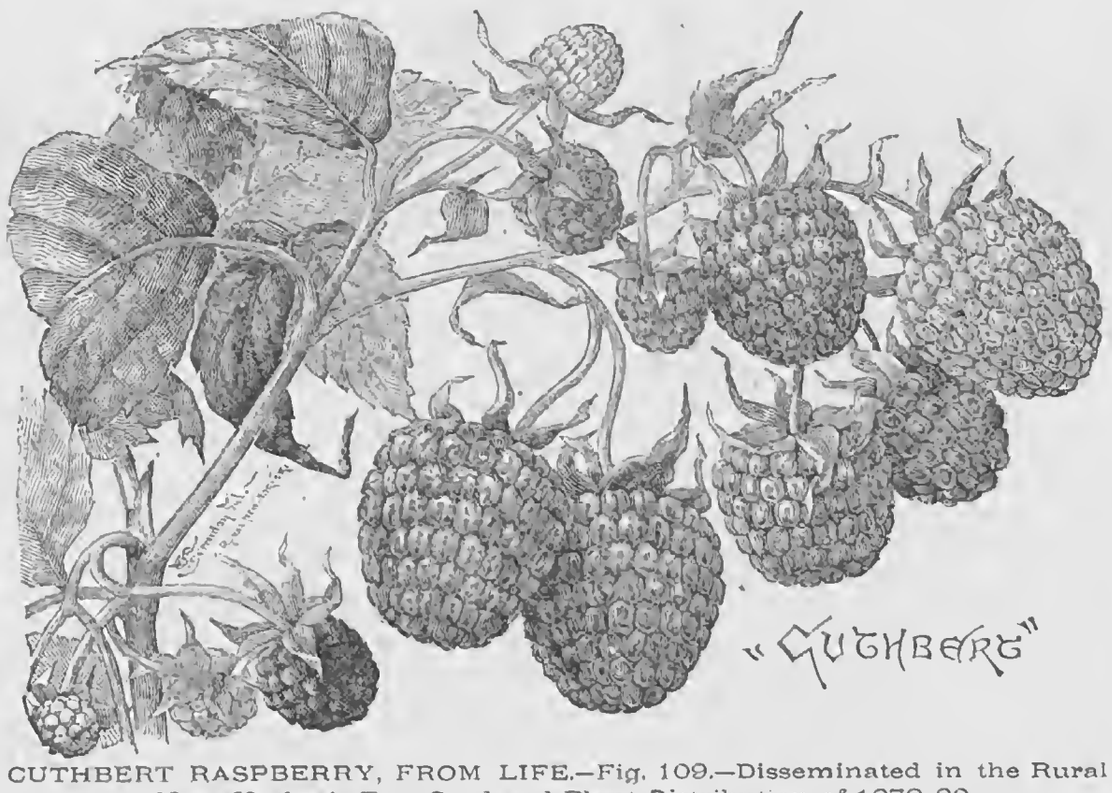
It is well known that the quality of the fruit depends in some measure on the character of the season, both the aroma and the proportion of sugar to acid being thereby affected. Schuebeler found that in the short but uninterrupted sunlight of Scandinavia, the aroma of fruits was stronger than that of the same kinds of fruits grown further South, but the sweetness was less; plums were so sour as to seem unripe to those accustomed to the plums of southern climates; but while the strawberries of Portugal were very sweet and large, they were poor in aroma and flavor as compared with the Scandinavian berries. The climatic influence on the quality of fruit is otherwise shown in the ratio of sugar to acid in the case of wild strawberries, which in one year may contain only two parts of sugar to one of acid, but in a more favorable season may contain 8.5 parts of sugar to one of acid. This change in the ratio is due both to an increase in the percentage of sugar and a diminution in respect to the acid.

Arranging the small fruits according to their richness in sugar and in acid on the basis of such analyses as have been made, they stand in the following order:

	Sugar		Acid.
Gooseberry	7.	Strawberry	0.9
Currant	6.4	Blackberry	1.2
Strawberry	6.3	Gooseberry	1.4
Blueberry	5.	Raspberry	1.4
Blackberry	4.4	Blueberry	1.6
Raspberry	4.	Currant	2.1

Only a single analysis each of the raspberry and blackberry has been made; on a better acquaintance with their chemical composition they might be located differently with respect to the other fruits. None of these fruits, however, stands so high as the grape, with its average proportion of 14.4 per cent. of sugar, and only 0.8 per cent. of acid. Compared with stone and core fruits, the berries contain a larger proportion of acid, and at the same time less of the neutral substances to cover up and temper the acid, so that for a double reason they are generally more sour to the taste.

Whatever may be the effect of the temperature of the season and of the amount and distribution of the sunlight on the quality of the fruit, we must make the best of it, for we cannot change the weather; but cultivation of fruit generally improves its quality, at least in regard to its proportion of sugar and acid, by increasing the one and lessening the other, although the wild fruit may excel in delicacy of aroma. Some wild berries have, however, shown quite as favorable a proportion of sugar and acid as has been found in the best cultivated varieties that have been analyzed. That the character of the manuring has something to do with the change in the quality of the fruit is shown by some experiments by Dr. Goessman, at the Mass. Agricultural College. By manuring the wild grape liberally with potash and phosphoric acid, he changed the ratio of sugar to acid to that of the Concord Grape. That the potash may take some special part in the modification of the ratio is indicated by the fact that the cultivated berry contains over twice as large a proportion of this substance in its ash as is found in the ash of the more sour wild fruit. Putting all these facts together, it seems reasonable to hope that by judicious use of concentrated fertilizers, sweeter small fruits might be produced at the pleasure of the gardener. This is a promising and inviting field for experimentation, which has been but little occupied, and satisfactory experiments with small fruits can be conducted on a less extensive scale and at less expense than with field crops.



CUTHBERT RASPBERRY, FROM LIFE.—Fig. 109.—Disseminated in the Rural New-Yorker's Free Seed and Plant Distribution of 1879-80.

STRAWBERRIES.

T. T. LYON.

MY experience during the past season has developed little reliable or conclusive as to the status of the newer candidates for popular favor; I therefore rely, to a considerable extent, upon the observation, experience and conclusions of others in the following remarks upon varieties:

SHARPLESS is very satisfactory so far as the vigor of the plant and the size of the fruit are concerned, but it is too soft, and there is much doubt of its ability to sustain its reputation as

a producer. It is of fair quality for so large a fruit.

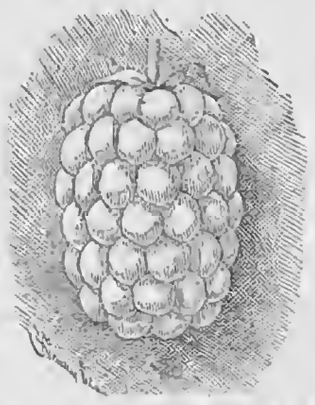
CRESCENT SEEDLING has been appropriately characterized as the "lazy man's strawberry." It bears a favorable comparison with the Wilson in this respect. It is a rampant grower, but too soft; while Wilson is firm, but of only moderate vigor. Neither can ever become popular with the best growers.

SENECA QUEEN is my favorite on account of its fine, even size, great beauty and fine quality. If I were compelled to choose one variety, to the exclusion of all others, with my present experience, I am not sure but it would be this.

SHIRTS is doing well. It is satisfactory in size, quality and appearance, and is, I think, firm enough. We need to know more as to its productiveness in different localities before it can take position as a market berry.

MARVIN has pretty well established a reputation as a large, firm, bright-colored, very late and productive berry. The plant is about as vigorous as Wilson. More time is needed to establish its character as a producer in different soils and localities. I have much faith in its future.

WINDSOR CHIEF seems generally to be characterized as the "Champion, and *only* Champion." The alleged originator has been appealed to, to demonstrate (if he can) its distinct origin, by giving to the public a history thereof. This he seems to have omitted to do. The natural inference would seem to be that such history may not be able to bear the light of criticism; hence there would seem to be occasion to doubt the fact of its distinct origin. The originator certainly owes it to himself to allay such doubt, if possible.



CRYSTAL WHITE BLACKBERRY. —FIG. 110. See page 162.

BIDWELL had its origin seven or more years since, as is alleged, at this place. It has received a most favorable notice from the Michigan Pomological Society. Still it remains comparatively unknown at home; although at the East, where it has recently become known, it seems to be attracting much attention. The plant is very vigorous, and the fruit large, bright-colored and of superior quality. It is firm enough for market, and under good management will be found profitable, especially so on light soils.

GLENDALE possesses many good qualities as a market berry. The chief doubt respecting its value for that purpose lies in the question of productiveness.

RUSSELL'S ADVANCE is, in most respects, a very desirable berry; but more time is needed to determine as to its productiveness and consequent value for the market.

BURGESS is a comparatively new sort, of which little seems yet to be known. It purports to come to us from Rhode Island. It is esteemed valuable by those who have most fully tried it.

Among the varieties that have been some time before the public without having attracted special attention, I regard the following as desirable, and several of them highly valuable, especially Early Hudson, Cowing's Seedling, Duncan, Duchess, Charles Downing, Matilda, Champion, and Monarch of the West; while Cumberland Triumph, Boyden's No. 30, Black Defiance, Major McMahon, Hudson's No. 10, Kentucky, and Springdale are scarcely less so. In the hands of good cultivators several of them would doubtless have been found highly profitable as market sorts.

Among the many that have now been some time on trial, without having achieved decided popularity, the following seem to be just desirable enough to be laid on the shelf with a lingering regret, viz: Captain Jack (it should have been honored with a better name), Col. Cheney, Seneca Chief (which is only exceptionally successful), Burr Oak, Caroline, General Sherman, Victoria (Golden Queen), and, perhaps, Frontenac, which, although excellent in quality, is hopelessly unproductive. Several of these, under favorable conditions, prove to be highly desirable as amateur or family berries.

There remains yet another class of varieties which, with us, have not yet grown and fruited under circumstances so favorable as to demonstrate either a warrant for commendation or condemnation, of which, without doubt, the successful ones may be expected to be the rare exceptions, while the great mass will be buried in oblivion. Of such I name Belle, Centennial Favorite, Cinderella, Continental, Crystal City, Durand's Beauty, Early Adela, Forest Rose, Iowa Prolific, Miner's Great Prolific, New Dominion, New Jersey, Scarlet, Pioneer, President Lincoln, Rappahannock, Red Jacket. To these might be added a still longer list of those which, although they still linger in the catalogues of nurserymen and in the list of amateurs, are hopelessly beyond the pale of popular recognition and approval.

RASPBERRIES.

GREGG has fruited here the past season and seems destined to supersede those old favorites, Mammoth Cluster and Doolittle, with those who grow the Black Caps, although at the Lake Shore, where most of the red varieties are sufficiently hardy, they are generally grown, since the fruit is preferred in the market.

CLARKE is somewhat grown for the early market, but its lack of productiveness is a serious obstacle to its popularity.

DELAWARE is very little known here, and it may fairly be doubted whether any amount of "pushing" or advertising could give it popularity with planters. Although firm and bright-colored, it lacks quality.

THWACK is a strong grower and productive, but it is far from attractive in color as compared with several others, while it is sadly deficient in quality. I was astonished to hear it so highly lauded at the last meeting of the American Pomological Society by some men who, beyond doubt, must have understood its lack in this respect.

BRANDYWINE is better known here, and is bright colored, firm and early; but it is too small and has not always shown itself productive.

HERSTINE has size, quality and color in its favor, and seems likely to lead in popularity, notwithstanding its decided lack of firmness, unless it shall be superseded by

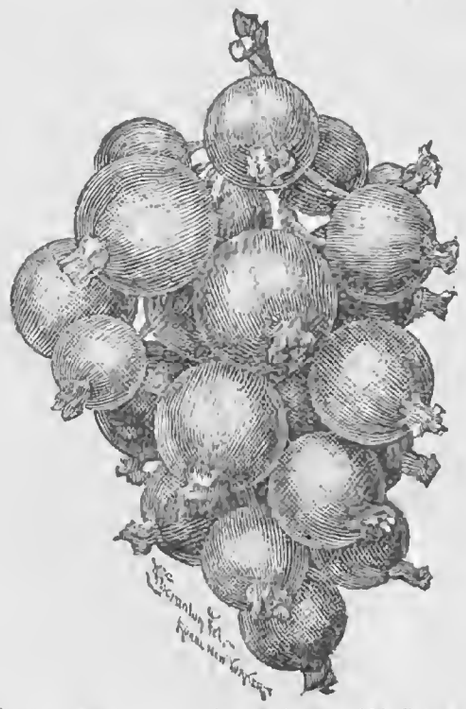
CUTHBERT, which is yet little known, although highly prized by those who have proved it.

MONTCLAIR is another berry as yet undisseminated here. It has, however, fruited here the last two years, and, although a brighter color might be desirable, its firmness, fine size and high quality, together with its slight tendency to sucker, are strong points in its favor.

SMALL FRUITS.

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

SMALL fruits, in our climate, mean, I take it, currants, gooseberries, blackberries, raspberries, strawberries and grapes. Their culture for profit, home comfort and health should have the widest welcome. No industry will average any richer dividends from the market than these nattily offered and well grown supplies. They may be raised in fine form, under the richest culture, yet if they are not marketed neatly, in good order, free from mussiness, and freshly picked, the fruit raiser will be disgusted with his returns. A good many slovenly growers meet rebuffs to the uncomely offerings of their goods, which they are blind enough to think due to a public want of taste for small fruits. But there is in cities and large towns an almost unlimited market for fruits to which culture has done justice and which the owner offers measured out and boxed in handy shape to handle. No man should market fruit who does not make it a business. Because you have a few quarts of any kind beyond your home supply, don't fill your tin kettle or peck measure and dump into a store to swap for groceries. Give your overplus to some nice neighbor or some poor, lone widow, whose home room or pinched affairs will not admit growing them or buying them.



LEE'S PROLIFIC CURRANT (BLACK)—FIG. 111. See p. 161

Every householder, both for the love of the fruit and the joy of its culture and possession, should plant some of these small fruits. An abundance is the duty and the glory of any large place. No house lot, however small, should be without some of the assortment. It is wonderful what crops every kind will yield to a busy worker in his home lot. Every vacant place, every drooping shed, every fence border can be made to rejoice in their fruitage. Of course they cannot be left to take care of themselves as ordinary fruits often are, in the wide garden or fruit farm. A good deal of Winter pruning, frequent Summer pinching, skill and judgment in training to cover unoccupied spaces, and a deftness that only practice teaches, must beget plenty and excellence.

Some of the care and constant watchfulness over small fruits in the little home is not out of place either in larger grounds or on the fruit farm. I'll leave the larger cultivators to take care of themselves and devote a few words to the methods by which a plenty of small fruits can be had in the narrowest domain.

And first about grapes:—I have a friend who, from a single line of Clinton Grape on a galvanized wire, gets bushels of the fruit. On a 25-foot lot twelve such vines can be trained up on to the lean-to or rear walls of the dwelling, stretching up 30 feet or more, both studded with fruit and shading the house. Strong posts around your little rear yard may hold as many more. Then along the borders below the grapes you may have currants trained to single stems and tied to horizontal wires, ripening in their season a delightful abundance. Gooseberries so trained, of our hardy, unmildewing American kinds, will give you lots of the luscious fruit. Some of those hardy modern Black-cap raspberries trained in some odd place will cheer your table with their harvest. Even the thorny Lawton or some of the hardier kinds of blackberries, trimmed and trained and pruned and pinched, will give a large supply for their season.

Then as to strawberries, not much can be done with any kind of comfort in an ordinary city lot. But in a small homestead of 50x100 feet there is, after all these other fruits are provided for, still room for a strawberry bed to supply that delightful fruit from the beginning to the ending of its season. On this joy of the table the householder should expend his soul. Its soil should be deep and rich, but not with too rank manure; every runner should be clipped during its bearing season. In separate rows he should have kinds covering the first blush of this fruit to its latest yield. Not a weed or a grass-spire should be found; but all should be well mulched to keep the berries from the spattering rain and dirt. Through the fearing season drench with water. This latter is a very needed thing which the large growers cannot furnish. But for it the strawberry's appetite is so great that nothing will so help out the cotter's crop, as to the bigness and abundance of its yield and the duration of its season, as an abundant supply of water nights and mornings.

Nothing so binds to our hearts the sacred memories of home as the joyousness of the family table well supplied with small fruits. The little youngsters from their earliest youth so relish these healthful fruits, that in after life enjoyment of them makes up a large part of home memories and endears to them, as much as any æsthetic or mental culture, those who have cared for their tender years.

SMALL FRUITS HERE AND THERE.

CHARLES A. GREEN.

SAMUEL MILLER writes me in glowing terms of the Triumph Grape. He does not say it is white, but leads me to infer that it is. While not an early grape, he thinks it will mature its fruit at Rochester, N. Y., if given a good position. "It is such a splendid variety I wish you to enjoy it, and shall send you a vine," he writes. At the Mississippi Valley Horticultural Society's Meeting, the Triumph was deemed the finest dish of grapes for table use on exhibition, the bunches weighing as high as one and one-half pound.

The Cuthbert Raspberry has been injured somewhat here by the severe freezing, but I trust not seriously. If it comes out next Spring with any live fruit buds I shall think highly of it, for this is the worst Winter for red raspberries I have known. They continued growing very late in the Fall, and the sudden dash of early Winter found them with immature wood. The leaves are hanging yet to raspberries that never retained their foliage so late before. The Cuthbert will not endure the severe Winters of Iowa and other points of the West. It is nowhere recommended as being so hardy as the Turner. Last Winter it went through without the loss of a bud with us. I am favorably impressed with this variety, but there is an opportunity yet for improvement in respect to complete hardiness. I predict that red raspberries in the future will be much more popular than in the past. People have been prejudiced against them on account of not knowing how to manage the suckers. Treat them as weeds, cultivate in hills both ways, and you will be successful; but cultivate only one or two inches deep. [We beg to state that this is our experience exactly.—Eds.]

I wish to bring about a reform in plant growing to this extent: Throw overboard half or more of the varieties of strawberries now on the lists. It is the worst possible waste of time and money to propagate or to plant a large number now recommended. "But we must publish a large list or we will be considered one-horse concerns," says one. I will reply that it is better to drive one horse and carry your friends safely, than to drive four-in-hand and dump them into the ditch. True, many varieties will thrive in one section, which should be discarded in another; but there are enough that will thrive almost anywhere, and such are the safest to recommend. There are scores of varieties of strawberries so nearly alike that one would require a microscope to distinguish one from another. Come, brethren, it is time to clear out the rubbish!

Visiting a large evaporating establishment recently, I inquired what method was found the best for keeping dried fruits from becoming "wormy." "We used to keep them in a dark room," was the reply, "but found that such a place was just the kind desired by the insects, and we lost some small fruits. We have since stored dried raspberries, etc., in very well lighted rooms, leaving as much space as possible between the sacks, and the result has been satisfactory."

The proprietors of the Niagara Grape have distinguished themselves for the Yankee shrewdness manifested in manipulating that variety. Without spending a dollar for advertisements they have made the grape known throughout the country; without disposing of their entire interest in one single vine, they have disposed of vineyard rights, bringing in, or promising to bring in—well I was told the exact amount, but will simply say somewhere into the hundreds of thousands of dollars. No living soul has the right to propagate a vine of this variety, nor will have until it is generally introduced to the public, which will not be for at least four years. When introduced it is proposed to attach the company's seal to each vine; therefore if any outside party had vines he could not sell them. One element of success the Niagara people have enjoyed from the beginning, without which no amount of ingenuity could have availed—they have a grape well-suited to the wants of the public, so far as can be determined by its conduct on the grounds of the originator. While not a variety of superior quality, it is good enough for market purposes, and not one in a thousand but will smack his lips over it. Its vigor, productiveness and beauty are its strong points.

THE GREGG RASPBERRY. —FIG. 112.

I am glad to see the originators of fine fruits rewarded generously. Few of them receive compensation in proportion to the benefits conferred. I met the originator of that valuable raspberry, the Doolittle, last Fall. He is a poor man, having made but a trifling sum from his seedling, whereas others made thousands of dollars.

I never have succeeded with fruits on low lands. The frosts in late Spring, when the fruits were in blossom, ruined fruits on the low lands, while those on elevations were injured but slightly in comparison. A difference of a few feet in elevation was often noticeable in the effects of frost. In young vineyards especially I have seen plants killed beside those unhurt, where the difference in elevation was but trifling. Elevation may or may not have been the controlling cause in this case. I asked Mr. J. J. Thomas recently whether the dwarf pears in the many orchards he had visited did better on the elevations than on the low lands. He replied, "Invariably better on the uplands." Messrs. J. H. and G. H. Hale speak of raspberries doing well on muck. I can do nothing with them, or with strawberries, currants, grapes, etc., on such soil. Our muck is too light, and lacks some essential ingredient.

The Lost Rubies Red Raspberry was planted last season in various parts of the country, and we shall soon hear reports of its conduct. With me it is the largest and most productive variety I have fruited, and it is very firm and beautiful. For five years it has borne heavy crops without Winter protection, and appears to be perfectly hardy. It possesses great vigor, the canes often growing six feet high. It ripens with Brandywine, and continues in bearing three or four weeks, depending on the season. This variety is not perfection, I hasten to add. Its greatest imperfection is, to my taste, being too tart; but I have noticed that this feature varies with the seasons and with different methods of cultivation. It was never so tart as last season. But, notwithstanding this defect, the quality of Lost Rubies is superior to that of most varieties, the flavor being pronounced and enticing—something among raspberry flavors as is the taste of a Spy or Spitzenberg among apples. I know of no variety that will yield so many quarts per acre, and none that the pickers are so partial to, owing to the rapidity with which they may fill their baskets. This is owing to its firmness. The cavity in raspberries comprises about one-third of the bulk. If the berries are soft and settle down solid, it takes a good many to

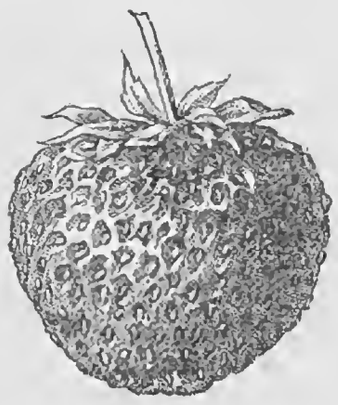
make a quart. It doesn't pay to grow soft berries. Mammoth Cluster is too soft. Gregg is much superior in this respect; but is inferior in quality.

The canes of Lost Rubies are similar to those of the Cuthbert; but the fruit is not at all like it. It has a closer resemblance to that of the Franconia, yet no one would take it for that variety. It is about the same size.

IMPORTANCE OF PRODUCING NEW FRUITS FROM SEED.

MARSHALL PINCKNEY WILDER,
PRES'T AMERICAN POMOLOGICAL SOCIETY.

THE widespread interest now manifested in the production of new varieties of small fruits from seed, induces me to comply with your request for an article on that subject. This is the most reliable method for obtaining new varieties suited to our various soils and climates, or as substitutes for those which may decline in the future. The acquisitions which have already been obtained give promise of still richer rewards to him who will work with Nature in compelling her to yield to his demands for still better results. She has placed in our hands the requisites for this purpose, and we have only to conform to her laws and we shall be sure of progress.



SENECA QUEEN.—FIG. 113.

The case with which new varieties may be obtained by crossing our best sorts of fruits, is now pretty well understood, and there is no better illustration of what can be accomplished than what has been done in the production of the numerous excellent native fruits which have been secured since the establishment of the American Pomological Society.

The importance of raising new varieties from seed is no longer of questionable utility. The fact that good seed of good varieties will produce good offspring is a fundamental law, proofs of which are seen in a multitude of instances from the results of artificial impregnation. Feeble parents produce weak children—a principle as well adapted to vegetable as to animal life. We have learned many of the laws which govern this most interesting department of science, and the more we work with nature in efforts for the improvement of our fruits the more we shall admire this most perfect and beautiful law for the improvement of men, animals and plants.

Fruits are a rich legacy to those who are to come after us. The man who originates a fine fruit that shall be adapted to general cultivation is a benefactor of his race, and his name shall be gratefully remembered long after he shall have passed from earth. Let us, then, persevere in developing these wonderful resources which Providence has placed in our hands. Persevere in our labors to produce new and improved varieties of fruits, and posterity will bless our names for the good we have done. Persevere in these praiseworthy pursuits, hoping that the time may come when every one throughout our vast territory may be in the possession of these blessings; when our hill sides shall rejoice in the burden of the vintage, our valleys teem with the golden products of the orchard, and fine fruit. "the most perfect union of the most useful and beautiful that the earth knows," crown in abundance the table of every inhabitant of our beloved land.

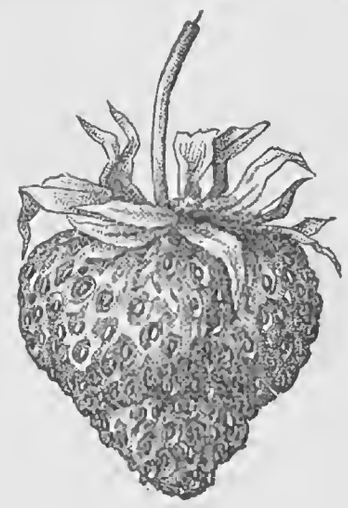
PHOTO-MARTHA.—FIG. 114.

STRAWBERRY CULTURE AND ITS PROGRESS.

DR. F. M. HEXAMER.

Depreciation in Prices.

IN 1872, the strawberries shipped from Charleston to Northern markets brought an average price of 57 cents per quart; in 1876, 38 cents; in 1877, 21 cents; in 1879, 14 cents; and last year, 12½ cents per quart. Jucundas from the Knox Farm at Pittsburg brought, in years gone by, from 50 to 75 cents per quart at wholesale; and, for several years after the war, first-class Triumphs and other large varieties sold readily for 40 and 50 cents per quart, by the crate, while now the very choicest would not bring half as much. This decline in

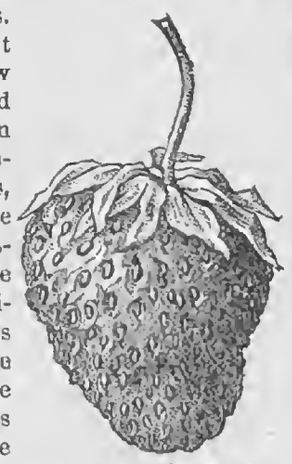


BIDWELL NO. 1.—FIG. 115.

prices is, of course, mainly caused by the larger quantities of berries raised; but there is another important factor which causes the present low prices for first-class fruit. In former years, when our selected Jucundas and Triumphs came to market, the only competition they had to encounter was from small Scotch Runners or sour, sandy Wilsons, and the contrast was so great that buyers paid willingly three and four times more for the best. But now, owing to the rapidly increasing competition and the great improvements in new varieties, poor berries can hardly be sold at any price, and the average market fruit has improved so much that there is but little difference between them and the choicest. and here, as in other trades, a plentiful supply of cheap goods depreciates the value of the better grades. The most important

Revolution in Strawberry Culture,

however, so far as concerns the grower, at least, has been effected by the changing of our markets. The market centers for fruits, as well as other goods, are rarely permanent; they are frequently moving from one place to another, or changing in their respective locations. Many of the prominent business houses in New York have changed several times within my recollection the locations of their stores, have moved with the migration of their customers, or they have transformed their business in such a way as to conform with the altered conditions. The Strawberry market is not exempt from these fluctuations of trade.



BIDWELL NO. 2.—FIG. 116.

A few years ago, New York was the great distributing center of berries for hundreds of miles along every railroad and steamboat line entering the Metropolis; but now the markets of most inland towns and large villages are supplied with home-grown fruits, and only an inconsiderable amount of berries is re-shipped from New York. Thus it happens that while the demand for products of nearly all kinds has largely increased during the last years, the amount of berries disposed of in New York has decreased somewhat; and while the producers of wheat and corn, of butter and cheese, of beef and pork, and many other farm products find, at home and abroad, new and profitable outlets for their bountiful crops, the small-fruit grower who depends on the New York market finds the demand for his products diminished instead of increased, and, naturally enough, wonders where that much-talked-of national prosperity may be found.

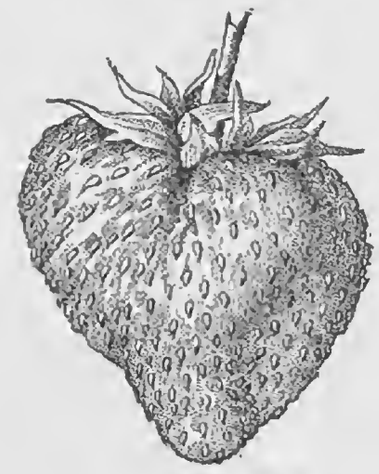
Some people are constantly complaining that "business is overdone," that "times have changed," and so they have. We cannot reverse the order of the universe. Times do change, and unless we change with them we have to go under; everything changes with every year, with every day, with every moment—commercial relations, seasons, vegetation—the earth itself has changed from vapor into solid matter, and will continue to change till the end of time. Without change there is no motion; without motion there is no life; inertia is death. How can *we* expect to remain at a stand-still when everything around us moves?

BRILLIANT.—FIG. 117.

It would be to little purpose to attempt to give here specific directions for the culture of strawberries. In fact, I think one of the most decided additions we have made to our stock of practical science consists in the knowledge that but few, if any, rules can be laid down which are equally applicable to all conditions and in all localities. Each one has to observe and study his own markets, his own soil, and the varieties, fertilizers, and cultivation best adapted for the same. We have to practice what observation and experience have taught us. The keenest observers, and those who can draw the most correct conclusions from their experiences, and will apply them judiciously, are always the most successful.

Fertilizers.

Of scarcely less importance to the strawberry grower is the proper selection and application of fertilizers. How and from what to reap the best returns for the money invested is, and always will be, the leading problem. There are, no doubt, many who know that bone-dust is best; others have used stable manure with success, and want nothing else; and still others may be sure that there is nothing better than a certain special Strawberry Fertilizer. All may be right and showing their good sense by continuing what they have found to be good and profitable; nevertheless,



MARVIN NO. 1.—FIG. 118.

should they change places with each other, some would probably soon modify their practices somewhat. Careful observation and extensive experiments have convinced me that the strawberry plant is not only a glutton, but an epicure at the same time; that it is not satisfied with an abundance of the richest food—it also insists upon having it prepared in the most palatable manner, served in the most dainty style and as often as it feels inclined to partake of it. Of course, you can force and starve it to exist on almost anything rather than die; but if you want it to put on its sweetest airs, to be pleasant and have rosy cheeks, and do its best generally, it must, like other pets, be coaxed and petted.

Now, wherever you keep your pets, be it North or South, on sandy plains or on heavy clay hill-sides, there is one decoy to which they respond every time and without fail, and this is a good, well-decayed compost. Whatever the fertilizer to be used consists of, composting increases its strength, enhances its value, and prepares it for the immediate needs of the plants. I do not wish to be understood as underrating the value of stable manures or of special fertilizers, some of which are among the crowning triumphs of scientific agriculture, but I do assert that practice, as well as theory, has proved that however effective either alone may be, combined they become often doubly valuable.

It is a great mistake to use commercial fertilizers only to lengthen out the supply of stable manure; much better results may be obtained by composting all the available manure with all the purchased fertilizers,—mixed with sufficient muck or soil to prevent too violent fermentation,—and to distribute the entire bulk over all the land to be cultivated. We all know that in seasons of severe drought ordinary fertilizers rarely produce the desired results, and that too much rain carries a considerable part of the fertilizing matter below the reach of roots; composts, however, by reason of the minute division of the active principles contained in them, are immediately available as plant food, and by being evenly scattered over the surface, benefit all plants alike, and become absorbed in a shorter time than raw fertilizers.

WINDSOR CHIEF.—FIG. 119

To obtain the best results from compost, it is advisable to divide the quantity to be used during the season into several parts, and to apply them at different intervals instead of using them all at one time. In feeding our horses we are careful to give them all they will eat up clean at one meal, and no more, else a part of the fodder becomes wasted and useless, while with judicious feeding, nothing is wasted, and all the provender goes to strengthen the animal. The same principle underlies the system of feeding plants. I will not enter into the details of preparing compost heaps, but I am sure that any one who will give composted fertilizers a fair trial will soon become convinced of their great value in strawberry culture. What ready cash is to the tradesman a good compost heap is to the strawberry-grower. As the merchant who has ready cash is better prepared to strike an advantageous bargain when opportunity offers than one who has to wait till money comes in before he can buy, so is the fruit grower who can rely on his compost heap in some measure independent of weather and seasons; he can count on its good results every time.

GLENDALE.—FIG. 120.

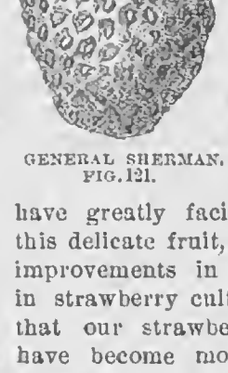
Irrigation

is attracting much attention now. We can hardly call it new, for the Egyptians practiced it to perfection more than four thousand years ago, and at the present time extensive systems of irrigation are found in Italy, Spain, India and many other countries of the Eastern Hemisphere. Except in California, we have made only a few isolated attempts in irrigation, but wherever tried systematically it has proved eminently satisfactory. The time cannot be far distant when we shall become enlightened enough to utilize the immense stores of fertility contained in our mountain lakes and streams, which are now permitted to flow into the ocean.

The use of potted plants has likewise become more general, and as an article of trade they are already of considerable importance. For the amateur, and especially in cases where Spring planting is not practicable, potted plants have certainly much in their favor.

Extension of Strawberry Culture.

It is but a few years since strawberries were considered a great luxury, to be indulged in only by the wealthy who could employ professional gardeners, skilled in the mysteries of their culture. Improvement and progress have dispersed these antiquated notions, and have placed a strawberry-bed in the garden of every right-minded person. While many may remember the time when strawberries were hardly known as a luxury even, it would be difficult to find now a comfortable home in city or village, or on the farm, where strawberries do not constitute an indispensable part of at least one meal a day during the season. It is true that improved means of communication and transportation have greatly facilitated the distribution of this delicate fruit, but were it not for the improvements in strawberries and progress in strawberry culture, could it be supposed that our strawberries of the past would have become more disseminated than they were then? It is only through the wonderful progress in cultivation and improvements by hybridization that the strawberry has reached its present commercial importance. Statistics show that the value of strawberries sold annually in our large cities amounts to many millions of dollars, but the priceless value in enjoyment, in good cheer and health to the millions who grow, pick and eat their own berries, is incalculable. With the planting of every strawberry-bed on a farm where there was none before, the corner-stone is laid for a happy home; for every plant we intrust to the soil bears in it the germs for happiness and health. Would we know where the strawberries grow, let us drive along the country road to yonder cozy cottage, where the rosy cheeks and bright eyes, the happy faces and cheerful expression of the children playing under the rose-covered veranda, tell, more plainly than words can tell, that the strawberry-bed is not far away.



GENERAL SHERMAN. FIG. 121.

Benefits of It.

But progress in strawberry and other fruit culture has accomplished more than to invigorate health, increase our enjoyment and endear our homes to our children; it has sharpened observation, brightened thought, and inspired the development and stability of the noblest traits of human nature. No plainer object lesson was ever taught, no more impressive sermon preached, than that which Nature has instilled in every root, in every leaf, in every expanding bud and every fading flower which must wither that the more perfect fruit may spring into life.

CINDERELLA.—FIG. 123.

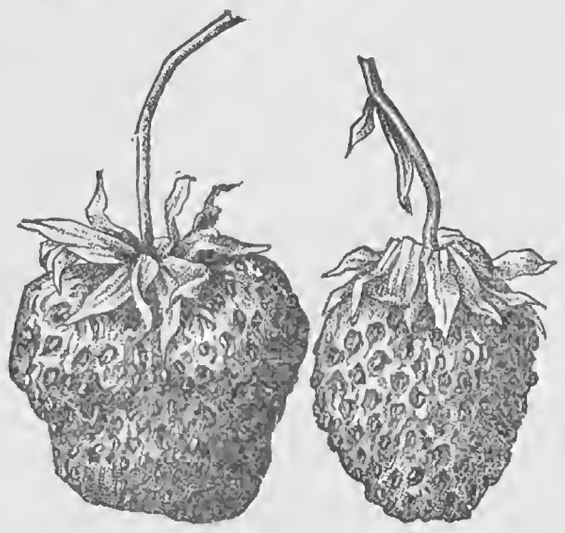
There is a class of people who do not believe in progress, who think the world had reached perfection when they were young, and that it has gone backward since. But who could, 50 years ago, have imagined the wonderful progress of the present day, and who can conceive what progressive ideas and progressive minds and progressive men will accomplish in another half century? We may at times go too fast and make missteps, or we may put on too much steam and burst a boiler, but what of that?—what does the brave soldier care if he must lose his life that his brothers may march to victory?

He who does not believe in progress is the most virulent sore on the body of the community, the most dangerous enemy to society, the state, and mankind; far better that he should perish than impede the wheel of progress.

SMALL FRUITS IN ARKANSAS.

DR. JOHN A. WARDER.

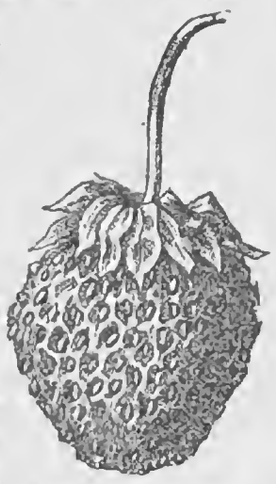
ATTENDING a recent meeting of the State Horticultural Society at Little Rock, the capital of Arkansas, it was pleasant to find so energetic a band of intelligent fruit-growers assembled. All were earnest and enthusiastic respecting the new industry which here, as elsewhere, follows close upon the heels of the iron horse, whose snorting career, though appalling to the coyote, the bear, the bison and the deer of the primitive regions, is always accompanied by the more gentle and useful animals of domestic and civilized life as the assistants of terra-culture.



SHIRTS.—FIG. 123. SHIRTS.—FIG. 124.

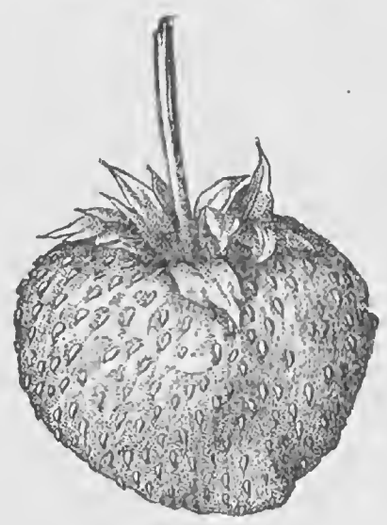
To one who had visited this region in days long past—say 1850—when access could only be had by steamboats along the rivers, it was most natural to draw a comparison and to observe the contrast in the surrounding conditions. King Cotton still bears sway in the lowland regions, and the long-leaved pines still wave their plumed tops on many of the uplands; but in all favorable sites, farms with mixed agriculture and fruitful orchards are asserting their claims to attention, and are evidently yielding satisfactory results to their owners. The very capital itself, from being a quiet cluster of elegant residences for the owners of the great cotton plantations along the rivers, has become a busy mart of trade, a thriving rail-road town in constant communication with the outside world, and contributing liberally of luxurious fruits to distant markets. Of these, the small fruits, especially the strawberry and the peach, seek the Northern cities by way of St Louis, while the famous apples may find a ready demand southward in Texas and Louisiana.

The attendant members of the Society were evidently encouraged by their success in fruit-growing and appeared to be quite well posted as to the best varieties, with which they appeared to be as familiar as we of the older Societies in the North. I heard constant and high praises of their great "Fruit Belt" and on inquiry as to its limits, was informed that it extended across the State along the line of the St. Louis, Iron Mountain and Southern Railway, from Poplar Bluff in Southeastern Missouri to the southwestern corner of the State near Texarkana on the Red River, especially for the fruits already named and for grapes in several places where they have already been planted, while apples and peaches succeed in all the upland regions of the northwestern quarter of the State, and pear trees have thriven in the southern parts since the early settlements made by the French, who also introduced the fig, and trained the native Muscadine or Scuppernong Grapes on their primitive arbors. This is still the favorite method of training these peculiar grapes.



ENDICOTT'S SEEDLING. FIG. 125.

The happy geographical range of this region, with its fertile soil and its fortunate climatic conditions, would seem to promise the best results for horticultural efforts. The latitude gives early products for the supply of Northern markets, while, in the elevated regions, where the apple thrives so admirably, there need be no lack of demand to the south and southwest, in Louisiana and Texas, where this noble fruit cannot be produced, and where a



MARVIN.—FIG. 126.

constantly increasing population stands ready to consume all their surplus and, like Oliver, ask for more.

THE BIDWELL AND OTHER NEW STRAWBERRIES, NEW RASPBERRIES, ETC.

E. P. ROE.

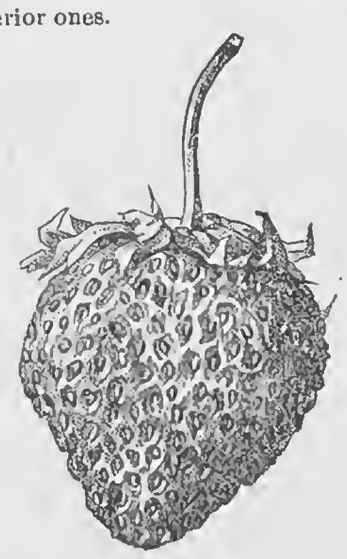
EVERY year I grow more conservative and less ready to drop the old standards for highly-praised newcomers. At the same time I believe we are destined to see a steady advance in the good qualities of the several small fruits, brought about by the efforts and discriminating observation of the many intelligent men engaged in their propagation and culture. The standard is now so high and the knowledge of good sorts so general that a worthless variety stands little chance of dissemination. Certainly no honest man ought to send out a fourth or fifth-rate novelty. There is one point on which the best informed are liable to error, and that is, the power of a given variety to thrive in different and widely separated localities. In this respect even I have learned that there are several very safe principles for our guidance. Parentage has an influence over a variety, which can never be eradicated or wholly overcome. As a general rule, we can affirm that to the degree that a variety of strawberry, raspberry, etc., contains foreign blood it will fail in southern latitudes and under a hot sun. For the people of the lower latitudes to condemn such varieties is just as absurd as it would be for us to condemn figs and oranges because we cannot grow them. On the heavy soils around Cleveland, Ohio, I am informed that the Jucunda proves one of the most profitable kinds that can be raised. On the light land of New Jersey and farther southit is a flat failure, except in some soils peculiarly favorable. Take the country over, it can be laid down as a safe practical truth that the varieties best adapted to general culture are those which spring from our robust native species—the Fragaria Virginiana or Rubus strigosus, etc.

Suppose the origin of a kind is obscure and the character of its parents cannot be learned, what then? Simply this—we must test the new candidate. Having once thoroughly made himself familiar with the marks of foreign parentage, an experienced fruit-grower can soon discover them in any newcomer. There will be a certain odor in the fruit, a tendency of the foliage to burn in Midsummer, and other distinctions which will not escape the practiced eye. Chief of all a feeble or fastidious kind will not thrive on a light, thin soil, no matter how far north it may be planted. I have only to set out a newcomer on the thinnest and lightest soils of my place in order to guess very correctly whether it will thrive in New Jersey and farther south. It was my ignorance of these principles which led me to send out the Pride-of-the-Hudson Raspberry. It bore the most beautiful fruit that I have ever seen anywhere, and Mr. Wm. Parry, the veteran fruit grower of New Jersey, after examining the bushes and measuring the berries, ordered five hundred plants on the spot and that, too, when they were held at fifty cents each. A riper and costly experience proved that, although it originated in this country, it was a child of the Antwerp and essentially an Antwerp in character, and I stated the fact in my catalogue as soon as I discovered it. I believe it would thrive well in England.

Is the Bidwell Strawberry destined to thrive North and South, East and West? I honestly believe that it is; for, during the last hot and singularly dry Summer, it showed a hardiness and vigor unsurpassed by any other variety on my place. I have tested it for two years on my driest as well as heaviest soils, and it appears to ask only half a chance anywhere. I also know that it has thriven on the light soils of other growers. I have never seen the slightest tendency to burn in its foliage, and it bore such enormous crops of very large, delicious bright-colored berries that I am led to believe it more valuable than the Sharpless.

At the same time it ripened so much earlier than the Sharpless that it will not interfere with that berry as a market kind. I am proving my faith by planting it more largely than any other variety. And yet, in spite of my sanguine hopes and beliefs, I distinctly state that it is a novelty untested as yet by the breadth of the continent. He is dishonest or else very ignorant who claims that an untested variety is certain to succeed in general cultivation. Mr. Berckmans, of Georgia, proved what a sound horticulturist he was by saying that he would not give a final and unqualified opinion as to a fruit until after ten years of trial.

The Bidwell is a novelty, but it is indorsed by a man so thoroughly worthy of respect as Mr. T. T. Lyon, who introduced it to the public, and I have been so strongly impressed with its value that I have bought all the plants he has for sale.* We should also remember that all the standard varieties we now have were once novelties, and that the money was made by those most prompt to recognize their value, and to plant them. A pint of first-class berries brings as much as, and often more than, quarts of inferior ones.



PRIMO.—FIG. 127.

THE OLIVER GOLDSMITH is a competitor in my grounds with the Bidwell, and I have been so much impressed by its value that I have bought the entire stock from the originator. I shall have more to say concerning it after another year of fruiting.

THE TRIPLE CROWN is one of the most distinct and delicious varieties on my place, but while it is exceedingly vigorous with me, its fruit indicates a foreign origin in part.

THE WARREN I recommend, but not the Longfellow, the latter being poor in flavor and a feeble grower.

THE SHARPLESS did admirably with me last year, but, like all of our large, showy kinds, it is not adapted to thick or matted culture.

THE SHIRTS impresses me very favorably, but I have not fairly fruited it yet.

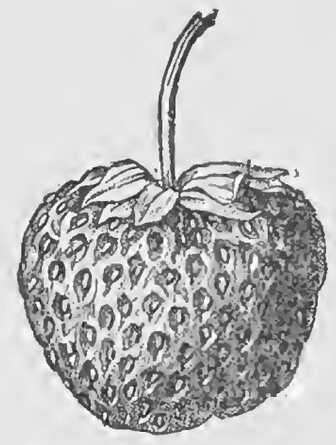
SHIRTS.—FIG. 128. SHIRTS.—FIG. 129.

THE MARVIN is a very fine, firm, late berry, but resembles the Jucunda so closely in its requirements and habit of growth that I am almost certain it will not succeed in the South or on light soils.

RED JACKET I have found one of the most promising of the new early berries. Although I have an endless quantity of plants I do not recommend Crystal City at all, except for the one quality of extreme earliness. I think it is the earliest berry we have. Of the old standard varieties, the Chas. Downing, Champion (Windsor Chief), Duchess and Kentucky are taking the lead. In regard to the

CUTHBERT RASPBERRY, I share in the opinion once expressed to me by Mr. Chas. Downing—that it is the best for general cultivation. From the first I was so sure of its value that I paid a large bonus, in addition to the price of the plants, to obtain stock that I could trace directly to Mr. Cuthbert's garden. I also obtained some plants from the original patch in the garden where it originated, and have made these the standard by which to test my stock; for it is of great importance that a variety destined to have such a wide popularity should be sent out unmixed, by all propagating it. Side by side with Mr. Cuthbert's plants I have grown the Queen of the Market for two years or more, and I fail to see, even under the microscope, the slightest difference between them. [Mr. Parry still offers them as distinct.—EDS.]

THE GREGG I consider a decided acquisition. It is somewhat larger and a little later than the Mammoth Cluster and so prolongs the season. This variety was originally sent out very much mixed, and much loss and disappointment will no doubt occur from this. The true Gregg is a distinct and uniform berry and when once known will maintain its place and superiority. I cannotsee wherein the



HUDDLESTON'S FAVORITE.—FIG. 130.

WESTERN TRIUMPH AND SWEET HOME, as I have received them, differ from the Gregg. My specimen beds put an end to many an argument among my horticultural visitors. When no distinctions can be observed between two so-called different kinds grown side by side under precisely the same conditions, nature settles the question. The productiveness of my

SNYDER BLACKBERRIES excited the astonishment of all who saw them last Summer, and this variety certainly competes equally with the Kittatinny for the home garden. Taylor's Prolific promises exceedingly well, but I do not regard the Wachuset Thornless as worthy of cultivation.

I have given in the above the result of some little observation and outlines of my own experience. After the fruitage of another Summer my mind will be much clearer in regard to many kinds now on probation. I believe we shall ever attain our best success by a docile subserviency to the teachings of nature. If she is on our side we cannot be wrong, and the most eminent authority cannot be right if she declines indorsement. My plan is to accept her decisions promptly, even though some of them are entirely contrary to cherished hopes and desires.

Cornwall-on-the-Hudson, N. Y

* It is but just to state that other dealers have the Bidwell for sale.—EDS.

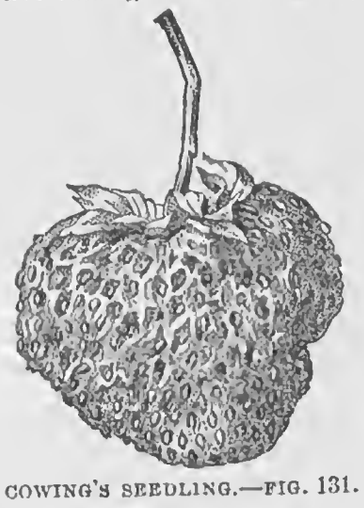
ANNOUNCEMENTS OF CATALOGUES FOR 1881 RECEIVED UP TO DATE.

The RURAL NEW-YORKER *begs to state that it will announce the Catalogues of all reputable seedsmen, nurserymen, etc., as they are received. Readers are referred to our advertising columns for particulars not stated under such announcements. It is plainly desirable on all accounts that our readers, in sending for such Catalogues, should mention the* RURAL NEW-YORKER. *This should insure due attention to their requests, while it seems an act of respectful appreciation of this journal. In future issues, we shall take pleasure in referring to specialties offered in the Catalogues received, respecting which our readers have made inquiry.*

ELLWANGER & BARRY, Rochester, N. Y. Descriptive Price List of Strawberries and other Small Fruits. Sent free to our subscribers.

E. P. ROE. Cornwall-on-the-Hudson, N. Y. Spring Catalogue for 1881 of Strawberry and other Small Fruits and Grape-vines. This catalogue, like Mr. Roe's beautiful work "Success with Small Fruits," invests the usually routine language of such publications with the interest of a well-told story. This will be mailed to our subscribers without charge.

ELLWANGER & BARRY, Rochester, N. Y. A Descriptive Catalogue of Select Roses, with a



COWING'S SEEDLING.—FIG. 131.

beautiful colored plate. Among the praiseworthy and new features of this catalogue we may mention that the names of the raisers; the year when the varieties were sent out, the parentage of the varieties, are given. This will be sent to our subscribers without charge.

D. M. Ferry & Co, Detroit, Mich. Seed Annual for 1881. This is a remarkable catalogue—considering that it is mailed to applicants without charge. It contains five colored plates, 500 engravings, 170 pages and a list of 1,500 varieties of vegetable and flower seeds and plants.

A. J. Caywood & Son, Marlborough, Ulster Co., N. Y. A Pamphlet of the new white grape Duchess, and two new strawberries.

V. H. Hallock, Son & Thorpe, Queens, Long Island, N. Y. Catalogues of plants, bulbs, &c. Free. This firm cultivates 30 acres of flowers and has made for many years a specialty of the beautiful Gladiolus of which they have an immense stock.

Ellis Bros., Keene, N. H. Illustrated and Descriptive Catalogue of Greenhouse & Bedding Plants for 1881. We see in this a picture of the new double white Bouvardia, "Alfred Neuner," illustrated in the Rural of Feb. 19.

Frank Ford, Ravenna, O. Descriptive price-list of Small Fruits, Seed Potatoes and certain specialties.

T. M. Metcalf, Prop. of the North Star Seed Farms, St. Paul, Minn. Annual catalogue of choice field, garden and flower seeds grown by them and selected from the stocks of the best American and European growers. A large, illustrated catalogue. Free to all.

Waldo F. Brown, Oxford, Butler Co., Ohio. Fifteenth Annual Catalogue of flower and vegetable seeds. Mr. Brown is an able rural writer and an experienced farmer and horticulturist. He offers his catalogue without charge to all who apply.

C. W. Dorr, Des Moines, Iowa. Seed Manual for 1881—also a fine list of the best small fruits. Free.

Geo. S. Wales, Bannockburn Farm, Rochester, N. Y. A Treatise on Strawberry Culture. The whole story told in a few words. This is sent "free" for a penny stamp.

United States Wind-engine and Pump Co., Batavia, Ills.—Descriptive Catalogue of 50 pages of standard wind-mills, double and single-acting pumps, the IXL feed grinders, Halladay's celebrated outlet valves, hay carriers, horse-hay forks, etc. Fully illustrated. Free.

Bowker Fertilizer Co., No. 43 Chatham St., Boston.—No. 3 Park Place, New York. Pamphlets of the Stockbridge Manures and Bowker's Hill and Drill Phosphate. All are invited to send for them.

The Dingee and Conard Co., West Grove, Chester Co., Pa.—The New Guide to Rose Culture and list of all desirable Roses—72 pages. Probably the largest establishment of the kind in the world. Roses by mail a specialty.

A. B Barnes, 46 and 48 West Lake St., Chicago, Ills. Annual Catalogue of Farm Machinery, Field, Garden and Flower seeds—illustrated, 68 pages. Free to all.

Ellwanger & Barry, Rochester, N. Y. Descriptive Catalogue of Ornamental Trees, Shrubs, Hardy Perennial plants, etc. 120 pages—illustrated with many new engravings and a colored plate of that fine shrub the Japan Snowball—Viburnum plicatum.—Also

A Descriptive Catalogue of Fruits with a colored plate and wood cuts—65 pages.—Also

A Descriptive Catalogue of Select Roses with a beautifully executed colored plate of those superb varieties Coquettes des Blanches, Jean Liabaud, Jules Margottin, Alfred Colomb and Marie Van Houtte, all Hybrid Perpetuals except the last which is a Tea.

A. C. Kendel, 115 Ontario St., Cleveland, Ohio. Price-list of native and imported Field, Garden and Flower seeds, Agricultural Implements, etc. Free.

Nash & Brother, 22 College Place, New York. Descriptive Illustrated Catalogue of the Acme Pulverizing Harrow, Clod-crusher and Leveler, 50 pages. Free.

Peter Henderson & Co., 35 Cortland Street, N. Y. Combined wholesale list from February 1st to March 15th. For florists and market gardeners.

Storrs, Harrison & Co., Painesville, Ohio. Catalogue of 80 pages with a handsome colored plate of carnations. New or rare plants, bedding and house plants, vines, roses, geraniums, fuchsias, etc., etc.

Also, semi-annual price list of fruit and ornamental trees, vines, evergreens, shrubs, etc.

Also, catalogue of grape-vines, strawberries and small fruits in general.

Also, pamphlet of "Dollar Collections" of fruit trees and small fruits of all kinds. Free to our subscribers.

L. W. Godell, Amherst, Mass. Illustrated catalogue of seeds and bulbs for the flower and vegetable garden. Free.

E. & O. Ward, Produce Commission Merchants, 279 Washington St., N. Y. A circular of instructions to shippers. Advice as to packing, shipping vegetables, fruits, etc, etc. This will be mailed free to applicants, and it offers some valuable suggestions.

E. & J. C. Williams, Chestnut Hill Nursery, Montclair, N. J. Catalogue of strawberries, raspberries, grapes, fruit trees, etc. Free to all. A trustworthy establishment. They recommend Charles Downing, Sharpless and Miner's Prolific as the best strawberries and recommend all to try a "dozen each of Caroline and Cuthbert Raspberries." They think highly, also, of the Brighton Grape.

T. S. Hubbard, Fredonia, N. Y. Catalogue of Grape-vines, Fruit Trees, etc. Headquarters of the new and promising Prentiss Grape. Sent to those who apply.

W. L Ferris, Jr. Poughkeepsie, N. Y. Catalogue of 26 pages illustrated. Vegetable and flower seeds, small fruits, &c.

William Parry, Parry P. O., New Jersey. Catalogue 35 pages illustrated. Strawberries, blackberries, grapes, currants, gooseberries—fruit and ornamental trees. Free to all.

Also, Catalogue of 32 pages of plants and flowers.

B. K. Bliss & Sons, 34 Barclay St., New York. A Select List of Novelties for 1881. Fine illustrations of peas, melons, new potatoes, new varieties of grain, &c. This is an interesting document and will be sent to our subscribers without charge.

Thomas Meehan, Germantown Nurseries. Philadelphia, Pa. Catalogue of 34 pages of all kinds of ornamental trees, shrubs and fruits. Also seeds of trees, shrubs and fruits. An excellent list—an old establishment and an experienced proprietor.

RURAL BRIEFLETS.

A deep, moist (not wet) fertile soil is what pleases the currant. For fertilizers, bone flour, wood ashes, muck, leaf-mold, cow manure may all be advantageously used. In sandy or dry soil, a mulch of salt hay, grass spread while green, corn-stalks or coal ashes will prove of decided value. Further south, shade must be given to the currant—such as that afforded by the shelter of barns or other buildings. . . . . .

In the field culture of the currant it is best to set them so that they may be cultivated both ways, viz., five feet apart. A shallow cultivator only should be used. An acre so planted would require about 1,500 plants. For this purpose select one-year-old plants. . . . .

The old Red Dutch is at once the most productive and the best in quality of any of the well-known varieties. To what extent Fay's Prolific may be an actual improvement upon this can only be determined after several years of trial in many different places. Give the Red Dutch a suitable soil and care, and the berries will be nearly as large as those of the Cherry and Grape Currants—while it will yield more fruit of a better (less acid) quality. . . .

The "White Grape" is perhaps the best white currant. "Victoria" ripens about two weeks later than the others. The berries are red, of fair quality, and produced in abundance. It is growing in favor among marketmen because it is late and also because it is a good shipper. The Cherry or Versaillaise is the largest of currants and, all things considered, is to-day the most popular. The berries are of a fine, liquid crimson-color, though very sour. . . . . .

The Black Naples is the best black—unless it may be Lee's Prolific, of which the Rural has no personal knowledge. See Mr. Lovett's remarks. . . . . .

The best varieties of American gooseberries are Downing, fruit large, soft, juicy, good; of a light-green color; plant strong and prolific; Houghton's Seedling, strong grower, productive, medium-sized fruit, pale or red color, tender and good; Smith's Improved, strong grower, fruitful; berries, pale yellowish-green, firm, sweet, of an oval shape and large; Mountain Seedling, large fruit, productive; red, thick skin; fair quality. . . .

Sugar and hot water, tansy or lime-water are recommended for ants among strawberries. .

Mr. Harvey had the grape fever very badly about 25 years ago. During its paroxysms he planted 150 varieties. He has since rejected 147. . . . . .

Mr. Josiah Hoopes thinks that country people should be able to recognize the honorable agent from the rascal. Mr. Engle thinks that people love to be humbugged and he would let the matter work out its own cure. Mr. Meehan, who has been in the nursery business for 25 years, thinks there are cases where agents do good as well as much harm. There are many instances where trees would not be planted at all, if not for the agents. There are scores of nurserymen who employ only honest men. In his vicinity agents sell to people who never come to the nursery, and who pay more because they are waited upon. . .

Mr. Ohmer, of Ohio, states that the Snyder Blackberry is really iron-clad. It seems to resist, he says, everything known as injurious to other kinds. It will stand 30 degrees below zero and come out all right in the Spring. It is an enormous bearer of not large, though pretty good fruit. . . . . .

Mr. Geo. S. Wales says, "Strawberry culture, in the fewest words, is to select varieties

THE NIAGARA GRAPE.—FROM NATURE.—SEE PAGE 161.—FIG. 132.

suitable to the soil and to make and keep the soil rich, mellow and free from weeds." . . . .

THE Belle de Fontenay is an uncertain variety, thriving well only here and there. But its fruit is so delicious that one may afford to take a heavy risk. The berries are large, dark red, firm and possessed of what we should describe as a perfect raspberry flavor. It is worth bearing in mind that a crop of Fall berries may be produced by cutting back the canes in the Spring. The berry is of an irregular shape and the plant suckers quite too freely. . .

AFTER writing our brief instructions as to "planting strawberries in the garden," we had occasion to refer to Phillip Miller's "Gardeners' Dictionary," a ponderous work published in England in 1759, and again referred to on our editorial page. Thus we find that methods since then are in many cases surprisingly unchanged. We there find:

"The usual method is to lay it out into Beds of four Feet broad, with Paths two Feet broad between each; thefe Paths are neceffary for the Convenience of gathering the Fruit and for Weeding and Dreffing of the Beds; after the Beds are marked out, there fhould be four Lines drawn in each at a foot Diftance, which will leave fix Inches Space on each Side, between the Outside Rows and the Paths; then the Plants should be planted at about a Foot Diftance from each other in the Rows in a Quincunx Order, being careful to clofe the Ground to the Roots of the Plants when they are planted"—etc. . . . . .

ELLWANGER & BARRY say that the Thwack Raspberry is large, red and insipid, which tells the true story in the fewest possible words. They might have added that it is the worst berry to sucker known.

MR. HENDERSON praises Durand's Glossy Cone Strawberry as the first among seventy kinds in his grounds. He says it is the earliest of all, prolific, of good size and fine flavor. We have not tried it. . . . . .

MR. LOVETT entertains hopes that the Pocklington may prove a better grape "for the million" than the Concord. We trust it may not prove so hard a task to eclipse the Concord among grapes as it does to eclipse the irrepressible Wilson's Strawberry.

MR. T. T. LYON was astonished to hear the Thwack Raspberry so highly lauded at the last meeting of the American Pomological Society. We were among the first to test this raspberry. Though very firm and of good size, it is as nearly destitute of the flavor as a raspberry well can be, and so we stated three years ago. We cannot suppose that those who have eaten the Thwack can truthfully say one word in its favor as to quality.

THE following anecdote as told by Mr. J. T. Lovett, is very amusing to us and we trust it may so prove to our readers.

"One morning in the hight of the berry season (and every fruit grower knows what a time that is for rush and hurry) a dapper young man presented himself at the office, and said he would like to look at the berry "plantations." I conducted him thither, when he commenced to dispense his knowledge of berry culture with great freedom. He asked: "Well, aw, how many brands of strawberries have you?" To which I replied, "Something over a hundred and fifty." "Well, aw, and what are the names of them?" I knew it to be a task, but the question being a direct one I commenced to name them, going over the list as one would the alphabet. I had not named more than a half-dozen, however, when I was interrupted to be told that he, too, had quite a collection. Supposing, by my experience, that he wanted me to ask how many he had, and their names, I did so. "Well, aw," he remarked, "I have, I think, *three*; one, I think, is called the Wilson; the name of one I cannot remember, and the other is called Mammoth of the West," adding, "that is a good *brand*, isn't it?" Recognizing Monarch of the West as the variety referred to, I told him it was one of the standard sorts and much esteemed by many. "Well, well, aw," he continued, "I suppose you are constantly *hybridizing* new varieties by *grafting*, etc." The last I saw of him he was explaining with his soft "R's" to my foreman that the best way to propagate the grape was by seeds and by root cuttings." . . . . . .

PROFESSOR GEO. HUSMANN says: "The day may not be so far distant, when the despised grape of North America will become the only hope of the failing grape-growers of all nations." . . . . . .

THE strawberry—or rather small fruit—catalogue of Messrs. Ellwanger & Barry, gives short, pithy descriptions of the kinds named in what seems to us an eminently trustworthy manner. It seems to have no pets, and the desire is apparent that each variety should rest upon its own actual merits. For example, in speaking of the Great American it says, "said to do well in some places." Of the Pioneer it says, "foliage burns some"; of the Cumberland Triumph, "too soft for shipping long distances"—and so on through the list. . . . .

A LIST of strawberries agreed to by the late Kentucky Hort. Meeting, for succession, family use, etc., for that State was:—Warren, Longfellow, Cumberland Triumph, Sharpless and Kentucky. . . . . .

NEW GRAPES.

GEO. W. CAMPBELL, DELAWARE, OHIO.

THERE has probably been no time in the history of American grape-growing, when there were so many new grapes presenting their claims upon public attention, as at the present time. And the most remarkable and interesting feature in the case is, that so many of them appear to have real merit, and to indicate substantial progress in the way of improvement.

To one who can remember when the Isabella, the Catawba and the Clinton were the only varieties in the catalogues or generally known to cultivators, the exhibition the past Autumn at the meeting of the Mississippi Valley Horticultural Society at St. Louis, of 249 distinct kinds of native grapes seems almost marvelous. And they were not all there, either; for some of the most promising of the new sorts were conspicuous by their absence.

When the number is so great, it will be impossible in the brief space of a newspaper article, to notice more than a few of the newer kinds which appear most promising and worthy of attention.

The two classes of grapes presented most prominently for our consideration are, natural, or chance seedlings, and hybrids or crosses with native and foreign varieties, or between our improved native kinds.

I am obliged to say, after many years of observation and experience in raising hybrid grapes and in testing those of others, that all our hopes and expectations have not been realized; and although some of the most beautiful as well as the most excellent grapes have been produced by hybridizing with the foreign kinds, they have none of them proven quite as hardy or as well adapted to general use as the hardiest purely native varieties. From the foreign admixture they generally retain some degree of tenderness, with a disposition to mildew of the foliage in bad seasons or in unfavorable localities. But although they may not be suited to all places, and may always require more skill and attention than the hardier natives, that they can be grown in great perfection under favorable conditions is abundantly proven by the magnificent specimens annually upon exhibition at all our prominent fairs and horticultural meetings.

The idea of any one grape suited to general or universal culture in our extended country of diversified soil and climate, I fear must be given up; and we must look for the highest success by choosing the special varieties which are best adapted to particular localities.

With these remarks, I will give my impressions of some of the more prominent new grapes as they have appeared to me either by actual trial, or from examination upon exhibition.

The white or light-green and yellow varieties, are the most numerous, and among them

THE NIAGARA will probably be pushed most persistently by the stock company who have it in charge, and who are industriously manipulating public opinion in its favor. It is a handsome, light-green grape; bunch and berry full, medium to large, in size; skin rather thick and tenacious; pulp tender, and quality fair to good; to my taste better than Concord. It is evidently productive and a strong grower, and succeeds well at Lockport, where it originated. It may therefore be reasonably expected to do well in all similar localities. Compared with other grapes exhibited at Rochester in September, 1879, it appeared rather earlier in ripening than Concord; and specimens exhibited in fair condition at the meeting of the Ohio Horticultural Society in December last, show it to be a good keeper. I regard it as promising and worthy of trial; but with some doubt as to its hardiness in severe Winters without protection.

THE PRENTISS is another new white variety, sent out for the first time in the Autumn of 1880. There is no question as to the extraordinary productiveness and fine quality of this grape in its native locality. The clusters and berries are of full medium size; skin thick; flesh tender; quality so much like the Rebecca as scarcely to be distinguished from that variety. Upon the health and hardiness of the vine will largely depend the value of the Prentiss for general use; and though promising and worthy of trial, its character in these respects can hardly be considered as established.

THE DUCHESS is still another white grape of recent introduction. Very handsome, and very good. In quality, as exhibited by its introducers, better than either of the two above named. Several vines planted the past season made a good and tolerably healthy growth; but from the character of its foliage and general habits, I think it will be found in most places, suited only to amateur or garden culture; subject to mildew of the foliage in unfavorable seasons, and to injury in severe Winters; like the Croton, and Allen's Hybrid.

THE LADY WASHINGTON, one of Mr. Ricketts's grapes said to be a cross between Concord and Allen's White Hybrid, has been exhibited by its originator for several years, and is of the largest size, very attractive in appearance, and of excellent quality. Not of very high flavor; but pure, and free from foxiness. The berries are a light, pale yellow, with pink tinge when exposed to the sun. A few vines planted the past two seasons, have made a strong growth, with large foliage of the Labrusca character, and quite healthy. So far as tested, very promising. Will probably be found as hardy and as healthy as the hybrids of Rogers. Upon the success of the Lady Washington will probably depend the popularity of others of Mr. Ricketts's beautiful grapes; as I suppose it is introduced as one of the most promising for general usefulness. It ripens with the Concord.

THE POCKLINGTON among the white varieties of the pure Labrusca type, is worthy of attention for large size and handsome appearance, with a vine and general habit of growth closely resembling the Concord, apparently healthy and hardy. It ripens a little later than the Concord, and is in some respects better flavored though having rather more of the native aroma called foxiness. Unlike the Concord, however, it is a long keeper and I think will be found a popular and valuable market grape, worthy of extensive trial.

ANTOINETTE is the name of one of the late T. B. Miner's Concord seedlings, of the Concord type, but white in color, and of very fair flavor and quality, ripening a little before Concord; will bear handling better, and is a better keeper. Berries large; clusters medium. I think it will prove to be a healthy and hardy grape, of better quality and larger size than the Martha.

PURITY is a small, white grape, a native cross with Delaware; a stronger grower than the Delaware, with large, thick, downy foliage which has been always free from mildew; the vine as hardy as Concord in the severest Winters. It is among the very earliest in ripening, and in flavor and quality is unexcelled even by the Delaware. Its only fault, as grown at Delaware where it orginated, is its small size. The berries are a little larger than Delawares; the clusters average smaller. As it seems also to be, like the Delaware, entirely free from rot, it may be worthy of planting, nothwithstanding its small size.

NOAH is another white grape of entirely different character supposed to be a Taylor seedling of the Cordifolia class, and the best of its kind which I have seen grown in Ohio. It seems to have the remarkably vigorous growth, health and hardiness of the Elvira Grape, with larger and less compact clusters, better quality and less liability to crack when ripening. A little later than Concord. Recommended both for the table and for wine-making.

Several very handsome white varieties claimed to be Concord seedlings, of various degrees of merit were sent me from Illinois, some of which I have under trial. If they prove satisfactory as to growth and foliage, and are as good as those sent me from their native place, they will certainly rival the best yet introduced. Some Delaware seedlings, both white and red, promise to be improvements upon the parent in size, growth and health of foliage.

MOORE'S EARLY may now be regarded as pretty fairly tested, and cannot be better described than as an early Concord, with smaller clusters, and rather larger berries. I cannot see that it is superior to its parent in any important particular, except that it ripens from a week to ten days earlier.

WORDEN'S SEEDLING is one of the best black seedlings of the Concord character, very productive, with clusters averaging larger than Concords, rather better flavored, and five or six days earlier in ripening. It is, however, like the Concord, tender-skinned, and does not keep very well after removal from the vine. In hardiness, foliage and habit of growth it is almost identical with the Concord.

EARLY VICTOR is the name of a very promising, early, black grape, sent me by John Burr, of Leavenworth, Kansas. I have fruited it for two years past, and regard it as the best grape of its character that I have seen; and one that should entirely supersede the Hartford, Early Champion, Janesville, Whitehall, and all that abominable class which have, in my judgment, no merit except earliness; and which no man with a decent sense of self-respect or humane regard for his stomach should tolerate. The Early Victor is very early, healthy, hardy, and productive, with really

FRENCH THORNLESS.—FROM LIFE.—REDUCED ONE-THIRD.—FIG. 133.—See page 162.

good quality, pure in flavor and wholly free from coarseness or offensive odor. The clusters are handsome and well-formed, of the size of well-grown Clintons; period of ripening two weeks before Concord; foliage of the Labrusca type; growth strong and vigorous. Clusters hang long on the vine without impaired flavor; and berries do not fall. A fair keeper after taken from the vine. I do not know that it has been offered for sale; but when it is, I believe it may be purchased with entire confidence.

THE BRIGHTON, the past season, was very satisfactory, and must be classed among the best of the red grapes, for quality. It is a strong, vigorous grower, very productive, bearing handsome clusters of medium-large berries of rich and sprightly flavor. The foliage is large and not more subject to mildew than the hybrids of Rogers. Its only serious fault here is its tenderness in Winter. Except in mild Winters, it will require protection.

HERBERT, OR ROGERS'S HYBRID 44, cannot be called a new grape; but it deserves renewed attention, and is worthy of more notice than it has received; as it is one of the very finest black grapes, in all respects, within my knowledge. Among the strongest, hardiest, and most vigorous in growth of Rogers's well-known hybrids, it is also large in bunch and berry, and early in ripening. In flavor rich, sweet and sprightly; flesh tender and juicy; with no trace of coarseness or foxiness. I regard it as a first-class black grape, worthy of a place in every garden and vineyard.

THE LADY GRAPE has been largely planted, and scarcely needs either description or recommendation. The demand for it has steadily increased, and although there has been, in sections, complaints that its growth was not satisfactory, it has generally succeeded well, and may be regarded as a standard, and reliable early grape of fine quality, specially desirable for home use and near market. From its thin skin and tender flesh, it is not suited for distant shipment or rough handling; and it is not a long keeper. But the perfect health and hardiness of the vine, its productiveness, the handsome appearance and fine quality of the fruit and its extreme earliness in ripening render it more desirable than any other among the very early grapes yet introduced.

THE JEFFERSON, one of Mr. Ricketts's grapes, said to be a cross of Concord with Iona, seems to possess great merit, and certainly to be worthy of extensive trial. The grape very closely resembles the Iona in appearance, having long and large clusters, usually shouldered, and large berries. The flavor has much of the peculiar richness and sprightliness of the Iona, and seemed to me even richer and better than that favorite variety. If there is no mistake about its parentage, and the vine proves as hardy and healthy as it is claimed to be, it will prove a most valuable acquisition. I have not personally tested it sufficiently to say more than this, its foliage, so far, has been healthy.

FRENCH'S SEEDLING
FIG. 134.

EL DORADO, a grape of the same parentage as Lady Washington; and Highland, a Concord seedling crossed with Jura Muscat, are both fine grapes, and from a limited experience, seem promising as to foliage and habits of growth; but further trial will be necessary to determine their character accurately.

I can, in conclusion, only mention briefly a few of the many promising seedlings, principally from the Taylor and its class, which have been produced in the Southwest. They all seem to have remarkable vigor of growth, hardiness and health of foliage with great productiveness; and though specially recommended as wine-grapes, some of them will doubtless be valuable also for table use. Among those most promising are AMBER, PEARL, TRANSPARENT, UHLAND, BLACK TAYLOR, with several others known only by number. The above-named were produced by Jacob Rommell.

The MISSOURI RIESLING, and several other seedlings of the same character by Nicholas Grein, of Missouri, are there regarded as very promising; and there are many others constantly appearing, from which it is believed the most valuable results will be obtained for the vine growers of the country.

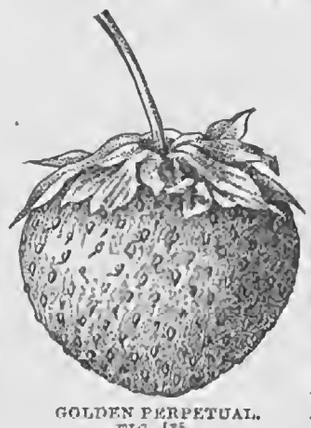
SMALL FRUITS IN NORTHERN VERMONT AND CANADA.

T. H. HOSKINS M. D.

Grapes.

I HAVE recently received a copy of the Weather Bureau's Report, with maps showing the isothermal lines for the different months. It was interesting to see that, although we have the temperature of Quebec at this point during the Winter months, we have the temperature of Southern Massachusetts during July, August and September. These are the months that make the grapes, and the early varieties accordingly ripen their fruit very well here and to the north and west so far as Montreal. But as the vines do not start so early in the Spring by about ten days, the varieties which are as late as Concord, or later, do not mature their fruit oftener than one year in three or four. In the city of Montreal the vines start as early as in Massachusetts, and the Concord ripens every year, though better some years than others. It can hardly be said that Concord, Isabella, Iona or Catawba ever reaches complete perfection anywhere north of Long Island Sound and east of the Adirondac Mountains.

The Delaware Grape is unquestionably the best and most successful variety among those well known and generally disseminated, for this and surrounding localities. Next I should place the Adirondac which, however, has a feminine fickleness that is very disappointing as regards a crop. Ennelan, Hartford, Creveling, Salem, and Allen's Hybrid are grown successfully. Champion, or Talman, ripens, perhaps, earlier than any other, but its poor quality, except for preserving, renders it undesirable. Massasoit and Lindley (Roger's 3 and 9) ripen usually, and are growing in favor with those who have tried them. Sweetwater, is quite a favorite, and an improved Sweetwater, larger in berry and far finer flavored than the old Sweetwater, has appeared in Montreal. Several early grapes of the Chasselas type are also grown successfully near Montreal; but all these foreigners suffer badly from thrip and mildew, though dusting with dry sulphur is almost a specific for the latter. From observation I think foreign grapes are generally more successful when grown here and in Canada out-of-doors than farther south. With some shelter, and especially in town gardens, they may be considered quite satisfactory. Among the new early grapes much is expected from Moore's Early, Vergennes, and r. Pringle's Golden Drop, the last an excellent white grape, closly allied to the Delaware in all its characteristics.


GOLDEN PERPETUAL.
FIG. 135.

Strawberries.

Wilson, here as everywhere, is the standard market berry, and is grown, even for a family supply, in three-quarters of the gardens. Downer's Prolific is regarded as the best ly, preceding Wilson by five or six days. Charles Downing is a general favorite. Crescent Seedling has been largely planted within a year or two, but I doubt if any pistillate variety will ever be held in much esteem. Monarch of the West is a failure generally, not ripening over the ends. Col. Cheney is too weak-stemmed, lying down in the dirt, and (unless both hands are used) the whole cluster comes off in picking instead of a single berry. Kentucky, Glendale and Windsor Chief are being tested for a late crop, but I have no decided success to report with any late variety as yet.

Raspberries.

Clark and Philadelphia have proved pretty satisfactory among the reds, but neither is enough superior to wild berries, which grow in great excellence and profusion and sell for six cents a quart, to induce extensive planting. Turner has not been tried, so far as I know. Nothing but the very hardiest will stand any chance in this climate. The Blackcaps, chiefly Doolittle, are grown for market, and sell readily in all our villages at 10 to 12 cents. Mammoth Cluster and Davison's Thornless are both failures. Seneca prolongs the season a little, and appears about equal to Doolittle. Gregg has not been tried.

KENTUCKY.—FIG. 136.

KENTUCKY.—FIG. 137.

Blackberries.

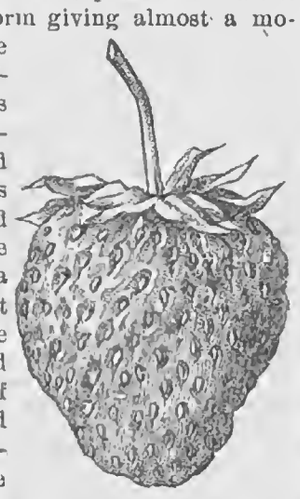
No blackberries will stand our Winters uncovered. By planting the hardier kinds under the lee of a fence, where snow drifts will soon cover them, we occasionally secure a good crop. Sable Queen has given the most satisfactory results, being quite as hardy as any, very productive, with large, handsome fruit of good quality.

Gooseberries.

Houghton's, Downing's, Smith's, the American and Shaker Seedlings have all been tried, and all succeed well. Downing mildews somewhat, especially if neglected.

Currants.

Currants are our most profitable market fruit, the currant worm giving almost a monopoly to the large grower who can afford to attend to his bushes in time. Hellebore is here applied as soon as the bushes are in bloom, and when it is well done we rarely see a worm. The fruit brings as good a price as strawberries, and can be grown at half the cost. The Red Dutch is the only variety of much value for market, La Versaillaise and Cherry being poor bearers, and white varieties unsalable. The Red Provens was at one time thought to be a great acquisition. It is extremely productive, but the fruit rots on the bushes almost as soon as ripe. We are looking for something superior in Fay's Prolific.

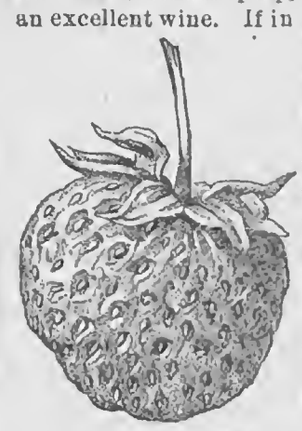

ARNOLD.—FIG. 138.

Orleans Co., Vt.

OUR NEW RIPARIA GRAPES.

PROFESSOR GEORGE HUSMANN, COLUMBIA, MO.

WHILE Eastern grape-growers, in producing new seedling grapes, have mostly sought to improve the Labrusca, and to hybridize it with the Vinifera, our Western men have turned their attention more to the improvement of the Riparia, or River Bank Grape, taking the well known Taylor or Bullitt for the parent. Their efforts were directed more to the production of valuable wine grapes than of those adapted for table and market; and, taking this variety for a starting point, the object they had in view may be summed up in a very few words. The Taylor has a thin skin, tender pulp, is juicy and makes an excellent wine. If in its seedling we can increase the size of bunch and berries, also making them set better and prove more productive while they retain the good qualities of the parent, we shall have what we want—a first-class *white wine* grape. That they have succeeded in this more than they dared to hope, no one can doubt who has seen the seedlings grown and tasted the wine made from them, which already is competing successfully with the best vintages and productions of the Rhine. But that they should also be able to produce superior table and market grapes was more than they expected. As all these seedlings seem to be entirely phylloxera-proof, and as they withstand the coldest Winters without the slightest injury, I may safely predict that they will form one of the foundations upon which the failing vineyards of France and California will be rebuilt, especially as they propagate very readily from cuttings. I will give short descriptions of the most prominent varieties. Mr. Jacob Rommell, of Morrison, Mo., has produced the following:


ARNOLD.—FIG. 139.

ELVIRA.—Too well known already to need a minute description. Bunch medium, shouldered, very compact; berry about the size of the Catawba, greenish-yellow, with pale amber tint when fully ripe, sweet, sprightly and good. Vine short-jointed, stocky, with fine, deep-green foliage, enormously productive.

AMBER.—Same parentage—Bunch fully medium, shouldered, not so compact as Elvira; berry oblong, pale amber when fully ripe, size of Isabella; skin thin but tough, covered with an exquisite bloom; very sweet, high-flavored, juicy, with very little pulp. A beautiful and very good grape, valuable for market and wine. Vine a strong, long-jointed grower showing accidental hybridization with Labrusca, healthy and productive.

PEARL.—Similar to Elvira in bunch and berry, but not so compact and finer flavored. A very strong grower, with beautiful deep-green foliage—of high promise for wine.

From Elvira seed, Mr. Rommell has produced several which are of very great promise, but not in the market yet, and which have only fruited twice. They are:—

ETTA No. 3, a strong, vigorous grower, showing a slight mixture with Labrusca; very productive. Bunch medium-compact, shouldered, from three to five on a branch; berry round, larger than Catawba, light green, turning pale amber when fully ripe, juicy, sweet and delicious, very pure in flavor and with tender pulp. If this grape increases as much in size of bunch and berry as the Elvira has done, it will be a treasure to grape-growers. It shows a great increase in size over last year already.

ELVIRA SEEDLING No. 4.—Bunch very long and loose; berry about the size of Catawba, pale amber, round, later than the foregoing, very juicy, sprightly and fine in quality, pure Cordifolia leaf; a strong grower.

ELVIRA No. 5 (named Faith, because Mr. Rommell has faith in it).—Bunch long, with heavy shoulder, rather loose; berry round, about size of Delaware, pale amber, sweet as honey and of very pure, fine flavor; seems a very strong grower and productive; vine shows some admixture between Cordifolia and Labrusca. These are the most prominent of Mr. Rommell's seedlings of Taylor and Elvira. He has many others not so fully tested, and some belonging to other classes, of great promise.

Mr. Julius Weydemeyer, of Hermann, has produced, also from Taylor seed, the

UHLAND, a beautiful and very good grape, containing a high per cent. of sugar, as the must ranges from 90 to 100 degrees, and makes a delicious wine resembling the finest hock. Bunch medium, moderately compact, shouldered; berry rather below medium but nearly as large as Catawba; round, golden-yellow, changing to pale amber. Vine a strong grower.

CAROLINE.—FIG. 140.

GREEN'S GOLDEN No. 2.—Vine a moderate grower; leaf shows admixture between Riparia and Labrusca. Bunch large, shouldered, loose. Berry round, larger than Concord, bronzy-yellow, transparent, very juicy, sweet and tender pulp; leaf heart-shaped. This is a beautiful and good grape; would be very attractive for market, if the skin does not prove too tender.

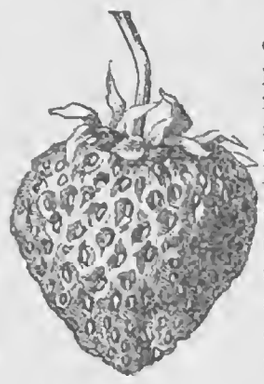
These are not yet named:—

No. 3.—Vine a moderate grower and healthy; heart-shaped foliage, showing admixture of Labrusca with Riparia. Bunch compact, not shouldered. Berry round, below medium, a trifle larger than Delaware, yellow, turning pale amber when fully ripe, very sweet, high-flavored and good.

No 4.—Bunch and berry about size and shape of Delaware; straw-color; berry round; pulp very tender, sprightly and sweet, very good. Riparia class, with slight mixture of Cordifolia; heart-shaped.

No. 5.—Bunch medium, compact, not shouldered. Berry color of Catawba, but not quite as large, pulpy, but sprightly, thick skin; very productive; Labrusca foliage.

No. 7.—This is the earliest of the lot; a charming little grape. Bunch and berry about size and shape of Delaware, golden-yellow, with peculiar star-like specks, spicy, sweet and juicy; little pulp; must make first-class wine; leaf deeply lobed, showing a mixture of Labrusca and Riparia.


HERVEY DAVIS.—FIG. 141.

Mr. Nicholas Grein, of Herrmann, Mo., has produced the following new seedlings. They are evidently all of Taylor origin, some of them with a slight Labrusca mixture, and I give their descriptions as taken in his vineyard, and also at other places where I saw them fruiting.

No. 1.—Commonly called Missouri Riesling. This is the best bearer of Mr. Grein's seedlings. Vine a moderate, very healthy grower; leaf lobed and pointed; seems to be a hybrid between Riparia and Labrusca; very productive, healthy and hardy. Bunch medium, shouldered, moderately compact. Berry medium, nearly the size of Catawba, pale amber when fully ripe, very sweet and of fine flavor; tender pulp. This is undoubtedly a fine wine grape, and may prove an attractive market fruit.

THE NOAH.—A Taylor seedling of Mr. Wasserzieher, of Nauvoo, Ill., which I had also bearing in my vineyard. It is a true Cordifolia, to judge from its leaf; seems to be very productive, healthy and hardy, and I consider it very promising. Bunch long, moderately compact and shouldered. Berry round,

(Continued on page 161.)

THE
Rural New-Yorker,

PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MARCH 5, 1881.

Now that the heaviest part of the work of the subscription season is over, we would thank our readers if they would advise us of ANY irregularity in the receipt of the RURAL NEW-YORKER.

IT is gratifying to be able to state that the interest in small fruits has not subsided any since our last special of September 7th, 1878, and it is pleasant for the RURAL to know that the suggestions, censures and praises therein published have proven exceedingly trustworthy. The interest in grapes is now probably more widespread and intense than at any other time in our country's pomological history; the interest in strawberries and raspberries may be said to "hold its own" at least; while that in blackberries and currants, and even in gooseberries, is being strengthened. We hear less, indeed, of mere *size* in strawberries, but quality, vigor, firmness and adaptation to different soils and climates are, more than then, exciting the attention they deserve. We have given our best attention to this number, and the articles which appear from our highest horticultural authorities, with our original engravings, will, we confidently hope, not disappoint the anticipations of our good friends and readers. The RURAL itself has its heart in fruit culture of all kinds, and it believes that it cannot engage in a better work than to seek to spread its enthusiasm until it shall become a delightful contagion among its subscribers from which, we trust, not one may escape.

THE Charles Downing, one of the best of strawberries, like the Wilson adapts itself to a great variety of soils. As to ripening, it may be considered medium.

WHAT has been said respecting the advisability of European vineyardists trying our new grapes might just as forcibly be said as to our new strawberries and raspberries.

THE Glendale, so far as we may judge by our own plants and by the reports which have been received, promises to become one of the most popular of late strawberries. It is quite productive, firm, of very good quality and stands drought well.

IN answer to many inquiries let us state that stamps for the "Seed and Plant Distribution" are NOT REQUIRED from those who subscribe through us for any of the papers announced in our clubbing list, the Inter-Ocean, Detroit Free Press, N. Y. World, St. Louis Globe-Democrat.

CUT all grape-vines received from the nursery this Spring so that but *one* cane remains and upon this permit but *one* bud to grow. Pinch out every axillary bud (or lateral) as it unfolds. By this plan a single strong cane will be produced, that will probably fruit the second season.

IN the way of currants there is little to speak of that is new except Fay's Prolific, a fine portrait of which was given in the RURAL of September 18, 1880. This in productiveness and size of bunch is a very decided advance in the history of the currant. It will probably be offered for sale next Fall.

IT is probably true that, unless we except the grape, no other fruit is to the same extent affected by soil, situation and climate as the strawberry. No matter how generally or enthusiastically a certain variety may be praised, it is safer to test it in a small way before engaging in its extensive cultivation.

WE have given little space to directions as to the preparation of the soil for small fruits and their cultivation. The RURAL NEW-YORKER has within a year given these directions in careful detail. Besides, in many of the catalognes which we are noticing all needed information is concisely and plainly presented.

WE find there is not one of all our raspberries—and we have one or more of almost every kind—that has not been more or less injured by the past severe Winter, during which the thermometer has been as low as 16 degrees below zero. The fact is, as we have before stated, there is no such thing as a *hardy* raspberry.

THE Crescent Seedling, of which so many and conflicting opinions have been expressed, seems to have proven itself one of the most prolific strawberries in cultivation. It begins to ripen early and continues, unless the season is very dry, through an unusually long period. It is not a firm berry, is inferior in quality and of but medium size at its best.

SEVERAL of our contributors have expressed themselves at odd times that we were hard on the Great American and others of Durand's Seedlings. Extended trial, however, seems to have shown that our estimate of them, as made from our tests at the "Rural Grounds," was not too severe. A strawberry that does well only here and there and needs special and dainty cultivation ought never to be recommended to the public in general.

IT is well known that small fruits, grapes etc., as well as large fruits may do well here and there under peculiar conditions, while in a great majority of cases over the country, they prove, if not worthless, far inferior to other varieties. We have been somewhat surprised, however, that the reports of small fruits which have been made from time to time as the results of tests at the Rural Experimental Grounds have been, and are being, so fully corroborated by practical horticulturists everywhere.

THE CUMBERLAND TRIUMPH.—Several years ago, when this strawberry was just sent out to be tested, the RURAL NEW-YORKER praised it as among the best of the many kinds we were then testing. It is of uniformly large size and our vines have been loaded with berries when many other varieties for various reasons have failed. It is of perfect shape, the flavor is excellent. The color is a pale-red or pink. That it is rather soft for shipment is all that can be said against it. We have read reports from many different parts of the country which show that this berry is everywhere growing in favor among those who have given it it a good trial.

WE might fill this page with instructions as to the preparation of the ground for grape-vines, and the reader would find himself little wiser at the end than at the beginning. There is nothing intricate about it, and long-drawn-out directions, even though plainly written, serve only to confuse the inexperienced and make him feel that he must proceed cautiously as if walking upon eggs, where only the exercise of a little good sense is required. If the land is naturally rich and well drained, it is only necessary to spade it up and rake it level. If the land is poor, good earth must be supplied to a depth of a foot at least. Bone and wood ashes may safely be supplied—or old manure of any kind. Spread out the roots carefully and cover them firmly with mellow earth to a depth of six inches. If the land is leachy and dry, a covering of old stable manure over the roots will do good service. Give *every* vine a stake or arbor to grow upon, and tie the canes to such support as they grow. Grape-vines should be planted not less than eight feet apart both ways. Ten feet apart for the vines, the rows eight feet apart, would be better.

AMONG raspberries, the Cuthbert fully maintains the character we gave it when distributing it over the country to our subscribers, as the best raspberry known. Our cut is true to life. The Turner is probably the best early raspberry. It is very hardy, prolific, and the fruit is of excellent quality. We have found the Highland Hardy uniformly the earliest, though less hardy than the Turner and of poor quality. The Gregg is making many friends and caution in commending it to our readers is no longer needed. The berries are larger than those of the Mammoth Cluster, ripening a little later. They are as black and glossy as jet. The Caroline has been discussed at length in these columns recently. We need only add that, being quite hardy, many will be glad to procure it with whom the Brinckle's Orange generally fails. The Caroline is too soft for a market berry, but the quality is such that it should be grown in every home collection. Among blackberries we may mention the Taylor as having proved extremely hardy, of excellent quality, and highly productive. But the berries with us have been rather small. The Snyder is much praised in the North and West, but it has not proved very productive at the Rural Grounds.

"BLIND" STRAWBERRIES.

MANY of our varieties of strawberries have imperfect stamens or simply the rudiments of them—such, for instance as the Crescent Seedling, Windsor Chief, Golden Defiance, Hovey's Seedling, etc. Such kinds must, of course, to bear fruit, be placed near other kinds which bear *perfect* blossoms or those having stamens at least, so that insects or the wind may carry the pollen from the one to the other. In looking over Philip Miller's "Gardeners' Dictionary" published in London in 1759, we see that he guards his readers against "blind" plants which he explains "is when there are Plenty of Flowers but no Fruit produced; if thefe Flowers are well examined, they will be found to want the female Organs of Generation, moft of them abounding with Stamina, but there are few, if any Styles, fo that it frequently happens among these barren Plants, that some of them will have a Part of an imperfect Fruit formed, which will fometimes ripen. This Barrenness is not peculiar to Strawberries," etc. But he makes no allusion to what we call pistillates or those having perfect pistils without stamens, while in our present cultivated varieties purely staminate flowers would seem to be rare, while pistillate varieties are becoming more and more numerous.

SEEDLING CULTIVATION OF SMALL FRUITS.

A LETTER from a correspondent reminds us that nothing has been said respecting the seedling cultivation of small fruits in this number. We may therefore briefly refer to the subject here. The seeds may be sown in a cold-frame or hot-bed, or in pots covered with glass. The soil should be fine and light. Shelter from the midday sun must be provided by boards, or evergreen boughs, or lattice work. The soil must not be permitted to become dry—neither must it be kept too wet. The seeds will generally germinate freely, though many may remain dormant until a second year. To cross varieties two methods may be followed. The first is to plant pistillate kinds among perfect-flowering kinds, and to separate both from all other varieties between which a union is not desired. If then the pistillates bear fruit, the pollen must have been furnished by the perfect flowers. Another method is to plant the females, or pistillates, under glass, and to apply the pollen from other selected perfect flowers as desired. These latter may also be cultivated under glass or in the garden. But if it is desired to *know* the parentage, of course, they must be protected from the pollen which may be carried by insects or the wind from other plants.

Seeds of small fruits germinate far more freely planted as soon as they are removed from the berry. If not planted until the ensuing Spring, they should be wrapped in bits of paper or muslin and preserved in sand, which must be kept slightly moist in a low temperature, or they may be placed in boxes of sand and buried during the Winter.

The seeds of grapes, raspberries, blackberries, currants and gooseberries may be sown in cold-frames in the Fall, and if the frames are properly protected during the Winter, they will, for the most part, germinate in early Spring. The frames in this case should be filled with moss, straw or hay. It simply amounts to burying the seeds, except that they are already properly planted. As we have before stated, grape seeds will, many of them, germinate in three weeks if planted in pots as soon as they are taken from the berries. The pots should be kept in a greenhouse or sunny window in a pretty uniform temperature of 70 degrees. Anybody may raise his own small fruit seedlings and feast upon the varieties which he himself originated.

BREVITIES.

CURRANT items are current for this number.

THE cions of grafted grape-vines will usually bear the second season.

OUR friend Mr. Derrick, defines strawberry SHORT-cake as "a cake without any strawberries in it."

LATE February or March in the South and April in the North, are the best times to graft the grape-vine.

WE are glad to find that the Caroline Raspberry has stood the Winter at the Rural Grounds as well as any.

CUTTINGS of varieties of the grape, which do not root readily, or weak-growing kinds, may easily be grafted on other stocks.

OUR cuts are all from nature and we have carefully avoided any exaggeration. Perhaps we have inclined the other way.

WE repeat what the lamented M. B. Bateham once told us, that bone dust and wood ashes are the best fertilizers for the grape.

WE have between 60 and 70 varieties of new strawberries upon which we hope to be able to make a full report in time for late Summer planting.

MONDAY, Feb. 28.—Upon a careful examination of our raspberries, we find that the Turner is least harmed of any variety in our test grounds.

WE respectfully object to Dr. Hoskins's expression "feminine fickleness," as applied to the Adirondac Grape, or, in fact, to any fruit or to anything whatever!

STRAWBERRIES raised under glass are now selling at the retail stores of this city at 75 cents per dozen. They are of small to medium size and only half colored.

MR. LOVETT writes us that "Herbert," Rogers's No. 44, is a splendid grape. So we have thought, not from experience, as we have not tested it, but from what other friends who have, have said of it.

As goose turns to geese in the plural,
The same rule to berries applied,
Gooseberry would be in the RURAL
Gooseberries, in flocks if espied.

WE had supposed from our own tests that Prouty's Seedling would become better known. It is very handsome and of excellent quality while the plant, with us, is strong and productive.

WE may be permitted to hope that our subscribers, after having read this number of the RURAL NEW-YORKER, will feel, for once in their lives, that they have had enough of small fruits.

IT seems to us that this number of the RURAL NEW-YORKER together with the catalogues of Small Fruit nurserymen, ought to answer most of the pressing questions which may arise in the minds of those who cultivate small fruits.

WE have tested "Goethe" (Roger's No. 1) and Rickett's Secretary during the past six years, as we remember. We shall this Spring dig up the vines to make room for new-comers, that may or may not prove to be more worthy of cultivation.

POTTED strawberry plants have been well tried and found wanting. They are worth no more than first-rate plants not potted and decidedly less if not well potted and transplanted at the right time. We hope small fruit growers will give up pot-plants.

MR. CHARLES DOWNING tells the agricultural department of the New York Tribune that the Snyder is the best blackberry for a cold climate; very hardy, immensely productive, about two thirds as large as Kittatinny, but will produce as many bushels per acre; the quality is equally as good as Kittatinny, or any other.

IF MR. E. P. ROE were asked what is the most beautiful and delicious strawberry in existence, he would name the President Wilder. He thinks it is perfect in flavor, form and beauty, and that it unites in one exquisite compound the best qualities of the two great strawberry species of the world, the Fragaria Virginiana and the F. Chilensis. The fault that he discovers in it is, that in many localities it is not productive.

MR. P. J. Berckmans, the well-known horticulturist and nurseryman of Augusta, Ga., says that the Wilson is the most profitable berry on his grounds; Monarch of the West next. Col. Cheney, Cumberland Triumph, Black Defiance and Kentucky do well. The Neunan is the great berry for the coast about Savannah. It is sent to this market in March and April in immense quantities. The berry is aromatic and pretty but very sour.

A CONSIDERABLE time ago, a box of the Duchess grapes was sent to us, by Mr. A. J. Caywood of Ulster County, N. Y. These grapes had been sent to several other places and, if we have not forgotten, exhibited at one or two fairs. The note from Mr. Caywood stated that Mr. Downing, after eating some of them, remarked that they had "raisened somewhat and were as sweet as a raisin," or words to that effect. Now, the grapes sent us *were* more raisin than grape and they were as sweet as a raisin to our taste; wherefore we repeated and emphasized what we supposed Mr. Downing had said, as our own opinion. But we have reason to believe that Mr. Downing did not make use of the words which Mr. Caywood imputes to him, at all. This is not the first time that opinions regarding the quality and value of new fruits have been printed as Mr. Downing's, which he never expressed or entertained, and it is time that such liberties with the respected name of our first pomological authority should cease. We are not authorized by Mr. Downing to make the above remarks. But we take for granted that one who habitually expresses his judgment so conservatively cannot be pleased to see his name signed to statements which, whether trustworthy or not, he never uttered or perhaps entertained. We respectfully call upon Mr. Caywood to state how it happened that Mr. Downing was erroneously quoted in his letter above alluded to.

(Continued from page 151.)

about size of Catawba, or a trifle smaller, greenish-white, not quite as juicy as Elvira and other Riparia I know; with harder pulp and a tongher skin, but sweet and of pleasant flavor. It will no doubt carry well to market, and I would rather eat it than Prentiss, as it is more spicy. Makes a very fine wine.

THE NIAGARA GRAPE.

(See page 149.)

In the Fall of 1879 Mr. J. S. Woodward sent us a Niagara grape-vine with the request that we would test it under the condition that the wood of the season's growth should be returned to him. It was planted in black half-muck, sandy soil to which a small quantity of barnyard manure was added. The growth was confined to a single cane which at the end of the season (last Fall) measured in length 18 feet. The remarkable engraving presented is an exact copy of a photograph of a vine taken Sep. 6th 1878 in a vineyard of about one acre planted in the Spring of 1878. The ground had formerly been in vineyard of Ionas and Israellas which had been removed three years previously. After their removal, it was planted to strawberries which bore one crop and the vines were then removed and the ground planted to mangels.

The Niagaras were one-year-old plants and after they had grown about one foot high, the young growth was entirely killed by frost.

One bearing arm of the vine shown was 18 inches; the other 30 inches in length, making four feet of bearing wood. It bore 63 clusters which weighed when picked, Nov. 6 (though ripe in late August), 26½ pounds. The whole vineyard, according to Mr. P. C. Reynold's estimate, averaged over 10 pounds of fruit per vine.

The Rural New-Yorker with no interests to subserve save those of the public, has endeavored in every way to present such information as might serve to guide its readers in their selection of the new fruits which, in less or greater numbers, are every season brought to notice. Among the many kinds of new grapes of high promise, the Niagara unquestionably, so far as can be judged from trials necessarily restricted, takes a foremost place. Still, beyond the fact of its vigorous growth in our Experiment Grounds, we are only enabled to state what others have said regarding it. We should feel sadly disappointed if a grape that has revealed so many qualities which seem to adapt it to the wants of the thousands, should after a while be found wanting in some essential quality.

CURRANTS-LEE'S PROLIFIC.

(See page 146.)

The currant plant requires a cool climate. It rarely, if ever, is injured by cold, but it is impatient of heat and drought. So decided is it in this respect, that while it has proved eminently lucrative in some sections of the New England States, New York and elsewhere in the same latitude, yet only in exceptional cases has it been found profitable south of the isothermal line of Philadelphia. It suffers chiefly from the bright sunshine of July and August, causing it to drop its leaves prematurely and thus rendering it unproductive. This feature, of course, varies somewhat with the different varieties, but to no great extent. The spread of the currant worm having now become so universal that the pest is to be found almost everywhere, has no doubt been the means of preventing many from planting and caused others to neglect their bushes. This should not be, for this insect is as easily controlled as the Colorado Potato Beetle, and anyone who is not willing to employ the necessary means to rid himself of the pest, can scarcely be said to deserve the fruit. Nobody thinks of going without potatoes on account of the beetle! Just here I may note the currant worm has never troubled any of my black currants.

It seems peculiar that in this age of progress so valuable and important a fruit as the currant should have suffered such general neglect. Had it received a tithe of the care and time in its improvement that have been devoted to the strawberry or the grape, there is little grounds for doubt but we would now have at least a hundred fine varieties instead of less than a dozen that are worth cultivating. Fay's Prolific—figured in the Rural of September 18—seems to be a move in the right direction among red varieties; and Lee's Prolific, which originated in England a few years past with Mr. Lee, marks a great advance among the black. As is well known, black currants are used principally for making jams and jellies. In the New York market, at least, they usually meet a ready sale at remunerative prices; but growers need a variety with larger bunches than those of the varieties hitherto cultivated, that the crop may be gathered more quickly and at less expense; while amateurs desire a kind with less austere and less musky fruit. Lee's Prolific supplies the requirements of both. As will be seen by Fig. 111, which is a representative cluster, it is a vast improvement in size, both of bunch and berry, on the old varieties. At the same time the quality is much milder and better. The bushes are of stocky, rigid growth and the term "prolific" in the name, is applied with singular appropriateness; for the amount of fruit they bear is simply astonishing. It ripens about ten days in advance of the well-known Black Naples, which, although no special advantage, is, so far as I know, no disadvantage. Unlike the old varieties of the black currant, it is quite difficult to propagate, one reason, no doubt, why it has not become better known and a feature which will impede its progress to popularity in the future.

Little Silver, N. J. J. T. L.

The Scuppernong Grape.

We do not remember ever before to have seen a large, life engraving of the well-known Scuppernong or Southern Muscadine. The branch portrayed was sent to us from Aiken, S. C., by Mr. S. Ott, when the grapes were still green, though nearly of mature size. The leaves are shiny on both sides, small, coarsely toothed. It will be seen that the bunches consist of several grapes only, instead of many as in other varieties. The berries are large—over a half-inch in diameter—having a thick, tough skin and a musky flavor, ripening in early Autumn. The Scuppernong is a variety of Vitis vulpina, the Southern Fox Grape—the same as the Concord is a variety of our Northern Fox Grape—Vitis Labrusca. A distinctive characteristic of the Southern Fox Grape is that the bark is firm, never separating in strips as in other species.

THE SCUPPERNONG GRAPE.

H. W. RAVENEL.

This is an American grape, and an accidental seedling or "chance sport" of our native Vitis vulpina, or Bullace grape. All the traditions of its origin point to the eastern shore of North Carolina, on a small lake or river of that name. From that original source it has been propagated by cuttings and layers.

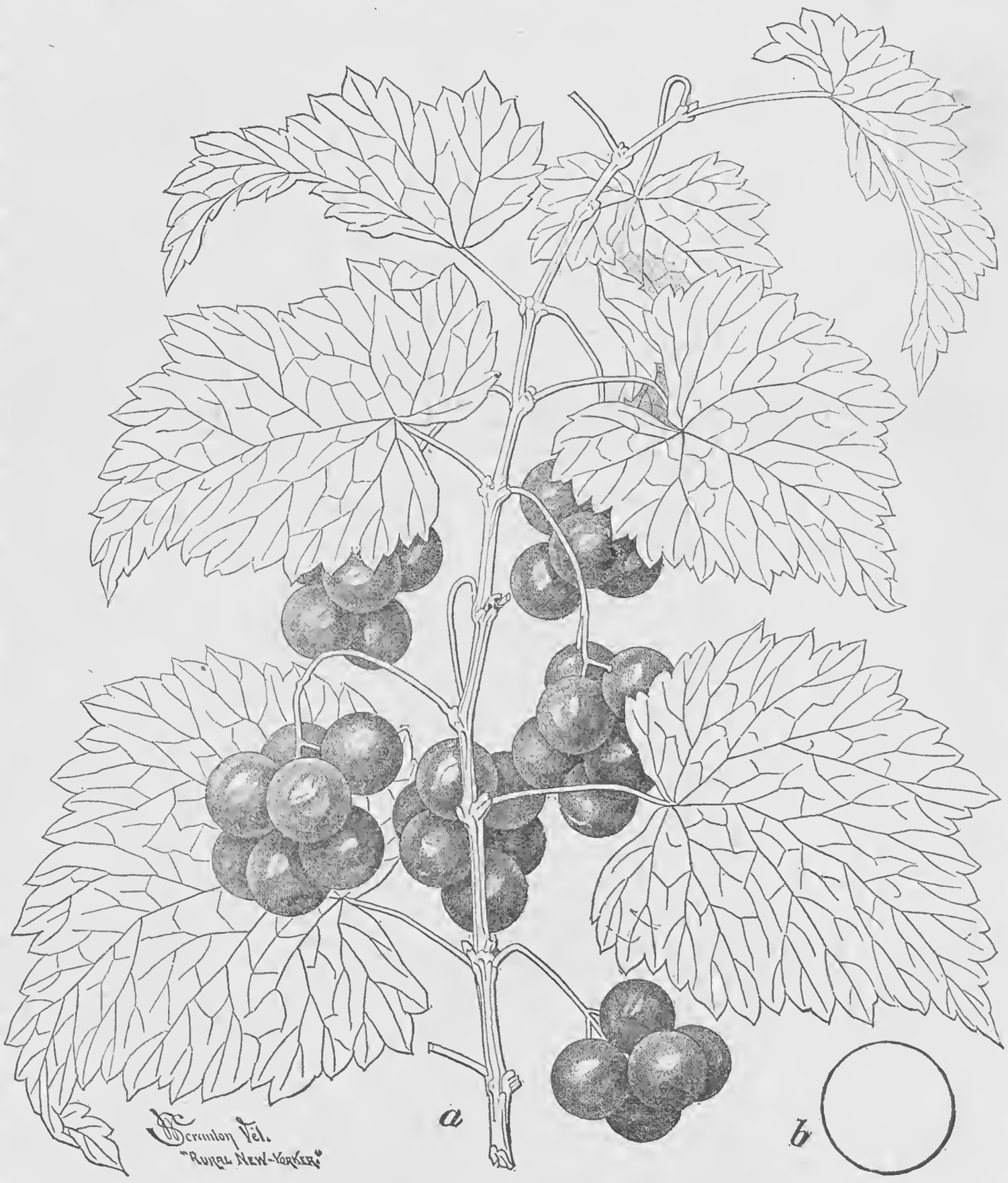
It is essentially a Southern grape, ripening here in this latitude during the month of September, and it could scarcely be cultivated successfully beyond the lower portion of Virginia. It is later in shooting in Spring than any other grape, not blooming here before the middle of May, thus escaping all risk of Spring frost. The thick skin protects the fruit from atmospheric changes and it never rots. It is hardy, vigorous in growth, well adapted to any kind of soil, and, with proper management, it gives a safe and certain crop.

Like its parent, the wild Bullace, the berries are few (from one to ten or twelve), borne in loose clusters, and mostly ripening together. The berry is round, and, when fully grown, about the size of a boy's marble. Like all the so-called "white grapes," the fruit is green (like the Malaga in color), changing to a dull brown when fully ripe. With a large tough pulp when half ripe, it loses most of the pulpiness when thoroughly ripe. The flavor is peculiar, and unlike that of all the foreign or American grapes in cultivation.

The whole habit of the grape is so unlike that of those in general cultivation and its training and management are so entirely different, that I may be pardoned for going somewhat into detail in what may be new to most of your Northern readers. From the compact structure of the wood it is difficult to get cuttings to strike. The usual mode of propagation is by layering. Those who propagate largely keep certain vines for that purpose, well cut back to the stump, leaving numerous shoots of short length with four or five buds. In the Spring these start and grow rapidly. By June they have attained a length of five or six feet, and are then fit for layering. A bunch of them, say from six to a dozen, are brought together, the leaves stripped from the lower portion, a hole made with the trowel near the stump, and a handful of well rotted manure thrown in; the vines are bent down into the hole, and earth is banked upon them to keep them in position, the exposed ends being slightly elevated by pressing the earth upwards. Hoe off weeds and grass during the Summer, and by November they are ready to be lifted—all well rooted. One good, strong root may give from fifty to a hundred layers.

These rooted layers may be planted out at any time during the Winter. The usual mode of training is on a canopy, which is enlarged as the vine grows. They should be set about 25 to 30 feet apart in all directions, and even a greater distance on very rich land. With these, as with all other plants, care in making a good start, by opening large holes and manuring well, tells on the after growth.

After they are planted out, the young vines should be cut back to three or four buds, and a stake driven in near the vine, standing about six feet out of ground, to which the vine is tied. As the season advances all the lateral shoots must be pinched off, so as to leave a single clean stem, which is kept tied to the stake as it grows. At the end of the first season it should have reached the top of the stake.



a, THE SCUPPERNONG GRAPE.—FROM LIFE.—REDUCED ONE-THIRD.—b, NATURAL SIZE OF THE BERRY.—FIG. 142.

The following Winter a canopy must be started on which the vine may be spread. Four upright posts, about six feet high and ten feet apart, with slats over the top, will give space enough for the second season's growth. This canopy can be extended afterward to suit the vine. It is important that the vine be kept uniformly spread out over this canopy so as to give sun and air. If they overlap and become crowded, the production of good fruit is lessened. The trunk must be kept clear of all laterals below the main branches on the canopy.

The Scuppernong is said not to need pruning. This is measurably true. The habit of this species is the starting of most of the buds which in other grapes remain dormant. There is then a greater subdivision of the branches, and a more bushy and compact growth, without these long branchless shoots so common to other grapes. The bushy, compact habit and the evenly distributed fruit render pruning unnecessary. A judicious thinning out of branches when they are too crowded, and the cutting away of feeble parts will help the general vigor of the plant.

The vine will begin to bear the season after it has taken to the canopy, the second year from the layer. As the growth increases annually, so does the production. I cannot give, from my own knowledge, any definite statement of the production, never having made any careful measurement; but 25 to 30 bushels to the old vines are often spoken of. A vintner in North Carolina says, in one of our horticultural magazines: "We have a good many single vines that bear 50 to 75 bushels." A bushel of Scuppernong grapes, weighing about 60 pounds, will yield from three to four gallons of wine, besides the vinegar that may be made from the pomace. In making the wine, it is usual to add about one pound of crushed sugar to the gallon of juice, to give it more body and better keeping qualities.

Besides the Scuppernong there are several other good varieties of Vitis vulpina in cultivation. Among them may be mentioned, Thomas, Flowers, Mish, Tender-pulp, Peedee. The last-mentioned and the Scuppernong are greenish grapes, the others black or purple. They are all, I believe, accidental seedlings; that is, they were found in the woods, and have not resulted from man's improving agency.

It is a curious fact in regard to this species, that whilst there is a great tendency to variation in the quality of the fruit, even in the wild state, the other botanical characters remain permanent. I have compared carefully these cultivated varieties with the wild grape,

and can detect no change whatever in leaf or general habit. The only deviation, besides that of color in the *fruit*, is in the color of the *tendrils*, three of the so-called white varieties —Scuppernong and Peedee—having pale greenish tendrils, while the purple kinds have purple tendrils.

There is undonbtedly a good field here open for experimenting and improving the vigorous and prolific Southern grape. In every case that has come under my observation, the seedlings of Scuppernong have reverted to the original black grape. Of some 50 or 60 seedlings that I have raised from selected fruit, all were black and inferior to the parent. I have no doubt, however, that with systematic and persevering endeavors, better varieties may be obtained. Taking advantage of the tendency to variation in this as in other grape seedlings, some variety may yet be found of *better quality* and *earlier habits*, so as to be capable of cultivation further North.

Aiken County, S. C.

THE GOOSEBERRY.

The editor of this paper has before now given his opinion that it is sometimes as useful to tell our failures as our successes, and with us the gooseberry is only a partial success. In the early days of our horticultural experience, when we were more sanguine than now, our garden was planted with Crown Bob, Whitesmith and Roaring Lion. For some years they grew well and bore a fair crop of enormous berries; but one unfavorable season brought mildew and, strange to say, the fruit was never afterward clear of the pest, which seemed to settle down into an incurable disease. So, to my regret, the strong-growing bushes were uprooted, and in their places the Houghton Seedling was planted. This, though small, has several good qualities. It is very prolific, clear of mildew, almost free of treacherous thorns, and the fruit can be quickly and easily stripped from the bushes. But it brings only half price in the market, and during a hot, dry season at the time of ripening, the whole crop scalded on the bushes, although there was plenty of leaves, as we are not overwhelmed by the ravages of the caterpillar. For this there is no remedy unless mulching would be of avail, which would be quite an expensive operation, our system being one of clean culture. My attention has been attracted by a variety called Smith's Improved, and last season, in the catalogue of a reliable dealer, I saw it noticed as "quite free from mildew." The temptation to purchase was strong, and but for heavy expressage I should have done so, but concluded to wait till Spring. The new catalogue of the same dealer says "*almost* free from mildew," and I wait further developments. But we want a large, hardy, prolific gooseberry, as good in its place as a Concord among grapes. It is well known that in the vicinity of large cities this fruit is not liable to mildew—is it owing to the dryness of the air, or some peculiar property of the smoke and gas? If any one has had experience on this point, I shall be glad to learn. Meanwhile, what shall we plant for *profit?*

ANNIE L. JACK.

GRAPES IN CALIFORNIA.

CHARLES H. SHINN.

Many persons believe that the leading and most profitable industry in California will ultimately be viniculture in all its branches. They point to the extent of territory adapted to this purpose, and to the opportunities made for us by the comparative failure of the French vineyards. For two years past the one remarkable feature of horticultural talk on this coast has been the grape question; and it is good to see the real courage and positive enthusiasm of the grape growers as a class. They have outlived their fears and conquered their earlier difficulties. Time, labor and patience, so we believe, are now the only elements needed to make California, for good or for evil, a great grape-growing State.

Most of the progress made has been within the past five years. In 1876 about 4,000 acres of vines were planted out in addition to the area already in vineyard; in 1877, 5,000 acres; in 1878, 7,000 acres; in 1879, 9,000 acres; and in 1880, 10,000 acres. This added acreage is supposed to represent about 35,000,000 vines. Nearly 65,000 acres are now planted to vines in this State. It is difficult to estimate how much will be planted this year; but the season is very favorable, and the growers report an astonishing sale of cuttings. Thousands of small farmers are preparing to set out five or ten acres apiece. Many persons of means design to plant large vineyards. The work has already begun. February is considered the best time to plant. To guard against the phylloxera some use cuttings of American vines; others are testing our wild grape (Vitis Californica) as a resistant stock; others depend on winter-flooding the soil, or choose isolated spots and propose to fertilize well, and use bi sulphide of carbon on the first appearance of evil. If, on this pleasant morning in later January, sunlit and beautiful, one might overlook the whole State from Modoc to San Diego, wheat-sowing and the planting of vineyards and orchards would appear the most salient features of the spring-time land, fresh with countless flowers and glad with hopes unnumbered.

I have spoken of 65,000 acres now planted in vines. Arpad Haraszthy, President of the State Vinicultural Association, and one of the leading grape-growers and wine-makers, thinks that the vines at present planted ought to produce 20,000,000 gallons of wine within four years from now, or, allowing for the raisins, brandy, and table grapes used, they can safely be counted on for 15,000,000 gallons. The wine product of last year was 11,000,000 gallons, worth $3,500,000. The 400,000 gallons of brandy made are worth $600,000. The raisin crop counts for $100,000, and the table grapes for as much more. Definite encouragement as this gives, it seems small enough when compared with what is hoped for in the near future. Investigators generally agree that about 40,000,000 acres of land within the limits of this State are adapted to grape culture. Much of this is government land, or railroad land, for sale at a low price. Some of it was wheat land, but the continuous robbing of the soil for thirty years has exhausted it for the cereals. California, though only six-sevenths as large as France, has six or eight times as much land suited to grape-growing purposes. We should have to plant vineyards at the rate of 10,000 acres a year for more than 50 years, before the loss occasioned in France by the phylloxera would be supplied. The wine product of California now is only one-380th part of that of the world. Switzerland produces as much as this State, and some of our counties are larger than Switzerland and have twenty times as much grape land. Some men who plant vineyards will choose unsuitable soil or poor kinds of grapes, or will neglect to give them proper care. The result will be failure. The culture of other fruit and vegetables, will occupy the attention of many horticulturists. So, on the whole, the grape growers do not think that the business can be overdone for many years to come.

The phylloxera is undoubtedly a danger here, though it travels slowly and is only known in a limited belt north of the Bay of San Francisco, and in a few isolated vineyards elsewhere. The pest can be kept within its present limits and gradually destroyed. So far the vine-growers have agreed to levy a sufficient tax for inaugurating this good work. A graduate of the State University has established a factory to make bisulphide of carbon.

The largest vineyards in California are in the counties of Sonoma, Napa, Santa Clara, Yolo, Los Angeles, and San Barnadino, though almost every county has bearing vines of, at least, the old Mission variety. Some of the largest vineyards cover 500 or more acres, and are managed with great skill and energy. The grape belt of the State lies along the Coast Range, from San Diego to Mendocino, occupying numbers of small valleys and extending over uplands and slopes, but seldom lying less than ten miles from the sea. It crosses the great central valley of California skirting the boundary hills, sometimes extending entirely across the lowlands, and in a measure it occupies the region from Kern to Shasta. It also winds in an irregular ribbon along the Sierra foot-hills, extending up the gradual slopes till the climate becomes too cold for European grapes. Above this limit there are extensive tracts where Clintons, Catawbas and other American varieties flourish. In this extensive territory each vintner can be suited. Here are places in which to plant the favorite vines of Portugal, Spain, Italy, Greece, Madeira, and more northern favorites. It is fair to suppose that time will discover here and there locations of unique merit, vineyards of almost inexpressible value. Dr. James Blake, an acute observer, thinks that parts of Lake County may possibly produce wine of unusual quality. Little has yet been done. Those who choose the volcanic soils on the hills must not expect to raise crops nearly so heavy as are raised in the valleys.

Many calculations have been made as regards the cost of starting a vineyard in California. On land costing $50 per acre, near to market and in a good neighborhood, a vineyard can be planted and cared for through the fifth year for $125 per acre, including first cost of the land. After that, cultivating, gathering and hauling ought to be done for $20 per acre per year. Four tons of grapes per acre—which is a low average—at $25 per ton, give a profit of $80 per acre, from which, however, the interest on the cost, $125, must be taken. In authenticated cases yields of eight, ten, and even fifteen tons per acre are reported. Since the prices paid for grapes were last year often as high as $30 per ton, it will be seen that large profits have been secured. Men have paid for vineyards from the profits of two years' crops, and wine-makers have in several cases rented vineyards for a term of ten years at a cash rent of $50 per acre per year. Some of the cases reported by local journals border on the fabulous; but the true and unbiased thing to say is, that in the last three or four years the vine-growers have undoubtedly been the most prosperous class on the coast, and are doing all they can to prepare for still greater victories.

The various societies, local and State, devoted to horticultural matters are taking up the subjects of diseases of trees and vines, culture, and varieties, and each day brings out some new experiment of interest. Nomenclature is rather mixed, owing to confusion among different importations and the loss of labels, and the State Vinicultural Society is wrestling with this problem. As regards diseases, Professor Hilgard, of the State University, is doing good work through correspondence and personal observation. Among rather recent importations of varieties of grapes was the noted Almeria, a fine shipping grape for table use, and grown chiefly in Portugal. Some experiments, not yet far advanced, are being made with seedlings and hybrids of the best foreign grapes.

San Francisco Co., Cal.

GRAFTING GRAPE-VINES.

In various ways the attention of the public has been specially drawn of late years to the relations of stocks and cions of grape-vines, but nothing has stimulated investigation so much as the loss of millions of money all over Western Europe from injuries inflicted by the phylloxera. Experiments with all kinds of grape-vines have been tried, and all sorts of remedies employed, but, in spite of the largest rewards, the evil has not as yet been overcome. The attention given to the foreign problem by all nations of Western Europe and America has naturally given a new impetus to the interest taken in grafting vines in the United States. People are beginning to think of the advantage it would be to the Delaware and other grape-vines of moderate vigor in most sections, if they could be sustained and strengthened by a strong-growing stock like the Concord and Clinton. Others go even farther and ask themselves why health and endurance as well as vigor of growth might not be communicated by the stock to the cion—why a variety liable to mildew might not be kept pure and unblighted by grafting it on a rugged kind. These are, of course, as yet mooted questions, not exactly in regard to the fact that stocks and cions affect each other, but in regard to the character and results of special unions of stocks and cions. Why people have not grafted grape-vines more, both in Europe and America, must be explained by the fact that we are apparently forced, or think ourselves forced, to employ cheap methods; but the time is fast approaching when the value of grafting grape-vines with skill and intimate knowledge of the idiosyncrasies of special kinds, is bound to force itself into notice.

This subject of grafting grape-vines can hardly receive too much attention, for there is reason to hope that some of the most difficult problems of grape growing will eventually be solved, at least in part, by a happy selection and union of stock and cion.

S. Parsons, Jr.

TWO PECULIAR BLACKBERRIES.

Crystal White.—This is so very different from all other blackberries, it may be regarded as a veritable prodigy. What it is or where it originated is as yet an unanswerable question. The best information I have been able to obtain is to the effect that it was found growing wild in Eastern Illinois, and it appears to be an example of albinism in the blackberry (just as the Yellow Cap Raspberries are albinos of the Black Cap species); but of what species I am unable to determine. The canes are of strong, upright growth; are in no way an exception to those of the popular cultivated varieties in thorniness; are of a pale yellowish-green color and are abundantly furnished with light-gray foliage—quite distinct in color and shape from any of the cultivated black varieties. Berries, of medium size, rather long, as shown by Figure 111, nearly always perfect, and regular in form, clear, translucent white; exceedingly sweet, quite spicy but somewhat insipid. I would not class the fruit as "best" or even "very good" in quality, it resembling, in this respect, the common white mulberry. Like those of some varieties of strawberries, the blossoms are deficient in, if not destitute of, stamens, and it needs to be planted contiguous to a stamen-bearing variety to fertilize it, when it is excessively productive, setting fruit in such masses as often to cause the stout canes to break or bend to the earth with the weight. Having passed unharmed the Winter of 1879-80, which was notable for its many sudden changes in temperature, I had thought it hardy; but the past Winter I find has been too severe for it, for its laterals have killed back considerably. While it is strikingly beautiful in fruit and intensely interesting, it will, I am disposed to think, ever be valued more as a curiosity than anything else.

French Thornless.—There are a score or more of so-called "Thornless" varieties of the blackberry, such as Hoosic Thornless, Dodge's Thornless, Wachusett Thornless, etc., none of which *are* thornless, correctly speaking, and which have given rise to the assertion, "Thornless Blackberries produce more thorns than berries." There is little room for doubt but the "Thornless" of which I now write (see Fig. 133, p. 150) is a variety of the European species (Rubus fruticosus) and its canes are as free of thorns as willow twigs. It is the only truly thornless variety I have yet seen. In habit it is of vigorous but slender, drooping growth. Berries small, very dark purple or black, sparkling; are formed of many small drops closely wedged together, and are produced in the greatest profusion. It ripens quite early; the berries are sweet and rich but of a rather mawkish flavor. In hardiness it is quite remarkable, not having been injured the past severe Winter, even at the tips of its little wiry branches. On the whole, it is perhaps more ornamental than useful, although a claim of both may justly be made for it.

Little Silver, N. J. J. T. Lovett.

The Eumelan Grape.—Among all the grapes that grow in my collection (and I have tried many varieties the last thirty years), the Eumelan, or one that I bought for that grape, is one of the best for the table, for the palate and for the stomach. One may eat of it to fullness and no unpleasantness is felt. The stomach never loathes this grape, but, on the contrary, is soon ready for more. As a Winter grape, it is unsurpassed. It needs but little care to keep it nicely until Mid-winter. It keeps well lying on shelves and only covered with two or three thicknesses of paper. The room in which it is stored should be dark and cold, but not freezing. It keeps well in three or four-pound boxes. If packed in cork dust it will keep through the Winter. I left some in a room last Fall where they froze and thawed three or four times, and in December they were quite palatable. For keeping, this grape should be thoroughly ripened.

Glens Falls, N. Y. E. W. K.

STRAWBERRIES FOR FAMILY USE.

It seems strange that while the families of village and city people usually have a fair supply of this, the most delicious, the most healthful and most easily grown of all the small fruits, not one farmer's family in five has even a taste, of the cultivated varieties at any rate, to say nothing of a good supply through the season; and yet each family might have an abundance at one-half or one-fourth the price the villager has to pay for them. If you ask householders why they don't raise strawberries for their families, the most common excuse is that they cause too much trouble or cost more than they are worth. Nothing that is worth having can be had without some trouble and a crop of strawberries need not necessarily cost more than a crop of cabbages or potatoes. Wishing to know just how much it cost to raise a small plot, I kept an account of the expense of five square rods, on which strawberries were grown for family use last year. The plants were set early in the Spring of '79, in rows four feet apart, one foot apart in the rows. They were hoed and weeded out five times during the season, and the runners allowed to grow and root all they would, and the ground was nearly covered with plants by Fall.

EXPENSE.

Plowing and fitting land	$ .34
Taking up and setting plants	.38
Cultivating, hoeing and weeding	2.20
Commercial fertilizer	.50
Picking fruit	2.72
	$6.14

The plot produced 186 quarts of berries, which supplied a family of eight persons with an abundance through the season and left 65 quarts to be sold, which brought, at wholesale, 13 cents per quart, or $8.45—more than enough to pay for the work done on the whole plot. But, taking no account of those sold, our berries cost only about three and one-third cents per quart. No account is made of the plants set, because they were of my own growing and cost comparatively nothing; but supposing they had been purchased at the usual prices, the berries would have cost only about five cents per quart. It should be remembered that the same plot will probably bear a good crop this year, with no further expense except that for picking the berries and a dollar or two for fertilizer. I should add that the varieties were Downer's Prolific, Charles Downing and Kentucky; and if there are three more reliable sorts for family use that will cover the strawberry season and be so valuable in other respects, it remains, I think, yet to be proved. It is well to test the new varieties, and there is a good deal of pleasure in it, if one does not mind disappointment; but the main dependence had better be placed on the old well-tried sorts. L. W. Goodell.

Hampshire Co., Mass.

Caroline Raspberry.

I noted in a recent number of the Rural the remarks of some of your contributors in re-

gard to the Caroline Raspberry, and I wish to add my testimony as to its value. I received a few plants from the originator, Mr. Carpenter, two or three years since, and have been simply delighted with them. I find them entirely satisfactory, and a marvel in the way of productiveness. I have tested most of the prominent varieties, as well as the old and standard sorts, and a feature which I consider largely in the favor of this is, that persons who cannot eat the raspberry generally, find the flavor of this pleasant and agreeable. It has been a matter of surprise to me that it was not more extensively introduced, and more generally offered in the catalogues of the different nurseries. I trust the attention which it has received from the RURAL will result in its being more widely introduced. I write this, not in the interest of Mr. Carpenter, whom I do not know, but specially in the interest of the people who must be benefited by the extended introdnction of so good a berry as the Caroline.

Passaic Co., N. J. ALBERT TURNER.

REFERENCES TO SEVERAL CUTS.

MARVIN. Very late—large, crimson, firm, of good quality. A promising berry. Foliage burns in some places. Page 147-148.

SHIRTS. See T. T. Lyon's article. Page 148.

HUDDLESTON'S FAVORITE. Better quality than Crescent Seedling. Soft. Very productive—bright red. Page 148.

HERVEY DAVIS. From John B. Moore. Firm, of excellent quality. Page 151.

GLENDALE. Light-red, firm, productive. Very late. Strong grower. Page 147.

SENECA QUEEN. Very productive—dark color when ripe. Early, juicy, soft. Page 147.

CAROLINE. Sent to us last Spring by John B. Moore to be tested. We shall be able to report next Summer. Page 151.

ENDICOTT'S SEEDLING. Sent to us last Spring by Mr. E. P. Roe. It seems to be a vigorous variety. Page 148.

KENTUCKY is, with us, very prolific even during dry seasons, ripening its fruit for a long time. The plants are as vigorous as any we have. The berries are sometimes twice the size of our engraving. This berry does well in Augusta, Georgia. Page 151.

FRENCH'S SEEDLING. From E. & J. C. Williams. Very large leaves—vigorous, prolific, of fair flavor. Page 151.

COWING'S SEEDLING (E P. Roe), planted in late May, made a good growth. Berry richly flavored, bright red, medium size. Page 148.

PHOTO OR MARTHA. Leaves large. Stems of both leaves and fruit notably short. Berry dark red, medium early, soft. Page 147.

Directions for Planting Strawberries.

FOR THE GARDEN.—One of the best methods is to plant in beds about four feet in width, leaving a walk between. Three rows may be planted in each bed set fifteen inches apart each way, the outer row being nine inches from the walk. By this method the beds need never be trodden upon.

RUNNERS.—If large berries are desired, runners should be cut out as they appear during the season. Thus new crowns are formed in the old plants for next year's fruit. Keep the ground clear of weeds and the surface mellow.

MULCHING.—Just before the fruit *begins* to ripen, cover the ground between the plants and about them with straw or freshly mown grass. This will protect the plants against drought and the fruit from the sand and soil which are spattered over them by rain.

FOR FIELD CULTURE—The matted-row system is generally adopted, as the cultivator and horse perform the labor. The rows should be not less than four feet apart and the plants 18 inches apart in the row.

"Glossy Cone."

IN our trial grounds last season we tested, alongside of this variety, about 30 kinds and by a careful comparison decided that the "Glossy Cone," had the greatest number of good points. The size is a full average; flavor equal to and somewhat resembling that of the old Triomphe de Gand; the form, as the name well indicates, is cone-shaped; color deep scarlet-crimson, having a gloss as if varnished, making it one of the most beautiful of all strawberries. It bears in the greatest profusion, and the fruit is thrown well up on strong fruit stalks. But its most valuable merit is earliness, in which, with us, it leads all others. We first observed its profusion of flowers, showing the rows white from end to end when the earliest of the other kinds only showed a flower here and there. It held to this early development all through the season, and we picked ripe fruit from it three days before any other sort, except Crescent which was equally early, but which in all respects is perfectly worthless with us.

PETER HENDERSON.

White Blackberries.

Having grown blackberries only in small lots, this may not be a fair comparison. Yet what experience I have had has been against the light-colored varieties. The

CRYSTAL WHITE, with us, is of a yellow, rather than white color; berry about half the size of Dorchester; rich flavor, and sweeter than most of the varieties; not productive; plant hardy, and a good grower: may do for the amateur who is after novelties, and is satisfied with a light crop.

KENTUCKY WHITE.—What few berries our plants have produced, were of a transparent white; berries not well filled out, plant not so hardy as Crystal White. I. J. BLACKWELL.

Notes from Charles Downing.

I have only seen the Bidwell Strawberry at Mr. Roe's once the past season, and know but little of it, only that it is of good quality and very promising.

I think the quality of the Duchess Grape is *very good*, at least. The vine is also a vigorous grower and a good bearer. I don't know enough of the Niagara to say any thing decidedly. The Prentiss, so far as I know it, is also of very good quality.

GRAFTING THE GRAPE.

FIGURE 143 is a cion cut as cions are usually cut in pear or apple cleft-grafting. Two cions may be inserted, one on either side, if the stock is large enough, or but one, as may be desired. Care should be taken to see that the inner bark, which is very thin in the grape, of the cion and stock is placed as nearly as possible in contact. The stock should be prepared as is elsewhere described by Mr. Burrows.

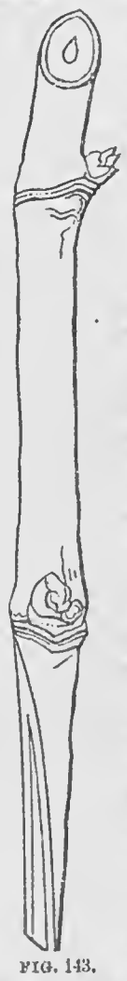


FIG. 143.

During a visit South last Spring to Tryon Mountain, N. C., we visited an old gardener who had met with entire success in grape-grafting, by the following method:—Cuttings of wild vines were made in late February or early March, with or without a heel of two-year-old wood attached, as shown in Fig. 144. These were grafted by cleft-grafting or by saddle-grafting, as shown, and both stock and cion were placed in boxes of mellow soil in the cellar. Here the cuttings (stocks) would form a callus in a few weeks, and in late April or May they were set out in nursery rows. We were also shown a number of old vines, some of which were two inches in diameter, that had been cut off within two feet of the ground. A vertical incision was made at the top and in this a cion, cut wedge-shape on one side as well as at the end, was firmly pressed until the bark of the stock and that of the cion were continuous. No bast or wax of any kind is needed in this kind of grape grafting,

A writer in the Gardeners' Monthly is quoted by Professor Husmann in his "American Grape Growing." The method is illustrated by Fig. 145. "After the first four or five leaves are formed, and the sap is flowing, you choose the place on the vine where you intend to graft. At that place, wrap tightly a twine several times around the vine. Below the twine, make a sloping cut down, as shown, and a similar reversed cut above, about one inch deep. In selecting a cion prefer one that has naturally a bend. Cut it wedge-shape at both ends and a little longer than the distance between the cuts in the vine (stock). Insert the cion, taking care to have the bark in contact securing it by a string in the middle to the stock, drawn tightly enough to force the cion

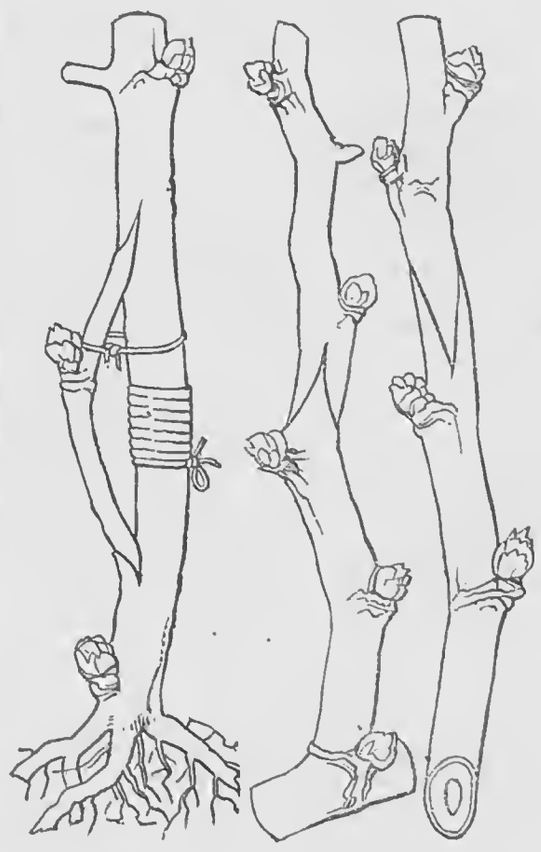


FIG. 144. FIG. 145.

ends into their places." The joints in this case should be covered with wax. The bud of the cion will soon grow, when by degrees all shoots of the stock and in the Fall the stock above the lower insertion of the graft, and the cion above the growth from the bud, may be removed.

GRAFTING THE GRAPE.

J. G. BURROWS.

This topic has been writen and rewritten about by ancient and modern authors until there seems but little, if anything, left untold; yet perhaps the results of my observation and experience on the subject may prove interesting to some of your many readers, and I offer them in the hope that they may to some extent benefit, at least, the beginner.

There are various circumstances which make it desirable to graft the vine; for instance, we may have some strong vines of a worthless variety, and by grafting them with an improved sort we cause them to produce fruit of greater value in much less time and in larger quantity than we could have obtained by replacing the old by young vines of the desired variety. Again, some of our finest varieties have either defective foliage or feeble roots, or they may be of delicate constitution, and by grafting them on some of the hardy and strong-growing sorts, we improve their condition sufficiently to enable us to grow them profitably for market. By adopting this method many of our vineyardists grow to perfection and at a handsome profit, such varieties as Allen's Hybrid, Rogers's Hybrids, Rebecca, Montgomery, etc.

There are several methods of grafting in practice, viz: splice-grafting, inarching, cleft-grafting, etc., the last being more generally in use, not, however, on account of its superior merit, I presume, but because it is the one form most commonly followed in grafting fruit trees. The vine is generally considered to be far more difficult to graft than most other fruits, and justly so from the fact that the bark is very thin, and the grain of the wood usually more or less crooked and gnarled, making it difficult to form a perfect-fitting joint. Vines of medium size make the most desirable stocks; but those of large size may be successfully grafted if they are vigorous and healthy.

To perform the operation, I remove the earth surrounding the crown of the vine down to the roots, and select that portion of the stock below ground which appears straightest in the grain of the wood; I saw off the top within three or four inches of the roots, and, having split the stock through the center, select for the cion a piece of the desired variety of medium size, short-jointed, with well ripened wood, consisting of two buds; if the wood should be long-jointed, then one bud only should be used. Beginning just below the bud, pare the cion to the shape of a rather long, slim wedge, to fit the cleft in the stock, and insert it by opening the cleft with a wedge or chisel and press it down firmly, being careful to observe that the bark of the stock and that of the cion match and cross each other slightly, in order that the cion may catch the rising sap, and thus sustain it till the union is complete. If the stock is small and does not hold the cion firmly in place, it should be secured by wrapping firmly with cord or wire. If the latter is used, care must be taken that it is removed about August 1st, or after it has made five or six feet of growth, otherwise it would eventually cut off the cion.

After the operation is completed a mound of earth about three feet in diameter sufficiently high to cover all except the top, should be thrown around the cion which should be protected on the sunny side by a half-inverted flower pot or board until it has formed a union and made some two or three inches of growth, when it should be gradually inured to the sun, and after a few days the protection may be entirely removed. Numerous suckers, or sprouts, will make their appearance from time to time from the crown of the stock, which must be removed or they will rob the cion of the required amount of sap and it will either perish or produce a feeble and sickly growth. To remove these superfluous shoots, a careful hand should be employed, as in the early stages of growth there is great danger of breaking off the young growth of the cion. In doing the work, carefully put aside the earth with the hand and take them off one by one. When all are rubbed off, replace the earth around the cion, covering it well up to the top of the old wood. This should be repeated as often as shoots appear.

There are several periods during the year when the vine may be grafted, and each has its advocates. Some prefer the early Spring; others are most successful in May when the vines have grown some three or four inches, and up to the early part of June. In this case, however, the cions must be kept in an ice-house or cold cellar to preserve them in a dormant state. The season generally adopted in this vicinity is early Spring—as early as the ground is fit "to work." Some of our vineyardists are very successful with this early grafting, one of my neighbors getting as high as 95 per cent. of the cions to grow, and many of them make from ten to twenty feet of growth, and produce a medium crop of fruit the second year after being grafted.

Dutchess Co., N. Y.

A CHAPTER ON GRAPES.

S. B. PECK, MUSKEGON, MICH.

IT is interesting to notice the different descriptions given of the same variety of fruit by different persons, both as regards the different likes and dislikes of flavor and successes and failures in the raising and marketing. Probably no grape is more generally a favorite, as to flavor, than the Delaware, especially in the minds of women and children, who are supposed to be more specially fond of sweets; still I lately heard a woman say, when offered nice Delawares, "No, I don't want them, I'd rather have the other." The other was the Concord.

Others admit the Delaware to be a nice, sweet grape, but say it doesn't pay for market, while a Western New-Yorker, who raises a great variety and markets them in Boston, gives preference to it for profit. Most persons like the flavor of the Iona, but many abandon it as too tender and uncertain, while a grower of large experience claims that he made a great mistake when he supposed that he could get a larger yield of Concords than of Ionas with the same care. The Clinton is generally claimed to be a poor, miserable, sour grape; but in setting a dish each of Clintons, Concords, Ionas and Delawares before a dozen school children for a trial of taste, a large majority voted for Clinton; and a young girl, who for a day was employed in preparing Concords for the press, and on the second day set to work on Clintons, said on tasting them, "Oh, these are a great deal better. —N. B. These Clintons were *ripe*.

Assuming that I, in common with the rest of mankind, have the right to differ in opinion from others, even though my opponents may be wiser than I, I proceed to express my opinion, my likes and dislikes of some of our more common varieties of grapes for the latitude of Central New York and Michigan.

I dislike the Isabella, Creveling and Adirondac, not because they are subject to disease, as sometimes charged, nor because of any special inferiority in quality, but simply because they do not bear enough to pay for their pruning and training. I dislike the Diana, not particularly on account of its flavor when ripe, but because it is subject to fits of barreness or excessive fruitfulness, causing it to fail to ripen in the latter case and to be worthless.

I like the Concord, not on account of its flavor, which to me is insipid, but because of its hardiness and productiveness, and, more especially, because the grape-eating public accept it and relish it as the "grape for the million" and hold on to it with a tenacity worthy of a better grape. I like the eight varieties of Rogers's Hybrids that I have tested (except No. 1, Goethe, which does not ripen), because of their vigor and hardiness, good size, peculiar saccharine flavor and fair but not excessive fruitfulness. In these there is much of a sameness in flavor and habit, though I have a choice in favor of the Salem for flavor and extreme hardiness, the wood always ripening to the extreme end of the smallest twig; but if you value extreme excellence don't let it overbear. It was first called Rogers's No 22, but latterly Rogers's 53—which is right? [Thomas says 22; Barry, 53—we do not know—Eds.] It ripens about with the Concord, and as to its number and name, were it as early as Rogers's No. 39 (Amenia) and Rogers's No. 5, I would number it "A No. 1," and name it "Seek-no-further." I know other grapes not worth mentioning, all having one fault like the Dutchman's horse "good for nothing"; still I am not sure but they, like crab and seedling apples for cider, would make the best of wine.

ERRORS IN DESCRIPTIONS.—The Salem is described by high authority as "the largest, most attractive and popular of Rogers's Hybrids"—the Wilder and Merrimac, Nos. 4 and 19, are larger. The Ives's was described as "too late for northern latitudes"—it ripens before the Concord. The Clinton, one of the slowest in its process of ripening, is described as "seldom good or even passable till ripened by frost"—not one word of which is true. The truth is that the process of ripening of this as well as of other grapes is a change of color and also a change of a portion of its acids to sugar, *glucose*, and if frost arrives before this process is completed it destroys or neutralizes a part of the acid, making it to the taste less austere but preventing it from ever ripening to perfection and destroying all its natural richness of flavor. Most persons may have noticed that a slight frost upon the naked potato gives it, when cooked, a sweetness of taste, the frost having changed a part of the starch to sugar—a change with which chemists are familiar.

TESTING NEW GRAPES.

WITHIN the past five years I have purchased about 50 of the newer varieties of grapes that have been so highly praised and so extensively advertised. If one-tenth of these new kinds prove desirable, I shall be agreeably disappointed. The cost of new plants is an important item, and to be added is the loss of space occupied by the vines during the years necessary to give them a fair trial. If, after finding them undesirable, we are obliged to remove them and set out others, much valuable time is lost.

To obviate this, in a measure, I set out new varieties alternately with other vines that are known to be valuable—as the Concord, Delaware, Salem, etc.; then by layering the best, one can easily and with comparatively little loss of time, fill the space from which the worthless kinds have been removed. New vines that cost three or four dollars each, are generally slow growers, therefore we can allow the better known varieties to occupy most of the room, until it is determined which we prefer.

I am of the opinion that in the general scramble after new grapes, we are likely to under-estimate the good qualities of many of the older kinds. While it is wise to spend a reasonable amount of time and money in the pursuit of better grapes, it is unwise to discard those that have already proved successful, until we are *very sure* that we have something better. The fact that a new kind of fruit is well advertised, is no proof that it is of any particular value. Perhaps the Champion has been more extensively advertised and more thoroughly puffed than any other grape, and yet it is probably the poorest that was ever offered to the public. We should judge more from the character of the persons offering new plants for sale, and not be caught by silver-tongued agents, or glittering advertisements. A person that has been engaged in palming off a worthless article, should never be trusted again.

People that are, in the main, honest, are sometimes deceived. They are so anxious that their new grape should be a desirable acquisition, that they can see more of its good qualities than others are able to discover. Again, what will succeed in one location, may fail in another, so that the best we can do is to keep on trying for better fruits, but to do so with due caution. NELSON RITTER.

SMALL FRUITS IN NORTH CAROLINA.

RASPBERRIES.—I have tried almost all sorts, but have never yet found any suitable to this climate or worth cultivating even for home use, save a few of the Black Cap varieties.

BLACKBERRIES.—None of the cultivated kinds pay for market purposes. The native kinds grow most profusely everywhere, and in some sections are sent to market, while in others they are dried in immense quantities.

STRAWBERRIES generally do well, the Wilson (if we do not include Miner's Prolific) taking the lead over all the thousand and one new varieties (or old ones with new names) that have been tested here. The berries would be extensively cultivated could we get cheaper express rates of transportation than at present prevail. Myself and one other rather extensive grower about six miles from here, are about all that now cultivate strawberries for the market, in this section. They prove, on the whole, anything but profitable after the first two or three shipments, coming then into competition with the low-priced fruit from Maryland and Delaware, so that with our present rate of express freight, we are obliged completely to abandon shipping before, perhaps, half of the crop is gone. Accordingly the cultivation of strawberries has a yearly tendency to become less, for anything beyond home use.

CURRANTS, whether white, red or black, after seven years' trial in all possible ways, I have, like previous experimenters, altogether abandoned, they proving utterly barren and useless through what seems to be mildew.

GOOSEBERRIES of the Houghton varieties do remarkably well and bear profusely. Only a few, however, are cultivated, and those merely for home use.

Grapes

I cultivate largely as they are almost a sure annual crop. Unlike peaches, they have never in my experience, been hurt by frosts with a single exception, and rarely does anything damage them in the least, provided those few sorts that are subject to rot, are excluded. I have now in bearing about 30,000 vines of about 20 varieties, and contemplate extending my vineyard to one or two hundred acres, if markets do not fail or become non-remunerative.

The varieties which constitute the bulk of my grapes at present are, Ives's Seedling, Hartford Prolific, Concord, Salem and Martha. Catawba, being almost annually more or less subject to leaf blight, I have discontinued propagating. Delaware (excepting in some seasons of leaf blight) does pretty well. It never rots; but I do not care to plant it extensively, having other kinds of equal, if not better, flavor and far more profitable. The following varieties of

ROGERS'S HYBRIDS, if not planted in too rich soil, (in which case they rot badly) do well:

No. 1 (Goethe), No. 15 (Agawam), No. 3, (Massasoit), No. 9, (Lindley), No. 19 (Merrimac), and a few others do well, sell quickly at good prices, being equal to or surpassing the Delaware in flavor. Salem does well if the wood is kept young; and it is splendid in flavor, and an excellent keeper, as is also the Diana; but its liability to partial leaf blight and consequent uneven ripening, to my great regret, prevent me from extending its culture.

MINER'S SEEDLING GRAPES I have now tested seven varieties of; but, as yet, I can speak approvingly of only one kind, viz., the Linden. This is a remarkably healthy, vigorous grower, and an abundant bearer. It is a little earlier than the Concord, of better flavor, and, unlike its parent, ripens its fruit properly and uniformly. With me it seems destined to supplant the Concord entirely, as the latter, in the most years, ripens its fruit so unevenly that an annual loss is sustained of nearly one-half the crop. Indeed here it is altogether a most undesirable and unprofitable shipping grape.

I am testing about 50 new varieties, but so far it remains for any that have fruited to show any superiority over old kinds, the fulsome eulogiums of their propagators and others to the contrary notwithstanding.

WHITE LADY does well and bears profusely berries of rich flavor as to sweetness; but the vine is such a miserable grower that I hardly care much to extend its culture.

JANESVILLE promises well in all respects, and is about five days earlier than Hartford. I expect to cultivate it very extensively.

MOORE'S EARLY, at present, I think but little of. It is very little earlier than Hartford and behind Ives's, and its flavor here is certainly inferior to that of the Concord.

CONQUEROR—promises well in all respects.

BLACK EAGLE I have discarded.

BRIGHTON proves here so poor a grower with no attractive properties either in bearing or flavor, that I have given it up.

WORDEN'S SEEDLING is very healthy, a luxuriant grower and profuse bearer; but it possesses the same fault as its parent—uneven ripening; and it is nearly as liable to crack in wet weather so that I hardly care to extend it.

CROTON after seven years' trial I have entirely abandoned.

ELVIRA, although a most healthy vine and profuse bearer, has such a compact bunch that half of its fruit ripens and cracks before the other half is ripe, and as it has a very insipid flavor I have entirely abandoned it.

EVA promises well.

BELVEDERE is one of the most luxuriant, healthy growers I have. It ripens with the Concord and more evenly; but it does not attract me sufficiently to further extend it, being smaller in berry and quite as tender as the Concord for shipping.

ARNOLD'S HYBRIDS are with me utterly worthless.

SENASQUA AND WALTER are splendid, rich grapes, but, what with the rather shy bearing qualities of the former and the tendency to wood blight in the latter, I shall not extend them.

UNION VILLAGE is utterly worthless in all respects.

EUMELAN is a splendid rich grape, is most profuse of bunches of large size, splendidly set until as big as buck shot, when they gradually mildew off (even if sulphured), until but a few straggling berries to a bunch are left—year by year repeated—I have given it up entirely.

TALMAN is exceedingly healthy, a luxuriant grower, and a profuse and constant bearer. Its foxiness, however, is a great drawback in my esteem, or I should cultivate it more extensively, especially as, unlike the Hartford, it does not lose its berries from the stem, and is about as early.

SENECA also does not drop its fruit, has a larger berry than Hartford, better flavor, and I think is destined entirely to supplant the latter.

ISABELLA bears profusely and has no foxiness as it has at the North. Some years it rots badly in others not at all. It is hardy and keeps its leaves finely.

I have on trial a great variety of the latest new kinds, including several from Commissioner Le Duc, most of them with unheard-of names; but their evident Vitis vinifera origin bears even at present a sure indication of their worthlessness here.

Special Wine Grapes.

I only cultivate Herbemont, Norton's Virginia, Cynthiana, Cunningham, Herrmann, Rulander, Northern Muscadine, Mary Ann, Winslow, Marion Port, Clinton, Rentz, Catawba, Scuppernong, and a few others on trial. Mixed to advantage with the above are Concord, Ives's Seedling, Martha, Pauline, and several other table grapes. These make wine as good as, if not better than, two-thirds of the French wines of which I have had experience during a residence of some years in France. Gallicized wines, however, or those well watered, sugared, alcoholized and bedeviled with dry essences and flavors, seem in this day and generation to please much better the perverted palates of eight-twelfths of the community than the pure juice of the vine, and so little are wines of the latter sort appreciated that I do not wonder that most of the makers, in order to effect anything like large sales, are driven to adopt the composition process; and in a great many instances, undoubtedly, wine dealers make up their so-called ports, sherries, etc., in their own cellars, without the aid of any kind of fruit whatever. HENRY SMITH.

Buncombe Co., N. C.

NEW ROCHELLE RASPBERRY.

I WAS very much interested in the articles referring to the New Rochelle Raspberry in the RURAL of February 5th. Having fruited it for the past three years, I consider it a very valuable variety. The plant with us is a strong, rampant grower, not quite hardy, and fully twice as productive as any red variety in cultivation, and, as it is only a little darker in color than the Philadelphia, we thought it would sell well in any market where that variety would. We, therefore, made quite a plantation of them, and for the past two years have had a fine supply of fruit for market. The first lot, picked two years ago, was gathered between six and eight o'clock in the morning and by ten o'clock the berries were in market. At noon I called around among the dealers where we had sent them, and all wanted to know if I thought they could sell such old, moldy berries as those, and I had hard work to convince them that they were fresh-picked and that what they mistook for mold was the natural bloom of the fruit. They, however, could not make their customers believe it, and so I left orders the next morning to give the fruit away among their customers, hoping in this way to introduce this variety; but I soon found that while we could give them all away one day, it was hard work to sell very many the next, the objection being to their color and not to the quality of the fruit. (When will people learn to use something besides their eyes in buying fruit?) After giving away and trying to sell for a week, the ladies of our family began canning them, and then we found that was the proper mode of disposing of them, and so we offered them in market as a canning berry, very much to the satisfaction of our customers, as shown last season by a number of letters received from families, asking to be supplied with the same variety, one lady saying they were the best canned raspberry she had ever had.

From our experience I consider it a very prolific and valuable variety for the family garden, but I would not now recommend people to plant it for market, except in a small way, until they find if it will sell in their market. If it will, then "go in for it strong," "there is money in it."

South Glastonbury, Conn. J. H. HALE.

GRAPES AND SMALL FRUITS IN TEXAS.

THE culture of small fruits is not practiced to any great extent in Southeastern Texas. This is attributable, first, to the uncongeniality of the climate, and, second, to the competition in the market, which the cultivated fruit has to meet from the Wild Dew Blackberries in their season, which are sold very cheap and sometimes entirely glut the market. Gooseberries, currants and the finer sorts of raspberries are an entire failure. The bushes gradually die the first or second year after planting.

Strawberries can be raised only on the annual plan; that is, the suckers are planted out either during late Fall or Winter for the scanty crop they will bear the following Spring. After bearing, the stool plant will die during Summer, and the plantation has to be renewed from the strongest suckers for the following season. Only a few varieties will bear anything like a crop cultivated in this manner, and among these the old Wilson is still without a peer. Among the newer kinds it has found a rival in robustness, though not in productiveness, in the Crescent Seedling. This will throw out vigorous suckers, while most of the other sorts will generally succumb to a long, hot Summer season, protracted longer than their natural ability can endure.

No grapes of the Labrusca variety will succeed here, and for the coming grape we have to look to and try to improve those kinds that spring from the Æstivalis species. Indeed, there is already a variety of this last class met with in this vicinity, without name, which bids fair to fill the place here of the Concord, "the grape for the million," from which million we are unfortunately excluded. I ought to mention the Scuppernong, but I hardly think this single-berried bush, the fruit of which consists of a leathery, tough skin and an indigestible pulp, deserves to be mentioned among cultivated grapes. It has, however, one, and only one, thing to commend it—that it is the "lazy man's grape." G. MARTI.

Harris Co., Texas.

A GOOD BLACK CAP.

THE Davison's Thornless is one of the best Black Caps. Any one who has grown the Doolittle and kindred sorts can appreciate the difference between having one's hands and face torn and bleeding, his clothing in tatters, and being able to escape with sound clothing and a whole skin. The Thornless is very early—an important consideration in some localities. In our local market the first raspberries sell for nearly double the price of the later berries; this, therefore, has proved, with me, far more profitable than the later kinds.

In consequence of its small growth, the plants should be set closer than the larger kinds. I set the rows four and one-half feet apart, two and one-half feet in the row. Set in this way the yield will at least equal that of any other variety known to me. The past season I picked from one-seventh of an acre, set in 1878, 440 quarts, or at the rate of about 95 bushels to the acre. They should yield still better the coming season, as they do not get to their largest growth until about the fourth year. The branches are not as badly broken off by the snows as are those of the larger and coarser kinds—at least, this has been my experience.

Will the RURAL readers who grow raspberries state what they consider a fair crop? I think that 50 bushels per acre (7,600 quarts) make about as large a crop as can be depended upon, one year with another and under all circumstances.

Onondaga, Co., N. Y. N. R.

THE KITTATINNY BLACKBERRY.—Unlike others the turning black of these berries is no indication that they are ripe, for they are frequently hard and bitter to the taste while perfectly ripe to all appearance, yet needing only a few more days upon the vines to acquire a delicious flavor and a melting juiciness. When picking them, a gentle pressure with the thumb and finger soon teaches one to distinguish the ripe from the unripe berries, and when their value has been really learned—coming as they do at a time when other berries are gone—no one will readily dispense with the row of Kittatinnies in his garden. E. K. B.

THE NEW ROCHELLE RASPBERRY.—You could not have done a better thing than praise the New Rochelle Raspberry. All last year I said to my visitors, "Here is my pet, my wonder—half Blackcap and half red—a wonderful bearer and really a good fruit." But, furthermore, it ought to be the point of a new line of berries, as La France leads off a new class of roses. It must not be neglected by experimenters. I shall, for one, try seedlings from it. E. P. P.

Oneida Co., N. Y.

THE SHIRTS STRAWBERRY.—Mr. Roe last Fall left two strawberries of the new kind called Shirts, which has, previous to this number, been several times referred to in these columns. These were drawn and engraved, and the pictures are presented on page 148. Mr. Roe says that the fruit is generally more conical. Our plants are strong and healthy. The flowers are perfect.

THE CAROLINE RASPBERRY.—FROM LIFE.—FIG. 146.

POT-GROWN VINES.

I NOTICE in the issue of January 15th some remarks on pot-grown vines. Your correspondent wishes to know if a vine grown in a pot is superior to one grown out of it—why it is so, etc.? Having had some twenty years' experience in growing grape-vines from cuttings after nearly all of the various methods, this experience has convinced me that the best method, all points considered, is briefly as follows:

Having cut the wood in suitable pieces of one bud each, of about an inch and a-half in length, after the usual form termed single eyes, the pieces are placed in sand about April 1st, over a steady bottom heat of 60 to 65 deg., either in a forcing-pit or in a hot-bed. Thus treated, they should form roots in about 30 to 40 days, according to the varieties. As soon as the roots have attained a length of one or two inches, they are potted in two-and-a-half inch pots and grown under glass till the weather has become sufficiently warm and steady—say about June 15th—when they are planted in the open ground in rows two feet asunder, and six inches apart in the rows, and kept scrupulously free from weeds. Cuttings so treated in ordinary seasons and in fairly fertile soil, will attain a diameter of a quarter, to three-quarters of an inch at the close of the first season's growth, with an abundance of roots two to three feet in length. Such vines, in my opinion, are far superior to the best pot-grown vines I have ever seen. Vines so grown have longer and stronger roots with heavier, shorter-jointed, riper wood and fully matured, and are equal if not superior to those grown after any other method, and greatly to be preferred to vines grown in pots.

In the same issue and under the caption "Do Bees Puncture Grapes?" I noticed a very interesting article. I would render the same verdict as your interesting correspondent, and the causes of ruptured and unsound grapes pointed out by him are correct without a doubt. Any person in doubt about the matter may easily satisfy himself as to the untenable charge that the bee punctures grapes, by watching it carefully when the grapes are beginning to ripen. Bees do feed on grapes and, in fact, on all sorts of fruit containing sugar; but in every case the skin is first broken by other causes and not by the honey bee, as many suppose.

Dutchess Co., N. Y. J. G. B.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, FEB 26.

W. R,—C. M. W.—E. D.—H. B.—A. M. P.—A. J. P.—S. H. R. M. B. W.—G. M.—F. D. C.—J. J. W. It would be unfair to dealers in general to print what you say of one.—I. J. B.—C. D. S.—A. F. M.—N. R,—Franklinton. We shall endeavor so to do—W. C. E.—G. U. D., thanks. Our weather notes and "Everywhere" correspondence is unavoidably neglected just at present in favor of Special numbers—C. H. B.—W. M. R.—T. T. L.—G. C. C.—J. B.—D. R.—A. J. A.—P M. S.—P. R. W.—W. R.—L. K. W.—J. H.—C. A. G.—A. B. A.—E. M. C.—A. E. B., paper not received.—H. R. S.—L. A. K.—S. E. S.—G. A. G., Jr.—W. B. M.—F. H. S.—M. B. P, very likely.—S. B. P.—R. J. C., too late for the Small Fruit No.—thanks—N. J. S.—D. B. M.—R. B. M.—W. S. M.—A Subscriber—L. A. R., thanks—J. H., we shall try the seeds.—C. D.—A. B. A.—J. V. D. P.—T. H. H.—S R. M.—J. H. T.—T. D. K.—L. E. C.—B. T—P. B. M.—G. W.—A. M. T.—A. B. A.—G. W., thanks—F. M. Youngblood, we do not find your address on letter—Please send it. Seeds not yet (16th) received—R. D.—G. G.—Geo. H., thanks—E. P. R—G. K.—H. J. S.—M, E. P.

The Literary Revolution.
Change of Base.

This very remarkable enterprise continues to make such progress as to astonish its friends and astound its enemies. Its greatly increasing proportions have compelled the removal of its headquarters from the Tribune Building to the very large and beautiful building, No. 764 Broadway, which is in the very midst of the "book district" of New York City, and, therefore, of the publishing enterprise of the nation. This building, though six stories in hight, 25 feet front and 100 feet deep, is sufficient only for the offices and retail store of the Company. The manufacturing is carried on in several large buildings located in other parts of the city, though it is contemplated concentrating them soon in one immense factory to be erected.

The announcements which are made elsewhere are extremely interesting to all who enjoy what is choicest in literature. The Library Magazine is unique in both form and character and altogether delightful in the richness of its contents. Of the books announced, Green's larger "History of the English People," reduced from $10 to $1; Carlyle's "History of the French Revolution," reduced to 40 cents; Carlyle's "Heroes and Hero Worship," 25 cents, and the "Revised New Testament," which is promised to be manufactured with rapidity heretofore unheard of, will attract special attention. It is worth while for every one who has not already seen it, to send and get the illustrated pamphlet, "Book Making, and Type Setting by Steam," which will be sent free upon application. Address, the American Book Exchange, 764 Broadway, N. Y.

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Change of Base!

The head-quarters of the Literary Revolution, in the Tribune Building since January, 1880, having become very much too small for the vastly increased business, are removed to and now occupy entire the magnificent six-story iron and brick building, No. 764 Broadway. Retail sales rooms will be continued in the Tribune Building. The manufacturing departments will, for a short time longer, be confined to the large buildings Nos. 18 Spruce street, 26 Beekman street, 33 and 35 Vesey street, and 62 and 64 Duane street, until we are able to erect factories and concentrate in one place the largest book manufacturing enterprise in the world.

The Library Magazine.

The Library Magazine of American and Foreign Thought, undertakes to occupy so high a stand that it shall be considered an indispensible part of the library of every American who aspires to the broadest culture, and to keep fully abreast with American and Transatlantic thought. The contents of any number will indicate how well it succeeds in this ambitious attempt. In consonance with the maxim "what is worth reading is worth preserving," it is issued in bound form only, and not in paper covers, as is the custom with magazines. Volume 7 just ready; over 400 pages, containing an amount of literature, of the very highest class, more than three times as great as found in any issue of the $4 monthlies. Price, elegantly bound in extra cloth, 40 cents. In half Russia, gilt top, 60 cents. Postage, 6 cents.

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More New Books.

New Books are being added to our list with a rapidity unexampled in the history of publishing. Recent and early forthcoming issues are—Green's Larger History of England, reduced from $10 to $1; the Revised New Testament, an elegant edition in large type, to be issued within 24 hours of the arrival in this country of the English edition, price 30 cents; Carlyle's "French Revolution," reduced from $3 to 40 cents; Carlyle's "Heroes and Hero Worship," reduced from $1 to 25 cents; Carlyle's translation of Goethe's "Wilhelm Meister," reduced from $1.75 to 35 cents; Lossing's "Eminent Americans," over 100 portraits, very elegant, price $1; Trumbull's celebrated historical and satirical poem of the Revolution, "McFingal," with very full annotations by Lossing, very elegant, price 50 cents; Charlotte Bronte's "Jane Eyre," 35 cents; Mrs. Mulock Craik's "John Halifax, Gentleman," 35 cents; Tasso's "Jerusalem Delivered," very beautiful, 40 cents; Irving's "Sketch Book," 35 cents; Irving's "Knickerbocker," 35 cents; Creasy's "Fifteen Decisive Battles of the World," 35 cents. The above elegantly and strongly bound in cloth at the prices named; most of them issued in half Russia, gilt top, at higher prices. Descriptive catalogue sent on request.

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"Please ship me the Fruit and Vine Manure and the Greenhouse Bone Manure ordered of your Long Island representative as quickly as possible. I am anxious to apply them."
In answer to your inquiry whether these fertilizers have fulfilled expectations, I may say that they have done so completely. The Fruit and Vine Manure, applied in the Fall to young Pear Trees, produced a growth of new wood the following season *exceeding anything I ever saw*, some of the new branches being five feet in length. The trees fruited admirably, and, to sum up the matter, I am convinced you have hold of the only correct ideas in this branch of fruit culture. As you are aware, I claim precedence as a grower of Marechal Neil Roses, taking first premium wherever they are shown. No small share of my success I attribute to the liberal use of your specially prepared Greenhouse Bone Manures, used by me for some years past. Its effects also on choice flowering plants are wonderful, and it is perfectly safe in application.

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GRAPES.
I applied the Fruit and Vine Manure broadcast, to a few vines experimentally; they were vines that had failed to make sufficient wood. The new growth was all that I could wish, and I shall apply generally to my grapes next Spring, apply broadcast and cultivate in with cultivator.

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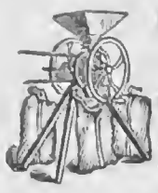
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BRIC-A-BRAC.

DR. BOYD was once asked how it was that he consented to the marriage of his daughter to a Presbyterian. "Well," he replied, "as far as I have ever been able to discover, Cupid never studied theology."

AN ordinary woman's waist is thirty inches around. An ordinary man's arm is thirty inches long. How admirable are thy works, oh nature! —Hawkeye.

BEFORE the lofty church I stand;
The organ's melancholy strain,
The moonlight, and the chanting tones
Weave strange thoughts in my doubting brain.

Why do I linger near the door?
Will holy tunes my spirit win?
Ah, no, small reverence is mine;
I wait because my love's within.

A YOUNG lady was speaking to a friend who had called upon her regarding a trait characteristic of her mother, who always had a good word to say to every one. "Why," she said, "I believe if Satan were under discussion mother would have a good word to say for him." Just then the mother entered and was informed what the daughter had said, "whereupon she quietly said: "Well, my dear, I think we might all imitate Satan's perseverance."

WIVES of great men all remind us
We may have our wives sublime,
And, departing, leave them behind us
Widows worthy of our time.
Therefore give your wife a send-off
By the life insurance plan;
Fix her so that when you glide off
She can scoop another man.

RULES OF THE HOUSE.

AT an Oil City hotel boards a father and son The latter has been in the habit of staying out later than his father liked, and one day the latter said: "My son, the rule of this room hereafter is that every person must be in before ten o'clock, or else remain outside."

"Yes, sir," said the obedient son.

A night or two afterward the father was detained by his business until nearly eleven o'clock, and, on reaching his room, found the inside bolt drawn. He knocked and was soon answered with: "Who's there?"

"Your father; get up and let me in."

"See here, the rule of this room is that every person must be in before ten o'clock' or stay outside. Now don't make any more disturbance about here."

The father slept in another room that night.—Oil City Derrick.

Real Estate.

Fruit Farm for Sale.

Situated 1½ miles South of Highland (opposite Poughkeepsie) containing 70 acres. Apple and Peach orchards, Currants, &c. In the center of the finest Fruit Growing Region on the Hudson. Good house and outbuildings.

For further particulars inquire of

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One of the best Stock Farms, of 720 acres, in South-Eastern Kansas. An abundance of good water and timber, and good buildings. Inquire of

JAS. J. DAVIS, EVERETT, Woodson Co., Kan.

GENESEE VALLEY FARMS FOR SALE.—Some of the finest residences in the Valley, near R. R Inquire soon of JOHN SHELDON,
Fort Collins, Colorado.

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Offers greater attractions in way of good, cheap lands, healthy country, mild climate, abundance of timber and water than any other section now open to settlement. In it the TEXAS AND PACIFIC RAILWAY is now being extended westward over one mile per day, and is now offering for sale at low prices and on easy terms over 4,000,000 acres of land.

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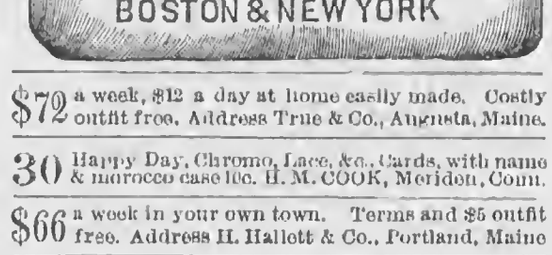

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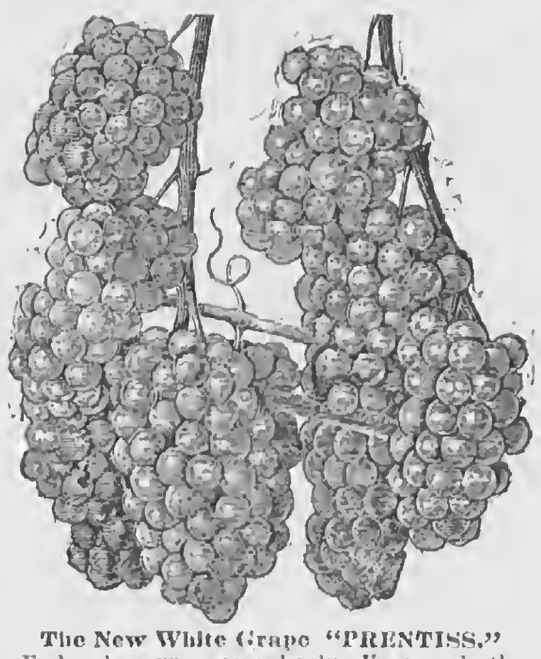

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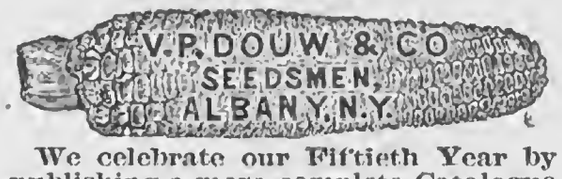

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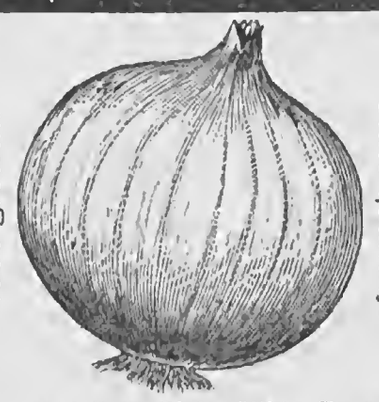

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PERSONAL ITEMS.

Randolph Tucker, of Virginia, is the handsomest man in the House of Representatives.

Secretary Schurz's journalistic property in St. Louis is said to yield him $12,000 a year. He is endeavoring to obtain a suitable house there for his future residence.

Senator elect Ben Harrison, of Indiana, is rather exclusive in his habits, but is popular and companionable. He has a great deal of self-respect and never loses in dignity.

Vice President-elect Arthur is in Washington endeavoring to make himself familiar with the technical duties of his office and with personality of the Senators over whom he is to preside.

[Sparta, (Wis.) Herald.]

As an exhibition of the intrinsic worth of St. Jacobs Oil, we think the case referred to, that of Mrs. O. W. Hubbard, of this town, cured of Sciatic Rheumatism of long standing by the Oil, is certainly striking, and, beyond all doubt, conclusive as to its efficacy. The remedy has our endorsement.

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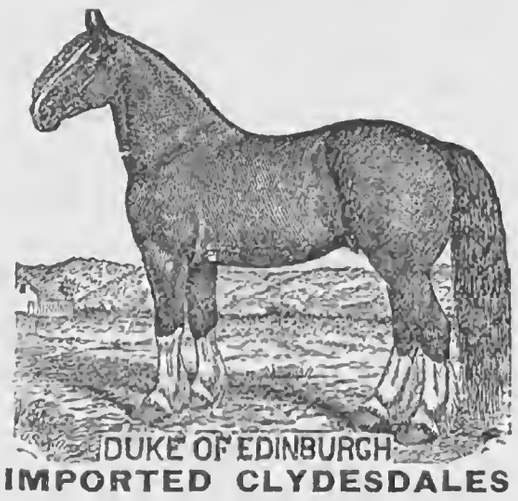

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Use KIDNEY-WORT *and rejoice in health. It is a dry, vegetable compound and* One package will make six qts of Medicine. *Get it of your Druggist, he will order it for you. Price, $1.00.*

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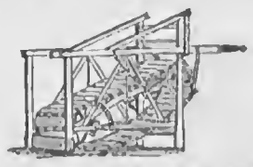

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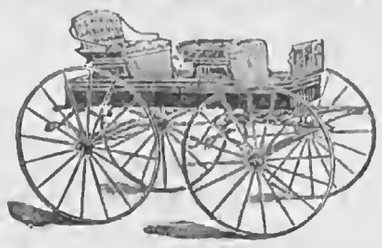

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Warranted to work as represented.

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Sows Beet, Carrot, Parsnip, Turnip, Ruta-Baga, Onion, and *all small seeds* in drills. Sent on receipt of $5.00.
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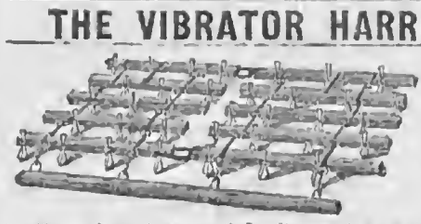

Best Harrow made Cuts every inch of ground, & adapted to all kinds of soil. Peculiar shape of tooth makes it easy of draft and leaves the ground light and mellow. Relieves itself of all obstructions. Bundled very compact for shipment. 3 sizes cut 6, 8, and 10 ft. Agents wanted. Write for Circulars to
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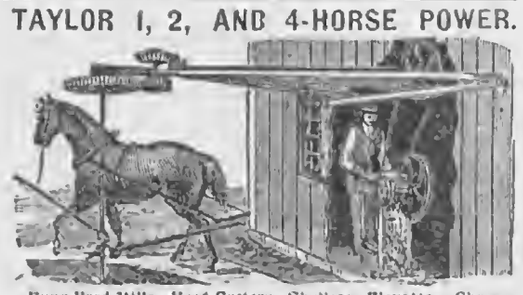

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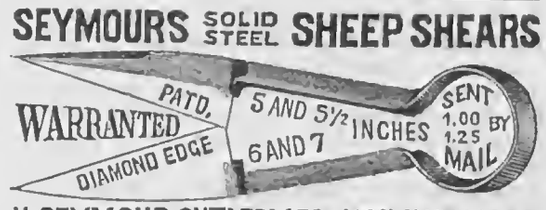

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SUGAR MAKERS: Why let a single year pass without a full supply of these Spouts, when they last a lifetime, and the extra flow of sap by their use over-pays their *entire cost every season*. Call for them at your hardware stores. Samples and Circulars sent post-paid on receipt of 15 cts. Address
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The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List.
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Though disease cannot always be conquered, its first approaches can be checked. But not only is the use of a medicinal safeguard to be recommended on the first appearance of a malady, but a wise discrimination should be exercised in the choice of a remedy. For thirty years or more Hostetter's Stomach Bitters has been the reigning specific for dyspepsia, fever and ague, a loss of physical stamina, liver complaint and other disorders, and has been most emphatically indorsed by medical men as a health and strength restorative. It is indeed a wise precaution to use this sovereign fortifying agent and alterative in the early stages of disease, for it effectually counteracts it, if the malady belongs to that large class to which this sterling medicine is adapted. Not only is it efficacious, but pure and harmless.

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The Bidwell. AS LARGE, FIRMER, BETTER FLAVORED, MORE PRODUCTIVE, AND MUCH EARLIER THAN THE SHARPLESS. After trial on various soils, I regard THE BIDWELL as the best. I have bought all the stock in the market and it is so limited that I can sell only in very small quantities. Order promptly before it is exhausted. I also offer a superb stock of the **Cuthbert Raspberry.** Send for Price-List. Address,

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Cornwall-on-Hudson, N. Y.

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COMBINED CATALOGUE OF
SEEDS AND PLANTS
Will be Mailed Free to all who apply by Letter.
Our Experimental Grounds in which we test our Vegetable and Flower Seeds are most complete; and our Greenhouses for Plants (covering 3 acres in glass), are the largest in America.
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DORR'S IOWA
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ARE PURE, FRESH, TRUE TO NAME AND RELIABLE.
It will PAY you to send to C. W. DORR, Des Moines, Iowa, for his new
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Published annually for free distribution. Contains complete list of choicest Seeds and Fruits for Farm and Garden, with descriptions and directions for cultivation, besides many miscellaneous articles and much valuable information for all, sent free.

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Extra Early, Very Dwarf (8 to 10 Inches), Requires no Bushing, Exquisite Flavor.
Acknowledged by all to be the best and earliest Pea grown. Editor of American Agriculturist says: "Very early, productive and good; quality not to be surpassed."
CAUTION.—As there is another Pea in the market called "American Wonder," send to us and get the genuine Bliss' American Wonder. Observe our fac-simile on every package.
PRICES.—One-fourth pint package, 20 cents; pint, 65 cents; quart, $1.25; by mail, post-paid.
Our Novelty Sheet, giving full particulars, mailed free.

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300 BEAUTIFUL ILLUSTRATIONS,
With a richly colored plate of a Group of Pansies, and a descriptive priced list of 2,000 varieties of FLOWER and VEGETABLE seeds—with much useful information upon their culture—150 pages—mailed to all applicants enclosing 10 cents, which can be deducted from first order for seeds.
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My Annual Catalogue of Vegetable and Flower Seed for 1881, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed House in America, a large portion of which were grown on my five seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name:* so far that should it prove otherwise, *I will refill the orders gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*
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SPECIAL MANURES FOR
Small Fruits, Fruit Trees, Early Vegetables, Etc.
For some Reports from Practical Fruit Growers, see page 165 of this issue. Send Postal for Pamphlet. Address
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Trade **LONDON PURPLE.** Mark.
Valuable insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For prices, Circulars and Opinions, write
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Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris green by virtue of its greater fineness.
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GILMAN'S STRAIN.
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Essex, Essex Co., Mass.

THIRTY-SIXTH ANNUAL REPORT
OF THE
New-York Life Insurance Co.
OFFICE, Nos. 346 and 348 BROADWAY.
JANUARY 1, 1881.

Amount of Net Cash Assets, January 1, 1880.....38,185,431.68

REVENUE ACCOUNT.

Premiums	$7,014,819.59	
Less deferred premiums Jan. 1, 1880	367,989.02	—$6,646,830.57
Interest and rents, (including realized gains on real estate sold)	2,635,877.95	
Less interest accrued Jan. 1, 1880	317,989.11	—2,317,888.84—$8,964,719.41
		$47,150,151.09

DISBURSEMENT ACCOUNT.

Losses by death, including Reversionary additions to same	$1,731,721.37	
Endowments matured and discounted, including Reversionary additions to same	564,579.85	
Annuities, dividends, and returned premiums on cancelled policies	2,203,590.02	
Taxes and re-insurances	212,424.06	
Commissions, brokerages, agency expenses and physicians' fees	770,804.30	
Office and law expenses, salaries, advertising, printing, &c	322,910.64	—$5,806,030.24
		$41,344,120.85

ASSETS.

Cash in bank, on hand, and in transit (since received)	$852,028.10	
Invested in United States, New York City, and other stocks, (market value $16,764,988.05)	14,925,174.09	
Real estate	5,029,324.59	
Bonds and mortgages, first lien on real estate, (buildings thereon insured for $15,365,000.00 and the policies assigned to the Company as additional collateral security)	16,464,922.23	
Temporary loans, (secured by stocks, market value, $3,184,840.00)	2,491,000.00	
* Loans on existing policies, (the reserve held by the Company on these policies amounts to $2,975,000)	597,451.12	
* Quarterly and semi-annual premiums on existing policies, due subsequent to Jan. 1, 1881	387,972.13	
* Premiums on existing policies in course of transmission and collection (estimated reserve on these policies $440,500, included in liabilities)	204,852.99	
Agents' balances	34,228.23	
Accrued interest on investments Jan. 1, 1881	357,167.37	—$41,344,120.85
Excess of market value of securities over cost		$1,839,813.96
CASH ASSETS, Jan. 1, 1881		$43,183,934.81

** A detailed schedule of these items will accompany the usual annual report filed with the Insurance Department of the State of New York.*

Appropriated as follows:

Adjusted losses, due subsequent to Jan. 1, 1881	$335,195.40
Reported losses, awaiting proof, &c	198,761.98
Matured endowments, due and unpaid, (claims not presented)	109,643.96
Annuities, due and unpaid	5,294.25
Reserved for re-insurance on existing policies; participating insurance at 4 per cent Carlisle net premium; non-participating at 5 per cent. Carlisle net premium	36,473,691.79
Reserved for contingent liabilities to Tontine Dividend Fund, over and above a 4 per cent. reserve on existing policies of that class	1,752,165.82
Reserved for premiums paid in advance	14,064.62
	$38,883,837.82
Divisible Surplus at 4 per cent.	$4,295,096.99

Estimated Surplus by the New York State Standard at 4½ per cent., over $9,000,000.00

From the undivided surplus of $4,295,096 the Board of Trustees has declared a Reversionary dividend to participating policies in proportion to their contribution to surplus, available on settlement of next annual premium.

During the year 6,946 policies have been issued, insuring $22,229,979.

Number of Policies in force	Jan. 1, 1877, 45,421. Jan. 1, 1878, 45,605. Jan. 1, 1879, 45,005. Jan. 1, 1880, 45,705. Jan. 1, 1881, 48,548.	Amount at risk	Jan. 1, 1877, $127,748,473. Jan. 1, 1878, 127,901,887. Jan. 1, 1879, 125,232,144. Jan. 1, 1880, 127,417,763. Jan. 1, 1881, 135,726,916.
Death-claims paid	1876, $1,547,648. 1877, 1,638,128. 1878, 1,687,676. 1879, 1,569,854. 1880, 1,731,721.	Income from Interest	1876, $1,906,950. 1877, 1,867,457. 1878, 1,948,665. 1879, 2,033,650. 1880, 2,317,889.
Divisible Surplus at 4 per cent.	Jan. 1, 1877, $2,626,816. Jan. 1, 1878, 2,664,144. Jan. 1, 1879, 2,611,436. Jan. 1, 1880, 3,120,371. Jan. 1, 1881, 4,295,096.		

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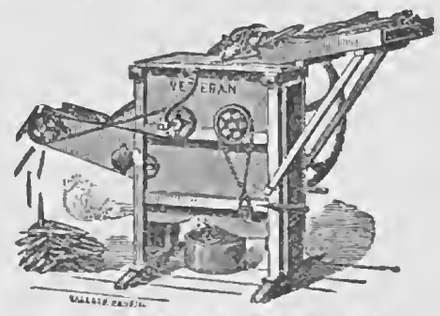
THEODORE M. BANTA, Cashier.
D. O'DELL, Superintendent of Agencies.
CHAS. WRIGHT, M. D., HENRY TUCK, M. D., } Medical Examiners.
MORRIS FRANKLIN, President.
WILLIAM H. BEERS, Vice-President and Actuary.

Veteran Corn Sheller



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Power and Hand Corn Shellers of all sizes and to suit all wants.
HORSE POWERS, JACKS, Etc.
Write for Descriptive Circulars and prices. Address SANDWICH MANUF'G CO., Sandwich, Illinois.

A GOOD SAW MILL For $200.
Our No. 1 Plantation Saw Mill is designed to be run by 8, 10 or 12 horse-power Agricultural Engines. With this power from
1,500 to 4,000 Feet
of lumber can be cut in a day. A product 25 to 50 per cent. greater than can be cut with any reciprocating saw mill. The mills are complete except saw, and will be put on the cars in Cincinnati for the low price of $200, and warranted in every particular. Saw Mills of all sizes. Engines and Boilers, Shafting, Gearing, etc.
Illustrated circulars sent free.
LANE & BODLEY CO.,
JOHN AND WATER STS.,
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GET THE BEST
Five sizes for Family Dairies. Four sizes for Factory use. All our goods are of perfect stock and the best workmanship. They are strong, simple, efficient, convenient and durable. They continue to be the Standard Churns of the Country.
We now furnish either Round or Square Top Churns, of the Family sizes, as may be preferred. Prices of both styles the same. Send for Circulars of our *improved* Round Top Churn.
Our Churns received the highest Premium at the International Dairy Fair, in New York City, in 1879, in competition with all the leading Churns in the market.
Send either to any Dealer in REALLY first-class Dairy Implements for a Churn or Descriptive Circular, or to the Sole Manufacturers, PORTER BLANCHARD'S SONS, Concord, N. H.

BIG GIANT CORN MILL.
Every Man His Own Miller.

The only Mill that will grind Corn with Shucks on without extra expense. The only Mill grinding Corn and Cob successfully that will grind Shelled Corn fine enough for family use.
Grinds twice as fast as any other Mill of same size and price. Manufactured by
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CUTHBERT RASP Berry.
E. P. ROE makes such a remarkable *liberal offer* of this celebrated raspberry with his superbly illustrated book "Success with Small Fruits" that all having country homes should accept it. Descriptive Catalogue free.
E. P. ROE,
Cornwall-on-Hudson, N. Y.

102 YOUR NAME in New Type on 102 Chromos, 10c. All new styles, designed by best artists, *Bouquets, Gold Chromo, Birds, Landscapes, Panels, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

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SUN-SUN CHOP TEA,
the FINEST and MOST BENEFICIAL imported, sent by mail on receipt of $2.50, postage paid. It is a BLACK TEA with a GREEN Tea Flavor, RECOMMENDED to suit all tastes. Sample of any of our Teas by mail on receipt of 6 cents. Postage stamps taken. GOOD TEAS, 30c., 35c. & 40c. EXCELLENT TEAS, 50c. & 60c. All EXPRESS CHARGES PAID on $5.00 Tea orders.
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Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.
595 Washington Street, Boston, Mass.

THE RURAL NEW-YORKER

Ralph Ferris

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 11. WHOLE No. 1624. | NEW YORK, MARCH 12, 1881. | PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Field Crops.

ON THE GROWTH OF CORN AT THE RURAL EARM.

J. B. LAWES, LL. D., F. R. S., ROTHAMSTED, ENGLAND.

THE RURAL NEW-YORKER of the first of January of this year contains the result of some experiments upon the growth of corn, tried in three fields of the Rural Farm. The yield in all was immense. Some of the corn was grown with manure, the composition of which is not given; some without any manure whatever, and, as the product of the latter amounted to nearly 70 bushels of shelled corn per acre, [the lowest of the three fields.—EDS.], it is evident that the soil and season were equal to produce such a crop by tillage operations alone. Further, reference is made in the article to fields in the neighborhood manured with very large quantities of dung and artificial manures, which did not produce larger crops than the unmanured land, and not nearly so large as the manured land of the Rural Farm. A question is then raised with regard to the source of these great crops, which may be put in the following form: Of the sum of the various forces employed in the production of the crop, assign to each its respective value? I think every one will allow that, when this question can be answered correctly, we may consider that Agricultural Science has made some progress.

Corn is a giant among the other grain crops, and for me has a peculiar fascination. I have already called attention in this journal to the remarkable advantage which corn possesses over the other cereal grain crops, in that it continues growing throughout the Summer, and ripens in the Autumn, but, at the time of writing, I was not so fully impressed as I now am with the great value of temperature for the production of nitric acid in the soil.

With corn the most vigorous growth and the most active assimilation of food take place just when nitrification is most active, but when the other cereal crops have done their work. No wonder then that the average yield of corn is much above that of other cereals. At the same time, although corn has access to sources of food in the soil, which are not available for other grain crops, still the food itself must come out of the soil. I will examine into the antecedents of the two fields in the Rural Farm to see if they will give me any assistance in supplying an answer to the question put in the RURAL NEW-YORKER, viz.: "Here we have an unusually fine crop of corn, without any manure, to what is it due?"

The article commences by stating that one of the fields, and that which gave the largest yield, had been *lying idle* for fourteen years, and the other for seven years. Now there is no such thing as idleness in nature; directly the last crop is carried off, she sets to work to cover the soil with vegetation; this vegetation dissolves the mineral matter of the soil, stores up the nitric acid, and as it dies gives off to the corn the food it had accumulated in the seven or fourteen years of its existence. At the present moment, the question as to whether the soil absolutely increases its stock of nitrogen while at rest—that is to say, while it remains covered with perennial vegetation— is not quite settled by us; but that a very large quantity of nitrogen becomes stored up and readily available for use when the vegetation is destroyed, is quite certain. To give an example, I may here say that the total quantity of dry vegetable matter, taken from a field where a large crop of barley had been mown, amounted to 1,300 pounds per acre; and of this more than half was stubble and growth above ground, as the underground roots to the depth of 27 inches did not exceed 700 pounds. Further, on a piece of grass land which was in arable cultivation twenty years ago, the first nine inches of soil from the surface contained 10,000 pounds of dry vegetable matter. Nature has not been idle either at Rothamsted or upon the Rural Farm. Weight for weight, the despised daisies and "Quack" would contain more nitrogen than the corn crop grown; and aided by a good tillage and a favorable season the rapacious corn would easily dispose of the accumulation of food stored up as the result of the toil of many years.

TOBACCO CULTURE IN CHEMUNG CO. NO. 2

G. GOFF, JR.

THE SOIL AND ITS PREPARATION.—Three kinds of soil are employed for tobacco land in this county; first, the low lands adjacent to the river, which are composed in large part of alluvial sand; second, a belt situated a little back from the river, and consisting of a rather heavy clay loam of great natural fertility, entirely free from gravel, and underlaid with a compact subsoil, and, third, a drier, more elevated and lighter soil usually gravelly, underlaid with clay, but of less average fertility than the second class. Tobacco is chiefly grown on the two latter kinds of soil, which, having a good natural drainage and at the same time a subsoil which entirely prevents the leaching of the surface soil, seem admirably adapted to the requirements of the tobacco plant.

The heavy clay loam, being more naturally fertile than the gravelly loam, produces the heaviest crops, and in some instances as much as 2,500 pounds of leaf have been grown on a single acre. The gravelly loam, while it does not produce quite so heavy a yield per acre, on an average, is considered to yield the better quality of leaf. The alluvial sand lying adjacent to the river, produces a very fine, silky leaf when thoroughly fertilized with stable manure; but it is not much used for tobacco owing to the light-weighing qualities of the leaf, which make it less profitable for the grower than the clay or gravelly loams, and the fact that it is usually very foul with weeds and weed seeds, brought on by the annual overflow of the river.

Our best growers consider that no crop which they can grow, will better repay a thorough and careful preparation of soil than tobacco. Without a thorough preparation—by which I mean making the soil fertile and friable by a sufficient quantity of manure and loose and mellow by sufficient cultivation—the best results either in quality or yield of the crop cannot be expected. It is true an occasional good crop of tobacco is produced from sod ground or soil not properly prepared; but it is the exception, not the rule. The best preparation of soil for tobacco is a thorough summer-fallow the season previous to setting the plants. At the same time the ground should be manured by as heavy an application of barnyard or stable manure, as can be obtained, remembering the more manure the more tobacco and the better the quality, other things being equal. The frequent plowing and harrowing necessary to a *thorough summer-fallow* pulverize the soil, free it of weeds, and mix in the manure well, which is the best possible condition of soil for the requirements of the tobacco plant. Sometimes it is not practicable to give soil intended for tobacco a summer-fallow. Where this is the case, let the nearest possible approach to it be made. If sod ground *must* be employed, let it be plowed as early in the Fall, previous to the season of setting the plants, as possible, so that the sod will have time to become partially rotted by the time the young plants are set in the field. Mr. Brant, a noted grower in our county, has grown good crops on stiff sod ground, by plowing it rather deep the previous Fall, as above stated, and cross-plowing it shallow the following Spring, thus forming a mellow surface for the plants. A new clover sod is sometimes used with good result and when properly manured is a very good foundation for a crop of tobacco. Of

THE MANURES in use for tobacco, common barnyard or stable manure is preferable, to any other. Horse manure is considered the *best*, as it is supposed to produce a better quality of leaf than that made from cattle, but any kind of barnyard manure, if well rotted, will give good results. These manures may be applied at any season when the ground is not occupied with the crop; but it is customary to apply it immediately after the crop has been removed, as it will then have opportunity to decay and the elements will become incorporated in the soil. Green manures are not suited to the wants of the tobacco plant. They produce neither large yield nor good quality. Commercial fertilizers are not in favor among Chemung tobacco growers, though they are occasionally used when other manures cannot be procured. They are at best considered poor substitutes for barnyard manure, and on our rich, heavy soil, frequent trials have failed to prove their utility in increasing the growth of the plant; besides, their use is thought to injure the burning qualities of the leaf.

THE TOBACCO BED.—It is my aim in these articles to give plain directions for growing and handling a crop of tobacco from beginning to end, by which farmers not experienced in this line of farming, may be guided. Each process will be described as nearly as possible in the order in which it occurs.

A good tobacco bed, surrounded with a frame slanting towards the south or east and fitted for a covering of glass, is considered indispensable in growing early plants. While these do not always yield the best tobacco, it is important, with the farmer who anticipates growing a considerable quantity of tobacco, to have some early plants. A succession of settings is desirable inasmuch as it gives the grower more time to perform the various steps in their season and to do them well than if the entire crop required attention at once. For this reason we herb growers aim to have some early plants, some medium early, and some late, which provides for the desired succession of settings. The early plants are grown under glass and the late ones without the use of that covering. The bed should be prepared the Summer previous to the Spring when it is needed for use, and frequently forked over during the Summer and Autumn to give the weed seeds a chance to germinate and be destroyed. In making new beds it is best to draw a few loads of very rich soil or muck form some rich spot, and apply it to the bed. When the bed is completed, if not already rich enough, let a liberal coating of well rotted barnyard manure be applied. This manure not only adds fertility to the bed, but it has a valuable mechanical effect in the soil, rendering it loose and friable, so that it will more perfectly hold an even moisture, which is essential for the quick germination of seed and growth of the young plants. In the Fall before the ground freezes up, let the surface soil be thrown up into a ridge, extending

SHOWING ESCUTCHEON OF JERSEY BULL-CALF, GRAND MIRROR, 4,904
From a Photograph.—Fig. 147.—See Page 171.

lengthwise through the bed, that the soil may be more perfectly pulverized by the action of the frost. In this shape it will also dry off quickly in the Spring, so that it may be worked. A warm, sheltered exposure should be chosen as a place for making the bed, as on the south or east side of some outbuilding or tight board fence.

SOWING THE SEED AND EARLY CARE OF PLANTS.—Early in the Spring—if early plants are desired—the glass should be placed over the bed, so that it may all the sooner become in condition to "work." If plants large enough to set are desired before June 10, in this latitude the seed should be started or "put to sprout" by the 5th of April. In order to save time and labor, it is customary to sprout the seed before sowing it. This is done by mixing it with very fine muck or leaf mold, from four to six days previous to the time for sowing it, and placing it in a pan by the fire until sprouted. Great care should be taken to keep the mixture moist and warm, or the seed will not germinate. A woolen cloth should be kept over the mixture, which should be saturated occasionally with warm water to prevent the seed from drying up.

One-third of a pint of seed will give 200 square feet of bed which will with good success furnish plants enough to set three acres. While the seed is sprouting the soil in the seed-bed is prepared to receive it, by being made mellow and fine by the use of the fork and rake. When sprouted, the seed is sown evenly over the bed, and carefully raked in with a fine-toothed even rake. The seed must not be covered deep, or it will not grow. Indeed, many do not cover it at all, but simply sow it on the surface. When the seed is sowed, the soil should be well "firmed" down with a roller or wide board, after which the bed is sprinkled with tepid water.

During the first few weeks after sowing the seed, the tobacco bed will require almost constant attention. The young plants are exceedingly tender and great care must be exercised to keep the surface of the bed from becoming dry. Tepid water is used to water the bed in order to hasten the growth of the plants, and it should be applied with a sprinkler having a fine rose, otherwise the seed will be washed out and destroyed. Until the leaves of the young plants are as large as a silver half dime the growth is very slow, and about one-half of the time of the growth of the plants while in the seed-bed is consumed while they are attaining this size. After plants have started their second pair of leaves, they may be further forced by stimulating their growth with liquid manure. This is best made and applied by placing in the barrel containing water for sprinkling the bed, a sack of hen manure or guano. On very warm days, the sash should be raised to prevent the plants from burning, and on cool nights, when there is danger of a frost, the bed should be protected with a covering of old carpets or boards.

PEACHBLOWS NOT "RUNNING OUT."—There is a gentleman in this country who has grown Peachblow potatoes continuously since their general introduction, many years ago. He has never changed seed, always planting his own, using the small ones. His soil is clay; he has always fertilized with barnyard manure. He has been raising better crops of late years than formerly. It would be difficult to convince him that potatoes "run out," even when small ones are planted, year after year. This is not thought to be an "Irish potato" country—Northern seed is usually planted.

Easton, Talbot Co., Md. H. S.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 52, FEB. 2, 1881.

Cost of Active Ingredients of Fertilizers During 1880 and Trade-Value Adopted by the Station for 1881.

Organic nitrogen has cost in the manipulated fertilizers, viz: Superphosphates and special manures, on the average, more than the amount allowed in the valuations, *i. e.*, 20 cents per pound. In dry fish scrap the cost has been 18 cents. In the samples of low-grade dried blood and tankings analyzed by the Station, nitrogen has cost 16 cents and in castor pomace and cotton-seed meal it has also cost 16 cents. The nitrogen of fine bone has been bought for 15 cents. The ruling market price of nitrogen in the highest grade of dried blood has been, during the Spring until Midsummer, about 15 cents. In the Autumn, as usual, the price advanced because of active demand among the manufacturers of superphosphates, etc., and reached 18 cents per pound.

It is plain that there is a considerable and permanent difference between the trade-value, or cost to the farmer, of organic nitrogen in the superphosphates and other manipulated fertilizers, and that of the raw materials ordinarily accessible to the retail purchaser. To adapt our system of valuation more perfectly to this state of things, I shall continue to rate organic nitrogen in superphosphates and special manures and in fine steamed bone, finely-ground and dry meat, blood and fish, and in Peruvian guano at 20 cents. In view of the market prices that have ruled for two years, I shall rate together the nitrogen of coarse or moist meat, blood, tankage, castor pomace and cotton-seed meal at 16 cents. The trade-values of nitrogen in the various grades of bone will also be reduced to conform to their actual cost.

Nitrogen in the Form of Ammonia-Salts and Nitrates.—Ammonia-salts do not appear in our retail market except as ingredients of some manipulated fertilizers, and the Station valuation for their nitrogen will remain as formerly. Nitrates in the single sample of nitrate of soda analyzed has furnished nitrogen at 28 cents, but since probably the price will fluctuate, no change in its trade-value appears to be called for.

Soluble phosphoric acid has been procurable in 1880, as in 1879, at a cost of 10 to 11 cents per pound in the imported superphosphate.

In our home-made manipulated fertilizers it still costs 12½ cents, and that may therefore remain as the Station valuation

Reverted phosphoric acid in the various manipulated fertilizers has cost no less than formerly, and the former price, nine cents, is retained.

Insoluble phosphoric acid in dry fish and in the different grades of bone has cost one cent per pound less than last year's valuation.

Potash, in nearly pure, high-grade sulphate, is reckoned at seven cents, and in muriate at three and one-half cents per pound. In low-grade sulphates containing magnesium chloride, and in kainite, it would probably be fair to reckon potash at five and one-half cents.

For comparison of the average trade-values employed in 1880 with those it is proposed to use for estimating the commercial value of fertilizers in 1881, see the following statement:—

	Average Trade-value for 1879 and 1880. Cents per pound.	For 1881. Cents per pound.
Nitrogen in nitrates	23	26
" in Ammonia-salts	23½	25½
" in Peruvian Guano, fine steamed bone, dried and fine ground blood, meat and fish, superphosphates and special manures	20	20
" in coarse or moist blood, tankage, castor pomace, cotton-seed, linseed and in fine ground bone, horn and wool dust	20	16
" in fine medium bone	18	15
" in medium bone	17½	14
" in coarse medium bone	16½	13
" in coarse bone, horn shavings, hair and fish scrap	15	12
Phosphoric acid soluble in water	12½	11
" "reverted" and insoluble, in Peruvian Guano	9	12½
" " in fine bone and fish guano	9	9
" " in fine medium bone	7	6
" " in medium bone	6½	5½
" " in coarse bone, horn shavings, hair and fish scrap	6	5
" " in coarse medium bone	5½	4½
" " in coarse bone, bone ash and bone black	5	4
" " in fine ground rock phosphate	3½	3½
Potash in high grade sulphate	7	7
" in low-grade sulphate and kainite	5½	5½
" in muriate or potassium chloride	6	3½

The reasons for these changes are to be found in the Bulletins of the Station for 1880 and in the Report for 1880, now nearly printed.

Fertilizer Analyses.

494. Lime-kiln ashes from New York State.

507. Lime-kiln ashes from stock of Ralph Barber, Rockville. Sampled and sent by H. A. Slater, North Manchester.

	491.	507.
Sand and insoluble	10.23	2.75
Silica		1.33
Char		4.98
Oxide of iron and Alumina	3.73	.22
Lime	50.53	53.87
Magnesia	3.19	1.30
Potash	1.74	1.94
Soda	.55	.73
Phosphoric acid	.63	1.31
Carbonic acid	29.40	24 81
Water at 212°		2 15
Combined water and loss		4.64
Nitrogen	none	none
	100.00	100 00
Estimated value	?	?
Cost per bushel	?	20 cts

Sample 491 was analyzed for private use, and the Station has no information as to cost, etc.

Both 491 and 507 have a composition more nearly like that of leached ashes than anything of common occurrence with which they can be compared. From leached ashes they differ in containing little or no moisture and about 20 per cent. more lime. They agree in general with leached ashes in the proportion of alkalies, magnesia and phosphoric acid present, although their potash is more and their phosphoric acid less than leached ashes commonly contain. Of the lime in sample 507, about 31 per cent. exists as carbonate and about 21 per cent. as caustic lime. These ashes are, in fact, wood ashes mixed with four or five times their weight of lime. They must be used with caution, but, if properly applied, will no doubt prove a valuable fertilizer on some soils. As to their money value, that is not easy to estimate with accuracy. Doubtless, however, they are well worth 20 cents per bushel if equal to the sample.

Baker's Special Manures.

517. Tobacco manure.
518. Potato manure.
519. Onion manure.
520. Turnip manure.
521. Oat manure.
523. Wheat manure.
523. Cabbage manure.

The above seven samples were manufactured by H. J. Baker & Bro., of New York, and sampled from his stock by S. C. Hardin, Glastonbury, Dec. 15, 1880.

	Tobacco. 517	Potatoes. 518	Onions. 519	Turnips. 520	Oats. 521	Wheat. 522	Cabbage. 523
Nitrogen as ammonia	4.01	2.77	4 08	5.47	3.66	4.86	4.35
Organic nitrogen	0.42	4.61	0 94	0.77	0.75	1.55	0.77
Soluble phosphoric acid	0.45	1.71	2.30	2.30	1.33	4 15	1.56
Reverted " "	4.71	4.58	3.91	3.72	4.10	1.96	3.97
Insoluble " "	1.28	2.42	1.39	1 69	2.08	1.17	1.18
Potash	11.98	12.92	9.55	10.56	11.12	5.93	10.01
Chlorine	4.23	4.23	2.75	3.32	3.44	1 93	3.61
Estimated value per ton	$44.05	60.54	47 08	53.79	44.91	49.0	46.14
Cost per ton	$47.50	46.50	47.50	52.00	47.50	47.50	48.00

S. W JOHNSON, Director.

Dairy Husbandry.

THE DAIRY COW—NO. 27.

HENRY STEWART

Rennet.

RENNET is the agent commonly used in the preparation of the curd in cheese-making. Recent discoveries in regard to acidification, so-called oxidation and fermentation, have thrown much light upon the character and modes of action of rennet. It is now well known that all these changes in liquid substances which contain sugar or organic matter in solution are produced by a process of vegetation of certain germs or spores and the production of organisms of which the yeast plant is a type. It is also well known that a very small quantity of a liquid, or even of its dried substance, added to such a solution is able to communicate the vegetative action which at a certain temperature, in a very short time, diffuses itself throughout the whole. And this is precisely the action of rennet upon milk. The very interesting question then occurs, what is rennet and upon what does its action depend? The rennet commonly used is a solution of the calf's stomach. An equally effective rennet may be made by infusing in water the intestines of a calf, the stomach or intestines of a young lamb or of a sucking pig, or even the bladder of an animal. It has been supposed that the gastric fluid of the calf's stomach was the coagulating agent of the rennet, but this supposition is without foundation and may be so shown by the well known fact that a stomach may be steeped in water several times, resulted after each infusion and in course of time it will recover its peculiar power of coagulating milk. So also sour milk and the sweet curd itself possess this coagulating power. Further, an extract from malt known as diastase has the property of changing starch into sugar, but if this diastase be exposed to the air for a time it undergoes a change similar to that which occurs in animal membranes and acquires the property of changing into lactic acid and coagulating milk. We are then forced to believe that it is not the acid contained in the rennet or any property derived from the gastric juice that confers this power upon it, but the presence of a peculiar organism which has the ability to reproduce itself in a favorable vehicle such as milk.

DRYING RENNET. FIG 148.

With this knowledge, the use of rennet as a coagulating agent in cheese making becomes easily understood and its preparation free from difficulty. The calf's stomach will always be the most popular substance used for this purpose in cheese making and its preparation may well be considered particularly. The stomach of the newly killed sucking calf only is used. This contains some of the curd of the milk upon which it has been fed and in some dairy districts the calf is given a copious drink of milk shortly before it is killed, so that the stomach may contain a larger quantity of this curd, which is preserved with the stomach. The stomach either emptied of its contents, or with these intact, is salted inside and out and dried in a warm place. The usual method is to turn the stomach, shake off the curd, salt the stomach, return it and salt the outer side, then stretch it upon an elastic twig and hang it up to dry (see Fig. 148). When the rennets are perfectly dry they may be put into a bag and hung up in the dairy room for preservation. Other methods are used in different localities, such as to pickle the stomachs in brine and dry them, or to pack them in jars or barrels in salt and keep them until required for use. In Italy and Switzerland the stomachs are chopped up very fine, mixed with salt, pepper, bread crumbs and whey into a paste which is pressed into jars or bladders and kept for use. The rennet improves with age and is the strongest when 10 or 12 months old. New rennet is charged with producing heading, swelling or "huffing" of the cheese. This peculiarity strongly corroborates the view above taken as to the nature of the action of rennet, for time is necessary to produce most effectively the organic change which takes place in the membrane and upon which its action depends.

Rennet is used in a liquid form, because it can then be quickly and intimately mingled with the milk. From what has been said of its character it will be evident that every particle of it must be a center of action and that this action spreads from each center in precisely the same manner in which the mycelium of a mold or fungoid growth spreads in every direction from every spore until the whole mass in which it is placed is quickly impregnated. For its proper action, then, it must be thoroughly stirred into the milk which is brought to a certain temperature, lower or higher according to circumstances for the reason that the germinative action is hastened by a proper degree of warmth. Usually the dried stomach is infused in warm water or whey and some dairymen add the juice of lemons to the infusion, one quart of the liquid being used for each stomach. Half a pint of the infusion to 100 gallons of milk is generally sufficient to bring the curd in one hour, with the milk at a temperature of about 80 degrees. The procuring of the curd is one of the most important manipulations in making cheese, as the quality of the product and its ripening or curing depend very much upon this part of the process being carried out with great carefulness and skill. The flavor of the cheese may be seriously affected by bad and impure rennet, and if putrefactive germs are contained in it, the decomposing ferment will assuredly be communicated to the cheese with disastrous effect. Doubtless many of the inexplicable troubles of the dairyman arise from the use of ill-conditioned rennet, and this should be carefully guarded against. It is always a safe precaution, when doubt exists as to the purity of the rennet, to filter it through flannel or even through cotton fiber, or blotting paper. By varying the character of the rennet the character of the cheese may be changed, and where many varieties of fancy cheese are made the rennet used differs very much. Some very celebrated French cheeses are made of rennet prepared with water to which brandy is added in the proportion of one-third, and spices and aromatic herbs are steeped with the stomachs in this mixture. For other cheeses pig's bladder is steeped in white wine and vinegar, and others again are made with diluted acids only.

The exhausted stomachs need not be thrown away, but may be again salted and left to renew their strength. This they will do in the course of some months, and as yet, no one has been able to say when this power of recovering their activity will be entirely lost. If this activity depends upon, or belongs to, the membrane, as almost conclusively appears, it may last until the membrane itself is dissolved away.

NOTE.—In the "Dairy Cow" No. 26, page 130, issue of February 26, a typographical slip occurs in the eleventh line from the bottom of the first column. After the word "solution," the correct reading would have been:—But it is easily soluble in a weak solution of carbonate of soda or potash.

The Herdsman.

THE GUENON MILK-MIRROR.

(See Illustration on first page.

THE name of the simple Bordeaux peasant, is, and should be, permanently associated with his discovery that the milking qualities of cows were, to a considerable extent, indicated by certain external marks easily observed. We had long known that capacious udders and large milk veins, combined with good digestive capacity and a general preponderance of the alimentary over the locomotive system, were indications that rarely misled in regard to the ability of a cow to give much milk; but to judge of the amount of milk a cow would yield, and the length of time she would hold out in her flow, two or three years before she could be called a cow—this was Guenon's great accomplishment, and the one for which he was awarded a gold medal by the Agricultural Society of his native district. This was the first of many honors with which he was rewarded, and it is much to say that no committee of agriculturists who have ever investigated the merits of the system have ever spoken disparagingly of it. Those who most closely study it, especially following Guenou's original system, which has never been essentially improved upon, are most positive in regard to its truth, and enthusiastic in regard to its value.

The fine, soft hair upon the hinder part of a cow's udder for the most part turns upward. This upward-growing hair extends in most cases all over that part of the udder visible between the hind legs, but is occasionally marked by spots or mere lines, usually slender ovals, in which the hair grows down. This tendency of the hair to grow upward is not confined to the udder proper; but extends out upon the thighs and upward to the tail. The edges of this space over which the hair turns up are usually distinctly marked, and, as a rule, the larger the area of this space, which is called the "mirror" or "escutcheon," the more milk the cow will give, and the longer she will continue in milk.

That portion of the escutcheon which covers the udder and extends out on the inside of each thigh, has been designated as the udder or mammary mirror; that which runs upward towards the setting on of the tail, the rising or placental mirror The mammary mirror is of the greater value, yet the rising mirror is not to be disregarded. It is regarded of especial moment that the mirror, taken as a whole, be symmetrical, and especially that the mammary mirror be so; yet it often occurs that it is far otherwise, its outline being often very fantastical—exhibiting deep *bays*, so to speak, and islands of downward growing hair. There are also certain "ovals," never very large, yet distinct, which do not detract from the estimated value of an escutcheon; notably those occurring on the lobes of the udder just above the hind teats. These are supposed to be points of value, though for what reason it would be hard to tell, yet they do occur upon some of the very best milch cows, and those whose mirrors correspond most closely to their performances.

Mr. Guenon's discovery enables breeders to determine which of their calves are most promising, and in purchasing young stock it affords indications which rarely fail as to their comparative milk yield. These indications occasionally prove utterly fallacious, and Mr. Guenon gives rules for determining this class, which he calls "bastards," without waiting for them to fail in their milk. The signs are, however, rarely so distinct that one would be willing to sell a 20-quart cow, whose yield confirmed the prediction of her mirror at first calving, because of the possibility of her going dry in two months or so, as indicated by her bastardy marks.

It is an interesting fact that the mirrors of bulls (which are much like those of cows, but less extensive in every direction,) are reflected in their daughters. This gives rise to the dangerous custom of breeding for mirrors, rather than for milk. What the results may be after a few years it is easy to see. The mirror, being valued for its own sake—that is, because it sells the heifers—will be likely to lose its practical significance and value as a *milk* mirror.

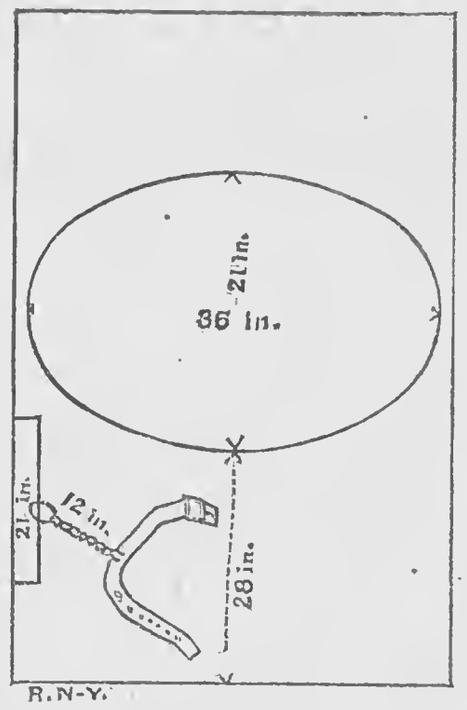
We have a striking photograph of a young Jersey bull, the property of Mr. John L. Hopkins, of Atlanta, Ga., and called "Grand Mirror." This we have caused to be engraved and the mirror is clearly shown. A larger mirror is rarely seen upon a bull. We hope in a future number to exhibit some cows' mirrors of different forms and degrees of excellence.

TO KEEP A COW CLEAN.

RICHARD GOODMAN, JR.

WE are beginning to recognize, slowly but, nevertheless, surely, that to make the best butter we must, among other things, keep the cow clean. Not clean inside only; though this is no unimportant or easy task, for it requires that the hay be not musty, that the grain be not soured, that the roots be not rotted, and it requires that the water be uncontaminated, and the atmosphere of the stable free from the odors of dung and urine and all decaying matter. Not clean inside only but clean outside also. Clean skin as well as clean hair, clean udder and clean switch.

How shall we keep cows clean outside as well as inside, and keep them thus with comfort to themselves and with profit to ourselves?



COW FASTENING.—FIG. 149.

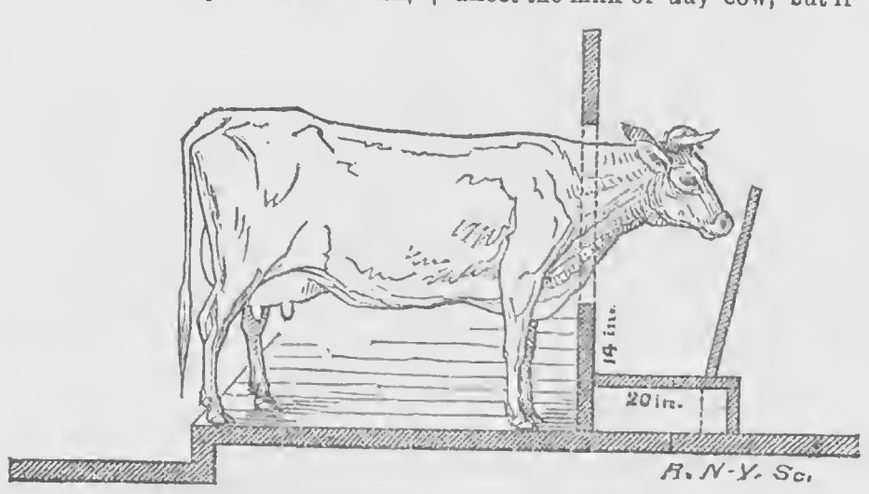
I know of one way only, and this I will attempt to describe. In the first place, let the platform be as short as it is possible for the cow to stand on with comfort, and let it be raised three or four inches higher than the passage-way behind her. Put a strap or chain around the cow's neck. Connect this neck-strap by a piece of chain 12 inches long to a ring which is free to run up and down an iron rod 20 inches long and secured perpendicularly at the left of the cow, Fig. 149. Let the cow reach the food in her manger by putting her head through an oval opening which shall be 20 inches from top to bottom and 36 inches from right to left, and let the lowest point of the bottom of this opening be 28 inches from the platform which the cow stands on. Let the bottom of the manger be about a foot from the level of the platform and about three feet wide and 20 inches broad.

This form of cow-stall (which may be frequently met with, but which I have never seen except in our own stables) seems to keep the cow secure, comfortable and clean. The 12 inches of chain which connects the neck-strap with the 20-inch perpendicular rod give the cow ample room to lie down, to get up and to reach the food in all parts of her manger; it does not cramp the cow when lying down, rising up or reaching for food in the corner of the manger, as do all forms of stanchions. The oval collar in front of the manger prevents the cow from stepping into it (as is frequently the case with unprotected mangers and cows tied by the neck-strap) and, while thus advanced on the platform, dunging upon that part of it where they will soon rest their flanks and hag when lying down. The elevation of three or four inches above the passage-way allows the dung and urine to fall entirely off of the platform.

Now cover the platform and passage-way with a thin coating of powdered gypsum, and then two inches of dry sawdust—and unless you have cows more "fidgety" than any I have ever encountered, you may expect to find them, morning, noon and evening, clean and always comfortable. Of course the sawdust and plaster should be renewed once or twice in the twenty-four hours, the accumulations of dung shoveled away at least as often, and the whole cow carded and brushed once a day.

Of all the forms of cow fastenings, other than this which I am describing, the stanchion is the cleanest and cheapest and most convenient, but it is open to the objection of being too severe and rigid for heavy or sickly or stiff-jointed cattle. The box stall conduces to the animal's comfort certainly, but is expensive and not always cleanly, for many cows seem to take pains to lie down in their freshly dropped dung, possibly because of its warmth. The neck-strap with running ring and open manger is comfortable but not cleanly, for the cow is very apt to place her front feet in the manger and while in that position dung upon the platform.

The measurements given above apply to stalls for Jersey cows; they should be varied of course according to the general size of the breed; but for all kinds of cows these stalls will be found, I believe, cleanly and comfortable for the animals and convenient and not expensive for the owners.



HOW TO KEEP A COW CLEAN.—FIG. 150.

STOCK NOTES.

A MOST serious calamity has befallen not only the owners but the breeders of Jersey cattle generally, in the loss by fire of 51 head of that breed which were burned in the barns of the "Elizabeth Farm" of the Coleman estate at Brickerville, Penn. This estate, under the management of its efficient agent, Mr. Cameron, had got together a very choice selection of animals of various breedings and valuable strains of blood which had already had their merits tested and appreciated at the prominent cattle exhibitions, and but for this fatal calamity would have made their mark throughout the country in their offspring. Among these animals were a bull and twelve young cows from the choicest of the Yokun Farm herd of Mr. Goodman of Lenox, Mass.

THE breeders on the Island of Jersey have had another pricking of the ears lately by the purchase of three of the best cows at the reputed price of $1,000 each. Some of our young "bloods" with inherited wealth, are as lavish on cows as Mr. Vanderbilt is on horses and pictures, and generally they find their money well invested. The best returns have come from these apparently excessive expenditures, and if to-day one Jersey bull could be selected as *primus inter pares*, he could be bought at any price within reason, say $5,000 to $10,000, and money be made from him. But enterprise and judicious liberality are not confined to the wealthy breeders. Only a few years since an intelligent mechanic came from Jersey City to his native place in Curtisville, Mass., settled upon the old farm, bought a few of the best Jerseys, found it a profitable business, and moved to a larger farm near Westfield in the same State, where his business prospers.

AT Lenox Furnace, Berkshire Co., Mass., is the farm of a young and enterprising breeder, E. M. Washburn, who, inheriting a well cultivated property, has turned it into a Holstein breeding establishment, and his neat catalogue just issued, of seven bulls and thirty females, some of the latter weighing 1,000 to 1,400 pounds, shows how rapidly he has filled up his stables with superior animals. Mr. W. has not been content with having all the "modern conveniences," such as steam power for working, pumping water, cutting up feed and ensilage tanks, and then looking round to select his cows and bulls, but sent a competent man direct to Holland and imported his own cows and has made money by doing so. Mr. Washburn for many years past, has made a business of sending milk to New York, as most of the families along the Housatonic Valley have done, and he says he has never found any cows of any breed that would equal the average of his present herd of Holsteins in quantity or quality of milk or in the satisfactory condition in which the milk reaches the consumer. The Holsteins have the good quality of most high-bred cows of being docile in the stable and pasture, possessing a quiet nature, and this with proper feed has more effect upon the condition of the milk than most people imagine. Improper feeding, such as too much grain and over-stimulating food, will affect the milk of any cow, but if the latter, like so many half-breeds or natives, has also a vicious, unquiet disposition, her milk is affected and the consumers, especially if babies, soon show the effects.

NEW England and the Middle States (and the South and West soon will) have numbers of young, enterprising breeders who are not only buying the best cattle abroad, but breeding to a high pitch of perfection, and great as are the results already obtained, there is no reason why they will not be exceeded, and we shall have, if we do not possess already, the best animals of every breed to be found in the world. We once "cornered" the market on Short-horns of the Duchess family and can do it soon again in Jerseys, Holsteins and Ayrshires, as well as Durhams.

MR. SIMPSON and Mr. James Stillman, both of New York city, have recently entered the "Jersey" arena, and with plenty of money are stocking their farms with the choicest specimens they can select and purchase.

W. S. TAYLOR, Burlington, New Jersey, is refilling his stables, but it will be hard for him to duplicate "Favorite of the Elms." It has been said that the famous Jersey bull, *Sarpidon* supposed to be dead, has been found *inter vivos*, and is claimed as a *deodand* by several persons who would like to act as high priests.

THE American Jersey Cattle Club has extended its rules regulating the importation of animals from the Island of Jersey, so that they did not go into effect until March 1st.

MR. BURNHAM of Saugatuck, Connecticut, is reported as the purchaser of one or more of the high-priced cows lately sold on the Island of Jersey.

Industrial Implements.

A Thriving Firm.

On a recent visit to the old-established agricultural implement works of Messrs. Gregg & Co., Trumansburg, I found them overcrowded with business. They have added many new machines to their line of manufacture during the past season, and as their goods are well known for superior workmanship, they have already made a first-class reputation and are meeting with large sales. Their Meadow King Mower has been made and sold by them for the past fourteen years, and it stands in the front rank of implements of this class and is well known throughout this country. Messrs. Gregg & Co. were the pioneers in the plow sulky line, having brought out the Osborne Plow Sulky in 1870. Its sale has steadily increased from year to year, while this year it promises to double that of any former one. This firm have been testing a new light reaper, of which they will bring out a limited number this season. It will be known as the Gregg Reaper. They cut with one of them last year over 700 acres of wheat, oats, buckwheat and barley, moving the machine over 70 miles in doing it. It stood the test well. If it does as well this season, Messrs. Gregg & Co. will build a large number of them for the season of 1882. Their orders for King of the Lawn and Young America Lawn Mowers show a large increase over previous years. W. H. K.

The Watertown Wagon Co.

THE flattering success which the Watertown wagons have met with since their first introduction has induced the Watertown Spring Wagon Co. to add to their line of manufacture several styles of three-spring wagons and one with an elliptic spring in front and platform springs in rear, and with reach. These wagons will be made in the excellent style which has secured for this company its high reputation and extensive sales. Last year they were compelled to enlarge their works and this year they will have to build another addition to meet the wants of their large increase in business. In order to facilitate their Western shipments they have established warerooms, with Messrs. A. A. Abbott & Co. as managers, at 298 & 300 Wabash Avenue, Chicago, Ill. The Watertown Wagon Co. have good reasons for the extraordinary success in their business, as they keep up the standard of their work, use nothing but first-class material and employ none but skilled workmen, and all their wagons and buggies are first-class and come fully up to representation. K.

GOOD TOOLS.—When a farmer or gardener is about to invest in a tool costing several dollars, he takes pains to post himself as to the different brands, and tries to get the best. Yet the small tools, and many of them such as are used every day the year round, are bought without much regard as to who made them or as to their quality. This is especially true of such a tool, say, as a pocket knife. When a pocket-knife is needed the stock of the country store is examined and one selected because it seems to be good. But we have all found out to our sorrow that knives are rarely made to *cut* now-a-days, but are, like the man's razors, made to *sell* We know of no tool that needs to be more reliable than the pocket-knife, for most of the time it is the only one at hand to help one out of a difficulty, and we are glad in this connection to call attention to the advertisement of Maher & Grosh in another column who advertise "knives to cut," and to assure our readers they will do just what they promise to do. B.

Miscellaneous.

RURALISMS.

THAT eminently good man, Mr. Peter Cooper, has just celebrated his ninetieth birth-day. There is no man in New York so sincerely loved and respected as he is for his beneficent acts, the benefits of which are enjoyed by all classes of the community. The Cooper Union is a grand monument, and he needs no other; but it has occurred to me that horticulture might do something in recognition of philanthropy such as his, which the children of horticulturists can enjoy in common with others; besides, it is known to me that Mr. Cooper has been a patron of horticulture in his peculiarly quiet way. I should like to see some *good* plant, a fruit or a flower, named after him; and I should further like to see a graceful act on the part of the Central Park Commissioners, to the effect that Mr. Cooper be invited to plant a tree in a suitable place on one of the Central Park lawns, to be known as the "Peter Cooper Tree."

A DAILY evening paper recently stated that Col Wilder, forty years ago, imported the first camellia plant, for which he paid $250, and that from that plant all the plants in the United States have been grown! Mr. Wilder always has a pleasant smile on his face, and it may be that statements such as these have something to do with it. I think he was raising seedlings of his own as early as that. I venture to say that forty years ago Mr. Wilder had more than forty varieties of the camellia, and that there were more than forty thousand plants in the United States forty years ago, if the reader will forgive the alliteration. It would not surprise me if it were found that there were more camellias grown at that time than there are to day. For some years past the pure and simple beauty of the camellia has been quite overshadowed by flowers of a gayer hue. The camellia is no longer a fashionable flower. So much the worse for fashion.

THE toad is so highly prized in France as a destroyer of slugs and other vermin, that a Frenchman has thought to add to its valuable qualities by crossing it with the frog, and says he has succeeded, and is well satisfied with the result. I am convinced that we do not sufficiently value the toad as an aid to horticulture. He is peculiarly the gardener's friend, and a goodly family of toads should find a place in every garden, and the children be taught not to harm them. They are useful in the greenhouse; and I always put toads and land turtles in the grapery. The tortoise is amusing as well as useful, and is capable of forming a friendship for you, if you will encourage him a little. I have taught him not only to eat out of my hand, but to stand on his hind legs to receive food. He will sometimes, however, mistake one's finger for a worm, and hold on like a crab.

THE fearful storm that passed over the country lately has its lessons for the fruit grower as well as for others. The destruction of fruit and ornamental trees has been something to remember in this section. There is one fact to which I wish to call the attention of the fruit grower. I have noticed that the damage, in most cases, has been to close or full-headed apple trees. In almost every case in which the tree was broken short off, a foot or so from the ground, it was not only full-headed, but had the appearance of never having been pruned at all. A gale like this may not occur again in twenty years, but we all know that winds sufficiently strong to damage apple trees are by no means of infrequent occurrence. There can be no doubt that much of this damage might be prevented if the trees were properly pruned, so as to leave them with an open head. It is better for the tree, and, in my experience, very much better for the fruit. This pruning should be begun when the trees are young, and no apple tree should ever be allowed to fill up at any time with branches so large that they cannot be removed with a pruning knife. It is never too late, however, to remedy this neglect, and orchardists should not let another year pass without opening the heads of their apple trees, especially those who live in localities subject to strong winds. The pear is tougher and better able to take care of itself; yet many pear trees would be benefited by the same treatment.

I KNOW, of course, that ribbon border and carpet gardening have been on the increase with us for a few years past; but I did not know till recently that this thing had gone so far that gentlemen now send their gardeners to Europe to obtain the latest patterns and styles, very much as a modiste sends for the latest styles in dress. Two such cases have come to my knowledge; how many more there may be I know not. I do not know when I have heard of anything so thoroughly childish and absurd, and so well calculated to degrade gardening, and stamp out everything pertaining to originality and good taste. Perhaps the best comment is no comment at all.

I REGRET very much to learn of the death of Dr. C. W. Grant, to whom I alluded a short time since in this column. In the great revival and spread of grape culture some twenty years ago, he was a very prominent figure, and will find his proper place when the history of grape culture in this country comes to be written. He had some weak and a good many strong points, and will be remembered kindly by many friends. His large and select library was about equally envied and admired by horticulturists of literary tastes. Some notice seems to be due to a man who once occupied so prominent a place in the horticultural world, and I could not let his death pass without, at least, these few words.

HORTICOLA.

BOOKS RECEIVED.

ILLUSTRATED STOCK-DOCTOR AND LIVE STOCK ENCYCLOPEDIA BY J. R. MANNING, M. D. V. S. This work of 1,002 pages, octavo, is divided into ten parts:—Part I—166 pages—treats of the horse, his history, breeds, characteristics and management. Part II—264 pages—treats of his diseases, their causes, how to know and cure them. Part III, containing 102 pages, is devoted to the history, origin and breeds of cattle, and their management and cure. Part IV—54 pages—treats of the diseases of cattle; their causes, how to know them, and what to do in each case. Part V—32 pages—is devoted to the history, breeds, characteristics and management of sheep. Part VI—18 pages—treats of the diseases of sheep, how to know and cure them. Part VII—34 pages—treats of the history, breeds, characteristics and management of swine. Part VIII, tells of their diseases and how to know and to cure them. The remaining two parts, occupying 79 pages of the text, treat of the history, breeds, characteristics, breeding and management of poultry, and of their diseases, and the remedies therefor.

An appendix of 52 pages gives the history and record, etc., of the most famous English and American race horses and American trotters. The remainder of the bulky volume is occupied by a convenient glossary of scientific and other terms, with their definitions; after which comes a list of the numerous illustrations in the work, which ends with a copious index by means of which any subject treated of in any part of the volume can be readily referred to.

This volume is very useful to the farming community in that it contains a well-selected condensation of what has hitherto appeared in several works treating separately of the various matters herein grouped together. The book is mainly a compilation from other works, there being little original even in the multitude of engravings; but the information it contains has been carefully culled and skillfully arranged so as to present to the farmer much that has been ascertained both as to the history and characteristics of farm stock, as well as their best management in health or disease. The work is printed in large, legible type, and written so that all can readily understand it.

HORSES' TEETH. This is a treatise on the mode of development of horses' teeth, their physiological relations, anatomy, microscopical character, pathology and dentistry, based on the works of well-known odontologists and veterinary surgeons to which is added a vocabulary of the medical and technical words used. This work is chiefly a compilation of what has been said by others on the subject, the author Wm. H. Clarke, candidly confessing that he understands neither veterinary nor human surgery. The compilation, however, is made from the best authorities. Published by the author; price $1.50, cloth-bound, 265 pages, octavo.

RURAL BRIEFLETS.

AMONG novelties now offered for the first time is the "Perfect Gem Squash," one of which was sent to us by the introducers, J. M. Thorburn & Co., for trial. It was pronounced by those who ate it of remarkable sweetness and fineness of texture. The "Perfect Gem" is rather small, being about four or five inches in diameter, but it more than makes up in productiveness what it lacks in size. We were shown the squashes on the vine last Fall, and it occurred to us that we had never before seen so many growing upon one vine in so small a space. . . .

YEARS AGO we tested a variegated-leaved potato—the Early Rose, if we remember correctly. Now there is a variegated-leaved tomato—the Trophy. But variegated-leaved vegetables are "go-betweens." They are neither pretty enough to be classed among useful ornamental plants, nor productive enough to be cultivated in the vegetable gardens. They are simply curious—and *one* plant is enough. . . . . .

WE have received from Dr. J. M. Bailey an "Essay upon Ensilage." Dr. Bailey is the author of the "Book of Ensilage"—that is to say, the "New Dispensation for Farmers." This pamphlet tells what a silo is, what ensilage is, and what are their advantages. Dr Bailey lives in Billerica, Mass, and is the proprietor of "Winning Farm." He is also the proprietor of a "Virginia Stock Farm," somewhere in Sussex County, Va—the town is not given. We have expressed ourselves rather freely as to this Dr. Bailey on previous occasions. As to the subject of ensilage, we confess we have suffered ourselves to be prejudiced against the system by the obtrusiveness and vanity of Dr. Bailey—its foremost advocate in this country. The pamphlet in question is an advertisement of himself and his book, the same as his book—the first edition, at least—was an advertisement of himself and his stock. . . . . .

THE SOJA BEAN, which we have before several times alluded to, is now offered in catalogues of 1881. We had intended to test it last season, but it was overlooked. Mr. Gregory thinks that, as it yields leaves very abundantly, it may prove of value for fodder purposes if cut when green. He says that, "baked with the common field beans, it will be found finer grained and richer flavored." For fodder purposes we should hardly think it could prove more valuable than many kinds of cow-peas. . . . . .

MR. W. A. SANDERS, of Sanders, Fresno Co., Cal., writes us that he recently visited the best raisin vineyards of Europe, and brought back with him to California over $1 200 worth of vines. Some varieties, he says—the Suliana, for instance—can be grown in a common water pail filled with earth. . . . . .

MR GEO. B. BOOMER, of the Boomer & Boschert Press Co., Syracuse, N. Y., informs us that since January 1 he has sold seven of their power presses to one firm, five to another, one to another and one to another, *all engaged in the manufacture of oleomargarine in New York City alone.* To this we will add four that were sold in Philadelphia for the same business. These presses cost $700 each, and are capable of pressing a ton at a pressing, four times a day. Surely there must be some oleo. on the market somewhere. . . . . .

OUR friend Mr. M. B. Prince, of North Carolina, writes us as follows:—"It is gratifying to see that the RURAL still keeps hammering away at the Government on the Agricultural Department appropriations, and it is to be hoped that all other papers which have not already done so will fall into line, backed by the farmers themselves. I would like to inquire (not in a spirit of fault-finding) how many copies of the Report of the Commissioner of Agriculture are there printed each year, and where do they go to? As near as I can learn, very few fall into the hands of farmers, except those of a political turn." . . . . . .

ON page 31 of Mr. Peter Henderson's catalogue, he states, under a pretty little engraving of the Edelweis (Leontopodium Alpinum) that "this is probably the first time that seed has been offered in this country." In this Mr. Henderson is mistaken. We remember to have seen it offered for sale in another American catalogue two years ago. The Edelweis is more interesting in romance than in fact. It is a little composite of the "everlasting" type with stems less than a foot high. The flowers are borne in heads of yellowish flowers underneath which is an involucre of white, woolly leaves that constitute its chief beauty. The leaves are also woolly or rather cottony and two or three inches long. It is found among the Alps and not abundantly even there, so that the presentation of a bouquet of these flowers to his lady-love is evidence of sincerity on the young fellow's part, since he must have endured some fatigue and exercised a deal of patience to procure it. This Edelweis is a hardy perennial and will grow in any light, well-drained soil. . . . . .

LIVINGSTON PERFECTION TOMATO is introduced by Mr. A. W. Livingston, the originator of the Acme and Paragon. It is said to be blood red in color, perfectly smooth, has very few seeds, is larger and earlier than the Acme, ripens evenly, is a good shipper and excellent for canning. . . . . .

WE are in receipt of a very strange-looking apple—if apple it may be called—from a subscriber in Michigan, who says it is from a seedling which was "the result of cross-fertilization." The fruit is about the size of a medium Baldwin, nearly round, somewhat ovate, with *neither basin* nor cavity. The color is a bright yellow shaded with a brilliant red. The flesh is very white, fine-grained with a mild sub-acid, delicious flavor. The leaves, as our friend describes them, are long, narrow, pendulous and finely serrated, of a light-green color with long, slender petioles. Its keeping qualities are evidently excellent. It has a rich aromatic perfume that from one apple may be perceived in any part of a room. We have written to our friend for further particulars, as we deem the apple or hybrid between pear and apple, as he thinks it is, worthy of notice, and we shall, after receiving them, present an illustration of the singular fruit. . . . . .

WE see in a number of catalogues that a new wheat called "Golden Grain" is offered. Some call it "Palestine Mammoth" wheat. The grain closely resembles "Black-bearded Centennial" in size, color and shape. High praise is bestowed upon its productiveness, hardiness stiffness of straw, etc. We have no right to cast any doubts upon its value except that we are unable to ascertain that anybody has fairly tested it. The color of the grain is as light as that of Clawson. It is short and so plump as to justify the claim made for it of being the largest grain in cultivation. We have the "Black-bearded Centennial" which it so nearly resembles, growing at the Farm and we shall sow the "Golden Grain" this Spring. . . .

RESPECTING the "Golden Grain" wheat we have just received the following note from a correspondent in Penn:

"I, this day, sent you by mail a sample of the Golden Grain, or Palestine Mammoth, Wheat which I think will exceed anything you have in New York State. If you have anything better I should be pleased to see a sample. The Golden Grain, or Palestine Mammoth Wheat, was brought from Palestine four years ago. It is a very hardy and most productive variety, with long, stiff straw. It stands well and stools heavily, growing from 25 to 70 stocks from a single grain. The ears are of good length, closely filled with full, plump grains with but little chaff, having yielded last year 32 bushels on one-half acre of land. The greatest curiosity about this wheat is that when it first shoots into heads it is a bearded wheat; but when it is ripe it is a smooth wheat."

GOOSEBERRIES when fairly ripe are to many a very eatable fruit—especially the sweet kinds. Years ago a native seedling bush was presented to us by Mr. A. S. Fuller, who was at the time an associate editor of this journal or rather of MOORE'S RURAL NEW-YORKER. This bush has borne an immense amount of berries every year since, and, though no larger than those of Downing, they are, for a gooseberry, tender and very sweet when fully ripe. There is not the same inducement for the horticulturist to work with seedling gooseberries as with the delicious grape and strawberry. It is essentially a coarser fruit. Nevertheless it is still, no doubt, capable of decided improvement. We want a productive, excellent gooseberry as large in size as the English kinds, that *will not mildew.* Very likely crosses between the foreign and native kinds might effect this. But we do not hear that any persistent work or study has been given in this direction. .

FOR mildew upon gooseberries no better remedy is suggested than partial shade, mulching and flour of sulphur, dusted freely over the leaves. . . . . .

MR. MERCERON of the Pennsylvania Fruit Growers' Society, says that the Sharpless, from all reports, is the best variety from Maine to California. He says it roots deeply into the soil, and therefore holds its foliage better than other varieties. The original plant which grew in 1872 is still alive. Mr. Sharpless is not positive what it is a seedling of, as he had Wilson, Downing and Jucunda all around it. .

MR. MEEHAN thinks that robins, sparrows, etc., are not an evil, for though they destroy our fruit, there are months that we have no fruit, during which time they destroy a great number of insects. . . . . .

IT is almost as important to prune the currant as to prune the grape. Cut out all old, blackened stems. . . . . .

THE Herald says that when a New-Yorker wishes to boast that his family has lived here for a long while he says: "My grandmother used to pick blackberries where Canal Street now is." . . . . . .

LONG ISLAND farmers are rejoicing over the extremely cold weather, thinking that the Army Worm and the potato bugs will be destroyed. .

A CORRESPONDENT from Long Island states that he bought a pair of Poland China pigs in November for $7.00, and at the same time a pair of common ones for $5 00. February 1st the Poland Chinas, he says, are about two-thirds heavier, though all have had the same chance.

What Others Say.

REGARDING the culture of sorghum and its manufacture into sirup and sugar, we find some interesting matter in the reports of the late meeting of the Minnesota Sugar-cane Growers:

Mr. Wilcox, of Wisconsin, said: Sandy loam in new land will, if planted early, secure a good crop. Barnyard manure and plaster-of-Paris fertilizing will aid old land in producing an early growth and a large-sized cane. The percentage of juice is greater in a large-sized cane than in a small-sized one. A sub-soil of clay retentive of water is injurious to the cane. Soak the seed in warm water, plant early, and cultivate carefully on the first appearance of weeds. Careful cultivation is a necessity. This industry has ceased to be an experiment. Nothing has yet been found to supersede the vacuum-pan for finishing, but it is too small for any but small manufactories.

Mr. Porter would decidedly sucker the cane. Mr. Nash planted his cane with a stalk every

10 or 12 inches, and had no suckers and the cane was large. On one acre he had 160 gallons—another planted 3½ feet apart, and had 80 gallons.

Mr. Hampton, of Hastings, had 140 gallons from one-half acre, and 16 bushels of nice seed; this year but 84 gallons, on account of suckers.

The President in his address said:—"We are making progress. The work of refinery has told us that there is as rich a mine of wealth in Minnesota as in any State in the Union. Our business is to help develop that wealth. As long as so much sugar and glucose are sent here I think our chances are good. I wish to speak of the average yield in gallons for 1879, which was less than 89 gallons per acre. This is but a small per cent. of the product saved. I bought and weighed at my sugar works in Morristown 973 acres of cane. It averaged 10 tons per acre and 14 gallons per ton. I also worked about 20 acres from which I did not strip the leaves, as it was getting late in the season and the leaves were in fine condition. This cane was cut, most of it, from September 15 to 18, and piled in the field, where it lay until I used it; it had dried out some. I estimated the weight of it at eight tons per acre, making in all 1,133 tons used at my works. This produced 16,100 gallons, or an average of about 14 gallons per ton. The actual time in making the above was 39 days of 24 hours each. I lost some time through the working season, which reduced the average yield very much. In one case I obtained 76 gallons from a quarter acre of cane. If my cane would average 140 gallons, and the State at large only 89 gallons, it is evident some of the cane is worked at a great loss. The cost of manufacturing the past season, to me, was six cents per gallon, not counting interest on investment—only labor and fuel being taken into account. If the cane had been as good as in 1879, it would have reduced the cost at least one-fifth. If the crop could have been worked 39 days from September 1, instead of being delayed into November, a much better yield could have been shown.

There were produced 7,317 acres of cane. If the yield is based on last season's average, we would have 549,383 gallons. But as better machinery is fast being introduced, it is presumed the actual figures when obtained will be much greater. The question now asked me is, 'What are the prospects for a market for another year?' If it was positively known that there would be a good, reliable market, the crop could be largely increased next season; there is but one small refinery in this State, and a ready market cannot be obtained as soon as the sirup is produced.

Many years' experience has satisfied me that three and one-half feet each way planted in check-rows is the best way, and always plant a liberal supply of seed, as it is much easier to thin out than to hunt for two or three scattering stalks, especially if the land is weedy. Another thing: If the season is cold, with heavy rains, or if some hills are covered more than one-half inch deep, if you do not have a good stand, you cannot raise a good crop. As soon as you can follow the rows I think it pays to stir the soil close around the hill to give the small plant a chance, so that it does not get choked with the weeds.

In harvesting a crop of cane it is my opinion that all that can be used safely without freezing should be worked from the hill or within two or three days from that time. I have reason to believe that if the cane can be cut and allowed to lie till the leaves are partly dried, on large mills a saving of labor can be made; but in smaller operations I should favor stripping if the cane is to be piled to remain, and in large piles stripping is absolutely necessary, as the leaves shut out the air and the cane will heat and mold. Cane stripped and bound in 40 or 50-pound bundles, each tier crossed, and a space of two feet between piles, if piled perfectly dry, will keep a good many days without damage. For putting up several hundred tons near a mill this would be my plan every time. I found whatever damage there was this way was from two causes: First, if piled when wet; second, if piled nearer than two feet from other piles. A little practice will enable you to give the piles a little slope on the top. We found if the cane was stripped and bound the teams could haul twice as fast. To do a successful business the shed should cover the mill and the cane; in two or three days of rainy weather, if the works are of large capacity, the product will pay all the cost of the shed.

Cane-juice contains a vegetable acid that enables the manufacturer to make a light-colored sirup, but the acid helps to hold quite a per cent. of vegetable matter that gives much of the strong cane taste. A sufficient amount of lime to nearly neutralize the acid removes most of the vegetable taste, which arises in the scum; the juice if left a little while settles tolerably clear, removing most of the cane taste. This treatment requires more skill and good judgment than all the rest, and the great lack in the North to-day is skilled labor in this department. Unless one has his sirup contracted to responsible parties I do not think it a safe investment for new beginners that have not had any previous knowledge. They can be more certain to make a crude article successfully the first season. If I were to advise new beginners I should say to them, better give some successful man your time, if need be, or employ skilled labor to assist you, especially in the department of defecating. Evaporating requires the same or nearly as much skill. A good article of sirup will always sell as well as good corn or other grain.

The past season I first tried the porous alum jelly, using it in the same proportions as generally recommended. I do not like the results. I then tried lime alone, a trifle more than a quart of cream of lime and about as thick as cream, to 100 gallons of juice; I boiled to about 220° on a Cook evaporator, and finished the product with a steam-pan, with a coil of inch pipe. I think one-and-a-half-inch pipe would be better, and copper pipe is best of all. This sirup, if boiled for sugar, should never be put hot in barrels. Remember in cooling the product, you cannot be too quick about it. In fact, the whole business requires dispatch to be successful.

If the product weighs 11½ pounds to the gallon this is standard weight at the Belcher refinery, and ought to be in this State. Some of the product will grain, if the cane is in condition to make sugar, twelve pounds per gallon, if well defecated, and I doubt if it is advisable to boil it heavier than that, as you will, with open pans, destroy more sugar than you will gain beyond that point. I have boiled it heavier, but do not advise it. Making sugar from amber sirup when the cane is in good condition with good defecation, with lime so the litmus paper will look nearly blue, and then the lime neutralized with porous alum, or, as some call it, sulphate of alumina, one pint of the solution to 200 gallons of juice put in after the treatment of lime, I have made sugar in paying quantities.

I never have had a doubt of the future of this industry. It was 15 years after the introduction of sugar-cane in Louisiana before the first sugar was obtained. Two years ago the sirup granulated beautifully, which was my first knowledge of clarifying with lime. Although the past season I made no sugar, my season's work paid me well. I paid $2 80 per ton for the cane delivered to the works in bundles. I think it can be delivered for $2 50 and be a profitable crop for the grower and manufacturer. The expense of good works that will work 100 acres, with sufficient buildings, involves quite an outlay, and the manufacturers have to take many chances that the grower does not share in. I think it better for the manufacturer to produce his cane, rather than pay more than $2.50 per ton, as he will then secure a profit in addition to the manufacturing.

From the Scientific American we learn that Mr. William H. Older, of Packwaukee, Wis., has patented an improved construction of buildings designed especially for barns upon prairies and other parts of the country where timber is scarce. A peculiarly constructed frame of timber and wire, the timbers being secured by bolts, is the principal feature of the invention. The outside may be covered with straw thatch, tarred paper, etc. A serviceable building can thus be constructed with little timber and at a small cost.

Also that Mr. Ura H. Palmer, of Elizaville, Ky., has patented a wheat heater for flour mills, in which the grain is heated by the direct contact of hot air, the air being heated by a lamp and circulated in currents through perforated tubes, among which the grain passes by virtue of its own gravity.

Mr. Charles Niederauer, of La Grange, Texas, has patented a cultivator in which the standards may be adjusted to regulate the depth of the cultivators or plows to avoid obstructions. Each cultivator or plow standard has attached to it an adjustable segment, and the standards are all operated together by lever and link connections. The plows are thus raised, while the main frame upon which the operator rides is not raised.

Mr. Julius Holekamp, of Comfort, Texas, has patented a seed planter whereby corn, sorghum, beans, rice, cotton, etc., may be planted in hills or drills, and so constructed that the seed may be planted in any desired quantity, and at any desired distance apart, and with the rows at any distance apart.

The sample man of the Mark Lane Express says that when Judge Jones says there is nothing the matter with American cattle, it is no matter what Judge Jones says. He denies that foot-and-mouth disease exists in the United States, though under the name of epizootic aphtha, it is spoken of as a common disease by United States papers. He has even questioned whether any cattle affected with contagious pleuro-pneumonia have been sent to England. Like the ostrich he puts his head in the sand and will not see what he wishes to have ignored. When in that country a short time back, he did not talk as he writes now in the Chicago Live Stock Journal.

Now putting aside all claims to the superior nutritive value of ensilage over green fodder, the Maine Farmer contends that the advantages are of sufficient importance to demand a careful consideration before the process is condemned as of no value. It is a very difficult thing to dry green corn fodder in the sun, and a rain storm will wash out twenty-five per cent. of its value very quickly. If packed away in the barn when too green, it heats and molds and becomes poisonous. If it grows stout and long, like that described by Whitman and Burrell, but little more than half of it can be eaten by the animals, whereas when cut up and ensilaged, it becomes soft and is easily masticated.

The "Mammoth," or "Russian," *sunflower* is one of those plants which are periodically "pushed" and recommended as furnishing not only the best food for poultry, but also excellent fodder for cattle, and always ready kindling material for the kitchen stove besides. Dr. Hexamer tells the N. Y. Tribune that he has tried it, and would not take three acres of sunflowers for one of corn. His hens prefer the corn, his cows the corn-stalks, and the cook the corn-cobs for kindling material. Farmers as a rule know a good thing when they see it, and when a crop has been recommended as persistently and as long as sunflowers, without finding more favor, there is generally some material defect about it.

Says the Indiana Farmer, "A Warrick county farmer recently lost eleven horses and mules from eating corn-stalks, which being cut up formed indigestible balls in their stomachs, producing death in a short time."

Everywhere.

NOTES FROM THE SOUTHWEST.

This immediate vicinity is being transformed by the vegetable business. I doubt if 500 cars will measure the business this year. All round the city land is taken up in gardens. Potatoes, cabbages, peas, beans, lettuce, onions, etc., are raised. People from a distance are coming in. Our markets are St. Louis, Chicago, Louisville, Cincinnati, Indianapolis, etc., none of them 48 hours away by express, and within safe distance by fast freight. Up the Mobile and Ohio Railroad the work of raising fruits and vegetables has reached, in spots, as high as Meridian, Miss. Doubtless there will be a great business in this in the future, as there are millions of acres of Government land homesteadible in a beautiful, healthful country, where there is an abundance of fine marl.

In this pine-woods belt sheep raising is to have a great future. Most of the lambs have already been dropped. Sheep are wonderfully fecund, multiplying at the rate of 100 per cent. per annum, very healthy, and cost little or nothing for maintenance, there being millions of acres for range. There is a great demand for the wool, and, as it is of very fine quality, it sells as high as 60 cents per pound for unwashed Merino on the spot where raised. People from a distance are just beginning to appreciate this business. In the next few years the pine-woods of Southeastern Mississippi and of Southern Alabama will be great sheep-walks.

In East Mississippi, in the superb prairie belt, stock raising is receiving a great impulse. Many parties, within the last two or three years, have sown grass and bought stock. Fine fields of clover, Blue Grass, Meadow Fescue and other grasses are to be found. People by the score are raising one kind of stock or another. Three years ago you could have counted all the stock raisers in Eastern Mississippi on the fingers of both hands; now there are a hundred, perhaps. The Stock Breeders' Association was organized there in January, 1879, with 11 members. Even some of these had no stock. Now there are nearly 300 members. Some of the most influential men in the State are stock raisers. The cattle are Jerseys, Short-horns, Devons and Galloways. The sheep are mainly Merinos, Cotswolds and South-Downs. Diversified industries seem to have been better illustrated in Eastern Mississippi than in any other portion of the State.

Another novel industry, for the South, is the raising of peppermint for distillation. The past year it has been proved by several trials to be a great success. Two gentlemen from Michigan tried the herb in five or six different localities. It proved so great a success that they are planting to their utmost capacity. It can be cut twice a year, and makes as good oil as is to be found anywhere. The richest sort of black prairie soil is to be had at from $8 to $10 per acre, and the mint raisers of Michigan say that the industry in Mississippi defies competition.

The planting of the Castor Bean is being agitated, with expectations that in a year or two it will be a most profitable and engrossing industry. The plant is very prolific in the South; its long season of ripening is greatly in favor of its cultivation in this section. It bears enormous crops and is wonderfully vigorous. A great feature is that the cotton-seed oil-millers will greedily buy up all the beans, to give employment to their mills in the Summer and save them from being idle so long a time every year. This gives a home market, with active competition among the buyers. In a few years you may look for thousands of acres, aye, tens of thousands, to be planted under this beautiful crop.

Another very hopeful sign for that country is that immigration is beginning to come in; not much just yet, but the influx has begun, and those who have come have come to stay. Men from Kansas and Michigan and, maybe, from other States, have come down and are well pleased, and their friends will soon follow. Almost everything that is needed can be raised there. Wheat and cotton, corn and sugar-cane, rice and clover, rye, barley, buckwheat, all the vegetables and many fruits will grow side by side in the richest of soils, a fine climate and as healthy a country as is to be found, with land that once sold at $50 to $100 per acre, for sale now at $8 to $15.

One of the most gratifying of all demonstrations is the success of the Agricultural and Mechanical College of Mississippi. It has been open six months. No one ever suspected that it would have over 200 students, if that many, for years; yet, in less than three months, there have been over 300 matriculations, and I suppose over 200 have been repulsed for want of room. No college in this country can compare with it. A perfect *craze* for an agricultural education seems to have seized the State. The most distinguished and wealthy men, from members of the United States Senate down, are sending their boys there to make farmers of them. At this college compulsory farm labor is a part of the *curriculum*. Each boy must work three hours per day for five days in the week. He must plow, harrow, dig ditches, hoe, fence, do anything that is needed to be done on the farm—a farm of 800 or more acres, utterly poor and out of shape. Military discipline prevails, too. The boys have to rise early, make their beds and keep their rooms tidy. They have to drill every day. They have to go to bed at a certain hour. They are under discipline most of the time. They study under the watchful eye of the "officer of the day." At night they are under espionage in their rooms. The corridors of the dormitories are patrolled by students all night, as sentinels. M. B. H.

Mobile, Ala.

RURAL SPECIAL REPORTS.

Ark., Poteau, Scott Co., Feb. 21.—Since January 1st, there has been an unusual amount of snow here, but the weather has not been so cold as in December. The ground has been entirely clear of snow only twice since November. For the past few days the prospects have been good for some Spring weather (in fact, the maples are in bloom); but at present the outlook is good for a snow-storm. This Winter has been a very unfavorable one for farming. Many who hadn't their cotton picked when the November "squall" came will have it to pick this Spring when they should be preparing their land for another crop. In this country we generally sow oats and break corn land in this month; but the weather will not admit of breaking land this year. It is feared that fruit is killed in the bud here, but as far as I have examined, I find that it is all right, although some trees are winter-killed.

H. C. B.

Ill., Pana, Christian Co., Feb. 23.—We have had a long, steady, cold Winter. From November 15, things have been frozen up solid, with but little snow; the depth of it has not exceeded at any one time more than five inches. We have had only very little sleighing, but the best of wheeling, the ground being bare but frozen. Winter wheat is all right so far as I know, having given my personal attention and a close examination to 40 acres of my own, of which 28 acres were sown in due season and 12 acres of such late sowing that it barely came up before Winter set in. I am satisfied it is all good. Peaches are undoubtedly killed. As to apples and cherries, they are all right.

D. B. P.

Ill., Highland, Madison Co., Feb. 18.—Apples are sound yet, at least the buds I examined were so. Peach trees are, I believe, frozen nearly to the ground. Among pears and sweet cherries the buds I looked at were all frozen. Of small fruits I can say nothing; neither can I of grapes. C. L. B.

Iowa, Aplington, Butler Co., Feb. 15.—We have had a long, cold Winter, with plenty of snow. Rail and wagon roads have been blocked badly. We have had 38 snow storms already. Hogs are about all sold, but we have some beef cattle here yet. Not much wheat was raised here last year. Farmers go in pretty heavy on flax, which is worth about $1 per bushel now for seed; oats, 21c.; corn, 20c. L. E. C.

KANSAS, Washington, Washington Co., Feb. 14.—We have had a very cold Winter, it froze up November 9th and has been steadily cold ever since. The thermometer went down to 24 deg. below zero once. The peach buds are all killed as far as I can find out. Wheat that was put in right is doing well, and is not winter-killed so far. On Saturday, the 5th, it commenced to rain and rained until in the night when it turned to the biggest snow-storm of the season. Stock is wintering well. Fodder is getting scarce; if the cold weather should hold much longer it will be high in the Spring. Prices of grain, are:—Wheat, 65c to 75c; corn, 20c; hogs, $4.15 per hundred pounds; butter, 15c per pound. J. G. B.

KANSAS, Harlan, Smith Co., Feb. 18.—Prospects for crops the coming season are most flattering. Abundant rain in the Fall, and a good deal of snow through the Winter—that is, for this country, where we seldom have much. There has been very little thawing since the first freeze. Warm rain the 5th inst. softened the ground a few inches and was followed by about eight inches of snow. The severe weather will probably kill the insect pests, which were as injurious last year as the drought. Winter wheat is reported to be in excellent condition. F. E. H.

KANSAS, Leavenworth, Leavenworth Co., Feb. 13—I have just been examining the fruit buds of apricots, budded peaches, and Heart and Duke Cherries and find many killed; but enough good ones are still left to make a fair crop of fruit except of apricots, of which only a few are left. J. B.

KAS., Caldwell, Sumner Co., Feb. 23.—The coldest weather down here in Southern Kansas was 14 deg. below zero when we had a three days' blizzard which began on Feb. 13. S. K.

MD., Denton, Caroline Co., Feb. 19.—The bearing peach trees in most of the orchards in this vicinity were frozen down to snow line—8 to 10 inches above ground. The bark peels off neatly, as far down as frosted, as in budding season. Young peaches in nurseries are killed down to snow line, so are tender varieties of cherry. Such a freeze has never before been known to occur here. Some claim the 'Queen of the Market" Raspberry to be unhurt, but Brandywine, and Wilson Blackberries have succumbed to the "pressure." J. W. K.

MICH., Three Rivers, St. Joseph Co., Feb. 26.—The Winter has been pretty cold here. We had not much snow until January, but since then we have had sleighing, except for one week, during which a great deal of rain melted the snow. The wheat looks bad. It was sown late and accordingly it had very little growth on the advent of Winter. Corn was two-thirds of a crop. S. M. S.

MICH., Evart, Osceola Co., Feb. 15.—This is a new country and hitherto lumbering has been the chief business here; but now splendid farms are being made out of the land that has been cleared of pines. We are having a cold Winter, with the mercury frequently down to 28 or 30 degrees below zero, and the snow three feet deep in the woods. E. O. T.

MINN., Fremont, Winona Co., Feb. 20.—We have had an old-fashioned Winter in this section. It froze up on the 11th of November and has not thawed out since that date. All kinds of stock have been in good order thus far. Farmers are beginning to stop raising all kinds of wheat, and are raising more stock and going into mixed farming generally. Stock is fetching fair prices; that which formerly brought from $10 to $15 now brings from $15 to $30. Oats, 28@30c.; corn, 30@35c.; hay, $12 ₱ ton; wheat, 80@90c. J. G.

N. Y., Croton, Delaware Co., Feb. 12.—The old adage

> When the days begin to lengthen,
> The cold begins to strengthen.

is being verified this Winter in Delaware Co. Our cold December was followed by a January equally severe, and then February started off a little ahead of either of the other months. On the second my thermometer indicated 24° below zero, four degeecs lower than it has been here before. E. J. B.

N. Y., West Croton, Delaware Co., Feb. 17.—Cold and blustering here now. Snow 20 inches deep on the level. Hay worth $18 per ton and scarce at that. I fear a good many farmers will run short of fodder before Spring. Dry weather and grass-hoppers have done a world of mischief here. D. H. C.

N. CAROLINA, Charlotte, Mecklenburgh, Feb. 21.—We have had three or four weeks of extremely cold weather this Winter—more severe than it has been for many years. The young pine trees in many places, the leaves being killed, look as if fire had run through them and scorched the leaves. On the river and creek banks the blades of the reeds are killed. I have never known this to happen before. Rose bushes are killed to the ground. W. J. H.

PA., Salem, Clarion Co., Feb. 19.—We have had an extremely cold Winter, the thermometer being very often down to zero and as far as 24° below—lower than it was ever before known in this section. Wheat, $1 00; corn, 30c.; oats, 40c. hay, $10 to $16 per ton. E. R.

TEX., Birdsdale, Bell Co., Feb. 10.—Never in the memory of the oldest man living, have we had such a season—from a severe drought to almost incessant rainy or cloudy weather up to the end of January. Much of the cotton crop was not gathered, and but very little of an immense corn crop was harvested. No Fall wheat was sowed. No Spring wheat or oats are yet planted, and it is still cloudy, misty, icy and cold with mud! mud! everywhere. People on the prairies are getting out of wood, in fact, in some places, they are now using cotton seed for fuel. It has been exceptionally cold here since the middle of November, with ice, snow and frost enough for at least six ordinary Texas Winters. E. G. H.

VA., Middleburg, Loudoun Co., February 22.—The peach crop in this vicinity will be a total failure, the buds having been killed by the severe cold weather. It is feared too, that the peach trees are seriously injured. W. C. B.

WASH TER., Colfax, Whitman Co., Feb. 12. We have had a long, dreary Winter. The ground has been covered with snow since the last week in November, and as a great many stock-men here prepare no feed for Winter, depending upon bunch grass alone, much stock have perished, especially cattle and sheep. Horses fare better as they will dig through several inches of snow and keep in very good order. The "Chinook" is gently blowing to-day—a warm wind that melts the snow very rapidly. It has been anxiously looked for, as there is plenty of grass if it could only be uncovered. Wheat, 35c.; oats, 45c.; hay, $10 to $15; butter, 37½c.; eggs, 37½c. H. M.

The Querist.

ANSWERS TO CORRESPONDENTS.

The Improved Kentucky Sheep.

A. B. M., Le Seur, Minn., asks for some information about the Improved Kentucky Sheep, of Robt. W. Scott.

ANS.—Forty-six years ago Mr. Scott, not finding any sheep suitable for the West and South, resolved to produce one by judicious crossing. Accordingly in the beginning of 1834 he selected about 30 ewes from a flock of common or "native" sheep, and bred them to a very fine large Saxon Merino ram, the object being to give in the offspring more thickness to the fleece and more fineness to the fiber of the wool before uniting the coarse fleeces of the native sheep with the coarse and still more open fleeces of the large imported breeds. The ewe lambs of this cross, when one year old, were bred to an imported Bakewell Leicester buck, of large, full, round carcass and of heavy fleece of long wool. In due time the ewe lambs of the latter cross were, in turn, bred to an imported South-Down ram of large size and high form, the object now being to infuse into the progeny the active, sprightly and thrifty disposition and the highly flavored and beautifully marbled mutton for which the South-Down is celebrated. Here again success was achieved, the flesh of the wethers being highly prized, while the value of the wool was increased as much by the greater number of fibers to the square inch, as it was lessened by the loss in the length of them. The next cross was by a ram possessing many of the good qualities it was desired to perpetuate in the flock. He was three-fourths Cotswold and one-fourth South-Down—a large, hardy, active sheep, with a thick and heavy fleece—qualities which he transmitted to his progeny to an eminent degree. The next two crosses were made by pure-blood Cotswolds and the next by a full-blood Oxford ram of remarkable softness and silkiness of fleece. All these animals had short necks, round barrels, broad backs and full briskets. These increased the weight of the carcass and fleece of the flock. Every one of the crosses, Mr. Scott says, was perceptible in the flock in the character and habits, as well as in the carcass and the fleece, though in some a particular cross predominated.

In 1853 the flock was divided between two full-blood Cotswolds, and in the following year it was bred to five select rams of Mr. Scott's own breeding in order to produce more uniformity. For the same object in the Fall of 1855 the ewes were bred chiefly to a ram whose pedigree showed a mixture of Cotswold, Oxfordshire, Teeswater and South-Down blood. In 1856 Mr. Scott says he bred chiefly to a large Cotswold buck, and in 1857 he bred to the same and to another ram of mixed blood, the ewes being so mated as to produce greater uniformity in the flock—those with more marked South-Down and Merino characteristics being bred to the Cotswold and those with Cotswold qualities being mated with the mixed-blood ram. In 1858 two large rams of his own breeding were used in the same way and for the same object. In 1859 about 100 ewes were picked out and bred in the same manner, for the same end, about half of them being bred to a fine mixed-blood ram which had gained a premium at the State fair the previous year, and the rest to a choice ram of what had now become known as the "Improved Kentucky" breed.

By this time the sheep were essentially uniform and imparted their qualities to their progeny as certainly as do other breeds of sheep. They had also become well known, having been successfully exhibited at many State and County fairs, and some of them had been sold in nearly every State of the West and South. Since 1860 judiciously selected rams of his own breeding, and others of Leicester and Cotswold blood, have been used so as to impart some desirable quality to the carcass or fleece or to strengthen the constitution of the progeny. Only the most healthy, finely-formed and well wooled ewes are kept as breeders, and great care is taken to secure rams of like character. The fleeces of Mr. Scott's flock of over 100 breeding ewes have averaged over eight pounds of merchantable wool, free from burs, etc., and though it was not washed on the sheep's back, still he thinks it was clean enough for domestic manufacture. The weight of the fleeces varies from eight to fifteen pounds. The wool, he says, is exceeded in length only by that of the Cotswolds, while it greatly excels that of the latter in fineness and softness of fiber and in the number of fibers to the square inch on the sheep's back. Although the fleeces are not quite uniform in length, thickness and fineness of fiber, still there is as close a general uniformity as in most other breeds. The entire body, except the face and legs below the knees, is covered with a close and compact fleece, which, when full-grown, leaves no open line along the back, but gives a perfect protection and a smooth, handsome and portly appearance. Though the fleece has sufficient yolk to preserve its softness, it has not enough to produce a dirty appearance. Mr. Scott says that the wool has generally commanded from three to five cents per pound more than any other combing wool in the neighboring markets.

Mr. Scott's flock never have any artificial shelter in Winter or Summer, yet they have always thriven well and been always almost entirely free from disease, especially from coughs, snuffles and foot-rot. In Winter short grass is all they need, and in its absence they are content with fodder corn, though, of course, at lambing time they require a more succulent diet. He has also heard good accounts of the thrift and hardiness of those he has sold to other sections where the climate is more severe than it usually is in his section of Kentucky. As to the prolificness of the dams, he has often raised one-third more lambs than there were ewes, and has rarely failed to raise a lamb for every ewe in the flock. He has not sacrificed other good qualities to size, but among the weights are 174 pounds for a yearling ram; 224 pounds for a two-year-old ram never shorn; 162 pounds for a grown ewe; 114 pounds for a ewe lamb—all weighed off grass without any extra feed, some of them in August.

The Phylloxera.

W. E. M., Wallsville, Pa., asks for an account of the phylloxera that is proving so injurious to grape-vines.

ANS.—The term phylloxera designates not only the insect, but also the disease it produces. The phylloxera insect occupies an intermediate position between the plant lice (aphidæ) and the bark lice (coccidæ), though in most respects more closely allied to the former than to the latter. Although the genus was first discovered in Europe by Prof. Planchon in 1868, yet it is more largely represented on this than on the other side of the Atlantic, for while there are only two discovered species indigenous there, there are 16 described species here, most of them inhabiting galls upon the leaves and twigs of hickory, oak or grape-vine. But none of these, except the phylloxera of the grape-vine, seriously affects man's interest. In 1869 M. Lichtenstein, of France, suggested that the insect which was ravaging the vineyards of his native land might be the same described by Dr. Fitch as making galls on the leaves of American grape-vines, and in 1870 Prof. Riley proved that this suggestion was true. At the same time he also proved—what was discovered simultaneously in France—that the grape phylloxera presents itself in two different types, one making galls on the leaves of grape-vines and the other affecting the roots. This hibernates mostly as a young larva attached to the roots. In Spring it moults, increases in size and begins to lay eggs. These eggs produce young which soon become virginal, egg-laying, wingless mothers. Five or six generations of these follow each other, and then, about July, some winged female insects appear. These fly to new vines or vineyards where they lay eggs, usually two or three in number, and then die. These eggs are of unequal size and in about a fortnight they produce sexual individuals, the larger producing females and the smaller, males, the latter being wingless and mouthless. The impregnated female produces an egg, which in its turn gives birth to a virginal, egg-bearing, wingless mother, which begins again the same round of reproduction. The insects spread in their winged state by flight from vineyard to vineyard; and in their wingless state from vine to vine, or even from neighboring vineyard to vineyard, either through underground passages or over the surface. The winged females begin to appear in July and continue to swarm out of the ground until vine growth ceases. The gall lice are found on all species of grape-vines, but least on the European vine—Vitis vinifera, and most on the River Bank Grape (V. cordifolia), and especially on the Clinton and Taylor. The root lice are most disastrous to the European vine, and least to our Summer Grape (V. æstivalis) and the Scuppernong. Of native vines, the most liable to the pest—the Catawba, Iona, Delaware and Goethe—belong to the Northern Fox (V. Labrusca). The puncture of the root lice causes knots and swellings of the roots, which begin at the tips of the rootlets which eventually die, when the lice migrate to fresh feeding ground. During the first year there are scarcely any visible signs of disease. During the second year all the fibrous roots disappear, and the formation of others is prevented by the lice which also settle on the larger roots which their ravages cause to rot. The symptoms of the disease now are seen in the sickly yellowish appearance of the leaf and a small growth of cane; and about the third year the vine dies; but then an examination of the roots will generally fail to discover any of the pests, all of which have by that time sought "fresh fields and pastures new."

Lime and Ground Limestone, etc.

E. R., Salem, Pa., asks, 1, for some information on limestone crushed or ground and burnt; and whether the former would prove beneficial on a limestone clay soil; 2, how would one get the most benefit from barnyard manure that has been left in the open yard, and has been frozen all Winter without having rotted at all—should it be hauled out in the Spring for corn, or left to rot until Fall for wheat.

ANS.—1, Ground limestone is of no value on a limestone soil which has already abundance of limestone in it. Where the soil is quite devoid of lime finely ground limestone might be of service; but only on soils that have plenty of vegetable matter in them from the decomposition of which carbonic acid is produced. Limestone is soluble only in water which contains carbonic acid, and it is therefore only in rare instances that it can be used with advantage. But lime is useful on all soils, because being freed by the burning from the carbonic acid, combined with it in the limestone, it is in a caustic condition and a very active decomposing agent of both organic matter, from which it takes carbonic acid again and of mineral matter from which it takes silica and so sets potash and soda free from their combinations as silicates and carbonates in which they are insoluble. Therefore lime is found very useful even on limestone soils, and it is really upon such soils, and where it is consequently cheap on account of its neighboring proximity, that lime is most extensively used. It is most useful on clay soils. 2, The manure would do the most good on the corn; if it is too coarse to be harrowed in on the plowed ground, it should be spread as soon as possible, and plowed in, when it will be well-mixed with the soil by thorough harrowing. See Farming for Boys and Girls No. 6, December 11th, 1880, where this is explained.

Farcy, etc.

W. H. C., Thompson Station, Tenn., asks, 1, where can he procure a small package of Silver Chaff wheat; 2, what will cure his mare of a skin disease called "farcy."

ANS.—1. We do not know just yet where Silver Chaff wheat can be bought. 2, Farcy is closely allied to glanders, both depending on the same poison in the blood, but while the poison in glanders is thrown off by the nostrils, in farcy it is eliminated through the skin. As it is usually the result of extreme neglect and exhaustion, we doubt whether it is really the disease that affects our friend's mare. The malady usually first shows itself by one, two or more lumps or hard enlargements in the skin of any part of the body, but generally in the thin skin on the inside of the thighs and arms, or the neck or lips. These are called "farcy buds," or "buttons." They soon soften and burst or are opened. The sore, however, does not heal after discharging; but the edges grow rough and the center becomes pale and moist. Then on pressing the neighborhood of the sore, cords more or less thin and hard will be felt running from it to other lumps, which form one after the other, until the skin becomes ulcerous. As the disease progresses, the appetite fails or becomes voracious; thirst becomes agonizing, and glanders breaks out. As with glanders, there is no cure for farcy, and as the disease is contagious, and glanders may be "caught" by human beings with results horribly fatal, all affected animals should be slaughtered and put out of the way at once. Sulphate of copper or of iron, oak bark, Cayenne pepper and cantharides may give temporary relief, but a speedy death is the safest remedy for either glanders or farcy.

Corn and Oats as Soil-Exhausters.

A. C. T., Normal, Ill., asks which will impoverish land the most—a crop of corn or one of oats.

ANS.—It is very satisfactorily shown that a crop of corn is easier on the soil than a crop of oats. It is far easier to produce 60 or 70 bushels of corn, weighing 3,600 to 4 200 pounds, to the acre, with three or four tons of dry fodder, than 50 bushels of oats, weighing 1,600 pounds, and a ton of straw. This is accounted for by the fact that corn is able to procure a large quantity of its nitrogen from the soil where oats cannot, and that a good crop of corn can be grown with the help of potash and phosphoric acid alone, and yet show in the crop a large quantity of nitrogen, while oats cannot be grown without the nitrogen added to the other manures. A great many experiments have been made in this direction with this effect. Now, as nitrogen is the most costly ingredient of both fertilizers and of feeding stuffs (of which manure is made), it is considered that the crops which need the most of this element to be supplied for their growth, are really the most exhausting crops. Oats are generally considered by practical farmers to be unusually "hard on the soil." The writer has grown good crops of corn on the same plot five years in succession, and the last was the best of all; but he has never heard of oats being so grown.

Scab in Sheep.

R. G., Lewisville, Ohio. has in his flock a few sheep that bite, and pull the wool from, their sides; there seems to be a sort of scurf on the skins; all the rest of the flock are doing well, and he asks what ails the afflicted sheep and how to treat them.

ANS.—This is very probably scab, a most troublesome and contagious disease. At any rate the case is so full of suspicion of this disease that great caution should be used lest it may spread to the rest of the flock. Separate the diseased sheep and treat them as follows. Steep one pound of cheap plug tobacco in one gallon of boiling water, but do not boil it. Stir in four ounces of flowers of sulphur and let it stand until it cools so that the hand can scarcely be held in it for a minute. Then rub this liquid on to the scurfy parts with a corn cob, breaking up all the small pimples and soaking the skin thoroughly with the hot liquid. Go over all the affected sheep in this manner, and in ten days examine them, and if necessary, repeat the operation. There is no other remedy for scab. If it is only a simple irritation of the skin caused by the dry feed, give one ounce of Epsom salts and wash the parts with salt and water. But as it will do no harm to use the tobacco and the risk of scab is serious it would be advisable to treat the sheep for that disease. The salts may be given in any case.

Gas Lime.

A. P. H., Galesburg, Ill., asks, 1, what is the value of gas lime as a fertilizer; 2 is it beneficial for loosening ground that is hard to work; 3, if good, how much of it should be used per acre.

ANS.—1. In its fresh state gas lime contains sulphuretted hydrogen and other sulphur compounds which are poisonous to vegetation, and it should never, therefore, be used until it has been exposed for two or three months to the weather. By this means the injurious compounds are changed by oxidation into harmless, if not useful, substances, leaving the lime in the condition of carbonate or mild lime, with some sulphate. In this state it is beneficial to such crops as would be benefited by an application of caustic lime. About 100 bushels per acre might be used with about the same effect as 40 or 50 bushels of ordinary caustic lime. 2. Yes, under the same conditions as caustic lime; but, of course, more of the gas lime can be used, and its mechanical effect, therefore, would be greater. 3. That would depend on the condition of the soil, but somewhat over double as much as would be required of common caustic lime.

Comparative Value of Feeding Stuffs.

F. R., Dundee, Ohio, asks what is the comparative value for fattening stock of ground cotton seed, cotton-seed-cake meal, linseed-cake meal and corn.

ANS.—The composition, nutritive value and market value of the foods mentioned are given as follows:

	Flesh-formers	Fat-formers	Nutritive value compared with hay at $15 per ton	Cost per 100 pounds
Cotton-seed-cake meal	41.5	31.4	$3.60	$1.75
Linseed-cake meal	32.4	31.5	$2.98	$1.00
Corn	9.1	70.4	$1.65	$1.00

The whole cotton seed is less valuable than the cake meal because of the larger proportion of indigestible husk contained in it. The linseed meal made in Cleveland is deprived of every particle of its oil by a chemical process, and is therefore less valuable than the ordinary meal; the former sells at $25 a ton, and the latter at $40. Cotton-seed meal is the richest feed of all, but its costive effects on the cattle make it inadvisable to feed it in such quantities as might otherwise be profitable.

Soiling.

C. H. B., Hamett, Pa., asks whether soiling cows would be likely to pay thereabouts; which are the best crops for soiling; how much land would be needed to keep a cow by the system; and how should the business be conducted.

ANS.—With good management soiling may be made a very profitable practice. No dairy can well be managed without it, excepting where land is very cheap and one has abundance of grass and pasture. One cow has been kept on an acre the year round by a good system of soiling, but it is very easy to keep a cow on an acre and a-half or two acres. The crops usually grown are Winter rye or wheat for the first green fodder to be cut in May and June; clover and grass to be cut in June and July; oats, or oats and peas, to be cut in July and August; corn to be cut in August and up to November with Hungarian grass or millet if need be; then mangels for Fall and Winter feed with dry corn fodder and hay until the rye comes again the next Spring. It is necessary to plant the crops for cutting at intervals so as to have them fresh and not too ripe.

Composting Animal Matter.

G. E. N., Afton, N. Y., says he is thinking of getting deacon'd calves from farmers in the Spring, and composting them for manure, and he asks how this should be done.

ANS.—Deacons, or immature calves, should be skinned as the skins are of considerable value. The flesh and bone will weigh probably 60 pounds, containing 15 pounds of dry matter worth at least one cent a pound for composting. As the flesh contains a large portion of nitrogen, some earth or swamp muck should be mixed with the horse manure to dilute it. A compost heap containing animal matter of any kind should be made as follows: a foot in depth of soil and sods or vegetable matter mixed; a layer of the animal matter such as deacon'd calves well sprinkled with lime and lightly covered with soil; a foot of horse manure; a layer of the animal matter sprinkled with lime as before, and then a foot of earth sods and vegetable matter. The heap should be well packed and tramped and made flat and hollow to hold the rain, and to preserve moisture.

Government Bonds.

J. D., address mislaid, asks, whether government four-per-cent bonds can be bought elsewhere than in large cities, and if so where can they be had by a person living in the country; where is the interest paid and how often; when do they mature; does it pay to buy them.

ANS.—The direct sale of the bonds is confined to large cities; but those living even in remote country places can buy them through the nearest bank. The interest is paid in January and July in large cities, but it can be collected, through local banks, just like a check on somebody in a distant town. The four-per-cent bonds were issued last year and run for 20 years, the government having the option of redeeming them after they have run ten years. Each bond of the par value of $100 is now worth about $113, and for any one who is content with a mere trifle over three and a-half per cent per annum interest on his investment, it will pay to buy them.

Arsenic for Heaves.

N. Rivenburg, Franklinton, N. Y. asks, 1, whether giving a mare arsenic or any other poisonous drug for "heaves" would prevent her from getting with foal; 2, would it injure a mare that is in foal.

ANS.—Arsenic is a dangerous drug to give any animal and especially when there are other remedies that are equally effective. Arsenic is given for the heaves under a misapprehension or a mistake that heaves is a nervous disorder. It is sometimes caused by a disorder of the nerves but is more often caused by irritation of the air passages by dust in the food or by chronic indigestion. The arsenic is given in very small doses as a nerve tonic, five grains being the usual quantity; it is impossible to determine beforehand what may be the precise effect of the drug in the particular way indicated, but as it is by no means a necessary medicine, it would be well to avoid the risks.

Grafting the Tomato on the Potato.

L. V. R. S., Providence, R. I., asks how the tomato is grafted on the potato, as alluded to in a late article in the RURAL.

ANS.—The grafting is that allluded to by Horticola recently. Briefly, it consists in growing a potato from a single eye, cutting the shoot down to two or three inches when it has grown about six inches high, and inserting a tomato graft by the method called split-grafting. It should be bound up with bast, tied to a stake to keep it from being moved by winds, etc., and shaded till union has taken place. The ground should be kept level, and below the point of grafting, or the result will be a failure.

Miscellaneous.

C. F. R., Tonawanda, N. Y, asks, 1, whether the books of the American Book Exchange are as well got up and bound as those of other publishers; 2, are Garmore's Artificial Ear Drums what they are represented to be; 3, is hemlock as good as pine in a barn where it is kept dry.

ANS.—1, The books are neatly gotten up and bound. The prices are so low that those intending to purchase a number of volumes can well afford to order a specimen work in advance. 2, We have been told by several parties that the ear drums were of no use whatever to them; while others again say that they can hear better with than without them. 3, The wood of the hemlock is coarse, splits irregularly and decays rapidly when exposed to the weather. It is stronger than white pine, gives a better hold to nails, and for all work not exposed to the weather it is preferred to pine, and for beams, rafters, roofs, sheathing, sides of frame houses, and rough work generally, it is equally good.

J. W. E., New York City, asks, 1, which part of Florida is the most healthful; 2, would we advise a young man with a family and in moderate circumstances to move to that State for the purpose of raising fruits for market; 3, in what part of Florida is the best land found; 4, are there any books that give trustworthy information about the State as a place for settlement.

ANS.—1, We do not know. There is but *one* way to ascertain, viz: by personal experience. 2, No, we should not, previous to such investigation. It is as hard to live in Florida by fruit growing as it is anywhere else with the disadvantage that old settlers have experience which new settlers have not. 3, For what purposes? 4, No, several pamphlets have been published for advertising purposes; but we hardly consider that sort of information trustworthy.

M. M. M., Orangeville, Pa., asks whether Alderney and Jersey cattle are the same.

ANS.—Yes, the Alderneys and Jerseys are substantially the same, the former coming from the small island of Alderney and the latter from its larger neighbor, Jersey. So few of the former, however, are being raised or imported into this country that the term "Alderney" has been merged into that of "Jersey" by all who are well posted in cattle nomenclature, although mistakes in the matter are still frequent among the "outside" public, and occasionally even among those who *ought* to know better. In reality the only Channel Islands cattle imported into this country are the Jerseys and Guernseys, the number of cattle ever landed here from Alderney having been extremely small.

L. D., Thorn Hill, Pa. has a colt rising three years old, that has had a bog spavin and thorough-pin since it was a year old. Blistering has done no good and he asks what treatment should be adopted.

ANS.—The animal should have absolute rest and the use of a high-heeled shoe is also advisable. The swollen parts should be subjected to pressure by means of a carefully adjusted truss and cold water bandages should be applied, after which a wash of tincture of arnica diluted with water should be used. It will require considerable time to effect a cure, and the safest and best means of causing it are pressure and applications of cold water.

J. R., Lawrence, Texas, asks how to remove a large wart from a calf's ear.

ANS.—The wart may be removed by tying a ligature tightly around its base, when it will drop off before long. Or, it should be touched daily with nitrate of silver to be had in a solid form from the nearest druggist; or again, it might be washed with a strong solution of the same. The safest and perhaps the best way to remove a large single excrescence of this sort, however, is by the use of the knife and the cautery. The cautery will stop the bleeding, destroy the root of the wart, and thus prevent it from reappearing.

L. K. W., El Dorado, Kansas, asks, 1, where the best books on Agricultural Philosophy, Botany and Chemistry may be obtained and the price of them; 2, can his subscription begin with Jan., 1, 1881.

ANS.—Johnston's Agricultural Chemistry ($1.75) Norton's Scientific Agriculture (75c.) Caldwell's Agricultural Chemical Analysis, ($2 00) Gray's Botany. All may be obtained at the American News Co., New York City. 2, We have no back numbers of the RURAL.

J. W. S., Jericho, N. Y., asks where can he get the revolving churn frequently spoken of in high terms by Henry Stewart in his articles on the Dairy Cow in the RURAL.

ANS.—The Churn is called "The Rectangular," and is made by Cornish and Curtis, Fort Atkinson, Wisconsin; but we suppose it can be supplied by any large dealer in dairy supplies as it has a very wide sale almost everywhere.

E. C., Los Moras Ranche, Menard Co., Tex. asks what is the nearest point at which to purchase Cotswold and Leicester rams for Texas.

ANS.—Kentucky is probably as near a point as any. W. L. Scott, Scott's Station, Shelby Co., Ky., has a fine flock. T. W. Samuels and Sons, Deatsville, Nelson Co., Ky., are also reputable breeders of these sheep. Leicester sheep will not do well in Texas. It will be a waste of money to take them there.

D. S., Northfield Center, Canada, asks where can he find the classical names applied to different kinds of wood.

ANS.—The names can be found in any good Latin and Greek Dictionaries; for, of course, when one speaks of the "classics," he refers to Greek as well as Latin. The botanical names of the trees from which the wood is made can be found in botanical works treating of the different genera.

M. F. C., Griffin, Texas, asks, 1, the address of the makers of the Lamb Knitting Machine, and, 2, which we think the better—the Lamb or the Twombly.

ANS.—1, Chicopee Falls, Mass. 2, The Lamb has a high reputation. Of the other we have no special knowledge, but we have heard it highly spoken of.

N. P. B., Macon Station, Ala., asks what is the price of the dog-power for churn lately advertised in the RURAL.

ANS.—The power is made by the Albany Agricultural Works, Albany, N. Y; the price varies with the size of the power. A postal card to the makers stating the requirements, will secure a speedy answer.

L. H. E., Chapman, Kansas, asks whether G. W. Pettebone & Co., of this city, are trustworthy.

ANS.—We would not have admitted their advertisement were it not that we were assured that the concern is trustworthy; but we have no word of commendation to bestow on such enterprises.

P. S. Logan., Ill., asks whether we will sell him a small quantity of the RURAL Branching sorghum.

ANS.—We have repeatedly published that we sell absolutely nothing except the RURAL NEW-YORKER, and for the information of our many new subscribers, we repeat the declaration.

F. N. G., No address, asks whether mangels that have been frozen and still continue so, can be profitably fed to stock.

ANS.—Yes; but the sooner they are fed after thawing, the better. If not used until some time after they have thawed, they are of very doubtful advantage.

J. W. C., Lovellsville, Pa., asks whether the Robbins Washer still gives satisfaction, and whether it can be used on a common stove.

ANS.—So far as we have heard it has proved quite satisfactory to purchasers. Yes, it can be used on an ordinary stove.

H. C. E., Neosha, Kansas, asks whether we will sell seed of the Rural Branching Sorghum to our subscribers, in addition to giving it in the Free Seed Distribution.

ANS.—We have repeatedly stated that we sell absolutely nothing except the RURAL.

G. W. C., Whiting, Kansas and several others ask whether F. M. Lupton, Publisher, 27 Park Row, N. Y. is trustworthy.

ANS.—He has the reputation of being so, and we have always so found him.

E. E. W., Cherokee, Iowa, desires to know what kind of incubator the RURAL would recommend, and the price.

ANS.—We are not prepared to recommend any at present.

Mrs. L. R. B., Benton, Co., Oregon, asks is there any such bean as the "Bulb," producing and growing from bulbs, without planting seed every year.

ANS.—We do not know of such a bean.

W. D. B., Brainard, N. Y., asks, where can he obtain a good creamery.

ANS.—The best are often advertised in the RURAL and will be soon again.

Several Inquirers ask where can they buy White Elephant Potatoes.

ANS.—They will be advertised in ample time in the RURAL.

H. M., Belen, New Mexico, asks whether there is any one connected with the RURAL who buys seeds on commission.

ANS.—No.

L. E. V., Botherell, Ont., asks for a description of the Lancaster Red Wheat.

ANS.—We have never raised it.

H. M. H., Graft, Neb., asks whether we can supply seed of Rice Corn.

ANS.—No.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MARCH 5.

S. H.—W. J.—J. M. D.—V. A. C.—W. H.—A. M.—Several excellent articles were received too late for the Small Fruit Number.—G. H. P.—L. W.—H. S.—A. S., Mansfield. Notes of experience are always welcome to the RURAL NEW-YORKER.—M. W. F.—S. B. P., Mich.—J. S. W.—E. A. H.—M. M. T.—C. D.—G. S. W., thanks. Too late for Small Fruit Number.—G. E. P.—P. B. B.—G. R. D.—B. D. B. C. D.—G. A. G.—F. S.—W. H. P.—J. F. S.—D. L. R.—J. B.—C. K.—A. E. S.—F. D. C.—E. R., Sr.—G. F. J.—S. D. A.—E. J. M.—N. A. L.—G. D. C.—B. A.—W. & G. M.—H. C. P—A. R.—S. H.—H. M. S.—W. P. D., thanks for plan.—H. T. J.—G. G. B.—A. B. A.—J. S. S.—H. S.—W. J. B.—E. & B.—W. E. M.—F. K. M.—O. W. F., we should judge from this ear Blount's Dent would soon change to Flint.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, MARCH 12, 1881.

In order to enable us to publish a part at least of the pressing matter which we have on hand and which has unduly accumulated owing to our special numbers, a supplement will be presented next week.

The Rural New-Yorker begs to offer in articles of its own selection, for the longest and heaviest five heads of wheat from the next crop, $50.00, to be divided into first, second, third, fourth and fifth premiums. The awards will be published in our Special Wheat Number, and drawings presented of the prize heads.

When we consider the variability of soil even in the same field—its natural fertility, and the different effects of different methods and degrees of cultivation, how is it possible to determine the value of different chemical manures upon certain other plots except by comparison with plots in the same field which receive no chemical manures and which are cultivated by the same methods and amount of cultivation?

Dr. Lawes in his comments upon the immense corn yields of last season at the Rural Farm (see first page), referring to another of his articles which appeared in this journal, says that he was not then so fully impressed as he is now with the great value of temperature for the production of nitric acid in the soil. "With corn," he says, "the most vigorous growth, and the most active assimilation of food take place just when nitrification is most active, but when the other cereal crops have done their work; no wonder then that the average yield of corn is above that of other cereals."

Whether the storage of apples, potatoes and kindred vegetables in our cellars has anything to do with developing diptheria, is a question worth considering. Our forefathers and foremothers who never heard of diptheria, buried their Winter vegetables in pits in the open ground. Perhaps in fifty years from now, there will be a return to the old custom, or, maybe, the "cellar" will be at the top of the house, and dwellings will be built on *terra firma*, with no vaults beneath exhaling damp and unwholesome vapors of decay, to be sucked into the bodies of the people up-stairs.

The unusual prevalence of small-pox the past Winter, has led to the establishment in various localities of vaccine farms where cows are kept for the object of supplying physicians with "points" for vaccination purposes. Very many people justly object to being vaccinated from the virus of a fellow mortal, as the mortal is most rare—even if he exist at all—who is entirely free from scrofulous taint in his blood. But from the blood of a fine, healthy young cow one has little to fear, and if something of her gently ruminating, motherly, mild-eyed qualities should be imbibed along with the virus, the human race might be much the gainer.

Have you a piece of land so poor that even weeds will not thrive upon it? That is precisely the land upon which to try the virtue of chemical manures. If upon such land by their use a crop of grain may be raised, then the value of chemical manures is at once established. That is, it would thus be proven that concentrated fertilizers may supply the food upon which crops feed. This test has often been made. We know of one instance in New Jersey where one of two plots of infertile land received a dressing of fertilizers, the other received none. Upon the latter, the corn grew to the hight of but a few inches. Upon the former at the rate of over 50 bushels of shelled corn per acre were harvested.

Quite a correspondence has of late been going on between the Rural New-Yorker and several stockmen of the country. They tell us that they cannot afford to pay our advertising rates, being higher than those of other agricultural journals. It would appear that stockmen are favored with *special* rates by many, if not by all, of the journals which they patronize, and with editorial notices *ad libitum*. We beg to state that to change our rates in their favor, would be a discrimination extremely unjust to our other advertising patrons, and that if they can not afford to advertise in the columns of the Rural New-Yorker upon *our* terms, we cannot afford to accept their advertisements upon *their* terms. And so let them, as we shall try to do, rest in peace.

It is our belief that if every intelligent farmer, gardener or horticulturist—everybody indeed that is interested in plant life—could know of the yearly contents of the Rural New Yorker; could know how earnestly it strives to promote their interests, that they would become subscribers. The hardest thing to drive into the public head is that anybody is unselfishly working for its interests. We could print probably not less than one thousand testimonials from good people that the plant and seed distributions of the Rural New-Yorker during the past three years have been worth more to them than the subscription price of the paper, and we are constantly receiving assurances from the best men of our country that the Rural New-Yorker itself is invaluable.

How many farmers and farmerines have good teeth? Prof. Hartshorn, of Germantown, Pa., recently stated in a lecture that the reason why the teeth of Americans decay sooner than do those of the people of other nations, is due to their habit of *rapid eating*. It is no new doctrine, but one that requires frequent repetition. Hasty eating induces dyspepsia, and nobody with an unsound stomach can long have sound teeth. The stomach is the body's best friend in the long run, and whoever obliges it to do the work of the teeth commits suicide in just that proportion. In the hurry of farm work, bear in mind that "less haste and more speed" applies directly to the mastication of your food. If you can't eat slowly, and chew your food thoroughly, at least train the youngsters about your table to do so, under the penalty of being toothless middle-aged men and women.

HUMANITY TO LIVE STOCK IN TRANSIT.

Attention has lately been called in the British House of Commons to the sufferings of American imported live stock on the voyage across the Atlantic, and from the remarks of the Secretary of the Privy Council it appears the attention of that body had been several times called to the matter, and that it had been for some time in communication with the Board of Trade with a view of devising measures for lessening the sufferings of animals in transit. Humanity and self-interest alike demand that the sufferings of exported animals both on their way to the sea-board and across the Atlantic should be reduced to a minimum, and the latter consideration is likely soon to enforce the dictates of the former. In this country the Humane Society's efforts will probably soon place upon our railroads cars effectually designed to transport live stock with a minimum of inconvenience; for out of the 420 models its offer of a premium has elicited, one at least must prove satisfactory, while there seems every disposition on the part of our Legislatures to compel the railroad corporations to pay regard to humanity in this connection. In England reports to the Privy Council from the insurance agencies show that the amount of suffering endured by stock in transit has been much lessened by recent devices, and the Privy Council's efforts are likely to make still further improvements in this direction. Already most of the animals are landed in excellent condition; while the reports of our exports of live stock in this week's Agricultural News column show a remarkably small percentage of fatality among our shipments last year. Small as this is, however, it is considerably greater than that incurred by a Canadian Steamship Company which has sent to this office a statement of its business in that line for the last fifteen months. From this it appears that during this time it shipped 16,005 head of cattle, and landed 15,852 alive, while out of 30,465 sheep shipped, it lost only 725.

A DANGER TO OUR HOG PRODUCTS.

Last week the importation of American hog products into France was prohibited on the ground that their use would be dangerous to the people owing to several cases of the terribly fatal malady, trichinosis, having arisen from the eating of American pork. There are now six European countries which refuse to allow the importations of hog products from this country for the same reason: France, Spain, Portugal, Italy, Greece and Switzerland. In reply to a question in the French Assembly, however, the Minister of Agriculture said that the prohibition in France would probably be short-lived, as it would be removed so soon as adequate measures for inspecting American pork had been provided in the various markets throughout the country. Advices from Liverpool last Friday state that dealings in our hog products in the British markets had become completely paralyzed owing to a report made by the English consul at Philadelphia to the effect that hog cholera was extremely disastrous just now in Ohio. The President of the Board of Trade of this city telegraphed to Commissioner Le Duc an inquiry as to the truth of this statement, on Saturday, and the latter at once replied that according to the information at his Department, hogs in Ohio and, indeed, throughout the whole country, were exceptionally free from disease at present.

The widespread foreign opposition to the use of hog products from this country, together with the weakening of the "corner" lately formed at Chicago in certain articles of the trade, must cause at least a temporary depression in prices everywhere. This is highly deplorable, and measures should be promptly adopted to remove the causes as early as possible. The value of our annual exports of bacon, hams and lard is next to that of breadstuffs and cotton, and it has been stated on excellent authority that unless prompt steps are taken to suppress hog cholera and other contagious diseases among our swine, the annual loss to the country will soon reach the enormous sum of $80,000,000. Until these maladies shall have been extirpated a rigid system of official inspection should be established at all hog packing institutions to guard against the employment of meat or lard from unsound animals. It is not for a moment to be tolerated that the health of the public, at home and abroad, is to be endangered and so vast an industry subjected to derangement and loss, in order that a few unscrupulous dealers might grow rich by the sale of plague-spreading products.

BREVITIES.

Dr. Armitage in his sermon last Sunday maintained that there is much more goodness and beauty of spirit among men than is generally known.

Attention is called to the advertisement in our columns "Wanted—A Manager." We know the farm, the proprietor, and may say that we shall congratulate the successful applicant.

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

We commend to all who are interested in such matters, the carefully prepared articles on the Army-worm by Prof. Cyrus Thomas. The first appeared in these columns in the issue of January 29. The concluding article will speak of remedial measures.

Horticultural people must always be crazy over something or other. At present, there is an evident disposition to make the object Roses. Roses are so really beautiful, they have so many endearing ways and looks, that one is excusable for making them a hobby and for riding it hard.

We are sad to know that our friends of the A. A. have moved away—up town somewhere, where rents are cheaper. They rarely or never called upon us, it is true; but then they read our signs and possibly looked in upon us through the windows, thus showing a kind of interest in our progress.

Cheese from lard in New York and butter from lard in Chicago elevate the hog to a rivalry with the cow in her own peculiar line. A large factory in this city is, we are told, engaged in the manufacture of cheese from lard. The latter is reported to be peculiarly adapted to the production of *brie* and similar cheeses. Orders for the new fraud are said to be miles ahead of the supply, and the stuff is reported to be undistinguishable from genuine cheese.

As we anticipated, the forty-sixth Congress came to its end without having, even in its last moments, repented of its sin in failing to pass a bill for the suppression of pleuro-pneumonia and other diseases among the live stock of the country. Well, in view of their gross neglect in this and not a few other matters, we trust that such of the members as are politically dead, may remain so, and that such as are still able to "talk" in the forty-seventh Congress may die politically on the first opportunity unless they shall show by their works and votes that they have heartily repented of their past disregard of the interests of agriculture.

A bill has been introduced into the New York Legislature to punish the owners of all hotels, restaurants and boarding-houses that use or place on the table oleomargarine or any of the similar concoctions, unless they display in a prominent place a card on which a statement is made in large letters, that the stuff is served in that establishment. The enforcement of this measure would be just alike to the guests of such places and to the producers of good genuine butter; but, happily for boarding-house landladies, and, alas! for their victims, we are sadly afraid that justice in this case will once more fail.

It is pleasant to see that, better late than never, some of our contemporaries are doing justice to our friend, Winning-Billerica Bailey. It has been a matter of exceeding surprise to us that he has hitherto been permitted by respected contemporaries to say his say without reproach. We do not know this man—do not want to know him. He has never harmed us excepting by appropriating our cut of Blount's Corn and calling it his "Ensilage Corn." We have condemned him so as to protect our readers against a bold-faced man whose statements are not worthy of trust. Ensilage will get along better when it gets rid of its "Winning" advocate.

The Eastern Pennsylvania Experimental Farm Club has arraigned the State Agricultural College in Center County, for inefficiency, and asked the Legislature to suspend the usual annual appropriation. We heartily commend the action of every agricultural association that keeps a watchful eye on the conduct of the agricultural college in its State, and holds it to strict accountability for failing to fulfil the object of its establishment. This is a duty which, it is much to be feared, has hitherto been sadly neglected by farmers' clubs and societies, and we hail this action of the Eastern Pennsylvania Farmers' Club as a hopeful sign of amendment.

The University of Pennsylvania has been indulging in the common-place clap-trap of endowing Mr. Garfield with a tail to his name in the shape of LL. D. Harvard pronounced a similar benediction upon the name of U. S. Grant, and the General caught at the bait and sent one of his sons there. Whether the University of Pennsylvania will be equally fortunate as regards the young Garfields is yet to be seen. Our President is worthy of all honor; but when a man has climbed so high in public esteem and public honor, there is not a college in the land that can add to the glory of his name by any title whatever. As names reach the hight of true grandeur, they shed all such quill feathers as titles.

The White Grub (larva of the May Beetle or June Bug)—Lachnosterna Fusca—is the strawberry's worst insect enemy. Many remedies have been recommended, tried and found wanting. Those applications strong enough to kill the grub have been found to injure or to kill the plant also. Salt, at the rate of three to five bushels per acre, has been recommended, but the efficaciousness of the possible remedy is not as yet known. A friend suggested to us a while ago that he believed whale-oil soap, cut into little pieces and placed about each plant or strewn over the surface of the bed, might kill or drive them away. He thought that rains would gradually dissolve the pieces and the earth soon become impregnated with the solution which would prove insufferable to the grub.

The happiest person in the country on the 4th of March, 1881, undoubtedly was the venerable mother of James A. Garfield; and she had the highest right to be. Left a widow with her small children, who, with herself, were quite dependent upon her own exertions for support, she kept her little flock together, and demonstrated, as have many other women also, "what a woman can do;" And now her boy is President of the United States of America. All honor to the good mother! Remarkable men almost never have remarkable sons, but a boy that amounts to something "uncommon" almost invariably has been blessed with a superior mother. So far as the human race goes, the mother is the prime factor in excellence.

The Colorado Cattle Growers' Association, in view of the existence of contagious pleuro-pneumonia in some of the Atlantic States, and the fact that some 40,000 calves were lately exported from the infected States to points west of Chicago as far as Nebraska, recently passed a series of resolutions deprecating such traffic as perilous to the herds on the Western plains, and petitioned the Members of Congress from that State to take immediate steps to procure national legislation to check the spread of the disease to uninfected quarters and to secure its suppression where it has already obtained a foothold. Although stockmen and farmers all over the country have made their voices heard in no doubtful tones on this matter, Congress has hitherto been shamefully negligent in passing the needed legislation. This disregard of their interests, the farmers of the country should keep in mind when their present *mis*-representatives shall come before them for re-election.

The beet-sugar factory at Franklin, Mass., according to a late telegram, has failed to the financial loss of many of the neighboring farmers to whom the concern owed $11 220 for beets, out of a total indebtedness of $25,000. The factory was owned by a joint-stock company which made big promises; but failed early. It imported machinery from Germany costing, it is said, five times what was expected; and as this will now be sold for a "song," another party intending to start in the business would have a good chance of beginning with an important point in his favor by buying the apparatus cheaply. We have read a great deal about the practicability of making beet-sugar profitably in this country; but, much as we would like that an industry which would so greatly help our farmers, could be remuneratively conducted among us, we have not heard of a single instance in which this has been done long enough to prove its possibility under present conditions. The right kind of seeds, the right kind of soil, the right sort of culture, the right sort of handling, skill in the farmers and skill in the manufacturers, are all indispensable, in addition to a thoroughly economical and efficient business management. In the present state of the industry here the necessary skill is wanting; and in the joint-stock companies that have hitherto chiefly embarked in the business, it is highly doubtful whether economy and efficiency have formed sufficiently pronounced features.

Entomological.

THE ARMY WORM—NO. 2.

PROFESSOR CYRUS THOMAS.

SINCE writing the preceding article I have had the good fortune to obtain copies of the papers by Messrs. Shurtleff and Kirkpatrick on this insect; that of the former written in 1862 and that of the latter in 1861.

In reference to the question as to whether it is single or double-brooded, Mr. Shurtleff says, "I have not sufficient data to decide between the two opinions; but it seems that Mr. Walsh is right." Mr. Kirkpatrick says, "It is not positively known how many broods of Army worms there are in a year, but there is no doubt that there are at least two, for the moths hatched in Midsummer deposit their eggs immediately after, and the last brood must remain either in the caterpillar or pupa state through the Winter."

The fact that there are two broods in the latitude of St. Louis being now admitted by all parties, the further question arises, are there not usually three? In the article alluded to, Professor Riley expresses the belief that there are. (Am. Ent., Aug., 1880, p. 184.) I am still of the opinion that there are not more than two in Southern Illinois or any place north of that latitude, and will give here my reasons for this belief.

As these involve two other points—the term of individual life and the method of hibernation—I first discuss these briefly, so far as they relate to the latitude designated. I limit the discussion to the latitude named because there are reasons for believing the habits of the species in reference to hibernation vary in different latitudes.

Term of Life.

Although the entire life of the individual includes all the time that elapses from the moment the egg is deposited until the moth produced therefrom dies; yet in calculating the succession of generations we have occasion to use only the time which elapses from the moment the egg is deposited until the resulting moth deposits her eggs. In order to arrive at a correct conclusion on this point it is necessary to ascertain what is the average length of the different stages, viz., of the egg from the time it is deposited until it hatches; of the larva state; of the pupa state, and of the moth from the time it emerges from the chrysalis until its eggs are deposited.

Where positive data ascertained by experiments can be found, it is undoubtedly best to use them at least as a basis, but the growth and development of insects in confinement where there is a uniform temperature, and where an abundance of food is always at hand, can seldom, if ever, be accepted as exactly the same as in a state of nature.

Professor Riley has shown by his experiments, made in 1876, that the moths commence laying, in confinement, in about two weeks after issuing from the chrysalis. As it is almost certain that in their natural condition the time would be extended rather than shortened, we assume 10 days in order to have a definite time to use in our calculations. In process of the same experiments Professor Riley found that the eggs, in a uniform temperature of 75 deg., hatched in about 10 days. It is probable, therefore, that in their natural condition the time required is about two weeks. But this assumption is not gratuitous, as will presently be shown.

He also found that by feeding the worms in confinement at an average temperature of about 80 deg., some passed through this state in 15 or 16 days, and this forms in part the basis on which he founds his present theory as to the number of broods. But all the evidence I have been able to obtain in reference to this point shows that in their natural condition they usually continue about a month in this state. My experiments in 1861, in the natural temperature of the locality, gave, as nearly as I could estimate the age of the worms when first taken, 28 days as the shortest period. Mr. Walsh, who also reared the species from the larval state, gives "from four to five weeks" as the length of this stage; Dr. Packard allows one month. Dr. Fitch says they continue to feed and travel about three weeks from the time they are discovered, which he says is when they are about one-third grown. The investigations, therefore, of these parties agree in fixing the average length of time they exist in the larval state at not less than one month.

The individuals of the Spring brood, as shown by repeated experiments, remain in the pupa state from two to three weeks. My experiments gave an average of seventeen or eighteen days; Dr Fitch says, "nearly three weeks"; Dr. Packard, and Prof. Riley say, "from two to three weeks"; Mr. Walsh's specimens remained in this state fifteen days; Shurtleff's, seventeen, and Kirkpatrick's, fourteen days. I will assume seventeen days as the average. The term of existence of the individual from the time the egg is deposited until the resulting moth lays her eggs is, according to these conclusions, about 77 days—eggs, 14-|-, larva, 30-|-, pupa, 17-|-, moth, 16,—total, 77 days.

In order to test the correctness of this conclusion let us see how nearly it agrees with the appearance and disappearance of the moths and worms. For this purpose I give here a short list of dates of captures of moths and appearances of the worms; I have many more, but only give such as we need for present purposes.

Dates of Captures of the Moth.

Illinois. Jackson County.

April 2, 6, 7, 8, 9, 10 (1879); 13 (1878); 2, 3, 4, 13, 15 21, 25 (1880).

June 20 (day of exit from pupa in confinement) 21, 22, 23 (observed emerging from the ground), 29 (1861 and 1875).

Oct. 18, 23 (1879).

Nov. 10 (1879). (Thomas & French).

Cook County.

Mr. Worthington, who has furnished me with quite a list of dates, gives April 3, 10, 11, 16, etc., as the earliest captures.

Galena, Jo Davies County,

Dr. Bean, who failed to find the early moths, notes their appearance in considerable numbers, June 24, 29 etc.

Normal, McLean County.

May 24, "two specimens"—"June 23, several"—"From July 15 to August 18, very common each year." (Forbes.)

Missouri, St. Louis.

"Early part of April," "Middle of April," "June to October." "Early in August," "In September," "October 9th." (Riley.)

New York, Schenectady.

July 7, 21.

August 7, 13, 16 and continues up to October 6 (1875.) (Lintner.)

Albany.

Latter part of May—from a single pupa found. (Meske.)

Notices of Larvæ.

Illinois, Jackson County.

First seen in 1861 about April 29th, continued to appear until May 15 and finally disappeared about June 10th. Latter half of September, 1874, marching. Latter part of May to first week in June, 1875. June 4 (1877) all the first larvæ below the dirt to pupate. (Thomas & French.)

Missouri, St. Louis.

"Early part of May," "During the latter part of April, and throughout the month of May," "Early in June, mowing down meadows." "All through the month of August, and a few full-grown individuals as late as the 23d of September." (Riley.)

These will answer for our present purpose.

Taking the Jackson County list—where the April and June captures, as I know from actual observation, represent the first appearance of the moth in each case—we find that the length of time that elapsed between the first in April (2nd) to the first in June (20th) to be 78 days.

Taking the first of Worthington's list, April 3, and the first of Bean's, June 24, we obtain 82 days.

Dr. Lintner commenced collecting July 7th and continued until October 25th. Up to August 7th, no Army-worm moths were seen except on the evenings of July 7th and 21st. From the time they began to reappear in August, they were absent no evening until he had passed October 6th, after which no more were seen. It is, therefore, more than probable that the July captures were the last of the preceding brood. Counting them from the last of the first brood—July 21st to the last of the second—October 6, we have just 77 days.

If we suppose Prof. Forbes's capture of May 24, to be the ending of the Spring moths, as was doubtless the case; and August 18th the closing of the Summer brood, we have 86 days as the average term of life.

"Early in April" and "in June," as given by Prof. Riley, corresponds in general terms with the estimate given. The appearance and disappearance of the larvæ correspond very well with this estimate, or if they show a difference it is in the direction of a longer term than supposed.

The life period of the second brood, as calculated by the meager data we have at hand, appears to be considerably longer than the estimate given. The first brood of worms have usually disappeared in this county from the 4th to the 10th of June, and those of the Fall brood seen when full-grown were observed between the 15th and 30th of September. This corresponds almost exactly with Prof. Riley's observations of the worms as above quoted.

Counting from June 10th to September 20th, we have one hundred and two days.

It is not possible that there could have been two broods in this period, as the time is too short, and, moreover, there is an entire lack of evidence to sustain such a view.

We may, therefore, assume as pretty well established that the life of the individual of the Spring brood, from the time the egg is deposited until the resulting moth lays her eggs, lasts not less than 77 days under ordinary circumstances, with the probability that it may be extended rather than shortened.

Before concluding our argument in reference to the number of broods in this latitude, it is necessary to allude to

The Hibernation.

What is here said on this point is to be understood as applying only to this latitude, as there are reasons to believe the method of hibernating varies in different latitudes. The worms when first seen in this county in 1861, in the latter part of April, as shown by my own observations and those of Col. B. Wiley, were quite young, evidently not more than one week old. The time of appearance and disappearance of the worms in the Spring, as shown by the observations of Professors Riley and French and myself, correspond with this. The capture of moths from the 2d to the 25th of April in different years, also agrees so exactly with the time the worms are first seen, that we are forced to conclude the eggs were deposited in the Spring. Moreover, the direct observations of Prof. Riley are sufficient to confirm us in this opinion if the other facts had left us in doubt.

It follows, therefore, that they must have hibernated as chrysalides or moths. Our reason for believing that they do not pass the Winter in the moth state are, *first*, those caught early in April are fresh specimens showing no signs of having lived in this state any considerable length of time; *second*, that so far not a single specimen has been taken in this section in the Winter, although we often have during this season warm and pleasant days when other species are captured. That a few of the second brood do reach the moth state in the Fall, is true, as the occasional captures in October and November show. But such captures are rare.

In an article published in the Prairie Farmer, June 20, 1861, I expressed my belief that it passes the Winter in the pupa state. All the data obtained since that time tend to confirm this view so far as this latitude is concerned.

Mr. Walsh held then and until his death that the eggs were deposited in the Summer and remained over until the following Spring.

Prof. Riley in his second report adopted Mr. Walsh's theory, but gave it as his opinion that "exceptional individuals occur perhaps one in a hundred, but demonstrably not as many as one in twenty, which lie in the chrysalis state all through the Winter." In his eighth report he expresses the belief that the great bulk of them hibernate in the pupa and moth states, the proportion of the former increasing northward."

In his ninth report he reaffirms this view. In 1880 in the article already quoted he gives as his belief that "by far the more common mode of hibernating is in the larval state."

Dr. Fitch does not express his belief on this point, but I infer from a careful study of his article that he believed it passed the Winter in the moth or pupa state. For, as Shurtleff remarks "his theory will do very well if they are found to lay their eggs in the Spring."

Kirkpatrick was of the opinion that they passed the Winter "either in the caterpillar or pupa State.

Prof. Comstock says, we can now safely state that it hibernates both in the moth and chrysalis states, the former being more common in the southern part of the country, and the latter in the northern regions."

Dr. Bean, of Galena, Ill., in a letter communicating a list of captures, incidentally remarks: "Dimly remember captures (think 1878) indicating probable hibernation in pupa state for this locality—but can't be sure."

Mr. C. E. Worthington, of Chicago, writes me as follows: "It doubtless passes the Winter in all stages; in fact, I have had eggs of Fall brood hatch in Spring and taken worn specimens in March, and have pupæ at the same time; while I have no doubt but the brood emerging in June passes the Winter in the larval stage. This brood, i. e., June and October, seems the only regular brood of the season."

Difference in latitude and climate will account in part for these different views, but it is evident that, so far as the more northern latitudes are concerned, this question is involved in very great doubt.

So far as this section is concerned, we may consider it settled that they hibernate in the pupa state; perhaps a few of the moths that come out in the Fall pass safely through the Winter, but so far we have no good reason to believe this.

As additional evidence in favor of this view I present the following, based upon the estimated term of life heretofore given:—

Assuming June 25 as the average time the first moths of the Spring brood of worms make their exit from the pupæ, and counting forward 77 days, brings us to the 10th of September, when the moths of the second brood will begin to appear. If they should deposit eggs, these could not hatch before the 10th of October, and the worms would not be half-grown before the 1st of November. Moreover, these would only be the advance guard of the brood. It would require the entire month of November to bring the mass of the brood to half growth, for we can hardly suppose they pass the Winter when younger.

But another almost insuperable objection to the idea that they pass the Winter (here) in the larva state is, that no armies of half-grown worms were ever observed in the meadows or elsewhere in October or November preceding their appearance the following April and May of the great Army-worm years. And, as before stated, when they did appear in April and May, they were, when first seen, not quarter-grown.

Literary Miscellany.

DOT MAID MID HAZEL HAIR.

DALK not to me baud maidene rare,
Mit shkin of bearly hue—
Dere vasn'd any kin combare
Mit von I hafe in view.

She'e gendle like der soft gayselle,
Her face was awful fair—
She has dwo aupurn eyes of plue,
Und hazel vas her hair.

Her woice vas rich like anyding,
Her moud vas like der rose,
Her sheeks—dem plooms just like a beach
Und dimpled vas her nose.

Her hands und feed vash shmall und need,
Und ven dot maiden sings,
Dem leedle birds den glose deir eyes
Und flops deir leetle vings.

I'm going to dook dot leedle maid
Some day to been my vife,
Und make her happy like I kin
Der balance of her life.

Und ven ve'm settled down for goot,
I'll show you something rare—
Dwo shmiling aupurn eyes of plue
Und shblended hazel hair.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 137)

CHAPTER V.

"We call them phillegomotors," said my friend "from the name of the gas by which they are upborne and propelled."

He then went on and gave me a description of these transit machines, in language which was simple enough, no doubt, for the understanding of a child. But I was like one who, awakening from the sleep of a generation, was receiving his first ideas of the steam engine or the magnetic telegraph. The general notion, however, which I received of the phillegomotor was this:—

A gas called phillego had been discovered which possessed remarkable properties as to lightness and elasticity. This could be generated or resolved at will, instantaneously, and to any desired extent, by chemical action in an apparatus which was attached to every car. The great bag, which I have remarked formed the roof of these cars, was the receptacle for this gas. At starting out enough of the gas was generated to just bear up the car. As passengers got in the quantity was increased and when they got out it was diminished, so that an exact equilibrium was preserved between the upward tendency of the gas and the force of gravity. The car having thus in effect no weight, it required but little force to propel it. This was accomplished by this same gas, which caused a disk or wheel, constructed on the principle of the propellor, to revolve with incredible velocity, thus acting upon the air as the propellor of the steamboat acts upon the water. The connection between the car and the track was by small wheels above and a clamp with a projection which fitted into the groove or under side, which I have spoken of as being smooth and bright as polished steel. The car was thus held in its place on the track against the force of wind, and the lifting power of the phillego, if by accident it should preponderate over the force of gravity. Each car was, of course, supplied with brakes and the most complete apparatus for regulating its speed, and in case of accident it could be instantly disconnected from the track, elevated above the house-tops and guided through the air till its speed could be diminished and it could descend in safety.

The cars for long distance passengers ran for a mile without stopping and then descended to the sidewalk, in the same manner those of the other line at every cross-street. I was so taken up with my friend's description of these phillegomotors, and so absorbed in watching them and following my friend's description of their mechanical appliances, that the hundred other wonderful things which came within the line of my observation made but a passing impression on my mind.

CHAPTER VI.

A LOOK AT THE CITY DURING BUSINESS HOURS.

A RIDE of half an hour brought us to my friend's place of business. He was at the head of a large cloth manufactory, which had mills in a neighboring township, and a store for the disposal of goods in the city. As it was the custom of the country to devote only the forenoon to business, it was necessary for business men to give their whole attention to their various occupations during the few hours which were devoted to them. My friend, therefore, excused himself to me till after business hours, but exacted a promise from me to go with him then to his house.

I wandered through the establishment for a while watching the throng of customers making their purchases, and the operations of unpacking and arranging goods just received, and the packing of those which had been sold. I wondered at the quickness and dexterity with which every operation was performed. Every employee seemed to know exactly what his duties were, and to be thoroughly competent to perform them. Great boxes of goods were run up on elevators to the floor appropriated to their class, and borne away on trucks in the hands of stalwart porters to the exact spot where they were needed, and quickly unpacked and disposed of without the least fuss, or uncertainty of movement. In the same manner goods which had been sold were gathered up as soon as customers had completed their purchases, and borne away to the packing-room, where they were boxed and marked almost before the customer had got out of the store.

Such excellent system prevailed that there was little ordering or running about asking for instructions but every one connected with the house seemed to have his duties so clearly defined, to understand them so thoroughly, and to be disposed to perform them so promptly that no controling or directing mind was required.

In making sales, also, the best understanding seemed to exist between buyer and seller. There was no cheapening, or higgling over prices, or examining of goods with the view of discovering something in them that was not as represented. Indeed, the quickness, and the apparently artless superficial manner with which the buyer bought surprised me no less than the straightforward and guileless manner with which the seller sold. Every bill of goods which I saw sold was paid for on the spot, and every order which was sent in and by far the greater portion of the business of the house was done through orders—was accompanied with the money, or its equivalent. And here I may mention another thing which greatly surprised me, namely: The careless manner in which money was handled. The cashier piled the coin which he received upon his desk before him, and placed the paper money under a weight that it might not be brushed off by the passer-by, or blown away by the wind. That any one of the throng of strangers passing in and out should snatch it or that any office boy or porter should help himself to some of it when the cashier's eyes were withdrawn, seemed to be a matter which they were at no pains whatever to guard against. Though several thousand dollars might be collected during the hours of business, it all lay upon the desk, like any article of little value till the cashier made up his accounts.

Having satisfied my curiosity as to the business methods of the house, I wandered out on the street to look about me till the close of my friend's business hours. The sidewalks were alive with people, moving along without the hurry and hustle which characterize the business men in the great cities of my own country, but with a business-like energy in every movement which spoke strongly of promptness and efficiency in every transaction.

The wonderful phillegomotors were shooting by constantly, dropping to the pavement, rising and shooting off again with an apparent impatience of delay which seemed to imply that, like the merchants, their harvest time was the hours of the forenoon. It was some time before I could witness the passage of one of these flying machines with a sense of security. Instinctively I moved to the

inner part of the sidewalk when one approached and my heart seemed to leap up into my throat when they descended to the sidewalk, from the feeling that a frightful accident was impending. But gradually my sense of danger grew less as I became more familiar with them, and nothing occurred to justify my fears, till I finally grew bold enough to take a ride in one. But of this in its place.

Great trucks, loaded with merchandise were bowling along the pavement, propelled by that wonderful genius of the country, phillego. Each was guided and controlled by a single man, who sat upon a platform in front of the truck, and with a foot-lever and two hand-levers managed the apparatus for producing motion, which was situated directly under him, and connected with the forward wheels. It was wonderful to see how easily and completely the driver controlled his truck. By the simple pressure of his foot he could start it off at a terrible speed, and by withdrawing the pressure he could reduce its speed to the barest movement. By the two hand-levers he was able to guide it to the right or left at will, or turn it about in a space but little more than its length. I stopped many times to look at these trucks being backed into the sidewalk for the delivery of goods; for it was really surprising to see how quickly and accurately this movement could be performed. The best trained horses in my country were nothing in comparison.

Express wagons and other business vehicles were propelled in the same manner. In fact, the horse as a beast of burden was entirely superseded in this country by that most useful and powerful slave of this advanced people, phillego. Having been elevated in the scale of being in a corresponding degree with his masters, his docility and intelligence caused him to be treated as a pet, and no dog ever displayed a greater affection for his master, or willingness to do his bidding than the horses of this country. Hence it was that so much confidence was placed in their fidelity and intelligence that neither bit nor rein was ever used to guide or control them. A single word would urge them on, or cause them to slacken their speed, or perform every required movement with the utmost safety.

It was really quite frightful to me to see these noble animals careering along without any apparent control among the various phillego vehicles, with which the street was crowded, and winding in and out among the pillars of the elevated railways. But they showed an intelligence little less than human in managing the vehicle which they drew. Their notions of space and distance in relation to it was most accurate, so that they never attempted to go where there was not room for it, and they always kept off far enough from any object with which it might collide, to insure safety.

There was another thing about these horses which excited my surprise, and that was the want of clatter with which they traveled. Their feet came down with a thud upon the pavement as though their shoes were made of rubber instead of steel. I afterward found that they were made of a substance which possessed some of the properties of rubber, but which was greatly superior to it in toughness and durability. Every vehicle, indeed, had its wheels hooped with this material, so that the noise of the street was a dull low rumble, instead of the clank and clatter to which I had been accustomed in the great cities of my own land.

Another thing which greatly contributed to lessen the noise of the street was the wonderful smoothness of the pavement. If the city had been chiseled out of some great marble plain, its streets could not have presented a more unbroken appearance. Not a single joint could I discover in the material of the pavement, though I carefully observed it for several blocks. Even between the side-walk and the street, though there was quite a depression to form a gutter, nothing like a joint was discernible. Indeed, the very houses seemed to be a continuation of the material of the street, without a joint from base to roof. Stoops, pillars, porches, balconies, even the very window frames, to the grooves for the sash, all had the appearance of being chiseled out of the solid rock. And such wondrous sculpture I had never seen attempted in any material as was displayed in the external ornamentation of many of the houses.

The material of the street and side-walk was of a greenish cast, and somewhat coarse in texture. That of the houses was very fine grained, hard, and susceptible of a high polish, so that in walking along the street one's image, reflected from the houses, accompanied him as a continual presence.

This people possessed the art of giving to the material of their houses any coloring which they desired, so that it seemed to be a part of their nature. Thus, some of the houses were beautifully mottled like serpentine. Others had the various and fantastic coloring of agate. Others were red like jasper, and others had the purple hue of amethyst. In short, all the most beautiful minerals were represented in the material of the houses. No two houses adjoining each other being alike, there was yet a tasteful regard paid to the harmony of their coloring which greatly lightened the effect which individually, they were so well calculated to produce.

The streets of the Golden City, it appeared to me, could not present a more beautiful appearance than those of Good-will-to-Men. Apparently located on a vast level plain of marble, from which its hundred feet wide streets were chiseled with mathematical precision, and from which its buildings rose to their tolliest domes and pinnacles as one unbroken piece of polished marble, variegated and beautified by an art which rivaled nature. With one continuous park of majestic elms, shading exquisite statuary, delightful bowers and sparkling fountains, running through the centre of every street, with the pavement laved daily by the water of the fountains, so that it was as pure and clean as the floors of the dwellings. With delightful parks at frequent intervals throughout the city, where nature fostered by art presented one continual feast of pleasure for human enjoyment. With a people in whose physically perfect bodies a mind of unspotted purity, goodness and commanding intelligence found a habitation. Surely, thought I, the Golden City itself could furnish nothing more of external beauty to delight the soul of man.

Musing thus, I wandered on along the crowded thoroughfare, indifferent to the gaze of those I met; for my soul was so elevated by the beauty and excellence of all I saw that I quite lost consciousness of my great inferiority to this noble people; and this inferiority I was compelled to believe was the source of the curious attention with which I was regarded.

To be continued.

BRIC-A-BRAC.

He aster her if she'd marry him,
He said "I canna tell,
But if you'll larkspur round awhile,
And pansy out right well,
I'll be your lady-in-the-mist,
Your hearts-ease and your pet,
And should fortune smile on you,
I'll mari-*gold*, you bet."

—Modern Muse.

At dinner she had a doctor on either hand, one of whom remarked that they were well served, since they had a duck between them. "Yes," she broke in—her wit is of that sort that comes in flashes—"and I am between two quacks." Then silence fell.

A blushing maiden of forty Summers entered the town clerk's office in Wheeling, West Virginia, recently, and asked in a voice trembling with agitation, for a license. The clerk took down the name and address of the visitor, "Name and address of the other party?" asked the clerk. "Faithful, and he lives with me," replied the fair one. The clerk looked at her for a moment, and blushingly completed the filling of the document which he handed to the lady. He was astonished at her conduct. She gave one glance at the license, hoarsely whispered "monster:" and swept majestically out of the office. The clerk had presented her with a marriage license, when it was a dog license she wanted.

For Women.

CONDUCTED BY MISS RAY CLARK.

MORN AND EVE.

I see her at my cottage door,
A little child, with sweet blue eyes,
Where linger yet, like morning's mist,
The look she brought from paradise.

And by her side an old man sits,
And dreams of days long since gone by,
While overhead a robin sings,
And sunset glories light the sky.

Along the paths her feet have trod,
Hopes fairest, brightest blossoms spring;
She hears no mournful undertone,
But sweet and clear life's joy bells ring,

She laughs to hear the joyous song
The sweet-voiced robin gayly trills,
But he, with faded, wistful eyes,
Watches the sunset o'er the hills,

And then, soft sighing, whispers low,
"My day, like this, draws near its close,
And night comes slowly stealing on,
The night which brings me sweet repose."

OUR TRAVELS.

VELENA.

The "gude man" and I had concluded to view the metropolis; visit the Quaker city and see Washington. A little fixing up being quite essential, a dressmaker was employed; all would have gone well had not said woman stopped off and got married. However, the dress was at last finished and the feet shod; then the head came in for its due attention. The pony and phaeton were brought around and we rode to a millinery establishment; entering, I said to the proprietor that I desired a hat, hood, bonnet or cap, whatever might be the style, becoming to me and suitable for traveling. Then came the trial: bonnets too young, too old, too flaring, too close, too sombre or too gay; all very fine and very becoming, but not to me—were brought forth. At last a compromise was affected; the outside black, face old gold and ruby—two colors never worn by the writer before and much less becoming than those she had worn, and we rode home through a drizzling rain. The 2nd day of November came. After reminding the Professor of his rights, saying to a prominent man who had come all the way from Washington to vote, "do not forget to vote before the polls close," and asking a young man who was to vote for the first time if he had forgotten to put in his vote, we took a drawing-room car (cost, extra, three dollars and fifty cents) and when the wheels went round, the Professor, David and I were traveling eastward. We rode through valleys, by hills and past small towns until Utica, with its Insane Asylum and woolen mills was reached. Here, an emigrant train had unpeopled itself; its inmates with their queer dresses and queer baskets were sunning themselves, deliberately walking to and fro or filling their lunch baskets at a neighboring eating house. They were men women, and children from Germany, going to the far West.

Upon leaving Utica, we were carried along by the iron steed past a romantic place where a winding stream among the rocks sped on its way most gracefully. Looking back to get a last glimpse of this lovely spot, we were carried out of its sight all too soon; on and on the locomotive hurried, with its freight of humanity following close in its rear.

Having arrived at Albany, and seeing that our niece had her washing on the line, we concluded not to stop; for washing day is not a good day to call on one's friends. In the distance we got a glimpse of the State Capitol, which has already cost nearly as much as the National, but is not to be compared to it in architectural design or artistic adornment and magnificence. To some, however, the one at Albany may seem all excellent, but I observe that one's comparative judgment depends upon what opportunities they have already had for observation.

On and on we went, rushing by the school where Cadet Whittaker did or did not snip off his ears. With the stars twinkling overhead and the lights beneath, with bonfires occasionally sending up lurid flames, the hurrahing of victorious politicians, shouting of car-drivers and hackmen, we reached the metropolis.

CHILDREN'S FUNNY BOOKS.

A heart must be very cold which does not feel a responsive thrill as it listens to the merry laugh of children over the treasures of a Christmas tree. But do we ever think that it is really an important matter what they laugh about? Books and pictures form a large share of the gifts at the holiday season. There is a class gotten up for the little ones, in gaudy colors, with superb bindings, which contain caricatures as senseless as they are coarse, while the wit in them is only of the order to be found in the comic valentine, or on the boards of the negro minstrels.

Are they of the kind to elevate our children's tastes or refine their characters? Is not the tendency the other way; do not children drink in this coarseness as they would water, and fill their brains with the clownish, vulgar trash, to the exclusion of anything better? What a pity it is that children in lovely homes, surrounded by all that should tend to elevate and purify their nature, should be so degraded by the careless kindness of friends, who, to amuse them for a moment, do so seriously mar their moral and intellectual nature.

There is an abundance of rare, delicious fun, of sweet tender sentiment, in books, that is all right, which children enjoy quite as well, without going over to the enemy's ground and plucking those poisoned sweets.

Many a mother has found it expedient to commit to the flames a book which she found was undermining her child's better nature, even though bound in crimson and gold. Do not spare for the binding if it is hurtful to the lad, no, nor for the giver, even though it was his "very best auntie." Your child's real good is above all such considerations.

Children cannot discriminate between the good and bad, themselves. You must do the choosing for them. Hence the great responsibility that rests upon you. Always make it a rule to choose something innocently amusing rather than something coarsely grotesque, no matter how taking it may be.

A gentleman once said he would about as soon introduce a viper into his household as one of the old comic almanacs which used to be so much in vogue; yet they were mild compared with much of the literature prepared for children this and every year. Olive.

Airing the Beds.—It must be a false idea of neatness which demands that beds should be made soon after being vacated. Let it be remembered that more than three-fifths of the solids and liquids taken into the stomach should pass off through the pores of the skin,—seven millions in number,—and that this escape is most rapid during the night, while warm in bed. At least one-half of the waste and putrid matter (from twenty to thirty ounces in the night) must become more or less tangled in the bedding,—of course soiling it,—and a part of this may become re-absorbed by the skin, if it is allowed to come in contact with it on the next night, as it must if the bedding is not exposed for a few hours in the light. We may well imitate the Dutch example of placing such bedding on two chairs near the window in the sunlight, or in the window, that the best purifier known, the light of the sun, may dissipate their impurities, or neutralize them. At least three hours, on the average, is as short exposure as is compatible with neatness.—Congregationalist.

CORRESPONDENT'S CORNER.

Will you please give me directions in your columns for making a bundle of everlasting flowers ornamental? And obligo A Rural Reader.

We should be pleased to have the above question answered by some of our sisters. R. C.

That indigestion or stomach gas at night preventing rest and sleep, will disappear by using Hop Bitters.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

BREAD RISING.

BY CHIEF COOK.

If we understood the principle upon which any household operation is performed, we would have the ability to vary its mere manipulation to suit our conveniences or our means. If all the bread makers were scientifically learned, the average health of the human race would, in less than a generation, be improved seventy-five per cent. Filling the stomach with food intended to nourish, but which is inherently unable to do so, is a drag upon all human advancement greater than can be easily imagined. Good food, good blood, good body, good brains are natural sequents. The act in bread making, called rising, is the mere expansion of a gas created in the dough itself, or introduced there after being produced elsewhere. Common beer yeast, hop yeast, soda and sour milk, soda and tartaric acid, baking powders, all create a gas in the dough by the action of the chemical antagonisms of which they are composed. This gas, after being thoroughly and minutely mixed through the mass by kneading or stirring (in the case of batters), would never make light bread without the agency of heat. It is one of the economies of domestic operations, that heat is necessary to cook the dough into an eatable condition, as the same heat expands the minute invisible globules of gas, so as to force the particles of dough apart, leaving it when baked in the spongy condition called "light." This gas which is highly exhilarating if taken into the system in quantity, is also perfectly harmless, though in every case, the two substances which by their being mixed together produce this gas, are highly injurious, and in sufficient quantity, either is fatal to human life. If in mixing together soda and acid, both deadly poisons, we put more of either than the other can render inert in forming the gas, the excess remains in the bread and is eaten, and every one who eats of such bread is at once poisoned. The list of diseases which this wholesale mode of poisoning, either produces or renders the system liable to, is too large to be intruded upon the pages of this journal.

The excess of soda is seen, tasted, smelled and felt, in the yellow, acrid, pungent character given to the bread or biscuit, and its effect upon the stomach and head. An excess of acid is detected by sourness of the bread. It is of the first importance, then, that the proportion of the two should be exactly right; two-thirds of acid to one-third of soda is correct, if both are pure; but if either is weak from any cause, more must be put in. Egg-rising is quite another affair; it is always pure, safe and perfectly wholesome. Beating eggs into flour merely carries bubbles of *air* into the batter, no gas here, no possibility of being poisoned; baking expands the bubbles of air, the batter rises, the heat fixes it at the right point and holds it there in the form of the most wholesome and most nourishing bread known, peculiarly fit for infants, or invalids, upon whose systems "cooks' poisons" would run riot.

But the best and most wholesome rising is frequently ruined by bad baking. Heat expands the little bubbles of gas or air; but if this expansion is carried on in too cool an oven, they burst into the atmosphere of the oven; the dough is still soft, and the bread "falls" or collapses. The heat must be a rising one, so that at the moment the dough is just porous enough to be light, the heat bakes it into bread, and all danger of heavy bread is passed; thorough baking after that is a mere question of time.

The study of this subject and the expert and certain application of it in making our "daily bread," are paramount with the value of health and long life.

HOLDERS.

I wonder if every lady of the Rural knows what nice things holders are for either a kitchen, sitting-room or parlor stove. I was in a neighbor's house, the other day, and, as true as Gospel, one of the young ladies used the skirt of her cashmere dress to open the stove door; and when we went out to tea, she took her pocket handkerchief to lift the tea-pot from the stove to the table; and her other sister took a plate of hot biscuit from the oven with her apron. Now, they are "real" nice, smart girls, and know how to work; but I was sorry to see them use their clothes for holders, because it is not economical or tidy. It is but a few minutes' work to make a holder; have it of three or four thicknesses of old flannel, make a cover of cloth that will wash; sew on a loop or ring to hang it up by and you will find it pays for itself a dozen times a day. I hope the girls won't think grandmother is always scolding, but I cannot bear to see girls brought up slack and shiftless, and I would rather make a holder and give it to a girl than see her grab up a nice dress with which to take hold of a hot stove door. It makes me press my lips tightly together to keep from speaking about it. But, there! Girls will be girls, and I presume they never thought a thing about it. But I hope they will learn as they grow older; and as I have spoken of it, perhaps some of them will go right to work, and make holders for every stove in the house. If I thought they would, I would tell them that round holders bound with bright colors, look really pretty to hang up near a sitting-room stove, while a holder made in the shape of a butterfly, with the wings worked with bright worsted, is quite ornamental in a parlor. But square ones are the best for a kitchen, and ironing table. The next time the girls want some new fancy work I would advise them to try their hand at making up a batch of holders.

Grandmother.

DOMESTIC RECIPES.

Cocoanut Cake.

Two cups of granulated sugar, one-half cup of butter, three eggs, a cup of milk, three cups of flour and two teaspoonfuls of yeast powder. Bake in jelly-tins. For filling, grate one cocoanut; to two-thirds of it add the beaten whites of two eggs and a cup of powdered sugar. Put this between the layers. Mix two spoonfuls of powdered sugar with the rest of the grated cocoanut and strew on top of the cake.

Potato Puff.

Mix two cupfuls of mashed potato, two spoonfuls of melted butter and some salt to a light and creamy state, then add two eggs, yelks and whites beaten separately and very light, and about six tablespoonfuls of cream or rich milk. Pile in a rough form on a pudding dish and bake in a quick oven until nicely browned. Eat at once.

Parsnip Fritters.

Scrape and, if large, cut in pieces and boil tender. Mash them, season with pepper and salt and to every two cups of mixture stir in a large teaspoonful of flour and a beaten egg. Form into small cakes and fry on both sides a light brown.

Spinach.

Look over, wash carefully, boil, in just enough water to cover, until tender. Squeeze out all the water, put through a colander, return to the fire and season with butter, pepper and salt. Prepare some thin slices of buttered toast, press the spinach into cups and on each piece of toast place a cup form, with the half of a hard-boiled egg pressed into the top of each.

Onions.

Put into salted boiling water with a cup of milk and boil until tender. Take out carefully, arrange in a baking-pan with pepper, salt and a bit of butter on the top of each, pour in a little of the liquor they were boiled in, and brown in a quick oven. MARY B.

Cleaning Mica.

The coal fire went out the other day and in lighting it, the wood necessarily had a bad effect on the mica, smoking it to a deep brown. Our amateur housemaid did not like the appearance and domestic economy forbade us to throw it away. So she took out the pieces, one at a time, soaked them in vinegar and water, rubbed them gently with a piece of soft flannel and replaced thence almost as good as new. For stoves where much mica is used this should be worth remembering.

ANNIE L. JACK.

QUESTIONS ANSWERED.

Washing Fluids—Washing Machines.

I have a dread of washing-day on account of the labor of rubbing the clothes. Cannot you give me a recipe for a harmless fluid or other preparation to put into the boiler that will aid in removing the soil and stains without such hard labor? ANNIE B. CLARK.

ANS.—The following was given us by a lady, with the assurance that it was positively a harmless washing fluid, used in the proportions given, and we are in no wise disposed to question the authority:—Two pounds of soda-ash, one-half pound of unslaked lime; pour over nine quarts of cold water and let boil 20 minutes. Take from the fire, add two quarts of cold water, let settle, pour off and bottle. Soak the clothes over night in cold water. In the morning wring out, soaping the soiled parts. To a good-sized boiler half full of water, allow one-half pint of the fluid. Put in the clothes and boil 20 minutes. The clothes are then taken through one suds and the usual rinsing waters. About a year ago we received a Robbin's Washer and Bleacher upon trial. We confess we were loath to try it, having a deep-seated prejudice against washing machines of every description. But at last we were obliged to acknowledge that the little machine did all that was claimed for it. It has been in use in our family most of the time since, and we have had no reason to change our first opinion of it. We think it a saving of labor and time and much to be preferred to washing fluids. But of late we have received complaints that "it is not all gold that glitters;" that the thin coating of white metal soon wears off, leaving a baser metal underneath, which rusts and thus ruins the clothes. Will not those of our readers who have used this washer give us their experience?

Keeping Eggs.

Will eggs keep packed in oats or chaff from Spring until Winter? Please give a recipe for a pickle. A READER.

ANS.—Yes, we should think so, but would prefer chaff to the oats, and dry, sifted coal or wood ashes to either. The eggs should be taken daily from the nests and packed, small end down, and set away in a cool and dry place where the temperature will not rise above 60° or 65°. For a pickle, see directions given in RURAL of February 26, page 139.

A fretful mother and a cross child indicates ill health, requiring only Hop Bitters to remove.

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Specimen copies of any of the journals here announced as clubbing with the RURAL NEW-YORKER *will be sent without charge to all who apply. The application, however, must be made to the journal of which specimen copies are desired. The subscriptions, however, may be sent to us and will receive prompt attention.*

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☞This beautiful Piano Upright Cabinet or Parlor Organ (Like Cut), The **Paris** New Style, No. 5,200. Height, 70 in.; Length, 48 inches; Depth 24 inches; Contains (5) Five Octave, (5) Five set of the celebrated Golden Tongue Reeds, as follows: Set powerful Sub Bass Reeds, set of ⅔ octave of the famous Vox Celeste Reeds which produce the sweetest tone ever heard; set of 1 octave of the new solo combination the Celestina or French Horn reeds, which exactly imitates a French Horn, besides 2 sets of 2 1-2 octaves each of the principal or regular Golden Tongue Reeds, making in all a beautiful combination, with which the performer can (by the aid of Beatty's new patent stop action) produce any variety of tone desired. It is, therefore, necessary to connect (17) seventeen stops with the above action in order to get the greatest possible variety. (No "dummies.") This combination is something entirely original. Names of stops are as follows: 1) Diapason Forte, 12) Principal Forte; 3) Sub Bass, (4) Bourdon, (5) Dulcet, (6) Diapason, (7) Grand Organ, (8) Celestina, or French Horn (9) Vox Humana, which imitates the human voice! (10) Aeolian, (11) Echo, (12) Dulciana, (13) Clarionet, (14) VOX CELESTE! which is by far the sweetest and most perfect that has ever been attained—Charming! is the universal exclamation of critics and lovers of sweet music who have heard it; (15) Octave Coupler, which doubles the power, (16) Flute forte, (17) Grand Organ knee stop, by the use of which the entire power of the instrument can be thrown on or off by the knee without taking the hand from the key board. It is a valuable improvement in real Organs. I have named this Organ, THE PARIS, because it has such a beautiful appearance; the case is built of solid black walnut, elegantly carved, finely veneered, with costly wood placed on the top, front, and ends, as shown in cut; handles, lamp stands, fancy pocket for music, two inner swells, rollers for moving, upright bellows, made of the best quality of rubber cloth, steel springs. The pedals are covered with metal, instead of carpet, which will last a life time. This Organ is truly a beautiful piece of parlor furniture, and the home of the wealthy, the millionaire, banker, or business man will find it an ornament to their parlor. I will sell this instrument, boxed and delivered on board cars at this place, including Stool, Book and Music, for only $85. ☞Please send in your order at once. You may order by letter or telegraph; can be shipped at an hour's notice. Remit by Post Office money orders, Express prepaid, or registered letter, or by bank draft. Money Refunded and freight charges will be paid by me both ways if in any way unsatisfactory, or you may pay me only after you have fully tested it at your own home. Send reference or evidence of your responsibility if you do not send the cash with order. Every organ of my manufacture when introduced in a new locality, sells many more. Often 25 sales are traced from the first instrument sold. It becomes a Standing Advertisement at your own home. If you do not want an instrument yourself, will you please hand or mail this offer to a friend who wishes to purchase. Nothing saved by long correspondence. Order direct from this Advertisement.

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News of the Week.

HOME NEWS.

MONDAY, March 8, 1881.

On Friday last, James A. Garfield, in the presence of fully 50,000 people, took the oath of office, and became President of the United States. All the exercises were conducted promptly and in good order, and the scenes attending the inauguration were in many respects the most noteworthy ever known in connection with a similar ceremony. Mr. Garfield's inaugural address is dignified in tone and devoted to the general subject of the changes wrought in the political system and political life of the nation. It was delivered in a pleasing manner, and received with frequent applause. Among the honored of the land who occupied the platform where the address was delivered, sat Mr. Garfield's mother. She listened with rapt attention to every word of the address, and after the oath of office was administered, the new President, turned reverently and kissed his mother and then his wife. The procession was a grand affair, and it was not until about two hours and a half had elapsed from the time the head of the procession passed the President's stand, that the new magistrate was released from his labors of bowing and saluting the passers-by. After the procession had disbanded the usual reception was given at the White House. In the evening, the Inauguration Ball took place at the National Museum Building, and it is universally conceded to have surpassed anything of the kind ever before held. This closed the day, and our new President and Vice President are duly installed in the highest offices with which they can be honored by the people.

President Garfield has chosen, as his cabinet, the following named gentlemen:

Secretary of State—James G. Blaine, of Maine.

Secretary of the Treasury—William Windom, of Minnesota.

Postmaster-General—Thomas L. James, of New York.

Secretary of War—Robert Lincoln, of Illinois.

Secretary of the Navy—William H. Hunt, of Louisiana.

Attorney-General—Wayne MacVeagh, of Pennsylvania.

Secretary of the Interior—Samuel J. Kirkwood, of Iowa.

The formal presentation of the obelisk to this city took place Washington's Birthday at the Metropolitan Museum of Art, in the presence of a large concourse of people. Secretary William M. Evarts made the presentation speech, and Mayor Grace, on the part of the city, received the gift in a neat little speech. Mr. Vanderbilt has given $103,732 in defrayment of expenses for the removal of the monolith.

After a struggle of several weeks to elect a U. S. Senator, Pennsylvania's law-makers have succeeded in giving John I. Mitchell that position. He came in as a "dark horse" at the eleventh hour, and was nominated on the 35th ballot. The final vote stood Mitchell 150, Wallace 92, McVeagh 1, Brewster 1.

The University of Pennsylvania recently conferred the Degree of Doctor of Laws on President Garfield.

The Senate celebrated the anniversary of Washington's birth by the passage of a joint resolution to give the Father of his Country a thirty-thousand-dollar monument. This patriotic proposition was not adopted without considerable discussion. The last Congress, it appears, appropriated $3,000 for a stone to mark the birthplace. Senator Johnston brought up a new bill to add $27,000 to it, so as to make the total $30,000.

The Arkansas Senate recently adopted a joint resolution fixing the pronunciation of the name of the State as "Arkausaw." If another resolution, making the spelling of the word the latter way, should be adopted, something of philological importance would be accomplished.

At a meeting of the World's Fair commissioners on the 23d ult. Grant said he could not attend much to the enterprise for several months, as he intended to leave the city. He was surprised at the little interest taken in the affair and recommended another effort to secure Central Park as a site. There still seems to be a considerable uncertainty about the location of the Fair Grounds. The attempt has been made to secure a portion of Central Park but it has failed. Morningside and Riverside Parks have been suggested as being better adapted to the purpose than Inwood, but it is probable that the latter site will be the choice. Subscriptions are being handed in rapidly, and everything looks favorable.

Minnesota's capitol was burned on March 1. The flames first appeared in the dome, but soon spread rapidly, the old, dry wood-work burning like tinder. It is thought to have been the work of an incendiary. The new market hall is being fitted up for the use of the Legislature.

A terrible railroad accident occurred on the Hannibal and St. Joseph Railway, near Macon, Mo., on Tuesday last. Two trains were demolished, and several persons were killed, and many more injured. A broken rail threw the cars from the track.

Another "worst storm of the season" has been raging in the Northwest. Reports from Wisconsin, Iowa, Illinois and Michigan say that nothing like the storm of Thursday last has ever been known in those sections. A dispatch from Elgin tersely puts it:—"No trains; no mails; no Chicago papers; no business." On the 3d inst. no trains were run in the entire State of Wisconsin, and railroad men say that it will be a week before trains can be run regularly again. The suffering in interior towns was greatest. Much trouble was found, even in cities, in procuring food and fuel, and great distress prevailed.

The interest of the Robinson estate in the Robinson Consolidated Mine, near Leadville, Col., has been sold by the administrator to Wilson Waldingham, of New York, for $1,000,000. Mrs. Forbes, of Plainfield, Mich, is sole heir to the estate.

Senator David Davis can safely be said to be the most extensive land owner in Central Illinois, and his total wealth, at a fair estimate, can be placed at $2,000,000. His taxes amount to about $27,000 yearly. Although a lawyer and recently a judge, Mr. Davis made his fortune in real estate. He has the handsomest residence and grounds in Illinois.

Vennor's latest forecast of weather for March, is as follows: There will be a rapid moderation on the 4th or 5th to warmth, but the temperature will again fall on Sunday night or Monday, and a week of extremely cold and stormy weather will likely ensue, with some hours of heavy snow fall. The 17th and 18th days, and possibly the 16th, come within another downward curve of the weather line, as do also the 24th and 25th.

The proposals for the new City Hall in Albany were opened Tuesday night. The lowest bid was made by Norcross Brothers, Worcester, Mass. Their bid was $206,000. We hope this building will not be modeled in all respects after its "big neighbor."

(St. Louis Chronicle.)

Trial by Jury.

Some believe that even this form of trial is not perfectly free from prejudice. But in our section, St. Jacobs Oil has been tried by that great jury—the public—and been judged the infallible cure for Rheumatism and all painful diseases.

AGRICULTURAL NEWS.

The Missouri Legislature will appropriate $15,000 to encourage the production of sorghum sugar, and the Mo. Ag. College will spend the money........ In response to the offer made by the American Humane Association for an improved car for the transportation of cattle, 420 models and almost 200 plans and sketches were received ....Accounts of the famine in some portions of Russia are deplorable. In some villages, it is stated, people die of hunger every day, and men pillage solely for the purpose of being put in prison, where they are at least fed enough to keep them from starving. In the East, bands of Kalmucks massacre entire villages to obtain their provisions. The Baskirks sell their children for a little flour, and the Kalmucks dig up the bones of horses that died of the plague last year, in order to grind them for cakes. Some villages are entirely deserted, all who were able having fled to the cities, abandoning the old and young to their fate. The chief trouble is that means of transportation are wanted to carry the surplus crops of one section to feed the destitute in another......., Wm. F. Dalrymple, of the famous wheat firm in Dakota, it is said, claims that his clear profit for 1880 was over $250,000. He raised a half million bushels of wheat on 24,000 acres.

An effort is being made in the Legislature of this State to regulate the storage charges on grain. The leading section of a bill for this purpose reads:

That the maximum charge of receiving and delivering grain shall not exceed one-quarter of one cent a bushel each, and the storage thereof for the first 30 days or any part thereof, one cent, and for each 15 days or part thereof, after the first 30 days, one-quarter of one cent per bushel. Provided, however, that grain damp or liable to early damage, as indicated by its inspection when received, may be subject to one cent a bushel storage for the first 10 days, and not exceeding one-quarter of one cent per bushel for each additional five days or part thereof. A quarter of one cent per bushel charged for receiving grain shall include all cost of what is called "trimming" to the leg of the elevator.

The trouble at Baltimore and elsewhere last Fall showed that some law on the matter is needed besides the arbitrary exactions of warehouse owners. Then ultimately "the farmer pays for all," and all the better for him if exactions are moderated by law........The Signal Service is perfecting a system of weather warnings by which farming communities near railway stations are to be notified of probable clear, rainy, or variable weather, by a system of variously-colored rockets.

A corporation has been organized at St. Louis, Mo., called the St. Louis, New Orleans and Foreign Dispatch Company, to forward in bulk grain and all kinds of produce and merchandise direct from St. Louis to Liverpool and other foreign ports.... ...Mr. W. H. Hughes, who is a relative of the founder of the Rugby Colony, Tenn., writes from there that the rumored migration of the colony to Minnesota is all nonsense. The colonists are preparing to put in their Spring crops.

Cattle are dying in some parts of Kentucky from eating tobacco........The draining of Lake Okechobee, Florida, lately referred to editorially, will reclaim 12,000,000 acres of excellent sugar land... ....The Southern California Citrus Fair will be held at Los Angelos, in March. Half the proceeds will be used to encourage immigration to Southern California........Dr. McMurtrie of the Agricultural Department, thinks that the best localities for beet-raising in the United States are, New England, New York, Michigan, Wisconsin, Minnesota, Dakota, Washington Territory, Oregon, one or two counties in Pennsylvania, and Licking County, Ohio.

Our exports of live stock to Liverpool and London during 1880 are shown in the following table:

	Liverpool Cattle.	Liverpool Sheep.	Liverpool Pigs.	London Cattle.	London Sheep.	London Pigs.
January....	3,015	1,641	219	2,023	......	......
February..	5,203	629	809	2,723	......	......
March......	5,077	958	....	3,518	777	200
April.......	6,686	2,998	918	3,919	1,289	......
May....	9,177	6,017	200	7,573	3,618	......
June........	10,042	9,425	502	8,649	5,481	66
July........	13,137	12,690	1,721	11,422	3,374	......
August.....	9,464	13,221	1,219	9,568	3,318	144
September .	10,826	4,620	2,026	4,906	2,733	219
October.....	6,514	4,429	1,976	4,228	459	......
November..	5,773	3,252	1,642	5,336	.	......
December..	3,131	1,981	106	2,972	1,237	......
Total.....	87,045	60,171	11,338	66,848	22,236	672

Of these the following numbers were lost during the voyage, according to a statement of the arrivals of live stock, published by Vaughn & Co. Liverpool.

	Cattle.	Sheep.	Pigs.
Of Liverpool shipment.........	3,408	2,136	1,423
London "	3,134	868	133
Total.......................	6,542	3,004	1,555

The fuel famine in Minnesota has been so great that many of the prairie settlers have burned stables, out-houses, farm implements and even furniture to keep themselves from freezing.

The mortality among stock on the Western plains during the Winter has been unprecedentedly severe. Thousands have died from cold aggravated by the prostration due to insufficiency of food, and hundreds of thousands from starvation, the scanty herbage on which stock eke out a meagre livelihood, being buried under an irremovable load of snow. The loss is said to have already amounted to 20 per cent. Great numbers of sheep have perished here and there, buried under enormous snow drifts. In many parts of New Mexico and some parts of Colorado great numbers of cattle are also dying from eating what is known as the "Loco" weed, which is spreading considerably among the wild grasses of that section. It becomes green before the grasses, and cattle therefore eat it, and become affected with a species of "blind staggers," owing to the poisonous nature of the weed. A petition is being circulated for the appointment of a government commission to investigate the matter and discover an antidote.

On the tobacco crop of Virginia alone, the Government receives an annual revenue of about $7,000,000. This product of that State is steadily increasing, notwithstanding it has been grown there for nearly two centuries.

According to latest advices the total amount appropriated for the Agricultural Department is $330,050. Among the special items is an addition of $500 to the salary of the Commissioner (a restoration to $3,500); examination of and report on wool, $5,000; for investigation of animal diseases, $25,000; experiments on tea, $5,000; insect investigations, $10,000; for continuance of experiments on sorghum sugar, $17,000; beet sugar, $10,000; for a building on the department grounds for the display of agricultural implements, $10,000.

Nature's Remedy.

It is evident that a large portion of our city people suffer from diseases of the liver, bowels, or kidneys. Kidney-Wort is nature's remedy for them all. Those that cannot prepare the dry can now procure it in liquid form of any druggist.—Globe-Democrat.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

A Great many persons become insane from sleepless nights that Hop Bitters would have prevented.

The People's World-wide Verdict.

Burnett's Cocoaine has been sold in every civilized country, and the public have rendered the verdict that it is the *cheapest and best Hair Dressing in the World.*

Burnett's Flavoring Extracts are invariably acknowledged the purest and the best.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, March 7.

St. Louis—WHEAT dull; No. 2, Red Fall, $1 01¼@$1 01½, cash and March: $1 03⅝@1 03¾, April; $1 05⅛@1 05¾, May; No. 3 do., 99c.; No. 4 do., 91½@92½c. CORN easy at 39½c., cash and March; 39¾c., April; 40⅛@40¼c., May; 40⅞@40¾c., June. OATS dull at 33½c., cash; 33c. bid, April; 34c. bid, May. RYE higher at 98c. PORK dull at $15 asked. LARD nominal. Bulk-meats dull, weak and lower to sell. Bacon easy; little done.

Chicago.—WHEAT in fair demand; No. 2 Chicago Spring, 99⅞@99⅝c., cash; 99⅜c. March; 99⅞c. bid, April; $1.03⅜ bid. May; No. 3 do, 88@90⅛c; rejected, 73@80c. CORN in fair demand at 37⅞@38⅜c., cash; 37⅞c., March; 38⅛c., April; 42⅛c., May; 42c., June; rejected, 37@37⅛c. OATS inactive at 31⅛@31⅛c., cash; 29@29⅛c., March; 29⅜c., April; 33⅜c., May. BARLEY $1 05, cash; $1,07, April. PORK in fair demand; new; $14.45@14 50, cash; 14.57½@14 60, April; $14 72½@14.75, May; $14 87½@14 90, June. LARD inactive at $9 87½, cash; $10.02½@10 05, April; $10.12½@10.15, May; $10 17½@10.20, June. BULK-MEATS—Shoulders, $4.75; short-rib, $7.65; short clear, $7 90. BUTTER—Choice to fancy creamery, 30@32c.; extra do., 26@29c.; choice to fancy dairy, 20@25c.; good do., 16@19c; common to good Summer and Fall made, 12@15c.; good ladle-packed, 15@16c.; good to fine do., 18@22c.; good to choice roll, 18@20c.; common to fair, 12@17c.; grease butter, 8@10c. CHEESE—We quote: Choice to fancy full cream of fine flavor at 13½@14c.; good do., 12@13½c.; do. lots that are off in flavor, 8@11c; choice part skims, 10@11½c.; good do., 9½@9¾c.; common to fair, 8@9c; off stock, 3@5c. HAY—A good demand and prices fairly supported. No. 1 timothy at $14.50@15 50; No. 2 do., $13.00@14 50; mixed do., $12.00@13 00; upland prairie, $10 50@11; No. 1 prairie, $8.50@9.50; No. 2 do., $7.50@8 50. WOOL—Demand light; market dull and weak as follows: Tub-washed, good medium, 43@45c.; do., coarse and dingy, 35@40c.; washed fleece, fine heavy, 33@35c.; do light, 36@38c.; do. coarse, 30@33c.; do. medium, 38@40c.; unwashed, fine, 23@25c.; do. fine heavy, 18@22c; do. coarse, 21@25c.; do. medium, 27@29c HOGS—Mixed packing, $4 90@5 30; light, $5.20@5.55; choice heavy, $5 60@6.00. CATTLE—Demand good at full prices; common to choice shipping, $4.30@5 25; export, $5.30@5 50. SHEEP—Demand good; fair to good, $4.50@5.50.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 8, 1880.

BEANS AND PEAS.—White beans have lost the advance of last week, but supplies are under good control and sellers are not pressing prime marks for home or export use at present quotations. Red kidneys extremely dull at $1.40@1.50; medium, marrow, pea and white kidney, $1.90@2.10; black or turtle soup, $1.40; Lima beans, $4.50@5. Green peas are firm with larger receipts: quoted $1.75@1 80 for Wisconsin: Southern B. E. peas, $2.10@2.15 per 2-bush bag. Comparative receipts of beans exhibit an improved home demand. Exports for the season are considerably below former similar periods and the stock in store is lighter than at this date last year.

BEESWAX.—A small business is in progress and the market is steady at 24½@25.

BUTTER.—There is a good steady Spring demand for the upper grades of butter and business would be of large volume if such styles were plentier. The abundant offering of low quality stock has been a severe detriment to the market for the past three weeks. Shippers cannot handle common off grade lots of Western and for that matter there is no encouraging call for fine shipping states. It is hardly possible that quality will improve for wholesale purpose, and from the present appearance of the market, we are to have a slow dragging movement on ends and odd lots until the arrival of new grass butter pushes the surplus into grease. The market has suffered badly from adulterated goods. It is simply ridiculous to attempt to find a place for "mixtures" of so-called butter that have appeared. Butter very properly is yearly becoming more and more an article that sells upon its merit.

Creamery choice Western 33@34c; fair to prime, 28@32c; State 23@28c., early packed 18@23c. State dairies, entire choice, 24c; other, 18@23c.; firkins, 16@23c.; pails and half tubs fine 27@28c other 16@25c; Welsh tubs, fine 24@25c; other 16@22c; Western imitation creamery, 13@27c.; dairy, fresh, 24@25c - other 14@23c; factory fine 20@22c.; poor to good 12@18c.

Receipts for week 18,174 pkgs.

Exports do. 2 785 do.

COMPARATIVE RECEIPTS AND EXPORTS.

	Receipts, pkgs.	Exports, firkins.
June 1, '80 to Mar. 1, '81........	1,182 381	249,911
" 1, '79 " " 1, '80........	1,215,431	265,544
" 1, '78 " " 1, '79........	1,180,047	2[illegible],924
" 1, '77 " " 1, '78........	1,010,077	143,721

CHEESE.—Demand is moderate only and there is a disposition to sell most grades promptly: but no radical change occurs in prices. Quotations

State factory, fancy, at 13@13½c. do. good and prime, 12@12½c.; do. fair, at 11@11½c.; do. half skimmed, 9½@10½c.; Wisconsin factory, fine, at 12¾@13c.; do. good to prime, 11½@12½c.; do. fair to good, 10½@11½c. Ohio factory, fine, 12½@12¾c.; do. good to prime, 11½@12c.; do. flat, fair to good, 10@11c.; do. poor to fair, 8@10c.

Receipts for week, 14 001 boxes.

Exports for week 29.160 boxes.

Liverpool cable, 68s.

Steam to Gt. Britain, 35s.@37s.6d.

Comparative receipts and exports for past four years.

	Receipts. Boxes.	Exports. Boxes.
June 1, '80, to March 1, '80..........	2,538 081	118,697,710
June 1, '79, to March 1, '80..........	2,253 615	101,701,164
June 1, '78, to March 1, '80............	2,8[illegible]3 0[illegible]8	1[illegible],22[illegible] [illegible]89
June 1, '76, to March 1, '80............	2,270,386	99,331,133

COTTON.—The market has a fair degree of activity and closed at. 1 r

March, 11.20@11.21c.; April, 11 24@11 25c; May, 11.35@11.36c.; June, 11.46@11.47c.; July, 11.55@11.56c.; August, 11.60@11.61c.; September, 11.04@11.06c.; October, 10 68@10 70c.; November, 10.50@10.13c.; December, 10.52@10,64c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary....	8⅛	8⅛	8⅛
Strict ordinary............	8⅝	8⅝	8⅝
Good ordinary.............	9⅝	9⅝	9⅝
Strict good do............	10⅛	10⅝	10⅝
Low middling............	10 13-16	11 1-16	11 1-16
Strict low middling......	11 3-16	11 7-16	11 7-16
Middling....................	11⅝	11⅝	11⅝
Good middling...........	12 1-16	13 5-16	12 5-16
Strict good middling....	12 7-16	12 5-16	12 9-16
Middling Fair............	12 15-16	13 3-16	13 3-16
Fair...	13 11-16	13 15 16	13 15-16

STAINED.

Good ordinary........ 7 13-16 | Low middling.. 9 11-16
Strict good ordinary. 8 13-16 | Middling.. ....10 13 16

Receipts for the week, 25,5[illegible]0 bales, Exports do. 11,000 do.

DRIED FRUITS.—There has been a quiet market throughout, without new features and prices generally steady. Quotations are for

Evaporated apples at 8½@9c. for the better qualities; sliced apples at 5@6½c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn. do; 4½@5c. for State do; 4½@5c. for western, Ohio and Mich. Peaches at 30c. for evaporated peeled; 14c. for unpeeled do.; N. C peeled at 20@23c.; for the better qualities, unpeeled peaches at do. for halves and 6@6½c. for quarters Plums at 15@16c. Blackberries at 7½c. Cherries at 17½c. Raspberries at 23@24c. whortleberries 10½@11c.

EGGS.—Receipts for week, 9,350 bbls.; do. last week 7,375 do. Lent opens with a fairly brisk demand; prices are at a good stock moving figure and it is important at this season to keep supplies going into use. Quality is excellent and this helps to keep trade steady. Quotations 20½@22c. the latter for nears.

FEED.—Sales at $20.50@21 for 40 to 60 lbs. $20.50@21 for 80 lbs; $21 for 100 lbs.

FLOUR.—There is considerable activity and a firm market. Shippers have taken this week 3,400 bbls. and fully 103,000 bags.

Latest prices are: $3,60@4,10 for very inferior to very choice superfine State and Western; $4.25@4 50 for poor to choice extra State and Western. odd lots and lines; $4.50@4 65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 35@5.25; good to choice do at $5.3@6.10, (very choice up to $6.25@6.50 and fancy at $6.50@6 75;) red and amber winter wheat. inferior to choice trade and family at $4.35@6: round hoop Ohio, $4.40@4 75; and trade and family brands of ... at $4.85@6.25, the latter for choice; St. Louis $4.60@5.50 for inferior to good extras: $5.50@6 35 for good to choice, and up to $6.75@7 for very fancy brands; Minn. clear, inferior to very fancy at $4 50@6: Minnesota "straight," poor to very choice, at $5 25@6.75, and patent inferior to fancy at $5 75@8.25; city mill extra at $5.50@5 60 for fair to choice for the West Indies; do. for England at $4.25@4.65 for poor to choice spring wheat; do. trade and family extras $5.65@5.75 do, for South America $5.65@6 00, the latter for very choice; No. 1 at $3 10@3.65 for very inferior to very fancy.

Receipts for week, flour, bbls. 114 510 corn meal, do. 675; wheat, bush. 344,000; corn, do 461,800; oats do. 261,200, rye, do 31,875; malt, do 35,490, barley, do. 70,125 beans, do., 15,000; rice, pkgs 1,775

Exports for week, flour, bbls. 77,600; corn meal, do. 1 150, wheat, bush 988,700; corn do. 457,500; oats, do. 2,475; beans, pkgs. 816; rice do 355.

CORN-MEAL.—Sales at $3@3.10 for Brandywine and $2.50@3 for yellow Western.

FRESH FRUITS.—Exports of apples for week, 13 550 bbls. Many of them are going abroad on interior owners' account. Here the market is dull, many lots are sweating badly and smallest orders are accepted by all dealers. Supplies are large and the season will prove a tough one for dealers. Mixed lots at station $1.25@1 75.

Baldwins and Russets $1 6½@1.87; Greenings, $1.25@1.50; choice sweets $2; sweet apples of fine size and color are gaining a good market abroad. Cranberries unchanged. The ears more here than can be used at the present rate of trade, and the outlook for remnants is blue. Cape Cod bbls, $4@7; N.J. crates 1,25@2.50. Florida oranges quiet at a range of $1.50@3.50 for poor to choice original packages Florida strawberries seasonably plenty and quoted at $1.25@1 50 per quart: hot-house do little better Peanuts quiet with a large supply. Va. hand-picked, 4½@4¾; other, 3½@4; shelled, 3½@3⅜. Hickory nuts per bush. 75@85 Pecans 7@8½c.

GRAIN.—Wheat has been in more active import demand, the shipments for the week reaching 1,124,000 bush.; and prices have ruled firm. Latest sales are of

Extra white at $1.19½: No. 1 white at $1 18½@1.19½. do. March at $1.18½@1.19½; do. April at $1.19@1.19½; do. May at $1.17½@1.18½; No. 2 white at $1 17½@1.18; ungraded white at $1.16@1 19½; mixed winter at $1.19½; No. 1 red at $1.20; No 2 red at $1.21½@1 23, do. March at $1 21@1.22½; do. April at $1.21½@1.23; do May at $1.20½ 1.22½; No 3 red at $1.14½@1.10; ungraded red at $1 14@1.21½; rejected spring at 97@97½

Rye at $1@1 01.

Corn is higher and active; shippers have taken this week 368,000 bush.; latest prices are for

New York No. 2 at 58@58½c, do. March at 58@58½c.

do April at 57¼@57¼, do May at 55¼@55¼. No. 2 old in st re at 5. No. 3 at 56⅞@57; ungraded mixed Western at 56@58¼; New York steamer mixed at 57¼@57¼. New York yellow at 58@58½; New York steamer yellow at 57¼@58; York No. 2 white at 65; yellow Southern at 55¼@58¼.

Oats have realized better prices and demand fair; latest prices are for

No. 1 white at 47½; New York No. 2 white at 46@46¼; No. 3 white at 44¼@44¼; N. Y. No. 2 at 44¼@44¼, do. March at 44¼@44¼, do. April at 44¼; do. May at 43¾. No. 3 at 43¼@43¾, ungraded white Western at 45@48¾, ungraded mixed Western at 43@44¼, white State at 47½@50. No. 2 Chicago at 44¼.

HAY AND STRAW.—Supplies are liberal but demand is good and prices are sustained. Quotations are for

Hay, prime timothy at $1.20@1.25 ℔ 100 lbs.; medium timothy at $1.10@1.15 do. shipping grades at $1@1.05 do.; clover mixed at $1.05@1.10, clover at $1@1.05. do. Straw—No. 1 rye at $1.20@1.25 ℔ 100 lbs.; No. 2 rye at 80@85c. do.; Oats and wheat at 80@85c. do.

HONEY—Market nominal at last rates.

HOPS.—Exports for the week 865 bales. Prices are generally steady, although demand is moderate. Quotations are for

	Cents per lb.
New Yorks, crop 1880, choice	22 @23
Do medium	19 @20
New Yorks, crop 1880, low to fair	15 @17
Eastern, crop 1880	16 @22
Wisconsin, crop 1880	16 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Bavarians	30 @35
Pacific coast, new	19 @23

POULTRY AND GAME.—The demand for dressed poultry is weakened by the observance of Lent: prices, however, are good for prime stock for special or unobstructed wants. Coarse tom turkeys slow of sale. Frozen case stock when in good order does as well as fresh.

Turkeys, choice small sizes, 16@17c.; poor to prime, 12@15c. Chickens, choice, 17@19c., other, 12@15c. Fowls, 11@13c. Capons, large, 21@22c.; small and slips, 18@20c. Ducks, fair to dry-picked 14@20c. Geese, extra, 13@14c; other, 9@11c. Squabs, white, $4.50@5 ℔ doz. do dark, $2.25@2.50. The outside rates are for Philadelphia and other established near point marks of poultry.

Live fowls are bringing good prices. Ducks and geese scarce and higher. Some selected coops of Western gray exceed $2.25.

Fowls, 12@14c.; roosters, 7@9c.; turkeys, 11@14c; ducks, choice, 87c.@$1.12; other, 60@75c.; geese, choice, $2@2.25; other $1.25@1.87; pigeons, 35@40c.

Wild pigeons are quoted at the strong rate of $1.75@2.00 ℔ doz. Wild ducks are not averaging fine; Western not wanted. Canvas-back ducks, Southern, $1.50@1.75 ℔ pair, red-heads, 75c.@$1; mallard, 40@60c.; teal and widgeons, 30@40c.; common do, 20@30c.

PROVISIONS.—Hog products have been variable in price and quieter.

Mess pork quoted at $15 for old and $16 for new. Bacon at 8⅜ for long clear and 8 7-16 for short clear. Beef hams at $22@23. Beef at $9 for plain mess and $10 for extra mess. Lard—Western steam at 10.4 for spot lots; 10.45@10.47½ for March and April; 10.50 for May and 10.52½@10.55 for June. Stearine at 10⅜ for choice. Tallow at 6⅝ for prime.

Receipts for week beef, bbls and tcs. 460 pork, 2,500 bbls. cut-meats, 33,300 pkgs, lard 21,021 pkgs.

Exports for week, beef, bbls and tcs., 3,625. pork, 5,325 bbls.; cut-meats, 15,504,400 lbs.; lard, 6,345,600.

VEGETABLES.—Exports for the week, 720 bbls. potatoes. Potatoes are quiet and outside rates not general. Bermuda second crops $5@6 ℔ bbl.

E. Rose, Eastern d.-h. $2.50, do. State, $2.12@2.25; do in bulk $1.87@2.12. Prolific, $2.00@2.25; Mercer, 1.75@2.00; Burbank $1.87@2.00; do. d.-h. $2.12@2.25; Peachblow $2.50; Snowflake, $2.50; Snowflake, bulk, $2@2.25; Peerless $1.75@1.87; do. d.-h. $1.87@2. A few new Southern items have appeared, but the weather here is against sales of specialties as yet. A few bunches of Chas. asparagus brought $1; West India tomatoes, 4½c@$1 ℔ box. Baltimore spinach, ℔ bbl $2.25@2.75; white and Russia turnips, 60@75c.; beets, 75c.@$1.; Hubbard squash, $1@1.25; marrow do. 50c.; currants, $1@1.25 onions, white, 16@6.0 other, $3@3.25, cabbage, $4@8 ℔ 100, celery, $1@1.50 ℔ doz.

SEED.—Clover has a moderate demand, quoted at 8@9¼c. Timothy is without business and there is no fixed price.

TOBACCO.—Export demand is moderate, but home trade very good and prices generally firm.

WOOL—Demand has been a little better this week; prices steady. Quotations are for

Ohio, Penn. and W. Va. washed fleeces, XXX and picklock, 45@48c; X. and XX 44@46c.; No. 1, 48@50c.; No. 2, 42@44c.; common, 38@40c.

N. Y. State, Mich., Wis. and Ind. washed fleece, X and above, 41@43c.; No. 1, 46@4?c.; No. 2 and common 37@42c.

Ill., Iowa and Mo. washed fleece, X and above, 38@40; No. 1, 44@46; No. 2 and common, 36@40.

Tub-washed—Superior: 49@50; average, 45@47.

Combing wool—Medium, washed, 50@55; do. low, 43@46; Canada, 45@46; Ky., unwashed, 30@37.

LIVE STOCK MARKETS.

NEW YORK, Saturday, March 5, 1880.

BEEVES.—Receipts for the week 13,407 head; do. last week, 11,441 do. It has been a sober sort of a week in the trade. Lent is here and butchers shape purchases accordingly. Colorado cattle sold at 9c. to dress 55 lbs. Fat bulls 4¼@5c. live weight; native steers ranged at 8½@11c. to dress 55@57 lbs.

COWS AND CALVES. Market very dull even with a light offering. Nominal range $30@55.

VEAL CALVES.—Prime calves are in good demand and uniform are firm, common stock neglected.

Live calves, common, 8¾c.; fair to prime 7@8¼; poor, 6@7c.; Milch Holy 6@8¾c.; buttermilk, 5@6c.; grassers, 3c.; dressed prime to choice 11@11½c.; poor to good, 7@10½c.; very poor, 5½c.

SHEEP AND LAMBS.—Receipts for week, 26,678 head; do. last week, 25,755 do. Sheep have brought good figures. Common to prime sheep, 5½@7c.; lambs, yearlings 7@7½c. Spring lambs, ℔ head, $4@8.

SWINE.—Receipts for the week, 31,741 head; do. last week, 28,123 do. Market firm for prime corn hogs and poor for soft do. The latter abound, to the discomfiture of the general market.

Live corn hogs, $5.50@6 ℔ 100 lbs.; soft hogs 4¾@5c. ℔ lb.; country dressed pork, light, 8¾@8½c.; medium, 7¾@8c.; heavy, 7½c.; city dressed Western 7½c. Pork tenderloins, 13c.

GENERAL ADVERTISING RATES OF THE RURAL NEW-YORKER.

Inside (Agate space)	40c. per line.
" 13th page	50 "
Outside or last page	60 "

Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct.; 13 ins., 15 per ct.; 36 ins., 20 per ct.; 52 ins., 25 per ct.

☞ No advertisement inserted for less than $2.

FARM IMPLEMENTS & SEEDS.
Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above. Address 189 & 191 Water St.

BERRIES For all CUTHBERT or SHARPLESS Free. 100 kinds. For circulars with *Points* and *Prices*, address E. B. UNDERHILL, POUGHKEEPSIE, N. Y.

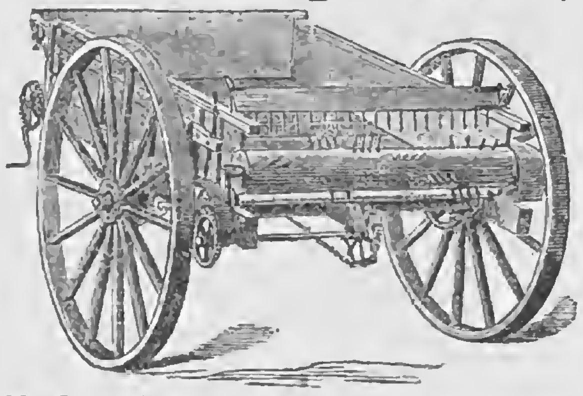
BOOKWALTER ENGINE.

Compact, substantial, economical and easily managed.
Guaranteed to work well and give full power claimed.
Engine and boiler complete including governor, feed pump, drive-pulley, etc., etc. at the low price of

3 Horse power	$240
4½ "	280
6½ "	370
8½ "	450

JAS. LEFFEL & CO., Springfield, O,

KEMP'S Manure Spreader,



Pulverizer and Cart Combined
Will spread evenly all kinds of Manure found on the farm, from the coarsest to the finest, including Lime, Ashes, Muck, Marl, Cotton-seed and other like fertilizers, in any desired quantity per acre, wet or dry, without manual labor, in ONE-TENTH THE TIME done by hand, and in a manner that no intelligent farmer will doubt the fact that he must realize
25 to 40 Per Cent. More Benefit
than by pitching it out the ordinary uneven way. Hence the chief merits lie in QUALITY OF WORK.
AGENTS WANTED. Send for Circulars.
Manufactured by the KEMP & BURPEE MANUFACTURING CO., owners and manufacturers for the United States, except New England, and the N. E. RICHARDSON MANUFACTURING CO., Worcester, Mass.
KEMP & BURPEE M'F'G CO., SYRACUSE, N. Y.

EGGS FOR HATCHING
From all the varieties of Poultry—Brahmas, Cochins, Hamburgs, Polish, Leghorns, Plymouth Rocks, Langshans; Roan Cayuga and Pekin Ducks. Our Plymouth Rocks and Pekins have never been beaten. Eggs carefully packed, from our prize birds, $1.50 per 13; two or more settings at $1 per 13.
SMITH & BRO., STONY BROOK, N. Y.

STRAWBERRIES.
The New and the Choicest.
I will send this whole collection of 132 plants by mail for $4.00; by express for $3.00. See my free catalogue for special offers on New Grapes, Fruits and Flowers for the Family, &c. Strawberry Culture for a 1-cent stamp. 12 Kirkwood or Mt. Vernon, $1; 12 Longfellow, 50c.; 12 Warren, 50c.; 12 Marvin, 50.; 12 Brilliant, 50c.; 12 Glendale 50c.; 12 Sharpless, 25c.; 12 Cum. Triumph, 25c.; 12 Duchess, 25c.; 12 C. Downing, 25c.; and 2 of the **Bidwell**, 25c. Order early.
GEO. S. WALES, Rochester, N. Y.

STOCKBRIDGE MANURES
SEND FOR PAMPHLET.
These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us
BOWKER FERTILIZER CO.
BOSTON & NEW YORK.

MANGEL, CARROT AND TURNIP SEED.
Yellow Globe, Giant Red, etc., 40c per lb. Ask for Catalogue. Stamp required for Sample Packet of Vegetable or Flower Seed.
TUISCO GREINER, NAPLES, N. Y.

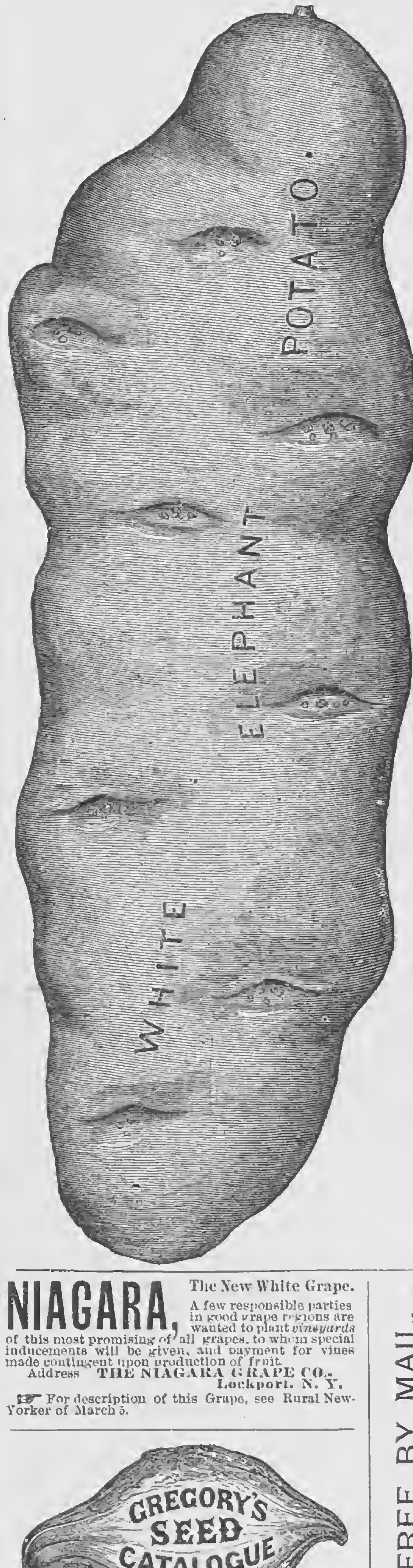
THE BELCHER & TAYLOR AG'L TOOL CO.

Manufacture this Plow of the *best Car Wheel Iron*; also of *Patent Hard Metal.* The handles vibrating from one side to the other as the plow is turned at the end of the furrow, enables the plowman to walk squarely behind the plow—a feature not possessed by any other Side-Hill Plow. It does as good work as any Land-Side Plow. For further particulars and prices send for our new *Illustrated Catalogue.* Address
GEO. S. TAYLOR, Agent, Chicopee Falls, Mass.

BUFFALO PITTS THRESHING MACHINERY
Vibrating Threshers
Endless Apron Threshers
Horse Powers
Mounted or Down.
Farm Engines
Plain or Traction.
The reputation that our
BUFFALO PITTS APRON THRESHER
has sustained for over 30 years as the
KING OF THRESHERS
is a GUARANTEE that our new Vibrating Thresher and Threshing Engine will be
Better than any others in the market.
THE PITTS AGRICULTURAL WORKS, Buffalo, N. Y.
Catalogues sent free on application

SHORTHAND Writing *thoroughly taught* by mail or personally. Situations procured for pupils when competent. Send for circular. W. G. CHAFFEE, Oswego, N. Y.

J. M. THORBURN & CO.,
No. 15 John Street, New York,
NOW OFFER:



"THE WHITE ELEPHANT POTATO."

This superb late variety was produced from a seed ball of the "Garnet Chili," fertilized with pollen from the "White Peachblow." Without hesitation we pronounce it as combining the best qualities of the foregoing varieties, viz: *wonderful productiveness, excellent quality and flavor, power of resisting disease, and great beauty*, not to mention the fact of its being proof against decay until far into Spring. These qualities alone would recommend it not only for field culture, but also for the private garden. From its origin it may be called a twin-brother of the "Beauty of Hebron," which it resembles in many respects, possessing many of those qualities which have rendered this latter variety so justly popular. Last season the originator planted one bushel of sixty pounds of "THE WHITE ELEPHANT," on one-eighth of an acre of ordinary soil, and therefrom harvested no fewer than fifty-seven bushels. The tubers, notwithstanding their great size, are **always solid**, and, growing closely together in the hills, the labor of digging is comparatively slight. The vines are very stout and vigorous, and have thus far resisted all manner of blight, turning yellow only at the proper season, and the potatoes ripening along with the "Late Rose." We claim that "THE WHITE ELEPHANT" not only possesses the unexcelled qualities of the "Beauty of Hebron, but also the wonderful productiveness of the old "California" of twenty years ago.

Price; ℔ barrel, $15, ℔ bushel, $6.50, ℔ ½ bushel, $4.50, ℔ peck $3, ℔ ½ peck $2, or one pound by mail for $1.

ALSO

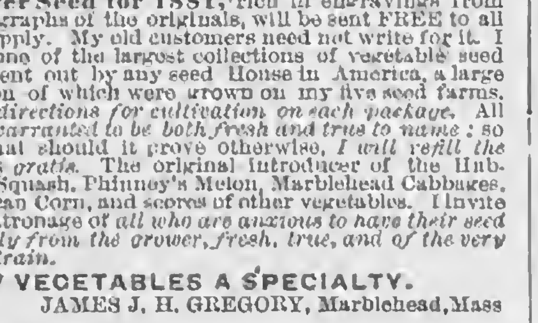
"PERFECT GEM SQUASH."

The Squashes are from four to six inches in diameter, flattened, of a creamy white color, slightly ribbed, and have a thin, smooth skin. The flesh is fine-grained, and when cooked is dry, very sweet, and has a delicious flavor entirely free from that strong taste common to all of the Winter Squashes. It is remarkable for its keeping qualities; in a dry, cool room, free from frost, they may be kept until Spring. In short, it is justly entitled to the name given it, being equal to the best Bush or Marrow Squash for Summer use, better than any other for Winter, a good keeper, very productive, a free grower, and worthy a place in every Kitchen Garden.

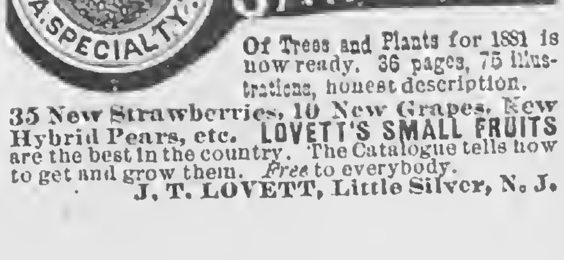
Per lb. $6, ½ lb. $4, ¼ lb. $2.50, per oz. 75c., per packet, 25c.

Descriptive Priced Catalogues of Vegetable, Flower and Field Seeds free to applicants.

NIAGARA, The New White Grape.
A few responsible parties in good grape regions are wanted to plant *vineyards* of this most promising of all grapes, to whom special inducements will be given, and payment for vines made contingent upon production of fruit.
Address THE NIAGARA GRAPE CO., Lockport, N. Y.
☞ For description of this Grape, see Rural New-Yorker of March 5.

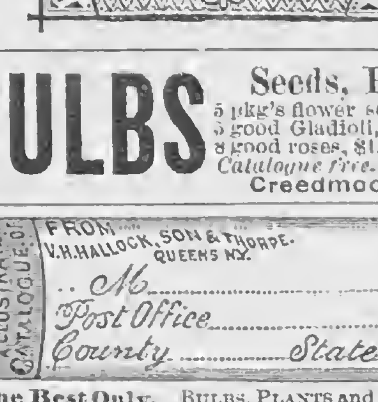


My Annual Catalogue of Vegetable and Flower Seed for 1881, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed House in America, a large portion of which were grown on my five seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name*; so far that should it prove otherwise, *I will refill the orders gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*
NEW VEGETABLES A SPECIALTY.
JAMES J. H. GREGORY, Marblehead, Mass



Of Trees and Plants for 1881 is now ready. 36 pages, 75 illustrations, honest description.
35 New Strawberries, 10 New Grapes, New Hybrid Pears, etc. LOVETT'S SMALL FRUITS are the best in the country. The Catalogue tells how to get and grow them. *Free* to everybody.
J. T. LOVETT, Little Silver, N. J.

FREE BY MAIL.



SEND FOR IT.

BULBS Seeds, Plants,
5 pkg's flower seeds......10c.
5 good Gladioli............10c.
8 good roses, $1. *Try them.*
Catalogue free. H. HALLOCK, Creedmoor, N. Y.

The Best Only. BULBS, PLANTS and select FLOWER SEEDS. Nearly **100** new varieties, NEVER before offered at retail. **Send for our Catalogue. 30** acres of Flowers. **84** Premiums in one year.
V. H. HALLOCK, SON & THORPE, QUEENS, N. Y.

OATS RUSSIAN WHITE.
Best in cultivation. 100 bushels an acre. Rust-proof and hardy. 1 lb., mail, postpaid, 50c.; 3 lb., mail, postpaid, $1.00; ½ bush. by freight or express, $1.50; 1 bush. by freight or express, $2.50. New bags, 25c. each, extra.
Address, **D. M. FERRY & CO., Detroit, Mich.**

RAISIN GRAPE VINES
By mail, BEST, 35c. each; 3 for $1. Cuttings, warranted to grow, 10c. each. W. A. SANDERS
Sanders, Fresno Co., California.

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 14

HENRY STEWART.

How Plants Feed.

PLANTS do not feed *on* the soil. They are supported by the soil and their roots spread in it and take a firm hold upon it. They find their food *in* the soil, and search very actively for it. The roots are provided with a very large number of organs called root hairs, each of which is a feeder for the plant and imbibes whatever liquid food it may find in the soil. This food is dissolved from the soil by the water which is held between the small particles in the manner previously explained.

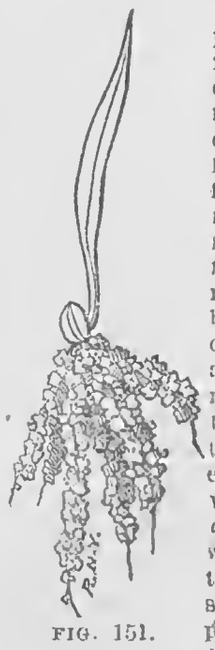


FIG. 151.

When a plant has become provided with roots it is able to find its own food, and this it does by pushing out into the soil from the roots a great number of very fine fibers called root hairs. If a young wheat plant is carefully lifted from the soft moist soil it will appear as shown at fig. 151. A quantity of fine soil will adhere to the root fibers which cannot easily be shaken off. If the root is carefully washed with water it appears to be made up of a number of fine, white fibers. If we look at it more closely through a magnifying glass, each fiber will be seen covered with short hairs, as shown at *a*, fig. 152. It is these hairs which take such firm hold upon the soil for they force themselves between the smallest particles of it and are only freed from these by careful washing to avoid breaking them, and then many are broken off in spite of the care, because of their fineness.

These hairs are the feeding mouths of the plant. As they force themselves into the soil they continually suck the moisture from between the small particles, which would be dust if they were perfectly dry, and pump it up through the roots into the stem, from which it goes into the leaves. If a small piece of a root fiber should be still more closely observed under a good microscope it appears to be made up of a number of cells as show at *b*, figure 152, and from some of these cells the root hairs would be seen to proceed.

The cells differ in shape. Some are round and some are oval, but when they are pressed together as they increase in size they become flat-sided, or six sided, and longer or shorter as the case may be The walls of the root hairs and the cells consist of a very thin membrane without any openings that are visible under the most powerful microscope, and yet the atom of food substances in the soil, which are also too small to be seen, can pass through these walls of the cells, and entirely through the plant. In these little cells there is always going on a work which requires for its execution a vast amount of force. This force is often seen in operation in the most wonderful manner, as when a growing tree forces a heavy stone wall from its place or raises, by its roots, a heavy pavement, and this force which is greater than any man could exert, is the work of these little cells which seem so weak and fragile that a breath could destroy them.

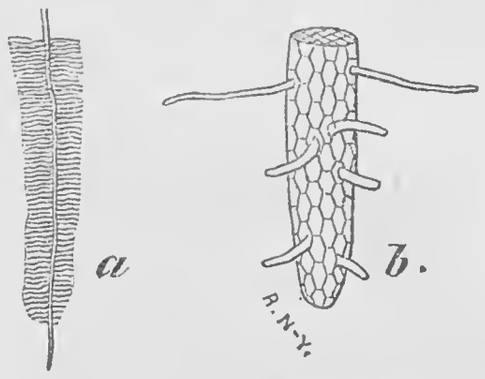


FIG. 152.

The food absorbed by the plant from the soil passes into the cells and from one to another by a very curious process known as osmose. This is the passage of liquids of different kinds through vegetable or animal membranes. It is more easily described as follows, than explained. If a wineglass is filled with pure water, and a piece of bladder is tied very tightly over the mouth of the glass, and this glass is then inverted in a bowl of salt or sugared water, the pure water in the glass, and the salt or sweet water from the bowl, pass and repass through the bladder until the water in the glass is as salt or sweet as that in the bowl. Sometimes one substance would pass entirely from the glass into the bowl, and another from the bowl into the glass, thus changing places. This operation is going on continually in plants and in animals; the plant food in the soil, thus absorbed by the roots passes through many millions of cells and membranes before it reaches the leaves; and the food of an animal dissolved in the stomach passes through the walls of the intestines into the blood vessels by the same process, so the blood is purified in the lungs and the muscles are built up from the blood in the same way. Indeed, the similarity between a plant and an animal goes much further, for the food of the plant, forming the sap, goes to the leaves, where it is acted upon by the air, is digested, and fitted to build up more cells by depositing the matter dissolved in it in the parts of the plant where new tissue is needed. Thus the plant grows from day to day.

A WORD TO THE COUSINS.

PERHAPS some of the RURAL cousins think it is not quite right that their letters do not appear in print, but let me explain. Our space is quite limited, hence we can insert only a part of the many letters we receive, and, as it is our motto to give only the best of everything to our readers, of course we must follow the rule here. It would please me greatly to gratify all my young correspondents, but I think they will admit that the best letters should have the preference. But I would not have them discouraged if a letter, now and then, finds its way to the waste basket. "Try, try again," is a good motto and it applies well here.

Now as Spring is coming on, I want all the cousins to see how well they can do with the seeds which we shall send them. Any questions which any one may ask, we will endeavor to answer. If there is anything the cousins wish to ask about gardening or floriculture, farming or fruit-raising, I shall be glad to aid them as best I can, and in this way we shall derive much benefit from our correspondence. [U. M.]

The Puzzler.

TENNYSONIAN ENIGMA.

"To their 17, 4, 21, 2, 19 under the hill."
"To love once and 10, 30, 23, 13, 21, 6, 11."
"The bounds of 29, 11, 6, , 15, 9, 24 wider yet."
"Two little 1, 28, 14, 26, 7 that meet."
"He turned and 5, 12, 7, 7, 31, 15 her where she stood,"
"And 20, 8, 13, 26 loved the queen."
"Sainted Juliet, dearest 10, 25, 3, 27:"
"A legend of good 16, 18, 3, 22 19."

The whole is a line from Elaine which contains much truth.

☞ Answer in two weeks.

HIDDEN TITLES FOR MALES.

1. I had a set of pearls.
2. I'd call "or" disjunctive conjunction.
3. Yes, I realize it sadly.
4. They have no bar on the boat.
5. Ico, untie my shoe.
6. The Hindu kept silent.
7. I met Kyp K. in Cecil Co.
8. V is counted as five.
9. What a dark night.
10. "From Arqui," said the card.
11. This quire of paper will do.

☞ Answer in two weeks. LITTLE ONE.

PUZZLER ANSWERS—Feb. 19.

HIDDEN FISHES.—1. Sword-fish. 2. Sheepshead. 3. Bull-pout. 4. Periwinkle. 5. Nautilus. 6 Pollock. 7. White-fish. 8. Devil-fish. 9. Bream. 10. Spawner. 11. Squill. 12. Star-fish. 13. Sucker. 14. Tautog. 15. Testerceau. 16. Thrasher. 17. Torpedo. 18. Dace. 19. Narwhal.

QUADRUPLE CROSSWORD ENIGMA.—Kent, Cass, Lake Leon.

WORD SQUARE.—

D A M E
A C E R
M E A N
E R N E

CHARADE.—Jar—Ring (Jarring).

Rheumatism comes from inactive kidneys. Hop Bitters never fail to cure it.

Stock and Poultry.

40 Clydesdale Stallions

AND MARES—Mostly Imported.

60 Hambletonian Stallions,

AND MARES OF THE FINEST BREEDING.

Largest Herd of

HOLSTEIN CATTLE.

With largest milk records in America.

Separate Catalogues of each class of stock with milk record of cows. Denote which is wanted.
☞ Correspondence solicited.

SMITHS & POWELL,
Lakeside Stock Farm,
SYRACUSE, N. Y.

POWELL BRO'S,
Springboro, Crawford County, Pa.
THE MOST EXTENSIVE IMPORTERS OF
CLYDESDALES
IN AMERICA.

One importation for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow,

Largest and Finest Collection ever seen on the American Continent.

ALSO,

HAMBLETONIANS,

And other strains of trotting Stock.

HOLSTEIN & DEVON CATTLE.

Catalogues sent free. Address as above, and mention the RURAL.

200 KENTUCKY MULES.

All grades and sizes, constantly on hand, for sale low. E. B. BISHOP'S SONS,
630 Grand St., Jersey City, N. J.

PLYMOUTH ROCK EGGS.

GILMAN'S STRAIN.

Raised on farm with unlimited range. Pure blood. Beautiful plumage, distinctly barred feathers, large size—8 to 11 pounds. A strain possessing excellent laying qualities, with hardy constitution and early maturity. 13 eggs, securely packed, by express, $1.50. W. C. HART, Rural Poultry Yards, Walden, N. Y.

Trees, Seeds, Plants, &c.

THE COMING STRAWBERRY
BIDWELL.
The Genuine *Headquarter Stock.* Having secured from the originator all of his stock and also from Mr. T. T. Lyon, Pres't Mich. Pom. Society, and disseminator of the Bidwell, all the stock owned and controlled by him, I am able to supply this most promising of the new strawberries in limited quantities. The First Premium was awarded to the Bidwell as the "Best New Variety and Plant," by the N. Y Hort. Society in 1880. Also a superb stock of the celebrated.

CUTHBERT RASPBERRY.

An exceedingly liberal offer of these two fine fruits, with my book "Success with Small Fruits." Descriptive Catalogue free Address

E. P. ROE,
Cornwall-on-Hudson, N. Y.

GET YOUR VINES AND BERRY PLANTS OF
E. & J. C. WILLIAMS,
☞ Catalogues Free. Montclair, N. J.

FOR 30 CTS. I WILL SEND

A package each of VERBENA BLOTCHED PETUNIA, DOUBLE PINK and Sugar Trough GOURD SEED. Also my ILLUSTRATED SELF-SUPPORTING
Truss Fence Plan.
Flowers the choicest. Gourds hold from 3 to 10 gallons each. Fence portable, and 30 cents a rod cheaper than post and board. Thirty cents pays for all. Address WALDO F. BROWN, Box 70, Oxford, O.

Will be mailed FREE to all applicants, and to customers without ordering it. It contains five colored plates, 600 engravings, about 200 pages, and full descriptions, prices and directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address,
D. M. FERRY & CO., Detroit, Mich.

JOHN SAUL'S
CATALOGUE OF
New, Rare and Beautiful Plants,
Will be ready February 1st, with a Colored Plate. It is full in really Good and Beautiful Plants. Nepenthes, New Dracænas, New Crotons, New Pelargoniums, New Roses, Geraniums, Fuchsias, etc., with a rich collection of Fine Foliage and other Greenhouse and Hot-House Plants, well grown and at Low Prices. FREE TO ALL OUR CUSTOMERS; to others, 10 cts.; or a plain copy free. Catalogues Seeds, Roses, Orchids, Fruits, etc., free. JOHN SAUL, Washington, D. C.

BLOOMINGTON NURSERY.

Established 1852. 13 Greenhouses. 600 Acres. New Spring Wholesale and Plant Catalogue, FREE.
BAIRD & TUTTLE, Agents, Bloomington, Ill.

WANTED---A MANAGER

For a Model Dairy Farm, worked on strictly business principles. A thoroughly practical, but EDUCATED, Farmer required. This is an excellent opportunity for an accomplished farmer who understands his business in every detail and can instruct a few young men in it if necessary. Apply with references, which must be first class, to MODEL DAIRY, Office of RURAL NEW-YORKER 34 Park Row, N.Y. City

GARDEN AND FARM SEEDS.

SEND FOR ... W CATALOGUE.
VANDERBILT BR... 23 FULTON ST., N. Y.

HOVEY & CO. BOSTON

SEND THEIR NEW CATALOGUES OF
SELECT SEEDS
NEW AND CHOICE PLANTS,
For 1881 FREE to all who apply.
HOVEY & CO., 16 So. Market St., Boston, Mass

30 Acres **BIG BERRIES** Currants, Grapes, Trees, Asparagus, etc.; 100 *best sorts.* Plants by mail or express. See our prices before buying. Catalogue free. HALE Bros., S. Glastonbury, Ct.

VICK'S ILLUSTRATED FLORAL GUIDE. 1881.

Is an Elegant Book, of 100 Pages, One Colored Flower Plate and 500 ILLUSTRATIONS, with Descriptions of the BEST FLOWERS, VEGETABLES, and Directions for growing. Sent free, by mail, for 10 cents. In English or German.

VICK'S SEEDS are the best in the world. The FLORAL GUIDE will tell how to get and grow them.

VICK'S ILLUSTRATED MONTHLY MAGAZINE—32 Pages, a Colored Plate in every number and many fine Engravings. Price $1.25 a year; Five Copies for $5.00. Specimen Numbers sent for 10 cents; 3 trial copies for 25 cents. Address,
JAMES VICK, Rochester, N. Y.

Rectangular & Square **BOX CHURNS**
Cheapest and Best.—No inside fixtures, and *always reliable.* Six sizes of each kind made. Three sizes of the Lever Butter Worker made. Best material used, and every Churn and Butter Worker warranted exactly as represented. One Churn at wholesale where we have no agent. Send postal for Circulars.
CORNISH & CURTIS, Fort Atkinson, Wis.

SEEDS
Our large *Illustrated Catalogue* of everything for Farm and Garden **mailed free to all.** ☞ Send for it at once. It costs nothing; may save you a great deal.
BENSON, MAULE & CO. 223 Church Street, Philadelphia, Pa.

10 NICE CONCORD GRAPE-VINES for $1, by mail post-paid. *Think of it!* Order now for early Spring shipment. *Circulars free.* **Wm. B. Reed, Chambersburg Nurseries, Chambersburg, Pa.** Mention this paper.

Trees, Seeds, Plants, &c.

BEST VARIETIES
Grape Vines, Strawberry, Raspberry, Blackberry, Currant and Gooseberry Plants.
Also the Largest Establishment in the world for Thorough-bred Poultry. ☞ Send for catalogues.
GEO. S. JOSSELYN.
Fredonia, N. Y.

Established 1863.
DUTCHESS NURSERIES.
Small Fruit Plants a Specialty.
DUTCHESS SEED STORES.
None but Tested Seeds sent out.
Combined catalogues free upon application.
W. L. FERRIS, JR., Poughkeepsie, N. Y.
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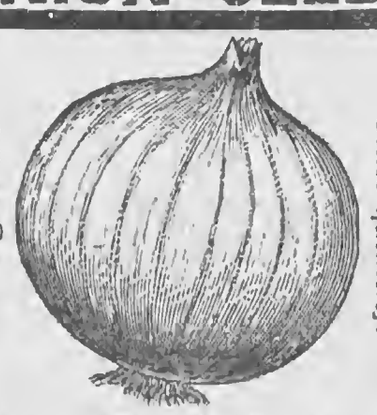

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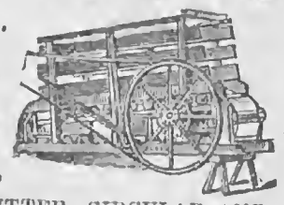

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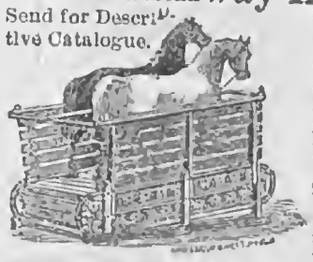

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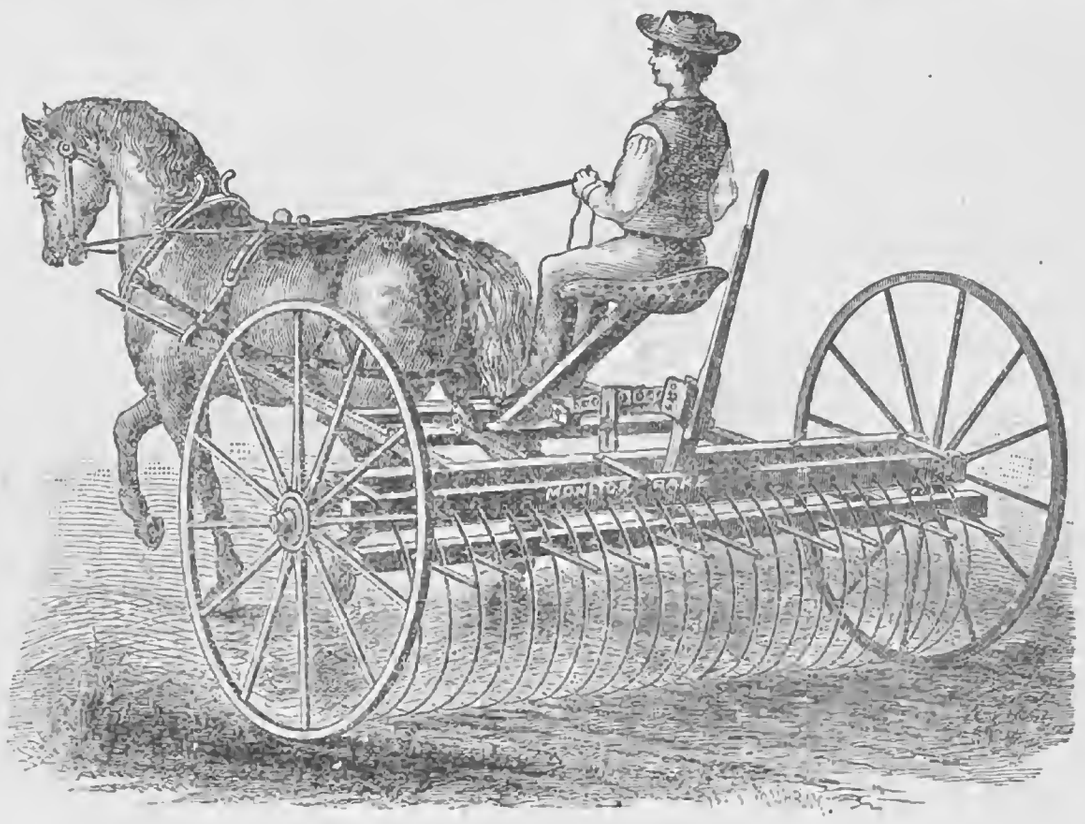

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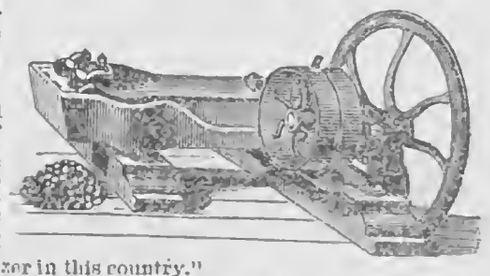

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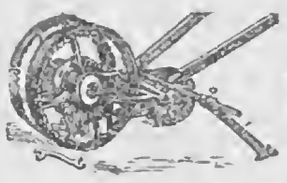

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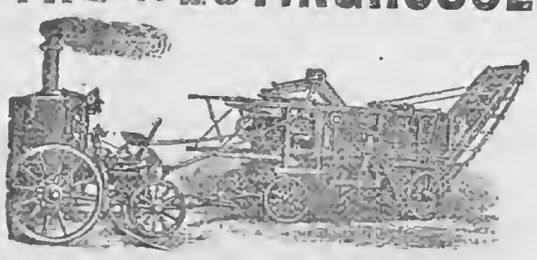

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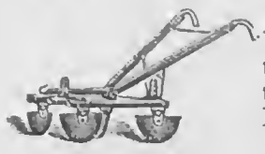

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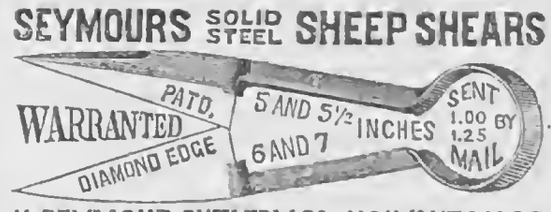

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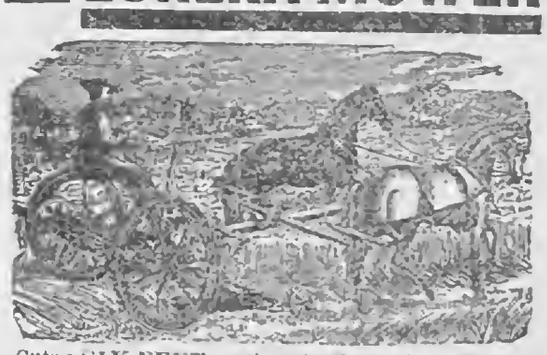

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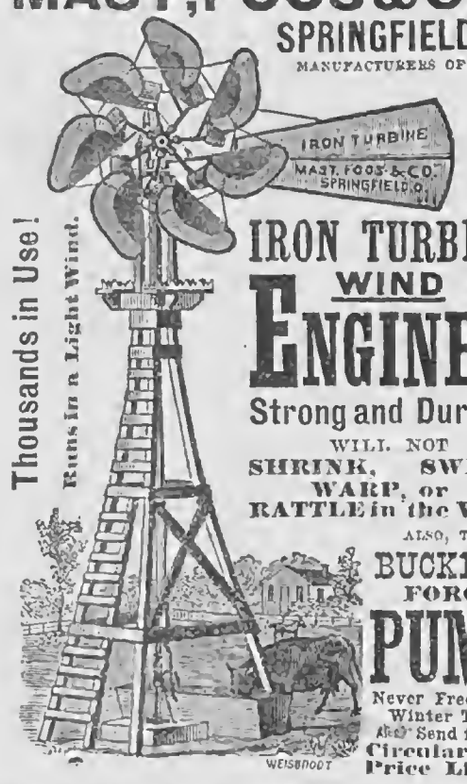

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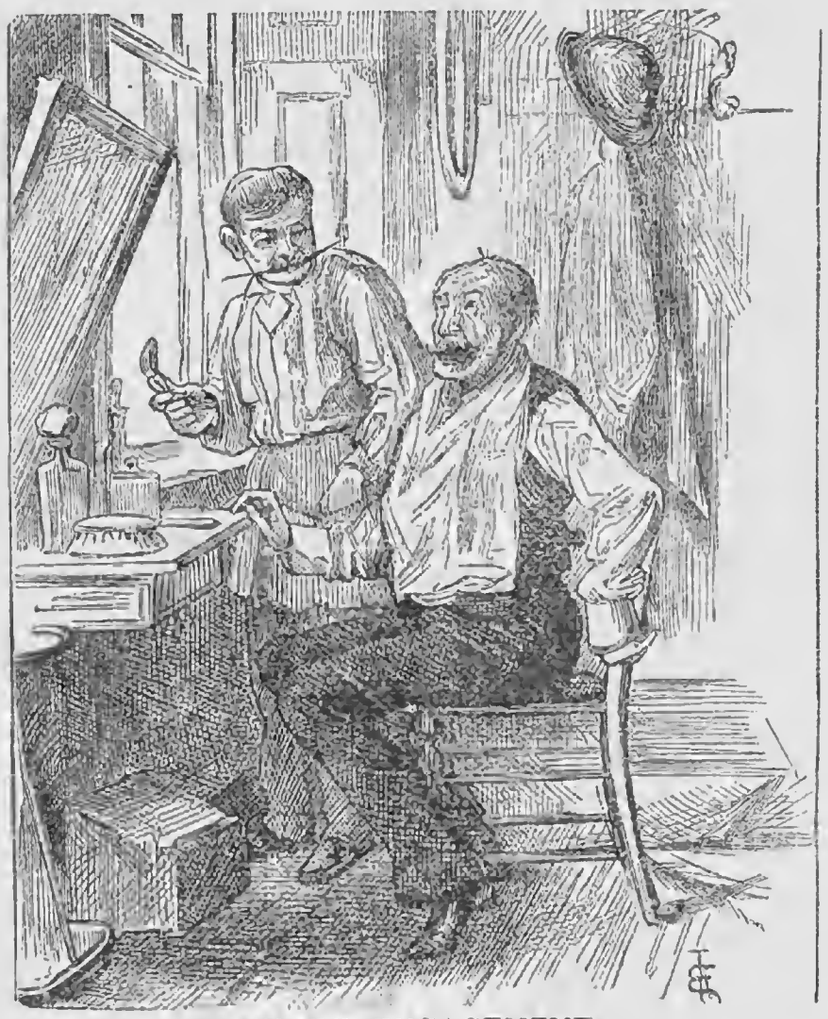

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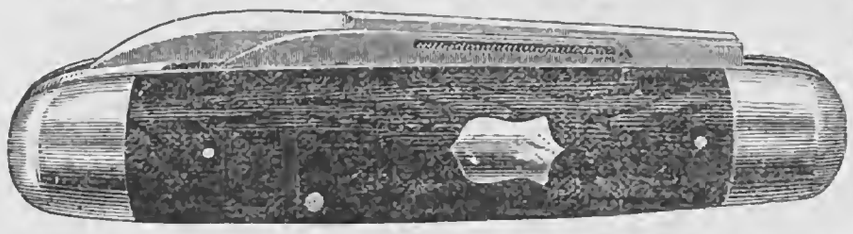

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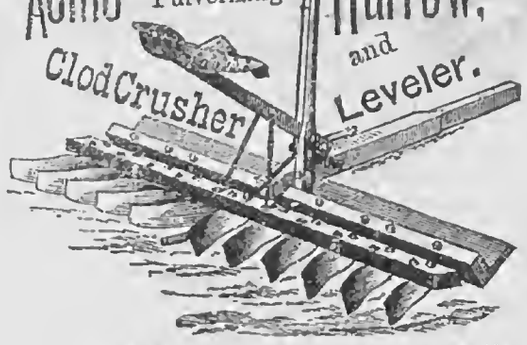

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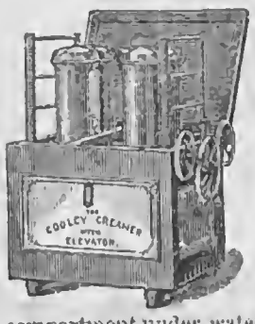

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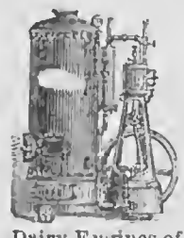

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL. No. 12. WHOLE No. 1625. NEW YORK, MARCH 19, 1881. PRICE FIVE CENTS, $2.00 PER YEAR.

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The Herdsman.

OUR ANIMAL PORTRAITS.

Jersey Bull Car Boy, 3351.

During the last decade it is very doubtful whether any breed of cattle have gained so much in popular favor and been so widely disseminated as the Jerseys. The richness of the cows' milk and the superiority of their butter have made them favorites alike with those who keep a single cow apiece to supply their own families with milk and butter, and with dairymen who are ambitious of obtaining top prices for gilt-edged butter from a select circle of customers who are willing to pay extra-high prices for an extra-fine product. Although there have been occasional importations of cattle from the Channel Islands for half a century or more, still, until a comparatively recent date, the herds of Alderneys, as they were then commonly miscalled, were confined mainly to the New England and a few of the eastern Middle States; and it is only within the last dozen years or so, that they have been largely introduced into the West and South. In view of the mild nature of the climate of their original home, in which the rigors of Winter common in the Northern States are unknown, the South should be especially congenial to animals of this breed, and we are glad, therefore, to notice that they are being widely disseminated from the Potomac and the Ohio to the Rio Grande and the Gulf. One of the choicest herds is that owned by Mr. John L. Hopkins, of Atlanta, Ga., known as the Edgewood herd, at the head of which is Car Boy, 3,351, the subject of the accompanying engraving.

While, as far as personal indications are concerned, more reliance can be placed on the appearance of the cow than on that of the bull, yet, since in establishing a herd, the bull is of vastly more importance than any single cow, even greater care should be taken in selecting him, the decision resting less on his own appearance and points—although these should have due weight—than on the character of his dam and both his granddams, for the cardinal principle of judicious breeding is that "like begets like or the likeness of some ancestor." In these points Car Boy should satisfy the most critical judgment. He was born on August 28, 1878, and imported in his dam, Queen Bess, of St. Brelades, 7,462. She is an excellent type of a Jersey cow and a prize winner both in the Island of Jersey and at the St. Louis Fair of 1878. His sire was Neptune 1st, a prize bull, and considered one of the best in the Island of Jersey. Neptune's dam, Mermaid, was a remarkably handsome cow, a deep milker and a prize winner. Car Boy is of a solid dark fawn color, with an amber stripe along the back, an exceedingly rich, yellowish skin, waxy horns and a highly promising escutcheon. As will be readily seen from the engraving, he is a very stylish, symmetrical and handsome animal. In 1879 he took the first premium, at Springfield, as a one-year-old, and last October he bore away the first premium as a two-year-old, and also the sweepstakes as the best bull of any age, at the fair of the Georgia Stock and Fair Association.

NOTES BY A STOCKMAN.

THE wise man remarked that he found three things that were too wonderful for him. Had he lived until to-day he would have found another he might have added to his list, "the way of a speculator in stock." Surely the ways of Wall Street have infected the stock business, and the shearing and fleecing processes of the railroad and mine gamblers have been adopted by the live stock speculator. I have often referred to the fuss made about "the coming sheep," and have tried to warn persons who have no money they can afford to lose, against being deluded by it. And now comes the last act of the little farce. As I prognosticated, these "coming sheep" have arrived, and an announcement is made that 44 head of newly imported Hampshire Downs, are to be sold at public sale. The "boom" is first made by outrageous puffing and by a process of "hippodroming" and prize taking, and then comes around the speculator to "rake the pot."

THESE splendid sheep—I admit they are magnificent, but they are fancy animals, breeders' and speculators', and not farmers' stock—will all wilt and die off miserably and in three years from now will be no more; but more victims will be forthcoming as long as there are greenhorns to fill the purse of the veteran importer.

FORTY-FOUR of "the coming sheep," recently imported, sold at Philadelphia for $2,500. This will hardly pay such a profit as will induce many importations, at least of high-class sheep. If this is all the "boom" that can be raised it will only pay to bring common animals, "ornery critters," in fact; and this is an additional reason why Americans should keep aloof from this sort of business.

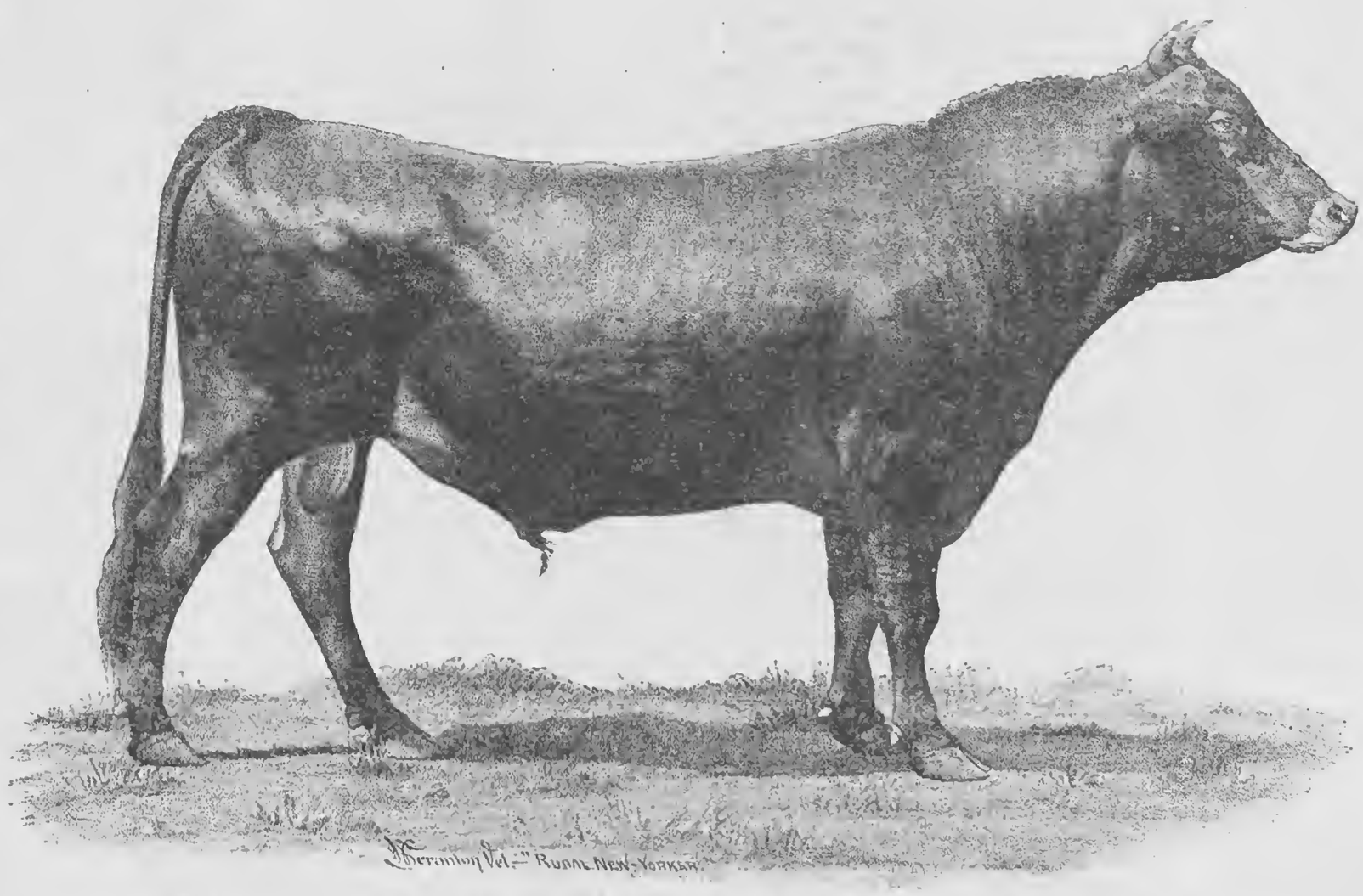
ONE of the strangest things is that farmers will not read and study the literature of their profession and will remain in ignorance of the very rudiments of it. What farmer possesses the few standard books which relate to the practice of agriculture? How few read an agricultural journal? and, alas that it should be said! how few of the agricultural journals are really trustworthy! This note grows out of reading a report of the Elmira Farmers' Club in which a person mentions a clear case of the well known black-quarter (carbuncular erysipelas), which was said to be caused by the freezing of the calves. Another person gives as a sure remedy for ticks, scab and other parasitic vermin on sheep, cattle, horses, etc., mercurial ointment, to be applied on the skin, "two streaks lengthwise and three around the body." Naturally enough, an objection was made against this remedy that it made the cows sick.

Now such crude, visionary attempts at information as these, were what brought the old New York Farmers' Club into disrepute and made a wreck of it. And they will destroy the usefulness of the very best farmers' club by weakening the confidence of the best and most intelligent of its members. It would be a wise thing to do to enlist the services of a competent professional man, as Dr. Law, of Ithaca, and refer these matters to him for advice. A little knowledge is a dangerous thing, but none at all is infinitely more dangerous.

BLACK-LEG is very prevalent just now, and carries off thousands of calves and yearlings every Spring and Winter. Imperfect digestion and blood poisoning are the causes of it, and either poverty or plethora will produce it. When the owners of cattle understand the principles of feeding and the laws of digestion and assimilation of food, they can prevent the occurrence of nine cases of disease out of ten which now happen. Further, if they have the knowledge that mercury is a poison and that animals will lick it off from the itching skin and so become poisoned, they will avoid applying it to parts that can be reached by the tongue, and use only such applications as will be safe.

GREASE is fatal to all insect life. Insects breathe by means of small pores on their sides. Grease or oil that comes in contact with the insects closes the pores and stops the breathing. Mercurial ointment kills as much by the lard in it as by the mercury—that is, so far as the vermin are concerned, but not as to the animals that lick it off from their bodies, so that almost any oily or greasy application will be destructive to insect vermin that infest animals, if it is applied where it will do the most good.

A PREVALENT and serious trouble with cows is abortion. This disease ruins many fine herds. Once it attacks one of a herd it goes through it, and much misapprehension is rife concerning it. Some lay it to dogs. This is an application of the proverb, "Give a cur an ill name and hang him." The dog has much to answer for, but not this. Yet a dairyman who keeps a dog deserves to suffer through his cows. But of this, more hereafter. Let us consider this disastrous disease. It is very clear that it is a contagious, parasitic disease. Pasteur has recently investigated it and has proved that it can be produced by inoculation by the special virus as easily as chicken or hog cholera, or small pox can be. This makes all clear and shows the way to prevent it. Occlusion, or complete separation of all infected animals, and the instant and thorough disinfection of stables are absolute means of prevention. Long-continued use of antiseptic medicines for cows that have been exposed to danger is desirable or necessary. The injection even of antiseptic solutions for pregnant cows may be useful. But when the nature of the disease is known, effective methods of dealing with it become mere matters of veterinary knowledge of remedies and their skillful application.



JERSEY BULL "CAR-BOY," 3351.—From a Photograph.—Fig. 152.

THE dairyman who has an aborted cow should carefully burn every part of the fetus; carefully cleanse with carbolic acid every place that has been fouled; remove the diseased cow to a distant stable; wash with thick lime and carbolic acid wash the floor, walls and stalls of the cow-house; fumigate the stable thoroughly with burning sulphur, and take as many precautions as he would if small pox or yellow fever had invaded his house. If this could become general, this disease would disappear or become very rare. It only leads astray and causes to grope in darkness to insist that it is caused "by the want of phosphates in the soil" (cows do not eat the soil, and crops cannot grow without their proper allowance of phosphoric acid), or by long-continued milking, or by dogging, or by slip-

pling on the ice, or mutual punching of th cows, or by high breeding, etc., etc., etc., to the end of the long list of the supposed causes. Some of these may, and often do, cause a cow to lose her calf, but only rarely, for a healthy cow will stand a good deal of abuse, but none of them ever caused the disease to become epizootic and to spread through a whole herd, and from that to other herds. The true cause is reasonable and simple and suggests prevention; the cure is impossible.

Lice on Cattle.

I see in agricultural papers many recipes for the destruction of these vermin, most or all of them doubtless effective, and I am not here going to praise or condemn them either individually or collectively, for I can say nothing by the way of experience concerning them. Not that my cattle and horses have never suffered from the pests; but because I have noticed the following facts which have suggested the remedy mentioned below:

Fact 1. Neither horses nor cattle are troubled with these parasites during Summer, when they can get to the ground. Fact 2. Horses delight to roll on the ground and always prefer naked spots where there is no grass. Why? Fact 3. Horned cattle like to rub their necks and shoulders (the places selected by lice) against any bank of earth and seldom omit to do so when any chance occurs. What for? I have noticed, too, that they like to paw in any loose earth and that in that case they do not throw the earth back behind them as a dog does, but that it often lights on their backs. Why is that? I have nothing to say about hens, all seem to know why they wallow and throw dirt over their backs. So I take the hint and when I discover any lice on cattle or horses, I rub earth on them (sand is the best) and strew it along their backs, and if one application is not successful I try it again, always in perfect faith that I shall succeed in the end because I always have. I supplement this with card or curry-comb. VIELLARD.

TO PREVENT CALVES FROM SUCKING EACH OTHER. — A correspondent writes us from Wallsville, Pa., that this habit lately referred to in the RURAL, is simply due to calf nature—the expectation of getting more food by sucking; so that when the supply in the feeding vessel is exhausted, the calf seizes hold of the ear or some other part of its neighbor thinking to obtain more food by sucking it; and the practice if allowed to be persisted in soon becomes a habit hard to be got rid of. The best preventive, he thinks, is to have the stanchions far enough apart to prevent the calves from reaching any part of each other, when their necks are tied in them, while they are feeding. Then if allowed to stand just so for a short time after eating or drinking they will scarcely ever attempt to suck each other.

Dairy Husbandry.

THE DAIRY COW—NO. 28.

HENRY STEWART.

Making Cheese.

THE process of making cheese is not only a mechanical one; it is also a chemical operation the nature of which has been very little understood, and even now we cannot say that sufficient is known about it to make it anything but a very uncertain one. From what has been said about milk (article No. 26) and rennet (article No. 27) it is very easily perceived that the rennet is the active agent in producing the separation or precipitation of the caseine of the milk from the whey; that the action of the rennet depends upon a certain organic element in it which is not well understood, and that this organic element acts by the production of a sort of inchoate, or undeveloped acidity which, however, is soon made active and apparent by lapse of time. This development of acidity in the curd is one of the most important changes which the dairyman has to control. All else is mechanical. To understand the process we will follow it step by step as practiced in an American factory.

The milk, either whole or skimmed, is heated to about 80 degrees. Sufficient rennet is added to bring the curd in 40 minutes to an hour. When the curd is firm enough to break, it is cut across in two or three directions, so as to make small cubes, which facilitates the separation of the whey. The whey usually separates in 15 or 20 minutes, by which time the curd has acquired a firm texture. The curd is then stirred with an agitator until it is well broken up, when heat is applied to the vat, and the temperature raised to 98 or 100 degrees. The broken curd is now well stirred, but carefully, lest the cream inclosed in the particles of curd might be lost in the whey. Just at this point the art and experience of the dairyman are taxed to seize the precise moment when acidity is about to develop itself, and before this occurs, the whey is drawn off. Then the curd is heaped in the vat and left to drain, while the acid develops itself gradually, until the curd becomes slightly sour to the taste. The modern practice of cheese making is gradually becoming more uniform in respect to the removal of the whey while it is still sweet, and leaving the curd in the vat to develop a moderate degree of acid before going to press.

After cooling 15 minutes the curd is turned over, by which it is exposed to the air and undergoes the requisite process of oxidation for the production of the desired acidity, and this manipulation is really the critical point in cheese making. If too much acid is produced the cheese lacks the mellowness and richness so desirable in a fine quality of product. If the whey is not sufficiently separated there is not only an excess of acid but often a more or less advanced degree of putrefactive decomposition in the cured cheese, which produces a very pronounced and sometimes very offensive odor, as in the case of that class of high-flavored and strongly odorous cheese of which the well known Limburger is a type. A great variety of cheese may be produced by different manipulations at this stage and by the after process of curing.

The common factory cheese, as now made, is put to press when the curds are cooled down to 60 or 65 degrees and before acid is plainly developed. After pressing for a few minutes to express the residue of the whey, the curd is broken up and ground in a curd mill, salted at the rate of two pounds to the hundred of curd and it then goes to press and is kept under pressure for two or three days.

The next process is curing the cheese. This is usually done in rooms specially prepared for the purpose, artificially heated and cooled, as the circumstances may require, and made with non-conducting walls and floors and amply ventilated. Here the cheese is exposed to a proper degree of heat to undergo a ripening stage during which the crude curd changes to a soft, buttery cheese which melts in the mouth and has acquired that peculiar agreeable, piquant and luscious flavor, which, with a certain solubility and easy digestibility, gives it so high a value as an article of food, if not of luxury. The usual temperature of the curing-room is 70 degrees; this is lowered or increased as may be desired to retard or hasten the ripening. The above applies to what is called full-milk cheese.

The high value of butter interferes very much with this manufacture and an enormous quantity of cheese is made of skim-milk, with the butter-milk worked up into it by the employment of a certain alkaline agent which neutralizes the acidity.

A vast amount of nonsense has been talked and written in regard to these manufactures. They have been called frauds and illegitimate. A common-sense view of the matter is to be taken. Is it better to waste a large quantity of skimmed and sour milk, produced in butter making, or turn it into a wholesome article of food that meets a certain popular demand? There is but one answer to this question. The cream of the whole milk has been replaced to a large extent in this manufacture with a preparation of animal fat known as oleomargarine. This is a limpid, yellow oil perfectly odorless, and when honestly made is of perfect purity and devoid of any objectionable quality. A sufficient portion of this oil is mixed in the vat with the skimmed milk until a perfect emulsion is formed. The after process is precisely the same as for pure milk. Buttermilk or sour skim-milk cheese is made by a different process.

In a former article it has been stated how the acid of sour milk may be neutralized by means of an equivalent amount of alkali. It may be worth while to repeat something of the process of curdling (souring) milk and of neutralizing this effect. The caseine of milk is insoluble in water, but is soluble in a weak alkaline liquid. Fresh milk is slightly alkaline and contains an excess of soda with which the caseine is in combination. When milk sours, the lactic acid produced by the decomposition of the milk sugar takes the soda from the caseine, forming lactate of soda, and the caseine is precipitated in the form of curd. The caseine is an acid substance always ready to unite again with an alkaline base. If a small quantity of soda or potash (common saleratus is bi-carbonate of potash) be added to the sour milk, the precipitation of the caseine is prevented and it is again dissolved, because the acid is neutralized and combines with the alkali. The milk is again sweet. No injurious product has been formed. Precisely the same action has taken place which occurs when saleratus and sour milk or buttermilk are used for making cake or biscuit. All the talk about the heinousness of this method of making wholesome cheese from an otherwise waste product of the dairy, at the recent dairy meetings, is simply cheap and sensational nonsense. Just as valid objections might be made to the use of salt—an alkali soda combined with chlorine, of itself a highly poisonous substance—for the purpose of preserving cheese from putridity, as against the use of an inoffensive carbonate of soda or potash to prevent the very same effect. The alkali is used to prevent the formation of an acid gas in the cheese, which would cause it to swell, heave or "huff" and so destroy its value as food. This gas is a product of excessive acidity in the curd and is frequently produced in full-milk cheese that has been badly made.

In making sour milk cheese the alkaline preparation is added in sufficient quantity to neutralize the acid after the milk is heated to 82 or 84 degrees; the rennet is added in the usual manner and the whole process goes on as with whole-milk cheese. By this process an enormous economy is gained and a vast amount of milk is saved from waste, and utilized as human food of a wholesome and nutritious kind. By the modern improvements in setting milk for cream the skimmed milk is usually kept sweet and only the buttermilk is sour; this is usually added to the sweet skimmed milk in the proportion of one-tenth.

Field Crops.

NOTES FROM THE RURAL FARM.

Potato Experiments.

THE following experiments were made to ascertain what distance apart potato seeds, cut to single eyes, should be planted in order to produce the best yield of marketable potatoes. Each test row was 33 feet in length; the variety planted was Beauty of Hebron. An old sod was plowed under in the Winter of 1880. The land was well prepared last Spring. The seed pieces were placed in shallow furrows, three feet apart, May 18, and upon them a slight sprinkling of concentrated potato fertilizer was spread. The earth was then hoed back so that the entire plot was quite level. The same fertilizer at the rate of 300 pounds per acre was afterward spread broadcast, just previous to the first cultivation. The potato beetles were destroyed by the use of London-purple, using a tablespoonful of the purple to a half-bushel of plaster, thoroughly intermixed. We have found that the quickest and most effectual way of mixing the poison with plaster or flour is to spread the latter say two inches deep over a tight floor; then spread the poison over the surface and mix with an iron-tooth rake. A half-barrel at a time may thus be prepared. That the yield was light in every case was no doubt due to the fact that the season was very unfavorable to the potato crop, being very dry in the early and too wet in the later part. We have to regret that the information to be obtained from the results of the experiments is by no means proportionate to the labor and time spent in conducting them.

ONE EYE IN A PLACE—ALL THE DRILLS 33 FEET IN LENGTH.

18 pieces, weighing 12 ounces. Yield, 24 pounds.
(18 pieces in a drill 33 feet long would be 22 in. apart.)
20 pieces, weighing 14 ounces. Yield, 14½ pounds.
(This row was harmed by moles.)

25	pieces, weighing	14	ounces.	Yield,	35½	pounds.
28	" "	14½	"	"	26¾	"
30	" "	18	"	"	21	"
33	" "	23	"	"	24	"
40	" "	23	"	"	20	"
49	" "	26	"	"	28¾	"
66	" "	32	"	"	31¾	"

TWO PIECES, EACH HAVING BUT ONE EYE, PUT CLOSE TOGETHER IN DRILLS 33 FT. IN LENGTH.

40 pieces, weighing 22 ounces. Yield, 24½ pounds.
(Nearly 10 inches apart.)

50	pieces, weighing	24	ounces.	Yield,	27	pounds.
60	" "	28	"	"	24½	"
66	" "	34	"	"	25½	"

THREE PIECES (SINGLE EYES) PUT CLOSE TOGETHER IN DRILLS 33 FEET IN LENGTH.

48 pieces, weighing 22 ounces. Yield, 18 pounds.
(Injured by moles.)

75	pieces, weighing	40	ounces.	Yield,	30	pounds.
90	" "	42	"	"	24	"

The average size of the last was much smaller than any of the others.

FOUR PIECES PUT CLOSE TOGETHER IN DRILLS 33 FEET LONG.

64 pieces, weighing 33 ounces. Yield, 24 pounds.

FIVE PIECES CLOSE TOGETHER. DRILL 33 FEET.

80 pieces, weighing 36 ounces. Yield, 27 pounds.

POTATO SKINS CUT TO SINGLE EYES.

May 26 we planted in well-prepared ground 37 pieces of potato skins—each having a single strong eye—six inches apart in the drill. The 37 pieces weighed two ounces. Three grew, and the yield was half a dozen potatoes as large as marbles. The experiment was made to test the value of a positive assertion on the part of a "well-known" farm writer that such eyes would yield as well as those to which flesh is attached.

Yield of the White Elephant.

In a plot adjacent to that in which the foregoing experiments were made, and treated in the same way, we planted the White Elephant. The plot was 66 feet long and 27 feet in width, or a little over 1-24th of an acre. They were planted in nine rows 66 feet long, cut to single eyes, and one piece dropped about every 22 inches. They were planted May 11. The yield was 697½ pounds.

The Yield of New Seedling Potatoes.

One of our prominent seedsmen sent us about 30 kinds of new seedling potatoes to test. Some of these have this season been offered for sale. All of them were represented by their originators as improvements in some or all respects over those at present known in commerce. As our test was made chiefly to ascertain their comparative productiveness, we need present them only by the original numbers:—

No. 35.	99 pieces, weighing	5 lbs.		Yield	55	lbs
	(planted all one foot apart).					
No. 35 (duplicate).	99 pieces, weighing	5 lbs.	1 oz.	Yield	58	lbs
No. 26.	99 pieces, weighing	3 lbs.	14 oz.	Yield	57	lbs
No. 36.	99 " "	6 lbs.	4 oz.	"	80	lbs
No. 9.	56 " "	2 lbs.	8 oz.	"	22½	lbs
No. [illegible].	49 " "	2 lbs.		"	17	lbs
No. 33.	58 " "	1 lb	9 oz.	"	24	lbs
No. 22.	40 " "	2 lbs.	2 oz.	"	49	lbs
No. 50.	16 " "		11 oz.	"	9	lbs
No. 51.	31 " "		17 oz.	"	20	lbs
No. 39.	8 " "		11 oz.	"	7	lbs
No. 49.	34 " "	1 lb	8 oz.	"	29	lbs
No. 10.	30 " "	1 lb	6 oz.	"	14	lbs
No. 2.	29 " "	1 lb	4½ oz.	"	42	lbs
No. 7.	66 " "	2 lbs.	4 oz.	"	40	lbs
No. 32.	33 " "	1 lb	12 oz.	"	18	lbs
No. 30.	11 " "	1 lb	2 oz.	"	10	lbs
No. 23.	22 " "	1 lb	6 oz.	"	15	lbs
No. 14.	43 " "	2 lbs.	3 oz.	"	28	lbs
No. 25.	19 " "		13½ oz.	"	20	lbs
No. 38.	19 " "	1 lb	1 oz.	"	16	lbs
No. 15.	66 " "	3 lb	1 oz.	"	43	lbs
No. 24.	47 " "	1 lb	11 oz.	"	35	lbs
No. 34.	29 " "		15 oz.	"	14	lbs
No. 29.	43 " "	1 lb	11 oz.	"	35	lbs

TOBACCO CULTURE.—NO. 3.

G. A. GOFF, JR.

Management of Tobacco Beds.

THERE is no other point in growing a crop of tobacco so important and so difficult to perform, as raising the young plants. It is the point where most failures occur, for the reason that it requires so much care and watching. It will not do to depend on one's neighbors for plants, as they are rarely willing to part with them until their own wants are supplied, after which the best opportunities for setting are past, and the remaining plants in the bed are small and weak. Inexperienced tobacco growers need to be reminded that during nearly half of the period from the sowing of the seed to the time for harvesting the crop, the plants remain in the seed-bed, and during that interval, being very small and tender, they require much more care and attention than during the last half of their growing lives. Inefficient hired help can hardly be trusted in caring for the plants without the supervision of the grower, and our most successful growers give to the work their personal attention.

After the plants are started nicely in the seed-bed, the chief dangers of failure are from burning, drying up, and the depredation of insects. The former two perils can be remedied by exercising sufficient vigilance; the last danger is more difficult to manage. The most troublesome insect that preys upon the young plants is a small fly or flea, which sometimes causes much loss. Various means are used to stop its depredations when it appears, as applying ashes, plaster, soap suds, guano water, etc.; but these are of little avail, only in so far as they strengthen the growth of the plant. A better and more effectual remedy is to place a hen with chickens a few days old, in close proximity to the plant bed, when the young chicks will aid greatly in destroying the insects. Weeding the plant-bed must begin as soon as the weeds are large enough to pull. It is a slow and tedious task requiring much patience to perform it well. A board is placed across the bed and upon this the weeder lies, face downwards, a position which allows him to get close to his work, without treading upon the bed. The expense required to weed a tobacco bed depends largely upon its management. If weeds are allowed to scatter their seeds upon it while it is not occupied with plants, the work of weeding is much more laborious and costly. For this reason no weeds should be allowed to grow in the bed at any time during the year.

Tobacco plants forced by the use of glass are always more tender than those grown in the open ground. In order to toughen them so that they will bear transplanting without much loss, the glass should be dispensed with a week or ten days previous to the time of setting them in the field. Early tobacco plants should be large enough to set by the first part of June. Nothing is gained by setting small plants, they should have leaves at least two inches long.

Fitting the Ground.

While the plants are growing, the soil where they are to be set should be fitted to receive them. The soil is usually plowed twice in the Spring, once early and again just before setting time. When the soil has been properly prepared by the use of the plow, harrow and roller it is marked one way, in rows three feet and a half apart, with a common corn marker. Sometimes the plants are set on a hill or "spat" made with a hoe; but the more popular method at present, as it saves much labor is as follows: a ridge is formed over each mark with a plow or cultivator. The Alden hill cultivator is the best implement for the purpose that we have found, and is the one generally used. The center teeth are removed leaving only the two outside ones, which are so arranged as to move the earth inward, thus forming a ridge. The ridges are then passed over with a light roller, on the outside of which are fastened narrow cleats which serve to mark the points where the plants are to be set. The roller commonly used for this purpose is made in two parts, each two feet long and about the same in diameter. These are hung in a frame far enough apart so that two ridges may be rolled at once. Thills are at-

tached to the frame so that a horse may walk between the rows. The plants are usually set about 20 inches apart in the row. The rollers, therefore, should be about five feet in circumference, having three cleats fastened at equal distances.

SOME OF OUR GRASSES.

PROFESSOR W. J. BEAL.

It is a good sign to hear farmers begin to inquire about the qualities of different grasses. Some of them have already found out that there is something worth raising besides Timothy and red clover. Prominent reasons why farmers have not paid more attention to other grasses are these:—There are so many kinds it is difficult to learn to recognize each, especially since they vary much at different seasons and in different soils. A mere description with the name is often of little value to a majority of people. Excellent illustrations with the descriptions are far more valuable, and we cannot help complimenting any journal which shall often produce good cuts of grasses.

This is a subject which has just begun to attract attention in this country. We should have a thousand students where we now have one who can recognize our grasses at sight. To learn to do this, requires considerable application. After a good understanding of the structure of plants and flowers, as usually studied in schools, one should analyze and preserve specimens in a herbarium, and preserve bunches of each grass by themselves. This should be followed up for a whole year.

The student will need much practice before he can learn to recognize all the grasses in any neighborhood, many of which will contain 50 to 80 native species. No person will ever regret the time spent in acquiring an accurate knowledge of grasses. The training is worth all it costs, and to many it will be of great value in other respects.

Orchard Grass—Cock's-foot—Dactylis glomerata.

This grass has often been mentioned by the press, but many are yet ignorant of its virtues and peculiarities. It has long been well and favorably known as one of the best forage plants in Great Britain and some other parts of Europe. Its reputation in the United States is quite variable. Some who know it well and have raised it for years, think there is no better grass for pasture or meadow. It is emphatically a grass that is sensitive to extra treatment. On poor, thin soils, the crop is small; on rich soils, heavy. The grass grows in bunches and looks rather coarse. It will not spread and make a thick, handsome turf. It starts very early in Spring, and very soon after it has been mowed or eaten off. Stock of all kinds are fond of it and thrive on it. If sown alone, about two bushels of seed in the chaff are used on an acre. The plant flowers quite early—about the same time as red clover. It will grow on sandy soil, or on clay, or on loam. The hay, when cut at the proper time and well-cured, is of excellent quality. If left to stand, even a few days after flowering, the stems speedily become woody and the hay will be of poor quality. It is usually ready for mowing before the farmer gets ready. He delays—and the grass is condemned because the hay is poor. Orchard Grass has been found to be one of the best for meadow or pasture for the dry, fertile plains of Kansas and Nebraska. Unlike Timothy or clover, it will stay on the land ten years or more. It is often spoken of as admirably adapted to growing in the shade; but it is no better for this purpose than June Grass. Both are of much better quality when grown in open spaces fully exposed to the sun.

St. Patrick and Burbank Potatoes.

Are these the same? Having seen a note in the RURAL in which a correspondent says that he thinks them the same, I will say that the time of ripening of both is nearly the same. The Burbank I consider the stronger grower and probably the better yielder. Ours were grown about ten feet apart, the rows running the same way. On comparing them I now find that nearly all the Burbanks have a russet coating, with a yellowish cast. The St. Patricks are almost smooth, and a shade whiter. It would take a very good judge to tell these varieties apart, if they were thrown together. When cooked I find the St. Patrick at least good, while the Burbank is not more than fair in quality, both boiled in the same pot. There is more difference between these varieties than between many others. Our St. Patrick came from Peter Henderson & Co., and the Burbanks from B. K. Bliss & Sons, and both were probably correct to name. The St. Patrick may become popular; the Burbank must go out.

Titusville, N. J. I. J. BLACKWELL.

SPRING AND FALL WHEATS.—I see inquiries in the RURAL in regard to changing Spring wheat into Fall wheat, and I would say that it is no uncommon thing for a Nebraska farmer to sow the same sort both in Fall and Spring out of the same bin, and raise a good crop from each sowing. The variety thus sown is the Grass or Odessa wheat. I have myself raised 28 bushels per acre of this wheat sown as a Fall wheat, and at the same harvest I have cut 20 bushels of the same as a Spring wheat. J. H.

Tekonsha, Neb.

Farm Topics.

ENSILAGE.

I HEREWITH send you some extracts from Professor G. H Cook's lecture on ensilage before the Somerset County Agricultural Society, delivered at Somerville, February 19, 1881.

Ensilage means green fodder of any kind preserved in a cellar. The word is taken from the French. It is no new theory, except in its application. The same principle is embodied in making saur-kraut. The green corn is taken from the ground at the time of tasseling; put through a cutting machine, cutting it into about half-inch pieces. It is then put into pits or silos made water-tight, as quickly as possible, and packed therein by men, mules, or oxen, and a tight covering having been made to exclude the air, it is weighed down with some convenient material. It has succeeded admirably well at the College Farm.

He gave the names of Francis Morris, Oakland Manor, Howard County, Maryland; Mr. Buckley, Port Jervis, N. Y., Messrs. Whitman and Burrell, Little Falls, N. Y.; Messrs. Coe, Bro's., Meriden, and B. C. Platt, Suffield, Ct.; and Dr. J M. Bailey, Billerica, Mass., as having sent well-preserved samples to the station showing that if the work is properly done, it is a perfect success. He mentioned Jas. Lippincott, Jr., Mount Holly, Burlington County, and C. W. Mills, Pompton, of our own State, as having also succeeded with it.

He had visited Mr. Mills and learned from him that he had eleven acres of corn and was using it for Winter fodder. He had an old barn, and, having built a partition wall through the middle of it, he had constructed two silos, each twenty feet deep, thirteen feet wide and forty feet long. He had cut up all the stuff from the eleven acres and filled the pits with it. He had a frame built perpendicular with the sides of the pits 15 feet above the barn floor; filled it; put a tight cover over it and weighted the contents with bags of wheat screenings. He had kept 120 head of cattle, including 40 milch cows and 12 head of horses. He began feeding from the silos last October and had fed up the fodder in one silo, and would have enough to last until Spring. Dr. Cook said his cattle looked well; Mr. Mills estimated the weight of green stuff from the eleven acres at 600 tons, the ensilaged fodder costing him a sum total of $500.

Ensilage had been tried as an experiment at the College Farm. The silo there holds 15 or 20 tons, and it is a perfect success as far as the preservation of green corn is concerned. Rye cut in the milk, clover, Hungarian Grass, brewers' grains, etc., might be preserved in the same way with equal success. The stock ate it better and seemed to relish it more than the dried corn-stalks. He said it is possible for a change to occur in ensilaged fodder enhancing its nutritive qualities.

For example, Winter apples were more nutritious in the Spring than when put up in the Fall. Wood might be changed by chemicals into starch or sugar, nothing having been taken from or added to it except the necessary chemicals. Glucose from corn sold in the market as pure bee honey. Ensilaged fodder, when taken from the silo, had a strong alcoholic taste and smell, and it should be taken from the pit 12 or 18 hours before it is to be fed. He found that after having been left in a heap for two or three days, it smelled and tasted like vinegar. Cows do not need as much water when fed ensilage, because it contains from 80 to 82 per cent. of water. Cows fed at the College Farm were given nothing but ensilage and cotton-seed meal in the way of economy. The experiment was not yet concluded. PENN.

ORCHARD GRASS—COCK'S FOOT—DACTYLIS GLOMERATA.—FIG. 153.

Ensilage.

There is nothing that interests practical farmers hereabouts so much as ensilage of green fodder, and there is no way in which so much good can be done in so small a space in the RURAL as by telling us about the successes as well as failures of this system, and giving directions for building, managing and filling the silos. I wish to build one the coming Spring; but do not want to start unless there is an assurance of success. Now is the time to make our arrangements if we are to have success this year, and all information on the subject would therefore be especially acceptable. If the system proves such a benefit as we have been told by some of its advocates, it will help the Eastern farmer to hold his own with the Western dairyman.

Plymouth, N. Y. W. B M.

REMARKS.—The RURAL is watching the subject very closely. It is because we still entertain doubts as to the value of the system that we hesitate to commend its adoption. Better delay a year than to build costly silos to be abandoned after a few years of trial. We have on several occasions referred to all the books or pamphlets that have been published on the subject.—EDS.

FEEDING TRIALS AND DAIRY PRODUCTS.

CONRAD WILSON.

AMONG the valuable experiments of the last few years there are some that are highly creditable to their authors, as well as greatly encouraging to farmers, and it is gratifying to find also that some of our agricultural colleges have lately turned their attention earnestly in this direction. The instructive pamphlet of trials and results lately received from Conductor Sanborn, of the New Hampshire College Farm, abounds with facts and figures of more than usual interest and clearly shows the value of this kind of work.

In one series of these experiments, continued through 70 days, each separate trial comprised a pair of two-year-old steers, grade Durhams, of nearly uniform weight. The feeding ration for the first lot was swale hay, 2,496 pounds, and cotton-seed meal, 560 pounds; making the total feed a little over 1¼ ton. The increase of live weight from this feed was 167 pounds, at a cost of $15, with a manurial result equal to $12.80, which made the net cost of the feed over the value of the manure equal to $2.24. From this it appears that the net cost for gain of flesh during 70 days was only

Two Cents per Pound.

This result plainly indicates the value of cotton-seed meal both as an economical flesh builder and as a source of rich manure.

In the second lot, the feeding ration was hay only, and amounted to 3,536 pounds. The gain of live weight was 135 pounds, in 70 days, at a cost of over five cents per pound. The evident lesson from this trial is that the daily ration cannot safely be limited to a single kind of food, whatever may be its nutritive value.

In lot No. 3, the ration consisted of corn meal and straw, amounting together to 2,770 pounds, with a gain of 120 pounds of beef, costing four cents per pound. The point here to be noted is the obvious fact that the proportion of corn meal per day was evidently too small to ensure the best result; being only five pounds a day for two steers. If the meal given had been five or six pounds for each animal, the cost of the beef would doubtless be less per pound, and with a larger increase of live weight.

Now, if these three trials are taken together, the average cost of the increase is less than four cents per pound. If the average of the 1st and 3d is taken, it is less than three cents. While in the 2nd trial with only one kind of feed (meadow hay), the cost of increase was over five cents.

Without stopping at present to examine all the results of this series, it is perhaps enough to say that in the 5th trial, with a ration of straw, blood and corn meal, the cost of beef was 3½ cents a pound, while in the 6th and 7th trials, with a daily ration of clover rowen and oat straw, the cost per pound for increase was less than two cents.

It thus appears that the *final average of six trials* shows a result of 145 pounds of increase for each trial of 70 days at a cost of three cents a pound for the beef.

Experiment of Prof. E. W. Stewart.

In a very interesting feeding trial as formerly conducted by Prof. E. W. Stewart, for testing results in milk and butter, the daily ration adopted for the purpose consisted of hay, bran, ground peas and oil meal, amounting in all to 16 pounds. With this ration, when given raw, it was found that the product of butter was less than five pounds per week. From the same ration when cooked, the yield of butter was eight pounds per week, and of milk 16 quarts per day. It was also found that an addition of two pounds a day to the cooked ration gave an increase of two pounds of butter per week.

Though this trial was chiefly intended to show the difference between cooked feed and uncooked, yet the results obtained for this point, do not by any means exhaust the experiment, which, while it sheds some light on the steaming of food, is also very suggestive for other questions equally important.

We find, for example, that the feeding ration in one case produces over two pounds of milk for each pound of feed, and further, that when two pounds of feed are added, as above mentioned, to the daily ration it means

Four Pounds of Milk for one Pound of Feed,

and one pound of butter for seven pounds of feed. Now all these figures are full of instruction, and still we have not yet reached the full measure of this well devised experiment. If all the factors belonging to it are duly examined, it will be easy to see that they shed a new and striking light on the cost of production for butter, and on the rate of profit in the dairy.

When, for instance, a feeding ration of 16 pounds per day is increased to 18 pounds with a resulting yield of butter amounting to 10 pounds per week, and of milk amounting to 280 pounds, it is clearly safe to say that the yearly result for butter in such a case can hardly be less, but would probably be more than 350 pounds, which at 25 cents would amount to $87 a year, and further, that the cost of the butter would not exceed five cents per pound, while the net profit per cow would be over $70 a year.

But one of the points in this experiment is too remarkable to be dismissed without further elucidation. The ratio of the feed to the milk and butter it produces, as referred to above, is in fact, a pivotal question in every dairy and on every farm. In this connection some additional light may, perhaps, be gained from recent investigations in Germany. In a series of elaborate experiments

At the Academy of Eldena,

this ratio was found to be, in the case of hay, when used alone, about 2½ pounds for one pound of milk. In another series of trials, Villeroy found the average to be a little less than this, but still over two pounds for a pound of milk, and in another case nearly three pounds of hay were required for one of milk. Yet in the experiment now under consideration, it was shown that the nutritive effect of hay in one of the rations was four times greater than in the German experiments, and in another ration the contrast was larger still.

In other words, it was shown, in one of the combinations of Prof Stewart, that the hay, which amounted to 10 pounds, and which, if fed alone, would give, according to European investigations, less than five pounds of milk, produced in this case 20 pounds, and in another combination more than 22 pounds.

Somewhat similar to the above, and no less instructive to farmers, is the suggestive and fruitful experiment of Professor Geo. H. Cook, as recently announced in the bulletin of

The New Jersey Experiment Station.

The cows in this trial were mixed grades, six in number, taken from the college herd of 24 head. The chief object in view was to determine the true proportion of several different feeding elements for the best yield of milk. For this purpose the following daily ration was computed by Professor Cook, and tested for 30 days.

Clover hay, 6 pounds; wheat straw, 13 pounds; brewers' grains, 20 pounds; turnips, 20 pounds; cotton-seed meal, 3 pounds. The average weight of the cows was nearly 1,000 pounds, and the average yield of milk during the trial was about 23 pounds per day for each cow. This rate of yield during 30 days (even if the year is counted at only 300 days), would make the annual product of milk about 7,000 pounds per cow, which at 2 cents a pound would amount to $140.

Now this result was not the mere product of a single cow for a day or a week; but the average for a trial of 6 cows for 30 days; and shows that the feeding ration here computed for milk, though not the best perhaps in all cases, is yet a safe and reliable guide that can hardly fail to give good results, and under favorable conditions, an unusual profit.

Though the main purpose of the experiment is thus well accomplished, a little further examination may perhaps disclose other results equally possible and no less interesting.

If we assume the ratio of milk to butter in this experiment as 25 pounds to 1 pound, (which for good cows is a low estimate), it would make the butter product per year equal to 280 pounds per cow, which at 30 cents a pound would amount to $84. Then if the manure and the skimmed milk are duly credited at their true value, the result will show that the net cost for the butter is less than six cents per pound, and the net profit per cow nearly $70, per year.

Without implying any doubt of the soundness of the above feeding ration as computed for milk, I venture to suggest that, when the object is butter, the result would probably be improved by the following slight changes in the formula. Clover 8 pounds, straw 12 pounds, brewers' grain 20 pounds, turnips 15 pounds, cotton-seed meal 3 pounds. Then if the clover, straw and turnips are charged at the *actual cost* to the farmer, the expense of this ration should not be over 17 cents per day, which would make the results for butter more favorable than the above figures.

It was intended to notice here the remarkable success of ex Governor Boutwell with his herd of 40 cows, and the still larger herd of *native* cows owned by Ladoc Pratt, in both of which are to be found some new and striking points of interest. But time is at present too limited, either to enter upon new topics, or extend the discussion of those in hand.

Entomological.

THE ASPARAGUS BEETLE.

The Asparagus Beetle (Crioceris asparagi) has long been an enemy to the asparagus crop in Europe; but its ravages have not been very widespread in this country until quite recently. Since 1862 this insect has been spreading slowly through New York, Connecticut, New Jersey and Pennsylvania, and during the past year the worst reports of its injuries have come from Burlington Co., N. J., where it is said to have destroyed 25 per cent. of the market crop. The accompanying cut, fig. 155 represents a beetle, its larva, and a portion of an asparagus sprout, showing how the eggs are deposited upon it. As will be seen, they are invariably placed endwise upon the plant.

The life history of this beetle may be stated in a few words: Upon the appearance of the plant in Spring the little pests, which have been passing the Winter under stones, old pieces of wood, the scaly bark of trees, etc., come forth, and, finding their way to their favorite "pastures" very readily, they begin at once to gnaw the tops of young plants. They soon pair and the females deposit their eggs, which are oval in form and nearly black in color, and placed, as shown in the cut, in rows of from three to seven each. In about eight or ten days the larvæ appear, which in form are much like the potato beetle, though different in color.

ASPARAGUS BEETLE.—FIG. 155

"The larva," says Professor Fitch, "moves very slowly, and is shy and timorous. As you approach it, it stops eating, and, holding its head stiffly back, it emits a drop of black fluid from its mouth. This appears to be its only defense against being devoured by birds and other predaceous animals, the acrid taste of the fluid rendering the larva unpalatable to them." The larva attains its full growth in about 12 days, then it descends to the earth, and, after spinning a slight cocoon, is transformed to a pupa, in which state it remains about 10 days. The perfect beetles are beautiful in appearance. The head, under side of the body, antennæ and legs are a shining black; thorax, reddish-brown, with two black marks in the center; wing-covers, light lemon-yellow, with a border of orange-yellow around the whole. When full-grown, the larva is about a quarter of an inch in length.

Among the remedies suggested for the ravages of this little pest, hand-picking is surest, but this can be practiced to advantage only where asparagus is cultivated on a small scale. Lime may be dusted on the larvæ in the morning when the dew is on, for then it will adhere to the plants as well as to the larvæ, and during the day it will be brought in contact with the latter more or less. When asparagus is raised in large quantities for market, all "volunteer growth" should be destroyed in the Spring, thus forcing the mother beetle to lay her eggs upon the market shoots, which are cut so often that the eggs will not have time to hatch.

Potato Bugs.—A singular circumstance respecting these pests occurred last Fall at Pine Hill. A gentleman was digging a well, and after he had dug through the hard-pan, which was very hard, he came to a layer of blue gravel, some seven or eight feet below the surface of the ground. Firmly imbedded in this gravel, like little stones, were multitudes of potato bugs. Upon loosening this dirt the bugs crawled around as lively as though just coming from the potato vines. Water was filtering through portions of the earth on a level with them. The mystery is, where did they come from and how did they get below the hard-pan? W. M.

To Destroy the Tent Caterpillar.—My plan for destroying the Tent Caterpillar is to take a shot-gun; put in a charge of powder without any wad; hold the muzzle of the gun about two feet from the nest and—"let drive." This plan I have tried for the last ten years and I can therefore speak well of it from experience. J. B.

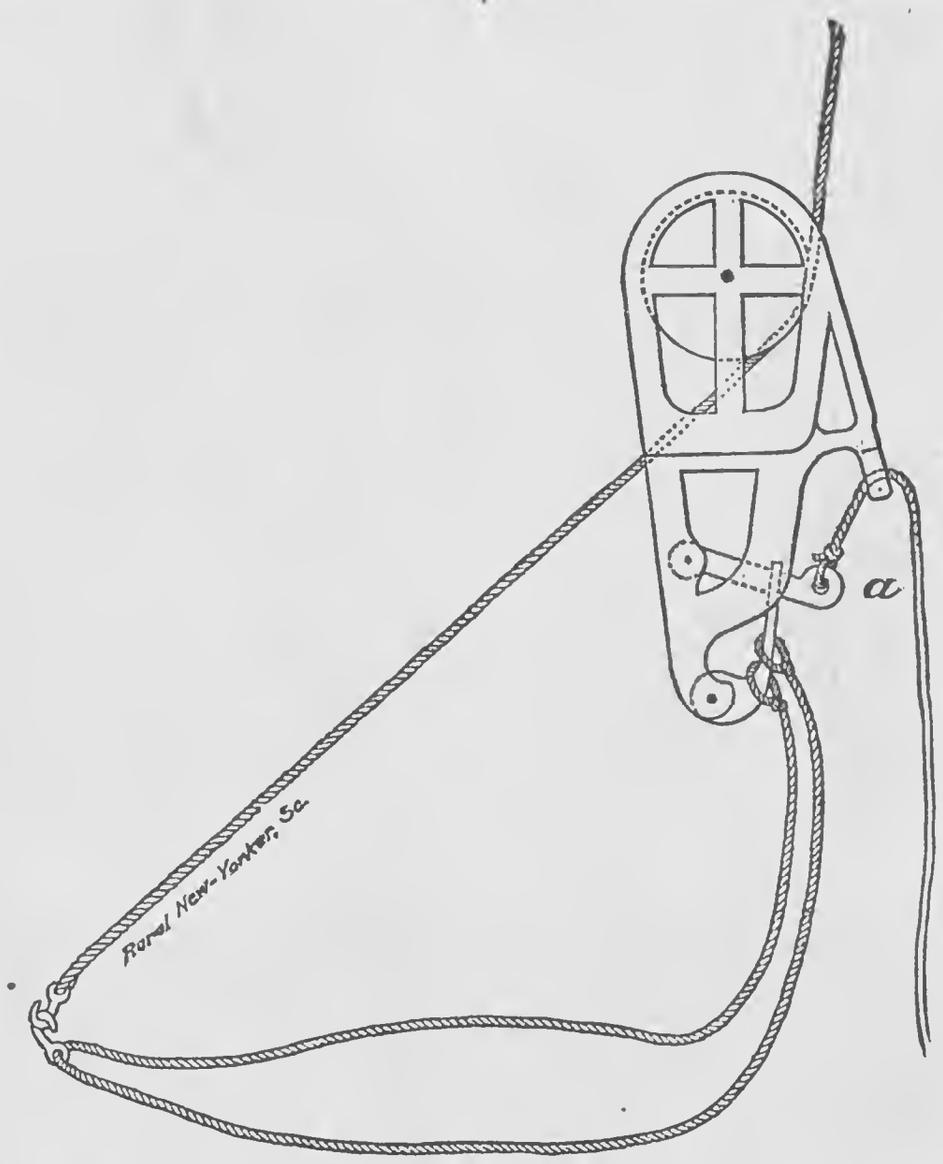
[Isn't it rather an expensive plan? Eds.]

Farm Economy.

HAY-SLINGS.

PROFESSOR I. P. ROBERTS.

Many inquiries have been made about the construction and working of the hay-slings referred to in my article on hay barns, published in the Rural for February 5th. The sling consists of a rope about five-eighths of an inch in diameter, to either end of which is attached a ring about two inches in diameter. The middle is furnished with a small casting resembling two links of a chain made rigid. The rope is laid on the hay-rack double, and about as far apart as are the two standards of the wagon. The cast double-link in the middle of the rope is usually placed on a hook fastened in the forward standard of the hay rack; the rings at the ends of the rope are placed on a hook fastened in the rear upright standard of the rack. So far, with the exception of the iron fixtures, it is a long rope, placed just as any farmer's boy would place a short one on the barn floor if he wished to carry a bigger load of straw than his arms would encircle. Upon this rope are placed from five to eight hundred pounds of hay, straw, wheat, corn-stalks, bound or unbound, or even barrels of apples or sacks of grain. A second rope is then placed upon the hay or grain, already loaded, and when another five to eight hundred pounds have been loaded, a third rope is placed upon it, and so on, using four slings for a load of two or three thousand pounds.



HAY SLING.—FIG. 154.

The Snatch Pulley.

A common cast "sheive" is surrounded by a cast frame like an ordinary pulley, except that the frame is about six inches longer one way. Upon the end of the extended frame is a snatch hung upon a pivot upon which are hooked the two large rings on the ends of the rope. To make it more plain to yourself, place the open hand with the palm up; imagine two large rings put upon the fore finger; bring the end of the first finger against the center of the ball of the thumb; imagine a small hole in the ball of the thumb and a spring pressing upon it. Then suppose a trip rope to be attached to the thumb-nail and to pass through an opening a little above it. This gives a clear idea of how the sling is emptied. To the end of the large or pulling rope is fastened a small hook; the rope is passed through or under the sheive, carried forward and hooked into the double link in the middle of the sling-rope, which contains the load. As the horses draw, the large rope is pulled through the pulley block until it comes to the hook and links which connect the large rope with the sling rope; these as well as the double sling rope pass through and continue to shirr until the pressure is equal to the weight of hay, at which time the hay rises. The pulley unlocks the car; the load then moves horizontally. The car differs little from those used in connection with the horse-fork, except that it will run on a track deflected sidewise.

Situated at the ends of the tracks in the center of the barn is a turn-table, which is shifted, locked and unlocked from the floor by a cord. I am using the hay sling in two barns, one of which not only has a track running the entire length, but also two running at right angles with the first, and three running into the corners. By having many tracks, one man in the mow can take care of all the grain or hay that three teams can draw.

Last harvest several loads of wheat and hay which weighed 3 000 pounds and upwards were taken off with four slings. It is from twelve to fifteen minutes from the time the load approaches the barn until the wagon is on its way to the field again; nearly one-half of this time is consumed in changing the horses from the wagon to the rope, backing out the wagon, putting in the team and getting a drink and the forks. The quickest time we ever made, after the horses were hooked on to the rope, was three minutes and thirty-six seconds.

The principal advantages of the sling over the hay-fork are these: first, it is far easier to handle; second, no power is expended in tearing the load apart; third, it puts the load in the mow and not on the barn floor; fourth, it unloads sheaves as well as loose material: fifth, it sheds no grain and takes the load off of the rack clean.

The loss over the hay-fork is the time it takes to spread the ropes when loading, which amounts to about two minutes per load. The track and all fixtures, including the large rope, are furnished and put up by the manufacturer for a specified amount. I have no interest in this matter, but to benefit the farmer, and I believe that in ordinarily intelligent hands the hay-sling is superior to the hay-fork.

The Poultry Yard.

RAISING GEESE.

There are three points of profit in raising geese—feathers, flesh and eggs. When properly managed the feathers form the most profitable branch of this industry.

To be successful here some experience is necessary. To secure the greatest profit from the feathers the goose must not be allowed to sit; she can then be picked four times a year, yielding something over a pound of feathers and about a quarter of a pound of down—only what is called the "top" down should be picked and even this should be left on at the last picking, about the first of November. To prepare the feathers for market, they should be pulled well apart and put into bags or, better yet, into nets and hung up to the ceiling to dry. If they are not well dried, worms are liable to form in the quills. The worm eats the feathers, and, of course, spoils them for use. To be in the best condition they should dry from three to four weeks; but by making the room quite warm the feathers can be prepared for market in a few days. Live feathers, that is, those plucked from the live goose, sell for from seventy-five cents to a dollar a pound, the down bringing about twice this amount. A goose that hatches out and rears a clutch cannot be picked more than twice a year, so that it is well to let only a few do the hatching, and have them alternate each year at this, if it can be done, as it is injurious to most incubating fowls not to be allowed to hatch out one brood a year.

The flesh of the goose when properly fattened, is highly relished by city customers. In preparing the birds for market it is well to keep in view the holidays observed by different nationalities. There is the universal Christmas

when nearly every one loves goose. On Thanksgiving Day the American frequently develops a decided liking for this bird. On Easter Sunday certain classes of Christians are devoted to the goose, and at the Jewish holidays in the Fall the Hebrews consider this an indispensable dish.

The goose is more fond of eating than of liberty, and can be easily penned up and fattened. To do this, put six or eight together in a dark pen and give them all the food they will eat. Corn and barley thrown into water form an excellent food for fattening them. Two weeks should be sufficient time to render them fat enough, if they are in fair condition when put in the pen. A goose well fattened should weigh from 15 to 20 pounds and sell for from a dollar to a dollar and a half.

There is some difference in the breeds of geese so far as laying qualities are concerned, though most of them can be induced to lay two clutches of 12 to 15 eggs each, provided the eggs are taken away from them as fast as laid. Goslings are very hardy, and unless caught by water vermin, are pretty well able to take care of themselves. Turtles are very fond of them, however, and they should therefore be kept out of deep water until half-grown. They are large enough for the table at six or eight months of age. The eggs are worth five and six cents each, but there is little demand for them in the general market.

The chief objections to raising geese are, first, that they are immoderate foragers and respect no man's property. They are usually a source of constant annoyance to neighbors, and where truck gardeners live, there is no peace with them. With the sides of the bill they can cut grass as close as a lawn-mower and their droppings are said to be poisonous to all vegetation. If allowed to mix with other poultry, they are almost certain to pollute the water that the other fowls drink until it is death to them. The man who raises geese should devote himself to this branch of industry and have no other feathered animals about him. It is said geese cannot be fattened if kept within reach of salt water though they multiply rapidly under such circumstances. Without the aid of a large body of water or running stream, it is doubtful if geese can be raised at profit, as they are large eaters and, not producing eggs for market, there is too much idle time in their lives. L. S. H.

Excellent Poultry Account.

WHETHER upon the broad acres of the farmer, upon the lawn of the suburban resident, or the restricted limits of the village lot, around the homes of the industrious poor or the mansions of the rich, there is nothing that will afford as much real pleasure to its owner as a flock of pure-bred fowls. Their beautiful plumage, distinct markings, and even size at once win the admiration of the visitor, and to the fortunate owner they are a source of untold delight, and in many cases they will amply repay for both the time and money expended in providing suitable accommodations for their comfort and a proper supply of nutritious food. Yet, comparatively speaking, around very few of our rural homes are such fowls to been seen. Generally a mixed or mongrel race is found, and in most cases very little attention is given to this part of domestic economy.

During a series of years great care has been taken by me to keep an accurate debit and credit account with a given number of fowls, the result of which from year to year has been given to the RURAL readers, solely for the practical information contained therein, and with the wish to benefit others, and particularly that class who have regarded their fowls as among the most troublesome and unprofitable of all their live stock. For five consecutive years these poultry accounts have been published in the RURAL and very widely copied by the press.

JAN. 1, 1880. IN ACCOUNT WITH 215 FOWLS.	DR.
To 215 fowls, at 60 cents each	$129 00
82 bushels of corn, at 60 cents	49 20
2 tons of cracked corn, at $22	44 00
2½ tons wheat middlings, at $23.50	52 88
220 pounds rough tallow, at 5 cents	11 00
100 pounds scraps	3 50
12 gallons kerosene oil, at 10 cents	1 20
10 pounds sulphur, at 7 cents	70
Red pepper	2 21
Total cost	$293 69
DEC. 31, 1880	CR.
By 1,054 10-12 doz. eggs	$208 48
73 fowls sold	53 20
317 roosters and culls	100 28
97 Plymouth Rocks (selected)	117 10
201 stock on hand, at 60 cents	120 60
136 bushels roost droppings, at 25 cents	34 00
Total proceeds	$633 66
Deduct cost	293 69
Profit	$339 97

Orange Co., N. Y. W. C. HART.

Young Ducks Feeding.

I am much obliged to Mr. L. S. Hardin for his answer to my question about raising ducks. The reason I asked the question was that I could not see how, with what we Yankees call a pot—which means an iron kettle eight to twelve inches deep—the young ducks could fish out the corn or any other feed in the bottom of it, with a board fitted on the top of the water with just room enough for them to put their heads into the latter; but when he says in his answer that he takes any old tin or iron pan, then, I suppose he means what we Yankees call a baking tin or a dripping-pan to bake meats or bread in, that would be an inch or two in depth, instead of the cast-iron pot, as mentioned. The difficulty arose from my not understanding the terms used by Mr. Hardin, and that is the difficulty generally, I think; writers use terms not well understood by readers, causing criticism or misunderstanding thereby. J. TALCOTT.

Various.

Dogs and Sheep.

In the RURAL of January 15, in J. S. Woodward's article, "Shall we Breed Sheep or Dogs?" the following appears: "The dog fund is so grossly deficient that there are now more claims," etc. I desire to call his attention to the law as we have it in Somerset county, N. J., and I think the same law works throughout the State:

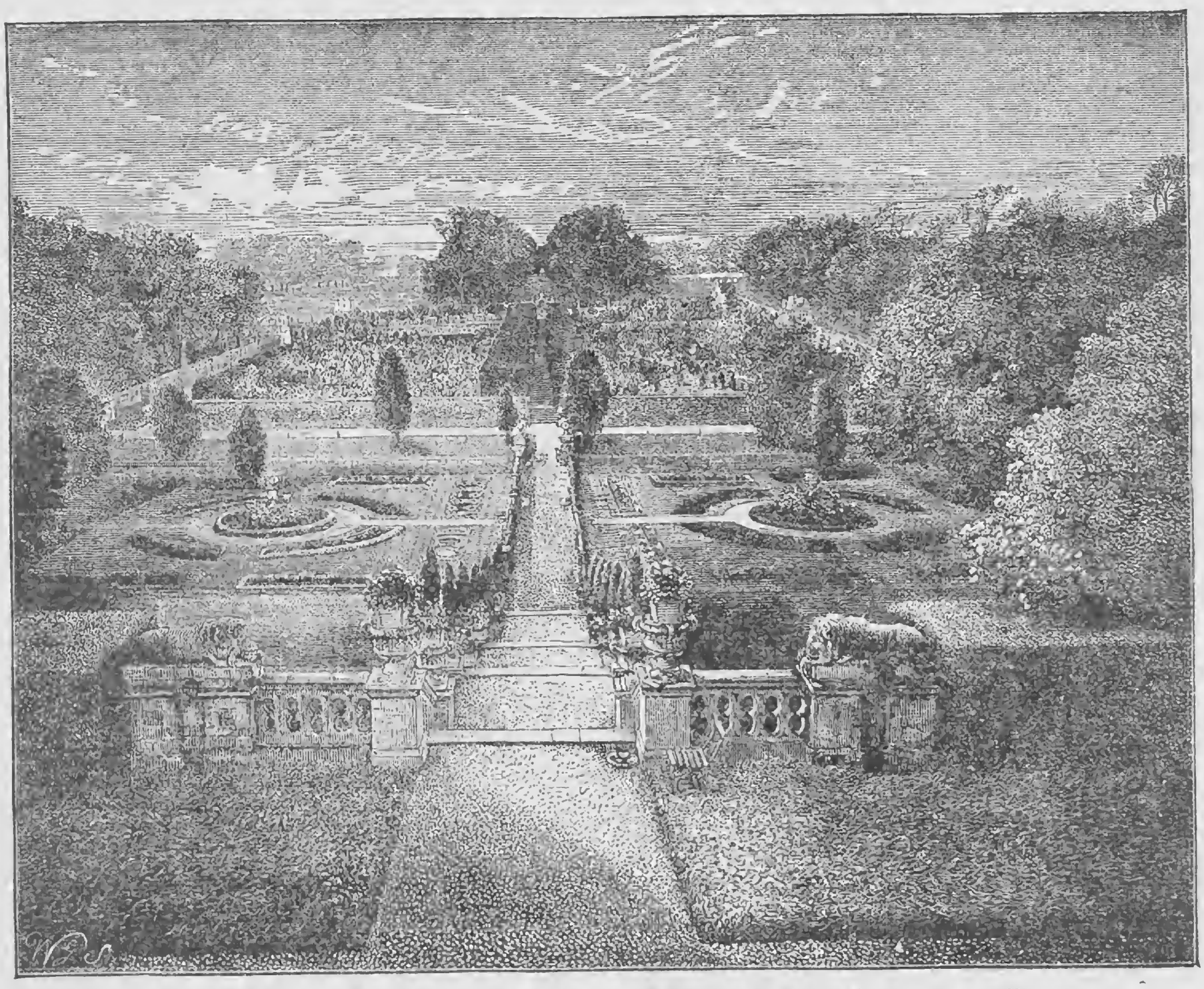
All dogs in the several townships are taken up by an assessor and a tax per capita levied according to the amount of damage done to sheep, hogs or poultry, and collected like all other taxes. So that if the assessor faithfully discharges his duty, no dog escapes its proportion of damage tax; and thus each sheep raiser is remunerated for actual loss. Of course the scare cannot be estimated in money value, although the appraisers usually take in all details of damage.

SPIKELET OF ORCHARD GRASS.
See page 156.

The dog tax in Franklin Township, due last December, was $3 50 per capita; in Hillsboro Township, 80 cents per capita, and the prospect is that in Bridgewater Township this year judging from the number of sheep already killed, the dog tax will be at least $3 per capita. You will see how this law *ought* to work. "PUM."

A Geometrical Garden Scene.

The scene represented in the acompanying engraving, Fig. 157, we give more for its beauty than for its utility, either for our farmers or suburban residents. Our hot summer suns are not favorable to this sort of carpet gardening or the evergreen turf so necessary to set off the colors of the masses of flowers and bright foliage. Besides the pleasure derivable even from pictured beauty, however, many of our readers can doubtless get some good suggestions from the view as to the arrangement of their flower beds and the groupings of the shrubs and trees around their homesteads.



THE GEOMETRICAL STYLE OF GARDENING.—RE-ENGRAVED FROM THE LONDON GARDENERS' CHRONICLE.—FIG. 157

A PROLIFIC COW.—Mr. Frank Shedd, Shedd's Station, Oregon, referring to a cow mentioned in the RURAL of January 15, that had six calves in less than two years, tells us of an Oregon cow that is "some pumpkins" in calf getting. She lives in the above neighborhood, is only five years old and has already had six calves, having, on the last occasion, had triplets which are all alive and doing well.

COAL FOR HOGS.—A correspondent from Centralia, Kansas, says that he has never found his hogs doing so well as they have during the past Winter, and he attributes their thrift especially to the refuse coal he has been feeding to them at the rate of about five bushels a week to twenty hogs, the coal costing only five cents a bushel at the pit.

POLLED CATTLE.—Men are learning the arts of peace—that is, to live without war. The logic of the World's progress must deprive our domestic animals of their war-like implements. Horns are often ten per cent. of the animal's cost, and no benefit. In the cost of shipping, they are twenty per cent. D. S. M.

OUR ANIMAL CUTS.—Colonel Curtis says: "I like your pictures of animals because they are natural whereas almost all others are fixed up or made from the trade cuts, which are not natural."

SMALL FRUITS IN NORTH CAROLINA.—The article under this caption in the Small Fruit Special Number, was written by Mr. Henry Smith of Henderson, Granville Co., N. C., not Buncombe Co.

Pomological.

PECK'S PLEASANT APPLE.

THIS is a first-class fruit in all respects. Mr Downing thinks it originated in Rhode Island, where, and in Northern Connecticut, it has been for a long time cultivated. It resembles the Yellow Newtown Pippin, with more tender flesh, while it is hardly inferior in flavor.

The tree is a moderate, upright, spreading grower, bearing regularly and well and the fruit commands a high price in the market. The apples upon the lower branches of old trees are flat, while those on the upper branches are nearly conical. The fruit is above medium in size, roundish, a little ribbed and slightly flattened, with an indistinct furrow on one side. The skin is smooth, and, when first gathered, green, with some dark red, but when ripe a beautiful clear yellow, with bright blush on the sunny side and near the stalk, marked with scattered gray dots. The stalk is peculiarly fleshy and flattened, short and sunk in a wide rather wavy cavity. Calyx woolly, sunk in a narrow, abruptly and pretty deeply sunk basin. Flesh yellowish, fine-grained, juicy, crisp and tender, with a delicious, high aromatic sprightly subacid flavor. Its season is from November to March and its quality ranks from very good to best. Mr. Downing concludes in a note to us in answer to our inquiry: "It is a very good Winter apple either for home use or market, and should have a place in every good collection. Mr. E. Williams says "I esteem it as one of our *very best* Winter apples, occupying the position among them that the Fall Pippin does among Fall varieties. The more it becomes known, the better it will be appreciated." According to our best information, Peck's Pleasant succeeds best in the following States: Vermont, Rhode Island, New York, Michigan, Ohio and Indiana.

THE CLARKE APPLE.—In an article on this apple in the RURAL of December 11 last, Mr. Samuel Stevenson stated that it originated about 100 years ago; while Mr. I. F. Tillinghast thought it was not over 25 years old. That it originated at Clark's Green is a well known fact hereabouts; but it could not have done so 100 years ago inasmuch as the History of the Lackawanna Valley shows that the

place where it originated was not settled until 1794. Neither could its origin have been as late as 25 years ago, for the apple has been on the farm where this is written for upwards of 40 years. It is an excellent apple and worthy of commendation. G. H. C.

Dalton, Pa.

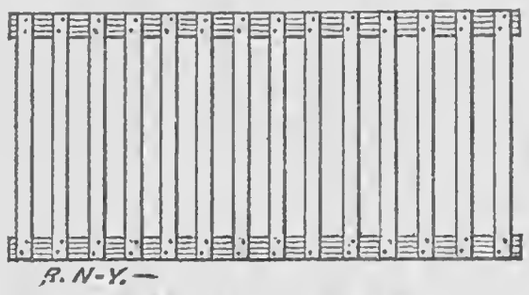
PEAR BLIGHT.—D. B. Wier's theory of pear blight does not accord with facts. The thriftiest and best trees I had, standing in grass and cultivated, were blighted and killed to the ground while loaded with fruit, whereas the ones which I considered worthless, on account of having been winter-killed two years ago, were free from blight, and bore perfect specimens of fruit. G. W.

Horticultural.

CELERY GROWING.

ONE of the most profitable garden crops that I raise is celery. I raised the past season about 5,000 heads of which I lost about 1,000 owing to the Winter setting in so unexpectedly. The 4,000 heads saved will bring, when all sold, about $125. This was all raised as a second crop following peas, and it did not occupy more than one-fourth of an acre. I also sold about $25 worth of celery plants. I raise very nice plants in the following way:

I sow the seed in a cold-frame about the



CELERY FRAME.—FIG. 158.

middle of April, and when about an inch and a half high I transplant to beds four feet wide by sixteen in length, setting the plants two inches apart each way. As soon as the bed is finished I have frames made of narrow strips of board and lath, the lath being their width apart. These I place over the bed about eight inches from the plants on the top of the stakes, three of which are driven on each side of the bed. By the use of these frames the plants enjoy a free circulation of air and are just half the time in the shade (while the sun shines) and will not wilt or need watering except at the time of setting out. The frames may be left on until the plants become well rooted. Plants treated in this way become very fine and stocky in from four to six weeks and may then be taken up with a ball of earth as large as a man's fist adhering to each plant.

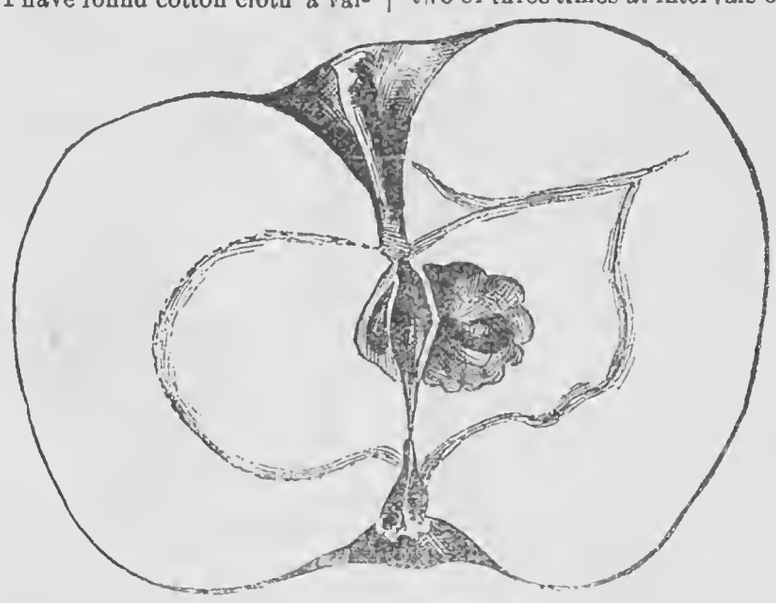
I transplant to the trenches from the 1st of July to the 1st of August. The trenches I make very shallow, about four inches below the surface after the plants are set out, some kind of fertilizer being below the plants. I have seen the best results from well rotted stable manure. I commence to earth up as soon as the plants begin to spread so as to keep them growing in an upright position, taking care not to choke them with too much earth at one time. I raise the dwarf varieties and have found the London Red the best for late keeping also the best flavored according to my judgment. I have the trenches four feet apart and the plants six inches apart in the trench. This, I think, is as near as is convenient for earthing up.

Before I commence to earth up I loosen the earth on each side of the trench with a hoe. I then get down on my hands and knees astraddle of the row, and, while holding the stalks of a plant together with one hand, I draw the earth up with the other, pressing it down firmly around the plant. The best time to do this is when the ground is a little moist but not wet. This process is called "handling," and by many it is called hard, disagreeable work; but there is no work in the garden that gives me more genuine satisfaction. This first handling brings the plants up nearly level with the surface, and before the second earthing up I run a cultivator up between the rows. I commence to harvest the celery for Winter about the 1st of November. My way of storing it is to make large beds of it on the cellar bottom, setting the celery upright and not too close together, and using earth enough to cover the roots well. If the cellar is dry, the beds may be watered occasionally, but in a damp cellar it would not be necessary and would be apt to induce rot. ADELBERT WAKEFIELD.

Oneida Co., N. Y.

Cotton Cloth for Hot-beds.

The RURAL was undoubtedly correct when it said lately in the "Queries" that "no substitute for glass for a hot-bed has yet been discovered," but I have found cotton cloth a valuable protection for hot-beds and cold-frames in the late Spring, when more space is required, as the tomatoes, peppers, etc., are transplanted from time to time as their growth necessitates. I made my frames four by eight feet, the ends being built up in the form of a gable roof with a ridge-pole, to which was tacked the cloth. This was made double at the center, for greater strength, and wide enough to hang over the sides of the frame. It was secured by loops at the edge over wooden pins in the side of the frame. A dressing of linseed oil will render it more durable and nearly water-proof. The advantages it possesses over glass, besides its greater cheapness, are, that with it there is no danger from excessive heat, either bottom or sun; that it requires but little attention, while on windy days the windward side may be closed and the other open to air and sun. Of course, glass must be used for the seed-bed, except very late in the season; but for the last bed before going into the open ground cloth (common sheeting) is much preferable. M. B. PRINCE.



PECK'S PLEASANT APPLE.—FIG. 159.

How to Raise Radishes.

One of the compensations for the white hairs in our beards that frighten and warn us, is that we know more than we did. It may be that all readers of the RURAL know how to raise radishes. It is an acquirement that has come to me within a few years, and it may be an item of value to some, especially if they are as fond of nice, crisp radishes with their bread and butter as I am.

To grow them, select a light, rich soil—a deep, moist one is the best, if you can get it—spade it deeply without manure and immediately thereafter, while the soil is moist and fresh, sow the seed thickly broadcast; rake it in and leave it alone. Radishes like a moist season to do their best, and if you can conveniently give them frequent and abundant waterings after the seed is up, you will be well repaid. For succession, seed should be sown two or three times at intervals of two or three weeks. A very important consideration in all seed sowing is to sow when the soil is freshly turned.

Rochester, N. Y. G. S. W.

WACHUSETT THORNLESS BLACKBERRY.

LAST Summer Mr. J. T. Lovett brought to this office a branch of the above blackberry of which our engraving below is a portrait. The berry is of excellent quality; the canes are hardy, healthy and strong. It is not, however, we believe, very productive. Its quality and its being nearly free of thorns are the chief points of merit.

WACHUSETT THORNLESS BLACKBERRY.—It is certainly an object worthy of any man's ambition to breed off the terrible thorns that make the blackberry an object of dread even to the man of horny palms. There can be no doubt that a class of *first-rate* blackberries without thorns would have the effect of very greatly extending the cultivation of this fine and healthy fruit. The blackberry could be robbed of its terrors without the loss of any of its goodness, and somebody will yet be found to do it. I can only speak of the fruit of the Wachusett. The berry is somewhat oblong, of medium size, sweet, and of good quality. It is an improvement on Newman's Thornless. Of the growth and habit of the plant I know nothing. PETER B. MEAD.

WACHUSETT THORNLESS BLACKBERRY.—FIG. 160.

WE see that Alfred Bridgeman offers seeds of the beautiful grass Eulalia Japonica Z-brina. The *plants* but three years ago sold for five dollars each, and even now bring one dollar each. We should like to know what proportion of seedlings show the transverse variegation.

Miscellaneous.

RURAL BRIEFLETS.

RESPECTING the "Golden Grain" Wheat we have just received the following note from a correspondent in Pennsylvania:—"I this day send you by mail a sample of the Golden Grain or Palestine Mammoth Wheat, which I think will excel anything you have in New York State. If you have anything better, I should be pleased to see a sample."

"P. S.—The Golden Grain or Palestine Mammoth Wheat was brought from Palestine four years ago. It is a very hardy and most productive variety, with long, stiff straw. It stands well and stools heavily, growing from 25 to 70 stalks from a single grain. The ears are of good length, closely filled with full, plump grains, with but little chaff, having yielded last year 32 bushels on one-half acre of land. The greatest curiosity about this wheat is that when it first shoots into heads it is a bearded wheat, but when it is ripe it is a smooth wheat." . . . . . .

WE have received from Mr. Charles A. Green the first copy of his "Fruit Grower." It consists of eight pages, 14 inches by 10½ in size. This it is proposed to issue quarterly at the price of 25 cents per year. We have this to say about the venture: Mr. Green is a forcible, trustworthy writer, and it may be expected, therefore, that his experience in fruit growing will be presented, as it is in the present number, in a very acceptable manner. It may be presumed that a rural journal, whether devoted to agriculture or to horticulture in any of its branches, should be edited by those who, from *experience*, know whereof they write. Such, however, is not always the case. We know of editors of agricultural papers who do not see a farm or garden, except by accident, from one year to another. And yet they set themselves up as teachers. The trouble is that they are just as likely to teach wrong as to teach right. They cannot, in re-writing or even in copying what others say, separate the wheat from the chaff. It is this kind of rural journalism that, among many well-disposed farmers, has brought "farm papers" into disrepute. We are glad to see Mr. Green's paper, because from his writings (we have no personal acquaintance with him) he may be judged as one who, while his experience enables him to judge wisely, loves pomology too well to praise or condemn unjustly. Mr. Green's address is Clifton, Monroe Co., N. Y. We heartily wish him success, and we hope our readers will examine his paper, specimens of which will no doubt be sent to those who apply. . . . . .

IN looking over the new Spring catalogues we are rather impressed with the engraving of, and remarks respecting, the new Russian White Oats in the catalogue of D. M. Ferry & Co., of Detroit, Mich. The panicle presented, if drawn from nature, is simply immense, while the tests which have been made in various parts of the country, in a small way, seem to give promise that the variety is wonderfully prolific while it has not as yet been attacked by rust. We have ordered a trial quantity of these oats and shall thus be enabled to inform our readers of their value and productiveness in due time. . . . . .

IN several catalogues — among them those of James J. H. Gregory, D. M. Ferry & Co., Alfred Bridgeman and Peter Henderson — we see the "Mammoth Pearl" Potato offered and highly praised for its quality, beauty and prodnctiveness. It is hard to keep the run of new potatoes, so numerous have they become; but in the long lists there are no doubt many that will take the place of the older kinds, whose names, one by one, are being forgotten. . . .

MR. JAMES VICK also offers the Russian White Oats. Reports, which he prints, say that the panicles are in some cases from 18 to 23 inches long, and the straws strong and bright. We should like to have our friends try the Russian White beside the Washington and report the result to the RURAL NEW-YORKER. . . . . .

JAMES M. THORBURN & Co. offer a new squash called "Perfect Gem." It was shown to us last Fall on the vines, and we had never before seen so many squashes growing so closely together. We attempted to procure seeds for our distribution, but they could not be supplied in large enough quantity. The "Perfect Gem" is not over six inches in diameter, of an oblate-round shape, and the quality is certainly of the highest excellence—being sweet, delicate, dry and tender. It seems that in a cool, dry room this squash will keep until Spring. . . .

WE have more inquiries as to Chester Co. Mammoth Corn than of any other field crop to which we have ever alluded. The questions generally are not, however, "Where can I get Chester Mammoth seed?" but "Where can I get the seed raised at the Rural Farm?" We cannot reply to this question, since there is but one establishment to which we have sold

the seed, and the quantity sold would not be sufficient to meet the demand were we to publish the name of the firm. . . . . .

HIRAM SIBLEY & Co. make a specialty of verbenas, a colored plate of which in their catalogue shows a half-dozen of the most brilliant colors. Verbenas, if sown in the open ground as soon as it can be worked, will bloom in late Summer; but it is better to start them now in pots or frames, in which case seedlings will bloom as early as potted plants set out in late May. For budding plants and for bouquets few flowers are more satisfactory than the verbena. . . . . .

PETER HENDERSON'S catalogue gives prominence, among farm seeds, to the favorite White Russian Spring Wheat, to which the RURAL NEW-YORKER gave prominence years ago in the report of a comparative test of many different kinds of Spring wheat. Among flowers the new single dahlia "Jaurezii" is spoken of as bearing blossoms of a rich crimson, resembling in shape those of some of the cactus tribe. . . . . .

AN old and very interesting plant is Bryophyllum calycinum. When a plant is interesting for oddity mainly, its popularity is usually confined to brief periods long separated. This Bryophillum has been much written of at times during centuries, for aught we know, always exciting a lively interest for a time and then, as it were, ceasing to exist. If a leaf of this plant be suspended by a string, or placed on a mantel, or left upon the earth of a flower-pot, in about ten days, as we remember, little plants with leaves and roots appear in the axils of the scallops or edges (crenatures) of the leaf so placed. These may be cut out and planted in thumb-pots and they will grow the same as other tiny plants so treated. When young, the Bryophyllum is beautiful and well supplied with its fleshy, smooth leaves; but in two or three years, as it nears the blooming period, it loses its foliage and the spreading panicles of hundreds of queer-looking flowers, resembling fuchsias somewhat, are all that is left besides the tall, leafless stalk. Seeing this plant offered in the catalogue of Storrs, Harrison & Co. suggests the above remarks, which, though old to our old readers, may be new to our new friends. . . .

IN reply to our recent editorial commenting upon some rather unkind insinuations in connection with this journal and Commissioner LeDuc, published in our respected contemporary, the Prairie Farmer, the latter says:—"Let the RURAL NEW-YORKER be undeceived. The Prairie Farmer disclaims the remotest wish or purpose to injure that journal or its editor." . . . . . .

MR. WILLIAM ROBINSON, the editor of the London Garden, who has proven himself an excellent friend of American horticulture, tells the RURAL NEW-YORKER:—"Kindly warn your American apple growers that the Canadians will beat them if they don't mind, giving as they (the Canadians) do, fruit well and regularly packed throughout, not merely topped off with good ones at each end." Our readers may remember that we have already twice or thrice called attention to this subject. . . . . .

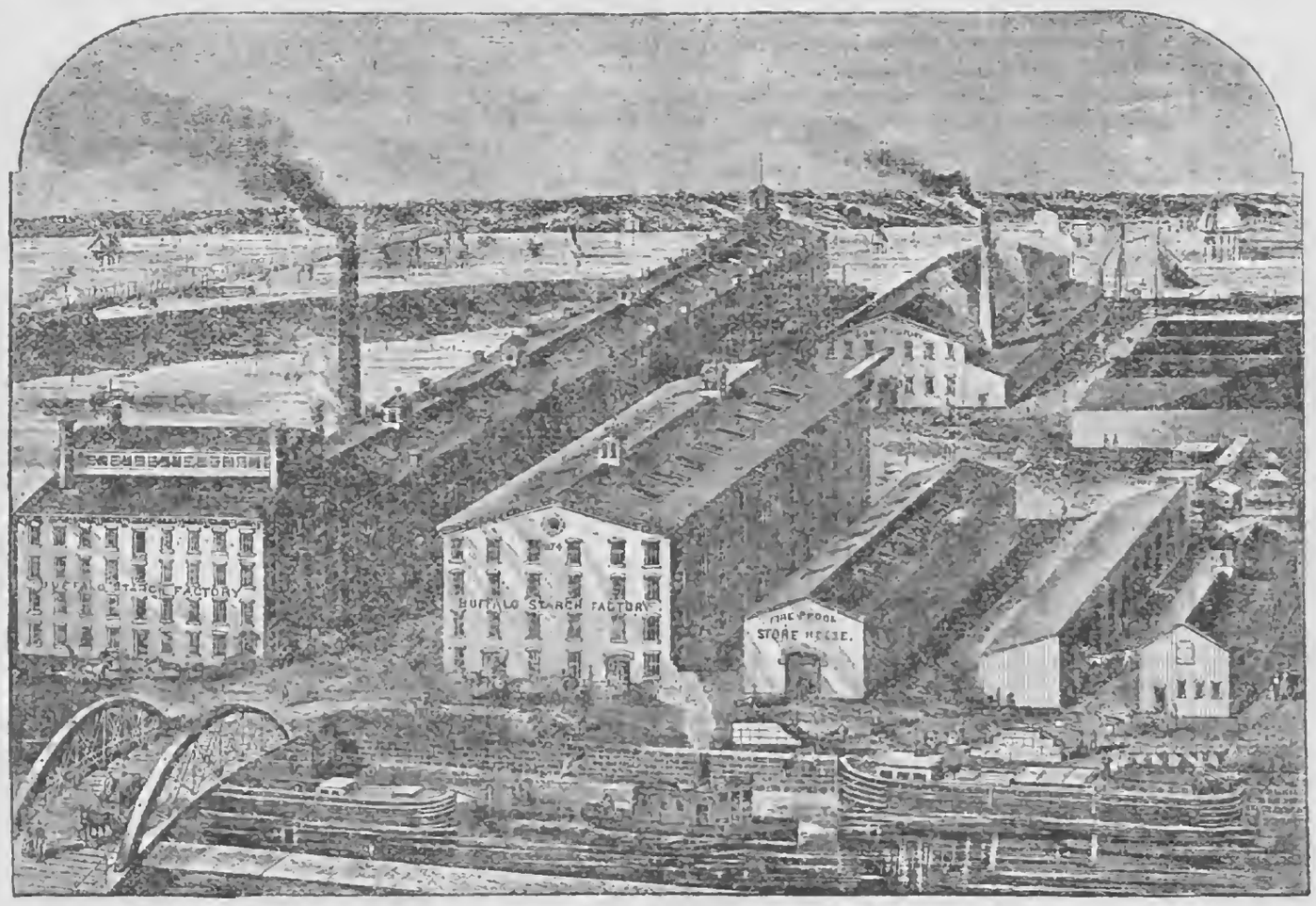
STARCH AND ITS MANUFACTURE.

EVERY one is supposed to have a general idea of the nature of this useful article, and of some of the sources whence it is obtained; but comparatively few are acquainted with many of its highly important qualities. Starch is very widely diffused throughout the vegetable kingdom, and is an organized substance belonging to the carbo-hydrates. It occurs in roundish grains in the cellular tissues of the seeds of cereals and in peas, beans, potatoes, etc. The grains in the same kind of plant are quite uniform in size and shape, but they vary slightly in different species of plants. Some of the larger grains exhibit a series of concentric rings, and in some may be seen, with a very strong light, a well marked black cross, as in potato starch. Commercial starch is heavier than water, and dissolves in nitric acid, but not in cold water, alcohol or ether.

Starch is most commonly obtained by separating it from other ingredients with which it is associated, the mode of separation varying much according to the source from which it is obtained. In extracting it from potatoes, they are first thoroughly washed and then rasped by machinery. The pulp thus obtained is placed upon a sieve and gently washed by a stream of water until the washings have no longer a milky appearance. The milky liquid is received into vats, the starchy matter is allowed to subside, and the water is drawn off. The starch is then suspended in water, run through a sieve to force from it any particles of sand, and, after settling again, it is transferred to baskets lined with ticking, where it is drained, after which the mass is placed upon a porous floor of half-baked tiles, and allowed to dry. In obtaining it from wheat or rice a more complicated process is required.

The demand for starch is very great, and many of the uses to which it is applied require that great care should be exercised to produce it in its purity. Pure water is an indispensable requisite in this connection, and on the location of the factory largely depends the success of starch manufacturing.

The Buffalo Starch Factory (an engraving of which we are enabled to give our readers, herewith), is situated on the banks of the Niagara River, about a mile from Lake Erie, and the wisdom of choosing such a location has been abundantly demonstrated. Although it has been in operation but 13 years, it is said to rank third in the world in the amount of its production. Something of the capacity of this establishment will be readily inferred from the representation here given.



GENERAL VIEW OF C. GILBERT'S STARCH WORKS, BUFFALO, NEW YORK, U. S. A.

FIG. 161.

LATE EXTRACTS FROM CORRESPONDENTS' LETTERS.

Kindly Words for the Rural New-Yorker.

"I AM glad to see that you are making the RURAL *by far* the best horticultural publication in this country. Your engravings and notices of new fruits and plants are always looked for with great interest."

So. Glastonbury, Conn. J. H. HALE.

"I like the RURAL; I think it is the best farmers' paper published. The articles on stock are interesting and instructive. I like the independent way in which it speaks on fruit, condemning all it thinks worthless, and praising only such as it thinks improvements on old sorts." E. N. G.

Newburgh, N. Y.

"I have just received the RURAL Shrub and Tree Special, and a most beautiful and useful number it is, and well calculated to elevate and improve the taste of all its readers, and help them to adorn their homes and the country also around them." A. B. ALLEN.

Queens Co., N. Y.

"The 'Corn Number' was most excellent. I take pleasure in comparing our old RURAL with other farm papers. All the others seem weakly productions." REV. R. H. CRANE.

Orleans Co., Neb.

"The RURAL is the best paper I get hold of. The Corn Number is worth the year's subscription." JAMES FENTON.

Middlesex Co., Mass.

"I could not think of stopping the RURAL, packed as it has been with valuable articles for the past year. It has been worth to me many times its cost." J. HUNTER.

Adair Co., Iowa.

"The RURAL for January 22, is a superb number, and so also was your Corn Number. The RURAL NEW-YORKER is a strong, honest, practical journal, and I like to read it." CHARLES SHINN.

Previously Editor of the California Horticulturist, and now of the Evening Bulletin.

"I have received a great number of sample copies of agricultural papers within a few weeks, but for reliable information upon agriculture and horticulture, and for interesting reading matter, the RURAL NEW YORKER is of more real value than all of them taken together." G. W.

Rock Falls, Ill.

"We believe there is no better agricultural paper published in the world than the RURAL NEW-YORKER. This is high praise, we know, but in our opinion it is deserved. Added to this, it is an excellent home journal, and every week's issue contains valuable reading for each member of the family."—J. A. Woodward in the Centre Democrat, Pa.

"I am so well pleased with the Beauty of Hebron and Golden Ovoid Mangel that I am anxious to try the forthcoming potato, and to say I think your endeavors to disseminate the best of seeds, potatoes and berries is deserving of much praise and gratitude from one and all. Orleans Co., N. Y. A. STERLING.

"My subscription to the RURAL is almost out, and I feel, though I am hard-pressed and a poor man, that I cannot do without it, so I send you my subscription for another year." WM. HARBERT.

Harrison Co., W. Va.

"It's a glorious old paper; long may it wave! I have subscribed for it for the past 18 years. Davidson Co., Tenn. W. H. H. TRUITT.

"It is the first time I have seen the RURAL since I have been in the mountains, although my parents, at the old home in Michigan, have taken it ever since I was a small boy. It is the best paper of its kind I ever saw, and brings back to my mind recollections of happy times when I was a boy, and before I left the old and much-loved home in the States—over 10 years ago. T. D. ELDRED.

Madison Co., Montana T.

"I have taken the RURAL for 29 years without a break—since 1852. I think the paper this year is better than it ever was before, and that it is the best agricultural paper in the world." JOHN BRADLEY.

Wayne Co., N. Y.

"I tell everybody that the RURAL is the best paper published, F. D CURTIS.

Kirby Homestead, Saratoga, N. Y.

"I am much pleased with the RURAL, and wish it a continuance of prosperity based upon its great merits." JNO. W. PRESCOTT.

Rapides Parish, La.

"I like your paper very much, and I can truly say that it has been worth many times its cost to me, and I wish it might find a place by every fireside." D B. RANDALL.

Franklin Co., Kan.

"Your special Shrub and Tree Number was very timely and valuable to me, and I hope to others. To me it is richly worth a year's subscription for the RURAL." Oneida Co., N. Y. LORENZO ROUSE.

"The RURAL is the best paper I have seen of its class for suburban residents who take a pride in their home and its surroundings. The issue of Feb. 12th is worth the whole subscription price to me, containing, as it does, the very information I was looking for—how to artistically plant my lawn and grounds." Chicago, Ill. WM. P. G.

"I will not be without the RURAL as long as I can raise the amount of subscription; for the information contained in its columns is worth ten times the price of the paper." A. L. L.

Arredonda, Fla.

"The Illustrations and make-up of the last RURAL Special were very happy. I could not help being reminded of that grand old teacher A. J. Downing. I am glad I am not the editor of a weekly paper—I should become crazed, I am sure." C. A. GREEN,

Clifton, N. Y. Editor of the Fruit Grower.

"We think the RURAL a necessity which we can't do without. As it grows better and better we become more and more attached to it. We thank you very much for the seeds you sent us." R. G. PAISLEY.

Bond Co., Ill.

"I am happy to see that the RURAL NEW-YORKER is a grand success." E. W. STEWART.

Erie Co., N. Y.

"We have taken your paper for several years and think it the best agricultural paper in the United States. I have tried most of them; but we cannot do without the RURAL."

Marion Co., Oregon. HENRY CARTER.

"The present is my 25th year's subscription to the good old RURAL; I don't know that I can say more in praise of it. I expect to take it as long as I live, if I can pay for it.

Delaware Co., N. Y. JOHN A. MORSE.

"I would not take three times the amount of the subscription to your paper for the seed I have now on hand." A. J. UTTERCACH.

Montgomery Co., Ind.

BOOKS, CATALOGUES, ETC.

BARN PLANS AND OUTBUILDINGS, with 257 illustrations. This is an excellent cloth-bound volume of 235 pages, 12 mo., published by the Orange Judd Company, 245 Broadway, N. Y. City. It contains a large number of elevations and plans of barns of all sorts suitable for every purpose and situation as well as many plans of cattle sheds, sheep shelters, pig-pens, poultry-houses, dairy-houses, milk-rooms, grain bins, corn cribs, granaries, smoke houses, dog kennels, and bird-houses—in fact, all sorts of farm outbuildings together with ample printed explanations. At the end a couple of chapters are also devoted to representations and descriptions of various forms of silos for preserving fodder, as well as of root cellars.

AMERICAN SANITARY ENGINEERING, by Edward S. Philbrick, C. E. This volume of 129 pages, octavo, treats of the ventilation of buildings; drainage of towns; details of sewage; ventilation of sewers; ventilation and cleaning of sewers; house drainage; apparatus used for house drainage, and public sewers and privies. Its author has had great experience in constructing sanitary works in different climates, and his suggestions, therefore, are valuable to those who live in localities where extremes of temperature prevail.

PRACTICAL ARTIFICIAL INCUBATION. By Edward Brown, F. L. S. Cassell, Petter, Galpin & Co., New York. This pamphlet of some 60 pages is the second edition of a work which has a considerable sale in the United Kingdom. It gives an illustrated account of the various incubators and artificial mothers that have been offered to the public in Great Britain, together with a good deal of other practical information on artificial incubation.

REPORT on the Culture of the Sugar Beet and the Manufacture of Sugar therefrom in France and the United States. This work of 294 pages was prepared by Dr. W. McMurtrie, under direction of Commissioner LeDuc, and is issued by the Agricultural Department.

REPORT and Proceedings of the Executive Committee of the International Dairy Fair held in this city in December, 1878, containing lists of exhibitors, awards of premiums, reports of committees, etc. T. Mortimer Seaver, Sec'y.

Also a similar work for the exhibition of 1879.

STUDIES OF THE FOOD OF BIRDS, insects and Fishes, made at the Illinois State Laboratory of Natural History at Normal, Ill. S. A. Forbes, Director.

REPORT of the Surveyor General and State Land Register of Nevada for 1879 and 1880.

PRELIMINARY REPORT of the Department of Agriculture for the year 1880.

FOURTH Annual Meeting of the New York State Dairymen's Association, with transactions and addresses for the year 1880. Copies of this work, which is full of useful information on Dairy topics, can be had from Josiah Shull, Ilion, N. Y.; price 25c.

CATALOGUE of the Edgwood Herd of Registered Jersey Cattle, owned by John L. Hopkins, Atlanta, Ga.

JOURNAL of the Proceedings of the Board of Supervisors of Chatauqua County, N. Y.—G. S. Josselyn, Supervisor of the town of Pomfret.

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MARCH 19, 1881.

This number of the Rural New-Yorker contains a four-page supplement.

In order to transact satisfactorily the constantly increasing business of the Rural New-Yorker, we have leased, for a term of four years, the entire front of our building facing Park Row, as well as that facing Beekman Street, hitherto occupied. The editorial rooms after May 1st, will be found on the right of the hall upon entering, the business department on the left.

If any farmer will consider the time and labor required to make the potato experiments detailed under Notes from the Rural Farm, he will see how inadequate ofttimes are the teachings of such experiments as compared with the cost of conducting them. "How far apart should we plant potatoes, cut to single eyes, in order to get the best yield?" The question is a simple one that it would seem ought to be answered by any careful set of tests. Such, however, is not the case, as anyone may discover who attempts to solve the problem.

A Poetical Cow.—A Cape of Good Hope paper thus describes the pet cow of a parsonage, for sale there. We think she must have been bred and reared under good instruction:—"She is a picture worth focusing by any photographer. Her coat is the sleekest; her temper the meekest; her form is the neatest; her udder the greatest; her eyes are the brightest; her milk is the whitest; her horns are the shortest; and if wanted more test to prove she is a beauty, a darling, a pet, just buy her, and you will have joy of your bargain."

Prof. S. W. Johnson corroborates, in his annual report (Conn. Ag. Ex. Station) the answers we have given to questions as to the value of salt as a fertilizer. He says "On some soils, salt (like gypsum on many soils) produces a good effect, not commonly by directly nourishing crops, for agricultural plants require no soda and very little chlorine, but by its solvent action whereby it disengages plant food from the minerals of the soil or in some indirect manner." The fertilizing value for any given crop or soil is only to be determined by actual trial. It must be borne in mind that salt is chloride of sodium.

Dr. Ravenel of South Carolina, as Professor Johnson states, finds that finely-ground Charleston phosphate rock is quite assimilable by vegetation, when applied in conjunction with vegetable matter, obtained by plowing under a large growth of the Southern cow-pea, or letting it decay on the surface of sandy or otherwise nearly worthless land. Professor Johnson remarks that the decaying vegetation would appear to dissolve the phosphate as effectually as, and more economically than, sulphuric acid. That is to say, a better economical result is obtained by applying a dollar's worth of finely ground phosphate rock with a decaying green crop, than by using the same worth of artificially dissolved phosphate.

The Mantes Fowl.—This is a new breed got up recently in France, and is now highly spoken of. It is something like the Houdan, possessing all the good qualities of the latter without its defects. It is brilliantly speckled in color, has only four toes to each foot, and no crest, but wears a well developed cravat. Now, if they will breed off this last useless excrescence, as they have the crest and the fifth toe, it will be quite an improvement. It is uncommonly precocious, fattens easily, and its flesh is of the finest quality. It is an excellent layer of large eggs, a fair setter and good nurse. We should think this fowl worthy of importation, and it might prove a good addition to the various sorts we already possess in the United States.

Longevity of Horses.—Mr. W. Douglas, late veterinary surgeon in the 10th Hussars, contends that if horses are well treated they may live five times as long as it takes them to attain maturity. Now, as they do not mature — except when greatly forced by high feed—till they are seven to eight years old, it follows that they ought to live 35 to 40 years. During this length of life they may be useful three-fourths of the time, which would be from 26 to 30 years. We will venture to say that American horses are so improperly treated that they do not endure more than half the above time, on the average, for good work. This reduces their usefulness of 26 to 30 years, to only 13 to 15 years. We know a horse that has been steadily worked on one of the city express wagons of New York almost daily for 16 years past, and he is still perfectly sound and as efficient as ever.

A CORRECTION—OAT GRASS.

On page 195 of our Supplement in answer to a query whether there is in this market a grass called Oat Grass; it is stated that "we do not find such a grass in seedsmen's catalogues, etc." This answer which was marked out on the page proof was left in by oversight. The "Tall Oat Grass" (botanically Arrhenatherum avenaceum or Avena elatior) is offered by all good seedsmen for about three dollars per bushel of about 12 pounds to the bushel. We are informed by Prof. Beal that this Oat Grass does well in some parts of Michigan. It is a perennial with stems about three feet high. Mr. Flint says that it is esteemed by those who know it for its early, rapid and late growth, making it well calculated for a late pasture grass.

Danthonia spicata is the "Wild Oat Grass" notable for the thick, wiry turf it makes upon dry sandy soils. This is also perennial with short, slender stems, and it blooms in early May. As a lawn grass for hot situations, we think this might prove valuable. There is a fine field for investigation among the grasses, and we propose to test, the coming season, several kinds which have always been deemed valuable but about which we seem to have little trustworthy information.

"BUTTERINE."

The malady afflicting Chicagoans, which goes under the name of "Winter cholera," and is referred to the eating of "butterine," into the composition of which lard enters, forms a striking proof of the power of habit among American eaters. Among the lower classes of people one article of food and one of drink seem to be regarded as the two great necessities of their existence—something in the way of grease to spread on their bread, and some hot, sweetened drink for their stomachs—and so great and uncontrollable is their passion for these two things that they will take up with the most miserable substitute for butter, in the one case, and gulp down a swill of burnt rye, sweetened with molasses, in the other. Of the deliciousness and wholesomeness of pure water as a drink they have no appreciation, and of the sweetness and toothsomeness of simple bread they have about as much. In regard to butter, there is nothing tolerable short of what is thoroughly good; anything less than that is an insult to the bread it is put upon. It is a much easier matter to do without butter than many people imagine, and if those who cannot afford to use a good article will do without any, as they dispense with other luxuries, their stomachs will be greatly the gainers thereby. Wholesome, plain bread and good water are excellent acquaintances for any man or woman to form, and such as will never cause regret or breed distressing results.

NOTICES TO SUBSCRIBERS.

If any of our readers have received the White Elephant Potato in a frozen or otherwise imperfect condition, they will please notify us by postal, giving their full addresses plainly written.

We shall begin the Seed Distribution this week and hurry it through with all practicable speed.

It is a satisfaction that we are enabled to send all of the varieties to our subscribers as originally announced. The packet of Rural Branching Sorghum is smaller than we had hoped to put up. But our South Carolina crop was virtually a failure.

It may again be necessary to state that, as we divide the postage with subscribers, we shall not send the seeds to those applicants who have not sent us their share of the postage (six cents). Those, however, who have subscribed for the Rural in combination with any of the journals with which we club, are not required to bear *any* of the expense—this having been added to the club price to simplify the matter.

We are very much in hopes that none of our readers (our old ones at least) will view our Plant and Seed Distributions in the light of *premiums*. The past is proof that we have sent out some of the most valuable plants in cultivation, and we think our Distributions should have ere now established for themselves the reputation they certainly deserve. The present collection has cost us more than any of its predecessors, and we cannot suppose it will prove less valuable. Those who for any reason cannot plant and cultivate them with due care, should present them to those who can.

OUR CATTLE PORTRAITS.

There seems to be a difference of opinion as to the accuracy—the merits, of our cattle portraits. Some praise them roundly. Some condemn them flatly. The accuracy of the photographs of which they are exceedingly correct reproductions is not questioned. But our artist, it seems, is expected to so "doctor" them that in lieu of a slight curve in the back; a reasonable proportion between the size of the feet and legs and the body, etc., they must be presented with backs of a dead level; feet and legs that are absurdly small; eyes that are of melting, ponderous mildness, and bodies of perfect symmetry.

But we beg to say that our object in presenting true portraits is to show our readers *what the animals are like!* It is not to invest the originals with ideal beauties that can never exist in fact. Such pictures are just as much exaggerated as those of strawberries, raspberries, grapes, etc., which are so often seen in our nurserymen's catalogues, and we do not see how any honest stockman can look upon such monstrosities without feeling that they convey falsehood just as effectively as if the characterizations were in so many written or spoken words.

In this connection let us call attention to our patent, adjustable cattle-portrait diagram on the last page. With slight alterations this may be made to give the desired outline and "points" alike for Jerseys, Herefords, etc., etc., just as the picture of Prince Imperial has gone the rounds as the portrait of several distinguished prize-takers.

With slight alterations and additions also, which will readily suggest themselves, the problem as to producing sex at will may be solved by our adjustable diagram, and a consideration of its merits is urged upon our illustrated stock journals.

UNDERSTANDING, THE FARMERS' NEED.

The great need of our farmers is understanding. We use this word as distinct from knowledge, intellect, education or wisdom, or, rather, as embracing them all and more. A liberal education—by which we mean a knowledge of the so-called higher branches, as mathematics, philosophy, astronomy and the classics—while it may render a farmer no less fitted for his business, is not really essential. The rudiments of an education, embracing reading, writing and arithmetic, well founded and *understood*, go a great way towards furnishing one with all that is absolutely necessary for a worker of the soil. The rest may come through the schools or through observation, logical and practical deductions, and experiments.

Knowledge is desirable, but of little use to him who knows not how to apply it. Intellect sets man above the brute, and the one man above his fellows; but the most intellectual man is not always, or often, the most successful in his undertakings. Education is not to be despised; but its possessor may not always know how best to use it, and the wise man may often learn from the ignorant one much that will be to his advantage in the lower walks of life.

We would say nothing tending to influence the agriculturist to neglect the acquisition of any or all forms of useful knowledge and culture, but we would endeavor to impress upon him the fact that they may be like fertilizing principles that exist in nature in a state that render them of no use, because they are not in a condition to make food for, or be assimilated by, plants. Understanding is that which enables their possessor to make them of service in his every-day life, and as a small amount of fertilizer judiciously applied, may be of more real service than a large quantity used at random, so a little learning that can be used is better than scholastic acquirements with an unpractical mind. So, get education, knowledge and wisdom when thou canst, "but with all thy gettings get understanding."

BREVITIES.

We have endeavored in this number to catch up in our answers to questions.

During the last five years, W. C. Hart, of Walden, N. Y., has cleared, above expenses, $1,409.13 on his flock of fowls.

We take pleasure in calling attention to the card of our venerable friend, Mr. Conrad Wilson, in our advertising columns.

Goat's milk for puppies is recommended by those who have tried it as quite superior to cows' milk, as the latter causes worms. This makes another point of utility for the goats.

We learn from several sources that Mr. Orange Judd is an applicant for the position of Commissioner of Agriculture in case of General Le Due's removal. If the administration were in need of an advertising agent, Mr. Judd would, no doubt, prove the right man. But he can have little practical knowledge of the agriculture of the present day, and as to botany he could not distinguish a crucifer from a composite. We were glad when he was appointed Indian Commissioner as we had hoped that some Indian might catch him and carry him off.

The "Slaughter of the Innocents" at Scranton, recently, when a score or more of little children perished from suffocation in the dormitory of a burning asylum, being unable to escape because they were locked in—was but the oft-repeated horror—except on a larger scale—of children being locked in houses and burned to death. Every generation seems to produce a crop of fathers and mothers who leave their little ones at home alone, and from some rather vague reason, lock them in, for greater security, as though any foe from without could equal the fire-fiend within. Children should be trained from infancy to know what to do in case of fire, be made familiar with the different ways of escape from a house, and above all, to know precisely what to do, in case their own clothing, or that of another child, takes fire. Also servants and all employes about a house should, from the outset, be so thoroughly drilled as to their action in case of one's clothing being ignited, that there will be no possibility of any one of them repeating the fatal folly of rushing into the open air in flames.

We notice that the English agricultural papers are beginning to recommend pretty strongly the importation of our trotting stallions for the purpose of improving their roadsters. Many of this class of horses now bred there, being got by weakly, spindle-legged, cast-off thoroughbreds out of common mares, are wanting in power, endurance and good action—too weak for farm work, and not strong and fast enough for the carriage. The American trotting horse, Shepherd Knapp, taken to England some years ago, has been well patronized there, we are informed, and has produced excellent road stock. The stoutest of trotting stallions not less than 16 hands high, and weighing about 1,200 pounds in good working condition, should be selected for the British market. The very fastest are not required. Those equal to a three-minute gait for a single mile, or 12 to 15 miles within the hour, would be quite as satisfactory as, if not more so than, any still faster. England doesn't want these horses for sporting purposes, but for utility—for the carriage and the cabriolet of the gentleman in the country, and the cab of the professional, such as the physician and others, in town and city.

Mrs. Hayes is a refutation of the saying that "a prophet is not without honor save in his own country," as she retires into private life crowned with the laurels of her countrymen and countrywomen's hearty acknowledgement of high service nobly done. Admirable as her conduct has been, it has been fully appreciated, and she had no lack of encouragement in upholding her sturdy principles of right. It speaks well for a country when it responds so quickly to a noble impulse, and it was a great compliment to the hostess at the White House, that she managed her campaign with such tact and womanly charm as to win as well as not to alienate friends. The portrait of her that her admiring and approving countrywomen have had hung in the Executive Mansion as a memorial of their high regard for her, is to be surrounded with an oaken frame, carved by the deft fingers of the women wood carvers of Cincinnati. The portrait is painted by Daniel Huntingdon, of New York, which is the only infelicitous feature of the memorial. Not that Mr. Huntingdon does not paint well, but that there are several women in the country who are fine portrait painters and from every standpoint, the work should have been given to some one of them.

The Hog Cholera Scare has been the chief object of agricultural interest on both sides of the Atlantic during the past week. In the British Parliament a discussion arose last Thursday as to the danger to the community from eating American pork, and during the progress of the debate a forged telegram was received in the House from Liverpool, insisting on the widespread prevalence of the disease here and the necessity for prohibiting the importation of hog products from this country. The author of the forgery has not yet been discovered. Secretary Blaine has protested against any hostile action by the British Government, insisting that the rumors of disease among our swine are grossly exaggerated. The British Minister at Washington is also reported to have sent reassuring messages to his government; the principal Chambers of Commerce through the country have also declared their belief in the exceptional freedom of our swine from disease just now; there has been a great deal of cablegramming on the subject between this country and Great Britain. The Belgian Government, too, has made inquiries about the matter with a view to future action. Three cases of death from trichinosis are reported, one from Ireland and two from France. There are good reasons for believing that the present "scare" is mainly due to speculators who wish "to bear the pork market," that is, to lower prices of hog products. As there is really no special cause for it, it cannot last long, although it is inflicting much injury upon our trade at present, and is likely to have results injurious to our swine husbandry.

Arboricultural.

FOUR NOTEWORTHY PLANTS.

One of the handsomest shrubs known to us, and one which escaped mention in our Special Hardy Shrub and Tree Number, is the

Double Red flowering Thorn—Cra'ægus coccinea flore-pleno. The engraving will impress those who have never seen the shrub in bloom as being somewhat too regular to be true to life. Such, however, is not the case. The flowers grow in umbels, as shown, and forcibly remind one of the trusses of some of the double-flowering pelargoniums of comparatively recent introduction which are really miniature bouquets in themselves. Each flower is perfectly double, of a rose color rather than a crimson—as is generally stated—and they begin to bloom in late April, lasting a full month. This shrub is perfectly hardy at the Rural Grounds, and all that can be said against it is that it seems so to burden itself with flowers one season that it oftentimes fails to bloom the next. There are several other very showy thorns which, if grafted upon one stock, would form a curiously interesting and beautiful tree while in bloom. Thus the double white, scarlet, red, white and rose might be used for the purpose—all worked upon the Common Hawthorn—Cra'ægus Oxyacantha.

Cornus florida.—The White-flowering Dogwood is not, strictly speaking, white-flowering, since the true flowers are of a greenish color. These are to be seen in the center of the inflorescence shown in the engraving, forming the little crowded heads resembling a dozen beads in a cluster.

The large, white leaves subtending these true flowers form a four-leaved floral involucre which in this dogwood is called the flower and, in fact, is just as showy as if it were. During a visit South last Spring we called attention to a tree, discovered by our contributor, Hon. H. W. Ravenel, of South Carolina, that bears red involucres. We trust some of our nurserymen have secured it for propagation.

Among dogwoods let us say that the Variegated Cornelian Cherry is one of the best of variegated shrubs, for the reason that its variegation is exceptionally constant. It holds its leaves well, and in October a purple color appears so that they are then green, purple and white. This is known botanically as Cornus mascula variegata.

The Double White-flowered Horse-chestnut.—The engraving shows the raceme of flowers and leaves about one-fifth the natural size. We have never seen this tree, but it is highly praised by those who have. Mr. Scott says that the flowers are borne in larger racemes than on the species and set with equal or even greater abundance on the tree. It blooms also two weeks later. This is a variety of Æsculus Hippocastanum—the Asiatic or Common White-flowering Horse-chestnut.

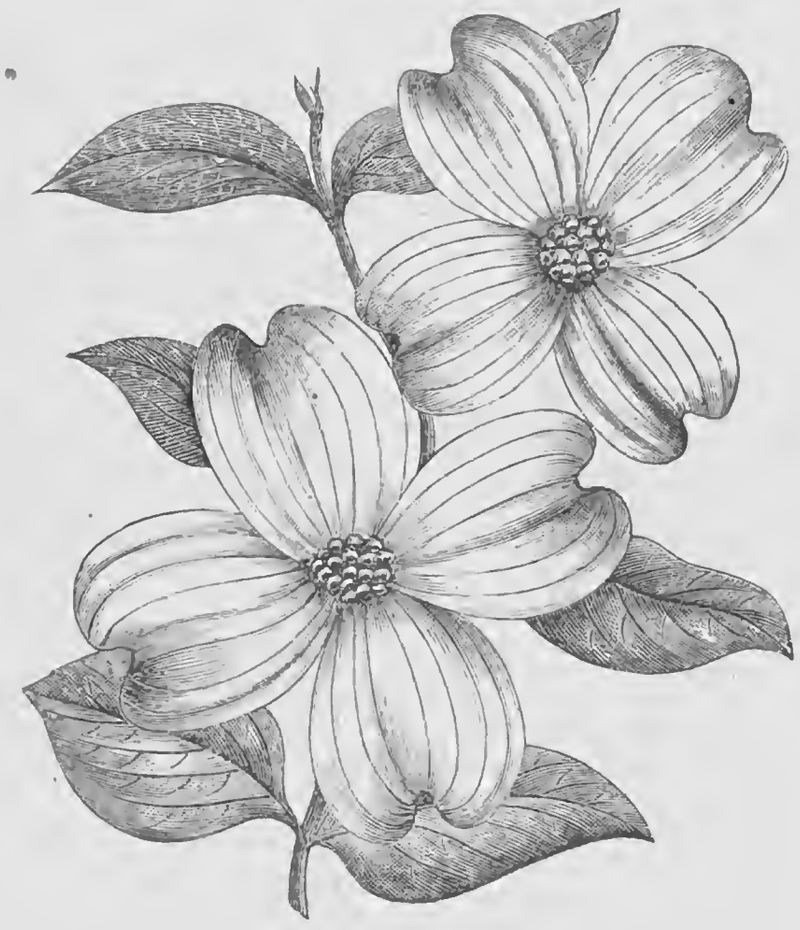
The Tri-colored Maple.—One-third the natural size the leaf shows, though not very definitely, the variegation of the Acer psendoplatanus tricolor. The yellow and green are well defined in the leaves, but we have never discovered the *third* color, viz, red, which gives rise to the varietal name. It is one of the best variegated-leaved trees we know and, being of rather slow growth, is richly entitled to a place in all home grounds of limited extent.

We acknowledge our indebtedness to Messrs. Ellwanger and Barry, of the Mount Hope Nurseries, of Rochester, N. Y., for the use of these cuts.

Everywhere.

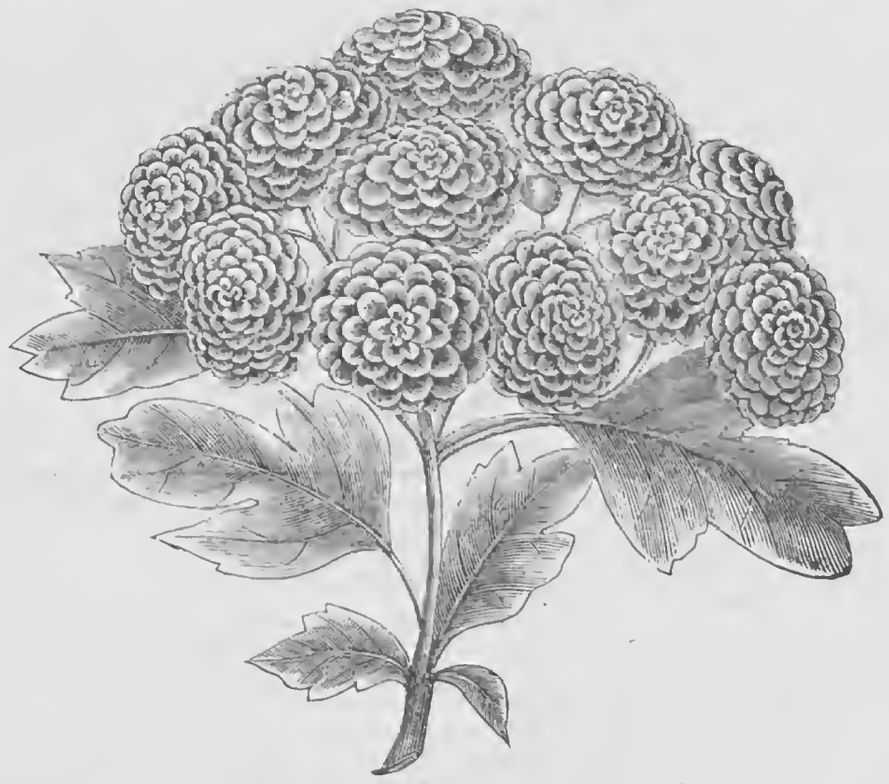
RURAL SPECIAL REPORTS.

Alabama, Selma, Dallas Co., Feb. 28.—We had a very severe Winter, with much freezing and snowing until the last couple of weeks, during which the weather has been fine for plowing. A great deal of oats has been sown, and most farmers have already finished the work. A great many sorts of oats were for sale here, but they were so very poor, badly mixed and light that I wouldn't sow either of them on any account. I have the heaviest oats in this county, having saved the seed for several years in succession. Most of the sort sown here is full of cheat, but the people pay little attention to the care of seeds of any kind. Last year I planted cotton for the first time. It was a bad year for the staple generally hereabouts, but folks said mine was the best; but I never worked so hard as I did to make this crop. Very little corn was raised here last year. I am now feeding the Blount Corn, which did well, considering the season we had. I have saved plenty of seed for the next planting, from that sent me by the Rural. I had strawberries in November, December and January. I haven't seen any berries this month, but the vines are in full bloom. So are our peach trees; indeed, everything is getting ahead nicely now. The main trouble with our farmers is that they all depend on one crop—cotton. This they sell, so that they have everything to buy. I find myself doing much better by engaging in mixed husbandry—raising some of several sorts of crops, for which there is always a ready market right at home. Then I deliver milk twice a day in the city; sell some hogs, having a nice lot of Poland-Chinas; raise vegetables, fatten cattle, and do well generally. J. M.



CORNUS FLORIDA.—FIG. 162.

DOUBLE WHITE-FLOWERING HORSECHESTNUT.—FIG. 163.



DOUBLE RED-FLOWERING THORN.—FIG. 164.

Ill, Belvidere, Boone Co., March 1.—We have had for the most part a very cold but pleasant Winter. Stock is wintering extremely well. Dairying is fast becoming the principal business here. Butter and cheese factories are plentiful, and all seem to be doing well. Many farmers are keeping Winter dairies, and think they pay better than Summer. Good cows are worth from $35 to $50 each. Fodder is abundant yet. Crops and prices were good the past season and farmers are doing well. Present prices are: Butter—creamery, 31@33½c.; dairy, 22@25c.; cheese, 8@11½c.; hogs, $4 60@4.70; cattle, $1 50@4 25; corn, 30c.; oats, 28c.; clover seed, $3 59@4 50. C. P.

Ill., Baileyville, Ogle Co. Feb. 21.—Had a moderate rain and thaw here on the 7th, 8th and 9th insts., the only thaw since November. Our heaviest snow storm came on the 11th and 12th insts, which snow drifted badly, blocking railways and common roads for several days. Good sleighing now. Fat hogs have nearly all been sold; they are now worth $5.10 per 100 pounds. Beef cattle are selling freely at from $3 50 to $4 per cental. Grain is improving in price, and farmers are hopeful of prosperous times. Business is brisk. W. B. D.

Ill., Fredericksville, Schuyler Co., March 1. We have had a very cold Winter here, the mercury ranging from 10° above to 22° below zero. The earth has been covered with a sheet of ice which, in its turn, has been overlaid with a counterpane of snow most of the time since about December 1. The weather has moderated of late, however. W. L. M.

Kan., Guilford, Wilson Co., March 4.—A snow storm that was extremely severe on live stock swept over this section for 24 hours on Feb. 10. Just before it we had a heavy downpour of rain for the same length of time, and before that stock water was so scarce that in many places animals had to be driven two or three miles to water at the deeper or larger streams. Winter wheat looks very well considering the dry season we have had. The acreage is larger than last year. No 2 wheat is worth 80 cents; corn 25 cents. A. G. B.

LEAF OF ACER TRICOLOR.—FIG. 165.

Kansas, Neodesha, Wilson Co., Feb. 28.—It snowed here all day on Feb. 11 and 12 and the snow is drifted five and six feet deep. The wind was very strong and came from the northwest—intensely cold and hard on stock. On Feb. 5 and 6 it rained continuously, making all cattle and hog lots knee-deep in mud, and then came the snow on top of that. It looks now as if it will be a fortnight before any plowing can be commenced. J. C.

Kan., Iola, Allen Co., March 3.—We have had a very severe Winter for this State. Wheat is not hurt as much as was expected; indeed, it is good as yet. The weather still remains very cold and unsettled. H. M. S.

Mich., Evarts, Oceola Co., Feb. 28.—There are thousands of acres of land here that would make homes for the poor, and it is cheap—from $2 50 to $10 an acre, and good land, too. There is also plenty of work. Lumbering is the principal business, and workmen are now paid $26 a month and board. Wheat went into Winter in good condition last Fall, for the ground had not frozen when the snow fell, and this has covered it ever since. We have had sleighing for about 115 days and have had only two thaws this Winter. I don't think small fruit has been hurt, for the snow has kept it unhurt. C. C. V. H.

Mo, Kent, Newton Co., March 1.—The weather croaker here can now say of a truth that this has been the hardest Winter he ever saw in his life. At least, the oldest settlers in this part say it is so. The first cold spell we had in November killed all the peach trees and most of the apple trees. I also notice that the bark is dead on small oak trees. The wheat is all right yet, as the ground has been covered with snow. C. C. E.

Neb, Wood Lawn, Lancaster Co., Feb. 23.—Since it is decided that flat cultivation of all crops is the best, and I think I can raise more corn in drills than in hills, how can I cover weeds growing in the rows and keep the field level? I would very much prefer the level to the ridged cultivation if I knew how to do it and kill the weeds. I managed my corn thus last year: After it was drilled in, I put my team to work on it with the harrow until it was nearly out of ground; then let it rest until the plants were well up so as not to cover them up; then harrowed again until it got too large so that the plants would break. Then I put in Frost & Bradley's riding cultivator, "Garden City," four shovels, two on each side of the row, turning the shovel nearest the corn to throw dirt away from the row; enough earth falls over on the row to cover all small weeds then started; the other shovel I turn to the corn and cultivate shallow. The second time I turn both shovels to the corn and cultivate deep enough to cover weeds. The third and last the same as the second, but, of course I must plow deeper, and that ridges up very much and leaves the field in bad shape for the next

plowing. Please tell me how to avoid the deep plowing and ridging and still kill the weeds.

D B M.

[We use a shallow cultivator as shown and described in the Corn Number. The horizontal blades destroy the weeds between the rows. Hand cultivation is the only answer we can give.—Eds]

N. Y., Afton, Chenango Co., Feb. 25.—We are having a very severe Winter in this section. The snow is about two feet six inches deep in the woods. Hay is worth $14@15; oats, 40c.; corn-meal and feed, $25@30 per ton; buckwheat, 55c.; potatoes, 38@40c. A desire is springing up among the farmers for better farming and greater improvement of farm stock of all kinds. A number of the wealthier farmers are getting thoroughbred stock. This seems to be the case generally all over the country, owing greatly to the agricultural press. We must have better dairies to compete with the oleomargarine trade. There is quite a little activity in the lumber trade; people seem crazy to get rid of their timber. The time is coming when timber will be scarce and high, if farmers keep on selling it around here for the next five or six years as they have been doing for the last five or six. There will not be timber enough left for building purposes and for fencing. G. E. N.

N. C., Brookston, Warren Co., March 1.—The early peaches are nearly all "gone up the spout." Common late seedlings seldom fail, and, by the way, don't you think that is the sort that has failed "but twice in fifty years" in that much-lauded Thermal Belt? I asked Dr. McAboy in reference to that; but he evaded a direct answer. M. B. P.

Ohio, Middle Bass, Ottawa Co., March 1.—Our Catawba and Delaware Grapes have been much injured by the extreme cold, so that it is hardly possible we can have a crop the coming season. Concord, Clinton and that class are uninjured. G M H.

Ohio, New London, Huron Co., March 5.—Wheat is as yet unhurt by the Winter, though it has been very dry since sowing. Good hay is worth from $12 to $15 per ton, it having been rather a better crop here than at most other places about us. Corn was a very good crop. Oats started to be very heavy, but rust made the berry very light. Potatoes were rather light. Wheat was a very fine crop. Factory cows paid from $40 to $60 per head; but dairy cows paid somewhat less where butter alone was made. Black leg slaughtered some calves here last Fall. I lost three and I charge the loss to neglect to let them have plenty of salt. These were the first I have ever lost by this complaint, and the first that ever went without salt once a week at least. The rest of the herd, four in number, came out all right from among their dead companions, as they were fed heavily on salt. Now, ye knowing ones—farmers of experience—tell us, through the good old RURAL, is not salt a preventive of this calf-killer? How many farmers are in the habit of salting their calves as they do their other stock. If this is an error, combat it; if truth, brace it up! BUCKEYE.

Pa., Berlin, Somerset Co., March 1.—We have had a splendid Winter; snow fell on Dec. 20. and the grain has been covered ever since; we could sleigh from that day until this, and it goes very well yet. This is a great maple-sugar country, and the farmers are all waiting for it to get warm so they can make something out of that before Spring work comes on. The price of the sugar is from 10 to 12½ cents per pound, and some farmers realize a handsome profit from it. S. B. P.

Wis., Albany, Green Co., March 3.—One of the meanest things to be seen all through the country at this cold season is the poor fowls sitting in the tree tops until they fall stiff and dead. Winter wheat brings 75c; Spring wheat, 60c.; oats, 27c.; corn, 30c; potatoes, 25c.; butter, 25c.; eggs, 22c. W. L.

BOOKS RECEIVED.

(See page 191 for other notices of books received.)

We have received from A. R. Foote, of this city, a copy of a petition which will soon be presented to the Legislature of this State, asking that, by proper legislative enactments, Bureaus of Statistics, Laws and Information be established—first, for all corporations representing capital only, in which the control of the corporation is determined by one vote for each share of capital; second, all corporations representing humanity only, in which the control of the corporation is determined by one vote for each member, said vote to be cast in person; third, that this bureau include in its duties the collection of statistics and information relating to industries and employments and the well-being of wage-earners generally; fourth, that these bureaus be placed under the executive administration of one or more commissioners for each, having full authority.

REPORT OF THE KANSAS STATE HORTICULTURAL SOCIETY FOR 1879. This work of 460 pages, octavo, is excellently gotten up, and contains a great wealth of horticultural information about Kansas. It contains reports of the proceedings of the State Horticultural Society for its ninth semi-annual meeting held at Beloit, June 17, 18, 19, and of its thirteenth annual meeting held at Holton, December 16, 17, 18, 1879, together with the proceedings of Division, County and local Societies.

The Querist.

Farcy—Early Symptoms of Contagious Pleuro-Pneumonia.

M. O. C., Gibbon, Neb, asks the cause of, and a remedy for, sores on his horse's leg. There are three on the inside of the ham, two below the pastern joint, and indications of several above. They commence as hard lumps, the size of a hickory-nut or less, and break; but there is no discharge of pus, but merely a raw surface sticking out like a wart, which refuses to heal, and bleeds when the scab is removed. The horse is in first-rate condition, feels well, and is not lame; but the leg stocks and sores are very tender; 2, what are the symptoms observable to the non-professional in the first stages of pleuro-pneumonia among cattle, and what remedies should then be applied; 3, by whom and for what price is any paper published in the interest of veterinary practice.

ANS.—1. On reading the customary symptoms of farcy in our last issue, our friend will see that he describes the symptoms of that disease. As there stated, farcy and glanders are one and the same disease, dependent on the same cause, namely, "a specific blood poison;" but each has a different manifestation, glanders showing ulcers on the nasal septum, discharge, etc., while farcy shows itself on the line of the lymphatics in small tumors on parts of the body, notably on the inside of the hind legs. This disease is highly dangerous to man and other animals; for if any of the pus from these tumors should get on a man's hand on which there is a recent cut, and thereby be absorbed into the system, it would be sure death. This animal should, therefore, be destroyed, and the stall, harness and everything that he came in contact with should be disinfected before allowing another horse to come in contact with them. If the owner is not satisfied that the disease is glanders or farcy, let him inoculate some old, worn-out horse with the virus from one of these tumors, and he will find out in two weeks that he has transmitted the great scourge of the horse. It *cannot be cured* in horse or other animal. Farcy runs its course until glanders develops, which will close the scene. Many men have died from this disease, contracted from the horse. In the interest of our friends, therefore, we are anxious that each should be able readily to distinguish the malady, and should know why, for his own sake and that of his neighbors, he should at once get rid of the afflicted animal. 2. The earliest noticeable symptoms are chiefly the following:—There is a slight rise in the temperature, discernible by the use of the thermometer. Should the temperature of a healthy animal, for instance, be about 100°, that of an infected one would, at this stage, range from 102° to 104°. At the same time there is a slight loss of appetite; a decrease in the flow of milk; rapid respiration; faintly, unusual sounds in the bronchial tubes; a peculiar grunt when forced to move; a dribbling of saliva from the mouth; a slightly accelerated pulse; often an occasional shivering fit; rarely a slight, hard, dry cough, especially after drinking; a disposition to keep apart from the rest of the herd, and, if pregnant, abortion. Like consumption in human beings, this disease cannot be cured; yet all cows suffering from it do not die, for nature incloses the diseased lung with a membrane, and in favorable cases the other organs of the body return to their normal functions. Still the recovered animal is not cured, for she has the effects of the disease inclosed within her body; and many instances are on record where a recovered cow has carried this disease into healthy herds a year after such recovery, and all this time she appeared perfectly healthy to non-professional eyes. There is, therefore, no cure for this malady, and the sooner the Government takes the matter in hand and stamps out this terribly fatal scourge the better it will be, not only for the Eastern States, but for the whole country, else we shall soon come to the condition of Australia, where it is an impossibility to control the disease, owing to the wild state of the country and the wide range afforded cattle. 3. The "American Veterinary Review," published monthly; $4 per annum; A. Liautard, M. D. V. S., editor, 141 West 54th Street, New York.

Very Hardy Flowering Shrubs.

A Subscriber, Fayette Co., Ia., writes us:

"In looking over the columns of the RURAL'S hardy tree special, it seemed to me that I was learning more of tree culture than could be learned by observation in a year. Still I am in doubt as to the hardiness of many (most) of the flowering trees and shrubs, and the thought, will they stand Iowa weather? puzzles me. The present Winter has given us three months of severe weather already, with no prospect of warming up at present; the thermometer has stood as low as 38° once and at 20° for several days at a time. I have been a resident of Northern Iowa for fifteen years and have never seen only one year in that time during which the mercury sank as low as 30°. Will you please give a list of shrubs and vines that will stand such weather, if there are any except natives.

The Iowa farmer's first tree planting is usually White Willow for wind-breaks; then a few apple (and the hardy ones are few) Cottonwood, Soft Maple, Box Elder and a few native pines, if they can be obtained. Shrubs are confined to lilacs and snowballs."

ANSWERED BY ELLWANGER & BARRY, ROCHESTER, NEW YORK.

It is very difficult, without actual experiment, to name any considerable number of flowering shrubs that will endure a climate where the mercury frequently falls during Winter to 30° below zero. We will name a few that we think will stand, but they will be much more likely to do so if sheltered from the prevailing Winter and early Spring winds, and planted on dry ground where they will ripen their wood well. This is important, because on the rich, moist prairie soils plants grow so late and so succulent that even very hardy things get winter-killed. Then a little protection for the first, and perhaps the second Winter would not be amiss.

Plants when well rooted and established in the ground can resist cold much better than those whose roots are near the surface. But we would say to your correspondent that even if all these which we are about to name should succumb and he were to fall back on his lilacs and snowballs, he would not be as badly off as he might be. He may have twenty varieties of lilacs if he chooses, white, red and purple, with all intermediate shades and a great variety of foliage and habit of growth. If he will plant twenty or, better still, fifty of these (in groups of a dozen), and mix with them the snowballs and other viburnums equally hardy, he will have a display worth a journey of many miles to see. However, we think the following if properly managed, as we have suggested, will stand by him through his hardest Winters:—

Berberry (Canadensis), our native; Cornus (Dogwood), Red-branched and Variegated-leaved; Deutzia, scabra and crenata: Lonicera, the Upright Honeysuckle, all the species and varieties; Philadelphus (Syringa or Mock-orange), several species and varieties; Spirea—Billiardi, crenata, obovata, opulifolia and its golden variety, perhaps, some others; Lilacs—twenty or more species and varieties, all beautiful and fragrant: Viburnum—lantanoides, prunifolium, rugosum, Opulus (the High Bush Cranberry) and Opulus sterilis, the snowball.

HARDY CLIMBERS.—Ampelopsis (quinquefolia), the "American Ivy." Honeysuckles—The common Woodbine; the Scarlet Trumpet; the Yellow and the Canadensis—perhaps others. Among flowering trees which will stand, we would suggest the thorns and Crab Apple.

Your correspondent, even in his very cold climate, might succeed with many fine shrubs, not named above, such as Weigelas, etc., etc., by giving them some protection in Winter. We advise him to try them; it will not cost much.

Club Root in Cabbages.

A. O., Meadville, Pa., asks the cause of, and remedy for, club root in cabbages.

ANSWER BY G. H. FRENCH.

"Club root," or "clump root," is a disease affecting the roots of cabbages, causing them to be very much enlarged. One writer says it is caused by the larva of a small beetle boring and burrowing into the roots soon after they are transplanted, or it may be later in the season. Another writer attributes the disease to the larva of what is known as the cabbage fly (Anthomyia brassicæ), working in the same manner in the roots. Without arguing as to which is correct, it is evident the disease is caused by an insect. The malady is found to be most common on ground that has been set to cabbages every year for a number of years, while the cabbages are seldom affected with the disease when set on new ground, or when alternated with some other crops. This suggests to us the most easily applied remedy—that of not raising cabbages on the same ground during successive years. A great many things have been applied as remedies to but little purpose, usually because the damage is mostly done before the presence of the disease is suspected, and therefore the remedies are applied too late. One writer states "that he has found by long experience that club root in cabbage can be remedied by boiling leaves and twigs of the scarlet-berried elderberry to a strong decoction, and pouring a gill, cold, on the center of each plant. One application is generally sufficient." The English, I am told, guard against all kinds of root-eating insects in cabbages by the following method: Before each plant is set its roots are wet and then dipped in soot, after which they are set in the ground as usual. This makes a more or less complete coating of soot around the roots. This serves to keep away insects, it being distasteful to them, and if not too strong serves to invigorate the growth of the plant.

Fertilizer Queries.

A Subscriber, Norwich, N. Y., asks, 1, what is the value of night soil as compared with horse and cow manure, and how should it be used; 2, what is the value of the scrapings of hides from tanneries—hair and lime, mostly; 3, what would be the effect of plaster on horse manure and straw as the stuff comes from the stable. 4, Referring to a recent article in the RURAL, under the caption, "Manure against Humus," he asks whether $100 could be more profitably spent in producing nitrogen, phosphoric acid and potash by purchasing grain, linseed meal, cotton-seed meal and wheat bran to be fed to farm stock, than if the same sum were paid directly for commercial fertilizers.

ANS.—1, There is very little difference between night soil and animal manure. The following figures will show the relative fertilizing values:

In 1,000 pounds of	Nitrogen.....	Phosphoric acid.....	Potash.....
Mixed barnyard manure, fresh.....	4.5 lb.	2.1 lb.	5.2 lb
Fresh night-soil, liquid and solid...	7.0 lb.	2.6 lb.	3.1 lb.

Night soil is best used mixed with earth in sufficient quantities to make a dry mass. 2, This kind of tannery waste is usually sold at one dollar a two-horse wagon load of 40 bushels, which is about its full value; hair contains less than one per cent of ash and about 17 per cent of nitrogen, but the nitrogen is very slowly available. 3, The effect would be to absorb any ammonia that might be produced in the manure, and nothing more. 4, One hundred dollars spent in such feed as you mention would be of greater benefit than if spent in commercial fertilizers; a large portion of the feed would be returned in milk, flesh or fat, and the remainder would add largely to the value of the manure; the two returns together would be considerably more in value than the cost of the feed, always supposing that the feeding should be done skillfully and economically and the manure well saved and managed.

Manure in Texas, Etc.

R. B. A., Pipe Creek, Bandera Co., Texas, has the manure accumulated from 1500 sheep since 1878, and wishing to raise Chester County Corn, he asks, 1, how many two-horse loads he should put on per acre; 2, if onions will do well so far South, and when they should be sown to have them for sale in the Fall and Winter; 3, will small fruits, strawberries, raspberries, etc., thrive in that locality; 4, who has pure-bred American Merino sheep for sale, and how much will they shear per head annually; 5, is English rape good feed for sheep?

ANS.—1. It will depend entirely upon the present fertility of the soil. The virgin soil of Western Texas is, as a rule, rich, and does not need much manure. We should think that 25 or 30 loads per acre would be sufficient, or even less. 2, Onions will do well in your latitude. Sow the seed in January or early in February. Harvest the crop when it is ripe, and preserve them in a shaded but airy place till you wish to sell. 3, The climate in Bandera County is too hot and dry for small fruits. The plants will in all probability be killed by the sun during July and August. But try a few strawberry and raspberry plants, by way of experiment, and report the result to the RURAL. 4, J. M. Campbell, Tilden, McMullen Co., F. W. Shaeffer, San Diago, Duval Co., and George Reynolds, Penites, Nueces Co., Texas, are breeders of American Merinos. The average weight of the washed fleece is about six pounds per head annually; but occasionally we hear of a ram of extraordinary size and quality shearing 15 to 20 pounds. 5. Yes; especially for feeding in Fall or Winter or early in Spring.

Culture of Cucumbers For Pickles.

E. J. S., Oneida, N. Y., asks for information as to the culture and profit of cucumbers for pickles.

ANS.—The ground should be plowed once or twice in the Spring, and, if sod land, it should be turned over the previous Fall. After the middle of June furrow out the field, having the furrows from four to five feet apart. At a distance of four feet apart, in these furrows, make the hills, and in each hill put a shovelful of well-rotted manure, over which throw a little earth, and on this plant the seed. The cultivator may be used in cultivating, though the work around the hills requires the hand-hoe. When the vines begin to run, pinch them off at the third joint and the crop will be increased. For pickles the seed should be sown the latter part of June or the first of July. The best variety for this purpose is the Green Prolific. It is well to plant plenty of seed as the "striped bug" may destroy some; and when the vines begin to run, all but three plants to a hill may be pulled up. Fine bone-flour sprinkled on the hills every day or two often rids the vines of these pests. A solution of tobacco put on the vines in the early morning and then a sprinkling of bone-dust are effectual, but there is nothing better than flour of sulphur mixed with plaster or finely-sifted coal ashes. We have no statistics at hand concerning the yield, cost and profit per acre, farther than that a large grower on Long Island realized a profit of from $125 to $150 per acre, when the cucumbers were contracted at $1.75 per thousand.

Gas Wells.

A. M. T., Farmington, W. Va., asks, 1, the address of some persons likely to purchase coal lands; 2, in a neighboring creek the water boils up in several places accompanied with gas that ignites readily, and our friend asks whether this is a sure sign that petroleum exists below, there being a petroleum well six miles away; 3, is there any means of analyzing gas, and if so, how should it be confined for transportation to the place of analysis.

ANS.—1. Write to Mr. B. R. Western, coal editor of the Mining Record, 61 Broadway, New York. 2. No. There are gas wells which produce nothing but gas, but it is a favorable indication of the proximity of oil. 3 Gas can be readily analyzed. A sample can be procured by inverting a bottle in the spring; the gas which enters the bottle will drive out the air and by keeping the bottle mouth downwards until it is corked tightly, the gas can be secured. If you want the gas analyzed it can be done for about $5, through Mr. Western, the above-named. But it will be hardly worth while. The gas is a common product and is simply carburetted hydrogen with varying proportions of carbon in it.

Alfalfa.

S. E. S., South Livonia, N. Y., having seen an article from the RURAL attached to a circular about Alfalfa, asks for further information about that fodder plant.

ANS.—Alfalfa needs a rich, well-drained soil. The plant, unlike our red clover, is perennial. It makes a comparatively feeble growth the first season and should never be cut or pastured. It spreads less than red clover and requires, therefore, more seed to the acre—not less than 15 pounds. It succeeds admirably in California and Kansas, and is being tried in Northern and Eastern States. We know of one instance where it is doing well in Southern Canada. It will endure any amount of drought, as its roots extend to a great depth in the soil. We should have no fear as to "getting rid of it" by plowing. In Kansas Professor Shelton informs us that he cut "four large crops from the same ground" in 1879. The ground should be thoroughly prepared, the seed harrowed in and rolled.

Digestibility of Foods.

F. W. L., Smith's Grove, Ky., asks whether we have any data as to the time it takes cattle, horses and sheep to digest hay, straw and fodder corn.

ANS.—For very obvious reasons it is impossible to arrive at any direct knowledge of the time required for the digestion of the foods mentioned. The nearest approach to it is in those few cases in which post-mortem examinations have been made of healthy animals that have been slaughtered. It has been observed by butchers that food is present in the stomachs of ruminating animals 12 hours after they have been fed; while it is known that a horse digests his food much more rapidly. In Dr. Beaumont's well-known observations made directly upon the stomach of a living man, which had been opened by an injury and had healed, it is recorded that cooked corn-meal was completely digested in four hours and fifteen minutes. From the well-known periods of the returning appetite of a horse there is reason to believe that a meal of hay or other fodder and corn or oats is digested in four or five hours. A cow or ox requires longer than this to completely digest the food, as the process of rumination occupies a considerable time. It is one of those subjects upon which we shall perhaps never have precise data.

Bitter Milk from a Farrow Cow.

H. G. C., Watkins, N. Y., has a farrow cow that gives bitter milk; some time since he saw in the RURAL a recommendation to give one ounce of saltpeter a day in a like case; he has tried the recipe for two weeks with very little benefit. He has been feeding corn-stalks and a little straw with one quart of buckwheat each day, and he asks for some preventive of the bitter milk.

ANS.—Nothing that you could give the cow could change the natural effect of the poor feed you are giving. "Nothing can come of nothing," and it would be difficult to find a poorer feed than you are using. Buckwheat is the worst possible feed for milk and butter, and straw and corn-stalks are very poor fodder. If you were to cut up the corn-stalks and straw, and give the cow two or three quarts a day of corn meal, it might avoid the defect complained of. But a farrow cow's milk may be bitter in spite of all treatment and devices, because the condition of the cow may cause it, and that may not be helped probably. But to feed a farrow cow on poor feed is provocative of such trouble.

Cleaning Pearl Millet Seed.

M. S., Kansas, asks how to clean seed from the heads of Pearl Millet.

ANSWERED BY W. B. JONES.

In the absence of a power "machine" for cleaning the Pearl Millet seed, the simplest way of doing it is by use of a common horse curry-comb. Place the heads of millet on a board or table and pass the curry-comb gently along them, combing off the seed from the husks. Some one should devise a machine for cleaning this admirable grain and make money out of it. I have one, but it is not perfected in the mechanism, yet it daily does the work of cleaning from 30 to 50 bushels. This grain cannot be thrashed or treated like any other. It must be taken off by the combing process. Some instrument or machine with revolving teeth would be the right thing. Pearl Millet as a green soiling forage plant for all the Southern and Middle States on rich, sandy soils, exceeds any plant yet tried, and must become a favorite crop in the future of soiling and ensilage. [A trial of the Rural Branching Sorghum may change Dr. Jones's opinion.—EDS.]

Hen Manure and Ashes.

T. P. D., Ostreme, Mich., having a quantity of hen manure and wood ashes, asks how to apply them, with best results, to corn—would it be best to mix them and apply them in the hill and then plant, or would it be better to sow them broadcast before the last dragging.

ANS.—In no case should the wood ashes and hen droppings be mixed for any length of time before they are used, as the former would liberate the nitrogen in the latter, most of which would go to waste. If mixed just before application, however, the soil would retain the liberated nitrogen. Unless land is very poor and manure scarce we *never* advise manuring in the hill. Hill-manuring helps young plants, but renders the least assistance when assistance is most needed. You need not be afraid of sowing too much broadcast. The proper quantity would depend entirely upon the fertility of the soil. It *may* be that your land does not need potash. Try on one part the hen manure and on another the ashes.

A Recipe for Making Posts Durable.

W. D. I. Yakima, W. T., asks our opinion as to the value of the following recipe for making posts durable:—"The American Chemist says that a Western farmer discovered many years ago that wood could be made to last longer than iron in the ground. Time and weather, he says, seem to have no effect on it. The posts can be prepared for less than two cents apiece. This is the recipe: Take boiled linseed oil and stir in it pulverized charcoal to the consistency of paint. Put a coat of this over the timber, and, he adds, there is not a man who will live to see it rot."

ANS.—Wood is rotted by the action of the air and moisture. Any substance which will tend to prevent this action will in the same measure preserve the wood. To what extent the above recipe will effect this can be ascertained only by experiment, and we know of none having been made.

Using Refuse Animal Matter as a Fertilizer.

S. E., Saugus, Mass., has 100 tons of the refuse from a glue factory, including the residuum after the extraction of the gelatine in glue-making, and chippings of the skins of animals with some of the hair on them, and he asks how to compost it so as to fit it for fertilizing purposes more speedily and economically than by mixing it with muck.

ANS.—Under these circumstances there is no occasion to undertake the heavy labor of composting all this 100 tons of valuable fertilizer in the way you propose. You can more easily arrive at the same end by spreading it directly on the soil and plowing it in with a light lap furrow. Then the harrow will mix it with the soil and it will be the very best compost you could possibly make without the labor of mixing it and turning it and hauling three times as many loads to the field. Precisely the same end is reached in either way, and you had better choose the simplest and easiest.

Injury to a Horse's Knee.

J. F. A.,—address mislaid—says that about six weeks ago his mare, while pawing in the stable, struck her knee. It swelled to twice its natural size. He sweated the place with bran wet with vinegar in which smart-weed had been steeped. The swelling was reduced and the inflammation removed, but the large bone on the inside of the leg above the knee, and also the front of the knee, continue enlarged, and he asks what will reduce the enlargement.

ANS.—Rub the following ointment on the enlarged part: Cantharides, half an ounce; biniodide of mercury, two drachms, and lard, four ounces. Smear the leg *below* the blister with sweet oil to prevent excoriation from the product of the blister running down, and secure the animal so that it will be impossible to get her mouth to the blistered part. Repeat if necessary. Give a couple of weeks' rest.

Incipient Ringbone.

J. C., Stewart, Minn., has a valuable young mare on one of whose fore-legs a ringbone is making its appearance, rendering her very lame, and he asks how to treat it.

ANS.—Have a regular veterinary surgeon fire and blister the affected limb at once, and give two months' rest at grass; and, if any lameness remains, repeat the operation. If there is no competent surgeon at hand, take the following ointment, and, after clipping the hair short, apply with friction:—Cantharides, powder, half an ounce; lard, three ounces. Secure the animal so that she cannot get her mouth to the blistered limb; give rest as in firing, and repeat if necessary.

Feed for Cows in Winter.

J. C. K., Castile, N. Y., asks what feed is the best for milch cows in Winter.

ANS.—There is no better food than clover hay or well cured corn fodder, cut and well mixed with corn, oats and wheat or rye bran ground together in equal parts. Four to six quarts a day of this ground feed may be given to a cow that is milking well. If the labor of cutting and preparing the food is more than the extra milk is worth the feed may be given dry. But the cut and moist feed will add at least one-third to the quantity of milk and one-third less hay or fodder will be used.

Hardy Cactuses.

F. F. A., Loudonville, N. Y., asks us to name and describe the kinds of cactus that are hardy enough to stand the Winters of this State.

ANS.—Opuntia vulgaris, the common prickly pear; O. Missouriensis, which is thickly covered with tufts of bristles; O. Rafinesquii which is somewhat like vulgaris and several of its Western forms: also Echinocactus Simpsoni, a neat but rather scarce white-spined "pincushion" species; and Echinocereus Krausei, a handsome, red-blooming "bunch" cactus.

Miscellaneous.

W. H., Van Wert, Ohio, asks what percentage of nutriment is there in oat straw, turnips and wild prairie grass.

ANS.—The following table gives the information desired:—

Per cent of	Oat straw.	Turnips.	Prairie hay.
Total albuminoids, or flesh-formers	2.3	1.1	7.5
Digestible albuminoids	0.8	1.1	3.4
Total carbohydr's fat-formers, inc. fiber	36.4	6.1	51.7
Digestible carbohydrates	18.7	6.1	34.9
Total fat	1.0	0.1	1.5
Digestible fat	0.	0.1	0.5

It will be noticed that the whole of the organic matter of turnips is considered as digestible nutriment. It must be taken into account that these are combined with 88 per cent. of water, while the oats and prairie hay have but 14 per cent. This fact leaves the indigestible organic matter of turnips so small in amount as to be practically not worth considering. Taking account of the fact that turnips contain six times as much water as the other substances, they are seen to be much more nutritious in proportion to the dry matter.

A Subscriber,—address mislaid—has five fields for a rotation of crops for mixed husbandry, but he finds that he can never get enough of grass and he asks whether he should make another field, reducing the size, of course, of those he has now.

ANS.—The fault with a five-field rotation is that it is exhaustive of the soil and does not produce manure. It is necessarily confined to corn, oats, wheat, clover and grass, and these crops are totally inconsistent with good farming and the keeping of sufficient live stock. A seven-course rotation is preferable, and it may be worked on four fields very well by having three fields under two crops. This rotation would be wheat, grass, pasture, corn, roots or fodder crops, barley or oats, seeded to clover, and lastly clover. The advantages of this rotation are, two fields for hay and one for pasture, one field of roots or fodder crops, and two succeeding cultivated crops by which the soil is cleansed from weeds. These advantages are obvious. A five field rotation is but little better than a four field one, because enough cattle cannot be kept.

W. A. D., Clinton, Conn., says that a year ago he had some raspberry canes which he thought had gone through the Winter uninjured, but when they should have put forth leaves they failed to do so, as they had been badly winter-killed. Last Spring he bought from Mr. J. T. Lovett some Cuthbert Raspberry plants which were very fine and made a rapid growth. He pinched them back from time to time and consequently they grew stout, bushy canes. But seeing it stated, in our Special Small Fruit Number, that the Cuthbert had been somewhat injured in some places, and thinking, therefore, that he might be mistaken in his belief with regard to the safety of his own, he has cut off the tops of several canes and sent them to us for our opinion on the matter.

ANS.—The specimens sent us are not injured in the least.

N. B. B., Pittsburgh, Ind., sends us a piece of the small intestines of a sheep that died suddenly without having shown any noticed signs of sickness. The bit of intestine, like all other small ones, was covered with little hard lumps, and in one place a large hole allowed the food to pass through; at this place there was a large, soft lump; and our friend asks what was the matter with that unfortunate sheep. The village doctor says the intestines showed signs of typhoid fever, but our friend "can't see it."

ANS.—The village doctor is right; under the microscope the peculiar organisms present in enteric, intestinal or typhoid fever are abundant. The inflammation caused the rupture of the intestine which is always followed by death in a few hours. The lumps are old deposits, resulting from previous inflammation, and have no connection with the present trouble. They consist chiefly of phosphate of lime and are by no means uncommon in the viscera of animals.

S. C. West Northfield, Mass., asks, 1, how much ground planted to fodder corn will it take to fill a pit twenty feet long, twelve feet wide and six feet deep, or 1,440 cubic feet; and, 2, if such a pit were properly filled what would be the value of its contents as compared with that of hay.

ANS.—2, Green corn fodder packed in such a pit weighs one ton for every 47 cubic feet. The pit will therefore hold about 31 tons. This may be raised on one acre; it has been grown on half an acre; but can be easily grown on one, by planting any large kind of corn, as the Southern white or Western Dent corn, and manuring and cultivating it liberally. The feeding value, as compared with hay, must be estimated in proportion to the water contained in the corn, which is equal to 75 per cent. while in hay there is only 15 per cent. Otherwise the fodder is nearly as valuable as the hay.

H. S., Easton, Md., asks whether it is advisable to plant whole potatoes; he has always cut them to a few eyes fearing to have too many plants in a hill.

ANS.—A good deal has been said in our columns on this question, to which our inquirer is respectfully referred. Whole potatoes will give a larger yield of small potatoes. Single eyes, if placed eight inches or more apart in the drills will give a better yield of large potatoes. We made some very careful experiments touching this subject, at the Rural Farm last season, the result of which we publish in this issue.

J. D. K., Lebanon, Va., asks, 1, how far from the ground and from each other should the wires be paced in making a wire fence to render it effectual against pigs, sheep and other stock; 2, will cuttings of Osage Orange of last year's growth, grow, if planted, and when should they be cut and set out.

ANS.—1, The lowest should be six inches from the ground. This and the next should be one foot apart, after that it doesn't so much matter. 2. There are only two ways of making hedges of the Osage Orange—from cuttings from the roots and from seed. The method of making such hedges was described in full in the RURAL for May 22 '80.

G. H. Parkhurst, Kings Co., N. Y., desires to know if the Chinese Yam (Dioscorea batatas, we presume) would not be a good substitute for the potato which is now so difficult to raise on account of the bugs.

ANS.—No. This has been tried again and again. The roots are too tender and too long; they grow too deeply in the ground. The larger end is at the bottom and it is difficult, therefore, to harvest the crop. Besides, the taste is not agreeable to most persons. Its first value is as a hardy, herbaceous, ornamental vine.

J. W., Ripon, Wis., says that if we wish he will send on for trial a specimen of the Jordan Prolific Potato which does well in that neighborhood.

ANS.—Yes, thanks. We are glad to try all very promising things and to report upon them. It is the only way by which we are enabled to present our readers with *fresh, original*, trustworthy information regarding NEW things. But we beg of our friends not to send us new varieties which are plainly inferior to old kinds.

M. A. P., Sterling Station, N. Y., asks, 1, where can a Weeping Beech, like that figured in the RURAL of February 12th, be obtained. 2, Whether Blount Corn will ripen thereabouts.

ANS.—Of *any* of the nurserymen advertising in our columns. Send for their catalogues. 2, It is doubtful if it will mature. Could not you try a small plot? It ripened with us last year two weeks earlier than it did the year previously. Perhaps you could acclimatize it. Dr. Chamberlin, who raised the first-premium crop, advertises seed at Medina, N. Y., not far from your place.

A Subscriber, Smithtown, L. I., asks, 1, what kind of Spring wheat is best for Long Island; 2 whether Spring wheat makes good flour.

ANS.—We have tried many different kinds of Spring wheat, but have never been very successful with any. Spring Mediterranean and "China Tea," as it is catalogued, have proven best. Champlain and Defiance promised finely one season, but hot weather and frequent showers seemed to shrivel the grain. Yes, good Spring wheat makes good flour, especially by the "new process" milling.

B. P., Okolona, Miss., asks us to recommend a washing machine for a family of six.

ANS.—We cannot very well answer such questions satisfactorily, because we need the information which can only be gained by experience with many different machines. A friend, however, recommends the Erie and Keystone Washers made by F. F. Adams & Co., Erie, Pa. Another, the Nonpareil Washer; still another, the Doty made by the Metropolitan Wringer Co., No. 32 Cortland St., N. Y. Perhaps the Robbins would answer nicely.

N. A., Dillsburg, Pa., asks, 1, whether we have tried the Russian White Oats, and if they are good; 2, when a clover sod has been turned under for wheat, will clover catch again.

ANS.—1. No. We propose to try them this Spring. 2, Decidedly, yes. A clover catch depends upon the seed, the preparation of the soil, and the weather which follows. Some talk of a clover catch as if chance had to do with it. Clover is as certain to grow as wheat if the conditions are made as favorable.

H. Y., Concord, has a cow from one of whose teats pieces of curdled milk come once or twice a week, and he asks how to treat her.

ANS.—This is probably caused by a disordered condition of the blood, or it may be caused by congestion of the udder. Give the cow eight ounces of Epsom salts, and afterwards one ounce of saltpeter once a day for three or four days. If the cow's dung is hard or dry this should be remedied by laxative food such as bran, without corn meal.

S. H., Auburn, N. Y., asks, 1, what is the speediest way of restoring ammonia to charred bone and leather which had been used in case-hardening tools; 2, having received the White Elephant Potato, he asks whether it will be necessary to send more postage stamps to secure the rest of the seed.

ANS.—1. Mix them with blood, hen manure and muck, guano, sulphate of ammonia, fish, farm manure, or, indeed, any substance rich in nitrogen. 2. No. You have sent your share of postage; otherwise you would not have received the Elephant.

A Subscriber, address mislaid, asks whether English Walnuts do well in the latitude of Central New York.

ANS.—English Walnuts do not grow as thriftily in this country as in England, especially in the northern latitude. The nuts are of as good quality, but the trees do not bear as well as they do in a more favorable climate. With high culture and a sheltered location they would produce more than they usually do growing in lawns without any care.

G. G. B., Manchester, Vt., asks how much more per month for a year can a farmer afford to pay a hired man if he does not board him than if he does.

ANS.—It is very clear that the difference should be the value of the board. This is easily ascertained, and it should be added to the amount of the wages. A frequent rate of wages is $15 a month and board, and $25 a month without board, $10 a month being generally considered as the price of a month's board.

A. J. P., Johnston, N. Y., has a Japan Snowball which in Spring is infested with small green worms that do not eat the leaves, but cause them to curl and the blossoms to fall. They don't seem fond of Hellebore, and he asks for some remedy they would be likely to take to more kindly.

ANS.—Try a tablespoonful of Paris-green to a pail of water. Sprinkle the bush as if it were a potato plant.

A. M., Lomont, Mich., having 12 peach trees to set out the coming Spring, asks, 1, how early should he plant them; 2, whether he can find the RURAL at the newspaper offices; 3, what is the best fruit drier, and where can it be found.

ANS.—1. As soon as the frost is out of the ground until the buds begin to push. 2. Sometimes; not always. 3. We must refer you to our advertising columns. We do not know which is the best.

W. B. N., no address, asks, 1, whether there is any known complete and thorough protection for plums and peaches against the curculio, one that is inexpensive, easy of application and not injurious to tree or fruit; he says he has just such a thing, and asks, 2, whether it would be advisable to apply for a patent.

ANS.—1. No. 2. Yes, if you are certain as to its efficacy, etc.

W. S., Lincoln, Neb., says that some eight years ago he saw in Missouri a fence built of pickets wattled in between wires, and having been told it was covered by a patent he asks whether it is patented, as he wanted to build one like it.

ANS.—We have made some inquiries about this sort of fence; but can learn nothing definite. It is probably patented, however.

E. F. D. Lynn, Mass., asks what value as a fertilizer have wood ashes and charcoal (mostly charcoal) the remains of a burnt frame building.

ANS.—The ashes would have only the value of leached ashes, as they are leached we presume. The charcoal would have no value as a fertilizer, as it is insoluble; but on a stiff soil it would have some mechanical benefit in lightening it.

F. M. B., Bucklin, Mo., asks whether there is any preparation into which pine shingles can be dipped, to preserve them, without injuring the water from the roof for cistern purposes.

ANS.—To steep them in crude petroleum is the best; it would flavor the water, but after a time this difficulty would disappear.

R. M. L., Oakburn, N. Y., asks whether the firm of G. H. W. Bates, of Boston, who advertise violins for $3 50, is trustworthy.

ANS.—Allowance *must* in some cases be made for extravagant language in advertisements. A *fine* violin *can not* be sold except at a loss for $3 50. The firm is good.

J. M. M., Strawberry Plains, Tenn., asks whether there is in this market a grass called Oat Grass.

ANS.—We do not find any grass of that name in any of the seed-men's catalogues, nor is it quoted in any of the market reports.

C. P. R., Brighton, O., asks for a recipe for a cheap, light-colored paint for a board fence.

ANS.—The RURAL has given several within the past year. But we have had no experience with

such cheap paints. Would some of our readers who have had, kindly answer.

H. H. Allen asks why we cannot give market reports up to the date of the paper.

ANS.—We give market reports up to the very hour of going to press. Your mistake is in comparing the *date* of market reports with date of paper. The RURAL is dated *ahead* nearly a week.

J. B., McLean Co., Ill., asks where can he obtain seed of the Chester County Mammoth and Blount's White Prolific Corn.

ANS.—Inasmuch as many of our advertising patrons have both kinds to sell, we do not think it would be quite fair for us to particularize.

A. G. Vaughan, Chester Co., Pa., inquires where he can get the best strain of Plymouth Rocks.

ANS.—We have had several strains at the Rural Grounds, and like Mr. C. S. Cooper's as well as any. His advertisement appears last in this column.

A. L. Long, Florida, says he has written to E. & O. Ward, who advertise in the RURAL, for one of their circulars, but has received no reply. Do they handle fruits and vegetables?

ANS.—Yes. The above note was forwarded to the Messrs. Ward, who reply that the application was not received by them.

G. S. N., Middlebury, Pa., asks whether the Hoosier Grain Drill, made in Richmond, Ind., will plant pumpkin seed with the corn.

ANS.—Yes, it will plant pumpkin seeds with the corn as well as corn alone, though the pumpkin seeds would not be dropped with as much regularity.

S. B. P., Berlin, Pa., asks whether a silo must be built frost-proof.

ANS.—It is only necessary that air should be excluded.

H. C., Peterboro, Ont., asks where thereabouts the common White-flowering Horse-chestnut can be had, and at what price.

ANS.—About 50 cents each. Please consult advertising columns for nurserymen.

J. E. D. B., Waverly, N. Y., asks where he can get seed of the Waushakum Corn, referred to in the RURAL Corn Special.

ANS.—From E. L. Sturtevant, South Framingham, Mass.

G. W., Auburn, N. Y., asks where would he be likely to get seeds of the Geranium sanguineum which was included in our Free Seed Distribution a year ago.

ANS.—Try Woolson & Co., Passaic, N. J.

W. H., Ionia, Mich., asks how to make movable racks for barnyard stock.

ANS.—We have in preparation an illustrated article on racks and other feeding conveniences, which we hope to publish shortly.

W. M., Penn Yan, N. Y., asks where can the Japan Snowball be got.

ANS.—Send for catalogue of the Kissena Nurseries, Flushing, L. I., or Ellwanger & Barry, Rochester, N. Y.

Many questions are asked as to where certain hardy trees and shrubs can be purchased.

ANS.—We reply—Send for catalogues announced in our columns.

I. P., North Blenheim, N. Y., sends a package of Spring wheat for name.

ANS.—We cannot name the variety, having had very little experience with Spring wheats.

T. J. L., Lowville, N. Y., asks where can he get the Buist Hardy Passion-vine.

ANS.—Write to Robert Buist, Jr., 922 Market Street, Philadelphia. He may know—we do not.

G. S. S., Snyder Co., Pa.—We have never tried pumpkin seeds in the corn drill alluded to. But we do not see why the machine would not drop them.

B. Steiner and at least fifty others inquire as to the hay sling mentioned by Professor Roberts in his late article. An answer is made by him elsewhere in this issue.

R. B. W., Mountain View, Ont. Can., asks where can he procure seed corn suitable for that latitude.

ANS.—Of William Rennie, Toronto, Canada.

W. S. S., Niagara, Ont., asks whether the Chester County Mammoth Corn ripens so far north.

ANS.—We should say it would not ripen there.

Stock and Poultry.

POWELL BRO'S,

Springboro, Crawford County, Pa.

THE MOST EXTENSIVE IMPORTERS OF

CLYDESDALES

IN AMERICA.

One importation for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow,

Largest and Finest Collection ever seen on the American Continent.

ALSO,

HAMBLETONIANS,

And other strains of trotting Stock.

HOLSTEIN & DEVON CATTLE.

Catalogues sent free. Address as above, and mention the RURAL.

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EGGS FOR HATCHING.

Light Brahma, Duke of York Strain, Plymouth Rock, Bishop & Ayers Strain $2.00 for 13, or $3.50 for 26. Warranted to hatch well.

C. S. COOPER, Schraalenburgh, N. J.

Miscellaneous.

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TRADE MARK.

THE GREAT GERMAN REMEDY.

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RHEUMATISM,

Neuralgia, Sciatica, Lumbago,

Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

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Also for sale STOCKBRIDGE MANURES.

BOWKER FERTILIZER CO.

BOSTON & NEW YORK

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

40 Happy Day, Chromo, Lace, &c., Cards, with name & morocco case 10c. H. M. COOK, Meriden, Conn.

$5 to $20 per day at home. Samples worth $5 free. Address Stinson & Co., Portland, Maine

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

Trees, Seeds, Plants, &c.

NURSERY FOREMAN WANTED! One who knows how to propagate and grow all kinds of first-class nursery stock. Address with reference P. O. Box 1643 Philadelphia, Pa.

10 **NICE CONCORD GRAPE-VINES for $1,** by mail post-paid. *Think of it!* Order now for early Spring shipment. *Circulars free.* **Wm. H. Reed, Chambersburg Nurseries, Chambersburg, Pa.** Mention this paper.

BULBS Seeds, Plants,

5 pkg's flower seeds,.....10c.
5 good Gladioli,.....10c.
6 good roses, $1. *Try them. Catalogue free.* N. HALLOCK, Creedmoor, N. Y.

Disseminator of the Mammoth Pearl and Magnum Bonum Potatoes (27¾ bu. grown from 1 lb. of seed), Berkshire Beauty Cabbage, Amber Cream Sweet Corn, La Plume Chestnut Celery, etc., etc. Elegant Catalogue free to all; send for it.

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☞ Special prices given on application.

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The New and the Choicest.

I will send this whole collection of 122 plants by mail for $4.00; by express for $3.00. See my free catalogue for special offers on New Grapes, Fruits and Flowers for the Family, &c. Strawberry Culture for a 1-cent stamp. 12 Kirkwood or Mt. Vernon, $1; 12 Longfellow, 50c; 12 Warren, 50c; 12 Marvin, 50c.; 12 Brilliant, 50c.; 12 Glendale 50c.; 12 Sharpless, 25c.; 12 Cum. Triumph, 25c.; 12 Duchess, 25c.; 12 C Downing, 25c.; and 2 of the **Bidwell**, 25c. Order early.

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MANGEL, CARROT AND TURNIP SEED.

Yellow Globe, Giant Red, etc., 40c per lb. Ask for Catalogue. Stamp required for Sample Packet of Vegetable or Flower Seed.

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A few responsible parties in good grape regions are wanted to plant *vineyards* of this most promising of all grapes, to whom special inducements will be given, and payment for vines made contingent upon production of fruit.

Address THE NIAGARA GRAPE CO., Lockport, N. Y.

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The undersigned keeps a supply of Early Amber and Early Orange cane seed, the product of different latitudes; hence adapted to various climates. The Orange is especially recommended for sugar making and for districts subject to hot sun in July and August. It has received the indorsement of the Mississippi Valley Cane Growers' Association at its late meeting.

Prices of seed at St. Louis: Early Amber, by mail, 3 pounds, $1; by express or freight per pound, 15c.; large lots, 10c. Usual discounts to the trade.

Early Orange, by mail, 2½ pounds, $1: by express or freight, per pound 20c.; large lots, 15c.

Kansas Orange, for northern culture, prices same as Early Orange.

No orders filled for less than $1. Remit by draft money order or registered letter.

Caution must be taken in selecting Orange seed, as when cleaned, none but an expert can detect it from some other variety, and the desire to speculate may induce some to mislead by selling other seed as Orange. It was for this reason that I had placed this seed in reliable hands last season for cultivation, in order to secure reliably pure seed for my trade.

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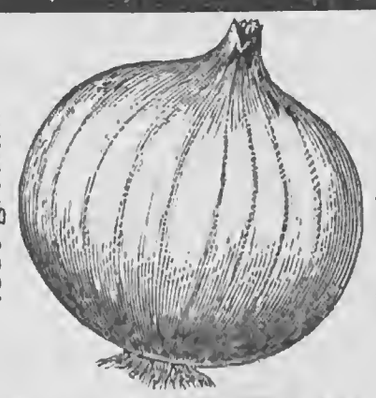

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Sanders, Fresno Co., California.

For Women.

CONDUCTED BY MISS RAY CLARK.

HER SYSTEM.

EDGERTON.

THERE lived, in days not very long gone by—
I could not tell you where, if I should try—
A lady, who was worthy, kind and good,
And all domestic arts well understood;
Her cooking, always tempting to the taste,
She took great pride in doing, free from waste;
She'd set a dinner fit for any king,
From ham and eggs, or some such simple thing;
She had a way, peculiarly her own,
Of always doing well whate'er she done;
She took great pride in always being neat,
As well as spreading toothsome viands to eat.
Her fav'rite hobby, all through life, had been
To keep her house as shining as a pin.
"A very model," she at length was termed,
And all her ways were patterned, taught and learned—
"A place for everything," she'd say with grace,
"And everything exactly in its place."

But all in vain her systematic plan,
Since she was wedded to a careless man;
He'd tell his wife, with blandly smiling face,
That *he* for everything had special place,
The only trouble being, that he forgot,
And ne'er again could recollect the spot.
He'd scatter helter-skelter, here and there,
And leave his traps a lying everywhere.

At length she hit upon a happy plan
By which she thought to cure a careless man;
She kept a bag of most capacious size,
Hung in a certain spot, hid from his eyes,
And in it dropped his little odds and ends,
As he would toss them to the careless winds,
And thought, forsooth, at some convenient time,
She'd empty out, and shame him of his crime.
But he, more cunning than she'd ever thought,
Had watched the woman well, till he found out
Where she, as stealthily as any cat
Had carried off and hidden, this or that.
"Aha!" said he, "this system suits me well,
I'll not be bothered any more to tell
Where anything may be I chance to quest,
For here, I find my lady's hidden nest!"

And any article he chanced to lack,
He'd go and gobble it from out the sack.
The upshot of her system, we are told,
Was, *being left with just the bag to hold.*

[This is how Mary Wager-Fisher's plan worked at our house.]

DESCRIPTION OF CUTS.

FIG. 166.—DRESS FOR LITTLE GIRL FROM FOUR TO SIX YEARS OF AGE.

The dress is of dark-green plaid, with hood lining, cuffs and sash, of red satin.

FIGURE 167, Key to figures. 1, black and white check. 2, salmon. 3, green check. 4, satin—pink and white stripe. 5, dark brown. 6, lavender and white. 7, black. 8, light green. 9, sky-blue, my mother's wedding frock. 10, cherry. 11, silver. 12, green and black check. 13, bottle-green. 14, black velvet. 15, scarlet velvet. 16, navy-blue. 17, striped gray. 18, violet satin. 19, black and white check. 20, brocaded white ribbon. 21, plum. 22, gray.

FIG. 169.—MUFF WITH SAC.

This muff is of black embossed velvet, with pointed drape of velvet, embroidered with silk or beads and edged with fringe; the sac is of black satin, trimmed with deep black lace.

FIG. 170.—BORDER: CROSS-STITCH AND DRAWN THREADS.

This border is suitable to be worked on crash, art canvas, or coarse linen. The cross-stitch is worked with colored Andalusian wool. The method of working over the drawn threads is clearly shown in the illustration.

FIG. 171.—BORDER: CROSS-STITCH.

This border is worked in cross-stitch with colored cotton or marking filoselle. A few back stitches are also employed. It is suitable to be worked round doilys, table-covers, servlettes, etc.

FIG. 172.—EVENING-CAP AND COLLAR.

The cap is composed of Breton lace, ornamented with a bouquet of flowers, and fastened at the back with a bow of ribbon. Collar of fine checked muslin, embroidered with crimson and blue silk, and edged with lace.

FIG. 173.—CRAVAT.

The cravat is of old-gold satin, edged with two rows of black lace, embroidered with gold; it is gathered at the back and front of throat, and is fastened under a bow of narrow ribbon.

FIG. 174.—BORDER EMBROIDERY.

This border is suitable to be worked over a joining of two materials; a braid is placed exactly over the join; the long and knot stitches on each side may either be worked in silk or wool.

CONCERNING PIANOS AND GIRLS.

MARY WAGER-FISHER.

I HAVE a great deal of sympathy with the young woman who, when asked if she played the piano, replied: "No, Heaven be thanked!" and I wish that there were a great many more who felt in a like way, for the piano has really become a national grievance, and the harm it has done intellectually, socially and esthetically is incalculable. Now that piano playing has become so common that people are satiated with it, and are turning to other occupations and accomplishments for their daughters, it is to be hoped that the *greatest* accomplishment possible to a woman will receive the attention it deserves. I refer to the art of talking well.

I suppose it would not be an exaggeration to say that not one-twentieth of all the women and girls in the country who own a piano, or are "dying" to possess one, can be credited with speaking the English language beautifully, so that it is a delight to listen to them.

In order to be a beautiful talker, one must possess a cultivated voice, a well stored mind, produced either by reading, travel, or observation, and the ability to express one's self fluently and elegantly.

Any woman who can do this, has the accomplishment *par excellence* of all accomplishments.

FIG. 166.

She can amuse, interest, entertain, and also instruct those about her, with a delight that is infinite in its range.

Society never wearies of her—she is the center of attraction; she possesses the charm which never grows old nor stale. Moreover, her great possession is in and of herself, and her delight in being able to express her thoughts and feelings in a fitting way, is very great.

Beauty, art and science have their fascination, but none of them equal that of a beautiful talker who has music in her voice, grace in manner and gesture, and eloquence in expression.

When Washington sat to Gilbert Stuart for the famous Stuart portrait, he had Miss Chew of Germantown, often accompany him, as her conversation, he said, brought out his best expression.

The fame of Madame de Stael's wonderful conversation will in all probability outlive the fame of the best pianist that ever lived.

Next to being a beautiful talker, I place the gift of beautiful singing. The two are very nearly allied in the effect produced upon others, and have much in common as an accomplishment which gratifies the possessor of it. There is a charm in a charming voice falling from the lips of a woman especially, that is beyond all measure, when the words she speaks are truly mated to the voice that utters them. But the piano—the dreadful piano, and the still more dreadful thrumming—the money wasted—the time wasted—the misdirected abilities—the back aches and the head aches, and I might well add the ear aches, that are the outcome every year of the piano and the music lesson! Is there not something better girls for the than all that?

I imagine I am as fond of instrumental music as most people, and I had my day at piano thrumming; but it was a comparatively short one.

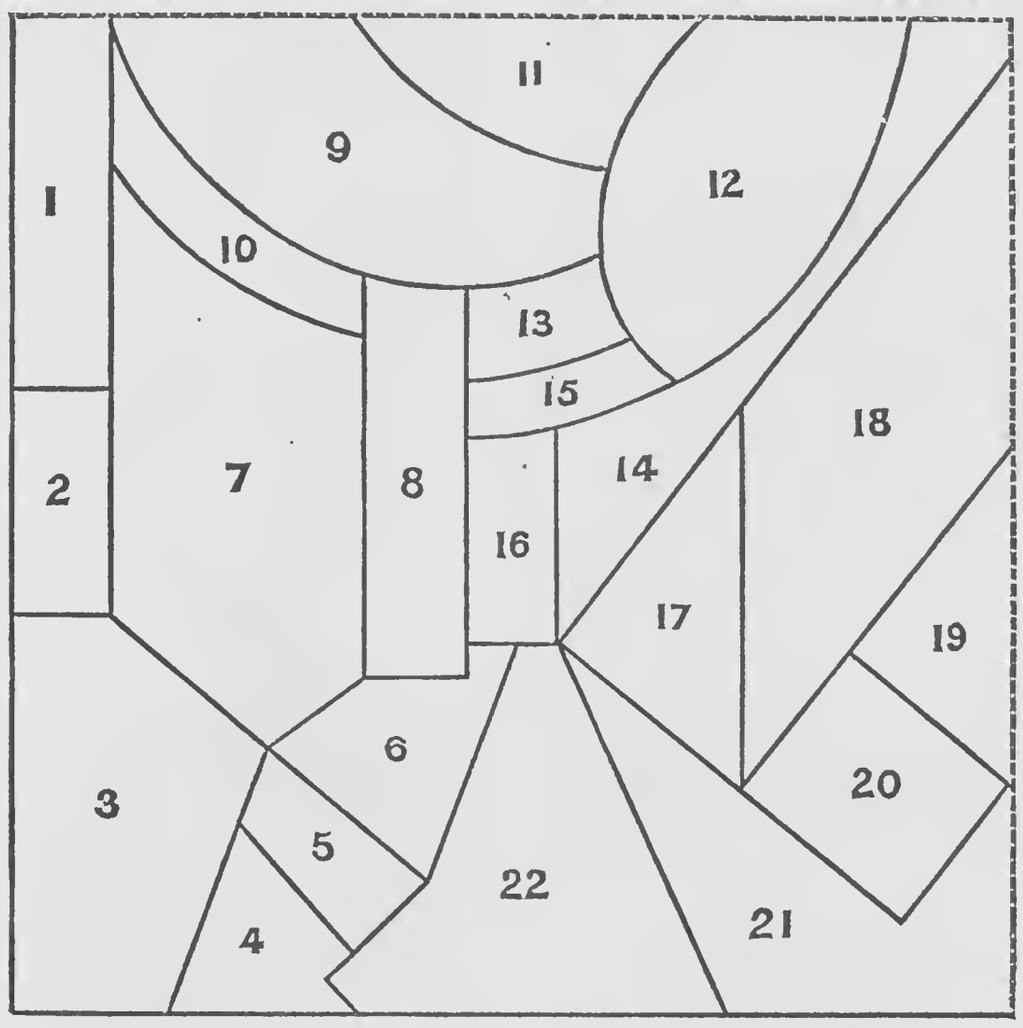

FIG. 167.

heard the usual praises that music teachers indulge in regarding my talent for music, I sang a little; that is I made a noise of varied sounds. But I very quickly perceived that with all the musical advantages possible, I should never be anything better than a fifth or sixth rate player to say nothing of singing, and I wisely concluded it was not worth the trouble.

And what of the thousands of young girls, who from the age of six to sixteen are placed at the piano and are absolutely forced to practice from one to four hours a day, whose girlhood is consumed in an almost profitless task, unless it may be satisfying the vanity of foolish an short-sighted parents. Is it not most pitiful?

The sound of singing and of music is delightful in a home, and serves a noble purpose, but only when it is a natural and an agreeable expression of feeling. A girl who goes singing through the house like a bird, pouring out a flood of gay and bright song, is like a rose in mid-winter; but the girl who is asked to play, who waits to be urged a little, and who goes through her score mechanically, or precisely as some one has taught her, who can make a great deal of noise and bob her hands about on the keyboard in a way that her rustic auditors think "perfectly splendid." Nothing, to the ear of an intelligent lover of music can be more dismal, and nothing, perhaps, to the soul of the girl less enjoyable. Poor thing, I say! Had it not been for the Juggernaut piano, she might have learned to draw beautifully—an exquisite accomplishment—to have learned to talk well, or perhaps to spell and write well, or to have cultivated flowers to such an extent both indoors and out-of-doors as to have delighted the eyes and noses too, of hundreds of people, and had the keenest sort of happiness, herself.

To young people who have an irrepressible taste for musical study, there is but one bit of advice—to go ahead.

People who have a decided bent for any thing, know by the best sort of knowledge, what they should do.

It is for the average girl for whom I plead; the girl who has no special talent for music, but spends her youth at the piano, because she, or her friends think it is fashionable, or "nice," or because some other girl is learning to play, who will be as sorry a failure as herself, and who might, if the same amount of money were expended in her behalf, as the piano and all its belongings cost, be developed into a really fine, useful and accomplished woman.

Neither do I think, because the piano has already been bought, that the girl must learn to play on it, when it is evident that to make her

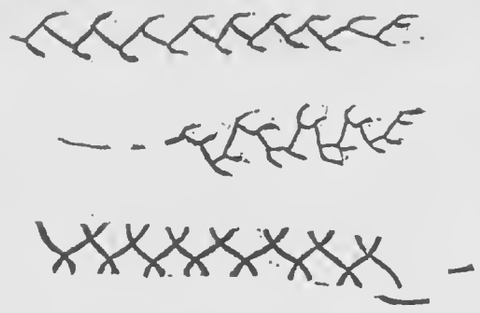

FIG. 168.

"practice" is distasteful and irksome. It is like eating an unwholesome dish of food for the sake of "saving" it.

To girls who are waiting, hoping, longing and planning for a piano, I want to say "DON'T." Think about it all around. Think of the room it will take up in the house and—in your time! Think of the money it will cost. Think what a heavy thing it is to move about. Think how carefully it must be cared for. Think how, of all accomplishments it is the most common. Think of the never ceasing practice, of the constant outlay of money it will entail, then think of other things that might serve you and yours vastly better.

Perhaps it may not be amiss to tell you that if you wish to study music for the sake of being fashionable, that it is quite the fashion now for misses and young ladies to learn to play the violin, the flute, the oboe, the harp, the clarinet, the bassoon, the kettle drum.

Of wind instruments, Mr. Sidney Lanier, who is an authority on the subject, says:—"No one at all acquainted with this subject will undervalue the benefits to female health to be brought about by the systematic use of wind instruments. Out of personal knowledge, the writer pleases himself often with picturing how many consumptive chests, dismal shoulders and melancholy spines would disappear; how many rosy cheeks would blossom; how many erect forms would delight the eyes which mourn over their drooping—under the stimulus of those long, equable and generous inspirations and respirations which the execution of every moderately difficult piece on a wind instrument requires."

Where there is a family of several girls, or of boys and girls, very delightful little orchestras can be formed, by each one learning to play upon a different instrument (always leaving out the piano!).

There is no instrument of the orchestra, excepting, perhaps, the heavier bass, which a woman cannot play successfully, and upon some of these instruments Mr. Lanier thinks that women, because of their superior daintiness, would make

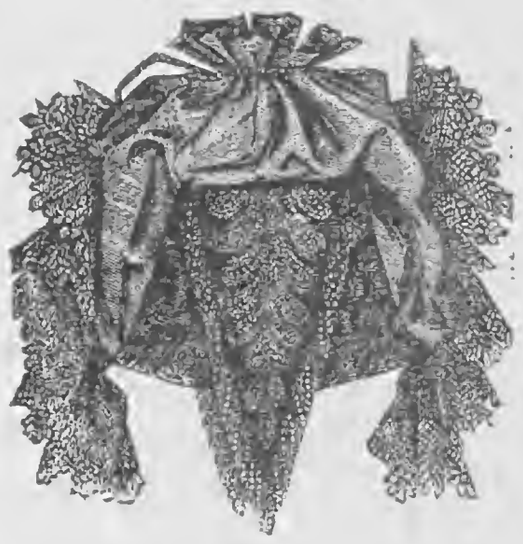

FIG. 169.

more successful players than men. This is especially so in playing the flute, and, one might also reasonably suppose, in playing the violin. So if any member of the family must play the piano, let it be one of the boys, who has no desire to increase the size of his chest. But if you have the gift of song—a singing voice—learn to sing as beautifully as possible. A beautiful singer is worth a thousand pianists, and a beautiful talker is still better. Remember that; and remember, too, that however lacking in money or advantages you may be, that you can do much yourself towards making of yourself a fine talker.

MRS. GARFIELD.

LUCRETIA GARFIELD—now mistress of the Executive mansion, is the daughter of an Ohio farmer. The public is not informed that she spent her girlhood in reading trashy novels, in curling her hair or in hemming ruffles for her petticoats. But it is informed that she learned latin, and learned it so thoroughly that years after she prepared her sons (in latin) for college.

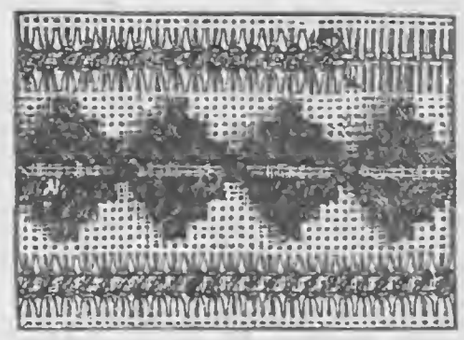

FIG. 170.

Although a thorough going housekeeper, the mother of quite a family of children, and always obliged to economize (for the Garfield's are not rich) she has kept her mind bright with reading and study, and herself an intelligent companion for her husband. It is worth while for our young farmerines to consider the possibilities that lie in their own future, and to ask themselves if they are spending the golden hours of their youth in such a way as will best fit them for positions of eminence and usefulness.

MARY WAGER-FISHER.

AN impertinent busybody importuned a young lady with the question, "What shall I say to people who ask me if you are going to be married?" "Say the truth," the girl promptly replied. "Yes, and what is truth?" continued the questioner, eagerly. "That you know nothing about it," was the conclusive reply.

CORRESPONDENT'S CORNER.

I SEND an illustration of one of my silk patchwork blocks, desired by "A New Subscriber." Of course no two blocks are alike. The block, as shown in Fig. 167, is thirteen inches square, and the key to the figures will indicates the color of the silks used. If "New Subscriber" actually begins a quilt, she will finish it in a short time, as it is very fascinating employment. M. W.-F.

DEAR MISS RAY:

Please excuse me for not sending the cat-stitch sooner, but I have been quite busy since I received the RURAL.

I think I worked my sister's sacque in coral-stitch, but the others I saw were worked in cat-stitch.

I should have said that the narrow striped bed-ticking is the prettiest foundation for a sacque.

The cat-stitch is the one represented at the bottom of Fig 168, and is the one usually used to lay open seams in flannel. It must be worked from you to get it right.

The stitch at the top is coral, or feather (I think coral is the more correct name). This must be worked towards you. The center one is double-coral, or double-feather stitch, but it is not suitable for working bed-ticking.

I shall try to tell you before long how to make lovely rugs, something, I think, entirely new to many of the RURAL sisters. MRS. W. V. A.

Mrs. R. S. will please notice this answer to her inquiry. Also please send address to RURAL'S office. R. C.

Literary Miscellany.

GO SLOW.

When you a pair of bright eyes meet,
That makes your heart in rapture beat;
When one voice seems to you more sweet
Than any other voice you know,
Go slow, my friend, go slow;
For brightest eyes have oft betrayed,
And sweetest voice of youth and maid
The very falsest thing have said,
And thereby wrought a deal of woe;
Go slow, my friend, go slow.

When you're convinced you are a poet,
And wishing all the world to know it,
Call on some editor to show it.
Your verses full of glow and blow,
Go slow, my friend, go slow;
For many a one has done the same,
And thought to grasp the hand of Fame,
And yet has never seen his name
In print. And why, waste baskets know:
Go slow, my friend, go slow.

When you to greed for money yield,
And long the mighty pow'r to wield
That's always found in golden field,
With senseless pomp and pride and show,
Go slow, my friend, go slow.
For thousands, tempted by the glare
Of wealth, have fallen in the snare
Set for the thief. And now despair,
Regret and shame have brought them low;
Go slow, my friend, go slow.

The good old Earth is never wrong:
Each of her works takes just so long;
Months pass before a happy throng
Of daisies in the meadows grow:
Go slow, my friend, go slow.
And Spring gives life to Summer's flow'rs,
And Summer's sun and Summer's show'rs
Prepare the fruit for Autumn bow'rs.
And Autumn frost brings Winter snow—
Go slow, my friend, go slow.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 178

CHAPTER VII.

RIDING IN THE PHILLEGOMOTER.

After rambling along for about half an hour I came to a cross street just as one of the long-distance phillegomoters descended to the pavement. A sudden impulse prompted me to take a ride in it, so I stepped aboard along with the little group who were waiting. Curious to observe every operation of this wonderful machine, I stood looking intently out of the window in the door as the car rose to the level of the track. I heard a voice say "Sit down!" but before I could obey the command I realized its importance: for the suddenness with which the car started off caused me to measure my length on the floor. One gentleman kindly interposed an arm, which somewhat broke my fall, and he, with two others, assisted me to my feet. Red with confusion, I stood shaking the dust from my clothing, when again a voice cried out, "Sit down!" A feeling as if my feet were disposed to stand still while the rest of my body was inclined to move forward would have ended in another fall had not a gentleman caught me in his arm and forced me into a seat.

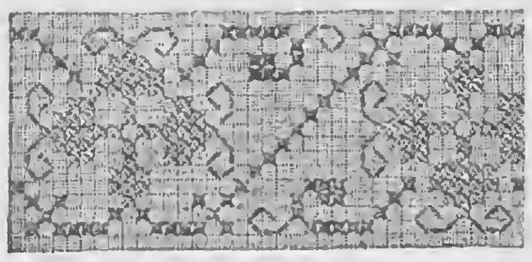

FIG. 171.

My mortification was so great that I believe I would have rushed out of the car had I realized that a station had been reached, but before my confused mind was able to take in the situation the car had descended to the sidewalk, taken on several passengers, and was rising again to its track.

I expected to see a smile on every countenance as one result of my mishap, but I was surprised to observe that not one of my fellow passengers showed the slightest disposition to laugh. On the contrary, there was an anxious look on every countenance, which seemed to at once disappear when, in answer to many kind inquiries, I replied that I was wholly uninjured. I could not but observe, however, that I was regarded by many with a look of pity; and when the gentleman next me asked kindly after my general health, all my fellow passengers seemed to stretch their ears to catch the reply, with so much solicitude that it was clearly apparent that they regarded me as a poor, unfortunate invalid, whose system could ill bear the jar of the fall which I had received. I was conscious of the fact that my physical appearance was far below that robust health which was a prominent characteristic of the people about me, but I never considered myself a person of weakly constitution. It is true that I suffered occasionally from headache and indigestion, and now and then a bilious attack obliged me to summon a physician; but these I regarded as the common, unavoidable ills of life, and I considered myself exceedingly fortunate, and that it was an evidence of the integrity of my constitution that I was never brought down to a languishing bed of sickness.

On five different occasions during my brief stay in the city inquiries had been made after my health, with a kindly solicitude which led me to fear that these keen-eyed people discovered something in my appearance which was really alarming, and I began to feel that it would be a matter of prudence to consult a physician. So I asked the gentleman next me if he could tell me where one might be found.

"Physician!" he repeated, with a look which seemed to imply that the word conveyed no idea to his mind.

"A doctor—one who heals the sick," I explained.

"Oh, yes, I understand you now," he replied. "But really, sir, I believe there are only two or three persons in the city who are ever called upon for advice in cases of physical debility. But never having had occasion to consult one, I cannot tell you where any of them may be found."

FIG. 172.

He then turned to an old gentleman who sat a couple of seats beyond him, and repeated my inquiry to him. He was an old man of a hundred and twenty-five or thirty years, judging from his appearance as compared with that of the old men whose ages I had learned. But even he was unable to tell where a healer of the sick might be found. "There is, however," said he, "a friend of mine, a very learned man, who has made ancient medicine a study, who, I think, would be able to give you some useful advice. His name is Autleman, and he lives on Ninety-second avenue between Two Hundred and Twenty-first and second st."

I remarked that I was an entire stranger in the city and requested him to give me the necessary directions to find the locality. The gentleman whom I first addressed at once offered himself as my conductor; for he said that I, being unused to their rapid mode of traveling, would be likely to be carried beyond my reckoning and thus occasion delay, while he would be able to conduct me by the quickest and most direct route. "And despatch," added he "is all important."

"Is the distance far?" I asked, with some anxiety.

"Between eleven and twelve miles," he replied. "But it is only a matter of about as many minutes, if we make prompt connections," he added, discerning the look of anxious surprise in my face.

I was beginning to feel that we could not get there any too soon. In fact a deathly sickness seemed to be stealing over me. Ninety-second avenue was away at the other side of the city, and Two Hundred and Twenty-first street was in a direction directly opposite to that in which we were going. So it was necessary for us to get out at the next station, cross the city to Ninety-second avenue and then go back to Two Hundred and Twenty-first. We had to use both the long and short distance lines, and four changes of cars were necessary. But we made the trip without any delay worth mentioning, and with a celerity of movement which would certainly have been fruitful of mishaps to me had I not been under the guidance of one naturally well endowed with vigor and quickness of thought and motion. It was a down, up and then advancing movement, during which one had barely time to get well settled in his seat before a mile station had been reached. And here I may observe that the seats, which were ranged along both sides of the car, were each a separate compartment whose projecting sides were well padded, so as to give suitable rests to the bodies of the passengers against the sudden movements of the motor.

It required some experience, I found to ride successfully in one of these cars. Promptness in getting up as soon as it touched the pavement, or getting on while those leaving it were getting off, and taking a seat before it had again reached the level of the track was essential to safety and dispatch in riding on the phillegomoter.

We reached Dr.—or rather Mr. Autleman's;—for there are none who follow medicine as a profession in this country—in just eleven minutes from the moment our purpose was taken. I almost forgot to say that I was at no expense for the long ride which I had taken. The different lines or phillegomoters being all owned by the city, the cost of running them, which was surprisingly low, was laid as a tax on the people so that they were free to all.

Mr. Autleman was not in, and an hour or more passed before he arrived. The gentleman who had performed such a kindly service for me, left me because of engagements which would not permit of further delay.

I cannot describe my state of mind during the time that I waited for relief from my sudden and unaccountable sickness. Men have died with much less pain than I experienced but few ever suffered greater mental disquietude in view of probable death. The good lady of the house, to whom I made known my story, showed the kindliest interest in me, and spoke of my condition in a tone of encouragement. But she could not disguise from my watchful eye the look of concern which appeared in her most sympathetic countenance. She repeatedly assured me that her husband would soon be home, and, unknown to me, sent a messenger to hasten his return, and she was so successful in keeping my mind occupied with pleasant conversation that I verily believe she was instrumental in preventing me from falling a victim to my morbid imagination.

At last the master of the house returned. He was a middle-aged man as the expression is understood in this country, say seventy-five or eighty years of age, and by far the finest specimen of an intellectual man that I had yet seen among this most noble people. His grand forehead, projecting far over his face, and rising broad, full, and high, spoke of a store-house for knowledge of unlimited capacity, and a reasoning power capable of resolving the most hidden secrets of nature. While his penetrating eye, gleaming from under his shaggy eyebrow indicated a critical acumen which searched to the very last analyses every subject which engaged his powerful mind. In other respects his face indicated great power combined with much delicacy, and though an expression of benevolence was not wanting, it seemed to be kept in obeyance by the commanding energy which was expressed in every lineament.

With many apologies for presuming to trespass on his time and attention, I made known the object of my visit, and by whom it had been recommended. Taking a seat beside me with a very deliberate air, he asked me to give him something of my history. I thought it strange that he should make such a request of a person in my condition, and gently suggested that he might, perhaps, first give me a cordial or tonic of some sort to relieve my distress.

"You need no cordial," he replied, in a most decided and emphatic manner, which was both silencing and reassuring.

From the questions which he asked as I proceeded with the account of my life, I observed that he was particularly interested in knowing about my parentage, my occupation and habits of life.

During the progress of my narrative, his eyes were bent upon me with the all-searching gaze of a seer, and what I told him seemed to be but little more than a confirmation of the story which his keen eyes read in my face and physique.

"There is no occasion for you to feel any anxiety over your present condition," said he, when I had finished my account of myself. "If you live among us and adopt our habits, you may reasonably expect a life prolonged to seventy-five or eighty years. But if you continue in your old habits, this period will be shortened at least twenty-five years.

"You have been unfortunate in your parentage, having inherited a physical constitution in which there are many points of weakness. You have been unfortunate in your education, in not having been thoroughly instructed in the laws which govern your various bodily functions, and trained to obey them. You have been unfortunate in your occupation and habits of life, inasmuch as that they have not been founded upon those inimitable laws of the physical constitution, the obedience of which is health and the enjoyment of life, but whose disobedience is disease and death.

"Every individual who is born into the world receives from his parents a heritage of constitutional vigor which is like so much capital in a bank. If it be rightly managed for him in infancy, and if he be instructed and trained to use it wisely when he himself gains control of it, it will be a continual advantage and enjoyment to him throughout a life which it will greatly prolong. But through ignorance, negligence or wilfulness it may be squandered, and the individual may find himself a bankrupt in all that makes life enjoyable before one-quarter of his years are told.

FIG. 173.

"Now your inheritance, not very large in the beginning, has been used with neither prudence nor intelligence; hence to our people, among whom health is regarded as the very foundation of happiness in the present world, you appear puny and feeble at a period of life when your physical vigor should be at its very acme.

"The only advice which you need is this: Observe the habits of the people about you, and cordially adopt them. And although you will never attain a large measure of physical vigor, you will yet be able to pass many years free from any portion of the terror which has driven you to consult me to-day."

He rose as he finished speaking, which I construed in a desire on his part that the interview might end. It is needless to say that I felt immediate relief, and, at the same time a strong suspicion came over me that my ill-feeling was surely imaginary. At all events I placed implicit confidence in the words of my adviser, for never yet had I met a person whose presence inspired me with so much respect for his wisdom and integrity. I took my departure with many thanks and apologies, which were cut short by a look from him the meaning of which could not mistake.

To be continued.

WHAT WILL HAPPEN TO YOU IF YOU LIVE TO BE OLD.

You will at first be surprised to hear yourself called an old man, or "the old gentleman" This you will soon begin to consider as a token of respect, but when, by way of insult, you are called "old dad" by insolent boys, you will long to see the bear coming out of the woods.

No, I am not an old man, will be your unspoken thoughts. I can walk, run and jump, which latter an old man cannot do. I have good appetite, good eyesight, good digestion, hear well, sleep well and enjoy life. True, there are some gray hairs and some wrinkles, but what of that? Others have the same that have never indulged the thought of being old. Why, there is my neighbor, he is nearly ten years older than I, he is engaged in active business with full as much anxiety and industry as his sons. True, he wears spectacles, so do many younger men or even myself, but that is simply an infirmity of slight account. And so you will argue from year to year, trying to convince yourself that you are not an old man, not even failing; not much, not much.

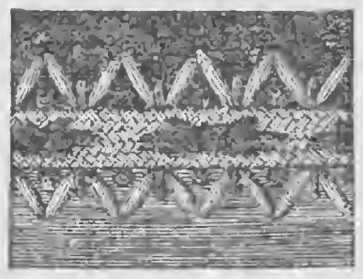

FIG. 174.

But at last you will be compelled to acknowledge that your joints are a little too stiff, that you get weary with a little extra exertion, and finally, that you get very tired. You hold your book at an inconvenient distance, your newspaper is blurred and you conclude to submit to wearing spectacles, at first the fashionable *pince nez*, but eventually this is not so convenient and as you have made up your mind to agree with your friends that you *are* in reality an old man, you adopt the old fashioned bow spectacles.

Time goes on, weariness increases, spectacles must be changed, partial baldness comes, hearing is capricious, not really deafness but an inability to distinguish between the words spoken to you; your hair has lost its gray and put on the white, your hands are a bunch of wrinkles and veins, your face has lost its color and your flesh is shrunken, and weight diminishes. You fall and are hardly able to rise, the slight moisture naturally exuding from the skin has nearly dried up, and for the want of the friction that it should afford, things drop from your hands despite your clutch. You incline forward either in standing, walking or sitting, you try to counteract this attitude of decrepitude and to stand erect, but the cartilages that have held the joints in proper shape have shrunken on one side from unnatural pressure and will not let you up.

Ambition fails, memory is treacherous, the tongue does not obey volition, and you fall over the least obstruction, and finally you are ready to say with the immortal poet, "sans teeth, sans eyes, sans taste, sans everything." VIELAND.

A DISTINGUISHED SUCCESS.

Some acute observer has framed a proverb that an army of sheep led by a lion is better than an army of lions led by a sheep. Exaggeration though this is, it is an expression of the proved truth that no matter how good the materials and sound the principles of any enterprise, the essential thing to success is that the management be good. Nothing is simpler than the rules of getting rich: one has only to buy cheap and sell dear. The thing is stated in less than ten words, but not one in a thousand men is able to do this simple thing. Nothing can be simpler than the business of banks, and because banking does not legitimately include ordinary business risks, the expression, "as safe as a bank," arose; yet the wrecks of banks are strown all along. Nothing can be simpler than the foundation principles of mining life; there is no "if" in them, no probability.

Life insurance is the only business in the world, if rightly managed. But this little "if" means everything; and when companies fail the real lesson is, not that the system is discredited, but that there has been weakness in the practice. How shall the companies where there is no weakness be distinguished from the rest? Time has already supplied the test. In the New York Life, which has now issued its thirty-sixth annual report, time has especially set the seal of approval. This company has seen the country grow, the railroad system develop, the telegraph come into general use, the cable connect the nations; it has passed through two wars and two financial crises; and it has grown large and strong as it has grown old. Starting without capital stock and without funds, it has accumulated forty-three millions of unquestionable assets, and has now outstanding one hundred and thirty-five millions in insurance. It is as solid and as trustworthy as any thing of human construction can be. It has done a great work of usefulness already, and is now better prepared than ever before to continue this work. Always

in the front rank in point of security, progressiveness, equity and economy, it presents unsurpassed claims to the consideration of intending insurers.

THE expression "A 1," popularly used to designate the first quality of articles, is copied from the symbols of the British and foreign shipping-list of the Lloyds. "A" is used to designate the character or conditions of the hull of a vessel, and the figure "1" to denote the efficient state of her anchors, cables, and stores. If those are insufficient in quantity or quality, the figure "2" is used to indicate the same. When it is said of a ship, "she is A 1," it means that she is all right as to hull, rigging, and equipments.

Hop Bitters give good digestion, active liver good circulation and buoyant spirits.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING THE INETRFERENCE OF THE FATHER-IN-LAW AND THE MOTHER-IN-LAW IN DOMESTIC AFFAIRS.

MARY WAGER-FISHER.

ANAXIMANDER came home from his office a night or two ago, and as we were at dinner he remarked: "I think that a good many people are made unhappy by the interference or peculiarities of their relatives in their domestic affairs. A client of mine who was in the office to-day, was telling me of the trouble she had in her family. She has her own mother with her and her father-in-law, and I imagine that she has as much annoyance from the one as from the other, etc., etc.," an extension of conversation that need not be repeated here, but which further illustrates the matter in hand.

A great deal of anathema has been hurled in the newspapers at the "mother-in-law," but such expressions have come chiefly from men who for well or ill founded reasons have come to regard that relative as altogether a superfluous personage in their own households. But I find that women, as a rule, have more trouble from the father-in-law, who, if he be given to meddling with household affairs, is a nuisance of the first water. I wish to say, before proceeding further, that some of the sweetest and most delightful members of families are sometimes the father or mother-in-law, and no word of praise can be too high for them. But there is another class equally well-meaning may be, but who succeed in making the younger households, of which they may be permanent or occasional members, extremely unhappy from their habits of meddling with what—I put it in plain terms—is none of their business. And I am going to point out some of the things which parents-in-law do, which they ought not to do, and ought to do.

I'll begin with the father-in-law. He will please to keep out of the kitchen just as much as he possibly can. He will not poke his nose into closets or cupboards, parley with the domestics, investigate the condition of the swill barrel, the ash barrel, the coal bin, worry himself about the kerosene or gas bills, or make purchases of provisions for the family under the pretence that he can buy more cheaply than the mistress of the house; let him do none of these things unless especially commissioned so to do by the mistress of the house. If he thinks that the daughter-in-law or son-in-law is wasteful, improvident or a bad manager, the best thing for him to do, decidedly, is to keep his thoughts to himself, for in all probability things are better managed and better taken care of by the second generation than they were by the first. And *even if they are not*, it is far better to pass the matter over in silence than to comment upon the same, and thereby engender bad feelings. When advice is asked, give it to the best of your judgment, but don't proffer it *too freely* unasked.

Do the father and mother live who think that their children, when they marry, are quite as competent to manage a household as they themselves were before them when they married? I opine not. But it does not follow that they are not, none the less. At all events, they like to do as they please and not be made to feel that they are still in leading-strings.

I think one great failing of the mother-in-law is a proneness to criticise "John." True, John may not be a piece of perfection; if he had been he would not have married her daughter. The mother-in-law is as prone to tell her daughter how she ought to manage John, and she is apt to complain to John about what a hard time her daughter has. Then, too, the mother-in-law is given, more than the father-in-law, to criticising the habits of the children and how "shockingly they behave." I think when parents presume to speak disrespectfully of the husband or wife of their child, to the child, that the duty of the latter is to disable their own guns at once with a well-directed shot. Such comments are altogether out of place and should never be allowed. Another fault of the father and mother-in-law—and it is one that the younger folks are not free from—is their tendency to a "penny wise and pound foolish" policy, fretting over trifles and occupying themselves so much with trivial matters as quite to overlook matters of real importance. To be able to save and apply one's best energies, time, opportunity and money to the *important* things, and let the unimportant things "go," is genius—the greatest gift with which one can be endowed. A fretful, peevish, hypersensitive parent-in-law in a household, is as a thorn in the flesh. The older a person grows, the more amiable and less irritable he ought to become. By the time a man is seventy he should know how silly and useless it is to fret, how many and great the trials of life are, and do all he can to smooth the pathway of the younger feet about him.

Nobody likes a visitor who comments upon the way the house is managed—unless the words are commendatory—or who invades the kitchen, or asks why you don't have things so-and so. And what is true in regard to a visitor is equally true in regard to a parent. He should remember that he is not in his own home, if the reins of government and of management have been intrusted to other hands. He should no more venture to meddle with the affairs of the household than he would if he were a guest in the house of a friend, or a boarder in a hotel. And the same applies to the mother-in-law and to one and all other relatives dwelling in the household, who are not authorized to act in such capacity by a mandate from head-quarters.

Finally, if parents live with their children, ought they not in all reason to conform so far as possible to the customs that prevail in the house? And when the children live with their parents, they ought, in all conscience, to conform to the customs of the parents. In either case, it is impertinence to meddle with servants, or to comment upon the "mismanagement" of an establishment that is not your own. If the father-in-law and the mother-in-law desire to make their presence in the home of their children a pleasure and a blessing, they will most scrupulously *mind their own business*, difficult as it may be.

A great deal might be said concerning the duty of the daughter-in-law and the son-in-law, but that topic is not under discussion at this moment, and then, too, a sunny-haired laddie is begging me, book in hand, to read to him "about the bears," so here's to the bears.

THE KITCHEN CLUB AT HILLSIDE.

ANNIE L. JACK.

IT is a long time since I have given our readers a sketch of the doings of the Kitchen Club. But in the meantime the season has gone round and with it many changes. The Methodist minister's wife has moved away, and taken with her our best wishes and a new tea set, and new-made graves in the churchyard have made a sad break among the members. "Some are married, some are dead," but everything must be renewed, even as the seasons are, and a few of the ladies met at Hillside to discuss the given topic. It was "Pin-Money," and we found it touched the feelings of all, married or single, though the younger members took a brighter view of the subject than those who had suffered more deeply. Mrs. Chapman read from Scribner's in "Topics for the Times," a wise man's opinion, and, though Miss Whitand said papa was always willing to give her what she asked, we advised all contemplating matrimony to have a marriage settlement however small—something to call their own.

Young ladies, if enterprising, can earn something for themselves outside of their home; art needlework is only one outlet, but women could make for themselves many other ways. Mrs. Welsh read an extract from a paper which was to the effect that a wood engraver, being asked why he did not employ girls, replied that a man engaging in the business undertook it as a life work, but a woman seemed to have no ambition to excel. She does not feel that her independence is to be sustained by it and generally marries, and gives it up as soon as possible. I thought this something of a libel from my knowledge of our sex; but then every one must judge from his or her own experience. Mrs. Tompkins advised ladies to take a specialty in fruit growing—to raise one thing well and of the best quality for spare money, while Miss MacGregor told us she bought all her groceries with the produce of her bees, and thought in bee-keeping there was a field for usefulness, that was open to women.

Some of the young ladies had tried poultry with different measures of success. So much depends on care and perseverance in *everything!* But Mrs. Chapman's remarks impressed us deeply, and we determined that our daughters should profit therefrom. She said "It requires more courage to ask your husband for fifty cents, than it would to take care of your children through the whooping-cough. You work, and save, and manage his household according to your best knowledge; he is what is called a 'good provider;' there is no lack of plenty to eat, or even to wear; but—who has not seen the look—'My good woman, what do you need with money?' 'To jingle it in our pockets, my lord and master, as we did when children, one cent against another; to pay our postage, give to poorer neighbors' children, and to spend it in a hundred other inconsistent ways. So let us, as members of this club, strive to be independent and earn for ourselves if possible, or at least let us teach our daughters the way to attain excellence in one branch of business for profit." We smiled, and commended the energetic lady's remarks, and adjourned to the tea table still discussing the merits of the case.

DOMESTIC RECIPES.

Pie Plant Pie.

Slice very thin into an earthen dish. Allow a large coffeecupful of pie-plant to a large teacupful of white sugar and two teaspoonfuls of flour. Stir together, let stand while making the crust.

A Nice Plain Pudding.

One quart of flour; butter the size of an egg; a pint of milk; two tablespoonfuls of baking powder; one cup of cut raisins. Steam one hour in a two-quart dish. Boil a pint of milk, add sugar, two tablespoonfuls of flour and flavoring for the sauce.

Pumpkin Pie.

As made 100 years ago with this difference that then they made a big panful. I will give you ingredients for one pie. One coffee cupful of stewed pumpkins; two of milk; a small handful of flour; two teaspoonfuls of ginger, a dust of allspice or nutmeg on top—no eggs. Bake in a very quick oven. The crust will not be soggy, if the oven be hot enough on the bottom. MRS. G. C. C.

Bread Muffins.

Take four or five slices of bakers' bread, cut off the crusts, put into a pan and pour over hot water, only just sufficient to soak the slices. Let stand an hour, drain off any liquor that you can, beat the mass smooth, mix in half a pint of sweet milk, two tablespoonfuls of sifted flour, a tablespoonful of melted butter, a little salt and three well-beaten eggs. Have muffin rings as well as baking-pan hot and buttered and fill each two-thirds full Bake brown in a quick oven. Eaten hot.

Apple-Corn Pone.

One quart of finely chopped apples; one quart of Indian meal; scald with a pint of boiling water, add sweet milk to make a stiff batter, then stir in the apples, add a little salt. Bake in a *close* vessel three hours or pour into a tin pail, cover tightly and boil in a kettle of water for the same time. Eaten with sweetened milk or cream. MARY B.

Wanted—Stamping Powder.

Can any of our readers give W. Rasch a recipe for a stamping powder that will stamp on all kinds of cloth?

For Neuralgia, Pains and Aches in the Back, Kidneys or Limbs,—Hop Bitters.

Trees, Seeds, Plants, &c.

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12 Kirkwood, 12 Marvin, 12 Longfellow, 12 Warren, 12 Brilliant, 12 Glendale, 12 Sharpless, 12 Duchess, 12 C. Downing, 12 Cumberland Triumph, and 2 of the Bidwell. Order early. The supply of Bidwell is limited. By mail, $1.00. By express, $3.00.

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10 Highland Hardy (earliest). 10 Brandywine (later),
10 Franconia (later), 10 Cuthbert (latest).
By mail, $1.50. By express, $1.00.

A RARE OFFER—
1 Hydrangea Paniculata, 1 Viburnum Plicatum,
5 Roses (H. P. one year old plants, choice varieties, my selection),
4 Grapes (Prentiss, Moore's Early, Brighton, Lady,)
20 Raspberries, including 10 Cuthbert, 10 Gregg,
12 Blackberries (Snyder and Kittatinny),
6 Currants (Red and White),
100 Choice Strawberries, (my selection of varieties).
By express only for $5.00.

Descriptive Catalogue free. Strawberry Culture for 1c. stamp.
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Wanted.

A thoroughly practical man, with large experience in putting up canned goods, such as Tomatoes, Corn, etc. To one who can give good recommendations and testimonials, a good salary will be paid, or, by putting in some capital, an interest may be obtained in the business. Parties applying will please to address
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Coronation, (50 cts.) Culprit Fay, ($1.) Fairy Bridal, (50 cts.) Flower Queen, (new, 75 cts.) Guardian Angel, (50 cts.) Hour in Fairy Land, (50 cts.) Miracle of Roses, (50 cts.) Little Bo Peep, (50 cts.) Maud Irving, (50 cts.) New Year's Eve, (60 cts.) Three Little Kittens, (50 cts.) Quarrel among Flowers, (35 cts.) Spring Holiday, (60 cts.) and Cinderella, (50 cts.) are all lively and pretty Cantatas

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News of the Week.

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

HOME NEWS.

MONDAY, March 14, 1881.

MESSRS. Wm. M. Evarts, of New York, Allen G. Thurman, of Ohio, and Timothy Howe, of Wisconsin have been appointed Commissioners to the International Monetary Conference at Paris, to be held in April. Hon. Levi P. Morton has been appointed Minister to France. Mr. Lowell, present Minister to England, has been requested by the President to retain that position.

Judge J. W. McDill, of Iowa has been appointed by the Governor to fill the vacancy caused by Senator Kirkwood's elevation to the Cabinet. Mr. Frye, of Maine, takes Mr. Blaine's seat in the Senate, and ex-Secretary Ramsey will probably succeed Mr. Windom from Minnesota. Angus Cameron was nominated for Senator, from Wisconsin, on the 48th ballot.

On the arrival of the ex-President and Mrs. Hayes, with the family, at Tremont, Ohio, on March 8th, they were met at the depot by about three thousand citizens, and with bands of music and shouts and cheers, were escorted to their residence. There Mr. Homer Everett, in a speech full of cordiality and sincere wishes for their prosperity and happiness, welcomed the ex-President and his family home. Mr. and Mrs. Hayes then held an informal reception, shaking hands with fully two thousand persons.

The Yorktown Centennial Committee, of which Senator Johnston, of Virginia, is chairman, have appointed a committee consisting of the chairman, Senator Butler, of South Carolina, and Representative Loring, of Massachusetts, to prepare invitations. The committee have decided to invite the President and Cabinet, the members of the Forty-sixth and Forty-seventh Congresses and Governors of all the States and Territories. The latter are to be conferred with at once to learn what military organizations contemplate participating in the celebration.

The Whittaker trial is "dragging its slow length along," with no probability of approaching its end very soon. Experts in handwriting have been examined this week, but no one, unless it is Whittaker, knows whether he wrote the note of warning or not. H. B. Claflin, S. V. White, G. I. Seney, H. R. Bennett and Stewart L. Woodford have raised $500 to pay Whittaker's counsel in his court-martial.

A German socialist meeting was held recently in Faneuil Hall, Boston. There were 4,000 present. The speakers were the German socialists, Fritzsche and Viereck, Wendell Phillips, John Swinton and others. Resolutions expressing sympathy with the German socialists were adopted.

The heavy storm of rain and wind on the 9th inst. cleared all the ice out of the Hudson River as far up as Sing Sing. The propeller Leader made its first trip of the season Thursday morning, from that village to New York.

Edison has removed from Menlo Park, N. J., to Fifth avenue, New York, considering his invention complete. He now proposes to light whole cities from central stations.

It is feared that Professor E. D. Sanborn, of Dartmouth College, who has been connected with the institution for 35 years, will soon be forced to give up on account of ill-health. He has also been so unfortunate as to lose most of his fortune by unlucky speculations.

Immigration sets in strongly this Spring, and the arrivals in 1881 are likely to exceed those of last year when they were the largest in the history of the country. During the week just past the landings at Castle Garden numbered 5,323, an increase of 2,479 over the first week of March, 1880.

The Union Pacific railroad has declared a quarterly dividend of one and three-fourths per cent. This rate is likely, hereafter, to prevail. Sidney Dillon was elected president of the road. The surplus earnings for the year were $13,204,000.

Fire was discovered in a room in the basement of the Wisconsin Capitol, at Madison, on Thursday afternoon, 3d inst., but was soon extinguished. The room is used for storing paints and oil, and the fire is supposed to have originated spontaneously in a heap of rags that lay in a corner. During the excitement, "Old Abe," the famous war eagle, screamed and flapped his wings, and being let loose, took a trip to another portion of the basement, and remained there till all danger was over.

John Hay, Assistant Secretary of State, on account of private engagements, will not be able to comply with President Garfields and Secretary Blaine's request to remain in the Department. He has been succeeded by Judge Bancroft Davis, who held the same position under Seward in Lincoln's time.

Mrs. Elizabeth K. Churchill, widely known as a speaker and writer on the rights of women and reform generally, died in Providence, R. I., on the 7th inst. She has been residing near Boston.

Californians are pronouncing eulogies on George W. Ridley, deceased, because he gave a sack of flour which was sold and resold during the war until it netted $50,000 for the United States Sanitary Commission. Giving a sack of flour is a generous thing, but some eulogy ought to be reserved for the man who contributed the most to the $50,000.

Mr. Henry G. Pearson has been nominated by the President to be Postmaster of this city. He is a son-in-law of ex-Postmaster James, and was formerly Assistant Postmaster.

Professor J. M. Van Vleck of Wesleyan University has been appointed by the bishops of the Methodist Episcopal Church as one of the delegates to the Ecumenical Methodist Conference, to be held in City Road Chapel, London, England, beginning on the 7th of September, 1881. The Hon. Oliver Hoyt of Stamford is the only other delegate from Connecticut.

A protracted and bitter controversy, growing out of defalcations in the chemical laboratory at Michigan University, has been closed by the resignation of Prof. Rose, who with Prof. Douglass had charge of the accounts of that department.

The Atchison, Topeka and Santa Fe Railroad made a connection on the 11th inst. at Dinning Junction, where a silver spike was driven in at 3:45 p. m. Engineer O'Neill of engine 503 of the Atchison, Topeka and Santa Fe road ran the first engine to the Southern Pacific road. There was no further demonstration.

A bill has been introduced in the Assembly appropriating $3,000 towards the erection of a monument in memory of General Nicholas Herkimer and his associates in the battle of Oriskany, and to contribute thereto such stone in the locks of the Chenango canal as are not needed by the State.

Miss Barbara Scott, of Montreal, bequeathed $30,000 to found a chair of civil engineering in the McGill College; $2,000 for a classical scholarship, to be called "The Barbara Scott Scholarship;" and $2,000 to the building fund of St. Gabriel Church, of Montreal.

It is said the postal card has decreased the sale of writing paper $12,000,000 annually in the United States.

Twenty-eight men and women formed a cremation society at New York lately with Rev. J. D. Benglass, a chaplain in the United States navy, as president. All active members will be cremated free of charge at death. A company with $50,000 capital is to be incorporated.

A large stone weighing 2,000 pounds, in the flouring mills of August Fischer, of Chicago, burst recently with a loud noise, and three persons were seriously injured by the flying pieces. The stone was an imported article, four feet in diameter and one foot thick, and was making about 275 revolutions per minute.

[La Crosse Republican Leader.]

Having been cured by St. Jacobs Oil, I recommend the same to all sufferers with Rheumatism, says Mr. L. Shiffman, 2804 Calumet Ave., Chicago, Ill.

FOREIGN NEWS.

The Czar of all the Russians, Alexander II, has at length been murdered by the Nihilists. Yesterday he attended church in the morning in St. Petersburg, and afterwards witnessed a military parade. While returning from this to the Winter Palace in a closed carriage, escorted by eight Cossacks, an Orsini bomb, made of glass and charged with nitro-glycerine, was thrown at the carriage and exploded just behind it destroying the back part of it. The Czar and his brother, the Grand Duke Michael, alighted unhurt. The coachman begged the Emperor to re-enter the shattered vehicle, but he moved a few paces to see some of his escort that had been wounded. The thrower of the bomb was at once arrested and tried to shoot the Czar, but the pistol was knocked aside. At this moment a second bomb was thrown by another person at the Emperor's feet, and instantly exploding, shattered both legs below the knees, severely injured the lower part of the body and tore the left eye out of the socket. The Emperor fell with a loud cry, and was taken to the Winter Palace, close at hand, in an unconscious condition. He lingered for nearly an hour and-a-half and died at 25 minutes past three, the only word he uttered having been the name of the Czarewitch, his eldest son, who was at once proclaimed emperor on the Czar's death. A Cossack and a passer-by were killed by the explosion, and two or three others severely wounded. The thrower of the second bomb was also instantly arrested, and one of the wretches is said to have been so roughly handled by the angry populace that he died. The name of the first assassin is said to be Poussakoff. Both were disguised as peasants, and stood on opposite sides of the road that runs by the imperial stables close to the Winter Palace. Intense indignation is cablegrammed from St. Petersburg and all the European capitals. All the troops in the Russian capital are under arms in their quarters. All the members of the royal family in the city at once hastened to the death-bed of the dying Emperor. Immense crowds thronged the streets; a cordon of Cossacks encircled the spot where the assassination took place. Telegrams were at once sent all over the Empire and to all foreign courts and capitals, announcing the calamity. Messages of condolence were at once sent by all governments, including our own, to the Czarewitch and the Imperial family. The news of the death of his Imperial nephew is reported to have been a terrible shock to the aged Emperor of Germany.

What influence the death of the Czar may have upon European affairs it is as yet hard to predict. This morning's cablegrams announce that Greece is resolved upon war with Turkey, as the latter seems determined not to yield all the territory claimed by the former. The question is now being discussed by the ambassadors of the Great Powers in Constantinople; it is probable that Greece will restrain her 75,000 men, at least until the disposition of the new Russian autocrat becomes known with regard to the "Eastern Question." Hitherto he has been considered as favorable to the "Old Russian" party, and therefore hostile to foreign influence in Russia, and especially to German influence.

The late Czar was born April 29, 1818, so that he had nearly completed his sixty-third year. He mounted the throne on March 2, 1855, on the death of his father, the iron-willed Nicholas, and for a year continued the Crimean War, in which Russia was single-handed against Great Britain, France, Sardinia and Turkey, with Austria a passive enemy. After the fall of Sebastapol on September '55, negotiations for peace were begun, and the Treaty of Paris finally put an end to hostilities in March, 1856. Since then the Emperor's career has been that of a reformer: he released Russia from military routine, discipline and dictation: annulled the impediments against Russians visiting foreign lands; granted a general amnesty to thousands of Poles and Russians condemned to Siberia during the preceding reign. His greatest measure of reform, however, was the emancipation of the serfs, which was decreed March 3, 1861, and carried out the two following years. The first attempt on his life was made April 15, 1866. A second attempt was made during his visit to the Paris Exhibition in 1867. The three late attempts on his life by the Nihilists have been already noticed in these columns:—that of Solovieff, who on April 2, 1879, fired three times at the Emperor in St. Petersburgh; the attempt last year to blow up the train on which he was traveling from Livadia in the Crimea to Moscow, and the other attempt a little later, to destroy him by blowing up the dining-room of the Winter Palace, while he was at dinner.

AGRICULTURAL NEWS.

AT Russell, Kansas, on April 13, 40,000 head of sheep are to be sheared by machinery..... The Indiana Legislature has voted against a law to compel owners to keep stock under fence, on the ground that it would be cruel to compel the poor man to shut up or pasture his single cow..... Accounts all over the country agree that bees have suffered severely in winter-quarters from starvation, dysentery, etc..... The seventeen-year locusts are expected to appear in June next in Marquette and Green Lake counties, Wis., in the neighborhood of Wheeling, W. Va., and in parts of Maryland and Virginia. They may also appear in Northwestern Ohio, Lancaster County, Pa., and Westchester County, N. Y. The thirteen-year locusts will probably be seen in Southern Illinois. The potato-bug will be found wherever there is a potato planted, without regard to State and county lines. The lightning-rod man will be out also early in June .....One of the largest peach orchards in the world is in Chambers County, Ala., near the Georgia line. It contains 250 acres and has yielded in past seasons $70,000 worth of fruit.....The following is a summary of the seed distribution by the Agri. Dept. of field and garden, and flower seeds during the year: To Senators and Members of Congress, 759,679 packages; agricultural societies, 17,444 packages; statistical correspondents, 139,729 packages; granges, 355,452 packages; special farmers, 127,644 packages; miscellaneous applicants, 181,305 packages. Total number of packages, 2,581,253.....The Colorado Cattle Growers' Association, in session at Denver, the other day, adopted a series of resolution regarding pleuro-pneumonia, concluding as follows: "Resolved, That we recommend a convention, to be held in Kansas City in September or October next, in the interest of Western stockmen, for the purpose of creating combined action in pressing the necessity upon Congress for national legislation on the subject of contagious diseases of live stock, and that we solicit correspondence on this point."

Fuel has been so scarce in Minnesota during the recent snow blockades that many families have burned hay and unthreshed wheat, and Appleton, a village of 400 to 500 people, did not have more than half a cord of wood and two or three tons of coal last week in the whole town. In other places two or three families have crowded together in one house and burned the vacated dwellings..... Two pickeling factories at Pleasantville, on the Hudson River, have used this season, 11,000,000 cucumbers.....Our butter trade with France is rapidly increasing. Up to Saturday, February 21 we had exported 324,629 pounds this year. How much of it was oleomargarine?.....Large quantities of hay are being imported from Canada to this city and Philadelphia. The import duty is 20 per cent.; the freight to this place, $50 per carload; wholesale price here in bales, $20 to $24..... .....Very full reports from the wheat region tributary to St. Louis, show that hitherto damage from the cold weather has been trifling; the acreage is much larger than last year, and the prospect is good for a large crop. Reports from Illinois are equally favorable.....At the late meeting of the Illinois State Board or Agriculture held at Springfield, Peoria was selected as the place to hold the State Fairs for the next two years.

A beet sugar factory is to be built at Berthier, Province of Quebec, Canada.....The average yield of Indian corn per acre throughout the United States is 29 2 bushels .....Advices from Texas say that the cold wave that swept over the State during the 10th, 11th and 12th of February, was more disastrous to stock than any that had preceded it this Winter. The herds and flocks had become emaciated and weak, and many animals were unable to stand the severe weather..... From the returns of Australia it appears that more than 2,500,000 acres of land are sown in wheat, being twice the area some eight years ago. The average yield was about ten bushels per acre. The largest wheat-growing district, South Australia, has an average of little more than seven bushels per acre, while New Zealand averaged nearly twenty-three bushels and New South Wales fourteen and three-fourths bushels per acre.

The Michigan Legislature has just passed a bill "for the protection of dairymen and to prevent deception in the sale of butter." It provides that all packages composed in part of suet or tallow shall be plainly branded "Oleomargarine," and that all made in part of lard shall be branded "Butterine," together with the name of the manufacturer in each case. A proper penalty is provided for failure to obey the law.....The Anti-Monopoly League lately started here is spreading like "wild-fire" all over the country. Branches have already been established in 25 States, and others are being constantly organized. Farmers—as they ought—are taking a lively interest in the movement.....The gross income derived from tobacco by farmers in the United States is stated at about $22,000,000.....Good English landlords are still returning to their tenants from 20 to 50 per cent. of their rents.....In Germany the weather has been dry and pretty favorable for farming operations .....In the Argentine Republic the harvest has been good, but there is not much surplus wheat for export.....In France the weather has been dry and frosty, and Spring cultivation is being proceeded with; the growing crops are generally spoken of favorably.

Late advices from Australia say that the harvest has been unusually heavy in New South Wales. Grass was very scarce and a water famine was threatened; bush fires were raging in several parts of the colony, and caused a great destruction of fences and grass.....In Victoria much satisfaction was felt at the success of an experimental export of fresh meat to England ....An extremely successful Wool Exhibition had been held.....Powell Brothers, of Springboro Pa., made two importations of choice Clydesdales last month; all arrived here in excellent condition.....On February 28, the Annual Meeting of the Clydesdale Horse Society of Great Britain and Ireland was held at Glasgow, Scotland. The third volume of the Stud-book was to be issued within a week. From reports it seems that exports of Clydesdales to the Continent, the colonies and this country are rapidly increasing, while in the United Kingdom these horses are becoming prime favorites.....

The New York Legislature has passed a bill abolishing canal tolls on west-bound freight.... Earnest Flagg, manufacturer of oleomargarine in this city, has failed, and is accused of "sharp practice" with his creditors.....Bradstreet's of the 12th of March contains despatches from Cincinnati and tributary points, Chicago, Louisville, St. Louis, St. Joseph, Kansas City, Indianapolis, the Iowa pork centers, and Milwaukee, in response to the charges made abroad concerning the prevalence of hog cholera and trichinosis in the United States. They report a healthier condition of hogs than for years previously, and say there is no ground whatever for apprehension. Some of the correspondents stigmatize the charges as a "bear" movement.

The River Platte wheat crop for 1880–81 has been variously estimated. This crop in the cluster of Santa Fe colonies around Esparanza and San Carlos aggregated 937,600 bushels against 300,000 bushels for the previous crop. The chief export is expected to be Flour. Adelaide, South Australia, advices of the 8th of January, 1880, state that the Government statistics of the Wheat crop of 1880 made 11,205,040 bushels for that colony, of which 10,747,146 bushels had been shipped up to the close of 1880, leaving a residue to bring forward into 1881 of 457,894 bushels. The crop being harvested in January and February, 1881, will not be equal in either quantity or quality to last year's outcome. It is estimated that the crop of 1881 will give an average yield of six bushels per acre, which will make an export surplus of about 6,533,333 bushels. The harvest on January 8, 1881, was in full swing with the weather all that could be desired.

There is now quite a free movement of grain from St. Louis, via the Mississippi River to New Orleans, which is indicated by the export clearances from thence to Europe. The boat "Oakland" took eight barges in tow on the 6th inst. for New Orleans. The barges carried 263,000 bushels of corn and 90,000 bushels of wheat for export to Europe. This is said to be the largest amount of grain ever taken down the Mississippi River in one tow of barges .....An insurance company has been formed in Prussia to insure against loss of hogs by trichinæ.....Mr. Lancaster, near London, has 46 acres of celery, and his celery commands the highest prices in market. His plantation, at 10,000 plants per acre, requires 460,000 plants. They are set in trenches, and vast quantities of manure are used. Seven horses are used in his 50-acre vegetable garden. Radishes between the celery bring about $140 per acre, and the celery $250 per acre. The labor comes to $250 per week in Summer and Autumn.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MARCH 12.

H. T. P—A. H. D.—A. W.—J. H. O.—S. R. M.—W. C. S.—A. C. R.—J. A.—M. E. W.—A. B. A.—F. H. S.—W. C. B—L. R.—I. C. D.—L. E. V.—L. C. S.—M. R. L. M.—H. B.—R. W. F.—W. D. T.—I. H.—D. B. E.—J. I.—S. H.—H. A. S.—W. P. D., thanks—G. H. P.—P. B. M.—E. T. D.—S. & P.—B. L.—M. L.—E. S. R.—W. W. R.—F. A.—M. B. L.—N. & M. B.—A. H. D.—E. D. B.—T. H. W.—J. W. D.—A. E. S., correction made—T. Y. W.—E. E. H.—P. B. M.—I. P. R.—H. S.—N. J. S.—T. L.—A. E. S.—W. B. J.—A. Z B.—I. P.—T. J. L.—G. M. H.—E. J. S.—H. G.—W. B. N.—W. H N.—H. M. M.—W. A. D.—F. S.—P. S. B.—M. W-F.—O. R.—A. F. J.—J. S—M. L. S.—Mrs. M. C.—M. E H.—D. S.—J. J. B.—C. B. A. G. D.—A. B. D.—J. G—S. B. P., Berlin.—N. A.—H. S. J. T. L.—M. B. H., answer next week.—W. G. W. Jr.—A. D, New Annan. We have been obliged to neglect questions of late owing to our special issues. Those over we shall endeavor to answer all we can find space for.—C. H. P.—J. A.—J. W. K.—W. F.—H. H. A.—A. B. C.—J. A. W.—C. P.—H. C. B.—H. L W., thanks.—E. W.—I. W. S.—R. M. L.—W. H. T.—G. W. O. R.—L. A. R., (Ills).—I. C. T.—A. C. T., in two weeks.—T. H. H.—H. T. I.—A. L. C.—C. P. R.—A. J. C.—W. B. H.—W. F. Jr.—F. B.—B. S.—

Did You Know It?

Some people suffer for years from weak kidneys and torpid bowels and liver. If you know such a person tell them that Kidney-Wort is a certain cure. It can now be had in either liquid form or as a dry vegetable powder. The same effect either way.—Evansville Tribune.

Women that have been bedridden for years have been entirely cured of female weakness by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

$25 in Doctor's visits, will do you less good than one bottle of Hop Bitters.

BURNETT'S COCOAINE

Has Received Universal Endorsement.

No other preparation possesses such remarkable properties for embellishing and strengthening the hair and rendering it dark and glossy. It cures baldness and eradicates dandruff.

Burnett's Flavoring Extracts are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, March 14.

Boston.—BUTTER—New York and Vermont Creamery, late made, 29@30c ℔ lb; do. Summer made, 23@26c; Vermont dairy, Fall made, 25@26c; New York Fall made, 23@25c; New York and Vt. straight dairy, 18@22c; fair to good, 14@17c; Western—choice creamery at 33@35c; choice dairy, 22@25c; do ladle-packed, 22@23c; ladle-packed, fair to good, 15@21c. CHEESE—Northern factory—choice, 13½@14c ℔ lb, fair to good at 11½@13c, and skim at 8@11c; Western factory—choice, 13@13½c; fair to good, 11@12½c; skim, 7@10c; Worcester county—choice, 11@12½c, and common, 7@9c. EGGS—Eastern at 23@24c, Northern, 23@24c, Western, 23@24c ℔ doz. BEANS—Northern hand picked Pea at $2 10@2 15 ℔ bushel; do do Western, at $2@2 10; common to good, $1 65@1 90; Yellow Eyes, $1 90@2 20; Red Kidneys at $1 60@1 70. Canada Peas 80c@$1 05 ℔ bushel for common to choice. Green Peas $1 25@1 70. The Potato market is steadier; we quote Aroostook Rose at—@75c ℔ bushel; Maine Central Rose at 65@70c; Northern Rose at 65@70c; Prolifics at 65@75c, and Peerless at 60@65c ℔ bushel. Apples at $1 25@2 ℔ bbl. Cranberries at $5@7 50. Onions, Red, $3 50@3 75, and White, $4@4 25 ℔ bbl. GRAIN—Corn is firm with sales of mixed and yellow at 50@61c; of steamer Corn at 59@60c for mixed and yellow, and of no grade at 57@59c ℔ bushel. Sales of No. 1 and extra white Oats at 49@52c. HAY AND STRAW—The stormy weather has interfered with trade and receipts of Hay have accumulated. First quality coarse Eastern and Northern at $22@23 ℔ ton; poor and medium at $18@21. SEED—Calcutta Linseed nominally $2@2 10 ℔ bu; and Western Flaxseed is quiet, $1 40@1 45 ℔ bush. Clover Seed at 8½@9½c ℔ lb for Western and New York; Timothy at $2 25@2 90; Red Top at $2 30@2 40 ℔ bag; and Canary Seed at $2 45@2 55 ℔ bag.

Chicago.—Wheat firm No 2 Red Winter, 99½c; @$1 01½; No 2 Chicago Spring, 99½c@$1 00½ cash, $1.00½, April; $1 04½@1 05, June; $1 04½ May. CORN firm 38c.@33½c, cash; 33½c.@33¾c. April; 42½c@42¾c., May. OATS steady at 28c@31½c, cash; 29½c.@29¾ April; 33½, May. RYE firm at 98c @$1. BARLEY steady at $1.05. PORK active, at $15 50, cash and April; $15 62½@15 65, May; $15 75@15 80, June. LARD active, but lower, at $10 55, cash; $10 55@10 58½, April; $10 65@10 67½ May. Bulk-meats active firm, and higher; Shoulders $5 10; Short Rib $8 Short Clear, $8 40. BUTTER Trade was fair, and the prices given below were easily realized: Creamery 30@34c; Dairy choice 25@28c; Dairy, fair to good 20@23c; Ladle-packed 16@20c; Packing stock 13@15c; Roll butter 15@20 Grease 8@10c. CHEESE.—There was a good demand for fine goods and such were firmly held. Full cream 12½@13½c; Part skim, choice 10½@11½ Part skim, fair to good 9½@10½; Part skim, hard 7½@8½; Low grades 4@6c. SEEDS.—Prime clover quotable at $5 00, prime timothy at $2 60, and flaxseed weak at $1 20. Other kinds were neglected. Sales were made of 505 bags timothy seed at $2 56@2 61 for good to choice. Hogs good demand; common to fair mixed, $5 30@6 50, light $5.50@5 80 choice heavy, $5 90@6 50; nearly all sold at an advance of 5c. CATTLE market quiet and weak; prices steady; common to fair shipping, slow at $4 @4 50; good to choice, $4 65@5 20; exports, $5 40 @5 60; no extra offered; butchers' and canning, $2 50@3 75, mainly at $3@3 25; stockers and feeders scarce and wanted at $3 25@4 25. SHEEP good demand; common to medium, $4 50@5 25; choice $5 50@5 90.

Cincinnati.—WHEAT in good demand at full prices; No 2 Red Winter, $1,06; CORN quiet; No. 2 Mixed 44c. OATS in fair demand and firm; No. 2 Mixed, 37c @37½c. RYE easy; No 2 at $1.12@$1.14. BARLEY strong; No. 2 Fall, $1.03@$1.05. PORK easier at $15 25. LARD firm at 10½c. Bulk-meats quiet; Shoulders, $5; Clear Rib, $7,95. Bacon stronger; Shoulders, $5.90; Clear Rib, $8.80; Clear Sides, $9.12½.

St. Louis, Mo.—WHEAT higher, but slow; No. 2 Red Fall, 1,02½@1 02½, cash and March; $1.03⅞@$1 04, April; $1 05⅝@$1.05⅞, May; $1.03½, June; No. 3 do, 99c @99½c; No 4 do, 93@93½c. CORN 39½c.@39¾c., cash; 39¾c @40c., March; 40½c @40¾c., April; 41c @41½c., May and June. OATS firm, but slow at 33½c., cash; 33¾c. bid, March; 33½c., bid, April. RYE firm at $1 02½@$1.03. PORK steady at $15.65@15,75, cash; $15.55 bid, March and April. LARD firm at $10 30 bid. Bulk-meats firm; Shoulders, $5@5.05; Clear Rib, $7.90@$8; Clear Sides, $8 20@$8 25, Bacon dull; Shoulders, 5¾c.; Clear Rib, 8¼c.; Clear Sides, 8¾c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 12, 1880.

BEANS AND PEAS.—The feeling among holders of prime beans, and the offering is of prime average thus far it quite firm, Sales are making in white 5c. below what last week, but there are marks that are held above quotations. No animation in red kidneys, Green peas firm at $1.70@1.75 for good and $1 80 for selected Wisconsin. Southern B. E. peas steady at $2 10@2.15.

Marrow beans prime $2.10, do, other $1.95@2 00, medium prime $2.10, do. other $1.95@2 pea $1.90 @2 10 white kidney $1.90@2.10, red do. prime $1.55@ 1.65 do. other $1.40@1.50, black or turtle soup $1.40, Lima $4.50@5.

BEESWAX.—A moderate trade is in progress, with 24½c@25c. quoted.

BUTTER.—Business is still running in its recent channel. Strictly fine grades are warring with the approach to Spring, and nearly all owners offer stock freely We say nearly all, for there is an old-fashioned line of trade which remains in this city that will use good-flavored, grass-bodied butter up to the latest period. This has to be catered for and a number of sound, sweet, honest dairies or selections of same are held with a view of furnishing a sure demand. As before, very common goods which, however, are mostly to be seen in late Western receipts drag and have more of a range price than a settled line of quotations. Supplies at the moment are moderate, as railroad transportation is not clear.

Creamery: choice fresh 34@35c fair to prime, 28@ 33c.; Fall, 23@28c.; Summer, 19@23c.; State dairies, entire choice, 23@24c; poor to good, 16@20c.; firkins, range 16@23c.; pails and half tubs, choice, 28@27c; other, 15@22c; Welsh tubs, best Fall, 24@25c; other, 16@22c; Western imitation creamery, 22@23c.; dairy, fresh, 23@24c; other, 14@22c; factory, fine, 20@21c.; other, 13@15c., very poor, 11@12c.

Receipts for week 14,830 pkgs.

Exports do., 3,100 do.

CHEESE—Exporters have been doing little and the home demand has been moderate. Prices have not varied materially. Here and there an effort to close out supplies has led to an easier price, but as a rule supplies are carried along with confidence. Quotations are for

State factory, fancy, at 13¼@13½c.; do. good and prime, 12¾@13c.; do. fair, at 11¾@11¾c.; do. half skimmed, 9¾@10½c.; Wisconsin factory, fine, at 12¾@ 13c.; do. good to prime, 12@12½c.; do. fair to good, 11@12c.; Ohio factory, fine, 12½@13c.; do. good to prime, 11¾@12¼c.; do, flat, fair to good, 10¾@11½c.; do. poor to fair 8@10c.

Receipts for week, 12,192 boxes.

Exports for week, 19,065 boxes.

Liverpool cable, 68s.

Steam to Gt. Britain, 25s.@30s.

COTTON.—There has been a sharp pressure to sell this week and lower prices have resulted. The cause has been "too much cotton," with the dull look of the foreign markets, and the wants of the spinners moderate. Latest prices are for

March, 10.68@10.69c.; April, 10 68@10 69c.; May, 10.79 @10.80c.; June, 10.88@10 90c.; July, 10.99@11c.; August, 11.03@11.05c.; September, 10.60@10 62c.; October, 10 31 @10 33c.; November, 10.21@10.23c.; December, 10.21 @10,23c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7 7-16	7 11-16	7 11-16
Strict ordinary	8 1-16	8 7-16	8 7-16
Good ordinary	9¼	9 7-16	9 7-16
Strict good do	9⅝	9 15-16	9 15-16
Low middling	10¼	10⅝	10⅝
Strict low middling	10 11-16	11	11
Middling	10 15-16	11 3-16	11 3-16
Good middling	11⅛	11⅜	11⅜
Strict good middling	11⅝	12⅛	12⅛
Middling Fair	12⅛	12⅜	12⅜
Fair	13¼	13⅝	13⅝

STAINED.

Good ordinary	6¾	Low middling	8¾
Strict good ordinary	8	Middling	10¾

Receipts for the week, 25,988 bales, Exports do. 11,041 do.

DRIED FRUITS.—Apples have a moderate export trade and hold to steady prices. Peaches move out slowly. Small fruits are quiet. Quotations:

Evaporated apples at 8@8½c. for the better qualities; sliced apples at 4½@5¾c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn. do; 4½@5c. for State do; 4½@4¾c. for western, Ohio and Mich. Peaches at 23@ 9c. for evaporated peeled; 13½c. for unpeeled do.; N. C. peeled at 19@ 22c; for the better qualities, unpeeled peaches at 6@6½c. for halves and 6c. for quarters. Plums at 15@16c. Blackberries at 7½@8c. Cherries at 17½c. Raspberries at 23c. Whortleberries 10½@11c.

Receipts for the week, all kinds, 1,093 pkgs.

Exports dried apples, 4,974 pkgs.

EGGS—Receipts for week, 11,641 bbls.; do. last week 9,331 do. There are at the moment two styles of sellers in the market one has great faith in the possible falling off in supplies before the active season of Lent is over, while the other adopts the sensible plan of giving consumers the full benefit of the lower fluctuations that have attended the market during the week. The market closes weak at following rates:

Near points, 19c.; Pa. and State, 23½c.; Western 18½c.; Southern, 18c.

FRESH FRUITS.—Apples have softened badly during the week and many parcels for which a good Spring outlet was expected are rolled to wagon venders or anybody who can handle rejections. Choice sound dry fruit is firm but not selling in a wholesale way. In fact it is a remark in the trade that single barrels can be had as low as, mixed lots $1 75@1 50; Baldwins and russets $1 62@1,75; greenings $1,25@ 1.50; very common lots upon which the buyer takes all risk 50@$1. Cranberries quiet, a return of buyers would find an easier market, Nominal rates. Cape Cod bbls. 44@7, crates N J, $1.25@1.87. Fla. oranges winding up with an improvement, the range is $1.50 @4 for poor to best bright out cases. Fla. strawberries in good demand when prime, poor to perfect 50c.@$1 per quart; hot-house berries $1,50@2, grapes scarce this season. Peanuts have rather more activity at late prices. Va hand-picked, 4¾@4¾ other, 3½@4; shelled, 3½@4½. Hickory nuts a drug at 75@85 per bush. of 50 lbs. Pecans 7@8c. per ℔.

Exports of apples for week, 16,500 bbls

FLOUR.—Shippers have bought less freely, the exports for the week being 8,000 sacks and 1,600 bbls. The home trade demand has been fair. Prices have shown firmness, and in instances a slight advance,

Latest prices are: $4.15@4.15 for very inferior to very choice winterline State and Western: $4.25@4 60 for poor to choice extra State and Western, odd lots and lines; $4.50@4 65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 35@5.25; good to choice do at $5.35@6.10, (very choice up to $6.25@6.50 and fancy at $6.50@6 75;) red and amber winter wheat inferior to choice trade and fancy at $4.35@6; round hoop Ohio, $4.40@4 75; and trade and family brands of do. at $4.85 @6.25, the latter for very choice; St. Louis $4.60@5 50 for inferior to good extra; $5,50@6 35 for good, to choice, and up to $6.75@7 for very fancy brands; Minn. clear, inferior to very fancy at $4 35@5; Minnesota "straight," poor to very choice, at $5 25@6.75, and patent inferior to fancy at $5.75@8,25; city mill extra at $5.55@5.65 for fair to choice for the West Indies; do. for England at $4.30@4.65 for poor to choice spring wheat; do. trade and family extras, $5.55@6.15 do, for South America $5.65@6.00, the latter for very choice; No. 1 at $3 10@3.65 for very inferior to very fancy.

Receipts for week, flour, bbls. 117,410 corn meal, do. 675; wheat, bush. 395,700; corn, do. 420,175; oats do. 214,670; rye, do 15,200; malt, do. 26,000; barley, do. 41,212; beans, do., 7,716; rice, pkgs. 2,511.

Exports for week, flour, bbls. 102 335; corn meal, do. 4 520; wheat, bush 1,131,263; corn, do. 451,567; oats, do. 2,000; peas, pkgs. 2,004; beans, do. 470; rice do 699.

GRAIN.—Wheat has had freer export demand, the shipments for the week being 994,000 bush. Speculative trading has been good; prices have shown frequent changes and closed firm, latest prices are for

No. 1 white at $1.18@1.18½, do. March at $1,18¾@ 1,18¾; do. April at $1.17¾@1.18¾; do. May at $1.16¾@ 1.16¾. No. 2 white at $1.17@1.17¾; ungraded white at $1.16@1.17¾; mixed winter at $1.18¾; No. 1 red at $1.20¾@1.20¾; No. 2 red at $1.21¾@1.21¾; do. March at $1,20¾@1.20¾; do, April at $1.20@@1.20¾; do May at $1.19¾@1.19¾; do. June at $1.18¾; No 3 red at $1.18¾ @1.18½; ungraded red at 80c@$1..0¾; ungraded spring at 85@95¾c.

Rye firm; quoted at $1.04 for full lots.

Corn is active and strong; shipments for the week, 142,0 0 bush; latest prices are for

New York No. 2 at 58¾@59c, do. March at 58¾@53¾c do. April at 56¾c., do May at 54¾@55, do. June at 51¾@52c., No. 2 old crop at 67¾, No. 3 at 56¾@56¾; ungraded mixed Western at 56@58¾; New York steamer mixed at 57¾@57¾, New York steamer yellow at 57¾@57¾; Southern white at 61c.

Oats advanced early in the week but closed more in favor of buyers, with a moderate trade. Latest prices are for

No. 1 white at 47¾; New York No. 2 white at 45¾ @45¾; No. 3 white at 43¾@44 N. Y. No. 2 at 40¾@44, do. March at 43¾, do. April at 43¾@43¾; do, May at 43¾@43; No. 3 at 43; ungraded white Western at 44¾@47¾; ungraded mixed Western 42¾@45; white State at 45, No. 2 Chicago quoted at 44.

HAY AND STRAW.—Demand is fairly active and prices showing firmness. Quotations are for

Hay, prime timothy at $1.15@1.20@100 lbs.; medium timothy at $1,10@1.15 do.; shipping grades at $1@1.05 do.; clover mixed at $1.05@1.10, clover at $1@1.05. do. Straw—No. 1 rye at $1,20 ℔ 100 lbs.; No. 2 rye at 80@85c. do.; oats and wheat at 80@85c. do.

The custom of storing hay in the city is becoming less and less a feature. At one time after the close of navigation the trade depended largely upon Fall storage and crammed barges that were kept at this end of the route. Now the bulk of hay used in and exported from New York has a steady railroad delivery, with commodious platforms, where enough can be held, in case of delayed trains, for pressing wants. The railroad system is also very convenient for shipping purposes: the business being greatly facilitated by the fact that a vessel can load direct from the station, instead of losing time by waiting for truck loads from storehouses. What is termed shipping hay also represents the grade used by car and stage routes. There used to be a wider classification in shipping and prime hay, but the enlarged use of good common has brought about a higher standard of the former. The past Winter, with its stiff prices, has developed a new source of supplies in the way of daily arrivals from the Western States. Canada, before, was the resource in case of a small domestic crop, but this season we have used all the Dominion could spare and have found room for the product of more remote points.

Exports for week, 254 bales.

HOPS.—Exports for the week have been 727 bales, and from Sept. 1, 35,716 bales, with for the corresponding period the previous year 41,337 bales. The market has a firm tone and is fairly active. The larger movement in the interior on wants of exporters has most influence. Quotations are for

	Cents per ℔.
New Yorks, crop 1880, choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	15 @17
Eastern, crop 1880	16 @22
Wisconsin, crop 1880	16 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Bavarians	30 @35
Pacific coast, new	19 @23

Receipts for week, 2,212 bales,

Exports do., 968 do.

LEATHER.—Quotations for hemlock sole are, 23 @23c. for light: 22½@25c. for middle; 22½@24½c. for heavy, and 20@22c. for good damaged.

OIL-CAKE.—Western is quoted at 29.50 per ton.

POULTRY AND GAME.—Receipts of dressed poultry are light and prices are unusually strong. A feature of the week is a sale of Vermont frozen poultry amounting to $20,000. Turkeys and ducks, 19c; chickens and geese, 15c. The demand is unusually good for Lent, Western frozen poultry quoted 18c.

Turkeys, small choice, 15@16c, other, 12@14c. Chickens, broilers, 24@25c.; Phila., 17@19c.; other 13½@15c. Fowls and chicks, 12@14c.; fowls, dry-picked, 14@14c.; other, 11½@13½c. Capons, large, 23c.; small and slips, 18@20c. Ducks, choice, 18@20c.; other, 14@17. Geese, extra, 12c.; other, 7@11c. Squabs, white, $3@ 3.50 ℔ doz. do. dark, $1 50@3.

Live poultry is active and high, stimulated by a demand for an approaching Jewish holiday.

Fowls, N. J., 14@15c.; other, 13½@14½c.; roosters, 8@10c.; turkeys, 14@15c.; ducks, choice, $1@1.25; other 75c @$1; geese, extra $2,25; other $1 25@2.

Wild pigeons have a quick sale at $1 75@2.00 ℔ doz. Wild ducks are unsettled; Western very slow, Norfolk Canvas-backs $1@1.25; Havre de Grace $1.75; Western 60@75c.; Havre de Grace red-heads, $1@ 1.25 Norfolk, 75c@$1; Norfolk mallard and black, 10@60c.; Western mallard and red-heads, 40c.; common, including teal, 30@30c.

PROVISIONS.—Hog products have tended higher on an active demand

Mess pork quoted at $15,60@16 for old and $16½@ 16¾ for new, $16 for April delivery add $16,10 for May delivery. Bacon at 8@9 for long clear and 9 for short clear. Beef at $21@23 for city extra; India mess 10 tcs.; $ 0.50 for extra mess in barrels and $9.50 for plain mess in bbls. Beef hams at $23@23. Lard—Western steam at 10.85 for spot lots; 10.8 ¼ for March; 10.85@10.87½ for April, 10.92½ for May and 10.95@ 0.97 for June, Steamer at 11¼@11¾. Tallow at 6¼@6¾ for prime.

Receipts for week, beef, bbls and tcs, 669 pork, 1,750 bbls.; cut-meats, 23,799 pkgs; lard; 15,764 pkgs.

Exports for week, beef bbls and tcs., 2,580, pork, 4,775 bbls.; cut-meats, 17,657,853 lbs.; lard, 7,150,450.

TOBACCO.—Exporters have been buying moderately and the home demand fair, with prices well sustained. Quotations are for

WESTERN LEAF.

	Light.	Heavy
Lugs	4¾@ 6	5 @ 6
Common leaf	6 @ 7	6¾ @ 7¾
Medium leaf	7¾@ 9	8 @10
Good leaf	8 @10	10 @12
Fine leaf	9¾@12	11 @13
Selections	12 @15	13 @15

SEEDLEAF.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	14 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5¾@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7 @10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	14 @18

SPANISH.

Havana fillers, common	80 @85
Good	85 @95
Fine	$1 @1.10
Superior	$1.15@1.25
Yara, first and second cuts, assorted	62½@67½
Yara, cuts	91½@$1

VEGETABLES.—Potatoes hold good, strong prices for Spring and there is a fair steady demand. Stock must be faultless to move the extreme. Bermuda second crops $5.50@6 ℔ bbl.

E. Rose, Eastern do., $2.50, do, State, $2,12@2.25; do, in bulk $2.12@2.25 Peerless, $2,00@2.12; Mercer, 1 75@2.00; Burbank $2,12@2 25; Peachblow $2.50; Snowflake in bulk $2.25@2.37; Snowflake, bulk, $2,12@2,25; Peerless $1.75@1 87; do, in bulk $1.87@2; sweet, Del. $1.50@2.62. Southern green stuff in making a good show and includes the following items: Charleston asparagus $12 per doz.; Norf. spinach $3 per bbl. Balt do. $1@2.50; Nor. kale $3; W. Indian tomatoes 40c@$1; per box; Bermuda beets $2; onions are something better; white $6@6.50 per bbl.; other $3.25 $4.50 and $4.75, the latter for State; carrots $1@1.25; beets 75c@ $1; Hubbard squash, $1,12@1.87; marrow do. 50c.; turnips all 50@75c; celery per doz $1@1.50; cabbages per 100 $4@8, Hot-house products, cucumbers choice per doz $4@4.50 culls $2@2.40; mushrooms per ℔ 75c; lettuce per doz 25@62c.; radishes per 100 bchs. $4@6; rhubarb do. $6@8

WOOL.—The market has been rather more active this week and the position is somewhat steadier, without, however, any advance made, prices standing essentially as quoted last week.

LIVE STOCK MARKETS

NEW YORK, Saturday, March 13, 1880.

BEEVES.—Receipts for the week 11,618 head; do. last week, 13,407 do. The week has been an unsatisfactory one and many lots of Chicago and St. Louis bought cattle have made a loss to owners. Prices, compared with Wednesday, were a shade stronger on good to prime steers, but common to medium stock kept adding to sellers' losses. Some rough Michigan oxen sold at 7@8c. to dress 56 ℔s. The bulk of the sales were at 9@10¼c. to dress 56@54 ℔s. for ordinary to very good steers, though 8¾c, was sometimes quoted, to dress 55 ℔s. A few fine quality loads sold at 11¼@11¾c. to dress 57 ℔s.

MILCH COWS—Dull, with a nominal range of $40@ 50 ℔ head, a few selected at $60. The latter grade of milkers are worth quite as much at home as here.

VEAL CALVES.—Live calves have ruled steady and firm. Dressed, with uncertain weather, have had an irregular place: best State, 10c.

Live calves, choice, 8½c.; fair to prime, 7@8; poor, 5¾@6½c.; Mt. Holly, 6¾@8¾c.; buttermilk, 6@8; grassers, 5@6c; dressed choice, 10½c.; fair to prime, 8¾@10c.; very poor and poor, 5@7c. Calves that dress under 60 ℔s. are confiscated by the police.

SHEEP AND LAMBS.—Receipts for week, 28,121 head; do. last week, 26,678 do. Sheep have sold briskly, as smaller receipts are indicated for next week. Sheep, 5¾@6¾c.; a few wethers at 7c.; yearlings, 6½@7½c; a few extras 7c. Spring lambs quoted $8@9 ℔ head.

SWINE.—Receipts for the week, 20,425 head; do. last week, 31,744 do. Market steady common mixed Western, 5¾@ 5¾c.; prime corn-fed hogs scarce and wanted; 6@6¾c; country dressed pork, light, 5@8¾c.; medium, 7¾@7¾c.; heavy, 7¾c.; city dressed, 7¾@7¾c. The season is growing short for very heavy hogs. Pork tenderloins, 11¾c.

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A CARD FROM CONRAD WILSON.

THE suspension of "The Business Farmer," though unavoidable at the time it occurred, does not by any means terminate the work intended, nor will it necessarily prevent the final attainment of some objects deemed important. But the new departure now proposed requires a change of base, and some variation in the plan. Having nearly recovered from the late severe prostration to which, for a time, I was compelled to succumb, I now feel warranted in resuming my work, in which already some results have been accomplished, while others more important are left unfinished.

In justice to other parties, it is proper to say here, that the company who have hitherto co-operated to aid my efforts have been prompted from the first by unselfish motives, and a deep interest in farming topics rather than with a view to pecuniary profit. It ought also perhaps to be further stated, that soon after the company was formed we lost the services of the two most efficient parties. The Rev. Mr. Brown was suddenly removed by death, and Mr. Charles Cook was called away on private business in Canada. Yet no wish has been expressed by the company to abandon the paper. On this point, however, it is incumbent on *me* to say, that I could not expect, nor can I even consent to, any further effort on their part to sustain the paper, since the cause of interruption was no fault of theirs.

Periodicals are often transient, but *Truth* survives. If the doctrines of "The Business Farmer" are sound, their future is assured. The journal may disappear, but the work will go on through other channels. To my friends and patrons I owe a debt of gratitude, and they will hear from me at intervals that I trust will not be few or far between. All subscribers who have renewed for the present year will find the matter arranged to their satisfaction.

In another column of this journal I have presented a few comments on some Feeding experiments of great value conducted by parties whose views, experience and reputation, give much weight to their teaching.

New York, March 8. Box 2695.

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HENRY STEWART.

Artificial Fertilizers.

PLANTS cannot live or grow without food. They are provided with organs for taking in food, precisely as animals are, but as they are fixed in the soil they cannot, like animals, go from place to place in search of food, but this must be brought to them. And the supply must be liberal, or the crops will not be large enough to pay for the labor spent upon them. The farm, as a rule, cannot keep itself supplied with manure, and a farmer is obliged to look to other sources to make up the needed supply. Fortunately, we have many of these sources from which fertilizers can be procured, and as these are not made on the farm in the *natural* manner, they are called *artificial*. The most commonly used of these fertilizers are lime, guano, bones, superphosphate of lime, gypsum and the potash salts.

Lime is very largely used as a manure. It is made from limestone by burning it in kilns, by which the character of the stone is entirely changed. If we take a piece of marble, which is limestone, and put it into water, or to the tongue, no change occurs, and no taste is perceived. But when this stone is burned and made into lime, we have a very different substance. If we put it into water, it begins to crack and swell and fall apart, and becomes so hot as to set fire to wood that may be in contact with it. If we put the tongue to it we find it to taste very strong, to be hot and pungent, and if the contact is prolonged it will destroy the skin. If a very small piece of it enters the eye by accident, the eye is seriously injured and sometimes the sight is lost. This is because in burning, the lime has been made caustic, and in this state burns and corrodes any moist, organic tissue which it touches. The substance must be moist, because moisture is necessary to any chemical decomposition, and we shall see how this behavior of lime is due to a chemical action. Limestone contains lime and carbonic acid, 56 lbs. of the former to 44 lbs. of the latter in every 100 pounds. By burning 100 pounds of limestone the 44 pounds of carbonic acid is driven off into the air and we have 56 pounds of lime left. But the lime immediately strives to get back to the condition of limestone which is natural to it, by seizing upon the carbonic acid again, and uniting with it. Therefore if the lime is brought into contact with any organic substance, either vegetable or animal, it burns, corrodes or decomposes it in the attempt to take from it whatever carbonic acid it may have about it.

This is precisely the action of a fire which deprives carbonaceous substances of its carbon. But lime has also a very strong affinity for water, as may be seen if we put 53 pounds of water to 66 pounds of lime. The lime takes up all the water, swelling up and falling to a fine powder, but yet remaining as dry as before. The water has chemically united with this lime and we cannot see it any more, and in forming this union it has given out a great heat, sufficient to inflame wood. When, therefore, a piece of lime comes in contact with any moist substance, it instantly robs it of the water it contains, and in doing this it destroys the tissue and causes it to rot and fall to powder. This is, then, what is meant by a substance being caustic. Now it is upon this peculiar property of lime—as well as on account of its behavior to some mineral substances in the soil which may be spoken of hereafter—that its value to the farmer depends. Let us follow up its action when applied to a field.

The farmer plows the soil and mixes with it the roots of the previous crop and the remains of former crops: weeds, or manure that has been applied in former years. He procures some lime and exposes it to the air until it has absorbed some water and has fallen to a coarse powder; this is done that it may be spread conveniently. He spreads the lime evenly on the plowed ground, and harrows the surface so that the lime and the soil may become well mixed. Every particle of lime that comes in contact with a fragment of vegetable matter in the soil begins to corrode it, to rot and eat it away, by taking its carbonic acid and its water from it; and it soon reduces it to perfect decomposition. It is then soluble, and when the farmer sows his seed and the seed sprouts, and throws out roots, the root hairs, or the plants' mouths, spread out and open their pores to suck in food. A genial shower falls; dissolves the plant food newly made by the lime, and carries it to the myriad little mouths open and eager to receive it. The plants well supplied with food thrive, and show by their bright, deep verdure, and their strength and vigor, how well the lime is serving its purpose in the soil.

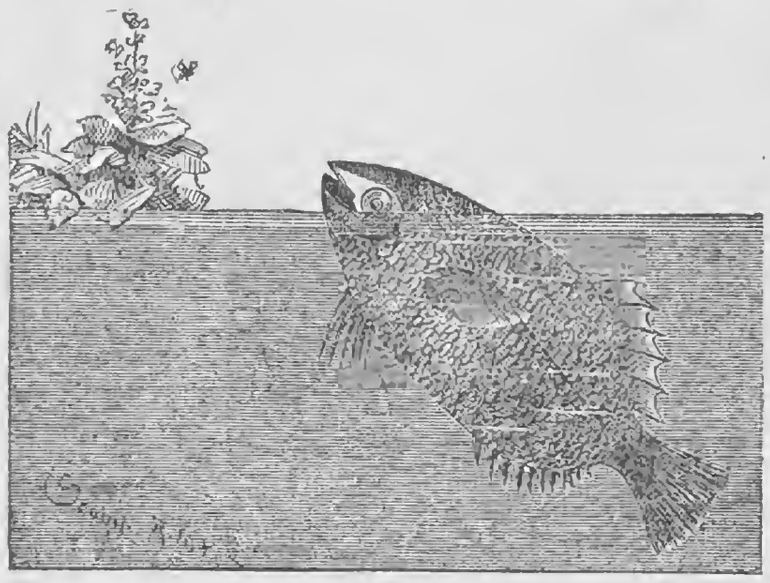
But it should not be forgotten that lime is itself a necessary plant food. In 1,000 pounds of clover there are 19 pounds of lime; in 1,000 pounds of corn stalks, 5½ pounds; in 1,000 pounds of tobacco, 73 pounds. There is much more lime than potash in wood ashes, and if it were not for the lime that exists in the grass a grazing animal could have no bones. So that while for this reason alone, it is necessary for the soil, yet its greatest value is derived from the chemical action upon organic matter, which has been explained, as well as upon a very similar action which it has upon some mineral matters, to be explained hereafter.

THE ARCHER FISH.

UNCLE MARK.

Probably almost all of the boys and girls, who will read this little sketch, have seen the common brook trout jump out of the water after flies and bugs. Having such a slender form and great muscular power, it can leap almost its whole length above the water to catch the unwary little fly which has ventured too near its unseen enemy. Indeed, a young friend of mine has a fine, pet trout which is kept in a tub, and he has to lay pieces of board across the tub to keep the spotted beauty from jumping out and becoming a meal for the cats. Sometimes a piece of meat is put on the end of a stick and held a foot or so above the surface of the water, but the trout likes no better fun than to jump up after it, and he scarce ever falls back without the dainty morsel.

But it is quite otherwise with the archer fish. Poor, clumsy, heavy-bodied fellow, he likes flies and bugs just as well as the sprightly trout, but he can't jump. That's quite out of the question with him, so he might often go without his breakfast or dinner had not the same wise Power who gave him the appetite, provided also means whereby it might be gratified. Yet he gets his



THE ARCHER FISH.—FIG. 175.

fly or his bug quite as often as the trout, and that, too, at a distance over which no trout could jump. The little fly which has just been sipping the sweets of the thyme or water lily, sails bravely homeward, so high above the water that, he thinks, no danger may be feared from a trout, however agile, but he does not mistrust another enemy. Perhaps it is the noise of his wings; perhaps it is the shadow of his body that attracts the attention of the little archer fish as he swims among the weeds and pebbles of the pond; but slowly the little hunter approaches the surface, and so directs his course that when his nose rises above the water, as we see him in the picture, he is at that point which is nearest to his game. Then, without warning, he shoots a little crystal bullet from his mouth—a drop of water—and down comes the fly. It has been said that this little archer is so sure of his game that he has been known to secure it at a distance of three feet, and triumphantly bear it away to his home among the pebbles. There are few, if any, specimens of this archer fish in this country, as his native place is in the fresh-water lakes of Japan.

LETTER FROM THE COUSINS.

UNCLE MARK:—As I have not written a letter before for the Cousin's department (not having been a member of the club), I thought I would send you a few lines, hoping they will prove interesting enough for publication. I am a farmer's boy living on a pleasant farm in the eastern part of Columbia County. I have three fine sheep which were given me by a neighbor when they were little lambs, and also a full-blooded Jersey calf, which I bought with my own money. My mother has some house plants, but during the very cold weather we have had they nearly all froze, at least the prettiest of them. The country about here abounds in foxes, and I can hear them barking almost any night. Hunters are out after them nearly every day, and they kill a great many. They can get from one to two dollars apiece for their skins. The weather now is quite mild, but we have had a very severe Winter. I shall be glad when Spring comes.

Canaan, Columbia Co., N. Y. PORTER DARROW.

DEAR UNCLE MARK:—I am a little girl and live at Prairie du Sac, Wisconsin; my step-father takes the RURAL. My mamma takes great delight in the flower and fruit department, and although she has very poor health she loves to cultivate flowers, as that is about all she is able to do. I thought, if you would allow me to become your little niece, that perhaps you would remember me in your seed distribution, so that I might help this Summer to make mamma's life pleasant and happy. I have grown up sisters and brother, also a little half sister that I love dearly. Her name is Flora Steele, we named her after the flowers, for my mamma worships flowers and her baby. DORA BROWN.

Prairie du Sac, Sauk Co., Wis.

DEAR UNCLE MARK:

If you please, I would like to join the Horticultural Club, as I am interested in Horticulture. I exhibited at our last fair 12 kinds of grain in the head, 20 kinds of grasses and 30 kinds of apples, and got the premiums on them. The specimens were all properly named, except the native grasses.

I am 13 years old and go to school and study reading, writing, spelling, geography, grammar and practical arithmetic. A. S. EMMONS.

Drowsiness, biliousness, pains and aches, and ague, Hop Bitters always cures.

Sabbath Reading.

THE UPWARD FLIGHT.

MRS. L. S. HAGNER.

ARE we almost there?
Have we scaled the height?
Are those the home-lights which gleam afar?
Have we bade farewell to the shadowy night,
And entered the realm of the morning star?

Faint to my ear come the sounds of earth,
The wailing of anguish and wild despair;
The hollow ring of her hollow mirth
Is lost in the depths of this upper air:

And now a breath like the breath of morn,
A light—a radiance, spreads around,
And forms of that mystic radiance born
Seem floating hither, glory crowned!

Oh angel! lend thy sheltering wing,
I see the portals of light unrolled,
With songs of welcome their arches ring,
The ransomed are safe in the Heavenly fold.

PIETY.

THE touchstone of piety is love to God. "The greatest of all the commandments is this, Thou shalt love the Lord thy God with all thy heart, with all thy soul, and with all thy mind, and with all thy strength." To a good man, God, though unseen, is a distinct personality, a being whom he loves. And it is no exaggeration for a man whose heart is all on flame with devotion to look up to the Great Presence and say, "Whom have I in heaven but Thee? and there is none upon earth that I desire beside Thee," the dearest ones, both on earth and in heaven, though dearly beloved and desired, being lost sight of in the absorbing contemplation of Him whose love, shed abroad in the heart, commands its supremest affection and its warmest delight.

But it is not every one who can say this directly he begins to serve God, nor even after he has made some way in the Christian life. The Divine life in the soul is a growth. The way of a Christian is a "Pilgrim's Progress;" if a Christian is standing still in the way he is losing his religion. If a godly man is not becoming better, he is almost certainly becoming worse. But if the glow of devotion is more fervid, and love to the Great Father is becoming more intense, the man is surely advancing in the life of the soul. The warmth and fervor of devotion to God are therefore the measurement of the soul's progress in godliness. Here, then, is the milestone by which to mark the soul's advance: can I say, "Whom have I in heaven but Thee?" If so, I am making way in my religion.

A FULL CUP.

WHEN the saintly Payson was dying, he exclaimed, "I long to hand a full cup of happiness to every human being." This was the language of a heart thoroughly purged of all selfish affection and filled with the spirit of that love, which led our adorable Jesus to give his life for human redemption. If every Christian would go out daily among men, filled with such longing for human happiness, what marvelous changes would soon be wrought in human society! The selfish element would be eliminated from the dealings of the Christian business man. Not justice merely, but benevolence, would enter into his every-day trade. The same spirit would rule his home and church life. He would become an incarnation of good-will toward all, and would so preach the Gospel by his deeds that man would see his good works; and glorify his Heavenly Father. The spirit of Payson is worthy of every man's imitation. Happy he who can truthfully say, "I long to hand a cup of happiness to every human being."—Zion's Herald.

How natural and how beautiful was that old Greek idea which gave a graceful spirit to each stately whispering tree, and held it an act of piety to plant a sapling where the felled trunk had stood, lest the pretty dryad should go homeless on the wold.

"But ah! my friend, the days were brief
Whereof the poets talk:
When that, which breathes within the leaf,
Could slip its bark and walk."

For trees and leaves do, really, breath. They seem, also, to toss their arms and sway, and bend towards each other, as though there were an earnest language in their murmurous sound, which cannot shape itself into words.

THE stars grow brighter as the night darkens. As the lights of earth are put out one by one, the countenance of heaven makes plainer revelation. Grace makes a very sunset of what to nature is the most impenetrable darkness, and the plaintive strains of the Miserere merge in spite of humility into songs of triumph; for the walls between the dying soul and the heavenly Jerusalem are so nearly fretted through that the loud Alleluias mingle with the contrite love whose eyes are closing on the cross. Precious in the sight of the Lord is the death of His saints.—F. W. Faber.

Now, I say the times are full of promise. I look over the earth, and nearly everything is hopeful. Christianity is growing stronger. To-day there are more Bibles, more Sunday-school children, more teachers, more spiritual songs, more sermons, than there ever were on any Sabbath since the light of the sun dawned on the Garden of Eden.—Bishop Simpson.

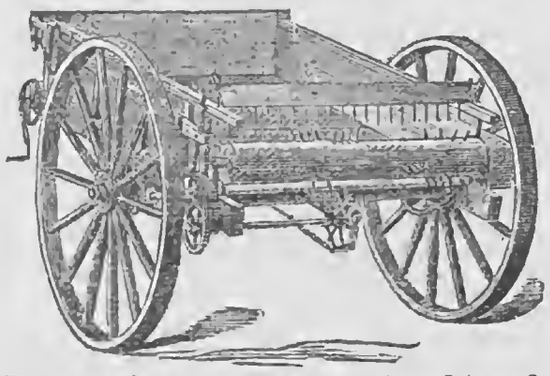
WHILE we are looking at unseen and eternal things, Christ, Christ only, is our sole foundation. He will be with us through the Valley. He will receive us when it is passed through. He will present us faultless to the Father. His blood, His righteousness, His spirit His image—these are the glorious dress He gives. Let us, day by day, put on Christ; so shall we be found clothed with the garments of salvation.—Bickersteth.

Implements and Machinery.

BUFFALO PITTS
THRESHING MACHINERY
Vibrating Threshers
Endless Apron Threshers
Horse Powers
Mounted or Down.
Farm Engines
Plain or Traction.

The reputation that our
BUFFALO PITTS APRON THRESHER
has sustained for over 30 years as the
KING OF THRESHERS
is a GUARANTEE that our new Vibrating Thresher and Threshing Engine will be
Better than any others in the market.
THE PITTS AGRICULTURAL WORKS,
Catalogues sent free on application Buffalo, N. Y.

KEMP'S
Manure Spreader,



Pulverizer and Cart Combined
Will spread evenly all kinds of Manure found on the farm, from the coarsest to the finest, including Lime, Ashes, Muck, Marl, Cotton-seed and other like fertilizers, in any desired quantity per acre, wet or dry, without manual labor, in ONE-TENTH THE TIME done by hand, and in a manner that no intelligent farmer will doubt the fact that he must realize
25 to 40 Per Cent. More Benefit
than by pitching it out the ordinary uneven way. Hence the chief merits lie in QUALITY OF WORK.
AGENTS WANTED. Send for Circulars.
Manufactured by the KEMP & BURPEE MANUFACTURING CO., owners and manufacturers for the United States except New England, and the N. E. States by the RICHARDSON MANUFACTURING CO., Worcester, Mass.
KEMP & BURPEE M'F'G CO.,
SYRACUSE, N. Y.

THE BELCHER & TAYLOR AG'L TOOL CO.

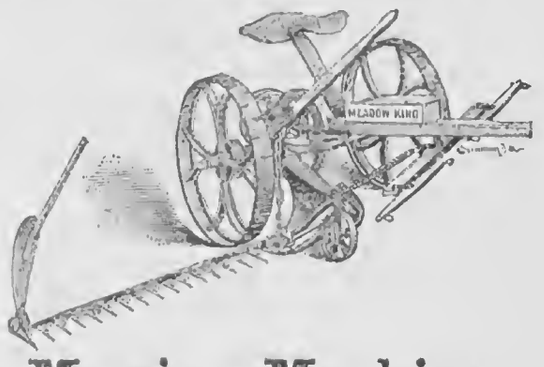
Manufacture this Plow of the *best Cast Wheel Iron*; also of *Patent Hard Metal*. The handles vibrating from one side to the other as the plow is turned at the end of the furrow, enables the plowman to walk squarely behind the plow—a feature not possessed by any other Side-Hill Plow. It does as good work as any Land-Side Plow. For further particulars and prices send for our new *Illustrated Catalogue*. Address
GEO. S. TAYLOR, Agent,
Chicopee Falls, Mass.

SAVED 8c. per bushel on CORN and 20c. on WHEAT *can positively be saved*. For Illustrated Pamphlet, giving full particulars, address The Thomas Harrow Co., Geneva, N. Y.

THE EUREKA MOWER

Cuts a SIX FEET swath easier than a side cut mower cuts four feet, and leaves the cut grass standing light and loose, curing in half the time. Send for Circular.
EUREKA MOWER COMPANY,
TOWANDA, PENNA.

MEADOW KING



Mowing Machine.
In all that goes to make up a Mowing Machine, the MEADOW KING has no equal. The simplest, strongest and most durable Mower in the world. No Side-Draft, no weight on the horse's neck. Send for Illustrated Circulars. Address
GREGG & CO., Sole Manufacturers,
Trumansburg, N. Y.
Also Manufacturers of Lawn Mowers, Plows, &c.

PERSONAL ITEMS.

Senator-elect Mitchell of Pennsylvania, wears a chin whisker in the California style.

Frances E. Willard this week presented Mrs. Hayes's portrait, secured by the temperance women as a testimonial to her temperance principles, to President Garfield, and it was hung in the White House next to Martha Washington's.

Whitelaw Reid, editor of the N. Y. Tribune, is said to be actually engaged to the daughter of D. O. Mills, the California banker, estimated to be worth anywhere from $10,000,000 to $25,000,000. These gossips report that the marriage is to take place early in April, and that the bridal trip will be an extensive tour on the Continent.

The train bearing ex President Hayes and his party from Washington, and going at full speed, collided Saturday afternoon with two engines and a train of empty cars near Severn station on the Baltimore and Potomac railroad, 15 miles from Baltimore Two men were killed and several injured. None of the Hayes party, who were in the last car of their train, received more than slight bruises.

[Worcester (Mass.) Spy]

Nothing on Earth so Good.

Certainly a strong opinion, said one of our reporters to whom the following was detailed by Mr. Henry Kaschop, with Mr. Geo E Miller, 418 Main St., this city; "I suffered so badly with rheumatism in my leg last winter, that I was unable to attend to my work, being completely helpless. I heard of St Jacobs Oil and bought a bottle, after using which I felt greatly relieved. With the use of the second bottle I was completely cured In my estimation there is nothing on earth so good for rheumatism as St. Jacobs Oil. It acts like a charm."

Real Estate.

NORTHERN TEXAS

Offers greater attractions in way of good, cheap lands, healthy country, mild climate, abundance of timber and water than any other section now open to settlement. In it the TEXAS AND PACIFIC RAILWAY is now being extended westward over one mile per day, and is now offering for sale at low prices and on easy terms over 4,000,000 acres of land.

For descriptive circulars and maps giving truthful information, address W. H. ABRAMS,
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LANDS AND HOMES

Short winters, low taxes, good society, convenient markets, superior schools, healthful climate. Excellent for Stock, Fruit, and Farming. The best Tobacco Region in the West. 1,000,000 acres well watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from $2.50 to $8 per acre on seven years' time. Free transportation from St. Louis to purchasers of land. Send for maps and circulars.

IN SO. WEST MISSOURI

W. H. CORBIN, Land Commissioner, Temple Building, St. Louis, Mo.

Implements and Machinery.

Pearce's Improved Cahoon Broadcast

SEED SOWER.

Sows all kinds of Grain and Grass Seed.

This machine has been sold in every State in this country and in almost every Grain-growing section on the Globe giving entire satisfaction everywhere to every intelligent operator. Price $6. Does the work of 5 men. Send stamp for Circular.

R. H. ALLEN & Co. Agts
189 & 191 Water St., N. Y.

GCODELL CO., Antrim, N. H., Sole Manufacturers

WHY not try our Champion Lock-Lever WAGON JACK in your own neighborhood? Address for terms, J. H. DAVIS, Box 58, Warren, Ohio.

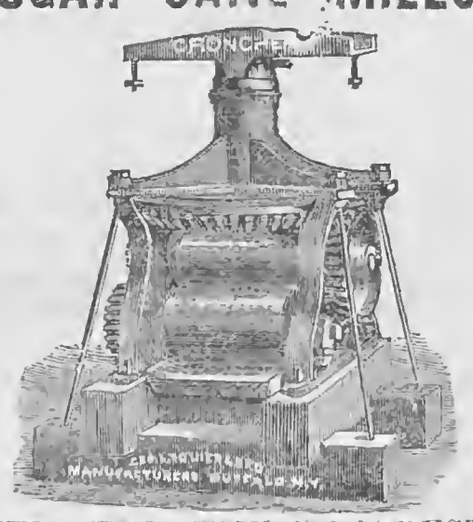
CLOVER

To every farmer sending us his name, we will send free *The Clover Leaf*, a 4 page, 28 column farmers' paper, full of valuable information on the culture and harvesting of clover for seed. When you write say where you saw this notice. Address BIRDSELL MANUFACTURING CO., South Bend, Ind.

BEST WASHER AND WRINGER *in the world.* Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of washer, $5. Sample to agents, $3.50. Price of Wringer, $7,50. Sample, $4 25. Circulars free.
ERIE WASHER CO., Erie, Pa.

Implements and Machinery.

SUGAR CANE MILLS.



THE BEST--THE CHEAPEST.
SEVENTY DIFFERENT SIZES.
Send for Amber Cane Manual
GEO. L. SQUIRE & BRO., Buffalo, N. Y.

GARDNER'S RAILWAY PITCHING APPARATUS

Consisting of Grappling Fork, Carrier Pulleys, etc. This fork, car, etc., has been sold throughout the U.S. and Canada with the greatest success. It has won its way amid the greatest competition of Forks and Carriers, and is without doubt the best Hay and Grain Unloader made; also Stacker. Send for a circular now. E. V. R. GARDNER & CO.,
Johnson's, Orange Co., N. Y.

IMPROVED FARM IMPLEMENTS.
Non-Explosive Steam Engines, Best Railway and Lever Horse Powers, Threshing Machines, Straw-Preserving Threshers, La Dow's Disc and Steel Spring Tooth Harrows, Eagle Sulky Horse Rakes, Cultivators, Feed Mills, Feed Steamers, &c., &c. WHEELER & MELICK CO., Albany, N. Y. Established 1830. Send for Illustrated Catalogue.

HEEBNER'S
LEVEL TREAD
HORSE POWER.
WITH
Speed Regulator.
Heebner's Improved
Little Giant
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"UNION" FEED CUTTER, CIRCULAR AND DRAG SAW MACHINES, &c.
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HEEBNER & SONS, Lansdale, Mont. Co. Pa.

The only World Renowned NON EXPLOSIVE
GASOLINE STOVE
USED IN EVERY FAMILY
LARGEST DISCOUNTS TO AGTS
VAPOR OIL STOVE CO.
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MATTHEWS' SEED DRILL
The standard of America

Admitted by leading Seedsmen and Market Gardeners everywhere to be the most perfect and reliable Drill in use. Send for circular. Manufactured only by
EVERETT & SMALL, Boston, Mass.

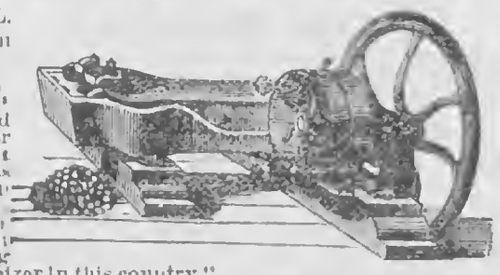
AGENTS WANTED FOR THE
SUMMIT
Stove-Pipe Shelf.—THE MOST convenient article ever offered to Housekeepers. One Agent made $144.67 in ten days. No freight charges.
Address, E. S. HARTZELL & CO.
236 South Third St., Philadelphia.

CHEAPEST AND BEST FERTILIZER.---FOLLOW NATURE.

WHICH USES GROUND LIMESTONE IN MAKING SOIL.

Every Farmer can prepare his own FERTILIZER with an ORDINARY HORSE POWER by using

Forster's Combined Crusher & Pulverizer.



Crushes and grinds Limestone at one operation. Ground Raw Limestone has been used as a Fertilizer in Germany for 50 years, and found to be three times as valuable as Burnt Lime. With above Machine, it does not cost as much as Burnt Lime.—W. W. REED, of Erie, Pa., says: "The GROUND LIMESTONE proved to be the most economical Fertilizer showing a profit over Bone Dust of $1.96 per Acre; over Phosphate of $1.28 per acre; over Guano of $9.70 per Acre; and over Salts of $5.95 per Acre."—JOHN G. BEAR, Montgomery, Lycoming Co., Pa., says:—"I believe it to be the *cheapest* and *best* Fertilizer in this country."

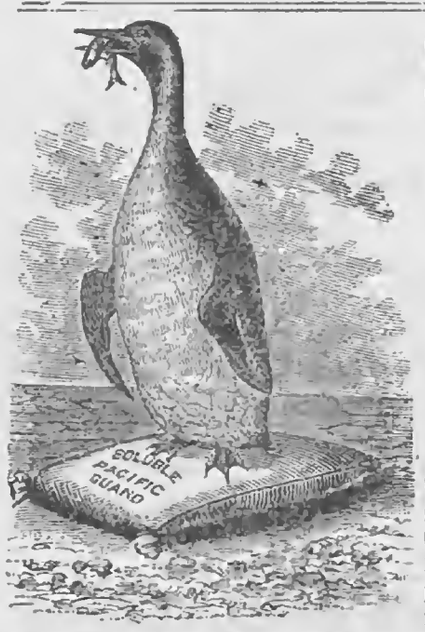
ESPECIALLY VALUABLE FOR SPRING CROPS, CORN, etc. Machine is exceedingly simple and not liable to get out of order. Address TOTTEN & CO., Pittsburgh, Pa. ☞ ONLY MAKERS.

ASK FOR
Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
USE ONLY THIS THE FIRST AND THE BEST

HALL, ELTON & CO.,
Electro-Plated Ware, German Silver and Britannia Spoons,

"EASTLAKE." [Patented.]
Factories, Wallingford, Conn. Salesroom, 75 Chambers St., New York

Fertilizers.



SECOND TO NONE.

Soluble Pacific Guano.

Sale in 1865 - - - - - 754 Tons.
" 1880 - - - 44,700 "

This Fertilizer, which was at first sold almost entirely in the Southern States, has of late years become so deservedly popular in the North, for the cultivation of all Farm Crops, that the Company have enlarged their works especially to supply the Nothern demand, and we are now in a position to fill orders promptly. Pamphlets containing testimonials and other information furnished by our local agents, or on application to

GLIDDEN & CURTIS,
GENERAL SELLING AGENTS OF PACIFIC GUANO COMPANY
Boston, Mass.

Implements and Machinery.

Farmers Knife Made of razor steel, fine ivory handle, inlaid gold shield or name plate. This wonderful Knife is almost as useful as an **entire carpenter shop**, and much handier. It has screw driver, claw, knot untier, machine for taking stones from horses' feet, rimmer, brad-awl, nut-cracker, corkscrew, stout small blade, and a large, strong, wide blade. It is a full size Knife—no diminutive affair. Entire length, with blades shut, 4 inches; weight, about 4 ounces. We bought 100 dozen of these knives, at forced sale, for one-sixth their value. It is a regular **$1.50** knife. Will send one by mail, boxed free and prepaid, for **63** cents. Every knife guaranteed exactly as represented, or money refunded. Address
BELCHER, JAMES & CO., Boston, Mass.

DOG POWER.

25 per cent more power than any other. Has adjustable bridge. 30 lb dog will churn for 6 or more cows.
Address,
ALBANY AGR'L WORKS, Albany, N. Y.

FARM GRIST MILLS
AND CORN SHELLERS.
Over 25,000 Now in Use.
Every Machine is fully Warranted. Price of Mills, $15 to $35 shellers, $5. Don't buy a Mill or sheller until you have seen our terms and Illustrated Circular. Address, with stamp, LIVINGSTON & CO.,
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PENNOCK'S PATENT ROAD MACHINE.
KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS
MACHINES SENT ON TRIAL. KENNETT SQUARE PA

STOCKBRIDGE
MANURES
SEND FOR PAMPHLET.

These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us

BOWKER FERTILIZER CO.
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COMPLETE MANURES

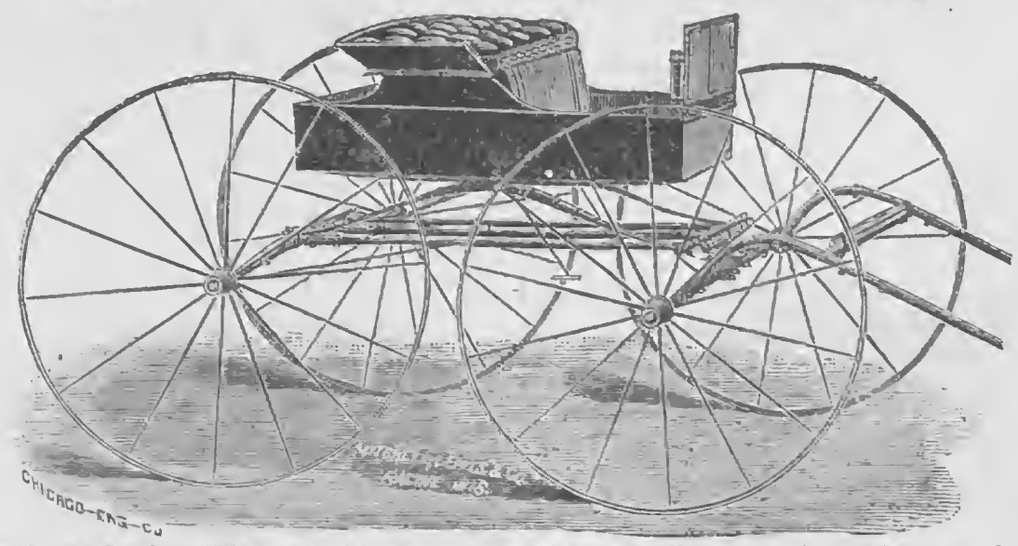
For EACH CROP, containing the necessary PLANT FOOD it requires. Also

Agricultural Chemicals,
GROUND BONE,
Guaranteed Strictly Pure.

Our Circular, containing facts interesting to Farmers, furnished on application.
H. J. BAKER & BRO., 215 Pearl St., N. Y.

Implements and Machinery.

Mitchell, Lewis & Co., Racine, Wis. U.S.A.
MANUFACTURERS OF
FARM AND FREIGHT WAGONS



Platform Spring Wagons, Three Spring Wagons, Four Spring Wagons Op and Top Buggies, Phætons, Sewing Machine Wagons, Buckboards.

The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List.
MITCHELL, LEWIS & CO., Racine, Wis.

Humorous.

"You don't know how glad I am to see you, Clara, dear." "Oh, yes I do," replied Clara dear; "Johnny told me that he heard you say you would rather die than see me."

MOTHER: "Now, Gerty, be a good girl, and give Aunt Julia a kiss and say good night."—Gerty: "No, no! if I kiss her she'll box my ears, like she did papa's last night."

"SHET dat do', Sam." "Why, it ain't cold, marm." "Golly, you shet dat do' you brat; ob course it ain't cold, it's me dat's cold. Tink I care wedder de do's cole or not!"

NEW style pocket handkerchiefs have the day of the week embroidered on them. This is to prevent a lazy man from carrying the same handkerchief the week through.

"MRS. BROWN, I do wish you would try to bring David out a little. Why, do you know he's so bashful that I really think if he caught the measles they wouldn't come out."

PECK'S Sun has been looking up the millinery business, and it finds that thirty cents' worth of velvet, three cents' worth of wire and forty cents' worth of feathers can be stirred up and sold for $25.

"KISS," said young Charles, "is a noun, we allow; but tell me, my dear, is it proper or common?" Lovely Mary blushed deep and exclaimed: "Why I vow, I think that a kiss is both proper and common."

A YOUNG lady was caressing a pretty spaniel and murmuring: "I do love a nice dog!" "Ah?" sighed a dandy standing near, "I would I were a dog." "Never mind," retorted the young lady sharply, "you'll grow."

TEACHER—"John, what are your boots made of?" Boy—"Of leather." "Where does the leather come from?" "From the hide of the ox." "What animal, therefore, supplies you with boots and gives you meat to eat?" "My father."—Galveston News.

A GENTLEMAN from Indiana recently registered at an Illinois hotel and looked at the printed notice in his bedroom, "Please do not blow out the gas." The occupant of the adjoining room heard him remark, "I pay my money, and I am going to blow out the gas if I want to."

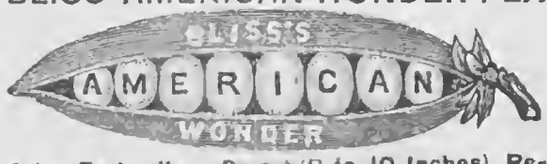
Something the Tourist Needs.

The tourist and the commercial traveler who visits foreign lands, or regions of his own country where vicissitudes of climate are among the influences prejudicial to health, omits a necessary precaution if he takes with him no medicinal safeguard against illness. The most reliable, if due credit be given to the statement of travelers, mariners, and emigrants who have used it, is Hostetter's Stomach Bitters, a sovereign protective against malarial and ship fever, and disorders of the stomach, liver and bowels, to which persons in transitu from one country to another, in the Tropics, and emigrants to the far West are peculiarly subject. The highly accredited medicine nullifies bad atmospheric influences, the effects of impure water, and inures the constitution to changes of temperature and an unaccustomed climate. Hardship and fatigue are endured with less danger or evil consequences if the system is fortified with this incomparable tonic and nervine.

CHOICE SEEDS! BEST OFFER YET.
A trial will prove it. For nine 3c. postage stamps I will send you, for trial, 11 papers **Choicest Seeds**, growth of 1880: Verbena (from 100 kinds), Double Crown Aster (mixed colors), New Spiral Mignonette, Sweet William (finest mixed), White Everlasting Scarlet Salvia, Phlox (25 colors mixed), Evening Primrose, Prize Aster (mixed colors), Pink Ageratum, Japan Cockscomb, and my New Illustrated Seed Catalogue.
L. W. GOODELL, Amherst, Mass.

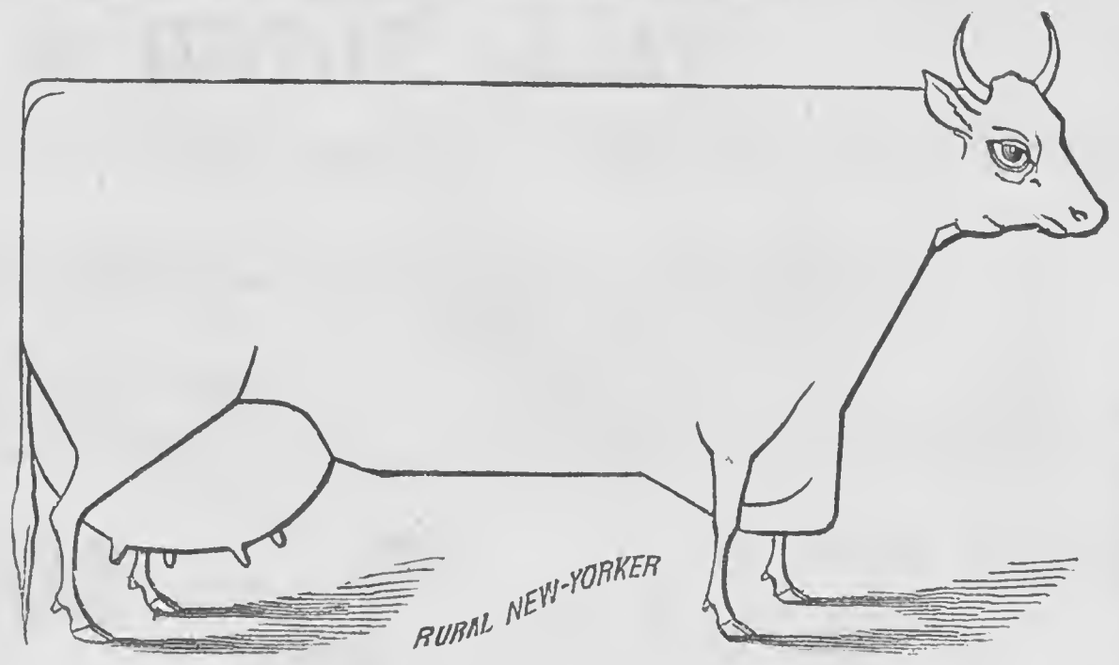
POMONA NURSERY!
BLIGHT-PROOF PEARS.
Largest Berries.
Catalogues of Fruit Trees, Plants, and Flowers sent free.
WM. PARRY, Parry P. O., New Jersey.

BLISS' AMERICAN WONDER PEA



Extra Early, Very Dwarf (8 to 10 inches), Requires no Bushing, Exquisite Flavor.
Acknowledged by all to be the best and earliest Pea grown.
Editor of American Agriculturist says: "Very early, productive and good; quality not to be surpassed."
CAUTION.—As there is another Pea in the market called "American Wonder," send to us and get the genuine Bliss' American Wonder. Observe our fac-simile on every package.
Prices.—One-fourth pint package, 20 cents; pint, 65 cents; quart, $1.25; by mail, post-paid.
Our Novelty Sheet, giving full particulars, mailed free.

ESTABLISHED 1845.
300 BEAUTIFUL ILLUSTRATIONS,
With a richly colored plate of a Group of Pansies, and a descriptive priced list of 2,000 varieties of FLOWER and VEGETABLE seeds—with much useful information upon their culture—150 pages—mailed to all applicants enclosing 10 cents, which can be deducted from first order for seeds.
Address, B. K. BLISS & SONS, 34 Barclay Street, New York.



ADJUSTABLE CATTLE-PORTRAIT DIAGRAM.
Patent applied for of course! See Editorial, page 192.

FULLY EQUAL TO STABLE MANURE, BOTH IN IMMEDIATE RESULTS AND LASTING EFFECTS.

The MAPES COMPLETE MANURES.

For Early Vegetables, Potatoes, Corn, Fruits, etc.

For some Practical Results, see Rural New-Yorker, Jan. 1, Page 43, March 5, Page 165. Send postal for new Pamphlet. Full assortment of AGRICULTURAL CHEMICALS for manufacturers and manipulators. Experimental Fertilizers, etc. Address

The Mapes Formula and Peruvian Guano Company,
AGRICULTURAL CHEMISTS, 158 Front Street, New York.

HENDERSON'S
COMBINED CATALOGUE OF
SEEDS AND PLANTS
Will be Mailed Free to all who apply by Letter.
Our Experimental Grounds in which we test our Vegetable and Flower Seeds are most complete; and our Greenhouses for Plants (covering 3 acres in glass), are the largest in America.
PETER HENDERSON & CO.
35 Cortlandt Street, New York

THE GENUINE BLANCHARD CHURN GET THE BEST
Five sizes made for Family Dairies. Four sizes for Factory use. They continue to be the Standard Churns of the Country. Send for a Churn or a Descriptive Circular, to the Sole Manufacturers,
PORTER BLANCHARD'S SONS, Concord, N. H.

The New Sheep Dip!
LITTLE'S CHEMICAL FLUID.
Non-Poisonous, Non-corrosive Disinfectant, and Specific for Scab and Mange, and any skin disease, Ticks, Lice and all insect pests. Worms in the throat and other internal parasites in Sheep and Lambs. Also a Certain Cure of Sore Eyes in Sheep and Lambs.
Is now extensively used in all the great wool-growing countries of the world, and is rapidly superseding all other preparations. In Australia it is the recognized Dip, and in New Zealand it is used in the Government Dipping Stations, and is highly recommended by the principal Sheep Inspectors. In the United States also, although only recently introduced, it is having a large sale, especially in California, and during the last 12 months many thousand gallons have been shipped to that State alone. A large demand has arisen from one end of the country to another, from parties who have satisfied themselves of its merits.
It is before all other Dips in the simplicity of its preparation. It mixes at once with **cold** water, and a single trial will prove that on coming into contact with the water the whole is changed into a milk-white Dip, which is **distinctly not the case with any other material.** May be used in the coldest weather with perfect safety.
Send 3-cent stamp for Testimonials and prices to
T. W. LAWFORD, Gen'l and Wholesale Ag't,
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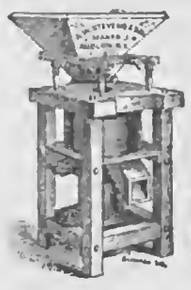

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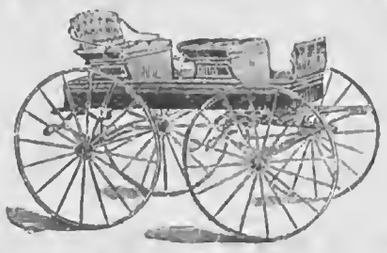

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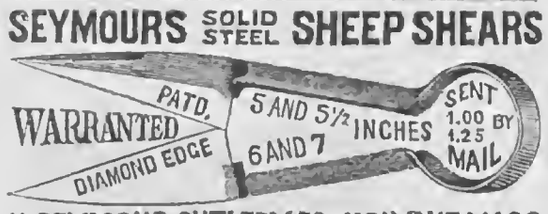

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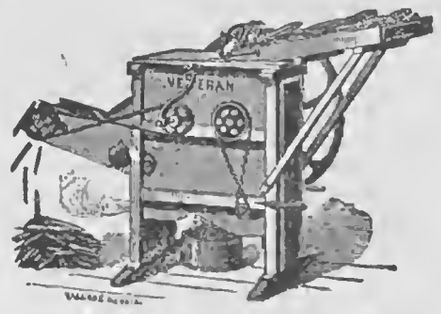

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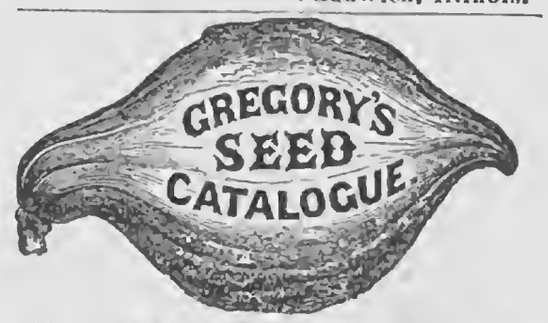

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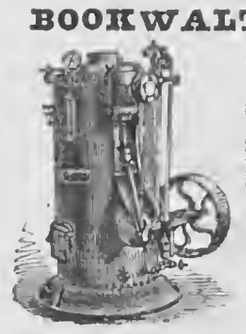

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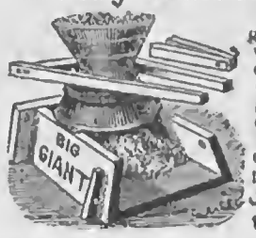

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THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Floricultural.

A STUDY IN ORNAMENTAL GARDENING.

PETER B. MEAD.

WE are running so much to "bedding" and "ribboning" in these days that there is a real danger in the near future of many forgetting that there is any other method of adorning the lawn or the garden, and there would, therefore, seem to be a necessity for occasionally presenting examples of other styles, better fitted to the means and surroundings of most American homes. I do not propose just now, however, to discuss the merits or demerits of any particular style of gardening.

The accompanying illustration is presented not only as an example of excellent taste, but also as a *study*. It is one of those things that will adapt itself to a great many places. I doubt whether any man, woman, or even child, can look at it without being impressed with its quiet, yet expressive beauty. It is simple, but very suggestive. How much more charming to see the plants so disposed as to develop their individuality, rather than that want of arrangement in which all individuality is lost in a crowded mass of color. In the former case we have beauty of form as well as color; in the latter, color alone. To this may be added that the illustration is susceptible of many variations from year to year at a very small cost, which is a point of much importance to those of moderate means.

But let us examine the picture, and see what it is. On the left we have a corner of the dwelling, showing a window prettily flanked on one side by a clematis, and on the other by a climbing rose. A modest little greenhouse is a fit companion, and in good taste. The walks are spacious, as they always should be where the grounds will admit of it, as they are convenient and conducive to comfort and enjoyment, as well as expressive of the largeness of the owner's heart, (sometimes of his purse) The vase at the sharp angle of the lawn is in the right place, and produces a good effect; and, what is better still, it has only a single plant in it. The oval bed is in a good position, and may be seen equally well from either walk. Through the center of this bed are three standard roses. Outside of these a row of Japan Lilies and gladioli, alternated, produce a good effect, which is enhanced by herbaceous plants between each. A border of variegated alyssum makes a neat finish to the whole.

A GARDEN SCENE.—Fig. 176.

In the border in the middle ground on the right, we have a row of hollyhocks alternated with Japan Lilies, and between each a Scarlet Pelargonium. For a background to these there is a mass of shrubbery with an irregular or broken outline, and some large trees in the distance. On the left, in the foreground, is a fine specimen of the Castor Oil Bean with its imposing ornamental foliage. Beneath the window, and commanding a view of the whole, is a rustic seat, where the family and friends may sit on a quiet eve, and enjoy the companionship of the birds and those other charming but voiceless children of Nature. Just at the moment we are looking at the picture the lady of the house has come out to gather a few flowers for the dinner table, and her little boy is eagerly pulling her by the hand to show her where to find the prettiest and the sweetest flowers. Who, that has ever been a boy, cannot remember something just like this?

I have said that this picture is presented partly as a *study*; by which I mean that many of the plants in the oval bed and in the border may be changed every year, if deemed necessary, without impairing the effect, and securing more variety than by massing, and at much less expense, as the principal plants are hardy and permanent ones. I will suggest a few changes by way of example, and leave the reader to make others, holding myself ready at any time to make any suggestions that may be needed. For example, remove the middle standard rose, and put in its place a Hydrangea paniculata grandiflora with a single stem five or six feet high. The top or head will need to be annually pruned to keep it in good shape and prevent it from getting too large. The lilies should not be often disturbed. Clumps of tigridias may take the place of the gladioli. Between the lilies and the tigridias put a plant of scarlet pelargonium one year, coleus the next, and so on. The border may one year be variegated alyssum, the next blue Lobelia, etc. The vase may one year have a Lomaria, the next a Sago Palm or a pritchardia. There are many annuals that may also be used with good effect.

In this way a pleasing variety of changes may be made every year. In the places not occupied by the plants above named may be dotted, all over the bed, clumps of snowdrops, scillas, triteleias, tulips, hyacinths, etc, for early Spring flowers, and these may be succeeded by Sweet Alyssum, mignonette, and other low-growing annuals.

I now turn the picture over to the readers of the RURAL, confident that they will find much pleasure in its study, even though they may have no plot of ground to which to transfer it.

THE PRETTY PRIMROSES.

WE have had so much pleasure and enjoyment during the past severe Winter from a few pots of Chinese Primroses (Primula Sinensis fimbriata) in our sunny window, that I felt like telling all who have never tried it how easy it is to grow them in the house successfully. Only four small three or four-inch pots have filled our window with a blaze of beauty ever since Thanksgiving Day, and more florliferous little creatures of the vegetable kingdom I never beheld. A hundred separate flowers could be counted upon the little plants at almost any time, and there is very little sign of abatement even yet; new buds continue to expand daily. The flowers are single, some pink, others white. The fragrance is delicate and delightfully fresh, reminding one of the leafy woods in June. The foliage is in itself almost as pretty as the flowers. The ferny green leaves in the colored varieties are shaded with maroon on the under side, and borne on stems of a similar color.

But the florists and amateur window gardeners will say, "Fudge! he's got the old natural single species of this well known plant, such as may be found growing wild in many parts of Europe; and what's the use of going off into ecstacies about that, when so many choice strains of double sorts are to be had at almost any greenhouse." Precisely, and this is a remark I may as well answer in advance. The new and choice varieties are certainly very beautiful, but they are also very uncertain, sportive, unreliable and tender and often indifferent bloomers at best. The late magnificent strains offered by many English growers at almost fabulous prices are indeed most tempting to any lover of flowers, both in colored representation and the glowing descriptions sent out. An exquisite colored plate in the London Garden last year almost tempted me to a small importation of the little beauties even at those high prices. But the risk of loss seemed too great; and I have since learned that the plants sent out proved sportive and unreliable in many cases, and experience with the double white which has long been common here has proven that its constitution has suffered by the florists' efforts to produce double flowers. And yet I would not ask any one to entirely discard the double varieties from his collection. I only plead for a place on every shelf for a few plants of the single sorts, and promise an abundance of pretty bloom in every case.

My plants were raised from seed said to have been collected from the finest strains of double sorts in England. But I obtained no double flowers; nor need any expect to do so in similar cases except by the merest chance. The only sure way of obtaining such is to buy plants of a reliable grower. The seeds are very small and require careful treatment to germinate; but once started the plants progress steadily, and soon become strong enough to bloom. The cultural directions found in first-class catalogues will lead to success if carefully followed. When old enough the plants will bloom in spite of your teeth, and in almost any location; and I really know of no other flowering plant on the whole list that will bloom so profusely in a sunny window in Winter, or give so much pleasure for so little care and pains Remember its leaves are averse to direct contact with water; apply it to the soil carefully. Give the plants rest in a shaded border in Summer if you can prevail upon them to take it. Do not overpot them, but change into larger pots when the roots ask for more room.

H. HENDRICKS.

CROCUSES are now (21st) blooming in sheltered places of the Rural Grounds. The yellows are always the first to bloom—the white next. The leaves of hyacinths and tulips are just beginning to show themselves.

Horticultural.

RURALISMS.

THE best method of keeping fruit is just now receiving a good deal of attention, both at home and abroad. The subject is one of great importance, and deserves all the attention it is likely to get. There are two quite opposite views advanced, both here and in Europe, and it would seem, quite independently of each other. One might be called the "wet" method and the other the "dry" method. I would suggest to those interested in the controversy (as all of us are, of course.) that it will greatly help to a solution of the question if it be borne in mind that all kinds of fruit will not keep equally well under the same conditions. At a future time I will contribute something to the "dry" side; just now, however, I will add a couple of items to the "wet" side.

Many years ago I had a box of Beefsteak Geranium (Saxifraga sarmentosa), which I directed to be left out, and it was placed under one of the grape-vines. In November I happened to see it, brushed aside the leaves, and found a bunch of grapes almost completely buried in the soil which had been thoroughly riddled with earth-worms. The box was then taken to the cellar and the earth kept moist. In the following March I attended a stated meeting of the trustees and faculty of the University of New York. It was usual at that time to have a little supper or lunch after the meeting, and that bunch of grapes was placed on the table in sound condition, and pronounced to be good by such men as Pro-

fessor John W. Draper, Luther Bradish, Professor Gardiner and others, all of whom, except the first, have passed away. I have since then many times preserved bunches of grapes suspended in pots of sand or charcoal powder, the bunches inverted generally, and the sand or charcoal kept moist, but not soddened. This is only a hint.

Again, last Summer bushels of apples were blown from the trees by the great gale of wind which all will remember, and some of these fell on a piece of ground which had just been dug over and on which boards were placed for a walk. Some early Summer apples got under one of these boards and were pressed into the soft soil by repeated treading. In October this board was lifted and the apples then discovered. They were in a perfectly sound condition. I simply state the facts, and leave others to make the comments.

The Epiphyllum truncatum and its varieties bid fair to become popular plants for Winter blooming in rooms, and they are worthy of being a good deal more popular than they are in the greenhouse. The inquiries of the lady of St. Louis have been followed by others. I have heretofore stated that my plants began blooming in November, and now (March 5) the last flowers are just fading. It is not meant, of course, that one plant or one variety has been in flower all this time, but a collection of varieties, which, with a little management, will give a succession of bloom daily during the period above mentioned. There is not a dwelling in the whole country that has not at least one window where a few of these plants will grow well and bloom profusely, and with as little trouble as any plant that grows. And then they look so gay and cheerful. They must receive treatment, however, a little different from that generally recommended to insure this succession of bloom. In the room I have them suspended, and in the greenhouse set on brackets, and either way they are beautiful.

There are many who take pleasure in ornamenting, or rather adorning, the home, who are unconscious of the beautiful and inexpensive material that is always at hand to those who live in the country or the suburbs of a city. I was much pleased recently, on making an evening call at a neighbor's, to see the reception-room beautifully adorned with a rush very common in marshy places and commonly called Cat's Tail (Typha latifolia). I had never thought of it as an ornamental plant before, though I can never see it without going back along the path of time to a period when there was no Fourth of July to a boy without a bundle of Cat's Tail—now, alas! robbed of all its poetry by "punk" and other vulgar inventions. The rushes had been cut pretty close to the ground, and placed against the wall all around the room, the butts resting on the floor. The effect was not only pleasing, but exceedingly picturesque. The young ladies who arranged them had the good sense and good taste not to cut them all of the same length, but to use them just as they came from the meadow, and this not only avoided stiffness and monotony, but secured a charming naturalness and variety. In addition to the rushes, vases were tastefully filled with native grasses mixed with the eulalia and erianthus. The effect of the whole was delightful; and as I threw myself on the lounge, involuntarily I found myself humming the pretty and plaintive old song, "Green grow the rushes, O!" I commend the example of these young ladies to others. There is no part of the country that will not afford similar material for making home pleasant during the Winter.

HORTICOLA.

Small Fruits in Kansas.—In spite of a very severe Winter grapes are all right. Blackberries are badly damaged, and so are strawberries, except where well mulched. Of raspberries, the Mammoth Cluster has stood the Winter about as well as usual. So has my Cuthbert without any protection whatever, and the ground has been free from weeds. I left them in this condition in order to test their hardiness thoroughly, and must say that I am well pleased with them. During the last ten years, I have tested most of the leading varieties of promise, and have discarded all but Mammoth Cluster. It is the berry for this climate. I can raise them, any ordinary season, measuring three-fourths of an inch in diameter. To the incredulous I will say that I have even beaten that; and although I have never tried the Gregg, I will pay a liberal premium for any Greggs that will beat my Mammoth Clusters in size. I shall plant both Gregg and Turner this Spring. A. B. D.

Edgerton, Kan.

NOTES FROM THE RURAL GROUNDS.

How to Treat the Seeds of the Free Distribution of the Rural New-Yorker.

White Elephant Potato.—We would advise to cut the potato so that there shall be but one eye to a piece and so that each eye shall have as much flesh as possible. These pieces we should plant in rich, loamy soil not less than one foot apart. In case of threatened dry weather, a mulch of leaves, straw or manure would be found serviceable.

Washington Oats.—These had better be sown thinly in drills of prepared soil. Each plant should have plenty of room so as to tiller and to produce the best yield.

The Rural Branching Sorghum.—The R. N.-Y., contrary to its wont, has praised this sorghum almost unqualifiedly as a fodder plant. And our faith is as strong now as at any previous time. We have tested it for three years and the results have been such that we prefer it to any other forage plant which we have ever seen or tried. The early growth of the Branching Sorghum is disheartening. All who try it would, if not cautioned to suspend judgment, consider it a failure one month after it appears above the ground. It then gives no promise of the splendid growth which shortly thereafter takes place. When it attains the hight of five feet, and a half-dozen or more leafy stalks are cut from each seed and every stalk continues to grow as if no interruption had occurred, its real value begins to break upon the cultivator.

It is of the first importance that the prepared plot be free and be kept free of weeds. If otherwise, those unfamiliar with its slow germination and its resemblance to grass, would probably be unable to distinguish the rows. Prepare the soil as for corn—the *mellower* the better. Sow the seeds from one inch to one foot apart in drills four feet apart. Press the soil over the seeds and cover half an inch deep. If sown but one inch apart, the plants at the first hoeing should be thinned out so as to stand not *less* than 18 inches apart. This thick sowing would thus insure an even stand, but where, as in the present case, it is desirable to raise as many plants as possible, the seed supply being very limited, six inches apart might be better, in which case it would be necessary to destroy fewer young plants. Another method is to plant four seeds in a place—a *flat* hill, if the expression is allowable—these hills to be two feet apart, all but one plant to be destroyed at the first cultivation. We advise our friends not to sow before *late May* or even June 1st for this climate. If in late Summer those who raise this sorghum will make the trial of placing equal quantities of this and corn stalks and leaves before their horses or cattle, they will ascertain that the sorghum will be eaten first. For ensilaging purposes we should suppose it would prove far more valuable than corn, while we are in hopes that the sorghum industry may find in this a rival of the several canes now employed for the production of sirup and sugar.

The Argenteuil Asparagus.—Our friends are advised to prepare small plots for this asparagus thoroughly. Select a rich, loamy soil if possible. If not, make it rich by the addition of well-rotted manure. Work it over several times with hoe and spade. Sow the seeds six inches apart in the drills—the drills 12 inches apart. Compact the soil over the seeds and leave the surface smooth and mellow. Let it be borne in mind that asparagus seeds are often *slow* to germinate—requiring sometimes a month or more. Attend to this seed-bed—Keep it free from weeds and the plants may next Spring be set in their permanent beds and cuttings for the table be made the year after.

Giant Dutch Purple Asparagus.—Same instructions in every respect as for the French Argenteuil.

Picotees, Carnations and Chinese Pinks.—These may be sown, as soon as received, in boxes, pans or flower pots. It does not matter so long as a thorough drainage is provided for. Use for this purpose plenty of broken flower pots—or bits of charcoal, or even pebbles or small stones will answer. Fill with rich fibrous soil, such as that from decayed sods, and add a liberal proportion of sand. Mix *thoroughly*. Sow the seeds at least an inch apart (two inches would be better); compact the soil by pressing the bottom of a flower pot upon it and cover to the depth of an eighth of an inch. Again press the soil—but gently and evenly. Place in a temperature as uniform as possible; avoid *hot* sunshine, and cover with panes or pieces of glass. Later these seeds may be sown in the open ground. In this case we would advise sowing in pots or boxes, as above explained, and plunging them in the ground until the rim of the pot is on a level with the surrounding soil, using glass to cover as before. Again, the seeds may be sown in late May in a well prepared, out-of-door border where the plants are to grow. In this case the percentage of loss, of course, will be greater.

We may be excused for insisting that the seeds of this present seed-distribution are worthy of especial care. They are, in so far as we may judge, the best of their kinds. The White Elephant, we believe, will prove as a late potato all that the Beauty of Hebron (previously sent out by the R. N.-Y.) has proven as an early potato. It is now offered for sale but cannot be purchased for less than one dollar per pound. The Rural Branching Sorghum, whatever it may prove in different climates and soils, has cost us $25 per hundred pounds. The asparagus seeds have cost us to import $175 per hundred pounds. The picotees and carnations have cost us to import from $10 per pound (the lowest) to $150 per pound (the highest). In making these distributions it is, as has often been stated before, no part of our plan to offer the seeds in large quantities. Our object is merely to introduce new plants for the farm and garden which (without cost to our readers) give the best promise of proving superior to well-known kinds; and we may call attention to our previous distributions to show that thus far we have been as successful as could reasonably have been expected.

If half of our new native grapes turn out half as good as they promise to do, the miserable Malaga Grape now sold everywhere in such immense quantities should soon become a fruit of the past.

Pomological.

EXTRA-HARDY APPLES.

T. H. HOSKINS, M.D.

The list of extra-hardy apples given on page 802 of the Rural of December 4, in which the Messrs. Chase, of Geneva, mention 15 varieties as being "as hardy as the Duchess of Oldenburgh," contains many which are far from being as hardy as that variety in Northwestern Vermont. Differences in hardiness that would not be noted in more favorable localities are very conspicuous here. The Tetofsky is as hardy as the Duchess, but Alexander, though a "Russian," is not. It must take its place considerably lower, alongside of Red Astrachan and St. Lawrence. Though hardy, Tetofsky is of little value as an orchard apple, on account of its habit of dropping nearly all its fruit before ripening. The Yellow Transparent is equally hardy, a little earlier, of much better quality, and does not drop. It is not quite so large as Tetofsky, but is of good, even, merchantable size, ranking with Early Harvest. The Tetofsky was dropped from the list of the Iowa Horticultural Society at its meeting of December 4, 1879, and the Yellow Transparent favorably reported on.

The "Peach," if by this name is meant the "*Pomme Peche*," or Peach of Montreal, ranks very near the Duchess of Oldenburgh in hardiness, and is better in quality, but not nearly so valuable as a market apple, being much more easily defaced in handling. This variety is not in "the books," and must not be confounded with various others bearing the same name. Its season is with the Duchess,—the first half of September, here.

Aucubafolia, instead of being very hardy, is a quite tender variety, long ago rejected here and in the Northwest on that account. It is a nice apple where it can be grown. The genuine may be easily known by its leaves being spotted with white, for which peculiarity the name was given—I have reason to think other sorts have been distributed under that name.

Clark's Orange I do not know. If it is the Fall Orange, or Holden Pippin, it is neither hardy nor profitable in very cold localities.

Plumb's Cider is hardy, and a good late Fall variety. It has not proved productive with me on trees 12 years planted.

Wealthy is the king of "iron-clad" early Winter apples, sometimes keeping well until April. If always reliable as a keeper, it would be preferable to the Baldwin anywhere, being equal in size and productiveness, finer in color, and better in quality.

Bethel (known in St. Lawrence Co., N. Y., under the name of the Stone Apple, having been carried there from Bethel, Vt., by a man of that name), is the equal of the Wealthy in size and quality, and a far better keeper. It is a free bearer in rich valley land, but rather shy on the hills, except in favored spots. It is about equal with Alexander and St. Lawrence in hardiness. The Messrs. Chase give it as keeping only as long as Wealthy, which is a great mistake. It keeps fully as well as the Baldwin.

Haas, or Gros Pomier, is hardy, productive and of fair size. It is very popular at the Northwest; but, so far, in the East it has been found quite poor in quality. It is a late Fall variety, and not a good keeper. The Messrs. Chase err greatly in giving its season as "December to March."

"Rubicon" (which is a synonym for the Pawpaw, or Western Baldwin of Michigan), is not very hardy, and so far is not regarded as valuable in this vicinity. The Michigan Horticultural Society say of it "must have suitable soil and good culture." This makes it a garden apple, likely to fail in ordinary orchard culture, which quite agrees with experience here.

McIntosh Red is a new variety, resembling the Fameuse in appearance and flavor, but generally larger. Specimens of the same size as Fameuse cannot be distinguished from that variety, but the tree is quite distinct, and so far, with me, seems hardier—I doubt its keeping much longer than the Fameuse.

Pewaukee, though a seedling of Duchess, is very inferior to it in hardiness. It kills badly here, and I burned a large number of three-year-old trees last Spring, as unfit to sell. I regret this, as it was a promising, and if hardy, would have been a valuable sort. It is less hardy than Fameuse.

The Quince, if either the "Quince," or "Cole's Quince" of the books, is not a Winter apple—See Downing. Cole's Quince is about as hardy as St. Lawrence. I annex a list of

Genuine "Iron-clad"

varieties, as tested in my grounds during the past 14 years, that are all productive, good and profitable.

Yellow Transparent	August.
Duchess of Oldenburgh	September.
Peach of Montreal	September.
Pringle Sweet	September.
Switzer	October.
Prollfic Sweeting	October.
Riabinouka	November.
Wealthy	December to March.
Magog Red Streak	December to May.
St. Johnsbury Sweet	Dec'b'r. to February.
Newport Sweet	December to May.
Scott's Winter	February to July.

All of the above-named varieties, except Switzer and the three last-named sweets, have been illustrated and described during the last two years in the Rural. Switzer is one of the new Russians, closely resembling Red Astrachan in size, form and color, but later in season and much superior as a dessert fruit. Prolific Sweeting is also one of the new Russians, large, roundish-oblate in form, good for cooking or eating out of the hand. The St. Johnsbury and Newport Sweets are good baking apples, and the former a fair eating fruit. Both are of good size, the St. Johnsbury beautifully striped with red, the Newport something like the Talman, but flatter. I hope to forward specimens of all these to the Rural, during the coming year.

Orleans Co., Vt.

MORE ABOUT PEACHES.

T. T. LYON.

Variegated Free is a name that came to us with trees imported from Pennsylvania. I fail to find the name in any of our recent works on fruit, or even in the catalogues of nurserymen. It may very possibly prove to be an old variety sailing under a pseudonym. Whether old or new, it proves here to be an exceedingly beautiful, pale-fleshed, purplish-red peach, tender and delicate in texture, very juicy, mild, but rich in flavor, ripening this season from the 20th to the 30th of September. Productive.

Richmond, which with Atlanta, is a seedling of the late Dr. Sylvester, of Lyons, N. Y., is characterized by W. C. Barry as unsatisfactory in Western New York. Both are highly successful here; Richmond taking high rank as a market peach in defiance of the competition of Early Crawford of nearly the same season, and Atlanta vindicating its claim as a prominent amateur variety on account of its fine appearance and high quality. Both are apparently growing in estimation among planters.

Crawford's Late has a fine reputation here as a market peach on strong soils, and has been extensively planted within the last three or four years. I fancy, however, that the popular verdict would be that it is only good to sell—not good enough to be grown for home use as compared with many others of the same season. In fact, my advice to all except market planters, would be to let it severely alone. There are dozens of better sorts, any one of which would more than fill its place for this purpose.

Hill's Chili (with a very long array of synonyms) seems to have taken a prominent position among commercial planters here on account of its hardiness and fine shipping qualities. Experienced and discriminating planters have long since condemned it for lack of quality, unattractive appearance and deficient size, unless thoroughly thinned. Its popularity is rapidly waning. Indeed, it seems surprising that it has so long stood in the way of more desirable and, elsewhere, more popular varieties.

Keyport White—a variety whose origin I have not been able to trace—has had a place in our lists since the early days of peach planting in the Michigan "fruit belt;" but it seems never to have been extensively planted, although a better, and especially on light soils, a more productive peach than Late Crawford. Had its originator been imbued with some of our modern ideas and succeeded in infusing into it a little of the aureate coloring, so temptingly commended to the dairymen of today, it would, very possibly, have taken a much higher place in the estimation of planters. Its entire freedom from color at the pit and its late ripening, conspire to render it de-

sirable, especially for preserving and canning. Season, end of September.

Late Red Rareripe, although long since recognized as one of the most excellent of peaches, and by no means snperseded in this respect by any of the more modern introductions, has apparently been almost forgotten by planters, in obedience to the behests of the commercial idea. Planters of family orchards might do very much worse than to fall back upon this worthy old favorite.

Stump the World is considerably planted here to follow the still popular Old Mixon Free—a purpose for which it is available on account of its fine size and showy appearance, although it cannot be commended for high quality. Season, near the end of September.

Tippecanoe Cling seems, with us, to acquire the high quality for which it is noted in Eastern Pennsylvania. It ripens fully within our ordinary seasons, and is, we think, one of the finest flavored of all our very late yellow peaches. Were it not a cling it would doubtless at once become a general favorite.

Heath Cling is one of the finest and most profitable when it fully ripens, which it will do here about the middle of October, but occasionally our seasons do not suffice for this purpose.

Smock Free may be said to be the latest reliable freestone, market peach for the "fruit belt." Within the past three or four years, I think it can be safely assnmed that, south of the Kalamazoo River, the planting of commercial orchards has been more extensively of this than of any other single, late variety.

Delaware White. We have a bright-looking, large, creamy-white peach occasionally planted in this region under this name. Very little seems to be known as to its origin, nor is it highly esteemed as compared with others of its season, which is very late—about the beginning of October. It is of only moderately good quality, but is a good culinary fruit, and with an infusion of "patent color" would very probably have become popular.

DOCTORS CONTINUE TO DISAGREE.

The extremely cold weather which prevailed over a very large area during the latter part of December last, has given rise to much speculation and discussion among the fruit growers in different sections of the country. The New York Tribune, in an article headed "Frost on the Peach Trees," gives the opinions and theories of Mr. Samnel Townsend, of Delaware, on several points connected with this snbject, that are not exactly in harmony with the conclnsions of the horticultural editor of the "Prairie Farmer." Delaware's veteran of the orchard says: "Zero is too cold for peaches, and 4° or 5° below for 24 hours will kill the fruit-bearing buds and the limbs they are on." Mr. Townsend, furthermore, declares: "There is no remedy for peach trees where the thermometer falls to from 8° to 15° below zero."

Now hear from the indomitable Illinois editor: "We have, for a long time, believed that a class of varieties may be obtained by careful selection of seedlings from the hardiest varieties in a few generations, that will prove hardy far north of the present limits of the "peach belt." * * We have by continued reproduction of hardy varieties from seed, obtained sorts that have withstood a reported general temperature of 26° below zero, both in tree and fruit bnd, and matured a crop of peaches the Autumn following; and we feel considerable confidence in picking peaches from one of these trees next Autumn, notwithstanding that the tree has been tried this Winter by 28° below zero."

It is plain that the gentlemen quoted above hold different views regarding the capabilities of the peach to withstand cold; but the fact, so common to all experienced growers, that there is a plainly noticeable difference in the hardiness of different kinds, would give the greater weight to the views of the editor. Mr. Townsend is at variance with another theory—one laid down by the scientific class of horticulturists—regarding the cause of the fatal disease among peach trees, commonly called "yellows." He maintains that extremely cold weather will cause this disease; that this is "one of the most fruitful" causes. In this, Delaware's gentleman of practice is at issue with the most profound scholars and acute observers belonging to the "craft." "A fungus that attacks and preys upon the roots," says the scientific, "is the cause of the yellows in the peach." That the disease is generally fatal is not debatable; but the reason for this fatality is found in the fact that it rarely occurs that the disease receives any treatment; hence it is not surprising that Mr. Townsend should be quoted as saying: "Never has there been known a single tree, which, when once so affected, was cured." To this my own personal experience with the disease in question, compels me to take exception, because I *know* of its having been permanently cured after it had so weakened the tree as to cause the fruit to color and soften weeks in advance of its proper season, the foliage to assume an enfeebled and abnormal color, the wiry and weak snckers to be thrown out along the heavier limbs, etc., etc. It was a case of veritable yellows, without doubt, cured through the agency of strong alkalies placed in contact with the roots. Here it will be noticed that experience goes once more against the views of the Delaware peach-grower, who by reputation is known by the writer to be a gentleman of long apprenticeship to the "art" of growing peaches for market. J. W. Kerr.

Carolina Co., Md.

Field Crops.

TOBACCO CULTURE.—NO. 4.

G. A. GOFF, JR.

Setting the Plants.

Tobacco setting commences here usually about June 1st. and continues during the month, as the weather allows. The plants are set immediately after a rain while the soil is saturated with water. Boys are usually employed for the work and are paid by the hour.

SHEEP'S FESCUE—FESTUCA OVINA.—FIG. 177.

One boy goes ahead and drops a plant in each mark made by the cleats on the roller, while others follow and set them. One boy can drop for two to set. Care should be exercised to have the roots set in straight. When the soil is hard or stony a dibble is useful in making the hole for the plant. The droppers are instructed to drop occasionally an extra plant, to be used to fill vacancies later in the season. Before pulling the plants from the seed-bed, the latter should be thoroughly sprinkled with water, so that the roots will not be injured. Should a little dirt adhere to these, they will be more likely to grow and do well.

As soon as tobacco is set in the field, insect enemies usually commence their depredations upon the plants. The first of these insects to work upon the plant after it is transplanted to the field, are the cut-worms. These sometimes are very destructive. They eat off the young plants at the surface of the ground. When they are troublesome they should be hunted for in the morning, when they may usually be found on or near the top of the ground around the plants. The tobacco field should be passed over frequently after the first setting and plants from the seed-bed should be set in wherever any are found lacking. It is well to have plenty of plants for this purpose, as sometimes a great deal of re-setting is necessary to insure a perfect stand.

Cultivation of Young Plants.

As tobacco is a native of a tropical climate, and as quick growth is essential to produce a good quality of leaf, it should be the aim of tobacco growers to push the growth of the young plants as fast as possible after they have been transplanted into the fields. Frequent stirring of the soil has much to do with the growth of tobacco, because it prevents the surface from becoming hard or baked and lessens the injurious effects of drought. Next to a mulch, there is nothing more beneficial to growing crops in dry weather, than a mellow surface, which acts as a mulch in preventing the soil from drying out. This fact seemed to be generally understood by early tobacco growers in different parts of the world. Early growers of the "weed" in Virginia laid great stress on frequent hoeing, sometimes going over their fields five or six times, and stirring the soil around the plants. Our improved implements for cultivating make it possible for tobacco growers to do much of the work by horse power that was formerly done with a hoe. A good cultivator managed by a skillful workman, may be run very close to the plants without injuring them, thus saving much hand work. Cultivating should begin as soon as the plants commence growing, after having been transplanted to the field. The cultivator is run twice between each two rows, when they are hoed or "scraped," as the process is usually termed, which consists of skimming off the surface of the soil with the weeds from around the plants and substituting fine, mellow soil from between the rows. The cultivator should be kept running between the rows as long as the work can be done without injuring the leaves. The oftener the field is passed over the better, especially in dry weather. About two weeks after the first hoeing, the tobacco is again hoed. This time the work is done thoroughly and the extras which are not needed to fill vacancies are removed. Most growers practice hill culture and hill their tobacco at the second hoeing, which makes the work very laborious and costly.

It is doubtful whether this hilling is beneficial to the plants. Experiments have failed to prove its utility, and it is probable that the work might be omitted without detriment to plants if the soil is made perfectly mellow between them. The Alden thill cultivator is the most popular implement in use hereabouts for cultivating tobacco where the soil is not too stony. When the soil is hard or very stony the common five-toothed "digger" is preferable because it is stronger and penetrates deeper into the ground.

Chemung Co., N. Y.

Sheep's Fescue—Festuca ovina.

The genus *festuca* contains about 200 species widely distributed over various parts of the earth Some of them are our most valuable grasses for meadows and pastures. The one above named is exceedingly variable, so much so that botanists differ in regard to what should be regarded as a species. Sheep's Fescue is common on the hills of many of the Northern States, Canada and many portions of Europe. It extends far northward. It flowers early, makes a nutritious feed and is a favorite of sheep. It grows in small tufts which are quite attractive to a lover of nature. The writer admires it, especially on thin soil or lawns under the shade of trees. It is good for edgings. The leaves are slender and more or less glaucous. In some of the high lands of Europe it constitutes the chief herbage. It is too small for profit as a grass for hay. It roots deeply, stands dry weather well, and often grows on soil so poor that no other nutritious grasses can thrive. On rich soil, other grasses usually crowd it out.

Professor W. J. Beal.

Seeding Oats and Grass in Virginia.

There is a Farmers' Club called the Goose Creek Valley Club in this valley. The members on the 4th inst., met at my house, the subject for discussion being "Seeding Oats and Grass." The opinion of the club was that Winter oats should be sowed in the Fall from September 1st to the 15th; and that Spring oats should be sowed as soon as the Winter breaks, and that the proper quantity of seed is one bushel to the acre. It was also decided that grass seed should be sown directly after the harrow that puts in the oats, before rain falls on the land. Timothy ought to be sowed, without other grasses, a quarter of a bushel per acre. Clover and Timothy mixed should be in proportion of one-third of the former to two-thirds of the latter. Sow 11 lbs. to the acre. Orchard Grass and clover seed should be mixed 1½ bushel of the first to 1-16 bushel of the second to the acre. It was the opinion of the club that plaster sown on young oats and grass pays well. It is the practice with our farmers, as soon as the oats are ripe, to cut with the old five-fingered cradle; bind in moderate-sized bundles; shock in shocks of from 12 to 15 bundles, and, as soon as cured, stack or put away in barns. The oats with us have been an uncertain crop for some years past.

Bufordville, Va. P. L. B.

Yellow Hackberry Corn.—A correspondent writes us from Akron, Ohio, that this corn is sold in that market at 30 cents per bushel. It is earlier than most varieties of Dent; but it will not mature in 90 days—as a late inquirer asked—but it may mature in 110 days. It will not give so many bushels to the acre as other sorts; but its yield of shelled corn will be proportionately greater. In husking it is hard on the hands, having a rough, prickly surface.

Damaged Clover Seed.—A correspondent writing to us from Adrian, Michigan, early in the month, says that the clover seed dealers in Toledo, Ohio, had most of their stock submerged during the flood that visited that town a short time back, and that they afterwards had it dried for market. He considers that such seed would be so damaged that to palm it off upon farmers as good seed, would be a swindle.

Farm Topics.

SOLUBLE vs. INSOLUBLE PHOSPHATE.

PROFESSOR G. C. CALDWELL.

Phosphoric acid exists in manures, whether home-made or commercial, almost entirely in in the form of phosphate of lime. There are different phosphates containing the acid in different proportions, and there are varieties of phosphate of the same composition, all of which differ from one another to a greater or

less extent in solubility, in pure water, and in the soil water, which has a notably greater solvent power than pure water. It is self-evident that that phosphate will be the most remunerative which for a given price yields up to the plant requiring phosphoric acid in extra quantity the largest amount of the needed food during the growing season; but it is not so clear which kind of phosphate will fulfill this condition, and the same kind will not answer in all cases. Mineral phosphates from South Carolina, bone-meal, and superphosphate are to be found in our markets; in the first the phosphate is practically insoluble, in the second substance it is slowly dissolved in the soil; in the third we have more or less phosphate of three different degrees of solubility, viz., a part that is soluble in water, a part that is as insoluble as the mineral phosphate or as the bone-meal, according as the superphosphate was prepared from one or the other, and a third part that stands between as to solubility, or the so-called reverted acid.

Dr. Hoskins, in a recent communication to the RURAL, questions the reliability, at least for practical purposes, of the comparative trade valuation generally adopted in this country of the phosphoric acid in these three forms of phosphate. He thinks that reverted acid is quite as valuable as soluble acid; that bone ash, finely ground, is nearly as effective as soluble phosphate, and that South Carolina phosphate may be, if ground fine enough, nearly equal to bone ash. I should say that he may be correct, in respect to a part of these propositions, and that he may not, for it depends. In France and Belgium soluble and reverted acid are, it is true, held to be equal in value, for reasons based partly on the results of pot and field culture experiments, and no distinction is made between them in the analysis and valuation of a commercial fertilizer. But this view does not prevail elsewhere in Europe. The relative value of the two forms of the acid has recently been made the subject of much discussion, some of it quite acrimonious, in Germany. It appears from these discussions to be established that on sandy or peaty soils, poor in lime, the reverted acid may be fully as effective as the soluble acid, and in some cases it has even given a better return. It is supposed that in such cases the soluble acid, meeting no lime with the aid of which it can pass back into a difficultly soluble state and remain fixed in the soil and within reach of the plant during the season's growth, is really leached out of the soil before the crops can get hold of a sufficient quantity of it to affect the yield to any considerable extent. On the other hand, experiment has shown a better result, also on a soil quite rich in lime, with reverted acid than with soluble acid. In this case it was explained that the soluble acid, when taken into solution in the soil in the presence of such an excess of lime, passed quite back into the original condition in which it existed when first treated with oil of vitriol to convert the common phosphate into superphosphate; but the reverted acid applied to the soil, occupying an intermediate position as to solubility, remained in that condition in the soil, accessible to the plant and yet not so soluble as to be wasted.

Mercker, one of the most prominent of German agricultural chemists, while granting the validity of these conclusions as to the effect of reverted acid on soils either very poor or very rich in lime, affirms that, with respect to the large majority of soils on which superphosphates are used, we do not yet know what the comparative value of reverted acid is for producing crops; and the general feeling in Germany is that more experiments are needed to establish the conclusion which the French and Belgian chemists have already adopted. No figures have been given of any comparative experiments in this country that furnish any contribution to the solution of the important question. I am hardly ready, in the face of the widely prevailing opinion in favor of soluble phosphate, based on an experience of many years in England, Germany and the United States, to acknowledge that farmers should everywhere and on all kinds of soils, be as well satisfied with reverted acid as with soluble acid, when they are so situated that they can be sure of getting as good superphosphates as they ought to receive for the prices paid.

At another time I may notice the present condition of the no less important question concerning the use of bone-meal, bone-ash, or mineral phosphate instead of superphosphate.

The Horseman.

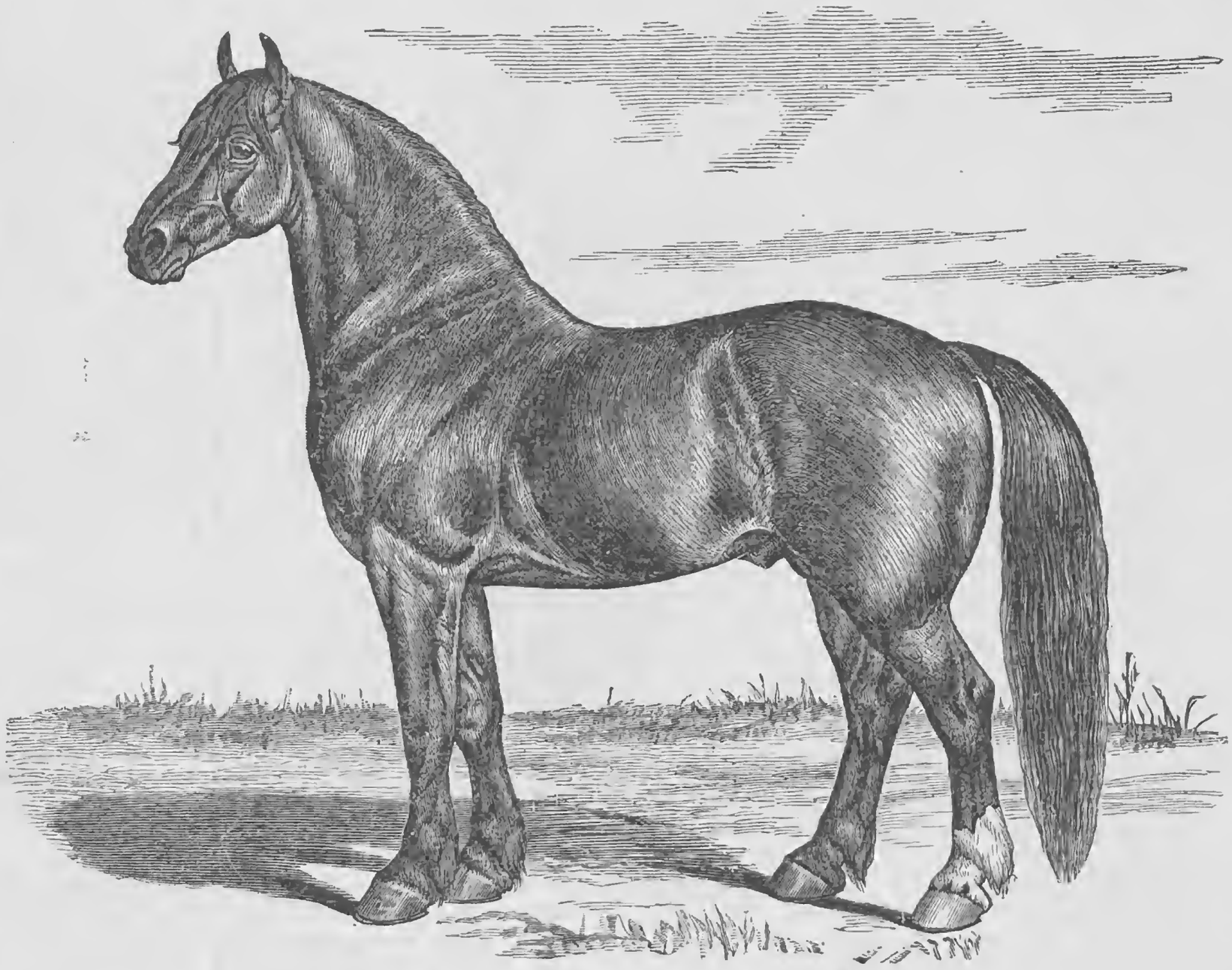
THE CLYDESDALE HORSE.

WHAT the Short-horn among cattle is to the English-speaking people, the Clydesdale is among horses—both are to be found improving their respective races wherever the United Kingdom has sent forth colonists, whether these have assumed their independence, as in the United States; or still remain subject to the Mother Country, as in Canada, Australia and New Zealand. Nor are exportations of these horses confined to these offshoots of Great Britain; for the breed is also employed to a considerable extent for improving the native stock of draft horses in France, Belgium, Russia and Germany. It speaks well for the Clydesdale that he "improves" on acquaintance; the better horses of this breed are known in any section, the more favor do they find there, and consequently not only is the number exported from Great Britain yearly increasing, but this Scotch horse is steadily coming into favor in England in competition with the choicest specimens of the best native breeds.

The Clydesdale owes his name to the place where the breed originated and which, with the surrounding country, is still the region where choice specimens most abound. This is the now busy vale of the Clyde along whose waters more vessels are built than beside any other stream in the world, and 21 miles from whose mouth Glasgow sends aloft dense clouds of smoke in token of her earnest life and industry. From the Middle Ages this region possessed a hardy race of pack horses, which were also good at the plow and other farm work. As the industry along the Clyde grew, however, a need arose for a heavier, sturdier race of horses, better able to accomplish the heavy work that the various sorts of manufacturing needs demanded. Towards the end of the last century, therefore, the Duke of Hamilton, who owned much of the land along the Clyde, imported a fine specimen of the Flemish stallion, which was crossed on the native race, ultimately producing the excellent breed known as the Clydesdale.

Among Clydesdales bays and browns predominate, with some white usually on the face or feet. The hight varies from 15:3 to 17:1 hands, though occasionally one reaches 18 hands; the weight generally ranges from 1,500 to 2,100 pounds, but sometimes as much as 2,500 pounds are attained. According to their weight, the Clydesdales are heavier-boned than horses of any other breed, especially in the limbs, which are wide, flat, cordy and hard. The bones, too, it is claimed, are exceptionally fine-grained and solid, to which circumstance is probably mainly due the fact that ringbones, bone-spavins, splints and other diseases of the bony structure are said to be unknown to this breed in their native land. The eye in the Clydesdale is prominent and unusually intelligent; the head neat; the neck light and well set on splendid shoulders. The barrel is round and straight; the body long and the quarters large and powerful. The mane and tail are both heavy, with a tendency to curl. From the knee and hock to the fetlock the back of the leg is "feathered" with long hair, a characteristic highly prized by Scotchmen as an indication of pure blood. In disposition this horse is gentle, though spirited, with abundance of courage and resolution. With or without a load he is an excellent traveler, for a heavy horse; is endowed with fine "staying" qualities, and is easily kept.

In this country the Clydesdales are rapidly striding to the front place in popular esteem as draft horses in cities and country places, and as begetters of prime serviceable stock crossed on our ordinary home-bred mares. Probably the largest importers of this breed are the Messrs. Powell Brothers, of Springboro, Crawford County, Pa., one of whose choicest imported Clydesdales is here represented. Scotland's Glory was foaled in 1873, at Balwhine, Aberdeenshire, Scotland, and imported in July, 1874. He is a handsome bay, 17 hands high, with a white left hind ankle. He has a wide, strong bone, fine action, and a powerful, symmetrical form. His sire was the 'Marquis of Lorne," a famous sire and prize-winner in Scotland.



CLYDESDALE STALLION, SCOTLAND'S GLORY.—FIG. 178.

The Herdsman.

CLOSE BREEDING.

THIS question, so ably advocated by "Stockman," has a side which I have never seen noticed by any writer on the subject. I consider the question of close breeding to establish family traits, to be entirely settled in its favor because the desired end cannot be reached by going outside of the family which possesses the desirable points. But, if we endeavor to perpetuate the good qualities, we must take great care not to carry along the weak points which always accompany them. Weaknesses, like weeds, propagate themselves, and weak parents always transmit their worst faults and never their best qualities. Breeding from too young or from immature stock, always results in irremediable deterioration. All efforts after that to correct this very common error only make the matter worse. We see this in every kind of stock in this country.

The stock of poultry now offered for sale as absolutely pure, is so badly demoralized by this "haste-to-get-rich" style of breeding as to be nearly worthless. The blood may be pure from improper crossing, (?) but it is so weakened by confinement to close yards, by breeding too young, and by breeding too many times in a season, that for any advantage it could have for the general improvement of the common stock of the country, fancy poultry has seen its best day, and with the present stock can never be regenerated. Mr. Curtis says "breeding to improve stock is an intricate work," and our breeders seem to multiply the intricacies faster than they do their customers. "Haste makes waste. The more haste the less speed." Any old almanac would teach even a *boy* better methods of breeding successfully.

S. RUFUS MASON.

HOLSTEIN SALES.

THE MESSRS. SMITHS & POWELL, of Syracuse, New York, say they have lately made the following sales of Holstein cattle:—To Messrs. Dye and Stillwel, Troy, Ohio, the Holstein cow Imogenia (333), which made a two-year-old record of 47¼ pounds of milk in one day, 1,262¼ pounds in a month, and the past season about 11,000 pounds in a little over 11 months; the imported cow Finesse with a record of 49 3-16 pounds in a day, 1,366¾ pounds in a month, and 10,330 7-16 pounds in 10 months and 28 days; the imported two-year-old heifer Gazelle (312), which gives promise of being a remarkable milker; the imported yearling heifer Ione (844); the yearling heifers Music (565) and Jnanita 2nd (562); the heifer calves Neilson 2nd, Finesse 3rd, and Leontine, and the bull calf St. Elmo, weighing, at 10 months, 900 pounds, an elegant animal and suitable in all respects to head such a herd as Messrs. Dye and Stillwel are founding. To Messrs. Whitman & Burrell, Little Falls, N. Y., we have sold the imported two-year-old Holstein heifers Lucretia Mott and Matchless (898) and the yearling bull Victor Knight and imported Gipsey Queen's heifer calf. To D. H. Burrell, Esq., we have sold the two-year-old heifers Orange Girl (863) and Finesse 2nd (561). To J. H. Ives, Esq., of Little Falls, the two-year-old heifer Undine (913). To E. J. Burrell, Esq., the two-year-old heifers Octoroon (916), Coral (907) and a heifer calf from imported Clothilde. To E. B. Ward, Esq., Detroit, Mich., the elegant imported Clydesdale stallion Perfection and the Clydesdale mares Middy Morgan, Molly Bawn, Madam Christy and Highland Girl, and the imported Holstein cow, Mabel (371), and the yearling bull Ingomar. To George Stilson, Livingston County, Ill, we have sold the yearling bull Vecai.

A Fine Milk Record for a Holstein Herd.

WE have numerous inquiries in regard to the milk records of our Holstein herd, and thinking they may be of interest to readers of the RURAL NEW-YORKER, we will mention a few:—Our cow "Aggie" is making a six-year-old record as follows:—84¾ pounds in a day; 2,362½ pounds in a month; and 17,206 pounds in 11 months, and she is still giving 35 to 40 pounds per day. "Ægis" has just closed her six-year-old record as follows:—82¾ pounds in a day; 2,289 9-16 pounds in a month; and 16,823 10-16 pounds in a year. "Lady of the Lake" dropped her calf when only 22 months old and has just closed her two-year-old record as follows:—45 13-16 pounds in a day; 1,344 11-16 pounds in a month; and 12,200¼ pounds in a year. We have several other two-year-olds which have given from 10,000 to 11,000 pounds; but they have not completed their records. We think the yearly average of our herd is even more remarkable than the individual records. We find that our entire herd of mature cows, including all that are four years old and over, have averaged, up to this date, 13,741 8-16 pounds and only three have completed their year's record. Our entire herd of two-year-old heifers that have been milked ten months or more, have averaged, up to this date, 9,614 10-16 pounds.

This record has been carefully kept by accurate weight of every milking with as much care as we have kept our cash account. This

average yield will give a better idea of the actual merit of this herd of cattle than any individual records. SMITHS & POWELL.

Syracnse, N. Y., March 1.

Scientific and Useful.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION.—XI.

Ensilage.

IN this bulletin we give the results of a feeding experiment with corn ensilage.

On November 16th four cows of native breed were taken from the herd at the College Farm, placed side by side in the same barn and for a term of 91 days were fed, exercised and milked at the same time.

During the first period of 28 days a ration was divided among them, made up of 22½ pounds of clover hay, 49 pounds of wheat straw, 75 pounds of brewers' grains, 75 pounds of turnips and 7½ pounds of cotton-seed meal. It was calculated to furnish daily to each 1,000 pounds of live weight

2.5 pounds digestible proteine,
0.5 pound digestible fat.
12.5 pounds digestible carbohydrates,

this being, according to German investigators, the necessary amount of food.

For the second period of 28 days no change was made in the ration fed cows No. I. and II., while in that fed III. and IV. 100 ponnds of ensilage were substituted for 40 pounds of turnips; in other respects it remained the same as that fed during the first period; it furnished daily to each 1,000 pounds of live weight

2.50 ponnds digestible proteine.
.90 pound digestible fat.
14.90 pounds digestible carbohydrates,

This was fed in order to determine whether an increased amount of the heat-producing compounds, fat and starch, was rendered necessary by the severity of the weather. The additional food caused no increase in the yield of milk; cows I. and II., on the poorer ration, gave during this period more milk than during the preceding.

Our intention thus far was to ascertain the quantity of food required to keep these cows up to their full yield of milk.

For the third period, of five weeks, ending February 17, Nos. I. and II. were fed the same as during the first and second periods; to III. and IV. an equal amount of digestible food was given daily in 120 pounds of ensilage and five pounds of cotton-seed meal per cow; it was eaten without waste and with apparent relish.

We tabulate below the yield of milk for 13 weeks. It must be remembered that during the first period all four cows received the the same ration; that during the second and third periods cows I. and II. received the same as during the first; that cows III. and IV. were fed during the same period with an unusually rich ration, and during the third period with one made up of ensilage and cotton-seed meal alone, containing, however, an amount of food equal to that fed during the first period.

	I.	II.	III.	IV.
	7 y'rs. old.	9 y'rs. old.	6 y'rs. old.	6 y'rs old.
	Calved July 15.	Calved Oct. 8.	Calved Oct. 23.	Calved Oct. 10.
	lbs.	lbs.	lbs.	lbs.
Av. daily yield for 1st period	23.5	25.2	25.2	24.8
" " " 2d "	25.2	25.1	25.6	24.1
" " " 3d "	25.2	26.1	24.9	24.
" " 91 days	24.6	23.2	23.8	24.
	.8			

An opportunity is here offered to call attention to the fact that up to a certain point the yield of milk may be influenced by the quantity of digestible food, but beyond this point, which is determined by breed, time of calving and individual peculiarity, an increased amount of food fails to increase the yield of milk; ensilage can produce no more milk than any other fodder which contains an equal amount of food, a point well illustrated by the above table.

While the yield of milk and its percentage of butter cannot be increased at will, it is well known that its quality may be materially influenced by the feeding. It is claimed for ensilage that it makes "Winter butter equal to June butter"—a claim willingly admitted, butter made from the fodder being, to our knowledge, of unusually fine color and flavor.

The composition of ensilage is by no means constant, as the following table of analyses shows. Soil, variety of corn, method of planting and cultivating, and, above all, the time of harvesting, exert a decided influence on its quality.

The samples furnished by Mr. Pratt and Messrs. Whitman & Burrell had the characteristic vinous smell, which indicated that they had been exposed to the air before reaching the laboratory; and probably an analysis of a perfect sample would have indicated a larger amount of nutritive matter. From personal observation at the silo, we know that Mr. Platt's ensilage was as well preserved as any we have seen.

	Loss at 212° F. Per cent.	Proteine. Per cent.	Fat. Per cent.	Fiber. Per cent.	Ash. Per cent.	Carbohydrates. Per cent.
Mr. Mills, Pompton, N. J.	77.4	1.02	0.68	6.85	1.00	13.04
Mr. Morris, Oakland Manor, Maryland	78.51	.88	0.62	6.43	1.53	12.03
Buckley Brothers, Port Jervis, N. Y.	80.86	1.27	0.67	5.47	1.00	10.73
Coe Brothers, West Meriden, Connecticut	82.10	1.21	0.71	5.34	1.02	9.62
College Farm, New Brunswick, N. J.	83.52	.94	0.65	5.18	1.43	8.28
Mr. Platt, Suffield, Connecticut	88.56	1.06	0.73	5.76	.81	8.08
Whitman & Burrell, Little Falls, N. Y.	83.54	1.06	0.50	5.85	1.40	7.65
James Lippincott, Mount Holly, N. J.	84.28	1.37	0.50	4.68	1.26	7.91
Dr. J. M. Bailey, Billerica, Massachusetts	84.87	1.06	0.45	5.61	.98	7.03

In the above table the samples have been arranged with reference to their percentages of water and carbohydrates:—

The amount of ensilage to be used depends entirely upon its quality and upon the plans of the farmer.

Mr. Mills, for instance, could make up a full ration for a cow of 1,000 pounds live weight, by feeding daily 80 pounds of his ensilage and 5½ pounds of cotton-seed meal; while at the College Farm, with five pounds of cotton-seed meal, 120 pounds are necessary. In these rations nearly all the carbohydrates needed, and a portion of the proteine and fat, are furnished at a very low price by the ensilage; the balance of the proteine and fat is drawn from the cotton-seed meal. If desirable, a much smaller quantity of ensilage could be used and the carbohydrates given in form of corn-meal or any feed rich in these compounds; in ensilage they can be had, however, much cheaper than in any feed known to us at present. One thing must be considered: if the quality of the ensilage obliges the farmer to feed his cows more than 80 or 90 pounds daily per head, there is reason to fear that they will scour. The amounts fed by the above named gentlemen have varied from 65 to 80 pounds, and with these amounts no trouble whatever has been experienced. We therefore conclude that if the ensilage is of first-class quality, 80 pounds per day will furnish an animal with the full amount of carbohydrates; if it is of medium quality, it will be safer to limit the amount to about 90 pounds, furnishing the rest of the carbohydrates in form of feed or straw.

From the above experiment we feel justified in concluding that milch cows can be safely fed large quantities of this fodder, and that it is a perfect substitute for hay. The question of expense we reserve for a future bulletin.

GEORGE H. COOK, Director.

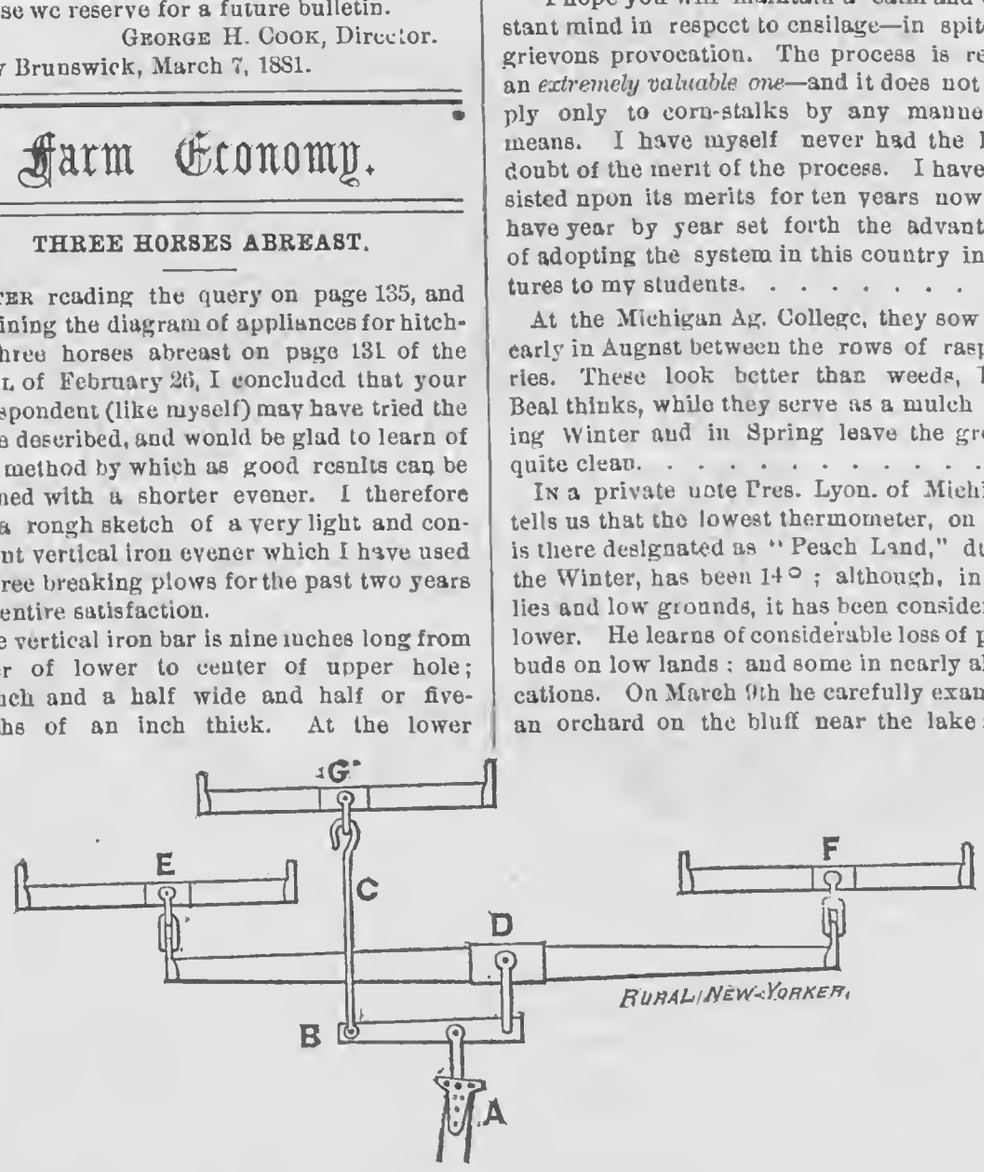
New Brunswick, March 7, 1881.

Farm Economy.

THREE HORSES ABREAST.

AFTER reading the query on page 135, and examining the diagram of appliances for hitching three horses abreast on page 131 of the RURAL of February 26, I concluded that your correspondent (like myself) may have tried the device described, and would be glad to learn of some method by which as good results can be obtained with a shorter evener. I therefore send a rough sketch of a very light and convenient vertical iron evener which I have used on three breaking plows for the past two years with entire satisfaction.

The vertical iron bar is nine inches long from center of lower to center of upper hole; an inch and a half wide and half or five-eighths of an inch thick. At the lower



THREE HORSES ABREAST.—FIG. 179.

link is attached a 3-feet-8-inches or 4-feet doubletree, to which the two outside horses are hitched by singletrees 21 inches long. One-third of the way from the doubletree to the upper hook is a draft link, where the plow is attached. The middle horse's singletree is hitched to a hook 10 or 12 inches long, thus placing the outside horses on an evener not much longer than an ordinary two-horse doubletree and giving the middle horse twice the leverage and raising his singletree nine inches above the whiffletrees of the other horses. This arrangement allows the team to travel close, and I find very little trouble in turning as wide as the plow naturally cuts *without* an equalizing side draft plate, which we were *compelled* to use with the 4½-feet evener and doubletree, such as is described in your diagram. By this method the weight of one long doubletree is saved, the draft equalized and the team allowed to travel so close as to draw the plow on a line, or nearly so, with the off horse in the furrow.

A, beam of plow; B, vertical iron bar 1½ inch wide, 9 inches long from upper to lower hole; D, link with 4-feet doubletree attached at lower hole three inches below plow-beam; C, hook 10 inches long with singletree, G, 22 inches long for middle horse, six inches above plow beam; E and F, singletrees 22 inches long for outside horses. W. P. D.

Mossing Ford, Va.

Miscellaneous.

RURAL BRIEFLETS.

MR. E. P. ROE writes us:

"I was a little surprised at what you wrote concerning 'potted strawberry plants.' I have found that they give very general satisfaction. I like potted plants so well that for my own Summer planting I use them as far as possible, preferring them to larger plants taken from an adjoining bed. I don't see how there could be much Summer planting without them in dry, hot seasons. It is a question that should be argued on both sides. You are the kind of a man who likes to hear both sides."

That is true, Mr. Roe, the RURAL is precisely that kind of a man. If strawberry plants are properly potted and are left in the pots long enough to hold a good part of the soil together when thumped out, the advantage is evident. But, taking our own experience as a guide, they are not, as a general thing, so sent out. Often the plants are root-bound from being too long potted or the soil falls off entirely because they have not been potted long enough. . . . . .

AN able scientist and respected friend writes us as follows:

"I hope you will maintain a calm and constant mind in respect to ensilage—in spite of grievous provocation. The process is really an *extremely valuable one*—and it does not apply only to corn-stalks by any manner of means. I have myself never had the least doubt of the merit of the process. I have insisted upon its merits for ten years now and have year by year set forth the advantages of adopting the system in this country in lectures to my students. . . . . .

At the Michigan Ag. College, they sow oats early in August between the rows of raspberries. These look better than weeds, Prof. Beal thinks, while they serve as a mulch during Winter and in Spring leave the ground quite clean. . . . . .

IN a private note Pres. Lyon, of Michigan, tells us that the lowest thermometer, on what is there designated as "Peach Land," during the Winter, has been 14°; although, in valleys and low grounds, it has been considerably lower. He learns of considerable loss of peach buds on low lands; and some in nearly all locations. On March 9th he carefully examined an orchard on the bluff near the lake; and found that from one-tenth to one-fifth of the fruit buds of the peach showed signs of injury, leaving enough to require thorough thinning should no farther calamity befall them. He is assured of a similar state of affairs along the lake shore, as far north as Muskegon and at Traverse City. . . . .

OUR readers will be amused while reading the following which we find in Sutton's Amateur Guide for 1881, published in London, England. It will be seen that our cousins in order to enjoy the "green cobs" of Indian corn are obliged to treat the seeds and plants as if they were those of some tender flower. The italics are ours:

MAIZE, OR INDIAN CORN.—"Few dishes are more delicious than the *green cobs* of Maize, boiled and served with fresh butter, and yet the cultivation of the plant has scarcely been attempted in this country. The seeds should be sown in April, in *boxes* which should be placed in a *cool vinery, orchard-house, or pit.* After the plants attain the hight of two inches they may be gradually *hardened off*, and should be *transplanted about the end of May.*"

If our English friends would procure seed of some of our quickest-maturing sweet corn, as, for instance, Early Minnesota Sugar or Moore's Early Concord, and plant it in warm exposures about June 1st, we have no doubt they might enjoy the "green cobs of Maize' without the trouble of sowing in boxes etc.

What Others Say.

THE SUGAR INDUSTRY.—From late proceedings of the Elmira Farmers' Club, as reported in the Husbandman, we take the following:

Mr. Little. "I measured exactly one square rod of ground beginning with a whole space between two rows, and finishing with a row, so that the plants on the square rods should have precisely the allowance of ground that every other rod gave. The other way I stretched a line across the rows to mark the boundary. From the square rod I cut 235 pounds of stripped cane that yielded juice from which I extracted two gallons of molasses that weighed twenty-two pounds and eleven ounces. Taking this rod as the average, I had 320 gallons of molasses to the acre—the weight, eleven pounds five and a half ounces to the gallon. To get this I threw out all small canes and cut off all waste. Another rod measured in the same way gave thirty-five pounds less in the weight of the gross product. . . . . .

I had the work done by hand with an old crusher I picked up and had run by two-man power. The boiling, as I have said, was on a stove at first with one open kettle, and afterward, as the kitchen work was done to give me full possession, I got three kettles going. In this way I got good molasses."

Mr. Brown: "I am informed that five pounds of dry sugar from a gallon of molasses weighing 11 pounds are a fair average. We sent some to a refinery in New York where 38 per cent. of sugar was obtained, and we are told that 48 per cent. of sugar was the full average of the best commercial molasses procured from the South."

A voice: "What soil is best?"

Mr. McKeel: "The plant adapts itself readily to the soil and situation, but I cannot say what composition of land is best for it. The best in saccharine yield I have found was that grown on sandy land, the poorest from muck, but the latter had more juice. So much depends on other conditions and circumstances that I dare not say any specified kind of soil is best."

Mr. Chamberlin, of Southport: "What is the cost per gallon of making molasses?"

Mr. McKeel: "My charge has been 25 cents for 11 pounds."

Mr. Chamberlin: "And that gives you good profits?"

Mr. McKeel: "I am satisfied." [Laughter.] The value of the sirup or molasses may be ascertained by use. I desired to increase the use, so I have sold it at five cents a pound, and it has gone off rapidly. I consider that a fair price, certainly low enough. . . . . .

In advising farmers who have consulted me about the land to be chosen for the cane crop, I have said, 'Take that which is suited to corn, and you will find that for every bushel of corn you might reasonably expect from that land, you will get about four gallons of molasses.'"

Mr. Little: "How much sugar have you been able to obtain from a gallon of heavy molasses?"

Mr. Reynolds: "By the use of a centrifugal machine without chemicals, about five pounds; by the aid of chemicals, possibly seven pounds."

SHOULD LIME BE MIXED WITH FERTILIZERS CONTAINING AMMONIA SALTS OR SOLUBLE PHOS. ACID.—"If we mix lime intimately with manures containing ammonia salts, the ammonia is set free as a gas and escapes into the air. Again, if we mix lime with a fertilizer containing phosphoric acid, or phosphates soluble in water, there is formed so-called reverted phosphoric acid, *i. e.*, phosphate of lime insoluble in water.

From these facts it has been inferred that lime should not be mixed with fertilizers containing either ammonia-salts or soluble phosphoric acid," says Prof. Johnson in his last

report of the Conn. Ex. Station. "This is, in fact, generally speaking, sonnd doctrine as applied to mixing fertilizers with lime before application. It should be remembered, however, that few fertilizers contain much ammonia-salts. Stable manure contains but three or four pounds of ammonia to the ton, and the ordinary superphosphates and special manures rarely contain more than two or three per cent. of ready-formed ammonia. On mixing with lime, enough ammonia might be liberated to affect the sense of smell, more or less powerfully, but the loss thus occasioned would be in most cases comparatively trifling, and far smaller than might be inferred from the odor, because the nose is a very sensitive test for ammonia, and because the intermixture and contact of the lime and the manure would be extremely rough and incomplete, and therefore such a mass might be left for days, giving off the smell of ammonia all the time, and then have lost but a fraction of that originally present. It has also been taught that it is a wasteful or injurious practice to apply lime to *the land* at or near the time of dressing it with stable manure, guano and superphosphates. This teaching is not always or altogether correct.

The mixing together, in the soil, of lime and fertilizers containing ammonia-salts, can scarcely occasion much loss, because the soil, by its moisture, by its humus, *i. e.*, vegetable matter in decay, and by the absorbent silicates, which are never absent from earth that has any moderate productive power, is ready to take up at once the liberated ammonia, and prevent any sensible waste."

As quoted by Green's Fruit Grower. Mr. J. J. Thomas says:—"The banker cannot invest a million dollars safely without knowledge of finance; the captain with no knowledge of navigation, would sink his ship. In no business is the serving of an apprenticeship more necessary than to him who plants an orchard for profit. He must know how to select the site and the varieties best adapted to his locality; he must select fruit that can be marketed to the best advantage; understand just how much to manure for the best results; know about cultivation, pruning, thinning, sorting, packing, shipping and selling, and these may involve innumerable qualifications. It would be interesting to inquire how many millions of trees have been set out for market orchards by persons who knew nothing of any of these particulars, and who supposed that all they had to do was to buy the trees and set them, when they would grow, take care of themselves, and, without further attention, bear heavy crops of silver dollars.

BAGS OR BARRELS, WHICH?—The question of substituting bags or cotton sacks for flour barrels is the subject of a lively discussion among Minnesota millers just now, says the Prairie Farmer. They maintain that sacks are preferable for several cogent reasons. First, on the score of economy sacks are the best, for while flour barrels are worth forty-five cents each, cotton sacks, holding half a barrel, are worth ten cents apiece. Again, it is declared that flour does not sift through a good cotton bag as much as through a barrel. All the flour shipped to Glasgow and Rotterdam goes in cotton sacks; and then the sacks are worth as much there as here. The advantage seems to rest with the sacks. It ought, if the change is made, to result beneficially to the farmer in the price of his wheat.

DR. LAWES says, in the London Ag. Gazette, that the complete exhaustion of the soil is not sooner effected is not due to any moderation on the part of the cultivator, but rather to the resistance which the soil itself offers to the too rapid removal of its treasures.

WHEN we hear a man boast of the length of his ancestry we are reminded of the quaint saying of the farmer. "The older the seed the worse the crop." . . . . . .

THERE are a great many moralists in the world who can write a good prescription for honest living but who seldom take any of their own medicine. . . . . .

WE have read the report of one farmer who has tried the White Russian Oats and, judging by this, we should advise that they be sown only for trial this Spring. . . . . .

FITZNOODLE says in Puck, "This man, (Jay Gould), by his powah, is now verwy little wemoved fwom an autocwatic wulah or emperwah, and has weally a gweat deal maw to say than many a Eurwopean potentate. It is quee-ah, extwemely quee-ah, that such things should exist in a wepublic which pwetends to be bettah in everwy respect than any othaw desewiption of government. . . . . .

JUDGE FRANK of the Montgomery County Horticultural Society (Ohio) said that his mother always succeeded in causing seed to sprout by placing coffee sacks over the seed-bed. . . . . .

The Washington Post says that Commissioner Le Due intends to stand by the agricultural interests of the country, just as long as the President will let him. The very fact that there is such a scramble for this position shows to our minds that General Le Duc, whether he has proven a wise, efficient officer or not, has certainly elevated the respectability and importance of the Department. A committee consisting of W. O. Atwater and others had an audience with the President to urge O. Judd for Le Duc's place. We no longer wonder why Judd's Agriculturist has so condemned General Le Duc. We should deem it a very sad blow to the interests of our agriculture if this Judd were successful. . . . . .

MR. BARRY, who brought the Sharpless Strawberry to notice, says it has more than realized his expectations. It might have been added that the R. N.-Y. was the first horticultural paper that ascertained its merits by its own tests. . . . . .

A WELL-KNOWN Illinois writer says, according to Mr. C. A. Green in the Fruit Grower, that the average Western farmer toils hard, early and late, often depriving himself of needed rest and sleep—for what? To raise corn. For what? To feed hogs. For what? To get money to buy more land. For what? To feed more hogs. For what? To buy more land. And what does he want with more land? Why, he wishes to raise more corn—to feed more hogs—to buy more land—to raise more corn—to feed more hogs—and in this circle he moves until the Almighty stops his hoggish proceedings." . . . . . .

BOOKS, CATALOGUES, ETC.

JOHN SAUL, Washington, D. C. Catalogue of new, rare and beautiful plants, 104 pages. Crotons, dracænas, carnations, fuschias, verbenas, phloxes, etc., with a beautiful colored plate of the roses, Duke of Connaught, Pearl and Beauty of Stapleford. Sent free. Also a DESCRIPTIVE CATALOGUE of Roses of all kinds.

HOOPES BRO. & THOMAS, Westchester, Pa. Hand-book of Beautiful flowers, 80 pages. Finely illustrated and full of trustworthy information. Each plant is correctly named and full instructions for successful cultivation are given. Sent free to our subscribers.

T. S. HUBBARD, Fredonia, N. Y. Wholesale price-list of grape-vines, fruit trees, etc.

L. W. GOODELL, Amherst, Mass. Illustrated Catalogue of seeds and bulbs.

Miscellaneous.

THE AMERICAN CANE MANUAL with descriptions of the American sugar machinery, manufactured by Geo. L. Squier & Brother, Buffalo, N. Y.

CIRCULAR AND PRICE-LIST of D. B. Wooster's Perfection Creamery, manufactured by M. D. Chapin, Poultney, Vt.

CATALOGUE OF SANDWICH CORN SHELLERS, fully illustrated, made by the Sandwich Manufacturing Company, Sandwich, DeKalb Co., Ill.

ADDRESS of the Hon. Marshall P. Wilder, and the other proceedings of the New England Historic Genealogical Society. Published by the Society; 18 Somerset St., Boston, Mass.

WATERTOWN SPRING WAGON CO. Illustrated Catalogue of wagons and buggies. Manufactory at Watertown, N. Y. This will be sent to applicants without charge.

A TREATISE upon Extracted Honey, Harvesting, Handling, Marketing. By Charles and C. P. Dadant, Hamilton, Ills.

A SKETCH of the Tobacco Interests of North Carolina. By J. D. Cameron—109 pages. Single copies 50 cents, in postage stamps or otherwise, W. A. Davis & Co., Oxford, N. C.

ILLUSTRATED CATALOGUE of Bee-Keepers' supplies—30 pages. Alfred H. Newman, 972 West Madison St., Chicago, Ill.

THE CORNELL UNIVERSITY REGISTER, 124 pages, Ithaca, N. Y.

WALTER A. WOOD, Hoosick Falls, N. Y. Twenty-Eighth Annual Circular of Harvesting Machines, manufactured exclusively by the Walter A. Wood Mowing and Reaping Machine Co.—32 pages, fully illustrated—free.

THE WARRIOR MOWER CO., Little Falls, N. Y. Farmers' Almanac—illustrated. Free.

Foreign Catalogues.

DANIELS'S ILLUSTRATED GUIDE for Amateur Gardeners, Norwich, England. A large, handsome work, beautifully illustrated. Price one shilling sterling. Daniels Bro's, Norwich, England.

SUTTON'S AMATEUR GUIDE in Horticulture. A costly work, beautifully illustrated with many engravings and several colored plates. Sutton & Sons, Reading, England. Also SUTTON'S FARMER'S YEAR BOOK and Grazier's Manual.

CARTER'S VADE MECUM and Seed Catalogue, fully illustrated with many engravings and several colored plates. James Carter & Co, High Holborn, London, England.

DICKSON & ROBINSON, 12 Old Milgate, Manchester, England. Illustrated, descriptive catalogue of vegetable and flower seeds.

H. CANNELL & SONS, Swanley Junction, Kent, England. Illustrated floral guide, 275 pages.

GEO. JACKMAN & SON, Surrey, England. Catalogue of trees, shrubs, etc.—50 pages.

WILLIAM BULL, King's Road, Chelsea, London, S. W., England. Catalogue of new, beautiful and rare plants—160 pages. Also SEED catalogue of flower and vegetable seeds, lilies, gladioli and other bulbs.

ANTHONY WATERER, Surrey (near Woking) England. Catalogue of rhododendrons, azaleas, hardy shrubs and trees, etc.—50 pages.

OSBORN & SONS, London, S. W., England. Catalogue of kitchen garden and flower seeds etc.—50 pages.

DOWNIE & LAIRD, 17 Frederick St., Edinburgh, Scotland. Descriptive catalogue of garden, flower and agricultural seeds—50 pages.

J. CHEAL & SONS, Crawley, Sussex, England. Catalogue of vegetable and flower seeds and amateur's guide. Illustrated; 50 pages.

JOHN LANG & Co., London, S. E., England. Catalogue of garden, flower and farm seeds.

WILLIAM BARRON & SON, 16 Market St., Nottingham, England. Descriptive Catalogue of ornamental plants—35 pages.

B. S. WILLIAMS, Upper Holloway, London, N., England. Descriptive and illustrated catalogue of flower, vegetable and farm seeds—75 pages.

HOOPER & Co., Covent Garden, London, England. Seeds, plants, roots—90 pages.

THE RURAL A NATIONAL PAPER.—I read with great pleasure the interesting report on the large corn crop raised on the Rural Experiment Farm, and would like to see a full description of the farm together with an account of its situation and surroundings. This should be given for Long Island's sake. The reports of the experiments in corn raising are very valuable and should be extensively known to Long Island farmers, so that the RURAL'S light may shine in dark places that still prevail on a large part of the surface of that highly favored island. In it there are still thousands and thousands of acres that lie uncultivated, though excellently suited for gardens or farms, and if it were known that these could produce good crops, they would soon yield abundant wealth under the influence of judicious tillage. E. F. PECK, M. D.

(We thank Dr. Peck for his suggestions. Though the Rural's Experiment Farm is on Long Island, we have the same interest in Colorado, Kansas, Texas and New England as in Long Island. We must consult the interests of our subscribers who are as numerous, according to population, in other States as in this State. There is no better *center* for a national agricultural paper than New York. A full description, together with a bird's-eye view, of the Rural Farm was given in our Fair Number last year. Eds.]

THE BLANCHARD CHURN.—One of the oldest if not the oldest manufacturies of churns is located at Concord, N. H. Messrs. Porter Blanchard's Sons are pioneers in the business, and the materials used, and the workmanship employed are the best that money can procure. One of our staff had the pleasure recently of making a thorough examination of the works, and we can unhesitatingly say that the Blanchard Churn is made "upon honor" and, with proper usage, will last a life-time. Those of our readers who are in need of a first-class churn, should examine into the merits of the Blanchard before purchasing another. B.

Everywhere.

WINTER WEST OF THE MISSOURI RIVER.

A VERY general remark, even with our own people, is: "This is the most severe Winter we have ever gone through." While perhaps true in certain respects, in most others it is not. The weather has not been colder than it has been quite frequently before. The Winter has been more protracted; there has been more cold weather; it has been continuous from about November 1st to March 1st. There has been more snow, the ground being well covered for more than one-half the time indicated. Notwithstanding all this, hardship, suffering, loss of stock, etc. have not been greater than corresponded with other Winters, all things considered. Crops last year were good and food for man and beast is abundant and cheap. As a rule, the people were in all matters better prepared than heretofore for Winter, and consequently they have been more comfortable. Stock that has been provided for has gone through the Winter well, and is in good condition. Large herds on the plains, with little, if any, provision or protection save what was afforded by nature, have suffered, and some have been lost. The accounts of losses, however, which have obtained publicity in the East, have been greatly exaggerated. Storms have scattered cattle, driving them from accustomed ranges, and water supplies have been short by reason of freezing. These misfortunes have contributed to make the losses rather heavier than usual. The natural food supply has been as good as, if not better than, usual. Upon the whole, cattle-men have no particular reason to complain. Such losses are always taken into consideration, and are expected. This is about the sum and substance of the past Winter between the mountains and the Missouri River.

Unless we shall have a late Spring every indication favors bounteous crops this year. The soil was well saturated with Fall rains, and, as said, snow has been abundant, therefore the ground cannot fail to be in good condition for farm operations. The Winter being steady, regular and dry, with altitude favorable, fruit prospects are good, with the exception, perhaps, of peaches. All other standard fruits as yet promise well. Winter wheat, of which an increased acreage was put in last Fall, ought to open up well this Spring. It has been well protected by snow. The ground is yet well covered. Spring wheat will be late. Usually seeding is done principally during the latter part of February and early March. This Spring but little will be done in March even. Late Springs are characterized by rapid growth and progress and followed by late Falls. There is about "so much" growing and producing season, be Spring or Fall late or early. Trusting, persistent tillers of the soil look forward with faith to abundant crops the current year.

Brownville, Neb., Mch. 15. R. W. FURNAS.

RURAL SPECIAL REPORTS.

IND., Newton's Retreat, P. O., Tippecanoe Co., March 14.—This has been the severest Winter this place has had since 1843. The ground has been frozen all the time since the 13th of November. J. A.

KAN., Edgerton, March 7.—This has been the most severe Winter I have known during a residence of 24 years in this place. Never before in the history of Kansas has the earth been frozen to such a depth and over so large an extent of country as during the present Winter. In many places the ground is frozen to a depth of from two to three feet, and has been in this condition for over four months, the mercury on one or two days reaching 16 deg. below zero. During December and January the ground was bare, the weather dry and cold—fine for feeding, as stock eat everything up clean, and there was no waste. But with the advent of February came our share of storms, both snow and rain, the snow being drifted so that the highways in many places were impassable. Fruit trees are uninjured, although peach buds are all killed and some cherry buds.

A. B. D.

KANSAS, Havenville, Pottawatomie Co., March 10.—The wheat crop of Kansas was rather under the average last year, and the same may be said of corn and oats; but, take Kansas all together, the crops were a fair average. This is a hard Winter. Our big snow is mostly gone, but we had a light one lately. Stock in these parts have wintered well; but there is a good deal of black-leg among calves. Butter is worth 18c; eggs, 14c; wheat, 60c to 70c; oats, 23c; corn, 23c.

J. H. W.

MICH., Saugatuck, Allegan Co., March 9.—This has been a cold Winter for our "American Italy;" still I think there will be a fair crop of peaches on the higher grounds, and plenty of other fruit. This is the paradise of the fruit grower. Peaches have only been killed twice since the settlement of the country and then the buds were not entirely killed; the trees never have been killed. The Northwest furnishes an insatiable market almost at our door, or just across Lake Michigan—our great warming-pan. J. S.

MINN., Fair Haven, Stearns Co., March 14.—The Winter has been a very severe one, with a great amount of snow and a great deal of wind. The depth of snow has greatly impeded lumbering in the pineries; business is, therefore, dull, every one complaining of hard times. M. R. L. M.

NEB., Jamestown, Dodge Co., March 9.—No Winter wheat is raised in this vicinity Last crop of Spring wheat about 10 bushel per acre. Corn light. Dry weather and chinch bugs ruined some fields. Yield from five to forty bushels per acre; perhaps one-third the latter. Oats exceedingly light. Potatoes a very poor crop. Rye poor, and very little sown. No sorghum is raised. A few have just begun to put out fruit trees and berries. Some of the neighbors have wild plums set out. The fruit was very good last Fall. I moved on my farm one year last October. I have set about 125 fruit trees. They did well last season, but my small fruits were nearly all killed by the dry weather, still I am trying again. Our Winter has been very cold and windy almost since November. J. M.

N. Y., Troupsburg, Steuben Co., March 1.—We have had very cold weather since about the middle of November, with good sleighing most of the time. Hay is selling in the barn for from $12 to $15 per ton; oats, 40c. per bushel; corn, 60c. This section is well adapted to grazing and cows are the principal stock kept. L. H.

VA., Bufordville, Bradford Co., March 10.—I live in a beautiful valley or cove formed by the Blue Ridge Mountain and one of its spurs, 38 miles west of Lynchburg. Fine beds of iron ore are all along the Blue Ridge Mountain. Some of them near the A. M. O. R.R., are now being worked and the ores shipped North and East. Tobacco is the principal crop. As fine a leaf as is raised in any State is produced in this neighborhood. Planters sometimes average from $25 to $30 per hundred for their crops. The Winter has been severe. Lands are selling in this county for from $5 to $15 per acre. Wheat looks bad, as we have had but a few warm days since the middle of November. G. L. B.

WASH. TER., Yakima City, Feb. 28.—The Winter has been very severe in this section. Residents of old standing report that nothing like it has been known before. Losses in stock are very heavy. Hay that sold for $4 a ton in the Fall has gone up to $75 a ton and hard to get. W. D.

WISCONSIN, Whitewater, Walworth Co., March 12.—We are having a very hard Winter in this section. Snow, rain and wind most of the time for 10 days; roads all blocked up; railroad trains delayed three days, and it is snowing very hard to-night: a heavy northwest wind is blowing all the snow off the prairie and marshes, and piling it in sheltered places around houses, barns, etc. Plenty of hay in this part. Corn at 45c; hogs, $5; hay, $7 to $10. H. A. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

Green Manuring.

F. G. A., St. Petersburg, Pa., says he has some poor land which he wishes to render productive, but he has no manure. Last Fall he sowed it to rye, which he intends to plow under next June, and he asks whether millet is a good crop to sow after that, to be turned under in September; would it fit the land for seeding the following Spring—soil clayey.

ANS.—Buckwheat would be the best plant for "green manuring," on a poor clay soil. It is certain to germinate, grows rapidly, shades the ground most perfectly, and leaves the land in a friable condition. Sow about one-half bushel of seed per acre any time after all danger from frost is past; plow under when in full bloom. Millet is somewhat uncertain in germinating, grows slowly when young, and leaves the land rather the reverse of friable. If the land is to be seeded to Timothy (Herd's Grass) it should be sown by the first week in September; if with clover, another crop of rye might be sown, and turned under the first or second week in May. This would be early enough to insure a good "catch" of clover, if no grain was sown with it. A plow with a jointer should be used in order to perfectly bury all the vegetable matter. Give most *thorough* and *persistent* surface culture, and give a little time for plant-food to be set free before any seed is again "cast in" and it will then germinate quickly and grow rapidly. To illustrate experimentally the effects of *superior* culture a friend selected in 1873, a piece of poor clay soil upon which was growing a very light crop of oats. Two-fifths of an acre was most thoroughly prepared and sown to wheat in the Fall of 1874, and it has borne a crop of wheat, without any fertilizers whatever, every year since, except in 1879, when the ground was summer-fallowed. The results are as follows:

				lbs.
1875	season	poor;	yield	158
1876	"	fair;	"	369
1877	"	superior;	"	694
1878	"	fair;	"	637
1880	"	fair;	"	720*

* 30 bushels per acre.

Making an Aquarium.

D. S., Burlington, Ind., asks, 1, how to make an aquarium; 2, what kind of plants should be put in one; 3, where can they be obtained, and whether a small water turtle in one would be likely to eat the fish it contained.

ANS.—1, Most aquaria are square in form, as the greater the number of sides, the greater is the liability to leakage. If metal posts are used, they should be plated, as oxidation often proves disastrous. Hydraulic cement should be used to keep the plates in position, but if putty is used, it should be painted, and the tank filled with water a week or more before the fishes and plants are put in. Cover the bottom to the depth of an inch or more with sand and on this strew pebbles; rocks containing much mineral substance should be excluded, and shells should be rid of all organic matter contained in them. The tank should be at least a foot deep, and when filled with water to within an inch or two of the top, it is ready for occupation. 2, River or pond plants that bud and root from joints on the stem can be raised by securing them in tufts to the sand in the bottom of the tank, by a light layer of pebbles. Water thyme, water crowfoot, milfoil, and starwort may be planted in this way. Caution should be taken as to the number of inmates and their habits. The gold fish is most commonly used, with the perch, minnow, stickleback, etc 3. We have seen small turtles in such tanks and have never heard of their destroying their "room-mates." We should think that sufficient plants for the purpose could be obtained along banks of streams and ponds with little or no cost.

Leather as a Fertilizer.

T. H. W., Oberlin, Ohio, wishes to know how best to convert old boots, shoes and bits of leather into an available fertilizer.

ANS.—Such leather contains, according to Prof. S. W. Johnson, from five to eight per cent. of nitrogen, but it is totally unavailable to vegetation, of course, unless the leather is brought into a state of decay or is acted upon by some powerful chemical agent. But it is specially prepared to resist decay and hence is very slow to fall into that condition when brought into the soil. The activity of leather as a fertilizer is hastened by fine division; but there have been no cheap means devised of pulverizing it. Prof. Johnson says it may be rendered brittle by roasting at a moderate heat, and then may be easily ground to powder. Prof. Storer has shown that roasted leather, while it shows some slight nourishing value, is still comparatively so inert that it can scarcely have any definite money value as a manure. It is, in fact, no better fertilizer in respect to nitrogen supply than simple peat. Question as to cheese will be answered in due time.

Marking Sheep.

J. A., Jamestown, N. Y., asks what is the best method of marking sheep—he objects to cutting their ears.

ANS.—The only permanent marks for sheep are the ear-marks of metal inserted in the ears in holes made by a punch. There is no cruelty in the operation. It is not nearly so painful as docking a lamb, or a hundredth part so much as castration. The cut in the ear is made instantaneously and at every shearing the sheep is considerably more hurt by cutting than in ear-marking in the above manner. Temporary marks may be made across the nose by means of red, blue and black paint so disposed as to represent the numbers. Any person can form his own key of numbers. But the objections against marking by means of the metallic clips are in reality quite groundless.

Miscellaneous.

H. T P., Glens Falls, N. Y., asks, 1, what amount and kind of manure or commercial fertilizer would be best for a small garden in town, the soil of which is naturally rather poor, low and damp; 2, which is the hardiest, most productive and finest-flavored of the three raspberries—Cuthbert, Gregg and Caroline.

ANS.—1. It should be drained before plants will thrive, no matter what manure may be used. It would then be best to plow or spade under a heavy spread of stable manure. A top-dressing of bone flour and wood ashes raked in might also prove advantageous. 2. They are all extra-hardy kinds. The Cuthbert is red; the Caroline yellow or salmon; the Gregg black. The last-mentioned is large but of rather poor quality. The first and second are excellent. Considering quality alone, we should prefer the Caroline.

E. D. B., Seneca Falls, N. Y., asks, 1, would it do to sow Honey Locust where a hedge is wanted and afterwards thin out the young plantlets; 2, is it best to sow seed so soon as the ground can be got ready, taking the risks of a severe frost afterward; 3, should last year's growth be cut down to the old wood; 4, where can a work on hedges be purchased.

ANS.—1. There would be too many lapses. It would also be more troublesome to cultivate them. Better to raise them in nursery rows. 2. Yes. 3. That is just as you prefer. It depends, however, somewhat upon the *length* of the old wood and upon the number of secondary branches. If the plants are sufficiently thick, then leave some of the new wood. 4, Warder's Hedges and Evergreens; price $1.50, to be had through the American News Company, this city.

G. S. F., Stoney Creek, Ont., Can., and several others, ask whether Manning's Illustrated Stock Doctor is reliable; and where can it be bought and its price.

ANS.—In our notice of the book in the RURAL for March 12, we stated that the work is chiefly a careful compilation from various good authorities on the subjects discussed. We understand that the compilation was made mostly by Jonathan Periam of Chicago, a careful and experienced agricultural writer. The price of the book bound in cloth, is $4.75: and bound in leather $5.75. It can only be obtained through the agents or canvassers of the publishers, Messrs. Hubbard Bros., 723 Chestnut St., Philadelphia, or direct from that address.

J. H. O., Pittsford, N. Y., asks what kind of commercial fertilizer is best for raising onions from the seed and how to apply it—barnyard manure he finds produces too many weeds.

ANS.—We presume that that formula which approximates most nearly to barnyard manure would suit best for onions. Such manures are put up by the Mapes, Bowker or other fertilizer companies. Or the different fertilizers may be purchased separately and mixed when and as desired. All of our fertilizer companies prepare their manures for special crops, such as for wheat, corn, grass, onions, cabbages, tobacco, etc. All interested should send for pamphlets, etc., which will explain such matters.

W. D. I., Yakima City, Washington Territory, asks, what can he do to save his six-year-old pear trees barked by hares. One tree has the bark on the main stem peeled off for half a foot, and he wishes to learn what he should use to coat over the wound in the bark. He intends to wrap canvas tightly round the tree and then on this apply a coat of pitch, and he asks whether it should be left on through the Spring.

ANS.—We believe that a simple wash of whale-oil soap and lime has saved our fruit trees. The rabbits have not touched the stems where this has been applied. The canvas without the pitch is as good as anything we can suggest.

W. C. S., Jefferson, Ia., wishing to plow under a piece of rye and plant the ground to potatoes, asks whether the heating of the green crop will injure the potatoes, if planted every third row, and whether rye is good for that particular crop; also when would be the right time to plow it under in order to get the best results.

ANS.—If we understand the above question rightly, we must take the view that the rye should be turned under as soon as the ground becomes dry enough to plow—else we should think the potato crop would prove unsatisfactory. Rye is about as good as any green manure.

A. C. R., South Richmond, N. Y., asks which is the best early Strawberry for market, and where is the best place to get plants.

ANS.—Probably we had best refer our friend to the Small Fruit Number. Crescent Seedling, Duchess, Crystal City, Glossy Cone, French's Seedling are among the earliest, but they should be purchased only with a knowledge of their peculiarities and the conditions under which they thrive. Any of the nurserymen who advertise them in the RURAL, will supply what they offer.

H. C. H., Blodgett Mills, N. Y., asks, 1, the address of a manufacturer of small-fruit baskets; 2, whether there is any unoccupied land on Long Island.

ANS.—1, N. B. Batterson, Buffalo, N. Y.; 2, There is a considerable area of unoccupied land there; but it is all owned by somebody, some of it being held for speculative purposes. Most of that sort of land lies at the eastern end of the island.

J. H., West Granby, Conn., asks, 1, where can he get the wild corn of America; 2, what is the best work on ornithology.

ANS.—1. We do not know. Except for experimental purposes or curiosity, it is a worthless sort. 2. Audubon and Bonaparte's is probably the best American work on the subject; price $7.50, to be had through the American News Co., N. Y.

The Hoosier Drill Co., Richmond, Ind. says: "Mr. Sadet wishes us to purchase him a good corn husker. We would like to know of you if you have any knowledge of a successful one and, if so, where?"

E. H. N., Shoreham, Vt., asks, 1, how far apart should sorghum be planted in drills; 2, how near should asparagus be planted.

ANS.—Both these queries are answered in "Notes from the Rural Grounds" in this issue.

G. H. P., Brooklyn, N. Y., asks when to plant doura, sorghum, teosinte and millet.

ANS.—Plant the latter part of May. It would avail nothing to plant earlier.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MARCH 19.

M. E. & M. H. B.—F. A. G.—H. A. C.—S. A. B.—R. M. M.—H. N. P.—E. T. D., thanks.—J. G.—W. B. H.—G. M. D.—C. R.—W. H. R.—B. O. C.—E. B. R.—M. W. F.—E. S.—T. T. L.—S. F. B.—S. B. P., Mich.—C. L. B.—M. C. B.—A. A. B.—E. E. S.—J. W. B.—M. M. W.—M. S. M.—J. C. D.—C. H. B.—S. S.—W. H. P., thanks.—J. H. P. S.—A. B. M.—M. F.—H. S.—W. H. L.—I. C. K.—R. M.—M. R. S.—K. L. H.—M. R.—S. T., thanks.—M. O. R.—C. E. B.—H. J. L.—S. O. L.—J. Y.—P. R. C.—D. D.—D. W. P.—F. E. G.—F. I. W.—I. E. G.—W. H. G.

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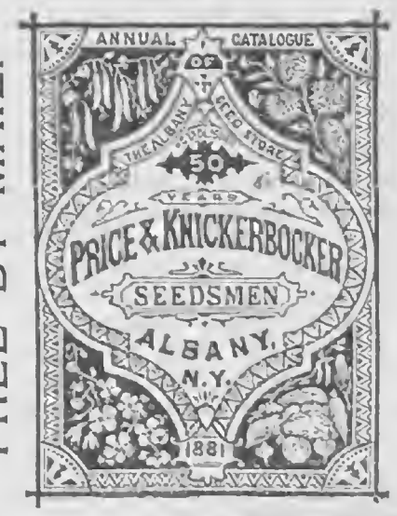

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Conducted by
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Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MARCH 26 1881.

With our present information, we think the R. N-Y. has reason to congratulate itself that it has rather opposed than advocated the use of barb-wire fences for farm inclosures. We are laboring under the belief that they will be heartily condemned ere many years.

Immense fields of pampas grass are being cultivated in Southern California—so great is the demand for those beautiful plumes. Perhaps in the not distant future they will enter into the decorations devised by milliners, and supersede the plumes of the ostrich.

Professor Birchoff, of Munich, announces that a woman's brain weighs about 10½ per cent. less than that of a man. The average weight of the masculine brain he places at 1,362 grammes, and that of the woman at 1,219 grammes, and he has examined about a thousand brains. So much for brains in Germany. The professor should come to America where the brains of women are altogether another affair. But it is a well-accepted adage that the best goods are in the smallest bundles, and that quality, rather than quantity, is the measure of value.

Pistillate varieties of strawberries are increasing in number. Is this due to the fact that, in making crosses, pistillate flowers are used for the seed bearers instead of emasculated perfect flowers? It seems reasonable that it should be so. If pistillate flowers are placed beside perfect flowers away or protected from other kinds, of course, if the pistillates bear fruit, the pollen was furnished by the perfect flowers. This is a much easier way of effecting a cross than by destroying the anthers of perfect flowers. But the tendency of such breeding will propably be still further to increase pistillate kinds, which is not desirable.

Rubber boots are cheaper than the doctor. They cost from $2.00 to $3.50 per pair, for boots for babies up to adults. For children, they are indispensable during the wet seasons, as the little ones never thrive well without fresh air and sunshine. They can well do without ribbons, feathers and furbelows. Give them instead rubber boots and insure for them dry feet, and peace of mind for yourself. Next to the boots, never allow them to go to bed with cold feet, neither go to bed with cold feet yourself. Warm, dry feet at night form a pretty sure guarantee that you'll waken in the morning alive, and be free from a cold.

The Foresters' Department in the British East Indies is said to be the largest and best managed of any in the world. It is now proposed to bring one of the foresters from that country to superintend the forests of Great Britain, and have arboriculture taught students there, as has long been done in France, Germany and Switzerland. We wish such a school could be established by the United States Government. A lamentable destruction has long been going on in our forests ever since the settlement of the country. If they were annually thinned out as needed, in a judicious way, instead of being mercilessly slashed down by the wholesale, they would furnish all the wood and timber we want, and still keep up the necessary growth from the younger trees for future requirements.

A Good Year for Agricultural Colleges in the West.—We are informed by reliable authority that the Legislature of Kansas appropriated all that was asked for in support of the Agricultural College without a dissenting vote in the Senate, and only seven dissenting votes out of nearly two hundred in the House. There was no abuse by any member. At Purdue University, in Indiana, a large appropriation went through easily without a scratch. At Lansing, Michigan, the Legislative committees added by a unanimous vote 2,200 dollars, and intended to add a thousand more to the amount asked for by the college. The last thousand was omitted by oversight, but may yet pass in a separate bill. The items added by the joint committees were mostly for experiments. The bill went through easily with very few opposing votes. The appropriation for two years was about $63,000.

Distinguished Hungarian Landholders on a Visit to the United States.—Six of these, namely, the Counts Andrassy, J. and G. Szechanyi, and E. Hoyos; Baron Gudenus; and Dr. Rudolph Meyer, are now making the tour of our country for the purpose of informing themselves as to the vegetable, grass and grain crops, the best methods of growing them, and the machinery used for this purpose and preparing them for market; also to examine the different breeds of our domestic animals, their rearing and fattening; and especially cattle, with a view, we dare say, of seeing if they cannot share with us in the foreign supplies of the British market. These gentleman possess very large estates in Northern Hungary, near the Carpathian Mountains, whence spring the sources of the river Theiss. The climate there, we are informed, is much like that of New England, but the soil is somewhat different. The seasons for the two past years have been very disastrous—a great failure in all sorts of crops, and want and suffering are among the peasantry in consequence. Strong men can be hired there for 15 cents per day and the people have been living for some time chiefly on coarse black bread, and not a mouthful of meat and no vegetables to supplement their meager fare.

CULTIVATION OF FISH.

It is asserted, and we dare say truly, that millions of acres we possess of salt and fresh water, properly stocked with fish, would yield a greater profit than the same area of our most fertile soils in vegetables, grass, and grain. Last year the appropriation for the support of the New York Fishery Commission was vetoed by the Governor, and it is feared on this account that the Legislature will not renew it. We think if it does not, it will be a great misfortune to the public. Few Commissions have been as beneficial as this. It has not only restocked many of our bays, rivers, and lakes with their original, valuable and delicious finny tribes, but it has also introduced several kinds among them from distant parts of the country, as well as some from abroad.

The property for hatching and breeding has cost the State about $50,000, and if neglected now will go to ruin. If kept up in active use it may soon add fifty times the cost to the wealth of the country in the production of fish. Our people, especially in the interior, eat too much meat. To vary this with fish would be much more healthy for them, to say nothing of the luxury and variety they would add to their diet. Salmon, shad, sheep's-head, Spanish mackerel, lobsters, oysters, soft crabs and clams from salt water; also the most delicious of all, the white fish, the Mackinaw and smaller trout of the fresh waters may be produced so cheaply that the poorest people could afford to purchase them for their tables. Now they are usually so dear that it requires a pretty well-filled purse to indulge in any but the medium or inferior sorts.

TO RURAL SUBSCRIBERS.

Our old readers will pardon us for stating to our new readers that we always reserve the right of commencing and of discontinuing our Free Seed and Plant Distribution whenever we choose; that they are in no sense premiums, and that our aim through them is, as a first consideration, to introduce new and superior varieties. A reference to those which we have distributed during the past four years will show that in this we have met with a good share of success, and it is exceedingly gratifying to the Rural that such is the case. We have been told by several new subscribers of late, who were complaining they had not received the seeds, that they "subscribed to get the seeds!" May we be excused for saying we do not value such subscribers, and that they had better wait until our seeds are offered for sale by seedsmen in general, at the usual price of well-known kinds.

Every one of our subscribers who has applied; who has sent his share of the postage: who has plainly written his name or address, will have received the seeds of our present distribution in a few days, unless it may be owing to mistakes in our office or irregularities of the postoffices, and we presume we shall have enough left to supply all exceptions of this kind. Many of our good friends write to thank us for seeds sent. We thank them for their consideration. But, again, we beg to say that we are entitled to no thanks. We fancy that we are trying to do a good work for the agricultural and horticultural interests of our country. In this our subscribers are aiding us—they give us the *means* to do it. The obligation is at least mutual, or, if not, the balance of thanks is due from us to them.

THE PRESIDENT AND THE FARMERS.

Farmers, irrespective of political bias, have good reason, we trust, to congratulate themselves on Mr. Garfield's accession to the Presidential chair. He has the reputation of being a thorough and practical farmer, which his well cultivated acres in Ohio would seem to justify. Believing him to be in sympathy with agriculturists everywhere, we shall hope for his hearty co-operation in whatever may advance the great agricultural interests of the country, and the position which he now occupies will enable him to wield a great and lasting influence in promoting these interests. In his inaugural address he says: "The interests of agriculture should have more attention from the Government than they have yet received. As the Government lights our coasts for the protection of mariners and the benefit of commerce, so it should give to the tillers of the soil the best lights of practical science and experience." From these words we may infer that he is contemplating some practical solution of the problem concerning a Cabinet position for the Commissioner of Agriculture.

The Department of Agriculture, though stinted in its appropriations, has been, under Gen. Le Duc, of great value to the material development of the country, and when elevated to equal rank and privilege with the other Departments, its value may be increased many-fold.

We believe that President Garfield realizes the fact that this great branch of our productive forces has been ignored, or treated in a grudging, half-hearted way, as if it were a disgrace rather than an honor to place the Agricultural Department on an equal footing with the other Departments. The Government seems to be ashamed to recognize agriculture as a great foundation of wealth and power, although it cannot get rid of the fact that, as one has said, "the *nation* dwells largely in the cottages and farm houses of the country." If the President wishes to win the grateful recognition of the great community of farmers, he will take the present opportunity to use his power to increase the capacity and usefulness of the Department of Agriculture.

SOME NOTABLE HORSE SALES.

Last week a large number of horsemen from all parts of the country assembled in this city to attend a couple of large sales of horses many of which were distinguished either for their own performances or those of their ancestors or relatives. On Tuesday, March 15th, 36 imported thoroughbred horses were sold under the auspices of the American Horse Exchange, an institution lately established here under the direction of Wm. H. Vanderbilt and several other wealthy lovers of horse-flesh for the honest sale here of imported and home-raised stock, and for the exportation of American horses to various foreign countries in which there may be a market for them. The sale included 36 horses, two only of which—Matchless by Stockwell and Nonpareil by Kingston—brought four figures—$1,000 and $1,025, respectively. From these the prices ran down to $30, the whole 39 bringing only $12,020, an average of $333.88. Much disappointment was felt by the importers at the low prices, the offsprings of Derby winners having in several cases been sold for less than the price good cart horses often fetch. It is evident that the day has gone by when the mere fact that an animal was imported gave it a fictitious value.

On the three following days Messrs. P. C. Kellogg & Co., held their annual combination sales of roadsters at the American Institute Building. In view of the high reputation of some of the trotters sold, the prices here, too, were somewhat disappointing. Fifty-one horses were sold on Wednesday for $21,730—an average of $426. On Thursday 39 were sold for $8,630—an average of $265, and on Friday 47 were auctioned off for $17,775, an average of $378. The entire sale included 137 horses, colts and fillies, which sold for $48,135—an average of a trifle over $351. On Friday, 14 Shetland ponies went under the hammer at an average price of $110 per head, the highest figure being $265 for a beautiful, little stallion.

On Thursday, March 3rd, the sale and dispersion of the Blink Bonny stud occurred in England. This was founded and overlooked for 18 years by Mr. W. I'Anson, and it offered for sale fourteen brood mares and eight yearlings. The former brought the aggregate sum of $31,620, an average of $2,258, and the latter a total of $17,590, an average of $2,795. The highest-priced animal in each lot—the mare, Pearl, $10,925 and the colt Pero Gomez, $2,180—were bought, it is reported, for Mr. Pierre Lorillard, and will be brought to this country. For prime horses there is a good market everywhere; but inferior animals, however loudly they may be puffed, are likely to go for a song.

BREVITIES.

Ex-Gov. Furnas (Nebraska) tells us in another column that, unless we have a late Spring, every indication favors bounteous crops this year.

With all thy getting, get wisdom, which means an unabridged and illustrated dictionary. Next to the Bible, it is the most important head-piece a family can possess, that can be procured with *money*.

Professor Tracy (Detroit, Mich.), writes us that he found, last season, a difference of 400 per cent. in the marketable product of two lots of onion seed of the same variety sowed side by side and thinned to the same number of plants in the row.

President Garfield is the only President who has been inaugurated in the presence of his mother. Happy man! Most of us meet with our greatest successes only after the hearts that would have enjoyed them most are moldering in the dust.

Clouds as Cows.—In the Aryan mythology the clouds were supposed to be cows, whose teeming udders not only refreshed, but replenished the thirsty and weary earth. In Germany the common superstition is that a fire kindled by lightning can only be extinguished by cows' milk, hair, etc., meaning that heavenly fire can only be quenched by the waters of heaven; that is, rain and dew from the clouds.

The visible supply of wheat is now comparatively small, and owing to this fact and an increased European demand prices are stiffening. The obstructions to railroad traffic in the Northwest owing to the heavy snow storms have prevented the movement of wheat from the interior in some sections for weeks. The tendency of prices at present is upward; but the high figures that ruled at this time last year, owing to the manipulations of the syndicate that formed the wheat corner, cannot be expected. The heavy snows in the West and Northwest, it is expected, will cause a late Spring and a late opening of lake navigation is also feared.

At last, after many disappointments and not a little discouragement to the managers, the first million dollars has been subscribed in aid of the World's Fair to be held in this city in 1883. Had not this first installment been completed last week, it is not improbable the undertaking would have collapsed through lack of encouragement from the general public; at any rate, it is more than likely that Gen. Grant would have resigned the presidency of the enterprise, which, under the circumstances, would have been a severe blow to it. As it is, he may find it convenient or necessary to do so, in view of his other engagements, but the project is now considered to be on the turnpike road to success.

The wheat farmers of England, according to late advices, are greatly discouraged at the competition with this country and the unfavorable weather which has of late seriously impeded agricultural work. So many farms all over the country are now tenantless that even should the weather henceforth prove propitious, a considerable diminution in farm crops seems inevitable. A single landlord in Essex, one of the leading wheat-producing counties, has over 10,000 acres of land for which he can find no cultivators, and a great deal of slovenly farming is loudly complained of. Land owners are still making deductions in rent to their leasehold tenants, and are ready to rent their unoccupied lands at considerably lower figures than they were formerly willing to accept. On this account and because, as a rule, they are relaxing their former strictness, with regard to the terms of leases, a considerable increase of tenants is expected at Michaelmas.

One of the severest and most widespread storms of the season formed in the Gulf of Mexico and Southern Texas on Friday last and moved rapidly northeastward, spreading over the entire country east of the Missouri River. In its passage nine inches of rain are reported to have fallen at Atlanta, Georgia, five inches at Augusta, while the downpour was correspondingly heavy all over Northern Georgia and Western Tennessee. Several freshets have done a great deal of damage in both States. On Saturday the storm swept over the Eastern, Middle and Northwestern States, and in the last section it proved the severest storm of the Winter, from twelve to eighteen inches of snow having fallen in Indiana, Illinois, Iowa, Missouri and over the upper lakes. This, certainly seems to have been one of Vennor's lucky "hits," as he had foretold one of the heaviest storms of the season on the 19th or 20th of March. Winter really ended with the vernal equinox on the 20th, regardless of the Spring of poets, almanacs or popular fancy, and to-day here is sunny and cheerful enough for the opening Spring.

Literary Miscellany.

THE LUCKY HORSESHOE.

A FARMER traveling with his load
Picked up a horseshoe in the road,
And nailed it fast to his barn door,
That luck might down upon him pour;
That every blessing known in life
Might crown his homestead and his wife,
And never any kind of harm
Descend upon his growing farm.

But dire ill-fortune soon began
To visit the astounded man.
His hens declined to lay their eggs;
His bacon tumbled from the pegs,
And rats devoured the fallen legs;
His corn, that never failed before,
Mildewed and rotted on the floor.
His grass refused to end in hay;
His cattle died or went astray;
In short, all moved the crooked way.

Next Spring a great drought baked the sod,
And roasted every pea in pod;
The beans declared they could not grow
So long as nature acted so;
Redundant insects reared their brood
To starve for lack of juicy food;
The staves from barrel sides went off
As if they had the whooping-cough,
And nothing of the useful kind
To hold together felt inclined;
In short, it was no use to try
While all the land was in a fry.

One morn, demoralized with grief,
The farmer clamored for relief;
And prayed right hard to understand
What witchcraft now possessed his land;
Why house and farm in misery grew
Since he nailed up that "lucky" shoe?

While thus dismayed o'er matters wrong
An old man chanced to trudge along,
To whom he told, with wormwood tears,
How his affairs were in arrears;
And what a desperate state of things
A picked-up horseshoe sometimes brings.

The stranger asked to see the shoe
The farmer brought it into view:
But when the old man raised his head,
He laughed outright, and quickly said:
"No wonder skies upon you frown—
You've nailed the horseshoe upside down!
Just turn it round, and soon you'll see
How you and Fortune will agree."

The farmer turned the horseshoe round,
And showers began to swell the ground;
The sunshine laughed among his grain,
And heaps on heaps piled up the wain;
The loft his hay could barely hold,
His cattle did as they were told;
His fruit trees needed sturdy props
To hold the gathering apple crops;
His turnip and potato fields
Astonished all men by their yields;
Folks never saw such ears of corn
As in his smiling hills were born;
His barn was full of bursting bins—
His wife presented him with twins;
His neighbors marveled more and more
To see his increase in his store,
And now the merry farmer sings,
"There are two ways of doing things;
And when for good luck you would pray,
Nail up your horseshoe the *right* way."

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 198.)

CHAPTER VIII.

A MISFORTUNE WHICH IN THE CITY OF GOODWILLTOMEN IS NO MISFORTUNE.

The gentleman who had conducted me to Mr. Autleman's gave me the directions necessary to find my way back; but I found that the hour for closing business was already at hand, and that I would not be able to reach my friend Mr. Flyter's store before he would have left for home. So I resolved to return to my hotel.

All the numbered streets crossed the avenues at right angles, and as the avenues were also numbered, it was not difficult for even a stranger to make his way about the city. I calculated that my hotel was about eight miles off, and for the purpose of the better observation of objects of interest, I resolved to make a portion of the distance at least, on foot.

The same general features of the city which I have already described were presented to me as I passed along. I was surprised to find so much uniformity in the different parts of the city; for I naturally supposed that some localities would be specially devoted to the homes of the poor, and that others would contain the mansions of the rich; that some streets would be the brilliant thoroughfares, and others little more than obscure passage-ways, where low groggeries might flourish and the pawn-broker and the second-hand clothier display their dingy wares; that bankers and brokers, iron mongers, produce dealers, commission men, and other distinct branches of trade would each be found congregated in certain localities. And though this was to some extent true of the business interests, yet, so far as my observation went, I could not discover that there was anything to distinguish the fashionable from the unfashionable, the high from the low, the rich from the poor, either in locality, the style of the houses, or the dress and general appearance of the people themselves.

I passed three of the parks which I have already described, in the course of my walk. I observed that they each contained the area of sixteen blocks, being two blocks wide by eight long. I observed also that at a distance of eight squares from every side of a park another park began. Thus each park was the center of a parallelogram of a hundred and forty-four squares, being four squares wide on every side, which constituted a section or ward of the city. Each park, though free to all, was especially the pleasure-ground of the people of the ward in which it was located. In many other respects the people of each ward were bound together by a community of interest. But this will better appear further on in my narrative.

I observed that the sides of the squares which faced the parks were entirely devoted to dwelling-houses and, unlike the residences on other streets, every one of which had a considerable plot of ground around it, they were built close together, and in a somewhat plainer style than the other dwellings. Hence I conjectured that these might be the habitations of the poorer class, who, as a sort of balancing of conditions, were accorded the right of occupying the sites about the parks; being thus enabled to look out in common upon the combined beauties of art and nature, which their circumstances did not permit them to enjoy as a part of their individual homes.

Having sauntered along for about an hour and a half, I began to grow somewhat leg-weary as well as hungry, for it was now sometime past the hour of noon. As well to rest myself as to regale my inner man, I stepped into a restaurant which presented an external appearance of neatness that was most inviting.

To my surprise, I found but one customer present, and he had finished his dinner and was about paying his bill. Some of the waiters were eating and others were sweeping up the crumbs and setting the room in order. From this I conjectured that, unlike the restaurants of my own country where meals are served "at all hours," the regular habits of the people permitted their eating-houses to place exact limits to the duration of their hours for meals. And as it was now but half past one o'clock, it occurred to me that but a small margin was allowed for the many causes which are apt to delay a man's time of eating.

"I am late, sir, I see," I remarked to the head waiter, who looked about as much like a waiter as a dignitary of state in my own country.

"Rather late, sir, but we never turn a man away hungry," he replied with a kindly smile which was a very pleasant thing indeed to see in a waiter under such circumstances.

"I have never yet eaten a dinner in your city, and I am an entire stranger to the customs of the country," I remarked, by way of apology, as he seated me at a table and placed a bill of fare before me.

"Pardon me, sir," said he, with a look of pity which was becoming very familiar as well as quite disagreeable to me, "but you look like a person who has lately gotten up from a bed of sickness."

"Do I?" I rejoined, laughing. "Just bring on some of your substantials and I will show you that I am a true convalescent. I had quite a poor turn this morning but one of your learned doctors cured me almost instantaneously by simply assuring me that I was not sick at all. So to convince you that I am well, reassure myself and vindicate the doctor, please bring me a dish of oysters to start off with."

Oysters!" he exclaimed in surprise.

"Oh! I forgot," said I, "its out of their season isn't it. Well, bring me some roast beef, lamb, or veal, anything substantial, I don't care much what it is; for I didn't make out much of a breakfast this morning, and I am very hungry."

The waiter gave me a look which seemed to imply that he thought some proofs of my sanity would be as much in place as those of my freedom from bodily ailment.

"I beg your pardon'" sir," said he, "but I must confess that these dishes which you mention are altogether new to me."

"Can it be possible," I exclaimed, "that such a common dish as roast beef is unknown in this country? The waiter who served me at breakfast told me that meat was not used in here as an article of diet, but I thought he was joking or else serving his purpose in some way by telling me a professional lie."

"A professional lie!" he repeated, with a look of pity, strongly tinctured with contempt. "Why sir, there is not a waiter in the city who would not burn with just indignation at such a charge. I do not quite understand what you mean by a 'professional lie,' but if it is a warping of the truth in any manner; the charge, in this case, certainly is unfounded, and I doubt not would be in any other instance in which it might be preferred against any waiter in the city."

This was spoken with the noble dignity that a virtuous man is inclined to repel any insinuation against his integrity, and though it appeared to me only the extravagant language of an enthusiastic defender of his guild, I could not feel but that I was justly rebuked for having spoken so uncharitably of one whose character was unknown to me. I therefore expressed my regret at having by word or thought done injury to his fellow-waiter's reputation. I said that during my brief stay in the city I had lived in such a continous state of wonderment at the marvelous advancement of its people in everything that was worthy of praise, that it might not be so strange as it at first appeared to me, if among them not a single individual could be found, who would stoop to tell a lie.

"I hope sir," said he," that you do not come from a country where falsehood is so common that general truthfulness would be regarded as an occasion for wonderment, and a thing to be esteemed worthy of praise."

I affected to treat this remark as a joke, and laughed heartily at it. At the same time I apologized for the delay which I was causing him, and requested that I might be served with anything that he might have which was serviceable for a hungry man. To tell the truth, I did not know what reply to make to this home thrust. I did not wish to bring reproach on my country by answering it as truth would compel me to do, and I had too much respect for myself to evade it by falsehood.

The waiter left me, and soon returned with a bowl and spoon and a dish which he called *tique*, a sort of thin pudding, combining the flavor of barley and hominy, but greatly superior to anything of the kind that I had ever eaten. It was in reality made out of a kind of grain which is entirely unknown in my country, but which has such an excellent flavor and is such a complete article of food that its use among this people is universal. Especially at the mid-day meal—which, by the way, is merely a lunch—it is the favorite, and, as a rule, the only dish. I ate heartily of it, and enjoyed it much, though I thought it would have been improved by a richer sauce.

To show my appreciation of the waiter's courtesy in serving me with so much good nature at so late an hour, I put my hand in my pocket to give him a fee, when, to my surprise, I discovered that my purse was not there. I always carried it in my right pants pocket, but not finding it there, I turned to the left, and from the left to the hip, and from the hip to the pockets of my vest, and from these to the pockets of my coat, my hope growing less and my dismay increasing as each pocket was searched in vain.

"I declare," I exclaimed, excitedly, "I have been robbed! Some one has picked my pocket! I surely had my purse with me when I set out this morning. Some skillful thief doubtless secured it in my hurrying to see the doctor. Is there a police station near where I can make known my loss?" I asked the waiter.

My distress and excitement had gathered round me a number of the waiters, and even the proprietor left his dinner to inquire into the cause of my trouble. I expected to be denounced by him as a "dead beat," to be summarily ejected into the street, or to have a policeman summoned to bear me off to justice. Judge of my surprise, therefore, when the proprietor, upon hearing my story, never offered to doubt it, but endeavored in the most kindly manner to allay my distress.

He assured me that I need not feel any uneasiness whatever over my loss. He said that there were finding-offices in every ward of the city where anything which was found was sent, and from which it was reported to every other office in the city. That if I would go to any of the finding-offices I would very likely hear of my purse, and doubtless have it restored to me within an hour after my loss was made known.

I looked at the man in surprise, but recalling my talk with the waiter, I prudently refrained from casting any doubt on the general honesty of the people. Especially, I thought, ought I to rely on the truthfulness and integrity of a community where I myself, though an utter stranger, am treated with so much confidence.

I took off a finger-ring which I wore and offered it to the proprietor of the restaurant as security for my debt till I should be able to pay it. He looked at me as though he were hardly able to comprehend my proposition, and the head waiter whispered something apart to him, the import of which, from the manner in which they regarded me and the few words which I overheard, I judged to be the calling of my mental soundness in question. I again pressed my security upon him, but he politely declined it, assuring me that if the amount were a thousand times as large he would ask no stronger security than my own word.

This speech appeared to me the very marrow of blarney, though I could not conceive what reason there could be, under the circumstances for flattery. I thanked him for the good opinion which he seemed to have of my honesty, and requested him to direct me to the nearest finding office. He replied that they were all closed, their office hours being from eight to twelve in the forenoon, and from six to seven in the evening.

Carefully noting down the address of my trusting acquaintance, I again bent my steps toward my hotel, my mind completely occupied with reflections upon the countless advantages which must accrue to a community whose members are all thoroughly honest and truthful.

CHAPTER IX.

TELEPHONES IN THE CITY GOODWILLTOMEN.

I ARRIVED at my hotel late in the afternoon, having walked the whole distance in a leisurely, observant manner, traversing the whole length of several parks, resting frequently on their rustic seats, and enjoying the rare beauty of their rich and varied scenes.

I found a note awaiting me from Mr. Flyter, in which he expressed his apprehension that some misfortune had befallen me, and requested that I should telephone him at once, if I should return to the hotel.

I told the clerk that I wished to communicate with 1,285, 57th Ave., and asked him with the air of one familiar with such matters to direct me to the telephone. He pointed to a door at the other side of the room, and told me that I would find it there. I passed across and entered a large, well-furnished room which had three rows of telephones extending completely around it. I made known my desire to the young man in attendance, and he directed me to a telephone a little apart from the rest, before which a large easy chair was placed. He took up a funnel-shaped instrument, and placed its large end against the telephone's disk, which it just covered, and spoke through it the address of Mr. Flyter very distinctly. In about half a minute an answer was returned, when he gave the condex—I believe he called it,—into my hand, and told me to apply my mouth to it when I wished to speak, and my ear, when I wished to hear.

I accordingly sat down in the easy chair and introduced my telephonic conversation by inquiring if Mr. Flyter was at home. That gentleman soon made his presence known at the other end of the line. He expressed great relief and happiness at learning of my safety, and showed the kindly interest which he felt in me by frequent exclamations of pleasure or condolence as I recounted to him my experiences since I left his store in the morning. Being unskillful in conversing by telephone, I received most of these exclamations in my mouth instead of my ear, which startled me not a little on several occasions, so that twice the condex nearly dropped from my hand.

Our conversation ended with the proposition from Mr. Flyter that I should await his coming in the evening, and accompany him to their social entertainments in the park. He had just finished dinner, he said, and was about to set out for his store, where he would be occupied from six to seven, and would then come to me at my hotel.

While I was engaged at my conversation with Mr. Flyter, several communications came in which were received by the young man in attendance from one telephone, and sent out by another. My curiosity concerning this telephone business was of course, great; for from appearances it was much more extensive than was ever dreamed of in my own country. I, therefore, put several questions to the operator, and learned from him that the telephones which I saw about the room were each connected with a different ward of the city, except the four next me which were connected with the four quarters of the ward I was in. There was one hotel in every ward, and in every hotel there was a telephone room exactly like the one I was in, with a telephone for every ward, and four for the ward in which it was situated. If a person in the twentieth ward wished to communicate with one in the thirtieth, he would go to the telephone office in his ward and direct the operator to "call" the operator of the thirtieth. This was effected by an electric current which, connected with the telephone numbered 20, indicated the telephone with the corresponding number in the office of the thirtieth ward. The operator then connected the telephone numbered 20 with that of the four belonging to his own ward through which communication was desired, and the person in the twentieth ward could talk to his friend in the thirtieth as readily as though he were in the same ward. If the communication was short and of little importance, the operator himself received and transmitted it.

What surprised me more than anything else about these telephones was the privacy with which messages could be sent. Though there was a telephone in every house in the city, yet a conversation could be carried on by two friends however widely separated, with as much secrecy as if they were sitting by the same fireside.

The manner of insulating any particular house was explained to me by the operator, and he said that the operation was most complete and easily accomplished, but I confess that I could not get a clear enough idea of it to explain it intelligibly.

I told this very pleasant young man of my misfortune in losing my purse, and requested that his charge for the use of the telephone might be put in with my hotel bill, which I hoped to be able to pay by the recovery of my purse. But he replied that there was never any charge made for the use of telephones in the city. They were for the convenience of the public, and were free to all. As to my purse, he said that he would be able to get me information about it in a few minutes, when the finding-offices should open.

I accordingly retired to await the hour of six, which was close at hand.

Shortly after that hour had struck I again entered the telephone office, and was greeted by the operator with the very agreeable information that my purse had been found and was awaiting my demand. He had telephoned the finding office of the ward, and had learned from it that a queer looking purse with queer looking coin and paper money in it had been reported by the manager of Philigomotor number 76. It had been found under the seats when the car had reached its terminus, and the manager of the car, remembering that an odd looking stranger had been severely jostled during the trip, conjectured that the purse might have escaped from his pocket on that occasion, and had accordingly returned it to the finding office of the ward in which the stranger's mishap had occurred. This was three wards away, but the operator gave me the directions necessary for finding the office in question, and within half an hour I had returned to the hotel with my purse in my pocket.

I offered to pay the director of the office in which my purse had been found for the service which had been rendered me, but he said that the finding offices were a city institution, and were free to all. I then inquired for the conductor or manager of philigomotor No. 76, that I might reward him for his honesty. But the man regarded me with the air of superior complaisance with which a good natured inhabitant of the town is apt to look upon a green rustic, and politely informed me that it was not the conductor who had found the purse, but the boy whose business it was to sweep out the cars at the end of the line. But even he would feel as much degraded by the offer of a reward for such a simple service, as any gentleman would for restoring to a lady a lost handkerchief.

MAGAZINES FOR MARCH.

THE Domestic Monthly; Atlantic Monthly; Scribner's Monthly; The American Naturalist; Lippincott's Magazine; North American Review; Godey's Lady's Book; St. Nicholas for March; Appleton's Magazine; Phrenological Journal.

The above periodicals have been received. The demand for space having caused delay in notice, we briefly mention receipt, with the comment of usual merit in their production.

NEW PUBLICATIONS.

Counsel to Parents, on the Moral Education of Their Children. By DR. ELIZABETH BLACKWELL New York: Brentano's Literary Emporium. Cloth $1.00; Paper cover, 50 cents.

The author of this volume enjoys a wide reputation, so much so that the mere mention of her name in connection with a literary production serves to recommend a perusal.

Forcible argument is used to inspire parents with a sense of duty in this important field of education. Parents having the subject of true health and happiness of their children, and the good of all humanity at heart, will profit by the counsel

and suggestions from one who has studied and proved the truth of her assertions.

A third edition of this little book shows an extended interest.

A Book of Rhymes and Tunes. By MARGARET PEARMAIN OSGOOD. Translations by LOUISA T. CRAGIN. Boston: Oliver Ditson & Co. Price, $1.50.

This is a true household singing book, acceptable not only to mothers and children, but to Kindergartens, and to all of the new faith, who believe in making school children happy. There are about a hundred songs, many of them retaining the original foreign words, but also furnished with special translations for this book. Its value grows upon one as the leaves are turned. Considerable skill is evinced in the selections, showing the tact of true women who remember how they felt as children. A bright boy or girl does not fancy the milk-and-water productions that are often put together for the "dear children." Neither is anything stately or over dignified acceptable. The "lullabies" are such as mothers and older sisters will admire to sing; the nonsense songs are worthy of the writers in St. Nicholas, (no higher praise is needed) and the few charming legends and romances from the German will please everbody. A large proportion of the songs have the original foreign as well as the English words preserved; a fact that may commend the book to many cultivated households.

Romola. By "GEORGE ELIOT." New York City: American Book Exchange.

This is an exceedingly cheap reprint of one of the best works of the late Geo. Eliot. Though the paper is necessarily poor to admit of its being sold at so low a price, the print is clear and the appearance of the cover is quite pretty and inviting. It fills a want in the catalogue of good, cheap works, since the higher priced editions are not always within reach of everyone. The character of the work needs no comment; the author's name is enough to recommend it to all.

The Servant Girl Question. By HARRIET PRESCOTT SPOFFORD. Boston: Houghton, Mifflin & Co. Price, $1.25.

This much vexed question is embodied in book form. The author impartially considers the subject showing the rights of mistress and servant in a clear light. All participants in household management are criticised commendably and otherwise.

Madame Bovary, BY GUSTAVE FLAUBET. TRANSLATED BY JOHN STERLING. Paper cover.—Price 75 cents. Philadelphia: T. B. Peterson & Brothers.

This work, interesting as it is as a novel, must also be regarded as a careful study.

BRIC-A-BRAC.

HOW LONG.

A little girl went timidly into a shop the other morning, and asked the shopman how many shoestrings she could get for a penny? "How long do you want them?" he asked. "I want them to keep," was the answer, in a tone of slight surprise.

BABY'S LULLABY.

[As sung by its father while mamma is visiting the neighbors.]

Rock-a-by baby upon the tree-top.
When the wind blows—confound it, do stop.
When the wind blows the cradle will rock,
Jerusalem crickets, what a temper you've got.
When the bough breaks the cradle will fall.
By thunder, you young 'uns do nothing but squall.

Now, baby, go-by; go hush-i-ty—hush:
Shoo, shoo, shooy, hush hush-i-ty—hush;
Go to sleep, my baby, my sweet little pet;
Go to sleep; don't you hear me, I'll spank you, I'll bet,
If you ain't asleep, this minute, now, now, rock-a-by,
Well, hang such a young one, that does nothing but cry.
—Oil City Derrick.

A "SUMMER HORSE."

THE blacksmith shops at the head of Griswold street had scarcely opened their doors the other morning when a colored man appeared at one of them leading an equine which slid and walked and hobbled by turns on the slippery snow. If horses ever live over a hundred years this one had passed that figure. His hair was long, one eye was closed and he had so many limps that it seemed useless to look for a sound leg.

"What I want to know," began the owner after he had taken four turns around a hitching post with the inch rope used as a halter, "am about what it will cost to shoe dis hoss."

"Two dollars," was the prompt reply.

"For de land's sake! but has iron riz up to dat pitch! I'll have to dwell on dat for a few minutes."

He dwelt. He walked around his steed, looked him over carefully, and then said to the smith:

"Now, see hyar. If you war' me wouldn't you sort o' keep dis beast fur a Summer hoss, an do your Winter haulin' on a hand-sled?"

"I would."

"Dat's what I war' finkin' 'bout, I guess I save him over till April and call myself a hoss frew de Winter. Seems like 'stravagance to get butes fur me 'an shoes fur him all to once. Hold up dar', Philander—none o' you pullin' up hitchin'-posts 'round yere!"—Detroit Free Press.

Beneath a shady tree they sat,
He held her hand, she held his hat;
I held my breath and lay right flat,
They kissed, I saw them do it.
He held that kissing was no crime,
She held her head up every time,
I held my peace and wrote this rhyme,
While they thought no one knew it.
—Shenandoah News.

NOVEL WAY TO SECURE A BED.

IT was at the time of the country fair and the village was crowded.

A man carrying two round bundles carefully tied up knocks at the door of an inn and asks for a room. They tell him the best they can give him is a room with two beds, one of which is already occupied. Under the circumstances he is obliged to accept the vacant bed. The occupant of the other is fast asleep and snoring soundly when he enters the room. He takes him by the shoulder, wakes him rudely, and asks:

"Are there any rats or mice here?"

"I believe not, sir."

"All the better, for they gnaw everything they can find. I have here, said the newcomer, pointing to the two round bundles, "the heads of two persons that I executed this morning, that I am taking to Paris, and you understand that if any rats or mice—

"Heads of persons!" said the other turning pale.

Five minutes later the possessor of these horrible trophies was alone in the chamber, where he slept comfortable until the morning.

The bundles he had were merely two watermelons.

For Women.

CONDUCTED BY MISS RAY CLARK.

AFTERGLOW.

GRANDMOTHER paces with stately tread
Forward and back through the quaint old room,
Out of the firelight, dancing and red,
Into the gathering dusk and gloom;
Forward and back, in her silken dress
With its falling ruffles of frost-like lace;
A look of the deepest tenderness
In the faded lines of her fine old face.

Warm on her breast in his red night-gown
Like a scarlet lily the baby lies,
While softly the tired lids droop down
Over the little sleepy eyes.
Grandmother sings to him sweet and low,
And memories come with the cradle-song
Of the days when she sang it long ago,
When her life was young and her heart was strong.

Grandmother's children have left her now;
The large old house is a shadowed place;
But shining out in the sunset glow
Of her life, like a star, comes the baby's face.
He lies where of old his father lay;
Softly she sings him the same sweet strain;
Till the years intervening are swept away,
And the joy of life's morning is hers again.

Grandmother's gray head is bending low
Why one;
The steps of her pathway are few to go;
The baby's journey is just begun.
Yet the rosy dawn of his childish love
Brightens the evening that else were dim;
And in after years, from the home above,
The light of her blessing will rest on him.

MRS. HAYES.

BERTHA A. WINKLER.

IT will not be denied that, in point of moral excellence, the late mistress of the White House is by far the most superior of any of her more recent predecessors, and therefore we confess a feeling of personal pride in the universal respect entertained for this first true representative of the American woman. Without entering into any details of her life, already so well known as "the light shining before the world," we will merely allude to some distinguishing traits during her four years at the Capitol; knowing that there, by her noble conduct, she first struck the keynote of the nations love.

It was something to enter the Capitol and take possession of hotly-contested rights under the angry glare of opposition; but it was more to plan in the midst of that confusion, a course of conduct at once so new to Washington Society and so daringly noble under the circumstances. Her abiding faith in the power of right and in the American people who recognized and sustained that power, nerved her to the task, and she was not deceived. It was something for the unpretending new mother of the country to find the brilliant gayety of Washington society arrayed against her, but it was more to set about her task in quiet determination supplanting exaggerated fashion and rivaling extravagance with her own sweet simple elegance, captivating the heart as well as the eye; appealing to the good sense of the majority as well as the taste of the artist. She did it for love of the true and the honor of her sex of whom not one truly American but that is ready to acknowledge her influence in that foreign-leavened society as truly wholesome. It was something to play the hostess to the representatives of European power for she knew they were no mild critics of another nation's failings; but it was infinitely more to brave Europe's sneer for conscience sake for she knew the mighty were not always the just and offence might easily be taken where only good was intended. But she resolved that the proud independence of America should be upheld by her in the face of all nations—that none of her principles should yield to etiquette and none of her virtues to a customary vice. It mattered not to her who ridiculed and who admired, her strength lay in the consciousness of duties faithfully discharged and honors worthily borne.

Too conscientious in all she did to fear criticism, she disarmed it before its attack by going straight onward doing right to the best of her knowledge and heeding adverse comments only where they conveyed a suggestion for improvement. Her noble espousal of every cause calculated to benefit and advance mankind, won the esteem of the enlightened and brought even old Conservatism to consider new departures with respect. Bound by no irksome conventionalities, she removed sanctioned abuses with the firm and gentle hand which only encountered opposition to change it into hearty co-operation. It was this firm, decided stand on all important questions, this fearless independence throughout, which appealed so powerfully to the kindred spirit of her free country and laid the foundation to her popularity. She was the mirror of the nation, reflecting throughout her conduct its resolute spirit, its tenacity of purpose and its peculiar ease and self-command in perfect freedom. She is the prototype of what woman will be in the free exercise of all her faculties and in her proper station of an honored, active member of the world's shareholders.

That her strong character and intellect does not conflict with her womanliness is evident from the universal praise which has been bestowed upon her as the "eminently womanly woman at the White House." And that she is not an unwelcome type of womanhood is also evident from the warm demonstrations with which she has been received in all parts of the Union.

The Americans are not celebrated as an adulating, homage-paying people; but they are appreciative and know how to give honor where honor is due. The President's wife may not have received the knee-homage of titled courtiers, but the warm hand-shake of a nation of lords is something far more valuable, and the sincere expressions of regard and admiration from lips unused to flatter, infinitely dearer. Her departure from the White House leaves no vacancy in our hearts. Our remembrance of her does not cease with her withdrawal from public life. Her farewell betokened that there was a welcome closer into our midst—honored, beloved, so long as memory endures and a spark of truth and honor is sheltered in the American heart.

THE HORTICULTURAL LEECH.

ANNIE L. JACK.

THEY come to you in varied guise and you are not able to avoid contact with them in daily life. We all know the leech that admires our house-plants, and begs for "one little slip" of the choicest of our treasures without offering anything in return. I have seen such people in my flower garden stoop down over a flower-bed and pick every seed they could find from a rare strain of pansy that had cost me dear; I have known another to break off cuttings, and with the remark, "I haven't any of this or that," coolly ask for a piece of newspaper in which to wrap their booty. It is just such people who borrow the RURAL, and if they return it at all do so in a soiled or torn condition. If you ask them to subscribe—they "can't afford it" but treat themselves to luxuries that some RURAL subscribers do without.

The horticultural leech crosses your orchard and reads the labels on your newly-planted trees; he carries a knife, and of course it is not stealing, but he takes off a few grafts of sorts you may have imported at some expense, and by such means, gets these varieties for nothing.

When you are pruning your grapes he is sure to be along, and "What a fine lot of wood you have," he was just wanting some cuttings. You tell him you have year-old plants for sale cheap, but he does not listen to the voice of the charmer, and goes home laden with spoil; indeed, you may think yourself well off if he does not ask for your horse and cart to carry them.

If you are at all enterprising; given to experiments; successful in raising any unusual crop, or, are known to be able to use your pen on these subjects the leech comes in another form. Here is a copy of a letter received to-day that explains my meaning:—"Dear Sir: I want information regarding a bean that I have been told you raise for pickling; what do you call it? where could I get the seed? what is the price? how much does it take to plant an acre? what is the probable yield in bushels, pods included? when is the time to pull them? do they require rich land? and what is the name and address of the firm that does the pickling?" All this without *even a stamp to pay postage*, and, as we do *not* run any kind of a horticultural paper in which to answer questions, I can safely class it under the heading of this article.

There are many other ways in which the "leech" makes himself known, but these I have mentioned are a few of the most annoying.

A TRAVELING COMPANION.

A VERY convenient article for a lady is a needle-book, pincushion, thimble, thread and scissors-case combined.

Take a strip of either black French kid, or enameled cloth eight inches long, and four and a half inches wide, and cut it with one end square, and the other end rounded like a diary cover; cut a lining to it of some bright colored fabric, either silk or cashmere and baste it smoothly close to the edge; cut a strip of old knitting, either some underwear, or hose just twelve inches long, and four and a-half wide, roll it tight and sew the edge down so it cannot get loose, then cut a place in the side of the roll just the size of your thimble; make a bag of the same material as the lining and fit into the thimble-case, cover the ends of the roll with the same cloth, working around the ends and those of the thimble-case a firm buttonhole-stitch. On the outside make some little bags hemmed nicely at the top, and baste them on to the lining close at the edge; take a bit of pasteboard and cut out a scissors-case just large enough to hold your scissors, cover it with cloth like the lining and blind-stitch it on to the roll. Make a case large enough for your penknife and put on the other side of the thimble-case. Cut out some leaves of fine cashmere or flannel and buttonhole-stitch the edge for needles; some buttonhole-stitched loops will hold your stiletto and tweezers. Bind the cover with ribbon or silk and sew it on the roll, right where the seam of the cover to the cushion comes; roll it up and have a bit of elastic or cord fastened to the center of the round end, to pass over the end to hold it firmly in place. It is a neat, convenient, and useful article, either for one's own use, or for a present to a friend.

Everything is compact and safe; pins, needles, knife, scissors, thimble, thread and all; and the whole outlay, even if you get French kid, is not over thirty cents, aside from your own work. You can put as many fancy stitches in the work as you please and have time for. GRANDMOTHER.

ELOQUENCE.

THE account of Booth's recital of the Lord's Prayer in your issue of the 19th inst., reminds me of a recital of the same matter by Miss C. P. Brooks, daughter of the late Gen. M. Brooks, of Livingston County, N. Y. Miss Brooks lost her hearing at the age of four years, consequently oral speech was early forgotten. She was educated at the Hartford Asylum under the superintendence of the Rev. T. H. Gallaudet, and after spending a few years at home she returned to Hartford and became a teacher in that institution. She was well educated in the common branches of English, was possessed of a splendid physique, rather over the average size, features faultless when at rest, but so extremely mobile as to nearly express her most secret thoughts.

Visiting a few friends she was asked to repeat the Lord's Prayer in the language of the Hartford Institution. She did not kneel like Mr. Booth, for it would have been impossible for her to have done so perfect justice to the occasion in that attitude. She stood before her audience and every motion of her limbs, every glance of her eye, and every expression of her countenance was the most perfect exhibition of an eloquence of the most exalted kind. At its conclusion, all sat speechless with astonishment, as though it were sacrilege to break the spell with the natural voice. S. B. PECK.

EVERY-DAY NOTES.—NO. 1.

"I KNOW not why it is," said a man who had been brought up under the old-fashioned rule for governing children, "but the times that I remember my parents with the warmest affection are the times when I ought to have been punished, and they knew it, but for some unexplained reason let me off. It may be that the reserve that our parents maintained towards us made us appreciate it when we saw a little human weakness manifest itself in them.

I never felt so much like exerting myself to be good as I did when I was with Aunt Mary, and she always thought everything I did was just right. No matter what unthinking mischief I had done, she always had some gentle excuse for me. The memory of her unceasing kindness warms me now, when I remember her, as nothing else does."

Children are so unlike, that where gentleness will answer with some dispositions, firmness and even severity are needed with others. Parents often fail to win their children's hearts—although seeking with the best intentions—beause they fail to read their natures correctly. B. C. D.

CORRESPONDENT'S CORNER.

MISS RAY CLARK:—Will you please translate the following French words into English; that is tell me what they mean?

"Soyez fidele et constante, toujours aimable, et prudente." "VOTRE AMI DEVOUE."

By answering as soon as possible through the RURAL you will oblige, MIZPAH.

Translation of above is as follows:

Be faithful and constant; always loving and prudent. Your devoted Friend, R. C.

Use Hop Bitters once and you will use no other medicine. Test it.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

JESSIE SEABRIGHT'S SCRAP JOURNAL.

MAY MAPLE.

FEB. 19, 18—: For several weeks John has been complaining of great pain in his elbow. We thought at first it might be a sprain; but when all remedies for sprains failed, we concluded that the disease must be inflammatory rheumatism. Several dollars were paid to the village doctor for liniments, but with no better success; the arm remained badly swollen and pained him constantly. As a last resort I suggested a poultice of grated carrots, knowing that it had been a source of great relief when suffering untold agonies from a felon. The poultice was applied, and that night he had a a good night's rest for the first time in a month. At the end of a week the poultice was dismissed and the arm pronounced well.

For a felon we now use a part of a lemon. If applied in season it will "kill it" in six hours, and thus save a great deal of suffering.

Several months ago I dined with Mrs. L——, who resides at the village, and for dessert she had oat-meal mush. It was an entirely new dish to me, but I liked it exceedingly well, and on my return I stopped at the grocery and purchased a small package for trial. The result is, oat-meal mush, with sugar and cream, has quite taken the place of rice and steam puddings for dessert at our dinner-table. And now the great wonder is that it is used so little by farmers. In all my various wanderings east or north I have never seen a dish of oat-meal upon a farmer's table, and yet I see no reason why it should not belong to the farmer's bill-of-fare just as much as corn-meal.

Occasionally a neighbor comes in to borrow a loaf of "salt-rising" bread, saying she has "lost her luck" in making good light bread, and wonders why it is that some people never

have poor bread while it is a common diet with others. If one has reasonably good flour and a good oven, it is quite unnecessary to have poor bread, provided no biscuit-dough or pie-crust has been put into the flour barrel for safe keeping from one baking to another; for, as "a little leaven leaveneth the whole lump," so will a little piece of dough sour a large quantity of flour, and this is the reason why many a housewife "loses her luck" in bread-making. To make the rising, I put a half-teaspoonful each of soda and salt into an earthen bowl and then fill the dish half full of boiling water; when this has cooled till the finger can be borne in it without scalding, stir in flour to make a thick batter. This is kept warm by putting it into a kettle of warm—not hot—water. The dish, which lacked nearly or quite an inch of being full at first, should be filled to the brim in from six to eight hours with light, foamy "emptyings," or "rising." To make three good loaves, I use two quarts of warm milk or warm water, for the wetting. I make a hole in the flour, which in Winter I often warm, and put in the wetting first and then the rising, stirring in enough of the flour to make a stiff batter; cover well with flour; set in a warm place to rise for an hour; then mix into loaves and let them rise three-fourths of an hour. Bake in a moderately hot oven from 45 to 60 minutes. Of course, the housekeeper must use her own judgment as regards baking. Some ovens bake much more quickly than others; sometimes the wood is slow to burn, and then more time is required. Old cooks scarcely need directions, but many a young matron needs the plainest demonstrations, and some time in the far-off future Alicia may find this Scrap Journal of as much importance to her happiness and comfort as a mine of gold.

POUND CAKE.

CHIEF COOK.

POUND cake is so called because it is made of a pound of butter, a pound of sugar, a pound of eggs and a pound of flour. There should be absolutely nothing else in it, all flavor is a damage, whether in the cake or the icing. Let the butter be just soft enough to beat easily, but beware of the slightest approach to oiliness. Use pulverized sugar only. Break the eggs into a basin, ready for instant use, and sift the flour. When all this is done, begin by putting the butter and sugar into a basin, and with a large, heavy tinned, iron spoon beat the two till perfectly homogeneous. At once add all the eggs, and if you are a woman beat till you are tired; then call your stoutest help and let her tire herself out, and then tire yourself over again thoroughly. When this is done add the flour and mix it in as quickly and as lightly as possible. You now have a perfect pound cake batter. Butter the sides of a pan, cut a sheet of letter paper to fit in the bottom; pour in the batter and bake at once. Try with a clean splinter, and when it comes out perfectly clean from doughiness it is done. Lay a plate over the cake; turn both together upside down; lift off the pan, let cool, and you will have a cake perfectly light in every part.

To Ice a Pound Cake.

Beat well together till pretty dry, the whites of five eggs; then add white, pulverized sugar a little at a time, till you have put in one pound, beating all the time. Coat the cake all over the top and sides with this for the first coat, using a broad case-knife. Set in a cool oven till dry, then apply a second coat thinned slightly with a little rose-water; when this is dried in the oven, it is ready for ornamentation. Make a cone of stiff writing paper about five inches long and one and a-half inch broad at the open end. Fill it with icing, and fold down the open end, closing it up entirely. Now with a pair of scissors cut off the point of the cone, till you can squeeze out the icing through the hole in the point by pressure of the thumb on the closed end. Hold the cone point down between the fore and middle finger with the thumb on the closed end. Now use the point of the cone as you would a pencil in drawing; point it to the part of the cake you wish to ornament, but not quite touching it; press the icing out with the thumb, and draw it over the cake at the dictate of your fancy. If you cut the point of the cone square across, you will produce a round thread of icing; if cut like a star, a star like thread will result, and by various ways of cutting off the point you can produce an endless variety of pattern and of all required sizes. When the cone is half emptied fill it up again. If you wish to build the icing in a fence around the edge, or as a castle in the middle, don't build faster than it will set, or your work will fall, but flat work can be rushed through at once. Notice the following essentials for a perfect pound cake:—sweet butter, fresh eggs, pulverized sugar, and the best flour finely sifted, long-continued and thorough beating of the three first, and as little as possible of the last; thorough baking and neat chaste icing; no color in the icing; no ornaments that cannot be eaten, and, above all, no bungling in cutting it up on the table (just prior to serving, not before.) The best cake in the world will not taste well in chunks. To cut a cake well use a knife made for that especial purpose. It has a long extremely thin blade, must be very sharp and used with a steady downward pressure; no drawing out, or the icing will skin off. I have said nothing about how to bake this cake; let no one undertake a pound cake till she can bake other sorts well; it is an art. The oven must be hot enough to set the batter, before it falls; and after that, don't let it be less than a deep brown on the top, when done. Keep a pound cake three days before it is cut. A fresh pound cake is poor stuff.

DISH-WASHING AGAIN.

"WHAT work will the little hands do first for mamma?" I asked, as Bright-eyes tired of her play crept into my lap. "Wash dishes; girls always do that first," said sage seven-year-old from his perch in baby's high chair. The little fellow has gone through his few Summers with his eyes open. First, last and all the time it seems to be the little girl's place to wash the dishes. No wonder she comes to hate it, as nine times out of ten, she will tell you she does, when she is a grown women. She knows, too, that her mother hated it before her, and for the same reason She was proud enough to be allowed to clear away the tea things the *first* time. I doubt if, up to her tenth year, there has ever come to any girl a prouder moment than that when she first heard her mother say to an admiring visitor. "She washes the dishes for me." The change in her feelings comes with the constant—I had almost said everlasting—washing of those same dishes. Morning, noon and night! Night, morning and noon! Noon, night and morning! for, once let the deluded daughter of the house make it manifest that she *can* do the dishes and do them well, and that becomes her task thenceforth. Her mother has been looking forward to this time ever since she was born. "If I only had some one to wash dishes, I could get along with the rest," has been the burden of her thoughts these many years. So the little daughter is chained fast to the treadmill and the mother's hands are free to do something that will *tell*—washing dishes never does. All the beauties of Summer flowers, waving grass and singing birds, may invite the child forth into the sunshine, but the sink standing in the corner with its load of dirty dishes holds her fast, so, mayhap she "slights" the plates and cries over the pots and kettles. Those dreadful pots and kettles! How little she thought in the days when she triumphantly mounted her short self on a stool, to thrust her arms in the dish-pan, that there was but a step between the china and glass of the tea-table and the pots and kettles of the kitchen. Now, I do not mean to say that little girls should not be allowed to wash dishes. They should not only be taught but encouraged to do it, as something necessary to be done. But I do protest against the practice of putting all, or even the bulk, of the family dish-washing on a young girl, thus making drudgery of what might be a not unpleasant task.

ADELINE E. STORY.

BED-QUILTS.

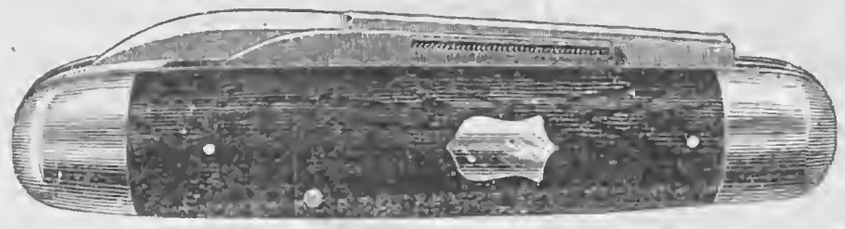
As the days begin to lengthen and the children are at home during the Spring vacation, it is a good time to look after the well-being of the bedding for another year's demand. The odds and ends of chintz and prints can be pieced up by the little girls in chains and blocks, and two useful ends be accomplished—the scraps be worked into use, and the children taught how to sew. A nice way to make a bed-quilt or comfortable is after this wise: make for the center a star of eight diamond pieces, cut out to be two inches long, with squares and half squares for the corners and sides of the star, so that the block when finished will be just square; then cut a strip of print or of bordering and sew around the squares. Next have a row of squares and half-squares pieced into a strip and sew around; then another strip of print, the block-work strip can be made wider, each row to alternate, a strip of patchwork and one of plain, till the quilt is as large as desired. One advantage in piecing in this way is that the quilt can be turned around, there being no top or bottom to it, and the wear will be equalized all around. I never should try new goods to piece up, but really it is economical to work up remnants of garments and turn them to use. I have seen very pretty quilts made by piecing up blocks all stars and setting them together with a sash four inches wide, or alternate blocks of plain. There is no way that a child will learn the use of the needle so easily as in patchwork; there is a fascination in the work that little girls like; besides it seems to establish industrious habits and that is a great item in education. Any employment that will keep a child busy is better than idleness for "Satan always finds mischief for idle hands to do."

GRANDMOTHER.

No Costiveness, Diarrhœa or any bowel complaints where Hop Bitters are used.

Implements and Machinery.

AN OLD FASHIONED HAND FORGED RAZOR STEEL KNIFE.



MAHER & GROSH, 30 Monroe St., Toledo, Ohio, to introduce their brand of cutlery (every blade warranted and replaced **Free** if soft or flawy), will send postpaid, knife like cut, strong blades and ebony handle for 75c.; or with 3 blades, $1. We have 1 blade knife, 25c.; extra heavy 1 blade, 50c.; medium 2 blade, 50c.; extra heavy 2 blade made for hard usage, 75 cts.; **Our Best** 2 blade, every blade tested, $1. Boy's 2 blade, 25c. Ladies' 1 blade, 25c.; 2 blade, 50c.; Gents fine 3 blade $1. **Pruners,** oil temper and tested, $1. Budding knife, 65c.; Hunting knife, $1. Cattle knife, $1.; Sample 6-inch, hand forged, Butcher knife, post paid, 50c. Illustrated list free. Liberal discount to dealers. Ask our Postmaster about us.

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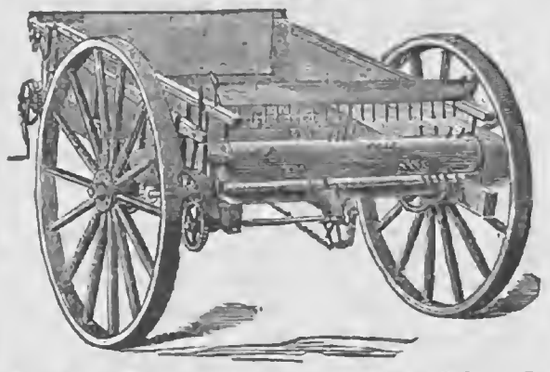
Manure Spreader,



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A new Farm Implement equaling the Mowing Machine. For particulars and illustrated circulars address **KEMP & BURPEE M'F'G CO.,** SYRACUSE, N. Y.

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SULKY HAY RAKE.

This rake is very simple in its plan, and durable in all its parts. It has no ratchets, springs, or friction devices for dumping, which are liable to break or get out of order; and for ease of handling, and for doing good work, is unequaled by any hand dump Sulky Rake in the market. Send for circulars. Address **GREGG & CO.,** Sole Manufacturers, **Trumansburg, N. Y.**
Also Manufacturers of Lawn Mowers, Plows, &c.

White's Patent
Lightning Churn Dash

Will churn cream in from 30 seconds to 3 minutes and new milk in from 3 to 5 minutes, and produces 9 per cent. more nice grained butter than any other dash ever invented. Does not cut the cream, but beats it like the old-fashioned dash. It is made in several sizes, and fits all the old-fashioned round tub or crock churns. Can also be used in an ordinary creamery pail. It is the best and cheapest in the market. County rights for sale.
M. J. NEWHOUSE,
Sole Manufacturer and Agent for New York State. ONEIDA, N. Y.

Miscellaneous.

THE NEW SHEEP DIP.
Little's Chemical Fluid.

Non-Poisonous. Non-Corrosive.

Specific cure for Scab, Mange and any skin disease. Ticks and Lice on all animals, Fleas on Dogs, Worms in the Throat, and internally, as well as sore eyes in Sheep and lambs.

It is before all other dips in the simplicity of its preparation. It mixes at once with **cold** water, and a single trial will prove that on coming into contact with the water the whole is changed into a milk-white Dip, which is **distinctly not the case with any other material.** Dispenses entirely with fires and boilers, which are necessary with Tobacco and other Dips. The sheep may be dipped with perfect safety in the coldest weather.

Send 3-cent stamp for Testimonials and prices to **T. W. LAWFORD,** Gen'l and Wholesale Ag't, **No. 296 E. Chase St., Baltimore, Md.**

Wanted.

A thoroughly practical man, with large experience in putting up canned goods, such as Tomatoes, Corn, etc. To one who can give good recommendations and testimonials, a good salary will be paid, or, by putting in some capital, an interest may be obtained in the business. Parties applying will please to address **BOX 47,** Brantford Post Office, Ontario.

200 KENTUCKY MULES.

All grades and sizes, constantly on hand, for sale low. E. B. BISHOP'S SONS, 630 Grand St., Jersey City, N. J.

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From all the varieties of Poultry—Brahmas, Cochins Hamburgs, Polish, Leghorns, Plymouth Rocks, Langshans; Rouen, Cayuga and Pekin Ducks. Our Plymouth Rocks and Pekins have never been beaten. Eggs, carefully packed, from our prize birds, $1.50 per 13; two or more settings at $1 per 13.
SMITH & BRO., STONY BROOK, N. Y.

Trees, Seeds, Plants, &c.

A GREENHOUSE AT YOUR DOOR
BEAUTIFUL FLOWERS

We will send postpaid, guaranteeing safe arrival in good condition, our *choice of sorts:*
60 $1 SETS: For example: 12 Roses, $1; 20 Verbenas, $1; 15 Basket or Bedding Plants, $1; 10 Geraniums, $1; 10 Tuberoses, $1; 6 Hardy Flowering Shrubs, $1; and *Hundreds* of others. **NEW AND RARE** and *many* **CHEAP,** For your choice of varieties, see our 72-page **Catalogue,** with colored plate, free to all. We offer an *immense stock* of **SMALL FRUITS** Grape-Vines, Fruit and Ornamental Trees, Evergreens, etc.: 8 Currants, $1; 25 Raspberries, $1; 75 Strawberries, $1; 8 Grapes, $1; 8 Apple, $1; 4 Pear, $1; 8 Peach, $1; 40 Sweet Chestnut, $1; 100 Hardy Catalpa, $1; etc. Catalogue (with 11 col'd strawberries) free.
27th Year. 18 Greenhouses. 400 Acres.
STORRS, HARRISON & CO., Painesville, O.

SPLENDID FLOWERS

Over 1500 distinct varieties. All **strong** Plants, each labeled, delivered safely by mail. **Largest assortment. Low prices.** In business **27 years.** *Guarantee satisfaction.* Stock comprises *all desirable varieties.* Only mature plants sent. Our new **Illustrated Hand-Book,** sent free, contains name and description of each plant, with instructions for successful cultivation. *Don't purchase plants elsewhere before sending for our new* **HAND-BOOK** All lovers of *flowers* should have our Every buyer of *cheap plants* should have it. Every one wanting *new* and *choice plants* should send for our *Hand-Book.*
HOOPES, BROTHER & THOMAS,
CHERRY HILL NURSERIES, West Chester, Pa.

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ILLUSTRATED DESCRIPTIVE AND PRICED
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Will be mailed free to all applicants, and to customers without ordering it. It contains five colored plates, 600 engravings, about 200 pages, and full descriptions, prices and directions for planting 1500 varieties of Vegetable and Flower Seeds, Plants, Roses, etc. Invaluable to all. Send for it. Address,
D. M. FERRY & CO., Detroit, Mich.

EARLY AMBER
SUGAR-CANE SEED.

KENNEY & MILLER,
Growers and dealers in the above variety of Seed, who, being the original introducers and improvers of the "Minnesota Early Amber Cane," can sell you the **pure** and **reliable** Seed, of the Southern and Northern grown. Our facilities are unparalleled for growing and maintaining its purity.
SEND FOR OUR CIRCULAR. Address
KENNEY & MILLER, Dundas, Minn.

SEEDS! PURE. Fresh and the Best.
They are **home-grown** they have stood the test of years. Try them. Handsomely Illustrated **Garden Manual,** mailed **free. BE SURE** to send for this before ordering. **Market Gardeners** write for *Special Price List.*
J. B. ROOT & CO.,
Seed Growers, Rockford, Ill.

OATS RUSSIAN WHITE.
Best in cultivation. 100 bushels an acre. Rust-proof and hardy. 1 lb., mail, postpaid, 50c.; 3 lb., mail, postpaid, $1.00; ½ bush. by freight or express, $1.50; 1 bush. by freight or express, $2.50. New bags, 25c. each, extra. Address, **D. M. FERRY & CO., Detroit, Mich.**

RAISIN GRAPE VINES

By mail, BEST, 35c. each; 3 for $1. Cuttings, warranted to grow, 10c. each. W. A. SANDERS
Sanders, Fresno Co., California.

30 Acres **BIG BERRIES** Currants, Grapes, Trees, Asparagus, etc.; 100 *best sorts.* Plants by mail or express. See our prices before buying. Catalogue free. HALE Bros, S. Glastonbury, Ct.

SMALL FRUITS!!

PLANTS for the million, at prices to suit the million. A superbly illustrated book, **"SUCCESS WITH SMALL FRUITS,"** with a very liberal offer. ☞ Catalogue sent free.
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Established 1863.
DUTCHESS NURSERIES.
Small Fruit Plants a Specialty.
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None but Tested Seeds sent out.
Combined catalogues free upon application.
W. L. FERRIS, JR., Poughkeepsie, N. Y.
Office of Nursery and Seed Store, 385 and 387 Main St.

News of the Week.

All subscriptions received after this date, will be placed on our lists to receive the Rural New-Yorker one year, counting from the date when the subscription is received. We have no back numbers.

HOME NEWS.

MONDAY, March 21, 1881.

THE rumor that Gen. Grant would resign the Presidency of the Word's Fair commission at its last meeting, called a large attendance. He did not resign then, but probably will before leaving for Mexico, to-day. A resolution was adopted that the Inwood site be retained as the place for the exhibition. It was also resolved that the members of the commission and Executive and Finance Committees agree to raise $1,000,000 by the 15th of April on condition that the transportation companies give $1,000.000, and the citizens of New York, not represented by these companies and not now subscribers, give $1,000,000. During the afternoon $27,000 were received, and the total amount now subscribed is $1,000,000.

Gen. Upton, U. S army, committed suicide on the 15th inst. by shooting himself through the head with a pistol. He was a graduate of West Point, and distinguished himself during the war for his devotion to duty. He was also the author of a standard military work entitled "Infantry Tactics."

All the ice in the Hudson is broken up from Hudson south to New York, and boatmen are hurrying in every direction to get their craft ready. A boat can go through to Albany without much difficulty.

The toral debt of our country has been reduced to $2,113,164,589.46, and money in the Treasury amounts to $233,258,176.69. Decrease of the debt last month $11,843,155.51: since June 30th, $62,215,-882.57.

Mackey, the California bonanza king, is arranging to bring his family from Paris, and will live permanently in New York. He has purchased the Stevens mansion on Fifth Avenue, the price being about $750,000.

On the 15th inst. the Maine Senate balloted for United States Senator, with the following result: William P. Frye, of Lewiston, had 23, Richard A. Frye, of Bethel, had 5. At the same hour in the House the result of the vote was as follows: William P. Frye, of Lewiston, 82, Richard A. Frye, of Bethel, 59.

The public debt of the United States is $68 per head; of Spain, $154; of France, $136; of England, $117; of Holland, $114; of Canada, $28; of Mexico, $39; of Switzerland, $2. Let's move to Switzerland.

The recent census shows that the native population of the United States is to the foreign as six and a-half to one, and that the foreign-born and colored people are about equal in number, the latter numbering 6,577,151.

In Chicago, at a meeting of citizens to take steps commemorative of the tenth anniversary of the great fire, it was proposed to erect a building for the public library to cost $500,000. This library has grown from a nucleus of 7,000 volumes, which Tom Hughes secured as a gift from English authors and publishers to the city immediately after the fire.

Moody and Sankey have entered upon the seventeenth and last week of their work in San Francisco. Large crowds have attended all the meetings and the accession of new members to the churches has been notable.

At the annual Commencement exercises of the Women's Medical College of Philadelphia, degrees were conferred on 19 women, six of whom were from Pennsylvania, three from New York and the remainder from various States.

One of the most remarkable freaks of lightning on record occurred near Florence, S. C., on the 16th inst. The victim of this phenomenon, Joe Biggs, a farmer, about 60 years old, was returning from his work in a field a short distance from his house, when he was overtaken by the storm. A terrific stroke of lightning came, which killed him instantly, and, tearing the earth up all around him, dug his grave and completely buried the old man in it. Biggs was only discovered by some portion of his old overcoat sticking out of the earth and revealing the place of his interment.

The fund, originally proposed for the oldest living ex-President, by the New York Times, has been converted into a fund for Gen. Grant alone, in view of the great services he has rendered the nation. The $250,000 for the fund, have been subscribed, and $216,000 have been paid in to the treasurer, Geo. Jones, publisher of the Times.

The newest monopoly is a syndicate for the manufacture of matches, with a capital of $2,500,-000, and head-quarters at New Haven, Conn. Ten large factories have been consolidated, with the intention of controlling the American market. They pay the government $3,500,000 per annum for stamps.

A strike at the American Printing Company's works of Fall River Mass., is in progress. There is not enough machinery in operation to pay for running, consequently the managers have decided to shut down until the strikers are ready to return to work. It is stated on good authority that the profits up to the present time will not guarantee an advance of wages, and that, if it were possible, concessions would be made to the operatives.

A tornado passed over a large part of Southwest Missouri, on the 15th instant, accompanied by rain and hail. At Galena, just across the Missouri line, it demolished about 15 buildings, mortally wounded two persons, and severely injured six others. The large tabernacle was completely destroyed. Several buildings were blown down at Joplin, but at Carthage the damage was slight.

Mr. J. Stanley Brown has been appointed private secretary to President Garfield. Mr. Brown was formerly stenographer to Major Powell of the Smithsonian Institution, and went to Gen. Garfield in the same capacity while the latter was still in the House of Representatives. Mr. Brown was at Mentor during the campaign and has been acting as President Garfield's secretary since the inauguration. He is a young man about 24 years of age.

Harry Genet one of the convicted Tweed Ring, has been sentenced, in New York, to the penitentiary for eight months, and to pay a fine of $9,604, to stand committed until the fine is paid.

[Jackson Daily Patriot.]

HAPPY FRIENDS.

Rev. F. M. Winburne, Pastor M. E. Church, Mexia, Texas, writes as follows: Several months since I received a supply of St. Jacobs Oil. Retaining two bottles, I distributed the rest among friends. It is a most excellent remedy for pains and aches of various kinds, especially neuralgia and rheumatic affections.

FOREIGN NEWS.

The assassination of the Czar is still the chief topic in Europe. Three men and a woman implicated in the crime, including Roussakoff who threw one of the bombs, have been subjected to judicial investigation, Roussakoff, it is said, under torture. Numerous other arrests have been made. It seems as if it would have been impossible for the Czar to escape that day. Several others were equipped and ready to throw other bombs had he escaped that which proved fatal. Another road by which he might have returned to the palace had been undermined and the mine was charged with dynamite. Some say this was intended to destroy the present Emperor near whose palace it was constructed; others say it was to provide death for the late Emperor if he had gone that way. The new Czar seems disposed to carry out and add to the liberal policy his predecessor is reported to have been on the point of inaugurating. A sort of parliament, it is said, will soon be established; the hardships of exile in Siberia will be mitigated, and many exiles restored to their homes. All foreign Courts, and especially Germany, have been assured of the friendship of the present Czar, who declares that his policy will be to institute internal improvements, to aid in maintaining peace among neighboring nations and to go to war only to defend the soil or honor of the nation. On receipt of the news of the death of her husband the Princess Dolgorouki, whom the late Czar married, against the wishes of his family, soon after the death of his wife, a short time back, and by whom he had previously had quite a large family, of course fainted, and then on recovery at once started into what is supposed to be a life-long exile. She has a handsome fortune "precautionally" lodged in the Bank of England by her husband shortly after their marriage—anywhere between $5,000,000 and $20,000,000.....This morning's cablegram announces that it is stated at St. Petersburg that the payments due from peasants for lands allotted them on the abolition of serfdom are about to be reduced in 23 governments by 40 to 70 per cent. the total reduction aggregating 9,000,000 rubles yearly, a ruble being worth about 80 cents.

The feeling is very strong in Europe that arms alone can decide the dispute between Greece and Turkey. The Powers have been trying to mediate, but as each has interests different from those of the others, they have not been acting honestly and therefore the Turk has been prevaricating and the Greek blustering. War is expected to begin soon; when and where it will end even Bismarck would be puzzled to say. Last Thursday France issued a new loan of 1,300,000,000 francs, a franc being equal to about 19 cents. Up to two o'clock on Friday morning thirty times the amount was subscribed. The interest was only to be three per cent, and such a rush of money to take up the loan speaks well for the credit of France and the thrift of her people, as most of the offerings came from them in small sums.

The British Government, having, after a world of trouble, succeeded in passing the "Coercion Bill," establishing martial law in any part of Ireland it may choose to "proclaim," is now suppressing discontent by imprisoning a handful—about 50—of village blatherskite politicians, while letting the prominent leaders severely alone. There seems to be no danger of an outbreak, as the country is full of troops ready for instant action. Down in South Africa the few scattered Dutch Boers in the Transvaal have inflicted greater loss and—yes—disgrace on the British arms than the Irish have done since the siege of Limerick in 1651. They have three times utterly routed detachments of British troops who advanced rashly against them, confident of whipping them easily because they had found no difficulty in chastising savage Zulus, Kaffirs, Dahomeans and Abyssinians. The Government has concluded a truce with the victorious "rebels," and negotiations for peace are now in progress, the insurgents demanding independence under a British protectorate, and the English asking an honorable submission.

[Clinton, (Iowa) Herald.]

James Butler, Esq., Clerk of the Roxbury Carpet Co., Boston, Mass., employing eight hundred hands, in a late communication concerning the admirable working of an article introduced into the factory, says: The famous Old German Remedy, St. Jacobs Oil, has effected several cures among our men, who have been badly hurt in working in the factory, and they pronounce it a success every time.

AGRICULTURAL NEWS.

THE Board of Control of the New York Experiment Station met at Albany on the 11th inst. The Committee on Location presented their report with about 50 offers of land, etc., for the station made by farmers living in various parts of the State all the way from Niagara Falls to Montauk Point. A letter from Henry W. Sage, President of the trustees of Cornell University was read, offering for the use of the Station land, barn, stock, tools and the services of the Professors in all branches where their assistance might be desirable, with scientific apparatus, all free of charge. A Committee was appointed to visit such sites as might be deemed advisable, before making a final report. This Committee consists of Robt. J. Sevan, Geneva; P. Barry, Rochester; Robt. J. Dodge, New York; Jas. McCann, Elmira, and Dane Batchelor, Utica.

Careful investigation puts the number of cattle grazing in the region drained by the Arkansas and Missouri Rivers at 3,750,000 head, of which from 15 to 20 per cent. by latest accounts are estimated to have perished during this Winter. Herds crossed with Eastern and imported stock are reported to have suffered most heavily.....The owner of the ground on which the Andersonville stockade stood is about to plow it up for a cotton field..... A parasite has appeared in the orange groves of Italy, the West Indies, Florida and California, which ruins vast numbers of trees and threatens to seriously interfere with orange culture. The Italian Government offers 300,000 francs and one of the wealthy citizens 100,000 more for an effectual remedy for the pest.. ....Vennor's latest.—"The Spring will be fairly early, hot and dry, and the Mid-summer cool and wet. The Autumn promises to be open, dry and fine. There is likely to be a great deal of sickness during the year, but the weather—except in a few isolated sections—will be favorable to agricultural pursuits. The Winter of 1882 bids fair to be open and generally mild, with but few, and those short-lived, storm periods".... ....Russia's wheat deficit last year is officially put at 65,000,000 bushels.....A company with a capital of $500,000 has been organized to build mammoth grain elevators at Council Bluffs, Iowa, to meet the demands of the grain trade over the seven railroads centering there.....Severe floods in Hungary are doing much damage to farmers... ....At a special meeting of the Milk Dealers' Association held in this city on Tuesday, 15th inst., it was agreed that the rate per quart to be paid to the producers by the dealers of New York, Brooklyn and Jersey City should not exceed three cents. Considerable trouble is expected as to the price of milk here the coming Summer, as the farmers who supply the market have in many places formed stock companies and determined to sell their milk to "creamery associations" or "butter associations," when prices rule low. ....

The late Lord Seafield planted not less than 60,000,000 trees on his estates in the counties of Elgin, Banff and Inverness, Scotland.....The average gross weight of the 474,159 hogs packed at St. Louis in 1880, was 250 1-10 pounds; average cost per hundred gross, $4.62; average yield of lard per hog, 35⅓ pounds.....In Berlin each district has an inspector of hog products, as a guard against trichinæ, and he is held to strict accountability that no meat infested with this terrible parasite shall be sold. Close to the city is a place in which the infected meat, after being cut into small pieces, is boiled for 12 hours and then subjected to the action of chemicals that reduce it to a powder.....A dispatch from Sioux City, Ia., says the demand for corn for fuel there is increasing, and teams are scouring the surrounding country for a supply. The selling price has advanced to 35c. a bushel for A No. 1, burning corn. No hard or soft coal; considerable green, but no dry wood in hands of dealers..... ....In 1877 a lot of dressed meat was shipped from this city for Liverpool on the Inman steamer, City of Bristol. When 400 miles out she broke her shaft and the Captain decided to complete the voyage under sail. The trip was long, provisions ran short, some of the meat was eaten, the rest become tainted and was thrown overboard. The shippers sued the Company for damages on the ground that the Captain should have made for the nearest port. The first trial resulted in a verdict against the Company; an appeal was in its favor; but a final appeal has just awarded the shippers $32,624 29.....All the New England Senators, except the Vermonters, support Dr. Loring as Le Duc's successor,..... R. L. Lindsay, a St. Louis lawyer, has been arrested for conspiracy to defraud the government out of lands by uttering false deeds under fraudulent titles. Operations were begun before 1860, and it is estimated that from 3,000,000 to 4,000,000 acres in Southeastern Missouri are involved. Lindsay is in prison for lack of $10,000 bail.....Gen. Mahone, of Va., who was elected as a Readjuster and who has just cast in his lot with the Republicans to the intense disgust of the Democrats, has been made Chairman of the Senate Committee on Agriculture,.....

In England the wheat crop is badly in want of dry weather. Some Spring sowing is over on light soils.....A despatch from Urbana, Ohio, says that a couple of farmers there bought "Hulless" Oats from traveling agents, and afterwards found they had signed notes aggregating $1,000 which they have had to pay—but they haven't got a grain of oats yet.....The Congress of Farmers and Agriculturists of Germany at their late meeting at Berlin passed the following resolution:—

"The Congress of the German Agriculturists regards American competition in regard to cereals, breadstuffs, and meats as of great danger to the interests of all those engaged in the raising of grain, cattle, swine, sheep, etc., and the Government of the German Empire is requested to adopt such measures as will avert and remove the detrimental effects of this competition upon the German agricultural interests." The necessity for a strong protective tariff for home-grown farm products was strongly insisted upon.....

Reports from Wisconsin say that the wheat crop there has hitherto not been injured to any extent. .....Late telegraphic reports from Kansas express fears that the peach buds have been injured. .....The Board of trustees of the Illinois Industrial University strongly recommend the Hon. Emory Cobb as head of Agricultural Deparment. .....The average weight of hogs packed last year at Cincinnati, was 268.37 pounds an increase 2.06 pounds over the previous year.....

The exports of wheat and flour from Australia and New Zealand to the United Kingdom in 1880 were equal to 13,040,000 bushels of wheat, including 7,040,000 bushels from South Australia, 3,600,000 bushels from Victoria and 2,400,000 bushels from New Zealand.....The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports and on rail from Western lake and river ports and frozen in on New York canals:

	1881, Mar. 12, bush.	1881, Mar. 5, bush.	1880, Mar. 13, bush.	1879, Mar. 15, bush.
Wheat	23,383,090	24,396,225	27,046,503	20,985,326
Corn	14,757,954	15,062,778	14,979,402	13,242,312
Oats	3,464,658	3,408,454	2,847,509	2,153,016
Barley	2,462,049	2,862,123	3,470,690	3,098,617
Rye	659,691	703,652	520,612	1,195,238
Total	44,724,472	46,392,223	49,164,719	40,774,509

It is now proposed in the French Assembly to raise the duties on imported oxen and bulls from 6 to 30 francs; on cows from 4 to 10 francs; on calves from 50 centimes to 2 francs; on sheep from 1½ to 3 francs, and on goats from 20 to 50 centimes.....

Effectual and Cheap.

Dyspepsia, bilious attacks, headache, and many other ills can only be cured by removing their cause. Kidney-Wort has been proved to be the most effectual remedy, for these and for habitual costiveness which so afflicts millions of American people.—Farm and Fireside.

Women that have been bedridden for years have been entirely cured of female weakness by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 50 cents per box.

Mr. John Cherry 1234 Kater street, Philadelphia, was cured by St. Jacobs Oil of a fearful attack of rheumatism in his hands,—says the Philadelphia Ledger.

All your own fault if you remain sick or out of health, when you can get Hop Bitters.

A FINE HAIR DRESSING.

Cocoaine dresses the hair perfectly, and is also a preparation unequalled for the eradication of dandruff.

THE superiority of **Burnett's Flavoring Extracts** consists in their purity and great strength.

The Markets.

SPECIAL FROM THE CHIEF CENTRES.

Until Saturday, March 19.

Chicago.—BUTTER.—Fine goods are firm, but the tendency in low and medium grades appears to be to an easier condition. Roll butter dull on account of the soft weather. Creamery, 30@34c.; dairy, choice, 25@28c; dairy, fair to good, 21@24c.; ladle-packed, 16@20c.; packing stock, 13@15c.; roll butter, 15@20c.; grease, 8@10c. CHEESE.—Full cream, 13@13½c.; part skim, choice, 10½@11½c.; do. fair to good, 9½@10½c.; do. hard, 7½@8½c.; low grades 4@6c. EGGS—In liberal supply and low at 17@18c. ₰ doz. SEEDS—Dull and inactive for clover, active and higher for timothy, and steady for flaxseed. The receipts of the leading seeds were liberal. Strictly prime clover was salable at $4.85@4.90, with Mammoth at $5.20@5.40. Prime timothy was in active request, and sold at $2.67½@2.70. The few sales of flax-seed were at $1.18 delivered. Hungarian was firm at 65@68c., and millet was in good request and firm, but there was little on the market. Sales were made of 66 bags clover seed at $4.40@4.75 for poor to good, and $5.30 for Mammoth; 3 cars and 1,679 bags timothy at $2 40 for poor, $2.60 @2.70 for good to prime, and $2.72@2.75 for choice; 330 bags of millet seed at 80@85c.; 1 car and 33 bags Hungarian seed at 65@70c. SALT.—Fine, ₰ bbl. $1 05; coarse, $1.25@1.30; dairy, with bags, $2.40@2.85; dairy, without sacks, $1.90; Ashton dairy, ₰ sack, $3.05; ground alum in bags, $1.10; Liverpool fine, brown sacks, $1 50. WOOL.—The market is slow, in sympathy with the trade at the East. Good to choice medium tub, 45@48c.; coarse and dingy tub, 35@44c.; fine and unwashed fleece, 21@30c.; coarse and unwashed fleece, 20@26c.; medium unwashed fleece, 29@33c.; medium washed fleece, 40@43c; fine washed fleece, 39@42c.; coarse washed fleece, 35@37c.

WHEAT steady, with a fair demand; No. 2 Red Winter, $1 07@1 09; CORN in fair demand; No. 2 Mixed, 47c. OATS firm; No. 2 Mixed, 38@38½c. RYE quiet; No. 2 at $1 12@1 13. BARLEY strong; No. 2 Fall, $1 07@1 09. PORK dull at $15 25. Lard dull at $10 60. Bulk-meats dull, weak and lower; Shoulders, $5; Clear Rib, 7¾c. Bacon quiet but steady; Shoulders, $5 75; Clear Rib, $8 70; Clear Sides, $9.

Cincinnati.—Fancy Northwestern creamery sells at 36c., choice dairy at 25c; choice Western Reserve at 22@25c; prime to choice Central Ohio at 18@21c; and common medium do. at 15@17c ₰ lb. CHEESE. —Market steady and firm for prime to choice cured factory at 12@12½c, and prime Northwestern late made at 11@11½c ₰ lb. EGGS—All offered sell readily, and the market closes firm at 13½@ 14c ₰ dozen, with most of the sales to-day at the lower price. CABBAGE.—Market steady at $7@10 ₰ 100, and $2.25@2 50 ₰ bbl. from store. Southern new are dull at $3 ₰ crate. ONIONS—Dull, with liberal offerings of choice yellow Danvers at $4.50 ₰ bbl. and $1 80 ₰ bushel, and some inferior to good can be bought at $3.50@4 per barrel. TURNIPS—Are dull at $1.50@2 per barrel. HAY.—Liberal receipts, but the demand being fair prices are well sustained. Common sells at $14@15.50; prime do. at $16@17 ₰ ton; prairie hay $10@11 per ton in bales on arrival. Wheat and rye straw is steady at $8@8 50 and oat straw firm at $9@9.50. SEED.—Market firm. Prime old clover sells at 8¾; prime to choice new do. at 8¾ @8¼c ₰ lb, and timothy at $2.75@2.80 ₰ bushel from store. Round lots on arrival would not bring these prices. Flaxseed is in demand at $1.12½@ 1.15 ₰ bushel. SORGHUM.—Good to choice sells at 30@35c per gallon in lots. Sales are made at 1@2c more by the single barrel.

WHEAT fairly active. No. 2 Chicago Spring, regular, $1 02¾; fresh, $1 04¾, cash; $1 02¾, April; $1 08, May; $1 08¾, June. CORN in good demand

at 39@40¼c, cash: 39¼c, April; 43¼@43¾c, May and June. OATS firm at 30½@32c, cash; 30½c, April; 34¼@34¾c, May. PORK dull, weak, and lower, at $15 40, cash; $15 40@15 42½, April; $15 55 May: $15 70, June. Lard active but lower at $10 55, cash and April; $10 70, May; $10 82½, June. Bulk-meats easier; Shoulders, $5 05; Short Rib, $7 95: Short Clear, $8 30.

St. Louis.—WHEAT weak; No. 2 Red Fall, at $1 03¼@1 04, cash; $1 04¼@1 05¼, April; $1 06¼@$1 07¼, May; $1 05¼@1 05¾, June; 96¼@96¾c., all the year: No. 3 do., $1 01¼ bid; No. 4 do., 93c. bid. CORN 41¼@41½c., cash; 41¾@42c., April; 42@42½., May; 42½@42¼c., June; 42½c., July. OATS 35¼c., cash; 35@35¼c., May; 34½@35¼c., June. RYE at $1 05 bid. PORK quiet at $15 75, cash; $15 70, May. Lard dull and nominal at 10¼c. Bulk-meats easier, but not quotably lower. Bacon lower; Shoulders, $5 75; Clear Rib, $8 70; Clear Sides, $8 85@8 90. BUTTER—Creamery at 30c for ordinary to 32@34c, for choice; dairy packed, extra selections, 27@28c; prime 20@23c, common to fair 12@16c; ladle packed, 18@22; roll mainly 14@16c for country to 20@22c for Northern. POTATOES—Peerless at 87½c, Rose at 93c, Burbank at 94@95c. Choice Western quotable at 80@90c. ONIONS—Prime ₩ bbl. at $4 60@4 75 to $5—latter for large bbls—and ₩ bush at $1 90@2. Red preferred to yellow. A car bulk yellow resold at 89c del. FLAXSEED steady at $1 12½ on basis of pure. GRASS SEEDS—Timothy at $2 45@2 55 and Redtop at 45@47½c. Clover $5@5 10; German millet 75@85c for inferior and dirty to 95c for prime; common millet at 65@72½c: Hungarian at 55@62½c. HOGS dull; light grades lower; Yorkers, $5 60@5 70; Baltimores and light butchers', $5 75@6 10; choice to fancy heavy, $6 10@6 30; mixed packing, $5 35@$5 75. CATTLE active and firm; exporters, $5 15@$5 65; good to choice heavy, $4 60@5 10; light shipping, $4@4 50; best butchers' steers, $4 25@4 50; fair to good, $3 50@4; cows and heifers, $3 25@$4 25; feeders, $4@4 60; stockers, $3@3 75. SHEEP dull and lower; shipments, none; medium to good, $4@5: choice to fancy, $5 15@5 85.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 19, 1881.

BEANS AND PEAS.—The demand for beans is not sharp and with continued liberal receipts the selling feeling is easier without showing a positive decline in best standard marks of white. Red kidneys remain in their former dull rut. They will be likely to drag at the comparatively cheap rates until stocks are reduced.

Green peas slow but steady at $1.70@1.80 for Wis. bbls., the latter from store; B. E. peas $2.10@2.15 ₩ 2-bush. bag. Marrow, medium, pea and white kidney beans, $ t.40@2.10, for fair to prime; red kidney, choice $1.55@1.65, other, $1.40@1.50, black, $1.40.

BEESWAX.—Demand is moderate, with prices unchanged; quoted at 24½@25c.

BUTTER.—There is a fair demand for fine table grades, a class of goods that has been used up pretty close. Supplies have fallen off, but with the decline cannot decrease to an extent that will prevent an unsold surplus by the time new shows a stock. For very common and some medium lots, this is already a settled fact. Very few State dairies remain that will sell upon their original merit. This is one of the disadvantages of holding for the last prices of the season. There must be some peculiar bearings upon the market to make the venture a safe one.

New creamery butter, 30@35c State half firkins, 27@30c; do, Welsh, 24@29c; old creamery, 17@23c; State dairies, best, 24c; other, 14@21c; firkins, 15@23c; pails and half tubs, prime Fall 25@28c, other, 14@23c; Welsh Fall, 22@23c; other, 14@20c; Western imitation creamery, 22@30c; dairy, 14@20c; factory, 13@20c; very poor, 10@12c., grease, 8@8½c.

Receipts for week 20,803 pkgs.

Exports do. 2,265 do.

CHEESE.—There has not been much activity this week, the shipments only 14,787 boxes. Prices however have been held steady and show no decided change, with the stock diminishing scantily. The choicest lots are indifferently offered, the holders depending upon the home trade to take a good portion of them. Quotations are for

State factory, fancy, at 13¼@13½c.; do. good and prime, 12¼@13c.; do. fair, at 11¼@11¾c.; do. half skimmed, 9@10c.; Wisconsin factory, fine, at 12¾@13c.; do. good to prime, 12@12¼c.; do. fair to good, 11@12c.; Ohio factory, fine, 12¾@13c.; do. good to prime, 11¾@12½c.; do. flat, fair to good, 10½@11½c.; do. poor to fair, 8@10c.

Receipts for week, 12,204 boxes.

Exports for week, 14,587 boxes.

Liverpool cable, 70s.

Steam to Gt. Britain, 25s.@27s.6d.

COTTON—Has been subjected to violent fluctuations, the tendency generally lower with a pressure to sell and a fair trading. The latest prices are for March, 10.65@10.67c.; April, 10.65@10.67c.; May, 10.76@10.77c.; June, 10.85@10.86c.; July, 10.94@1.96c.; August, 10.95@11.00c.; September, 10.53@10.55c.; October, 10.40@10.42c.; November, 10.24@10.27c.; December, 10.24@10.27c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7⅛	7⅜	7⅜
Strict ordinary	7⅜	8⅛	8⅛
Good ordinary	8 13-16	9⅛	9⅛
Strict good do	9 5-16	9⅝	9⅝
Low middling	10	10⅜	10⅜
Strict low middling	10⅝	10 13-16	10 13-16
Middling	10⅞	11	11
Good middling	11 7-16	11 11-16	11 11-16
Strict good middling	11 11-16	11 15-16	11 15-16
Middling Fair	12 5-16	12 9-16	12 9-16
Fair	13 1-16	13 5-16	13 5-16

STAINED.

Good ordinary	6 9-16	Low middling	8 9-16
Strict good ordinary	7 11-16	Middling	9⅜

Receipts for the week, 33,623 bales. Exports do. 12,637 do.

DRIED FRUITS.—Apples have a fair home demand and moderate export movement, with prices generally firm. Peaches are steady in price and moderately active. Small fruits are quiet. Quotations:

Evaporated apples at 8@8¾c. sliced apples at 4¾@5¾c. for good to choice North Carolina; 4@4¼c. for Va. apples, 4@4¼c. for Tenn. do; 4¼@5c. for State do; 4¼@4¾c. for western, Ohio and Mich. Peaches at 23@24c. for evaporated peeled; 13@c. for unpeeled do.; N. C. peeled at 19@22c.; for the better qualities, unpeeled peaches at 6@6¼c. for halves and 6@6¼c. for quarters. Plums at 15@16c. Blackberries at 8c. Cherries at 17@17½c. Raspberries at 24c. bid. Whortleberries 10@11c.

Receipts for the week, all kinds, 320 pkgs.

Exports dried apples, 1,031 pkgs.

EGGS—Receipts for week, 11,226 bbls.; do. last week 12,192 do. Consumption is steady and free arrivals keep prices in buyers' favor. Southern have the weakest position owing to small size and poor packing. Small size is not so much of an objection as nest-mussed condition: this prevents them from being mixed in with other lots for retailing. The market closes fairly strong, as there is some outside addition to local wants.

Near points, 21c.; State and Pa., 20@20½c.; Western, 20@20½c.; Southern, 20c.

FLOUR.—There is a more active trade in progress, chiefly on home trade account, with prices stronger.

Latest prices are: $3.35@4.15 for very inferior to very choice superfine State and Western; $4.25@4.50 for poor to choice extra State and Western, odd lots and lines; $4.50@4.65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4 35@5.25; good to choice do. at $5.35@6.10; (very choice up to $6.25@6.50 and fancy at $6.50@6.75;) red and amber winter wheat, inferior to choice trade and family at $4.30@6; round hoop Ohio, $4.40@4 75; and trade and family brands of do. at $4.85@6.25, the latter for very choice; St. Louis $4.30@5.50 for inferior to good extra; $5.50@6.35 for good, to choice, and up to $6.75@7 for very fancy brands; Minn. clear, inferior to very fancy at $4.35@6.; Minnesota "straight," poor to very choice, at $5.25@6.75, and patent inferior to fancy at $5.75@8.25; city mill extra at $5.60@5.70 for fair to choice for the West Indies; do. for England at $4.30@4.65 for poor to choice spring wheat; do. trade and family extras, $5.65@6.75; do. for South America, $5.65@6.00, the latter for very choice; No. 1 at $3.00@3.65 for very inferior to very fancy.

Receipts for week, flour, bbls. 125,250, corn meal, do. 1,405; wheat, bush. 563,500; corn, do. 565 100; oats do. 218,800; rye, do. 19,950; malt, do. 31,530; barley, do. 32,400 beans, do., 11,500; rice, pkgs. 1,950.

Exports for week, flour, bbls. 107,550 corn meal, do. 3,000; wheat, bush 949,350; corn, do. 858,400; oats, do. 4,682; beans, do. 327; rice do. 266.

CORN MEAL.—Sales at $2.90@3 for Brandywine, and $2.50@3 for yellow Western.

FRESH FRUITS.—The market for apples has assumed the fitful condition that follows a large and badly keeping crop at this advanced date. Reports indicate an abundance yet unforwarded, and the foreign market is having heavy installments. There is little promise of profit for stock now sent abroad from the States. Careless packing has damaged trade abroad, coaped-off lots and the lack of uniform packages have operated badly for owners in very many instances. At the moment Canadian stock is ruling the English trade.

Baldwins and russets pr. $1 50@1 75 greenings $1@1.50; mixed lots $1@1.50; inferior 50c@$1; a few State Spitz exceed $2, but there is an offering at $1.50@2. Cranberries have only a chance sale. Grapes only quotable: N. J. $1@1.75. An offer for a line of barrels would have to be billed from crates. Fla. oranges quiet: West Indian begin to commete with them; half bbl. crates range at $1.50@4 for common to prime Fla., strawberries 50c@$1 ₩ quart; fruit good; Chas. will stop within two weeks; hot-house berries $1.50@2. Peanuts quiet at 4¾@4¾c. for Va hand-picked; good to prime 3@3½; shelled, 2½@3¼. Hickory nuts 75@85; bull nuts 40@50c; Pecans lower 7@8½c.

FURS AND SKINS.—The Producers Price Current of March 19, says:

"Cable advices from the Hudson Bay Co's London sale report an advance in large bear, lynx and wolf of 20 per cent. and in otter of 7½ per cent. as compared with the prices obtained last March. Small bear, cubs, martin, skunk and silver fox sold the same as last March. There was a decline of 5 per cent. in fisher, 10 per cent. in mink and white and cross fox and 12½ per cent in red fox. Mr. Lampson's sale is now in progress. There is but little business doing here at present, as usual during the progress of the foreign sales. Our quotations will be revised next week, when full reports from Mr. Lampson's sale shall have been received."

No. 1 quality	Nor. & East.	W. & S. W.
Fisher	7.00@10.00	6.00@9.00
Black Bear	7.00@12.00	5.00@9.00
Cubs and yearlings	3.00@ 5.00	2.00@4.00
Otter, each	8.00@10.00	6.00@8.00
Beaver, per lb	2.25@ 3.00	1.50@2.25
Mink, dark	1.25@ 1.50	80@ 90
Mink, pale	70@ 90	40@ 60
Red Fox	1.50@ 1.75	1.00@1.50
Grey Fox	90@ 1.00	60@ 80
Raccoon, each	80@ 90	60@ 75
Skunk, black	90@ 1.00	85@ 90
Skunk, half-striped	55@ 60	50@ 55
Skunk, striped	25@ 30	25@ 30
Skunk, white	10@ 15	10@ 15
Opossum (Irish cut)	....	12@ 15
Muskrat, winter	13@ 14	11@ 12
Muskrat, fall	9@ 10	8@ 10

GRAIN.—Wheat has been unsettled but fairly active, the exports for the week reaching 980,000 bush.: latest prices are for

No. 1 white at $1.22¾@1.22¾, do. March at $1.22¾@1,22¾; do. April at $1.20@1 21¾; do. May at $1.19@1.19¾; ungraded white at $1.18¾@1.20¾; mixed winter at $1.22@1.22¾; No. 1 red at $1 21¾@1.30¾; No. 2 red at $1.25¾@1.26¼; do. March at $1.24¾@1.25; do, April at $1.22¾@1.24¾; do. May at $1.21¾@1.23; do. June at $1.21¾@1.22¼; No. 3 red at $1.22, ungraded red at $1.20@$1.30; ungraded spring at $1.10; rejected spring a $1 01.

Rye at $1.02½@1.06.

Corn has been tending higher and ruling active. Latest prices are for

New York No. 2 at 59½@60c do. March at 59¼c; do. April at 57¾c., do May at 55¾, do. June at 55¼@55¾. No. 3 at 57½@57¾; ungraded mixed Western at 57@59¾; New York steamer mixed at 58¾@59¾. Southern white at 59¾@61c. No. 2 white at 60¾@61.

Oats have ruled higher and fairly active; latest sales are f

No. 1 white at 49; New York No. 2 white at 45¾@46¼; N. Y. No. 2 at 44¾@45, do. March at 44¾@44¾, do. April at 44; do. May at 48¾; do June at 43 bid; No. 3 at 43@44½; ungraded white Western at 45@48¾; ungraded mixed Western 44@45¾; white State at 50@53 mixed State, 47; No. 2 Chicago quoted at 44¾ bid.

HAY AND STRAW.—Receipts are very good but demand is fair and prices well sustained. Quotations are for

Hay, prime timothy at $1.15@1.20 ₩ 100 lbs.; medium timothy at $1.10@1.15 do.; shipping grades at 95c.@$1 do.; clover mixed at $1.00@1 05, clover at 95c.@$1 do. Straw—No. 1 rye at $1.20 ₩ 100 lbs.; No. 2 rye at 80@85c, do.; oats and wheat at 75@85c. do.

Exports for week, 1,926 bales.

HONEY.—Entirely nominal.

HOPS.—There continues a strong temper to the market particularly for the higher qualities. Prices are held firmly. Exports for the week 819 bales. Quotations are for

	Cents per lb.
New Yorks, crop 1880, choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	15 @17
Eastern, crop 1880	16 @22
Wisconsin, crop 1880	16 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Bavarians	30 @35
Pacific coast, new	19 @23

Receipts for week 1,371 bales.

Exports do., 634 do.

LEATHER.—Quotations for hemlock sole are, 22@23c. for light: 22½@25c. for middle: 23½@24½c. for heavy, and 20@22c. for good damaged.

MAPLE SUGAR.—Has appeared in small quantities from Ohio and Del. Co. N. Y. Prices not decided. Opening rates 15@16c.

OIL-CAKE.—Western is quoted at $20.50 per ton.

POULTRY AND GAME.—The market for dressed is fully as active as the season warrants. Choice frozen turkeys have brought 16@17c. closing at 16c. Supplies of fresh killed poultry of all kinds are ample and prices are rated as high as they will bear

Choice small fresh killed turkeys 16c. other, 14@15c. Chickens, broilers, 23@25c.; prime large 18@20c; other, 13@16c. Fowls Phila., 14c.; other 11½@13c; chickens and fowls mixed 12@14c.; Capons, large, 22c.; small and slips, 18@20c. Ducks, choice, 20c.; other 15@18c; Geese, 8@11c; Squabs, white, $3@3.50 ₩ doz.; do. dark, $1.75@2.

The demand is not active for live as the Jewish holiday is passed and prices are weak.

Fowls, 12@13c.; turkeys, 12@14c.; roosters, 6@7c.; ducks, 70c@1.12; geese, $1.12@2.12, pigeons, 35@45c.

The first English snipe brought $3.50@4 per doz.; wild pigeons scarce and wanted; quoted $1.75@2; wild ducks have a fair trade when prime; Western not wanted being too low in quality with Norfolk, which we quote:

Canvas-backs, 75@$1; red-heads, 75c, mallard 30@40c., teal and widgeon 20@25c.; common, small 15@20c.

PROVISIONS.—Hog products have been in good demand and closed firm.

Mess pork quoted at $15.50 for old and $16.25 for new. Bacon at 8.50 for long clear and 8.85@8.90 for short clear. Lard—Western steam at 11,10@11.12½ for spot lots; 11.07½@11.10 for March; 11.07½ for April, 11.12½ May and 11.17½ for June. Stearine at 11¾. Tallow at 6¼@6¾ for prime. Beef hams at $23¼@23. Beef—Extra India mess quoted at $21@23 for city; $11@11.50 for extra mess; nominal for plain mess; packet at $12@13.

Receipts for week, beef, bbls. and tcs. 934; pork, 3,106 bbls.; cut-meats, 28,089 pkgs; lard; 11,900 pkgs.

Exports for week, beef, bbls. and tcs., 2,215; pork; 3,025 bbls.; cut-meats, 10,403 459 lbs.; lard, 8,131,575.

SEED.—Clover is moderately active at 8¼@9. Timothy is quiet and wholly nominal.

TOBACCO.—Export demand is moderate only and the increase for seed-leaf fair, with prices generally steady.

VEGETABLES.—The market is fairly strong for choice, but as free deliveries are expected when the river opens, holders here are making a pretty general offering. It is likely, however, that many of the canal-boat stored now at Albany will prove poor in quality.

Bermuda second-crop potatoes, $5@6; Early Rose Eastern d.-h. $2.50, do. State, $2@2.25; do. in bulk, $2@2.12; Prolific, Eastern, $2; Mercer, 1.75@1.87; Burbank, $2@2.25; do. d.-h., $2.12@2.25; Snowflake, $2.25@2.37; Snowflake, bulk, $2@2.25; Peerless, $1.75@1.87; sweet, $2.25@2.50. Green stuff is in good variety but starts slowly. The list is as follows: Fla. green peas $4@5 ₩ crate; do. tomatoes, $2.50@3 ₩ half bush. box; W. Indian tomatoes 40c@$1; Bermuda beets $1.75 ₩ box; Spinach Norfolk $2@3 ₩ bbl.; kale, do. $1.50@1 75; Chas. asparagus $12 ₩ doz.; R and W. turnips, 50@75c. ₩ bbl.; Hubbard squash, $1.12@1.37; marrow do. 50@60c.; cabbages, $4@7 ₩ 100; onions, white, $5@6.50; other, $3@3.75; carrots $1@1.25 ₩ bbl.; celery, 75c.@$1.25 ₩ doz.

WOOL.—The market is depressed and lower. Manufacturers are not inclined to buy materially. Ohio and Penn. fleeces quoted at 40@43½. X and XX Mich. and Wis. fleeces at 40 for X, medium and No. 1. Ohio and Mich fleeces at 45@47.

LIVE STOCK MARKETS

NEW YORK, Saturday, March 19, 1881.

BEEVES.—Receipts for the week 10,388 head; do. last week, 11,618 do. The week has been uninteresting. Supplies have been small, but with pretty even grades the range of prices was short—9@10¾ to dress 56@57 lbs. and to prime steers: a single pair at 11½c. Export trade light.

VEAL CALVES.—All stock is plenty and prices are easy.

Live calves, choice, 8c.; fair to prime, 6@7½; poor, 5@5½c.; Mt. Holly, 5@5½c.; buttermilk, 3@4c. grassers, 2¾@2¾c.; dressed, choice, 10c.; other, 6@8c.; very poor, 4@5½c. "Bob" veal is confiscated as fast as it arrives.

COWS AND CALVES.—Receipts are large and few sales make the extreme; prices range $25@55 per head.

SHEEP AND LAMBS.—Receipts for week, 24 179 head; do. last week, 28,121 do. Market dull; stock generally held above butchers' views. Sheep 5¾@6½c.; yearlings, 6¾@7c. Spring lambs easier at $4@7 ₩ head.

SWINE.—Receipts for the week, 14,921 head; do. last week, 20,475 do. Market weak. Live corn-fed hogs, $5.85@6.30, country dressed pork, light, 8¾@8¾c.; medium, 8c.; heavy, 7¾@7½c.; city dressed, 8c. Pork tenderloins, 10@11c.

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AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

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NEW FRUIT AND ORNAMENTAL TREES

Besides the largest and most complete general stock of Fruit and Ornamental Trees in the United States, we have the pleasure to offer the following **Choice Novelties:** APPLES.—Red Bietigheimer, Stump, Sutton Beauty. PEARS.—Souvenir du Congres, Petite Marguerite, Ansault. PEACHES.—Waterloo, Conkling. GRAPES.—Monroe, Rochester, Lady Washington. STRAWBERRIES.—Sharpless and others. Also, the best new Deciduous Ornamental Trees and Shrubs, Evergreens, etc. We always secure the best novelties at home and abroad, and all who intend to plant should not fail to consult our Catalogues, which contain full descriptions of all the new and old fruit and ornamental trees worth having.

Priced Catalogues sent as follows: No. 1, Fruits with plate, 15 cts.; plain, 10 cts. No. 2, Ornamental Trees, etc., with plate, 25 cts.; plain, 15 cts. No. 4, Wholesale, Free. No. 5, Catalogue of Roses for 1881, Free. No. 7, Catalogue of Strawberries and Small Fruits, Free.

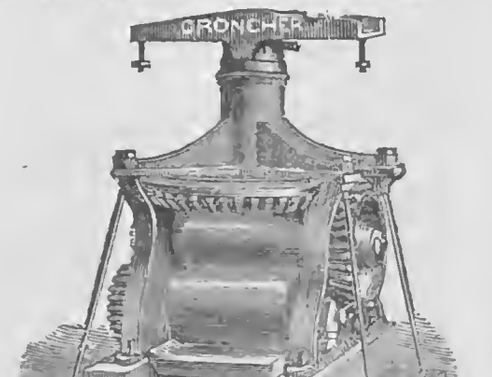
ELLWANGER & BARRY, Rochester, N. Y.

My Annual Catalogue of Vegetable and Flower Seed for 1881, rich in engravings from photographs of the originals, will be sent FREE to all who apply. My old customers need not write for it. I offer one of the largest collections of vegetable seed ever sent out by any seed House in America, a large portion of which were grown on my five seed farms. *Full directions for cultivation on each package.* All seed *warranted to be both fresh and true to name*; so far that should it prove otherwise, *I will refill the orders gratis.* The original introducer of the Hubbard Squash, Phinney's Melon, Marblehead Cabbages, Mexican Corn, and scores of other vegetables. I invite the patronage of *all who are anxious to have their seed directly from the grower, fresh, true, and of the very best strain.*

NEW VEGETABLES A SPECIALTY.

JAMES J. H. GREGORY, Marblehead, Mass

SUGAR CANE MILLS.



THE BEST—THE CHEAPEST.

SEVENTY DIFFERENT SIZES.

Send for Amber Cane Manual.

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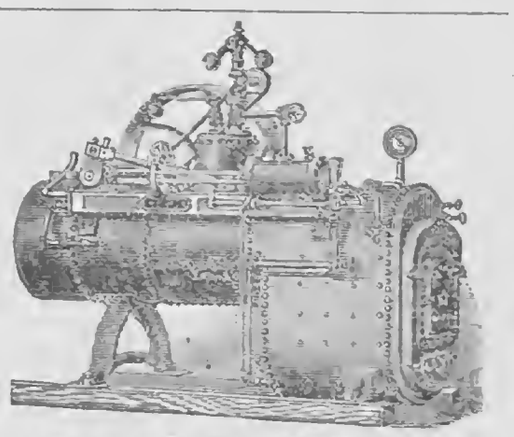
102 YOUR NAME In New Type on 102 Chromos, 10c. All new styles, designed by best artists. *Bouquets, Gold Chromo, Birds, Landscapes, Panels, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

SAVED 8c. per bushel on CORN and 20c. on WHEAT *can positively be saved.* For Illustrated Pamphlet, giving full particulars, address The Thomas Harrow Co., Geneva, N. Y.



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Eaton, Madison Co., N. Y.,

MANUFACTURERS OF

PORTABLE AND AGRICULTURAL

Steam Engines

Of the HIGHEST STANDARD, in every respect of materials, and workmanship. Were pioneers in the manufacture of

Practically Portable Steam Engines,

And with determined policy to build only the BEST MACHINERY from the BEST MATERIALS, and in the BEST MANNER OF CONSTRUCTION, and with continued improvements, have attained the HIGHEST STANDARD in excellence of workmanship, simplicity of design and capacity of power. For a quarter of a century have maintained their manufacture, the

Standard Portable and Agricultural Engines of the world. Descriptive Circulars sent on application. Mention this paper.

Trade **LONDON PURPLE.** Mark.

Valuable insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For prices, Circulars and Opinions, write

HEMMINGWAY'S LONDON PURPLE CO., (Limited) 90 Water St., New York.

Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green by virtue of its greater fineness.

Professor C. E. Bessey says: It promises to be a most excellent remedy. It quickly kills both the Larva and the Winged Insects.

Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground, either dead or in a dying condition, in less than six hours.

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 16.

HENRY STEWART.

Artificial Fertilizers.

THE whole universe comes to the help of the farmer. For him the sun shines, the showers fall; the dews distil; the lightning flashes; plants grow; animals live and all nature works in its silent and mysterious, but beautiful manner. Even the myriads of fish which swarm in the Southern oceans, and the countless flocks of sea birds which inhabit the lonely, rocky islets and barren coasts of those oceans, have been existing and working for ages, for the farmer's benefit.

In the depths of those oceans there have been growing minute plants upon which some of those fish feed. These fish have furnished food for millions of sea birds. These birds have made their roosting places and their nests upon the barren rocks which were avoided by the sailors on account of the treacherous reefs and shoals which surrounded them. Here in solitary safety, the birds have bred and fed and died, for centuries, until their droppings and their dead bodies have accumulated in deep beds covering the rocks. As not in falls in this part of the ocean, these droppings were preserved in the most perfect manner and retained every soluble part that might otherwise have been washed away. These beds of sea-bird dung furnish the most valuable of artificial manures which is known as Peruvian Guano. Guano is named from a Peruvian word, "huano," which means dung or manure, and was in use by the Peruvians when the continent was first discovered by the Spaniards. It is remarkably rich in ammonia and phosphoric acid, good samples containing 10 to 15 per cent of the former and 13 per cent. of the latter, with more than two per cent. of potash. It is most valuable because it is nearly wholly soluble and therefore acts very rapidly; 100 pounds of good guano contain as much ammonia as 3,000 pounds of good manure and as much phosphoric acid as 6,000 pounds; and being thus so very rich, it should be used with caution. From its character it is found useful for all crops, but is especially valuable for grass, root crops, garden vegetables and others which require abundance of ammonia.

Superphosphate of lime is the next valuable fertilizer. This is really artificial in every sense because it is made and never found naturally. It is made from phosphate of lime, a compound of lime and phosporic acid, which exists in bones and in a rock known as apatite or natural "rock phosphate." But phosphate of lime does not contain as much phosphoric acid as the farmer wants for his crops, and he therefore employs the chemist to change the character of it, and give it an extra quantity of the acid and thus make of the simple phosphate a *super* or *extra* phosphate. Lime and phosphoric acid unite naturally in the proportion of three parts of the former to one of the latter. The chemist calls this *tri-calcic* (three-lime) phosphate. In this state it is not soluble, except in bones which are only slowly soluble.

But the farmer wants his fertilizer to act at once. The chemist then mixes sulphuric acid with the natural rock phosphate or with the bones, and this acid takes away from the phosphoric acid two parts of lime and leaves only one part of it. This is the *super* phosphate, of the former, because the phosphoric acid is in excess; and it is the *mono-calcic* (one-lime) phosphate of the chemist. In this state it is completely soluble, and if applied to a crop of wheat, or turnips, or to a grass field, its effects are seen at once. Bones finely ground are sometimes used in place of the superphosphate of lime and are very valuable, but they act slowly, and the farmer sometimes is not inclined to wait for their effect upon the crops.

Gypsum is known as plaster. It is a soft, whitish rock, which contains 32½ parts of lime; 46½ parts of sulphuric acid, and 21 parts of water in 100. For use as a fertilizer it is ground in mills very finely, and is spread upon the crops. It has a remarkable effect upon clover and is mostly used for that crop or for corn. It is found very useful when scattered upon manure heaps or stable floors, as it readily combines with ammonia, and forms a sulphate. The ammonia in the state of carbonate, is combined with carbonic acid. As we have previously seen, lime is very eager for carbonic acid, and as ammonia is just as eager for sulphuric acid, the carbonic acid leaves the ammonia and unites with the lime, forming carbonate of lime; while the sulphuric acid and the ammonia unite, and form sulphate of ammonia; a change of partners, as it were, all round. When a quantity of gypsum is scattered over a strong smelling stable, these new combinations are formed, and the ammonia is fixed and is no longer apparent to the scent. It is thus saved from waste and loss.

Potash salts are brought from the salt mines of Germany. They consist of potash in combination with sulphuric acid, or muriatic, (otherwise called hydro-chloric) acid, and mixed with common salt and magnesia. They have been found very useful and have largely taken the place of the wood ashes which were once abundant, but of late years have become very scarce. Potash salts are chiefly used in mixtures with other fertilizers; or by themselves upon grass lands.

PUZZLER ANSWERS—March 12.

HIDDEN TITLES FOR MALES.—1. Earl. 2. Lord. 3. Sir. 4. Baron. 5. Count. 6. Duke 7. Prince. 8. Viscount. 9. Knight. 10. Marquis. 11. Squire.

TENNYSONIAN ENIGMA.—"He makes no friends who never made a foe."

Balmy sleep, good digestion, rich blood, elastic step and cheerfulness in Hop Bitters.

Trees, Seeds, Plants, &c.

GERANIUMS. One of the Most Select Assortments In the Country.

PRICES LOW. For Circular, giving Description and Price, address **GERANIUMS**

ELLWANGER & BARRY, ROCHESTER, N. Y.

800,000 No. 1 PEACH TREES.

Over eighty varieties. Among which can be found kinds suited to all sections, including all the new and old standard sorts. Also 300,000 Apple Trees, 200,000 of them extra long-keeping varieties, adapted to Southern planting or wherever long-keeping apples are desirable. I also offer a full line of all kinds of Nursery stock, at prices to suit the times. Apples and Peach Trees, Grapevines, Raspberries, Blackberries, Strawberries, Roses, Shrubbery and Hothouse plants sent by mail to all sections. Catalogues showing how and what to plant, with much valuable information, mailed *gratis* to all applicants. RANDOLPH PETERS, Great Northern and Southern Nursery, Wilmington, Del.

TREES | **FRUIT and ORNAMENTAL.**

One of the largest and most complete assortments of any size desired. Also, Flowering Shrubs, Grape Vines, and Small Fruits.
STRAWBERRY PLANTS A SPECIALTY.
Send for Prices and Descriptive Catalogue *free*.
WM. H. MOON, Morrisville, Pa.
60 miles from New York and 30 miles from Philad'a.

SEEDS

Vegetable, Farm and Flower Seeds,
FERTILIZERS & GARDEN REQUISITES,
At Retail and Wholesale, sent to any part of the United States.
Catalogues mailed FREE to any address.
THORBURN & CARSON,
125 Chambers Street, New York.

20 PLANTS FOR 100 — CATALOGUE FREE — F. E. FASSETT & BRO. — ASHTABULA, OHIO.

THE NEW GRAPES.

Lady, Brighton, Jefferson, Lady Washington, Moore's Early, Duchess, Purity, Prentiss, Highland, Noah and El Dorado. Also Concord, Rogers's best Hybrids, and other older varieties of merit. Splendid 1 and 2 years **Delaware** layers, $8 to $12 per 100, $50 to $100 per 1,000. Fine foreign grapes, including **Welcome**, for vineries. **Cuthbert, Gregg,** and **Mammoth Cluster Raspberries. Glendale** and **Sharpless** Strawberries. Magnificent ever-blooming **Roses,** by mail, $1 per dozen; by express, $6 per 100, $50 per 1,000. Three strong 2 years, or four 1 year Lady or Brighton, post-paid, for $1. Circulars free
GEO. W. CAMPBELL.
DELAWARE, OHIO.

FOR 30 CTS. I WILL SEND

A package each of VERBENA, BLOTCHED PETUNIA, DOUBLE PINK and Sugar Trough GOURD SEED. Also my ILLUSTRATED SELF-SUPPORTING
Truss Fence Plan.
Flowers the choicest. Gourds hold from 3 to 10 gallons each. Fence portable, and 30 cents a rod cheaper than post and board. Thirty cents pays for all. Address
WALDO F. BROWN, Box 70, Oxford, O.

SEEDS.

Garden, Flower and Field Seeds,
Reliable Fresh and Pure, at reasonable prices.
(ESTABLISHED 1839.)
A. C. KENDALL,
Successor to STAIR & KENDALL,
Cleveland Seed Store, **Cleveland, Ohio.**

Miscellaneous.

OUR LITTLE ONES.

For April, 15 cents. All Newsdealers have it. $1.50 a year. Liberal terms to Agents. Send three cent stamp for specimen to RUSSELL PUBLISHING CO., Boston, Mass.

LANDS AND HOMES

Short winters, low taxes, *good* society, convenient markets, superior schools, healthful climate. Excellent for Stock, Fruit, and Farming. ☞ The *best Tobacco Region in the West.* **1,000,000** acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from $2.50 to $8 per acre *on seven years' time.* Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*
W. H. CORRIS, Land Commissioner, Temple Building, St. Louis, Mo.
IN SO. WEST MISSOURI

GATES'
GARGET CURE.
For the Cure and Prevention of Garget in Cattle.

Teats Partially destroyed, Restored to their Natural Condition. Kernels in Teats or Udder removed Speedily and Surely. All Stringy Substances or bunches in Udder removed by 1 to 3 bottles. Blood or Sediment in Milk, from 1 dose to 1 bottle.
SOLE PROPRIETOR,
JOHN B. GATES,
Worcester, Mass.
17 Harvard Street.
☞ Price 75 cts. per Bottle, or 3 for $2.

KIDNEY-WORT

The Only Remedy
That Acts at the Same Time on
The Liver, The Bowels and The Kidneys
This combined action gives it wonderful power to cure all diseases.
Why Are We Sick?
Because we allow these great organs to become clogged or torpid, and poisonous humors are therefore forced into the blood that should be expelled naturally.
KIDNEY-WORT WILL CURE
Biliousness, Piles, Constipation, Kidney Complaints and Diseases, Weaknesses and Nervous Disorders.
by causing free action of these organs and restoring their power to throw off disease.
Why Suffer Bilious pains and aches?
Why tormented with Piles, Constipation?
Why frightened over disordered Kidneys?
Why endure nervous or sick headaches?
Why have sleepless nights?
Use KIDNEY WORT *and rejoice in health. It is a dry, vegetable compound and* One package will make six qts of Medicine.
Get it of your Druggist, he will order it for you. Price, $1.00.
WELLS, RICHARDSON & CO., Proprietors,
(Will send post paid.) Burlington, Vt.

Liquid KIDNEY-WORT

In response to the urgent requests of great numbers of people who prefer to purchase a **Kidney-Wort** already prepared, the proprietors of this celebrated remedy now prepare it in liquid form as well as dry. It is very concentrated, is put up in large bottles, and is equally efficient as that put up dry in tin cans. It saves the necessity of preparing, is always ready, and is more easily taken by most people. Price, $1 per bottle.
LIQUID AND DRY SOLD BY DRUGGISTS.
WELLS, RICHARDSON & CO., Prop'rs,
A Burlington, Vt.

WANTED---A MANAGER

For a Model Dairy Farm, worked on strictly business principles. A thoroughly practical, but EDUCATED, Farmer required. This is an excellent opportunity for an accomplished farmer who understands his business in every detail and can instruct a few young men in it if necessary. Apply with references, which must be first class, to **MODEL DAIRY,**
Office of RURAL NEW-YORKER, 34 Park Row, N.Y. City.

New Publications.

MUSIC BOOKS FOR SCHOOLS.

Song Bells. (50 cts.) The latest book for Common Schools. By L. O. EMERSON. Has a great variety of cheerful, genial, musical songs, such as the girls and boys must like, and also a good Elementary Course.

Among our older and standard School Song Books, that are still favorites, and in constant demand, we mention **Whip-poor-Will,** (60 cts.) **Mocking Bird,** (50 cts.) and **Golden Robin,** (50 cts.) all by W. O. PERKINS.

Welcome Chorus. ($1.00) The latest Books for High Schools, Academies and Seminaries. By W. S. TILDEN. Is of the best character, and well fitted to follow those most successful books, the **High School Choir,** ($1.) and the **Hour of Singing,** ($1.) both by EMERSON and TILDEN; and the **Laurel Wreath,** ($1). by W. O. PERKINS. We also mention **Emerson's Quartets and Choruses for Male Voices,** (60 cts.) just out, as a good book for practice in High Schools, Academies and Colleges.

Operettas and Cantatas for School Exhibitions.

Coronation, (60 cts.) Culprit Fay, ($1.) Fairy Bridal, (50 cts.) Flower Queen, (new, 75 cts.) Guardian Angel, (50 cts.) Hour in Fairy Land, (60 cts.) Miracle of Roses, (60 cts.) Little Bo Peep, (60 cts.) Maud Irving, (50 cts.) New Year's Eve, (60 cts.) Three Little Kittens, (60 cts.) Quarrel among Flowers, (35 cts.) Spring Holiday, (60 cts.) and Cinderella, (50 cts.) are all lively and pretty Cantatas.

OLIVER DITSON & CO.; Boston.
C. H. DITSON & CO. 843 Broadway, New York. J. E. DITSON & CO. 1228 Chestnut St., Phila.

SICK FOLKS Folks should send a three cent stamp for a free book of nearly 100 large octavo pages, full of valuable notes by Dr. E. B. Foote, the author of
MEDICAL COMMON SENSE AND PLAIN HOME TALK,
FREE BOOK on Scrofula, Diseases of Men and Women, and all chronic ailments, with the evidences of their curability. Address M. H. Publishing Co., Box 788, New York City.

CLOVER

To every farmer sending us his name, we will send free *The Clover Leaf*, a 4 page, 8-column farmers' paper, full of valuable information on the culture and harvesting of clover for seed. When you write say where you saw this notice. Address BIRDSELL MANUFACTURING CO., South Bend, Ind.

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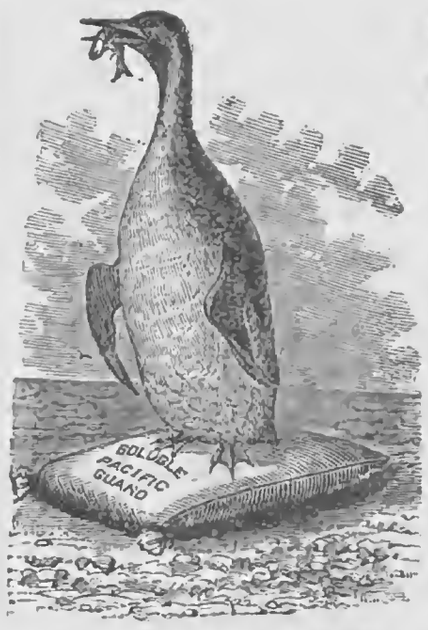
JOSIAH ALLEN'S WIFE
HAS "ROTE" A THE BEST AND FUNNIEST OF ALL. **NEW BOOK.**
'My Wayward Pardner.'
AGENTS WANTED in every Town. Don't miss it, but send for Circular at once, and secure territory. Address AMERICAN PUBLISHING CO., HARTFORD, CONN.
☞ Mention Rural New-Yorker.

Fertilizers.



SECOND TO NONE.

Soluble Pacific Guano.

Sale in 1865 - - - - - 754 Tons.
" 1880 - - - 44,700 "

This Fertilizer, which was at first sold almost entirely in the Southern States, has of late years become so deservedly popular in the North, for the cultivation of all Farm Crops, that the Company have enlarged their works especially to supply the Nothern demand, and we are now in a position to fill orders promptly. Pamphlets containing testimonials and other information furnished by our local agents, or on application to

GLIDDEN & CURTIS,
GENERAL SELLING AGENTS OF PACIFIC GUANO COMPANY
Boston, Mass.

BOWKER'S HILL AND DRILL PHOSPHATE
SEND FOR PAMPHLET.
This is a true bone superphosphate, and may be used *on any crop*, in the hill or drill or broadcast, either *with* or *without* manure, and will produce a much earlier and larger crop. In the Report of the Mass. Inspector of Fertilizers, its valuation is from $2 to $10 per ton higher than other Phosphates which sell at the same price. The past year over 3000 tons were sold against 100 tons three years ago, showing that it is liked by the farmers. If there is no local agent near you, send to us.
Also for sale STOCKBRIDGE MANURES.
BOWKER FERTILIZER CO.
BOSTON & NEW YORK

STOCKBRIDGE MANURES
SEND FOR PAMPHLET.
These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us.
BOWKER FERTILIZER CO.
BOSTON & NEW YORK.

PERSONAL ITEMS.

Bismarck says he will hold office until the day of his death.

Senator Sawyer, of Wisconsin, is said to be worth $7,000,000.

Dr. Cumming, the once well-known London preacher, is now out of his mind.

Mr. Herbert Gladstone, the Premier's son, will be married this Spring to Miss Tollemache, a lady prominent in London society.

W. K. Rogers, who acted as private secretary to ex-President Hayes during the latter's entire term, will shortly open a law office in this city.

Somebody who did not fancy Robert Lincoln's appointment to the cabinet, remarked that it was on the potato principle—the best part underground!

Postmaster-General James started in life as a printer's boy, having served his apprenticeship under Wesley Bailey, the veteran abolition editor of the Utica N. Y. Liberty Press.

Judge James W. McDill, of Iowa, who succeeds Mr. Kirkwood in the United States Senate, is also an Ohio man. He was born at the village of Momal, in that State of statesmen, 47 years ago.

Senator Allison is said to have refused a Cabinet position "because his wife's health would not have permitted her to endure the great social burden that must have fallen to her lot as the wife of the Secretary of the Treasury."

Louis, Bavaria's crazy King, now keeps his palace closed all day and opened between sunset and sunrise. At sunrise the court goes to bed. When the stars begin to twinkle everybody marches down to breakfast and the King calls for shaving water.

"No, I am not worth a million of dollars," said Senator Brown, of Georgia, to a reporter, "nor is any other man in Georgia, if his debts were all paid. Young man," continued the Senator, looking at him benignly over his spectacles, "a million dollars is a good deal of money."

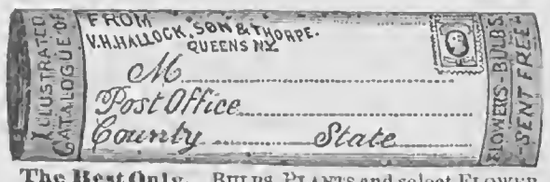
Wendell Phillips said in a public address a few days before the assassination of the Czar: "I look at Russia, 4,000 miles away, and see what incubus is resting on her people. I only hope that somebody will lift it off their shoulders. If nothing will do it but the dagger, then, welcome the dagger."

Remain at Home.

If you are suffering from Consumption or Catarrh, don't let your friends or your physician induce you to leave home and its comforts for Colorado or Florida. Send for the Compound Oxygen Treatment. It will do more for you than any change of climate. In a recent letter from Hon. Wm. D. Kelly, introducing a friend, a resident of our city, whom he had persuaded to give Compound Oxygen a trial, he says: "His physicians advised him to go to a better climate; but his means will not permit this, and I know that the climate of Philadelphia improved by your Compound Oxygen, *will do him more good than a removal to any climate on this continent;* and in saying this *I speak my own large experience* in California, Florida, and in the elevated plains of the country." As Judge Kelly is one of our oldest patients, his opinion of Compound Oxygen is of great value. Our Treatise on Compound Oxygen, containing large reports of cases, with full information, *sent free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

Trees, Seeds, Plants, &c.

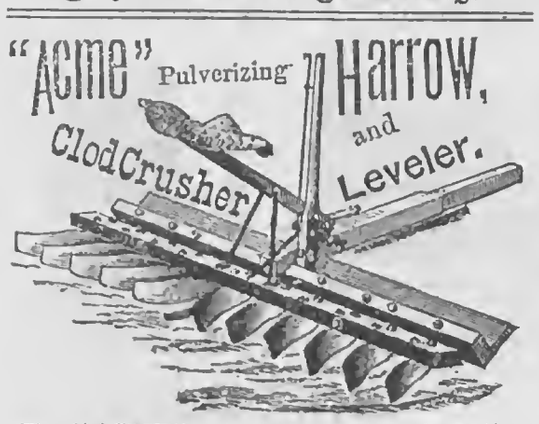
WIND-BREAKS AND HEDGES,
Norway Spruce, 2 to 3 feet, $10 per 100. Price-list of Nursery stock, Small Fruit, etc., free.
Blauvetville, N. Y. A. T. BLAUVELT & CO.



The Best Only. BULBS, PLANTS and select FLOWER SEEDS. Nearly **100** new varieties, NEVER before offered at retail. **Send for our Catalogue. 30** acres of Flowers. **84** Premiums in one year.
V. H. HALLOCK, SON & THORPE, QUEENS, N. Y.

Implements and Machinery.

"Acme" Pulverizing Harrow, Clod Crusher and Leveler.



The *"ACME"* subjects the soil to the action of a *Crusher* and *Leveler*, and at the same time to the *Cutting, Lifting, Turning* process of double rows of
Steel Coulters
the peculiar shape and arrangement of which gives *immense cutting power*. The *entire absence of Spikes or Spring Teeth* avoids pulling up and scattering of rubbish. It is *especially adapted* to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil. Send for circular.
NASH & BROTHER, Sole Manufacturers,
HARRISBURG, Penn. and 22 COLLEGE PLACE, NEW YORK CITY.

Miscellaneous.

ST. JACOBS OIL
TRADE MARK.

THE GREAT GERMAN REMEDY.
FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents,** and every one suffering with pain can have cheap and positive proof of its claims.
Directions in Eleven Languages.
SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.
A. VOGELER & CO.,
Baltimore, Md., U. S. A.

50 All Gold, Chromo & Lit'g, Cards, (No 2 alike,) Name On, 10c. Clinton Bros., Clintonville, Conn

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine

SHORTHAND Writing *thoroughly taught* by mail or personally. **Situations procured** for pupils when competent. Send for circular. **W. G. CHAFFEE,** Oswego, N.Y.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

40 Happy Day, Chromo, Lace, &c., Cards, with name & morocco case 10c. H. M. COOK, Meriden, Conn.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

Implements and Machinery.

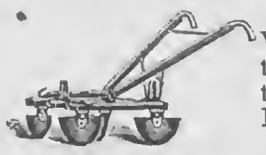
HEEBNER'S LEVEL TREAD HORSE POWER.
WITH
Speed Regulator.
Heebner's Improved
Little Giant
Threshing Machines.

"UNION" FEED CUTTER, CIRCULAR AND DRAG SAW MACHINES, &c.
Send for Catalogue.
HEEBNER & SONS, Lansdale, Mont. Co. Pa.

BEST WASHER AND WRINGER *in the world.* Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of washer, $8. Sample to agents, $3.50. Price of Wringer, $7,50. Sample, $4.25. Circulars free.
ERIE WASHER CO., Erie, Pa.

COMMON SENSE ENGINE.
Simple, durable, of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3 horse power, $275; 5-horse power, $300; 7-horse power, $375; 10-horse power, $500. These engines fully guaranteed in every respect. Address Common Sense Engine Co., Springfield, Ohio.

LITTLE INDIAN GIRL CULTIVATOR.



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CHANNEL CAN CREAMERY.
Deep setting perfected. Gets all the cream in less than ten hours, with ordinary well or running water, or in two hours with ice water, with less than half the ice called for by any other process.
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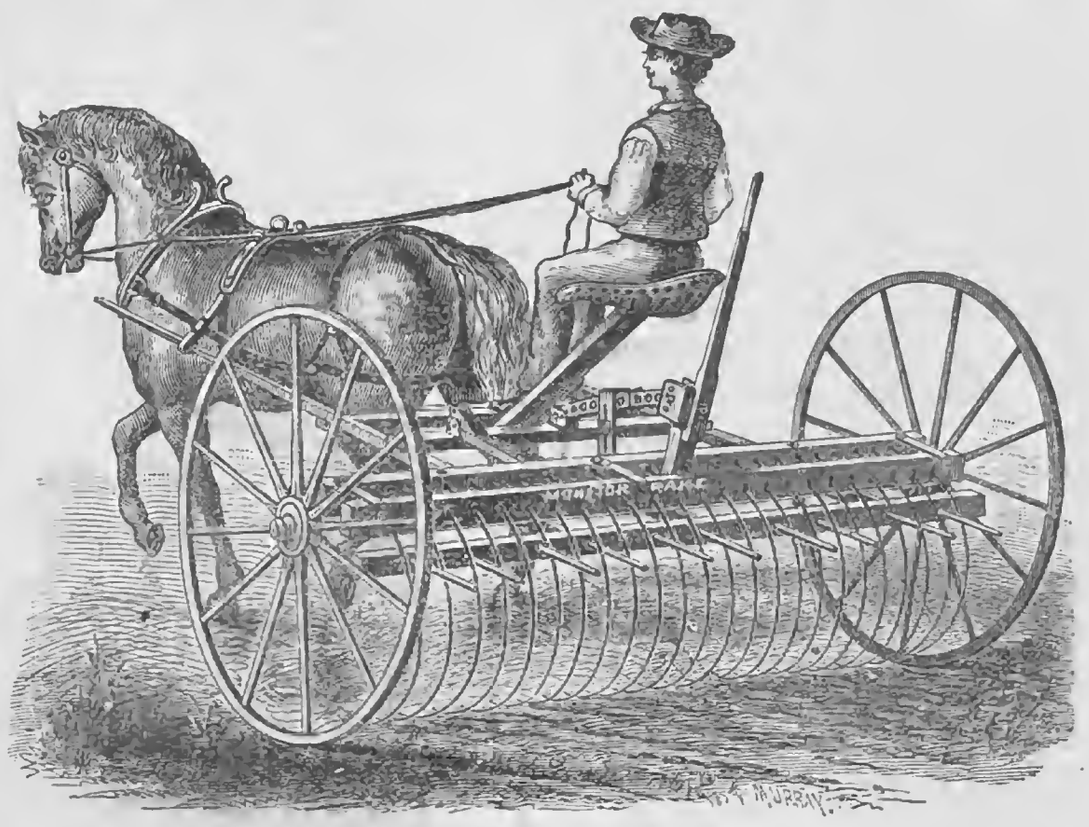

Of all the Rakes that I ever saw rake, I never saw a Rake rake as this Rake rakes! That is what they all say.
Send for Circular.
HIGGANUM M'F'G CORPORATION,
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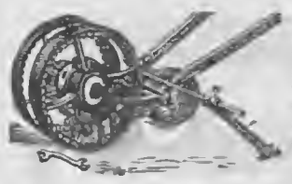

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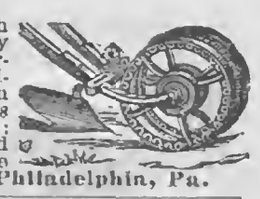
Let every man, woman, and child whether interested much or little in working the soil, send now for our carefully written Catalogue. We want all farmers who value labor-saving tools to study out our combined Horse Hoe, Cultivator and Coverer; Market Gardeners, who have acres upon acres on each of which our Double Wheel Hoe will *save its cost* yearly, to examine the merits of our fine garden tools; and every one who has even a small vegetable garden to read closely what the Firefly Hoe and Garden Plow will save them. **S. L. ALLEN & CO., 229 Market St., Philadelphia, Pa.**



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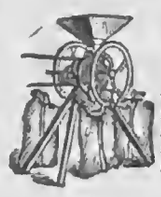

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Every Machine is fully Warranted. Price of Mills, $15 to $35. Shellers, $6. Don't buy a Mill or Sheller until you have seen our terms and illustrated Circular. Address, with stamp, **LIVINGSTON & CO.,**
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MACHINES SENT ON TRIAL. KENNETT SQUARE PA

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Admitted by leading Seedsmen and Market Gardeners everywhere to be the most perfect and reliable Drill in use. Send for circular. Manufactured only by
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Send for Descriptive Catalogue.

Threshers and Separators.
These Powers are *guaranteed* to produce more Power with *less elevation* than any other Railway Power.
WM. L. BOYER & BRO.
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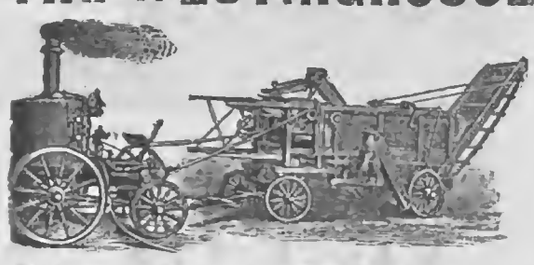
THE WESTINGHOUSE



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Grain Threshers, unequaled in capacity for separating and cleaning.
Combined Grain and Clover Threshers, fully equal to regular grain machines on grain, and a genuine **Clover Huller** in addition.
Engines, positively the most desirable for Lightness, Economy, Power and Safety. Boiler has horizontal tubes, and is therefore free from the objectionable features of vertical boilers.
Horse Powers, both Lever and Endless Chain.
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Cuts a **SIX FEET** swath easier than a side cut mower cuts four feet, and leaves the cut grass standing light and loose, curing in half the time. **Send for Circular.**
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A dapted to all kinds of plows and every condition of the soil. The perfection of *Plowing Machines.* Saves draft, labor, and is easily managed. Has been in successful operation for the past eleven years. Every machine warranted. Send for Illustrated Circulars. Address **GREGG & CO.,** Sole Manufacturers,
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Cold and moisture combined have a torporising effect upon the bodily organs, and the digestive and secretive processes are apt to be more tardily performed in Winter than in the Fall. The same is true, also, of the excretory functions. The bowels are often sluggish, and the pores of the skin throw off but little waste matter at this season. The system, therefore, requires opening up a little, and also purifying and regulating, and the safest, surest and most thorough tonic and alterative that can be used for these purposes is Hostetter's Stomach Bitters. Persons who wish to escape the rheumatic twinges, the dyspeptic agonies, the painful disturbancies of the bowels, the bilious attacks, and the nervous visitations, so common at this time of the year, will do well to reinforce their systems with this renowned vegetable stomachic and invigorant. It improves the appetite, strengthens the stomach, cheers the spirits, and renovates the whole physique.

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Has no joints—made entirely of Iron.

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STRONG AND DURABLE.

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ALSO THE

BUCKEYE FORCE PUMP.

Never freezes in Winter. Send for circular and prices.

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"MAYN'T I have some more sugar in my tea, aunt Georgy?" "Why, you've had three!" "Yes; but they melt away so!"

A MEDICO-FRUIT LOZENGE OF THE PREMIER CLASS.

TROPIC FRUIT LAXATIVE

Prepared from tropical fruits and plants.

Try it once, and you will esteem it highly as a safe and effective remedy.

Is the Best and Most Agreeable Preparation in the World

For Constipation, Biliousness, Headache, Torpid Liver, Hemorrhoids, Indisposition, and all Disorders arising from an obstructed state of the system.

Ladies and children, and those who dislike taking pills and nauseous medicines to secure cathartic action, are especially pleased with its agreeable qualities.

Packed in Bronzed Tin Boxes only.

Price 25 Cents. Large Boxes, 60 cents.

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For Cheese Factories, Creameries, and Dairies.

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Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.

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ARE ABSOLUTELY PURE.

MAYNARD'S RIFLES AND SHOT-GUNS.

PRICES REDUCED.

For Hunting and Target Practice, at all ranges, the "MAYNARD" more completely supplies the wants of Hunters and Sportsmen generally, than any other Rifle in the world, as many barrels can be used on one stock; and for accuracy, convenience, durability and safety, is not excelled. Send for Illustrated Catalogue describing the new attachment for using rim and centre-fire ammunition.

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Full Outfits Furnished. Send for Catalogue.

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Successors to Jones, Faulkner & Co.,

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H. W. MARSELLUS,

164 & 166 West Main St., Rochester, N. Y. General Agency and Headquarters for all the best Agricultural Implements needed by farmers. Send for Circulars.

QUICK ACTION—PERMANENT EFFECTS.

The MAPES COMPLETE MANURES.

SPECIAL CROP MANURES,

MANUFACTURED BY

The Mapes Formula and Peruvian Guano Company,

158 Front Street, New York.

Wheat and Corn in Ohio.

Wheat *more than doubled on land that had produced five successive crops. Was the heaviest, and ripened first.*

Corn. *One bag of the Mapes Corn Manure per acre, produced the best crop raised in twenty-five years. These manures pay.*

W. H. HEFFELMAN, DOYLESTOWN, WAYNE CO., OHIO, November 19th, 1880, reports—

I used the Mapes Complete Manure (light soil) on my wheat last fall (1879), 200 lbs. per acre, drilled in. It grew, and went through the Winter well. On strips, where I did not use any wheat manure, the wheat "froze out" badly. Where I used the Mapes Manure it ripened first, and was the heaviest wheat I had, and that on land which had borne five successive crops. The yield was over double that of natural soil. The berry was bright and plump, and weighed more than any other wheat. I also used 200 lbs. of the Mapes Corn Manure, drilled in and on both sides of the row; I had the best corn I have raised in twenty-five years. My neighbors, who used your manures, say that they pay them well. I am well satisfied.

Cabbage, Corn, Potatoes and Turnips.

"Have used the Mapes Manures six years, and am ENTIRELY SATISFIED *that they are permanent in results, and there is* NO *exhaustion of the soil by their use."*

Used somethirteen tons during present year, and propose to use some twenty tons next season.

BENJAMIN P. VALENTINE, FLUSHING, QUEENS CO., L. I., Oct. 4, 1880, reports—

CABBAGE.—Applied one-half ton per acre of the Mapes Cabbage and Cauliflower Manure on sod, mowed the same year, plowed once and plants put out. Applied the fertilizer in drills mixed with soil and covered with a coverer. No other manure used; soil, a good loam; season, favorable. Yield was of fine quality, and fully as good as I have had with fifty dollars worth of horse manure.

CORN.—Used 400 lbs. per acre of the Mapes "A" Brand Manure applied broadcast, nothing in the hill. Soil, part hilly and poor, and part good. Yield, seventy-five bushels shelled corn, fine quality, with few nubbins.

POTATOES.—Used 500 lbs. of the Mapes Potato Manure in the drills, also fifteen two-horse loads horse manure broadcast; soil, a good loam; season, very poor. Yield with the Mapes one-fourth more than where stable manure was used alone. Quality of the potatoes was fine and smooth where the fertilizer was applied, but rough and grubby where the stable manure was used.

TURNIPS.—Only 200 lbs. per acre of the Mapes Cabbage and Cauliflower Manure applied in drills; no other manure. Soil, part good and part poor. Had a fine crop; beat stable manure by far even with this small quantity of the fertilizer.

Mr Valentine writes, with the report: "Herewith find draft three hundred and fifty dollars, balance of my account of six hundred and twenty-three dollars ($623) for the Mapes Manure used on my farm during the present year."

"I am satisfied with the results, and so much so, that I shall require in the neighborhood of twenty tons for the next season."

"I append same results—have used the Mapes Manures six years, and *am entirely satisfied* that they *are* permanent in results, and that there is *no exhaustion* of the soil by their use."

Cauliflowers.

"Have used the Mapes Manures since 1877—am well satisfied with them—land is improving in condition all the time"

Land in 1877 too poor to raise grass enough to feed a cow, and now in high condition. Has only used the Mapes Manures

SAMUEL BROWN, MATTITUCK, SUFFOLK CO., L. I., Feb. 16, 1881, reports—

Soil, a good light loam; season, favorable; crop, cauliflowers, planted in July. Applied broadcast one ton of the Mapes Cabbage and Cauliflower Manure, and 600 lbs. of potash salts ($5 00). Yield, 401 barrels of cauliflowers on two and one-half acres. I lost 40 barrels left in lot and frozen in. The crop was of extra quality, large and fine heads.

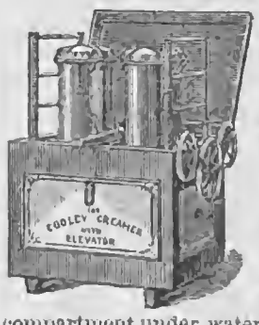
The land was in good condition, but this was from previous use of the Mapes Manure since 1877. I do not use stable or farm manure.

Remarks.—"Have used the Mapes Manures since 1877—am well satisfied with them. Land is improving in condition all the time. Have more corn this year, after fattening my hogs, poultry, etc., all Winter, than I ever had before from even more land. When I took this land it wouldn't yield enough grass to feed a cow. Have used no manure except from your representative at Mattituck since 1877, when I gave him the first order here, and my farm is in high condition to-day."

☞ The above reports are from pamphlet 1881. Send postal for pamphlet.

COOLEY CREAMER.

GOLD MEDAL, PARIS, 1879.



Butter made by this Process was awarded **Sweepstakes** at International DAIRY FAIR, 1878, and **Gold Medal** at same Fair, 1879.

Gold Medal at Royal Agricultural Exhibition, London, 1879.

MANUFACTURED in FOUR STYLES and TEN SIZES.

THE REGULAR.—The cans in this, removed to bench for skimming automatically.

THE JUNIOR.—Skimming done automatically without removing cans. THE UPRIGHT OR CABINET.—Has a compartment under water tank, the illuminated conical point of cans projecting into this compartment, skims without removing cans.

THE ELEVATOR.—Has a hoisting arrangement for raising cans out of tank. Milk drawn off automatically before removing cans form platform of elevator.

They require no milk-room. They raise all of cream between milkings. Impure air, dust or flies cannot reach milk set in them. The cans are submerged and water sealed in each style.

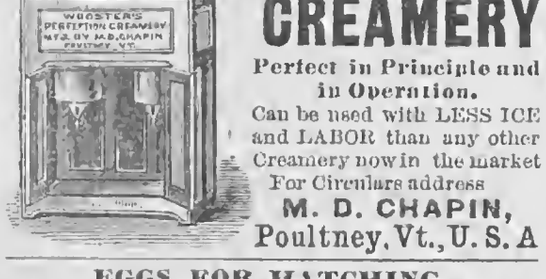
Each style has transparent panes for the purpose of determining when the milk is out, and cream about to flow. Our patents cover these processes.

No others have a right to use them.

☞ Send for "DAIRYMAN" giving particulars.

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Cut this out, as it will not appear again.



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Only mills made with Cast Cast Steel Grinders.

Warranted superior to any in use, for all purposes. Will grind faster, run easier and wear longer. *Satisfaction guaranteed.* Also, Corn Shellers, Feed Cutters, Cider Mills, &c. Send for circulars containing our challenge, open to all, and prices. Manufactured by

WHITMAN AGRICULTURAL CO., ST. LOUIS, MO.

Name this paper in application for circular.

THE WOOSTER CREAMERY

Perfect in Principle and in Operation.

Can be used with LESS ICE and LABOR than any other Creamery now in the market

For Circulars address

M. D. CHAPIN, Poultney, Vt., U. S. A

EGGS FOR HATCHING.

Light Brahma, Duke of York Strain, Plymouth Rock, Bishop & Ayers Strain $2.00 for 13, or $3.50 for 26. Warranted to hatch well.

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Established 1840.

Patent spark arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from **$150** upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to

B. W. PAYNE & SONS, Box 841, Corning, N. Y.

NEW ROSES

Hybrid Teas.—Combining in large degree the hardiness and brilliant colors of the Remontant Roses, with the sweet perfume, perpetual blooming qualities, and soft shades of the Tea Roses. **Hybrid Perpetuals.**—All the really choice varieties, old and new, and only such, are grown by us. Ours is the only Catalogue unencumbered with a host of synonomous and inferior varieties. Descriptive catalogue for 1881 now ready. To customers of last year it will be sent without their applying for it.

ELLWANGER & BARRY, Rochester, N. Y.

THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 14.
WHOLE No. 1627.

NEW YORK, APRIL 2, 1881.

PRICE FIVE CENTS.
$2.00 PER YEAR.

Ralph Evans

(Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.)

Farm Topics.

ENSILAGE—ITS APPLICATION TO MILK AND MEAT PRODUCTION.

PROFESSOR E. W. STEWART.

STOCK FEEDING, for one purpose or another, is the greatest agricultural industry of the United States, the dairy and beef, pork, mutton and wool products of which amount to a round thousand millions per year. Any improvement in feeding which shall cheapen this immense production even five per cent. is well worthy of careful consideration. Every stock feeder considers himself fortunate when the long Winter is over and his animals begin to feed upon the fresh, vigorous-growing grasses in Spring. Their old coats disappear and the fine, silken, glossy covering indicative of thrift and health, returns. Grass is the typical food of our domestic animals. "All flesh is grass," and the great study of the stock-husbandman has been how to preserve grass in the best way for use during the cold season. The term "grass" in its broadest significance includes nearly all our cultivated grains—Indian corn, sorghum, millet, etc., as well as our meadow and pasture grasses. The old and universal method of preservation by drying increases the woody fiber so as to render it much less digestible than in its green state.

Antiquity of Ensilage.

Some 20 years ago the custom of Austro-Hungarian farmers of pitting green fodder in the earth began to attract attention. It had been practiced by them for 50 years or more; in fact, according to some of the early Roman agricultural writers, grain and fodder were pitted by the farmers of Italy at an early period of history. So the modern silo is not quite a new discovery, but rather the improvement of an old one. This practice of the Hungarians spread into Germany and thence into France. The latter country has made the greatest progress in its application. The Hungarian and German silos were simply pits dug in dry places of earth, eight to ten feet wide at the top, six to eight feet wide at the bottom, six to eight feet deep, and as long as suited the convenience of the makers. The green fodder—Indian corn, rye, rape, vetch, clover, or grass—was laid in the pit, trodden firmly on the top and piled some five to eight feet above the surface of the ground, like the cone of a potato heap. This top was covered with straw, and then the earth thrown out of the pit was banked upon and over the top to the depth of 18 to 24 inches. This covering of earth was compacted so firmly as to exclude the air, and furnished a heavy cover which settled with the fodder in the pit; but in settling it was liable to crack and let in the air, so that attention was required to fill these cracks and compress the earth.

The French greatly improved upon the system of silos by building solid, air-tight walls of masonry above ground, or partly above and partly below the surface of the ground; and, instead of covering the top with earth, a weighted cover of planks is used, which settles with the fodder in the silo, giving a constant pressure, and thus excluding the air without liability of mixing dirt with the fodder. This cover, with constant pressure, is the great improvement made by M. Auguste Goffart in the silo; and to him also is the system of ensilage indebted for the practice of cutting the green fodder into short lengths so as to cause it to pack more solidly in the silo, and when taken out to be in convenient form for feeding. When this form of silo is operated expertly the green food should not pass beyond the saccharine stage of fermentation, and when taken from the silo and exposed to the air the alcoholic fermentation soon begins. In this state the ensilage (preserved fodder) is in its best condition for feeding, and its food value is probably equal to what it would have been at the time of packing in the silo—that is, the changes have improved its digestibility as much as fermentation has reduced its weight of dry substance. Some have figured an increase in food value, but this would be equivalent to the production of *something* from *nothing* unless the increase is produced by a chemical change which renders some of the constituents more digestible or palatable.

Plan of a Silo.—(See Page 222.)

That our readers may get a clear idea of the plan of building silos, in convenient form, of concrete, we give the outline of a ground plan for a triple silo—the inside of each being 16 feet wide by 32 feet long and 16 feet deep.

8, 8 represent the standards—three by six-inch scantling—placed inside of the proposed walls, edges to the wall, making them stiffer sidewise. These standards are placed mostly in pairs (one on each side of the wall) and three inches farther apart than the wall is to be thick and reaching some inches above the top of the wall (about 17 feet long). The pairs of standards are about eight feet apart. The boxing planks (represented by the lines inside the standards) may most conveniently be one and a half inch thick by 14 inches wide and 16 feet long, except those on the outside of the end walls, which must be 17½ feet long. The walls, being 16 feet high, should be 16 inches thick if made of concrete. Wall made of concrete is stronger than an ordinary stone wall built by a mason. The doors are represented by the letters d, d, d. The boxing planks extend across these doors.

We give a plan for a triple silo because many farms require storage of this capacity (about 185 tons for each silo, or 555 tons), and if less storage is needed, two may be built, or one if that is all that is needed. If more than one is required and less than two of this capacity, then it would be better to build two side by side, 25 feet long, than to build one 50 feet long. The latter would take 23 feet more in length of wall: besides, the two silos side by side would be more convenient, the doors being near together. The roof on this ground plan would span the silos lengthwise, and another silo could be added at any time, requiring only one side or long wall and two end walls, and the roof can be extended over the new silo. This plan, then, permits one to be built as a trial silo and others to be added at any time without any change of plan. This form of silo may be placed with the door end near the drive-way into the basement stable. A track laid from the silo door and a car run into the silo will enable one to deliver the ensilage before the animals. This car may hold a feed for the whole stock and be readily moved on the track by one man at any time.

Building the Silo.

For convenience of filling, the silo may be sunk half its depth in the earth, where the situation permits this to be done with good and easy drainage. But if the soil is springy, or if the silo is to be sunk in slate or shale rock which permits the water to pass freely through it so as to produce a pressure of water on the bottom, it is difficult to make the bottom water-tight without cutting a free drain on the outside of the wall and some inches below the bottom, so as to conduct the water off. It is better not to go deeper in any case than can be easily drained. It is also most convenient not to have the bottom of the silo below the level of the feeding floor of the basement stable. If two to four feet are excavated, this earth can be used to bank up on the back end of the silos for an elevated drive-way for setting the cutter or for delivering the green fodder. The excavation should be at least 18 inches beyond the proposed wall for convenience of working. Having got the bottom leveled, set the standards 19 inches apart (this will give a space between the boxing planks of 16 inches), care being taken that the edge of the inside standard next the boxing be straight. To hold the standards firmly in place, nail a lath across the under ends; this will prevent them from spreading, leaving the lath under the wall and offering no obstruction to the removal of the standards after the wall is built. Now a bracket should be nailed across the top and the pair of standards set accurately plumb on the inside edge and solidly stay-lathed in that position. When the standards are all set about the proposed walls, and the boxing planks are all placed, we are ready for

Preparing the Concrete.

The first tier on the bottom of the wall should be made wholly with water-lime concrete, as follows:—Mix well one part of Akron or Rosendale cement with three parts of fine sand, while dry. You may now mix in also three or four parts of clean gravel; now mix into thin mortar, and place a layer of this mortar, two or three inches thick, in the bottom of the wall box, and if you have cobble or rough stones, or any irregular stones picked from the field, bed these in the mortar, taking care not to let them come quite out to the boxing plank. Use all the stone you can get in, taking care to have a layer of mortar between them; tamp it all down solid so as to have no spaces in the wall. Fill the boxing to the top, using a layer of mortar and a layer of stone alternately.

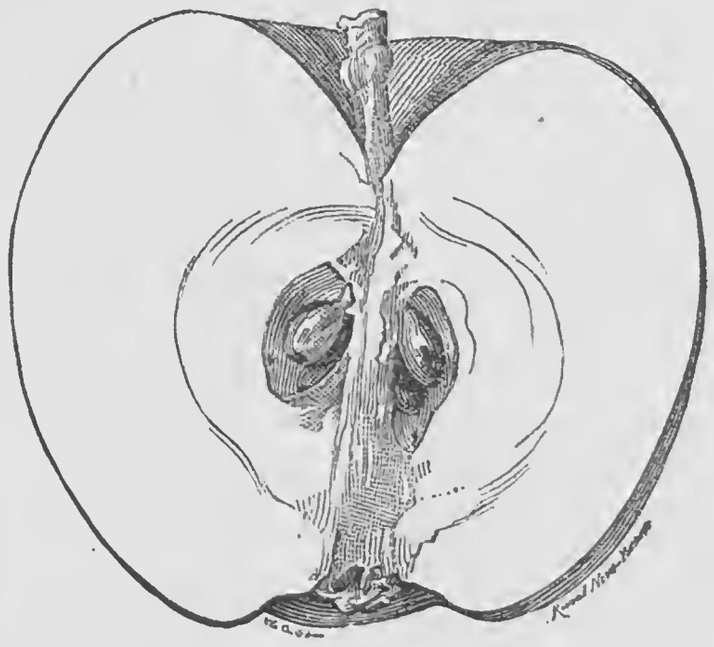
For the next layer of wall, and all above, mix as follows:—One part of cement with six of fine sand, while dry. Mix in four parts of gravel as before. Have a vat of quick-lime, well slaked under water, standing near, and use this thin milk of lime to wet up and mix into mortar the water-lime, sand and gravel. Make a calculation so as to get about one part of dry quick-lime to eight of sand used. Being mixed up into thin mortar, it will not be difficult to get the milk of quick-lime mixed thoroughly through the mass of mortar. The quick-lime should be slaked under water several days before using. This quick-lime will improve the walls and when hard will be water-proof. This will give, if stones are also used, about one part of water-lime to 13 or 14 of sand, gravel and stone, and one of quick-lime to about 15 of other materials. This wall will be cheaper than one built wholly with water-lime.

The boxing planks, after the first layer has become hard, are raised just 12 inches, leaving a lap of two inches on the wall below. The mortar is then put in the wall-box and stone bedded in as before, and the tiers are carried up in this way to the top. The standards may be kept from spreading in the middle by having a movable clamp hooked across, some feet above the boxing.

Plates eight by ten inches are placed on the top of the silo walls, and when the boxes are leveled for the top layers of the walls, three-quarter-inch bolts, 21 inches long, with screw or nut on the upper end and a square bend on the lower end, are used. Place three of these in each long wall—one in the center of the wall and one near each end, 12 inches from the end wall. Let the bolt go 13 inches down into the wall. To hold these bolts while filling around them, bore a hole in a narrow strip of board and tack this board across the top of the box just where the bolt is to be placed, the upper end of the bolt being put through the hole in the board, standing perpendicularly and eight and three-fourths inches above the box, so as to take the plate. These bolts will be in line, so that holes may easily be bored in the plates to receive them.

These plates are framed for short posts, two and a half or three feet long, upon which six-by-six-inch plates are placed for the roof to rest upon. This space between the top of the wall and the roof is usually occupied by swinging doors, which are closed after the silo is filled; and when it is desired to get as much as possible into the silo they are closed and the ensilage is piled above the wall two or three feet before the weighted cover is put on, and the compressed ensilage only sinks a very little below the top of the wall.

The inside of the walls of the silo is given an even coat of cement, thoroughly troweled down. The bottom is also cemented so as to make the whole air and water-tight. The doors should be double—one hung inside and the other outside. The inside door should be hung so as to shut even with the inside wall, be in two parts, and swing out. Felting should be placed on the jams so that the inside doors will shut air-tight. The outside door should be made in three parts, fastened together with hinges, the upper part only 10 inches wide and should be fitted to the outside jams of the door so as to be screwed fast, one section at a time, beginning with the lower section. The space between the two doors should be filled with sawdust, packed in, and the upper section is so narrow that the sawdust can be packed closely to the top and thus make the doorway air-tight.—(Concluded next week.)



THE PRIMATE APPLE.—Fig. 179.

WHAT ABOUT SILOS?

No doubt hundreds of the readers of the RURAL are seriously considering the question whether or not to build a silo and sow corn fodder enough to fill it. Many certainly are looking to us to find encouragement to go ahead and spend $300 to $500 in putting down a pit or building a silo, and in preparing for making *sauer-kraut* for cows on a great scale.

The RURAL is certainly not blindly conservative. It sees good in new things all the time; in fact, it may be regarded as progressive some-

times to the verge of rashness, but in this matter it must still advise caution.

We certainly add nothing to the corn fodder by tanking it, and we lose very little by drying it. We may certainly consid r to advantage the different ways of treating and feeding corn fodder.

To those who feed either store cattle or milch cows in the Winter, corn fodder offers an article of forage too valuable to be neglected. It is much more valuable than what we commonly call "corn-stalks"—that is, the straw or stover of corn which has ripened.

Corn-stalks are always well-cured if handled in the usual way; that is, cut up just before frost; "stooked" at once and left to dry and cure in the stook exposed to all vicissitudes of weather. By the time the cars are fit to husk, the stover may usually be bundled and stacked; at any rate, if left a few weeks in larger stooks, it will be well-cured with very little labor.

It is exactly so with corn fodder. It should be sown so late that it will not be over-ripe by the time we expect frost—say the 15th of September. Then it should be cut up and stooked, without binding, in bundles, so that the air can go through it, the stooks being bound at the top. Later it may be bundled and stacked. There will be no molding, the leaves will be bright and green, the odor sweet.

The fact that corn fodder, when it is cured and secured for Winter use among common farmers, sells for about the same price as corn-stalks, is no evidence of the comparative value of the two articles. The corn fodder is certainly much more valuable. We have few analyses of corn fodder, and no comparative experiments in feeding by which its feeding value has been accurately determined. It is recognized as good fodder for milch cows, especially if fed with corn-meal, bran, or oil-meal of some kind, and it has the reputation of exciting a flow of milk.

When well-pitted or "ensilaged" it is wholly eaten, and, if fed with suitable additions of grain-feed, is fattening and gives a good yield of milk. The disadvantages connected with "ensilaging" maize are, 1st, the handling of enormous quantities of water and, 2nd, considerable loss of nutritive elements, and the danger of very great loss if the process be imperfectly done, or the fodder (ensilage) be exposed too much to the air after the pit is opened.

An admirable system of feeding corn fodder has for several years been followed at the Michigan Agricultural College, and it seems to give quite as good results as "ensilage." It is this: the fodder is cured in the ordinary way, and, when fed, is cut by horse power into pieces two or three inches long. It is spread out over the floor in a confined space about six inches thick. Over it, to the depth of about three inches, *pulped* mangels or sugar beets are spread. These are "pulped" as fine as apple pomace, by an English machine called a "root-pulper,"—we know of none manufactured in this country.

These layers of corn fodder and pulped roots are repeated until the mass is several feet in thickness, when it is compacted somewhat by tramping and covered with a piece of canvas or similar covering. A heat soon comes on and after two or three days, according to the weather, it is ready to feed, and is given to the cows steaming. The quantity made at once should be enough to last three days; for if kept longer it may become over-heated or too sour. Meal or bran, or any provender of the kind, may be added when the heap is made, and very little loss takes place if the mass is fed before it heats too much. The whole is eaten, and, so far as we can see, a better control of the fodder is had, with less expense of labor and apparatus than is required for "ensilage." The practical question as to which system gives best results can not be discussed—for we have no comparative results.

ECONOMY OF USING APPETIZING FOOD FOR FATTENING ANIMALS.

PROFESSOR F. H. STORER.

It is not a little interesting to observe how the gradual introduction into this country of the European process of preserving green fodder in pits is likely to direct renewed attention to the real significance of palatable food, just as was the case some years since when the idea of steaming fodder was prominent. It was thought, indeed, at one time that the process of steaming fodder increased its digestibility and that a part of the merit of steaming depended upon this supposed fact as well as upon the palatableness of the steamed food; but now that it is known that the digestibility of the components of hay and straw is not increased by steaming, the true significance of the appetizing character of the steamed food has become all the more apparent. The chief merits of steamed food consist clearly in its softness, warmth, and especially in the agreeable flavor which is easily imparted to it by additions of meal or the like and because of which animals are induced to eat it freely.

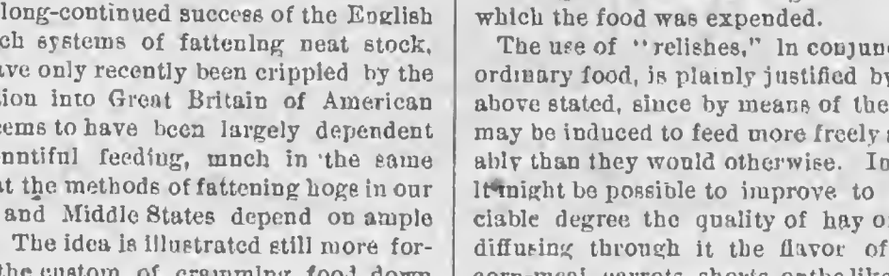
But manifestly, in so far as flavor is concerned, that may be got in other ways than by steaming. Animals may be made to eat largely both by incorporating appetizing flavors with their rougher food and by feeding out to them daily a variety of foods, the less palatable being placed before them first and the more palatable later, after their appetites have begun to flag. It has long been recognized, in some of the best agricultural districts, that in fattening animals it is good economy to give them so much and so palatable food that they shall be induced to eat the largest possible amount of it. The long-continued success of the English and Scotch systems of fattening neat stock, which have only recently been crippled by the importation into Great Britain of American cattle, seems to have been largely dependent upon bountiful feeding, much in the same sense that the methods of fattening hogs in our Eastern and Middle States depend on ample rations. The idea is illustrated still more forcibly by the custom of cramming food down the throats of geese and other poultry, which prevails in some parts of Continental Europe. And this custom is specially interesting since the successful results obtained by it go to show that the powers of digestion in an animal must be greater than its natural capacity of eating food. If animals can be safely crammed with food by actually forcing it down their throats, there would seem to be no great risk in tempting their appetites to the utmost, for, let us do our best, we are not likely to reach in this way the limit of their powers of digestion. It is important to remember, in this connection, that, as regards any one single fodder, such as hay for example, the percentage amount of it digested remains essentially the same, no matter whether the animal receives much or little of it.

The foregoing systems of forcing the process of fattening are not only justified by their practical results, but scientific investigations go to show that there is sound sense in the idea of inducing fatting animals to glut themselves with food. That is to say, it has been shown by experiments that the gain of flesh in the process of fattening is relatively larger when animals are luxuriously fed than when their rations are merely liberal. For example, the German chemists Henneberg and Stohmann fed a 1400-pound ox on a ration composed of 11 pounds of clover hay, 11 pounds of wheat straw, 10.34 pounds of cracked horse beans, 3 41 pounds of sugar, 0 44 pound of rape-seed oil, and 0 165 pound of salt, and found that 0.68 pound of actual flesh (albuminoid matters) was deposited within the animal every day. They then increased the ration so that it consisted of 11 pounds of clover hay, 11 pounds of wheat straw, 12 87 pounds of cracked beans 3 08 pounds of starch, 0.66 pound of rape-seed oil, and 0.165 pound of salt; but as a consequence of this change the daily gain of actual flesh rose to 1 31 pound. The ratio of albuminoids to carbohydrates in the two rations was almost precisely the same, viz. 1 to 4 3 and 1 to 4 2, respectively. The real difference between the two rations was that the amount of digestible food was considerably larger in the second than in the first. The animal was found to have digested 19 65 pounds of food per day in the one case and 21.41 pounds in the other. Yet for every 100 pounds of albuminoids digested, only 18 pounds were deposited as flesh in the first instance, while 32 pounds were deposited as flesh in the second instance.

The same thing was seen in some experiments where nothing but clover hay was fed out, in larger and smaller quantities. An ox fed upon 22.44 pounds of clover hay and 0.11 pound of salt, gained 0.132 pound of flesh per day; but when fed upon 27.5 pounds of the clover hay and 0.11 pound of salt he gained 0.275 pound of flesh per day. In the one case the animal digested 9.87 pounds of food, and in the other 12.84 pounds. For each 100 pounds of albuminoids digested there were deposited 14 pounds of flesh from the more abundant ration and nine pounds from the more moderate allowance.

Yet again, an ox fed on 26.51 pounds of clover hay and 0.11 pound of salt, digested 11.47 pounds of food and gained 0.21 pound of flesh per day; and when fed upon 31.9 pounds of clover hay and 0.11 pound of salt, he digested 14 32 pounds of food and gained 0.34 pound of flesh. For every 100 pounds of albuminoids digested, 11 pounds of flesh were deposited from the smaller and 15 pounds from the larger ration. In all these trials, the deposition of flesh was larger when the ration was most liberal and the gains obtained by increasing the rations were got in a highly advantageous way, economically speaking, since the rate of gain of flesh was larger than the rate at which the food was expended.

The use of "relishes," in conjunction with ordinary food, is plainly justified by the facts above stated, since by means of them animals may be induced to feed more freely and profitably than they would otherwise. In this sense it might be possible to improve to an appreciable degree the quality of hay or straw by diffusing through it the flavor of oil-meal, corn-meal, carrots, shorts, or the like, although the actual amount of the addition, when regarded merely as food, might be well-nigh insignificant. In the same way as these relishes, ensilage, steamed hay, and sweated hay undoubtedly do good service by provoking the appetites of animals. Some farmers have been not a little puzzled, at one time and another, to account for the fact that better results are often obtained on feeding out hay which has undergone some slight fermentation by curing in cocks, than can be got from the same sort of grass cured quickly and to all appearance as nicely as possible in the swathes where it is freely exposed to air and sunlight. Of course there is a liability of losing a larger proportion of the better parts of the hay, by the crumbling of delicate leaves, in the process of sun-drying, and particularly with clover



PLAN OF A SILO.—FIG 180.

than in the other case where the hay is cured in cocks, but there is nevertheless a real advantage to be credited to the incipient fermentation, in that cattle usually prefer such hay and eat it more freely.

Pomological.

THE PRIMATE APPLE.

The Primate Apple is the best Summer apple we have. It is of medium to large size; skin yellowish-white, often with a handsome blush on the cheek exposed to the sun; flesh very tender and crisp, of a pleasant sub-acid flavor, excellent for dessert or cooking, and ripens gradually for a long time. Last season it ripened as early as the middle of July, and was in use for at least two months. The tree is a stout, vigorous grower, a good and early bearer. If any one has but a single tree it should be the Primate. Its origin is, according to Downing, unknown. It must be over 30 years since I obtained and set grafts of it under the name of Sour Harvest, and not until I had grown and fruited the Early Harvest did I learn the difference. I suppose in this county at least, and I think in the State, nine out of ten, if not 99 out of 100, who know it at all, know it only as the Sour Harvest, and if they were ordering a tree of a nursery they would order this by that name; and if they got an Early Harvest, which the nurseryman would be justified in sending, they would pronounce him a fraud when the tree came into bearing. It is not an uncommon thing to find a fruit attain greater celebrity under a wrong or improper name than under the rightful one. For instance, the White Doyenne Pear was long and widely known in this State as Virgalieu, and thousands of old residents know it by no other name to this day. The New Rochelle Blackberry attained its greatest notoriety under the name of Lawton, and the Pine Apple was the popular name for the Scotch Runner and Crimson Cone Strawberries. E. Williams.

Montclair, N. J.

Primate.—Mr. J. J. Thomas says of this apple that it is "medium in size, light-green, becoming light-yellow, often with a slight blush; fine-grained, very juicy, with a very agreeable mild sub-acid flavor. Ripens for several weeks through the latter part of Summer. Valuable." According to the best information we can glean, it succeeds well in Massachusetts, Michigan, Louisiana, and fairly well in Maine, New Hampshire, Rhode Island, New York, Ontario, Pennsylvania, New Jersey, Maryland, Ohio, Indiana, Illinois, Nebraska, Missouri, Utah, California and Mississippi.—See first page.

MORE ABOUT THE EARLY TILLOTSON PEACH.

In the Horticultural Department of the Country Gentleman, of the 10th of March, the Editor takes occasion to criticise my remarks, in the Rural New-Yorker of February 5th, respecting the Early Tillotson Peach.

I freely admit the undoubted ability of the critic to communicate rare and valuable information on this, as well as on most other subjects pertaining to horticulture; and that, in the article alluded to, he communicates some facts not generally known. I do not attempt to discuss the matter through the editor's own columns, for the reason that I long since learned the futility of attempts to meet such a dignitary on his own "stamping ground." My reason for giving it attention will be found in the fact that the criticism seems to proceed upon the assumption that I have spoken hastily, and even incorrectly upon the subject.

I intentionally left the date of the introduction of this peach indefinite, fixing it about 1845 or 1850. Exception seems to be taken to the remark that this peach came before the public "with quite a flourish of trumpets." To this I reply that, in January, 1848, (Genesee Farmer, pages 58 and 59,) David Thomas, replying to a query of the previous month, says: "In our heavy loam the fruit has always been *very fine*, when the ground has been well cultivated; and *earlier* than any other valuable sort in my collection, except the *Early Ann* which ripens three or four days before it." * * * "Had I only known of its excellence in time, and planted it as extensively as I might have done, it would have yielded me, this season, a large sum." This was practically indorsed, at the time, by P. Barry, who was at that time the conductor of the Horticultural Department. The only other notice of this peach of any special import in this connection, is the description supplied by Mr J. J. Thomas, as he states, to A. J. Downing, for insertion in the first edition of his "Fruits and Fruit Trees of America;" and which appears on page 475 of that work. This edition is dated 1846; the date of the preface being May, 1845 In this description, Mr. Downing (in introducing it) remarks: "The Early Tillotson is unquestionably one of the most desirable of all the very early freestone peaches." And Mr. J J. Thomas, in his description, says: "It is much higher-flavored than any peach that ripens previously, or for some days after it, and as a garden variety, is entitled to universal favor."

Although, as I well knew, this peach had been long known locally, it was assumed, as I still believe, that up to the period named, it had not become generally and favorably known away from Central New York. I also take occasion to remark that the era of extended advertising and extravagant puffing had hardly yet dawned upon the horticultural world; hence I claim to be warranted in the remark, as applied to that period, that this was, in fact, "quite a flourish of trumpets."

Facts possibly may not warrant the assumption that the period named is properly that of the introduction of the variety to the pomological world; but I am not yet convinced of error in this particular. T. T. Lyon.

Field Crops.

TOBACCO CULTURE.—NO. 5.

G. A. GOFF, JR.

"Worming."

Very soon after tobacco plants commence growing in the field they are usually attacked by the tobacco worm—Sphinx Carolina. This worm, which is so well known by tobacco growers, is the larva of a dusky, brown-winged miller, nearly as large as a humming bird, which may be seen flying through and about tobacco fields on warm nights in July and August, depositing its small, greenish eggs on the surface of the tobacco leaves. The worm, when first hatched, is very small—not more than an eighth of an inch in length; but it commences its work of destruction immediately and in five or six days has gained such a size as to be readily seen. Up to this time the damage done to the tobacco is small; but at this stage of its existence the worm undergoes a change, throwing off its old coat or skin and coming out in a new dress. From this date on its growth is very rapid and unless something is done to prevent its ravages on the plants, the damage to the crop will be very serious. A large worm will sometimes render a plant utterly worthless in a few days, hence

the importance of destroying the pests while they are small. There are usually two crops of worms, the first coming on in the early part of July while the plants are young. The second crop appears usually about the middle of August and is generally more destructive to the crop than the first brood, as at this time the plants are so large as to make it very difficult to find them. "Worming" tobacco is a very laborious and costly task in seasons when the worms are numerous. It is a work, however, which must not be neglected if a good crop is to be expected, for the quality and quantity of the crop depend largely upon it. Various means have been adopted for destroying tobacco worms, but of them all none is so effectual as picking them off by hand and destroying them. Turkeys will devour them greedily and are very useful to aid in the work of hunting and destroying them, yet the chief reliance must be placed on hand-picking them. It is supposed that worms are less numerous in the Summer succeeding a wet Fall. They are also less numerous in wet rainy seasons, when the continued heavy rains wash off the eggs in large numbers. They are always present, however, in numbers sufficient to cause great damage to the crop, unless the utmost vigilance is employed in destroying them. In seasons when they are numerous, the tobacco field should be passed over at least once a week, the leaves examined and the pests destroyed. A little experience will enable one to tell where they are most likely to be found. Eggs also should be looked for and destroyed. The work may be done by small boys with profit if a premium be offered to the boy who secures the greatest number of worms, or the searchers may be paid by the dozen or hundred, in which case it is best to have the pests collected in some kind of a dish or a vessel so that they may be correctly counted. A good way of lessening their number is to destroy the millers that lay the eggs. A method practised largely in some tobacco-growing districts is to plant Jamestown Weed in the vicinity of the tobacco field, the blossoms of which are eagerly sought after by the flies. Poison is injected into these blossoms, which poisons the miller and thus prevents it from depositing its eggs.

"Topping."

In order to throw the energies of the entire plant into a *few large leaves*, the top, or seed bud, which makes its appearance when the growth of the plant is nearly completed, is broken off; the process is called "topping."

The work requires some experience and judgment to perform it correctly. It is better that the plant be not permitted to blossom, and the sooner it can be topped the greater is the saving of vitality. Care should be taken in pinching or breaking off the top or bud not to injure the leaves immediately below. A common mistake made in topping tobacco is in topping too high. Low topping is advisable, as it gives larger leaves and better quality. From ten to fourteen leaves should remain on the stalk.

Spiked Wild Oat-Grass or Old Fog—Danthonia Spicata.

This is another grass of small size found on poor soil. The stems are short and few in number; the leaves short, twisted and generally hairy. The grass grows in small bunches and is not considered of good quality for any kind of stock. There are some 60 species of Danthonia, nearly all natives of South Africa, where they afford much valuable pasture. The species above is generally found on poor, thin, high clay soil. The late Hon. John Stanton Gould, in his excellent article on grasses, says he once gave this grass a good trial. "When it was fed to the cattle in the Winter, although the mangers were kept well filled, they bellowed with hunger. The horses became hide-bound and the cows shrank in their milk. They got along very well when they were fed twice a day with Timothy and Blue Grass and were allowed to pick at the Danthonia at intervals as they felt inclined for it. It was rather better than rye straw, but not much. It was certainly better than nothing; but the better plan is to manure the soil, so that it will produce the richer grasses." PROF. W. J. BEAL.

Horticultural,

RAISING CELERY.

IT is less difficult to raise good celery than is generally imagined. Ordinary skill, attention and judgment are all that are necessary to produce a good quality of celery, and we wonder that farmers do not more often attempt its cultivation. The first requisite is moderately good soil, not necessarily very rich, except immediately about the roots of the plants, and not too light and dry. The ground should be thoroughly and deeply worked, so that it will the better retain sufficient moisture for the growth of the young plants.

In the latitude of New York City and southward the seed may be sown in open ground in April. The soil should be well prepared and mixed with thoroughly decomposed farm-yard manure or some commercial fertilizer. Sow the seed thinly and equally; cover with half an inch of earth; slightly pack down; and water, if it does not rain in a few days after sowing. When the plants are one or two inches high, they should be transplanted into another bed—a few of the larger leaves having been taken off—and set about four inches apart but no deeper than before. In July the plants may be set in rows four feet apart and six inches apart in the row. It is not necessary to plant in trenches, but a little manure may be dug in along the furrow in which the plants are to be set. The time of blanching, though depending upon the time when the celery is to be used, is generally in September. A plow is run between the rows; the stalks must be gathered in one hand and the dirt pressed up against them with the other.

More earth should be thrown up against them with a hoe; but the tops must be left exposed several inches and, as they grow, more earth must be banked up against them.

The blanched plants are stored in a trench about one foot wide and just deep enough to contain them; packed closely and more or less heavily covered according to the severity of the weather.

CUCUMBERS.

EARLY cucumbers for slicing I plant in cold-frames with other plants, and when the latter are removed the cucumbers occupy the ground. I thus get a double use of sash. I do not believe in hot-beds for cucumbers. It is too much work to keep them supplied with water when they commence to bear. There is nothing like having them down on a level with old mother earth, where she can assist the clouds in watering them, provided we have the conditions right, which are: a rich soil and good cultivation. With regard to kinds of cucumbers, I have found Early Frame as good as any. I do not like Long Green Prickly. It does not make a handsome pickle, and is a small yielder. Early Russian is good for late planting.

Late cucumbers for pickles I have always found a profitable crop. I plant the main crop as late as the Fourth of July, as a second crop following peas, early onions, lettuce, etc. I always manure them in the hill, either with phosphate or well-rotted stable manure. When the latter is used I dig a hole eight or ten inches deep, and put in about a half bushel of manure, tamp it down solid, cover it with three or four inches of soil, and leave the "hill," when planted, a trifle below the surrounding surface. It then gets the full benefit of all the rain that falls, and, if I wish to water it, the advantage is apparent—the water all runs the right way towards the center of the hill. I hear a great many complaints from my customers every Fall as to the injury to their vines from dry weather, and in most cases I find they have planted them on raised hills. What their object was I never could find out. It is needless to add they were not readers of the RURAL. I also find another fault is in not keeping the vines picked clean; they need cutting every other day. I use a sharp-pointed knife and leave a half inch of stem on each cucumber. This gives them a tidy appearance when taken to market, and they are said to keep better; but of this I have no proof; but I do know that they should be either pickled or salted pretty soon after they are picked. Keeping them has a tendency to toughen the outside rind and cause them to shrivel up when put in the brine. One thing more I have learned from experience—not to plant in the open ground until the soil is thoroughly warm and warm nights are the rule, not the exception. About the 10th of June is early enough for this latitude. ADELBERT WAKEFIELD.

Oneida Co., N. Y.

SPIKELETS OF WILD OAT GRASS.—FIG. 181.

SPIKED WILD OAT GRASS—DANTHONIA SPICATA.—FIG. 182.

PEAS.

PEAS produce best on a light, rich, well-tilled soil, and a good crop may be raised with the application of but little manure. The soil, for the first crop, should be prepared as early as possible in Spring after the frost is out of the the ground, and the peas put in as soon thereafter as possible. Other sowings may be made at intervals of two or three weeks until July, if a succession of crops is desired. We prefer to sow the early, medium and late varieties at the same time, the peas thus being matured in succession, and the excessive heat, and, perhaps, drought of July and later, are avoided.

Peas, when grown in small quantities for private use, may as well be sown in double rows six or eight inches apart with a space between of about three feet in order to give room to bush the taller-growing varieties, and plenty of space to pass between the rows in gathering the crop

We believe that nothing is lost in bushing even the medium-growing varieties, as it gives them a neat appearance, keeps the vines from matting and trailing in the dirt, and, above all, keeps the good farmer from saying harsh things when, during a light shower or heavy dew, he is requested by the mistress of the the house to go out and pick a mess of peas on the plea: "We must have them for dinner." No one relishes the overhauling of wet, dirty vines, or the picking of the bespattered pods from those trampled beneath his feet.

EARLIEST VARIETIES:—Philadelphia is the earliest of all, and close upon it come Early Kent, Daniel O'Rourke, Laxton's Alpha, Carter's "First Crop," Kentish Invicta, and Tom Thumb. The last variety can be raised with least trouble and may also be said to produce least, as it grows but half a foot high.

EARLY:—McLean's Advancer, Laxton's Prolific Long Pod and McLean's Little Gem are good early varieties.

MEDIUM:—Champion of England, Laxton's Marvel, McLean's Premier, and Eugenic.

LATE:—British Queen, Black-Eyed Marrowfat, Tall Sugar, and McLean's Best of All. Champion of England for a main crop is still considered the best. This grows five feet high; the pods are large and well-filled. For an early pea there is none better than McLean's Little Gem.

Experience with new Vegetables.

Having seen several articles in the agricultural papers of late stating that the Alpha was a first-class tomato, I concluded to write and give my experience in the matter. Last Spring I procured two packets of this variety, and from the seed raised about 500 plants. These I set out in a favorable situation with a view of saving the seeds, thinking that if the variety proved valuable there might be a sale for it; but it proved quite the contrary. The plant itself is very weak-growing, even under high culture; the fruit is small, irregular in shape and very liable to crack and rot. It is one of the poorest varieties, without exception, I have ever seen. Among other varieties I tested the past season were the Acme, Paragon and Hathway's Excelsior. Of these I think the Excelsior is by far the best. It is very productive, solid and of excellent quality. The Acme and Paragon are very good; but in most cases will crack and rot to some extent.

I also tested some other novelties in the vegetable line, among which were the Golden Wax Bean, Red Drumhead Cabbage and Bliss's American Wonder Pea. This little pea is truly a wonder, being very early, highly productive and of excellent quality. The cabbage, though not a new variety, is comparatively unknown. It is a great improvement on the common Red Dutch, being larger and of better quality. The Golden Wax Bean is much better than the old Black Wax in productiveness and quality.

Shelburne, Vermont. W. H. B.

ON the 24th of April, 1875, the thermometer was 24 °, at seven in the morning, and the sleighing for that and the next day was good. Be not in too great haste to uncover plants Let the mulch still remain upon the strawberry patch. One cannot sow his Spring wheat and oats too early after the ground is dry enough to plow. But plants that have been protected during the Winter are tender now and need protection more than ever.

The Swine-Herd.

OUR ANIMAL PORTRAITS.

A Specimen Small Yorkshire Sow.

THE cut, fig. 185, represents a perfect specimen of the modern Small Yorkshires, a breed which originated in England, and has been brought to great perfection. They are pure white and excel in aptitude for taking on flesh and for easy keeping. The skin is very thin and the bones small. The heads and snouts are the shortest of any breed except the Suffolk. The animals are quiet and docile in disposition. The only objection to them is that they carry too much fat in proportion to the lean meat.

This sow, Marchioness, is the property of T. R. Proctor, Utica, N. Y., and is recorded in the Yorkshire Swine Registry as A 81. She was bred by W. H. Cole, Clinton, N. Y., by an imported sire, King John, bred by Wheeler & Sons, England, and he is out of Flora *85. She was farrowed April 22, 1878, and weighs 400 pounds. She has had two litters of pigs and had eight with her at the last New York State Fair, where she won the first prize in her class. During the same month she also received the first premium at the Oneida County Fair.

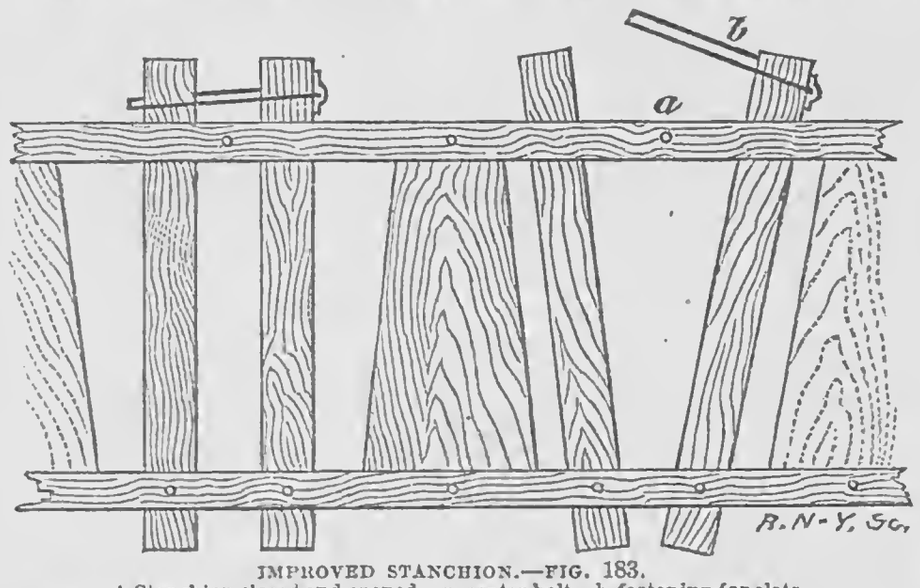
PIGS.

COL. F. D. CURTIS.

WHEN pigs are two or three days old, unless the mother has a surplus of milk, she may be fed succulent food to increase the flow. If she appears to have plenty of milk such food should not be given to her for at least a week in order that the inflammation in the udders may subside. The health of the mother and the growth of the young will depend very much upon the care and judgment exercised at this period. Many sows are injured at this time and the pigs stunted by the excessive feeding of the mother. We consider milk to be improper food, and would prefer nothing but clear water or house slops mixed with a little bran. At the end of a week more nourishing food may be given, gradually increasing the supply as the young pigs will demand more sustenance. Barley meal will make more milk than any other kind of grain. Oats rank next in value. They should have the hulls sifted out, as the sow will not eat this part of the grain which would be wasted, but which is excellent for young calves or cows.

Wheat shorts or middlings are good milk-producing food and are cheap and healthful for a sow suckling pigs. The best form in which either of these foods can be prepared is to mix them with milk. Hogs always relish their food best when slightly fermented, just enough to make it sour. A little milk will produce this condition, if mixed with the meal or bran the day before the food is required. By a little care and pains-taking a supply of fermented food may always be kept on hand. This labor will always pay well, as the pigs will do so much better on it. It is necessary to keep the appetite from flagging if they are expected to be thrifty. Abrupt changes of food or the failure of a steady supply are apt to produce derangement of the bowels, which is exceedingly injurious to young pigs. The little ones are sure to be affected by the condition of the mother; hence it is important that great care should be exercised in her food. Corn may be fed in connection with milk, but we consider corn alone the least desirable of any grain. We should prefer buckwheat rather than corn. Sugar beets or mangels may be fed with grain and will be found conducive to health and will help to keep the appetite good.

When the pigs are between two and three weeks old they will eat oats with their mother, and this is the best kind of grain to give them. They will eat more every day, and the quantity may be increased without any danger of injury. They will also eat corn, but if it is given to them it should be in limited quantity. Corn is more heating than oats and harder to digest, and is liable to produce an excess of fat which causes thumps; or it may cause inflammation of the bowels, which is fatal to young pigs. We have lost a number on this account and have learned from experience not to rely upon corn. Too much milk given to pigs will produce the same result. If the season will admit, a sow will do better if allowed to run out on the ground where she can obtain grass which is an antidote to diseases of the stomach and which will also help materially to increase the milk. Running out upon the ground will also arrest the thumps, which is more liable to affect young pigs when confined in a pen. This disease, so common among young pigs, may be known by the heaving of the sides or by the panting of the animals and their refusing to eat. We know of no medicinal remedy except the use of turpentine which should be administered daily, diluted with milk, in doses of a half teaspoonful and more, according to the size and age of the pig.



IMPROVED STANCHION.—FIG. 183.
A Stanchion closed and opened. *a*, center bolt. *b*, fastening for slats.

Frequent washing with soap-suds does pigs a great deal of good and should always be practiced if they get dirty. Young pigs will never thrive well in a filthy pen. If the dam is unclean the pigs are liable, when suckling, to get sore about the head and around their mouths, which will stunt them. When this is the case they should be thoroughly washed and oiled.

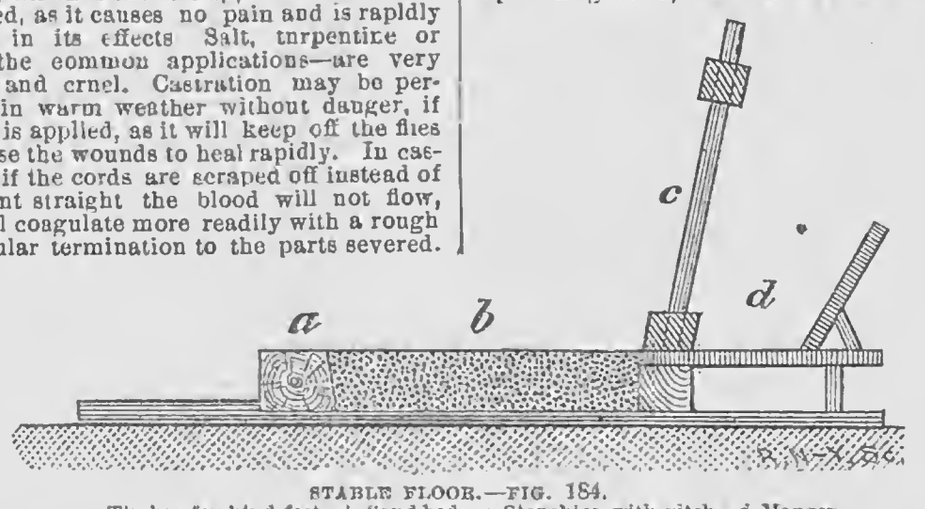
The male pigs should be castrated when four weeks old and the parts be smeared with coal tar, which is the best application we have ever tried, as it causes no pain and is rapidly healing in its effects. Salt, turpentine or ashes—the common applications—are very painful and cruel. Castration may be performed in warm weather without danger, if coal tar is applied, as it will keep off the flies and cause the wounds to heal rapidly. In castrating, if the cords are scraped off instead of being cut straight the blood will not flow, as it will coagulate more readily with a rough or irregular termination to the parts severed. This fact is more important in castrating older pigs. If the parts swell badly the incisions should be carefully opened so that the pus may pass out. Pigs, after castration, should be kept in a dry place, as exposure to wet may result in cold and inflammation, which are generally fatal.

Farm Economy.

IMPROVEMENTS IN COW STABLES.

THE article of Mr. Richard Goodman, Jr., on page 171, of the RURAL for March 12, is very valuable, and while his plans of neck straps, chains, oval head holes, etc., are perhaps excellent, and may be as represented, still the old-fashioned stanchion may, by slight modification, be made into a fastening that does not combine the oft-applied terms of "severe" "rigid" "inhuman" etc; but, which, on the other hand, is easy and secure; throw her body forward, which it is impossible for her to do with the perpendicular frame. With the two movable neck slats, the cow is enabled to move her neck side-ways the distance between the slats, and as there is usually a play of about two inches for her neck in the rigid stanchion, this added to the play of the slats, gives her a side motion of about nine inches—quite enough to relieve her from absolute "rigidity." The illustration is self-explanatory. There will be a necessity for a center pin, or a bolt at *a* to keep the play of the slats within bounds. The fastening for the slats can be made of a ⅜-inch rod, and when the slats are brought together, and this bale slipped over them, the fastening is most secure.

In regard to stable floors. I have my own notions, one of which is to put the planks flat upon the ground, and use absorbents so liberally that they are always dry. Where the cows stand I have a platform raised at least eight inches above the floor. At the proper distance back from the stanchion, I have an 8x12-inch oak timber laid flat-wise for the hind feet of the cows to stand upon, and then this space is filled with wet sand, and renewed until it has become packed solid. The cows are then kept bedded with litter, straw or any refuse of the barn. When the cows are "dry"—and Ohio dairies are so through the Winter—road dust gathered the previous Fall, or dry sand, or muck, makes excellent bedding, being great absorbents of moisture as well as deodorizers, and making an excellent bed besides. For several years the manure from my horse stable has been used as an absorbent, put behind the cows, and by this combination of manures, muck, straw, etc., the compost is highly improved in quality. JOHN GULD.

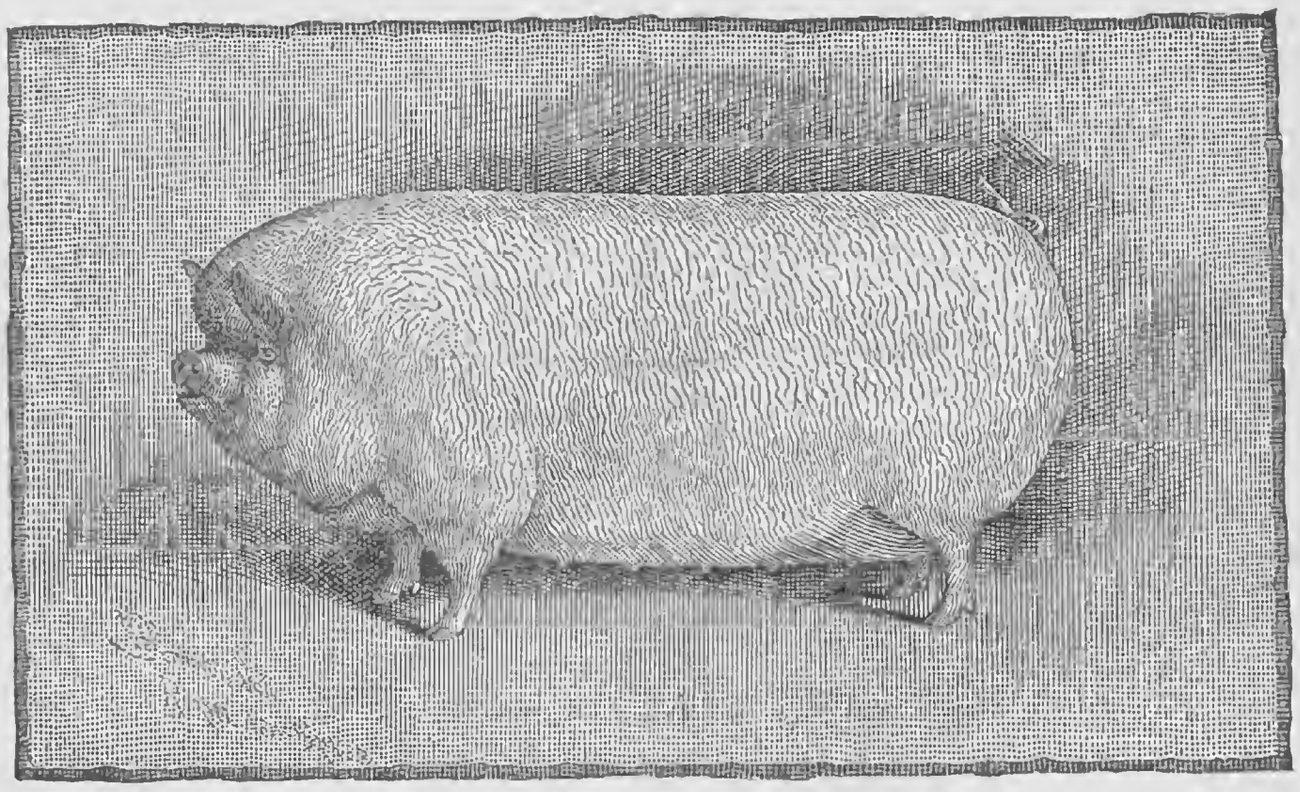


STABLE FLOOR.—FIG. 184.
a, Timber for hind feet. *b*, Sand bed. *c*, Stanchion with pitch. *d*, Manger.

Three Horses Abreast.—(See Page 225.)

Having seen in a late issue of the RURAL a diagram of a method for working three horses abreast, I have decided to send you a model of a contrivance for this purpose partly invented by myself and partly copied from others. I have used almost every sort of device for the above purpose; but I have never found any that worked as well as this. It is now used on my brother's farm in Oakland Co., Michigan, one of the hardest places in the world for plowing. The diagram sets forth the principle and construction of the device so clearly that no further explanation is needed.

Marin Co., Cal. W. H. PHILLIPS.



MARCHIONESS.—FROM A PHOTOGRAPH.—FIG. 185.

while in regard to dispatch no fastening has ever equaled the stanchion. By observing the illustrations, it will be seen that the improved stanchion differs only in two respects from the ordinary one:— first, it is set with a pitch; and, second, the neck slats are both movable instead of one being rigid, as in the ordinary stanchion. The superiority of this improved fastening is obvious in many ways—the pitching forward of the top of the stanchion allows the cow greater freedom in getting up for the slant, and enables her to

Miscellaneous.

RURAL BRIEFLETS.

THE RURAL NEW-YORKER has published several communications to the effect that the St. Patrick and Burbank are the same potato. Mr. Isaac F. Tillinghast of La Plume, Pa. writes us that he has grown the former quite extensively and if any man can see, either in the appearance of the tubers or vines, any difference whatever from the already well known and popular Burbank, he has better faculties than Mr. T. . . . . .

MR. TILLINGHAST has grown the Mammoth Pearl, now extensively advertised, for two years. He says it is a large, nearly round, white variety very heavy and solid. The vines are exceedingly strong and it is very productive. He thinks, however, that its claims to earliness and fine quality have been a little over-estimated by some of its admirers. . .

MR. TILLINGHAST regards the new "Pride of America" as one of the best of Mr. Browne-ll's offerings. It resembles in color and shape the Snowflake but is with him a better cropper. We should hope so. The Snowflake is, at the Rural Farm, the smallest yielder we have ever raised. . . . . .

EVERYBODY, so to say, praises the Beauty of Hebron—and it is well worthy of its good name. Now for the WHITE ELEPHANT. Let us hope it may prove as good for a late as the Beauty is for an early potato. Probably not less than 30,000 trials of it will be made in this country the coming season and their reports will settle the question as to its value and the trustworthiness of the RURAL's claims for it. . . . . .

Mr. WALDO F. BROWN says, in the Ohio Farmer, that the Peabody Branching Corn is the same as Blount's White Prolific. We cannot say either that it is or that it is not, never having raised the former. We know, however, that Prof. Blount raised the corn bearing his name, for years, and is supposed to have made it what it is by careful cultivation; by emasculating the barren stalks; by careful selection etc. Perhaps he will inform us if originally it was the Peabody. . . . . .

"ONE thing I do wish you would do in the RURAL," writes Mr. C. M. Hovey of Boston, Massachusetts:

"Tell everybody that thimbleberries are not raspberries any more than currants are gooseberries. I am heartily sick of the Black Cap business and disgusted when I see respectable nurserymen advertising thimbleberries as raspberries. Do try and stop it. Let them stand on their own merit. Those who like Black Caps can get them in abundance, but those who think they can find the *delicious* aroma of the raspberry in them, can detect what I never did." . . . . . .

WE sometimes test new things and report upon them so long before they are popularized that the fact is often entirely forgotten. The American Wonder Pea is a case in point. This is now widely advertised and is becoming a genuine favorite. Yet this might just as well have happened a considerable time ago. In the RURAL NEW-YORKER of June 29, 1878 we find the following remarks under "Notes from the Rural Grounds." "In the way of peas American Wonder is an improvement, in its way, upon anything we have previously tried. The vines grow about 14 inches high and are vigorous, strong and prolific. The pods are about the size of the Philadelphia, well filled, averaging five seeds which are tender and sweet. Unless it is McLean's Little Gem, we prefer this variety to any we have yet tested." It is, according to our trial, a day or so earlier than the Gem. . . . . .

THE following offer is from our contributor Dr. T. H. Hoskins, of Newport, Vermont. We publish the note as received from him:—

"At the time I described the new hardy Summer apple, the Yellow Transparent, in your columns, I had scions to spare, though many applied for them. Now I have a few thousand on hand more than I have use for, and if you want to, you may say that any reader of the RURAL who will send stamps for postage and packing can have some as long as they last. I only recommend the variety for the "Cold North." The Middle States have numerous varieties quite as good. . . .

WE have to thank Mr. Edward T. Dyer of Providence R. I. for the following bit of information:

"Editors are supposed to know everything, so I will tell you something which you say you do not know. In Tilton's Journal of Horticulture Vol. V, Page 264, Mr. E. S. Rogers says:

"Salem, No. 53. This was originally numbered 23 in my private collection; but a spurious sort having been put into the market under that number, the number of this variety was changed to 53." . . . . . .

MR. HOVEY still regards his strawberry (Hovey's Seedling) as the best in cultivation—that is the best in the world. It received the highest prize for the best four quarts of any variety in 1880; also two years ago as the finest

strawberry in competition with all the new sorts. "I do not," he writes us, and we are not sure we should print any part of his letter, "eat any other myself—except the earlier sorts, such as Boston Pine and Jenny Lind and, for a late one, La Constante. These are all of 25 sorts I ever think of having on my table."

. . . . . .

MR. HOVEY has been accused for 30 years past of thinking his own things the best. "I suppose," he writes in another part "you know that when I introduced the Concord Grape all the Boston cultivators said it was 'only fit for jellies.'" . . . . . .

What Others Say.

OLEOMARGARINE IN ENGLAND.—The President of the English Board of Trade stated in Parliament some time ago, that oleomargarine had been declared by experts to be a wholesome article of food; wherefore its importation could not be stopped. The Mark Lane Express says: "We see not a particle of difference between meat, wheat, cheese, butter, poultry, eggs, or butterine; all are additions to our food supplies. If any one of them is unwholesome or injurious to health, the law is able to step in and destroy it. If they are sold for what they are not, the law is again well able to protect the purchaser who has been defrauded." This is certainly taking a very liberal view of the subject, and it shows that our English cousins are inclined to give us a chance to supply them with food in all its usual forms.

THE FIRST AND SECOND NEEDS OF A SOLDIER.—It is said, according to London Field, that when the Duke of Wellington returned from his hard-fought Peninsular campaign some of the War Office officials asked him what part of the soldier's outfit was most important in order to secure his efficiency? The Duke's reply was, "A pair of good boots." Being further questioned as to the part of the outfit next in importance, the reply was, "Another pair of good boots." There is more force and wisdom in the Duke's reply than appears at first sight; certain it is, those who have two pairs of good boots can always have one pair in reserve, getting dry and comfortable for a change when necessary. A man dry and comfortably shod is equal to more work in inclement weather, and less liable to be injuriously affected by exposure to cold and wet, than one suffering from cold, damp, or wet feet.

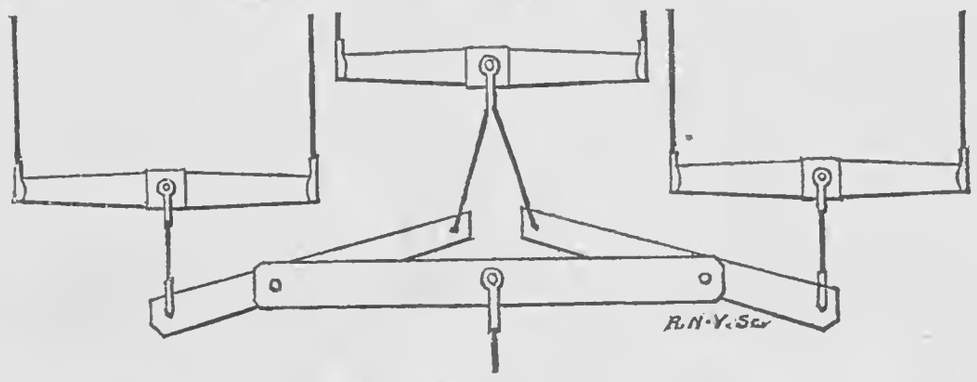
PARIS-GREEN ON CORN-STALKS.—Under date of Sept. 17, Mr. D. C. Spencer of Old Saybrook, wrote the Conn. Agricultural Experiment Station as follows: "Last Spring I applied Paris-green, mixed with water, to my corn when it was about three to five inches high, to stay the ravages of the Army-worm. I desire to know whether you have analyzed any corn thus treated, or can inform me if it will now be safe to feed the corn-stalks and husks? If not, will the Station analyze a sample for me?"

Mr. Spencer was requested to forward to the Station a dozen to fifteen stalks taken from different parts of the field. The samples came in good order, well tied up in papers and secured with sacking. The stalks were run through a straw cutter, and all the dust, together with a good portion of the well-mixed cuttings, was examined by Dr. Jenkins for arsenic. No trace of this poison could be found by the processes which serve to detect 1-50,000th of a grain of white arsenic. It thus appears that Paris-green applied to the young plants had been completely removed by the rain. It has been well established by Dr. McMurtrie that vegetation takes up into its interior no arsenic from the soil with which Paris-green has mingled in the quantities that are used for destroying insects, a result fully confirmed by this examination.

JOSEPH HARRIS, of Moreton Farm, is excellent authority as to vegetables as well as to farm matters in general. He has the following to say regarding beans, etc.:—

BUSH BEANS.—For early string beans, there is no better variety than the Early Valentine. Select warm, mellow, sandy soil. Sow the seed in drills fifteen inches apart, and drop the beans about an inch apart in the row. If the land is rich, thick sowing favors early ripening. It is quite an object to get string beans as early as possible, and it is well worth running a little risk of having the first sowing cut off or uninjured by a frosty night.

There is no healthier, more nutritious or more delicious and productive vegetable. It should be raised by every occupier of land. All that is required to have it in great abundance during the season, is good land, good seed and a little care in planting, training and cultivating. On his own farm he plants Lima beans in rows five feet apart, and the hills three feet apart in the rows. The land can hardly be too heavily manured. Plant the



THREE HORSES ABREAST.—FIG. 186.

beans with the eyes down, and put five or six beans in each hill, and cover with two or three inches of rich, mellow soil. The earlier the beans are planted after the soil can be made warm and mellow, the better. A little rich, well-rotted manure thoroughly worked into the soil in the hill will be of great benefit.

FOR BEETS the soil should be made rich and mellow. Rapid growth makes the beets tender. Drill in the seed pretty thick, dropping a seed every inch, and thin out the plants to three or four inches apart. The young plants that are drawn out can be used for greens. Keep the ground well cultivated or hoed, and suffer not a weed to grow. The farmer, at any rate, should have a full supply of beets, early and late. If he has more than he can use on the table, the cow or the pig will be grateful for them.

THE EARLY BASSANO is a standard early beet. If the seed is of a good strain and the plants are grown rapidly, the beets will be tender, sweet and of excellent flavor. It is doubtful if there is any better early variety. Sow the seed for an early crop as soon as the soil can be made warm and mellow. Do not cover more than an inch deep. For Autumn and Winter use, sow about the time field corn is planted.

MANGELS.—Mr. Harris prefers to grow the Yellow Globe Mangel, rather than the Mammoth Long Red. But much depends on the soil. On very deep, rich soil, perhaps a larger crop can be grown of the Mammoth Long Red than of the Yellow Globe. But the latter are better for shallow soils. They are more easily harvested, and are believed to give a richer color to the butter. The milch cows, as well as the ewes and lambs and suckling sows, will be very grateful for either variety.

Any one who can raise good beets in the garden, can raise good mangels in the field. The only difference is that we make the rows two and a half feet apart, and use the horse-hoe frequently between the rows. Thin out the plants to eight to fifteen inches apart. Keep clean, and this is all there is to be done. If there are any vacancies, fill out the spaces with Drumhead Cabbage. Sow the seed of the latter about a week or ten days later than the mangels. The cabbage will continue to grow and head after the mangels are removed. For a double crop of this kind, the land cannot be made too rich or be too well prepared.

Everywhere.

RURAL SPECIAL REPORTS.

CONN., Columbia, Tolland Co., March 18.—There has been considerable activity in the fruit market for a little time past, though at moderate prices. Apples have brought 35c. per bushel for medium quality. Potatoes bring 65c. for smooth Early Rose. Onions are not active. Farmers have been doing an unusual amount of business in getting off lumber at fair prices. It is probable that farmers will grow patches of sorghum the coming season sufficient for the production of all the syrup required in the family. There are frequent changes in real estate and some good farms for sale. The severe Winter will probably leave the roads in bad condition. The ensilage fever has not yet attacked this place. W. H. Y.

CAL., Marshall, Marin Co., March 10.—I am on a dairy ranche here where 200 cows are kept. This is the best time of the year for the business. Feed is good and abundant. We have not had cold weather enough to freeze a potato out-of-doors, and no frost at all except on a few nights. Butter brings from 36@37½ cents in San Francisco, 55 miles away; eggs, 20 cents—which is very low here—pork, on foot, 6 cents. We are making 140 pounds of butter a day, milking 148 cows. We have lots of flowers all the year round. W. H. P.

ILL., Kankakee, Kankakee Co., March 15.—We have had a long, cold Winter here. It froze up on the 15th of November and has not thawed out since that date. We have had 36 snows, with a total snow-fall of 64 inches. And up to the last week in February we had no wind; the snow lay just where it fell, making the sleighing splendid, of which we have had 12 weeks—something very unusual for this country. During 38 days the thermometer indicated zero and below. The fruit is mostly killed. Winter wheat and rye are doing well so far. Wheat is worth $1; corn, 35c; oats, 30c; potatoes, $1 per bushel; hay, timothy, $10 per ton; prairie $6, and other things in proportion. J. M.

IOWA, Lima, Fayette Co., March 17.—We have had some very cold weather this Winter. The thermometer was down to 30 deg. and 38 deg. below zero, and the snow about two feet deep. Crops of nearly all kinds were good the past season except wheat and potatoes. Corn is worth 22c. to 25c; wheat, from 60 to 90cts.; pork, $4 40 to 4 50; cream, 20cts an inch; butter, 18 to 20cts; eggs, 22cts; potatoes, 40cts. Spring wheat has been a failure for the last three years, some of the farmers have tried to raise Winter wheat, but it gets winter-killed. It averaged about five to ten bushels per acre. P. E. J.

IOWA, Greene, Butler Co., March 16.—We have had a very cold and severe Winter hitherto, with a greater depth of snow than Iowa's oldest inhabitant has ever seen in this State. A. M. G.

MO., Troy, Lincoln Co., March 17.—Wheat looks very promising. R. S. W.

NEBRASKA, Austin, Sherman Co., March 13.—Our Winter of 1880-81 commenced on September 13, '80. In 1879 the first frost visited us on October 19. The first snow fell on October 16, in '81, but this melted away. The snow from the first day of December is still on the field. What was melted by some sunny days in February last, came back by a heavy snow-storm on March 3. In 1880 every one was busy sowing wheat in the middle of March. Mine was sowed on the 24th. The ground this year is still frozen for many feet, and very few had their ground plowed in the Fall. There is, owing to the early Winter, a good deal of corn unhusked in the field. Our wells did not dry up, however. Some days I had to melt snow, because the well was filled up by a snowdrift; but my cattle did well. I lost only two calves, one owing to premature birth. I have plenty of hay. Last year I tried a few fruit trees, obtained from a New York nursery, and among twenty only three proved themselves not frost-proof with us. (Austin is 2 000 feet above the sea). I planted also 2,000 Osage Orange seedlings, but as far as I can judge from the few above the snow, they died. I add that the snow in the field is from 2½ to 2¾ feet high, and that perhaps the little specimens are saved by its depth. Our roads are so bad that two neighbors who had to go for coal, on different times, could not fetch more than 1200 pounds with four horses. Our mail ought to come three times a week; a good many times it could not come once in two weeks. J. B. N.

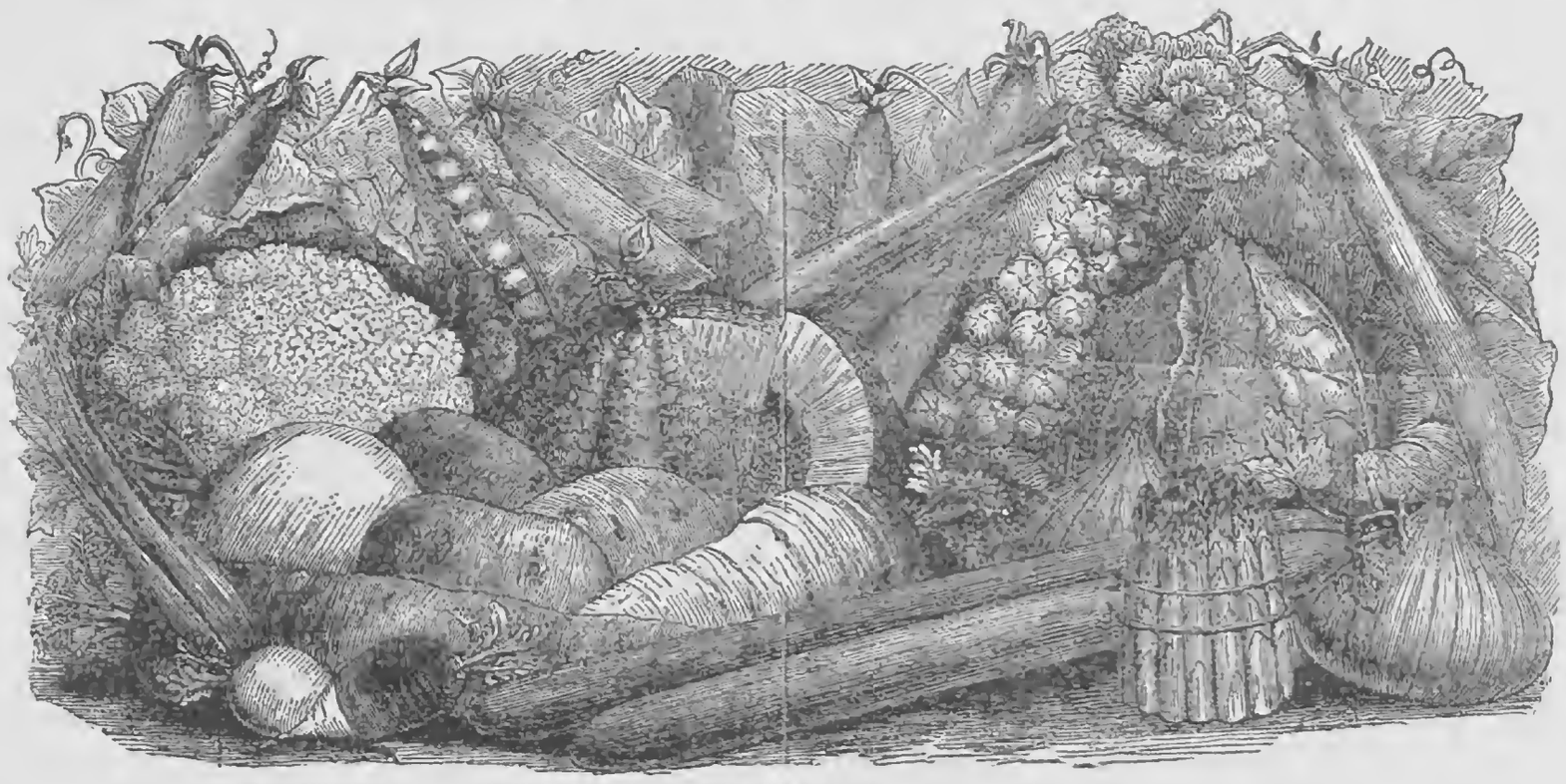
N. C., Tryon City, Polk Co., March 23.—It has been unusually cold here during the past Winter, and we have had two snow storms. Each time the snow fell to a depth of about four inches, and covered the ground for a week. No injury has been done to fruit trees or buds, however, and the prospect is now good for an excellent crop. A. B.

OHIO, Calcutta, Columbia Co., March 15.—The wheat came out from under the snow seemingly in fine condition. Weather fine, indicative of Spring. J. S.

S. C., Greenville C. H., Greenville Co., March 13.—Small fruit culture is going to be, in the not far distant future, one of the chief agricultural pursuits in this Piedmont Belt of South Carolina. A neighbor of mine made 550 gallons of wine last year from five acres of land, and it was from young vines. The same gentleman intends to put twice or thrice that number of acres in vineyards this year. Raising small fruits here can be done much more cheaply than in other parts of this State, on account of the adoption by our county of the "no fence" law, rendering it compulsory upon every person to keep his stock in a strongly inclosed piece of ground, and from trespassing upon the cultivated ground of his neighbor. It has been of immense pecuniary advantage to farmers by lessening the expense of fencing to at least one-fourth of its former cost, and owing to a gradual rise in the value of real estate also. One could have driven last Summer through Greenville County for four or five miles and not have seen one acre fenced in. Your correspondent, "Clinton," who wrote upon the destruction of our virgin forests, and the preventives of it, would surely have advocated the adoption by the farmers of the "no fence" law if he had seen it in operation here. A. H. D.

VA., Hayes's Store, Gloucester Co., March 15.—The farmers are very backward in their work this year because of the late, cold Spring. The greater part of the buds of the fruit trees are killed by the severity of the Winter. All Winter oats are entirely dead and everybody has lost nearly all of his root crops, vegetables, etc., by the severe freezing. Persons engaged in the oyster business have also been heavy losers, as the frozen rivers have made the oysters too poor to sell, which is quite a consideration in this vicinity where many people have to depend on that business for a living. But we are hoping to have good weather this year, so as to enable us to make up for our losses by putting in and making a large crop of corn, truck, etc. H. P. S.

VA., New Market, Shenandoah Co., March 15.—Farmers are plowing for corn and Spring crops; garden making is begun in earnest. We have had a very long and severe Winter here—the coldest known for many years. The thermometer has been as low 35 deg. below zero and the snow two feet deep. We have had but a few mild days during the whole Win-



A GROUP OF VEGETABLES.—AFTER DANIELS BROS'. (ENGLAND) GUIDE.—FIG. 187.

ter. Prices are as follows: wheat, 98c to $1.02; corn, 50c.; rye, 60c.; oats, 35c.; butter, 16 to 18c.; eggs, 12½c.; bacon, 8 to 11c.; potatoes, 50c. P. S. W.

WIS, Minnesota Junction, Dodge Co., March 13—We are having a large amount of snow this Winter. I have lived in this State for 40 years, and up to the present season have not seen so much snow or felt so many blizzards. We have been deprived of mails for a week at a time, and have only just got the roads cleared so that teams can travel. Just now a regular northeaster is coming on again. I think the Spring will open rather late, on account of the great body of snow on the ground. In the Fall, Winter wheat was small; but, as a general thing, it looks well, and I think will come out all right when the snow goes off. Stock looks well, but unless we have warmer weather soon fodder will be rather scarce. A great many farmers will plant Amber Cane seed in Spring. We think the RURAL Corn and Small Fruit Numbers just what we want. C. C. D.

WIS., Rice Lake, Barron Co., March 14.—This section is best adapted to the raising of small grain—wheat, oats and barley. Little corn is grown; a few farmers only raise some of the earliest sorts. Wheat averages from 15 to 30 bushels per acre; oats, 20 to 60; barley, 20 to 40. The last two years have been so dry that crops have only been medium. Fruit culture has not been developed here to any extent. Of apples a few varieties of so-called "ironclads" are raised. One gentleman however, is astonishing the neighbors by raising some of the standard sorts. W. T. F.

WIS., East Troy, Walworth Co., March 17.—We have had a long, cold Winter. It froze up the 11th of November and it only thawed one day in two months. The roads were as smooth as a plank road We have had plenty of snow since the 13th of January. On the 9th of February we had a big rain, then a heavy snow storm and wind drifted the snow badly. Wheat looked bad when the snow came, as it got a poor start last Fall H. A. T.

WIS., Lodi, Columbia Co., March 17.—We have had a long, cold and snowy Winter. Once the thermometer dived down to 40 deg. below zero. The roads have been blocked up so that it has been almost impossible to get around at all. B. M. S.

WIS., Kingston, Green Lake Co., March 16—We have had a very cold Winter with plenty of snow. For some parts of the time the roads were so badly blocked that whoever died could not be buried for days. P. B.

The Queries.

ANSWERS TO CORRESPONDENTS.

Soiling Milch Cows—All About It.

D. B., Omro, Wis., asks for the proper method of soiling milch cows, with all the usual details, so that a beginner can practice the system.

ANS.—Soiling is a method of feeding cattle that are confined in yards, pens or stables, with green fodder grown for the purpose and cut and carried to them. It is a practice suited best to lands that are of high value, and to small farms upon which pasturing cannot be made profitable. For instance, a farmer that has 50 acres of fair land would be doing well to keep 10 cows upon it under ordinary circumstances, but if by soiling his animals he can support 30, 40 or even 50 cows the advantages are very obvious; and this result has been reached by farmers who understand the system and know how to apply it economically. The method may be described as follows:—To begin, a green crop should be prepared for use early in the Summer, but a beginning may be made at any time. The system can, however, be better understood by going through the whole detail, supposing everything is in working order. The first crop prepared is winter rye or wheat or both, sown early in the Fall and later, so as to give a succession of crops for cutting. A piece of clover and grass is also kept in readiness and a field of Orchard Grass is useful. The rye or wheat is ready for cutting in April and May, and is cut and fed as it is required. One square rod will supply a cow for one day if the crop is good, as it ought to be. Near the end of May Orchard Grass and clover will be ready for cutting and Timothy and clover in June. Oats are to be sown on fall-plowed ground as early as possible in the Spring, one acre or more at a time in strips, so that the fodder will be fresh and tender. Oats and peas sown together yield twice as much as oats alone; barley and vetches also make a good crop as a change from oats. This lasts until early Canada corn, or early sweet corn becomes ready. This is ready as soon as it is in tassel, and lasts until the ears are hardening. If there is a market the ears can be sold for green corn; if not, they make rich fodder. Corn is sown in succession so as to keep coming in in the best condition.

When the first rye is cut off it will make a second growth and may be pastured if desired, but it is better to plow the land at once and plant corn or mangels, or oats and peas on it. The oat ground is plowed and planted as soon as an acre is cleared, and in this way the land is never idle but is always producing. Hungarian Grass or millet is sown in July on the late oats or the earliest corn ground, and these crops carry the cows through until the frosts make it necessary to cut the corn and millet. Rye may be sown in August for late pasture if needed, or for early cutting in the Spring, and also later. Whenever a new crop is ready, what is left of the former one is cut and cured for Winter feed, while it is in good condition and before it gets ripe and hard. An acre or two of mangels or sugar beets should be planted in May or early in June for Winter feeding with the surplus fodder or hay not used in the Summer. The corn is planted in drills from 18 inches apart for the small kinds, to three feet for the larger kinds, and the hills are made from six to twelve inches apart. Some bran and corn meal should be fed, as these make the manure rich and pay for themselves in the increased growth of the fodder crops.

The fodder is fed in racks in the yard or feed troughs in the stables, and all the manure is saved by using abundance of litter, such as dried swamp muck, leaves, hard-wood sawdust or even earth drawn in from the fields and scattered around liberally. An enormous quantity of the richest manure may be made by feeding liberally of such feeds as malt sprouts, bran, middlings, palm-meal, cotton-seed meal and corn meal; and the extra milk and butter pay for the feed. A cheap stable for 10 cows to be used for soiling may be made by setting posts in the ground 14 feet apart one way and seven feet apart the other way, and boarding up and dividing into stalls; two cows can be kept in each stall, fastening each to one side of the stall. The stalls are 9x7 feet and a feed passage runs in front from which the fodder can be given. The fodder is best cut 12 or 24 hours before feeding and it can be put into the feed passage through windows from the wagon so as to be readily distributed to the cows. Each cow will eat 50 pounds of green fodder, with an allowance of meal, or 80 pounds without, but the meal, if it has to be bought, is always advisable. The feeding should be in the morning right after milking, at noon and after milking at night. Abundant water also should be provided, as much as if the cows had dry food. The manure should be wheeled out twice a day and a deep gutter made to carry off the liquid into a hollow where it is absorbed by proper material of some kind. As soon as a piece of land is ready, the manure is spread, fresh as it may be, and plowed in, so that but little of it accumulates and none of it is wasted. The cows may be kept very clean if well littered, or the stable is well drained and cleaned twice daily and a brush and card should be used before milking. It is but little trouble and it pays both in the health of the cows and the cleanliness of the milk.

Inversion of the Womb in Cows, etc.

C. H. B., Hamett, Pa., says that one of his neighbors lately had a sick cow that was very weak, wouldn't eat, and was shivering all over; the tender-hearted owner gave her a big piece of pork; rubbed turpentine on her back and between the horns, and then, having cut open the end of her tail, put in some pepper and salt and tied a rag around the place, and our friend asks what we think of such treatment; but he says the cow did well after a day or two. 2. Another neighbor has just lost a cow owing to the so-called "calf bag" coming out after she had calved, and he asks a preventive or remedy for such mishaps, which are of quite frequent occurrence. 3. He also inquires how much a Cooley Creamer will hold; and, 4, what is our opinion of soiling cows.

ANS.—1. The treatment of your neighbor's cow was brutal, and not in accordance with the intelligence expected of a reader of the RURAL NEW-YORKER; but probably he doesn't read it. As the symptoms are not given sufficiently at length, we cannot prescribe the treatment that ought to have been employed. 2. Inversion of the womb is usually due to overstraining during parturition, irritation of the digestive organs, constipation, tumors in the womb passage, etc. Some cows have a natural predisposition towards it, owing either to a tendency to tubercnlosis or to their shape and make in the parts implicated. Elderly cows are more liable to the complaint than younger ones; and it has been noticed that those that suffer most from it rise considerably in the back, beginning to lower towards the tail, the hips, rump and sirloin being for the most part straight—a form that denotes great weakness in the special parts affected. If cows are kept in a cow-house before calving, the floor should not slope backward, but be level, or, better still in the case of some cows, slope as in the cut, figure 88, for some time before calving. The same beneficial influence would be exercised by raising the hind-quarters with a thick layer of litter. If falling of the "calf-bag" is anticipated, the cow should be carefully watched at the time of calving, and when the mishap takes place, a clean sheet should be placed under and around the "bag" to keep it from being soiled. If this has not been done, it should be thoroughly cleaned by the free use of warm water. The placenta should be gently removed and the bag returned as soon as possible. To effect this, the cow should be placed with the hind legs higher than the fore, as in the cut, a couple of assistants holding the bag at the level of the vagina by means of a cloth placed under it. The operator then, having well oiled his arm and hand, as well as the

FIG. 88.

surface of the womb, places his fist or half-closed hand against the center of the bag—the point farthest from the vagina—and presses it gently but steadily up the passage as far as possible, stopping when the animal strains and progressing between her throes. An assistant should afford aid by pressing the organ closely round the operator's arm, which should not be pulled out until the bag has been returned to its place and all the dependent parts pushed in with the left hand, which should also be well oiled. If the animal's throes are very violent, the following anti-spasmodic should be given: Chloride ether, 1 oz; laudanum, 2 oz.; ale (cold), 1 pint. The introduction of a ball of tow has been found beneficial in keeping the bag in its place; it should be removed after 24 hours, if the animal has become quiet. Harness, such as that shown in the cut, should also be employed until all danger of the bag falling a second time is over. It is well to restrain the bowels for a couple of days with doses of landanum. Animals that have died from this disease are unfit for human food. 3. The Cooley Creamers are made of a dozen sizes, with a capacity of from one cow to a large dairy. 4. This question is answered in reply to another inquirer elsewhere in this department of this issue.

Feeding Calves, etc.

A. H. C., Beatrice, Neb., is feeding five calves on the milk of two cows by feeding, with the milk, gruel made of equal parts of oil-cake meal and shorts, and he asks, 1, a number of queries as to the best method of feeding calves from one to three months old under the above condition, and what should be their ration of grain after they have been weaned of milk and put on grass when three months old; 2, a remedy for lice on stock; 3, how to grow large water-melons.

ANS.—1, Calves must be fed very carefully at such an early age. They cannot digest much meal and to over-feed them will stunt them in growth. The oil-cake meal and shorts should be boiled. If mixed in equal parts, one teacupful a day will be enough to begin with at a month old, and the allowance may be gradually increased until, when three months, a pint may be given to each calf. The meal should be well boiled, and made into thin gruel and added to the milk; raw meal will scour the young things. The feed should be given three times a day and about as warm as new milk. Some hay should be given—as much as they will eat; but the meal should never be left before them or they will eat too much. After three months they may have the raw meal, beginning a few days before with a small quantity and gradually increasing up to a teacupful at a meal, which is enough when on grass. Whole grain is not good for them; the extra cost of grinding the meal will be saved in the use of it. 2, Lice will come on any cattle under any circumstances, as these vermin are carried about by cats, dogs, rats and mice, fowls, owls, and other birds, and they come from unsuspected quarters often. When they appear use either the remedies lately mentioned in the RURAL, or apply a mixture of linseed oil and kerosene oil in equal parts to the top of the head, the ridge of the neck and the backbone, the brisket and under the thighs. A few applications will kill them off. Keep no fowls with the cattle or horses. 3, Large water-melons may be grown by pinching the ends of the shoots and keeping only one melon on the vine and feeding it plentifully with weak liquid manure. The soil should also be made rich and continually hoed and stirred.

Hoose in Cattle.

M. R. L. M., Fair Haven, Minn., asks for the cause of, and a remedy for, a disease that is proving fatal among his cattle. When lying down they can't get up, seeming to lose the use of their limbs which will not hold them up even when they have been raised. The appetite, however, continues excellent. On a post-mortem examination of one of twelve lost within three months, the lungs looked as if blood had settled in them, and on cutting them open the cells or "pipes" were found full of white worms from two to three and a half inches long, the size of No. 36 thread, and sharply pointed at both ends.

ANS.—This disease is known as verminous bronchitis or hoose, and is caused by the presence of the worms alluded to, in the bronchial tubes—the parasite is the Strongylus micrurus. The worm is taken into the body from the pastures or drinking places which are undoubtedly infested with it. As preventive measures—pasture on fresh land for two or three years and drain wet places in the pastures. Provide pure, uncontaminated water for drink and, if possible, give fodder that has grown on land to which sick cattle have not had access. Bury deeply the bodies of dead animals. As treatment, separate the sick from the well, give the former good, nutritious food to which is added one-half ounce, morning and night, of a powder made by mixing one part of copperas and two of gentian. Give plenty of salt, and fumigate by placing the animals in a close stable and burning flowers of sulphur as long as it can be breathed without producing violent coughing. The sulphur may be burnt by dropping a small quantity at a time on a shovel or pan of burning coals. Fumigations should be daily for three or four days, then weekly till cured.

Effects of Heat in Summer and Winter.

J. J. B., Allentown, Pa., asks why do we feel the heat more oppressive in July in the shade, where the thermometer registers 80 deg., than we do in January in a room in which the mercury rises to 80 deg.

ANS.—The bodily sensations of heat and cold are poor criterions by which to judge of the temperature, inasmuch as they often depend on conditions other than the degrees of heat indicated by the thermometer. Among other reasons why 80 deg. of temperature might be more oppressive in July than in January, the first that occur to us are, that the system is then more relaxed by a protracted heated term and therefore less able to endure a high temperature than in January, when it is braced up by the ordinary cold of the season; second, the air in hot Summer days is more heavily charged with malaria and other debilitating influences than in the cold days of Winter; third, a sensation is often pleasant for a short time which, if prolonged, would prove the reverse. It is related of Charles II., of England, that one day he asked a circle of courtiers and learned men why it happened that if a fish were carefully and slowly put into a vessel already filled with water, not a drop of water would overflow. Various reasons, foolish and philosophical, were given for the phenomenon, and when all seemed satisfied that the matter had been satisfactorily accounted for, the "Merry Monarch" exclaimed, with a laugh, "But the water *will* overflow." So, after giving the above reasons why a temperature of 80 deg. might prove more oppressive in the shade in July than in a room in January, it occurs to us to inquire—"But is it really more oppressive?"

Retention of Placenta, etc.

T. W. C., Big Rapids, Mich., asks what should be done when a cow retains the placenta after the second day.

ANS.—No harm usually results from the retention of the after-birth for a couple of days; but its removal should not be delayed beyond that time. To effect this, the hand and arm should be well lubricated with salad or linseed oil, and carefully passed up the vagina into the uterus, the points of the fingers having first been brought together so as to occupy as little space as possible, and the back of the hand being upwards on introduction. The protruding end of the placenta should be held in the left hand so that the operator can pull gently at proper times, and an assistant should hold the tail on one side. On entering the womb, the hand is passed to the several places where the after-birth is attached—the cotyledons, as they are called—and if these are gently pressed between the fingers with a kind of rotary motion, detachment soon takes place. Anything like violence must be avoided, or hemorrhage may result. When the entire placenta is removed, it would be well to syringe the vagina well with a quart of soft water containing one ounce of chloride of lime. The following drench may be beneficially given: Eight ounces of Epsom salts, half an ounce of ginger pulverized, one-quarter of an ounce of caraway seed pulverized, two drachms of copavia. If there are indications of bleeding give two ounces of ergot of rye powdered.

Palestine Mammoth Wheat.

E. S., West Union, N. Y., and several others, ask, 1, who sells the Golden Grain or Palestine Mammoth Wheat; is it a Spring or Winter sort, and its price; 2, have we catalogues of the Free Seed Distribution.

ANS.—1. It is offered in a dozen or more of the catalogues which we have noticed. The grain is very large and closely resembles the Black-bearded Centennial. It cannot be claimed to be the largest grain, since it is no larger than the Centennial. We have been unable to learn anything as to the *size* of the heads or the number of grains in a spikelet. J. J. H. Gregory, of Marblehead, Mass., offers this grain at 25 cents for a small packet. Other seedsmen offer it. Messrs. Haines & Co., who introduced this wheat, say it has proven a Winter wheat in Pennsylvania and a Spring wheat in the West and South. We should like to know what is meant by that. We believe that this grain will disappoint people or that it is the Black-bearded Centennial. We have a trial quantity and respectfully advise our friends to await further information before sowing it. 2. We have no catalogues. Our Seed Distribution was fully explained in our Fair Number Supplement, copies of which we send to applicants without charge.

Rice Corn.

F J. G., Dobb's Ferry, N. Y., asks for information about Rice Corn.

ANS.—There are a great many varieties of Sorghum vulgare, not one of which is everywhere known by the same familiar name. Thus we have Durra, Doubra, Rice Corn, Egyptian Corn, etc. Some of these bear upright heads of grain—others drooping, whence the botanical name of S. cernuum has been given. But it is now conceded that the drooping head is not sufficiently distinctive to justify the specific name. Nearly all of these varieties produce a single heavy stalk for which reason they are not prized as fodder plants. The grain is valuable as a chicken food and when ground makes a starchy flour less nutritious than wheat flour. We should not cultivate it if we could raise corn. The Rural Branching Sorghum is a variety of Sorghum vulgare throwing up many leafy stalks from a single seed. This also, unlike the single-stalked kinds, will bear cutting two or three times according to the length of the season. The stalks continue to grow just as well after as before cutting. "Rice Corn" seed may be obtained of any of our prominent seedsmen.

Moistening Old, Dry Cheese.

T. H. W., Oberlin, Ohio, having a few old, sharp, dry cheeses of good flavor, asks by what process can they be best preserved and rendered palatable.

ANSWER BY PROFESSOR L. B. ARNOLD.

Scanty moisture in cheese is a most favorable circumstance for long keeping. The cheeses described, being dry, are already in condition for preservation and will doubtless last as long as desired. The sharp flavor is also largely due to their being dry. It can be very much abated and the cheese made palatable and otherwise more desirable, by making them moist. This can best be done, after washing them with weak lye to get the grease out of the way, by keeping them wrapped in wet cloths. The absorption of water will be slow, but if persevered in it will be effectual. It can be facilitated by making small holes in the side and filling them with water. After cutting it may also be hastened by applying wet cloths to the cut surface. It will not do to immerse the cheese in water, either before or after cutting, as the water will dissolve out its goodness.

Miscellaneous.

E. A. F., Brighton O., asks, 1, whether Oxford Down Sheep are heavier-fleeced than Shropshire Downs; 2, is the market for pork likely to be high or low the coming season; 3, can different varieties of potatoes be planted close together without impairing the purity of the seed.

ANS.—1, Oxford Down sheep are long-wools, and Shropshire Down, medium-wools. The fleece of the former averages somewhat heavier than that of the latter. 2, In ordinary times, it would be very imprudent for any journal to predict, a considerable time ahead, what the price of hog products would be the coming season, as this is regulated not only by the relation of supply and demand, but often also by speculative movements, such as that which sent "mess pork" so extremely high a few months ago. Difficult as it would be at any time to forecast correctly the price of pork, to do so at present would be extra-hazardous owing to the uncertainty as yet with regard to the effects the present European scare about danger of trichinosis from the use of American pork, may have upon the trade. 3. Yes. They can only mix through the seed proper—"seed-balls" as they are called.

H. A. M., Wayne Co., N. Y., asks, 1, where can the Mapes Perfect Corn Manure be had, and its cost; 2, would it be advisable to use it on a clay soil; 3, how much should be applied per acre and how; 4, where can he get seed of the Golden Ovoid Mangel and at what price; 5. have the seeds of the Free Seed Distribution been sent out yet.

ANS.—These manures are advertised in our columns, to which we refer our friend for the address. The price is $50 per ton, or $5 00 per 200-pound bag. 2. We can not advise as to the use of special manures. The advice would be purely guess-work. 3, All the way from two to five hundred pounds. It is best to mix it thoroughly with soil—say three parts of soil to one of fertilizer, sow broadcast and harrow in. It may be used in the hills or drills also. 4. The Golden Ovoid was introduced by the RURAL NEW-YORKER in 1879. It is now offered in several of the catalogues we have lately noticed as "Yellow Ovoid" at 50c. per pound. 5, The columns of the RURAL will answer this question.

M. S. M., Norfolk, Va., has a cow about 18 months old, he thinks, that calved a couple of months ago. Her bag is very fleshy, but she gives little milk, and he asks, 1, whether there is any way to enlarge the udder. She is supposed to be a cross between Ayrshire and Jersey, and he inquires, 2, would the offspring of such a cross be hornless, as she is; she is a very large beast.

ANS.—1, Give plenty of good feed, air and exercise, and milk three times daily. Probably the yield of milk will be more satisfactory after the second calf. 2. The Ayrshire and Jersey are both horned and their offspring should therefore be horned too, unless dishorned artificially. From the fleshiness of the bag, the great size of the animal, and her horned head, we are persuaded that this beast cannot be a cross of the Ayrshire and Jersey. She may be a cross of one of the polled or hornless breeds, but, not knowing her color, it would be useless to conjecture which.

M. W. F., Bryn Mawr, Pa., asks how long the cyclamen remains in bloom.

ANS.—How long the cyclamen will remain in bloom depends upon the temperature in which it is grown. In a moderately low temperature we have had flowers remain in good condition for three months or more, about two months being a fair average. The duration of the bloom, as a rule, is shortened in proportion to the rise in the temperature. The cyclamen is not a hot-house plant. We agree with our correspondent, that the cyclamen is a beautiful as well as an interesting flower. We recently placed a bud of the beautiful Rose, Perle des Jardins, in water in a cold room. It preserved its freshness and beauty for a full month. This is a beautiful rose with large flowers of a golden yellow and high fragrance

T. Y. W., Cornwall-on-the-Hudson, N. Y., asks how to produce bottom heat on a small scale for a hot-bed, by the use of wood, coal or fluid.

ANS.—The above is so peculiarly worded that we scarcely guess what it means. Neither wood nor coal is used directly for bottom heat to a hot-bed. As to fluid, hot water (in pipes or a tank) is sometimes used, and there is nothing better, but it is not economical on a small scale. Manure is the material in common use, and it will yield a lasting heat if mixed with a goodly bulk of leaves. If our friend will tell us the extent of his proposed hot-beds, and for what purpose they are to be used, we can tell him whether hot water or manure will be the better for him, and how to employ them.

I. C. D., Valencia, Pa., has a two-year-old Jersey cow that has dropped her first calf. It has hair growing on its eye-balls just as on the rest of the body—one about half covered and the other about one-third; but it can see a little; the heifer yields milk on one side only, the other side of the udder never having enlarged or shown any appearance of containing milk, and our friend asks whether such mishaps are not rare, and what can be done to remedy them.

ANS.—Such cases are certainly rare. If the animals are thought worth it, the services of a veterinary surgeon should be employed. The cow's udder *may* turn out all right after her second calf. It might be as well to make beef of the one and veal of the other.

S. O. A., Allegan, Mich., asks, 1, whether Pearl Millet is good for Winter feed; 2, what kind of soil suits it best; 3, would it be advisable to raise it for fodder instead of corn; 4, how much seed would be needed for an acre and how should it be planted.

ANS,—1. It is not as good as corn-stalks. 2. With us it has done best on a clay soil, though it is supposed to do better on a sandy one; 3. No; we much prefer corn. 4. A quart is enough for an acre. Sow it in drills three feet apart and thin out in the drills to two feet apart.

P. D., Short Creek, W. Va., asks where and at what price can he obtain seed of the White Burley tobacco, and how to cultivate and cure it.

ANS.—Seed of the White Burley variety of tobacco can be procured of the Western Tobacco Journal, 140 West Front Street, Cincinnati, Ohio, or of J. T. Boggess, Felicity, Ohio. The seed is warranted fresh and true to name. Price 50 cents per ounce or $4 per pound. The method of culture and of curing seed leaf tobacco is applicable to the White Burley in the North, for which see articles in course of publication in the RURAL.

R. M., Mitchell, Ont., Canada, asks whether the Arbor-vitæ pyramidalis is as hardy as the Norway Spruce, and what nurseryman can supply plants 2½ feet high.

ANS.—The disposition of the American Arbor-vitæ to grow into a narrowly pyramidal form is seen in many seedlings. Some catalogues offer it as a distinct sort. There is no difference in hardiness between this and the less pyramidal kinds. We cannot say which is hardier, the American Arbor-vitæ or the Norway Spruce. Both are among the hardiest conifers known.

N. C. B., Clarksburg, W. Va, ask whether the Bowker Fertilizer Co, of this city is O K, and whether he would be likely to get as good a stand of grass by using its special grass fertilizer as by using guano.

ANS.—Yes, it is "O. K." Yes, we think you would. We believe that the fertilizer prepared for grass by this and other good fertilizing companies is better than guano, for the reason that the former contains the nutriment that grass requires in more nearly the right proportions.

J. C. T., Kendallville, Ind., asks, 1., the names of some histories suitable for children; 2, do we recommend the Compound Oxygen advertised in the RURAL.

ANS —1, Green's English History in short stories is an excellent work; histories of the series now being published, called the "Epoch Series" are also good. They can be obtained through the nearest book-store; 2, We have never tried the Compound Oxygen treatment; but we have heard of several cases in which its use produced good results.

J. G. A., Baltimore, Md., asks, 1, how to mix cement for making a walk; 2, a remedy for lice on a dog.

ANS.—One part of cement to three of coarse sand. It is best to dig out the paths first to a depth of a foot or more and fill in with broken or small stones. Then mix the cement so that it will run between the stones, finishing with that which is mixed with less water and a larger proportion of cement to sand. 2. Carbolic or tobacco soap. Whale-oil soap is good.

G. T. J., Goldsboro, N. C., asks, 1, what kind of fish will be suitable for a small garden pond 12 feet wide, 90 feet long and three feet deep; 2, where can the fish be got; 3, what books will "post" him on fish matters.

ANS.—1. European carp—Cyprinus carpio. 2. Of Professor Baird, Washington, D. C. 3. There is no book that treats fully of fish in a small compass. The reports of the U. S. Fish Commission are useful but voluminous.

S. A. B., Edwardsville, Ill., wishing to plant some shrubs, asks which would be the better soil for the purpose—one composed of sandy leaf mold and the natural black soil of the section from the foot of steep hills, or one of a rather grayish color mixed with leaves, but containing little sand, taken from the bed of a small lake that is usually dry in Summer.

ANS.—We should use only the soil which is described as "of sand, leaf-mold and black soil."

C. L. B., Wabash, Mich., asks where can the Niagara Grape be got.

ANS.—We do not understand that the grape is for sale, but responsible parties are wanted to plant vineyards of this grape, to whom special inducements will be given. That is, payment for the vines will be made contingent upon the production of fruit. The announcement will be found in our advertising columns.

J. S. W., Whitley, Ill., asks whether a cow that is milked slowly—say for 25 or 30 minutes—will give as much milk for as long a time as one that is milked more quickly.

ANS.—The milk should be drawn as quickly as possible. Such slow milking would soon dry up a cow.

J. H. F., Cobbleskill, N. Y., asks if Daniel Beatty is the manufacturer of organs and pianos advertised in the RURAL, and whether they are good instruments.

ANS —Yes. Yes.

J. B. N., Austin, Neb., asks whether the Albany and Hoosier grain drills sow garden seeds as well as plant corn.

ANS.—The first does. The latter is intended for corn or seeds as large as corn.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MARCH 26.

"Improvement."—J. T.—O. J. C.—J. L. H.—J. M.—S. K.—H. L. W.—C. A. C.—W. M. M.—H. C. P.—I. W. C.—G. C. B.—M. P. B.—W. L. F.—H. E. B.—F. D. C.—A. S.—P. S. B.—A. R. C.—M. E. H.—Mrs. W. V. A.—M. J. A.—J. H. P. S.—A. E. W.—J. H. B.—P. S, W.—W. M. N.—W. H. Y.—A, S.—I. S.—P. B. M.—J. H. P. S.—T. J. E.—M. W.—C. S. J.—J. B. N.—J. M.—J, S. M. W.—H. A. M.—S. O. A.—M. A. G.—R. S.—E. T. & Co.—J. G. A.—S. B. P.—H. C. P., thanks for suggestion—we fear we cannot work it up.—Mrs. M. H.—I. P.—F. Y.—J. L., answer by mail.—P. S. W.—B. C.—S. B. C.—R. M.—M. H.—W. A. H.—A. L. F.—J. P.—M. M. S.—A. S.

Trees, Seeds, Plants, &c.

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BIDWELL. The Genuine *Headquarter Stock.* Having secured from the originator all of his stock and also from Mr. T. T. Lyon, Pres't Mich. Pom. Society, and disseminator of the Bidwell, all the stock owned and controlled by him, I am able to supply this most promising of the new strawberries in limited quantities. The First Premium was awarded to the Bidwell as the "Best New Variety and Plant," by the N. Y. Hort. Society in 1880. Also a superb stock of the celebrated.

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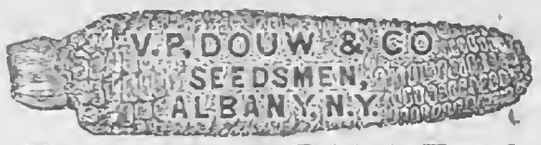

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These collections (Strawberries excepted), *packed to carry safely a thirty days' journey* if the order is sent early. I prepay mail packages; purchasers pay express charges. At these prices no alterations made. Shall be pleased to *double* but can not *divide* a collection.

GRAPES—
1 Prentiss, $1.50. 1 Brighton, 30c.
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10 Highland Hardy (earliest), 10 Brandywine (later), 10 Franconia (later), 10 Cuthbert (latest).
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1 Hydrangea Paniculata. 1 Viburnum Plicatum.
5 Roses (H. P. one year old plants, choice varieties, my selection),
4 Grapes (Prentiss, Moore's Early, Brighton, Lady,)
30 Raspberries, including 10 Cuthbert, 10 Gregg,
12 Blackberries (Snyder and Kittatiny),
6 Currants (Red and White),
100 Choice Strawberries, (my selection of varieties).
By express only for $5.00.

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THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, APRIL 2, 1881.

We have greatly desired ere now to place before our readers the truth, in so far as it can be told, regarding the ensilage question—that is the value of pits or silos for preserving corn-stalks, etc. in a succulent, green condition. A good deal of what has been printed on this subject has been written by those who are in one way or another interested in exaggerating the advantages of the system. At our request Professor E. W. Stewart has furnished us with the whole story as he views it—the first part of which is presented this week. We have only to add that his views are entitled to much respect, as he has investigated the matter very thoroughly; neither has he any motive in distorting the truth, nor is he capable of so doing if he had.

Clethra alnifolia—sometimes called White Alder and Pepperbush—is found wild in damp woods, from Maine southward near the coast. It bears pretty racemes of heath-like white flowers in July and August, and is well worth a place in every garden. Besides its beauty as an ornamental shrub, attention is called to it as a forage for the honey bee, blooming as it does when few honey-yielding flowers are in bloom. The honey from this plant is said to be nearly white and of the best flavor. It is easily transplanted at almost every season and thrives in dry as well as in wet places. We have cultivated the plant for years.

Corn.—The final estimate of the corn crop for 1880 in all the States is placed by the Agricultural Department at 1,507,530,040 bushels. Excellent unofficial estimates put it at 1,537,535,940, or about 30,000,000 bushels more. While the aggregate yield of the Western States, according to the latter calculation, is considered to have been 77,147,710 bushels less in 1880 than in 1879; that of the Middle and Southern States is thought to have been respectively 27,720,040 and 40,380,620 greater. Thus the total shortage in 1880 from the yield of 1879, would be less than 10,000,000 bushels according to good unofficial estimates and about 40,000,000 bushels according to the Department of Agriculture—closely confirming our prediction in the Rural of last September 4th. At present it is highly probable that the supply of corn for the remainder of the year will be unusually small; for, in addition to the fact that the demand for it both at home and abroad yearly increases while the supply this year was originally less than last, a considerable amount of the crop, especially in the Northwest, was left in the fields last Fall, owing to the early arrival of severe weather, and much of this the storms have beaten down into the mud where it has become frozen, so as to render it unmerchantable. Vast quantities, too, have been used for fuel, especially in Iowa, and the other Northwestern States, while owing to the unusual severity of the Winter and the shortage of hay in many sections, a greater than ordinary amount has been used as stock feed. Of course, there will still be a vast quantity of corn in the country, yet the supply will be moderate in comparison with that for the last few years.

THE VALUE OF ENSILAGE.

An esteemed correspondent writes us as follows respecting ensilage:

"No doubt Professor Johnson is correct when he says that if corn were cut at the same time and properly cured, it would be just as valuable, for it is seldom properly cured and the labor of so curing it is greater than of preserving it in silos. Besides, the system of ensilage is very much broader than merely preserving green corn. It certainly appears to be appropriate for preserving all the grasses and for rendering soiling a practical system, which it never has been for the general farmer. It is unfortunate that its enthusiastic advocates have confined it to the one partial food of green corn. By applying it to the various grasses, a complete ration for milk or fattening may be fed from the silo, Winter and Summer. This will solve Winter dairying and render the farmer independent of purchased grain. The whole system is not understood even by its advocates. The wings of some of the enthusiasts of the system, who figure out impossible profits should be clipped; but there is much to be said in its favor after all the drawbacks are considered?"

A MISLEADING DEFINITION.

In the new Supplement to Worcester's Dictionary we notice that the word Ensilage is defined as follows:—"A mode of preserving vegetables fresh, as green corn fodder, sugar-cane, and other arundinaceous plants, by burying them in the earth in a silo or trench." Now in point of fact ensilage does not and cannot preserve vegetables *fresh*. We are told in this very dictionary that the proper use of the word fresh is as in the terms "fresh news" and "fresh vegetables," and why in the world is so much stress laid on "arundinaceous plants"? On turning to the body of the work we find that the word arundinaceous means "of, or like, reeds." But the method of ensilage has for many years been practised for preserving clover, lucerne, the tops of root crops, chicory leaves, mashed roots, brewers' grains and in general all sorts of forage that cannot readily be dried, no matter whether the plants be graminaceous, leguminous, chenopodiaceous, or what not; in view of which fact, the limitation of the lexicographer is somewhat amusing. If the intention had been to imply that thus far ensilage has been commonly applied to the preservation of fodder corn in this country, assuredly something would have been said of plank and stone coverings, as well as of earth; and of *structures* above ground and underground. It was well enough perhaps to grant, unreservedly, papers of naturalization to this French word and to direct, as has been done, that it should be pronounced as if it were of English invention; but it would certainly have been better for the permanent credit of the dictionary if the meaning of the word had been less incorrectly defined. The dictionary-maker, of all persons, should never do work in a hurry. He should most carefully guard himself, withal, from the delusion that pedantry can by any possibility take the place of precision.

CROP PROSPECTS IN THE WEST.

A few of our contemporaries in different parts of the land have already, in answer to inquiries, received a large number of reports from various parts of the country with regard to the condition of the fall-sown grain. The Cincinnati Price Current published last week reports from 400 different points chiefly in the West and Northwest, and on March 26, Bradstreet published reports from 18 cities in the same region, the senders having beforehand gathered telegraphic information from various trustworthy parties in the tributary territories. Inasmuch as most of the country covered by the inquiries is still covered also by snow, very little definite information has been obtained. Comparing both the above reports with some others of a local character, it appears that in Ohio the prospect for wheat was fair with no increase of acreage from the previous season. In the Northern part of the State the outlook for oats was poor; as was that for barley in the Southern part. In Indiana, the outlook for wheat was less favorable than last year; the acreage about the same. In Illinois favorable reports predominate with regard to wheat; there has been an increase of acreage under it, and the aggregate yield is expected to equal that of last year. In Missouri and Kansas, the outlook for crops is highly promising, and there is a considerable increase of acreage under wheat. In both States the severe Winter has left the ground in better condition than usual for Spring work. In Texas, Arkansas and Southern Missouri plowing is now going on, and in the two former States there will be a considerably larger acreage under cotton. In Michigan, much uncertainty prevails with regard to wheat, but the general impression is that while the acreage is about the same the yield will be less than last year. There will be little plowing before April 20. From two to four feet of snow cover the crops in Wisconsin, but the prospect for wheat is unusually good. Montana farmers are reported to have begun seeding a week ago, and Dakota farmers will begin in about two weeks—April 9th. The Missouri River is breaking up, and an immense wheat crop is expected on the "Bonanza" farms. In Southern Minnesota there will be a large increase of acreage under crops; but seeding will not begin for three weeks. The prospects for wheat in Kentucky are less, and those in Tennessee more, favorable than at this time last year. None of the reports indicate any aggregate increase of wheat acreage; but the Department of Agriculture estimates that this amounts to four per cent. on last year's area.

SHOULD THE INNOCENT SUFFER?

A little over a week ago some of the leading members of a gang of land swindlers were arrested in St. Louis, Cleveland and Pittsburg, and a number of others are still at large in other places. Their operations are said to cover from one to three million acres in Missouri and to have been carried on since 1854. The ring engaged in the fraud is believed to have included several government officials, one of whom used to be in charge of a Missouri land office, by which means the swindlers obtained possession of a large quantity of genuine United States land patents, which were sold to innocent settlers accompanied by forged deeds that pretended to give complete titles to the property. These deeds were often given the appearance of age so deftly by the use of smoke or coffee, that no one ever suspected the deception until about 14 months ago, when a private letter gave an inkling of the matter to Secretary Schurz. Special Treasury agents have been investigating the swindle ever since with the results of the above arrests. That this swindle should have been aided at the outset, if not started, by government officials, and that it should have remained undetected for 35 or 36 years, argues gross carelessness—to put it mildly—on the part of the responsible officers of the government. In the meanwhile thousands of innocent settlers have invested their money and labor in lands to which they have no legal title, and the question arises—what should be the action of the Government under the circumstances? In view of the fact that the swindle was perpetrated through the dishonesty of the Government's own officials; that it flourished for upwards of a generation through the gross carelessness of successive incumbents of government offices, and that the present occupiers of the land, having paid for it in good faith, were swindled through the Government's own fault, we believe that only one upright course now lies open to it—to punish the swindlers as severely as the law allows, and to give clear titles to their holdings to the present occupiers of the land. While we insist on the punishment of the guilty, we are equally emphatic in our opinion that for their crimes the innocent should not be made to suffer.

CULTURE ON THE FARM.

Agri-culture, horti-culture, flori-culture are the kinds of culture we keep most before our readers, and we feel at times guilty for leaving it to so great an extent to others to talk of homo-culture, or the culture of man. For, after all, what is everything and anything without Man, the thinker, Man, the worker.

To be sure, we have not failed to urge the proper education of the young; but we have not done what we should to persuade the elder people not to neglect that cultivation of the mind which is necessary to enable them to keep pace with the progress in every department of this great world in which we live. The boy who leaves the school-house early in life, and takes up farming as his avocation, should no more think of neglecting his study and reading than should a physician on the receipt of his diploma from the medical college that graduated him. But we are sorry to say it is often done.

A case in point: The writer being in want of some information concerning matters of long ago, of which he supposed an old school-mate was possessed, wrote him a letter asking a few simple questions, to which no reply came. The matter was not of sufficient importance to warrant another request in the face of such apparent neglect. A year after the parties met in their native country village, when an apology and explanation were offered thus: "I received your letter; but I don't write letters any more. I have got out of the habit of it, and I always get my neighbor to write for me. I told him what to write, but I guess he didn't do it."

Now this man in his youth was equal to the average of his mates as a scholar, and could have been, if he would, the equal in intelligence and information of most of those about him. But what kind of a farmer has he made? The same as his father before him. He is honest, industrious and frugal and his farm is well kept, after the same plan as a hundred years ago. There is no "book farming" about him, you may be sure.

We cite this man as an illustration. The country is full of such, and it ought not to be so. But how is the evil to be remedied? By the introduction in every village and hamlet of Farmers' Clubs, that shall be debating societies, taking up as questions matters both on the farm and off it; of circulating libraries, from which books may be taken at small annual expense, that treat chiefly but clearly on all subjects of interest; of newspapers and magazines that shall be read and talked about, and by bringing forward anything and everything that shall keep alive and in action the thinking power. Interest the young men and the young women in these things, and as they grow older let not the interest flag; and the next generation of farmers and farmers' wives will be wiser, better and happier than the present one.

BREVITIES.

Our choice of green peas for family use from careful tests of *all* the leading varieties is for earliest Alpha; for next early McLean's Little Gem; for the main and late crop two sowings of Champion of England.

Mr. Charles Downing writes us, and our readers will please make a note of it, that "apples sent to be named, should be of average size, color, form, etc., such as will give a fair representation of the variety."

Proctor Knott, Congressman from Ky., in a late House debate on the proposal to grant $10,000 for further investigation of the ways of the cotton-worm, estimated the comparative value of turkeys and government bugologists thusly:—"There would be more propriety in an amendment voting $10,000 to buy turkeys to catch the tobacco worms in my district, for I am sure a single turkey cock is worth more in the extermination of insects noxious to agriculture than all the entomologists the government has employed in the last ten years." Wonder whether it was this curious comparison of the irreverent Knott that caused the defeat of the proposed appropriation!

A bill is now before the Committee on Agriculture of the Massachusetts Legislature the decision with regard to which is of interest to our agricultural colleges in so far as a precedent may be established in a matter which should closely affect the interests of these institutions. It is proposed with regard to the agricultural college at Amherst, to adopt the policy now common in nearly all the New England colleges, by giving its alumni a share in its government instead of the self-perpetuating Board of Trustees who have now control of the institution. Should the bill be passed 15 members outside of the ex-officio trustees are to be chosen for five years—one-third by the Board itself, one-third by the State Board of Agriculture and one-third by the graduates.

The fourth Fat Stock Show at Chicago will open to the public on Monday, November 7th, next, and continue open daily until 10 P.M. the following Saturday. There will be practically no changes in the regulations that have been in force at former exhibitions. The premiums already decided on amount to $4,675 against $3,455 last year. For cattle the premiums will aggregate $2,775; for sheep, $920; for swine, $795; for poultry, $190. A considerable sum is also expected to be offered as special premiums by private individuals, one gentleman having already promised $700 for that purpose. In a Fat Stock show horses, of course, have no legitimate place; but as the majority of visitors are interested in fine horses as much as in other kinds of farm stock, the State Board of Agriculture has decided to partially open the doors of the exhibition to breeders and importers of horses. Of course, no premium will be offered in the equine department, but the excellent opportunity there afforded for the display and sale of choice stock will doubtless induce owners to make a fine show, as each horsemen will have the privilege of exhibiting any number of horses up to ten.

Reports from Southern Texas and the Gulf indicate a rapid breaking up of the Northern Winter. The sun having in his course northward passed the equator on March 20th, the warm winds from the Gulf are already preceding him northward. Late telegraphic reports to New York City say that the season in Texas, Arkansas and Southern Missouri is no later than the average, and although in Northern and Western Kansas, Northern Missouri, Southern Iowa and Southern Illinois telegrams say the season is a week or two later, the prospects are fair for a rapid advance of Spring. In the Northwest, however, Winter still appears reluctant to depart, for on Friday, March 25, the Signal Service telegraphed to this city that for the previous five days the temperatures had averaged below the freezing point as follows:—Dakota seven degrees; Minnesota, nine; Wisconsin, six; Michigan, ten; Iowa, five; Nebraska, three; Illinois and Missouri, one, with Kansas at freezing point. The condition in the last five States was favorable to the rapid disappearance of snow. This morning's telegrams announce disastrous floods with great destruction of property in Nebraska, and should the enormous deposits of snow melt rapidly, similar floods must occur all over the West. Farmers should prepare, as well as they can, in advance for such a contingency.

Literary Miscellany.

A WONDERFUL CRYSTAL WEDDING.

JOSEPHINE POLLARD.

"'Tis time for our crystal wedding,"
Said Mr. Frost to his wife,
With a suddenly sharp expression,
That cut like a two-edged knife.
"The North Wind must be invited
To bring his friend from the East,
And none of our friends must be slighted
Or fail to appear at the feast."

So then they began to make ready
With speed, regardless of cost,
For the beautiful crystal wedding
Of Mr. and Mrs. Frost.
The North and the East Wind called for
Miss Snow and old Mister Sleet,
And all of that party together
Were sure to have things complete.

In honor of the occasion,
The houses with fringe they drape,
Rich beads and bugles of crystal
Suspended in every shape.
While all the poles and the chimneys
Were dressed in transparent suits,
And the trees were overloaded
With loveliest glaced fruits.

The Telegraphs were invited,
So out of town couldn't go;
And the Telephones failed to answer
When any one cried "Hallo!"
The magnates were not forgotten,
Who stand in serene repose,
And Franklin made his appearance,
With an icicle on his nose.

There were acres on acres of icing,
And wonderful rivers and lakes;
Most beautiful caves and grottoes,
And delicate frosted cakes;
While cobweb curtains suspended
Above the scene, in mid-air,
Lent a charm to the crystal wedding,
That proved such a grand affair.

Decanters and tumblers, engraven
With initials of old Jack Frost,
Were scattered about in profusion—
No telling just what they cost;
And I couldn't begin to number
How many from out of town
Came in to this crystal wedding,
And at the banquet sat down.

Old Sol got wind of the matter
Just as he was going to bed,
And out from between the curtains
He suddenly popped his head
And smiled, as with glowing fingers
He took Jack Frost by the ears,
And loosened the pearls and diamonds,
That straightway dissolved in tears.

Soon faded the lovely picture,
The limpid and sparkling sheen,
That seemed, to our raptured vision,
Like unto a fairy scene;
And some will remember the beauty,
And some will remember the cost,
Of the wonderful crystal wedding
Of Mr. and Mrs. Frost.—N. Y. Independent.

ADVENTURES OF AN ANTEDILUVIAN
In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 213.)

CHAPTER X.

SOCIETY WITHOUT SOCIAL DISTINCTIONS.

SHORTLY after seven o'clock Mr. Flyter arrived and we set out together for the neighboring park. We found it already lighted for the evenings entertainment. Many people had arrived, and the children especially were present in full number, which seemed to imply that it was an occasion in which they greatly delighted.

All the people seemed to meet on complete equality, and no one passed another by without a pleasant greeting. There were no bashful ones sitting apart from the rest of the company as though fearful of exciting unfavorable remarks on their dress or behavior, nor could I discover that any one was inclined to put himself or herself forward with the view of attracting attention.

The old people walked and talked together through the delightful avenues of the park, or sat in the pleasant arbors and discussed the events of the day. The young people danced and sang, played at various games, and created fun and enjoyment for themselves in a thousand different ways. While the children collected together in a pavilion by themselves, passed the time as gleesome, happy children do.

I moved among them quietly, and would modestly have kept myself in the back ground. But this I was not permitted to do. Mr. Flyter introduced me to every one he met, and they all seemed so cordial and pleasant, and treated with so much respect and courtesy that I was made to feel at home in spite of myself. In fact I was treated in every respect like one of the family, a word in which I found they much delighted, as expressing the intimacy, and friendly relations which existed among the people of each section of the city. Indeed, I had never known a family among whose members there was greater harmony of feeling, more delicate regard for each other's rights and preferences, or a stronger disposition to repress selfishness; and to promote each others happiness in every reasonable manner.

I asked Mr. Flyter if it was the custom for all the people of the wards to assemble at these social gatherings.

He replied, that on an average there would not be forty of the inhabitants of each ward absent. And these would be away visiting, or detained at home by natural and unavoidable causes. "We are a very social people, as you may have observed," he went on, "and these gatherings are sustained in so general a manner, not from a sense of duty, or out of respect for an old custom which has been handed down to us from our fathers, but because of the real enjoyment which we derive from them:

"Do you keep them up the year round?" I asked.

"Yes, sir, Sundays excepted, every night throughout the year, and even then all the people may be found congregated in the church at the other end of the park."

"There is one thing about your people," said I, "which I cannot understand, and that is, how you get along without a lower stratum of society. I walked eight miles through your city this morning, and I did not see a single home of poverty, and among the many persons whom I met not one presented the appearance of want. You say that all the people of your ward are assembled here to night with the exception of perhaps forty, yet I cannot discover that any one is distinguished from another by dress, intelligence of look, or general manners."

"I do not quite understand your question, sir," said he. "What do you mean by a lower stratum of society?"

"Who, are your 'hewers of wood, and drawers of water.' The men and women of toil; who carry society along on their brawny shoulders, and who by the sweat of their brows and the toil of their hands make smooth the way of their more fortunate fellows?"

"Your explanation only mystifies me, sir. 'Men and women of toil, who by the sweat of their brows and the toil of their hands make smooth the way of their more fortunate fellows!' Why, sir, I know nothing in the whole length and breadth of our land which answers this description."

"Perhaps I obscure my meaning by too figurative language," said I, "let me speak more plainly. This magnificent city of yours did not spring up by magic. Brains of skill and taste are evident in it everywhere; but back of these there must have been the muscle of the laborer to dig its foundations, delve out its sewers, pave its streets, and rear its wondrous structures. The food which comes nicely served to your table is not the product of unaided nature, there must be hands to guide the plow, to sow the seed, to cultivate the crop, to reap the harvest, to thresh it, grind it, and transport it to where it may minister to your imperative wants. Now in my country the men and women who thus serve society by the labor of their hands constitute a distinct class and in the social scale, stand at the bottom, and are hence said to be the lower stratum of society."

"You surely do not mean to imply by your remarks," said he, "that in your country there are two classes of society; one of which performs all the labor, and the other of which eats the fruit of that labor; that those who labor are looked down upon and despised by the other class whose imperative needs they are the direct means of supplying?"

"Not exactly, sir," said I, "willing to round off the sharp edges of this rather severe view; You know that in the very constitution of nature there is a foundation for different ranks of society. All men are not created with equal gifts. Some are born to command, and others to obey, some to lead, and others to follow, some to plan, and others to execute. All cannot command, for then there would be none to obey; neither can all lead, for then there would be none to follow. There must be many followers for one leader, and many to execute where there is one to plan, and as the necessities of existence are alike upon all, the inferior offices in the ongoings of society naturally fall to the lot of those whose birth or circumstances do not raise them above the necessity of performing them."

"Hence you mean me to understand," said my interlocutor, "that in your country, inferior offices, as you term them, in the maintenance of existence, all fall to the lot of a class, which you call the lower stratum of society. Now, in this country no duty which is connected with the maintenance of existence is regarded as inferior. It would be a libel on the goodness of the Creator to suppose that he should have constituted our bodies in such a manner that anything connected with the maintenance of their integrity should be degrading to perform. The fact that man needs food which can be produced only by muscular effort necessary to obtain it, or that he needs clothing to ward off the cold, or a house to protect him from the inclemency of the weather, which cannot be secured to him without labor, indicates that it would be to his advantage, and in no sense degrading, to put forth the labor essential to accomplish these necessary results.

"Now for one part of society to impose on another part the labor necessary to provide for our natural wants, and to look down upon it because it is less fortunate in its worldly circumstances, would be utterly abhorrent to our reason, our sense of justice, and the charity which we are taught to exercise toward our fellows. With us a man is esteemed according to the usefulness of the service which he performs. The man who digs a ditch to drain a marsh which is the source of malaria to the inhabitants round about it, is more honored on account of that service than the philosopher, who, after years of study, arrives at a demonstration of the revolution of some nebulæ in the realms of space. In fact, it is recorded that several generations ago, a poor man took possession of a tract of unreclaimed land which had hitherto been avoided on account of the expense of draining it. He and his family suffered much from the noxious exhalations of the marshy soil; the circumstances of the case becoming known here, a body of our best citizens went out, and getting the poor man away from home, with their own hands dug ditches, and completely drained the marsh before his return, and escorted through the streets by thousands of our citizens as a mark of the esteem in which such a generous deed was held."

"Such a disposition of good-will toward our fellows in a people," said I, "cannot be too strongly commended, or its far-reaching, beneficial influences too highly rated. But it seems to me that in your remarks you have not given due weight to the advantages of the natural division of labor which obtains in every community, nor to the fact that men are naturally adapted to different occupations by their difference in mental endowment, nor to the fact that rank in society is a natural outgrowth of this very difference in mental capacity which is a characteristic of society everywhere.

"You are a manufacturer and merchant. Your time and attention are almost completely taken up with your business. If you have a house to build, you have not the time, the physical power nor the skill to dig its cellar, lay its foundations and put together its materials. But each of the many branches of labor connected with it is best performed by the different tradesmen, who are each trained to a particular calling.

"The trade or profession which an individual is capable of following with success depends much on his natural mental endowment. There are few poets, statesmen, or philosophers in any generation. Those who have not the talents for these exalted stations must content themselves in the broader fields of the professions. If they have not the talents necessary to earn a livelihood here, they must fall back into the still broader fields of the trades and mercantile life. And if in these fields they have not sufficient intelligence to earn success, they must descend to that lowest and broadest of all conditions in society, the condition of the common laborer.

"I begin to suspect," said Mr. Flyter, "that the difference in our views of this subject results from the difference in the standpoints from which we contemplate the picture. You, knowing but little of the condition of society here; argue from the facts which you have observed among your own people, and I, knowing nothing of the manners and customs of your people, speak from my knowledge of society as it exists among us.

"I confess that I can gather but a vague notion of your meaning when you speak of different grades in society, but I recognize the justness of your observations on the social inequality which exists between the cultured and refined and those whose minds have been dwarfed, and whose perceptions have been blunted by inactivity, and the continual strain of physical labor. Happily, however, among us there is no such social inequality. Here every individual is well educated and cultured. The waiter who serves you at your hotel, the barber who shaves you, and the laundryman who does up your linen—have had just as much care bestowed upon their education, and are as well informed and as well bred as any member of our general society. As I have said before, usefulness is the badge of esteem among our people. And all being alike well-educated in their youth, and allowed the same number of hours each day, and the same opportunities, speaking generally, for the cultivation of their minds and the development of the noblest attributes of our nature, there is, of course, not the least occasion for distinctions in our general society."

Our conversation was interrupted at this juncture by the approach of a young lady, the most lovely in feature and the noblest and most graceful in mien that I had ever seen, who addressed Mr. Flyter as Grand-pa—being in reality his great-grand child. The old gentleman cruelly turned me over to her tender mercies, which was an infliction I felt sure his kind nature would never have been guilty of, if he had really understood my feelings in the matter. For though an ardent admirer of the opposite sex, I had always enjoyed them best at a distance. And to be obliged to keep up a conversation with this divine creature, who I felt sure must be the belle of the park, and who I could not but believe must regard me as the most ugly, puny and contemptible specimen of humanity that she had ever seen, was a task before which my voice grew husky, and my whole frame trembled with self-distrust.

She, however, appeared to be utterly oblivious to these tokens of embarrassment in my manner, and talked away with such a hearty good-nature and so much intelligence upon topics relating to the customs of the country, and objects of interest about the park, that I soon came to feel quite at home in her society. Indeed, I had never been more favorably impressed by any woman, young or old, whom I had ever met. Beautiful without being vain, cultured without being pedantic, dignified without being haughty, and modest without being diffident, there was thrown over all a simplicity and artlessness of manner which in almost any other young lady I would have regarded as either the hight of affectation, or an evidence of the want of familiarity with the world. But in Miss Flyter it was like an elegant setting to a costly pearl, or a handsome frame to a picture of rare beauty and excellence.

It may be supposed that I fell desperately in love with this very lovable young lady. Nothing would have been more natural, under ordinary circumstances. In fact, I believe I did on two occasions make observations which any other young lady of my acquaintance would have construed into an evidence of admiration, but they were as completely lost upon Miss Flyter as they would have been upon my grand-aunt. The effect of this was to make me more circumspect, but did not in the least diminish my admiration for the young lady.

CHAPTER XI.

LIVING BY THE CLOCK.

I RETURNED with Mr. Flyter from the park, and for several weeks enjoyed the hospitality of his home. It was indeed hospitality, in the truest sense of that term. For though I was an utter stranger and quite an insignificant one at that, all the members of the household served to vie with one another in promoting my enjoyment and making me feel entirely at home. It was not indeed a difficult matter to keep me entertained, for everything which I saw and heard was new and interesting, and I was an eager student of the manners, customs and institutions of this noble people.

Mr. Flyter's home was a spacious mansion surrounded by a plat of ground of half a square in extent. His brother-in-law and his family occupied a similar mansion on the other half square. The grounds about both these mansions were laid out with exquisite taste, and kept scrupulously neat and flourishing, by the personal care and labor of the members of the households. Servants among the people were few and no one thought it beneath him to take a spade, shovel or pickaxe in his hand and perform that labor which is usually thrown on the shoulders of John or Patrick. And I might add that there was not one among them with whom John or Patrick could for a moment compete, either in skill, strength or physical endurance.

Mr. Flyter's household consisted of himself and wife, his son and his wife, his grandson and his wife, and their son and daughter. His brother-in-law's family was composed of the same number and the same order of generation. Several other families whose acquaintance I made, possessed this same peculiarity of number and relationship. In fact, I found that it was the universal custom of the country for the father, son, grandson and great grandson, with their wives, to form a common household, and I was told that it was not an uncommon thing to find five generations having everything in common and living happily together under the same roof.

The question naturally occurred: What becomes of the supernumeraries—if I may so term them—of large families and those who are not fortunate enough to secure husbands and wives; for I invariably found that there were but two of each generation in the same household. I put this question to Mr. Flyter one day, and it may well be supposed that the answer which I received gave me some new and interesting ideas on a very important question of sociology.

"Why, sir," said he, in reply, "there are no supernumeraries in our families, and none who pass the marriageble age without marrying. Every married pair have two, and only two, children, a son and a daughter. The son invariably finds a domestic partner at about thirty years of age, and the daughter is considered marriageable at twenty-five, and seldom has to wait long after that age for a husband."

"Happy people!" I involuntarily exclaimed, "among whom a domestic partner is assured to every one. "But, sir," said I, "I am curious to know how you regulate this matter of progeny. In my country, where there are many of both sexes who never marry, the number of children which are likely to be born to any married couple is very uncertain, and the sex of those children is equally as uncertain. Doubtless this matter of hereditary transmission is governed by immutable laws, but if it is, they are practically unknown among us, and the number and sex of a man's children are a mere matter of chance. Thus, while I know of some married couples who have no children at all, others have a dozen or more; and while in one family the children may be all boys, in another they are just as likely to be all girls. Besides, there are many diseases which make such terrible ravages among our children that sometimes whole families are swept away before they reach maturity. So you may well imagine that it is a source of wonderment to me to find living under the same roof a family chain of four or five generations without one supernumerary or broken link.

"I suspect," replied my host, "that you gave the true explanation of the difference between our people in this manner when you said that there were doubtless immutable laws which determine the number and sex of children, but that those laws are practically unknown among our people. Now, among us these laws are well known and thoroughly obeyed. In fact, it is a matter of necessity with us that they should be known and obeyed; for you must understand that our population has about reached the limit of the capacity of the land to sustain, so that an increase of even one child to every married couple would result in much suffering, and even starvation among the inhabitants. Thus each married pair seek only to reproduce themselves in one son and one daughter, that the number of our population may be sustained at the limit where the best interests of all shall be subserved."

"But, sir, said I, "in our conversation the other day you spoke of your country as being many millions of square miles in extent. You surely do not mean to say that this vast region is fully occupied, and that it has reached the full limit of its production."

"I do indeed," he replied. "There is not a waste or barren spot in its whole extent. There are mountain ranges, it is true, whose snow-capped peaks and rocky sides might at first thought be considered barren, but they subserve a very essential service in the productiveness of the valleys and plains, so that they are by no means barren in the sense that they are useless: while in regard to the productiveness of our soil, it is enough for you to know that it is a general estimate that the product of an acre will afford an abundance of food for a family of ten."

"Am I to infer from your remarks, sir," said I, "that ——" Here a bell sounded, which caused Mr. Flyter to spring up so abruptly that I verily thought that he must be a member of a fire company, and that the bell was an alarm of fire.

"Put on your hat and go with me to the gymnasium," he said.

I obeyed, wondering how he knew that it was the gymnasium that was burning. As we passed down-stairs we found the other members of the household on the move, and when we reached the street a tide of people seemed to be moving along, all in the same direction, its number being constantly augmented from every house and cross-street.

Observing that there were as many women as men in the throng, and that they were altogether a very jolly company to be hurrying to a scene of

conflagration, I quietly observed to Mr. Flyter:—"Are you sure it's a fire?"

He turned about and looked me full in the face with a very searching glance for about a minute before he replied. "Fire! No."

It was not the first time that my sanity appeared to me to be called in question since my advent among this people, and I resolved in future to think before I spoke and to be less hasty in jumping at conclusions.

When we came in sight of the park I observed that the people were crowding into the three gymnasia, which were a feature of every park, and it then occurred to me that the bell which I heard was rung to summon the inhabitants to their daily athletic exercises. This people had a Grecian love for athletic sports, and, as a result of this, a strength, vigor and beauty of physique which would have made them models even for that æsthetic and physically perfect race. And they showed the same method and regularity in taking physical exercise as characterized their habits in all other particulars. In fact, the methodical habits of this people were a source of continual wonderment to me; and on many occasions I could not suppress a smile at the conscientious promptitude with which every duty was performed. I had known individuals in my own country who divided up their time with sharp-cut exactness; who had regular duties apportioned to every hour in the day, and carefully observed rules as to eating, sleeping, exercise, etc., and I had been accustomed to ridicule the punctiliousness of these persons in thus imposing on themselves rules and habits which I thought could not but be irksome for them to follow. But here were all the people of a great city—and I was told that the same was true of other cities in the country—all actuated by the same principles in regard to their habits and mode of life, and living up to those principles with punctilious exactness. And what was the more remarkable in regard to the regularity of their habits was that they were under no constraint in the matter except the constraint which habit imposes when it becomes second nature, and when it is sanctioned by the conviction of the intellect that it accords with the truest and best interests of the individual.

To be continued.

BRIC-A-BRAC.

THE PLACE HE WANTED.

A Galveston millionaire was asked recently by a delegation of his friends if he would not consent to allow his name to be used in connection with the United States Senatorship. He replied that he never had meddled in politics before, but just now he had made up his mind to apply for a position other than the Senatorship. "Ah! I suppose you want to get on the Supreme Bench," said one of the committee. The heavy property owner shook his head and toyed with his $5,000 diamond ring. "Perhaps Garfield is going to offer you a place in his Cabinet?" "No. You havn't guessed it yet." "Foreign mission?" "Gentlemen, I'll be candid with you. For years I have been trying to get the city authorities to have the slop barrel at my back gate emptied once a month and have failed. I am determined to have that slop barrel emptied, and I have applied to the City Council for the position of driver to a scavenger cart."

LOVE'S CALENDAR.

THE Summer comes and the Summer goes;
Wild flowers are fringing the dusty lanes,
The swallows go darting through fragrant rains,
Then, all of a sudden—it snows.

Dear Heart, our lives so happily flow,
So lightly we heed the flying hours.
We only know Winter is gone—by the flowers,
We only know Winter is come—by the snow.

—T. B. Aldrich.

AN OLD TABLE.

"That is surely the oldest piece of furniture in England," said a collector of antique curiosities to a friend, pointing to a venerable-looking table, as he spoke.

"How old is it?" asked the friend.

"Nearly 400 years."

"Pshaw! that is nothing. I have an Arabic table over 2,000 years old."

"Indeed!"

"Yes; the multiplication table.

The scaly scamp! to be so sly,
(If he didn't tell a lie,)
And to neither laugh nor cry
Is almost past belief.
But to have "squealed" would not have done,
For then he'd have to cut and run,
And, too, he would have spoiled their fun,
And brought himself to grief.

MODEST MUSE.

HIS BREAKFAST ORDER.

Mr. Setemup came down stairs to a 10 o'clock breakfast with a vacant countenance and a backward tendency in the hair that made his two eyes ache. He sat down at the table and picking up a knife and fork, glared in uneasy wonder at something on the platter before him. It had evidently been fried in butter, and was evidently intended for food. Mr. Setemup harpooned it with his fork and lifted it up bodily, gazing at it with ever increasing wonder.

"What under the sun," he exclaimed at last, "is this thing?"

"Well," replied his patient wife, with just a shadow of a sigh, "it looks like your new soft felt hat, and that is what I thought it was, but you pulled it out of your pocket when you came home this morning and said it was a porter-house steak, and you wanted it broiled for breakfast. You needn't give me any of it; I'm not hungry."

And Mr. Setemup, who was just will to know what else he said when he came home and what time it was, for the life of him didn't dare to ask.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE FLOWER GIRL.

LILIES! lilies, of the vale!
Buy my flowers, they're all for sale,
Sure such beauties ne'er were seen,
Hiding 'neath their mantles green;
Gentle lady, would you know
Where my drooping treasures grow?
In a sheltered shady nook
Close beside a running brook,
Where the birds unceasing sing,
Flowers in rich abundance spring.
Violet and snowdrop sweet
Bloom unheeded round my feet;
For, in vain, they would compare
With my lilies, pure and fair.
By their precious fragrance led
Soon I reach a mossy bed;
Where, secure from every eye,
Lilies spring and flower and die.
Roused from sleep, I bring them you,
Fresh and wet with morning dew;
See them now, so sweet and pale,
Buy my lilies of the vale.

SILK CULTURE IN AMERICA.

For Women, Girls and Children to Read, who wish to Make "A Little Money."

MARY WAGER-FISHER.

It is rather more than two hundred years ago that the culture of silk was begun in this country, in the Colony of Virginia.

James I, who hated tobacco, believed that the cultivation of the silk worm would succeed in the genial climate of Virginia, and if so, it would supersede the raising of tobacco. Although great effort was made to encourage the cultivation of silk by the British Government, the result was a failure. Tobacco was more profitable. Enough raw silk had been raised in the colonies, however, to make the coronation robe of Charles II.

The effort was again made in Georgia, and from 1766 to 1774 the annual export of reeled silk (a reeling establishment had been opened at Savannah) amounted to, from five hundred to a thousand pounds. But as cotton became vastly more profitable, the culture of silk in Georgia was abandoned. In 1760 silk culture was begun in Connecticut and continued for eighty or more years. About half a century ago, a general revival in behalf of silk culture, extended over all the Eastern and Western States, and a great rage for the Morus multicaulis, (many-branched mulberry) sprang up, so much so that as high as five hundred dollars a hundred were paid for cuttings. But the enthusiasm proved to be a bubble, which burst a short time before 1839, since which time there has been less silk raised in the entire country, than there was in Georgia 120 years ago.

The success of every valuable industry has its period of probation, and there seems to be no reason now, why the culture of silk in this country cannot be made a very profitable employment. Heretofore, there has been no home market for the cocoons and no machinery for reeling the silk; now the immense silk mill of the Cheney Brothers at South Manchester, and the seventy-seven silk factories in Patterson beside 140 others in various places furnishes a market for all the silk that can be raised in America for some years at the least. American silk has reached such a degree of texture and beauty, that increasing orders come for it even from France, the land of the silk worm and of silk manufacture.

In the neighborhood of Philadelphia there has recently been considerable experimenting by various intelligent persons, in silk culture, in order to test the feasibility of cultivating the silk worm and the results have been so successful and entirely replete with encouragement, that various philanthropic women have formed an association, known as the "Women's Silk Culture Association of the United States." Perhaps I should add that this society is not the outgrowth of experiments in Pennsylvania alone but also of a belief in the theory in many other places.

However, people always have most faith in that with which they are personally acquainted. Persons who have attended the Pennsylvania State Fairs, for the past two years, know something of the work being done by this association from its exhibit in the Exhibition Building.

As $12,000,000 yearly go from American manufacturers to foreign countries for raw silk, it certainly was both a philanthropic and patriotic idea to endeavor to keep as much of that goodly sum as possible at home to enrich the pockets of thousands of our own countrywomen; thrifty, ambitious women and girls in rural districts, who rack their brains for some way in which they may earn a "little money"—by interesting and engaging them in the culture of silk. It is a work for which women are entirely fitted, and also has the advantage over many occupations of being carried on at home. It is capital for children, too, who become intensely interested in the curious and wonderful cocoon makers.

The practical features of the Association consist of a school in which persons are taught to care for the silk worms through all their stages of development and to reel the cocoons—for American artisans are now endeavoring to make the best possible apparatus for reeling silk, so that filature of it may form part of the silk culturist's Winter work—to furnish silk worm eggs and trees and cuttings of the most approved sort of mulberry trees for the worms to feed upon; and a small book, or brochure, which gives full information as to what and how to do in order to successfully cultivate silk. This little book costs one dollar, but several persons in a neighborhood, moved to undertake silk culture, can club together and procure the book at very much reduced rates; the eggs cost one dollar a thousand, $5 per ounce. Ordinary mulberry cuttings (it is the best way to propagate from cuttings) cost $1.50 per hundred.

Now for some figures concerning the profits of silk culture. Raw silk commands from $4 to $3 per pound, according to quality; cocoons and floss silk from $1 to $1.50 per pound. Two hundred mulberry trees will grow on two acres of land, which would yield about 30,000 pounds of leaves. About 16 pounds of leaves make a pound of fresh cocoons, which would yield about 1,765 pounds of fresh cocoons. These, when stifled (dried) would weigh about 588 pounds and the dry cocoons at $2 per pound would amount to $1,176. A fair estimate for expense would not exceed $160, leaving a balance of $1,016, on two acres of land and in one month's or six weeks' time. Where two crops are raised in the Summer, as may be done, of course the profit is proportionally greater.

Another feature of the association—and a very important one—is that it will buy all the cocoons raised by women, however small the quantity. This the silk mills will not do, but the mills will take from the Association the raw silk if it can furnish it to them in large quantities. Of course large factories can only buy at wholesale. The Association also supplies silk worms at the proper season, at $1 per hundred. Perhaps I should say that this is purely a philanthropic society, chiefly supported by persons who are sufficiently interested in this subject to be willing to put their hands in their pockets and draw out the necessary funds for its support; especially to benefit their countrywomen. If anybody who reads this wishes to make a donation to this worthy cause, or to solicit more specific information than I have given—and there is a great deal more to be had—address the Women's Silk Culture Association, 1,328 Chestnut street, Philadelphia. Don't forget to enclose a postage stamp, for any reply that you may desire.

That silk culture in this country can at this time be made profitable by country people, is, I think, unquestioned by persons who know anything about it. But, like all new industries, it should be begun by the uninitiated in a small way at first, and gradually improved upon as one obtains experience and success. I have no doubt but that if a large number of RURAL readers express a desire for more information in regard to silk culture, with a view to undertaking it, that the editor of this journal, with his usual generosity, will make room for it and give from time to time hints and suggestions that will prove helpful to the young silk culturists. Perhaps ere long there will be need of a "silk culture department." When we produce our own silk, and tea, and sugar, what airs we can take on!

DECORATIVE ART NOTES.

M. G. H.

It is a significant sign of the progress of the artistic spirit in this country that so many of our most prominent artists are engaged in household decoration.

This is walking in the footsteps of the old Venetian and Florentine masters who brought the best of their art to serve domestic ends, and have left a legacy which we think it no burden to cross the water to obtain.

In almost all houses are antiquated mirrors whose frames, either tarnished or scaled have made them unsightly or useless. The glasses unless broken are usually very true and worth preserving. A new fashion comes happily to their aid. Have plain wooden frames made for them, at least three inches wide, and then decorate them.

A beautiful mirror of beveled glass has one of these frames stained with oil paints in varying shades of brown; across the top and drooping on one side is a branch of snow balls whose roundness and perspective is finely shown. Another has a naked branch on which is perched a flock of snow birds; on the opposite corner spring branches of golden rod. A third is covered with crimson plush. Across one corner passes a band of gold satin with a motto, holding a bunch of peacocks' feathers falling over the glass. At the bottom, painted on the plush, are up-springing daffodils, whose brilliant yellow petals are of natural size.

The most artistic and effective fabrics are now produced by ladies at their own homes by purchasing the common brocaded goods, and following the patterns with crewels in South Kensington stitches. The selection of the colors requires some judgment, but any one at all familiar with the harmonies and tones now demanded in all good work will have no difficulty. These goods so embroidered are used in upholstery for fancy chairs and also for table covers. Cheap laces of good designs are treated in the same way and combine effectively with the stuffs.

Industrious ladies have their recompense in some pretty articles for feminine adornment which it is not given for the idle to appropriate. The most artistic of these are long scarfs of silk slipped through an ivory ring, which are to be worn over the arm, and which conceal a work bag in their folds. Such a one of dark blue-green silk is made double, with fringed ends on which are embroidered delicate flowers in blue with their foliage. A slit reveals the pink inner lining and opens the way to the pocket. Others are of pongee lined with color, and decorated in outline stitch with quaint figures from Mother Hubbard, Edward Lear, and Kate Greenaway designs.

For home use, use pongee silk aprons. These are turned up at the bottom forming the pockets and embroidered with delicate sprays in stem stitch, and with such old-fashioned flowers as the French pink, known in art as corn flowers, wild roses and daisies. Another was very appropriately ornamented with the clearly defined words in olive greens, "How doth the little Busy Bee," with here and there outlined an illustrative busy bee.

One of the most beautiful examples recently seen of painting on satin was a long hanging screen of old gold satin bordered with olive green plush, on which was painted an owl with wisdom in his wide, staring eyes, his feathers properly ruffled, and seated on a branch of mountain ash, with its leaves and bright crimson berries. It was beautifully done and very effective.

RUGS.

I PRESUME that most of the RURAL ladies have seen, and probably many possess, an old-fashioned, blue and white coverlet: in many homes they are preserved as relics, because," "my mother," or, "my grandmother wove it," but in others they have served faithfully for years as a bed-covering, until time and usage have brought them to such a state that they have been ignominuously banished to the garret or store-room, or, worse yet, to the barn to be used for a horse-blanket; to cover a ragged cushion, or for some other useful purpose.

Beautiful rugs can be made of these "cast-aways." Those that have blue and red grounds, do not make pretty rugs, but those with a blue ground and a white pattern, or brown and white ones, are "just the thing"

Not long since, as I was driving through the city, a country wagon passed by, loaded with cabbage, over which, as a protection from the cold, was thrown one of those blue coverlets pretty much worn about the edges, but with enough that was good in the center, to make a couple of rugs. The pattern was beautiful, and a vision of the pretty things I could make out of it, rose before my mental eye sight, I could scarcely refrain from shouting after the driver to try to induce the owner to part with it.

To return to the subject; having cut your coverlet the size you wish to make your rug, allowing for the edge to be turned under, the next thing required is a medium sized worsted needle and several half-bunches of Germantown wool. Taste must be used in the selection and arrangements of colors. Three or four colors, are enough, although a "medley," in which all colors have been worked, makes a nice effect. Work on the darkest side of the cloth and follow the white pattern, using *any* or *many* stitches, only keeping a fixed idea throughout the whole. Cross-stitch straight lines, dashes, fans etc., *ad libitum* can be used.

Sometimes there is very little of the white pattern and a great deal of the blue ground; in that case, "make up" a pattern and work it with the brightest colors on the blue. It is very fascinating employment and well repays one for the labor, when it is completed.

For the border, a cheap woolen fringe, new or old, is pretty but I used strips of cloth cut from a pair of old pantaloons. A strip of black about two inches wide next to the rug, then a strip of gray, and lastly another black strip, about four inches wide. The outer edge of each strip was overcast—button-hole stitch—the stitches being quite far apart. The edge of the rug was basted under and overcast on to the first black strip, and that strip lapped over the gray and the gray in turn over the black. Then on each strip of cloth I worked some fantastic patterns—dashes, triangles, fans etc, then lined the rug part with a piece of old carpet. This must always be done, though something beside carpet may be used: the rug should be pressed on the wrong side before it it is lined. This same work makes lovely chair covers, stool covers, etc. MRS. W. V. A.

FASHIONS.

EMBROIDERY and hemstitching in the highest styles of decorative art are now applied to table linen.

Plush will be used upon spring costumes of cheviot, cloth and cashmere.

Uncut velvet in changeable colors will be used this season as a dress trimming.

Large fans are again in vogue; the handsomest are decorated with hand-paintings of roses, &c.

The old-fashioned flowing sleeves of lace are again popular. The wide directoire collars are worn with them.

Dove-colored silk stockings embroidered in colors to match the toilet are the very latest novelties in French hosiery.

The Spanish fashion of wearing black kid gloves with full evening dress still continues. The most dressy of these have lace insertions on the long arms.

Chenille flowers and foliage are very fashionable; they are used for coiffures and the trimming of bonnets, and are especially pretty and effective when twisted among the braids and coils of the hair.

Tamboured muslins are once more revived, and ladies are decorating plain mull and batiste with insects, flowers, etc.

Some of the new Spring bonnets are studded with mock jewels, and some of the fancy braids are dotted with tiny straw buttons and crystal beads. The bright yellow straws have the precedence of the pure white, although the white chips are unusually delicate and beautiful, and are exceedingly graceful in shape. The Belgian split satin braids and the Florence and Tuscan straws are equally attractive and new in design.

Among imported dresses are those that fasten in the back with hooks and loops.

A favorite trimming on new Spring dresses consists of real Spanish lace and jet trimmings.

Initial letters from ancient manuscripts are used to mark table linen.

Very wide shaded ribbon is employed in millinery and shaded feathers are in great demand.

There are bonnets of all shapes and sizes among the new importations; pokes of moderate dimensions are favorites—so are cap bonnets.

Novelties in dress fabrics are the variegated and shaded stripes in silk and wool; also striped surahs and satins. These goods are made up in combination with plain material in one of the prevailing colors of the stripes.

MISS CLARA GOODYEAR won the second prize offered by the Society of Decorative Art for a needle-work design for a three-fold screen.

The vigor of youth given to the aged and infirm by using Hop Bitters. Try it.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE WELL-DOING OF WORK.

R. B.

"WHATEVER is worth doing at all is worth doing well."

If by "well" is meant in the best manner possible, I do not believe it. There is much time and strength wasted for want of a judicious—not slighting, for the work is no slighted if it is done as well as is worth the while—proportioning of the amount of labor to the occasion.

I am no advocate of careless, slipshod work; I believe in thoroughness, in long apprenticeships, in perseverance that amounts to obstinacy, in mastering every step in the trade or profession, in skilled laborers, in nicety of detail and fineness of finish; but I dislike to see labor, and care, and time, and skill wasted on something that is really of little account; wasted, when they might be devoted to worthier objects.

The versatility of the American people is making a nation of dabblers, but I am not ready to approve of that while I protest against doing everything in the best possible manner. It is well, it is best, to know a little of everything and a great deal of one thing. A liberal education gives us the first; the rudiments of many things with the discipline and culture that comes with study, and lays the foundation for learning much of one thing—the life work. This primary dabbling is right. It gives us an insight into things that would otherwise be sealed books to us and makes us intelligent listeners and lookers-on where we have no active part. It is almost indispensable to the well-rounded character, and the help it gives in prosecuting the one thing is incalculable. But if that some one thing is not well-learned, the Jack-of-all-trades-and-master-of-none falls far short of the mark. His case is not one where I wish for an application of my text modified from "well" into "well enough."

I had a class-mate who used to rise early and retire late, who had little time for library books, rest or recreation, because everything must be done so well. Lectures, note-books, exercise-books must all be copied, and the laborious re-writing consumed a great deal of time, which seemed to me then—and does still—a great waste, and that might have been much more profitably spent. My first copies were very readable, and I felt that they were quite well enough done to be laid away, and be very seldom seen, when school-days were past.

I remember well how my elderly relatives used to patch. A smooth, beautiful piece sewed over and over like embroidery, when, likelier than not, the garment was only a little too good to be discarded, and consequently it shortly fell away from the patch, and all that superfine sewing was lost. And the darning that was finer and prettier than the stockings; the overcasting close and even enough for trimming, when half the number of stitches would have made it neat and serviceable!

I know a housekeeper who sweeps and dusts religously, who goes over rooms but little used as regularly as the day comes, and she is as guiltless of ideas as her house is of dust. Wouldn't it be better to let both accumulate a little? We couldn't excuse the corners or festoons of cobwebs, but thoroughly done one day, and with only just a hint of dust the next, mightn't that indefatigable duster better give a rapid "fleck and a promise" and she sit down to some of her husband's books, which she "never has time to read?" Instead of continually dusting the binding of Lowell and Little Classics, to read The Vision of Sir Launfal or Rob and his Friends; either would take no longer than one day's circumspect scouring, and her book-shelves are full of such gems!

The problem is, where to draw the line. It cannot be drawn except in a very general way; experience and common-sense must teach each one to do that for himself. Be methodical, systematic, thorough, for that is to be efficient, but there is nothing incompatible in all this with a little judicious "well enough," which is only a kind of abridgment, or shortening of methods to suit the case.

WASHING AND WASHING MACHINES.

SEEING an inquiry in the RURAL for an easy method by which the family washing may be done "without the expenditure of such hard labor," I venture to say a few words in regard to this much dreaded part of housework.

In the first place there is no royal road to the wash-tub and the accomplishment of clothes washing. Much depends on the length of time the clothes have been in use since last washed, and the occupation of the wearer. Some employments soil clothes vastly more than others—and here let me suggest a change of garments at least twice if not three times a week. Also much depends upon the conveniences for washing—having water and fuel near at hand, which otherwise consume both time and strength in getting in readiness for the day's work. Convenience is labor saving, and economy, too, in the end. It saves much exhaustion of patience and vexation of spirit. My method of washing is an old-fashioned one, and is as follows: The day before washing get the clothes and sort them, preparatory to soaking them over-night, putting the cleanest ones in a tub by themselves, and the dirtier ones in another; cover them with water in which there is some soap, and let stand. Having thus soaked them, wring them out with a clothes-wringer next morning. Proceed to pound them in a nice suds in a barrel with the clothes maul, sorting them and changing water when necessary. They should be pounded through a second time, by which process they are now ready for boiling, with perhaps the exception of a few wristbands, which will require a little rubbing on the wash-board. Have the water in the boiler entirely cold; add a little soap; put in the clothes; bring to a boil, boiling 20 minutes; take out, put into clear, hot water, as this discharges the soap and remaining dirt, after which rinse twice, in the last "blue" them and hang them up to dry. I use no washing fluid, as all such compounds have a tendency to destroy the fabric.

It is true that a multiplicity of inventions and appliances are every day being thrust upon our notice in order, as their originators claim, to lighten the task and make washing no work! but, in fact, really to put money into their own pockets at the expense of the laboring classes. They are nearly all, if not wholly a fraud, a contemptible cheat. Among these is the notable "Robbin's Washer and Bleacher," about which such a hue and cry has been raised. One of these machines was left at our house with a request from the agent that I would use it and give him my opinion of it. I followed the directions, curious to see the little device, or rather *humbug*, begin operations, which it did after consuming nearly one-half a cord of well seasoned, hard wood. The water began discharging through the tube, a little suds and a little puff of air about every alternate second, the former of which fell on the clothes a few inches from the tube, scarcely any force being perceptible. What it accomplished I failed to discover, unless it was a dreadful waste of fuel. I could have attained the same results without it. In my opinion it is of no benefit whatever in the process of working.

Its invention seems to be based merely on the fact that suds in a boiler brought to a certain degree of heat will discharge the dirt from soiled garments, under certain conditions. But to plunge clothes dry into boiling water without previously soaking them, "yellows" the garment and spoils them, as many can testify who have tried this ingeniously contrived humbug. I would not give a penny a ton for them for my use; hence I regard them as a complete nuisance. Plain common sense, plenty of soap and water, and fuel and a convenient wash room with its appurtenances, together with willing hands, will tend greatly to dispel even the horrors of washing and washing-day.

MRS. M. H.

A QUESTION.

MARY WAGER-FISHER.

Is there any reason why old-fashioned people should not be new-fashioned enough, to carry their food to their mouths with a fork instead of with a knife? Is there any reason why a farmer, any more than a merchant or a banker, should shovel his food into his mouth, as if that receptacle were a granary or a corn bin? Is there any reason why the mother, or the father, should mortify the grown-up daughters by drinking their tea from the saucer instead of from the cup?"

Summer Sausage.

Sausage may be kept for use in hot weather by frying the sausage as for immediate use, packing it tightly in a jar, and covering with hot melted lard. Cover the jar closely and set in the cellar. When wanted for use, take out the pats, or balls, and heat in a skillet, as in frying. The "Pennsylvania Dutch" fry tomatoes in their season, and pack away in a similar fashion for Winter use. The sausage I know keeps perfectly, and the tomatoes I have been assured keep equally so.

DOMESTIC RECIPES.

Red Wash for Bricks.

MELT one ounce of glue in a gallon of water; while hot put in a piece of alum the size of an egg, one-half pound of Venetian red and one pound of Spanish brown. After trying upon the bricks, if found too dark, add water, if too light add red and brown.

To Kalsomine Walls With Paris White.

To give the walls of a large room, say 16 by 20 feet, two coats, it will require about one-fourth pound of light glue and five or six pounds of Paris White. Soak the glue over night in a tin dish containing a quart of warm water. If the wash is to be used in the morning, set the dish containing the glue into a kettle of boiling water over the fire, adding a pint of cold water to it. Stir the glue until all dissolved and quite thin. Put the Paris White into a clean pail and pour over hot water until of the consistency of thin cream. Now mix the glue mixture with the whiting and apply with a fine whitewash brush. It may be too thick, in which case thin with hot water.

MARY B.

Baked Eggs.

Take a common earthen platter with a flat bottom and set into the oven until hot; butter it, have the eggs broken and slip them carefully onto the dish. Sprinkle over a little salt, allow a spoonful of cream to two eggs, put directly into a quick oven and bake four or five minutes—very nice.

E. L.

Miscellaneous.

ST. JACOBS OIL

TRADE MARK.

THE GREAT GERMAN REMEDY.

FOR

RHEUMATISM,

Neuralgia, Sciatica, Lumbago, Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains, Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents,** and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,

Baltimore, Md., U. S. A.

WORK We are now prepared to start persons of either sex in a new business at their own homes; $1 per evening earned by the industrious. $200 worth of materials easily carried in your pockets. No clap-traps to peddle, or $5 outfit to buy.

Business Legitimate and Honorable.

Any reader of this paper sending their address and a silver dime (or four 3-cent stamps,) will receive a valuable package of information and two samples which will do to commence work on. Dont fail to write at once. H. G. FAY & CO., RICHFORD, VT.

☞ Letters answered by return mail.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.,** 409 Washington Street, Boston, Mass.

DOLLY VARDEN SEED CORN for sale at 10c a package, post-paid, by A. ELGIN, Reidsburg, Pa.

Miscellaneous.

GOLD MEDAL, PARIS, 1878.

GERMAN

SWEET CHOCOLATE.

The most popular sweet Chocolate in the market. It is nutritious and palatable; a particular favorite with children, and a most excellent article for family use. *The genuine is stamped S. German, Dorchester, Mass. Beware of imitations.*

Sold by Grocers everywhere.

W. BAKER & CO.,

Dorchester, Mass.

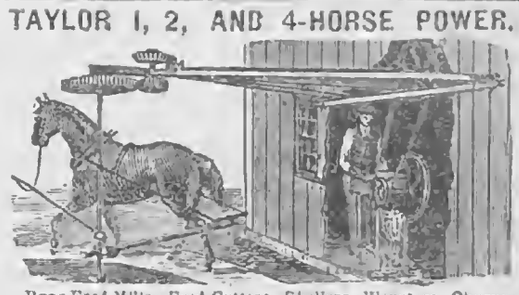
INVALID ROLLING-CHAIR.

(RECLINING.)

A PRICELESS BOON to those who are UNABLE TO WALK. LEONARD BACON, D. D., HON. A. H. STEVENS, M. C., and OTHERS recommend them. SEND FOR CIRCULAR.

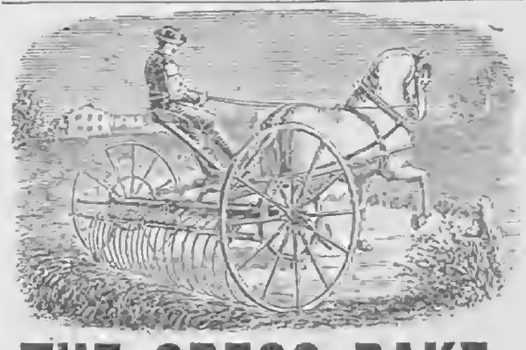
FOLDING CHAIR CO., New Haven Ct.

TAYLOR 1, 2, AND 4-HORSE POWER.



Runs Feed Mills, Feed Cutters, Shellers, Elevators, Churns, Saws, Pumps, Etc. Overhead, out of dirt and snow. Simplest, cheapest, best. Dealers in Machines of all kinds.

Send for circulars to TAYLOR HORSE POWER COMPANY. (Cut this out.) 41 South Canal St., Chicago.



THE GREGG RAKE.

Can be Operated by the Foot Alone.

Leaving both hands free for driving. Can be operated as a complete Hand Dumping Rake, at the will of the driver. Can be operated easily by any Boy or Girl who can drive a horse. First-class in every particular. Stong and Durable. Best of Material, Well Finished. Thoroughly tested, never fails. Send for Circulars.

Address GREGG & CO., Sole Manufacturers. **Trumansburg, N. Y.**

Also Manufacturers of Lawn Mowers, Plows, &c.

Wanted.

A thoroughly practical man, with large experience in putting up canned goods, such as Tomatoes, Corn, etc. To one who can give good recommendations and testimonials, a good salary will be paid, or, by putting in some capital, an interest may be obtained in the business. Parties applying will please to address **BOX 47,** Brantford Post Office, Ontario.

50 All Gold, Chromo & Lit'e. Cards, (No 2 alike,) Name On, 10c Clinton Bros., Clintonville, Conn

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

40 Happy Day, Chromo, Lace, &c., Cards, with name & morocco case 10c. H. M. COOK, Meriden, Conn.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

102 **YOUR NAME** In New Type on 102 Chromos, 10c. All new styles, designed by best artists. *Bouquets, Gold Chromo, Birds, Landscapes, Fancy, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

SAVED 5c. per bushel on CORN and 20c. on WHEAT *can positively be saved.* For Illustrated Pamphlet, giving full particulars, address The Thomas Harrow Co., Geneva, N. Y.

The Coquillard Wagon.

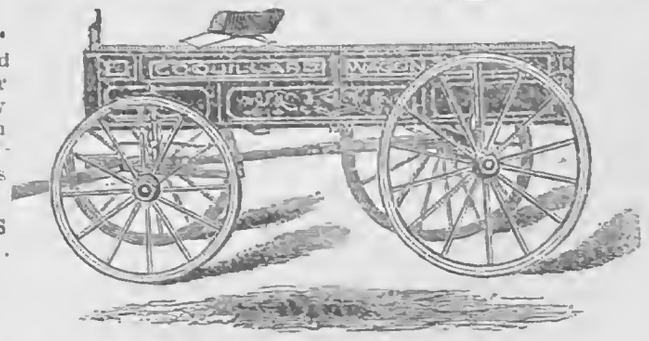
THE FARMER'S FAVORITE.

These wagons are made of the best Wood and Iron to be procured, and put together by the most experienced workmen. Every one warranted to give satisfaction, both in regard to quality of material and workmanship. They are also noted for their lightness of draft and ease of running.

Carriages, Buggies and Sleighs

Of superior workmanship always on hand. Send for Circulars and Price List.

A. COQUILLARD,
South Bend, Ind.



Trade **LONDON PURPLE.** Mark.

Valuable insecticide for the extermination of the COLORADO BEETLE, COTTON WORM and CANKER WORM. For prices, Circulars and Opinions, write

HEMMINGWAY'S LONDON PURPLE CO., (Limited) 90 Water St., New York.

Professor C. V. Riley says: London Purple can be more effectually sprinkled or sprayed on to the plant than Paris-green by virtue of its greater fineness.

Professor C. E. Bessey says: It promises to be a most excellent remedy. It quickly kills both the Larva and the Winged Insects.

Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground, either dead or in a dying condition, in less than six hours.

News of the Week.

HOME NEWS.

MONDAY, March 28, 1881.

Gen. Grant has resigned the Presidency of the World's Fair Commission. He gives as his reason for so doing that the exhibition wants at its head a man who can give his whole time to the work. As his engagements would take him out of the country for three months when his presence here would be most needed, and as, on his return, other engagements, which could not be ignored, would demand his attention, he thought it best to give some one else the position. He thinks it would be wise to postpone the fair until 1884 or 1885. Mr. Hugh J. Jewett, President of the Erie Railway, is proposed for the vacancy.

An organization of females styling themselves "The Working Women of Chicago" met in that city, Wednesday, and put in nomination for city officers the same ticket nominated by the socialists.

It is stated that a party of Mormons have settled in Ancora township N. J., who announce the intention of practicing polygamy.

The Rev. D. P. Mitchell of Topeka, has been found guilty by his Methodist Conference of using the church money dishonestly to promote his candidacy for Congress.

The shippers in Buffalo are anticipating the most lively season in navigation in years. Navigation is not expected to open before the last of April. There will be about 200,000,000 feet of lumber shipped this year and about 300,000 tons more of coal. The iron ore shipments will exceed last year's by 500,000 tons.

Kalloch the murderer of De Young of San Francisco, has been acquitted. The verdict was received with much applause, and the defendant was heartily congratulated by his friends. When Kalloch was discharged and got into a carriage to go home, an immense crowd took the horses from the vehicle and pulled him to his house, about three miles distant.

Fine old trees are being ruthlessly cut down in New England. "The Parsons Elm," the largest and handsomest tree in Enfield, Conn., dating back beyond the memory of living man, was laid low by its owner, to get thirty-five cords of firewood out of it.

Western Reserve College, at Hudson, Ohio, is to be removed to Cleveland, as was decided by a vote of the trustees. Amasa Stone, of Cleveland, gives $500,000 to the college, on condition that the city shall raise money for the site, which has been already done. Another condition is that the name is to be changed to Adelbert college, in honor of a son of Mr. Stone who died some time ago.

Ex-Secretary Schurz was honored with a banquet by the Bostonians on the 22d inst. All that portion of his party that parts its hair and its convictions in the middle, as an exchange says, were present. Mr. Schurz made them a little speech on the Indian question, and closed with a eulogy on the present prosperity of the nation.

An extra session of Congress, which by some was thought necessary, was by others as firmly opposed. Protests have been sent to the President from commercial and business centers, and public feeling seemed to be against it. So the President decided not to call an extra session. It is thought that much unnecessary legislation would have been introduced, which can be brought up at the next regular session as well, the only necessary legislation now demanded being on the Refunding Bill.

And now the report comes from Gen. Sheridan that 30 persons have been massacred and 19 wagons burned by the Indians near Janos, Old Mexico. The moral suasion policy is a good one in some respects, but some of these red-skins can remember a flogging longer than they can a sermon.

A table showing the valuation of real estate and personal property in the 60 counties of this State has been lately completed at the Census Office. The real estate column foots up $2,326,669,813, and the personal property amounts to $852,469,320.

Buchanan, the bogus diploma maker of Philadelphia, has made a confession wherein he gives the names of wholesale druggists in that city who, he says, have sold his diplomas. Ten thousand names, preserved by him, are included in his disclosures. He says that 25,000 of his diplomas are current in America and 40,000 in Europe.

The work of tunneling under the Hudson River is going on satisfactorily. Two hundred men are employed by the company. The completed portion of the tunnel advances five feet every day toward the New York shore. The whole distance completed thus far is 290 feet from the shaft. The superintendent says that on the New York side the company is getting ready to begin work at the foot of Morton Street. A caisson is building and they will soon be working at both ends. The whole distance is 5,500 feet. If they advance at the rate of five feet at each end every 24 hours, it will take something like 18 months to complete the work.

President Garfield at his inauguration occupied the chair from which Washington rose to take the Presidential oath in 1789. This relic has been in charge of William C. H. Waddell for the past 50 years, who forwarded it to Washington at the request of the Inauguration Committee.

Mr. Thomas A. Scott has recently made gifts to several Philadelphia institutions, amounting in the aggregate to over $150,000. Of this $50,000 go to the endowment of the Chair of Mathematics in the University of Pennsylvania, $50,000 to Jefferson Medical College, $30,000 to the Orthopedic Hospital, and $20,000 to the Children's Department of the Episcopal Hospital.

Settlers in Nebraska have had a rough experience this winter. One of them writes of a neighbor's having had a child die during a violent snow storm and being unable to bury it for over a week, it being impossible to get through the deep snow with it. When the farmers rode to town to get the mail or groceries they invariably took shovels along to dig a way out in case their horses got stuck. The early arrival of Winter took many by surprise, and a large quantity of corn was left in the fields, of which urgent need has since been had.

The city of Bath, Me., on the 19th inst., celebrated the 100th anniversary of its incorporation as a town by appropriate exercises consisting of a historical address, oration and poem. Salutes were fired at noon. There was a grand reception in the evening.

A bill to remove the restriction on suffrage in New York State, based on sex, was reported in the Assembly for the consideration of the House. This is to allow women to vote at all elections.

Official advices have been received by the Government from Matamoras than tons of infected rags are being constantly shipped from Mexico to the United States, destined to large manufactories, where they are ground and used in the manufacture of paper. The matter is being investigated with a view to punishing the offenders.

The labor troubles at Fall River, Mass., are not yet settled. There is a strong feeling that the result may be a general strike, for the unions say it is a blow struck at them, and they are very indignant over the matter. On the other hand, the manufacturers say that they are wearied with these continued agitations, and do not like to be dictated to by the help. They have got the right, they claim, to run their mills themselves. The rumors set afloat that they are running over time and paying lower wages than other places they indignantly deny.

[Ypsilanti (Mich.) Commercial.]

Our representative lately learned the following from Mr. Carl Siegmund, Cor. Congress and Washington Sts.: "My daughter suffered from Rheumatism to such an extent that it crippled her, rendering her unable to walk at all. We consulted many physicians and used all kinds of medicines, but in vain. At last St. Jacobs Oil effected the happiest results. It cured my daughter."

AGRICULTURAL NEWS.

The Ohio State Board of Agriculture, following the example of that of Illinois and the Illinois Legislature, strongly indorses Mr. Emery Cobb for head of the Agricultural Department. Dr. Loring of Massachusetts, at present *seems* to have the "inside track," however, we are sorry to say. ....

AT a recent sale of ostriches at Port Elizabeth, Cape of Good Hope, the following prices were obtained:—Two pairs of breeding birds at $650 per pair; one ditto at $625; two ditto at $600; one ditto at $1010; two ditto at $525; and four ditto at $500. Some younger birds sold on the following terms:—Three pairs at $112 per pair; five ditto at $375; three ditto at $325 and four at $300. Ten young ostriches sold at $325 to $312 per pair. Fifteen young birds realized $140; and twenty changed hands at $125....A mechanical contrivance to facilitate horse breaking, invented by Major de Lange, and already introduced into the Russian cavalry, is, on the recommendation of the French Cavalry Commission, about to be tried at Saumur. This "*ressort-dresseur*" is an artificial hand, attached to the animal's lower jaw. It combines softness with resistance, and is a substitute for the breaker's hand. It is said to obviate much rough treatment.....The increase of creameries in one county of Southeastern Pennsylvania (Bucks), is from one in 1878 to forty-two at present. The farmers prefer creamery stock to bank or railroad stock, finding the business of making butter and cheese, under their own management, and according to latest improvements, more profitable than raising grain or cattle.....Mr. F. B. Harper is said to have priced his stallion Ten Broeck to a party for $75,000. He has made the fastest mile, 1.29¼; the fastest two miles, 3.27½; the fastest three miles 5.26¼; and the fastest four miles, 7.15¾—the latter 3¾ seconds faster than any horse has ever run four miles.....

Coffee culture in Central and Southern California is reported to be getting profitable, the plant growing vigorously and yielding a bean of strong and aromatic flavor.....A French company for the manufacture of beet sugar in Canada has been definitely organized—capital 6,000,000 francs, of which 1,000,000 have already been paid up..... It seems likely that there will be a reduction in the acreage of Spring wheat this year, owing to the early stoppage of preparation of the ground in the Fall, and to the lateness of the Spring..... Lately at Delano, Kern Co., Cal., no less than 120 expert shearers were busy clipping the fleeces of 200,000 sheep.....January last was the coldest month in Scotland of which records exist. The lowest temperature authentically recorded was 15 deg. Fahr. below zero at Stobe Castle in Peeblesshire.....The Canadian Minister of Agriculture has addressed, through Gov.-Gen. Lorne, a memorandum to the British Government proposing an extensive organization of Irish emigration to Manitoba and northwest Canada.....The total value of the exports of domestic breadstuffs during the month of February, 1881, were $19,919,246, and during February, 1880, $14,420,544; during the eight months ended February, 1881, $182,428,826, and during the eight months ended February, 1880, $183,835,659.....Mr. Gladstone stated Monday in the House of Commons that he expected to introduce the Irish Land bill on the 7th of April..... ....In Germany the crops of lucerne are being destroyed by a disease said to be caused by a small eel-like worm found only in clover and lucerne, which causes a malformation of the roots which soon die away.....The new English Wilts and Hants Agricultural College is henceforth to be known as simply the "College of Agriculture." .....In order to encourage the manufacture of beet sugar Canada exempts it from excise duty for eight years.....The English Agricultural Commission cost last year $79,250; this year its cost is estimated at $63,200, and how long it may last no one can foretell.....

Throughout the Winter wheat region in the Northern States the general report is that the continuous snow has kept the Fall-sown grain from any serious injury, and that, as a rule, it will prove in good condition.....The Mark Lane Express of March 21 says that the previous week's fine weather had inestimably benefited agriculture. Young wheat, though backward, was assuming a healthy appearance..... ...One-third of the London supply of wheat comes from this country..... ..Steamers carrying cattle from the United States to Great Britain are liable to a month's quarantine before they are permitted to carry cattle thither from Canada.....In some parts of the West the ground is frozen so deeply that the roots of the tea plants in China are injured.....A commission appointed by the Agricultural Society of France to investigate the effect which the rapid import of American flour is likely to have on French agriculture has reported in favor of a protective tariff of 57 cents a barrel on American flour.....An English farmer who had lived several years in Canada recently returned to England, taking with him a number of Colorado beetles as a curiosity. Five of them escaped, and the amateur naturalist was arrested and fined $25. The matter has been brought to the attention of the House of Commons, while the people in the vicinity have formed themselves into a committee of the whole to capture the "blasted foreigners"..... ...Guatemala, almost under the equator, had a heavy frost February 10, destroying crops on every hand. The crop on a Chimoltenango tobacco plantation containing over 100,000 plants was ruined.....A detailed statement of the packing operations in Chicago for the 12 months ending March 1 show an increase in business both for the Summer and Winter months, the aggregate being the largest number of hogs ever packed in any city in the world in any one year. The number packed was 5,752,191, an increase over the preceding 12 months of 1,071,554. The receipts of live hogs during the year were 7,059,355, and the shipments 1,394,220; 316,884 tierces of lard were made, 260,970 barrels of pork, 23,767,603 pounds of green meats, 38,166,035 pounds green and dry salted, 11,372,895 pounds of Cumberlands, 60,642,845 pounds of short ribs, 38,109,996 pounds of short clears and 52,579,140 pounds of long clears.....

A Certain Cure.

The first thing to do in the Spring is to clean house. For internal cleansing and renovating, no other medicine is equal to Kidney-Wort. In either dry or liquid form it cures headache, bilious attacks, constipation and deranged kidneys.

Women that have been pronounced incurable by the best physicians in the country, have been completely cured by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

THOSE of our readers who are anticipating purchasing a rifle, will do well to examine those made by the Mass. Arms Co., Chicopee Falls, Mass. A handsomely illustrated Circular and Price List are sent free. Send for it.

We know Hop Bitters are above and beyond all as a nutritious tonic and curative.

BURNETT'S COCOAINE
The Best of all Hair Dressings.

It allays irritation, removes all tendency to dandruff, and invigorates the action of the capillaries in the highest degree, *thus promoting a vigorous and healthy growth of hair.* Its effect upon the glossiness and richness of the hair is such as *cannot be surpassed.*

Burnett's Flavoring Extracts are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, March 26.

Chicago.—WHEAT unsettled; outside prices; No. 2 Chicago Spring, regular, $1; fresh, $1 02½, cash; No. 3 do., 89@94c; rejected, 75@81c. CORN, unsettled, regular, 38½c; fresh, 40¾c, cash; rejected, 39¾c. OATS quiet, but firm; regular, 29½c; fresh, 32c, cash. RYE easy at 97½@¢1. PORK strong at $15 12½, cash and April; $15 26@27½, May; $15 37½@$15 40, June. Bulk-meats in fair demand and firm; Shoulders, $4 95; Short Rib, $7 63½. BUTTER—Choice to fancy creameries 31@32c ₰ lb; fair to good do 28@30c; fine to fancy dairy 24@27c; good to choice dairy 20@23c; medium to fair dairy in shipping lots 17@19c; ladle-packed, good to choice 18@20c; fair to the best packing stock 15@16; grease butter 9@10c. Fair to choice roll butter sells at 16@19c. CHEESE—Good to choice full-cream cheddars at 12½@13c, with late made do, in a small way, at 13½@14c; slightly skimmed do at 10½@11c; good to prime flat shapes at 9½@10c, and the poor to only fair qualities at 7@9c. EGGS—At 18@19c ₰ doz. the inside figure for loose packages. HAY—No 1 Timothy $14 75@$15 50 ₰ ton; No 2 at $13@$14; mixed do at $12@$13; upland prairie at $11 50@$13 50; No 1 prairie at $9@$10; No 2 do at $7.50@$8.50. Small bales sell for 20@50c ₰ ton more than large bales. SEEDS—Business was very quiet in this line on yesterday, and the tone of the market was rather weak. We quote as follows: Prime to choice Timothy $2 62@$2 67 ₰ bushel; common to good $2 50@$2 60; prime medium clover $4 70@$4 85; choice do $4 90@$5; flax $1 18; Hungarian 70@80c; millet 90c@$1; German millet 90c@$1 05, according to quality. HOGS—Market slow, weak, and 5@10c lower than yesterday remain unsold; quality good; light, $5 60@$5 80; packers and shippers bought sparingly; a number mixed packing, $5 30@$5 50; good to choice heavy, $5 90@$6 05; one very fine lot at $6 50. CATTLE—Market week and easier, with a fair demand; common to fair shipping, $4 40@$4 60; good to choice, $4 90@$5 40; exports, $5 50@$5 75; corn-fed Texans, $4 40; butchers' fairly active, but weak; common to fair dull at $2 25@$2 75; good to choice steady at $3 25@$4; stockers strong and more plenty at $3 20@$3 90; feeders, $3 75@$4 50. Calves, $9@$16 ₰ head. SHEEP—Market slow and 15c lower than yesterday; Texans, $3 70; fair to good, $4 50@$5 05; choice $5 40@$5 60; Sheep and Lambs, mixed, $5 60@$5 75; only fair demand; not all sold.

Cincinnati.—WHEAT No. 2 Red Winter, $1 09. CORN.—Demand fair and market firm; No. 2 mixed 47c. OATS steady, with a fair demand; No 2 Mixed, 39c. RYE quiet; No 2 at $1 13. BARLEY in good demand and strong; No 2 Fall, $1 09. PORK firmer at $15. LARD firmer at $10 35 bid, bid, $10 50c, asked. Bulk-meats firmer; Shoulders, $4 85; Clear Rib, $7 72½c. Bacon quiet but steady; Shoulders 6¾c; Clear Rib, $8 60; Clear Sides, $8¾. Hogs firm for light, dull for heavy weights; common $4 25@$5 10; light $5 60@$6; packing $5 50@5 70; butchers' $6@6 40. BUTTER Fancy Northwestern Creamery sells at 30c, choice Dairy at 25c, choice Western Reserve at 23@25c, prime to choice Central Ohio at 20@22c, and common medium do, at 15@18c per pound. CHEESE 12@13c, for prime to choice but late made Northwestern is offered at 11@11½c ₰ lb. EGGS, market steady at 15@15½c per dozen, with sales mainly to the local trade at the latter figure. HAY—The arrivals have been scarcely equal to the current demand and the market is stronger. Common sells at $14 50@15 50, prime do, at $16 50@17 00 ₰ ton, and Prairie hay at $10@11 per ton, in bales on arrival. Wheat and Rye straw is steady at $8@8 50 and Oats straw firm at $9@9 50. SEED—The demand is less active, and as the offerings are more liberal especially of old Clover seed the market is slow at lower prices. Prime old Clover sells at 8@8¼, prime to choice new do at 8¼@8½c ₰ lb, and Timothy at $2 75@2 85 ₰ bushel from store. Round lots on arrival would not bring these prices. Flaxseed is in demand at $1 12½@1 15 ₰ bushel. MILL FEED, is in moderate supply and firm. Bran sell at $14 75@15 00, shipstuffs at 15 50, and middlings at $17@20 per ton in bulk, and 50c more in sacks on track

St. Louis.—WHEAT—No. 2 Red Fall, $1 05, cash; No. 3 do., 93½c. CORN, 41½c, cash and April. OATS 36¼@36½c., cash. RYE firm at $1 05. BARLEY quiet at 80c@$1 05. PORK firm at $15 50, April. Lard higher at 10½c, bid. Bulk-meats higher; Shoulders, $4 90@4 90; Clear Rib, $7 65@7 75; Clear Sides, $7 85@7 90. Bacon higher; Shoulders, $5 62½; Clear Rib, $8 50; Clear Sides, $8 70@8 85. POTATOES—Choice Eastern—Peerless 85@87½c, Rose 87½@90c, Burbank 90@92½c, Peachblow 92½@95c. Western—Peachblow 75@85c. Early Rose 75@80c; mixed, 60@70c; interior and damaged, 50@60c. ONIONS—Prime $4 25@4 50 ₰ bbl or $1 70@1 85 ₰ bush.—top figures for red only; sprouted or damp $3 to $3 50 ₰ bbl. SEEDS—German millet stiffening—Interior and dairy at 75@85c, prime 97½c@$1; clover lower at $4 90@4 95; common millet quiet at 65@72½c; Hungarian do at 55@65c; redtop steady at 45@47½c; timothy neglected, at $2 45@$2 55; flaxseed, $1 10 on a basis if pure. HOGS—Yorkers and Baltimores, $5 50@5 70; mixed packing, $5 20@5 50; good to choice heavy, $5 75@6. CATTLE—market active; exporters, $5 25@5 75; good to choice, $4 60@5 15; medium to fair, $4@$4 50; best butchers' Steers, $4 25@4 60; fair to good, $3 50@4; Cows and Heifers, $3 25@4 25; stockers, $3@3 75; feeders, $4@4 60; corn-fed Texas Steers, $3 25@3 75. SHEEP—market active; medium to good, $4@5 15; choice to fancy, $5 25@5 85.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, March 26 1881.

BEANS AND PEAS.—There has been a better call for beans for export and home use, and prices strengthened promptly under it. This shows that notwithstanding the large comparative receipts, dealers are pretty well assured of their position so far as white standards are concerned. Red kidneys and black beans are a drug.

Green peas plenty and weak; $1.70@1.75; Southern B. E. peas $2 25@2.35, Medium, marrow, pea and white kidney beans, $1.90@2.12½; red kidney, choice, $1 55@1.60, other, $1.40@1.50, black or turtle soup, $1.40; Cal. Lima, $4.50@5.

BUTTER.—New has already become a feature in the local trade and its presence increases the disposition to part with old. This of course does not strengthen the latter in prices even for the best flavored parcels. For common to medium class goods the feeling is weak and the position precarious. A good many lots that should have been sold early for cheap table use will have to degrade to grease. A few long established dairies are still selling on their butter merits, but even these begin to seek buyers.

New creamery choice 34@35c; good to prime 32@33c.; fair to good 30@31c.; State half firkins, 28@30c; other 24@26c; Welsh, 24@29c. Old creamery, 17@23c.; State dairies, 19@25c; firkins, 15@23c., State pails fall 26@28c; other, 14@23c; Welsh 16@20c.; Western imitation creamery, 22@24c.; dairy, fresh 23@26c.; other, 14@22c., factory, 13@20c.; poor Western 10@12c., grease, 7½@8½c.

Receipts for week 23,203 pkgs.

Exports do. 2,171 do.

CHEESE.—Export demand is very moderate and the home trade is without much animation. Prices are held steady, since receipts are small and stocks are showing some reduction. Quotations are for

Fancy at 13½@13¾c. fair to good and prime, 12½@13c.; do. fair, at 11½@11¾c.; do. half-skimmed, 9@10c.; Wisconsin factory, fine, at 12¾@13c.; do. good to prime, 12@12¼c.; do. fair to good, 11@12c.; Ohio factory, fine, 12½@13c.; do. good to prime, 11½@12¼c.; do. fair to good, 10½@11½c.; do. poor to fair 8@10c. Skimmed creamery, 8@9c., and full skimmed factory at 5@6c.

Receipts for week, 18,603 boxes.

Exports for week, 18,645 boxes.

Liverpool cable, 70s.

Steam to Gt. Britain, 25s.@27s.6d.

COTTON—Has had less activity this week, but closed strong at, for

March, 10.70@10.71c.; April, 10.66@10.67c.; May, 10.74@10.75c.; June, 10.83@10.84c.; July, 10.91@10.92c.; August, 10.95c.; September, 0.03@10.04c.; October, 10.34@10.36c.; November, 10.23@10.24c.; December, 10.22@10.24c

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7½	7⅝	7⅜
Strict ordinary	7¾	8⅛	8⅜
Good ordinary	8 13-16	9⅛	9⅜
Strict good do	9 5-16	9¼	9½
Low middling	10	10⅛	10⅜
Strict low middling	10⅛	10 13-16	10 13-16
Middling	10⅜	11	11
Good middling	11 7-16	11 11-16	11 11-16
Strict good middling	11 11-16	11 15-16	11 15-16
Middling fair	12 5-16	12 9-16	12 9-16
Fair	13 1-16	13 5-16	13 5-16

STAINED.

Good ordinary	6 9-16	Low middling	8 9-16
Strict good ordinary	7 31-16	Middling	9¼

Receipts for the week, 18,832 bales. Exports do. 13,326 do.

DRIED FRUITS.—Apples have had a fair inquiry and prices firm. Peaches show more activity especially in unpeeled peaches halves which were taken at 6@5¾c, a decline. Small fruits are in full demand and well sustained in price. Quotations:

Evaporated apples at 8@8¾c. for choice to fancy; sliced apples at 4¾@5¾c. for good to choice North Carolina; 4@4¼c. for Va, apples, 4@4¼c. for Tenn. do; 4¼@5c. for State do; 4¼@4¾c. for western, Ohio and Mich. Peaches at 22@23c. for evaporated peeled; 13½c. for unpeeled do.; N. C. peeled at 19@22c.; for the better qualities, unpeeled peaches at 6@6½c. for halves and 6@6¾c. for quarters. Plums at 16@16c. Blackberries at 8c for prime. Cherries at 17@17½c. Raspberries at 25c. Whortleberries 10@11c.

Receipts for the week, all kinds, 638 pkgs.

Exports dried apples, 4,261 pkgs.

EGGS—Receipts for week, 13,500 bbls.; do. last week 11,226 do. During the week the market took a spurt and prices have been 1@1½c. higher than quoted. The market closes in buyer's favor, but an encouragingly active trade prevails. The market has not worked so well during the Lenten season for sev

eral years. Duck and goose eggs not specially active.

Near points, 21½@22c.; State and Pa., 21½c.; Western, 21@21½c.; Southern, 21c.; duck 30c.; goose 45@50c.

FLOUR.—The market shows irregularity and closed in buyer's favor, with a fair trade in progress. Shipments this week have been 79,000 bags and 5,800 bbls. Latest prices are; $3.50@4.00 for very inferior to very choice superfine State and Western; $4.25@4.50 for poor to choice extra State and Western, odd lots and lines; $4.50@4.65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.35@5.25; good to choice do. at $5.35@6.10; (very choice up to $6.25@6.50 and fancy at $6.50@6.75;) red and amber winter wheat, inferior to choice trade and family at $4.35@6; round hoop Ohio, $4.35@4.75; and trade and family brands of do. at $4.85@6.25, the latter for very choice; St. Louis $4.00@5.50 for inferior to good extras; $5.50@6.35 for good to choice, and up to $6.75@7 for very fancy brands; Minn. clear, inferior to very fancy at $4.20@5.85; Minnesota "straight," poor to very choice, at $5.25@6.75, and patent inferior to fancy at $5.75@8.25; city mill extra at $5.60@5.70 for fair to choice for the West Indies; do. for England at $4.25@4.65 for poor to choice spring wheat; do. trade and family extras $5.65@6.75 do. for South America, $5.75@6.00, the latter for very choice; No. 1 at $2.85@3.50 for very inferior to very fancy.

Receipts for week, flour, bbls. 125,230; corn meal, do. 3,161; wheat, bush. 679,700; corn, do. 712,850; oats do. 181,750; rye, do. 31,450; malt, do. 54,700; barley, do. 152,375; beans, do., 5,068; rice, pkgs. 1,178.

Exports for week, flour, bbls. 78,600; corn meal, do. 5,625; wheat, bush 796,950; corn, do. 658,000; oats, do. 3,172; peas, do 4,200; beans, do. 631; rice do. 1,162.

FRESH FRUITS.—The season shows a rough winding up for apples. It is seldom that a large crop has so poor a chance; the usually long Winter having kept many fine lots housed when they should have been selling, and the wastage is consequently very large. The British markets have proved a good, if not a very profitable, relief. Points have been reached in England and Scotland not before known to the wholesale apple trade and the favorable feature is the fact that a larger line of consumers will henceforward call for stock. London at the present time uses 4,000 to 6,000 bbls per week. Mixed lots late arrivals $1@1.25.

Bld'ns $1@1.0? russets $1.37@1.75; greenings $1@1.37; Spitzenbergs $1.50@2; rejection 50@75c; cranberries dull and nearly nominal; crates quoted in a small way at $1@1.75. Fla. oranges hold a good place when choice; sales, however, begin to be forced and $1.50@3.50 is a full range for original packages. Fla. strawberries run poor; best 75c; poor 20@50c. per qt. Hot-house strawberries $1.50@2 per quart. There is no change in nuts and last figures are full.

FURS AND SKINS.—The Producers Price Current says:

"Cable advices from C. M. Lamson's London sale report that beaver and musk rat advanced 10 per cent. as compared with the prices obtained last January. Martin, lynx and large northern raccoon advanced 10 per cent, and fresh skunk 20 per cent. compared with the July sale. Blue fox advanced 40 per cent., otter 7½ per cent. and large bear and wolf 20 per cent. compared with last March sale. Silver fox other than Alaska and sea otter sold same as last March and old skunk same as last July. Opossum declined 15 per cent. compared with sale of last January. Southern and small raccoon declined 5@15 per cent., all thirds and fourths of raccoon about 15 per cent., red fox 10 per cent. cross fox 25 per cent., and gray fox 20 per cent. compared with sale of last July. Alaska silver fox declined 25 per cent. White fox 10 per cent and Russian sable 10 per cent. compared with sale of last March. Fisher and mink are yet to be heard from.

The advances reported had been fully anticipated in the market here, but many of the declines were unexpected. Raccoon, opossum and fox are generally lower and weak. Mink are very dull. There is a stronger feeling in the best grades of skunk."

Quotations will be secured by next week.

GRAIN.—Wheat has been fairly active for export. Some 900,000 bush. shipped this week. Prices have towards the close tended lower on increasing movement forward of supplies: latest prices are for

No. 1 white at $1.20@$1.21¼. do. March at $1.20¾@1.21¼; do. April at $1.18¾@1.19¼; do. May at $1.19¾@1.20; ungraded white at $1.16@1.20; No 2 white at $1.17@$1.17½; do. March at $1.22¾@1.23¼; do. April at $1.21¾@1.22¼; do. May at $1.19¾@1.20¼; do. June at $1.18¾@1.19¾; No. 3 red at $1.19¾@1.20¼; ungraded red at $1.14@$1.26¼; No. 3 spring at $1.15.

Rye at $1.06@1.06¾.

Corn has shown shipments for the week of nearly 900 000 bush., but closed weak in price on freer arrivals. Latest prices are for

New York No. 2 at 59@59¾c, do. March at 59¾@59¾c; do. April at 57¾@57¾c., do May at 54¾c; do. June at 54¾c; No. 2 at 57¾c.; ungraded mixed Western at 56@59¾c; New York steamer mixed at 58½@59c. No. 2 white at 60c.

Oats have been in active speculative demand, but closed with freer offerings and prices easy; latest prices are for

No. 1 white at 50; New York No. 2 white at 45@45¼; No. 3 white at 43½@43¾; New York No. 2 at 44@44¼, do. March at 44¼ do. April at 43¾; do. May at 43¾; No. 3 at 43¾@43¾; ungraded white Western at 44½@48½; ungraded mixed Western 43@44½; white State at 47½@51, No. 2 Chicago quoted at 44.

HAY AND STRAW.—Arrivals have been larger and prices tending lower especially for the common grade of hay. Latest prices are for

Hay, prime timothy at $1.15 ₩ 100 lbs.; medium timothy at $1,05@1.10 do.; shipping grades at 90c.@$1 do.; clover mixed at $1.00@1.05, clover at 95c.@$1 do. Straw—No. 1 rye at $1,15@1.20 ₩ 100 lbs.; No. 2 rye at 75@80c. do.; oats and wheat at 70@75c. do.

Exports for week, 1,811 bales; since Jan. 1 '81, 13,613; same time last year 23,397.

HOPS—Shipments this week have been 728 bales. Demand has been light both on export and home trade account, but prices held firmly. Quotations are for

	Cents per lb.	
New Yorks, crop 1880, choice	22	@23
Do. medium	19	@20
New Yorks, crop 1880, low to fair	15	@17
Eastern, crop 1880	16	@22
Wisconsin, crop 1880	16	@23
Yearlings, crop 1879, choice	12	@18
Olds, all growths	4	@10
Bavarians	30	@35
Pacific coast, new	19	@23

Receipts for week, 1,586 bales,

Exports do., 603 do.

POULTRY AND GAME.—Dressed poultry, with moderate supplies has a very strong position; prices for killed or frozen very firm.

Frozen turkeys range 15@18c.; do. fowls, 13@14c.; small fresh-killed turkeys, 16@17c.; other, 14@15c. Chickens, broilers, 22@23c.; do. roasting 18@20c N. J. and Bucks Co. 16@18c.; other, 13@15c. Chickens and fowls, 13@15c; Phila. fowls, 14@15c.; other 12@14c.; Capons, large, 22@23c.; small and slips, 18@20c. Ducks, 15@20c.; Geese, 8@11c; squabs, white, $4.50 ₩ doz.; do. dark, $1.25@2.50

City killers are operating quite freely and prices are strong for cooped stock at the close. There is no surplus of any sort.

Fowls, 12½@13½c.; roosters, 6@8c.; turkeys, 12@14c.; ducks, 70c@1.12; geese, extra, 2.12, other, $1.25@1.75; pigeons, 35@45c.

English snipe are scarce and firm at $2.50@2.75 ₩ doz Few pigeons in market; a fair offering would bring $2. Wild ducks are variable in quality, and as a rule prices are low; Western not wanted.

Norfolk Canvas-backs quoted 75@$1; red-heads, 50@60c; mallard 40@50c.; teal and widgeons 20@25c.; common, 15@20c.; Havre de Grace birds exceed these rates 25@50c. ₩ pair.

PROVISIONS.—Hog products have tended lower, but closed firm.

Mess pork quoted at $15 for old and $15.75@16 for new. 15.60@15.70 for April delivery, and 15.80@15.90 for May delivery. Bacon at 8.30 for long clear and 8.75 for short clear, Beef hams at $22½@23. Beef at $21@23 for extra India mess Tallow at 6⅝-16@6⅝ for prime. Stearine at 11⅜@11½.

VEGETABLES.—The Hudson now admits of deliveries and for common quality potatoes the situation is weak. The general tone of the market is dull and is likely to run unsettled for a time until stock is classified. New arrivals of State potatoes are of very irregular quality.

New Bermudas higher, $6@7 ₩ bbl.; Early Rose, Eastern, $2.50, do. State, $2@2.25; Prolific, $2; Mercer, 1.75@1.87; Jackson White, $1.75; Burbank, $2 00 @2.25; Snowflake, $1.75@2.25; Peerless, $1.50@1.75: the highest prices are for double-headed bbls. Sweet potatoes dull at $2.25@2.50. Southern garden stuff enlivens the market, but the weather has been unfavorable for use and show and prices are irregular. Onions have declined; in fact all old stuff has a cheaper tendency. Fla. green peas, $2.50@4.50 ₩ crate; do. tomatoes, $2.50@3 ₩ half-bush. box; Bermuda tomatoes; 90c.@$1 ₩ 6-quart box; do. beets $2@2.50 ₩ crate; do. onions, $5; Norfolk Spinach, $1.50@3 ₩ bbl.; do. kale, $1@1 25; do. radishes, $3.50@4 ₩ 100 bunches; Chas. asparagus $10 ₩ doz.; beets, 75c@$1 ₩ bbl.; carrots, $1@1.25; Hubbard squash, $1@1.25; marrow do. 50@75c.; onions, white, $3.50@4.50 ₩ bbl; other, $2.50@3; celery, $1@1.25 ₩ doz.; cabbages, $4@7 ₩ 100. Hot-house products—Cucumbers, $3@4 ₩ doz.; mushrooms, 75@90c. ₩ bbl.; lettuce, fine, 75c.@$1 ₩ doz.; other, 35@62c.; radishes, $4@5.50 ₩ 100 bunches; rhubarb, $4@6.

WOOL—The market continues depressed on the pressure to sell in view of the approaching new clips; prices are unsettled. Quotations for new fleeces are as follows:—

Ohio, Penn. and Va. XXX and picklock, 45@47c.; XX, 42@43c.; X, 40@42c.; No. 1, 46@47c.; No. 2, 40@42c.; common, 36@38c.; combing, 45@48c.

N. Y. State, Mich., Ind. and Wis. XX, 38@40c.; X, 37@40c. No. 1, 44@46c.; No. 2, 38@40c; common, 35@38c.; combing, 42@45c

Iowa, Vt. and Ill., X and XX, 35@38; No. 1, 42@44; No. 2, 35@38c.; combing, 40@43c.

Mo., Ky. and Tenn. washed fleece, 38@43c.; unwashed fleece, 25@30c.; unwashed combing, 27@33c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, March 26, 1881.

BEEVES.—Receipts for the week 8,293 head: do. last week, 10,833 do. Supplies have run remarkably light for a cold weather week, but the fact did not produce much compe[tition] on the part of buyers. Lent still causes man[y mo]derate retailing days and besides, we are at [the e]dge of a season when the weather can turn dis[gust]ingly warm for large lots of dressed carried by wholesale butchers. The range of prices is close and has ruled so all the week; nothing sold below 6¾c. to dress 56 lbs., and the bulk of the sales may be quoted at 10@11¼c., with a few extra steers at 12c. Several failures of late have given a blue tinge to the cattle trade.

MILCH COWS.—The run of car-loads range at $30@55; several extras quoted $62. Market dull.

VEAL CALVES.—Market firm for good stock, choice State and New Jersey showing an advance from Wednesday's figures.

Live calves, choice fed, including Mt Holly, 8@8½c; fair to prime, 6@6¾c.; poor, 5@5¾c.; buttermilk, 4@5c.; grassers, 2½@3½c.; dressed, best, 10@10½c.; poor to good, 7½@9½c.; very poor, 4@6½c.

SHEEP AND LAMBS.—Receipts for week, 22,109 head; do. last week, 23,179 do. There is an easy feeling in the sheep market—sheep regarded well sold at 6½@6¾c.; a car-load of extra wethers 7¼c., and one of clipped was held at 5¾c. Yearling lambs, 7½c. Spring lambs $2@8 ₩ head; quality poor, hence the low range.

SWINE.—Receipts for the week, 19 764 head; do. last week, 14,921 do. Trade rather quiet.

Live at the yards, $6@6.40 ₩ cwt.; country dressed pork, light, 8½@8¾c.; medium, 7¾@8c.; heavy, 7½@7¾c.; city dressed Western, 7¾@8c. Pork tenderloins, 11½c.

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Seed Store, No. 35 Courtland Street, New York.
NEW YORK, July 2, 1879.

MR. SMALLEY: Dear Sir: My son informs me that you called the other day, and in talking about the asparagus that you evidently misunderstood our offer—our offer as I made it would be from $1,000 to $1,500, according to the quantity you had of seeds and plants. I write this thinking you may yet consider it, but if so you must do it at once; in ten days it will be no use to us at any price, as our catalogue is in preparation, and if we had to have a cut made we have no more than time now to do it to meet fall trade. The cut and advertising would cost us at least $1,500, and we have gone over the whole thing carefully and have decided that the offer we made you is all we can afford to give, so if you wish to accept it you must do it within ten days from this date or we must be counted out; after that date we could not touch it at any price. Very truly yours,
PETER HENDERSON.

BERRY BASKETS.—BEST, CHEAPEST. Free Circular. N. D. BATTERSON, BUFFALO, N. Y.

SUGAR CANE MILLS.

THE BEST—THE CHEAPEST.

SEVENTY DIFFERENT SIZES.

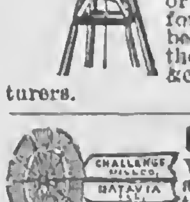
Send for Amber Cane Manual.

GEO. L. SQUIRE & BRO., Buffalo, N. Y.

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Whee and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

CHALLENGE WIND MILLS



Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.

CHALLENGE MILL CO., Batavia, Ill.

GALE CHILLED PLOWS.

NEW SERIES.

The Gale Manufacturing Co., Albion Michigan, through the Manufacture and Sale of "*Gale Chilled Plows*" have acquired a reputation "World-wide"—a name that lives as a "Household Word" in this and other Lands. Therefore we seek time and space here to thank a generous Public for patronage bestowed, and honor accorded us in being "Pioneers" in the *Chilling of Plows* and now offer to our *Patrons* and *Trade* in the East

"OUR NEW SERIES" OF CHILLED PLOWS,

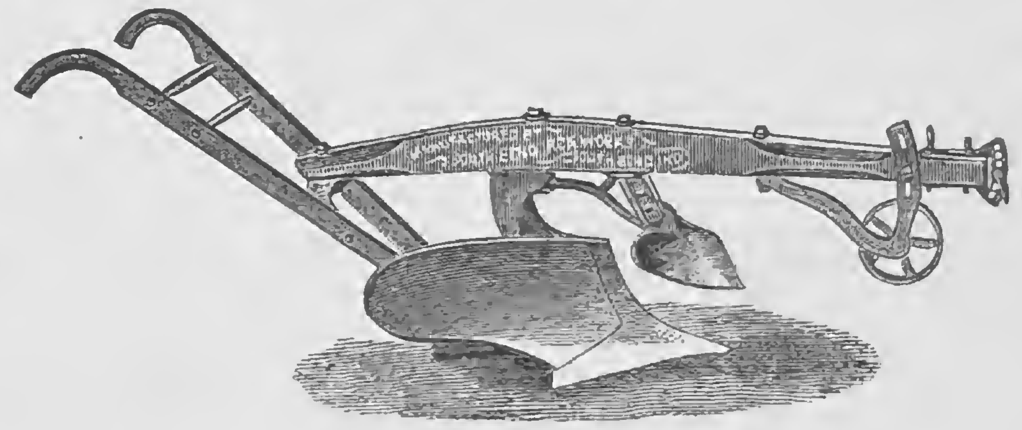
In *sizes* and *styles* for *two* and *three* Horse—Right Hand and Left Hand. "Our New Series" have the styl of *wooding*, as above in cut. The beam shifts *independent* of *Jointer*, therefore its *adjustment* is *quick* and *simple* with line of *Draft* always direct. Its *jointer*, improved with *Wrought Iron Arm*, New Mode of Attaching to the *Plow Standard*, and any *pitch* desired given jointers on front of Arm. This *Jointer*, also *Coulter*, are absolutely "Anti-Clogging," and are justly called the *King of Jointers* and *Coulters*. Call on your Agent for one, or address Gale Manufacturing Co., New York State Headquarters, 164 West Main St., Rochester, N. Y., or

GALE MANUFACTURING CO., Albion, Mich.

THE PLOW OF THE PERIOD.

THE "OLIVER CHILLED."

1,500 Sold in 1870.



86,000 Sold in 1880.

Ten years ago almost unknown—to-day doing service on over

HALF A MILLION FARMS.

Sales steadily increasing, and showing the largest ratio of gain where it is best known.

Endorsed by the best agricultural authorities in the country—and its superior merits confessed by a brood of puny imitations.

With 700 men, nearly a million dollars of capital, and acres of buildings and machinery, employed in its production—the demand for this—

THE LEADING PLOW OF THE AGE,

has been during the past year beyond our capacity—a state of facts never before witnessed in the

ANNALS OF THE PLOW TRADE.

THE

"CASADY" SULKY PLOW.

A revolution in the art of plow-making. Has no Landside! Carries every pound of side and bottom pressure on its wheels! Guages the width of its own furrow! Turns square corners without lifting out! Rides over buried stones without disturbing the truck! Works in the hardest, dryest ground! and accomplishes other results not possible to any other plow on wheels.

Address for Circulars, Terms, etc.

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INDIANAPOLIS, IND, ST. LOUIS, MO, MANSFIELD, O. KANSAS CITY, MO, HARRISBURG, PA. CEDAR RAPIDS, IOWA. BALTIMORE, MD. ST. PAUL, MINN. DALLAS, TEXAS. ROCHESTER, N. Y.

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THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to

Bagg's Hotel Farm,

UTICA, N. Y.

SEED POTATOES.—BURBANK, ST. PATRICK, SILVER SKIN, MATCHLESS, and 15 other best new and old sorts. For good stock and low rates write to W. L. JOHNSON, CLIFTON SPRINGS, N. Y.

"HAWLEY'S" Choice Onion Seed.

WARRANTED FRESH AND GENUINE

Early Red Globe	Pk't, 10c.,	oz. 25, lb.	$ 50
Wethersfield Large Red	"	10c., oz. 25, lb.	50
Yellow Globe, Danvers, *extra stock*	"	10c., oz 40, lb.	4 50
Extra Early Red, *very choice stock*	"	10c., oz 40, lb.	5 00
Fottler's Imported "Early B'w'k Cabbage	"	10c., oz. 40, lb.	4 00
Egyptian Earliest Beet	"	5c., oz. 10, lb.	75
Dewing's Early Turnip Beet	"	5c., oz. 10, lb.	50
Imp'l Dw'f Celery, *The Best* of all	"	10c., oz. 50, lb.	6 00
Sugar, Tour's netted melon	"	10c., oz. 40, lb.	4 00
English Potato Onion Setts (Express),		peck $2; bu.	8 00
Hawley's E H'rtf'd E.E'y Peas,	"	" $1.75; "	7 00
Little Gem Dwarf, Extra Early,	"	" 2.00; "	8 00
Pride of Am's Potato, v'y ch'ce,	"	" 1.00; "	3 00

If by mail, *in quantities* of ¼ lb and upwards, postage at the rate of 16c. per lb must be added. *Catalogues free to all.* Wholesale Trade List, for dealers only. Address, R. D. HAWLEY, Importer and Grower of Choice Vegetable Seeds, Hartford, Conn.

Reading for the Young.

HIDING "EASTER EGGS."

SCAMPERING through the barn yard,
Nellie, Fred and Bess,
Hiding "Easter Eggs" away
Just where you'd never guess.

Not in the great old hay-mow,
Nor corner of manger or stall;
"O, Mamma," cried Bess, "you need'nt try,
'Cause you'll never guess at all."

"You know Mamma said we might hide them
Just anywhere we please;"
Nell, did you ever see such eggs,
Such nice large ones as these?

And we're going to color *lots* of them,
Mamma says she'll help us too.
I am *so glad* that Easter comes,
And Nellie and Fred are, too."

O, innocent joys of childhood!
Sometimes our heart still begs,
For the feelings of mingled joy and pride,
In hiding "Easter Eggs."

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

The Orange Trees.

"What smells so sweet?" asked Daisy one day soon after her arrival.

"Why, that is the orange blossoms!" cried Violet. "Haven't you seen any yet?"

"No," answered Daisy, "I know which are the orange trees, but haven't looked at them closely."

"Let's go out and pick some oranges and you can have all the flowers you want. There is papa poisoning gophers; he will explain about the trees, though I can tell almost all the different kinds."

The girls walked along to where Mr. Erman was stooping on the ground, some peach sprouts lying by his side, and before him a small pail containing bits of sweet potato. "Still at it, you see," he remarked, as the girls came near; "these gophers are never idle. They burrow under the ground and eat the roots of the trees, and unless I am constantly on the lookout my trees are killed almost before I know it. So every day or two I go around with my medicine."

"How do you know where they are if they never come above ground."

"Oh, they usually work near enough to the surface to throw up some loose dirt like that mound yonder. There's a fellow I must take care of. Then I dig down till I find the runaway, stick a poisoned bit of sweet potato on a peach sprout, put it down in the hole, cover it and that usually finishes Mr. Gopher.

"There papa, we didn't come to hear about gophers. Daisy wants to see the orange trees."

"Well, here they are all around us; plenty of flowers, too. Pick some for her, Violet."

Some of the trees were white with blossoms, and the air was laden with fragrance. Violet began breaking off the flowers with such a lavish hand that Daisy expostulated. "There, there! Don't pick any more of the beauties! Just think how many oranges you have spoiled already!"

Violet and her father laughed. "You foolish child, don't you see what quantities of flowers there are? These little trees never could support so many oranges. Papa will have to thin them out, so don't deny yourself any orange flowers whenever you take a fancy for them."

"How beautiful the trees are with the white blossoms, bright oranges and glossy leaves! Why are some of the leaves so light?"

"Those are the new growth. It has been so warm this winter, and we have had so little frost, that the trees have grown right along, though not as fast as they do in Summer."

"I always thought that orange trees were very large before they bore, but look at this little thing," said Daisy, pointing to a diminutive specimen about three feet high, bearing half a dozen handsome oranges.

"Seedlings do not bear until they are from six to nine years old; but these trees are all budded. This is the way we bud a tree," continued Mr. Erman in answer to Daisy's inquiring look, "we generally take a seedling and cut the bark of the trunk in a certain manner, and insert a bud from some variety that we wish to propagate. This bud does not come from the end of a twig, but from the axil of a leaf. Then when the bud begins to grow we cut off the seedling top, and the whole tree is grown from that bud. In a few days I am going to bud some stock and you must come and see how it is done."

"It seems a pity to cut off the trees," remarked Daisy.

"Yes, but if these were not budded trees there would not be an orange on the place to-day. These trees are nearly four years old from the bud, and have not been set three years; and look at the hundreds of oranges. Next year I expect to have thousands instead of hundreds."

"When do you pick the oranges, Mr. Erman?"

"They do not become nice and sweet until about this time, though some pick them as early as January; but I think they are too sour then. From March to May is the best time for California oranges. They have been picking for some time in the large orange groves which are from twenty-five to thirty years old; but there are a great many oranges on the trees still, and we must take you to see the old ranches the first day I can spare."

"I should think it would hurt such little trees as some of these to bear so many oranges."

"I don't see that it hurts them any. The trees that bore last year are bearing now, and seem to have made as much growth as the others. Besides, I never allow a tree to have more fruit than it can mature without hurt to itself. You remember the thinning process of which Violet told you."

"But, Mr. Erman, if these trees are all the same age, why should there be any special difference in their size?"

"Because they are different varieties. These rows of tall trees with the very large oranges are the Konah, and the rows beyond, with fruit a trifle smaller, are the Rio. These light-colored oranges of medium size are the St. Michael and Mediterranean Sweet. Then we have the Maltese Blood, which is red, as its name indicates, the Du Roi, Tahita, Bergamot, Mandarin, and other standard and fancy varieties—about seventeen, I think, and six kinds of lemons."

"I didn't suppose there were so many different kinds."

While Daisy and Mr. Erman were talking Violet had been filling a basket with the golden fruit, and now, slipping her hand through her friend's arm, she said:—"Come, Daisy, you have learned enough about the oranges, and I want you to eat your fill. Last January, when Mr. Hopkins and his wife were here, they would persist in eating the green oranges, and then went back East and told every one that California oranges were *sour*. I was so provoked I didn't know what to do, and you must prove the statement to be *utterly false!*"

THE "YOUNG QUERIST."

W. C. H., New York City.—We have no seeds of the Golden Rural Tomato to sell.

A. S. L., Livingston, N. Y., asks if the firm of Burt and Prentice, 46 Beekman St., N. Y. are reliable.

ANS.—We believe they are. Your complaint will be referred to them.

C. L. D., Edgerton, Kan., asks 1, how many tons the largest ship will carry. 2, how many miles the largest ships will run in an hour.

ANS.—The Great Eastern is said to have been built to carry 10,000 tons; 2, eighteen miles an hour is the fastest time ever made by ocean steamships.

N. B., Almond, N. Y., wishes to know what will keep the little white worm away from the roots of plants.

ANS.—We presume you refer to house-plants. The little white worm is most common in the roots of the geranium and seems to come from decaying matter produced by keeping the plant roots too wet. We do not think you will be troubled if your flower pots have proper drainage.

M. V. S., Racine, Wis., asks how she shall treat Japan Quince seeds saved last Fall, also the little black berries from the Honeysuckle? Do they contain seeds, and when should they be planted?

ANS.—The little black berries are seeds. In raising the Honeysuckle from seeds they should be sown in the Autumn after they are ripe or they will not come up the first year. Both the Quince and the Honeysuckle are propagated by cuttings.

I. M. D., Boulder, Col.—Please tell me when and how to plant peas so they will not be buggy.

ANS.—You ask a difficult question, since the pea-weevil, to which you probably refer, begins its existence in the pea itself; hence, wherever the pea is sown, just there will be the weevil. One method suggested to get the better of these pests is to keep the seed peas over one year in tight vessels. Some recommend putting the seed peas in hot water a minute or two before sowing, by which means the weevils will be killed and the sprouting of the peas will be quickened. Late-sown peas are less liable to the attacks of this weevil.

LETTERS FROM THE COUSINS.

How to Do It.

UNCLE MARK:—Our children, who took much delight in their lessons in botany last Summer, have found out—through their examinations of different flowers and seeing the regularity of their parts—a pleasant evening puzzle for the cousins. Apples or pears being brought in, they challenge the uninitiated to cut a piece out of an apple from eye to stem without cutting into a core-cell or touching or showing a seed. The one party does this unfailingly every time, to the wonder of the other. They do it by taking care to choose an apple in which the five lobes of the calyx are not rubbed off. By cutting straight from one of these lobes the knife is sure to go in the desired direction. W.

Tyrone, Pa.

DEAR UNCLE MARK:—I am only six years old and have just learned to write. I have a big brother Frank nine years old, and a little brother Willie one year old. I have no sisters. My big brother belongs to the club, but he is very lazy about writing. The China pinks you sent him were beautiful. Mamma says I am her little housekeeper; I sweep, dry the dishes, pick chips, and take great care of little brother. I had a fine time Christmas. I went to see my grandma at Newbern and got a load of presents, and came home and had the toothache, but that did not spoil my enjoyment of them. Please to remember me in seed time. Your niece, ETHEL WYSOR.

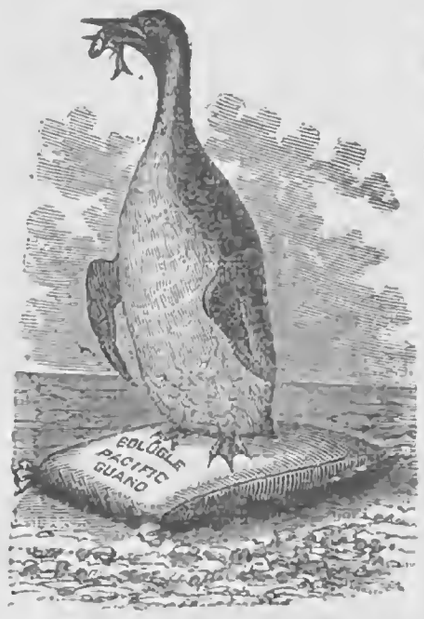
Newbern, Pulaski Co., Va.

DEAR UNCLE MARK:—I like to read the letters from the cousins ever so much. I have been watching the papers every week to see if any little girl from this vicinity would write a letter to you, but so far I have failed to see any, so I thought I would write and ask if I could join your club. I am nine years old and have never gone to school I study at home and mamma hears me recite. I have two cats, a dog and fourteen chickens. My chickens laid 144 eggs last month. The Cuthbert Raspberries that you sent papa did splendidly. The flower seeds I did not plant as I had no place for them. We were living in the city then but now we are in the country. I have a splendid place for flowers. MAUDE CULLEN.

St Paul, Minn.

Parents, do not use vile drugs or nostrums in your families, but use pure Hop Bitters.

Fertilizers.



SECOND TO NONE.

Soluble Pacific Guano.

Sale in 1865 - - - - - 754 Tons.
" 1880 - - - 44,700 "

This Fertilizer, which was at first sold almost entirely in the Southern States, has of late years become so deservedly popular in the North, for the cultivation of all Farm Crops, that the Company have enlarged their works especially to supply the Nothern demand, and we are now in a position to fill orders promptly. Pamphlets containing testimonials and other information furnished by our local agents, or on application to

GLIDDEN & CURTIS,

GENERAL SELLING AGENTS OF PACIFIC GUANO COMPANY
Boston, Mass.

BOWKER'S
HILL AND DRILL
PHOSPHATE
SEND FOR PAMPHLET.

This is a true bone superphosphate, and may be used *on any crop*, in the hill or drill or broadcast, either *with* or *without* manure, and will produce a much earlier and larger crop. In the Report of the Mass. Inspector of Fertilizers, its valuation is from $3 to $10 per ton higher than other Phosphates which sell at the same price. The past year over 3000 tons were sold against 100 tons three years ago, showing that it is liked by the farmers. If there is no local agent near you, send to us.

Also for sale STOCKBRIDGE MANURES.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK

STOCKBRIDGE
MANURES
SEND FOR PAMPHLET.

These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK.

Carpetings.

CARPETS.

We have now open for inspection and for sale a line of the choicest CARPETS ever offered in New York, of the latest and most desirable colorings and patterns.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS—We have opened a full line of 300 pieces at 75 cts. per yard. They cannot be had elsewhere in this city. We have other grades at 85 cts. and $1 per yard:

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

INGRAINS—We have of the best Extra Superior Grade a very full line from 75 cts. to 90 cts. per yard. Also, a line a grade lower at 65 cts. to 75 cts. —all wool.

If you want Carpets call and see what we have. You will get Reliable Goods and save money by purchasing from us.

J. & J. DOBSON,

CARPET MANUFACTURERS,

40 and 42 WEST 14th ST., NEW YORK.

John Van Gaasbeek, Manager.

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Quartet Books for Choirs. Excellent ones are EMERSON'S SACRED QUARTETS, THOMAS'S SACRED QUARTETS, BAUMBACH'S SACRED QUARTETS (and his New Collection), BUCK'S MOTETTE COLLECTION (and his Second Motette Collection), and DOW'S SACRED QUARTETS, (this last for male voices only.

Price of each of the above, $2.00 in Boards, and $2.25 in Cloth.

EASTER MUSIC! Send for lists of Easter Carols and Anthems, and begin, in time, to practice!

The Beacon Light. New and Beautiful SUNDAY SCHOOL SONG BOOK. By J. H. TENNEY and Rev. E. A. HOFFMAN. This book was prepared by the best talent, and may safely claim to be among the *very best* music books for Sunday Schools ever published. Examine it! Specimens mailed for 30 cents.

Now subscribe for the MUSICAL RECORD, $2.

Gems of English Song. ($2.00) is the best large collection of Sound Sheet Music (Vocal. Very Popular. GEMS OF GERMAN SONG, ($2) and MOORE'S IRISH MELODIES $2.) are also of the best books of the same class.

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To every farmer sending us his name, we will send free *The Clover Leaf*, a 4 page, 28 column farmers' paper, full of valuable information on the culture and harvesting of clover for seed. When you write say where you saw this notice. Address BIRDSELL MANUFACTURING CO., South Bend, Ind.

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Short winters, low taxes, good society, convenient markets, superior schools, healthful climate. Excellent for Stock, Fruit, and Farming. ☞ The best Tobacco Region in the West.

1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from $2.50 to $8 per acre on seven years' time. Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*

IN SO. WEST MISSOURI

W. H. DOWNS, Land Commissioner, Temple Building, St. Louis, Mo.

GENESEE VALLEY FARMS FOR SALE.—Some of the finest residences in the Valley, near R. R. Inquire soon of JOHN SHELDON, Fort Collins, Colorado.

PERSONAL ITEMS.

General Schenck is again very ill.

The Empress of Germany suffers from a spinal complaint.

Ex-Governor Horatio Seymour is very weak and is confined to his room.

General Joseph E. Johnston has permanently fixed his residence in Washington.

General Gonzales Ortega, one of the most famous of Mexican soldiers, died a few days ago.

Senator Sherman has presented every member of the Ohio Legislature with a cabinet photograph of himself.

Sergeant Bates, the carrier of the American flag in other lands, is said to be very ill at his home in Saybrook, Ill., and his wife and six children are suffering greatly from poverty.

Mr. Archibald Forbes, who is in Chicago, suffering considerably from a bullet wound received at Ulundi, Zululand says that "the outcome of Nihilism will be a Russian constitution beyond a doubt." He had a high opinion of the murdered Czar, whom he characterizes as "the only honest Russian I ever knew."

[Pittsburgh Commercial Gazette.]

The Rt. Rev. Bishop Gilmour, Cleveland, Ohio;—Chas. S. Strickland, Esq., 9 Boylston street, Boston, Mass.;—Capt. Paul Boynton, the World renowned Swimmer;—Prof. C. O. Duplessis, Manager Chicago Gymnasium, Chicago, Ill;—Wm. H. Wareing, Esq., Asst. General Superintendent, New York Post Office—Hon. Thomas L. James, Postmaster, New York;—Stacey Hill, Esq., Mt Auburn Inclined Plane Railroad, Cincinnati, Ohio, are among the myriads who have experienced the beneficial effects of that most remarkable remedy, St. Jacobs Oil, and who have testified to its efficacy in unqualified terms.

Stock.

POWELL BRO'S,
Springboro, Crawford County, Pa.
THE MOST EXTENSIVE IMPORTERS OF
CLYDESDALES
IN AMERICA.

Two importations for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow.

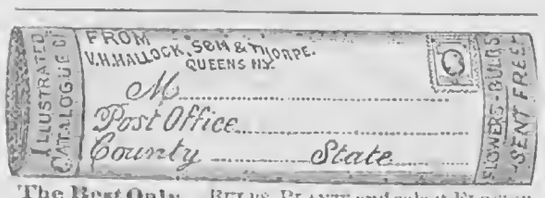
Largest and Finest Collection ever seen on the American Continent.

ALSO,
HAMBLETONIANS,
And other strains of trotting Stock.
HOLSTEIN & DEVON CATTLE.
Catalogues sent free. Address as above, and mention the RURAL.

200 KENTUCKY MULES.
All grades and sizes, constantly on hand, for sale low. E. B. BISHOP'S SONS,
630 Grand St., Jersey City, N. J.

Trees, Seeds, Plants, &c.

Nursery Stock.
One of the largest establishments in America. Fruit Trees, Small Fruits, Ornamental Trees, Shrubs and Roses of all varieties, wholesale and retail.
Large stock transplanted Norway Spruce, Elms, Maples, Lindens, etc.
☞ Special prices given on application.
SMITHS & POWELL,
Syracuse Nurseries,
SYRACUSE, N. Y.



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POMONA NURSERY!
BLIGHT-PROOF PEARS.
Largest Berries.
Catalogues of Fruit Trees, Plants, and Flowers sent free.
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Disseminator of the **Mammoth Pearl** and **Magnum Bonum Potatoes** (27¾ bu. grown from 1 lb. of seed), **Berkshire Beauty Cabbage, Amber Cream Sweet Corn, La Plume Chestnut Celery,** etc., etc. Elegant Catalogue free to all; send for it.

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Phila., 1876—Paris, 187
25 Years in Use.
GUARANTEED SUPERIOR
To any other Windmill Made.
17 SIZES—1 MAN TO 45 HORSE POWER
Adopted by the leading R. R. Co.'s and by the U. S. Govt. at Forts and Garrisons.
$8,500,000 worth now in Use.
Send for Catalogue "B" and Price List.
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Consisting of Grappling Fork, Carrier Pulleys, etc. This fork, car, etc., has been sold throughout the U.S. and Canada with the greatest success. It has won its way amid the greatest competition of Forks and Carriers, and is without doubt the best Hay and Grain Unloader made; also Stacker. Send for a circular now.
E. V. R. GARDNER & CO.,
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LEVEL TREAD
HORSE POWER,
WITH
Speed Regulator.
Heebner's Improved
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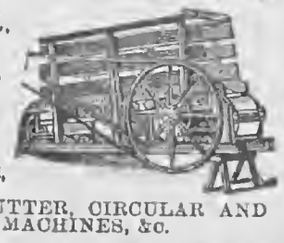

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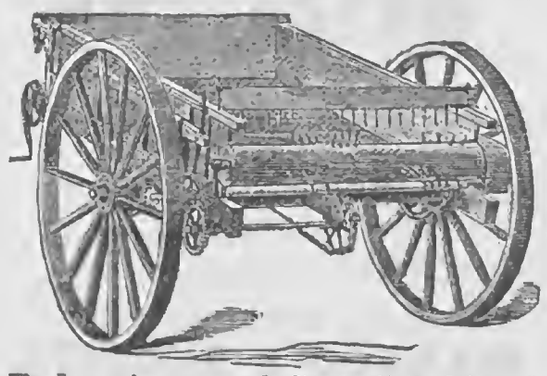

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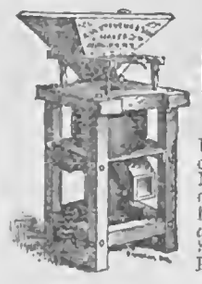

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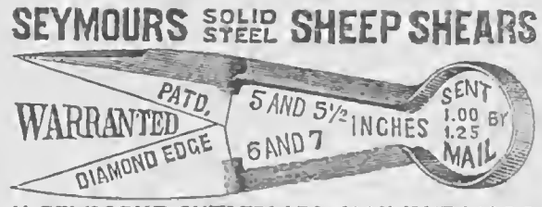

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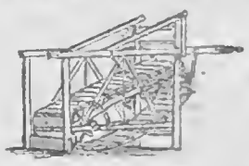

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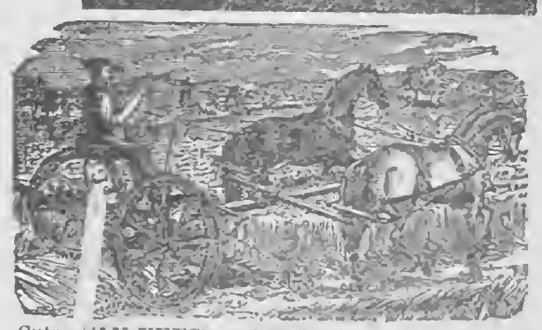

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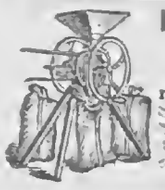

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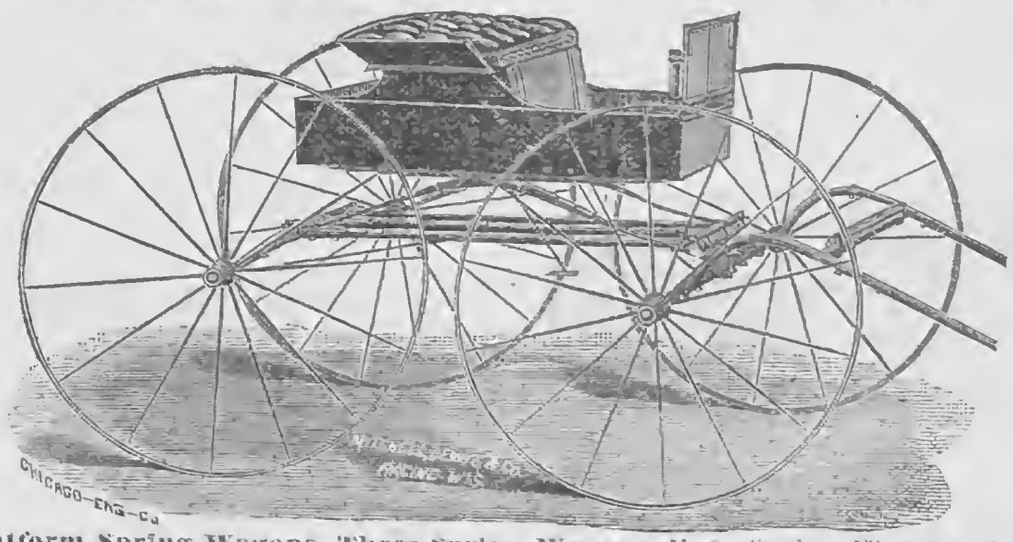

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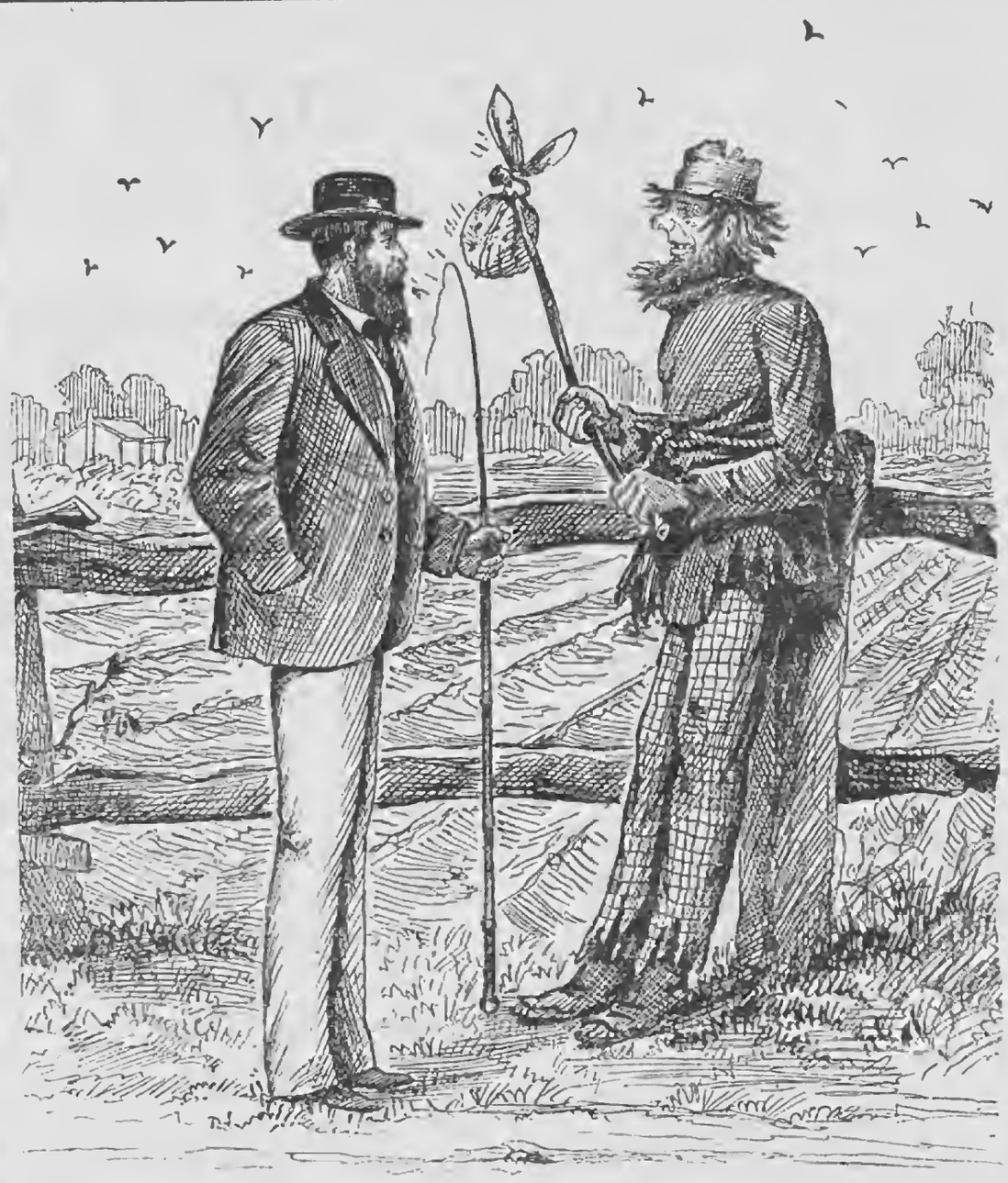

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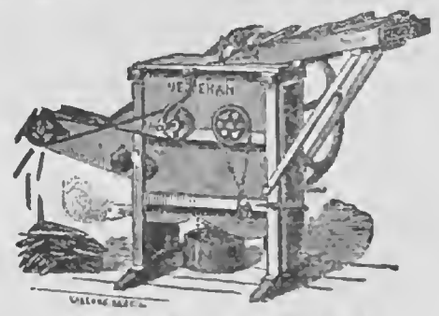

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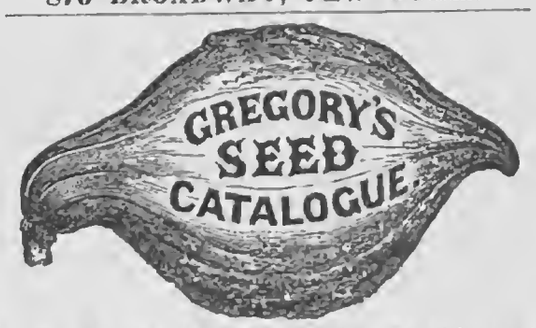

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THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 15.
WHOLE No. 1628.

NEW YORK, APRIL 9, 1881.

PRICE FIVE CENTS.
$2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

The Herdsman.

OUR ANIMAL PORTRAITS.

Holstein Cow Lady of the Lake.

THE accompanying remarkable picture is an exceedingly accurate copy of a photograph of an imported Holstein cow, bred in North Holland and imported thence by Smiths & Powell in 1878. A person familiar with the distortions of photographs taken with instruments ill adapted to the purpose, and by "artists" who are no artists, but, on the contrary, poor artizans, might construct in his own mind an imperfect idea of what the cow is. He might suppose her to be well formed, her hind-quarters to be no larger than her fore-quarters in proportion, her head of a reasonably useful size, etc; but there is no fairness in an artist's doing this—certainly not if he be a conscientious man. How does he know that the hind-quarters are not really too small, and that the animal is not artfully posed in this way just to convey an idea that she is well proportioned? He cannot tell but that she has an enormous head, which by her position is thus greatly reduced in size. The artist who wishes to be fair has no option but to copy the photograph and leave to the photographer the responsibility for his own work. In this picture we have an extreme case. Whoever posed the cow, we suppose, wished to exhibit her excellent escutcheon, well-formed udder and fine tail. The photographer had not a suitable instrument, so the picture presents a horrible distortion.

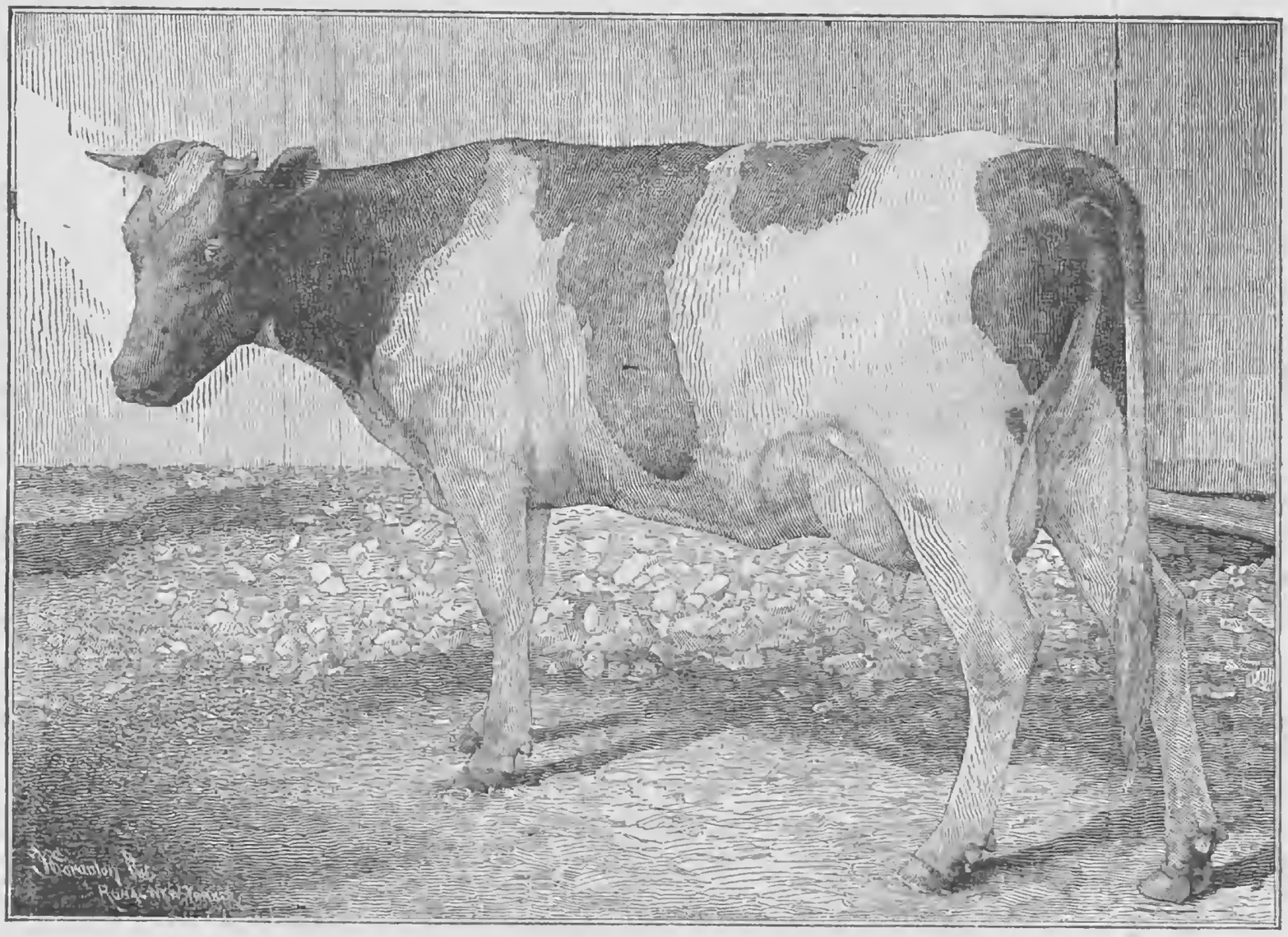
A proper instrument for taking animal photographs is quite an expensive one, but such may be had. However, a cheap common instrument may be made to answer well in this way:—The animal must be placed far away from the camera and against a strongly contrasting background, so that the figure will stand out clear and bright, and it is usually best to take the picture in strong sunlight, and the more nearly instantaneous in time the better. Such a picture will be very small, but should be clear and well defined so that it may be enlarged to any desired extent. The proportions will be more nearly accurate the farther away the object is.

One of the best distant positions in which an animal can be placed is on the sill of a barn-door, the doors, of course, being open, the sun shining full upon the object, and the interior of the barn proving a nearly black background. In this case the photographer places his instrument at a hight, if possible, somewhat above the object and as far in front of the barn as he can get a picture that will bear enlarging. The artists who make cattle portraits a business, and require a photograph only to give an idea of the animal's markings and the general look of the head and horns, have really an ideal frame over which they hang the skin of one cow one day and of another the next. What are such "portraits" worth but condemnation?

One of these cattle drawers once told in our hearing how that he was applied to, to draw a picture of a pair of Chester County pigs. His charge for traveling some 200 miles and making sketches was too much for the owner who pleaded for some sketch which he could afford to pay for. So Mr. ——— went to his own orchard and made an accurate sketch of a fine Suffolk sow he had there; then, coming to the house, he copied this sketch on the same paper, turning it about, making certain additions and giving a slightly heavier head, and sent the picture off as a pair of Chester Whites, male and female. They gave excellent satisfaction and served in the public prints as portraits of particular pigs of a rather famous breeder, carrying about with them the well-known initials of the "artist" as evidence of their correctness.

The substitution of the picture of one animal for another, and continuing its use after the animal for which it was taken has been made beef of, is no more clearly a fraud upon the public than is this method of working up a picture to suit breeders' wishes rather than the facts, and picturing what the breeder thinks the animal ought to look like, rather than the beast itself. Give us a good photograph and the pictures will be portraits, and will fairly show the animals, with "nothing extenuated and naught set down in malice."

THE Holstein heifer "Lady of the Lake" calved March 30th, 1878. She was imported and is owned by Smiths and Powell, "Lakeside Stock Farm," Syracuse, N. Y. She has just closed her two-year-old milk record which is as follows: She dropped her first calf at 22½ months of age, and before she was two years old gave 45 pounds 13 ounces of milk in one day, and 1,284 pounds nine ounces in one month. As a two-year-old she gave 1,344 pounds 11 ounces in a month, 7,056 pounds 12 ounces in six months, and 12,200 pounds four ounces in the year. With one exception (Netherland Queen of the same herd), this is largest two-year-old record ever published. Netherland Queen gave as a two-year-old 58 pounds 12 ounces in a day; 1670 pounds nine ounces in one month, and, 13,574 pounds three ounces in one year. This firm have the two largest records for mature cows ever published, Aaggie, six years old, gave in one day 84 pounds 12 ounces, 2,362 pounds two ounces in one month: 10,692 pounds six ounces in six months and 18,004 pounds 15 ounces in one year. Aegis, six years old, gave 82 pounds 12 ounces in one day; 2,289 pounds nine ounces in one month; 10 904 pounds five ounces in six months, and 16,823 pounds 10 ounces in one year.



HOLSTEIN COW, LADY OF THE LAKE.—From a Photograph.—Fig. 189.

IN-AND-IN BREEDING.

Mr. Talcott's Answer to "Stockman."

HUMAN nature is very weak, and in many instances very "precarious." "Stockman" says in the RURAL NEW-YORKER of February 19th. "Mr. Talcott does me great injustice when in his communication, (page 84), he says my replies are shifts to avoid a direct answer in one way or another." Had "Stockman" quoted what I wrote and was printed on page 84, I should have said nothing more about it. After stating my object in asking him to give the number of animals of the Bates Duchess family now in existence, so that farmers might judge of the theory of in-and-in breeding as advocated by him, I said:—"Either through ignorance or prejudice on my part, I can look at his replies in no other light than as shifts to avoid a direct answer in one way or another." It has seemed to me that "Stockman" has not wished, nor does he now wish, to discuss this question of in-and-in breeding, but merely to throw down the gauntlet of in-and-in breeding as a great bugbear that no one dares to contend against; and he refers to Mr. Thomas Bates to show what a furore there has been with regard to his so-called families of cattle, and especially the Duchesses, to prove that in-and-in breeding must be the true system of breeding. I have never written a line for the sake of contention, and never intend to, yet I have my views and opinions from actual experience, and when I have learned a valuable lesson from that source, it will take more than a bare assertion from others to convince me of error; but when actual demonstration has shown me that I may be in error, or that others may have as good evidence of right by other processes, I think I can be as easily convinced of such facts as most persons.

"Stockman" in his replies to my question, ("If in-and-in breeding is so successful, where are the descendants and how many are they, of Duchess of 1804, and Duchess of 1810 at this date?") has virtually acknowledged that their breeding has not been a success in the manner they have been bred. He says: "The reason why Mr. Bates left so few at his death is that that gentleman bred his Short-horns for reputation; it was a passion of his, and he gave his life and work to it. Desirous of proving the wisdom of his method, he doubtless, as many other breeders have done and do, fed and slaughtered every animal that did not come up to his ideal. That he would sell any inferior animal is not to be supposed for a moment or that he would keep one for breeding."

Now, if the above be true with regard to Mr. Bates's manner of breeding, when he asserted he had the best cow in England in Duchess of 1810, and he had and used the best bulls in England, as he also asserted, was it not rather poor encouragement to the breeders of Short-horns of that day? It seems to me that there were too many culls, or too many barren animals to be successful with such material as Mr. Bates began with. If so many animals from such stock were inferior and not fit to breed from, what could be expected from the ordinary Short-horns of that period? I am fully convinced that what is termed in-and-in breeding, as practiced by Mr. Bates, did deteriorate his cattle, and the continued practice has sadly interfered with their health and hardihood since his death. It is very evident that the Booth cross in Lord George (10,439) on the Airdrie branch of the Duchess family, did increase their hardihood and breeding properties, which shows that in-and-in, or extremely close-breeding, was not as successful in the long run as an outcross. The failure of the Duchess family, also alluded to in my letter published in RURAL NEW-YORKER of February 5th, where so many of them had died and failed to breed, is a strong argument with regard to the evil effects of too long-continued close-breeding.

"Stockman" may, if he wishes, take the so-called Oxford family and see how much consolation he can get from their present numbers in this country. I would like to know why Mr. Bates's Duchess 34th, and Duke of Northumberland (1,940) were so much superior to those previously bred, if it was not owing to the infusion of new blood by the use of Belvedere

(1,706), and if it was, then what becomes of the theory of in-and-in breeding? By the use of Belvedere, Mr. Bates has shown to the world that other Short-horn breeders of his day had as good cattle as he had. By the use of this bull he also proved that he did improve his herd, thus showing that he was too strong in his prejudice against the cattle of other breeders. The improvement made by this outcross and the fact that the Matchem Cow, the ancestress of the so-called Oxford family of Mr. Bates, which has been ranked second to the Duchess, had a strong infusion of Mason blood in her veins, which blood Mr. Bates had previously condemned, prove most conclusively to my mind that Mr. Bates's cattle were not better than those other breeders had in his day. In fact, he selected his animals to start with from what he no doubt considered the best herds, and the best specimens in such herds, and after breeding for some time and without that success that he wished, he was forced to go outside of his herd (although it must have galled him to do so, after his sweeping denunciations of the cattle of other breeders), or his herd must have utterly failed. Mr. Stephenson must have felt proud to have sold Belvedere to Mr. Bates, as it was a tacit assent on the part of the latter that Mr. Stephenson had a better bull than he had, which was no doubt the fact, as his "get" so plainly proved. Should not Mr. C. Collings have the honor of originating the Duchess family, and Mr. Stephenson the honor of furnishing Mr. Bates a bull that did more to bring that family of Short-horns into repute than any bull Mr. Bates ever bred? Also, should not Mr. Mason have the honor of furnishing from stock of his breeding the Matchem Cow which produced the so-called Oxford family in the hands of Mr. Bates? It seems to me that to these men equal honor is due with Mr. Bates, if they get their proper meed of praise in regard to these families of Short-horns.

In regard to Mr. Bakewell's sheep breeding, he could for years breed without going outside his own flock and not breed very close, owing to the large number of ewes in the flock. And then what of the black tup found on his premises? Did not Mr. Bakewell get some new outcross from that source? It has often been shown that such a thing was possible, and even probable. Does the single instance of Goldsmith Maid prove that in-and-in breeding is a success? How many of the trotting-bred horses are a success, even as farm horses or roadsters? In other words, how many are failures to all intents and purposes, as has been plainly shown by the prices they have sold for during the past few years, when from overstocking breeders have sold the surplus? I could point to sales where the animals sold did not bring the money paid for the service of their sires—could that be called a success? "Stockman" knows full well that in a case like Goldsmith Maid's, it will do to publish the success, but what breeder of cattle or horses would be willing to have the failures made public, and no one should do that with his neighbor's property without his consent.

"Stockman" says I have no right to pick out the Duchesses as examples of what I consider injurious breeding. That is a strange assertion it seems to me. If in-and-in breeding is the true course, then the more in-bred the better, I should think. I did think I had the right to ask the question and also that I had the right to pick out the Duchesses if I chose. If I had no such right, then it is an error of judgment on my part, as I did not intend to do what I had no right to do. I leave the readers of the RURAL to judge in this matter, and will abide by their decision. Stockman says. "The history of the best and most successful stock-breeding is full of such examples, and yet Mr. Talcott finds fault with me for complaining that the great bugbear of farmers is close breeding—it is only because they are uninformed of the facts. But Mr. Talcott is informed and therefore if he sins at all it is against light." The above sentence I suppose Stockman thinks is unanswerable; but I would most respectfully ask him or any other person: Did not the introduction of Belvedere (1706) into Mr. Bates's herd make in it the greatest improvement made by any bull he ever used? Did not the Matchem Cow in her first crossings with Mr. Bates's Duke bulls produce healthier and more prolific animals than the Oxfords of the present day? If so, what becomes of the theory or practice of in-and-in breeding? In regard to examples, I will state that nearly 40 years since I saw in the yard of the late Francis Rotch one of the most miserable specimens of Short-horn cows that I ever beheld, which Mr. Rotch said was the progeny of a bull on his own mother, and he called my attention specially to that fact, as one of the results of in-and-in breeding. I also have frequently seen such results in other herds, and in my own I have in a good many instances had results as disastrous, but I never knew any harm to come from an infusion of fresh blood in any herd. That there have been fine animals bred by in-and-in breeding I have no doubt; but such are not the invariable rule, but rather exceptions to a general rule, while with fresh blood of equal merit a poor animal is the exception and not the rule resulting from such breeding. J. TALCOTT

CALVES SUCKING THEMSELVES.—A correspondent writes us from Albion, Michigan, that he found a complete remedy for this habit in the liberal application of Cayenne pepper two or three times to the parts sucked. No evil effects resulted either to the sucker or sucked.

Another correspondent writes from Peekskill, N. Y., that the use of common pine tar (applied we suppose, to the part usually sucked) will prevent the habit.

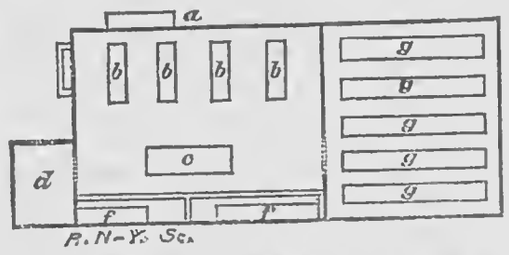
Dairy Husbandry.

THE DAIRY COW—NO. 29.

HENRY STEWART.

Cheese Factories.

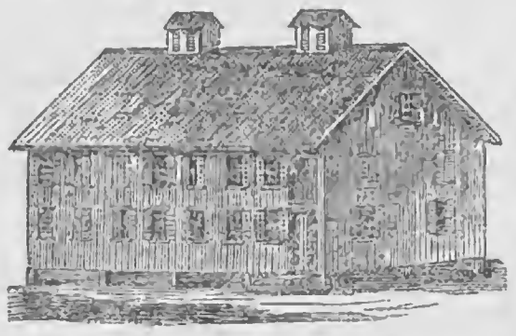
THE cheese factory is nothing more than an association of dairymen by which one set of apparatus and one skilled person are employed to do the work of several. It is thus a system of economizing labor and capital by association. It has lightened the labors of thousands of farmers and their families and has vastly enlarged the development of the dairy interest. There are two methods of managing the business of a cheese factory; one is by purchasing the milk outright from the farmers at a stated price and another by making the cheese on a co-operative principle and distributing the proceeds, *pro rata*, according to the quantity of milk delivered by each member, after a certain fixed charge has been made for manufacturing. This charge is usually two cents per pound of manufactured cheese. The method, however, of organizing the business is immaterial; it is the management that is more pertinent to us at the present.



GROUND PLAN OF CHEESE FACTORY—FIG. 190.

A cheese factory consists of a building adapted to the requirements of the machinery used in the manufacture, for the proper reception of the milk, and for the curing of the cheese. It is provided with a steam boiler for heating purposes, a curing room for storing the cheese and apartments for the manager. It should be constructed in such a manner as to maintain an equal and steady temperature with economical consumption of fuel and be connected with effective drainage by which the refuse whey may be carried off to a safe distance. A frame building with an eight or ten-inch air-space between the inner and outer walls and protected by air-proof lining, answers every desirable purpose. The ground floor should be amply spacious, and a two-story building with curing room above is the cheapest. As an even temperature and a stable condition of moisture and good ventilation are required, it would seem that a basement curing room would be preferable to any other. It would certainly provide every requisite in a more certain manner than an upper floor would, and yet I have not yet heard of a curing room so arranged in this country. Curing cellars are common in England and in France, and it is difficult to see why an airy, well lighted, well drained basement of brick or stone should not be infinitely preferable to an upper floor heated by the Summer sun to an injurious degree and difficult to cool at certain seasons.

The factory site should be on high, airy, well-drained ground. A permanent supply of water sufficient to fill a two-inch pipe is needed for a factory of 500 cows. A building of this capacity should be 75 feet long by 32 feet wide and the floor should be nine feet in the clear. If the curing room is in the basement, a story-and-a-half building only will be needed. The frame should be substantial; the lower floor of matched hard pine plank, slopes three inches from front to rear, where a trapped drain is made to convey away all the slop and whey and the washing of the floor. The whole interior should be double plastered. The upper floor should be matched and tight, and to avoid pillars in the lower room the beams should be supported by iron rods attached to collar beams in the roof. An ice chamber, or, which is far better, one of the ice and cold-air machines now made and to be procured for a moderate sum, is needed to control the Summer temperature. The most ample arrangements for thorough ventilation are indispensable. A modern factory for 500 to 600 cows, is supplied with the following apparatus: two 600-gallon vats, or more smaller ones; a five-horse power boiler; two gang cheese presses; 20 self-bandaging hoops; one 600-pound platform scale; a 70-gallon receiving can; a hoisting crane; a tin milk conductor; a set of curd knives to cut perpendicularly and horizontally; a curd mill; cheese scale and other small utensils. The whole cost of these amounts to a little over $700.



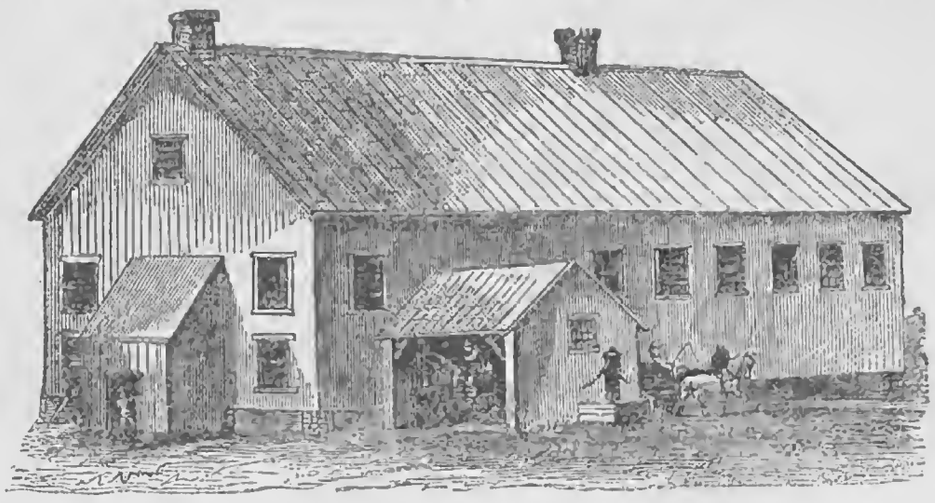
CHEESE FACTORY UNDER ONE ROOF—FIG. 192.

The space on the lower floor required for manufacturing will be about 40 feet in length. This is separated from the rest of the building by a close double partition having a large sliding door in the center or otherwise placed, as may be found convenient for the removal of cheese from the press to the curing room, for which this space is set apart. A convenient arrangement is as shown at Fig. 190.

At *a*, is a covered drive-way for unloading, with a platform for receiving and weighing the milk. The milk is then conducted by means of the milk conductor to the vats, *b*, *b*, *b*, *b*, here represented as 300-gallon ones, and four in number. The curd sink is at *c*; the boiler house at *a*; the presses at *f*, and the cheese tables at *g g*, *g*, in the curing room. The drain is shown by the double lines.

The curing room is furnished with benches, 24 inches high and three feet wide, made of strips having spaces between them to facilitate circulation of air. These benches should be carefully made to avoid cracks or spaces in the joints which would harbor cheese maggots, the great pest of the cheese factory. They should be ranged at a distance of two feet apart and the cheeses are placed on them in double rows. A roomy closet should be provided in which to keep the numerous small utensils and for a wash-stand and towels for the men. The factory is best warmed by steam coils supplied from the boiler, and a small engine of two-horse power at least will do all the hoisting, pumping, or forcing water for washing, and grinding the curd. The upper curing room, or the basement if that is used, is furnished in the manner described and an elevator for moving the cheese will be found very convenient. A sliding trough will also serve to pass the cheese from the upper to the lower floor.

The style of building for a factory may be varied to suit the taste or ambition of the owners. Fancy-work pays nothing, and plainness and substantial work and material only are required for economy and for use. The engraving, Fig. 191 represents a well arranged factory in Northern Vermont in which the whole is under one roof. In some factories the curing and store-houses are made separately, with every appliance for coolness, such as shutters and ventilators; double walls; and an open space under the building. A separate curing house belonging to a well-known New York factory is shown at Fig. 191. These buildings are plain but sufficient for every purpose.



CHEESE FACTORY WITH DETACHED PARTS—FIG. 191.

LARD-CHEESE.

WE no sooner become resigned to "oleomargarine" than this invention of more recent date meets our gaze. It has even become stale to say, What next? Lard-cheese is a mixture of lard and cheese in the proportion of three pounds of sweet milk to one pound of lard. The two ingredients are mixed together by running them through a machine which revolves at the rate of about 4,000 revolutions per minute. The machine consists of a revolving cylinder within a stationary one, and is two feet high and eight inches in diameter. The inside is set all over with about 4,000 sharp teeth, which just clear the outside cylinder when they revolve. The lard and milk after being mixed are called cream. Three pounds of this cream are mixed by hand with 100 pounds of sweet skimmed milk; the cheese is then made just as other cheese.

The butter is taken out of the milk—four pounds of butter to 100 pounds of milk—and about a pound and a half of lard substituted for it. The butter in cheese hastens decay, while lard may be shipped around the world.

This cheese stands the heat better than any other kind, and will therefore be apt to find a ready market in the South. No taste or smell of lard is perceptible; it is a great improvement on skim-milk cheese, and contains nothing deleterious to the health. The cheese is, in fact, first-class, although it does not sell quite as high as milk-cheese.

The cylinder which I have described costs about $300. The parties who own the patent put in all the machinery—that is, boiler, engine, etc.—which costs about $5,000, and charge .00½ cent. per pound on all cheese made. The cheese is branded "Lard-cheese," and if so branded I see no reason why it should not find a ready market, and the making of it become a profitable and honorable industry.

PROFESSOR I. P. ROBERTS.

Field Crops.

POTATOES CUT TO SINGLE EYES.

A Question of Spaces.

CONRAD WILSON.

THIS inquiry is clearly presented and very fairly tested in an experiment recently reported from the Rural Farm. Some of the features and results of that trial, though not apparently very striking, are too important to be lightly dismissed. Though the yield was not large, in consequence of an unusually poor season, I think it will be found, when all the factors are examined and compared, that the trial was by no means unfruitful, and that some of the results developed are well worth the time and labor invested.

On comparing the various products (but omitting such as were injured by moles), it appears that in the two poorest rows the average number of pieces was 35, and the average product 20½ pounds, making the yield per acre equivalent to 150 bushels. It will also be seen that in the best row the number of pieces was 66, with a yield of 31¼ pounds, making the rate per acre 225 bushels. Taking the average rate per acre for all the rows together, we find it equal to 184 bushels, with 50 pieces in each row, and for the five best rows 209 bushels per acre, with an average of 64 pieces per row.

Now to show in what way, and to what extent the spaces in planting affect the yield, we have the following instructive figures.

	bush. per acre.
35 pieces per row represent a yield of about	150
50 " to each row " " "	184
64 " per row " " "	209
66 " " " " "	225

In other words,

The distance apart for	150	bu. per acre was nearly				12	in.
"	"	"	184	"	"	8	"
"	"	"	209	"	"	7	"
"	"	"	225	"	"	just 6	"

In another view also, this result is further confirmed; for if we take the closest planting above given (which is six inches in the rows), it shows an area of 2.6 square inches for each single eye, which is space enough for a much larger yield than either of the above.

But again, there is another comparison to be made in this connection. An adjoining plot of the same area as the above was planted with the White Elephant variety, and the yield was at the rate of 280 bushels per acre. In this second plot the distance in the rows was 22 inches, while the other conditions were similar to those of the first plot.

Now if this variety had been planted at the same distance in the rows as the average of the previous plot (which was about eight inches,) the yield would have been, according to the law above indicated, over 400 bushels per acre, and in a good season, probably five or six hundred bushels; for it is evident, from the above comparative test, that the White Elephant is much more prolific than the Beauty of Hebron.

If now we take the average product of the two plots together, it shows a yield for the entire experiment equal to more than two hundred bushels per acre, which must be admitted

a very fair result for a season so unpropitious and when so many potato crops in New Jersey and on Long Island were entirely cut off by an early and severe drought. Had the season for this trial been free from conditions so unusually disastrous, the total result for both varieties would doubtless have been much larger.

I hope the editor will test the White Elephant this year at eight inches apart in the rows. The following

Recent Examples

of success in potato culture may well encourage the field trials of the coming year.

With a yield of only 208 bushels per acre, Joseph Harris reported the cost at 16 cents per bushel, and the profit per acre at $87, and in another case, with a yield of 300 bushels, he found the cost to be nine cents, and the profit per acre, $123.

Fred. T. Burnham of Massachusetts, reported to the Essex Agricultural Society, a result from two-thirds of an acre showing a yield equal to 320 bushels per acre, with a profit of $120.

At a potato trial in Vermont, of 355 competitors (all of them under 17 years), the premium crop was 422 bushels, by Lewis S. Reed of Goshen.

Now if the *White Elephant* is tested under thorough conditions the coming year, there is good reason to believe that a rate of yield equal to four or five hundred bushels per acre will be the result.

TOBACCO CULTURE.—NO. 6.

G. A. GOFF, JR.

"Suckering."

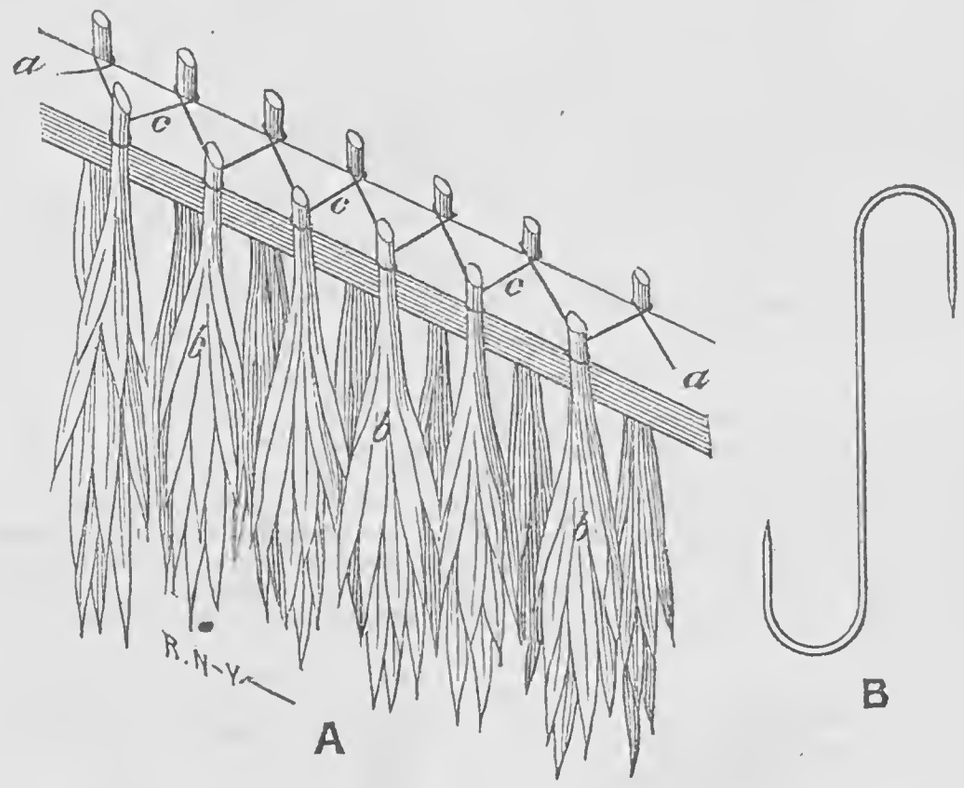
AFTER a tobacco plant is "topped," sprouts or "suckers" immediately start out at the axils of the leaves. The work of breaking these off is termed "suckering." It is important that the work should be done well, or the growing suckers will rob the plant of much of its vitality, and hence injure the quality and yield of the crop. Two suckerings are usually necessary—the first in two or three days after the plants are topped, and the second shortly before the time for harvesting the crop. If suckers are allowed to remain on the plants when they are harvested, they will damage the leaves during the process of curing. Suckering tobacco is very laborious work, as it necessitates much stooping, on which account boys are better fitted for the work, and being smaller are less liable to break off leaves in the operation. They must be watched, however, or the work will be slighted.

Harvesting the Crop.

Experience and judgment are necessary to determine when tobacco is fit to cut. The leaf assumes a peculiar quality, which is well understood by every experienced cultivator, but is difficult to describe. When ripe the leaves become spotted and the lower ones turn brown. About two weeks are usually required for tobacco to ripen after it has been topped.

The plants are cut with a hatchet and carefully laid upon the ground for a few hours to wilt, but they must not be long exposed to a hot sun. Great care should be taken to handle the plants carefully, so as not to break or tear the leaves. Careful hands should be secured if possible, and they should be instructed to handle the plants with great care at all times, for great damage sometimes results from the careless handling of tobacco. The cutting should be done principally in the early and later part of the day in order to prevent sun-burning, which will surely occur to tobacco exposed to a hot sun in the middle of the day. It is not safe to leave tobacco upon the ground between the hours of ten in the morning and three in the afternoon on a hot day. Only as much should be cut down, therefore, in the morning as can be removed to the curing barn by ten o'clock, when, if the sun shines hot, the cutting must be suspended until two or three o'clock in the afternoon.

When sufficiently wilted to admit of handling without injuring the leaves, the plants are loaded upon a wagon and drawn to the curing barn where they are hung up to cure. The rigging used for drawing the tobacco to the barn consists of a smooth platform 16 feet long and five feet wide, fitted to a wagon. The plants are loaded upon the rigging carefully, with the butt ends kept even, in a rank not more than two feet high. If loaded too high the tobacco will be bruised in drawing it to the barn. In loading it is important to begin at one end of the rigging and load the proper height from bottom to top, thus working towards the other end. Thus, if the loader commences to load his rigging from the front end he should complete his load as he passes to the back end, so that when he has reached that end his load will be done. This prevents the plants from binding while they are being taken from the rigging, provided they are taken off from the end opposite that at which



HANGING TOBACCO.—FIG. 193.

they were loaded—which should always be done.

If the tobacco barn is situated a considerable way from the field, so that the tobacco must be drawn quite a distance, an old carpet should be tacked to the bottom of the rigging to prevent the plants lying next to it from being bruised.

Green tobacco is extremely tender, and rough handling should always be avoided, as a leaf torn or bruised is injured in quality as a wrapper. The tobacco is usually hung upon poles with twine, which is made for the purpose. The manner in which the plants are hung is best shown by the cut A, Fig. 193. *a* is the pole to which the plants are hung; *b*, *b*, *b* show the plants as hung; *c*, *c*, *c*, the twine as it crosses over the pole. This is the common method of hanging tobacco, and the one practised by most of our growers. A new method, however, is being adopted by some which is undoubtedly preferable to the one above described.

In this plan the plants are suspended to the poles by wire hooks made of common wire but somewhat in the form of a letter S, as shown in cut B, Fig. 193. One end of the hook is driven into the butt end of the plant by a boy who follows the cutter. The plants are hung upon laths by the hooks, from six to eight plants being hung to a lath. These laths are suspended in the curing barn upon cross joists which support the ends of the laths, leaving the plants hanging between. When this method of hanging tobacco is employed a different rigging is used for drawing the tobacco to the curing barns. It consists of a frame about four feet wide and five feet high and twelve or sixteen feet long. Upon this the laths are placed crosswise and upon them the tobacco handed up from the ground is hung as above described.

This method of handling tobacco has the following advantages: 1st, the plants hung thus in the field and carried in a perpendicular position to the curing barn suffer less damage from the bruising, breaking or tearing of the leaves than when thrown flatwise upon a platform rigging. 2nd. Being hung in the field and drawn in a hanging position, tobacco may be handled without being much wilted, and hence harvesting can be carried on in wet or cloudy weather. 3d. Tobacco hung upon laths requires less handling of individual plants while being suspended in the curing barn, and hence less damage is suffered by the leaves.

POTATOES.

THE MAMMOTH PEARL seems this season to be offered among the novelties of all large seedsmen, who speak of it in high terms. The skin and flesh are white. It is said to have been selected as the best of over 2,500 seedlings, which, if true, must have required the services of several persons several years to determine. In shape it is roundish, with few eyes, and those not sunken. Its productiveness is said to be something remarkable.

THE ST. PATRICK is said by several, who seem to have compared the two supposed kinds, to be identical with the Burbank. But as to parentage, the St. Patrick is stated positively to be the result of a cross between the Garnet Chili and Early Rose. Hence, though they may resemble each other closely, probably a further trial will show they are not the same. The St. Patrick has been tested in England and is well liked. The present season it is offered in Daniels's Illustrated Guide (Norwich, England), from which our engraving is reproduced, at one dollar per peck, while it is now offered here by Mr. Henderson, the introducer, at $1 25 per peck.

PRIDE OF AMERICA.—This was raised by E. S. Browneli, and closely resembles the Snowflake, ripening a few days earlier. It is said, however, to be more productive, to grow to a larger size, and to be adapted to a greater range of soils. It is a white variety, and is now offered for the second season.

MANHATTAN.—This has been tried for the past 10 years we believe. It has a purple skin, is productive, but of medium quality only. We tested it two years ago.

MAMMOTH PEARL. ST. PATRICK. ONE-HALF NATURAL SIZE.—FIG. 194. PRIDE OF AMERICA. MANHATTAN.

CHOOSING SEED CORN, ETC.

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

CHOICE seed and better culture should go hand in hand. Enrichment and tillage have much to do with the quality and swell of our corn crop; but senseful and careful choice of seed would grow to an equal factor in footing up its bushels. In truth, I think that in the near future better choice is the great hope of this grand staple. We have trusted too much to manure, or to nature's enrichment, or the deep virgin soil of the vast West; but seed choice and better kinds have been little tried or studied.

Now God fashioned the corn-stalk ready for man to grow an ear at every joint; yet the average farmer is blind to the chance and holds to the old ruts. His choice of seed begins and ends at picking from the corn-bin the longest and heaviest grain-weighted ears. Even with this half-wit in its business, the harvest piles the corn-cribs. No crop fills the eye with so grand a sight and sense of plenty. In the dearth of food abroad, its troop of *fixings* yearly gains it better relish on the palate of the world and a stronger foothold in its grain marts. Diplomacy might help in this. We make foreign ministers, attachés and consuls out of a little literature and a great deal of politics: suppose we foster commerce in Indian corn by making diplomats out of first-class adepts in all the toothsome viands of which Indian corn is master.

But the business of corn-growing wants brains plowed under and planted right alongside its buried food. Well-studied, skillful trial and method, put at the service of the plants' root-growth and seeding, will pay well. The choice and care put into other business will prove in this better helps than whole barnyards turned under, or heavy doses of special manures. Yet spare not your enrichment! If this year's crop does not eat up its substance, the next will render you account of its service. At the same time let every corn-raiser study the plant's ways and post himself on what others have found out.

I give my own little record, and, years before the war, I largely furnished Thorburn & Co. and others with sweet seed corn and yellow eight-rowed New England. My method in field work was, heavy manuring, level culture and low-down-earing stalks. As soon as the crop matured I had every stalk with two or more ears cut up and looped two and two and hung on nails or poles in the corn-crib. When fit for shelling, a second choice was made from stalks bearing the most and best ears. Seed from these was carefully kept for my next planting. Under this plan, year by year, the quantity and quality of the crop made great gain. I soon found plenty of stalks with three good ears. But business down in Dixie broke up my corn crop, as well as other things, and I have never renewed the culture.

I call especial note to the need of gathering the seeds and stalks together. You can rarely trust a farm-hand to pick to basket from your two or more eared stalks. It requires a watchfulness and denial of a full basket to which he is not equal; but he cannot well shirk or blunder in the choice of two-eared *stalks*. Nor will the average "hand" stop even to choose closely the best ears from the stalks in cribs; this work you should do yourself of a rainy day or at some leisure.

Corn Culture.

I would like to say a few words about the culture of corn, which may be of benefit to some. After thoroughly fitting the ground, I put in the seed with a grain drill, one peck to the acre, in drills 40 inches apart, using 200 pounds of phosphate to the acre; then, before the corn is up, if the weeds have started, I harrow it thoroughly with the Thomas Smoothing Harrow, which will kill all the weeds and not injure the corn. I use the harrow as often as is necessary to kill the weeds till the corn gets too large; then the cultivator and hoe have to do the rest. Thin to 12 inches. The harrow saves me much time, as I can keep the start of the weeds, which is hard to do if one has to wait for the corn to get large enough for the cultivator.

Oneida Co., N. Y. S. G. S.

Sweet-scented Vernal Grass — Anthoxanthum odoratum.

This is another small grass, possessing considerable merit on account of some of its peculiarities. As the stems are quite short, only a light crop can be cut for hay—in the words of Mr. Gould, "not over three-quarters of a ton from an acre." The grass starts very early and flowers early in the season. It is not a favorite with any kind of stock, though often recommended for pastures on account of its earliness. The stems and tops are the most offensive to stock. It is very fragrant, especially after wilting, giving an odor which is much admired. This is one of the reasons why it is so often recommended for lawns. T. M., in the Treasury of Botany, says:—"The fragrant resinous principle which occurs in this grass, and is called *coumarin*, is a widely diffused natural perfume, being found in the Tonka Bean, the Faham Tea-plant of the Mauritius, the common Sweet Wood-ruff, the common Melilot, and the Blue or Swiss Melilot." The grass is a native of Europe, and is extensively naturalized in North America. It likes rich, moist soil and cool Summers. In the northern part of Michigan, and perhaps in other places, the Indians raise this grass and use the stems for mats, card baskets and other small articles for the sitting-room. The delightful odor remains with the grass for a long time after it is cured and used in this way.

PROFESSOR W. J. BEAL.

Farm Economy.

PASTURING GRAIN FIELDS.

As a rule here the farmers have their land fenced into small lots so as to be able as much as possible to pasture as soon as the crop is taken off the fields. In Summer, wheat and oat fields are pastured and in Winter, corn fields, as soon as the corn is gathered. This year considerable loss has been sustained by farmers who, on account of bad weather, were unable to gather their corn in season to obtain the benefit of allowing their stock to have the run of the corn fields, or, where they had not sufficient stock of their own, to rent out their corn fields to others. And at this late date on account of the scarcity of feed caused by the short crop and very long Winter, farmers are renting their corn fields to stock-men. This course is a serious question of profit with many, as it is very doubtful whether the amount received for the corn-stalks will pay for the damage to the land by tramping by large droves of cattle when it is so wet.

This damage is no inconsiderable one when it is beyond question that where the land is muddy and stock is allowed to tramp over it, as they are certain to do when turned in to live on the stalks and corn that is left, the land and crops will feel the effects of such treatment for two or three years. I believe it a "penny-wise-and-pound-foolish" policy that induces farmers to allow it. It does not seem to injure land to pasture it late in the Fall or during the first part of Winter, but very few of our best farmers care, as a rule, to have their fields pastured after New Year's, unless it is so cold that the ground does not thaw out any during the day-time. But as this year seems to be an uncommonly hard one, and as fodder is getting very scarce, a number of farmers have allowed their fields to be pastured later than usual; in fact, many of them now have droves of cattle in their corn fields clearing up the stalks although the recent rains and snows have made the fields nearly knee-deep in mud. This kind of tramping will seriously injure the cultivation of the land the present Spring and its ill effects will be visible for two or three years more.

Miller Co., Mo. N. J. SHEPHERD.

Deaconed Calves as a Fertilizer.

IN disposing of "deaconed"—calves I first procure a large crockery cask, one tight enough to hold ashes. I then put in a layer of ashes and then a layer of "deacon" cut in pieces so as to pack closely, and keep on in this way, every alternate layer being of good wood ashes. Let the cask stand uncovered so that the rains can keep it moist. The ashes will dissolve meat and bones, rendering the whole one of the best fertilizers for any crop in the Spring following. I often wonder why men who call themselves farmers let so valuable a matter go to waste and breed flies and vermin, while they themselves breathe the bad air that fills their barn yards.

I once applied some of the above-described fertilizer to a plot of rutabaga turnips and they yielded at the rate of 800 bushels per acre. Another good way to dispose of "deaconed" calves is to dress them and put them in a common feed steamer and cook them, and then feed them to fowls. After the fowls have taken all the meat off the bones, take the bones and pound them fine, so that the fowls can eat them, and then you may begin to look for eggs, for this food will not fail to make them lay. ISAAC PEASLEE.

Schoharie Co., N. Y.

The Vineyard.

GRAFTING THE GRAPE—CAUTION.

DISAPPOINTMENT has been the lot of not a few planters who yielded to the peach craze of the last few years; but, while we deplore the circumstances which have been unfavorable, there is reason to fear that the grape fever, now so prevalent, will ultimately be attended by a like want of success for lack of intelligent choice from the many new candidates for public favor. To write a long discussion of the merits of this variety or that would, or should, lead the editor to consign my paper to the waste basket, inasmuch as almost every writer, as the saying goes, "has an axe to grind." I would, however, most earnestly urge upon those who contemplate planting for market the propriety, if not the necessity, of adopting the new varieties possessing higher flavor and better qualities than the old, as the further cultivation of the taste of the fruit-consuming public must, at least in a few years, create the demand for such grapes. By crossings and by hybridization we now have grapes of different colors, ripening at different periods, and the

FLOWER OF SWEET-SCENTED VERNAL GRASS.—FIG. 195.

cultivation of the growers is most rapidly increasing. Now is the time to strike for the higher qualities—for all the rich spiciness attainable in the grape.

It is, comparatively, but a few years since the grafting of the grape was thought by most people to be a chimerical idea. Attempts were made by various methods, in a small way, and many of them proved failures. Whole vineyards are changed now by grafting, but this work is only done by experts who have gained their knowledge by long practice.

In conversation with Mr. Charles Downing, a few weeks since, this genial veteran in horticulture related to me the circumstances attending his first trials in the line of grape-vine grafting. He had a cutting of a desirable variety, from which he wished to test the fruit as soon as possible. He commenced operations by sawing off a large vine below the surface of the ground; he then proceeded with a carpenter's bit to bore a hole into this stock near the edge, a little less than the size of his graft, upon which he made a square, even shoulder an inch or less from the lower end, and trimmed it down to fit tightly in the hole in the stock. Grafting wax was used in the ordinary way, and then the soil was drawn up to stock and graft. The growth of the graft that season was extraordinary—about twenty feet—"but," said Mr. D., "I might have grafted a hundred in the same manner and ninety-nine may have missed."

I come at last to the caution intended to be given in this article: The outer harsh coat of the grape-vine is not the true bark, but seems intended by nature as covering for the sappy bark against the inclemencies of the seasons. Now, this is not to be regarded in matching the graft to the stock by any of the methods practiced, but the true *green* bark, which is very thin on the last year's growth, must be perfectly adjusted to the inner bark of the stock, which can be more plainly seen. Nor can this be performed successfully if the split by cleft-grafting is twisted and ragged. The wedge of the graft should also be longer than is usual in tree grafting.

It is insisted by Mr. J. H. Ricketts, of this place—who has had large practice in this special work—that in cleft-grafting small stocks two and three years old, the operation should be completed by winding first with large cord and over this fine copper wire, not larger than 1-16th of an inch. The wire is not to be loosened or removed until considerable growth of graft is attained. Grape wood will not impinge upon the graft so closely as the wood of fruit trees, which gives a show of reason to his argument.

In saddle-grafting in the house, wind the whole length of the saddle closely with cotton twine. This being placed in the ground, the cord will rot off as the stock and graft unite.

Newburgh, N. Y. A. A. B.

The Apiarian.

THE WORKER BEE.

IF we examine a hive in the month of May, June or July—the busy season of the year, when the population has attained its fullest development—we shall find therein three distinct kinds of bees—a queen, a large number of drones, and many thousand workers. Later in the season, usually after the first of September, the population will be found to consist of the queen and workers exclusively, as drones are not then tolerated in healthy colonies. It is superfluous to describe the worker bees minutely, as all who take an interest in the subject, have frequently observed them in the vicinity of the hive, or when gathering honey or pollen. They are not inappropriately called *workers*, though the queen is by no means an idle inmate of the hive. She lays all the eggs from which the young bees spring, and the workers perform all the other labors of the colony. They cleanse the interior of the dwelling, by removing thence all impurities; they close with propolis the cracks or crevices which might harbor worms or moths, or allow the escape of heat from within; they build the combs, nurse the brood, guard the hive, and provide all the honey, pollen, propolis and wax needed in the economy or essential to the prosperity of the colony.

Though each individual worker is, or can become, qualified to perform, in an emergency, all these several labors, yet ordinarily there is a subdivision of labor among them. Their duties may properly be classified under two heads—the internal or domestic, such as the production of wax, the building of comb, the nursing of brood, the capping of cells, and the garnering up of honey and pollen, and the external, such as the gathering of the substances and materials requisite for the support and welfare of the associated body. The bees that attend to the domestic duties, rarely leave the hive except for exercise; while the others are almost constantly on the wing. The workers are hatched from an impregnated egg, which can only be laid by an impregnated queen, and these eggs are always deposited in the small or worker cells. The egg hatches in three days. In six days the cell is capped over by the worker bees, and in twenty-one days from the laying of the egg, the bee emerges from the cell.

The workers possess an organ of defense—the sting—which they are quick to use if occasion requires. This is not curved, as in the queen, but is straight. The gland which secretes the poison is double, and the sack in which it is stored, is as large as a flax seed. The sting proper, is a triple organ, consisting of three sharp spears, very smooth and of exquisite polish. The most highly-wrought steel instruments, under a high magnifier, look rough and unfinished, while this part of the sting shows no such inequalities. One of these spears is canaliculate—that is, it forms an imperfect tube—and in this canal work the other two, which fill the vacant space, and thus the three make a complete tube, and through this tube, which connects with the poison sack, passes the poison. The slender spears which work in the tube are marvelously sharp, and project beyond it when used, and are worked alternately by small but powerful muscles, so that they may pass through buck-skin, or even the thick scarf-skin of the hand. They are also barbed at the end with teeth, seven of which are prominent, and extend out and back like the barb of a fish-hook. Hence the sting cannot be withdrawn if it penetrates any firm substance, and so, when used, it is drawn from the bee, and carries with it a portion of the alimentary canal, thus costing the poor bee its life.

The question—"How long may a worker live?" does not, consequently, admit of a precise and definite answer. It is certain the worker bee never attains a great age. Those reared in Autumn may live for eight or nine months, and if in queenless stocks, where little labor is performed, even longer; while those reared in Spring will wear out in three months, and when most busy, will often die in from 30 to 45 days. None of these bees survive the year through, so there is a limit to the number which may exist in a colony.

Prof. Cook places the number of workers in a good colony at from 1,500 to 4,000, but qualifies this statement by saying, "It is possible for a colony to be even much more populous."

An indirect function of all the bees is to supply animal heat, as their very life requires that the temperature inside the hive be maintained at a rate considerably above freezing. In the chemical processes attendant upon nutrition, much heat is generated, which may be considerably augmented at the pleasure of the bees, by forced respiration. The bees, too, by a rapid vibration of their wings, have the power to ventilate their hives, and thus reduce the temperature, when the weather is hot. Thus they moderate the heat of Summer and temper the cold of Winter. LIGURIAN.

Horticultural.

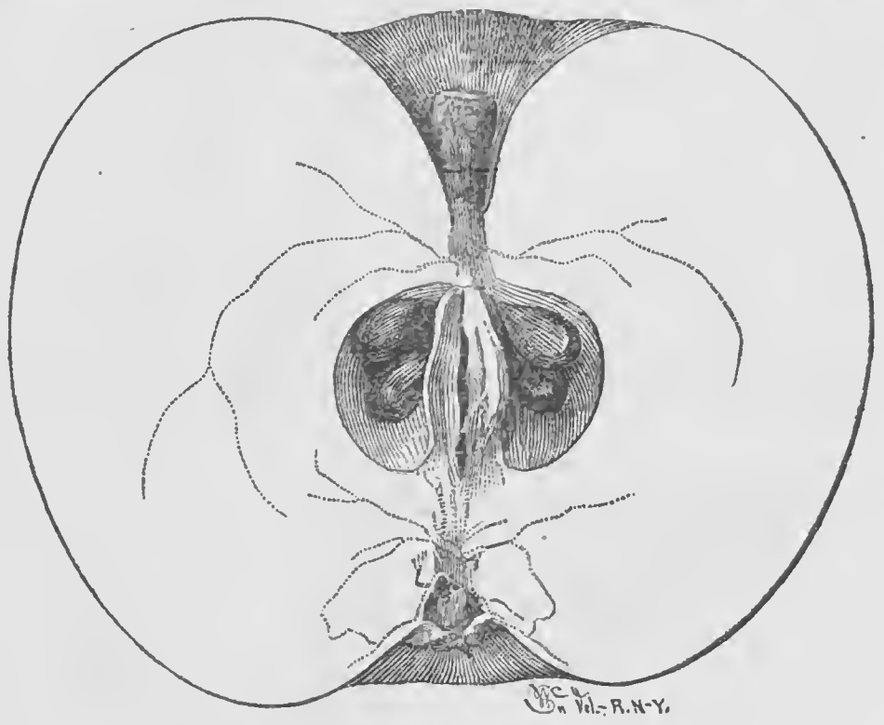
RURALISMS.

THE valne of the large nnmber of new coleus sent out last Spring is now undergoing discnssion, and the general conclusion seems to be that the list, for various reasons, should be reduced, at least for open-air use. I expressed myself to this effect several months ago, as did also the RURAL. There is too much sameness in many of the varieties produced by different parties; they are so much alike, indeed, that it requires an amazingly sharp eye to distinguish any difference between them. I procnred a couple of dozen last Spring and submitted them to rather rough usage in regard to exposure in the Summer and a low temperature during the Winter, to which many snccumbed. The following survived and now look well:—Paroquet (Hiawatha), Meteor, Glory of Antumn, Mrs. Kirkpatrick, Burning Bush, and Mrs. Barr. Paroquet showed itself to be the hardiest. Fortnnately, these are all good kinds, Glory of Autumn and Mrs. Kirkpatrick being especially beautiful. Kentish and several other new kinds are very beautiful in the hot-honse or a warm green-honse, but in the open air or in a low temperature in Winter they soon droop and die. The florist who has weeded out his list of coleus has done a wise thing for himself and a good thing for the horticultural community. Where different parties work for the same end and with the same materials, it is quite natural that the results arrived at should be very nearly alike; still, it is to be regretted that so many kinds of coleus and other plants, nearly or quite identical, should be offered for sale under different names. On the whole, old Verschaffeltii still remains unsurpassed for out-door work.

AS LONG as I can remember anything (how much longer I cannot say) it has been a practice among old-fashioned people, especially in the country, to propagate the oleander, ivy, and a few other plants from cuttings placed in a bottle of water; but not long since I called upon a lady who propagates nearly all her plants in this way. She had a very good collection, which she keeps in a sunny room, and grows them well, as was evident from their condition. I noticed perhaps a couple of dozen wide-mouthed bottles, each containing some slips, which I thought had been placed there temporarily for safe-keeping; but she said, "No; that is the way I root all my young plants;" and I found many of them well furnished with young roots. These bottles contained cuttings of coleus, achyranthes, scarlet pelargonium, fuchsia, verbena and several other kinds of plants. She further informed me that she learned the practice many years ago from her mother, and seldom lost a cutting. This method of propagating plants may be new to many, and may prove useful. I know that Cissus discolor and other plants besides the oleander will root in water. I would suggest that some of the RURAL family give the method a trial.

IT is generally supposed that what are called climbing plants must have something to climb on, and there are persons who do not grow this class of plants simply because they have no object on which the plant can climb. There are exceptions to most rules, and there are some among the climbers. Let us take, for example, the Thunbergia, a very beautiful climbing plant, and see what fine effects can be produced without the aid of supports. Prepare a circular or oval bed, or a border, of any convenient size, and at intervals of a foot or two put in three or four seeds of Thunbergia, either alata, aurantiaca, or alba, or all of them mixed. This must not be done till the weather becomes warm. When the plants are well up, thin them out, leaving only one in each spot. An earlier bloom may be had by sowing the seed under glass or in the house in shallow boxes, and transplanting to the beds as soon as the weather is warm enough. Let the plants run on the ground as they please, except that the end of a shoot will need turning occasionally to keep it within the bed or the border. The plants will in a few weeks mat the ground with a mass of beautiful green, which in due time will be gemmed all over with charming buff flowers. The effect is very fine, and will please some people better than a bed of scarlet pelargoniums. It is an inexpensive way of producing picturesque effects with several kinds of twining plants easily raised from seed. Plants with tendrils are not so good for the purpose as those without. There is no reason why a bed of gladioli, lilies and similar tall-growing plants should not be covered in this way, the green carpet being far more attractive than a naked bed of earth, with its accompanying weeds, which the Thunbergia will completely smother out.

IN riding in the cars I frequently pass a group of Fastigiate Maples, one large tree seeming to be the parent plant of the smaller ones near it. I am rather pleased with this form of the maple, and can readily conceive situations on the lawn and elsewhere where it would produce a pleasing effect. For instance, trees of this kind would find a suitable place near the dwelling, where those of a spreading habit would be quite inadmissible. Besides, these maples have claims on the score of utility, their erect habit of growth rendering them peculiarly fitted for close planting in lines or belts on exposed prairies, plains, etc., where protection from cold and strong winds is of the greatest importance to all kinds of growing crops, whether of fruit or grain; their rapid growth would soon make their influence felt. As wind-breaks they could be especially utilized at the West; and though not so good as evergreens for this purpose, they would grow up in less than half the time. The two combined would make a very thorough protection against almost any wind that blows. It would seem that this particular variety propagates itself from seed, which is a very important matter. I think I saw, a few years since, a Fastigiate Maple still more like the Lombardy Poplar in habit, on the grounds of the Messrs. Parsons at Flushing. I do not know whether these gentlemen ever propagated it, but it is worth looking up.



PECK'S PLEASANT APPLE.—FIG. 203.

Scientific and Useful.

DISINFECTION versus VENTILATION.

PROFESSOR F. H. STORER.

THE comparative merits of ventilation and disinfection are still hotly disputed, and it is not easy to find many persons in the ordinary walks of life who do not estimate unduly one or the other of these methods of purification. It is not, by any means, so generally known as it should be that in the majority of instances the two processes do not necessarily work to the same end, and that they are consequently not comparable one with the other. Each of the two processes is excellent in its place. Both of them are useful and necessary. Neither of them can be too highly commended. But they should, by good rights, be employed to help and supplement one the other, since, generally speaking, neither of them is competent to take the other's place.

Formerly, the idea was that disinfection consisted simply in getting rid of foul gases, but as we now have reason to believe, its chief merit lies in destroying minute living creatures. In the beginning, the question seemed to be how to get rid of unpleasant smells, and it was thought that the best way of doing this was to hide them. The burning of incense in churches, so as to conceal the unpleasant odors arising from graves beneath or from crowds within them, was a case in point; the fumigation of sick rooms is another, though, as we now have reason to believe, the scents and fumes did really work to destroy noxious germs and were consequently true processes of disinfection. They belong in the same category with the old system of fumigating travelers and their effects which still persists at the quarantine grounds of Southern Europe. So, too, the aromatic "thieves' vinegar," which enabled its inventors to plunder dead bodies with impunity during epidemics of the plague, doubtless acted to destroy the microscopic organisms by which infection is brought about. The popular prejudice in favor of the healthiness of pine groves and of "the smell of tar" as well as the Turkish practice of planting thick groves of cypress trees in their cemeteries doubtless depends upon a fact of the same order. The Orientals are said to believe that the aromatic odor of the cypress prevents all ill effects from the burial of the dead, and the idea is a just one. But beside these terebinthine and tarry products, there are numerous other substances which are known to be powerful disinfectants by virtue of their power to destroy microscopic organisms prejudicial to health, and one of the most important practical problems of the day is to find out convenient and efficient methods of using these various materials, and of familiarizing the public with their use.

Ventilation alone, as of a sick room, is wholly incompetent for the task now in question. Practically speaking, ventilation can neither destroy germs nor reduce the number of them in a given locality to any useful extent. The purpose of ventilation is very different from this. It does invaluable service by removing noxious gases and by diluting them with so much pure air that they no longer have power to do harm. But this dilution of the air has comparatively little significance as regards the organized beings. Some part of them may be swept away, indeed, from apartments where the air is constantly renewed; but so long as a sufficient number of individuals is left to perpetuate the species, and so long as food for them to live upon remains, they will continue to prosper, so enormous is their reproductive power. In order to cope with them effectively, it is necessary to resort to disinfectants which shall either destroy the organisms, root and branch, or, at the least, hinder them from multiplying. In order to gain these ends, the disinfectant had better be actually applied to the substances which the organisms infest, or to those which are to be protected from their ravages, in order that it may come into intimate, destructive contact with them.

Of course, mere ventilation may, and often does, do good work by checking the increase of microscopic organisms in that it removes dampness, which is specially favorable for the growth of molds, for example. Ventilation, like the other forms of cleanliness, is invaluable in that it often works against the formation of nesting places for the noxious organisms. But it is none the less true in very many cases that the action of pure, dry air needs to be re-enforced by that of some chemical agent, which shall serve to destroy hurtful organisms. It so happens that many of the more powerful disinfectants can decompose offensive gases, as well as destroy the microscopic organisms now in question, and it was formerly thought that the sole use of disinfection was to decompose gaseous matters. If this were really so the believers in the sufficiency of thoroughgoing ventilation would be much nearer right than they are, for all kinds of gases can be removed in that way if pains enough be taken. But it is known nowadays, from the results of numberless observations and researches, that not foul gases alone but minute living things play a highly important part, and probably the principal part, in the production of many kinds of putrefaction, decay, and disease. Hence it is that when once these creatures have invaded our premises, it is as necessary to resort to agents fit to destroy them as it is in ordinary life to keep in practice the agencies—such as cleanliness and ventilation—which tend to hinder or prevent such invasion.

Pomological.

PECK'S PLEASANT APPLE.

On page 190 of the R. N.-Y. (March 19) was presented an outline-sketch of Peck's Pleasant Apple. Mr. Charles Downing sends us the following communication regarding it and a specimen apple which well represents this excellent variety at its best. Mr. Downing's note is as follows:

NEWBURGH, N. Y., March, 25, '81.

"I was surprised to see such a caricature outline of the Pleasant Apple in the RURAL, and if I had time would give you a good scolding, but I can only say that the apple is generally of a regular form and good size. I send you an apple by mail to show its regularity; this specimen is over-large and too high-colored, and over-ripe."

The Poultry Yard.

A MISTAKE IN FEEDING POULTRY.

I HAVE been annoyed at times almost beyond endurance in my endeavors to have my work done just as I direct. In no one instance is this annoyance greater than in my almost futile attempts to have my poultry cared for in a way that shall show some little regard for my wishes in the matter. I have a large flock of hens—mature birds, all of them, not fancy specimens, but just such hens as any farmer would keep, and I try to keep them well; but all my suggestions, wishes and even positive orders avail nothing to prevent them from being fed almost exclusively upon sloppy food. The trouble is just here—people raising poultry get in the habit of feeding young chicks soft food and as they grow to maturity follow up the practice. This practice is very faulty; chickens are young indeed, when they cannot consume some solid food such as the smaller grains. It is true that young chickens will do much better for a time upon soft food, but the proportion of solid food should be increased as the chicks attain larger growth. The mere fact that all kinds of poultry, both young and old, devour all kinds of sloppy, wasby food with avidity, proves nothing, as will be speedily found by comparing the increase in weight or productive capacity with the unusual quantity of soft food devoured. The reason for all this should be plain to the most casual observer:—soft food, as usually made, is lacking in the nourishment required by poultry. The attempt to fatten fowls upon this sort of food is never satisfactory. The laxity that is the result of a continued diet of soft feed very seriously interferes with the egg-producing capacity of the best layers in the world. Now, I do not wish to have it inferred that I want my hens fed always upon corn or barley, or that they should never be fed soft food. But as a change of pastures is beneficial to sheep and calves, so I would change the diet of my poultry very often, and occasionally give them soft food but never confine them for even a short time to that diet. In Winter all fowls are better if they never taste soft food, if they have plenty of meat scraps and corn—in short, the best possible heat-producing diet that can be given them. The profits from poultry depend very much upon the same rules and principles that govern the profits of the dairy. F. K. MORELAND.

Miscellaneous.

ROCKERIES.

(See page 254.)

MANY suppose that a rockery, if one has the stones and the means of piling them together, is a structure very easily arranged. But we have always thought that there is room for the display of great taste in rockeries, and that those we often see in gardens are far from ornamental. Rocks themselves cannot be considered fitting articles wherewith to adorn the lawn, and unless they are so arranged as to form a seemingly natural part of the scene, might better not be introduced. Small rockeries are at best incongruities. It is impossible so to arrange them as to offer any excuse for the incongruity of their existence. The engraving on p. 254 shows a small part of a rockery at Bentham Hall, Shropshire, England, and illustrates what we would say as to the scale on which such combinations should be arranged to produce pleasing effects. The selection of plants also well adapted to such structures can be made only by horticulturists of experience and taste.

THE CUT-LEAVED WEEPING BIRCH.—In your recent Hardy Shrub and Tree Special, I am sorry that so little is said of the Cut-leaved Weeping Birch. I regard this tree very highly and would place it first upon a list of ornamental lawn trees. The growth is upright with pendulous branches; its shape is symmetrical and its foliage is of a beautiful deep green color. The leaves are finely cut. It is graceful, stately and handsome, and with age it increases in beauty. The tree requires no trimming, as no art can improve the shape nature has given it.

Rochester, N. Y. H. T. J.

A BUNDLE OF THINGS.

That Sap-sucker Once More.

AS SEVERAL excellent articles have already appeared on the character and habits of the sap-sucker, I shall add nothing to them except to touch upon the question, which seems to have been left unsettled, whether this bird really does that which his name implies. In a paper on this subject which was published in

Appleton's Journal for December 7th, 1872, James Manrice Thompson, who appears to have watched the sap-sucker closely, says that his food is the sap and juices of green trees, *and nothing else.* Dr. Hoskins says that there is no evidence that he sucks sap, and quotes Mr. Fairbanks as stating that the bird goes his rounds from tree to tree for the purpose of securing the insects attracted by the exuding juice. Mr. Thompson, on the other hand, thinks that he flies from tree to tree or pecks new holes while he is waiting for those previously pecked to fill up with sap. Mr. T. professes to have actually seen him drinking, and remarks that he is more easily heard than seen, since he always keeps the body of the tree between himself and the observer, and this is probably the reason why so little is generally known concerning him. It occurred to me, when General Noble expressed the opinion that in making the holes the bird was hunting for worms, that this could not be possible unless there was a worm in every square inch of the trunk of the tree, which I thought not at all probable. However, as I have since had reason to know, this supposition might not be an unreasonable one if the trees were not otherwise sound and green, for thousands of our finest pine trees have died during the past Summer, in the bodies of which may be found two or three worms for every square inch of surface. The outer bark of these trees is all roughly chiseled off by the woodpeckers in search of worms. In the description given of the sap-sucker by Mr. Thompson he differs somewhat from Mr. Robson, the former stating that the bird's back from neck to tail has a light brownish stripe, that his head is striped with dull white and dingy black, with a barely perceptible spot of red on the occiput, and that his breast is of a cloudy white; while the latter says he has a *bright* red spot on his head, and that his breast has a black spot in the center of it. Both agree in saying that he descends the tree tail foremost.

Ox Warbles.

A full description of the species of gad-fly which attacks cattle has also recently been published in the RURAL. I wish to add that the maggots of this fly are called by many farmers "wolves"—a term which may be a corruption of *warbles*, a name given in England to the swellings occasioned by them on the backs of cattle. These swellings are also called the wourms or warmals, that is, wormholes.

It may not be generally known that there is also a kind of gad-fly which attacks both rabbits and squirrels. The eggs are always deposited under the throats of these animals. Between the 1st and 20th of August last I noticed that about one-half of the young rabbits could scarcely get about on account of their swollen throats, and they could frequently be caught without difficulty. I caught one of them, and with a penknife cut from its throat no less than ten maggots, the largest of them being nearly the size and shape of an ordinary man's thumb from the first joint to the end, and of a rather dark-brown color.

Root Pruning—Estimated Yields of Corn.

In a leader of January 22 the editor of the RURAL argues that it is just as reasonable to suppose that the extraordinary yield which attended his flat and surface culture, was attributable to that method of culture as that the yield of the crop reported by Dr. Sturtevant was due to root-pruning. The case of a neighbor is cited who, although he applied 1,200 pounds of fertilizer per acre, raised an average crop of only 75 or 80 bushels, following the method advocated by Dr. Sturtevant. Referring to the RURAL'S experiment with Fultz Wheat, we find that an application of 500 pounds of fertilizer, which had the whole Winter to dissolve, yielded at the rate of 26 bushels, while a plot of equal size, without any fertilizer, yielded at the rate of 28: it is certainly allowable to suppose that owing to the dry season, or from some other cause, the 1,200 pounds may not have had any effect on the corn of the RURAL'S neighbor, or, if any effect at all, one not very beneficial. My own practice has always been to keep the surface level, but at the same time to plow deep and break the roots. I see no reason as yet to change this practice. I think that the great yield of corn at the Rural Farm was principally due to the fact that the field *had not been broken within fourteen years.* It is well known to farmers that an old sod, particularly if it be one of Blue Grass, is the very best of manure for corn, the plants producing more grain and less stover. It must be confessed that, notwithstanding all that has been said on the subject, there yet remains enough about the culture and habits of corn, which we do not know, to keep us thinking. The RURAL'S corn experiment has impressed on me more forcibly than ever another fact, and that is, that no estimated yield of grain, however fairly made, will hold out when the crop is actually measured; since the Blount Corn fell from 142 to 132, and the Chester from an average, on four acres, of 150 to 116 bushels per acre. Would it not be better not to publish results until they are accurately ascertained? I note that a seedsman, who has for sale the fertilizer used by the RURAL, ascribes in his catalogue the large increase to his fertilizer, and gives the estimated yield of 150 bushels per acre on four acres of Chester, and 142 on not quite an acre of Blount Corn, instead of the actual yield. [The yield of the *best* acre of Chester was nearly 160 bushels.—EDS.

Hillside vs. Sidehill.

As contributors sometimes indulge in criticism on words which are the names of farm objects or which relate to agriculture, it will not be amiss, perhaps, if I undertake the defence of an old word which many agricultural writers seem to have forgotten how to use—hillside. They have somehow gotten it turned round and call it a sidehill. They might just as well call a river-bank a bank-river, or a seashore a shore-sea. Hillside is the side of a hill; sidehill is the hill of a side, as bank-river is the river of a bank, and shore-sea the sea of a shore. What objects in nature such things are I leave for those to conceive who find names for them. HUGH L. WYSOR.

Pulaski Co., Va.

BOOKS, CATALOGUES, ETC.

THE PACIFIC GUANO COMPANY: Its History; its Products and Trade; its Relations to Agriculture

ALSO, SOLUBLE PACIFIC GUANO, manufactured by the Pacific Guano Company, of Boston, Mass. The first of these pamphlets gives a history of the Company—which is chartered by the State of Massachusetts with a capital of $1,000,000—and also tells about the nature of its business. The second describes the composition, etc., of Soluble Pacific Guano, gives directions for its use on various crops and presents a large number of testimonials of its excellent effects from farmers in different parts of the country. Both can be had *gratis* on application by P. O. card to Messrs. Glidden & Curtis, Tremont Bank Building, Boston, Mass.

WEBB & SONS, Wordsley, Strowbridge, England. Catalogue of flower, vegetable and farm seeds of every description. Among the many foreign catalogues which we have recently noticed this, perhaps, is one of the most comprehensive. It consists of 120 large pages; is profusely illustrated, with illuminated covers and a number of colored plates.

A PAMPHLET of 24 pages on "Extracted Honey," tells how to harvest, handle and market it. The authors, Charles and C. P. Dadant, of Hamilton, Illinois, have handled and sold 45,000 pounds of extracted honey in three years and this pamphlet tells how it was done.

RURAL BRIEFLETS.

RAKE the lawns—Clear up the rubbish wherever it exists—Attend to drains and cesspools—Carry them away from the house, cisterns and wells—Sow peas—Sow oats and Spring wheat—Prepare the garden for new strawberry patches; for the Rural asparagus seeds, Branching Sorghum, etc.; for early potatoes—Set cold-frames—Plant tomato seeds, celery, cabbage, cauliflower and lettuce seeds. Prepare for radishes, spinach, parsnips, onions, parsley, beets and early turnips—Leave beans, melons, sweet corn, cucumbers, squashes until the ground becomes warm—It is well to remember that tomatoes may be sown in the open ground as late as June 15 and still produce a fine crop. For catsup, perhaps, this is the best way. Do not set out pot-grown or cold-frame tomato plants until all danger of frost is over—We have given erect arbor supports for tomatoes a thorough trial. They are well enough for those who have lots of time and who take a pride in having everything neat and trim. But the plan does not pay. The vines need tying every few days—and thinning out as well. This, owing to the offensive odor of the vines, is disagreeable work. So-called trellises are little better. They confine the plants too closely. Three heavy stakes driven in so as to form an equilateral triangle and connected with strong cord or laths nailed on *as needed*, we have found the most serviceable of any contrivance we are familiar with. Laying brush or something of the kind under the plants for them to rest upon when they fall over, is also a very good plan, if appearances are disregarded—Sow grass seed upon bare spots of the lawn. Red-top for lawns in general is as good a kind as any. Sow it thickly—not less than three bushels to the acre when sown alone. . . . . .

WE are in receipt of a treatise of 44 pages upon concentrated fertilizers, from the Mapes Formula and Peruvian Guano Co., 158 Front St., N. Y. We give this treatise special notice for two reasons:—One is that it reprints the entire story of our great yields of Chester County Mammoth and Blount's Corn with the certificates of the several committees who visited the Rural Farm and carefully estimated the yield. This is copied from our Special Corn Number for which we have had very many applications since the edition was exhausted. It reprints also an interesting article by Mr. E. Williams published in the N. Y. Tribune respecting his visit to the Rural Farm; another by the agricultural editor of the N. Y. World. The other reason is that it presents many letters from farmers in different parts of the country who have used special manures, stating kinds and quantities used and the supposed effects upon different crops. A description and price list of all the different kinds of special manures is appended, which will be found to answer many questions which we are daily receiving. We desire in every way to aid in a better understanding of commercial fertilizers and commend this treatise to our readers, to whom it will be sent on application, without charge. . . . . .

AMONG our foreign catalogues recently received is one from L Paillet, Chatenay Valley, near Paris, France. Some of the descriptions rendered in English are amusing. Here is one which we copy word for word:

"NEW PELARGONIUM—MONSIEUR EMILE SORBET. This new variety is without any doubt the best plant ever sent out to the trade since a long time, this variety is very vigourous, freen blooming, foliage deep green, flower large and a of deep red crimson colour, velvelted and very brillant, the noseguay is well shaped, well furnish; this variety as bedding plant is the most beautifullest one. The colour is so brillant that if hardly the eyes can support the look of it." . . . . . .

WE learn with regret that Mr. Fay, the originator of "Fay's Prolific Currant," is dead. .

ONE new subscriber of the RURAL returns our package of seeds, writing that he is greatly disappointed. He prefers roses, new varieties of peas, etc. One of the several objections to our "Distributions" is that it takes new subscribers a considerable time to understand them. . . . . .

MR. JOSSELYN, we learn from a private letter, says that Light Brahmas are his favorite fowls because they are the largest, good layers and the best table fowl he ever had. He has never bred Games or Dorkings. Dark Brahmas, he says, are good; but fine ones are not so easy to breed. Plymouth Rocks, he says, are popular but he does not like them and never did, though he acknowledges that they are good fowls. Black Cochins are about the best layers he ever had. "But," says Mr. Josselyn, "all fowls want a good run. No fowl will do well in a little pen without grass."

WE are right glad to know that the Kansas State Agricultural College (Manhattan) is flourishing finely. Prof. E. M. Shelton, writes us, under date of March 19th: "The attendance is large and the interest taken in agricultural matters is very great. About 90 per cent. of all of our students are the sons of farmers. . . . . .

WE have received the following gratifying communication from the owner of Car Boy, presented in R. N.-Y. of March 19. "The RURAL with Car Boy arrived yesterday. I took it to the barn and all the men recognized it at once. On my way back to the house I met a negro man who, though a good fellow, has never cultivated the Beautiful nor given attention to the arts. Holding the paper up before him, but at some distance, I said, "Bob, here is a nice picture." His face spread and he exclaimed, "Well, if they ain't gone and done put Car Boy in dat paper!" I know of but one better test than that. When the eye of the owner falls upon it, and he sees in it a faithful representation of the animal he has carefully studied and loves, the artist has the most satisfactory evidence of his success. In this engraving I see my bull. It is true and for its truth. I esteem it highly. I know not how much to thank you for it." . . . . . .

What Others Say.

THE following paragraphs as to what Messrs. Read and Pell have said in late speeches, we find in the Mark Lane Express of latest date: Hereford breeders will be pleased to hear that with respect to Herefords and Short-horns, Mr. Pell thinks that the cross between the Hereford bull and the Texan cow is better than when the Short-horn bull is used, and that "there is every probability that the Hereford bull will become the bull of the Western plains."

THE increase in the number of cattle in America, according to Mr. Read, is a million a year.

MESSRS. READ and PELL concurred in stating that British producers of mutton, wool, and barley have little to fear from American competition. Mr. Pell added oats. Mr. Read said:—"I should say with regard to my own farm that I shall try to grow more mutton, and wool, and barley, and less wheat and beef.'

AS to dead meat and its transit, Mr. Read said:—"They have all sorts of contrivances for preserving dead meat which our railway companies do not give in this country, which our butchers do not appreciate or seem to wish for; and the American importers did complain very bitterly of the way in which the meat is handled in this country."

AGAIN, with respect to the superiority of the American system of preserving meat, Mr. Pell said:—"We were fed on American meat in going from Liverpool (to the United States), which had been brought out from America, and had been kept on board the ship whilst in England, and was carried back again; and we lived upon it on board ship, and had fresh vegetables too that had been brought from America." Mr. Read added:—"Then at the great hotels they have ice larders, and they do not consider meat at the hotels in a good state for consumption under three weeks old."

THE London Live Stock Journal says that the Birmingham magistrates lately had before them a case in which another popular form of cheap meat, namely, sausages, and the various compounds sold in tins and pots, were concerned. The chopped meat prepared for sale in this guise is, it appears, made to look "healthy" by a liberal use of red ochre; and over a thousand pounds weight thus adulterated were seized and condemned by the sanitary inspectors, being, as the officers said, worse than any meat they had ever seen, "every stage in the process of disease being represented." Until some wholesale importer or manufacturer is put on trial for poisoning, it does not seem as if the public will ever be successfully protected from the unprincipled scoundrels who, for the greed of gain, recklessly expose the lives and health of the community at large. In the present case prosecution is promised, and we trust it will be enforced in the most stringent manner.

THE old Early York Cabbage is scarcely grown now by market gardeners, as there are other early varieties of greater excellence, and Mr. W. F. Brown advices his readers in the Farm and Fireside to try the Winningstadt, Jersey Wakefield or Early Dwarf Flat Dutch in its place. For Winter he has never found anything better than the Premium Flat Dutch and Stone Mason Drumhead, and both these varieties are now considered standard and are very reliable for heading.

MR. BROWN is quite right in thinking there is some choice in cucumbers, even. He has found that for all purposes the Early Cluster gives the best satisfaction. It does not run much to vine, is very prolific, and makes a pickle of the best size and shape. It is in bearing in six weeks, if not planted until the weather is warm and settled.

THE Golden Wax Bean can be used as a shell bean, but is not so good for cooking in the pod; seeds white with red eye. The Giant Wax is a pole variety with red seeds, somewhat flattened, and large, flat pods the color of the Black Wax. It is very prolific and the quality is excellent. Dreer's Improved Lima is the best flavored shell bean Mr. Brown ever used. The seeds are a greenish white, very thick, and grow so compact in the pods as to be flattened at the ends; very large, and tender. The most profitable and satisfactory garden bean he finds to be the small Lima. It is some weeks earlier than the large Lima, much easier shelled, and will yield nearly or quite double.

A GOOD EXAMPLE.—The members of the Council of the Royal Agricultural Society of Ireland are about to introduce a novelty in instructing the peasantry of the country in improved methods of dairying, according to the Live Stock Journal of London. At their last meeting, £140 were, on the proposition of Canon Bagot, voted to defray the expenses of a "traveling dairy," and a committee, consisting of Colonel Vesey, Canon Bagot, Mr. James Robertson, Mr. G. A. Stephens, and Mr. Wm. Young, was appointed to carry the scheme into operation. This "traveling dairy" is to consist of a sort of shed, constructed somewhat like a railway wagon, which can be easily transferred from place to place, and is to be fitted up with all the modern dairy appliances, including churns, pans, butter-workers, &c. The dairy is to visit all the shows in connection with the central society, and on these occasions the best systems of butter making and packing are to be practically exemplified by a skillful dairymaid, whose husband is to have charge of the entire business, and be capable of delivering lectures on dairying. One portion of this educational scheme, to which Canon Bagot attached a great deal of importance, is the careful packing of butter for the Dublin and English markets, as the present modes are not by any means commendable. The success of this innovation in dairy education is looked forward to with great interest. How would this method answer to instruct *our* "peasantry" in improved methods of dairying?

THE following from the N. Y. Tribune shows that barb-wire fences have their advocates. "I have in use on my farm post and oak board, post and rail, Osage Orange and

barb wire fences, and I prefer the last to either of the others. Reasons are: It takes fewer posts, costs nothing for repairs and is a barrier to all my stock, and no stock that are accustomed to it will be injured. Twice in the past year I had a pair of horses, attached to a wagon, run away in a field fenced with barb wire and in both instances they ran twice through the only open gate in the field before being secured. Frightened as they were they kept clear of the barb-wire.

PYRETHRUM.—A writer in the same journal gives his experience with pyrethrum which well accords with what has appeared in these columns respecting its value as an insecticide. "I have tried good pyrethrum (Persian or Dalmatian Insect powder) for lice on pigs, cattle and horses, by sprinkling it upon and rubbing it into the hair, and on chickens by blowing it under the feathers with a bellows, and find that it is harmless to the chick just hatched, also sure death to fleas on dogs. I have tried it on many kinds of insects—cabbage worms, potato bugs, flies, bees, moths, spiders—and I have failed to find the insect that would not succumb to contact; and, barring the expense, I consider it ahead of all other powders, with the added benefit that it seems not to be the least injurious to vertebrate animals."

ECONOMIZING LAND.—We see it somewhere recommended, but it is by no means a new idea, remarks the Germantown Telegraph, that, in setting out apple orchards, the trees of which should not be less than 30 feet apart, to plant peach trees between the apples. They will not interfere with the young apple trees for many years, and then not until about two generations of the peach tree shall have passed away. We have referred to this economizing of space on several occasions, having seen it adopted by some first-class fruit raisers.

THE Lumberman says that in New York there are about 500 venders of sawdust, having a capital of $200 000 invested, and doing a business of $2 000,000 annually. Forty years ago the mills were glad to have sawdust carted away; 25 years ago it could be bought for 50 cents a load, but the price has increased, and now it brings $3 50 a load at the mills. It is used at the hotels, eating-houses, groceries and other business places. It is wet and spread over floors in order to make the sweeping cleaner work. Plumbers use a great deal about pipes and buildings to deaden walls and floors. Soda-water men and packers of glass and small articles of every kind use it, and dolls and some living creatures are more or less stuffed with it. Yellow pine makes the best sawdust, as it is the least dusty, and has a pungent, healthy smell. But any white wood dust will do. Black-walnut sawdust will not sell, and is burned.

SOME ONE who has had a sad experience in the purchase of a horse says that he asked the dealer how much he would take to warrant the horse good, and that the philanthroplst replied at once that he would not make any charge—that is, he would warrant him good for nothing. . . . . Appearances are nothing if you are in the right; but if you are in the wrong, you must pay especial attention to them.

Everywhere.

RURAL SPECIAL REPORTS.

KANSAS, Caldwell, Sumner Co., March 18.—It has been snowing all day, but melting as it fell. We have had the severest Winter ever known in this part of Kansas. All peach buds are nearly or quite, killed. Raspberries and blackberries are badly frozen back. Winter wheat that was sown broadcast is very badly frozen out. Drilled wheat is all right. Sowing oats and plowing for corn are the order of the day at present. About two-thirds of the oat crop are sown. We begin planting corn about the first of April. A great many cattle have died in the Indian Territory south and southwest of us, this Winter. All the streams have been frozen over, some of them solid to the bottom, causing stock almost as much suffering from thirst as from cold and starvation. All the large herds of Texas cattle have to go through the Winter on the range without grain or fodder of any kind, which is pretty rough on them when the prairie grass is covered with snow for weeks at a time, as it has been this Winter. S. K.

KANSAS, Downs, Osborne Co., March 18.—This is the most backward Spring we have ever had in this part of Kansas. No farm work is done yet. A considerable quantity of corn is still in the fields. It is too wet to get on the ground and it is freezing every night. Early-sown wheat looks well; late-sown makes no show. With the usual amount of rain we expect good crops the coming season. W. A. H.

MO., Pleasant Mount, Miller Co., March 21.—We have just had the heaviest snow-fall of the year. It commenced on the evening of the 18th and continued without intermission until late at night on the 19th. At least 20 inches of snow fell and is now thawing rapidly. This will delay Spring work at least another week, as the ground was already too wet to work; and as creeks and rivers were already full this may cause considerable damage by floods. This time last year farmers were through sowing oats, but so far no one has sown any at all. In fact, quite a number of farmers have not been able to gather out all their corn, and this fact will in some measure retard Spring work. Fruit is damaged considerably, but is not all killed. I have examined buds and find a few peach buds alive and also some of those of the apple and plum. Winter wheat looks well considering the backward Spring. Fodder with a large number of farmers is getting scarce, as the Winter has been an uncommonly long one. N. J. S.

MO., Montgomery Co., March 22.—The storm of March 19 was the worst of the season. Fully 18 inches of snow fell and in places the drifts completely block up the roads. S. B. C.

NEBRASKA, Doniphan, Hall Co., March 14.—We have had the severest Winter here ever known. It set in early and since November 1st, we have had but few pleasant days, and since the 1st of December we have had snow upon the ground from three to eighteen inches deep, and good sleighing most of the time. Small fruits are not injured. There is but little of other kinds raised here yet, this being a new country. Rye looks well; but little Fall wheat is sown here. Farmers expect good Spring wheat this year, if the Summer season is favorable. G. C H.

N. Y., Clinton, Oneida Co., March 25.—We have had a splendid Winter for business, although there has been some very cold weather, with good sleighing since the middle of November. The 8th of March saw the first wagon on the road, so that we had 115 days' good sleighing. Winter wheat is looking fine, having been covered with snow all Winter and having made a good growth last Fall. Owing to the dry season hay is scarce and is selling for $18 to $20 per ton; oats, 50c., potatoes, 50c.; corn, 60c to 65c. S. C. G.

N. C., Lynn, Polk Co., March 21.—The contributor to this department from Brookston, N. C., in referring to the "much lauded Thermal Belt" in the RURAL for March 19, does an injustice when he says Dr. McAboy "evaded a direct answer," when asked whether common late seedling peaches were not the sort that had failed here "only twice in 50 years." Now, I could not answer that question from my own knowledge, as I was not here to know the facts. I take it for granted that until I planted budded fruit here, some nine or ten years ago, all the fruits on the "Belt" were native seedlings. We do not know any difference between the late and early, or between seedlings and budded fruit. The "Belt" had a full crop last year and there was little or no fruit for 100 miles north or south of us. The papers say that the trees are killed far south of us as well as the fruit. At this writing the peach trees are in full bloom giving assurance of abundant crops. Should this prove true the fame of the Belt will be established. The Spring planting is now over and at least 5,000 peach and pear and apple trees have been planted this season. No blight is feared in pear trees. L. R. M'A.

The Querist.

ANSWERS TO CORRESPONDENTS.

Muriate of Potash and Wood Ashes.

A. S., Westover, Md., asks, 1, whether it is desirable to use muriate of potash on soils on which wood ashes have proved to be a good manure; 2, how will the action of the potash compare with that of wood ashes; 3, how much of the potash would be equal to one bushel of good ashes; 4, will the potash dissolve in time to be of use to the present crop, if applied directly to the soil; 5, would the potash be a good fertilizer for corn, and how much should be used per acre.

ANSWER BY PROF. F. H. STORER.

1. That depends upon the kind of soil. It would be well to try the experiment, anyway. 2. For some kinds of crops, such as clover and beans, for example, the muriate of potash might perhaps do as well as wood ashes. The muriate is a good source of potassic food for plants, but it is a "special" manure, while wood ashes lack nothing but nitrogen to bring them into the category known as complete fertilizers. The muriate does not contain any phosphoric acid, lime, etc., as ashes do, and it can neither alter the humus of the soil nor the mechanical textnre of the soil as ashes can. 3. Can only be answered by experiment upon the particular field you would wish to cultivate. It is probable that in some cases no amount of the muriate would serve as well as wood ashes. 4. Yes. 5. It is not unlikely that it would be, especially if it were used in conjunction with guano, fish scrap, meat-dust, cotton-seed meal, or the like. 200 pounds of the muriate might be used to the acre. Perhaps a smaller amount than this would be sufficient.

Cooling Milk, etc.

O. R., Ann Arbor, Mich., asks, 1, the best method of cooling milk for retailing about the city; 2, will the use of ice injure the keeping qualities; 3, would pouring the milk on ice as it passed through the strainer cause too sudden a cooling; 4, would the amount of water added to the milk in doing this be sufficient to constitute a fraud on the consumer; 5, what is the best way to feed brewers' grains in warm weather; 6, could they be sun-dried sufficiently to be stored safely in bulk.

ANSWER BY PROF. L. B ARNOLD.

A convenient and expeditious way for cooling milk is to strain it into a tin vat surrounded with cold water, similar to vats in cheese factories, and to float crushed ice and salt on it in a tin floater, moving it frequently over the surface of the milk as it is being strained into the vat. By making the bottom of the floater flat and large enough to cover a considerable portion of the surface of the milk, it will be ready for distribution about as soon as the milking is done. 2, If put directly into the milk, yes. 3, Yes. 4, Yes. 5, Use tight casks or vats large enough to hold one day's feeding—one for each day between dates of receiving the grains. Fill and press down with heavy weights resting on loose covers. Cover with water to exclude air, using salt enough in it to supply the cows. The grains should not form the exclusive feed, and should be renewed at the shortest possible intervals. Heavy feeding and stale grains make objectionable milk. 6, Not without more labor than will pay. The grains are not as good after drying as before.

Quarantining Live Stock.

M. F. C., Fort Griffin, Texas, asks what is meant by quarantining cattle on account of the risk other cattle run of contracting contagious diseases from them, and whether the quarantining is enforced by the State or the United States.

ANS.—Originally the term quarantine meant 40 days during which a ship after arriving in a port, when suspected of being infected with a malignant or contagious disease, was obliged to have no intercourse with the shore, lest the supposed or real infection should be spread by communication. It was thought that 40 days' detention apart would afford time to abate the disease and remove risk of infection. The term still implies prohibition of intercourse; but the length of time during which it is to last is undetermined by the word. When cattle arrive in this country from the United Kingdom and other countries where contagious diseases are prevalent among cattle, they are quarantined for 90 days—or ought to be if the laws are obeyed—by the United States Government, which has charge of our commerce with foreign nations. Some of the Atlantic States, notably New York, New Jersey and Pennsylvania, anxious to eradicate pleuro-pneumonia from among their herds, have lately passed laws authorizing properly appointed officers to slaughter infected animals or to quarantine them until all danger of their spreading the disease has passed. This is a matter within the jurisdiction of the individual States, with which the United States has not yet meddled.

Perennial Rye Grass.

H. C. P., Albion, Mich., asks when should Perennial Rye Grass be sown; what amount of seed should be sown per acre, and whether it should be sown alone or with other grasses.

ANS.—This is, we suppose, Lolium perenne, a grass much esteemed in England, where it is considered one of the most valuable of the cultivated grasses. But it is thought to be inferior in nutritive value to Orchard Grass when green. It must be cut for hay when in blossom or it becomes hard and is not relished by stock. Flint says it is not to be compared to Timothy or Orchard Grass. It produces a great amount of seed, soon arrives at maturity, exhausts the soil, lasts for six or seven years, and then dies out. It takes just about the same place in England that Timothy does here. It has short roots so that it will not endure severe droughts and is therefore not adapted to gravelly, dry soils. Mr Killebrew does not think it as of special value for Tennessee farmers. We have several times referred to this grass in the R. N.-Y. during the past three years. Sow, as soon as the land can be prepared, from two to three bushels per acre. We should say it had better be sown alone—if at all.

Miscellaneous.

E. E. S., Papillon, Neb., asks, 1, which is the proper time to begin farming accounts—Jan. 1 or March 1; 2, would it hurt fruit trees that are bearing to put a bolt through them to prevent them from splitting where they are forked; 3, where can apple root grafts true to name be bought.

ANS.—1. The first of January is the best time to begin farm accounts, as well as all others. But, if more convenient, they may commence any time between that and first of March. 2. We have seen bolts, both of wood and iron, put through trees to prevent the trunks from splitting; but unless the tree is pretty vigorous and it is carefully done, this might injure it more or less. The bolt inserted should not be any larger than the auger-hole bored through to receive it, otherwise in driving it in, you might split the tree. The safest way, however, which we have often practiced, is to put a belt of cloth around the tree, so thick that a cord or rope will not cut through it, then tie up with a strong cord or rope, as required by the size of the tree. After this, if the rope is not sufficiently tight to hold well, put in thin narrow wedges enough between it and the cloth belt to make it hold tight. This rope should be slacked every Spring, as much as the trunk of the tree has grown in diameter the preceding Summer, 3. Of any nurserymen. See their advertisements.

A. B., Plank Road N. Y., asks what mode of training the Concord Grape is most in vogue in Southern New Jersey, at Vineland and and among the German vine-growers in Ocean County, and whether the Rose-bug ever shows itself there.

ANS.—An extensive vineyardist writes us from Vineland in answer to the above inquiry: "The modes of training grapes with us are, first, single posts, eight feet apart and from four to eight feet high; second, two wires on posts 16 feet apart, vines eight feet, with from two to four canes, on the renewal system. Every one has a pet theory of his own; some have high posts and a trellis overhead, and so on. The Rose-bug has never seriously troubled us. A few make their appearance every year on the white roses, and sometimes do a little damage to the grapes, but nothing serious."

H. A. P., Zanesville, Ohio, asks where can the Black Alder be got.

ANS.—The Black Alder, or Winterberry (Ilex verticillata, or Prinos verticillatus), is very common in low grounds in almost every part of the country. It blooms in the above section in late May. Possibly our friend refers to the Alnus incana, which is a true alder, and is sometimes called the Black Alder. This is a shrub or small tree from eight to twenty feet high, forming thickets along streams. It is better known as the Speckled Alder. Either can be procured, if not in the woods or fields, of nurserymen in general.

G. C. B., North Rochester, Mass., sends for botanical name a plant that is there grown in gardens under the name of "Old Maid's Pink." It also grows among wheat; has a dull purple flower, and attains a hight of from six to twelve inches.

ANS.—It is probably Corn Cockle—Lychnis Githago (Gray) or Agrostemma Githago of some botanists. We have never heard it called "Old Maid's Pink."

J. H. B., Hawley, Minn., asks whether blueberries are likely to thrive in a dry prairie soil.

ANS.—Wild plants will not thrive in a dry, sunny position. Our only hope for cultivating the blueberry with success lies in the production of seedlings which may adapt themselves to the changed conditions.

R. F. R., Franklin Furnace, N. J., asks whether there is any paper that makes information with regard to iron and the market quotations therefor a specialty.

ANS.—Yes, several. In this city there are the Iron Age, weekly, $4 50, 10 Warren Street, and the Metal Worker, weekly, $1.20, 83 Reade Street.

W. J. W., Belmont, N. Y., asks where can he obtain reliable information about Southern California.

ANS.—We know of no better source of such information than the letters in our "Everywhere" Department during the last three years.

T. S. L., Blossom Hill, Va., asks where can Petunia hybrida flore-pleno be obtained, and its price.

ANS.—The price is 25 cents per packet of a few seeds. It may be found in several of the catalogues we have called attention to.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, APRIL 2nd.

S. H.—F. R.—A. B. A.—C. D., thanks.—W. J. W. S. B. P., Mich., thanks.—G. C. H.—L. B. A.—E. A. F.—S. H. W.—J. J.—O. H. P.—E. S. B.—L. R. S.—W. A. H.—H. A., we do not sell the White Elephant potato or anything else—we forward such communications to those who do.—S. H. R.—G. E. N.—A. B.—F. H. S.—N. J. S.—L. E. McA.—G. E. W.—W. H. C.—J. L. P.—A. W.—N. J. S.—D. H., We don't think there is much to be said about potato planting and digging machines.—W. F.—A. R. C.—M. P.—J. T., thanks.—J. F.—S. S., thanks for sample of oats.—A. B. T.—T. H. H.—N. S.—S. H.—J. M. C.—E. A. F.—R. J. L.—W. H.—W. T. F.—S. S.—J. S. W.—M. E. A.—W. R., We are always thankful for sketches of those many home-invented contrivances which might, in many cases, be used by others.—J. L.—W. E. B.—W. L. F.—F. M. B.—H. S.—E. W.—G. G. J., We do not know the concern.—W. H. C.—B. C. C.—G. N. K.—F. W.—D. R.—H. A. M.—J. W., Ripon We shall try it.—N. D. H. and S. L. D.—W. B. H.—S. C. G.—C.—H. S.—A. B.—"Daisy."—C. G., transplant now.—E. M. A.—A. B. A.—L. A. G.—S. C. G.—A. W.—N. H.—C. M. C.—Seth.—M. E. A.—D. H. S.—J. M. G.—P. B. M.—W.—P. L. F.—S. S. D.—T. M.—W. F. K.—W. C. W.—H. J. C.—M. L. S

THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, APRIL 9, 1881.

ACTING upon the instructions recently given in these columns, our young friends might now busy themselves in grafting. It occurs to us that as the currant is easily grafted, why not graft cions of the gooseberry and black and white currant upon the red, or the white and red currant and gooseberry upon the black?

SEVERAL printed documents have been sent to us by subscribers, to whom they had been sent by Orange Judd, documents written by editors in his employ, setting forth the eminent fitness of Judd for the position of Commissioner of Agriculture. The request or suggestion is made that the persons receiving these documents will write to the President supporting Judd's claims. Pretty business this!

TRANSPLANTING AND CUTTING BACK.—Whenever a tree is transplanted, many of the roots are injured—a part destroyed. Those that remain when set out in a new place are in no condition to feed the plant as it was fed previous to removal. Hence the top must be cut back to restore the equilibrium. Let us instance the case of a newly transplanted grape-vine. If many buds are permitted to push and grow, the growth of each at the end of the season will be found to be of a feeble, immature kind. If, on the other hand, but one bud be permitted to grow, a strong, healthy cane will be the result. Thus we see in the former case the sap is distributed among *many* buds and shoots, while in the latter it is supplied to *one*. The tree or plant of any kind may live in either case. While, however, cutting back renders the chances of life greater and insures more vigor, we have still to consider whether a few strong shoots are not more desirable than many feeble ones.

THE OHIO WINTER-WHEAT CROP.—According to the report of the Ohio Board of Agriculture just published, the winter-wheat crop has been injured much more seriously than previous reports intimated. Secretary Chamberlain, who has been traveling extensively through the State, reports that the condition of the growing crop is very critical. In many places entire fields have been winter-killed owing to the alternate thawings and freezings. Although the increase of acreage put under the crop last Fall is officially set down at five per cent., yet the yield of Winter wheat next harvest, Mr. Chamberlain thinks, will not be over 70 per cent. of the production of 1880—52,000,000 bushels. Our readers will remember, however, that many of the gloomy predictions made a year ago, with regard to the damage due to winter-killing of wheat, were happily falsified by the recovery of the sickly plants on the return of the genial suns of Spring, and it may be that our Ohio friends will be gladdened by a like agreeable surprise this year.

THE WORLD'S FAIR.

"To BE or not to be—that is the question." The feeling of uncertainty which lingers about the matter seems to be growing in intensity every day, and unless some greater progress is soon made, the time for holding the Exhibition had better be extended at least to 1884. We admit that it would be a little inconsistent with the characteristic "go-ahead-ativeness" of citizens of the Empire State to drop the matter entirely; but better a hundred-fold extend the time to such a date as would afford, not only our own nation, but those across the sea, ample time for preparation. Better have a good Fair in 1900 than a poor one in 1883. How do things stand at present? Gen. Grant, whose election to the presidency of the Commission gave quite a "boom" to the enterprise, has resigned and gone to the "wilds" of Mexico on personal business; no satisfactory agreement has yet been reached as to the site; the plan of taking Central Park seems to be abandoned and no better location is proposed; the finances of the concern, though encouraging, are not by any means in such a flourishing condition as they should be, and a general feeling of uncertainty pervades the community, save that portion represented by the indefatigable Committee. While our earnest desire is to have an Exhibition in 1883, if it can be assured, we would much prefer a postponement until a time when there can be no doubt of its success, and when not only New York but the whole country may do itself the highest justice.

FALSE ECONOMY.

THERE is a vast amount of false economy in business, and it has found its way to the homes of many of our farmers. True economy, not parsimony, is the basis of success, and this is as true in the farmer's occupation as in any other. The farmer who objects to giving his son a liberal education on the ground that he is going to be "nothing but a farmer," is putting into practice a most unwise and injudicious principle of economy. Such an one will not buy books, or take papers, which rightly perused, would give him great assistance in his work, simply because he thinks he "cannot afford them."

His poor farming tools are "good enough for him," though on every hand he witnesses the rapidity and thoroughness of the work done by improved machinery in the hands of truly economical farmers—economical because they choose methods by which they can do their work most quickly and, at the same time, most efficiently. The "economic" farmer wishes to make money, so he sells off entire those crops which, returned in part to his soil in the shape of manure, would make his land much more productive, forgetting that the soil needs a certain amount of food in order to produce. He disposes of his best calves and colts, because "being nicer they will bring a better price," and he retains the poor offcasts for breeders—a sure step toward ignominious failure in stock-keeping. The time is come when our best farmers are cutting loose from these misleading principles, and are taking broader views of things, and when this false economy should be superseded by the true.

SOMETHING FOR NEXT TO NOTHING.

ALMOST every week we publish in the RURAL notices of printed matter of various sorts, containing a great deal of interesting and useful information, which can be obtained by our readers either for the trouble of making application therefor by postal card, or at most, for a trifling pittance that often falls short of the cost of production. Reading matter of this kind includes catalogues of all sorts, pamphlets on various subjects, reports of State Boards of Agriculture, pomological and dairy societies and associations, as well as the annual reports of the Department of Agriculture and special reports published by it from time to time on various topics of current interest or importance. Many of these works are the result of a world of labor and research, and are replete with the latest and best information on the various topics they discuss. Others advocate one-sided views of particular subjects; but even these generally afford a good deal of serviceable information to the discriminating reader. Others again—and to this class belong the best sort of catalogues of seedsmen and nurserymen, and pamphlets of manufacturers of machinery and dealers in fertilizers—while advertising the goods offered for sale in them, give excellent advice and information as to the best methods of using and treating these. In view of the large fund of practical and interesting knowledge that could be easily gathered even from a choice selection of these in the course of the year, we strongly urge our readers to send for such of them as they may consider useful, judging from the notices of them that may appear from time to time in our columns.

INVESTIGATING OLEOMARGARINE.

JUST a year ago we had occasion to chronicle the festive trip made by a Congressional Committee to Baltimore and this city in compliance with an invitation to a "glorious" spread tendered them by the makers of oleomargarine in both places. After having been abundantly wined and dined by those interested in the concoction and sale of the conglomerate, the legislative junketers, having cursorily inspected the process of manufacture, paid for their entertainment by lavish praise of the product. This sort of investigation of "oleo' just suited the makers of the stuff, to whom the Congressional Committee gave entire satisfaction. The same cannot be said of the State Legislative Committee at present in session in this city to investigate the manufacture of butter from tallow and cheese from lard. This Committee seems resolved to get at the truth in the matter, not, like their predecessors, by a hasty visit to a factory cleaned up for their inspection, and a subsequent examination of the product at a banquet at which the manufacturers regaled them; but by a careful examination of those who are best able to afford correct information on the subject. Among the mass of information already elicited the public should know that sometimes the fat for the manufacture of the "butter" is extracted by melting at 100 degrees below the temperature necessary to kill animalcules in it; that frequently hogs that show signs of disease are hurried to market and "worked up" into cheese; that cotton-seed oil, pea-nut oil and alum are used in the process of coloring and clarifying the mixtures.

While we are hardly prepared to advocate such a bill as that lately introduced into the Missouri Legislature, providing imprisonment of not over one year and a fine of not over $1,000, or both, for any person convicted of making or selling any oleaginous compound designed to take the place of cheese or butter made from pure, unadulterated milk or cream, we certainly insist that such substances shall be sold for what they really are, and not be dishonestly palmed off on the public as genuine cheese or butter at the price of these products. The present investigation seems to have established the fact that fully four-fifths of the spurious "butter" sold here by retailers is bought as real butter, while a very large proportion of our exports of "butter" is, there is good reason to believe, composed of this concoction. The injury annually done to the dairy interests of the country by the trade in the various imitative compounds of lard and tallow, is estimated to have already reached the vast sum of from $50,000,000 to $75,000,000.

THE EUROPEAN OUTLOOK.

SOME of the most disastrous wars that have ever glorified rulers and afflicted mankind have sprung immediately from trivial causes, although in most cases unfriendly antecedent conditions prepared the way for the final outburst. When the magazine is stored with loose powder, a hardly visible spark will cause a destructive explosion. Between such a magazine and Europe there is a strong likeness to-day, and there would be little to wonder at should the flame from the first gun fired in the squabble between Greece and Turkey produce a conflagration that before its extinction in blood should envelop the whole of Europe. From the Mediterranean to the Arctic Ocean and from the Ural Mountains to the Atlantic, the whole Continent is a vast camp; the flower of the youth and manhood of every country is forced into its armies which, in the guise of the savior of the nation, is an incubus upon its industry and a menace to its neighbors. It has been well said that in Germany every tiller of the soil carries a soldier on his back, and small wonder that so many of the soldier-ridden peasants are seeking relief from their grievous burden on this side of the ocean. In France the increase of the already enormous army is the first consideration with the government—the object for which the people are grimly patient under a grievous burden of taxation. Though the Russian army, the largest on the globe, had no terrors for its emperor's assassins, its vast unwieldy, bulk and headlong, machine-like obedience are a constant threat alike to European civilization and Asiatic barbarism. The young Kingdom of Italy, with a load of debt already as heavy as that of many of its old neighbors, is still adding yearly to the oppressive burden to increase her fleet and her army. Thus of the five Great Powers, four are armed to the teeth, and straining all their resources to equip themselves still more destructively for—what?

Were there any truth in the paradox that a thorough preparation for war is the strongest safeguard of peace, the tranquillity of Europe would be assured for at least the present generation. But, apart from the fact that a nation completely equipped for a fight is likely to indulge in one on the first favorable opportunity, especially as the state of preparedness can only be maintained at enormous expense, there are other incentives to battle urging each country to contention. France, always the firebrand of Europe, is revengefully determined to recover the lost provinces of Alsace and Lorraine; Germany is equally determined to retain these unwilling sections of Teutonic nationality; Russia under a warlike young autocrat is not likely to forget her traditional claim to be the heir to the territory as well as to the religion of the Greek Empire; Italy is eager to assert her position as the latest accession to the Great Powers by battling either with Austria for Trieste or with France for Tunis. Great Britain alone, having just had a surfeit of one war in Asia and another in Africa, and having no special axe to grind during a European conflict, is genuinely anxious for a continuance of peace.

BREVITIES.

AT the April meeting of the N. Y. H. S, the culture of mushrooms will receive attention.

STRAWBERRIES of fair quality from Florida are selling to-day (4th) at retail, for $1.50 per quart.

ONE of the methods of Mr. Judd to influence President Garfield in his favor is set forth on page 246.

THE Yellow-Wood — Cladrastis tinctoria or Virgilia lutea—"bleeds" when cut as freely as any maple. We wonder if the sap has ever been tried for sugar.

IT may be observed that the Japan conifer named retinispora, is sometimes spelled retinospora. The former is the spelling adopted by Siebold and Zuccarini, the founders of the genus.

WILL our friends whose names appear in the list of mangel cultivators, in the RURAL of Feb. 26, please send us their addresses as soon as convenient. Only about half of them have done so as yet.

NOW, we believe, is the best time of the year to transplant evergreens. They may also be pruned now. If the lower growth is scanty, cut off the top of the leader and the terminal buds of all the top shoots.

THE plum and cherry should be grafted very early before the buds begin to swell. Pears and apples may be grafted even after the buds break if the cions have been preserved in a dormant condition. Grafting the peach seldom succeeds in the North—it is better to bud in late Summer.

OUR next original portrait of distinguished farmers or horticulturists will be that of Mr. C. M. Hovey of Boston, Mass. The next thereafter will be those of Messrs. Lawes and Gilbert, of Rothamsted, England. We have just received the photographs at the reiterated request of the editor of the R. N-Y.

LET bee-keepers take courage! Mr. Jones is the champion bee-keeper and lives at Beeton, Cal. In 1879 he obtained 75,000 pounds of honey from 300 colonies of bees, and last year he took $2,000 worth from his hives, although it was a bad year for honey. During 1880, he obtained 600 new colonies from 400, and he began the present year with 1,000 colonies valued at $7,000. With no drawbacks, he expects to clear from his bees this year $10,000.

WHILE young Spring and old Winter are contending for supremacy great is the uncertainty of the weather. Just a week ago the Signal Service Office, in a special bulletin, informed us that the season in Texas and the other Southwestern States was of average earliness; yet on April 1, another special dispatch announced that in Northern Texas, Tennessee, West Virginia and thence northward over the lower lake region, the temperature was below freezing point in the morning. In Northern Minnesota people still shivered in weather 10 degrees below zero.

THE Illinois Legislative Farmers' Club, composed of members of the State Legislature, among several other measures submitted to the House, relating to the control of contagious diseases among domestic animals, recommends the appointment of a State Veterinarian with assistants, with power to investigate all outbreaks of diseases, and in case of emergency to regulate the transportation of stock, etc. We are strongly of opinion that such a measure would be beneficial, and that it cannot be adopted too soon for the safety of the vast live-stock interests of the State.

HOWEVER great are the evils of the credit system in the North they are still more disastrous in the South and especially in the Cotton States; and before prosperity becomes assured among agriculturists there the pernicious practice must be abandoned. The usual method is for the planter or farmer to give the merchant a lien on his prospective crops, whereupon the latter, being fully secured, furnishes the needed supplies, fixing his own prices thereon. The planter is thus entirely at the mercy of his "factor," with no redress against exorbitant over-charges. The Supreme Court of Mississippi has just rendered a decision which should afford some relief from these exactions to the farmers of that State, and to those of other States should the precedent be followed there also. A mortgage on the crops of a planter held by a merchant was foreclosed by him. Although it was proved that the prices charged the victim were more than double cash rates, yet the lower Court gave a verdict in favor of the merchant. On appeal, the Supreme Court reversed the decision on the ground that in buying the goods the farmer was not in a position to decline them on account of the exorbitant prices charged therefor, and that he consented to take them at those rates through overruling necessity. His extorted consent to the prices fixed was therefore without consideration, and consequently void. "Pay as you go," is alike the practiced maxim of prudence, thrift and the RURAL NEW-YORKER.

Literary Miscellany.

LEISURE HOURS.

WHERE seek we first, the ruddy bloom of health?
A boon, without which none can boast of wealth.
Where, but among the happy, free and gay,
Where honest labor rules the livelong day.
Go, visit yonder farm-house on the green,
If it so happen you have never been,
To him whose pride is to hold the plow.
Go, in a Summer eve, near set of sun,
And when the well-planned, hard day's work is done,
See how the farmer and his rugged boys,
The wife and daughters, cherish life's rich joys,
Free from the cares that hinder or destroy
The calm delight of those who shun employ:
Behold his fields of richly-waving grain,
Moved by the breeze that sweeps along the plain,
See how they smile, kiss'd by the rosy lips
Of mellow sunbeams, ere the night's eclipse,
In shade just changing to a golden hue,
In every aspect beautiful to view.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 230.)

CHAPTER XI.

SOCIETY WITHOUT SOCIAL DISTINCTIONS.

In the tower of every church throughout the city a wonderful clock was placed, which not only struck the hours of the day but indicated to the inhabitants the time of every duty. Thus, at half-past five in the morning the clock set a bell ringing, which was intended to rouse the people from their slumbers. At seven o'clock another bell indicated the hour for breakfast. At eight o'clock the business bell proclaimed the time for opening stores, and entering on the various pursuits of the day. At twelve o'clock the lunch bell rang, which also marked the hour for closing business. After lunch the people devoted themselves to various intellectual occupations. The gymnasium bell sounded at four o'clock, which called the people of both sexes and nearly all ages to the several gymnasia connected with every park. At five o'clock the bell which announced the hour for dinner rang. And at six another announced the evening business hour, when the stores were opened till seven for the accommodation of the public. The bell which called the people together for two hours of social enjoyment at the parks was rung at seven. And, finally, at nine those delightful chimes sounded, which, with the hymn of praise that rose simultaneously from every quarter of the city, fittingly announced the fact that the labors and pleasures of the day were ended.

There were, of course, occupations in which it was necessary to vary this routine.

CHAPTER XII.

HOMES OF STONE AND ART.

As I spoke in the last chapter of my needless alarm over what I took to be a summons to a fire, I may say here that the destruction of property by fire was a thing quite unknown in this country. Not only were the houses completely fireproof, but the conveniences of life among this people were so perfect, and they themselves were so habitually prudent and cautious that danger from fire was entirely precluded.

The stone-like appearance of the houses which I have spoken of as representing buildings chiseled from the solid rock, was not confined to the outside, but extended throughout the interior. The floors, ceilings, walls, balustrades and even the doors and windows had the appearance of being the laborious work of the skillful sculptor.

This stone-like material, which if I remember rightly, was called blisten, was of the consistency of mortar or cement when applied, but much tougher and more cohesive. It was capable of being pressed into moulds, and at a certain stage of its hardening it could be cut like chalk, so it was an easy matter to fashion it into any desired form, and when once hardened it was even more durable than marble itself. Its nature made destruction by fire impossible.

The houses were built most substantially of a sort of corrugated brick, two feet long and a foot square, which were laid in this substance, and which it bound together with a tenacity that was even greater than the cohesion of their own particles; for it was easier to break them in pieces than to separate them from one another when once the blisten had become thoroughly hardened. When the wall was built up, it was faced with the blisten after the manner that our houses are plastered, but with machinery which accomplished the work in a much more rapid and artistic manner. The coloring of the particular stone which it was desired to simulate was transferred instantaneously to the whole side of the building before the blisten became dry, by an instrument which resembled the *camera obscura*. A chemical substance was then cast over the building in a fine spray, which seemed to burn in, as it were, the coloring which had been transferred to the blisten so as to make it appear a part of its very nature, giving to it at the same time a hardness and polish which made it resemble the laborious work of the lapidary.

The interior of the houses, the floors, etc., were constructed out of a porous sort of wood, over which was spread a coating of blisten, prepared somewhat differently from that upon the outside, which sank into the pores of the wood, and almost completely changed it to stone. At least it became incorporated with its substance to such an extent that it never cracked or broke off without the wood cracking or breaking with it.

The decorations of this material in the interior of the houses were wondrously varied and beautiful. The floors were uncarpeted and were made to resemble mosaic work of the highest order of richness and beauty. The ceilings of the more important rooms were elegantly frescoed, and the walls were covered with portraits and paintings executed in the highest style of art. Being very practical in their habits, I wondered where these people found time to execute such marvelous works of art; for not only was every house profusely adorned, but the excellence of the work seemed to indicate that time and faithful labor were essential elements in its execution. I was told in reply that houses in this country were built to withstand the power of time for a thousand years or more. The decorations in the older houses, therefore, represented the accumulated work of centuries. One member or more in nearly every family possessed artistic talent, and devoted much time to art; thus, in the course of time the home became a storehouse of most excellent works.

The character of these art productions was various, and they were adapted with rare skill to their surroundings so as to produce the highest artistic effect. Thus twining around a pillar, there would be a skilful representation of a species of clematis, or on each side of a door a flower-pot would seem to be placed, from which an ivy would appear to grow up the posts, in a most naturally graceful manner. Above the center of a richly-carved mantel, a dish or basket of fruit would be placed, and at either end a rare plant would grow from a richly-gilded or carved pot so naturally as to appear to give its very aroma to the air. Nearly every available space was occupied by some work of art whose character made it appropriate to the position which it occupied, and thus every house was a picture gallery of the most varied and well-executed works of the painter's art.

In Mr. Flyter's dining-room there was a picture of a feast which occupied the whole wall at one side of the room. It was an exact representation of the members of the household when his great-great-grandfather was at the head of the family, and he himself was yet unborn. I expressed my surprise that there should be so little change in the style of dress and the general appearance of the people since the remote day when the picture was painted. I was told in reply that styles of dress had not changed materially for hundreds of years, and that I would have to consult pictures of a thousand years of age to find much of the antique. The people of that day were regarded as only in the dawn of the higher civilization of the present. They were puny and sickly in appearance as compared with their descendants, and there was a want of intellectuality, and a hard, narrow, shrewd, and selfish look about them which contrasted most unfavorably with the splendid physical, moral, and intellectual manhood of the people of the present.

This progress from a lower to a higher type of manhood was well indicated in the family portraits to which a room in every house was devoted, and which extended back in an unbroken line in some instances for thirty generations. An interval of ten generations gave a very perceptible increase in physical vigor, manliness, intellectuality, and refinement of expression. But when one came to compare the first portrait with the last in the line; every feature and expression which is noble, grand, and exalted in our nature seemed to have pushed itself into prominence in the last, and to have crowded completely out of sight those marks of littleness and incompleteness in their physical and mental natures which were a prominent characteristic of the first.

The names, and the dates of birth and death of the original of each portrait were placed beneath it. And it was not the least instructive of the lessons which I drew from my study of these ancestral pictures that there was a general increase in the age to which these worthies lived as they advanced toward a more perfect type of manhood.

Mr. Flyter's portrait gallery contained the pictures of his ancestors for 350 years. That of his brother-in-law, Mr. Glinden, represented his ancestry for over a thousand. Mr. Glinden, by the way, was one of the few antiquaries which could be found among this people. And he was accustomed to say that he owed his taste for the study of the ancients to the picture of a battle-scene copied by one of his ancestors many hundred years before from a masterpiece which was then regarded as very ancient."

ROCKERIES—AFTER THE LONDON GARDENERS' CHRONICLE—SEE PAGE 241.—FIG. 196.

This battle scene was the only one in existence in the country, and, though so rare, it was little prized. In fact, his neighbors were accustomed to remark good-humoredly that it was an evidence of a perverted taste in Mr. Glinden to harbor such a useless and even degrading work of art. But he was an antiquary, and prized it for its antiquity and for the vivid representation which it gave of a feature of life among the ancients.

I was surprised to learn that there were so few students of ancient history among this people; for Mr. Glinden informed me that there were but three beside himself in that great city of ten million souls who were at all familiar with the history of their early ancestors.

"Our people," said he, "are so unmeasurably in advance of the nations from which they sprang that they can learn nothing from their history which is profitable; and their minds are so completely occupied in keeping pace with the rapid strides of science, and the continual advancement in art and literature that they have no time to devote to studies which they think merely gratify an idle curiosity."

This view appeared to me rather novel, for among us the study of history is considered no less profitable than entertaining. But when I came to think it over I could not but regard it as just; for wherein could the records of wars, carnage, pillage and devastation prove useful or even entertaining reading to a people who loathed all violence with a deep abhorrence. Or of what advantage could the study of the manners, customs and institutions of an age whose history was stained with every species of crime and fraud, and which was a record of selfish and narrow-minded contention over questions of religion, science and government be to a people among whom crime and deception of every sort were unknown, and every social problem had been as satisfactorily demonstrated as the rudiments of mathematics. Such studies could be profitable to this people only as they taught them humility by reminding them that even in their exalted natures the germs of a depraved humanity existed.

But to return to the art decorations. In Mr. Glinden's house there were several rooms devoted to the pictures of extinct species of animals. This was a very rare collection because of its extent, its character, and the skill with which the work was executed. I returned to it and studied it over again, and not a little of the interest with which it was invested to my mind was due to the fact that it contained many animals which still flourish among us in pristine vigor; such, for instance, as the bear, the wolf, the deer, the fox, the lion, the tiger, the elephant, and, strange to say, even the pig figured among them in all the glory of his many generations of development.

But by far the grandest pictures which I saw among this people were those of their churches. Here the best artists seemed to have combined their efforts on works whose magnitude would seem to have required the patient labor of many generations.

The churches were all immense and elegant structures capable of seating from seven to ten thousand people. Their auditoriums were invariably spanned by a great dome whose magnificent sweep afforded a surface for the grandest conceptions of the artist's genius. Lighted from above and at each end, the side walls were left unbroken for magnificent landscapes executed with such a realistic effect that one was disposed to wonder why he could not hear the sound of the waterfalls or see the boats moving along the streams, or the animals disporting themselves on the hillsides. And he was inclined to long for the conclusion of the services that he might walk abroad in the green fields and enjoy the peace and quiet of the rustic scene which seemed to stretch away from his very presence.

There were many other decorative arts which flourished among this people, some of them entirely unknown to us, in as advanced a stage as the art of which I have spoken, but I will not dwell upon them lest the many other things which I wish to speak of may be more than enough for the readers patience.

To be continued.

MAGAZINES FOR APRIL.

THE AMERICAN NATURALIST.—Contents: The Fertilization of Salvia splendens by Birds; On the Origin of the Foot Structures of the Ungulates; Progress of Invertebrate Palæontology in the United States for the Year 1880; Evidences of the Effect of Chemico-Physical Influences in the Evolution of Branchiopod Crustaceans; Notes on a few of the Diseases and Injuries in Birds; The Brain of the Locust; Recent Literature; General Notes; Botany; Zoology; Entomology; Anthropology; Geology and Palæontology; Geography and Travels; Microscopy; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

VALUE OF THE HOUSE WREN AS AN INSECT DE-

STROYER.—Ornithologists and Entomologists are always most properly and sensibly urging upon people the duty and necessity of protecting the birds. In fact when any destructive insect appears in overwhelming numbers, the good offices of our feathered friends would seem to be almost our sole dependence for protection from their ravages. And yet our laws and usages are singularly defective, regarded simply from a selfish point of view—leaving humanity entirely out of the question But the matter is constantly forcing itself upon public attention, and gradually we shall make laws which ought to have been upon our statute books from the foundation of the Government. In the meantime let us all, who have this subject at heart, keep on "preaching" until this glorious end is achieved. The observations I have been able to make during a residence of several years on a farm have convinced me that the common house wren is really one of our most valuable birds, not, perhaps, for what they have done, but from the possibilities wrapped up in their diminutive bodies. They are quite as social as the purple martin or the bluebird, and greatly surpass both of these in the rapidity with which they increase. I began several years ago to provide them with nesting-places in the vicinity of my buildings. Sometimes I fastened the skull of a horse or ox, or a small box, in a tree top. But latterly I have made it a practice every Spring to obtain thirty or forty cigar boxes for this purpose. If the box is long and large, I put a partition across the middle and make a hole through into each apartment. It is very seldom that these boxes are not occupied by one of these little families. In most instances two broods are annually reared in each nesting-place. One of my boxes last season turned out three broods of young wrens —six little hungry birds each time, or eighteen in all! I think a cigar box never before did better duty.—Am. Naturalist for April.

THE ATLANTIC MONTHLY.—Contents: The Portrait of a Lady, XXI.-XXIV.; Concerning Dead Love; What we Learn from Old Aryan Words; The Longing of Circe: Friends, a Duet; Voltaire's School Days; The Wives of Poets, IV.; Her Ghost; The New Sunday; Sonnet; Reminiscences of Washington, XI.—The Fillmore Administration, 1850-1853; Secrets; The British Philistines; Johnson's Garrison, and other Biographies; The Last State of English Whiggery; A Century of Dishonor; Two German Novels; The Contributors' Club; Books of the Month.

ENGLISH IGNORANCE OF AMERICA.—One striking trait of British Philistinism is ignorance of other countries, and chiefly ignorance of America. To the Philistine this ignorance is his most cherished intellectual treasure. He guards it carefully, and plumes himself upon it. To enlarge and confirm it, he reads the travels of other Philistines in America, and in some cases visits the States himself, to return with a confusion of mind and perversion of fact upon the subject which is the occasion of profoundest self-congratulation, and which makes him for the remainder of his life an oracle upon American affairs among his untraveled friends and neighbors. Let me frankly confess, however, that a like ignorance and confusion in regard to England among natives of other countries is sometimes courteously assumed by the Philistine. Some years before my visit to England a pretty sweet-mannered, although not very high-class, Englishwoman was telling me, with the eyes and the voice of a dove, of something that had happened in Manchester; and then with gentle condescension, she added, inquiringly, "You 'ave 'eard of Manchester?" I said that I had, and she was satisfied. There are little courts and alleys in London which are called mews; and I was kindly informed by one or two friends, as we passed some of them, that mews were places for the keeping of hawks in olden time. It was impossible even to laugh at instruction so kindly given; nor did I tell my good teachers that any school-boy twelve years old in America knew that as well as they did. The elegant and very clever woman who recommended me to read Kenilworth before going to see the castle displayed this same sort of Philistinism. What need of telling her, either, that school-boys in America read Kenilworth!—Richard Grant White in April Atlantic.

FIG. 197.

HARPER'S MAGAZINE, — Contents: The Green Mountains in Sugar-time; An English Cathedral, Arthur Gilman; Indian Education at Hampton and Carlisle; Italian Life in New York; My Farm in Switzerland; Art Embroidery, Alexander F. Oakey; An Artist's Reminiscences, I. George; Patrolling Barnegat, A Poem; Milwaukee; Anne, A novel; Two Storms, a story; The Indian Camp, a poem; Darwinian Diversions; Vernal Faith, a poem; Life-Assurance does Assure; Young Man, Go West; A Laodicean, a novel; The Gate of the Orient, a poem; Editor's Easy Chair—Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

FIG. 198.

INDIAN EDUCATION IN VIRGINIA.—The effort has been for a natural, all-round growth rather than a rap'd one. Books, of course, are for a long time of no avail, and object-teaching, pictures and blackboards take their place, with every other device that ingenuity is equal to, often on the spur of the moment, to keep up the interest and attention of the undisciplined minds that, with the best intentions and strong desire to know English, have small patience for preliminary steps. A peripatetic class was thus devised to relieve the tedium of the school-room and had, to speak literally and figuratively, quite a run. It usually began with leap frog, and then went gayly on to find its "books in the running brooks, sermons in stones," etc. Geography is taught with molding sand and iron raised dissecting maps; arithmetic at first with blocks. The Indians are particularly fond of each, and the advanced class is quite expert in adding up columns of figures as long as a ledger page, and equal to practical problems of every-day trade and simple business accounts.—Helen W. Ludlow, in Harper's Magazine for April.

OUR LITTLE ONES.—Contents: The Rain-Wagon; Fruits of the Tropics; Willie's Carrier-Pigeon; The Robin's Song; The Bright Cent; A Good Fit; A Sail in a Tub; "Rats!" The First Snowdrop; What a Big Man am I! The Light-house; So Strange! The Shepherd; What I do Every Week; Bobby's Blunder; The Spider and the Wasp; What Sammy's Monkey Did.

This is one of the prettiest magazines of its kind that we have had the pleasure of seeing. The literary portion is appropriate and the illustrations finer than usually presented for childish appreciation. Every article is accompanied with an illustration.

O. JUDD'S ENDEAVORS TO BE THE NEXT COM. OF AGRICULTURE.

Thousands of Circulars Sent About the Country Soliciting People to Write at Once to the President Indorsing him.

THE following is one of several letters that have come to us inclosing certain documents which Mr. O. Judd is circulating about the country:

EDITOR RURAL NEW-YORKER, 34 Park Row, New York.

SIR:—The inclosed circular which I received today, explains itself. I presume hundreds of thousands of them have been distributed. I think I "smell a mice." No wonder the A. A. has so much fault to find with the Department and with Le Duc. I would suggest that you mail this circular to the President, if you have not already. It will show him how peculiarly fitted Mr. O. J. is to pull the wires. Respectfully,

Waverly, N. Y., March 25.

We make the following extracts from one of the circulars referred to:

NEW YORK, March 25, 1881.

DEAR SIR:—You doubtless well know that the Department of Agriculture at Washington has thus far been of little use, often worse than useless, to the farming interests of the country. A number of very intelligent farmers and others interested in agriculture have urged Mr. Orange Judd to allow his name to be presented for the place of Commissioner of Agriculture, to act at least until the Department could be re-organized and placed on a better basis. . . . . .

Word has just come to me from Washington that the President seems disposed to make such appointment if it is desired by the more intelligent farmers and others of the country.

If you agree with me in the opinion above expressed, will you please write *at once* a brief letter to the President of the United States, Washington, D. C., telling him in your own way that you recommend (highly, strongly, or otherwise, in your own words) Mr. Orange Judd of New York, for Commissioner of Agriculture and request him to make the appointment. Also get as many others to write, or join you in writing, as you readily can. It is preferable that the requests come directly from the people in their own language.

As several persons, in my opinion, wholly unfit for the place, are strongly pushing for the appointment, who claim it as a "reward for political services," and are using all sorts of political influence to secure it, it is highly desirable to have the above request go forward from *yourself without a day's delay*. Respectfully,

GEORGE THURBER, Editor, etc:

We have no comments to make upon the above and are quite willing to aid Mr. Judd in its further circulation.

A dramatic editor of a French paper had occasion recently to criticise severely the performance of a somewhat popular actress. Shortly afterwards the lover of the young lady met the journalist in the theater, and presented him with a package of goose-quills. "This, sir," said he, "is a present from Miss X." "What!" exclaimed the critic, "did she tear all those out of you herself? How you must have suffered!"

For Women.

CONDUCTED BY MISS RAY CLARK.

DESCRIPTION OF CUTS.

FIGS. 197 & 198—SLEEVELESS JACKET: CROCHET.

Materials required: Three-quarters of a pound black double Berlin wool, one ounce scarlet Shetland, bone hooks (Nos. 9 and 13.)

This jacket is suitable and comfortable to be worn during the cold weather under the loose cloaks that are now so fashionable, and no difficulty will be found in shaping if a paper pattern is cut the exact size, and the work placed upon it from time to time, to see where the increase and decrease is necessary. The pattern should be cut to fit tightly, as crochet stretches very much. The jacket consists of four pieces—two for the front and two for the back; it is worked lengthwise; only one pleat is necessary to form the waist. With the Berlin wool and hook No. 9, four stitches and three worked rows form an inch, so that no difficulty will be found in calculating the number of stitches required. Commence at the armhole with twenty-five stitches for an ordinary-size jacket.

1st Row: One double into each of the chain-stitches one chain, turn.

2nd Row: One double into each of twenty-six stitches, one chain, turn; continue to work in this way, increasing one stitch at the end of every row, until you have worked down to the waist, then work as many chains as are required to reach the bottom of jacket—about thirty stitches will be required; work on all the stitches, still increasing

FIG. 199.

one in every other row at the shoulder until you have worked to the top of the slope, which is in all about fifteen rows.

Now commence the fancy pattern which simulates the square collar, and is worked as shown in the pattern Fig. 198. When within eleven stitches of the shoulder, work with the Shetland and Berlin wool together two trebles into each of two stitches of the last row but one, one double into each of six successive stitches of last row but one, one double into next stitch of last row. The following is a plain double row:—

In the 18th row: Work the pattern to simulate the collar as described in the 16th row, beginning the pattern eight stitches nearer the waist.

19th Row: Double.

20th Row: Like 18th row.

21st Row: Double.

22nd Row: Like 18th row.

23d Row: Work thirty double stitches only below the waist.

24th Row: Twenty-five doubles.

25th Row: Twenty doubles.

26th Row: Fifteen doubles.

27th Row: Ten doubles.

This finishes the half-back of jacket. The second half is worked to correspond.

The fronts are begun at the edge, and worked towards the side with the pattern shown in figure 197.

Make a chain the length required.

1st Row: One double into every stitch. Work as directed for the collar, with pattern shown in Fig. 198 until you have five rows worked.

Continue the pattern, increasing one stitch for the throat at the end of every other row.

To shape the waist, pass over twenty-four stitches in the waist without working, work on the upper stitches to form the bosom of jacket,

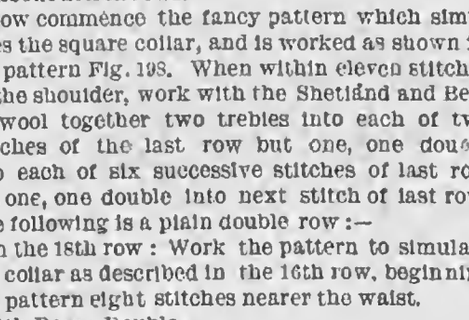


FIG. 200.

and the lower for the basque. Commence each row four stitches farther from the waist each time, so that the plait may be gradually shaped, until you have seven pattern rows in the widest part; then work straight down with one double into every stitch, decrease one stitch at the beginning of every row to slope the shoulder and basque, until you have the width required at the waist; work the bottom of this piece as described for the bottom of back. The other front is worked in the same way, but take care to keep the fancy pattern for the opposite side.

Sew up the four parts on the wrong side with a needle and wool; three rows of point Muscovite are worked round the jacket and armholes. Point Muscovite is worked as follows:

1st Row: One double into a stitch, draw up a loop through next stitch, three chain. Repeat from the beginning of the row.

In the next row work up the three chain through the double, so that it comes between two loops on chain of last.

To make the button-holes up the right side of front; when working the second row of point Muscovite, instead of working the chain into the last row, work two chain, pass over two stitches, and continue the pattern into the next stich; eight button-holes are required. A crochet edge is worked thus round the outline of fancy pattern on the bodice, and round the armholes one double into a stitch, four chain, one treble into the first, pass over two stitches, and repeat.

FIGS 200 & 201.—LETTER-CASE.

LETTER-CASE. FIG. 201.

This case is made of dark ruby plush, cut in one piece, measuring eighteen inches in length and five and a-half in breadth; the ends are turned up to form pockets three and a-half inches deep; the flaps measure two inches deep; they are of gold-colored satin to correspond with the corners; an embroidery design is worked on one flap; the case is edged with ruby and gold cord, and is tied with a fancy ribbon.

FIG. 199—CUSHION-COVER: EMBROIDERY.

This cover measures eighteen inches square; the foundation is dark ruby plush; the embroidery for the corners is worked with crewels on silk canvas, which is appliqued to the foundation under embroidered bands of moire ribbon; the cover is finished by a tassel-fringe with netted heading,

FIG. 202—ROMAN APRON.

The apron is of crash, embroidered with cross-stitch border in green and blue silk; the ends are finished with fringe, made by knotting lengths of silk into the material, and the apron is tied behind with wide ribbon.

MRS SENATOR LOGAN has never tasted wine; at a dinner given to Prince Arthur, some years since, she declined it, and at the recent lunch of a cabinet lady she was the only one of twenty-five who was abstinent. She has brought up her children to share her feelings in the matter.

NOTE.—The usual amount of space allotted to women has again been encroached upon, and the question arose:—Cuts or no cuts—more or less matter? We have decided to put in practice the motto, *Multum-in-Parvo* and thereby please varied tastes. R. C.

CORRESPONDENT'S CORNER.

THANKS—I for one return thanks to Mary Wager-Fisher, for the hint in the RURAL of January 8, concerning scraps of silk and velvet, and how to utilize them. As for silk and velvet I had none, but I had a bag of scraps of flannel; of these I

FIG. 202.

made a spread for my lounge to protect it, for the children love to play on it these cold days. Besides being useful it is very pretty. MALINDA.

I AM thoroughly interested in the RURAL NEW-YORKER, have read it more or less since my childhood, and write asking for information. I will be as brief as possible. In the issue of March 19th, Mary-Wager Fisher gives some of the best of advice to girls, but one thing is left out; she speaks of possessing a cultivated voice, a well-stored mind, and the ability to express one's self fluently and elegantly. I would like to have her explain what is necessary to possess such a voice, and what books she would recommend to a mind not well stored. Many who have become mistresses of households desire to make the best possible use of the few spare moments they have for reading and improving, and also wish to urge their children to do the same. Yours with respect,

Lake Co., Ohio. IMPROVEMENT.

CAN you favor us with designs for the border of rag mats; they would be very useful and are often inquired for. A. J. C.

We confess ignorance and refer the above to our RURAL sisters, some of whom, no doubt will be able to give description. R. C.

WILL you tell me how to renovate black silk?

MRS. W. V. A.

There are several ways of renovating black silk. One is to dip in a solution of coffee, and press with a warm (not hot) iron, on the wrong side; another is to dip in a weak solution of ammonia, and press as above. Still another is to sponge with weakened vinegar. The sponging in any case is better than dipping, but of course not so quickly done. R. C.

Read of, procure and use Hop Bitters, and you will be strong, healthy and happy.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

A NEW COOKING STOVE INVENTED BY A WOMAN.

MARY WAGER-FISHER.

Has it ever occurred to women that the ordinary cooking stove or range is uncomfortably, incoveniently and needlessly low? that longer legs would improve it?. Mrs. Amelia Lewis, an Englishwoman (she deserves to have been born a Yankee), has invented and put npon the market a cooking stove that appears to be so superior to the arrangements now in use as to supersede them all. And for three reasons—its better adaptability to cooking, its low first cost and the small expense of fuel it consumes. I think, as a gormandizer of wood and coal, the cooking stove and range, as now constructed, yield the smallest amount of heat that is utilizable of any machine in existence. Every thonghtful housewife must have thought the same thing many times over. One of my neighbors who has a range in her kitchen, actually was obliged, a year and a half ago, during the mild Winter, to buy a stove to put in the kitchen, the sole office of which was to keep the cook warm. I think Philadelphians, much more than the New Yorkers, utilize the heat of their stoves. They use more pipe, and put drums in rooms, so that by the time the chimney is reached there is not much heat left to be wasted on the air.

Mrs. Lewis's stove stands high on three legs, has a cross-piece underneath which serves both as a "stay" for the legs and a shelf upon which to put pots and skillets. The stove stands out free in the room so as to be accessible from all sides; it has perforated ears at each end, in which pokers may be stuck. All the cooking utensils are of tin, and of Mrs. Lewis's design, mostly, and all have closely fitting double covers. Things that are commonly boiled are steamed instead. And, *apropos* of steaming, too much cannot be said in its favor. At the outset of my housekeeping I had a steamer constructed to fit in a small iron pot. It is about sixteen inches high, eight inches in diameter and half way up the cylinder is a cross-piece of perforated tin which rests on ears and can be removed at pleasure. The object of the cross piece is to divide the steamer so that two different vegetables or articles of food may be steamed in it at the same time. It looks like a section of tin stove-pipe with a cover on one end, but it is indispensible and takes up very little surface room on the range. It could be made three-storied as well. Mrs. Lewis's stove has no "oven." The baking is done on the top of the stove, the baking tins being placed on slightly raised wire stands, and the whole covered with a hood of sheet-iron made double with a space between the sheeting for the passage of hot air. The baking pans that come with the stove are of tin with a cover fastened on like the lid of a trunk, to be raised and closed in like fashion. Although the Lewis cooking utensils seem admirable, it is not probable that any "Bridget" would take to them kindly, or to the stove either. But for intelligent woman the entire arrangement would be one of exceeding interest and pleasure. The smallest size of stove for a family of seven costs fifteen dollars and the furniture twelve more. But any stove furniture except the ovens can be used on it. It is claimed that the amount of fuel required for it is but half that needed for the ordinary stove.

I suppose that all housekeepers who hire domestics, have a similar experience in regard to the use of machinery and of improved cooking utensils by the "cook," who, of all hired help, is usually the most "pig-headed." I believe that the housekeeper who is a strict and methodical disciplinarian invariably gets the best service out of her help, and the use of improved utensils and improved ways of cooking and of work may speedily be brought about by a firm insistence on the part of the mistress.

MAKING MAPLE SUGAR.

As the season for sugar-making is at hand, I thought perhaps a few suggestions might be welcome to some of the young people. As I have had long experience and practice I think I know something about it and what is needed to make nice maple sugar. The first thing is perfect neatness—perhaps cleanliness is a better word. Buckets, pans, strainers, and boys or men, all need to be perfectly clean. No danger but what we shall get our "peck of dirt," without having it served up in sugar! With all care, there will be bits of bark, dead leaves, and dry moss in the sap-buckets, and if these are boiled up in the sap, they will give a bad taste as well as a dark color to the sirup. A strainer made of coarse linen toweling, sewed up like a bag, and sewed at the open end over a tub hoop, is what is needed to strain the sap into when first gathered. Of course, there will be floating mites from the arch, that will fall through the boiling pan and with the most thorough skimming there will be particles of scum that will flo at in the sirup, so it is necessary to run this, when it is ready to take off, through another strainer made just like the sap-strainer. The sirup ought to settle overnight, or at least twelve hours, then have ready a flannel strainer, and pour off the sirup from the cans or pails very carefully, so as not to disturb the niter that has settled at the bottom. It can be strained into the sugar pan, and is ready to set on the stove. Some years there is much more niter in sap than others. If there is a great amount of it in the sirup, let the latter come to a boil, remove the pan from the stove, and pour in a quart of pure sap, stir it thoroughly and let it settle for two or three hours; then pour the sirup off into pails, and you will be astonished to see the quantity of grit or mites that remains. Now drain, and rinse out the sugar pan, pour back the sirup and set it over the fire. Keep it well skimmed and there is no need of any further cleansing. When it boils up in large blubbers it is nearly done, and great care must be taken lest it scorch. You can test it by putting a few spoonfuls into a saucer, and stirring it. If done, it will granulate quickly, and become hard Take the pan from the fire, and with a wooden paddle stir it slowly. If you wish to cake it, have your tins ready, and when it it as thick as hasty-pudding dip it into the dishes or molds and let it stand till cold. If you wish to have a fine, dry sugar, keep stirring till all the lumps are broken up, and it is a mass of fine-grained sugar This is the nicest kind of sugar, but it is a deal of hard work to stir it. Another way to prepare it is:—when ready to cake, dip it into tubs and let it stand till cold; then with a knife or spoon, scoop out a cavity in the middle of the tub and all the moisture will drain down, and the edges around will be a nice white sugar. If you wish to bottle up sirup for table use or put it into cans, it only needs to boil about ten minutes, then set it off from the fire and when cool enough not to break the bottles, put it in them, fill them full, and let cool till the steam ceases to rise, then cork tight and dip in a resin and tallow cement, and set in a cool, safe place in the cellar and you will have beautiful sirup for the table all the year. The first runs make the best flavored sirup and the later ones are just as well to cake or drain.

I know there are a great many improvements in sugar-making but I do not think sugar "done off" in an evaporator, is as sweet or delicately flavored as when the sap is siruped off in large pans. I think it is desirable to preserve the maple flavor, as that is what is expected. Above all things, be particular to keep cleanliness in mind during the whole process. Cinders, flies and gnats do not improve the article, or add to its value. Use the kind of apparatus you choose, but *do* be neat about it. GRANDMOTHER.

Robbin's Washer.

You ask your readers to give their experience with Robbin's Washer and Bleacher. We have used two of them within three years, and have had the same trouble with them that you complain of, viz.: rusting the clothes. We have no fault to find with the working of the machine other than this. It is the nearest to a labor-saving washer of anything that I know. If the manufacturers could overcome that difficulty it would be a great success.

Tremont Co., Iowa. A. C. GASTON.

QUESTIONS ANSWERED.

Asparagus and Celery.

M. P. BURTON wishes recipes for cooking the above vegetables.

Asparagus, Boiled.

ANS.—Cut the stalks of equal length, rejecting the woody part and scraping the white part which remains. Tie into bunches with tape, or in a piece of coarse net and put into boiling, salted water. Boil from 20 to 35 minutes according to age. Before it is done toast a few slices of bread, dip into the liquor in which the asparagus is boiling, butter and lay in a hot dish. Drain the asparagus, until the bunches and place upon the toast with a few bits of butter. A favorite accompaniment to boiled asparagus is a white sance as follows: Two ounces of butter, one ounce of flour, a small teacupful of milk, two tablespoonfuls of cream and a teaspoonful of salt. In a saucepan mix the flour and butter, add by degrees a half pint of boiling water. Stir until the mixture boils, add the milk, boil two minutes longer, season with salt, take from the fire, stir in the cream and pour over the asparagus, or serve in a gravy boat. A tempting way of serving plain, boiled asparagus is as a

Salad.

Boil, until carefully, place upon a flat dish and make very cold by standing in the ice-box. Serve with a dressing of vinegar, pepper, salt and salad oil.

Asparagus and Eggs.

When eggs are plentiful prepare in this wise. Cut as many tender stalks as you will need into half-inch bits, boil in salted water 15 minutes, drain, pour over a cup of rich drawn butter and turn into a buttered pudding-dish. Break a half dozen eggs, or as many as required, carefully over the surface, strew over bits of butter, season with salt and pepper and put into a quick oven until the eggs are set. Serve at once. Or make an

Omelette.

The green part only of a good-sized bunch of cold, boiled asparagus, a half dozen eggs beaten very light, two tablespoonfuls of milk and a little salt. Chop the asparagus very fine, stir in the beaten egg and milk. Put a tablespoonful of butter into a frying-pan, heat and pour in the mixture; shake and loosen with a broad knife as it forms. Fold over in the middle and turn upside down upon a hot platter.

Stewed Celery.

Cut into inch lengths and stew until tender. Drain off the water, and just cover with sweet milk. When it begins to boil, thicken with a lump of flour and butter rolled together, season with pepper and salt and boil a few minutes longer. After adding the butter and flour you may, if you please, add two well beaten eggs. It is best to first mix a few spoonfuls of the hot thickened milk with the eggs to prevent curdling.

Miscellaneous.

ST. JACOBS OIL
TRADE MARK.

THE GREAT GERMAN REMEDY.
FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

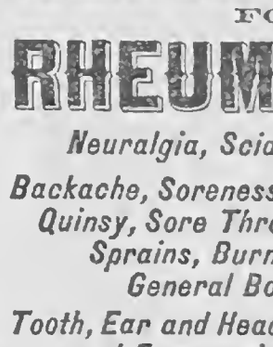
No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,
Baltimore, Md., U. S. A.

Back Supporting Shoulder Brace



Is so constructed that it gives a strengthening support to the back, and draws the shoulders back so as to expand the chest, throwing the body into an erect and graceful position. Price $1.50 by mail. Give waist measure. Send for circular and illustrated price-list of

Hygienic Undergarments

to
Mrs. A. FLETCHER & Co.
6 E. 14th St., New York City.

Wanted.

A thoroughly practical man, with large experience in putting up canned goods, such as Tomatoes, Corn, etc. To one who can give good recommendations and testimonials, a good salary will be paid, or, by putting in some capital, an interest may be obtained in the business. Parties applying will please to address
BOX 47, Brantford Post Office, Ontario.

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine

25 Large all Gold & Silver Chromo Cards with name 10c. Agents wanted. J. B. Husted, Nassau, N. Y.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

40 Happy Day, Chromo, Lace, &c., Cards, with name & morocco case 10c. H. M. COOK, Meriden, Conn.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

Trees, Seeds, Plants, &c.

WIND-BREAKS AND HEDGES.
Norway Spruce, 2 to 3 feet, $10 per 100. Price-list of Nursery stock, Small Fruit, etc., free.
Blauveltville, N. Y. A. T. BLAUVELT & CO.

BULBS Seeds, Plants,
5 pkts flower seeds.....10c.
5 good Gladioli.....10c.
8 good roses, $1. *Try them.*
Catalogue free. N. HALLOCK,
Creedmoor, N. Y.

"HAWLEY'S" Choice Onion Seed.
WARRANTED FRESH AND GENUINE

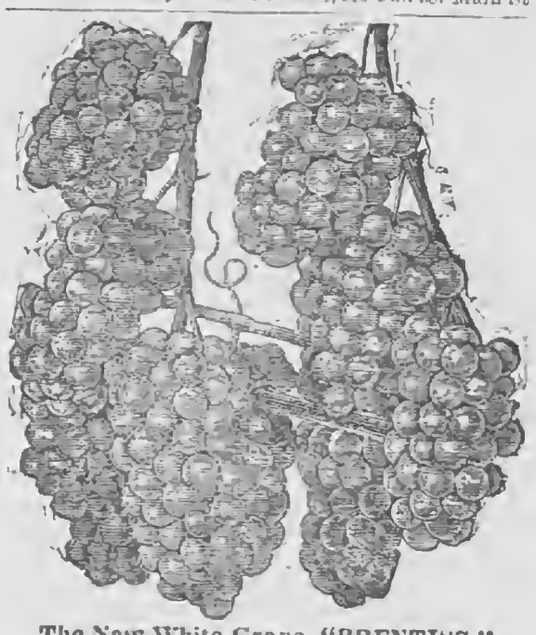
Early Red Globe	Pk't 10c.,	oz. 25,	lb. $2 50
Wethersfield Large Red	" 10c.,	oz. 25,	lb. 3 50
Yellow Globe, Danvers, *extra stock*	" 10c.,	oz. 40,	lb. 4 50
Extra Early Red, *very choice stock*	" 10c.,	oz. 40,	lb. 5 00
Fottler's Imported "Early B'w'k Cabbage	" 10c.,	oz. 40,	lb. 4 00
Egyptian Earliest Beet	" 5c.,	oz. 10,	lb. 75
Dewing's Early Turnip Beet	" 5c.,	oz. 10,	lb. 50
Imp'l Dw'f Celery, *The Best* of all	" 10c.,	oz. 50,	lb. 6 00
Sugar, Tour's netted melon	" 10c.,	oz. 40,	lb. 4 00
English Potato Onion Sets (Express),	peck $2;		bu. 8 00
Hawley's E H'rtf'd E.E'y Peas,	" $1.75;		" 7 00
Little Gem Dwarf, Ex'ra Early,	" 2.00;		" 8 00
Pride of Am'a Potato, v'y ch'ice,	" 1.00;		" 3 00

If by mail, *in quantities* of ½ lb and upwards, postage at the rate of 16c per lb. must be added. *Catalogues free to all.* Wholesale Trade List, for dealers only. Address,
R. D. HAWLEY,
Importer and Grower of Choice Vegetable Seeds.
Hartford, Conn.

STRAWBERRIES AND ROSES
IF YOU INTEND TO PLANT Small Fruits, Roses, Shrubs, Vines, Flowering or Vegetable Plants, send for my free Catalogue *full of information.*
STRAWBERRY CULTURE for a 1c. stamp.
GEORGE S. WALES, Rochester, New York.

SPLENDID **FLOWERS**
Over 1500 distinct varieties. All strong Plants, each labeled, delivered safely by mail. Largest assortment. Low prices. In business 27 years. *Guarantee satisfaction.* Stock comprises *all desirable varieties.* Only mature plants sent. Our new Illustrated Hand-Book, sent free, contains name and description of each plant, with instructions for successful cultivation. *Don't purchase plants elsewhere before sending for our new* HAND-BOOK
All lovers of *flowers* should have our
Every buyer of *cheap plants* should have it. Every one wanting *new* and *choice plants* should send for our *Hand-Book.*
HOOPES, BROTHER & THOMAS,
CHERRY HILL NURSERIES, West Chester, Pa.

Established 1863.
DUTCHESS NURSERIES.
Small Fruit Plants a Specialty.
DUTCHESS SEED STORES.
None but Tested Seeds sent out.
Combined catalogues free upon application.
W. L. FERRIS, M.D., Poughkeepsie, N. Y.
Office of Nursery and Seed Store, 385 and 387 Main St



The New White Grape "PRENTISS."
Early, vigorous grower, hardy. Very productive, best quality. Send for circular. The above is from an exact photograph of a branch by Godfrey, Rochester, N. Y. Also the largest and best stock of Grape Vines in the country. Prices very low to dealers and large planters. Also trees and small fruits. Send stamp for descriptive catalogue. Price list free.
T. S. HUBBARD, Fredonia, N. Y.

MAGNUM BONUM (Amer
FOR SEED.
Extra fine, per bu. .....$1.50; per bbl. $3.50
Other Potatoes Seeds, etc. Catalogues free
TUISCO GREINER, Naples, N. Y.

10 NICE CONCORD GRAPE-VINES for $1, by mail post-paid. *Think of it!* Order now for early Spring shipment. *Circulars free.*
Wm. H. Reed, Chambersburg Nurseries, Chambersburg, Pa. Mention this paper.

OATS RUSSIAN WHITE.
Best in cultivation. 100 bushels an acre. Rust-proof and hardy. 1 lb., mail, postpaid, 50c.; 3 lb., mail, postpaid, $1.00; ½ bush. by freight or express, $1.50; 1 bush. by freight or express, $2.50. New bags, 25c. each, extra.
Address, D. M. FERRY & CO., Detroit, Mich.

RAISIN GRAPE VINES
By mail, BEST, 25c. each; 3 for $1. Cuttings, warranted to grow, 10c. each. W. A. SANDERS
Sanger, Fresno Co., California.

THE DINGEE & CONARD CO'S
BEAUTIFUL EVER BLOOMING
ROSES
The only establishment making a SPECIAL BUSINESS OF ROSES. 50 LARGE HOUSES for ROSES alone. We deliver Strong Pot Plants, suitable for immediate bloom, safely by mail, postpaid, at all post-offices. 5 splendid varieties, your choice, all labeled, for $1; 12 for $2; 19 for $3; 26 for $4; 35 for $5; 75 for $10; 100 for $13. We GIVE AWAY, in Premiums and Extras, more ROSES than most establishments grow. Our NEW GUIDE, *a complete Treatise on the Rose*, 70 pp, *elegantly illustrated*, describes 500 newest and choicest varieties—*free to all.*
THE DINGEE & CONARD CO.
Rose Growers, West Grove, Chester Co., Pa.

News of the Week.

HOME NEWS.

MONDAY, April 4, 1881.

THE past week has been an unusually exciting one at Washington. Mahone, the Virginia "Readjuster," made a speech vindicating the position which he has taken in acting with the Republicans, though elected as a Democrat as his supporters supposed. The very equal division of the Senate between the two parties makes his vote of great importance. He administered, in his speech, most scathing rebukes to his assailants. The President, too, has been arousing the indignation of certain leading senators by his recent appointments, that of Judge Robertson to be Collector of the Port, in this city, being the "bone of contention." This was a slap in the face for the Conklingites and a soothing caress for the followers of the new Secretary of State. A simple turning of the tide from the five Conkling appointments of the day previous.

In view of the fact that Mr. Jewett declined the position of President of the World's Fair Commission, the committee have decided to take no further action in relation to a permanent President until after April 15, when the Finance Committee will report the subscriptions to the capital stock as provided for in the resolution of March 16. Mr. Cyrus W. Field is mentioned for the head of the Commission. California has appropriated $5,000 to represent the State at the Exhibition.

The quantity of goods smuggled into this country by persons claiming to be respectable, is enormous. Women and men dress themselves for the first time in new garments, and carry in their hands new umbrellas, canes and parasols, and, sling over their backs new opera or field glasses, and other articles, when about to leave the steamer, and the custom officers are helpless.

A meeting of the directors of the Mexican Southern R. R. Co. was held in this city last week. Among those present were General Grant, Russell Sage, Jesse Seligman, Frank Work, U. S. Grant Jr., and General G. M. Dodge. The following officers were elected: President, U. S. Grant; Vice President, G. M. Dodge; Secretary, James H. Work; Treasurer, Russell Sage. An executive committee was also elected consisting of Jay Gould, Frank Work and Russell Sage. A resolution was adopted requesting General Grant to proceed to Mexico with a view to representing the interests of the company in that country. He left on Monday.

Mrs. Mary N. Bliss, of Columbus, Ohio, has given $10,000 to Kenyon College for the building of a new hall to be called "Hubbard Hall," as a memorial to her deceased brother, George Hubbard. The hall is to contain a gymnasium, offices for the President and Vice President, and the Treasurer, and a lecture and apparatus room for the Professor of Physics.

There has been another disastrous flood in Nebraska, near Omaha. The river Platte overflowed the level prairies in the Platte Valley for miles around. A mile and a half of the Union Pacific track has been washed out, and the $50,000 bridge at Columbus was carried down stream. Several hundred thousand dollars worth of property have been destroyed.

The town of Green Island, Neb., opposite Yankton, has been swept away by the flood. The inhabitants could be seen from Yankton clinging to their houses as they floated off. A large amount of stock is supposed to have been drowned. All the bottom lands, which are well settled, are flooded. The flood at Bismarck, Dakota, came so suddenly that the people were glad to get to the bluffs with clothing enough to keep warm. About four thousand people were rendered homeless, but the water has fallen so that many buildings are now out of water. The total loss is estimated at from $150,000 to $175,000.

The reduction in the public debt for March is $6,192,819, and for the nine months ending March 31, $68,408,702. While the reduction for the month is less than one-half what it was for March, 1880, the aggregate reduction for the nine months is nearly $22,000,000 greater than for the corresponding nine months of the preceding fiscal year.

The counsel for the prosecution in the Whittaker Court Martial rested the case on Tuesday last, and the defense was opened with Cadet Whittaker on the stand. He again related the "story of his wrongs," and was sharply cross-examined by opposing counsel.

The historic eagle, "Old Abe," died last week in the Capitol at Madison, Wis. He followed the Eighth Volunteer Infantry of Wisconsin through 30 battles, being near its flag in every contest, yet he never received a wound, though often the mark for the enemy's riflemen. In 1579 he was exhibited in Boston for the benefit of the preservation fund of the Old South Church.

James Currie, the supposed murderer of Porter, the actor, was killed in Los Vegas, New Mexico, while on a drunken spree. He threatened to take the life of a bar-tender, who shot Currie in self-defense.

Wisconsin law-makers are on the right track, and we hope they will not re-*treat*. The Governor signed the "Anti-treating" bill, and now, if a company of young men in that State wish to drink together, each must pay for what he drinks, as is the custom in Germany, where treating is said to be almost unknown. Many think the law will be a dead letter, while others believe it will materially lessen drunkenness and crime.

Secretary Hunt will shortly issue a circular relative to the enlistment of boys in the navy. They must be between 14 and 18 years of age, able to read and write, robust and of good character. They will be enlisted as third class, at $9.50 per month, and one ration, with promotion for good conduct. The prime object is to place in the naval service, with the consent of parents, good, deserving boys, who will elevate its service.

The States of Michigan, New Hampshire, Rhode Island and Vermont pay their Governors $1,000 a year; New York and Pennsylvania, $10,000; California, Illinois and Nevada, $6,000; Indiana, Missouri, New Jersey, Virginia and Wisconsin, $5,000. Oregon pays $1500, and the others from $2,000 to $4,000 each.

Francis Murphy, the temperance lecturer, who has been resting at Cape May for a few days, after six weeks of revival work in Pittsburgh, is preparing to go to Europe for the purpose of starting temperance revivals in Scotland and England. He will sail about the last of July. Prior to that he will conduct a series of farewell meetings in Pennsylvania and Ohio.

[Elgin, (Ill.) Daily Leader.]

The subjoined opinion, we perceive, is by J. A Daniels, Esq., of Messrs. Stogdill & Daniels, Attorneys, La Crosse, Wis., and appears in the La Crosse Chronicle: Sometime since I was attacked with pain in and below one of my knee joints. A few applications of St Jacobs Oil quieted the pain and relieved the inflammation. I regard it as a valuable medicine.

FOREIGN NEWS.

IN view of the vast European complications that may arise from it, the attitude of Greece is at present a topic of high interest. As an inducement to remain at peace during the Turko-Russian war, the little kingdom was promised a slice of Turkey when the war should be over. On the conclusion of hostilities, the signers of the treaty of Berlin *advised* the Sultan to cede certain territory to Greece. The Porte agreed to make over a part of the territory mentioned, but absolutely refused to grant the whole of it. The matter has ever since been wrangled about, Greece sticking to her first demand, and Turkey yielding a little more under pressure, but finally making a resolute stand on some of the territory claimed by Greece. The latter has 80,000 men under arms and appears resolved on war. The Ottoman forces would make short work of the Grecian army, however, if the European Powers kept their hands off; but once the war is begun Austria, Italy and England will probably take a hand in it at an early day, and the other Powers may soon pitch in also. By this morning's cablegram it appears that Greece is in the attitude of a slim, little fellow trying to get at a much stouter and stronger man but held back by a circle of giants. The Great Powers are trying to restrain Greece from pitching into Turkey.

Another possible war cloud looms over Tunis in north Africa. France, having possession of Algiers, has long had a covetous eye on its neighbor Tunis, and making use of a late quarrel with the Bey, seems resolved to seize upon the country. When England occupied Cyprus at the close of the Turko-Russian war, it is said that Lord Beaconsfield's government promised that no objection would be made to the occupation of Tunis by France in reward for the latter's acquiescence in Great Britain's possesson of Cyprus. Italy, however, objects to the further aggrandisement of France on the Mediterranean, and if well backed up, may go to war to prevent it.

In England, it is now asserted that Parnell and his followers will support Mr. Gladstone's land bill for Ireland, and cease all opposition to the election of Liberal members of Parliament. This reconciliation of the "irreconcilable" Irish agitators goes to prove that this bill is of a rather radical nature. Its provisions are not yet positively known, but it has leaked out that it will secure stability of tenure; make landlords liable for damages for unjust evictions; establish right of free sale of leases; grant facilities for the purchase and ownership of land by farmers; make provision for the sale of large tracts of waste land in small holdings, and work a great revolution in the condition of the Irish farming classes by securing the just reward of honest labor. Under such a law it is expected the conflict between landlord and tenant will rapidly subside, and Ireland enter upon a new era of prosperity. To secure the passage of the bill against the bitter opposition of Irish and English landlords, the English tenant farmers and agricultural laborers are being organized, and great mass meetings being held.

That furred tongue, bad tasting mouth and miserable feeling, say you need Hop Bitters.

AGRICULTURAL NEWS.

According to Liverpool reports, from 53,000 to 56,000 barrels of American apples have been sold there weekly, mostly at 12s. to 14s. a barrel, though some of the choicest Newtown Pippins touched 30s., or $6.....Boston sent to Europe some 500,600 barrels of last year's crop of American apples.....The Northern Illinois Sheep Breeders' Association will hold its third annual sheep-shearing festival at the fair grounds in Woodstock April 21 and 22. The exhibition is open to all.....There are 306,096 acres of orchards in the State of Illinois, giving an average product of $26.70 per acre.....Despite the advice of the Land League to tenant farmers—not to leave the country—95,857 persons left "Old Ireland" last year, an increase of 48,493 over the previous year.....Com Le Duc says the seeds of "Hulless" Oats distributed for two or three years by the Department of Agriculture failed to obtain favorable reports from those who tried them.....The Grand Jury is busy investigating the Missouri land frauds, at St. Louis. Of course, a lot of Chicago rascals are implicated. ....An old Pennsylvania farmer says that those who left their corn standing in the fields will find it dangerous husking in the Spring, as the shocks will be full of snakes which have made their winter-quarters there.....A bill has passed both Houses of the Connecticut Legislature declaring cider an intoxicating beverage, to be subject to the same restrictions concerning its sale as apply to other liquors.....A hundred English skylarks are to be set at liberty in New Jersey to make the sky melodious.....The report on trichinæ, compiled by the late Passed Assistant Surgeon Glazier, of the Marine Hospital Service, is now passing through the press at the Government Printing Office, and will soon be ready for free distribution.....The rural newspapers of Canada complain of a general exodus of young men to the United States. Towns, in many cases, lose all their unmarried males, which make it bad for the marriageable females and for the future general prosperity of the community..... Canada settlers in New England are talking of returning to the Dominion tempted by the government's liberal offers of land and agricultural help in Manitoba.....A chestnut tree which was cut down the other day by John Budd of Sandburgh, Sullivan County, N. Y., made 1,800 marketable fence rails, besides much firewood. The tree contained 2,000 rings at the butt, which, it is claimed, indicated that it was 2,000 years old.

The Assembly of this State has passed that bill requiring boarding-house keepers, etc., who use oleomargarine, to display a placard in the dining-room announcing the fact.....The Cincinnati Price Current, published last Thursday its 32nd annual report of pork-packing in the West for the Winter ending March 1st, showing for the Winter a total of 6,916,456 hogs packed, being 30,995 less than for the preceding Winter. The total for the 12 months is 12,243,854, showing an increase of 1,241,655. The Winter's average is 207.71 pounds, against 212.94 pounds last year. The average yield per hog of lard is 35.65 pounds, against 36.62 last Winter. The reduction in the number and weight during the Winter is equivalent to 200,000 hogs of the average of a year ago. The amount of mess pork made during the Winter is 359,691 barrels—a reduction of 170,867 barrels. The reduction in the production of lard is 5,762,043 pounds. The prospect for supplies of hogs for the Summer season is regarded as much below last year up to June, but beyond that time as not varying much from last year.....It is now estimated that 22,000 of the 850,000 cattle in Colorado have died during the past Winter, a larger mortality than has been ever before known. A large share of them were driven into Texas when Winter came, but those left behind suffered severely, 1,100 dead carcasses being counted in 22 miles along both sides of the Platte River near Julesburg.

Of grain bags 41,614,000 were sold last year to California farmers.....Last year Portugal bought nearly as much of our wheat as Germany..... Massachusetts farmers seem "bound" to have an experiment station.....The New England Milk Producers' Association recommend the formation of a company with $200,000 capital, to supply Boston with pure milk.

There is great excitement in Belmont County, Ohio, over a horse epidemic raging there. The disease resembles glanders, and is pronounced by veterinary surgeons incurable and contagious. A number of horses have died, and many others are sick. Horse owners say there is great danger from a spread of the disease.....In France frequent storms have impeded the sowing of Spring grain; but so far fall-sown grain has not been injured. Field work is about two weeks behind hand.

Relief from Neuralgia.

A gentleman who had suffered from a severe attack of Neuralgia, writes: If I had not had Compound Oxygen to resort to the last six days, don't know how I would have gotten through. Had Neuralgia one day in face and head, but found, by increasing times of inhalation, a prompt remedy." Treatise on "Compound Oxygen" sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

Facts.

Ponder on these facts—you cannot be well or get well if your bowels and kidneys refuse to act properly. Kidney-Wort will restore their healthful action. Buy it in either the dry or liquid forms and give it a faithful trial. Druggists sell it.

Women that have been pronounced incurable by the best physicians in the country, have been completely cured by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, billousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Oh, why will you let that invalid friend suffer that Hop Bitters will so easily cure.

BURNETT'S COCOAINE

Will Save the Hair.

And keep it in a strong and healthy condition, because it will stimulate the roots of the hair, and restore the natural action upon which its growth depends.

Burnett's Flavoring Extracts are absolutely pure.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, April 2nd.

Chicago.—WHEAT active; No. 3 Red Winter, $1-01½@1 03¾; No. 2 Chicago Spring, $1 01½@1 03¾, cash; No. 3 Chicago Spring, 92@96½c; Rejected, 76@81c. CORN moderately active at 38¾@41c, cash. OATS active at $1@33c, cash. RYE fairly active at 99c@$1 01¼. BARLEY steady at $1 05. PORK active. BUTTER—Creamery, 30@33c ₱ lb; dairy, choice, 25@27c; dairy, fair to good, 20@24c; ladle-packed, 16@20c; packing stock, 13@15c; grease, 8@10c. CHEESE—Full cream, 13@14c ₱ lb; part skim, choice, 10½@11c. EGGS—Steady at 15c ₱ doz. HAY—We quote: No. 1 Timothy, $15@15 50 ₱ ton; No. 2 Timothy, $14@14 50 ₱ ton on track; mixed, $12 50@13 50; upland prairie, $11 50@13 50; No. 1 prairie, $9 50@10. SEEDS—Good to choice medium clover, $4 50@4 75 ₱ bushel; good to choice Mammoth do at $5@5 15; good to prime Timothy at $2 35@2 45, and flax at $1 18. HOGS—Market active and firm; common to good mixed packing, $5 40@5 80; Bacon Hogs, $5 75@5 85; common to fair light, $5 50@5 70; choice heavy, $5 90@6 45; butcher's pigs, $6 25. CATTLE—All good wanted, and 10c higher than yesterday; exports strong at $5 50@6 35; good to choice shipping, $4 90@5 30; common to fair, $4 40@4 75; canning and butchers', $2 50@4 25, mainly at $3@4 75; stockers and feeders scarce and in good demand at $3 25@4 15; Calves, $10@15 ₱ head. SHEEP—Market firm and fairly active; export, $5 75@6; common to medi- 4 20@4 75; good to choice, $5 10@5 40.

Cincinnati.—WHEAT strong; No 2 Red Winter, $1 08@1 10. CORN strong; No. 2 Mixed, 47@47½c. RYE quiet, but firm; No. 2 at $1 13. BARLEY in good demand at full prices; No. 2 Fall, $1 08@1 10. PORK firm at $15 25@15 50. LARD stronger at $10 50@10 55. Bulk-meats firmer; Shoulders, $5; Clear Rib, $7 80. Bacon quiet, but firm; Shoulders, 5½c; Clear Rib, $8 60; Clear Side, $8 90. BUTTER—Fancy Northwestern Creamery sells at 36@37c, ₱ lb; choice Dairy at 25@27c, choice Western Reserve at 24@26c, prime to choice Central Ohio at 20@23c, and common to medium do. at 15@18c. POTATOES—Choice Northern Early Rose and Burbank sell at $2 75 ₱ barrel from store. Early Rose sell in a small way from store at 95@$1, and Peachblow at 80@85c ₱ bushel, and 7½@10c less on track. HAY—Common sells at $14 50@15 50, prime do. at $16 50@17 50 ₱ ton, and Prairie hay at $11@12 per ton, in bales on arrival. Wheat and Rye Straw is steady at $5@8 50, and Oats straw firm at $9@9 50. MILL FEED—Bran sells at $14 75@15; shipstuffs at $15 50, and middlings at $16@20 per ton in bulk, and 50c more in sacks on track. SEED—Prime old Clover sells at 8@8¼, prime to choice new do. at 8¼@8½c ₱ lb, and Timothy at $2 70@2 80 ₱ bushel from store. Round lots on arrival would not bring these prices. Flaxseed is easier at $1 10@1 12½ ₱ bushel. German Millet sells at $1 50 common Millet at $1 10, and Hungarian Grass at $1 10 per bushel. Hogs quiet; common, $4 25@5 25; light, $4 45@5 85; packing, $5 35@5 80; butchers', $5 90@6 30.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 2, 1881.

BEANS AND PEAS.—Supplies of beans continue moderate and mediums are the specially firm item of the list. Exportation is moderate but the home trade is large enough to toughen prices. The long Winter had added greatly to consumption especially as best potatoes have ruled high and were immovable a good deal of the time owing to the danger of freezing. Pea and white kidney beans are firm in sympathy with other white. Red kidney remain almost a drug; a wholesale buyer would obtain considerable concession from the nominal quotations. It really looks as if nothing would give them a trade place outside of a home demand. Such mills have always been light as only a small portion of foreigners have used them. Black beans are quiet; we learn that much of their former Southern want has been latterly filled by a home crop of a variety of beans that has become popular. Lima beans scarce; Western green peas are quiet; a few car loads per week more than stocks the easier market, Southern B. E. peas steady.

Marrow beans prime $2.10 other $2@2.05; medium, prime $2.12½; other $2@2.07; pea and white kidney $1.95@2.10 red kidney, choice, $1.55@1.60, other, $1.40@1.50; lima $4.50@5 Green peas Wis. in bbls. $1.60@1.65; Southern B. E. peas $2.50 per 2 bu bag.

BEESWAX.—A light trade in progress and steady prices; quoted at 21½@25c.

BROOM CORN.—There has been very little New York trading in this item for many months. Philadelphia now rules most sales of this section of the country. Choice in a small way has made 7½c. here

BUTTER.—New butter holds well to the opening prices when fine. The general average of quality is not fine, the most marked difference being in Western goods. Old butter is pressed for sale at lower figures. Its outlet is very narrow this Spring. Advices from abroad at present will deter exporters from using it at any price. Oleomargarine is again in strong debate, and various suggestions are made with a view of keeping it apart from pure butter in the trade. The line of discrimination is, however, a wide one, and while so many consumers are unable to detect the fraud, and a large class of retailers are willing to dispense it with enlarged profit, it will be difficult to adopt a lasting remedy in the interest of farmers.

New Butter.—Creamery, choice Western, 34@35c.; State and Penn., 30@33c.; fair to prime, 27@30c.; dairy tubs, choice, 27@28c.; other, 20@25c.; Welsh tubs, choice, 26@27c.; fair to prime, 23@25c.; poor, 15@18c. Old Butter.—Creamery, 15@23c.; dairies, entire, 17@20c.; firkins, 13@20c.; pails and half tubs, 13@25c.; Welsh, 13@18c.; Western imitation creamery, 20@23c.; fresh dairy, 13@15c; other, 12@21c., factory, fine, 18@19c.; other, 11@17c.; very poor, 8½@10c.; grease, 7@8c.

Receipts for week 18,719 pkgs.

Exports do. 1 634 do.

COMPARATIVE RECEIPTS AND EXPORTS.

	Receipts. pkgs.	Exports, firkins.
June 1, '80 to April 1, '81	1,270 875	250,191
" 1, '79, " 1, '80	1,284,475	280,513
" 1, '78, " 1, '79	1,273,650	260,225

CHEESE.—The best stock is in much reduced supply and prices rule firm; good grades and under are freely offered and favor buyers; creamery skims have ruled at a decline, but closed on the best lots somewhat steadier. Latest prices are

Fancy at 13¾@13¾c.; do. good and prime, 12¾@13c.; do. fair, at 11¾@11¾c.; do. half-skimmed, 9@10c.; Wisconsin factory, fine, at 12¾@13c.; do. good to prime, 12@12½c.; do. fair to good, 11@12c.; Ohio factory, fine, 12¾@13c.; do. good to prime, 11¾@12½c.; do. flat, fair to good, 10¾@11¾c.; do. poor to fair, 8@10c. Skimmed creamery, 6@7½c.

Receipts for week, 14,730 boxes.

Exports for week, 17,800 boxes.

Liverpool cable, 69s.

Steam to Gt. Britain, 21s.3d.@25s.

COMPARATIVE RECEIPTS AND EXPORTS.

	Rec'ts. bxs.	Exp'ts. bs.
June 1, '80, to April 1, '81	2,605,815	122,947
" 1, '79, " 1, '80	2,379,760	103,202
" 1, '78, " 1, '79	2,974,260	139,873

COTTON—Has been in very large demand for export and spinning and closed firm at for

April, 10 46@10.47c.; May, 10,36@10.37c.; June, 10.65@10.66c.; July, 10.74@10.75c.; August, 10.79@10.80c.; September, 10.49@10.50c.; October, 10 21@10 23c.; November, 10.00@10.10c.; December, 10.09@10.10c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	6 15-16	7 3-16	7 3-16
Strict ordinary	7 9-16	7 15-16	7 15-16
Good ordinary	8¾	9 1-16	9 1-16
Strict good do	9¾	9 9-16	9 9-16
Low middling	9 15-16	10 5-16	10 5-16
Strict low middling	10 7-16	10¾	10¾
Middling	10 11-16	11 15-16	11 15-16
Good middling	11¾	11¾	11¾
Strict good middling	11¾	11¾	11¾
Middling Fair	12¾	12½	12½
Fair	13	13¼	13¼

STAINED.

Good ordinary	6¾	Low middling	8 7-16
Strict good ordinary	7¼	Middling	9 13-16

Receipts for the week, 17,727 bales, Exports do. 16,825 do.

DRIED FRUITS.—Apples have a very moderate export demand and the home trade is steady and fair, with prices generally firm. Peaches hold to

steady prices on a moderate inquiry. Small fruits are in demand and firm. Quotations are for

Evaporated apples at 8@8½c. for choice stock; sliced apples at 4½@5½c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn. do: 4½@5c. for State do: 4½@1½c. for western, Ohio and Mich. Peaches at 28@30c. for evaporated peeled; 13½c. for unpeeled do.; N. C. peeled at 19@22c.; for the better qualities, unpeeled peaches at 5½@5¾c. for halves and 5½c. for quarters. Plums at 15@16c. Blackberries at 8c. for prime. Cherries at 16½@17c. Raspberries at 25c. Whortleberries 10@11c.

Receipts for the week, all kinds, 761 pkgs.

Exports dried apples, 3,241 pkgs.

EGGS.—Receipts for week, 16,750 bbls.; do. last week 13,675 do. There have been one or two higher days in the week when supplies were small, light supplies are no longer a terror and buyers rather sway the market. Demand good; quality all fine.

Near points, 18c.; State and Pa., 17½@17¾c.; Western, 17½@17¾c.; Southern, 17@17½c.; duck, 23@31c.; goose 48@50c.

FLOUR.—A very good business has been done this week and prices closed better; shipments for the week 87,000 sacks and 1,800 bbls.

Latest prices are: $3.50@4.19 for very inferior to choice superfine State and Western; $4.25@4.50 for poor to choice extra State and Western, odd lots and lines; $4.60@4.65 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.25@5.25; good to choice do. at $5.35@6.10; (very choice up to $6.25@6.50 and fancy at $6.60@6.75;) red and amber winter wheat, inferior to choice trade and family at $4.35@6; round hoop Ohio, $4.35@4.75; and trade and family brands of do. at $4.85@6.25, the latter for very choice; St. Louis $4.60@5.60 for inferior to good extras; $5.60@6.35 for good to choice, and up to $6.75@7 for very fancy brands; Minn. clear, inferior to very fancy at $4.30@5.85; Minnesota "straight," poor to very choice, at $5.25@6.75, and patent inferior to fancy at $5.75@8.15; city mill extra at $5.60@5.65 for fair to choice for the West Indies; do. for England at $4.25@4.65 for poor to choice spring wheat; do. trade and family extras, $5.65@6.75; do. for South America, $5.75@6.00, the latter for very choice; No. 1 at $2.85@3.60 for very inferior to very fancy.

Receipts for week, flour, bbls. 128,800; corn meal, do. 5,075; wheat, bush. 920,675; corn, do. 859,400; oats do. 123,650, rye, do. 43,800; malt, do. 3,550, barley, do. 55,300; beans, do., 5,554; rice, pkgs, 700.

Exports for week, flour, bbls. 110,400; corn meal, do. 8,700; wheat, bush. 738,800; corn, do. 678,193; oats, do. 6,321; peas, do. 1,775; beans, pkgs, 620, rice do. 1,240.

FRESH FRUITS.—Exports of apples for week, 16,908 bbls. The market is irregular, the bulk of stock offered at low prices. Fancy guaranteed lots of red will command 25@37c. per bbl. more than the general list. Mixed lots at station $1@1.25.

Bld'ns and russets $1@1.62, greenings $1@1.37; Spitzenbergs $1.25@2; rejections 50@75c; cranberries are peddling out at $1@1.75 for N. J. crates. Fla. oranges dull with the last end of the season here; range for h'f barrel cases $1.50@3; Fla. strawberries good to prime 75c@$1; other 20@50c. per qt. Hothouse strawberries $1.50@2 per quart. Black Hamburg grapes per lb. $4@5. Peanuts dull with a large supply. Va. hand-picked 4¾@4½c; extra prime 3½@3¾c; good to prime 3@3½c; shelled 2½@3½c; pecans 7@8c.

GRAIN.—Wheat has been active and closed higher partly on account of the unfavorable crop reports; latest prices are for

No. 1 white at $1.21½@1.22¼, do. April at $1.20@1.20¾; do. May at $1.19@1.19¾ No 2 white at $1.20@$1.21; ungraded white at $1.18½@1.21; mixed Winter at $1.21 No. 1 red at $1.30, No. 2 red at $1.24½@1.26 for railroad, and canal at $1.22½@1.23¼; do. April at $1.23¼; do. May at $1.22¾; do. June at $1.20½@1.2½; do. steamer grade at $1.20½@1.21; No. 3 red at $1.20½@1.21; ungraded red at $1.15@$1.29; rejected Spring at 98½@99c.; ungraded Spring at $1.1t.

Rye is firm with full lots quoted at $1.06@1.07. Corn has been active and higher; exports for the week 840,000 bush; latest prices are for

New York No. 2 at 58½@59½c do. April at 57¾@57¾c., do May at 54¼@54½c.; do. June at 54½@54½c No. 3 at 54½@55½c.; ungraded mixed Western at 57@59c; New York steamer mixed at 57½@58c, No. 2 white at 59½@60c.; white Southern at 60c.; steamer yellow at 58½c.; yellow Southern at 56@58½c

Oats are active and favor holders; latest prices are for

New York No. 2 white at 46; No. 3 white at 44½@44¾; New York No. 1 at 46c.; New York No. 2 at 44½@46, do. April at 44½@45, do. May at 43½@43¾; do. June at 43½@44. No. 3 at 44½@45. ungraded white Western at 43@48½; ungraded mixed Western at 44@46½; white State at 50, No. 2 Chicago quoted at 46c.

HAY AND STRAW.—Prime hay is in demand and well sustained in price; low grades of hay are abundant and favor buyers. Latest prices are for

Hay, prime timothy at $1.10@1.15 ₩ 100 lbs.; medium timothy at $1.00@1.05 do.; shipping grades at 80@95c. do.; clover mixed at 95c.@$1.10, clover at 85@90. do. Straw—No. 1 rye at $1.15@1.20 ₩ 100 lbs.; No. 2 rye at 75@80c. do.; oat and wheat at 60@70c. do.

HOPS.—Exports for the week, 503 bales; the demand from shippers is without improvement and brewers buy moderately, with prices unchanged. Quotations are for

	Cents per lb
New Yorks, crop 1880; choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	13 @16
Eastern, crop 1880	15 @22
Wisconsin, crop 1880	16 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Pacific coast, new	19 @23
Bavarians	30 @35

Receipts for week, 1,025 bales.

Exports do., 374 do.

MAPLE SUGAR.—The demand is fair for both sugar and sirup. Prices have declined with free arrivals. Fancy refined Vermont sugar exceeds quotations. Good light State and Western, 8@9½c., poorer lots, 7@7½c. Sirup, 10@11 lb. tin cans, 75c@$1 with can.

OIL-CAKE.—Western is quoted at $29.50@30 per ton

POULTRY AND GAME.—The arrivals of dressed poultry have continued light, and after the long Winter just passed there is not much left to be packed. Sellers are asking stiff prices and have no supplies, even though Lent is yet here. Case frozen poultry is likely to have a good place for all desirable parcels to come.

Turkeys, fresh and frozen, choice, 17@18c.; other, 15@16c.; Phila. chickens, broilers, 25@33c.; do. large, 19@21c; N. J. chickens, 16@20c.; State and Western fowls and chickens, 13@16c; Phila. fowls, 15@16c.; other, 13@14c.; State and Western fowls, 14@15c. Capons, large, 25@26c.; small and slips, 21@23c. Ducks, choice, 20c.; other, 15@18c. Geese, 8@10c.; Squabs, white, $4 ₩ doz.; do. dark, $3.25

Live poultry has a steady sale at good prices. City killers now use up all coops of fowls and turkeys close—a very early beginning for that branch of the trade.

Fowls, 15@16c.; roosters, 8@10c.; turkeys, 15@16c.; ducks, choice, $1.25; other, 75c@$1; geese, choice, $2.25; other, $1.25@1.75; pigeons, 35@45c. Of the latter only strongly developed birds are wanted, mainly for pigeon matches.

The market is firm for good birds. English snipe and wild pigeons quoted $2.50 ₩ doz. Southern Canvas-back wild ducks, $1.75; red-heads, 75c; mallard and black, 30@40c; Western mallard and red-heads, 40@50c.; common ducks range 15@25c.

PROVISIONS.—Hog products have a more active demand and prices stronger.

Mess pork quoted at $12@15¼ for old and $16@16.25 for new. $16.20@16.30 for April; $16.25@16.35 for May and $16.30@16.35 for June. Bacon at 8.40 for long clear and 8.90 for short clear. Beef hams at $21@23. Beef at $21@23 for extra India mess. Western steam lard at 11.05@11.07½ for April, 11.07½ for May, 11.10 for June, and 11.12½ for July. Stearine at 11½@11¾.

Receipts for week, beef, bbls and tcs. 7 0 pork, 3,600 bbls.; cut-meats, 18,950 pkgs; lard: 7,700 pkgs.

Exports for week, beef, bbls. and tcs., 2,575; pork, 3,050 bbls.; cut-meats, 10,781,994 lbs.; lard, 5,733,850 do.

SEED.—Clover is in light demand; quoted 8½@9. Timothy is quiet at $2.80@2.90.

VEGETABLES.—Exports of potatoes for week 640 bbls. Fine sorts of potatoes begin to show more strength now that buyers perceive that the late additions to supplies are not desirable. Some State stock is going direct to the West.

Bermuda potatoes $6@7 ₩ bbl.; Early Rose, Nova Scotia d.h. $2.50@2.62. Maine $2.37@2.50, State. $2@2.25; do. bulk $2@2.12, Prolific, $2; Mercer, 1.75@1.87; Jackson White, $1.75; Burbank, $2.00@2.25; do. h. h. $2.12@2.37, Snowflake. $1.75@2. do. bulk $2@2.37, peachblow d.h. $2.25, Peerless. $1.62@1.75; do. bulk $1.50@1.62, sweet Del. $2.25@2.75.

Southern green stuff has been delayed and has frequently turned out badly; prices have a wide range for perishable stuff. Some good remnants of old garden truck remain notwithstanding the long past Winter.

Fla. green peas per crate $1@4; do. tomatoes, $2.50@3 ₩ half bush box; Bermuda tomatoes, 90c.@$1 ₩ 5-quart box; do beets $2@2.50 ₩ crate; do. onions, $5; Norfolk Spinach, $2.50@3 ₩ bbl.; do. kale, $1.75@2; do. radishes, $3@4 ₩ 100 bunches; Chas. asparagus $7 ₩ doz.; do. lettuce $3@6. per bbl.; W. and Russian 50@75c do. beets, 75c@$1 ₩ bbl.; cabbages, $4@6 ₩ 100. Hubbard squash, $1 ₩ bbl.; marrow do. 50@75c.; onions, white, $4@4.50 ₩ bbl.; yellow $2.50@3; other, $3.25@2.50; carrots, $1@1.25; celery 50c@$1.

TOBACCO.—Has been moderately active and prices steady.

WESTERN LEAF.

	Light.	Heavy
Lugs	4½@ 6	5 @ 6
Common leaf	6 @ 7	6½ @ 7½
Medium leaf	7½@ 9	8 @10
Good leaf	8½@10	10 @12
Fine leaf	9½@12	11 @13
Selections	12 @15	13 @15

SEEDLEAF.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5½@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7½@10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	11 @18

SPANISH.

Havana fillers, common	80 @85
Good	88 @95
Fine	$1 @1.10
Superior	$1.15@1.25
Yara, first and second cuts, assorted	62½@67½
Yara, cuts	92½@$1

WOOL.—The market has ruled easy and quiet. Latest sales are at 40@42 for X, and 41½@43 for XX Ohio fleeces; 38@39 for Mich. fleeces; 43@45 for medium and No. 1 fleece 44@45 for fine delaine fleece.

LIVE STOCK MARKETS.

NEW YORK, Saturday, April 2, 1881.

BEEVES.—Receipts for the week 12,389 head; do. last week 8,365 do. The market has worked splendidly for sellers, Wednesday's prices were good but the close shows an advance of ¼c. over them, and a bright prospect is possible for next week. The transactions were chiefly at 9½@10½c. for only common to fair steers to dress 56 lbs., and 11@11¾c for good to prime, dress 56@57 lbs. This week's prices are rather severe upon tender butchers and sellers make cautious movements.

COWS AND CALVES.—Good cows will soon be profitable at home and recent receipts are not of a high average quality as prices will indicate. Common to good $25@65, a few extras at $80.

SWINE.—Receipts for the week, 21,835 head; do. last week, 19,764 do.; market quoted steady for live at 5½@6¼c.

Country pork, light, 8¾@8½c.; medium, 8@8½c.; heavy, 7½@7¾c.; city dressed Western, 7½@7¾c. Prolonged cold weather and light supplies of dressed keeps the market firm. Pork tenderloins, 11½c.

SHEEP AND LAMBS.—Receipts for week, 21,983 head; do. last week, 21,169 do. Sheep have had a good stiff market and prices close firm. A car load of fine Ohio brought 7c. other sales 5½@6½c.; yearling lambs 5½@7½c.; Spring lambs per head $3@7.

VEAL CALVES.—Low quality live and dressed abundant, prices weak for any grade but choice.

New Jersey live fed choice 8c; good to prime, 6@7½c.; common 5@5½c.; grassers, 4@5c, buttermilk, 2½@2½c.; Mt. Holly, calves, range 4@8½c.; dressed choice 10c.; good to prime 8½@9½c.; poor to fair 6@7c.; very common 4@6c. "Bobs" continue to arrive and are promptly seized by the Health Board.

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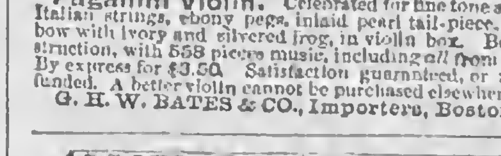

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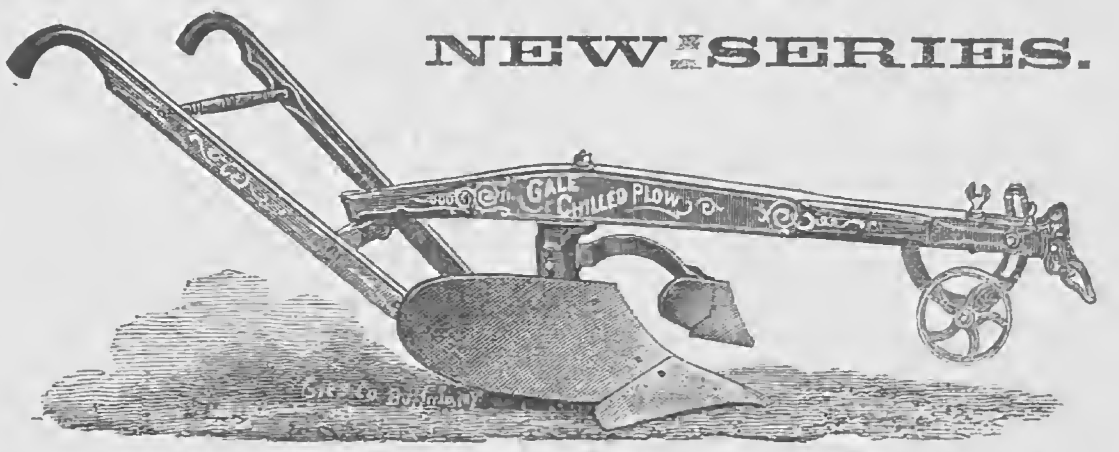

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"Potato Bug Exterminator" separate.

Price—Zinc Tube, post-paid, $1.25.
Polished brass, post-paid, $1.75.

Over 15,000 Sold in Seven Months.

It is the fastest-selling article in the United States. As a Potato-Bug Exterminator I CHALLENGE THE WORLD for its equal in saving of TIME, LABOR AND MATERIAL. For syringing fruit trees infested with canker worm or other insects it has no equal. My agents are making from $10 to $20 per day. Send for Illustrated Circular, Testimonials and Terms to Agents to

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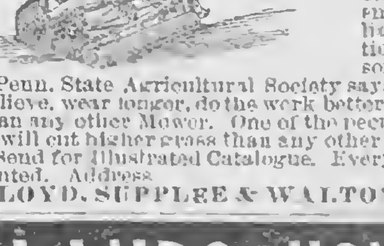

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The Use of Artificial Fertilizers.

MANURES and fertilizers are food. They supply plants with nourishment. But this food must be given in a rational manner or it may do harm. An animal may be injured by improper feeding, and so may a plant. It is necessary then that we should use caution in the use of manures, and more especially in the application of the common artificial fertilizers, because these are too strong to come into close contact with the tender root fibers.

Common yard manure even may be used so as to injure plants. For instance, in the attempt to make a plant grow very quickly, one may put a quantity of fresh manure in a hill and plant some seeds, such as beans, cucumbers or melons, directly upon the manure. This soon heats and forces the seeds to sprout; but the young sprout is immediately killed by the excess of heat and if the hill be examined the seeds will be found dead and rotten. A similar mistake is often made in the attempt to make a hot bed of fresh manure and sowing the seeds too soon. The bed heats too much for the seeds and the young plants are destroyed. This mistake is often made by old gardeners and farmers; and sometimes experienced persons have overlooked this danger, and have had all their labor lost in this way. This, however, can scarcely happen in field work, because manure is used there only in small quantities and is soon mixed with the soil. But when using the stronger artificial manures it is often the case that a handful of it is dropped in a hill and the seed, either corn, beans, melons, or even young cabbage plants, are placed in contact with the fertilizer and so destroyed. So that it is necessary to be very cautious in this respect and take care to mix the fertilizer with the soil for some distance from the seed or the young plant. There is then no danger, for the moisture in the soil soon dissolves the fertilizer and holds it in solution and spreads it through the soil where the roots reach it and are able to dispose of it with advantage.

Many farmers are in the habit of drilling fertilizers with wheat or rye, and no doubt there are cases in which some of the seed is injured, more especially in a dry season. This danger would be avoided if the fertilizers were mixed with earth so that it could be sown by the drill with the same ease as if unmixed; but the safest way is to scatter the fertilizer broadcast over the soil and harrow it in at least a day or two before the seed is sown. Some fertilizers are strong poisons and contain the most corrosive acids, and it has sometimes occurred that animals have been poisoned by merely licking the empty bags or by drinking the water of brooks or ponds, in which the bags have been placed to soak or be washed. This is another way in which caution should be observed in regard to these fertilizers.

On account of this peculiar character of these useful substances, it is advisable to apply them either when rain is expected or after it has fallen. This is necessary when they are used for growing crops, as a top-dressing for grass or young grain in the Spring. The falling rain or a heavy dew even will dissolve them and dilute or weaken them, so that when carried into the soil they will be rendered harmless.

Those young persons who like to work in the garden, among vegetables and flowers, will find these fertilizers, more especially guano, to be of great value in forcing a strong and rapid growth. But they must remember how highly concentrated a food for their plants they are using and that a very small quantity—a teaspoonful even—will usually contain in that small space as much of the fertilizing elements as a large forkful of the best manure. They will then feed their plants very sparingly, because too much may easily be worse than too little and if it does not kill the plants outright it may stunt and retard the growth instead of encouraging and hastening it. A safe mode of applying any artificial fertilizer in the garden is by dissolving it in water and watering the earth—not the plant—with the solution. Another method equally safe, and easier, is to scatter a small quantity, as a teaspoonful, around the plant for a distance of at least six inches in every direction and then hoe it into the loose soil. The first shower will dissolve it and carry it into the soil and the plant will soon show by its deep green color and its freshened vigor how grateful it is for the needed food. Such an application may be repeated two or three times during the season and when plants are grown for exhibition, and large and fine specimens are desired, it may be repeated weekly, but copious watering will then be needed, or the plant will not be able to make use of the food supplied to it.

These directions should serve as a general rule for application in all cases. It is necessary for every farmer and indeed every other person to think and to act reasonably. Then knowing the nature of those things we are using for our purposes, and what dangers are to be avoided in their uses, we can apply them with safety and benefit.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—My father is a subscriber to your paper, so I thought I would write and ask you to enroll my name on your list of RURAL Cousins. I am very much interested in the cousins' letters, and have often thought about writing to you. We live on a pleasant farm about four miles west of Springfield. My father owns three limekilns and a stone-quarry. He burns lime part of the time and carries on farming to a certain extent. I had a garden last year and I intend to have one next Summer. I have a brother thirteen years old and two little sisters, one aged seven years and the other three. I am ten years old myself. I wish more of the cousins would write. I would like to hear from them very much.

Your niece, EDITH HOLCOMB.

Springfield, Ohio.

DEAR UNCLE MARK:—I am a girl fourteen years of age. Last year I had a garden of my own and had quite a variety of vegetables and flowers. I often thought I would write to tell you about it but I failed to do so. In my garden I had roses, verbenas, asters, phlox, snapdragons, tomatoes, watermelons, musk-melons, cabbage, cucumbers, peas, beans and beautiful gladioli. I did not give them as much care as was necessary, but they did very well. Mother has a great many flowers in the house this Winter, and has quite a number in blossom. I always wanted to join the Horticultural Club and now with your leave I will ask admission. We have a great variety of shrubbery and small fruit, therefore your special notice of them is very satisfactory to us.

Racine, Wis. MARIA V. SHELDON.

UNCLE MARK:—I am a little girl ten years old, and would like to join your club. I have three brothers and one sister. My papa takes the RURAL and I like to read the cousins' letters. My mamma has a good many house plants, among them is a large calla lilly, a heliotrope, a large fuchsia, two large pinks, a great many geraniums and many other plants. I have a little toad cactus, which has long, round leaves covered with prickers. My papa has a great many strawberries and several kinds of grapes. I had a little flower garden last Summer and I mean to have one again this Summer, so when you send seeds again please remember me. Your niece,

Hartford, Conn. BERTHA S. GIDDINGS.

DEAR UNCLE MARK:—I call you so because I am anxious to be adopted into your family and become one of the RURAL cousins. My sister and I like the letters published from the cousins ever so much. My father takes six weekly papers but we like the RURAL best of all. I am 10 years old and my sister is 12. We live on a fruit farm and I intend to be a fruit grower when I am a man. Father gave me two rows of grape vines in one of his vineyards last year, which I attend to, myself, and when the fruit was marketed I received $21. for it, with which I intend to buy a new variety of grape roots and set out on land my father has given me. I have a colt, a calf, a dog, four cats and two canary birds. Your nephew, MAX FAY.

Portland, N. Y.

DEAR UNCLE MARK:—I would like to join your Club, if you will take a little Rocky Mountain girl for one of your nieces. My pa takes the RURAL and thinks he could not do without it. The mangel seed we got from the RURAL last Spring we planted, and when pa pulled the mangels he thought there was a wagon load of them. Our Cow-peas did not amount to anything. I must tell you what we have growing in our lot. Three apple trees, three crabs, two plums, two cherries, and, on the north side, three or four dozen gooseberries and currant bushes, and, last but not least, a nice bed of strawberries. I love a nice garden and plenty of flowers.

Boulder, Col. IDA M. DAVIDSON.

DEAR UNCLE MARK:—We have taken the RURAL for so many years that it seems indispensable to the family. I am very fond of flowers and would like to become a member of the Horticultural Club. We have a hydrangea 16 years old. It has every year over a hundred blossoms of a beautiful pink color. I have a canary and two tame fishes. One is a chub and the other a sunfish. I have them out of doors in Summer and in the house in Winter. I have two tame chickens; the hen I call Biddy, the rooster I call Dick. I have read with a great deal of interest the letters from the cousins.

Valatie, Columbia Co., N. Y. RURAL GIRL.

The Puzzler.

HIDDEN PARTS OF TREES.

1. Robert run keenly.
2. Selim blew his horn.
3. Caleb ran cheaply.
4. How pale a fever leaves any one.
5. Direct to R. Bascomb, Arkansas.
6. In the pit he fell.
7. Is Lero other than he seems?
8. Is a potato an esculent?
9. He is temperate.
10. Ha, ha, that wig was rich.
11. Gable S, some one is coming.
12. Tom, with a wisp, routed the mosquitoes.
13. Enos hooted the idea.
14. Nebu danced the hornpipe.
15. Did you see Denis.
16. If Rui tries he'll succeed.
17. Herman uttered a fib.
18. Mrs. C., I once loved in vain.
19. What a big raft.
20. Cyrus P. rigidly refused.
21. Ibo I Ugh, is an Indian grunt.
22. This talk is foolish.

☞ Answer in two weeks. LITTLE ONE.

SQUARE WORD.

1. A mark used in printing. 2. A weed that grows among grain. 3. The superficial contents of any figure. 4. Genuine. GUS.

☞ Answer in two weeks.

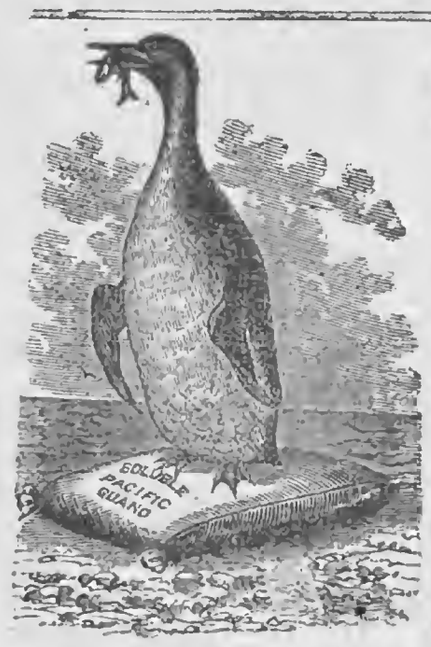
CHARADE.

The first of dinner is a part.
The next in hands of ladies seen.
Third to guess this if you can.
The whole has oft in battle been.

☞ Answer in two weeks. G.

For sinking spells, fits, dizziness, palpitation and low spirits, rely on Hop Bitters.

Fertilizers.



SECOND TO NONE.

Soluble Pacific Guano.

Sale in 1865 - - - - - 754 Tons.
" 1880 - - - 44,700 "

This Fertilizer, which was at first sold almost entirely in the Southern States, has of late years become so deservedly popular in the North, for the cultivation of all Farm Crops, that the Company have enlarged their works especially to supply the Nothern demand, and we are now in a position to fill orders promptly. Pamphlets containing testimonials and other information furnished by our local agents, or on application to

GLIDDEN & CURTIS,

GENERAL SELLING AGENTS OF PACIFIC GUANO COMPANY
Boston, Mass.

BOWKER'S
HILL AND DRILL
PHOSPHATE
SEND FOR PAMPHLET.

This is a true bone superphosphate, and may be used *on any crop*, in the hill or drill or broadcast, either *with* or *without* manure, and will produce a much earlier and larger crop. In the Report of the Mass. Inspector of Fertilizers, its valuation is from $3 to $10 per ton higher than other Phosphates which sell at the same price. The past year over 3000 tons were sold against 100 tons three years ago, showing that it is liked by the farmers. If there is no local agent near you, send to us.

Also for sale OCKBRIDGE MANURES.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK

STOCKBRIDGE
MANURES
SEND FOR PAMPHLET.

These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK.

Carpetings.

CARPETS.

We have now open for inspection and for sale a line of the choicest CARPETS ever offered in New York, of the latest and most desirable colorings and patterns.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

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Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS—We have opened a full line of 300 pieces at 75 cts. per yard. They cannot be had elsewhere in this city. We have other grades at 85 cts. and $1 per yard:

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

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If you want Carpets call and see what we have. You will get Reliable Goods and save money by purchasing from us.

J. & J. DOBSON,

CARPET MANUFACTURERS,

40 and 42 WEST 14th ST., NEW YORK.

John Van Gaasbeek, Manager.

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"The true Light, which lighteth every man that cometh into the world."

The Beacon Light is an unusually attractive and beautiful SUNDAY SCHOOL SONG BOOK, by J. H. TENNEY and Rev. E. A. HOFFMAN, who have had a very successful experience as song writers and composers. Their book is one of the best ever made. THE BEACON LIGHT has many noble hymns, and the sweetest of melodies. Specimen copies mailed for 30 cents; Liberal reduction for quantities.

Cantatas. Choirs and Societies will do well to end the musical season by performing either a Sacred Cantata, as *Buck's 46th Psalm*, ($1.) or *Chadwick's* splendid *Joseph's Bondage*, ($1.) or *Butterfield's Belshazzar*, ($1.) or try the very easy *Esther*, (50 cts.) or *Root's* always popular *Haymakers*, ($1.) or *Buck's* classical *Don Munio*, ($1.50.)

The Emerson Method for Reed Organ.

($2.50) By EMERSON and MATHEWS, is among the very best, and has a good collection of instrumental and vocal music.

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Folks should send a three cent stamp for a free book of nearly 100 large octavo pages, full of valuable notes by Dr. E. B. Foote, the author of
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FREE on Scrofula, Diseases of Men and Women, and all chronic ailments, with the evidences of their curability. Address M. H. Publishing Co., Box 788, New York City. BOOK

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To every farmer sending us his name, we will send free *The Clover Leaf*, a 4 page, 28 column farmers' paper, full of valuable information on the culture and harvesting of clover for seed. When you write say where you saw this notice. Address BIRDSELL MANUFACTURING CO., South Bend, Ind.

HOPE FOR THE DEAF
Garmore's Artificial Ear Drums
PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular.
GARMORE & CO.,
S. W. Corner 5th & Race Sts., Cincinnati, O.

BERRY BASKETS.—BEST, CHEAPEST. Free Circular. N. D. BATTERSON, BUFFALO, N. Y.

PERSONAL ITEMS.

Judge McDill, the new Senator from Iowa, is a granger-looking man, with the plain, simple, hearty habits of a Western farmer. But he is by no means inexperienced.

Here is a severe prayer test. Mr. Miller, the new Senator from California, rose in one of the Moody meetings in San Francisco and asked prayers for himself in his endeavor to lead a Christian life in Washington.

Garfield rises at seven and breakfasts at eight. He spends an hour in dictating personal letters. He lunches at half-past two. Between three and four he reads the New York dailies, then receives members of the Cabinet, and dines at six. He spends the evening with his family and a few personal friends.

Mr. A. Keene Richards, who died in Kentucky on Saturday week, expended more than a million dollars in efforts to improve the breed of racehorses in America. He made two long journeys in the deserts of Arabia for the purpose of obtaining the pure Bedouin horse. He succeeded in getting a few of the best blood at fabulous prices, which he mixed with the most fashionable English and American racers. The result, however, up to the time of his death, failed to meet his anticipations, although many winners were sent from his beautiful Blue Grass Park, near Georgetown.

[New Albany Ledger-Standard.]

Speaking of Governors suggests the mention of an item we received from Mr. Henry A. Knight, Foreman at Chas. Waters & Co.'s Governor and Valve Works, Boston, Mass.: I have used St. Jacobs Oil among our employees and find that it never fails to cure. The men are delighted with the wonderful effects of the Oil, as it has cured them of bruises, burns, etc.

Stock and Poultry.

40 Clydesdale Stallions

AND MARES—Mostly Imported.

60 Hambletonian Stallions,

AND MARES OF THE FINEST BREEDING.

Largest Herd of

HOLSTEIN CATTLE.

With largest milk records in America.

Separate Catalogues of each class of stock with milk record of cows. Denote which is wanted.

☞ Correspondence solicited.

SMITHS & POWELL,
Lakeside Stock Farm,
SYRACUSE, N. Y.

200 KENTUCKY MULES.

All grades and sizes, constantly on hand, for sale low. E. B. BISHOP'S SONS,
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EGGS FOR HATCHING

From all the varieties of Poultry—Brahmas, Cochins Hamburgs, Polish, Leghorns, Plymouth Rocks, Langshans; Rouen, Cayuga and Pekin Ducks. Our Plymouth Rocks and Pekins have never been beaten. Eggs, carefully packed, from our prize birds, $1.50 per 13; two or more settings at $1 per 13.

SMITH & BRO, STONY BROOK, N. Y.

Miscellaneous.

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THE GREAT CURE FOR RHEUMATISM

As it is for all diseases of the KIDNEYS, LIVER AND BOWELS.

It cleanses the system of the acrid poison that causes the dreadful suffering which only the victims of Rheumatism can realize.

THOUSANDS OF CASES

of the worst forms of this terrible disease have been quickly relieved, in a short time

PERFECTLY CURED.

TRADE KIDNEY-WORT MARK

has had wonderful success, and an immense sale in every part of the Country. In hundreds of cases it has cured where all else had failed. It is mild, but efficient, CERTAIN IN ITS ACTION, but harmless in all cases.

☞ It cleanses, Strengthens and gives New Life to all the important organs of the body. The natural action of the Kidneys is restored. The Liver is cleansed of all disease, and the Bowels move freely and healthfully. In this way the worst diseases are eradicated from the system.

As it has been proved by thousands that

TRADE KIDNEY-WORT MARK

is the most effectual remedy for cleansing the system of all morbid secretions. It should be used in every household as a

SPRING MEDICINE.

Always cures BILIOUSNESS, CONSTIPATION, PILES and all FEMALE Diseases.

Is put up in Dry Vegetable Form, in tin cans, one package of which makes 6 quarts medicine.

Also in Liquid Form, very Concentrated for the convenience of those who cannot readily prepare it. *It acts with equal efficiency in either form.*

GET IT OF YOUR DRUGGIST. PRICE, $1.00

WELLS, RICHARDSON & Co., Prop's,

(Will send the dry post-paid.) BURLINGTON, VT.

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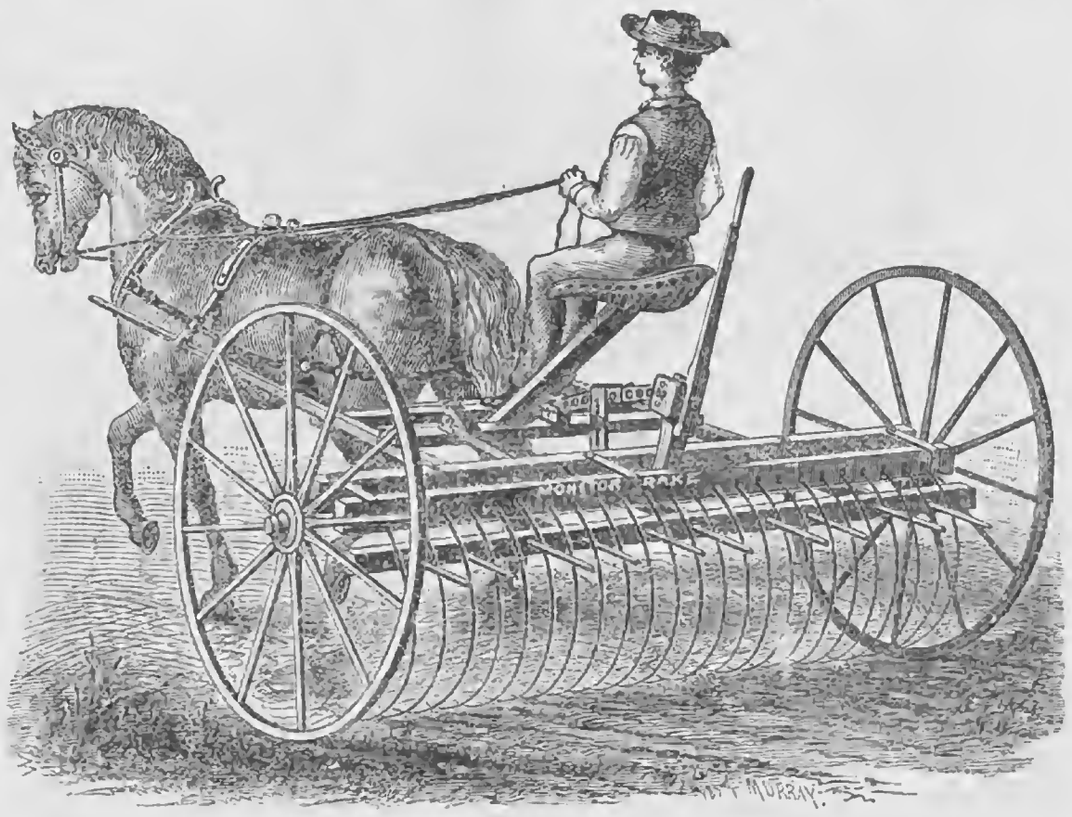
AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.**, 409 Washington Street, Boston, Mass.

Musical Instruments.

The Monitor Self-Dump Rake.



Of all the Rakes that I ever saw rake, I never saw a Rake rake as this Rake rakes! That is what they all say.

Send for Circular.

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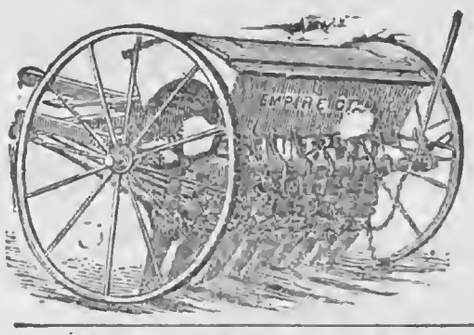
Higganum, Conn. U. S. A.

FIFTEEN PER CENT SAVED

BY USING THE



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WITH
FORCE FEED FERTILIZER
ATTACHMENT.

Distributes all kinds of Grain evenly and accurately.

PLANTS CORN FOR FIELD CROP.

Sows Phosphates without pasting or clogging. Amount sown regulated by gear.

NO GUESS WORK.

Send for Circular to EMPIRE DRILL CO.,
Box B. Shortsville, N. Y.

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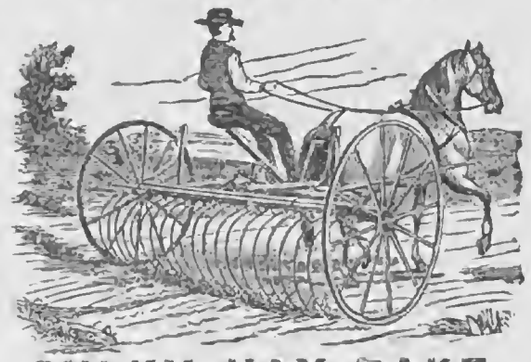

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This rake is very simple in its plan, and durable in all its parts. It has no ratchets, springs, or friction devices for dumping, which are liable to break or get out of order; and for ease of handling, and for doing good work, is unequaled by any hand dump Sulky Rake in the market. Send for circulars. Address

GREGG & CO., Sole Manufacturers,
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PENNOCK'S PATENT ROAD MACHINE.

KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS

MACHINES SENT ON TRIAL. KENNETT SQUARE PA

HEEBNER'S
LEVEL TREAD
HORSE POWER.
WITH
Speed Regulator.
Heebner's Improved
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Threshing Machines.

"UNION" FEED CUTTER, CIRCULAR AND DRAG SAW MACHINES, &c.

Send for Catalogue.

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Stove-Pipe Shelf.—*THE MOST convenient article ever offered to Housekeepers. One Agent made $144.67 in ten days. No freight charges.*
Address, E. S. HARTZELL & CO.
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BEST WASHER AND WRINGER *in the world.* Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of washer, $8. Sample to agents, $3.50. Price of Wringer, $7.50. Sample, $4.25. Circulars free.
ERIE WASHER CO., Erie, Pa.

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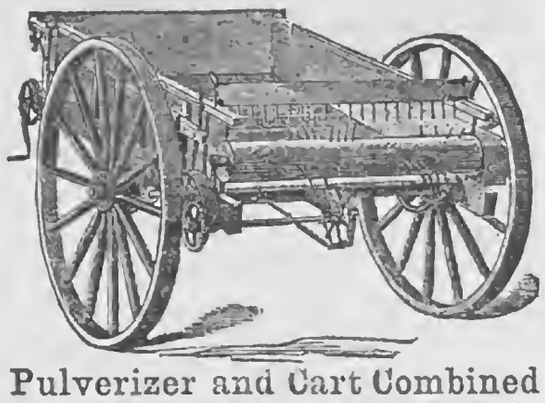
Manure Spreader,



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A new Farm Implement equaling the Mowing Machine. For particulars and illustrated circulars address KEMP & BURPEE M'F'G CO.,
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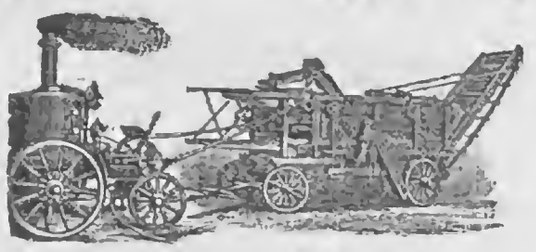

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ENGINES & HORSE POWERS.

Grain Threshers, unequaled in capacity for separating and cleaning.

Combined Grain and Clover Threshers, fully equal to regular grain machines on grain, and a genuine **Clover Huller** in addition.

Engines, positively the most desirable for Lightness, Economy, Power and Safety. Boiler has horizontal tubes, and is therefore free from the objectionable features of vertical boilers.

Horse Powers, both Lever and Endless Chain. All sizes. Send for Catalogue. Address

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LINCOLN PATENT
CHANNEL CAN CREAMERY.

Deep setting perfected. Gets all the cream in less than ten hours, with ordinary well or running water, or in two hours with ice water, with less than half the ice called for by any other process.

AGENTS WANTED. Send for Circular to WM. E. LINCOLN,
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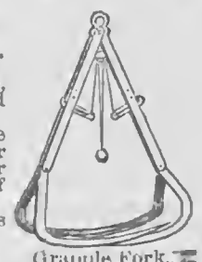
FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

Save Labor and Money.

Are Simple, durable and cost but little. No trouble in getting over high beams, or to the end of deep bays. Hundreds are in use.



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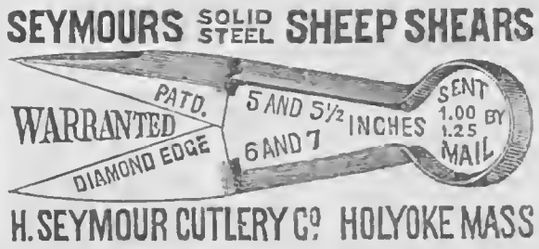

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THE EUREKA MOWER

Cuts a SIX FEET swath easier than a side cut mower cuts four feet, and leaves the cut grass standing light and loose, curing in half the time. Send for Circular.

EUREKA MOWER COMPANY,
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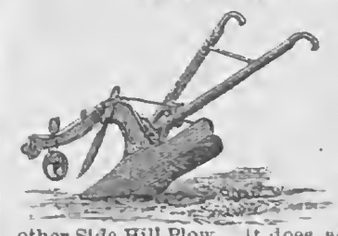

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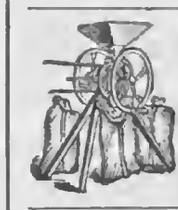

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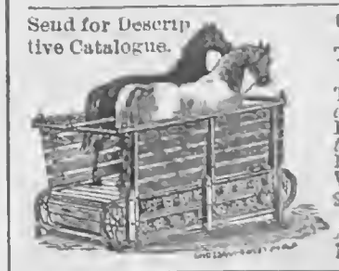

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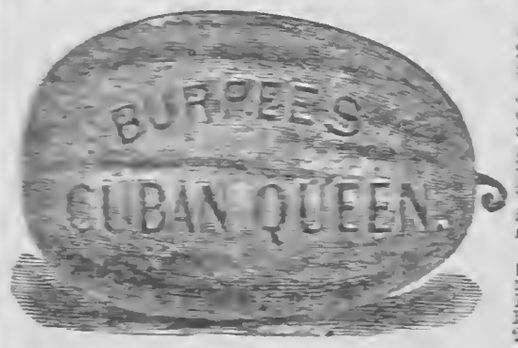

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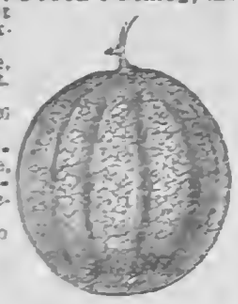

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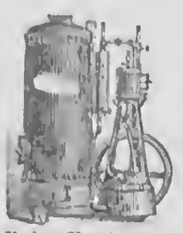

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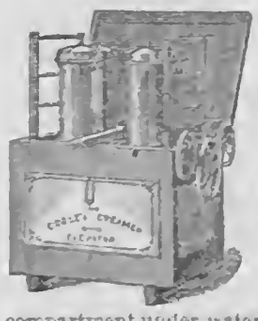

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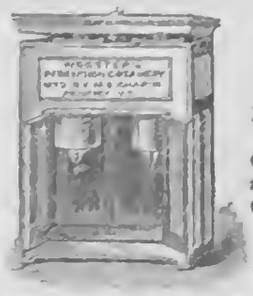

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 16. WHOLE No. 1629. | NEW YORK, APRIL 16, 1881. | PRICE FIVE CENTS. $2.00 PER YEAR.

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The Herdsman.

ANIMAL PHOTOGRAPHY.

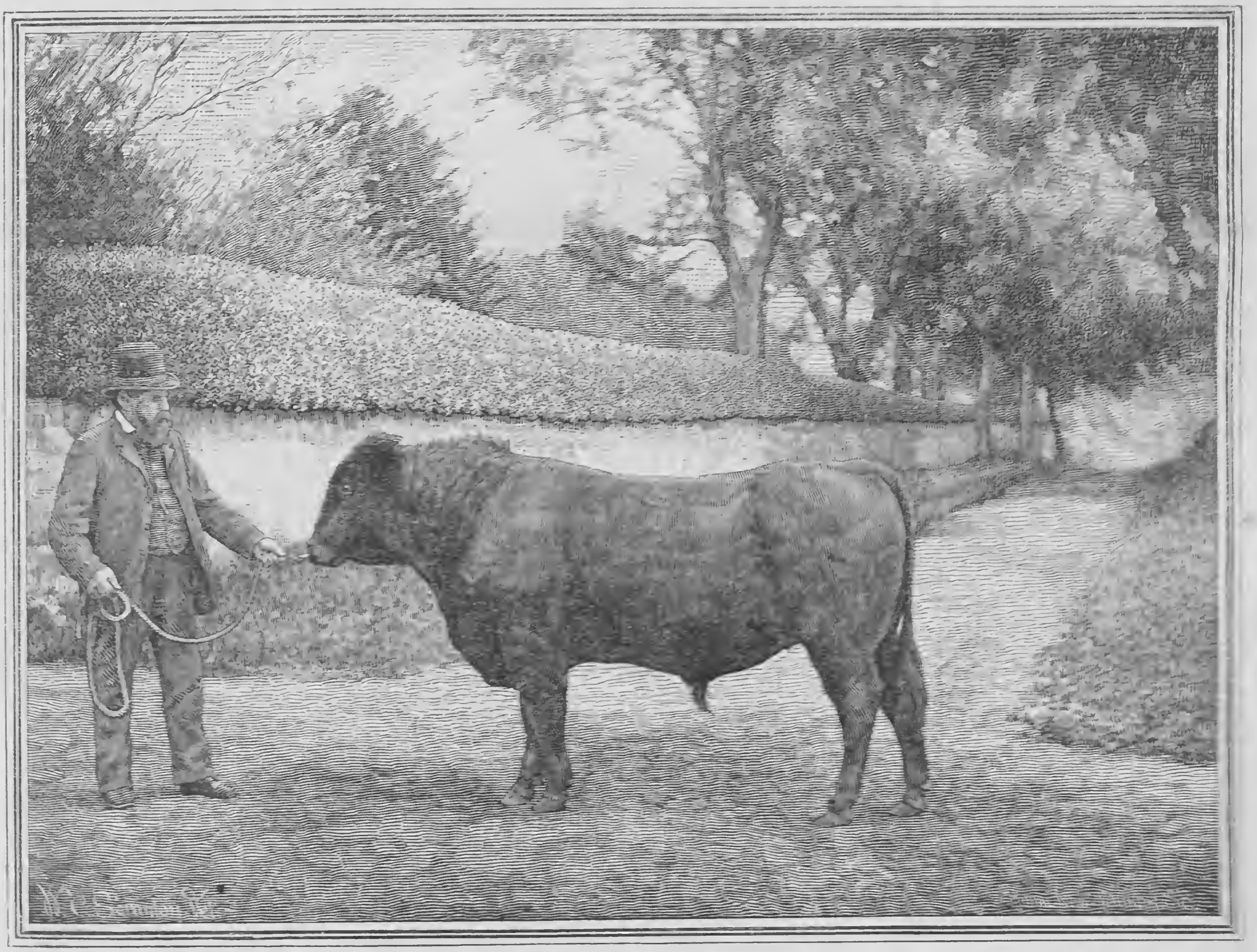
BY A STOCKMAN.

I CAN easily sympathize with the owner of a fine animal delivered over to the tender mercies of a country photographer who knows nothing about the points of a beast and is possessed of a little more than usual of the professional conceit of the average camera man. To take a good photograph of an animal requires the operator to be both an artist and a photographer, and it goes without saying that an artist should know all about the prominent points of the anatomy of an animal, at least so far as regards the balance of the limbs and extremities, and how these may best be represented in the photograph. I have had some experience in this business, both as a youthful amateur photographer years ago and more recently in the getting up of portraits of animals for engraving. Not one country photographer in a hundred, nay—I suspect—in a thousand, understands what is wanted. He has been used to taking human portraits and concentrating all his attention to focusing the face, or some central feature of it, regardless of the other objects, and generally succeeds in getting hands like legs of mutton and ears of elephantine proportions. When such an artist levels his camera on to a cow or a bull he is apt to focus the fore-quarters of the animal so as to get the head as near right as may be and to get as near a station as possible so that "each particular hair may stand on end" with great accuracy. After several abortive trials the patience of the owner, who can suggest nothing, because knowing nothing of the mysteries of the camera, is exhausted, and he submits as best he can to the failure with a lot of photo's which cause him to groan his teeth in spite and despair.

I would like to give a few hints to such owners. Let them procure a copy of one of Schreiber's (of Philadelphia) pictures and they will see a photograph "as is a photograph" and a study. In these the outlines are all preserved, and the lines really belong to the animal. What one may do another may, if he will use the same methods. The animal photographer should take in the whole animal; he should use a large lens with a long focus, and focus the centre of the figure and a little beyond it. It is not important to get any particular part with the greatest clearness; the general outline is what is most needed; the artist who copies the photograph for the engraver can fill in the detail, but he must have the outline exact. Then one will get a perfect portrait of the animal so far as the figure is concerned. The best photographs are made by first taking a very small negative on a large plate, making the animal the centre of the picture, and then enlarging it. In this way a very perfect representation of the animal is obtained. If the owner is able to instruct the picture-maker as to what he wants he can give many useful suggestions which will help the latter in getting a good portrait. As a sample of the way in which animals should be photographed I send you a photo of a polled bull the property of Mr. Ferguson, of Scotland, which might well be copied in facsimile for the benefit of your readers in this regard. The picture expresses more than I could say in a whole page.

POLLED ANGUS CATTLE.

THE accompanying engraving is a copy of a photograph of a bull of the polled Angus breed. These cattle have become prominent here of late since the large importations made by the late Geo. Grant, of Victoria, Kansas, and the more recent importations of Mr. Redfield, of Batavia, N. Y. The result of Mr. Grant's enterprise has been very satisfactory. The bulls have been crossed on the native Texas and the pure-bred Short-horn cows, with most decisive and agreeable effects. Since Mr. Grant's death two or three years ago the breeding of these cattle has been continued by one of his associates, Mr. Thomas K. Clark, who has a tract of eight square miles fenced for his ranch farm at Victoria. It was in 1878 that the importations were made and the past year the first grand success was achieved by the appearance of 80 polled cross-bred steers



"PRINCE OF THE REALM."—AGE 15 MONTHS.—POLLED ANGUS BULL.—From a Photograph.—Fig. 204.

n the Chicago stock y ards, where nothing bn the hard logic of cash is made the test of merit. All the sentiment in favor of a hornless beast with its powerlessness for mischief and its consequent amiability and general loveliness, counts for nothing in the butcher's eyes. He buys beef and not beauty, and has an eye to loins and chops and twists before quietness of disposition. Nevertheless, the drover has a word to say in this regard, and he finds the hornless steers are so easily handled and so quiet that he would rather have them at a little advance on the ordinary rates than the horned cattle.

Viewed then by the butcher's scale of merit, these 36 cross-bred steers at Chicago at once took a high degree. They were the first that had appeared in the yards and some curiosity occurred as to how they would turn out. They averaged 1340 pounds and dressed 62 lbs. to the 100; had 140 pounds of fat and 106 of hide apiece. The dressed weight is five pounds for 100 above the average, and equal to that of extra beeves. This result is encouraging to those who have spent money and time in introducing this breed as well as to those who desire to improve their stock.

Mr. Redfield, of Batavia, N. Y., is forming a herd of these cattle, having procured some choice animals from Scotland and from the same herd to which the animal belonged whose portrait is here given. There are many other herds in the country and some in Canada, and although there is an unaccountable prejudice against these hornless cattle, or, as they are called in the Scottish vernacular, "doddies," yet we believe they will surely grow in the estimation of breeders both for beef and the dairy. For as dairy cows this breed has a high reputation. One of the best cows the writer ever owned was a black polled beast, with a form and a frame that could not be excelled by a choice Ayrshire or Jersey; a coat of satiny luster and velvety softness and, which is most to the point, a credit of 12½ pounds of butter weekly continued for several months and upon very moderate feed. The absence of horns would remove the greatest objection that can apply to cows and bulls. There would be none of that constant fear and apprehension of damage and injury which now haunt the dairyman, especially the one who keeps costly cows. And it is a question worth considering if it would not be wise for the owner of a good herd to introduce this breed for the purpose of founding a race without horns especially adapted for the dairy. A cross-bred Jersey and polled cow, has been exhibited at the New Jersey State Fair for two years past, and in her looks at least, promises very well. There can be no doubt that as great success could be reached in this direction as has been achieved with beef cattle. The polled Angus is an old and thoroughly well established breed and has such a strong degree of prepotency that its cross-bred progeny at once lose the horns, and acquire the character of the polled sires.

Farm Topics.

COMPARATIVE VALUE OF CORN FODDER WITH ENSILAGE.

T. H. HOSKINS M. D.

THERE is a good deal of disputing, and evidently a good deal of gross misunderstanding on this important subject. Important it certainly is, when it is a pressing question in the minds of so many farmers whether they shall sow ten or twenty acres of Southern corn and build a silo this season, or not. Can ensilage be made to replace both roots and hay for neat cattle, either wholly or in great part? Is it a cheap as well as a good substitute? And is it likely to answer as a large and regular ration for cows, without injury to them, or their product in milk, butter or cheese? If all these questions cannot be answered in the affirmative, or until they can be so answered, the indebted farmer at any rate ought to "go slow." The "fancy" farmers often boast of the benefit they are to agriculture in the matter of experiments, and we old stagers and regulars in the business, who have seen so many agricultural humbugs rise and flourish and fade away, can just as well wait for the results in this case as in the others. We have our pasturage and our meadows, which we know give us good and healthy feed for our cows. We can raise corn, and feed both stalks and grain dry. We can buy and feed oil meal or shorts, or grow and feed oats, peas and clover to increase the nitrogenous ration; and we can grow roots. There is no trouble about having good feed and plenty of it, if we never build a silo. There is no urgency or need of hurry in the case.

There are serious objections to both corn fodder (the stalks of a crop grown for the grain) and fodder corn (corn stalks grown thickly for forage). In either of these forms the crop is a heavy one to handle, a difficult one to cure, is not so well relished by cattle as to be eaten clean, and it will not, when fed alone, like good early-cut hay, give a full yield of rich milk that will make first-rate butter. It is decidedly a second-rate feeding material for dairy cows, yet it is extensively used throughout the Northeastern States. On the other hand, there is no crop that will yield anything like as much feed to the acre, especially upon light soils, as corn. To the farmer of a few sandy acres, corn offers the only feasible feed with which he can compete in dairying with the owners of "natural grass land." It is this class of farmers, particularly, who are most interested in the subject of ensilage. The man whose pastures will carry a cow to every two acres, and who cuts an average of two tons of hay per acre in his meadows, is impregnably a dairyman if he choose, ensilage or no ensilage, grain or no grain. These two questions do not vitally interest him.

Are the acknowledged defects of dry corn fodder and fodder corn as feed for dairy cows *corrected by ensilage and not replaced by others equally great?* This is the problem before our light-soil dairymen. They know that green fodder-corn, especially when supplemented with a well balanced grain and oil-meal ration, will make about as good butter as the best pasturage. But when it has to be brought into competition as dry fodder with good hay, notwithstanding all that has been and can be fairly said in its favor, the prices of the two kinds of butter will invariably tell the story—"give me two tons of good hay and take my five tons of fodder." For milk alone—market milk—the difference is not so great; yet I know of no way in which as much, or half as much, milk can be made from fodder as from hay, no matter how you fix it.

There is good reason why this should be so. In the first place, analysis shows that the food is not there,—that chemically the value of dry corn-stalks is not equal to that of dried grass such as we make our cow hay of. In the next place, even if chemically as good a feed, it is not as palatable to the cattle. No matter how well it is cured or prepared they will not eat it clean, and if fed alone it will dry them off almost as quickly as straw. My corn fodder is handled with the utmost care, and stored upright in a large, airy shed loft with a sparred floor, where it cures perfectly without a particle of mold. I cut it fine, put it in a large tight box, wet it with hot water, sprinkle it with a bushel of mixed meal to every 16 bushels of cut fodder, and then I have to give the cows the choice of shrinking in their milk or wasting one-fourth of the feed. With early-cut hay and the same meal I get full messes and everything is eaten clean.

When green fodder corn is so good, why is dry fodder corn so poor, compared with the meadow grasses, green and dry? The reason is not far to seek. We dry our meadow grass into hay so quickly that the sugar and starch are very thoroughly retained without change. If on account of bad weather we fail to do this, we know the consequence—poor hay. It takes two months of the most favorable weather (and under cover at that), to dry fodder corn so that it can be piled horizontally without molding. In all that time the nutritious elements are undergoing "retrograde metamorphosis;" in plain language, changing for the worse. The sugar and starch will ferment, and escape into the atmosphere from which they were taken by the growing plant. A similar change takes place in the albuminous elements though to a less extent. But, taking both together, the value, judged either by analysis or feeding, is lessened from one-third to one-half, and often more. Corn may be as good as meadow grass when green, but (at least without artificial heat) you cannot dry it quickly enough to make anything like so good hay of it.

Now comes the question—is ensilage a remdy for this evil, and one coming to us with no evils, or much slighter evils, of its own? The analyses that have been made of well preserved ensilage (and I think experiments have sufficiently proved that such preservation is easily practicable) show some little loss of sugar and starch by transformation into alcohol and acetic acid. This loss is well balanced by the action of the same fermentation in rendering the woody fiber more digestible. It is possible that a very slight amount of alcohol and acetic acid in this feed may, as is claimed, promote digestion, favor assimilation, and thus increase the secretion of milk. But as only a little is needed for that purpose, and as much is certainly bad, I think we should aim for a minimum of fermentation in ensilage. Fine cutting, thorough treading and strong compression will secure this in a properly constructed silo. We may calculate, with safety, that ensilage in the silo will cost no more than fodder corn in the barn. It will cost no more to feed it out. It will need no more meal to be fed with it for a full flow of milk. All testimony shows that it will be eaten up clean. These are certainly great advantages. What are the drawbacks as we see them now? First the cost of the silo. If the farmer must borrow money for this purpose, then I would say "Don't—Wait." If he is out of debt with money on hand, I would say, "begin small." Make a small silo (but a good one), and try one or two acres of corn to begin with. Learn the art, and try the feed on your cows one or two years first, before making up your mind to feed chiefly on ensilage. Shun everything like excitement over this matter. Take no stock in statements of 40, 60 and 80 tons of fodder on an acre. Twenty-five tons are a good crop, only to be got on good land with careful tillage. With such a yield and good calculation the crop may be got into silos at a cost of not less than two dollars a ton everything counted in. Do not reckon the value of this feed too highly. Many enthusiasts call two tons of it equal to one ton of hay. So some men call one bushel of carrots and one bushel of oats equal to two bushels of oats for a horse. But it is only in a special and limited sense that this is true. And so of ensilage. As a variety food, like roots, in small quantities in Winter, it might replace hay when fed in the proportion of two to one. But as a steady, regular main ration, the proportion of four to one would be much the safest to reckon upon. This, with a 24-ton crop, would give the equivalent of six tons of hay to the acre at a cost of fifty dollars. This does not mean wealth untold, or butter at ten cents a pound, but it is very much better than our sandy-land farmers can realize in any other way, and therefore it is worthy of a careful trial by those who wish to follow dairying on that kind of land.

DRIVEN WELLS—HOME-MADE FERTILIZERS.

MR. J. S. WOODWARD in a late RURAL, in writing about the water supply on farms, mentions "dug and bored" wells. They are both good—and expensive in comparison with a "driven well." I "drove" a well this Winter and it has given me such a large supply of water at such a small cost, that I think if farmers generally knew of this plan, there would be fewer cattle driven long distances to water next Winter. My well, including a good force-pump, cost me exactly $21 50 in money, and the labor of two farm hands for, say, half a day each; depth of well, 30 feet. In this style of well the only danger is in striking a rock, in which case the pipe must be pulled up and you must try again. I used 1¼-inch pipe; but 1¼ inch would do; but the former gives such a good supply of water and the additional cost is so light that I would advise its use. The pipe can be driven with a 25-pound sledge, or heavy maul. At first—the time varies—the water will be very muddy until all the fine particles among the sand or gravel at the lower end of the pipe have been pumped out. After the reservoir below has been freed from all matter that can be pumped through the strainer at the bottom of the pipe, the water will be as clear as any well water. Mine, although driven over two months, is still throwing up great quantities of mud; but I hope soon to have it all right. For watering cattle it does well enough, as the mud settles in the trough very quickly, much more quickly than ordinary soil mixed with water would do.

[Probably the "filter section" of our friend's pipe is partly sunk in a mud layer, and the water would soon become clear, if he either sank it a little lower or pulled it up a trifle. Experiment would show which should be done. Farmers should remember that the "Driven Well" is still covered by Green's patent, and one of his ubiquitous agents is likely to call for royalty upon all owners of "driven wells" who have put them down without license.—EDS.]

I think you hit the nail squarely on the head when you advised an inquirer in a late issue to feed purchased food to cattle and make his own fertilizer. It is my idea exactly, and I am working it out this Winter, and if your inquirer could go into one of my cattle stables and smell the ammonia made from cotton-seed, linseed and "corn-seed" meal, he would prefer that kind of fertilizer to any other. You can't preach too much on that subject. Feed everything you can on the farm, and if you don't get quite as much money as you would by selling, you will find the account *more* than balanced by the saving in fertilizer bills; besides, as you say, one ought to get full value for home-grown food as well as for that purchased, in the increase in growth or fat of his cattle."

Baltimore Co., Md. A. L. CROSBY.

TO PRESERVE SHINGLES.—Referring to a late inquiry on this topic in the RURAL, a correspondent writes to us from Hot Springs, Ark., that an excellent preservative of shingles is a strong solution of salt and lime. Make this in a water-tight box or other receptacle, never mind how rude, and steep the shingles in it for a few hours, and they will last much longer for the treatment, will be nearly fireproof, and will give no bad taste to the water from the roof when collected in a cistern.

Field Crops.

WHAT SHALL BE OUR BEST WHEAT?

HUGH L. WYSOR.

I PUT the question in this form because it affords an opportunity to inquire what qualities in a variety of wheat shall constitute it the best. In general terms, the answer might be, that is the best which shall please both miller and farmer. To please the farmer, it must be certain and prolific; to please the miller, it must be a good yielder of a high grade of flour. Looked at in this light, our best wheat either does not exist, or is not yet offered for sale. The three essential things, then, which the coming wheat must possess are these:—Certainty, which includes earliness, power to resist rust and winter-killing; prolificness, which includes tillering power; and flour-making qualities.

Of all the varieties which have been introduced to the public notice with great blast of trumpets within the last twenty years, only three have proved generally popular. These, in the order of their introduction, are—Boughton, which goes under various names (Tappahannock, New York Flint, and perhaps, also the Early May, of the South); Red Mediterranean, with which might be included the Lancaster, as they can scarcely be told apart; and the Fultz. Some might say that I ought to include the Clawson in this list, but, until within the last year or two, the Clawson has never been very extensively sown or proved very successful outside of its native State—New York. Of the three, the Boughton, as grown here, has never been equaled and can never be surpassed in its flour-making qualities; the Red Mediterranean is the most certain, and the Fultz the most prolific. The wheat of the future must be looked for, if anywhere, among crosses of these three. It will be useless to produce a variety of wheat with long ears, even if they be a *foot* long, and with spikelets containing three and four kernels, if a good crop cannot be produced from it except in favorable seasons or one in every three or four years. For this reason, notwithstanding the favorable opinion which the editor of the RURAL has expressed of it, there is nothing to be hoped for in the Silver Chaff, or in the Winter Defiance, for they both have one fatal failing, if no other—*they are ten days too late.* In a period of ten years, the Red Mediterranean, which has never, or seldom, been known to exhibit more than two kernels to the spikelet, will have yielded as much grain as the Fultz, which frequently exhibits four; for the former will have given a fairly good crop every year on all sorts of exposures, northern as well as southern, while the latter will have given only three unusually good crops out of the ten. I give below a little table which by means of figures, taking five as the highest grade of merit in any particular, shows the comparative merits of some of our varieties.

Name of wheat.	Certainty...	Prolificness.	Flour making quality.
Boughton	3	4	5
Red Mediterranean	5	3	4
Fultz	4	5	2
Clawson	3	4	2
Fultzo Clawson	4	4	*
Silver Chaff	1	5	*

* Not known.

It is a little remarkable that just as the RURAL has concluded that the Fultz is a better and more prolific wheat than the Clawson, the people of this State have come to the opposite conclusion, as I learn from the report of the Virginia Commissioner, who says that numbers of farmers all over the State have discarded the Fultz, which they have been growing for six or seven years, and are sowing in place of it the Clawson, believing that they will reap better crops from the latter.

Golden Grains—Black-Bearded Centennial.

I have no personal knowledge of either of these two wheats, not having tried them. The Black-bearded Centennial is said to have originated in Australia, and was distributed in the Fall of 1879 by the Department of Agriculture. From this source the Virginia Commissioner received half a bushel, which he says was sown rather late. The yield was nothing remarkable, being only about five bushels of a quality inferior to that received. Of the Golden Grains I have received a sample from Messrs. Burpee & Co., who have it for sale. Messrs. Bliss & Sons, Gregory, and Landreth also offer it. All of them, except Landreth, say that the introducer offers $50 for any white wheat which will equal it, and then say on their own authority that he is perfectly safe in making this offer, for the kernel is fully *three times as large as that of our best common wheat.* Why these gentlemen should say this puzzles me not a little, for I know them all to be honest and reliable men. The Red Mediterranean, as I have said above, is one of our most common wheats, and a kernel which should be three

times as large as a kernel of this would be a monster indeed. From the sample sent me, I should say that the kernels of Golden Grains, while they are shorter and thicker than those of the Mediterranean, would not weigh any heavier or but slightly so at any rate.

Pulaski Co, Va.

REMARKS.—WE had not intended to say that Fultz is *better* than Clawson; but more prolific at our farm owing to its producing more kernels in the spikelet. We have about five acres in Silver Chaff which we have sown in preference to Clawson which we have raised as our main crop ever since this wheat became known. Our Winter Defiance may prove worthless. It is, as Mr. Wysor states, very late. We had hoped it might change in this respect. The claim that Golden Grains produces the largest kernel, etc., is evidently a mistake, since the kernel of Black-bearded Centennial is so nearly like it in color, shape and size that one cannot be distinguished from the other.—EDS.

TOBACCO CULTURE.—NO. 7.

G. A. GOFF, JR.

The Tobacco Barn.

IN the early days of tobacco growing in our valley mere sheds of rude and temporary construction were used for curing tobacco. These have been replaced as the business has grown in favor by permanent buildings, constructed for the purpose on scientific principles. The barn that I shall describe is the tobacco barn in popular use at present by our best growers. The size of the building must, of course, be governed by the amount of tobacco to be cultivated. A barn large enough to cure three acres of tobacco should be 64 feet long and 28 feet wide. The posts should be 16 feet long from shoulder to shoulder; 6x8 inches will do for the size of the posts and tie beams, and 8x10 for the sills. The plates may be somewhat smaller—say 5x8 inches.

Such a building will hold three tiers of plants after they are hung, leaving five feet between each two tiers. By having the posts two feet longer and setting the sills well up from the ground, another tier may be added. This is often done, but it is objected to by many from the fact that the tobacco in the upper tier, being far from the ground, does not dampen readily when it is wished to take it down. The side beams or girts are four by four inches and should be placed four feet nine inches or five feet apart to give sufficient space between the tiers for large tobacco. The poles on which the tobacco is hung are two and one-half by five inches and 14 feet long, and while in use, when the usual method of hanging is followed, are placed about 16 inches apart. The outside is boarded up and down and the cracks battened. Ample means for ventilation should be provided by hanging every third or fourth board on hinges, thus making perpendicular doors, which are provided with locks and staples to fasten them shut or open. The space beneath the sills should be fitted with horizontal doors hung to the sills. Ventilators are placed on the top of the building 30 or 40 feet apart, to aid in the ventilation. It is highly important that a tobacco barn should be so constructed that it may admit of being tightly closed when necessary, or opened to admit the air freely at the will of the grower.

Double swing doors on each side of each end are most convenient. One pair may be made to answer, however, if the lower middle girt next the door is framed so that it may be readily removed to admit a team and wagon to the other side. A tobacco barn should stand in a dry, airy situation, away from trees, which sometimes prevent a free circulation of air and cause the tobacco to pole-sweat. A good tobacco barn is a necessary appendage to a tobacco farm. Too much tobacco has been hung for curing, in years past, in grain barns and other buildings unsuited for the purpose. Tobacco hung in such buildings rarely cures as well as that hung in properly constructed tobacco barns. Too close hanging is also a fault with many growers. Tobacco should never be crowded in curing if the best results are to be expected. Too thickly hung it will often pole-sweat while curing and thus become seriously damaged.

The Assorting and Stripping Room.

Not less important than a suitable tobacco curing barn is a capacious and comfortable tobacco stripping and assorting room. It should lie adjoining or adjacent to the curing barn. The best assorting room is constructed and furnished with an eye to comfort and convenience. It should be not less than 18 feet square, as it is desirable to keep a quantity of tobacco and a number of cases in it, and yet have plenty of room for work. A bulking or packing room is sometimes partitioned off from the main room, in which to store a quantity of tobacco while it is being assorted. This room should be made tight so that when the tobacco is too dry to be handled nicely, it may be steamed by passing steam generated in a small steamer, made for the purpose and set on the stove, through a pipe into the inclosure. A good stove should be used in the assorting room in which a fire may be kept over-night when desired.

POA COMPRESSA.

BLUE GRASS, WIRE GRASS, FLAT-STEMMED POA.—This is another common grass with short stems. It well deserves the name "Blue Grass," by which it is often known.

FIG. 205.

The whole plant has a dark bluish green tint. The stem is quite flat, so it will not easily roll between the thumb and finger. This mark alone will enable any one to distinguish this grass from Poa pratensis (June Grass), which also goes by the name of "Blue Grass" in Kentucky, and, more recently, in many other portions of this country. I hope the name "Blue Grass" may be reserved for Poa compressa. The grass is a common one, found in dry meadows or pastures, especially where the soil is inclined to clay or gravel. The growth is short and thin, and it flowers about a month later than June Grass. The panicle is rather small and dense; the leaves rather short. The stems remain green for a long time after the seeds have ripened. It shrinks less in curing than any other grass with which I am acquainted. The stems are almost solid, *i. e.*, the wall is so thick that the hole in the center is quite small. A scythe is much gummed in mowing. All who know this grass agree that it is one of the richest and that no grass makes a better or richer hay. The grass is a perennial, but does not spread rapidly by its root-stocks as is the case with June Grass and Quack Grass. It never forms a close turf and is not difficult to eradicate when once well established. PROFESSOR W. J. BEAL.

Growing Potatoes Under Straw.

The ground was broken in the Fall of 1879 and in the Spring of 1880 it was harrowed and made fine, then furrowed not very deep, 3½ feet apart. Potatoes of medium size were cut once and dropped in the furrow 20 inches apart. On one acre of ground I spread 100 bundles of rye straw, of the estimated weight of 550 pounds, over the potatoes dropped in the furrow, and then with one horse attached to a one-horse Syracuse plow, a light covering of earth was turned over on the straw and potatoes. The season being so very dry, the straw did not all "mulch," and the result was not as good as it would have been if the straw had all rotted and made a bed for the young potatoes. The results, however, were in favor of the rye straw, as the yield on that acre was 25 bushels more than on an acre alongside of it prepared in the same way, but on which no straw was used. Now, the rye straw used on potatoes in this way is, I claim, worth more than it would be if hauled to the paper mill and sold at $20 or even $25 per ton. Moreover, the potatoes that grew under the straw were larger and much smoother than those grown where no straw was used. Some people think that the potatoes will not come up under the straw; this is a mistake, they will grow sooner in this way if properly covered. I have also covered potatoes in the hill with coarse manure and have had good results.

Schoharie Co., N. Y. ISAAC PEASLEE.

Horticultural,

RURALISMS.

I HAVE just received (March 26) several back numbers of the RURAL, (our postmaster probably likes it,) and among them that of January 15, containing Kit's inquiry about pot-grown grape-vines. It may not be too late to answer his queries briefly. The brevity of these "Ruralisms" makes it quite impossible to go into detail, which I should like to do; but I will try in a few words to make Kit comprehend my views of the subject. Just as poor vines can be, and are, grown in pots as in any other way, even the poorest; on the other hand, a skillful propagator can grow better vines in pots under glass than he can grow in the open air from cuttings. I have tried so many thousands in these and other ways that I know it; and, in addition, the best vines I have ever seen grown by skilled professional men have been grown in pots. Kit also asks why the pot-grown vine is better, and in what respect. It is better because it can be started earlier, has a longer season to grow in, is more under control, makes better wood and better roots, carries better, bears exposure better, and is easier to plant. The roots are not in a more natural position, but they are in a better position to make fibrous or feeding roots and until these are made no growth takes place. I am now speaking of *well-grown* vines; but a man who grows the Delaware and the Concord, for example, in precisely the same way in pots will generally make a failure of it.

Kit's corkscrew vines may do very well to draw corks with, but I should be loath to plant them to get the wine to put in the bottles. No, Kit, those are not the kind I referred to, and you were right in supposing they were none the better for it. Let me make one more statement, and I will keep quite within bounds in making it. I have planted or directed the planting of more than twenty thousand vines, and the result has always been so much in favor of well-grown pot vines as to leave no doubt in my mind as to their value. But I must add that I have always selected the vines myself, whether grown in pots or in the open air, and have never been satisfied with either till I have seen the roots. It must not be supposed that I am in favor of coddling the vines, for most decidedly I am not; neither must it be supposed that I am prejudiced against vines grown in the open air, for, again, most emphatically I am not. I know too much about the vine to entertain any such nonsense as that. But I must break off in the middle somewhere, though I have not said half that I wanted to. Now, Kit, suppose you take the chair, and let me ask a question. How should a first-class pot vine be grown? You cannot get off under the plea that you are "so much of a novice." Your manner of putting questions shows that you are "no such thing."

IN the number for January 15 I also find an excellent portrait of Mrs. Brett's seedling Peach. I have eaten this Peach from the tree, made some favorable notes in regard to it, and wish to add my testimony to Mr. Downings's in regard to its goodness. I am the more anxious to do this because I had submitted to my examination during the same visit five or six other peaches, and this was considered the best of them all. Two of these were comparatively new foreign peaches highly spoken of in England, but which do not seem to be well adapted to our climate, and another a Southern seedling which is thought to be very good in Georgia, but which is hardly second-rate here at the North.

A FEW days since there appeared in the city papers an account of the poisoning of a family at Troy (I think it was) from eating pork and beans. It was at first supposed that the pork contained trichinæ, but on being analyzed by a chemist nothing of the kind was found. On examining the beans, however, the report says "black insects" were found on them. The "black insects" were probably the bean weevils. A large seed firm in New York last Winter (1880) furnished me with a sample of beans very badly infested with these weevils. I made inquiry of all our principal seedsmen, examined their stock, and as the result found that the only bean thus affected was the Early Valentine. I found only two lots thus affected, and as far as I could learn, they were both grown in the same locality, showing that thus far this weevil is local. These beans were destroyed, but there were, no doubt, other lots elsewhere in which they were not discovered. These cases of poisoning give the subject a very grave importance, and it should receive prompt attention from seedsmen and seed-growers throughout the country and it would be well for all who use beans to give them a thorough examination. These bean weevils were first seen, I think, about five years ago, but were supposed to have disappeared. I had some Lima beans from Peru, S. A., about twenty years ago, which I found to be full of weevils; but I destroyed beans and all as soon as the discovery was made.

LAST Fall I warned the readers of the RURAL against some peddlers who were vending fabulous lilies at fabulous prices; and I also denounced them in the neighborhood in which they were at the time operating. I have since been thanked for doing so. Several sales, however, had already been effected. A few days since I saw one lot of them which have been carefully grown in pots during the Winter. They are all Lilium candidum, the common white garden lily. It is, to be sure, one of our most beautiful lilies, but eleven dollars seem to be rather a stiff price to pay for three

BLUE GRASS—POA COMPRESSA.—FIG. 206.

bulbs which can be bought of almost any florist for twenty-five cents each. They were sold under outlandish names, that were neither Latin nor Hottentot, represented to be of different colors, and sold at different prices, a handsome deduction being made for the collection, and this last seems to have been the bait that caught the innocent little fishes. When will people learn to let these peddlars alone? There will be more about this Spring.

HORTICOLA.

SPRING VEGETABLES.

Peas—Cabbage—Lettuce—Radishes—Onions—Beans—Salsify—Parsnips—Beets—Carrots—Peppers—Tomatoes.

JAMES TAPLIN.

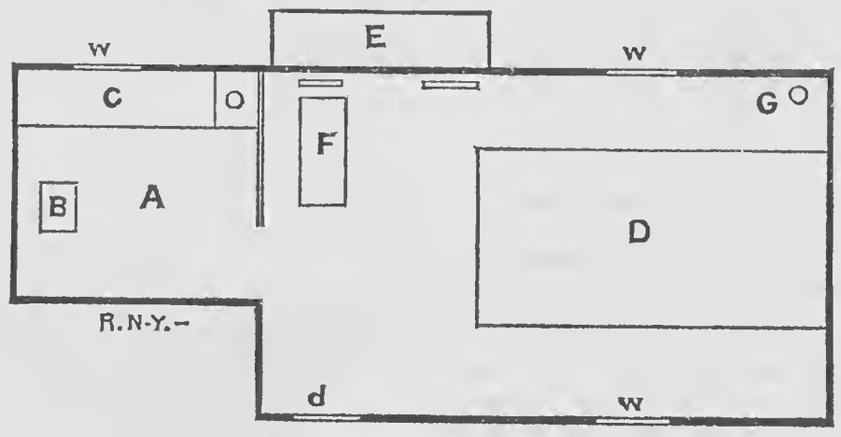
IN growing vegetables, whether for home consumption or for market, it is necessary to have the ground in good condition, well manured and cultivated deeply. For early vegetables a dry, warm soil is needful, as in cold, wet soil the plants will die and the seeds rot. This is especially necessary in seasons when the ground is saturated with water, and on wet, cold soils it is useless to sow or plant very early. For early crops it is advisable to cultivate and even manure the soil before frost, so that little is needed before sowing; but that is only available on very light dry soils. The first crops requiring attention are early peas, cabbage, lettuce and radishes. Lettuce and cabbage should be raised in frames if required very early. Cabbage especially should be autumn-sown, and transplanted into good, rich, well cultivated ground as soon as frost is over. Onions should also be sown as early as the ground will permit. For this crop the ground cannot be made too rich. Chicken manure or night soil is the best for this purpose, but it is necessary to have the soil thoroughly dry when the seed is sown. If that condition prevails even in March, it is best to sow, as, although the seed is a long time in the ground, it comes up stronger than when sown later. The earlier peas are sown the better as they stand the dry weather better than when sown later. I have seldom found that peas are a satisfactory crop after the 4th of July as they mildew and die off without bearing. Another thing, I may note that peas should always be sown at least four inches deep, as they come up stronger and do not burn so quickly. The ground should be made quite firm over the seed. As regards varieties of peas, there are new kinds every year, more or less good, and for those who can afford to try experiments, it is well to do so, but I usually grow only two varieties, Daniel O'Rourke and Champion of England. These two kinds planted together, keep up a succession of bearing until the very hot weather. As soon as Daniel O'Rourke is over, the Champion of England is ready. If the ground is naturally very dry, it is well to leave the drills a trifle lower than the surrounding ground, so the water may collect there, or they may be watered artificially if desired. In sowing onions, it is well to put them in drills about fifteen inches apart. The ground may then be hoed, so there is very little weeding. Broad beans are vegetables the Americans do not usually care for, but they are very popular with the English. They should be sown very early on stiff cold soil. For those fond of this bean it makes a welcome variety before the bush beans come in. Salsify, parsnips and a little early beets may be sown as soon as the ground will permit. A few Horn Carrots may be sown in a light dry border, as I think small early carrots are much superior to the large late ones. Lettuce seed may be sown to succeed that transplanted. As regards varieties, each one usually has a favorite sort, and among so many good ones, it is hard to choose, but on rich, moist soil, I consider the French Cos much superior to the cabbage varieties, though it is not much grown in this country.

Parsley should also be sown in rich soil, although the best plan is to sow in August in a frame and transplant in the Spring, as the seed is very long in coming up. Although much of it will run to seed, there are many plants which do not do so, and it gives a good supply of parsley until frost comes.

Tomatoes should be sown in a warm frame. I have not found much advantage in sowing before the first of April, unless there are unusual facilities for growing them on; as a rule, they become overgrown and weakened before they can be planted out. As regards varieties, there are many good ones, but I myself prefer the Acme. Some peppers may also be sown in a warm frame. Some onion setts, shallot, and garlic, should be planted if required, as the earlier they are planted the better. Any old large onions which are sprouting are very useful if planted now; all the trouble required is to make a shallow drill, and just stick the onions in. They give a good supply of onions before even the setts are fit for use.

Raising Vegetables.

WINTER SQUASHES, like many other vegetables, I raise as a second crop following early beans. They are both planted, however, at the same time—the squash hills about 15 feet apart. These I make by digging a hole about the size of a bushel basket and putting in a liberal supply of well-rotted manure, covering the whole with about four inches of earth. The beans I plant in rows between the squash hills, and they are gathered before the squashes occupy the ground, and sold as string beans. In this way two valuable crops are raised on the same ground, and it is a very pleasing sight to see the bean patch about the middle of July suddenly transformed into a bed of squashes. I dislike to see bare ground in a garden in Midsummer, and there is no need of it if a little forethought is used.



PLAN OF CREAMERY.—FIG. 207.

CABBAGE PLANTS may be set very late, even as late as the last of July, to fill in empty places, and if they do not make solid heads I dig a trench and bury their roots, fold the outside leaves over the heads and cover them with nothing but earth, and in Midwinter or Spring they will come out first-quality cabbages. The plants that I use so late I transplant once or twice and leave them in the nursery bed six inches apart, and when I wish to use them I take them up with a spade, leaving as much earth as possible on the roots, and if it is a wet day they will hardly feel the change.

TURNIPS—the common field or flat sorts are perhaps the latest vegetable that can be used as a second crop. These I have sown as late as the 10th of August, and got a fair crop. I give the ground a coat of wood ashes, sow them in drills and hoe once. Many sow them broadcast and never hoe or thin them, and consequently they get a crop not worth harvesting. What is worth doing at all, is worth doing as it should be done.

Oneida Co., N. Y. ADELBERT WAKEFIELD.

Dairy Husbandry.

THE DAIRY COW—NO. 30.

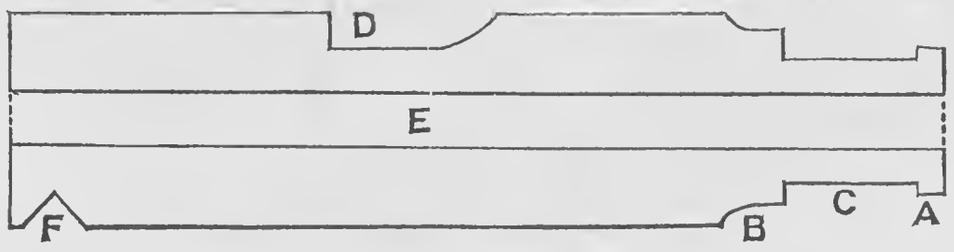
HENRY STEWART.

Creameries.

A CREAMERY is a co-operative dairy. What the cheese factory has been to the cheese dairy the creamery has been to the butter dairy. As the former has raised and equalized the character of American cheese, so the latter has improved and made more even the quality of American butter, so that instead of a great variety of butter all differing in degrees of badness, from thousands of farm dairies, all kept under less or greater difficulties, we now have a well recognized grade known as "creamery," which is all that can be desired for ordinary consumption. The creamery, in fact, not only takes out of the hands of a number of overburdened farm housewives a labor which was too great and too exacting for them, and does this work at a far less cost of time, labor and materlal; but it takes the work from a good many incompetent persons and provides the best skill and the best apparatus for its completion. The increased value of the dairy cow and the enlarged receipts from the dairy which have been realized through the establishment of creameries, are of the greatest importance both individually to the dairymen and collectively to the industrial interest of the nation. It is a well-known fact that an improvement in the quality of a staple article of food greatly enlarges its consumption, notwithstanding the increase in price which is in proportion to its increased value. It is from this result that Western dairymen now enjoy a very material improvement in their incomes; for while a few years ago, when creameries were unknown and dairymen labored under many disadvantages of climate and locality, the price of Western butter was the lowest current in the market; for the past few years, since the introduction of creameries, Western butter is now at the top and ahead of the best Eastern products which come on to the market. Western dairymen, too, have carried off the first premiums for butter at dairy exhibitions and many Western men now enjoy enviable and world-wide reputations, who would have remained unknown but for the introduction of the creamery system.

The creamery system is of general application and may be made available both for the associated dairies, and for large single dairies. Its greatest and most effective development, however, is through association, by which a large number of farmers and small dairymen may enjoy all its benefits. There are creameries which work up the product of several hundred cows and are patronized by fifty or more separate persons. Some are owned by private individuals who purchase the milk or the cream, and some are co-operative and contribute the milk on joint account and divide the proceeds *pro rata*. For several obvious reasons the former is the better plan, whether the owner be a single individual or a joint stock company formed from among the patrons. Those who deal with the creamery then know each day precisely what they are entitled to for the supply of so much milk at a stated price. Certain restrictions and regulations are enforced and observed in respect of the feeding and management of the cows and the care and delivery of the milk, so that the milk shall be of even and good quality and be delivered in satisfactory condition. Creameries are usually combined with cheese factories, so that the skimmed milk may be turned to profit, either in skimmed-milk cheese or in the mixed and artificial article known (generally *sub-rosa*, however) by the despised name of oleomargarine cheese. There is no doubt that a very large amount of this material is worked up into cheese in creameries, of which nothing is said or heard. This is neither the place nor the opportunity to discuss the merits or demerits of this business; but in describing the creamery system it is necessary to make a passing reference to it. Cheese is made in this way that it will puzzle the wisest expert to distinguish from full-cream and truly honest cheese, and no means of detecting the difference can be relied upon excepting the microscope. The business has reached such large proportions, and exists under such peculiar conditions, that there seems to be no means of interfering with it, even by legislation, unless it be of a special kind which would be inoperative. Those who expect to become interested in creameries therefore will find their attention turned to this subject, whether they will or not, as being a part and parcel of the creamery business. Where creameries are confined solely to butter-making, the skimmed milk is returned to the patrons who dispose of it in their own way.

The apparatus of the creamery consists of the vats or pails for setting the milk, the cream vats and the churns. A large variety of milk-setting apparatus is in use, both for deep and shallow setting, for each of these systems has its advocates. Ice is used for cooling the milk in the warm weather, and is in fact indispensable when the best quality of product is desired. It is not only valuable as a refrigerator, but its use economizes time and material; for at the low temperature at which the milk is set—usually about 45 deg. in the deep pail system—all the cream is raised in 12 hours or less, so that but half so many pails are required as in ordinary setting. Deep setting also requires much less space than shallow setting, and this economy of space lessens the necessary amount of floor room in the creamery, which, of course, reduces the cost of the building. The cost of the necessary apparatus for a 600-cow creamery, with cheese-making furniture complete, including a 6-horse power steam engine and an 8-horse power boiler, amounts to about $1,500. The cost of a small creamery for butter alone for 80 to 100 cows would be little more than $350, including the building, if the deep pails be used, and strict economy be exercised.



AN IMPROVED SAP-SPOUT.—FIG. 208.

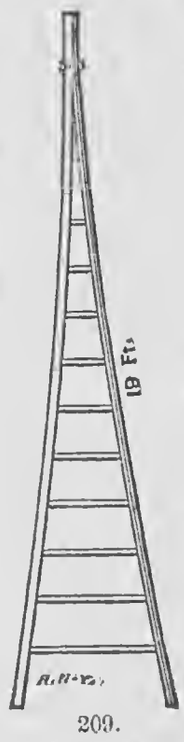
The accompanying plan, Fig. 207, is arranged on this low basis of cost and consists of the following:—a frame building with double walls, the studs being six inches wide and covered under the boarding with air-tight roofing paper. The outside is of novelty siding which lies close upon the studding; the inside is sheeted with narrow, matched stuff. This gives a sufficient and perfect air-space which equalizes the temperature. The main building is 13x21 outside, has two windows, w, w, and one outside door, d. The annex, A, is 9x9 outside and has an arched passage-way but no door; in this is a water heater, and a sink provided with a pump; a window over the sink lights this wash-room. The main room contains a pool, D, 6x12, which holds 120, eight-inch 14-quart or 30-pound pails, 20 inches deep. This will be sufficient for nearly 100 cows and it is best to have the pool of ample size rather than barely large enough. The pool or vat should be built up of cream-colored brick laid in cement and if not wholly sunk in the floor, should be inclosed in a pine-plank frame strengthened with two three-quarter-inch galvanized iron rods passing from side to side and held by washers and nuts on the outside of the frame. A raised vat will be found more convenient than one sunk in the floor, as stooping will be avoided. A one-horse power is placed under a shed, E, with the driving pulley brought into the building; a belt from this works the churn. The butter-worker may be kept in the wash-room. The whole floor should be of matched pine with the joints calked and the boards well painted; the floor should incline one inch from the sides to the center, where a wide groove or narrow gutter should lead the drainage to a pipe under the sink where it escapes into the trapped drain. A pump to supply water to the vat if needed, may be set near the vat and worked by a belt from the horse power. Both the pumps may be connected with one well near the house, if running water is not available. This plan may be adapted to small private dairies, and the smallest dairy may be arranged in a similar manner. A hanging rack above the vat may be provided to hold the spare pails and utensils that are not in use so that the space occupied by the vat will not be lost. A ventilator should be made in the roof and the building should have half a story above the main floor to aid in the ventilation. An extra pump should be located at G.

Farm Economy.

A Convenient Ladder.

In a late number of the RURAL was described a ladder for picking fruit. Believing it to be both the duty and the privilege of your readers to *confer* as well as to accept good things, [we wish all of our subscribers took this view.—EDS.], I herewith send you the plan of one that I have used for a number of years, not only in climbing trees, but around my buildings and stacks also. It is easily made, and the cut explains itself. I use a light cedar or spruce pole, sawed *nearly* through, for sides. S. T. T.

Suffolk Co., N. Y.



209.

[We have seen a ladder resembling this closely in shape, made as follows:—Split an ash or spruce pole to within a few feet of the end; then put a ring round it to prevent it from splitting further. Spread it the proper width for a ladder, bore holes and insert rounds the right distances apart, and the ladder is ready to be thrust up through any little opening and will rest firmly against a small branch where an ordinary ladder would cant or twist about.—EDS.]

An Improved Sap-spout.

IN the device, a sectional cut of which is here presented, the part marked A. is a little less than the hole bored in the tree, and C. is a little smaller than A., to admit of the sap flowing freely from the tree. At B. the spout fits the hole tightly. D. is a notch for the bucket to rest on. F. is another notch made to prevent the sap, as it falls from the opening, from running back along the spout. E. is a quarter-inch hole bored through the spout for the flow of the sap. Slip the bucket over the spout on to the notch D., and then it hangs against the side of the tree, nothing being in the way of the cover, which can be placed on the bucket shutting the sap in and thus preventing it from freezing as quickly as it would if exposed to the air, while the bits of bark or other objectionable matters are shut out. One can hold the pail to receive the sap in one hand, and with the other turn the bucket and pour the sap out. W. RANDALL.

Hygienic Information.

TRICHINOSIS.

THE recent interdiction by most European Governments of importations of American hog products on the ground that their consumption is especially liable to produce trichinosis, has attracted to this disease an amount of lively interest greatly disproportionate either to its frequency or fatality. Of the few deaths attributed to it there is excellent reason for believing that a large proportion are really due to other causes; but, even granting that all that are imputed to it are actually produced by it, yet the number every ordinary year is probably smaller than that of those from hydrophobia or by lightning. With regard to the fatality of the disease, the proportion of deaths to cases is no greater than in many diseases of common occurrence. For instance, in 1866 the malady was epidemic at Hederslaben in Germany, a town of 2,000 inhabitants, and out of 327 cases of trichinosis 82 only were fatal, or a trifle over two deaths in seven cases, and this is a fair average rate in severe attacks. In milder cases the proportion of deaths is much smaller, only three having occurred in 200 observed cases. Indeed, many people doubtless have suffered from mild attacks of the disease, who have attributed their pain to rheumatism or a severe cold. Even among the most skillful physicians there is yet a good deal of difference of opinion as to the nature of this disease, as shown by the disagreement among the doctors as to whether the two alleged cases of the malady lately discovered at Madrid were really instances of trichinosis, and there has been a like divergence of opinion regarding a couple of recent cases in Dublin.

Trichina Spiralis Greatly Magnified.

As far back as 1832 it was discovered that the muscular tissues of man sometimes present, after death, a sanded appearance due to the presence of innumerable minute cysts, or mouthless sacs, scattered throughout the substance. When examined under the microscope, these little cysts are found to contain immature worms coiled up round and round in the smallest possible compass. They are cylindrical and tapering in shape and when they have attained their largest size they are one-twenty-eighth of an inch long and one-six-hundredth of an inch thick. The name given them is trichinosis spiralis, from a Greek word meaning "hair," and a Latin word meaning "spiral," the term being indicative of their appearance when coiled up in the center of the cyst or sac. So minute are the parasites and so multitudinous that sometimes as many as seventy or eighty thousand of them are found in a cubic inch of muscular tissue. Subsequent microscopic investigation has shown that nearly all animals may be infected with trichinæ (the plural form of trichina); but that of all animals used as food by man the hog is most liable to be so infected. This is chiefly attributable to its omnivorous appetite, which leads it to swallow all sorts of refuse flesh, for trichinæ are propagated among all sound animals by feeding on trichinosed flesh.

The dangerous period in trichinosis is shortly after the introduction of the parasites into the system. When the muscular flesh of pork containing the encysted mites, is eaten in a raw or improperly cooked condition, the cysts are digested and destroyed, but the inclosed worms, retaining their vitality, pass into the small intestines. There they lose their spiral form and in four or five days attain maturity and a length of from one-ninth to one-seventh of an inch. The sexes are soon developed and each impregnated female produces from 1,000 to 2,000 live embryos, the parents dying after having produced young. The embryos, which are extremely minute but of the same form as their parents, at once begin to penetrate the walls of the intestines and to make their way throughout the whole body. This causes irritation of the intestines first and then pain in all the tissues they penetrate, so that their progress is made manifest by the symptoms of suffering in various parts of the body. Within a fortnight after the appearance of the first symptoms the parasites are dispersed along the voluntary muscles throughout the body and limbs. There they soon become inclosed in distinct sacs where they increase in size to one-twenty-eighth of an inch and become coiled spirally like their progenitors in the same stage of development. In their passage through the body they produce extreme pain, which is intensified as they absorb the substance of the muscular tissues during their growth. All the voluntary muscles are painfully affected, and are often unable to perform their customary functions; the limbs swell and are extremely tender; nausea, a high fever of a typhoid character and many other painful symptons appear, the attack generally ending fatally in about four weeks, and sometimes much earlier. If the patient survives this period, the encysted trichinæ usually become quiescent and remain without material alteration for an indefinite time, awaiting an opportunity for development in the alimentary channel of another animal, an opportunity most of them never obtain. The severity of the disease depends on the number of encysted trichinæ introduced into the system, and the fecundity of the females therein developed. In favorable cases convalescence is generally slow, and the muscles remain stiff and tender for a considerable period. There is no specific remedy for the ailment.

The only known preventive of trichinosis is the thorough cooking of trichinosed flesh before it is eaten. Some say that the application of heat enough to coagulate albumen—160 degrees—is sufficient to kill the parasites; but the latest, best and safest method is to cook the meat thoroughly throughout. If the pieces are large, trichinæ in the middle are not killed by heat that kills those on the outside. As long as any part of the meat retains the "pink" color known as "rare," it is highly probable that infesting parasites have not been killed. Smoking and pickling are of no use whatever. Trichinæ can be detected in the muscular tissues of pork or other flesh by aid of a good microscope with careful observation and a little practice.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 54, MARCH 30, 1881.

542. "Ashes from factories in Canada." Sample taken February 10th, from stock of J. Thayer, Dealer, Boston, Mass., by George F. Chapin, Thompsonville.

Analysis.

Sand and Silica	4.84
Char	2.98
Oxide of Iron and Alumina	.67
Lime	67.42
Magnesia	1.28
Potash	.23
Soda	.42
Phosphoric acid	.38
Sulphuric acid	.37
Carbonic acid	7.05
Moisture	1.00
Combined water (of slaked lime)	13.46
	100.00

As to the state of combination we may say that probably the seven per cent. of carbonic acid is united to nine per cent. (in round numbers) of lime, making about 16 per cent. of carbonate of lime—that the combined water is united to about 42 per cent. of the lime, making 55 per cent. of hydrate of lime (slaked lime) and that the remainder of the lime—16 per cent.—exists as caustic lime. Accordingly the sample contains 87 per cent. of lime and its carbonate and hydrate. It contains also nine per cent. of sand, char., oxide of iron and moisture, leaving but four per cent. of magnesia, alkalies, phosphoric acid and sulphuric acid.

These "ashes" are, in fact, lime, so slightly admixed with wood ashes as not to differ essentially from oyster shell lime in composition or value whether commercial or agricultural. The presence of so much caustic and slaked lime renders this sample very unlike ashes in its action on the soil. The name is misleading and evidently we have a material which will scarcely pay the farmers of Connecticut to transport from the "factories in Canada."

The weight of the struck bushel is about 55 pounds, its commercial value is not far from that of an equal weight of slaked oyster shell or other cheap lime.

545. Quinnipiac Coarse Bone, Sampled Mar. 10, from material purchased of the Quinnipiac Co., Wallingford, by Julius W. Yale, of Meriden.

Mechanical Analysis.

Fine	smaller	than	1-50	inch,	13	per cent.
Fine medium	"	"	1-25	"	10	"
Medium	"	"	1-12	"	12	"
Coarse medium	"	"	1-6	"	15	"
Coarse	larger	than	1-6	"	50	"

Chemical Analysis.

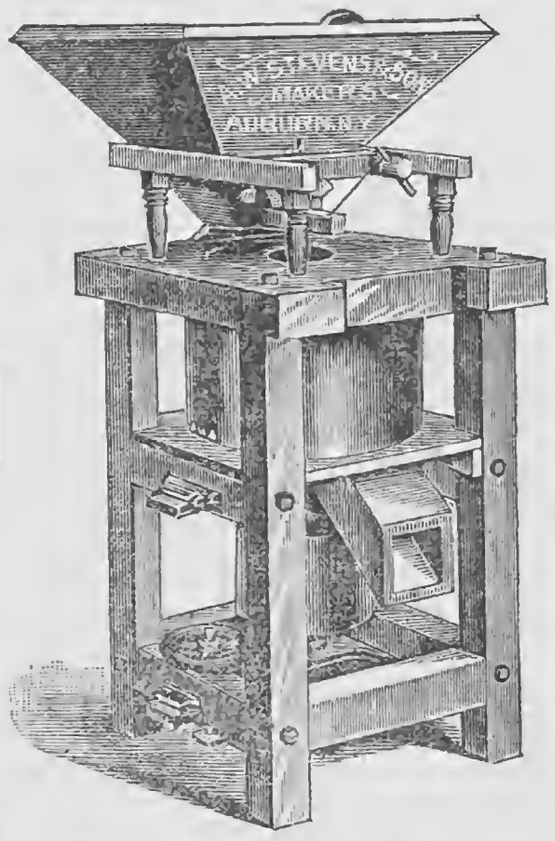
	per cent.	ton value.
Organic Nitrogen	3 84	$ 9.38
Phosphoric acid	22.33	20.56
Estimated value per ton	.....	29 94
Cost per ton	.....	30.00

S. W. JOHNSON, Director.

Industrial Implements.

The Stevens Improved French Buhr Feed Grinder.

A very excellent French Buhr Feed Grinder is made by A. W. Stevens & Sons, Auburn, N. Y. The advantages of grinding feed have



STEVENS FRENCH BUHR FEED GRINDER—FIG. 211.

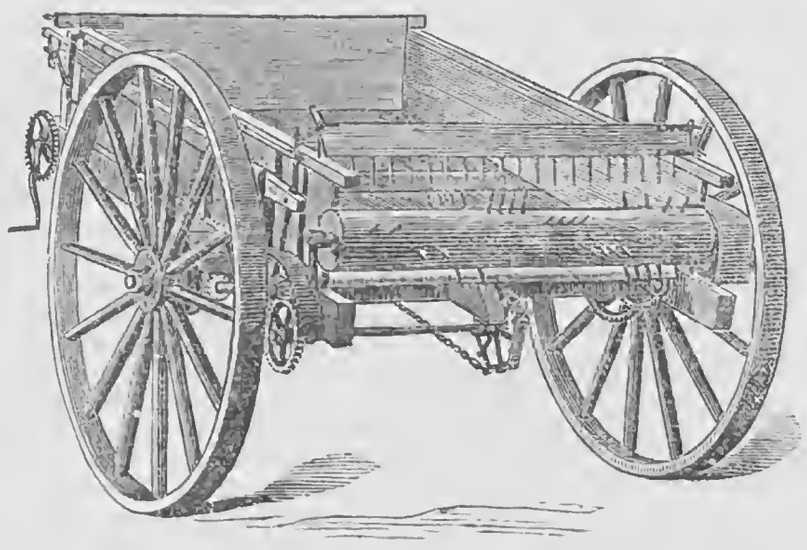
frequently been discussed in other parts of the RURAL, so that here reference need only be made to this, one of the very best mills for doing so. Many farmers and thrashermen have an engine or horse-power, which during a large part of the year lies idle, the owners losing the interest on the money invested in it. With a portable mill like this, these powers can be pleasantly and profitably employed during the season usually passed in idleness, the owners grinding not only their own feed but also that of their neighbors, and doing in fact a milling business. Indeed some who use them often grind, we are assured, from 150 to 200 bushels per day. The price of the mills has been fixed at a small advance on the actual cost, and full terms of sale will be promptly furnished on application to the above address.

G. B. B.

Kemp's Patent Manure Spreader.

As shown in the accompanying cut, this is simply a broad-tired machine cart with a short tongue, which connects with the front wheels of any farm wagon at the ring-bolt. It holds about 30 bushels, and having a movable bottom, like the traveling bed of a tread horse-power, when this is in gear it carries the load slowly to the rear, where a swiftly-revolving cylinder, armed with teeth and extending across the width of the cart, pricks the manure to pieces and scatters it evenly in fine particles as the team moves along. It spreads all kinds of manure, coarse or fine, as well as lime, ashes, marl, muck, cotton seed, etc., either wet or dry, in such quantities as may be desired per acre. This it does much more efficiently and in much less time than the work can be done by hand, so that far more benefit is derived by the crops from manure in this way well pulverized and evenly distributed than from an equal quantity applied in the ordinary unequal, lumpy fashion. This excellent device, which we have seen tested in a highly satisfactory manner, both experimentally at the last New York State Fair, and in ordinary work in the field, is made by the Kemp & Burpee M'f'g Co., Syracuse, N. Y.

G. B. B.



KEMP'S PATENT MANURE SPREADER—FIG. 212.

A HANDY AND EFFICIENT IMPLEMENT.—An excellent thing about a farm-house is an ordinary force pump; but still more desirable is one like the Lewis's Combination Force Pump, made to meet all the requirements of the country homestead. Besides washing windows and carriages, extinguishing fires, watering the lawn or the flower beds, and performing all the other duties of the common force pump, this unique contrivance can be promptly metamorphosed into a Paris-green or London-purple sprinkler, scattering sure death among the potato beetles, or it can be used to spray hellebore on currant bushes, or, in fact, to pour liquid death on noxious insects of all kinds on the farm or in the garden. Try it once, and you won't afterwards rest comfortable without one.

G. B. B.

Pomological.

THE CLARK APPLE AGAIN.

In the RURAL of Dec. 11, in which is given a fine illustration of the Clark Apple, my name appears in a manner seeming to call for a fuller history of this valuable fruit, the original tree of which still stands in our village. Seeds of fruit trees were brought from Plainfield, Conn., in the the year 1799, by Deacon Wm. Clark then migrating with his family here for settlement. A nursery was grown from these seeds, and this Clark Apple and one or two others of less value are the only seedlings worth preserving, although many old orchards of native fruit from this nursery are still standing in the neighborhood, owned by the lineal descendants of the first proprietors. La Plume is four miles from here, so there is no serious discrepancy of statements except as to time. The tree now standing is a sucker from the parent tree which fell many years since, and is at the corner of the barnyard of Dr. Hiram H. Nichols, whose wife, formerly Miss Clark, inherits the patrimonial estate on which it stands. The apple is well described by Mr. Downing in the above issue and is not extolled a whit too much.

S. S. STEVENSON.

Clark's Green, Pa.

Miscellaneous.

SUGGESTIONS FOR SPECIAL NUMBERS OF THE RURAL.

I trust the RURAL will not deem it an impertinence in me to say how much I like the "Special" features of the paper; how I enjoyed the Corn Number and the "Decorative" Number, or, as it was termed, the Plant and Shrub Number. I would suggest a "Garden Sass" Number and a "Root" Number—the "garden sauce" to comprehend such vegetables as would be desirable for the farmer to cultivate for home consumption, both in a fresh state and for Winter use. I should much like to see what vegetables the RURAL would recommend. It should also contain instructions for cultivation and for keeping, so as to be used at other times besides when fresh from the garden. Beyond a few heads of lettuce, a few radishes, a "mess" or two of peas, as many of beans in the Spring, and of potatoes, a few beets, onions and turnips, the ordinary farmer has mighty little to add to his fare of bread and meat—the latter in many cases salt at that. Perhaps the RURAL would suggest some vegetables as worth a trial.

In the "Root" Number we might get an idea of what roots to raise for stock to mix with dry fodder for improvement of stock—roots that could be easily raised and cared for, besides turnips, which are about the only crop raised by the average farmer. Of course, progressive farmers raise others. Or perhaps the RURAL might venture the opinion that roots will fall off in demand and use, now that we may *can* our fresh fodder in silos.

The "Garden Sass" Number might contribute to the health of the rural community by a greater variety of diet. Too many people live in an atmosphere in Winter of volatilized grease, volatilized by griddle greasing for pancakes and the frying of meats. It would thus contribute to health, contentment and longevity. The "Root" Number, by improving the stock feed, would contribute to the increase of farm profits and contentment with farm life.

G. H. R., M. D.

REMARKS.—We are obliged for all such suggestions. It should be borne in mind, however, that each issue of the RURAL treats of farm topics, and it is only the most valuable

farm crops that it is well to devote special numbers to.—EDS.

Minnesota Sorghum Sirup.

C. F. Miller, of Rice Co., Minn., writes us:—"I have taken the liberty to send you a small sample of the *pure* "Minnesota Amber-cane sirup" by express, so as to let you see what can be made by any of the ordinary men in our county, who are skillful and handle things aright. I see by my correspondence that a lively interest is being taken in your State (my native State,) in this new and valuable industry, which is already assuming mammoth proportions in the West.

The "goods," as you will see, are entirely free from that peculiar, "green vegetable" taste, which has been so objectionable to the market value of sorghum sirup heretofore. This kind of sirup can be made by the thousands of gallons by every farmer who has a small capital, say $500 to invest. It takes no elaborate machinery to make good merchantable goods, that will sell in any market in the world. The sugars are of a bright, beautiful, light-brown color, very lively, and they are capable of being refined into the white sugars of the best grade. C. F. MILLER.

REMARKS.—Thanks to Mr. Miller. The sirup is in taste soft and agreeable without any of the characteristic or half-acid taste of poor molasses. Its color is a clear, reddish amber.

RURAL BRIEFLETS.

SOME friend sends us the following slip cut from a contemporary:—

"THE LADY APPLE.—In the Review of January 13 I read an item from the RURAL NEW-YORKER to the effect that the Lady Apple sold in New York city during the holidays at $6 to $7 per bbl. I don't doubt the truth of this statement, for I have often read of them selling at nearly twice that sum. Are not such items, unless accompanied by an explanation, calculated to deceive the general reader? The Lady Apple, Pomme d' Api, is a small flat apple, too small for general use, the largest of them not larger around than a silver dollar. When ripe, they are beautiful in color, being a rich golden orange, with bright carmine red cheek. In quality they are first-class, but the labor of gathering and packing them for market is why they cost so much money. They are seldom bought except by rich people, and therefore not adapted for general purposes. One of the reasons for their selling so high is that they are great keepers. Their size is the great objection, as a man can gather six or eight times as many common-sized apples in a day as of Ladies." G. F. N.

What is there deceptive about such statements without an explanation? Whenever we mention the price of the Lady Apple, must we tell the whole story? The reason which G. F. N. gives why they are not adapted for general purposes, viz., that they are seldom bought except by the rich, is a queer reason. This fact, standing alone, should adapt them for general cultivation—at least while they sell for six dollars and more per barrel. . .

WE have received the following letter from a writer in Rosewood, Fla:—

"On the 4th of the present month a man by the name of Charles H. Hogan (at least he signed his name so) pretended to act as agent for quite a number of papers, and among the lot was the RURAL NEW-YORKER. I paid him $1 25 for a year's subscription for the same. I have waited a sufficient length of time, but no paper has yet come. I now think I have been humbugged. Please let me know whether you know anything of such a person. Is he all right, or have I been humbugged?"

We know nothing of Mr. Hogan. Whenever the RURAL NEW-YORKER is offered for less than $2 00, it should excite a suspicion that something is wrong. . . . . .

WE desire more than ever before to rid our columns of deceptive or humbug advertisements, and to render this department of our journal as trustworthy as any other. It is right that we should in all ways endeavor to assist trustworthy advertising patrons. Thus we help our readers, our advertising patrons and ourselves. But in order to do this the obligation is potent that we should expose fraudulent advertisements, and to this end we ask the co-operation of our readers. Their complaints are promised prompt and careful investigation. . . . . It *often* occurs that advertisements come to us with the appearance of entire reliability. We inquire of the agent through whom the advertisement comes and are assured that such is the case and that the firm is entirely respectable. The advertisement is inserted, and but for the complaints which reach us from our subscribers we should never know in many cases that the advertisements were not to be trusted. . . . . Here is a case to illustrate:—

"Elkhorn, Todd Co., Ky.—We noticed in one issue of the RURAL the advertisement of Chase & Co., of Westboro, Mass. Our little daughter answered the advertisement, and what she got has turned out a perfect humbug.

MRS. C. A. M."

Thus warned, the advertisement was at once thrown out, and others from the same party through the same agent were rejected. One of our young men ascertained by diligent inquiry that Chase & Co., of the Literary Guest, Westboro, Mass., and Wilds & Co., of the same place, and Tracy & Co., Vane & Co. and Professor Gargell & Co. are all conducted by one JONES, and that the Post Office Department has forbidden mail to be delivered to him. Had we made *searching* inquiry before the advertisement appeared, some or all of this information might have been gleaned before. But the advertisement itself was not objectionable upon its face, and we had confidence in the advertising agent; so that the motive for further inquiry was wanting. . . . . It is mortifying to us to be obliged to admit that in spite of all reasonable efforts to guard against it, disreputable advertisers have from time to time been permitted to avail themselves of the columns of the RURAL NEW-YORKER. . . . . Here is another:—

"Rising City, Neb., March 25, 1881.—Please say to the patrons of your paper that Chase & Co., of Westboro, Mass., are frauds. Some weeks ago I noticed their advertisement in the RURAL, offering the Literary Guest for three months and a prize of two oil paintings of large size, valued at $6 00, all for 35 cents. We sent the 35 cents as directed, and after several weeks received the paper (which is only an advertising sheet), with a circular stating they had just run out of the prizes, but if we would send them 50 cents more they would send two other pictures. The paper is a deception and the whole thing an advertising swindle. F. M."

. . . . . .

IT is time that our readers were thinking of their melon patches and of procuring the seeds of the best varieties. The melon is a fruit that rapidly deteriorates unless care is given to the purity of varieties and the selection of seeds from the best and earliest specimens. Among watermelons we see that "CUBAN QUEEN" is highly extolled by our contemporaries, as well as by the firm who introduces it, viz., W. Atlee Burpee & Co., of 219 and 221 Church Street, Philadelphia, Penn. This firm has kindly sent us packages of the seed for trial. It is described as a recent introduction from the West Indies, and is considered the *largest* and *choicest variety in the world*. The skin is said to be beautifully striped and the rind seldom over half an inch in thickness. The melons are said to vary from a round to a round-oval in shape. The flesh is of a bright scarlet, remarkably solid, crisp and sugary. Fifty dollars are offered in three prizes to those who grow the first, second and third largest specimens. We cannot speak of this melon from experience, since we have not tested it. The only doubt in our mind is whether the season in this climate will prove long enough for it. No matter how excellent a variety of watermelon may be, unless it ripens before the cold nights of early Fall it must prove worthless. We should like to have some of our readers compete for the prizes and to hear as to the value of the Cuban Queen. Let us suggest that the seed-bed be made in light, sandy soil, in a warm exposure, and that the hills be enriched with *rich*, light soil, rather than with manure, even though well rotted. One strong plant in a hill is enough—the hills six feet apart each way. . .

OUR many, many old friends will share with us a feeling of regret that our "Free Plant and Seed Distributions" are sometimes the cause of exceeding annoyance. We present below the letter of a new subscriber—an intelligent man seemingly—who presents his strictures in a style as ironically forcible as they are unjust—at least so it appears to us. We have numbered the essential parts of the letter so that the reader may readily connect them with our comments.

SALEM, Dent Co., Mo., March 28, '81.

On reading the article in last RURAL, 26 inst. "To Rural Subscribers" it came into my mind that the writer had taken a supper of mince pie and hard-boiled eggs or had been the recipient of a curtain lecture the previous night. Although it did not mention the writer hereof, he felt it all the same, for the seeds offered had something to with his subscribing, yet he would have subscribed anyhow. (1,) Now, whether it is your intention to give the seeds as a premium or not, it seems to me it is but a play on words; most, if not all, subscribers so take it, and I suppose you would not offer them did you not expect it to be an inducement to subscribe. And then (2), you don't allow anybody to thank you. Well I propose to say I am very exceedingly thankful—to Providence, that so many good things as the RURAL prints in the course of a year can be had for the insignificant sum charged and a what-will-you-call-it, thrown in. As to what is said about not valuing a certain kind of subscribers very highly, if I should express myself just as I felt I should say (3), it was none of your affair what induced them to subscribe. (4), Don't tell a man he is a fool for giving two dollars for an article that he could buy for one. Thankfully and Respectfully,

A NEW SUBSCRIBER, T.

(1). As we understand the word "premium" as used in this country in connection with journalism, it is a peculiar kind of pay offered for the services of agents and others as an inducement to procure subscribers. It is submitted that we have never offered seeds or plants for this purpose. Our first distribution of seeds was made in April five years ago; our next in September four years ago; our next in the March following. Three years ago we distributed 10,000 packets of Clawson Wheat raised at the Rural Farm gratuitously. We have thrice sent a small assortment of seeds to the members of our Youths' Horticultural Club which now numbers 1,000 names. We have twice sent out cuttings of the Salix pentandra. In some of the above cases we have made no charge even for postage; in *all* others less than we ourselves have paid.

Must such distributions be considered *premiums?* For the past three years our *main* Distribution has been announced during the latter part of the year, and for the past two years, these Distributions have been advertised in connection with the Rural's Experiment Grounds as a *means of inducing subscriptions* and increasing our means of not only continuing them but of rendering them more valuable from year to year. Are they *premiums* therefore? (2). Yes, we "allow" our friends to thank us and are grateful to them. But we do not think that we are entitled to thanks. The obligation is mutual, as we have said, or, if not, the balance of indebtedness is due from us to our subscribers whose support enables us to continue our distributions. (3). We have never said that it *was*. We have said that we did not value subscribers who view our distributions of seeds and plants *merely* as a method of gaining subscribers and who have no appreciation of the motives which influence the management of the RURAL NEW-YORKER. If these distributions are to any great extent the means of securing new subscribers, we have to reply, first, that we have never been made aware of the fact, and second, that it is the *costliest* method of advertising that publishers ever adopted. We have no doubt whatever that in a *given* season the money which our "Distributions" cost, if judiciously invested in advertising, would be far more effectual in securing subscribers. In the long run, however, we do entertain hopes that the real value of the plants and seeds which we have introduced and may introduce will promote the aims of this journal as mere advertising never could. (4). This remark we may not comprehend. Does the writer mean that we must not call him a fool for giving two dollars for the RURAL NEW-YORKER which is worth but one? Or does he mean to imply that he pays two dollars for the seed, etc., which are worth but one dollar or perhaps less? We can only reply that all seedsmen charge 25 cents or more per packet for new and valuable kinds. Oftentimes the enterprising seedsman desiring to be foremost in the introduction of novelties, offers them with no other knowledge of their worth than the commendations of the originators For the most part, however, in the many distributions we have made, we have ascertained their value *before* offering them to our subscribers. Scores of "new" things have been tried at the Rural Grounds and rejected where one has been preserved. That we have been successful in introducing or disseminating new seeds or plants of high value, the Cuthbert Raspberry, Beauty of Hebron Potato, Blount's White Prolific Corn, Clawson Wheat, the Acme Tomato, Golden Mangels, Ennobled Oats, etc., etc., not to mention any flower or hardy shrub or tree seeds included, will sufficiently attest—and we entertain a lively faith that the present Distribution may add to the list strangers that come to stay.

Finally let us repeat. *If any of our subscribers, for any reason whatever, are dissatisfied with the* RURAL NEW-YORKER, *we agree, upon being so advised, promptly to refund the money for the unexpired term.*

What Others Say

A MEMBER of the Western N. Y. Farmers' Club, as reported in the Am. Rural Home, used to think that a man who would dilute milk was a villain. He tried to establish a route for pure milk, advertising quite extensively. But he found it up-hill business. He found but very few who were willing to pay more for pure milk. Citizens seemed generally satisfied with watered milk. He ran the business about three years, losing money all the time, jeered at by other milk-men, and then he took to wholesaling his milk. In fact, the price of milk has been reduced so low by watering, that an honest milk-man cannot live.

APPLES AND PEARS.—M. Carrière gives in a recent number of the Revue Horticole figures of an apple which produces on the same tree and even from the same spur, fruits, some of which have the true depressed-globose form of the apple, while others are pear-shaped. The tree grows near Rouen, and was inspected by M. Carrière himself. It is stated that it was only in shape that the fruits varied, the taste and perfume being in all cases those of the apple.

HERE is an important bit of experience which Mr. Bennett gives to the N. Y. Hort. Society:

About three months ago Mr. Bennett became fully convinced that smoking or fumigating destroyed the color of high-colored rosebuds. Instead of fumigating, about December 12th he began using cut tobacco stems as a mulch, and since then had rarely seen a green fly until recently. About seven weeks after mulching, the fly began to appear and the plants were soon covered. Used the mulch again, and now the plants are perfectly clean, the fly actually having died from the fumes of the mulch. It not only is a preventive, but a cure.

John Henderson asked if there was any economy in using the mulch. Mr. Bennett answered he thought there was in labor. Two boys could cut up enough tobacco in a day for a house 100 feet long. He used a hay-cutter.

Mr. Henderson: "Does take more tobacco?"

Mr. Bennett: "It might take more tobacco, but refuse tobacco stems are plentiful and readily obtained."

John Eagan said there was no doubt but that fumigating bleached the buds of roses.

Peter Henderson stated his experience in using tobacco to destroy thrip on dracænas. He made a decoction like strong tea, or rather strong coffee, and dipped his plants therein; found it very efficacious.

Mr. Bennett said he forgot to mention that tobacco stems used as a mulch acted also as a fertilizer. Since using it, he had noticed a great improvement in the foliage of his roses.

MR. JENNER, as we see in the Rural Home, planted potatoes in coal ashes two feet thick, and they yielded fair-sized tubers of good quality. There were no wood ashes among them, as they were taken from a stove that had burned all Winter without re-kindling.

ADULTERATION, one would imagine, had in this country reached the limits of its evil perfection, says the Agricultural Gazette, (Eng). But it is evident, from a report just published by the Illinois Humane Society, that in this branch of knavery we are far behind our unscrupulous kinsfolk over the sea. In Chicago they have lately started into the business of adulterating neat cattle by weighting them with water. This is accomplished by the stockman in charge of a car-load of steers mixing salt plentifully with the provender given the animals at the last feeding station before reaching Chicago. This, of course, excites unquenchable thirst. Upon landing the brutes at the stockyard, they are given all the water they can drink, until—so it is affirmed, though the statement may excite the scepticism of an anatomist—they "have been known to burst open from a plethora of liquid in the stomach." The cattle are then sold, when, it is needless to say, the butcher has to pay for the water at the price of beef."

VITALITY OF CIONS.—Mr. Wier tells the Prairie Farmer that he had kept cions of the pear in sawdust from early Winter through the whole of the following year, and to the next June, fresh and in good condition, and when inserted as grafts they grew, and trees are now bearing from them. Mr. Wier quotes the remark of Van Mons that grafts received by him after being three years in the mails had been inserted and grew.

OH! the unwritten and unwritable code of the successful farmer.—London Ag. Gazette. . . . . The Western Rural says that Dr. Loring is too much of a politician to make a good Commissioner of Agriculture.

BOOKS, CATALOGUES, ETC.

KISSENA NURSERIES, FLUSHING, N. Y. PARSONS & SONS COMPANY.—Descriptive catalogue of ornamental trees and shrubs. We take pleasure in calling the attention of our readers to this catalogue which is, all at once, comprehensive, simple, accurate in names and possessed of a carefully prepared index. This firm through a number of years, has given studious attention to novelties. All of any promise, both abroad and at home, have been purchased and tested, the inferior rejected, the good propagated for sale. Among these we are greatly pleased to see offered for the first time the "Sunray Pine," which, to our thinking, is the handsomest evergreen in cultivation. The plants offered are no doubt small and the price high. But the golden beauty of this plant would tempt one to purchase it in spite of size or price. Our own specimen, now about four years old from the nursery, is about two feet high. It has not been harmed by the Winter, so that it may be estimated as hardy enough to stand 16 deg. below zero, at least. Besides a long list of novelties, all of the old kinds are briefly described and both the familiar and botanical names given. Lists of roses, azaleas, rhododendrons, &c., are also presented.

WE have received the catalogue of E. Y. Teas, of Indiana, respecting which we desire to make a comment or so. Upon the last page is a re

production of our cut of the White Elephant Potato published in our Fair Number of last Fall. No credit is given for this cut. He says that he has grown it "the past season and believes it to be equal to what is claimed for it." Where did Mr. Teas get his seed from? Either from the introducers or the originator. The former sold no seed "last season." The originator sold the entire stock to the introducers. A specimen or so was sent to supposed trustworthy parties with the request that they would try it and report. Has Mr. Teas's stock of potatoes, eyes of which he offers for sale, come from such specimens? If so, his stock must be very small, and it can scarcely be deemed quite honorable that he should, under the circumstances, offer them for sale at all.

PROCEEDINGS of the American Poultry Association at their eighth annual meeting, held at Cleveland, Ohio, Jan. 31 and Feb. 1, 1881. Geo. S. Josselyn, Fredonia, N. Y., Secretary.

HOVEY & Co., 16 South Market Street, Boston, Mass. Illustrated Seed Catalogue for 1881. A long list of novelties. Among peas we notice the Telephone, sent out by the RURAL NEW-YORKER to subscribers two years ago. We have received many reports from our friends to the effect that the Telephone is a valuable variety. Also Hovey's Illustrated Catalogue of new or rare plants for 1881. Both will be sent without charge to applicants.

ILLUSTRATED PRICE LIST of harrows, cultivators, horse-hoes, road-scrapers, garden and field rollers manufactured by the Higganum M'f'g Corporation, Higganum, Conn. Sent free to applicants.

F. R. PIERSON, Tarrytown, N. Y. Illustrated catalogue of garden supplies of all kinds for country homes—seeds, plants, fruits, etc. Free.

W. V. SKED & Co., 1,451 St. Clair Street, Cleveland, Ohio. Catalogue of green-house and bedding plants.

GEORGE S. JOSSELYN, Fredonia, N. Y. Descriptive catalogue and price list of high-class poultry. Free.

Everywhere.

RURAL SPECIAL REPORTS.

ILL., Hagarstown, Fayette Co., March 30.—We are having very bad weather here for wheat. It froze very hard last night and snowed some this morning. Wheat is very badly hurt in spots and some pieces will have to be plowed up. We shall not have half a crop unless I am very much mistaken. No plowing has been done here yet. The season is a month behind ordinary years. Raspberries and peaches froze to death. There is very little old wheat in this part of the country, and what little there is doesn't bring enough to pay the farmers for raising it. When wheat does not sell for $1 per bushel the farmer doesn't get pay for his labor. J. H. B.

IND., Lagrange, Lagrange Co., March 28.—The Winter has been long and cold with plenty of snow, which made business lively in the lumbering line. Wheat looks quite well, though small. The quantity sown is equal to that in any past season. Stock has wintered well. Feed is plenty yet. There is very little disease among stock. We shall soon have a cheese factory in our place. This a good fruit country; apples, peaches, plums, etc., and all the small fruits do well. Our farmers greatly pride themselves on having the best of fruits. N. S.

IOWA, Masonville, Delaware Co., March 27.—I notice that there is much snow all over the world where snow has ever been in man's time and in many places where snow was never seen before, and we have not been forgotten. We had plenty of snow already, and yet to-day we are having another fall. I suppose we shall have Spring some time, so that farmers can go to work as usual putting in crops. Many have corn yet in the field not picked. Hay is plentiful enough yet to last until June. Prices here are:—hay, $3@7 per ton; corn, 23@25c.; oats, 25c.; potatoes, 50@75c.; Timothy seed, $2.75; live hogs, $4.50@5; beef cattle, $3@$3.50. Last season there was considerable Amber-cane raised. I anticipate more will be planted this year, as sorghum sirup is getting more in use here. No sugar has been made; but no doubt some will be made another year. I look for the time to come, and within a few years, when we in Iowa will make all our own sugar—a large item in our expenses, the home supply of which will save many thousand dollars yearly to our county alone. N. C.

IOWA, Carroll, Carroll Co., March 24.—This has been a long, tedious Winter in this State. The earlier part of the season was remarkable for extremely cold weather. February and March have been notable for tremendous driving snow storms. Farmers in the West depend largely on their corn-stalks in wintering cattle. The great depth of snow has shortened this source of supply. It will be a lesson to many farmers in this county. There will be fewer straw-stacks burned next Fall than usual. I do not think small fruit has suffered, as it has been buried under snow drifts most of the Winter. Not one farmer in ten has finished husking corn, and the snow is two and a half feet deep in the fields. We had no prospect of Spring until within the last two days. It is thawing now, but it will be many days before we can sow wheat. G. S.

IOWA, Kosauqua, Van Buren Co., March 29.—Yesterday we had another snow storm—one of the heaviest of the season. It is putting the farmers back with their Spring work. W. C. W.

KAN., Larned, Pawnee Co., March 28.—We are having a genuine March squall to-day. Wheat is pretty badly damaged. S. L. D.

LA., Clinton, Feliciana Parish, March 28.—Our corn is up. Cotton planting will commence next week. Peaches are now about the size of buckshot. Apples and pears are in bloom. Potatoes are up and booming; peas already stuck. Corn is worth 85c.; pork, $18; horses and mules, $100@130 Strawberries are in bloom, and raspberries just putting out. No land surpasses this for health, climate, water and varied crops. Our necessity is population. Land can be now bought for $2 to $5 per acre, much of which will bring a bale of cotton, worth $40. per acre. Why immigration does not come to Eastern Louisiana we cannot tell. There is not a veterinary surgeon within 50 miles of this place. W. E. K.

MICHIGAN, Bear Lake, Manistee County, March 26.—Everybody about here is interested in the great discovery that has recently been made. Salt springs were found on the Manistee River at an early day, and for several years a good deal of anxiety has been expressed to know what was under the county. Nearly or quite two years ago Mr. Chas. Reitz commenced boring for salt, although geologists declared no salt would be found in this region. Unswerving perseverance, however, has at last been richly rewarded; for salt, pure salt, has at last been reached; not brine alone, but a solid bed at a depth of 1,930 feet. Thirty feet of salt had been bored through when a solid substance was struck. The water spouts out of the top and runs off into the lake; the stream is large enough to fill a two-inch tube and is, of course, as strong as water can be made, containing 36 per cent. of salt to 100 parts of water. It is a great success, and several mill-owners are making preparations to put down wells immediately. Dr. Garrignes, State salt inspector, after testing a sample, gave his opinion that Mr. Reitz has struck the rock salt deposit, his being the first well that has reached the primary salt field in Michigan. He also says that bicarbonate of soda, sal soda, and soda ash are all made of salt. Four million dollars' worth of these are yearly imported into the United States. Is there not a chance here for men to make fortunes? These new industries will lift Manistee out of the backwoods in a very short time. Already this new discovery has affected the value of real estate, and there is no doubt but there will be a greater addition to the population this Spring by immigration than for several years past. Besides the manufactures that give employment to so many hands, there will be a fine chance for enriching the farms with agricultural salt, that is usually sold for a very low price at the salt fields. The future of Manistee is sure to bring wealth to its industrious, enterprising inhabitants. There are but few if any of the northern counties of Michigan that have a brighter prospect. In the first place, it is one of the healthiest locations in the world. Secondly, it has an extensive lumber business, which is likely to last for many years. Miles of lumber are made every day in the sawing season; and it is said more shingles are manufactured here yearly than in any other county in the Union. Thirdly, it is a fine fruit-growing region, and the farming lands are constantly improving; and now to "top off with," we have the very best salt bed yet discovered in Michigan, if not the very best on the Continent. Whoever is desirous of obtaining many of the good things of this life, especially good health and good salt, should come to Manistee County. Apples, per bbl., $1.50 to $2 25; butter, 15 to 25 cents per pound; eggs, 25 cents a dozen; lard, 11 cents per lb.; potatoes, 55c. M. E. A.

NEB., Rising City, Butler Co., March 28.—We have Spring at last. We have had abundance of snow and cold, bad storms. Stock has suffered for want of shelter and food, there being nothing left but straw, and not much of that. Our snow is gone and farmers are just beginning to sow wheat. We anticipate good crops this year. Immigration has already commenced; we look for better times. F. W.

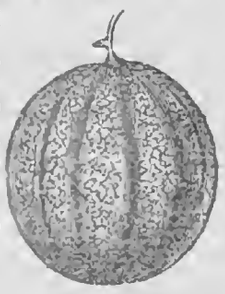
OHIO, Dent, Hamilton Co., March 28.—We have passed through a long and very severe Winter, and it continues cold. Peaches are all killed and early cherries and other fruits are badly damaged. Clover is one-half or two-thirds frozen out, and wheat looks as if it were pretty nearly gone; time has to determine what the future crop will be. A. T. P.

Trees, Seeds, Plants, &c.

82-POUND CUBAN QUEEN WATER-MELON.

This new Melon from the West Indies is certainly the **Largest** and **Finest Variety** in the world. All who saw our crop the past season remarked they never before saw such a large, fine Melon, nor any so **wonderfully productive.** Their flesh is bright red, remarkably *Solid, Peculiarly Luscious, Crisp, and Sugary*—surpassing all others. On a Melon of enormous size there is barely half an inch of rind! They are very hardy, strong and vigorous in growth. *Price 25 Cts. per Packet of 15 seeds;* 6 Packets for $1.00, post-paid. We offer **$50.00 IN CASH PRIZES**, to be awarded as follows:—$25.00 to the grower of the Largest Cuban Queen Water-Melon; $15.00 to the grower of the second largest, and $10.00 to the grower of the third largest. Do not fail to try and see how large the **Cuban Queen** can be grown.

☞ **OTHER SPECIALTIES FOR 1881.—Burpee's Netted Gem Musk-Melon** (see illustration), the most productive and most delicious small Early Citron. Price, 25 Cts. per packet. **Montreal Green Nutmeg,** the largest Musk-Melon known, weight 22 lbs., and of superb flavor. Packet, 25 Cts.



Burpee's Climax Tomato, far ahead of Acme, and the best of all tomatoes. Price, 25 Cts. per packet. **Burpee's Surehead Cabbage,** always heads. 15 Cts. per packet. **American Wonder Peas,** genuine, 15 Cts. per packet; 60 Cts. per pint, post-paid.

A New Morning-Glory—The Eclipse, from Brazil, surpassingly beautiful. 20 Cts. per packet.

A Liberal Offer only to those who order from this advertisement. **For Our Dollar** we will send, by mail, post-paid, to any address, one packet of each of the above, amounting in value to $1.50, and will **also** give two trial packets of **New Early Cabbages** and a sample of the **New Golden Grains Wheat. Order now!** *Postage-stamps accepted as cash.*

Burpee's Farm Annual for 1881, beautifully illustrated, mailed free to all who write for it.

Address W. ATLEE BURPEE & CO., Seed Warehouse.
Nos. 219 and 221 Church Street, Philadelphia, Pa.

E. P. ROE Supplies Country Homes with choice first-class Small Fruit, plants and Grape Vines, and makes some singularly liberal offers of plants with the superbly illustrated book "Success with Small Fruits." Descriptive Catalogue free. Address E. P. ROE, Cornwall-on-Hudson, N. Y.

ONION SEED.
CROP OF 1880.

Yellow Danvers	$3.50	₮ lb, or	5 lbs, for	$16.25
Large Red Wethersfield	3.75	" "	"	17.25

. Mailed free of postage. Special prices for larger quantities. ROBERT BUIST, Jr., Seed Grower, Lock Box 62. Philadelphia, Pa.

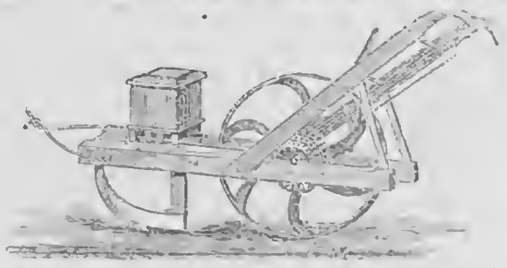
10 NICE CONCORD GRAPE-VINES for $1, by mail post-paid. *Think of it!* Order now for early Spring shipment. *Circulars free.* Wm. R. Reed, Chambersburg Nurseries, Chambersburg, Pa. Mention this paper.

RAISIN GRAPE VINES
By mail, BEST, 25c. each; 3 for $1. Cuttings, warranted to grow, 10c. each. W. A. SANDERS, Sanders, Fresno Co., California.

SEEDS—PLANTS—FRUITS, and
GARDEN SUPPLIES
of all kinds for COUNTRY HOMES.
Verbenas, 4c. each, Heliotrope, 6c. Pansies, 4c. Petunias, 5c. Coleus, 4c., Geraniums, 8c., and all other plants as cheap.
Valuable — PREMIUMS — given away.
15 Papers Choice Flower Seeds, for 50c.
F. R. PIERSON, TARRYTOWN, N. Y.
Catalogues sent free to all.—Write for one.

Implements and Machinery.

MOUND CITY CORN AND CANE SEED PLANTER.

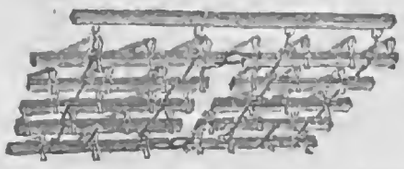


It will either drill 12, 16 or 20 inches apart, or plant in hills any desired distance. A perfect DRILL, and a perfect Check Row Planter.
We also have a stock of SELECT AND PURE CANE SEED which we will sell at low prices. Send for price and description to manufacturers.
J. A. FIELD & Co., St. Louis, Mo.

The FEARLESS.

VICTORIES — UNEQUALED
Is the **only** machine that received an award on both Horse-power and Thresher and Cleaner, at the Centennial Exhibition; was awarded the two last **Gold Medals** given by the New York State Agricultural Society on Horse-powers and Threshers; and is the **only** Thresher selected from the vast number built in the United States, for illustration and description in "Appleton's Cyclopedia of Applied Mechanics," recently published, thus adopting it as the **standard** machine of this country. Catalogue sent free. Address
BINARD HARDER, Cobleskill, Schoharie Co., N. Y.

THE VIBRATOR HARROW.



Best Harrow made. Cuts every inch of ground, & adapted to all kinds of soil. Peculiar shape of tooth makes it easy of draft and leaves the ground light and mellow. Relieves itself of all obstructions. Bundled very compact for shipment. 3 sizes cut 6, 8, and 10 ft. Agents wanted. Write for Circulars to
PHELPS & BIGELOW WIND MILL Co., Kalamazoo, Michigan.

PATENT TOOTH
HORSE RAKE
which does not scratch the ground and dust the hay. **Best Rake** made. Buy no other rake, and have clean hay.
New **Victor Lever Feed-Cutter.** *Largest and best made.*
The best **Champion Vegetable Cutter** made. Cuts a bushel of potatoes in 25 seconds.
JOHN R. WHITTEMORE, Chicopee Falls, Mass.

IMPROVED FARM IMPLEMENTS.
Non-Explosive Steam Engines, Best Railway and Lever Horse Powers, Threshing Machines, Straw-Preserving Threshers, La Dow's Disc and Steel Spring Tooth Harrows, Eagle Sulky Horse Rakes, Cultivators, Feed Mills, Feed Steamers, &c., &c. WHEELER & MELICK Co., Albany, N. Y. Established 1830. Send for Illustrated Catalogue.

The Old and Well Known
KISSENA NURSERIES
PARSONS & SONS CO., (Limited)
Flushing, N. Y.,
Near New York City.
ALL KINDS OF
HARDY TREES AND SHRUBS,
Including the Latest Novelties. Price Lists FREE.
LARGE NEW DESCRIPTIVE CATALOGUE, *Six Cents.*

THE ALBANY SEED STORE.
ESTABLISHED 50 YEARS.
WE OFFER
P. & K. **Extra Early Tom Thumb Sweet Corn,** the earliest and sweetest grown; are good size, sweet and tender, and a good cropper; will yield more salable ears than any other sort. Per pkt., 10c; per quart, 50c.; by mail, per ¼ bush. $1.50; per bush., $6.00.
P. & K. **Surprise Musk-Melon,** the finest flavored in the world; early, sweet, and prolific. Per pkt. 10c.; per oz 35c.; per ¼ lb 75c.; per lb $2.50, by mail.
P. & K. **New Mammoth Head Lettuce** attains a large size; has a compact head; white, crisp, and tender; a delicious sort. Per pkt. 15c. by mail.
Beautifully Illustrated Catalogue free by mail.
PRICE & KNICKERBOCKER,
80 State Street, Albany, N. Y.

BERRY BASKETS.—BEST, CHEAPEST. Free Circular. N. D. BATTERSON, BUFFALO, N. Y.

"HAWLEY'S" Choice Onion Seed.
WARRANTED FRESH AND GENUINE

Early Red Globe	Pk't,	10c., oz. 25,	lb.	$3 50
Wethersfield Large Red	"	10c., oz. 25,	lb.	3 50
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The best advice we can give our readers for the season is to *prepare* the land for crops better than ever before. It will pay you, good friends, to do so. Try it. Use less manure if you will; but harrow the plowed ground until it is smooth, and mellow.

It is very generally taken for granted that salt is an excellent if not a needed fertilizer for quince trees, asparagus plants, etc. Many tell us how much they have applied "without doing any harm." Did it do any good? Who can tell from actual experiment?

In reply to continued inquiries we would say that we advise none of our readers living north of Iowa City, Chicago, Toledo or New York to plant Chester Co., Mammoth Corn. Last year was an especially favorable one for corn and this variety needed all of it to ripen fully.

The first announcement that Ricketts's "Secretary" Grape was a failure as tested at the Rural Grounds, was made in these columns two years ago. The second announcement that we have seen comes from Mr. W. C. Barry, who says:—"It has turned out to be a great failure. The fruit is small, of medium quality, not so good as Clinton. The vine is a miserable grower and the foliage poor."

We have tried the effects of commercial fertilizers of liquid manure, of old stable and barn-yard manure on various crops with which we desired to excel. But the very best results have been obtained from a mixture of thoroughly decomposed leaves, stable manure and muck—that is, so decomposed as to form a *soil* of these substances. If any of our readers wish to grow prize vegetables of any kind, let them try it.

Melons and Cucumbers.—For early melons or cucumbers many plant the seeds on inverted sods cut about four inches square. The sods are placed in a frame of any kind and covered to the depth of half an inch with mellow, rich earth. The plants root firmly in these sods the same as they would in small flower-pots and may safely be transplanted as soon as the weather becomes settled and warm. For melons this is an excellent plan, since our seasons are scarcely long enough to ripen them before the cool nights of Autumn, when the seeds are planted in the ground in the usual way. Late melons are never sweet.

Not an American Among Them.—The shipments of grain from this port last month amounted to 6,645,712 bushels, including 4,043,343 bushels of wheat; 2,514,036 bushels of corn and 88,336 bushels of rye. To transport this vast bulk the services, in whole or part, of one hundred and seventy-three vessels were needed—ninety-two steamers, twelve ships, sixty-eight barks and one brig. Of these, one hundred and four were British; nineteen, Norwegian; seventeen, Italian; eight, Austrian; six, German; six, Belgian; four, Swedish; four, French; two, Danish; two, Dutch; one Portugese, but there wasn't an American among them!

Is it Thrift or Parsimony?—The establishment of an Experiment Station in connection with the agricultural college at Amherst, is strongly advocated by the farmers of Massachusetts. That objections should be made in the Old Bay State to the trifling cost of so obviously beneficial an institution is, indeed, a matter of surprise. That the favorite abode of intelligence, enterprise and culture should be ignorant of, or insensible to, the advantages its struggling agriculture must derive from such a station, cannot for a moment be suspected in view of the fact that States with much more modest pretentions to these virtues are wide-awake to the benefits derivable from such institutions. That Massachusetts is also the favorite abode of thrift on this side of the Atlantic, may account for her hesitation in making a liberal appropriation for the station; but her intelligence must surely soon apprehend that such thrift is of the penny-wise-and-pound-foolish sort.

Cheap Homestead Adornment.—Farmers, strive to make your homes *homelike*. We do not ask you to spend money beyond your means for shrubs and trees, flowers and vegetables. But do what you can while not permitting the more pressing interests of the farm to suffer. Plant a few trees and shrubs, even though they be taken from the woods or fields. Plant grape-vines even though you go to a neighbor for cuttings. Sow the seeds of apples and pears for stocks upon which to graft the finest kinds that are cultivated about you. Plant currant and gooseberry cuttings, if you cannot procure the plants. Try a few rows of celery—a plot of asparagus. All this and more may be done by any farmer who *desires* to make his home *homelike;* to attach his children to it. He will at the same time be setting a good example to indifferent farmers and in the end he will find that he has materially added to the sum of his happiness.

The Season.—All over the North and over a good deal of the South, too, the season is still backward, ranging behind the average for a decade of years from seven to 14 days in States bordering on the Ohio to fully a month in Northern Minnesota. At the end of last week the Signal Service reported the temperature over the Northwestern States at about freezing point except in Minnesota where it still averaged below zero. Even there, however, it is expected that the ground will be fit for seeding to begin by April 20, though in the Red River Valley it will be later, while in Dakota it is expected to begin about the 10th. In Iowa and Wisconsin the prospect is that it will be as late as the 16th, and that owing to the tardiness of the season and the curtailment of Fall plowing by the early advent of wintery weather, there will be a diminished acreage of small grains. In Illinois, Michigan, Indiana and Ohio reports with regard to Winter wheat are variable, although the majority are favorable for a good crop. Missouri and Kansas are still rejoicing over their prospects of an unusually fine harvest. Last Spring seed sown after April 17 throughout the Northwest, made a much better crop than that sown a month earlier, and various published records for a series of years go to show that late-sown wheat has done the best. This fact together with the consideration that Winter can't last all Summer or even all Spring, must afford some solace even in the bleakest quarters.

Opposition to the introduction of American live stock and cereal products is rapidly growing among the agricultural classes in every European country. In Germany the chief agricultural societies have been earnestly beseeching Bismarck to protect home industry by laying a strongly protective if not a prohibitive import duty on grain and "provisions" from this country. The Great Chancellor, finding their prayer in accordance with his own predetermined policy, has graciously already imposed a considerable tax on imports of our products and may yield to the farmers' late entreaty to increase it. In France similar petitions have been addressed by the farmers to the Government, and last Tuesday the Secretary of Agriculture promised that in order to leave the Ministry complete liberty to tax imported cereals and cattle, these should not be included in commercial treaties. In the United Kingdom farmers and their special organs in the press are constantly on the outlook for some plausible pretext for insisting on restrictions on importations of agricultural products. Despite the hardships brought upon them by successive bad harvests and close competition with cheaper foreign meats and breadstuffs, the agriculturists of the country have hitherto been restrained from boldly advocating the imposition of protective duties on these products by the consciousness that a protective policy could not be consistently adopted in their favor by the foremost, or, rather, the only advocate of free trade, among the nations. Should another bad harvest, however, aggravate their distress, it would cause us little surprise to find the British farmer giving loud expression to his present taciturn belief in the right and expediency of a protective tariff, at least on goods that compete with his own.

ABOUT THE FREE SEED DISTRIBUTION.

As the Free Plant and Seed Distributions of the Rural New-Yorker are not offered *as* premiums but mainly for the purpose of introducing, without cost to our patrons, new plants which promise to prove of more value than those in general cultivation, the question may have arisen in their minds, why we do not bear the *entire* cost of postage as well as of the seeds and the expenses attached to putting them up. We have this answer to make. A considerable proportion of our readers are not so situated as to be able to give the seeds a trial. Many others read the Rural for the information derived from special departments, such as the poultry, swineherd, herdsman, querist, implement departments, etc. The seeds and plants are of little value to such readers. If, therefore, we sent our Distributions to all of our subscribers, whether they applied or not, we should put ourselves to the great and useless expense of sending them to thousands who do not care for them. The reputation which the Rural has established of testing all novelties, naturally induces persons who have novelties of high promise to introduce to send them to us for trial. In this way as in many others, our Distributions, the R. N-Y. itself, and our Experiment Grounds work admirably together. If the seeds, fruits or plants of whatever description prove inferior to old kinds, we are enabled to state the fact to our readers and thus save them the expense and disappointment of ascertaining it for themselves. If, on the other hand, they prove superior to old kinds, we at once set to work to secure a crop large enough to enable us to distribute them among our readers.

Attended as they necessarily are with a deal of vexation, we are, nevertheless, so well satisfied that the work is good and that we are pleasing our friends and serving the interests of agriculture and horticulture, that we shall apply ourselves to our *next* Distribution in the hopes that it may utterly eclipse any of its predecessors.

We are now well through with the present seed distribution except as to those who are still applying from day to day. We may now the more fully devote ourselves to our crowded columns and endeavor to show to our kind friends that we are deeply grateful to them for the prosperity which the Rural New-Yorker enjoys to-day.

THREE DISASTROUS FLOODS.

Floods are just now devastating vast tracts of country, terror before and death, ruin and desolation behind them. In Hungary the river Theiss, which destroyed most of Szegeden last year, is again threatening the rebuilt city with a like fate, having, owing to the bursting of a dam, flooded over 150,000 acres of the adjoining country and risen even higher than in '80. Many deaths are reported and four batallions of the army have been sent to combat this terrible foe. Nearly all the low lands of Southern Spain have been submerged by late storms and enormous destruction of cattle, crops and even human beings has saddened the land. Worst of all the floods there, is that in Andalusia where the Gaudalquiver has engulphed a vast area of thickly-settled country and driven the terrified inhabitants of Seville to the highest stories of their houses for safety. Several detachments of engineers and sailors from the fleet, as well as the king and high officials have carried encouragement and relief to the afflicted region. Mightiest of the floods, however, is that which the muddy Missouri has been pouring over its broad bottom lands, and which has already swept from Fort Benton nearly to Kansas City—more than 2,000 miles. Early in the Winter an enormous quantity of snow fell in Montana; and for the last five or six weeks, the weather there has been extremely warm—almost summer-like.

The rapidly melting snows have swollen the upper Missouri as well as the Milk River, Yellowstone and its multitudinous other tributaries to an extraordinary hight, and the aggregate waters have swept down with a mass of accumulated ice upon the frozen lower part of the river at and below Yankton, creating huge ice gorges that in several cases have diverted the river from its regular course for miles at a stretch. The broad valley between Yankton and Sioux City is the oldest settled part of Dakota, and here the lately prosperous farmers have, in most cases, been entirely ruined by the flood.

All the towns on the River from Bismarck to Council Bluffs have suffered severely, but along the bottom lands the loss and suffering must be far more appalling. In Europe the flooded country is so thickly-settled that help is always at hand, and the inhabitants have only water to encounter; but along the Missouri the homesteads are often so far apart or so hidden in "clearings" among timber, that neighborly aid is impossible, while huge masses of ice, drift-wood and wrack add to the horror and danger of the rushing waters.

EUROPE'S WAR ON THE AMERICAN HOG.

During the year ending June 30, 1880, our exports of hog products amounted to $84,838 242. This vast trade has lately been seriously threatened by the action of seven European Governments in forbidding importations of American pork through alleged fear of trichinosis. With six of these our trade was so small that its discontinuance can have little effect on our aggregate exports; but last year France took upwards of $17,000,000 worth of pork and ham, and the loss of the growing trade with that country, if permanent, would be a serious injury. In England some interested parties in and out of Parliament endeavored to induce the Government to imitate the unfriendly action the Continental powers, but they have met with a prompt rebuff, so that our annual exports of 700,000,000 lbs. of hog products to the United Kingdom are in no danger of being diminished by hostile legislation.

Both individually and collectively Americans eat more pork than the inhabitants of any other nation, and nearly every pound that is eaten here is home-raised, yet the deaths from trichinosis throughout the country in the course of the year are probably fewer than those from lightning. The few deaths that are known to have occurred from the disease in a series of years, have in nearly all cases been among Germans, Norwegians or Swedes, and have been due to the imported custom of eating raw ham and sausage or imperfectly cooked pork. Owing to the prevalence of this habit in Germany, Norway and Sweden the disease there is much more common than here, nor is it owing to the use of imported American pork, for the native hogs are pretty badly infested with trichinæ according to the published statement of a German professor who found the following results of microscopic inspection in various cities. In Brunswick trichinæ were found in one hog in 5,000; in Halle the proportion was one in 1,500; Gotha, one in 1,800; Schwerin, one in 550; Copenhagen, one in 465; Stockholm, one in 266; in Kiel, Prussia, one in 260, and in Lienkeping, Swenden, one in 63.

In veiw, then, of the fact that trichinosis is almost unknown both in this country, where in proportion to the population more pork is eaten than in any other nation, and in the United Kingdom where vastly more American pork is used than in the whole of Continental Europe, there seems no valid reason why the use of American hog products should be considered especially productive of trichinosis.

BREVITIES.

Sir Edward Thornton calls Trichina spiralis an insect, which is a mistake, it being no more an insect than is the tape-worm or any other entozoon.

Several years ago we spoke of the value of Red Top Grass seed for lawns—Red Top alone. One of the finest lawns we have ever seen was sown with this only. Three bushels of seeds to the acre for lawns are not too much.

Mr. W. C. Barry calls attention to the Melon Apple as having no superior as a dessert apple, if, indeed, it has any equal. Though the fruit is so tender that it will not bear handling or long carriage and though the tree is not vigorous enough to render it a profitable kind for orchard culture, yet it is so desirable a fruit for family use that it ought to be included in every collection.

The present excitement about trichinosis is sure to be productive of fresh discoveries, not only in relation to that disease, but also with regard to internal animal parasites in general. Already microscopic research, by post-mortem examination, has found that an organism closely resembling *Trichina spiralis*, yet fundamentally distinct from it, is generated in muscular and visceral tissues of defunct animals at a temperature of 85° to 90° Fah. in the course of from 24 to 48 hours, and earlier if the animal was suffering from fever before death, or if the air is moist as well as hot. This mite is called the "death vibrio," and is about the same size as the trichina, from which an expert only can distinguish it, chiefly by the circumstance that it has never been found encysted, while the trichina is generally met with in that condition. No doubt one has often been mistaken for the other. It is supposed to be a nearly universal phenomenon of animal decomposition, and to be often generated in hams, sausages and preserved meats in which post-mortem changes have not been completely arrested. A good deal of gastric disorders and septic fever is attributed to it, the symptoms of diseases caused by it and by trichina being very similar and the ratio of deaths about the same.

The Querist.

ANSWERS TO CORRESPONDENTS.

Live stock and Grass Queries.

A New Beginner, Dalton, Pa., asks, 1, a remedy for catarrh in sheep; 2, what is the best sheep for mutton and wool in Northwestern Pa.; 3, where can Short-horn and Jersey bull calves, and Cotswold sheep be bought; 4, would the Improved Kentucky sheep be profitable there; 5, which is the best breed of cattle to fatten for the butcher; 6, what is a good mixture of grass for the lawn.

ANS.—1, We suppose the catarrh is only a cold, which sheep are apt to take when exposed to high, raw wind, snow, sleet, and rain, or standing on muddy ground. Secure the sheep from all such, give them of Epsom salts or sulphur just enough to loosen their bowels slightly, and with their hay feed night and morning one to two quarts of wheat bran, or twice the quantity of roots, instead of grain. A half to one pint of oil meal (linseed meal is the same), is a good thing also to be fed with the above. 2, The best sheep for a combination of wool and mutton, are the English Downs. If the pasture is rather scant and the ground rough, the South Down is preferable. If the pastures are abundant, then the larger-sized Downs, like the Oxford, Hampshire, or Shropshire. But a cross of the Cotswold, or any large long-wooled ram on Merino ewes or their grades, produces excellent mutton lambs and wethers, and a fair quality of wool. 3, Short horn bulls, F. C. Cornell, Ithaca, N. Y.; Jersey bull calves, M Miles, Mountainville, N. Y.; Cotswold sheep, Joseph Harris, Moreton Farm, Rochester, N. Y. 4, We have heard these sheep highly spoken of; but whether they would prove the best kind for any particular locality, can only be ascertained by trial. 5, If pasture is abundant Short-horn cattle are the most profitable breed to rear for the butcher; but if feed is not very abundant, Devons are preferable, as they thrive on scantier fare. 6, The best mixture of grass for the lawn, is simply Red-top and white clover. Prepare the ground in the finest manner, then sow at the rate of eight quarts of the clover to the acre, and two bushels of grass seed. The seeds-men mix up half a dozen different kinds of grass seeds and clover for lawn sowing, but as these grow quite unevenly they do not make so fine a lawn as a single sort. Orchard Grass, also Rye grass, make a fine lawn, provided at least, four bushels per acre are sown, so as to come up very thick. No other grass or clover should be sowed with these. They come forward in the Spring earlier than any other sorts and keep green later through the Autumn, and if the weather is mild, into the Winter. They must be cut quite often, not be suffered to grow over four or five inches high, otherwise the grass will become coarse, and perhaps spread where not wanted.

Care of an Osage Orange Hedge.

W. H. C., Williams Co., Tenn., wishes to know how to plant and cultivate an Osage Orange hedge.

ANS.—The Osage Orange may be raised from seeds or from root cuttings. The oranges or fruits should not be sown in their natural state as the plants would come up in too thick clusters and much seed would be wasted. Seed already prepared can be obtained of leading seedsmen at 75 cents per pound. The seed should be sown in Autumn or Spring. If sown in the Autumn they will not make their appearance until Spring. Good, rich, well pulverized garden soil should be chosen and the seed put in, in open drills, with a hoe, about eight inches apart, the seeds two inches apart in the row. Cover them about an inch and a half deep. An occasional hoeing or stirring of the ground to keep it clear of weeds is necessary. The plants should be two years old before transplanted, though if the soil in which they have been growing was strong and rich, they may be transplanted after one year's growth, Spring is the best season for planting hedges in northern latitudes, but southward where there is no danger from the "heaving" of the soil in Winter, Fall planting succeeds very well. Before planting, the plants from the seed-bed should be carefully sorted, those corresponding in size and strength should be set together and each one cut down to within two inches of the ground line of the seed-bed and all the longer roots cut back about one-third their length. The hedge line should be laid out and plowed two or three feet wide and pulverized thoroughly. Two parallel trenches eight or ten inches deep should now be dug, and at a distance apart of about six inches, and in these trenches set the young plants twelve inches apart, breaking joints, as the carpenters would say. Press the earth down firmly around the stems and level with a hoe. The season after planting several shoots will be thrown out which are to be shortened back the ensuing Spring to within six inches of the ground, and then cut back each year's growth thereafter to twelve inches. The hedge should be trimmed in early Spring or Fall. Summer trimming is liable to be injurious to the hedge, owing to intense heat.

Planting Corn.

J. F., Bellmore L. I., intending to plant an acre of corn on the plan recommended by the RURAL—that is, in drills—asks for information as to culture, best kind of seed and sort of manure. The soil is a sandy loam, was sod last Spring; then it was plowed, manured well and planted to cucumbers for pickles.

ANS.—Such land should not need much manure. We advise to plow shallow and *harrow* in, say, six loads of farm manure to the acre—or from 250 to 400 pounds of corn concentrated manure such as may be purchased for about $40 per ton of Forrester, Bowker, Mapes; or the same quantity of fish guano or of "Soluble Pacific Guano" may be sown broadcast thoroughly mixed with soil. We should advise you to plant Blount's Corn except that we do not know of any seed offered for sale that has been carefully selected. The Chester Co. Mammoth will on such land unquestionably give you a handsome yield, if high winds do not prevail late in the season to lodge it. The fact is that every farmer should have his own variety of corn. It pays to try different kinds on small plots, and then to save the best ears from the most prolific stalks. Upon such plots—which should be as widely separated as the farm permits to prevent crossing—it is not much trouble to go over it as soon as the "sels" appear and cut off the tassels of all stalks that are barren or less productive than others. Then the most productive will be fertilized by the most productive. We URGE this upon our readers. It will *pay* them to do so. We would advise that the land be put in thorough order. If sufficiently dry roll it and then harrow. If tall-growing kinds are planted, let the drills be four feet apart and drop the corn in the drills, as close as may be, hoeing out at the first hoeing so that the plants stand from one foot to 16 inches apart in the drill. *Do not plow* after planting. Use a shallow cultivator to keep the surface mellow and free of weeds. Hoe and cultivate *flat*. There can be but one object in hilling up corn plants, viz., to kill the weeds. The hills give *no* support to the stalks and soil is taken for the purpose of hilling from where it is more needed—viz., from over the feeding roots.

Braxy in Sheep.

F. M. B., Sodus, Mich., asks what ails his ewes, and a remedy for the disorder. The first sign of the disease is their refusal to eat; in a few hours they throw up their heads and begin to stagger around the yard, and in a few hours more they lie down and begin to bloat, appearing in great distress, but they linger for several days before death relieves them from pain.

ANS.—This appears to be inflammation of the bowels, or intestinal fever, called by shepherds "braxy." It would be more satisfactory if our correspondent opened and examined a sheep. If our surmise is right, the sheep would be found to have a quantity of reddish fluid in the abdomen and the bowels would be of a purplish or a greenish color and of a fetid odor. It is hardly worth while to try to save a sheep when it is down, but when first taken the following treatment is advisable. Give a dose of two ounces of Epsom salts and dip a rug or sack in hot water and tie it under the belly. After the salts have worked off, give flax-seed tea or oat-meal gruel sweetened and put a teaspoonful of saltpeter in it. Repeat this for two or three days. Keep the sick sheep very quiet by themselves. It is the result of too much dry food. Smutty corn or corn fodder or musty food will cause it.

Small Fruits in Southwestern Kansas.

J. H. H., Garfield, Kansas, asks what sorts of small fruits are likely to thrive in Southwestern Kansas. Experience with fruits there is unattainable as none have yet been planted, and little or no interest is shown in their cultivation by the new settlers who comprise all the inhabitants there.

ANSWER BY PROF. E. GALE, PRESIDENT OF KANSAS STATE HORTICULTURAL SOCIETY.

The writer of this query will find it difficult to succeed at first with the varieties of small fruit that grow abundantly in the Eastern States. Success with any varieties is not assured. For two years past failure has been the rule in all the western half of the State. We are hoping for a better condition of things the coming year. But our first, second and third injunction to all planters of small fruits on the plains is, GO SLOW. You can discard all red raspberries. Strawberries will need careful mulching in Winter; and always plant something for protection—plant shelter-belts at once. Don't wait to see if you need them, for you will. Plant corn or sorghum or anything that will keep the wind off your garden the first year or two. There are reliable nurseries all through the West. Send to any of them for their catalogues. Then order direct from them either by express or mail, and you will do better than to order through any of the traveling agents.

Queries on Drainage.

W. L. F., Wyoming, N. Y., asks, 1, whether a good drain can be made of stone at a less expense than one of tile; 2, if tiles are used should a layer of stone be put on top of them; 3, how much more surface will a ditch three feet deep drain than one 2½ feet deep; 4, the name of the best work on drainage, its price and where it can be got.

ANS.—1, A stone drain may be made as serviceable as a tile drain, and in some cases better. When a sufficient supply of flat stone or stone that can be laid snugly, can be got, the drain may be laid as follows: a row of stones is laid at each side of the ditch, close to the side that the water may not pass behind, and these are covered with flat stones so that the joints are broken and protected. Above these upper stones is laid a quantity of rough or round stones for a foot in depth, and the earth is filled over these. If well laid such a drain will be permanent. 2. When tile is laid no stone should be placed on them or there will be great danger of breaking some of the tile by the pressure. 3, A ditch 2½ feet deep will drain as much ground as a deeper one. Drains are rarely made deeper than 2½ feet now. The mania for deep draining has been cured of late years: 4. Klippart's Land Drainage is the best work on this subject; price, $1.75, to be had of the American News Company.

Bermuda Grass.

R. N. K., Floyd, N. Y. asks where can seed of Bermuda Grass be obtained, and whether it would be likely to thrive in that section.

ANS.—It cannot be obtained unless possibly from the West Indies. It does not seed in this country, though many suppose it does. Upon careful examination of the flower spikes, however, very few if any seeds will be found. It is propagated by cuttings alone. These may be procured in Georgia and other Southern States. We have no positive information as to whether it would endure the Winters within the above section. According to Mr. Killebrew, it thrives on the top of Lookout Mountain which is 2,200 feet high.

American Seabrights.

E. A. F., Brighton, Ohio, asks for information about the American Seabright fowls.

ANS.—American Seabrights are a mongrel variety which don't breed true enough to get a place in the "American Standard of Excellence." Several generations of them have been sent to Buffalo Shows with as many kinds of combs, &c., as there were generations. There is a class of fanciers who would never be satisfied except with a breed of their own origination or an undoubted mongrel. For such people American Seabrights ought to fill the bill. We do not know who originated them.

Miscellaneous.

A. S., Eagle Harbor, Mich., has a well that is dug for 14 feet and drilled for 45 feet more; the water rises to the top of the drill hole, and he thinks there is water enough below to make it rise to the top of the well were it not that the seams are too close; and he asks whether a heavy blast exploded at the bottom would be likely to open the seams, and whether it would injure the upper part of the well, which is "piped" to within two feet of the bottom.

ANS.—In similar cases in oil wells recourse has been had to what are known as "torpedoes," which are tin cartridges loaded with nitroglycerine. These are lowered to the bottom of the well and are exploded. The effect of this powerful explosive is to shatter the rock, and if any seams are near to the boring, to open them and increase the flow of the well. The use of such a device in the above case may cause a freer flow of water, but the pipe should be drawn out of the well before the cartridge is exploded, otherwise it will probably be hurled out by the discharge. It is hardly probable, however, that the water will rise to the top of the well, as the hight to which water rises depends not on its abundance in the subterranean reservoir, but upon the hight of the fountain-head. If this, however distant, is higher than the mouth of the well, the water will overflow, as in an artesian well; but the water will never rise spontaneously in the well higher than it is at the fountain-head.

W. H., Van Wert, Ohio, asks, 1, whether Persian insect powder will not kill cucumber and squash vines instead of the insects that injure them; 2, whether more flax seed cannot be raised on land by sowing one bushel per acre than by sowing three pecks per acre; 3, in trimming grape-vines how many of the joints should be left on to secure the most fruit.

ANS.—1. It will not kill the vines. 2. That depends. If the land were rich and well prepared we should prefer the three pecks, as each stalk will then have more branches and therefore produce more seed than if sown more thickly. When flax is grown for seed, from half a bushel to a bushel per acre is sown; the richer the ground the less seed is required. 3. We cannot answer. Rank-growing vines, like the Concord, should be permitted to bear more than feeble growers like the Delaware. The thrift of the vine must answer the question. Generally in amateur cultivation vines are permitted to bear too heavily.

D. E. S., Norton, Kansas, asks, 1, what is the best plant for a permanent hedge for line or road fence to turn stock—evergreen preferred; 2, how much seed would be needed to raise plants for three miles of hedge; 3, where could seed be obtained, and at what price; 4, how to sow the seed, cultivate and transplant. Our inquirer is prejudiced against Osage Orange for a fence.

ANS.—1, Evergreen Thorn and Honey Locust, the former (evergreen) is armed with thorns. 2. Buy a pound of seed, count them, and allow one-third for poor seeds. 3 From Thomas Meehan, Germantown, Pa., or J. M. Thorburn & Co., 15 John Street, New York. Price of Honey Locust about 50 cents a pound. 4. These questions have been answered in previous numbers, to which we must refer our inquirer.

W. E. B., Springfield, Mo., has a Short-horn cow whose calf is three months old, and being anxious that she should breed again, but not knowing when she comes into heat, as she runs by herself, he asks for some treatment that will bring her into breeding condition, and how this can be ascertained.

ANS.—It is very often that a cow does not come into breeding condition for two or three months after having a calf. The arrival of the period may be known by the cow being very restless and uneasy, carrying the tail to one side, bellowing continuously and anxiously looking around as if looking for something. It is better to wait for natural effects than to try to bring it on by feeding which is very rarely of any benefit.

T. L. P. C., Cartersville, Va., asks where can the seed of Sheep's Fescue Grass be obtained, also Burnet seed, and the price of both.

ANS.—Sheep's Fescue, a free grower on high dry pastures, having the chief merit of affording a pasture for sheep where better grasses will not thrive, can be had from J. M. Thorburn & Co., 15 John St. N. Y., price 25 cents per pound. Seeds of Burnet, a vegetable used chiefly for salads and soups, can be had from the same firm for 20 cents an ounce, or $1.50 per pound.

B. C. C., Goliad, Texas, asks how soon should the top be cut off after inserting the bud in budding peach trees in June.

ANS.—In your climate if the bud were inserted in June, we should cut back the top as soon as a thrifty growth of the bud has been made.

A. M. S., Greenbush, Ia., asks whether the dentaphone will do what is claimed for it, and whether the company that advertises it is trustworthy.

ANS.—The dentaphone is in some cases a help to the deaf; but in others—and these seem to be the more numerous—it is utterly worthless. The manufacturers we have found fairly reliable. Of course, like dealers in other wares they dwell most on the successes of their device.

F. W., Rising City, Neb., asks where he can get Alfalfa seed.

ANS.—From all prominent seedsmen who advertise in the RURAL. The usual charge is 30 cents per pound for California seed—Alfalfa; and 45 cents for Lucerne, both being the same, except that one is raised at home and the other imported.

F. W., Cambridge, Mo., asks where and at what price can the Double Red-flowering Thorn and the Calico Plant be obtained.

ANS.—These can be purchased of many of the nurserymen whose catalogues have recently been noticed in our columns. The price is for the Thorn about one dollar and for the Calico Bush (Kalmia latifolia) from 50 to 75 cents.

R. J. L., Havana, N. Y., asks where the Weeping Beech can be had and its price.

ANS.—Of every nurseryman that advertises in our columns. It is a magnificent tree; slow to start—slow to grow for the first two or three years—but it is a joy after that. Our best specimen is now seven years old from the nursery. It is about 12 feet high.

J. J. J., Logansport, Ind., asks where can "smooth" barley be obtained and at what price.

ANT.—We do not know what is meant by smooth barley unless it is "hulless barley," which is about the same, as compared to ordinary barley, as hulless oats are compared to ordinary oats. J. J. H. Gregory of Marblehead charges $8 per bushel for it.

Wm. M. N., Darien, Conn., whom we thank for various suggestions, asks if Mr. Charles Downing is the author of "Fruit and Fruit Trees of America."

ANS.—A. J. Downing is the author, but Charles Downing has revised, corrected and largely added to the valuable work. It can be obtained through the American News Company of this city, price $5.

W. M. N., Burbank, Ohio, asks which is the best harvester—twine or wire.

ANS.—That made by Walter A. Wood—twine or wire—is an excellent machine; so is the New Adams and French machine, with Fair's Cord Binder; the Buckeye Wire Binder, made by Aultman, Miller & Co., is also fine.

O. E., French, Linn, Wright Co., Ia., says:—1, Will Professor I. P. Roberts please give name and address of the manufacturers of the hay sling described by him in a late RURAL; 2, Please, give the name and address of a company that makes a good two-horse hay rake 12 feet wide.

ANS.—See adv. columns of next issue for hay-sling.

W. T. G., Address mislaid, sends us kernels of what he calls Diamond Spring Wheat, which are very long and handsome. He says it has long heads, and he would like to know if we or our readers have had experience with it.

ANS.—We have not.

N. S., Slater, Indiana, desires name of evergreen sprig.

ANS.—We cannot tell from this specimen. It seems to be a Juniper.

BURNETT'S COCOAINE

Promotes the Growth of the Hair,

And renders it dark and glossy. It holds, in a liquid form a large proportion of deodorized COCOANUT OIL, prepared expressly for this purpose. *No other compound* possesses the peculiar properties which so exactly suit the various conditions of the human hair.

The greatest appetizer, stomach, blood and liver regulator on earth—Hop Bitters.

Important.

Have you found the key to perfect health and strength? It is Kidney-Wort, the only remedy that overcomes at once the inaction of the kidneys and bowels. In either liquid or dry form it is a perfect remedy for those terrible diseases that cause so many deaths.—Home and Farm.

Women that have been given up by their dearest friends as beyond help, have been permanently cured by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 50 cents per box.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, APRIL 9th.

F. W.—G. T. W.—C. D.—C. S. L.—T. J. B.—F. W. C.—H. W.—I. P.—F. W., Rising City, Neb., many thanks.—J. H. B.—W. H. M.—J. A. R.—B. C.—C. M. J.—R. L., Florida, thanks for information as to engine—Glad to hear from you.—J. J. B.—C. N. G.—D. H.—J. N. S.—E. P.—A. L. J.—S. R. M.—H. B.—S. R. M.—E. G. S.—L. S. H.—E. E. W.—W. H. B.—C. D.—C. F. H.—I. R. S.—I. P. R.—G. H. F.—N. Q. R.—A. L. J.—A. H. M.—E. W. S.—H. D. E.—A. W.—J. H. S., the apple not yet received.—N. A.—Jno. L. A. S.—J. B.—W. S. H.—I. A. H.—W. H. C.—W. H. B. A.—S. H.—L. D.—J. L.—G. M. M.—E. H.—J. L., Jr.—E. J. A.—J. S.—J. C.—H. A.

Literary Miscellany.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 245.)

CHAPTER XIII.

SOME SOCIAL QUESTIONS DISCUSSED.

MR. GLINDEN proposed to me one day that I take a ride with him into the country. His brother-in-law occupied a farm some miles out of the city, and it was to visit him and to give me an opportunity of observing country life that the trip was projected.

We set out directly after breakfast one morning in an elegant little carriage drawn by a superb horse which was attached to the vehicle in the manner which I have before described. This noble animal bore us along at a pace which to me was peculiarly exhilarating from the mingled sense of fear and security which kept my heart in a flutter. When I looked upon the horse dashing along as unrestrained by bit or bridle as if he were upon his native plain, my hand involuntarily grasped some projecting part of the carriage for security. But when I turned to Mr. Glinden sitting with his arms folded across his breast as composedly as if he were in his easy chair at home, reason rose above fear, and gave me a sense of safety.

I enjoyed a conversation with Mr. Glinden more than with any other person whom I met, because he seemed able to adapt himself readily to my level. This was doubtless owing to the fact that he was a student of history, and familiar with the manners and institutions of people which bore some resemblance to my own.

Our conversation this morning naturally turned toward the peculiar customs and institutions of the country, concerning which there were ever new questions arising in my mind to be resolved.

"How is it, Mr. Glinden," said I, "that these family portraits and monuments of art which form a part of the very walls of your homes are completely preserved in your households for so many hundreds of years? Is there no changing of dwelling place among your people from city to country, or from country to city, or from one city to another? Are there no fluctuations of fortune among you which make the wealthy of one generation the paupers of another, and thus strip many a noble family of its ancestral home?"

"There are neither changing of residence nor fluctuations of fortune among our people," replied Mr. Glinden. "Every house is regarded as the heritage of the male line in each family, and is handed down from father to son in a succession as unalterable as the family name. And not only is each family bound to its home by its veneration for these ancestral monuments, but the different pursuits and occupations of our people are also hereditary, so that a son succeeds to the business or occupation of his father with the same regularity that homes and lands are inherited. Each family is, therefore, bound to its own locality by the additional demands of its peculiar occupation."

"You surely do not mean to say, sir," said I, "that your laws or social customs bind a man for life to the occupation of his fathers. Must a ditch-digger or a street sweeper plod on in his humble and laborious, though it may be, very useful life, simply because his father has followed this occupation before him? And is he denied even the possibility of raising himself above his humble station, however strongly he may desire, and however capable he may be to attain a higher position in society?"

"Unfortunately for your illustration," replied Mr. Glinden, "there are neither ditch diggers nor street sweepers among us. If you mean to imply that this social custom of ours shuts the door on ambition and prevents a man of superior capacity from filling a station suitable to his ability, I will say in reply, first, among us a man's ambition is satisfied when he fills a station that is useful, and has made himself as competent as may be to fill it well.

"Second, not even the president of one of our universities receives greater marks of consideration on account of his superior station than the humblest member of our society. We may honor him for his superior abilities and attainments and look up to him as one whose opinions and counsel we respect and value, but not one among us would turn his back upon his servant merely to court his attention.

"Third, by the laws of hereditary descent, those mental faculties which are habitually active in the parents will be transmitted in a corresponding degree of activity to their children. And as it is the custom for families pursuing the same occupation or business to intermarry, a natural bias of mind is thus received from both parents by the children of every family toward their peculiar hereditary occupation.

"The laws of hereditary transmission are so well known among us that a man might readily beget a child of a native ability much superior to his own. But he is too wise to do so. He knows that there is but one preacher for every ward, of perhaps five or six thousand souls, and that the teachers, professors and men high in the realm of science must necessarily be few in comparison with the many who must devote themselves to providing for the creature wants of themselves and their fellow-men. If, therefore, the carpenter, the mason, or the blacksmith should say, 'I will endeavor to give my boy a genius for oratory, or endow him with the natural capacity for a professor of any science; he would be directing his aspirations toward pursuits which were already as fully occupied as the best interests of society demanded. And he would be making of his son an inferior preacher or man of science when it would be better for the boy as well as for society that he should endeavor to make him a good carpenter or blacksmith. According to the operation of the law which I have spoken of, a preacher who has a long line of ancestry behind him who have devoted themselves to this occupation would be a natural preacher, and he would be able to transmit to his son the necessary talents for this avocation in a fulness and completeness which the most ambitious carpenter could never hope to achieve. So you will perceive that a man's sense of what is reasonable and right concur in making him contented with his hereditary occupation."

"Your remarks, sir," I replied, "appear to be founded on reason. But I must confess that it is a very difficult matter indeed for me to conceive of a state of society founded upon such lofty principles that no one of its members has any higher ambition in life than to make himself as useful as he can in the sphere which fate has decreed that he shall occupy, where there are neither envyings nor rivalries between individuals of different stations, and where each individual accepts his peculiar lot in life cheerfully, and performs its duties faithfully, from the conviction that his own best interest as well as those of society will thus be subserved. There are some interesting queries, however, which naturally arise in my mind from your remarks. First, from what class of the people are your officers of Government chosen? Or is office-holding hereditary among you like the other occupations of your people?"

"The machinery of our government is very simple," replied Mr. Glinden. Public, like private stations are hereditary, and on the same general principles. Chief among these is the native bias toward a particular pursuit which a child inherits from a long line of ancestors who have followed the same occupation and which gives him a facility in the performance of the duties which the most diligent application of one born to a different pursuit can never achieve."

"But, sir," I rejoined, "it certainly appears to me very unjust that the honors and emoluments of public office should be conferred on some individuals because they happen to be born in an office-holding family, while many other worthy citizens must plod on in their humble mode of life merely because their fathers have done so before them. Besides, is there not great danger that those to whom the offices of government are assured from generation to generation will take advantage of their hereditary power to promote their own or their families' interests at the expense of the public good?"

"These are objections," replied Mr. Glinden, "which arise very naturally in a mind that has no higher stand-point from which to judge of human nature than that which must necessarily be yours from your natural relations with a people among whom the supremacy of the intellect, and moral sentiments over the selfish and animal principles of our nature is still only a vague vision of the future. Among us this supremacy is so complete that every citizen acquiesces in the dictum, that whatever promotes the good of the public promotes the good of the individual. While the humblest member of our society would regard it as degrading to his personal worthiness to allow his mind to be disquieted by aspirations after a public office which are merely the outgrowth of a desire to be an object of popular attention. Among our early ancestors ambition often took this direction. Men sought office, and spent half their fortune in the most iniquitous manner in securing it, merely to gratify a selfish vanity which was pleased with the empty applause of the multitude. They expended money lavishly upon the adornment of their persons and their houses that they might outshine their neighbors in the splendor of their style, and excite the gaping wonder of the common throng over their pomp and magnificence.

"Happily the day of this vulgar love of applause has long since gone by; and among us, if a man seeks the applause of his fellows at all, it is for duties faithfully and well performed in the particular sphere in which it has been his lot to be cast.

"In regard to an office-holder using his position for the purpose of promoting his own or his family's interests at the expense of the public good, I may say, that during the whole course of my long life I have never know of an instance where the slightest breath of suspicion has been cast upon the character or conduct of a public officer. In fact, the words peculation, embezzlement, fraud, theft, etc, which were formerly so frequently used in connection with offices of trust, are now obsolete."

"Peculation, fraud and theft obsolete!" I exclaimed. "Can it be possible for poor, frail humanity to attain to such a high condition of morality that there shall be no need of words to give expression to such an unworthy class of ideas?

"There is another query," I continued, "which your remarks have raised in my mind. You say that there are no fluctuations of fortune among your people. Now I would like to know how it is possible for the immense business of this great country to be carried on without fluctuations of fortune."

"It is not a matter of much difficulty," replied Mr. Glidden, "when reason and moral sentiment combine in directing and controlling public and private enterprise.

"I will not enter into a discussion of the causes which in the olden time made the wheel of fortune revolve with such uncertain movements that the poor might ever live in hope and the wealthy be ever on their guard. But I think it is undeniable that the inspiring motive in those days was selfishness. Wealth was then the goal of human ambition, and men strove to reach it with a selfish zeal in which the interests of their neighbors were completely lost to view. They had not then learned the important lessons that the truest interests of the individual lies in the direction of the best interests of the community, and that in promoting the happiness of their neighbor men are both directly and indirectly promoting their own.

"These lessons have become practical realities with our people, and they constitute the very warp and woof of our social and business intercourse. No one among us seeks to heap up riches to himself, because he knows that in proportion as he has more than enough for the comforts and such enjoyments of life as the condition of society among us makes necessary, another must have less, and if all were actuated by this desire for accumulating, the harmonious relations of our society would be subverted, and our happiness as a people destroyed.

To be continued.

MAGAZINES FOR APRIL.

APPLETONS' JOURNAL. CONTENTS:—A Question: a Greek Idyl; Mysteries and Miracle-Plays; Oliphant's Land of Gilead; On some of Shakespeare's Female Characters, II. Portia; Greek Dinners; Why does the Crab go Sideways? A Culture-Ghost: or Winthrop's Aventure; The Caliph Haroun Alraschid; The Earl of Beaconsfield as a Novelist; Ruskiniana (Ruskin's Arrows of the Chace); Concerning the Cheerfulness of the Old; (the Country Parson), Editor's Table: Carlyle as a Thinker—The English Estimate of Carlyle—Tact not a Special Feminine Quality. Notes for Readers.

It is narrated by one of the biographers of Fox, that, after playing at Almack's for twenty-two hours without intermission, he rose from the table a loser to the tune of eleven thousand pounds. The fashionable gamblers of that negligent time were accustomed to find themselves occasionally on the side supposed to be agreeable to Cato; and to all of them in turn, as they staggered homeward in the dawn with empty pockets, might have been applied the line in the "Fasti:"

"Inde domum redeunt, sub prima crepuscula mœsti."

But the losses of Fox had been so enormous on this occasion, that his friends feared lest he should be prompted to some desperate act. Accordingly, they betook themselves to his house, and, unseasonable as was the hour, brushed the servants aside, and insisted on forcing their way into his presence. They found him prone upon the hearth-rug, leaning upon his elbow, reading a chapter in Herodotus.—Appletons' for April.

LIPPINCOTT'S MAGAZINE.—Contents: A Peep at the North of Ireland; Characteristic Dances of the World; Zoological Curiosities; On a California Ranch; At Night; John Henry; Present Tendencies of the French Drama; The Zoar of the American Loyalists; The Wounded Singer; Sister Weeden's Prayer; Wash Lo; After Betrothal; Nineteenth Century Notes; Our Monthly Gossip; Literature of the Day.

THERE is no account of the origin of dancing, but, combined with music, it is practised by every nation on the globe, and the foundations of it lie in the human constitution itself. Its earliest form was probably a rhythmical march, since the innate feeling for rhythm would instinctively induce men when walking to regulate their song and steps to a certain recurring order or measure. Again, a superabundance of animal spirits leads naturally to one form of dancing,—a motive we see constantly exemplified in children, and even in animals. All savage nations dance primarily from this motive. Captain Stedman, in his "Narrative of an Expedition in Surinam," says that he has seen a negro, for want of a partner, figure and foot it up for nearly two hours to his own shadow against a wall.—Amelia E. Barr in Lippincott's for April.

NEW PUBLICATIONS.

The Ladies of the White House, or in the Home of the Presidents. By LAURA C. HOLLOWAY. Philadelphia: Bradley & Co.

This book is well and attractively bound. The contents, however, is the more important consideration to the appreciative mind for whom the work is intended. Mrs Holloway has given a history of all the ladies who have graced the Presidential Mansion in the capacity of hostess. The careful collection of facts must be the result of much labor, and the public should feel grateful to the author for the entertainment as well as the extended knowledge imparted. The opening leaves reveal the portrait of Martha Washington, accompanied with biography of this noted woman, and incidents of her career. Following in illustration and description are her successors, including Mrs Garfield, whose record of necessity, is incomplete. Nellie Grant is included in this book gallery, and is a charming addition. The varied style of physique and exposition of character form an interesting study of human nature, and one which many young women might profit by. These words are but a few of the many which could be said in praise of this book; but why waste time in depicting what surely is worthy a practical test. We add but one thought of disparagement; why not have called it "Women" instead of "Ladies" of the White House, a much grander title.

Pearls of Thought. By MATURIN N. BALLOU, Boston; Houghton, Mifflin & Co. Price $1.25.

Works of like character have been published previously by this author which will serve to introduce this the latest one to readier notice. It is valuable as a reference for quotations. The words of eminent authors are classified alphabetically as to topics, thus rendering it easy to secure something appropriate for almost any subject.

The King's Missive and Other Poems. By JOHN G. WHITTIER. Boston: Houghton Mifflin & Co. Price $1.

This little book contains thirty-two poems, most of them late productions from the pen (or brain), of the venerable and esteemed quaker poet. Every new poem increases in value from the fact that the prospect for successors is lessening.

Lennox Dare. By VIRGINIA F. TOWNSEND. Boston: Lee & Shepard. Price $1.50.

This novel is written in the usual vein of this well-known author. It is calculated to interest the reader who seeks entertainment as a reward of perusal.

For Women.

CONDUCTED BY MISS RAY CLARK.

PERFECTION.

GRISELDA is a pattern maid,
Whom nothing can excite,
By all her slightest word's obeyed,
She's always in the right.

Her prompt decision is superb,
She knows no wicked spite;
Her calmness naught can e'er disturb,
She's always in the right.

No breeze that blows can rough her hair
To rude unseemly plight,
No mud to soil her dress would dare—
She's always in the right.

Her steps she bends where she should go,
She scorn's the world's delight;
She answers "Yes" she answers "No"—
She's always in the right.

Her figure's tall, her eyes are pale,
Her form is spare and slight;
Her thin, red lips no faults bewail,
She's always in the right.

She always does the thing she should,
Her sayings sages cite,
Because, you see, 'tis understood
She's always in the right.

Should I wed her, they say, my life
Would be serene and bright;
But, oh, I would not want a wife
Who's always in the right.

No, no! My bride must have a fault,
Or we'll ne'er jog along;
That woman isn't worth her salt
Who's never in the wrong.

POINT LACE MAKING FOR GIRLS.

FRIENDS:—There will probably be some time yet, before the warm breath of Spring will warm the earth sufficient for commencement of work in your flower garden, so in the mean time why not make yourselves a good supply of laces? The cheap imitation lace that many of you are wearing does not wash nicely, and is often thrown aside and replaced with new during the season; the money thus spent, if it was used to buy point lace braids and thread, would supply you with the most beautiful and durable collars, cuffs, barb points, straight lace, &c., at no great expense of time, or trouble of making up, provided you are familiar with the use of the needle. You can, with a little care in learning the real lace stitches do this as easily as you can hem a handkerchief or do ordinary sewing. The first thing necessary is a pattern, and these are procured in various ways. Fashion Magazines often contain beautiful printed patterns of many articles.

Modern lace workers use a fine, closely-woven braid which very much shortens the process, and is a close imitation of the ancient hand-wrought web that formed the design of the pattern. These are made of pure linen, and are basted firmly to the pattern following the figures and outlines, being folded down neatly so as to make the points and square corners of the figures. In following curves or circles baste down the outer edge of the braid, leaving the inner edge to stand up full or ruffled. This must be gathered down to fit the pattern—by the whipping-over process, drawing the threads as the work proceeds. The next thing is the real lace "filling in" stitches. When these braids are connected by irregular threads, they are called brides in France, legs in Italy and ties in England. These threads are often twisted together and also worked over in common button-hole stitch, forming straight or irregular bars.

The most common "filling in" stitch is Point de Bruxelles (or Brusselles net) as it is sometimes called. This is made by commencing at the left hand and on the edge of the braid; work a row of loose button-hole stitches just as you would on an edge in white embroidery. The spaces between the stitches form the "mesh" of the lace. You now have the thread at the right hand. In returning make another row, putting the needle through every mesh of the first row, drawing up the threads so that they are pretty close and even. Afterwards use your own judgment as to size of mesh. Continue to make these rows, one after the other diminishing and increasing, to fit the space to be filled. If any of you cannot make this Bruxelles lace stitch, and wish very much to make your own laces—and to learn it, I will send a few made on dark cambric free, and answer inquiries as to braids, patterns, &c., if you will send me a stamped envelope addressed to yourself. If this is printed I will send you descriptions of other stitches soon. POINT LACE.

[NOTE.—The writer of the above promises illustrations and descriptions of the work for publication. If the address is wished, please apply at this office and a card of information will be forwarded to you.] R. C.

CORRESPONDENT'S CORNER.

WILL some of the RURAL ladies write us a chapter on girls graduating dresses? I have a daughter who will graduate in June, from a popular Female College. Of late years the graduates have all dressed rather expensively; but the class, (20 in number) this year want a dress that will be useful after commencement, something that can be laundried. Will not some of the RURAL sisters advise me as to material, make, etc?

Can any one tell me what Paris muslin is?

What color would you advise in silk for a young lady, something suitable for most seasons of the year and that will not fade or loose its freshness. By answering all these queries, you will oblige a friend of the RURAL. MRS. B. A.

Paris muslin is mull. Space in present issue will not allow of answer to the other questions. We would be pleased to have the information from the source requested. R. C.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

MONDAY.—There were a great many remarks passed and much solemn protestation among my friendly neighbors when it was understood that I did not intend to keep a servant after Janet left. But months have passed since then and a new baby occupies a share of my attention; yet I do not regret the step I have taken. For with my sister and little daughters the wheels of our household machinery go smoothly, and we are able to get a char-woman at regular intervals for the heaviest work. It gives one a feeling of independence to be able to do this, and it is a good school for young girls, whose business in life must always be that of housekeepers. So Celia and Karen take turns in the lighter duties of house-work, and my sister, who has a knack for cookery, takes pleasure in its nice details. Of course, there is the dish-washing, and it is indeed the greatest lion in the path. But with plenty of hot water and towels, a couple of mops and a draining board, it is not difficult to get through this wearisome task. I was in a house the other day, that caused me to moralize on the tidiness of housekeepers in general. They were people who made pretensions to some style as well-to-do farmers. Yet the mistress of the house sat and combed her hair in the kitchen close to the stove, because the bed-rooms were cold. The cooking stove was not ornamented with a tea kettle, the old one having been worn out more than a year before, and a saucepan was used for heating the water. Yet these same people gave away a ten-dollar present at a wedding and did not seem to know that charity begins at home. The chore boy brought in water from the well at a little distance and filled a barrel in a corner of the kitchen; when this was done, he took a tin cup, dipped it twice into the barrel and drank, the second time returning what he had left to the barrel. This water was for household use—drinking and cooking purposes, and I mention this little act to show how small habits of uncleanliness will be noticed, and to enforce the necessity of acquiring tidy methods in all housekeeping. I suppose these thoughts came to my pen more readily because a young man came to me lately for advice in a very trying predicament. With some stammering he told me that he knew two girls, and one was a neat housekeeper, always tidy, with an apron or an old skirt over her dress if caught in any dirty work. The other was as good to work, and not an idle girl, but untidy about her clothes, sometimes slipshod, and if he called early in the day sure to run away and slip on her afternoon dress (a bad sign). He knew instinctively when she did this; knew the risk, and yet he felt for her a greater regard than for the first mentioned. I dared not advise in the case, but only consoled him with the fact that he was taking the risk with his eyes wonderfully open.

PATENT CHURNS.

IN the Autumn of 1866 my husband and myself, in company with a wagon-load of our neighbors, attended an agricultural fair at Bath, Steuben Co., New York. Since then I have many times thought to write of a churn I saw there, but I believe pure laziness has each time prevented me. Now, I have always contended that the good old dash churn with which our foremothers used to coax the butter to separate from the cream, was the proper instrument; and any innovation by calf, sheep or dog power was not to be allowed for a moment. But there is nothing so useful in causing a person to change his opinions as a good bit of experience seasoned with hard work. This I have had, and I now cry for some other power besides animals or man, to operate the churn. And this brings me back to Bath, and the Fair. There were churns and churns and churns on exhibition. Some of them made a noise like a thrashing machine, and were as hard to operate as a fanning-mill. Others had no inside works but tumbled over and over cornerwise. One was made of tin like an overgrown lard can, and turned on a pivot, swishing the cream round and round until every drop turned to butter! All these required the assistance of a good stout pair of hands while performing their duty. They were all an improvement on the old dash churn; but none of them exactly hit the mark.

Away off in one corner, toward the sheep pens, I saw a crowd of men and on inquiring of my "other half" the occasion of such a gathering was told. "It is another of those patent churns; I was hoping you wouldn't see it." Straightway I remarked: "I must see that one, too," and he meekly acquiesced, and we went to see it.

Now I am not a machinist nor am I a clock-tinker, and if I fail in giving an accurate description of this "help to womankind," you can attribute it to the aforesaid fact.

As near as I can tell it was a system of pulleys with one immense weight, which was to be wound up like a clock, and being set going would churn until run down. If the butter did not come then it was wound up again. As this was really a labor-saving invention, of course the men didn't invite their wives and sisters and somebody else's sisters to look at it. It was the old story of the young man going to church on horseback, while his sister had the choice of walking or staying at home.

I talked about that churn all the way home, but not a word did "my wayward pardner" vouchsafe in reply until we were almost home, when I heard this comforting remark: "I ain't going to get no patent churn. You'd be wanting a washing machine next, and then 'twould be a wringer, and the goodness only knows what next. No, mam; I'm going to git one of them K——— reapers, though; didn't it do splendid work! No use in breaking my back with a cradle, when I've got money enough to buy a reaper. There's butter enough in the cellar to almost pay for one. I ain't pastured eight cows all Summer for nothing." Of course I subsided, as was fit and becoming for a "weaker vessel;" but that churn has been in my head at little odd spells ever since.

Improvements that do not lessen the work which a woman has to do, or make it easier for her, are comparatively useless, except to the manufacturer. What is wanted is a churn that will do the required labor, without any labor of woman or man or dog or calf or sheep; and not one that requires both hands of the overworked woman to furnish the power. There are hundreds of patent churns and the one above referred to comes the nearest to my idea of what a labor-saving machine should be; and for a large dairy where the churning needs to be done twice a day, part of the time, it would be far ahead of any churn that must be operated by hand. I use the old-fashioned dasher in a common churn which is much more easily cleansed than square ones—an important item when water is scarce or inconvenient to procure.

Last night I was talking about this churn and trying to describe it, when Willie said, "Ma, I saw one like that at Camp Point, Illinois, two years ago. It had six cog-wheels and the rope that held the weight was fastened to the big wheel and the dasher was fixed to the small wheel." The one I saw had no cogs, but had a groove in each wheel and a complicated arrangement of cords.

"BESSIE VICTOR."

DOMESTIC RECIPES.

Dried-Apple Fruit Cake, Extra.

Two cups of dried apples, soaked over-night; in the morning chop and stew in two cups of molasses one hour. When cold, add one-half cup of butter, three eggs, one teaspoonful of soda; cloves, mace, cinnamon, etc., to taste; one cup of raisins and flour sufficient to make as stiff as pound cake.

Sponge Cake Without Eggs.

One cup of sour cream, one of sugar, nutmeg, a pinch of salt, one teaspoonful of saleratus mixed in the flour. Stir a little stiffer than with eggs.

Hartshorn Cake.

One teacupful of sugar, one of sour cream, one tablespoonful of baking hartshorn, one teaspoonful of salt. Mix not very stiff.

Fruit Stains.

Scalding hot milk will take out berry stains.

Cream Jelly Cake.

In place of jelly, one pint milk, one egg, two tablespoonfuls of corn-starch. Sweeten and flavor to taste. Dissolve the starch in part of the milk; add the beaten egg, stir into the boiling milk and cook. Be careful not to scorch while cooking. Let cool.

For the Cake.

Three eggs, two cups of sugar, one cup of butter, two cups of flour, one cup of corn-starch, one cup of sweet milk, one teaspoonful of soda, two of cream-of-tartar. Bake in three parts.

French Cake.

One-half cup of butter stirred to a cream, one cup of sweet milk, two of sugar, three of flour, with three teaspoonfuls of cream-of-tartar, stirred through, three eggs, one teaspoonful of lemon extract; add a teaspoonful of soda last of all.

Scalded Milk for Coffee.

If you cannot obtain cream you will find scalded milk the best substitute.

Cabbage.

Take half a solid head of cabbage; with a sharp knife shave fine; mix salt enough through to season, and put into a vegetable dish. Take two eggs, beat well, put in a dish with two-thirds of a pint of good vinegar, set on the fire, stir till boiling, and pour over the cabbage. Put the cover on the dish. When cold, slice two or three hard-boiled eggs over the top, sprinkle with pepper and you have a dish no oyster supper is complete without.

Brown Bettie.

Put in your pudding-dish a layer of bread crumbs, then a layer of spiced apples, and so on until your dish is full. On each layer of apples sprinkle some sugar, a few bits of butter and a little nutmeg; add a little water. Bake three-fourths of an hour. To be eaten with sweet cream or hot sauce.

Float or French Custard.

Beat the yelks of five eggs with 10 tablespoonfuls of sugar, stir in a quart of new milk; place over the fire and stir until it creams (don't cook too long). Pour in a dish you can cover. Spread carefully over the top the whites of the eggs, which must have been beaten to a stiff froth; cover and leave till cool. Grate nutmeg over the top before serving. This is nice for tea.

For Diarrhœa.

First give a preparation of magnesia and rhubarb in the proportions of six tablespoonfuls of magnesia to one of rhubarb. Dose, one teaspoonful taken in a little milk and sugar. After this has taken effect give a teaspoonful of the following "hot drops" every two hours until relieved: one-half pint of alcohol, one ounce of cayenne pepper, one ounce of laudanum, one ounce of camphor gum, one ounce of extract of rhubarb, three drops of oil of peppermint. For chronic diarrhœa, give a half teaspoonful three times a day. The rhubarb and magnesia should, however, be taken first.

Soap.

As Spring is here I send my recipe for making soap. Run off the lye before starting the fire, boil it until it will strip a feather while you can count ten. Add grease as long as it will eat it up. It will be strong, but will not eat one's hands like soft soap. One tablespoonful stirred in warm water will make over half a bowlful of soft soap. I make it in preference to soft soap. It is better and takes less storage. M. J. STEWART.

Omelette.

Six eggs, whites and yelks beaten separately, a tablespoonful of sweet cream, a teaspoonful of salt, one-third teaspoonful of pepper, a small spoonful of butter and the same quantity for the frying-pan. Stir the butter to a foam, add the cream, pepper and salt, then the yelks beaten well, and, last, the whites, which should be beaten until they stand alone. Have the butter in the pan hot and turn in the mixture. Turn and lift the pan as the omelette cooks. Be careful not to burn. Raise the omelette at the edges with a broad knife to keep from burning. Set the pan on the grate in the oven to brown and serve round, or turn one-half upon the other as soon as the top ceases to be liquid. Send at once to table.

MARY B.

Coloring Rags.

It will oblige me if some of the lady readers of the RURAL will send me through Domestic column, recipes for coloring carpet rags. I would like those for red, yellow, orange, blue, green and any other they may think necessary for a nice stripe. MRS. J. S.

Ladies, do you want to be strong, healthy and beautiful? Then use Hop Bitters.

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News of the Week.

HOME NEWS.

AT a recent meeting of the New York Produce Exchange, resolutions were passed urging the need of a Constitutional amendment whereby all tolls on goods transported by canals in this State, should be removed. Also that the facilities for canal transportation should be increased so that a larger share of Western trade could be obtained. Canada is the great rival for Western traffic, and her expenditures in order to secure it have been enormous.

A change is soon to take place in the present firm of Scribner & Co., of this city. Mr. Roswell Smith, who is present business manager of Scribner & Co., has purchased Scribner's Sons interest at the reported sum of $250,000, and hereafter the business of each will be entirely distinct. The name of Scribner's Monthly will soon be changed to The Manhattan Monthly, it is thought. Mr. Charles Scribner is said to be contemplating the introduction of a new illustrated weekly similar to Harper's.

Mr. Andrew Carnegie, the New York iron manufacturer, is about establishing a free library for the benefit of his employes at Braddock, Pa., where his steel works are located. Plans are now prepared for a large three-story building to be erected at a cost of $20,000. The lower floor will be fitted up for stores and the upper floors furnished as a library, reading room and a public hall. The library will consist of about five thousand volumes, and, with the income from the stores and the occasional rent of the hall, it is expected to be self-supporting. Let others go and do likewise.

Unfortunately for the general accuracy of our news items, it was not Porter's murderer, Currie, whom we reported dead last week. This rascal is still at large somewhere in the West.

The event of the Brinley sale of antique books in this city, was the struggle for the possession of the famous Gutenburg Bible. It was printed about 1450, and has 1,282 double-column pages. For four centuries the book lay buried in an obscure library at Erfurt, Germany, but it is still in a good state of preservation. It brought the modest little sum of $8,000, and Hamilton Cole is its possessor.

Ex-Vice President Wheeler met with a hearty reception on his arrival home on the 7th inst. He was met at the depot by a company of the National Guards and a great crowd of citizens, and escorted to his residence. Mr. Wheeler said that he now had returned to his fellow-townsmen for the first time in many years, divested of all official title, to pass the balance of his life as a private citizen with them.

The American delegation to the Paris Monetary Conference, consisting of Messrs. Evarts, Thurman and Howe, left this city on the 5th inst. for Europe.

A company has been formed with a capital of $30,000,000 and a charter obtained to build a ship canal across Florida. The work commences immediately. The route is via the Caloosahatchie River to Lake Okeechobee, thence to the Atlantic Ocean near the mouth of Lucie River. This is substantially the same company having a contract to drain Okeechobee.

C. C. Boycott, the harvesting of whose crops in Ulster, Ireland, under the protection of English soldiers, recently created much interest, and whose treatment by the Land Leaguers gave rise to the term "boycotting," arrived here on Tuesday with his wife and a party of friends, and left the same evening for Virginia, with a view of spending a short season in gunning sports. Mr. Boycott was registered on the steamer which brought him over as "C. Cunningham."

The Washington Headquarters Commission has taken action looking towards a celebration in 1883 of the centennial of the declaration of peace, and the disbandment of the Army of the Revolution at Washington's headquarters at Newburg.

Ithaca, the site of the Cornell University, gives a majority of 50 against license, making it the largest "no-license" village in the State. Every town in Tompkins County is "no-license."

From $200,000 to $300,000 in silver certificates are daily received at the New York Custom House in payment for duties on imports.

The graves of Confederate soldiers were decorated at New Orleans on the 6th inst. The Grand Army of the Republic contributed floral offerings. In the evening the Association of the Army of the Tennessee had a reunion at Masonic Hall.

The resignation of Andrew D. White as Minister to Berlin has been received by the President. The report comes from Washington that President Barnard, of Columbia College, will be appointed to succeed Minister White at Berlin. President Barnard is a gentleman of high character and literary attainments, and is well versed in affairs. Gen. Hartranft, of Pennsylvania, is also suggested for the place.

A new through line from Boston to Chicago is soon to be established. The new route will be from Boston via. Hoosac Tunnel, Troy, Schenectady, Syracuse, Buffalo, and so westward. The capital stock is $25,000,000.

The jury in the late Seawanhaka case, in which Inspectors Jaynes and Mathews were tried for manslaughter, failed to agree after long deliberation, the result being ten for conviction and two for acquittal.

The remains of the late Senator Carpenter, of Wisconsin, were buried at the Forest Home Cemetery, near Milwaukee, on the 10th inst. The funeral pageant surpassed anything of the kind ever witnessed in that State, the large assemblage and the magnificent floral offerings showing that the late Senator's friends were by no means few.

The Senatorial deadlock on election of Senate officers is still unbroken, but there are not a few in both parties who would be glad to see the end of the struggle.

Judge Robertson has not, at this writing, been confirmed as Collector of the Port of New York. Great pressure is being brought to bear upon the President to withdraw the nomination. The petion for the retention of Gen. Merritt, present Collector, comprises names already covering 55 feet of manuscript. Whether Mr. Garfield will yield or not, remains to be seen.

Improved Appetite and Digestion.

One of the first effects of Compound Oxygen is an increase of appetite and an improvement in digestion. A patient writes: "I was unable to digest my food on account of Chronic Inflammation of the Stomach and Torpidity of the Liver. The Treatment had an almost magical effect from the first. My improvement in strength, appetite, and ability to digest my food is indeed wonderful." Another says: "Can now eat almost anything I wish, though a month or six weeks ago my diet, even a hygienic one, disagreed with me." Another: "My appetite, before very poor, is now excellent. Feeling an elasticity and courage and strength that I have been a stranger to for years." Another: "Have not felt so well in two years. Appetite good; blood circulates well; pains in back, limbs, and lungs have disappeared, and I sleep such sound and refreshing sleep that I begin to feel like a new person." And another: Respiration, appetite, nerves, and sleep all much improved." Our Treatise on Compound Oxygen, containing large reports of cases and full information, sent free. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

AGRICULTURAL NEWS.

IOWA'S butter and cheese product last year was worth $19,000,000........The laws of Kansas are very favorable to the farmer and stock raiser in respect of exemption from execution and sale. He is secure in the possession of 100 acres of land, with all improvements of whatever character, his implements and machinery, two horses, two cows, ten pigs and the year's crops.........Here is what Vennor says of the weather for the last part of the month. "The weather will be very stormy in the Lower Provinces about the 20th, with very high water prevailing, but in the West April will be a dry month. There will be warm weather just following the 20th, ending in thunder storms on the 24th and 25th. Snow storms are probable in the far West on the 25th and 26th, and snowfalls are not unlikely to occur in England at the close of the month. The month will end wet and cold, but on the whole will be like a May month."...... The men arrested in Cleveland, Ohio, for alleged participation in the Missouri land frauds, were discharged last Thursday on account of the entire absence of incriminating evidence against them. They were arrested on the sworn charge of a St. Louis detective, who promised to substantiate his accusation by proof, but though the case was twice adjourned, he failed to put in an appearance......Some cattle near Watertown, N. Y. are suffering from a mild type of murrain.

Spinal meningitis seems to be be pretty fatal among horses at Hartford, Conn. The Times of that city of April 2, says 30 of them were lying dead on the banks of the Connecticut River a mile or two below the city, and others were under treatment........M. Pasteur has received the great gold medal of the French Society of Agriculture for his researches on ferments and contagions in their relation to agricultural interests........It is officially stated that pleuro-pneumonia has been entirely eradicated from Connecticut.........An insurance company has been started in Prussia to insure loss of hogs by trichina spiralis......Owing to the insane pork scare in Europe, the exports of bacon from New York fell off the week before last to 7,400,000 pounds. The average shipments for many weeks theretofore were 12,000,000 pounds.

M. Tirard, Minister of Agriculture and Commerce, has assured the Tariff Committee of the French Senate, that cereals and cattle will be excluded from commercial treaties.

Australia can freeze mutton so that it will stand a voyage of 70 days and still be solid enough to knock a tramp through a picket fence........The State Agricultural Department of North California has been experimenting in the cultivation of jute with the most satisfactory results.

The Indiana Legislature has passed a bill authorizing the destruction of all unlicensed dogs. Canines that wished to live had to get their owners to secure a license for them by April 1......In 1880, France imported 304,320 head of cattle from Belgium, and 764,114 head from Germany. Her importations of live stock from Italy are considerable. ....The total number of cattle exported from Canada in 1880 was 50,904, being 25,596 more than in 1879. Exports of sheep numbered 81,843, and of hogs 700........Minister Noyes has cabled to Secretary Blaine that the French Government has agreed that all pork loaded upon ships before the passage of the French decree concerning pork imported from the United States, shall be admitted into France, subject only to inspection and with as little delay as such examination permits........

The supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Seaboard ports, and on rail from Western lake and river ports and frozen in on New York canals is:

	1881. April 2, bush.	1880. April 3. bush.
Wheat	21.752,359	24,382,845
Corn	14,266,409	15,163,948
Oats	8,241,930	2,769,185
Barley	1,979,208	3,633,927
Rye	433,801	690,543
Total	51,673,797	45,040,448

The barley trade at Oswego from Canada is enormous. About 7,459,660 bushels were brought over during the last six months to be converted into beer. The increase has been very rapid during the past ten years. Although the duty is 20 cents per bushel, there is no market so good as Oswego.

Fearless Threshing Machine.

We call the attention of farmers and threshermen to the advertisement of the celebrated Fearless Threshing Machine, elsewhere in this paper. Unparalleled honors have been bestowed upon this machine, at fairs and exhibitions, State, National and International; and, if universal victory at trials is evidence of superiority, then most assuredly was an ex-President of the New York State Agricultural Society correct, in saying of the Harder Machines, "they are the best ever made." And, as equally good and reliable testimony has been borne times without number, persons designing to purchase will do well to consult the manufacturer of the Fearless, Minard Harder, Cobleskill, N.Y.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, April 9

Boston.—WOOL.—In the wool market the business of the week shows a fair average, upward of 2,000,000 lbs. of all kinds having been sold. In washed fleeces there is, if anything, a rather better feeling, and prices have been forced down about as low as they are likely to go at present. The new clips of California, Texas, Missouri, Kentucky and other Southern sections are so recently at hand that no possible change can scarcely be looked for, particularly as the trade in manufactured goods is so unsatisfactory. The transactions in Ohio and Pennsylvania fleeces have not been very extensive, and prices have ranged from 40@43c. for X and XX and 43@45c. for medium and No. 1. There is no XX in good condition offering, but many of the manufacturers have fixed upon 40c. for this grade, and are, therefore, inclined to hold back. Michigan and Wisconsin fleeces have been sold at 38@40c., and medium at 40@42c. ℔ lb. Combing and delaine fleeces are quiet, but prices are steady at 43@45c. for fine delaine; 45@48c for fine and medium combings, and 29@32c. for Kentucky. Unwashed and unmerchantable fleeces remain the same, with sales of good medium unwashed at 30@33c., and fine at from 25@30c. California wools have been quiet at 16@25c. for Fall, and 25@30c. for Spring. Pulled wools continue in request, but at low figures; some choice and fancy supers have sold up to 40@48c., but the bulk of the sales have been in the range of 30@37½c. ℔ lb. In Montevideo wools there have been large sales at 18@19c., in bond, and 30c., duty paid, upward of 500,000 lbs. having been taken. Australia and New Zealand wools have been selling freely at from 38½@42c., and carpet wools have also been in better demand, with large sales of Donskoi, in New York at from 27@30c. ℔ lb. On the whole the feeling is more settled, but with very little prospect of any formidable change.

Chicago.—WHEAT in fair demand. No. 2 Chicago Spring, $1 00⅝@1.03⅞, cash: $1.05 bid May; $1.06⅝@106⅜, June; No. 3 do. 92@96c. CORN in good demand at full prices at 39⅞@41⅛c, cash; 42⅜@42⅝c May; 42¾c June. OATS quiet and weak at 31¾@33⅛c. RYE active at $1.04@1.05. BARLEY $1@1 02. Flax seed—good crushing $1.16@1.17. Pork excited and higher on European reports and crowding of shorts by longs at $16.87½@17 cash; $16.90@16 92½ April; $16.92½@16.95 May; $16.87½@16 90 June; $17 00 July. Lard active at $10.75 cash; $10 80@10.82½ May; $10.90@10.10,92½ June; $10.96@10.97½ July. Bulk meats strong and higher; shoulders $5 20, short rib $8,05, short clear $8 35. BUTTER—Creamery 30@33c, dairy choise 25@27c, dairy fair to good 22@24d, ladle-packed 16@20c, packing stock 13@15c, grease 8@10. CHEESE—Full cream 13@14, part skim choice 10½@11c, do. fair to good 9@10c, do. hard 7@8c, low grades 4@5c. HOGS—Packing in good demand, others quieter and 10c. lower than yesterday; common to good mixed packing $5.40@5.80; light $5.30@5.75; choice heavy $5 90@6 40. Cattle—very full supply and prices 10c. lower than yesterday; common to fair shipping $4 50@5; good to choice $5.30@5.60; expores $5 75@6.25; corn-fed Texans $4,50@4 90; butchers' steady with a fair demand at $2 50@4.20; stockers and feeders $3 30@4 65; demand very good and business large. Sheep, good demand for choice; common to medium weak and nominal at $4 25@5; good to choice $5 50@5.75; exports $5,90@6.25.

Cincinnati.—WHEAT strong; red winter, $1.12. CORN stronger; No. 2 mixed, 47½@48c. OATS in good demand; No. 2 mixed, 39c. RYE strong; No. 2 at $1 17@1 20. BARLEY firm; No. 2 fall, $1.10; No. 3 do, $1.05@1.07; No. 3, $1; No. 2 spring, 95c. PORK excited and higher at $16.50. Lard in light demand, but holders firm at $10.70. Bulk-meats stronger; shoulders, $5; clear rib, $8. Bacon steady and firm; shoulders, 5½c.; clear rib, 8½c.; clear, 9c. BUTTER strong and higher; fancy Northwestern creamery, 36@37c.; choice dairy, 25@27c.; choice Western Reserve, 24@26c.; prime to choice Central Ohio, 20@23c., and common to medium do. 15@18c, ℔ lb. CHEESE.—The market has ruled firm at 12@13c. for prime to choice cured factory, and 11@11½c. for late-made Northwestern HAY,—Common, $16@17; prime do, $18.50@19 50 ℔ ton, and prairie hay, $12@13 ℔ ton in bales on arrival. Wheat and rye straw is steady at $8@8 50, and oat straw firm at $9@9.50. MILL FEED.—Bran sells at $14 50@15; ship stuffs at $15 50@16, and middlings at $16@20 ℔ ton in bulk, and 50c. more in sacks on track. SEED—Prime to choice clover sells at 8@8½c. ℔ lb., and Timothy at $2.70@2,80 ℔ bush. from store. Round lots on arrival would not bring these prices. Flax-seed is steady at $1.10@1.12½ ℔ bush. German millet sells at $1.50; common millet at $1.25, and Hungarian grass at $1@1.10 ℔ bush.

Fertilizers.

Mapes' Potato Manure, $50; Corn do, $50; Fodder Corn do, $47; Beet and Mangold do, $50; Cauliflower and Cabbage do, $49; Sugar Cane or Sorghum do, $47; Asparagus do, $52; Tobacco do, $53; Complete do, (for light soils) $53; Complete do, $52; Grass and Grain Spring-top Dressing, $52; Fruit and Vine Manure, $37; Lawn Top-Dressing—full strength—free from odor, $60; Lawn Top-Dressing (with plaster), ready for use without further mixing, $35; Potato Manure, (Ville Formula, $48 50c; Complete do, (Ville Formula) $49; Complete do, ("A" Brand) $42; Nitrogenized Super-Phosphate of Lime, $38; Nitrogenized Superphosphate of Lime, (with potash) $40; Ammoniated Dissolved Bone, (Moosehead) $36; Potash Bone Phosphate, $37; Ground Dried Fish, (8 to 16 per cent,) $40; Ground Dried Fish, (with phosphoric acid and potash added) $40; Prepared Fish Guano, $41; Pure Ground Bone, Medium, $36; Pure Ground Bone, Fine 38; Pure Ground Bone, Extra Fine, $40; Pure Ground Bone, Meal and Extra Fine, $41; Pure Ground Bone, for Feeding Stock, (in barrels about 200 lbs. each) $60; Muriate of Potash, 80 per cent., bags about 200 lbs each, $42 per ton; Kainit, or German Potash Salts, 24 per cent, bags 200 lbs each, $15; Sulphate of Ammonia, (barrels about 250 lbs) per lb, 4@5½c; Nitrate of Soda, 95 per cent—per lb, 4@4½c. All Chemicals subject to fluctuations.

BAUGH & SONS, Philadelphia, Pa.—Baugh's Twenty-five Dollar Phosphate at $25 for 2,000 lb; Baugh's Economical Fertilizer at $30 for 2,000 lb; Baugh's Raw Bone Super-phosphate at $38 for 2,000 lb; Baugh's Special Tobacco Fertilizer at $38 for 2,000 lb. All delivered on the cars or on the boat in that city.

No. 1 Peruvian Guano—"guaranteed," $56 per ton; Plaster, Nova Scotia, $8 per ton. No cartage charged. A single bag sold at ton rates.

PRICE LIST OF STOCKBRIDGE MANURES AND BOWKER'S PHOSPHATES.—For potatoes and roots, $50 per ton; for corn and grains, $50; for strawberries and small fruits, $40; for grass, top dressing, $50; hill and drill phosphate, $45; Bowker's phosphates, $40; Brighton phosphate, $38; soluble bone, $35; pure steamed bone, $40.

[Cincinnati Irish Citizen.]

Mr. John Miller, of 54 West Fifth Street, tells us that he was cured by the use of St. Jacobs Oil of a complicated case of rheumatism of ten years' standing.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 9, 1881.

BEANS AND PEAS.—A direct demand from the West has struck the interior and with strong country prices the market here has advanced for prime white. Exporters are shut out by the new rates' but holders are firm in their asking. Green peas plenty, dull and weak at $1.60@1.62½ for Wis. bbls.; So. B. E. scarce and wanted at $2.75 for 2 bu. bag.

Medium and marrow beans fair to prime $2.10@2.25; pea and white kidney $1.95@2.15, red kidney, prime $1.55@1.60, other, $1.40@1.50.

BEESWAX.—Demand continues small; quoted at 25@25½c. for Western and Southwestern.

BUTTER.—Selections of State and Western are quoted at 23@25c; other grades range at 12@19c. with plenty offering at intermediate prices: very poor Western 9@10c: grease 8@9c: new butter does not arrive freely owing to the backward Spring; besides cheese factories are using a good deal of milk. Light supplies of new will help to work off useful lots of old better than was hoped.

New Butter.—Creamery, choice 33@35c. including Penn; State sweet 29@30c.; other 27@30c.; hf firkins 20@29c.; Welsh 20@28c.: poor new 15@18c.

Receipts for week 23,681 pkgs.

Exports do, 238 do.

Stock of butter in New York estimated at 48,131 pkgs.

CHEESE.—Export demand has been very light this week, and shipments have been only 14,900 boxes. The home trade is moderate. On fancy stock prices are held strong at a slight advance; otherwise the feeling is easy. Quotations are for

Fancy at 13¾@13⅞c.; do. good and prime, 12½@12¾c.; do. fair, at 11½@11¾c.; do. half-skimmed, 8@9c.; Wisconsin factory, fine, at 13@13½c.: do. good to prime, 12@12½c.: do. fair to good, 11@12c.; Ohio factory, fine, 12½@13½c.; do. good to prime, 11½@12½c.: do. fair to good, 10½@11½c.; do. poor to fair 8@10c. Skimmed creamery, 6@7c.

Receipts for week, 9,050 boxes.

Exports for week, 15,433 boxes.

Liverpool cable, 69s.

Steam to Liverpool 21s.6d.@25s.

Stock of cheese in N. Y. estimated 59,827 bxs.

COTTON—Has been more freely offered and closed weak at for

April, 10 57@10.59c.; May, 10.65@10.69c.; June, 10.74c.; July, 10 82c.; August, 10.87.; September, 10.53@10.54c.; October, 10 21@10.22c.; November, 10.09@10.10c.; December, 10.09@10.11c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	7 1-16	7 5-16	7 5-16
Strict ordinary	7 11-16	8 1-16	8 1-16
Good ordinary	8⅝	9 3-16	9 3-16
Strict good do	9⅝	9 11-16	9 11-16
Low middling	10 1-16	10 7-16	10 7-16
Strict low middling	10 9-16	10¾	10¾
Middling	10 13-16	11 1-16	11 1-16
Good middling	11⅜	11⅞	11⅞
Strict good middling	11⅝	12	12
Middling Fair	12⅝	12⅝	12⅝
Fair	13⅜	13⅜	13⅜

STAINED.

Good ordinary	6⅞	Low middling	8 9-16
Strict good ordinary	7⅞	Middling	9 15-16

Receipts for the week, 17,418 bales, Exports do. 28,487 do.

DRIED FRUITS.—Evaporated apples been in active demand for the West and foreign markets, with some 6,000 boxes taken, nearly all at 7⅜. Peaches rule at strong prices and have a steady demand. Small fruits are quiet. Quotations are for

Evaporated apples at 7½@8½c. for prime and strict-choice stock; sliced apples at 4½@5½c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn do; 4½@5c. for State do; 4½@4½c. for western, Ohio and Mich. Peaches at 28@29c. for evaporated peeled; 13½c. for unpeeled do.; N. C. peeled at 19@22c.; for the better qualities, unpeeled peaches at 5½@5¾c. for halves and 5½c. for quarters. Plums at 15@16c. Blackberries at 8c. for prime. Cherries at 16½@17c. Raspberries at 25c. Whortleberries 10@11c.

Receipts for the week, all kinds, 273 pkgs.

Exports dried apples, 4,037 pkgs.

EGGS.—Receipts for week, 18,818 bbls.; do. last week 16,729 do. The market worked well for sellers and materially higher than at this date last year. Good prices are expected to rule Easter week as no heavy supplies are indicated.

Near points, 19c.; State and Pa., 18½@18½c.: Western, 18½c.: Southern, 18@18½c.; ducks, 31@32c.; goose 55@57c.

FLOUR.—The market has shown firmness and in cases a slight advance, with a very good demand.

Latest prices are: $3.70@4.35 for very inferior to choice superfine State and Western; $4.40@4.65 for poor to choice extra State and Western road lots and lines; $4.65@4 75 for choice to fancy do.: Inferior to good white wheat, trade and family extras, $4.50@5.40; good to choice do, at $5.40@6.25; very choice up to $6.35@6.50 and fancy at $6.50@6.75; red and amber winter wheat, inferior to choice trade and family at $4.50@6.15; round hoop Ohio, $4.50@4 85; and trade and family brands of do. at $5.00@6.25, the latter for very choice; St. Louis $4.75@5.75 for inferior to good extra; $5.75@6.50 for good to choice and up to $6.75@7 for very choice to very fancy brands; Minn. clear, inferior to very choice at $4 40@5.85; Minnesota "straight," poor to very choice, at $5 85@6.75, and patent inferior to fancy at $5.75@8.15; city mill extra at $5.50@5.65 for the West Indies; do. for England at $4.40@4.75 for poor to choice spring wheat; do. trade and family extras $5 70@5.75 do. for South America $5.75@6.00, the latter for very choice; No. 2 at $3 00@3.70 for very inferior to very fancy.

Receipts for week, flour, bbls. 119,700, corn meal, do. 3,100; wheat, bush. 730,300; corn, do. 579 9.0; oats do. 157,875; rye, do 48,500; malt, do. 13 600; barley, do. 44,100, beans, do., 5 228; rice, pkgs. 1,025.

Exports for week, flour, bbls. 66,950; corn meal, do. 6,000; wheat, bush 967,800; corn, do. 622,800; oats, do. 1,675; beans, pkgs. 610 rice do. 1,411.

CORN-MEAL.—Sales at $3.05@3.10 for Brandywine and $2 80@2.90 for yellow Western.

FRESH FRUITS.—Exports of apples for week, 14,185 bbls. The market is dull for anything at all off from prime. A good many are going abroad, but mostly on country account as there is no sure outlet here. Newtown pippins are becoming a favorite retailing sort; and a discriminating dealer assures us it will yet be a feature for late use, and will not go so exclusively to our trans-Atlantic cousins.

Baldwins prime $1.50@1.75; greenings $1.25@1.50; Spitzenbergs $1.25@2; russets $1.25@2; poor and remnants 75c@$1. Fla. oranges plenty and quiet range $1.50@3 for ½ barrel cases. Fla. strawberries have not sold quite so freely. Some left over with quotations at 40@75c per qt. Hot-house berries $1.50@2 do. grapes Black Hamburg per lb. $4@5. Cranberries are almost a dead item. N J. crates freely offered at 87c@$1.50. Peanuts quiet; prime Va. hand-picked 4½@4½c; extra prime 3¾@3½c; prime 3@3½c; shelled 2½@3½c; pecans 7@7½c.

GRAIN.—The unfavorable weather at the West early in the week tended to activity and higher prices, but at the close the feeling is weak. Exports of wheat for the week 1,077,000 bush., for which the latest prices are—

No. 1 white at $1.21⅛@1.21⅜, do. April at $1.20@1.20⅜; do. May at $1.18⅝@1.19; do. June at $1.17½@1.17⅞; No. 2 white at $1.20@$1.20½; ungraded white at $1.17½@1.19¾; mixed Winter at $1.20½; No. 1 red at $1.30@1.30½; No. 2 red at $1.24@1.25; do. April at

$1.22½@1.22½; do. May at $1.21@1.21½; do. June at $1.19½@1.20¼; do. July at $1.17½@1.17½; do. August at $1.16; No. 3 red at $1.20½@1.22; ungraded red at $1.17@$1.27; rejected Spring at $1.

Rye at $1.08@1.09½.

Corn closed at for

New York No. 2 at 58@59½c.; do. April at 57½@58c.; do May at 54½c.; do. June at 54½@54½c.; No. 3 at 53½@54½c.; ungraded mixed Western at 51@59½c; New York steamer mixed at 56½@57½c., No. 2 white at 60@60½c.; yellow Southern at 58½c.; Pa. yellow at 56c.

Rye at $1.03@1.03½.

Oats closed firm at for

No. 1 white at 52c.; New York No. 2 white at 47@47½c.; No. 3 white at 45½@46; New York No. 2 at 46½@47c.; do. April at 45, do. May at 44; do. June at 44, do. July at 44½ No. 3 at 43, ungraded white Western at 45@50; ungraded mixed Western at 44@47; white State at 48@50½; No. 2 Chicago at 47c. asked.

HAY AND STRAW.—Prime hay has a good demand and is steady in price; the lower grades are plenty and freely offered. Quotations:

Hay, prime timothy at $1.10@1.15 ₱ 100 lbs.; medium timothy at 95c.@$1.00 do.; shipping grades at 85@90c., do.; clover mixed at 95c.@$1 00, clover at 85@90c. do. Straw—No. 1 rye at $1.10@1.15 ₱ 100 lbs.; No. 2 rye at 70@80c, do.; oat and wheat at 60@65c. do.

Exports for week, 2,151 bales.

HOPS.—The market continues quiet, but is held firmly in hopes that the approaching mild weather will invigorate trade. Latest prices are for

	Cents per lb
New Yorks, crop 1880, choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	12 @15
Eastern, crop 1880	14 @23
Wisconsin, crop 1880	14 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Pacific coast, new	19 @23
Bavarians	30 @35

Receipts for week, 790 bales.

Exports do., 361 do.

LEATHER.—Quotations are for hemlock sole, 22@23c. for light; 22½@25c. for middle; 22½@24½c. for heavy, and 20@22c. for good damaged.

MAPLE SUGAR.—Prices have been low but with smaller receipts and a more general demand the market is better; good sugar 9@10c; common 8c; Sirup, with can of 10@11 lbs. 75c@$1.

OIL-CAKE.—Western is quoted at $29.50@30 per ton.

POULTRY AND GAME.—Supplies of dressed are still very light and not likely to improve. Sellers do about as they please with prices. Frozen poultry has found a good place this season.

Turkeys, choice frozen, 18@19c; fair to choice other, 15@18c.. Poltn. chickens, broilers, 25@40c; other 22@24c; N. J. and Bucks Co. 18@22c; fowls and chickens, State and Western 14@17c; Phila. fowls, d. p. 17@18c.; N. J. 16@18c.; State and Western 15@17c. Capons, large, 28@30c; small and slips, 23@25c. Ducks, 15@22c. Squabs, white, $3.50 ₱ doz.; do. dark, $2@2.25

The coming celebration of the Jewish Passover forces a demand and with little stock to meet it. Prices are high. The country seems almost drained of market poultry.

Fowls, 16@17c.; roosters, 11@12c.; turkey, hens, 19@20c.; turns, 16@17c; ducks, 75c@$1.37 geese, $1.50@2.50 pigeons, 35@45c. Game is in light supply; but little is wanted as would appear with the decline in snipe choice Red heads ducks 75@90c per pair; other surts 25@35c; Eng; snipe $1.75@3; plover $1-50; sand 50c.

PROVISIONS.—Hog products have been active and closed strong at an advance.

Mess pork closed at $16.75@17 for new mess on the spot, $16.85@16 95 for April, and $17 for May. Bacon at 8¾ for long clear and 8.80 for short clear. Beef hams at $21@22. Beef at $21@23 for city extra India mess in bbls Tallow at 6¾@6 7-16 for prime. Stearline at 11¾@12. Western steam lard at 11.10@11.12½ for spot lots and, 11.12½ for April, 11,15 for May, and 11.17½@11.20 for June.

Receipts for week, beef, bbls and tcs, 400 pork, bbls. 3,800; cut-meats, pkgs. 12,800; lard: do. 8,57 .

Exports for week, beef, bbls. and tcs., 1,778; pork, do. 3,022; cut-meats, lbs. 6,543,412; lard, do. 2,906,025.

SEED.—Clover is quiet at 8¼@9. Timothy is slow at $2.80@2.90

TOBACCO.—Export demand is fair in both Western leaf and seed leaf and prices rule firm.

WESTERN LEAF.

	Light.	Heavy
Lugs	4¾@ 6	5 @ 6
Common leaf	6 @ 7	6½@ 7¾
Medium leaf	7½@ 9	8 @10
Good leaf	8 @10	10 @12
Fine leaf	9½@13	11 @13
Selections	12 @15	13 @15

SEEDLEAF.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5¾@ 7
Penn. assorted, low	10 @12
Assorted, fair	13 @16
Assorted, fine	18 @22
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7½@10
Wrappers	15 @25
Wisconsin assorted	7 @10
Havana seed	14 @18
Wrappers	13 @18

SPANISH.

Havana fillers, common	80 @85
Good	88 @95
Fine	$1 @1.10
Superior	$1.15@1.25
Yara, first and second cuts, assorted	62½@67½
Yara, cuts	92½@$1

VEGETABLES.—There is a strong market for potatoes and the advance in beans does not hurt them any. Buyers prefer to pay best prices with the assurance of good quality. Most lately arrived bulk lots are consequently dull

Bermuda potatoes $9@10 ₱ bbl.; 2d crop $7@7 75; Early Rose, Nova Scotia d.h. $2.62@2 75. Maine $2 50@2.75, State, $2.25@2 50; do. bulk, $2.25@2 50. Prolino, $2.12@2.25; Mercer, $1.87@2 Jackson White, d.-h., $2@2.25; Burbank, d.-h. $2 50@2 62; do. bulk, $2 25@2.50, Snowflake, $2.25@2 50; do. d.-h. $2.37@2.62, peachblow do. $2.37@2.50 Peerless, $1.75@2; sweet Del. $2,25@2.75—hardly wanted.

Advices indicate that hail storms have seriously damaged Southern green crops; nearly all of the smaller usual shipping points mention some damage and some an entire loss.

Fla. green peas per crate $3@4; Md. do. $4@5; Fla. tomatoes, $1.50@2 ₱ crate; Bermuda tomatoes, 50@60c. ₱ box; Fla. string beans, $4.50@5 ₱ crate; Bermuda beets $2@2.50 ₱ crate; do. onions, $3.25 ₱ crate; Norfolk Spinach, $3@3.50 ₱ bbl.; do. kale, $1 75@2; do. radishes, $2.50@3 ₱ 100 bunches; Chas. asparagus $6@7 ₱ doz. Fla cabbage, $2.50@4 ₱ bbl.; lettuce $2.50@4. per bbl.; old turnips, 50@75c ₱ bbl; cabbages, $4@6 ₱ 100. Hubbard squash, $1 ₱ bbl.; marrow do. 50@75c.; onions, white, bulk, $4@5 ₱ bbl.; other, $3@3.25; carrots, $1@1.25; celery 50c@$1.

WOOL.—The market continues very dull and buyers have the advantage. There is not much prospect of activity until there are negotiations for the new clip. Quotations:

Ohio, Penn, and W. Va, XXX and picklock, 43@45c.; XX, 40@42½c.; X, 40@41c.; No. 1, 45@46c.; No. 2, 38@40c.; common, 34@35c.; fine delaine, 45@45c.; medium combing and dela no. 45@47c.

Mich., Ind, and Wis, X and XX, 37@39c.; INo. 1, 42@44c.; No. 2 and common, 32@37c.; fine delaine, 42@43c.; medium combing and delaine, 44@46c.

N. Y. State, N. H. and Vt. X and XX, 35@36c.; No. 1, 40@43; No. 2 and common, 32@36c.; fine delaine, 39@42c.; medium combing and delaine, 43@45c.

Iowa, Ill., and Western X and XX, 34@35c.; No. 1, 40@42c.; No, 2 and common, 32@35c.; combing, 40@43c.

LIVE STOCK MARKETS.

NEW YORK, Saturday April 9, 1881.

BEEVES.—Receipts for the week 13,015 head; do. last week, 12,389 do. The strong prices of the past sales' days have brought in good supplies. The demand at the close is not so sharp as it was as the weather is warm for carrying; cattle declined with the last free offering. Range for business done at the close 9¼c. to dress 58 lbs, to 11¾ to dress 57 lbs,; the latter rate seldom obtained.

COWS AND CALVES.—Supplies are small and the receipts have met a fairly quick sale at $30@55 per head. Few will come from near points for a while as the milk season for consumption is opening and new butter is stiff in price as well.

VEAL CALVES.—Prices have an easy tone for both live and dressed. The latter must be strictly fresh at this date of Spring.

New Jersey live fed prime 7½@8c; other 6@6½c.; very poor 4@5c.; Mt. Holly, takes the range. Buttermilk, 3@4c.; dressed calves choice 9½c.; other 5@8c.

SHEEP AND LAMBS.—Receipts for week, 18 845 head; do. last week 21,933 do. There has been a weak feeling latterly although receipts are moderate. Sheep sold 6½@7½c, with a few at 7¾c. Exporters have taken a fair portion of the supply. Yearling lambs 6¾@7¾c.; live lambs per head $3@6.

SWINE.—Receipts for the week, 21,198 head: do. last week, 21,935 do. Market firm at $6@6.25 ₱ 100 lbs. Western corn-fed.

Country dressed pork scarce and firm: light, 8¼@8½c.; medium, 8@8¼c.; heavy, 7¾c.; city dressed Western, 7½@7¾c. Pork tenderoins, 11¾@12c.

Clergymen, Lawyers, Editors, Bankers and Ladies need Hop Bitters daily, for nerve force.

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GENERAL ADVERTISING RATES OF THE RURAL NEW-YORKER.

Inside (Agate space)	40c. per line.
" 13th page	50 "
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Discount on 4 insertions, 5 per ct.; 8 ins., 10 per ct. 13 ins., 15 per ct.; 26 ins., 20 per ct.; 52 ins., 25 per ct.

☞ No advertisement inserted for less than $2.

E. & O. WARD, PRODUCE Commission Merchants.

(ESTABLISHED 1845.)

Send for Circular of Great Value, giving full instructions for shipping

POULTRY, GAME, BUTTER and PRODUCE

No. 279 Washington St., N. Y.

Ref., *Irving National Bank*, New York City.

COMPLETE MANURES

For EACH CROP, containing the necessary PLANT FOOD it requires. Also

Agricultural Chemicals,

GROUND BONE,

Guaranteed Strictly Pure.

Our Circular, containing facts interesting to Farmers, furnished on application.

H. J. BAKER & BRO., 215 Pearl St., N. Y.

GATES'

GARGET CURE.

For the Cure and Prevention of Garget in Cattle.

Teats Partially destroyed, Restored to their Natural Condition. Kernels in Teats or Udder removed Speedily and Surely. All Stringy Substances or lunches in Udder removed by 1 to 2 bottles. Blood or Sediment in Milk, from 1 dose to 1 bottle.

SOLE PROPRIETOR.

JOHN B. GATES,

Worcester, Mass.

17 Harvard Street.

☞ Price 75 cts. per Bottle, or 3 for $2.

THE OLD RELIABLE HALLADAY

STANDARD WIND MILL

26 YEARS IN USE.

GUARANTEED

Superior to any other make.

17 Sizes-1 to 40 H. Power

Adopted by U.S. gov. at forts and garrisons and by all leading R. R. Cos. of this and other Countries.

Also, the

Celebrated I X L Feed Mill,

which is Cheap, Effective and Durable. Send for Catalogue "D" and Price List. Address,

U. S. Wind Eng. & Pump Co., Batavia, Ill.

IMPROVED CALIFORNIA WIND MILL.

Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.

CHALLENGE MILL CO., Batavia, Ill.

J. B. CROWELL & CO.,

25th **Greencastle, Pa.** year.

GRAIN & FERTILIZER DRILLS.

Complete Force Feed, Rubber Springs, AUTOMATIC CUT OFF, saving Fertilizers. Agents wanted in territory not occupied.

☞ Descriptive Circulars sent on application.

PLANTS WITH THE PRECISION OF A HOE

All the ground a person can walk over in a day.

THE EASIEST TO HANDLE AND THE FASTEST HAND PLANTER IN USE.

Every Planter fully warranted and satisfaction guaranteed. Inducements on samples this season. Send for circular. WALLACE FISK,

South Byron, Genesee Co., N. Y.

Vanderbelt Bros, No. 23 Fulton St., Agts. for N. Y. City. Hamlin Johnson, Providence, R. I., Agent for New England.

NEW FRUIT AND ORNAMENTAL TREES

Besides the largest and most complete general stock of Fruit and Ornamental Trees in the United States, we have the pleasure to offer the following **Choice Novelties:** APPLES.—Red Bietigheimer, Stump, Sutton Beauty. PEARS.—Souvenir du Congres, Petite Marguerite, Ansault. PEACHES.—Waterloo, Conkling. GRAPES.—Monroe, Rochester, Lady Washington. STRAWBERRIES.—Sharpless and others. Also, the best new Deciduous Ornamental Trees and Shrubs, Evergreens, etc. We always secure the best novelties at home and abroad, and all who intend to plant should not fail to consult our Catalogues, which contain full descriptions of all the new and old fruit and ornamental trees worth having.

Priced Catalogues sent as follows: No. 1, Fruits with plate, 15 cts.; plain, 10 cts. No. 2, Ornamental Trees, etc., with plate, 25 cts.; plain, 15 cts. No. 4, Wholesale, Free. No. 5, Catalogue of Roses for 1881, Free. No. 7, Catalogue of Strawberries and Small Fruits, Free.

ELLWANGER & BARRY, Rochester, N. Y.

THIS IS THE

VICTOR Double Huller Clover Machine that beat the Birdsells, Monitor, Jr., and the Ashland Clover Hullers in a scientific test at the Toledo, O., Fair, Sept. 15th and 16th, 1880, in the presence of 30,000 Farmers and Threshermen of the West.

Committee's Report mailed free. 284 Victors sold last year.

HAGERSTOWN AGRICULTURAL IMPLEMENT MFG. CO.

State where you saw advertisement. Hagerstown, Md.

WIND-BREAKS AND HEDGES.

Norway Spruce, 2 to 3 feet, $10 per 100. Price-list of Nursery stock, Small Fruit, etc., free.

Blauveltville, N. Y. A. T. BLAUVELT & CO.

It is manifest that from GOOD SEEDS ONLY can Good Vegetables be obtained.

The character of LANDRETHS' SEEDS has been substantiated *beyond all question.*

They are the STANDARD for Quality.

Over 1500 acres in Garden Seed Crops under our own cultivation.

Ask your Storekeeper for them *in original sealed packages*, or drop us a postal card for prices and Catalogue.

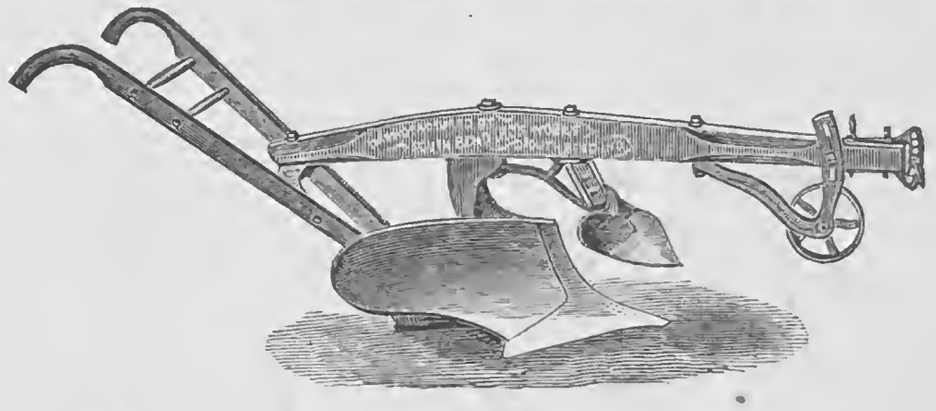
Wholesale trade prices to dealers on application.

Founded 1784. DAVID LANDRETH & SONS, 21 and 23 S. Sixth St., Philadelphia.

THE PLOW OF THE PERIOD.

THE "OLIVER CHILLED."

1,500 Sold in 1870.



86,000 Sold in 1880.

Ten years ago almost unknown—to-day doing service on over

HALF A MILLION FARMS.

Sales steadily increasing, and showing the largest ratio of gain where it is best known.

Endorsed by the best agricultural authorities in the country—and its superior merits confessed by a brood of puny imitations.

With 700 men, nearly a million dollars of capital, and acres of buildings and machinery, employed in its production—the demand for this—

THE LEADING PLOW OF THE AGE,

has been during the past year beyond our capacity—a state of facts never before witnessed in the

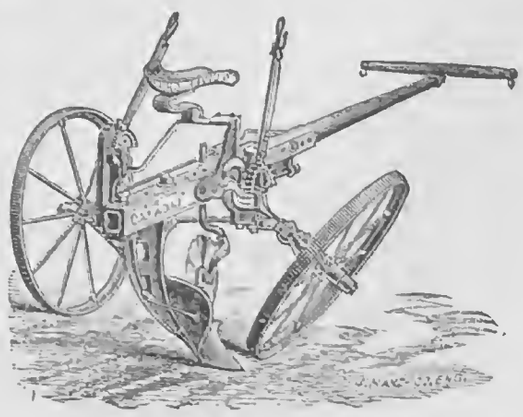
ANNALS OF THE PLOW TRADE.

THE

"CASADY" SULKY PLOW.

A revolution in the art of plow-making. Has no Landside! Carries every pound of side and bottom pressure on its wheels! Guages the width of its own furrow! Turns square corners without lifting out! Rides over buried stones without disturbing the truck! Works in the hardest, dryest ground! and accomplishes other results not possible to any other plow on wheels.

Address for Circulars, Terms, etc.



OLIVER CHILLED PLOW WORKS,

SOUTH BEND, IND.

INDIANAPOLIS, IND, ST. LOUIS, MO, MANSFIELD, O. KANSAS CITY, MO, HARRISBURG, PA. CEDAR RAPIDS, IOWA. BALTIMORE, MD. ST. PAUL, MINN. DALLAS, TEXAS. ROCHESTER, N. Y.

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 18.

HENRY STEWART.

The Growing of Crops.

ALL the laborious preparation of the soil by means of draining, plowing, harrowing and manuring is but the first part of the farmer's work. These are all mechanical work; that is, they are done by the hand, or by tools, or machines; yet each one depends upon some settled principle, and must be done in the right manner and consistent with each principle upon which it is based, or it will fail and all the labor be lost. Knowledge of what should be done, and skill and practice to do it, are needed, but nothing more when the work is done, all is done that can be done, and there is no uncertain element which can enter in to prevent the certain effect of the work.

But when the farmer sows his seed he is met at once by the greatest uncertainties. The weather then becomes the farmer's master, and under its influence a man is helpless. Frost may blast the tender corn, just appearing with its green shoot above the soil; drouth may parch the earth and destroy the growing plant; sweeping rains may beat the crops to the ground; fierce winds may lay low the corn or the wheat; the fog may brood over the field until the hot sun overcomes it and chases it away, and then, scorching the wheat, may cause it to rust and wither and destroy all the farmer's hope for a return for his long-continued labors. From the time that the seed is sown until the harvest is safe in the barn, there is nothing but uncertainty as to the result.

In addition to the risks from the weather there are dangers from insect enemies, and from injuries by rust and smut and other diseases caused by the growth upon the crops of minute plants known as fungi, which feed and grow upon the sap and so deprive the crops of their proper nutriment. The farmer has need to know of all these things that he may do what he can to avert these dangers and lessen these risks; for when one knows of a danger that may occur, he may take all those means to avoid it which are possible for him. No man can control the weather. This he must take as it comes. But the farmer may prepare himself in many ways for these accidents, so that he may suffer but little from them.

One great safeguard against these risks, is to have one's work done in good season, for it is well known that the late sown crops suffer the most from bad season. Another is to prepare the soil in the best manner; for a crop upon soil that is poor, or has been poorly prepared, is often too weak to recover from an injury that would not damage a crop upon good soil, and that is strong and vigorous. Dry weather is always most hurtful to weak crops, and rarely injures stout and deep rooted plants upon well plowed soil. So too the heavy rains that flood the fields and choke the roots of the plants which cannot thrive in water—where the soil is not drained, rarely do any injury where the land is drained, because the water passes off very quickly through the drains. Again, crops that are strong and are growing rapidly rarely suffer much from insects or from diseases; it is with these as with animals, and even with persons, the strong do not suffer from disease, it is the weak that are always ailing and that cannot resist those accidents which the strong and healthy either escape altogether or by which they are but little troubled.

In all this there are seen the results of what may be called a natural law; by which is meant something which always produces certain results, as for instance, that wrong doing is always punished in some way or at some time; that water quenches fire or that fire burns. These results being absolutely certain, we term such cause and effect a natural law. And the natural law which is here involved is this, that work well-done always produces better results than work ill-done. To do work badly, in wrong season or in a poor manner, is wrong doing; it is not dealing justly to those we work for; it may be ourselves for whom we work, or it may be for another person; the act is precisely the same in effect; and being unjust is wrong and punishment always follows. It does not matter that it was not intended or that it was done through ignorance; the intent or want of knowledge is never regared so far as a law of nature is concerned and the farmer who breaks the law here referred to, always suffers, although he might not know or expect what would be the result. We find this out as we grow older, and this knowledge is experience; and "Experience," we are told "keeps a dear school;" because those who learn only by experience always learn by suffering.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK AND COUSINS:—Not seeing any letters from this part of the country, I will ask to be admitted to your interesting Club. I am 13 years old, and live on a farm with my uncle, G. W. Henry. He has taken the RURAL for some time, and we like it very much. My uncle has a farm of 305½ acres. He raises cotton, corn and oats. He has five head of horses and mules, two Indian ponies, which we ride, and 46 milch cows. I have learned to be a real good dairy maid. I was brought up in New Orleans, La., and San Antonio, Texas, and last year was my first year on a farm. I would not exchange our ponies and our beautiful farm for all the cities in the South. I was always a pale, delicate girl, but now I weigh 100 pounds. I had a small garden last year, but did not raise seed because it was not genuine. I hope you will be so kind as to send me some.

Pottsboro, Grayson Co., Tex. CARRIE SPOONER.

Hop Bitters has restored to sobriety and health, perfect wrecks from intemperance.

Fertilizers.

SECOND TO NONE.

Soluble Pacific Guano.

Sale in 1865 - - - - - 754 Tons.
" 1880 - - - 44,700 "

This Fertilizer, which was at first sold almost entirely in the Southern States, has of late years become so deservedly popular in the North, for the cultivation of all Farm Crops, that the Company have enlarged their works especially to supply the Nothern demand, and we are now in a position to fill orders promptly. Pamphlets containing testimonials and other information furnished by our local agents, or on application to

GLIDDEN & CURTIS,

GENERAL SELLING AGENTS OF PACIFIC GUANO COMPANY,
Boston, Mass.

BAUGH'S $25. PHOSPHATE.
BAUGH'S ECONOMICAL FERTILIZER.
Price $30. Per Ton of 2,000 Pounds.

☞ CONSULT YOUR OWN INTERESTS AND SAVE MONEY BY USING THESE FERTILIZERS.

Circulars giving guaranteed analysis sent free upon application.

BAUGH & SONS,
20 S. Delaware Ave., Philadelphia, Pa.

BOWKER'S
HILL AND DRILL
PHOSPHATE

SEND FOR PAMPHLET.

This is a true bone superphosphate, and may be used *on any crop*, in the hill or drill or broadcast, either *with* or *without* manure, and will produce a much earlier and larger crop. In the Report of the Mass. Inspector of Fertilizers, its valuation is from $3 to $10 per ton higher than other Phosphates which sell at the same price. The past year over 5000 tons were sold against 100 tons three years ago, showing that it is liked by the farmers. If there is no local agent near you, send to us.

Also for sale STOCKBRIDGE MANURES.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK

STOCKBRIDGE
MANURES

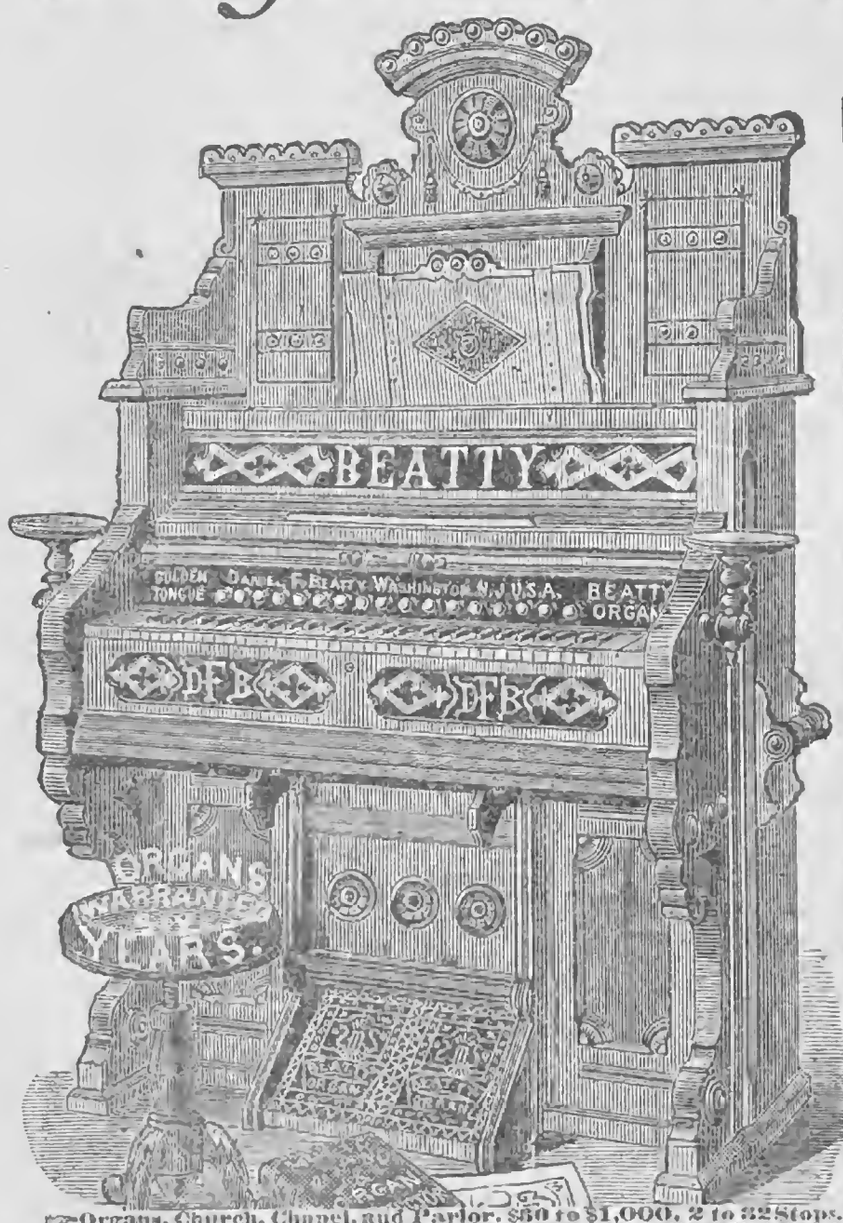
SEND FOR PAMPHLET.

These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK.

Musical Instruments.

$65. Beatty's Organs.



THE "LONDON,"
New Style No. 5,000.

18 Useful Stops.

(1) Diapason Forte.
(2) SUB-BASS.
(3) Principal Forte.
(4) Dulcet.
(5) Diapason.
(6) GRAND ORGAN.
(7) Æolian.
(8) VOX HUMANA.
(9) Echo.
(10) Dulciana.
(11) Clarionet.
(12) VOX CELESTE.
(13) Flute Forte.
(14) OCT COUPLER.
(15) Bourdon.
(16) French Horn Solo.
(17) Right Knee Stop.
(18) Grand Knee Stop.

(19) *Beatty's New Patent*
STOP ACTION.

IMPORTANT NOTICE. On April 1st, and until Sept. 30, 1881, "London," New Style No. 5000, will contain 5 full sets reeds, 18 stops (as described herewith), instead of 4 sets 11 stops as formerly. ☞This is special, and made solely as a *Mid-Summer Holiday Offer.*

I defy Competition

It contains five octaves, five full sets of the Celebrated Golden Tongue Reeds, as follows: 2 sets of 2¼ Oct. each, regulars, 1 set powerful SUB-Bass, 1 set FRENCH HORN, also 1 set VOX CELESTE.—5 FULL SETS IN ALL. Two knee stops, handles, lamp-stands, pocket for music, Solid Black Walnut Case, carved, veneered, extra large Fancy Top, as shown in the accompanying picture. ☞It is a very Stylish Case. Upright bellows, Steel springs, metal foot-plates, rollers for moving &c. Height, 72 in.; Depth, 24 in.; Length, 44 in.; Weight, 400 lbs.

☞Price boxed delivered on cars here, stool, book, music only **$65**

☞It is Unequaled!

☞Organs, Church, Chapel, and Parlor, $50 to $1,000, 2 to 32 Stops. Baby Organs, only $15 Splendid New Organs, 4 Full Sets Reeds, For $48. The "Paris" Offered for $85, a Magnificent Instrument. Other desirable new styles now ready. ☞Pianos, Grand, Square and Upright, $125 to $1,000. ☞REMIT by Post Office Money Orders, Express prepaid, Bank Draft or by a registered letter Money Refunded and freight charges will be paid both ways by me if the instrument is not *just as represented.* Please send reference if you do not remit with order. ☞*Be Sure to send for Latest Illustrated Catalogue, "Beatty's Quarterly," Mid-Summer Holiday Circulars, &c., SENT FREE.*

Address or call upon DANIEL F. BEATTY, Washington, New Jersey.

Stock and Poultry.

POWELL BRO'S,
Springboro, Crawford County, Pa.
THE MOST EXTENSIVE IMPORTERS OF
CLYDESDALES
IN AMERICA.

Two importations for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow.

Largest and Finest Collection ever seen on the American Continent.

ALSO,

HAMBLETONIANS,

And other strains of trotting Stock.

HOLSTEIN & DEVON CATTLE.

Catalogues sent free. Address as above, and mention the RURAL.

HOUGHTON FARM JERSEYS
FOR SALE.

Address MANLY MILES, M. D., Mountainville, N. Y. The herd is led by RAMAPO, whose mother, EUROTAS, has a record of 785 pounds of butter yield in one year, and the Queens MYRA and LASS EDITH, who brought the highest price at the Kellogg sale in 1880.

DR. MANLY MILES'S Book on "BREEDING" will be forwarded on receipt of price $1.50, or it can be obtained at the office of the ORANGE JUDD CO., 751 Broadway, near Eighth Street.

BERKSHIRES
AND
Small YORKSHIRES

THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to

Bagg's Hotel Farm,
UTICA, N. Y.

New Publications.

"FOR ORGANISTS."

ORGAN GEMS. ($2.50) By F. L. DAVENPORT.
ORGAN SELECTIONS. ($1.50) By PETERS.
BATISTE'S ORGAN VOLUNTARIES. $2.50.
BATISTE'S LAST COMPOSITIONS. $2.50.
ORGANIST'S RELIANCE. (10 Nos., each $1.25. Complete, $6.) By EUGENE THAYER.
ZUNDEL'S ORIGINAL ORGAN COMPOSITIONS. ($1.25.)

In these six well-made books will be found a very large number of voluntaries, some classical some new and light, but all good. Organists will be glad to use the longer ones intact, and to adopt the shorter compositions as themes from which to vary.

Billee Taylor, price reduced to 50 cents.
Olivette, price reduced to 50 cents.

Johnson's New Method for Harmony.

($1.00.) By A. N. JOHNSON. "The best book in the world" (for its object), was the commendation bestowed by an enthusiastic pupil on a former book by the same author. However that may be, this is his newest treatise, and can hardly be excelled for plainness of explanation, ease and thoroughness. It does not attempt Counterpoint, or any of the higher problems of composition; but confines itself to those things that every organist, every good player, and every composer of "the people's music," ought to know.

OLIVER DITSON & CO., Boston.
C. H. DITSON & CO., 843 Broadway, New York. J. E. DITSON & CO., 1228 Chestnut St., Phila.

CLOVER

To every farmer sending us his name, we will send free *The Clover Leaf*, a 4 page, 28 column farmers' paper, full of valuable information on the culture and harvesting of clover for seed. When you write say where you saw this notice. Address BIRDSELL MANUFACTURING CO., South Bend, Ind.

102 YOUR NAME in New Type on 102 Chromos, 10c. All new styles, designed by best artists. *Bouquets, Gold Chromo, Birds, Landscapes, Fonels, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

The Ladies of the White House

AGENTS WANTED for "The Ladies of the White House or in the Homes of the Presidents," the most interesting book of WASHINGTON LIFE ever published. A History of every Administration from WASHINGTON to the present time. Includes much Personal and Private history never before published. Address BRADLEY & CO., 66 N. Fourth St., Phila., Pa.

☞Our new edition contains portrait and sketch of MRS. GARFIELD.

PERSONAL ITEMS.

Mr. Ashmead Coutts-Bartlett has written to friends denying that he expects to visit this country with his bride. They have no intention of coming to America at present.

Kossuth, who is now 79 years old, enjoys good health. He has a very pleasant villa near Turin, surrounded by a handsome garden, which he planted himself and cultivates with the greatest care.

Mrs. Garfield, who speaks French and German fluently, is said to be the first President's wife able to talk with foreign diplomats in the court language of Europe. Her husband is also accomplished in German and French.

Miss Frances E. Willard of Chicago, who has been, at Washington, the leading speaking spirit in the presentation and unveiling of the painting of Mrs. Hayes, presented to the White House by the Women's National Christian Temperance Union and the Mrs. Hayes Memorial Committee, has started on a tour through the Southern States Before going she and Miss Ransom, the artist, lunched with President and Mrs. Garfield.

[Mondovi, (Wis) Buffalo Co. Herald.]

Notions of the First Settlers.

Mr. W. H. H. Amidon, one of the first settlers in the town of Gilmantown, Wis., and one of the most industrious and hard working men in the country, has been very severely troubled with rheumatic pains during the past few years, so much at times, that he was disabled from performing manual labor. Learning of the wonderful cures effected by the use of St. Jacobs Oil he procured a few bottles and experienced immediate relief. Many others of our acquaintances have used it and express themselves as highly gratified with the relief it has afforded them. This king of medicines can be bought everywhere.

Miscellaneous.

CARPETS.

We have now open for inspection and for sale a line of the choicest CARPETS ever offered in New York, of the latest and most desirable colorings and patterns.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS—We have opened a full line of 300 pieces at 75 cts. per yard. They cannot be had elsewhere in this city. We have other grades at 85 cts. and $1 per yard:

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

INGRAINS—We have of the best Extra Superior Grade a very full line from 75 cts. to 90 cts. per yard. Also, a line a grade lower at 65 cts. to 75 cts. —all wool.

If you want Carpets call and see what we have. You will get Reliable Goods and save money by purchasing from us..

J. & J. DOBSON,

CARPET MANUFACTURERS,

40 and 42 WEST 14th ST., NEW YORK.

John Van Gaasbeek, Manager.

ENSILAGE.

THE

ROSS GIANT CUTTERS

FOR ENSILAGE AND LARGE STOCK RAISERS

Of immense

Size, Weight, Strength & Capacity

Guaranteed the best Cutter for the business. Send for Circulars to

E. W. ROSS & CO., Fulton, N.Y.

BERRY BASKETS.—BEST, CHEAPEST. Free Circular. N. D. BATTERSON, BUFFALO, N. Y.

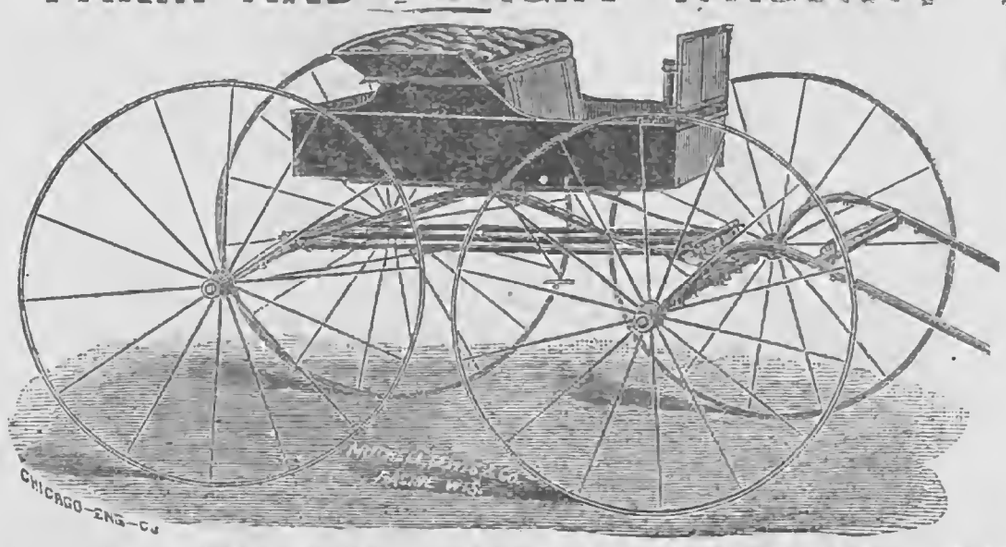
50 All Gold, Chromo & Lit'g. Cards, (No 2 alike,) Name On, 10c. Clinton Bros., Clintonville. Conn

Implements and Machinery.

Mitchell, Lewis & Co., Racine, Wis. U.S.A.

MANUFACTURERS OF

FARM AND FREIGHT WAGONS.



Platform Spring Wagons, Three Spring Wagons, Four Spring Wagons Open and Top Buggies, Phætons, Sewing Machine Wagons, Buckboards.

The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List.

MITCHELL, LEWIS & CO., Racine, Wis

INVINCIBLE

TRADE MARK

VIBRATING THRESHER

Established 1848.

Has the LARGEST SEPARATING CAPACITY

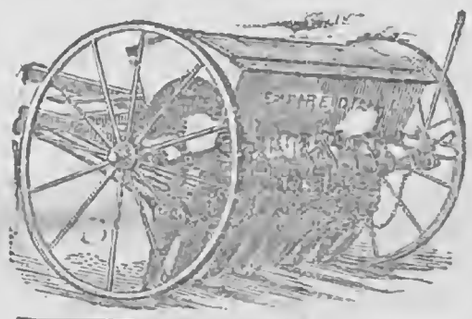
ROBERTS, THROP & CO.

THREE RIVERS, MICH.

Illustrated CATALOGUE Sent free

FIFTEEN PER CENT SAVED

BY USING THE



EMPIRE GRAIN DRILL,

WITH

FORCE FEED FERTILIZER ATTACHMENT.

Distributes all kinds of Grain evenly and accurately.

PLANTS CORN FOR FIELD CROP.

Sows Phosphates without pasting or clogging. Amount sown regulated by gear.

NO GUESS WORK.

Send for Circular to EMPIRE DRILL CO., Box B. Shortsville, N. Y.

PENNOCK'S PATENT ROAD MACHINE.

KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS KENNETT SQUARE PA

MACHINES SENT ON TRIAL.

HEEBNER'S LEVEL TREAD HORSE POWER.

WITH

Speed Regulator.

Heebner's Improved

Little Giant

Threshing Machines.

"UNION" FEED CUTTER, CIRCULAR AND DRAG SAW MACHINES, &c.

Send for Catalogue.

HEEBNER & SONS, Lansdale, Mont. Co. Pa.

AGENTS WANTED FOR THE

SUMMIT

Store-Pipe Shelf.—THE MOST convenient article ever offered to Housekeepers. One Agent made $144.67 in ten days. No freight charges.

Address, R. S. HARTZELL & CO. 136 South Third St., Philadelphia.

BEST WASHER AND WRINGER *in the world.* Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of washer, $8. Sample to agents, $3.50. Price of Wringer, $7.50. Sample, $4.25. Circulars free.

ERIE WASHER CO., Erie, Pa.

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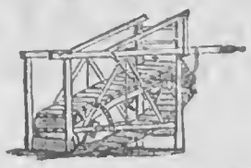

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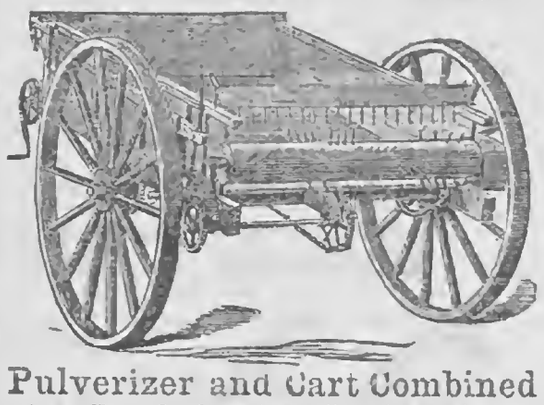

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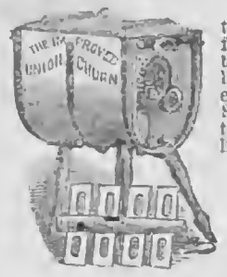

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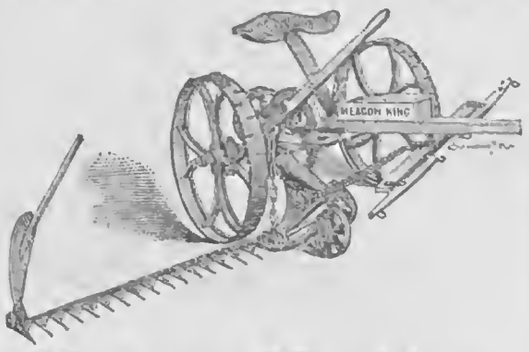

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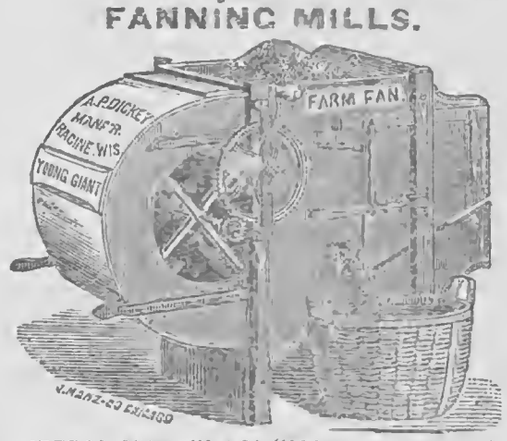

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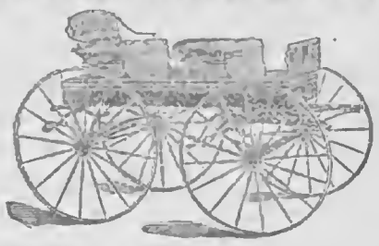

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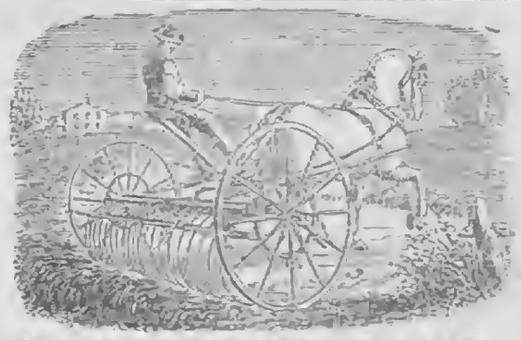

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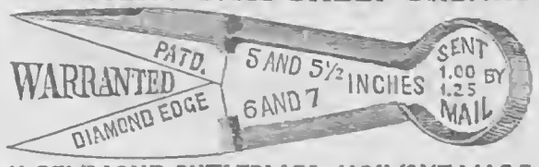

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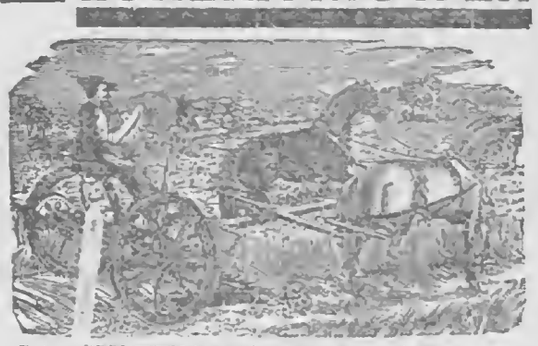

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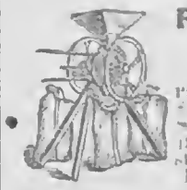

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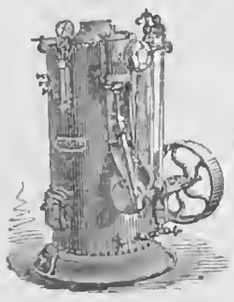

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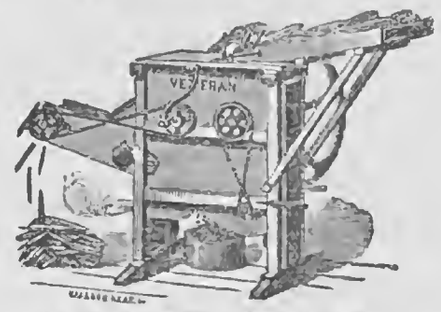

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 17. WHOLE No. 1630. | NEW YORK, APRIL 23, 1881. | PRICE FIVE CENTS. $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Biographical.

CHARLES M. HOVEY.

BY WILLIAM FALCONER.

MR. CHARLES M. HOVEY, of Boston, or Cambridge rather, needs no introduction to American florists and pomologists, and but little to those of the Old World, as his long, devoted, useful and forcible labors in horticulture have secured for him a respected, an honored name abroad as well as at home. His life has been an exceedingly active and laborious one, but love of his calling, indomitable perseverance and vigorous intellect have borne him successfully through the turmoil of business and literary work, till now, although in his 71st year, he is still hale and hearty, lithe and active.

He was born on the 26th of October, 1810, at Cambridgeport, where his father was a merchant. His taste for horticulture was an inborn one. When but 15 years of age he began gardening for pleasure, his father's ample yard affording him room enough for his gratification. When between 16 and 17 he had gathered together a goodly collection of hyacinths, tulips, ranunculuses and other bulbs and plants, and with borrowed tools built a small green-house. In this work he was assisted by his elder brother, who is still associated with him. And thus by love and application they proceeded and succeeded in their work, and by economy, exchange and purchase increased the variety of their stock till they laid the foundation of a famous commercial business. In 1834, in addition to their nursery at the 'Port, they went into the seed business in Boston, and have ever since continued to conduct both. Under the name of Hovey & Co., Mr. Charles M. Hovey manages the nurseries and his brother, P. Brown Hovey, and nephew, John C. Hovey, the seed business.

In 1840 the present nursery ground in East Cambridge was bought; it was then a 40-acre piece of wild woodland. The woods were cleared; it was cut up into squares and avenued with pear and other trees, and extensive green-houses were erected. Until this time the cultivation and improvement of green-house and hardy ornamental plants chiefly occupied his attention, but with greater convenience and enthusiasm fruit trees and ornamental trees came in for a vigorous share. Fired by an ambitious and progressive nature, love of his avocation as well as commercial enterprise, he visited Europe in 1844, and bought in the English, Scotch, French and Belgian nurseries such ornamental trees and shrubs—two or more of a kind—as he thought would be hardy and of use in New England. About 20 per cent. perished in their passage hither; 50 per cent. of the whole succumbed within a year or two, and of the remainder a goodly number, proving unworthy of cultivation, were rooted out and destroyed; but of the collection then begun there are in their nurseries now some 175 specimens from 10 feet to 60 feet in hight.

During his whole career the hybridization of plants has been a favorite work, and by this means he has secured some very fine results, especially among camellias. He began the hybridization of camellias in 1835. For the pistillate parent he used Waratah, which has red, cockade-like flowers, and for the staminate ones such of the best doubles as he could get pollen from. All of the first lot of seedlings showed imperfect flower centers, but there was one among them of good form and whose petals were beautifully rounded without any of the characteristic indention of the end; therefore this one was selected as a pistillate parent and the others were discarded; the staminate plants as before were the best doubles. From this second crossing were obtained all of Hovey's fine camellias that have lately figured so conspicuously in America and Europe. Among them are Mrs. Anne Marie Hovey, white, striped and blush-pink, and for which a first-class certificate was awarded by the London (Eng.) Royal Hort. Society in 1879, and a Prospective Prize of $60, by the Mass. Hort. Society, also in 1879; C. H. Hovey, almost the color of a General Jacqueminot Rose and for which was awarded a first-class certificate by the L. R. H. S., and C. M. Hovey, scarlet, not unlike the color of the bracts of Poinsettia pulcherrima, and for which the Mass. Hort. Society awarded its large gold medal in 1854. The above mentioned awards are the highest honors conferred by the Mass. Hort. Society. In the Spring of 1879, with true American enterprise, Mr. Hovey shipped a large lot of their camellias to England, himself accompanying them. They were then bursting into blossom. He exhibited them in London, their superlative excellence overcame English prejudice, the people appreciated them and bought them readily.

In 1838 he hybridized some Indian azaleas and from the seeds raised America, Suzette, Alba crispiflora and others. In 1845 he began the hybridization of Japanese lilies, and as the result secured Melpomene, Terpsichore, Thalia, Polyhymnia, Clio and others, all pretty forms of L. speciosum. Many fine sorts of the leading "florists'" flowers, as verbenas, phloxes, pelargoniums, pansies, carnations and the like were also raised in this way, but most of them are now out of date. But pelargoniums, Cambridge Pet, Dolly Dutton and Commodore Nutt are still favorites in the community. Epiphyllum, C. M. Hovey, glowing violet and red, is also a hybrid raised by Mr. Hovey.

In 1833 by hybridization he secured the strawberry seeds from which, in the following year, he raised Boston Pine and Hovey's Seedling, the last named still one of the finest strawberries. After several years' trial the Mass. Hort. Society awarded it a prize valued at $50. From the time it was first exhibited for 20 consecutive years it was awarded the first prize for the best two quarts of any kind of strawberry; and later, in 1877 and '80, for the best four quarts. In 1855 he raised the Hovey Cherry from seed; Mr. Downing refers to it as "vigorous, productive, very good."

He, representing the firm, has also introduced the Sheldon, Dana's Hovey and other pears. In 1844 he began to make a collection of all the kinds of cherry, plum, peach, apple and pear trees to be obtained, numbering over 1,500 and which were fruited and proved and many of them described in the Magazine of Horticulture. In 1860 he raised Thuja Hoveyi from seed, and five years later a variegated leaved form of Magnolia acuminata.

In 1835, when but a little over 24 years of age, he founded the Magazine of Horticulture and was its editor for 34 years—the whole period of its existence. The volumes of this magazine are a healthy, wealthy mine of horticultural literature and embody full reports of the exhibitions and proceedings of the Mass. Hort. Society, the merits and demerits of the various fruits and flowers grown at the Cambridge nurseries, together with a vast amount of other gardening matter. As books of reference to the gardener who desires to be conversant with his business in its broad sense, this magazine is of great value; its complete indexes are an excellent feature.

In 1848 he began the publication of the Fruits of America, of which two volumes and three numbers—in all 27 numbers—were issued. This is a beautiful work; each number contains four colored plates of fruits, together with wood-cuts of the trees, sketches from life. These wood-cuts are claimed to be exact copies of the trees, and in order to have them positively correct, Mr. Hovey, not only made the sketches himself, but also drew most of them on the blocks. It is much to be regretted that the spirit, energy and talent that began such an exhaustless work could not find it convenient to continue it.

For the past 48 years Mr. Hovey has been an active member of the Mass. Horticultural Society, and president of the same in 1853–1856 inclusive. It was during his administration that the present Horticultural Hall, so spacious and magnificent and so centrally situated, was erected, and great credit is due him for the untiring energy he displayed in riveting the influence required to build this edifice. At page 169 of the history of the society (published last year) we find: "The more cautious members of the society were doubtful of the expediency of building at the time this enterprise was undertaken; but the perseverance and determination of the president of the society and chairman of the Building Committee, Charles M. Hovey, triumphed over every hindrance, and carried the work on to success." And thus the committee "had been enabled to secure for the society a beautiful granite structure throughout for the sum of $104 630"

Mr. Hovey is in himself a horticultural encyclopedia. No matter what branch of horticulture is advanced, he is familiar with it, its nature and its history. His long and close practical experience, together with his retentive memory, apt expression, lucidity and frankness renders him an agreeable companion, a fact instilling teacher, a man with whom time is never lost, but, on the contrary, always well and profitably spent. In a letter I had the other day from Mr. Robinson, the editor of the London (Eng.) Garden, he speaks of Mr. Hovey: "What a wonderfully strong captain Hovey is after so many of those hard Winters and hot Summers! He knows a lot about gardening." Indeed I often wish he were a hundred miles or more away instead of being my neighbor, so that in place of these flying little visits, I could enjoy ones of a day or two, and like with my dear old friend, Louis Menand of Albany, in earnest sit us down to talk till one o'clock before we'd think of bed!

CHARLES M. HOVEY.—From a Late Photograph.—Fig. 213.

Farm Topics.

STANDING OF THE ENSILAGE PROCESS IN THE UNITED STATES.

PROFESSOR E. W. STEWART.

[Conclusion.]

HAVING considered the rise and progress of this system in Europe, let us see what progress it is making in this country. Mr. Francis Morris, of Maryland, some five years ago began pitting green corn in the German fashion, and feeding upon ensilage for a short time in Winter some thousand head of cattle. His was green corn ensilage only, and his report was very favorable to its economy. He has continued this practice up to the present, and still gives favorable reports. Perhaps Mr. O B. Potter, of Sing Sing, N. Y., was the first in this country to build a masonry silo; and he began to preserve corn ensilage about 1877, using a covering of earth to compress the ensilage. His ensilage progressed farther in fermentation than is generally approved, but still was found, as he reports, a very economical food for stock. He has since wisely used clover to ensilage with corn so as to furnish a better balanced ration than corn alone, and after some two years' trial gives a favorable report. His earth covering does not so effect-

ually exclude the air as the weighted plank covering.

In 1879 Dr. J. M. Bailey, of Billerica Mass., built the first double silo of concrete masonry, and stored about 125 tons of corn ensilage, which, although somewhat belated in storing, gave him much satisfaction in feeding. His report stimulated inquiry and experiment in the new process.

At the beginning of 1880 this process was much discussed by the agricultural press, and the result was the building of some 50 or more silos in different parts of the country, most of them substantial, and many of them in the most durable form. This was most remarkable progress for a new system to make in a single season. Probably 8,000 tons of corn ensilage were preserved. The reports from these various experiments have been coming in for the last six months, nearly all of them favorable, many of them very enthusiastic, as to its economy and value. Some very extravagant estimates were made as to the tons of corn raised upon an acre, but these estimates were soon reduced to solid fact by the measurement of the compressed contents of the crops in the silos. Forty-six pounds were found to be the weight of a cubic foot of ensilage after compression under 1000 pounds to the square yard, and the content of the silo was easily measured, and thus the yield per acre determined. The yields noted ranged from 20 to 33 tons of green corn per acre. Thirty tons may be considered an excellent yield of green corn. This is equal to about five tons of water-free food, which is nearly five times the average yield of dry food per acre of our ordinary meadows. But it must be noted that the dry food of corn ensilage is not as valuable per weight as that from meadow grasses.

Yet it must be admitted that the success of the silos built in 1880, in the ensilage of green corn has been very remarkable, and has given this new system a respectable standing in American agriculture; but the final verdict upon the system can only be given when it shall be applied practically to the preservation of our meadow grasses and thus prove itself worthy of being considered a system in stock feeding.

Cost of Ensilage.

Mr. August Goffart states that he is able to take the corn growing in a field, cut it, haul it to the silo, run it through the cutter, pack and cover it in the silo, for one franc per ton—a little less than 20 cents. This cannot be done in this country because our labor wages are more than double those in France. What, then, is the whole cost of producing and ensilaging one ton of corn? Whitman & Burrell estimate it at 80 cents per ton. Mr. Avery estimates the cost of harvesting, hauling, running through a cutter, packing in a silo and covering at $200 for 300 tons, or 66 cents per ton. Dr. Tanner, of Orange Co., N. Y. estimates the cost of harvesting and putting in the silo complete 150 tons at 75 cents per ton. Mr. Chaffee, of the same county, who put up ensilage for thirty cows, estimates the whole cost of raising corn and storing in the silo at $2 per ton; and this he considers very cheap feed. The whole cost of raising corn and putting it in the silo has been estimated by some half dozen others at from $1 to $2 per ton. If we take the latter figure as approximating to the real cost, and if we estimate three and one half tons of properly kept ensilage as equal in feeding value to one ton of good hay, then we find it as cheap as hay at $7 per ton in the barn.

But the great advantage to the small farmer in corn ensilage is, that he may produce as much cattle food upon one acre of corn as upon four to six acres in meadow; yet the drawback to this view is, that the meadow produces a complete cattle food, whilst corn is is not a complete food but must be fed with other nitrogenous food to obtain its full value. The conclusion, then, must be, that all the grasses, including corn, supplemented by the clovers and other leguminous plants, must go into the silo together, and these furnish complete rations for the production of meat, milk and wool. The labor bestowed per ton in ensilaging the grasses and grains in the more succulent state, will be even less than for corn, because the former can be more easily cut by the mowing machine and handled by the horse rake and hay loader, or even with the fork.

It is also quite probable that the grasses, in the fit condition for ensilaging, may be put in the silo with less labor than they can be cured and put in the barn.

It should have been mentioned under the head of the silo—that the concrete wall may generally be built for 10 cents or less per cubic foot, and that the silo should cost not much over $1 per ton capacity. The greater digestibility of succulent grass over that of cured hay will certainly be an ample remuneration for this new method of preserving it. It is quite true, however, that by some small German experiments it appears that grass after carefully drying is as digestible as in the succulent condition; but when these experimenters seek to generalize from these few and exceptional cases, founding upon them a general axiom that green food loses none of its digestibility by drying, let us oppose to this the great general fact that cattle grow and fatten rapidly and profitably upon the succulent grasses, but cannot be profitably fattened upon the dried grasses or hay. Our meadows are usually stocked with nearly the same combination of grasses as our pastures, but who would assert that a full ration of the best hay would produce as much milk or lay on as much flesh as the best pasture? Such facts, open to the general observation of all intelligent feeders, are not to be upset by a German experiment upon two sheep!

Ensilage as a Complete Ration.

Conceding that the system of ensilage, which we have described, will preserve the grasses in a comparatively fresh state, how shall this process be applied to general stock feeding, making a complete system by which animals may be grown, yield milk, and be fattened?

Ensilage, as generally discussed in this country, has been used to signify preserved green corn. This single food is quite inadequate to the complex wants of the animal system. It is deficient in albuminoids to nourish the muscular system, and deficient in the phosphates to build the bones. Yet it is a very valuable ingredient in the ration of animals because of the large weight grown upon an acre, and because it is relished by all our farm animals. Some of the grasses and clovers are rich in the elements in which corn is deficient. To make a complete ensilage ration only requires a proper combination of green grasses and clovers with green corn. Corn having the least proportion of albuminoids, can seldom be used for more than half of the ration. In the following table I give some of the most important of the green foods for ensilaging, and give only the water and digestible nutriments in each:

	Water.	Digestible Nutrients. Albuminoids.	Carbohydrates.	Fat.	Nutritive ratio.	Value per 100 pounds.
Maize fermented in silo; average of 11 analyses	82 0	1 00	10 19	0 54	11 4	0 16
Red clover ensilage	79 5	3 06	8 10	1 70	4 0	0 28
Alsike Clover	83 1	1 46	8 21	0 49	3 9	0 20
Winter Vetch	82 1	3 50	6 70	0 45	3 1	0 19
Lucern	75 3	3 50	9 10	0 40	2 9	0 25
Green Rape	87 1	2 00	4 80	0 40	2 2	0 15
Sorghum	77 3	1 60	11 90	0 30	7 4	0 19
Orchard Grass	74 0	3 60	12 47	0 40	5 1	0 24
Fodder Peas	81 0	3 45	7 8	0 40	3 5	0 19
Fodder Oats	81 0	1 70	8 9	0 35	5 8	0 17
Timothy Grass	70 0	2 10	16 0	0 50	8 2	0 28
Hungarian Grass in bloom	72 0	2 64	13 2	0 40	5 2	0 24
Fodder Rye in head	76 1	1 90	12 0	0 40	6 8	0 21
Upland Grass, average	70 0	1 90	14 2	0 50	8 1	0 23

There are many other grasses not given in the above table, that may also be used, and some other leguminous plants, but this table contains all the plants that will usually be chosen for ensilage. Can a proper ration be constructed from them for growing young animals, for fattening animals, for producing milk, and growing wool? No one can doubt that these green foods, properly combined, contain every element in the right proportion for all purposes of stock feeding. Where these grasses are found in perfection in pasture the feeder relies upon them to produce the highest results.

If we examine the table, we find that 100 pounds of green corn would give only one pound of digestible albuminoids. If this were fed to a cow that yielded 30 pounds of milk, it would be insufficient to furnish the caseine and albumen in the milk alone, without yielding anything to supply the waste of the cow's system. The German experimenters think they have shown the necessity of supplying two and a half pounds of albuminoids per day to a cow of 1,000 pounds weight, in milk. This would require 250 pounds of corn ensilage as a daily ration—an impossible ration. But if we take from the table 65 pounds of clover ensilage and 60 pounds of corn ensilage, it will give a complete daily ration for a cow of 1,000 pounds weight, in milk—2 58 pounds albuminoids; 11 37 pounds carbohydrates; 1 4 pound fat. This is a large excess of fat, which will more than make up the deficiency of carbohydrates. I know from experiment that this ration will produce a large flow of milk, having fed it in just this proportion early in September from green corn and second-crop clover, both in excellent condition; but being fed fresh, it contained more water than that given in the table, as that had lost water in the silo. Yet it contained liberal nourishment to produce a full flow of milk. I have fed this combination in several different years and always with complete satisfaction.

Let us examine Red Clover as an ensilage crop. As will be seen by the table, Red Clover is the most nitrogenous of the leguminous grasses there given, except Lucern or Alfalfa, and this latter has not been cultivated to any considerable extent except in California. A full crop of green clover weighs more than most farmers suppose. The writer has fed many acres of Red Clover for soiling, and carefully weighed the product of an acre in different seasons. Ten tons have been found only a good crop in a favorable season, and sometimes 12 tons have been weighed from an acre at the first cutting. Twenty tons may be taken from an acre at three cuttings in the most favorable seasons. And as a ton of clover is worth about two tons of fodder corn, it will be seen that the clover crop may be quite as profitable for ensilage as corn. It can be cut and ensilaged at a less price per ton than corn can be grown and ensilaged. If, then, we estimate the specially raised clover crop to produce 15 tons per acre, this would give a ration of 65 pounds per day for 461 days, and it would take half an acre of good corn to produce the 62 pounds of corn per day—this is equivalent to keeping a 1,000-pound cow on a full ration of clover and corn 308 days from the product of one acre. This would be the full milking season of ten months, and ought to produce an average of 6 000 pounds of milk. In this case the acre produces everything the cow consumes, and this is certainly a cheap production of milk.

The same proportional ration may be combined of Alsike Clover, Orchard Grass, Hungarian Grass, or Winter Vetch and corn, when these shall all be put in the silo. Fodder rye and clover, 50 pounds of each, will furnish a complete ration. One hundred and twenty five pounds of peas and oats ensilaged together, will give a complete ration. So, likewise will 100 pounds of Timothy and Hungarian Grass, or 125 pounds of sorghum and Orchard Grass. The reader will see that an almost endless combination may be made from this table, giving the requisite ingredients for a complete ration.

If, then, it is conceded that these green foods may be preserved in a silo in a fit condition for the production of milk, meat and wool, the farmer may feed stock without the use of grain and thus make his farm self-supporting. In this way the system of ensilage may enable the stock farmer to continue succulent food to his animals throughout the year.

Experience with Ensilage.

I BUILT a silo in September last, 19x10½ feet in the clear, and filled it the last of September with corn when just in the silk, cut with a fodder cutter in half-inch lengths. It was firmly packed by men tramping upon it. When the silo was filled I put on about one foot of rye straw, then two-inch plank crosswise, then about 1,000 pounds of earth to the square yard. It was opened on December 22 and found in splendid condition. The cows eat it with great relish. It increased the flow of milk considerably and the milk was of first-rate quality. I fed about two quarts of meal and bran to one bushel of ensilage per cow, and in the 17 years I have been in the milk business I have never fed anything that gave me as much milk and of so good a quality as this ensilage, or sauer-krant, or swill, as some call it. I have fed almost all kinds of feed, cooked, steamed and raw, wet and dry, but I never have found anything that gave me such good satisfaction as this ensilage. I like it so well that I shall try to put up from 200 to 300 tons the coming season. It is a success beyond a doubt. There have been a great many farmers here to see my silo, and they all think it a good thing, and there will be a good many silos built in the county of Burlington, New Jersey, the coming season. One of my neighbors has built one already 60x20 feet and 15 feet deep. He is keeping 50 cows now and expects to keep 100 instead of his present 50. I am keeping between 30 and 40 head at present, and intend to keep 100 head on the same land that now only supports half that number.

Mount Holly, N. J. JAS. LIPPINCOTT, JR.

PLOWING WITH THREE HORSES ABREAST

THE article on this subject in the RURAL of March 26, with the illustration of evener and double and singletrees for this purpose, from a Virginia correspondent, showing how simply and easily the plowing can be done, leads me to speak of the method now often practiced in the prairie States. A sulky double plow is used, turning two furrows at a time, as wide and deep as may be required. A comfortable seat is attached on top of the plow, and, sitting in this to guide the horses, a lad 15 years old, or a lame or infirm person, can perform the work as well and perfectly as the strongest and most active man. Three and a-half to four acres can be thus easily plowed per day, costing not over one-half as much as to do it with a single plow and pair of horses, requiring a vigorous man to work them. When the soil is heavy, powerful horses must be used, and these are now multiplying with tolerable rapidity among us, owing to the frequent importations during the past ten years of the larger breeds of horses from France, Scotland and England. The produce of these stallions from fair-sized, vigorous, roomy mares give half-bred animals sufficiently powerful for such plowing and other heavy farm and road work. Thus the cost of raising this sort of horses is in reality no more than that of smaller and less powerful ones; for the former, owing to their greater strength and size, can be put to work one year earlier than the latter, and this more than pays for the extra fee for service of the imported stallion and the increased feed requisite to rear them. Similar teams and plows can be as advantageously used in the Eastern States, where the fields are of the size of a few acres and free from rocks and stumps, and not of a too rough and broken surface, although if worked in inclosures of ten acres or more they would be of still greater economy. WESTERNER.

Field Crops.

NOTES FROM THE RURAL FARM.

Our Present Wheat Experiments.

WE are often asked the question what kinds of wheat we would advise friends to sow. We cannot answer such questions even for our own farm, much less for those in various parts of the country about which we know nothing whatever. Until two years ago we accepted Clawson as the most profitable variety we could sow. Its adaptation to a wide extent of country, as well as its hardiness and productiveness, led us to continue its cultivation without a question as to whether it could be improved upon. Since, we have ascertained that there are a number of different kinds which, in so far as can be judged from the test of two seasons, are just as hardy and productive, and which will make a better quality of flour. In order to test the question still more thoroughly we have now growing, as our readers are already aware, about 80 different kinds. This will give us a rare opportunity of crossing those which seem to possess special merits, as well as of determining which are in themselves superior to those which have already been well tested. The results of these experiments will be given in our Special Wheat Number, with engravings to illustrate marked peculiarities. We give below a list of the kinds sown. The areas vary from five acres to mere strips. We propose to distribute among our subscribers trial packets of the most promising kinds as soon as we shall have raised them in sufficient quantities to enable us to do so. It will be seen that in some cases the same variety has been planted more than once. This is either because of a difference in the appearance of the grain, which threw doubt upon all the specimens being correctly named, or because the seed, received from widely separate parts of the country, presented differences the stability of which might thus be ascertained. In other cases the same variety has been sown more than once with a view to throw light upon the question how much seed should be sown to the acre.

List of Wheats Growing at the Rural Farm.

SHUMAKER.—1¾ bushel to acre. Sown Sept. 23.

FULTZO-CLAWSON.—A cross between Fultz and Clawson effected by Mr. Hugh L. Wysor.

FULTZO-CLAWSON.—Cross No. 2. Square ear; four grains to spikelet. Sown Sept. 24 at rate of one bushel to acre. Mr. Wysor deems this the best yielder known.

BENTLEY.—From H. A. Whittemore.

SANDOMIRKA.—From Ohio S. University. Five-eighths of a bushel of seed to acre.

GOLDEN STRAW.—Three and one-eighth bushels to acre.

FULTZO-CLAWSON.—Cross No. 3. Ear pointed; three grains to spikelet.

ZIMMERMANN.—One and four-sevenths bushel per acre. From Missouri College.

B. 1 AND B. 2.—New Zealand. Sown Oct. 10; from B. K. Bliss.

WYSOR'S SQUARE HEAD.—Cross between English Square Head and a variety supposed to be Wick. Sept. 24.

NO NAME.—A bearded wheat found among Silver Chaff. Long ear; three kernels to a spikelet.

MOLD'S WHITE WINTER.—Sown Oct. 7. Selected heads from our crop of 1880.

B. 3, B. 4, B. 5, B. 6, B. 7, B. 8, B. 9.—New Zealand wheats. Sown Oct. 10; one drill each.

MOLD'S WHITE WINTER.—From Isaac Alter, California. FIVE kernels in many spikelets. We counted the kernels of three heads and found 102, 95 and 90 grains, or 287 grains in the three.

FULTZ.—One and three-quarters bushel per acre on low land.

SILVER CHAFF.—About five acres seeded with four quarts of Timothy. This is the field upon which our fine crop of Mold's Ennobled Oats was raised last year. Sown Sept. 23. Oct. 15 the field was covered with the growth. Upon this field, as well as upon two small plots, the "broadcast drill tubes" were used, five of them taking the place of the usual nine drill tubes, so that the strips of grain were as five of the broadcast to four of the old style.

FULTZO-CLAWSON.—No. 1 cross; sown in small plots from one to two and a-quarter bushels per acre.

SHUMAKER.—Sown two and a-half bushels per acre, Sept. 16.

FULTZO CLAWSON.—No. 2 cross; sown one and one-eighth bushel per acre.

OREGON.—From James R. Knight. Two and a-quarter bushels sown per acre Sept. 17.

DEFIANCE.—This was saved from seed twice sown as Winter wheat. Sept. 17.

SONORA.—From Prof. Blount, Colorado. One drill.

GOLDEN GLOBE.—Mediterranean (?). One drill each.

VELVET CHAFF.—From Prof. S. M. Tracy, Mo. Sown Sept. 19, one and five-elevenths bushel per acre.

CHINA TEA, Sherman, White Fife, Minn. Hard Fife, Oregon Club, Hard Australia, Lost Nation, Touzelle, Soft Australian, Chili, White Russia, Odessa, Eldorado, Canada Club, Judkin, Brooks, White Mexican, Improved Fife, Russian, Pringle's Hybrid No. 6, China Spring, Egyptian, Saxon Fife, Dominion, Prussian White, Pringle's Hybrid No. 4, Australian Club, all from Prof. Blount. Small plots of each sown Sept. 18, 19 and 20.

Nursery, Polish, White Rogers, Russian No. 3, Dott, Russian Nos. 10, 12, 2, 8, also from Prof. Tracy.

La Dow, Wyeor's Hybrid, large heads, square at top, Eldorado (apparently different from the other), Black-bearded Centennial, Blount's Hybrid No. 10, between Diehl and Golden Straw.

RURAL WINTER DEFIANCE.—A portrait of this was presented in our Fair Number. It originated from shriveled seed four years ago of Spring Defiance. The seed sown as above was saved only from heads measuring nearly seven inches in length.

RURAL WINTER LOST NATION.—Saved from selected heads of Winter crop of last year. Originally from Spring Lost Nation seeds received from Dr. T. H. Hoskins, of Newport, Vt. Two kernels were planted by hand Oct. 5, one foot apart each way on a plot of about one-fortieth of an acre, so as to admit of cultivation.

RURAL WINTER CHAMPLAIN.—History the same as that of Winter Defiance.

MANGELS, WHAT THEY ARE—HOW RAISED AND STORED.

[In answer to question, page 277.]

COL. F. D. CURTIS.

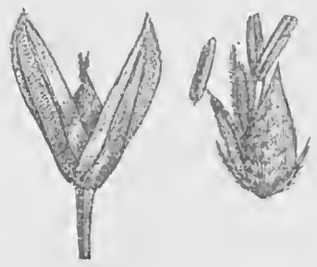
MANGEL, or mangel-wurzel is a German name and means mangel (want), and wurzel (root). [It is also supposed to be a corruption from "mangold" beet, and wurzel, root. EDS.] It is the best root for field culture, not because of its special sweetness—saccharine matter—but because the largest crops can be grown with the least labor. It is not a turnip, although some varieties are turnip-shaped, as the Yellow Globe Mangel. The word turnip is of Saxon origin and means a round root. Some of them are flat-round, and others spherical or globe-shaped, as the Ruta-baga (Brassica campestris) or the Swedish turnip a variety finer-grained, sweeter and smoother. There are two sorts of the latter, white and yellow, the latter, larger and more valuable. Globe Mangels, as the name implies, are round, while the other mangels are long or beet-shaped. They grow out of the ground as the season advances and are easily pulled on this account and come up with very little earth attached to them, while it is necessary to plow out the sugar beets and other small varieties.

The Yellow Globe Mangels grow with a slender tap-root and with a slight push are apt to become detached from the ground, when they will wither and die. This is an objection to them and necessitates considerable care in their culture, after they have attained some size, as even the pressure of the foot will loosen their hold on the soil. The long mangel has a much stronger tap-root and takes a firm hold in the ground. This root is also fed by a number of small rootlets starting out of the sides, which are lifted out of the ground and dry up as the root increases in size, other rootlets growing beneath them and keeping up the means of growth. The tap-root will penetrate down several feet if the soil is mellow, and on this account these roots are not so much affected by drought. A rich surface increases the number of lateral rootlets, and thereby adds to the growth. Mangels, therefore, want a deep soil and a rich surface. A rich surface gives the young plants a vigorous start and, through these rootlets, also helps to make a large growth. Thirty and forty tons are not an excessive yield, and there is no single crop where a greater burden can be taken from the land than of mangels. With proper machinery to sow the seeds and to cultivate the young plants, the hand labor can be reduced to a small percentage. The need of hand labor is the main reason why this crop is not more generally cultivated.

The seed should be so put in that there are no "skips" or vacant places, as it does not pay to transplant to fill these out. Transplanting is a tedious and unsatisfactory process, as the plants will not generally amount to much, especially if the ground is dry and the weather hot. Whenever it is done the large leaves should be twisted off, or the evaporation from them will kill the root before it takes hold in the ground. It is better to fill in "skips" with the seed of Swedish turnips, which may be sowed a month later than mangels and then mature. If mangel seeds are sown with a common seed sower, they should be first "sized," that is, run through a sieve so as to make the seeds at least of three sizes, and the machine should be set accordingly, otherwise they will be more apt to clog in the hopper. Three pounds of seeds are ample for an acre if all are covered and evenly distributed; but, to make sure, it will be better to sow thicker, using five or six pounds. The Germans allow 14 pounds of sugar beets per acre, but the rows are closer together than mangels are grown, and the plants are left thicker in the rows.

Mangel rows should be at least two feet apart and the plants be thinned out to one foot or 16 inches. One beet seed will send up several plants, as the seed is really a burr and contains a number of germs or seeds, according to its size. The seeds ought to be put in from a half inch to an inch deep, according to the dryness of the land at the time of sowing. The best cultivator we know of to work among the young plants has the hind teeth so shaped that they clean away all of the weeds and stir the ground close up to the plants without covering them up. This leaves a space about an inch wide, to be thinned out by hand. A stroke with a hoe across the row cuts out everything except a bunch of plants and weeds where a plant is to be left, and this bunch must be weeded by hand. When once thoroughly done no more hand labor is required except to pull, now and then, in after cultivation, any stray weeds. Cleanness and frequent cultivating are important and will well repay the care.

Mangels should be planted as soon as the ground is in good order in the Spring. In the latitude of Tennessee they may be planted as late as May or the first of June, as the Autumn is later there than in New York. They require a period of about five months to get a full growth and mature. They should be gathered before hard frosts, as freezing makes the crowns soft and injures them, causing rot. As soon as the plants can be seen above ground the cultivator should be run between the rows, and when the beets are two or three inches high they should be thinned out. They should be planted in drills, and the ground may be ridged up or not. When slightly ridged the plants are not so apt to be covered up in cultivating. If the ground is naturally clean—free from weeds—the labor of ridging may be dispensed with. In this case, a marker may be run across the field to mark the rows



SPIKELET OF CANARY GRASS.—FIG. 215.

and clear them of lumps, so that the planting may be better done. The soil should be in good, mellow order. It is a good plan to roll it before marking out and planting.

The roots may be housed in a cellar or kept in the field. When cellar room is not available, a pit four or six feet wide and one foot deep should be prepared in a dry spot by throwing the ground out on each side and leveling the bottom on which the roots may be dumped and piled up for any length, the top being shaped like the roof of a house. The sides of the heap may be carried up a foot or two from the bottom, and the pit covered with straw with a small tile on the top every ten feet to let out the moisture and heat. A covering of earth from six inches to one foot thick should be put on top of the straw and spatted down with a shovel. The roots should be taken out at one end when needed. They should be *perfectly* dry when put into the pit and when covered. They may be pulled in the fore part of the day and the leaves cut off, the roots being thrown into rows with spaces between them to drive a team. They may be picked up by hand and thrown in a wagon or cart, and also thrown into the pit without injury. The slight bruising does not cause them to rot. A wisp of straw should be pushed into the tile to keep the cold out. In severe climates a covering of manure should be put over the earth to prevent freezing. When warm weather comes in the Spring the roots should be taken from the pit and be stored in an outbuilding or they will grow. Mangels can be kept in this way in excellent condition until July. Mangels are worth much more for feeding stock than the chemical tables indicate. They are rated by these tables as 85 per cent. water, with about seven per cent. of sugar. When hogs will fatten on them fed raw, and cattle grow into beef, there must be virtue in water or chemistry fails to appreciate fully the value of these roots.

AMERICAN CANARY GRASS—PHALARIS INTERMEDIA.—FIG. 214.

OATS—CULTURE AND EXPERIMENTS.

PROFESSOR I. P. ROBERTS.

I AM now enabled to give the results of another year's, or what is far more valuable, the average results of five years' experimenting.

It has been my uniform custom to avoid rich ground when experimenting with oats, so as to give the special manures a chance to show their value on our land. The land selected for 1880 was a warm, gravelly soil producing well in a wet season, but Summer crops suffer on this land in a dry time. The average yield of these plots was about one-half as much as our regular field crop. From a measured field of 14 acres and 154 rods we thrashed 1,022 bushels of clean oats weighing 33 pounds to the bushel. In addition to this, a quantity was fed in the sheaf estimated at 75 bushels. Nine pecks of seed of a local variety—Ovid—were sown per acre.

Thick and Thin Seeding. 1880.

	Yield per acre. bu.	lbs.
7 pecks of seed per acre	24	12
13 " " "	21	3
16 " " "	18	9
Average of thick and thin seeding		
4 years, 5 pecks per acre	39	29
5 " 7 " "	38	9½
5 " 13 " "	38	10
5 " 16 " "	37	33
1880.		
Average of 5 plots treated with commercial fertilizers	35	12½
Average of 5 plots, unfertilized	34	2
General average for three years		
Treated with commercial fertilizers	35	10½
Unfertilized	33	2½
1880.		
Average of broadcast plots, 7 pks. per acre	36	18
" drilled " 7 " "	30	15
General average for three years		
Broadcast	49	4
Drilled	43	7½
1880.		
Treated with salt	34	12
" plaster	31	28
Adjoining plots unfertilized	27	13½
General average for three years		
Salted	40	16
Plastered	37	9
Unfertilized	36	7
1880		
To plot No. 9 were applied 600 lbs. of equal parts of salt and plaster	37	1
Plot No. 8 on the one side, unfertilized	29	17
" 10 " other " "	28	19
Average of the two (No. 8 and No. 10)	29	9

The darker and more moist appearance of the soil of No. 9 led to a determination of the amount of moisture in the first four inches of the soil of this plot and also of that of No. 8. Twenty samples of earth of one quart each were procured, at uniform distances from each other in each plot, by pressing a quart tin fruit can with one end out, into the earth, a thin slide being used to divide the soil within the can from that without. The samples were most thoroughly mixed, each with its own kind, and a sample of each mixture was placed in a glass jar and taken immediately to the laboratory. Two determinations of each sample were made with the following results: No. 8, 11 per cent. water. No. 9, 11 6-10 per cent. water.

Allowing that a cubic yard of earth weighs 3 000 pounds this would give in the first four inches of earth in an acre, as follows:

No. 8, 87 84-100 tons water. No. 9, 93 63-100 tons water.

The samples of earth were taken about two weeks after the grain appeared above ground. The soil on the surface seemed quite dry although the plants had no appearance of suffering for want of moisture. It appears from the above results that either plaster or salt or both have the property of preventing evaporation or of drawing moisture from the atmosphere. They probably perform both offices.

I would call attention to the results of broadcast and drill sowing. I was led to these experiments by noticing that on the clay knolls, especially where the ground was spring-plowed, not more than one-half of the seed appeared to germinate. Notably was this the case where the sowing was early and heavy rains followed soon after. In the Spring of 1877 ten acres were heavily manured and plowed, nearly all of which was heavy clay land, and were planted to corn. In the Fall I ran one furrow, as deeply as two large horses could pull the plow, under each row of corn-stubble, leaving the ground extremely rough and corrugated. In the Spring the surface was very mellow and dried off much earlier than the adjoining ground. It was cross-harrowed to level it; replowed and was easily put in very fine condition. Four bushels of oats per acre were drilled in and we congratulated ourselves that we had broken the backbone of that clay field.

But a heavy rain came three days after; it turned cold and remained so for ten days. In some places I do not think over a quarter of the seed came up. Harvest gave us 40 bushels per acre; we should have had 70 at least, as we harvested over that amount on the adjoining field the previous year. The extreme mellowness of the soil permitted the drill to deposit the seed too deeply. Had it been broadcasted the yield would have been far greater; and in addition, had the sowing been deferred ten days the yield would, without doubt, have exceeded that of the previous year. I got much consolation from the culture of that field—though the yield disappointed me—when I think how much I learned and how nicely that old clay field has behaved since. For the next year we harvested 37 bushels and a few pounds of wheat per acre from it, and late in the Fall of the same year, it was cut with a reaper, leaving the clover stubble about four inches high—sufficient clover had been cured to make about a ton of hay per acre.

So far the experiments in thick and thin seeding have been conducted on moderately poor land; in the future our best land will be selected and in a few years we shall have data for a double comparison. In an article on mangels to follow this, the effect and value of commercial fertilizers will be discussed. It will therefore be unnecessary to treat of them now with reference to the oat crop.

Cornell University, Ithaca, N. Y.

ONION CULTURE.

ONIONS have never proved a very satisfactory crop with me until the past season when I had a splendid crop which I raised in the following way: The soil was a deep, sandy loam, fine and mellow and free from weeds. I used about 10 pounds of phosphate (Crocker's) and a bushel of wood ashes on each square rod of ground and raked in. An essential thing in raising onions is to have the ground rich near the surface. I then marked off the ground and sowed the seed so thick, treading it in with my feet, that when the onions were a foot high they were all matted together in the row. They were then about the size of my little finger. I then thinned them out, leaving them about three inches apart, taking care to pull all that had the appearance of making scallions, which can easily be discerned at this time by their long, thick necks. When the onions were thinned, they dropped over flat on the ground; in fact, I had to be very careful in thinning them or I would have pulled them all up, but they soon straightened up and made a very fine crop. The onions that I pulled I tied up in bunches and sold, so that I lost nothing by using plenty of seed. The seed was the Yellow Danvers sown as early as I could work the ground. This I consider necessary as the crop, to keep well, must ripen in hot weather. For early onions I plant the English Multipliers. One little one makes a big one, and a large one makes a cluster of small ones. These are a very profitable crop, as they are sold in bunches and bring about a cent apiece; and as about 100,000 can be grown upon an acre, and as they do not interfere with a crop of cucumbers that may follow them, the profit is large. I prepare the ground the same as for the black seed onions. I tread these in also after setting them out.

Oneida Co., N. Y. ADELBERT WAKEFIELD.

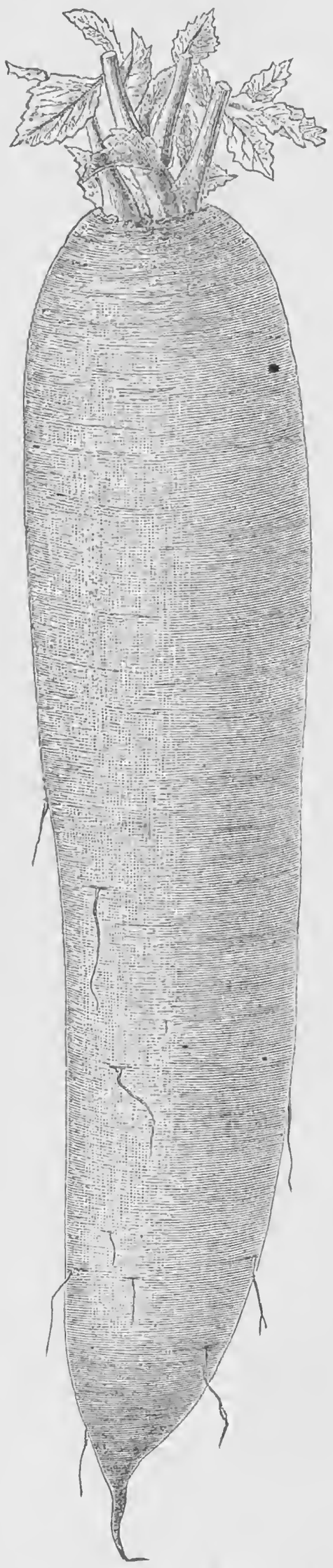
AMERICAN CANARY GRASS.—Phalaris intermedia.—(See page 271.)

There are twenty or more species of this grass, most of which grow in Central Asia. The seed of one species is the annual and well-known canary-seed. The stems of the species now under consideration are from six to twelve inches high; leaves short; spike of flowers thick, an inch and a-half long, all of which are accurately shown in the illustration. It grows in sandy places along the coast in Florida, the Carolinas, Texas, California and other States. It is an annual which has attracted considerable attention in the warmer parts of the United States. Some consider it excellent for Winter pasture. In California its reputation is not so good. It should receive careful study and be the subject for definite experiments. In this way we shall, no doubt, find some grasses which are better for certain purposes and localities than any we now possess. PROFESSOR W. J. BEAL.

TURNIPS.

TURNIPS will grow and flourish on soil that is moderately rich, and produce a better crop than when sown on too rich land. In the latter case the growth is apt to be at the top instead of at the root. For a garden crop turnip seed should be sown in drills about 14 inches apart and the plants be thinned out to about five inches in the drills. To prevent the roots from becoming wormy, dig away the earth to the depth of a half inch or more from the top of the roots and give them a light dressing of wood ashes. In old gardens turnips are almost certain to grow wormy if the earth is allowed to remain upon them.

For the first crop turnips should be sown as early as the ground can be got in order and has become warm, and for the late or main crop sow from the middle of July to the last of August. Ground from which early potatoes have been taken makes a good seed-bed for turnips. Turnips in the field are generally sown broadcast, and then the farmer has no work to do to care for them, and often the yields per acre are as high as 150 to 180 bushels. When we consider the value of this root for feeding purposes we wonder why it is not more extensively grown. Stock will be very grateful in Winter for a root "dessert" of this kind, and will do well on it.



LONG WHITE FRENCH TURNIP.—FIG. 216

Among our best varieties may be mentioned Red-Top Strap-Leaf, White Strap-Leaf Flat, White Egg, Early Purple-Top Munich, White French, and Laing's Rutabaga. Among novelties in foreign markets is the Paris Market or Long White French, which the accompanying engraving (one-half natural size) represents. It is of quick growth, very tender, sweet and juicy. It sells at a high figure in Paris markets, and will probably be offered by our seedsmen another year.

A GOOD SUGGESTION.—A friend writes us from Janesville, Wisconsin, that if the RURAL Sorghum takes kindly to the Western soil and climate it will be a great thing for that State whose dairy interest is fast stepping to a front place, necessitating a good fodder crop for soiling in July and August. He suggests that those who grow the sorghum should weigh the product as it is cut and report the result. We are thankful for this suggestion which we submit to our readers. Those who cut twice or thrice would have to weigh as many times. We take this occasion again to urge it upon our readers to sow this seed on clean land, and not to neglect the young plants, which for several weeks will impress anybody cultivating them for the first time as out-and-out failures—so slow are they to start into luxurious growth.

LANCASTER RED WHEAT.—In answer to an inquiry with regard to this wheat in a late RURAL, a correspondent writes us from Adrian, Michigan, that it is a beautiful red variety, with a long, plump berry. When growing and in good health the straw has a bluish cast, which sometimes gives it the name of Blue Stem. The straw is soft, so that the wheat is liable to fall or lodge, which is its worst fault. It is a good yielder thereabouts, but is being superseded by Fultz and Osborn on account of its tendency to lodge.

WHITE RUSSIAN WHEAT AND OATS.—A friend writes us from Cuba, N. Y., that he has raised the above wheat for four years, having obtained the seed originally from Wisconsin, and that it is in every way a superior variety and fast taking the place of all other Spring wheats in that section. He has also a couple of bushels of the above oats produced from a small packet obtained from Buffalo two years ago. He considers it a tip-top variety and says it neither rusts nor lodges. It stools out well and has very long heads.

Horticultural.

THE TELEPHONE PEA.

I have not noticed any report from any of your subscribers in regard to the Telephone peas included in your Free Seed Distribution. I am somewhat surprised, for if they have generally proved as productive as mine did, considering the treatment they received, I think the pea well worthy of comment.

Right here allow me to say a word in commendation of the RURAL's course in disseminating new and choice varieties of flowers and vegetables among the farmers of our country. I believe that these seed distributions in connection with the reports from the Rural Experiment Grounds are proving of great value to the agricultural interests of the country.

But for the report:—I received a packet containing 17 peas, three of them badly weevil-eaten, the rest to outward appearance being all of them sound and likely to grow. I sowed them rather late in good ordinary garden soil, not very highly manured and without giving them any extra fertilizer besides what the whole garden received. Neither of the weevil-eaten ones came up, and one of the others failed, so there were only 13 that ever started up, and after they were about six inches in hight one of these was accidentally broken off just below the surface of the ground, leaving only 12 to mature seed. From these, besides several pods which were picked off by children while green—some half a dozen pods or more, to my knowledge—I gathered 708 perfect peas, making by measurement three-fourths of a pint or a little more. Most of the pods contained from six to eight large, perfect peas, and a number of them had as many as ten and were a cause of wonder to all who saw them, being so closely crowded together it hardly seemed as if the pods could hold them. If this pea proves equal in quality to what it is in productiveness it is surely a great acquisition. One thing that is greatly in its favor with me is that, although a strong grower, the vine does not grow nearly as tall as the Champion of England. Though this is an excellent pea, it requires such tall brush for support that this requirement is a great objection to it.

Delaware Co., N. J. E. J. BROWNELL.

A GOOD SUGGESTION.—In sowing the new asparagus seed, or any other seed hard to germinate, it is a good plan to sow a few radish seeds among it. They come up soon, are good to mark the rows before the tardy seeds are ready to come up, and the roots are off the ground before they become troublesome.

ANNIE L JACK.

The Apiarian.

TEMPERATURE FOR BROOD-REARING.

G. M. DOOLITTLE.

IN order to rear brood successfully the temperature inside the cluster of bees must be at least 80 deg. Supposing we have a cluster of bees that on a cool morning in the fore part of May occupies three or four spaces between the combs in a full hive containing 2,000 cubic inches, we will usually find brood on two combs only, and but a small amount at that. If these two combs of brood are set close to one side of the hive and by means of the division-board all the bees are shut on these two frames, the queen can and will occupy with eggs two or three times the space that would be occupied in the center of the full-sized hive, and the same number of bees will rear them into brood. As this has been called "Spring fussing" by some, and has been lightly spoken of by others, we have made some experiments in regard to it and will give one of them as an example.

We selected two stocks as nearly equal as possible, both being clustered between six ranges of comb, and we shut one on three combs while the other had the whole hive. Both were treated as nearly alike as possible, and the result was that the one shut on the three frames had each frame full of brood, while at the same time the other had brood in only four frames, to the amount of not over one frameful, or one-third of what the other had. Now, it will be seen that if we put an empty comb in the brood-nest of the hive with three combs, the queen will fill it with brood in a very short time, while if we attempt to increase the brood by the same means with the other, we shall be likely to ruin more or less of the brood already in it. As soon as the bees become crowded for room, the division-board is moved along and empty comb is placed in the center, and this is repeated as fast as the queen fills the combs with brood till the hive is full, which will be long before the one left to itself approaches that condition. This is what is called "building up" in the Spring, or a judicious spreading of the brood. Never spread brood until the bees are crowded for room, for it is only a waste of time, brood and heat. By the above plan double the number of bees will be ready for the honey harvest that would have been if the bees had been left to themselves. This is one of the secrets of successful bee culture.

Another thing to be considered is the size of the frame used. Take, for instance, the large Quinby frame and the Gallup; let a practical bee-keeper manage both and it will soon be found that with the same quantity of bees, and with queens of equal fertility the frame first mentioned cannot be managed so as to have every cell occupied with brood, while the other can. Furthermore, the hive with the small frames can be managed so that double the quantity of bees can go into the fields, while with the large frame they have to stay at home to keep up the necessary heat for brood rearing. With the large frame the bees are spread over too large a surface, while with the small one they are in a more compact and natural form. To illustrate more fully:—Suppose we hive a good swarm in a box nine or ten inches square and five feet high; if the yield of honey is good they will fill it the first season, and if they winter well, so as to consume but little of their stores, we shall find that the bees and brood will be at the bottom while the heat is at the top, and but few bees go to the fields; cut off the top and bring the size of the hive down to 12 inches deep, and double the quantity of brood will be reared and double the number of bees will go into the fields to labor. Again, in the Spring we often want to strengthen a weak colony by inserting a frame of brood from a strong swarm without injuring it, and have the weak stock protect the brood given them. This we can readily do with the small frame, while with the large frame it is much more difficult. If we have a very small swarm we take a frame in which we can see a few young bees gnawing out of the cells; shake all the bees in the small stock on to it, adjust the division-board to the one frame, and in a few days the colony will be strong enough to take an empty frame. This is for ordinary Spring weather, and not when the mercury is 95 deg. in the shade.

Borodino, N. Y.

BEES IN APRIL.

APRIL is a test month for bees, as they are apt to suffer for want of food. The hives which have been in the cellar during the Winter may now be set out on the Summer stands; but the bees should not be allowed to fly much until there are flowers or blossoms of some kind from which they may gather honey. Bees, at this time of the year, consume more honey than is generally supposed, in rearing the brood, hence it is well to feed them, while they cannot aid themselves, by inserting combs filled with honey, which they will gladly remove and the empty cells will be appropriated for brood-rearing. Rye and oat meal should also be supplied as long as the bees will feed upon it.

When the hives are first set out in the Spring it is advisable to take an inventory of each one to see what condition the bees are in, how the new brood is coming on, whether there is any loss of queens, etc., etc. During this examination the weak swarms should be reinforced from the strong, which may be done by inserting, in those which are weak brood-combs from the strong colonies. By having one spare hive to begin with, the entire number may be passed under observation, and the colonies be put in a condition for work. The apiarist

should now be on the lookout for the bee-moth and other enemies to the bee. Every worm or miller killed now will save much trouble later on in the season. Early bloom is necessary if stimulative feeding is not practiced, hence it is well to cultivate the Silver, Red and Soft Maples whose early blossoms afford excellent honey resources for the bees to draw upon in early Spring. Willows and poplars are also early-blooming trees, and among plants and flowers blood-root, liver-leaf, cress, etc., may be mentioned. Bees are industrious workers and every little honey-yielding flower will be visited many times by them in their eager flight, in the days of early Spring.

Arboricultural.

A FEW TREES AND SHRUBS FOR KANSAS.

ADELINE E. STORY.

An Eastern man no sooner becomes the possessor of a piece of land in the comparatively treeless region of the West than he is seized with a sort of mania for tree planting. The information vouchsafed by the older settlers, that his land must first be put under the plow for two or three years, acts as a damper to his ardor—still he plants. The trees dwindle and die, and he plants again. In Northern Kansas his chief reliance hitherto, both as an adornment and a wind-break, has been the Cottonwood, Soft Maple, Box Elder and Black Walnut. The Cottonwood is a coarse, large-growing tree of no particular beauty. Its roots are far-reaching and troublesome, and on this account it should not be planted near orchards or on the lawn where more delicate trees may be set out. Its rapid growth, its ability to grow straight up in spite of all the winds that blow, and the ease with which it is propagated are its principal recommendations. They must be considered weighty ones, as in driving about the country one finds more trees of this kind than of all others put together. If the home grounds are large—as they need be here to allow of trees sufficient to serve as protection against the wind—a variety of large-growing trees, such as the elm, oak, ash, Honey Locust, catalpa, willow, mulberry, Black Walnut, Norway Spruce, Scotch Pine and the different varieties of maples may be planted, not in rows, as is the common practice, but brokenly, thus producing an effect much more pleasing to the eye. Within these, and immediately surrounding the house, smaller trees and shrubs may be distributed, thus preventing too dense a shade thereby endangering the health of the inmates. Some of the good people here so act on the principle—"One cannot get too much of a good thing" that they set out trees to the total exclusion of the sunshine.

Kansas is no particular friend to evergreens. The Norway Spruce, American Arbor-vitæ and several varieties of pine have been found to do well here. The Red Cedar is indigenous and is on that account more often met with, but the dull brown-green of its leaves in Winter, when brightness is most desirable, renders it less attractive than the others.

Of the smaller trees and shrubs known to succeed well may be mentioned Box Elder, (Ash-leaved Maple) Dogwood, Osage Orange, lilac, flowering almond, hibiscus, snowball, sumach and wild gooseberry. The sumach, growing in clumps here and there among the trees, is indeed, a thing of beauty. It adds a brilliant, though by no means tiresome, effect to the whole. This is especially the case in Autumn when the leaves take on a gorgeous coloring of red, while all the others—even the maple which in the East so glows with color—drop their leaves without so much as an effort at brightening up. But what of the wild gooseberry of Kansas? Did any one ever sing its praises as a thing ornamental? Whether or not, it is indeed a beautiful bush, symmetrical in shape, glossy of leaf and dense of foliage. The light-green color of the leaves, affording a pleasing contrast with others of darker hue, makes it very desirable for the lawn.

In this list of trees and shrubs I have thought best to mention only such as have been successfully grown here, the larger portions of them being indigenous to our State. I have been actuated also by a desire to recommend only such as are within the reach of all.

The Japan Retinosporas not Very Hardy.

On looking over the exceedingly interesting Tree and Shrub Number of the Rural, I find the Japan Retinosporas quoted as very hardy. This doubtless is correct in the latitude of New York, but it will not hold good in Wisconsin. I have tested the following: R. plumosa, R. plumosa aurea and squarrosa planted in favorable situations in soil especially prepared for growing and testing the newer kinds of evergreens. Now I find, after a careful test of a few years, that they are tender and will not stand this climate At least the three above-named varieties will not prove a success in the Northwest. I give them up with regret from the fact that where the climate will admit of their healthy growth they are among the most pleasing and graceful of evergreens.

Dodge Co., Wis. C. Perry.

Pomological.

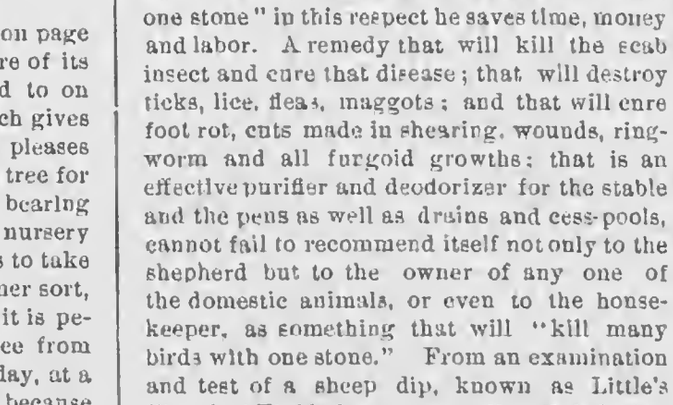
The Swaar Apple.

We find that the apples which are most popular to-day in the New York markets are the Northern Spy, Spitzenberg, Swaar and Baldwin. Of these the Spitzenberg, now as always, is generally preferred and brings the highest price. Next comes the Swaar, of which our engraving represents the average size as they are now sold from street stands. When we consider the immense quantities of this apple that are offered in the markets, both East and West, at this season, we naturally ask where they come from? Where does this excellent apple thrive so well? The question is not easily answered. According to our information, it seems to thrive here and there in isolated localities more than most other apples of fine quality which are raised in large enough quantities to constitute during their season leading market varieties. It thrives moderately well in California, Nebraska, Kansas, Missouri, Illinois, Indiana, Oregon, Michigan, New York and Pennsylvania. This is as far as our information extends.

The color of the Swaar is a rich golden-yellow when ripe. The flesh is yellowish, tender, compact, fine-grained and the flavor is aromatic, perceptibly subacid, rich and agreeable. It ripens through the Winter, keeping well until late Spring.

The Summer Rose Apple, figured on page 21 of the Rural, deserves to have more of its good qualities noted than are referred to on page 20. For, besides the beauty which gives it its name, and the flavor which pleases every one, it has the great merit, in a tree for the house-yard or town garden, of bearing not only regularly, but even from nursery size; and of growing so moderately as to take but little room. Being an early Summer sort, equally good for dessert or kitchen, it is peculiarly convenient as a back-door tree from which fruit can be taken fresh every day, at a season when it is scarce in market, because the early sorts ripening in the heat of Summer, so soon lose their quality and go into decay. It is more reliable, more useful, and handsomer than the Primate. W,

Jonathan Apple.—This succeeds very well over an extensive range of country and remarkably well in Louisiana, Ohio, Indiana, Kansas, Nebraska, Iowa, Illinois, New York, and New Hampshire. Our engraving, from one of medium size, shows the form sufficiently well. It is nearly covered with bright red stripes upon yellow. The flesh is white, juicy sub-acid, aromatic, and fairly rich. The tree is productive and the fruit generally fair. It keeps until Spring.

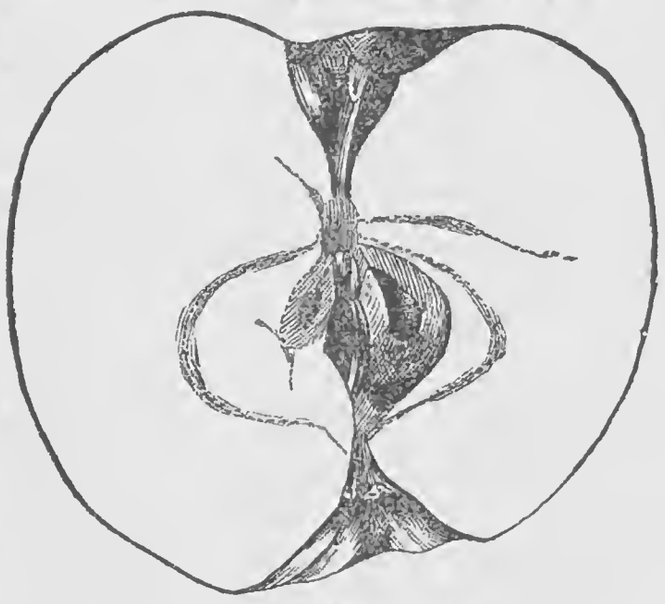


SWAAR.—AVERAGE SIZE AS SEEN ON N. Y. STANDS, APRIL 1.—FIG. 218.

Miscellaneous.

A USEFUL VERMIN DESTROYER.

It was said by an ancient poet who knew what he was talking about, that "sheep are always an unhappy flock." This is very true, for there is no other domestic animal that is so much pestered with vermin, both internally and externally, as a sheep. Let a sheep owner closely examine his flock or call to mind the many troubles with which he has known his sheep to be afflicted. First, there is the scab which fortunately is so much dreaded and is so carefully guarded against that it is now much rarer than it was formerly. But it requires constant watching and preventive measures to avoid this pest. Then there is the sheep tick which prevails everywhere, a ferocious and persistent blood-sucker which worries and torments the poor animals until they lose both flesh and wool. Next comes the bot grub which enters the nostrils and lives in the nasal passages and makes life a burden to both the sheep and the shepherd. Lice, fly maggots and more insect pests might be mentioned.



JONATHAN.—FROM LIFE.—FIG. 217.

Then foot root, both the common and the malignant kind, will recur to the shepherd's memory. There are many remedies that destroy these pests, but some of them are as dangerous to the sheep as to their insect enemies. Mercurial ointment, arsenical preparations, and even tobacco may be classed among these dangerous remedies. If one can "kill two birds with one stone" in this respect he saves time, money and labor. A remedy that will kill the scab insect and cure that disease; that will destroy ticks, lice, fleas, maggots; and that will cure foot rot, cuts made in shearing, wounds, ringworm and all fungoid growths; that is an effective purifier and deodorizer for the stable and the pens as well as drains and cess-pools, cannot fail to recommend itself not only to the shepherd but to the owner of any one of the domestic animals, or even to the housekeeper, as something that will "kill many birds with one stone." From an examination and test of a sheep dip, known as Little's Chemical Fluid, I am very well satisfied that this preparation will do all that is claimed for it. As the season for shearing sheep is approaching, it will commend itself to the shepherds as a tick destroyer and as a preventive of scab and foot diseases, to be used at this season when such an application is most easily and usefully made. For the dairyman it will be useful to free the cows and calves of lice which now increase with amazing rapidity, and to rid the animals of ringworms and warts. Further, as it destroys animal lice most effectively, I don't see why it should not be equally *good* (or *bad*) for plant lice and I am waiting with impatience to test its merits on these pests of my cherry and plum trees.

A Shepherd and Dairyman.

The Champion Hay and Grain Unloader.—In an article on Hay Barns in the Rural of February 5th, Prof. I. P. Roberts, Farm Manager at Cornell University, referred enthusiastically to the great ease and speed with which not only hay, but also short oats, barley, corn-stalks and wheat, bound or unbound, could be unloaded from the wagon and deposited on the mow by means of a hay sling he had found very convenient and efficient. Straightway a large number of inquiries poured in upon him and us as to the manner of its construction, which he fully explained in an illustrated article in the Rural for March 19. Since then we have had a multitude of inquiries as to where it could be obtained, and at length all these questions are answered by an advertisement in this issue. The device has already been so fully described and fittingly praised in our columns that it only remains for us to say that the sling is entitled to the careful inspection of all who may be in need of such a convenience. E. G. B.

Wattled Picket Fence.—In answer to an inquiry about this fence in the Rural of March 19th, a correspondent writes us from Payson, Illinois, that the same sort of fence has been used there for many years, and is rapidly gaining favor. The best pickets are split from good white oak, and these are better than sawed ones. All who wish make the fence without any fear of infringing a patent. Very few plant hedges thereabouts now, as they require too much summer-pruning, and barb-wire fence has had its day in that section.

Restoring the Gnawed Bark on Trees.—In answer to an inquiry on this subject in the Rural of March 26, a correspondent writes to us from Cooperstown, N. Y., that an excellent way to make the bark grow on trees from which it has been peeled or gnawed off is to bind the denuded place with clay, or with mud if clay is not at hand. Thus treated he has found that the bark will grow again without a scar

A Pertinent Question.—I have been watching for some one to advertise, in the Rural, Suffolk or Small Yorkshire pigs for breeding; but have failed to see any such advertised. If any of your readers have them, why don't they advertise? E. M'C.

Sing Sing, N. Y.

What Others Say.

The Proceedings of the Western N. Y. H. S. just received, interesting as they always are, seem more suggestive and instructive than usual. President Barry's address is full of good hints. We make a few extracts. Speaking of artificial manures he quotes from Mr. Harris, who says:—"I have much faith in artificial manures. They will do great things for American agriculture, directly or indirectly. Their general use will lead to a higher system of farming, to better cultivation, more root and fodder crops, improved stock, higher feeding and richer manure." Mr. Barry had learned by experience that to test the value of a fertilizer it must be used on a poor soil where a fair crop, or even a small crop, could not be produced without manure. He had used various kinds of fertilizers on his lawn, in his garden, on trees, etc., but the ground in every case being already rich, he failed to observe the effects of the fertilizers. This is the case with many farm experiments which we hear of as coming to nothing.

Speaking of poor orchard management, Mr. Barry remarked that he had seen trees standing in grass neither broken up nor manured for many years, making a feeble and stunted growth, and producing heavy crops of fruit, one-half or one-fourth of which may be merchantable, the balance hardly worth picking up. We find orchard after orchard in this condition. This will not pay. Trees may kept in a vigorous and healthy condition by proper tillage of the soil, abundance of fertilizers, and judicious pruning. These involve labor and expense, but you cannot grow fine fruit without both, and a good deal of them. A fruit tree shows neglect very quickly. In his pear orchard, to lessen the chances of blight, he slacked off in both cultivation and manure. The result was, in two years one-half his crop was culls. His trees, instead of making stout shoots 12 to 18 inches long, made scarcely any growth at all. He had observed similar results in the case of other fruit trees. In some soils, especially in those of a light and sandy nature, a moderate top-dressing every year is necessary; in others, every second year will be sufficient. There can be no rule laid down. The trees and fruit will tell what is wanted.

The time has come, Mr. Barry thinks, when fine fruits only will pay; the growing of poor fruits is already overdone; the growing of fine fruits will never be overdone. He urged upon orchardists the necessity of thinning as well as of good culture. But when thinning is advised we are promptly told it will not pay; the labor costs too much; it is not practicable on a large scale, etc. The fact seems to be overlooked that it is no more labor to thin the fruits than it is to gather a crop of poor, unmarketable fruits. Thinning at the proper time not only enables the tree to bring the remaining crop to perfection, but gives a quality of fruit that will find a ready sale and fair price any season, and, besides, it saves the tree from exhaustion. As fruit trees grow old they have a tendency

to overhear, and, while good cultivation and careful pruning tend to lessen this difficulty, yet there are few cases where thinning, to a greater or less extent, may not be advantageous. His own practice is to thin twice, or even three times. The earlier the work is commenced after the fruit is well set, the better.

The few growers who send the fruit to market in first-class style reap their reward in fair prices and a good reputation. The California growers and shippers seem to have attained great perfection in packing.

In 1848, just 33 years ago, when ocean voyages were longer than they are now, President Barry took some barrels of Northern Spy and Melon Apples to show our friends in Europe. These varieties were then but recently introduced, and comparatively rare. He distributed them among the leading pomologists in England, France and Belgium, and all declared they were the finest apples they had ever seen. They were sent to New York by rail and made a long ocean voyage—13 or 14 days. They were sent by rail from Liverpool to London, then packed in baskets and sent by express to different places in France and Belgium, and in every case were received in perfect order. He brought some back with him quite sound, in March, although he was 21 days on the water. This shows how easy it is to transport apples long distances, if of fine quality and well packed.

The shipment of American apples to Europe is destined to be immense. But if our growers and shippers desire to secure the best results for themselves and the consumers they will at once determine upon a thorough system of selecting and packing. This applies with equal force to our home markets. Winter pears sent to New York this present Winter, about the holidays, well selected and nicely packed in half-bushel boxes, sold readily at $3 and $4 the box. With less care and taste in selecting and packing, such pears might not have sold for more than $3 or $4 per barrel.

Mr. William C. Barry, of the committee on native fruits, after speaking of the Melon Apple said that another apple equally valuable and nearly as difficult to obtain, is the Jonathan. It is one of those slender-growing sorts which find no favor with nurserymen. But it seemed to him that the people cannot afford to dispense with such a valuable sort. It is of medium size, roundish-ovate form, skin of a light yellow color, nearly covered with light red, deepening to a rich crimson, then to a dark purple; flesh, white, tender, juicy, with a pleasant sub acid flavor; it has all the qualities which constitute a perfect dessert apple. And this, one of our best Winter apples, can hardly be obtained in the market. . . . . For those who are engaged in sedentary pursuits, or who suffer from indigestion, apples of fine quality are invaluable, and they should be used daily in every family, and at every meal in some form or another.

The Amber Queen is claimed by the originator, Mr. N. B. White, Norwood, Mass., to be the richest and best flavored grape ever produced. It is described as a strong grower, with thick leaves, bunch large, amber-colored but growing darker as it becomes riper. Eatable in August and lasts through September.

Speaking of the Niagara, Prentiss, Duchess and Pocklington as promising white grapes, he said that they possess important qualifications which have long been sought in white grapes, such as vigor, hardiness and productiveness. With five fine varieties like the above, and more to come soon, grape growers will surely be able to satisfy a long felt want.

Oleomargarine and the Dairy Interest.—The value of the milk, cheese and butter produced in this country in 1875 was between $45,000,000 and $50 000,000, according to the statement made the other day by F. D. Moulton before the Assembly Committee investigating oleomargarine in this city. Oleomargarine was first introduced surreptitiously, and is now sold by the dark-lantern method. For nearly ten years the dairymen have had to contend with this secret foe. Laws have been evaded and openly violated to damn the reputation of American butter abroad. Last year 28 000,000 pounds of butter and 25 000 000 pounds of oleomargarine were exported. But for the oleomargarine our exports of butter would have been between 50,000,000 and 60,000,000 pounds. England imports $50 000 000 worth of butter annually, and of this $45 000,000 comes from elsewhere than here, giving us only about 10 per cent. of the trade She imports $25 000 000 worth of cheese, and of that, $15,000 000 worth, or about 75 per cent, goes from the United States. We can make better butter and cheaper butter than other nations, and, but for this oleomargarine fraud, we should supply the markets of England.

Mr J. J. Thomas has the following to say, in the Albany Cultivator, about the comparative quality and value of the four new white grapes, Duchess, Pocklington, Prentiss and Niagara. Without having had an opportunity of examining them critically side by side, he would place the Duchess first in quality, a drawback being its one-fourth foreign blood, and the fear that this intermixture may possibly injure the foliage in future. Next in flavor would be the Prentiss, a strictly native sort, of excellent quality, but not equal in this respect to the Duchess. The Niagara, although one notch lower in flavor, is larger, finer in appearance, a prodigious grower and bearer, and, on the whole, has an unusual number of excellent points not found combined in any other variety. The Pocklington is still larger and perhaps more showy than the Niagara, but a notch farther down in quality at the usual time of ripening. It is said, however, that if allowed to hang several weeks it becomes excellent. These four sorts all stand high, and are all eminently worthy of trial.

Professor Johnson gives the following analyses as between New Process Flour from Minnesota Spring wheat, and fine flour from entire wheat W W W brand.

	New Process.	Entire Wheat
Water	12.79	12 89
Ash	0.50	1.44
Albuminoids	12 31	14.12
Crude Fiber	0.07	1 22
Nitrogen-free extract	73.14	68 23
Fat	1.19	2.01
Water free.		
	New Process.	Entire Wheat
Ash	.57	1.65
Albuminoids	14 12	16.20
Crude Fiber	.08	1.39
Nitrogen-free extract	83.86	78.43
Fat	1.37	2.33
	100.00	100.00

The Prairie Farmer takes this view in reference to glucose: "If the farmer, having sold his corn to the highest bidder, has no responsibility in the turning of it into whisky and the sad consequences that follow the use of that article, why should the farmer feel any more concern over the circumstance that his corn is made into glucose, which may or may not contain free sulphuric acid, and which may or may not be used in the adulteration of cane sugar, sirup, and confectionery? With ignorance and prejudice removed, and with commercial processes properly regulated, there is no reason why there should be rivalry between cane sugar and glucose, any more than there is now between tea and coffee, or butter and cheese."

Mr. Chas. A. Green, in the New York Tribune, says that farm bells are manufactured from cheap metal, and such a one as he has just put up on his house-top—without help, in an hour's time—weighs thirty or forty pounds, costs $5, and does not necessarily require a cover. There it swings on cast-iron bearings, connected with the kitchen by a light wire, which passes down the chimney side, without making any hole in the roof. There are several reasons why these bells are desirable on farms. 1. The workmen are often prevented by winds or distance from hearing the dinner-horn or hand-bell. 2. It sounds cheerful and neighborly to hear the bells clang out over the country. 3. By a series of signals previously arranged, either the errand boy, the proprietor, or all hands can be brought to the house in a few moments. 4. In case of fire, or any calamity—in case of tramps making themselves offensive when only the women are present—the bell can call together the whole neighborhood in a few moments. Mr. Green knows of a case where the farm buildings caught fire, and were saved by the prompt alarm of the bell. Such bells, we would add, might be useful in giving an alarm at night, in case of burglars or fire.

London purple.—Professor Johnson says that this cheap substitute for Paris green has been reported to be efficacious as an insecticide. A sample sent by P. M. Augur, Esq., was found to contain 47.3 per cent. of *arsenic acid*. The complete analysis by Professor Collier shows the arsenic acid to be united to lime. The arsenate of lime is sufficiently soluble in water and in the digestive fluids of animals to act as an effective poison. The London-purple may therefore be regarded as fairly the equivalent of Paris-green for destructive purposes.

Seldom is a mistake made in estimating the disposition of those who delight in fine orchards, gardens, rural walks, and the culture of elegant shade trees and shrubbery. A rural residence, tastefully planned and adorned with floral beauties is generally the abode of refinement and intelligence. —O. S. H. S. . . . . Mr. Harris, in the Fruit Recorder, says a strong word for asparagus culture, showing that from a bed of 30 feet square, he has had all his family needed, and sold therefrom $20 per year for the last ten years. . . . . Really, there is no vegetable so overlooked by farmers in general as asparagus, and we hope our present Seed Distribution may help to work a change. . . . .

Mr. Thorne, of the Ohio State University, finds the ash of corn cobs fully as valuable a fertilizer as sulphate of potash. Our farmers, he says in Farm and Fireside, should consider this, as large quantities of this ash are yearly being made by the commercial shipping warehouses of the West, whose engines are fed chiefly, if not altogether, upon corn cobs. . . . . You would save yourself and others a great many useless heartburnings if you would manage to keep your eyes open to the virtues of your friends and look at their faults with your eyes shut. . . . . It is a pretty serious thing to break an old friendship, for, like old china, it can never be made quite whole again. A broken friendship may be soldered but it will always show the crack.

NOTES FROM THE RURAL GROUNDS.

How to Treat the Seeds of the Free Distribution of the Rural New-Yorker.

(Second Publication.)

White Elephant Potato.—We would advise to cut the potato so that there shall be but one eye to a piece and so that each eye shall have as much flesh as possible. These pieces we should plant in rich, loamy soil not less than one foot apart. In case of threatened dry weather, a mulch of leaves, straw or manure would be found serviceable.

Washington Oats.—These had better be sown thinly in drills of prepared soil. Each plant should have plenty of room so as to tiller and to produce the best yield.

The Rural Branching Sorghum.—The R. N.-Y., contrary to its wont, has praised this sorghum almost unqualifiedly as a fodder plant. And our faith is as strong now as at any previous time. We have tested it for three years and the results have been such that we prefer it to any other forage plant which we have ever seen or tried. The early growth of the Branching Sorghum is disheartening. All who try it would, if not cautioned to suspend judgment, consider it a failure one month after it appears above the ground. It then gives no promise of the splendid growth which shortly thereafter takes place. When it attains the hight of five feet, and a half-dozen or more leafy stalks are cut from each seed and every stalk continues to grow as if no interruption had occurred, its real value begins to break upon the cultivator.

It is of the first importance that the prepared plot be free and be kept free of weeds. If otherwise, those unfamiliar with its slow germination and its resemblance to grass, would probably be unable to distinguish the rows. Prepare the soil as for corn—the *mellower* the better. Sow the seeds from one inch to one foot apart in drills four feet apart. Press the soil over the seeds and cover half an inch deep. If sown but one inch apart, the plants at the first hoeing should be thinned out so as to stand not *less* than 18 inches apart. This thick sowing would thus insure an even stand, but where, as in the present case, it is desirable to raise as many plants as possible, the seed supply being very limited, six inches apart might be better, in which case it would be necessary to destroy fewer young plants. Another method is to plant four seeds in a place—a *flat* hill, if the expression is allowable—these hills to be two feet apart, all but one plant to be destroyed at the first cultivation. We advise our friends not to sow before *late May* or even June 1st for this climate. If in late Summer those who raise this sorghum will make the trial of placing equal quantities of this and corn stalks and leaves before their horses or cattle, they will ascertain that the sorghum will be eaten first. For ensilaging purposes we should suppose it would prove far more valuable than corn, while we are in hopes that the sorghum industry may find in this a rival of the several canes now employed for the production of sirup and sugar.

The Argenteuil Asparagus.—Our friends are advised to prepare small plots for this asparagus thoroughly. Select a rich, loamy soil if possible. If not, make it rich by the addition of well-rotted manure. Work it over several times with hoe and spade. Sow the seeds six inches apart in the drills—the drills 12 inches apart. Compact the soil over the seeds and leave the surface smooth and mellow. Let it be borne in mind that asparagus seeds are often *slow* to germinate—requiring sometimes a month or more. Attend to this seed-bed—Keep it free from weeds and the plants may next Spring be set in their permanent beds and cuttings for the table be made the year after.

Giant Dutch Purple Asparagus.—Same instructions in every respect as for the French Argenteuil.

Picotees, Carnations and Chinese Pinks.—These may be sown, as soon as received, in boxes, pans or flower pots. It does not matter so long as a thorough drainage is provided for. Use for this purpose plenty of broken flower pots—or bits of charcoal, or even pebbles or small stones will answer. Fill with rich fibrous soil, such as that from decayed sods, and add a liberal proportion of sand. Mix *thoroughly*. Sow the seeds at least an inch apart (two inches would be better); compact the soil by pressing the bottom of a flower pot upon it and cover to the depth of an eighth of an inch. Again press the soil—but gently and evenly. Place in a temperature as uniform as possible; avoid *hot* sunshine, and cover with panes or pieces of glass. Later these seeds may be sown in the open ground. In this case we would advise sowing in pots or boxes, as above explained, and plunging them in the ground until the rim of the pot is on a level with the surrounding soil, using glass to cover as before. Again, the seeds may be sown in late May in a well prepared, out-of-door border where the plants are to grow. In this case the percentage of loss, of course, will be greater.

We may be excused for insisting that the seeds of this present seed-distribution are worthy of especial care. They are, in so far as we may judge, the best of their kinds. The White Elephant, we believe, will prove as a late potato all that the Beauty of Hebron (previously sent out by the R. N.-Y.) has proven as an early potato. It is now offered for sale but cannot be purchased for less than one dollar per pound. The Rural Branching Sorghum, whatever it may prove in different climates and soils, has cost us $25 per hundred pounds. The asparagus seeds have cost us to import $175 per hundred pounds. The picotees and carnations have cost us to import from $10 per pound (the lowest) to $150 per pound (the highest). In making these distributions it is, as has often been stated before, no part of our plan to offer the seeds in large quantities. Our object is merely to introduce new plants for the farm and garden which (without cost to our readers) give the best promise of proving superior to well-known kinds; and we may call attention to our previous distributions to show that thus far we have been as successful as could reasonably have been expected.

Everywhere.

RURAL SPECIAL REPORTS.

Ga., Atlanta, Fulton Co., March 31.—Our Winter has been long and severe. The season is two weeks later than usual and we are still having frost and cold weather. While I write it is freezing; peaches are nearly through blooming; we are afraid they will be killed, although the young fruit doesn't seem to be injured, it is feared that it is hurt in reality and that it will drop off when half-grown. Farmers have begun to plant corn in spite of the cold weather. Crops are looking well, though some have suffered from the heavy rains which washed some fields considerably. Butter is worth 25c. per pound; eggs, 20c. per dozen; hay $28 per ton. Labor is higher; "hands" that could be got for $8 per month last year now command $12. C. D.

Iowa, Oskaloosa, Mahaska Co., April 2—We have had a very severe Winter commencing about the middle of November. To-day it has been snowing all day; there are many drifts six feet deep at the present writing. Winter wheat has a bad appearance; the top is entirely dead; I speak of my own. It will be two weeks at least before seeding can begin. Hay is scarce at $15 per ton; corn, 25c.; potatoes, 75c.; butter, 20c. We are having a creamery started in our place with a capacity of 500 cows—a new thing for our county. A. B.

Kan., Parsons, Labette Co., April 2—Day before yesterday the temperature was 14 deg. above zero, and yesterday and to-day it is freezing, with violent northwest winds. All reports that the season is not later than usual in these southwestern latitudes are not true. The usual time to herd cattle on the prairies commences on the first of this month. There is not a piece of verdure on them to-day. They are bleak and brown except where burned, and there they are black. It is considered desirable to get all seeds in the ground early, but in 1875 the season was late and grasshoppers also prevented planting till very late and the best corn crop for 10 years was raised that season. It seems to us that the season through will simply be later—that our rains and heat will appear as much later as the season opens late. We have had unusually high March winds and dust enough for common countries. To illustrate the great difference in the climate of Kansas and Iowa, I may state that a grain firm in Iowa has not been able to ship a single carload of corn of the last crop dry enough to inspect No. 2, while not a single car from this place has failed to inspect No. 2 Our wheat crop up to the 31st of March was in an excellent condition, but the weather of the past two days will have been more trying than the previous Winter. Corn here is 28@30c.; wheat, (Winter only raised here) 85c.; oats, 20c.; potatoes, 50c.; butter, 20c.; eggs, 8c.; coal, 13c. for 80 pounds. Not more than five per cent. of Spring plowing has been done. J. E.

Mich., Watson, Allegan Co., March 28.—We have passed through one of the most severe Winters we have had for some time, having had continued sleighing from the middle of November last until last week. It has given business a "boom" that it has not had before in some time. Every wooded nook has been scoured and old logs that had lain for years,

if they were sound, were unearthed and converted into lumber. Consequently every able-bodied man that was not afflicted with the disease known as "constitutional weariness" has been employed, and there has not been enough to "fill the bill" even then. Everything has brought a good price as the demand has been fully up to the supply. All kinds of feed for cattle and horses are scarce and growing more so every day, but we feel in hopes there will be enough to carry us through. Hay now is $14 per ton at the barn; corn, 50c.; oats, 40c.; wheat, $1; potatoes, 65@75c. and in good demand; butter, 20c.; eggs, 12c.; dressed beef, 5½@8c. It has been thawing gradually for a week, and the snow, which according to an estimate of careful observers has fallen to a depth of 18 feet during the Winter, has begun to disappear. Patches of mother earth begin to show themselves, and the bovine race seem to enjoy roaming the fields again. The blue birds, robins and meadow larks have again put in an appearance and we gladly welcome them back, having had enough cold and snow this season to make up for the lack of snow the past two Winters. As near as I can ascertain a part of the peach buds are killed, but fruit-growers think there are enough left for the good of the trees. Some were so loaded with fruit last year that where these were not thinned out the trees were ruined by the breaking of the limbs. The snow is not removed enough yet to permit a general view of the wheat fields, but where there is a partial view wheat looks better than last Fall. I do not remember when we have had so poor a growth in the Fall. There was very little growing weather after wheat was sown. It came up all right, as the ground was moist, but cold weather set in so early its growth was stopped. This is a good maple sugar season thus far, and the product is of most excellent quality. The few "sugar bushes" that remain in this section are now being tapped, and there is a good demand for the sugar at from 10 to 12 cents per pound. This immediate section is mostly adapted to the dairy business—butter and cheese being the chief products. Both have paid well during the past year, and the cheese factories are starting up again, and are being extensively patronized by the farmers. Last year the cheese from the factories in this vicinity was all sold in the cities and villages within a radius of fifty miles, thus showing a good home consumption. The *penchant* for cattle is for pure-bred Short-horns. We have some splendid ones and farmers of very limited means are so alive to the business of improving their stock that breeders are liberally patronized. Of sheep Merinos predominate, although there are occasionally a few small flocks of Cotswolds. Of hogs the Poland-China crossed with the Chester White or some other good breed seems to be the leading sort at present. In the wheat field Clawson takes the lead, although Fultz has given some surprising yields. The only complaints I have heard of the latter is that it is difficult to thrash it clean on account of the small kernels and its being so compact in the head. The leading potato as yet is the Early Rose. This grows so quickly as to get thoroughly ripe and out of the way of the potato beetle sooner than any other that has been introduced here. The cause of the partial failure of the potato crop last year was owing to the protracted wet weather. Where the largest crops grew the year before, viz., on low, mucky land, the crop was an entire failure last season on account of such land being under water a part of the time. H. D. E.

MINN., Zumbrota, Goodhue Co., April 7.—The weather here is fine. The snow has nearly all gone, but the air is rather cold yet; freezing nights. Will not be likely to seed much before April 10. Wheat, 87c.; oats, 30c.; barley, from 40c.@$1; good butter, 16@18c.; eggs, 10c.; lard, 12½c.; pork, 4½@5½c. No heavy floods here this Spring. Snow has departed easily and without rain. Snow is still heavy on the prairies. A great many hands are coming from there now. T. M.

MINN., Stewart, April 4.—We have had a very severe Winter. It set in about the middle of October, and it has not even slacked up yet. To-day it is snowing as if the supply above had not been lessened by former storms. Wheat is worth from 70 to 85c.; oats, 25c. to 30c.; corn, 40c. to 45c.; butter, 15c. to 20c. J. C.

N. Y., Cuba, Allegany Co., April 1.—We are having snug Winter weather yet. Snow fell yesterday and last night to the depth of four inches: fodder is scarce and high. The cheese factories have nearly all commenced operations in this section. E. G. S.

OHIO, Greenwich, Huron Co., April 6th.—We have had and still have a very deep snow, which is badly drifted. The snow commenced coming March 29th and continued to come for five days. I think if it had been level it would not have been less than two feet deep. We have also had some very cold weather for this time of the year. On April 5th the thermometer indicated 8° at five o'clock in the morning. We are afraid the birds will all starve if the snow keeps on much longer. Farmers say this snow is going to be the salvation of wheat, for there has been a great deal of freezing and thawing during the month of March. All that can are making maple sugar and the season has been splendid for it, too. A. B.

WIS., East Troy, Walworth Co., April 7—And still it is Winter. On the 4th and 5th of this month it was four deg. above zero, and it is 16 deg. this morning. There are 18 inches of snow in the woods now, and miles and miles of roads are drifted three to four feet deep from one fence to the other, and the snow is old and hard. The outlook for Spring wheat is not very promising. Farmers are very much discouraged. We cannot tell much about Winter wheat yet, as the ground is nearly all covered with snow. H. A. T.

The Querist.

ANSWERS TO CORRESPONDENTS.

Pears, Quinces and Plums for Northwestern Wisconsin.

W. T. F., Rice Lake, Wis., asks whether there are any sorts of pears, quinces or plums that would stand that climate.

ANSWER BY T. T. LYON PRES. MICHIGAN POM. SOCIETY.

There can hardly be a better reply to this query, than to quote the recommendations of the Wisconsin State Horticultural Society, as found in its Transactions for the year 1878. This Society recommends lists of fruits for "general cultivation" with separate lists "for trials." Of apples, grapes, raspberries, and strawberries, varieties are recommended for general cultivation; but, in the cases of pears and plums, lists are given only for trial, as follows:

PEARS.—Flemish Beauty, Ananas d' Ete, Early Bergamot, Bartlett, Swan's Orange, (This is a synonym of Onondaga) Seckel, Winter Nelis, Clapp's Favorite.

PLUMS. Lombard, Imperial, Egg, Magnum Bonum, Hinckley (or Miner,) Yellow Egg, Eldridge Duane's Purple, De Soto. Of the above, according to Downing, Imperial is a synonym of Red Magnum Bonum; Egg and Magnum Bonum are synonyms of Yellow Egg; while Miner is the leading name and Hinckley the synonym. Very probably the Weaver, a recent native seedling of Iowa, may prove valuable in Wisconsin also. It is highly commended in its native State, especially for its hardiness. The above lists utterly ignore the Quince, which possibly may prove desirable in the southern portion of the State, on suitable soils; but I would not recommend its extensive trial, unless it be after full experience, in similar circumstances. I would doubt its ability to sustain the low temperatures occasionally occurring there; said to be as low as 30° and even 40° below zero.

The fact also that so old a Society, in so old a State as Wisconsin, only recommends lists of pears and plums *for trial*, should doubtless be accepted as a reason for planting but sparingly, and watching critically the results of all known experiments of this kind, with reference to locality, soil and modes of treatment, before venturing upon the extensive planting of this class of orcharding.

So far as plums are concerned, the most promising field for experiment would seem to me to be with our native wild plums (Prunus Americana and Prunus Chicasa), on account of their unquestioned hardiness; a result, very probably, of their exemption from the liability, so general among varieties of the so-called Prunus domestica, or garden plum, to the premature dropping of the foliage; and, as an infallible consequent, the failure to properly mature their young growth; and its death from excessive cold.

The Best Breed of Cows for a Milk Dairy—relative Value of Mangels and Hay, etc.

S. H., Pewaukee, Wis., asks, 1, which is the best breed of cows for a milkman; 2, what is the relative value of mangel-wurzels as compared with good hay or sweet corn fodder; 3, is sweet corn fodder better than common corn fodder; 4, is there any such thing as a hand drill for planting corn fodder.

ANS.—1. Each breed has its merits. If a large yield of milk is desired the Dutch or so-called Holstein is to be preferred, but these cattle are very high-priced and a milkman could not afford to purchase them. Good, well-selected native cows, with Short-horn blood in them are the best in some cases because they give abundant and good-looking milk and when the milk falls they are easily fatted. No milkman can afford to raise calves unless he has cheap land and plenty of pasture. If he has these he had better keep Ayrshires; or at least select the best native cows, get a pure Ayrshire bull from a good milking strain and raise half-breeds. So far as regards the cost of milk, the Ayrshires, according to their special advocates, take the palm over all other breeds, as they are easily fed and milk freely. 2. Careful experiments made by Prof. Sanborn, of the New Hampshire Agricultural College, show that for growing stock one pound of good hay is equivalent to six pounds of mangels, crediting the mangels with the extra growth made by the animals and the amount of hay saved in their feed when the roots were added to their normal ration. This may be taken to represent their practical value when given as excess food in common practice. When in addition to a normal ration of hay, cattle can be induced to eat five pounds more of nice hay, this "excess" food Prof. Sanborn finds will do more than 12 times as many pounds of mangels—that is than 60 pounds of the roots! In feeding milch cows he finds that mangels increase the flow of milk very little, while they injure its quality, the milk of cows fed in part on them giving a smaller percentage of butter, and absolutely a smaller amount per cow. The theoretical value of mangels formerly stood at about one of hay to five or six of mangels, but from practical tests the Professor thinks this low value will have to be cut down. 3 Such analysis as we have do not show any pronounced difference in the value of sweet and common corn fodder; but practically the former is found to be the more desirable. 4. The Fisk Automatic Seed Planter, advertised in this issue, is, we are assured, an excellent implement for this purpose.

How to Build a Hog House.

W. H. B., Afton, Ia., asks how to build a hog-house for say, 50 hogs.

ANS.—A large number of hogs will not do well if fed in one body. The strong ones will fight the weaker and drive them from the feed. Ten hogs are as many as can be profitably confined together, and these should have a pen at least 15 feet by 20. This would make a building 75 feet long by 20 feet wide for the pens, with a floor-way of at least six feet in front of the pens, making the building 26 feet wide for the pens and room in front of them Movable partitions could be put in so as to divide the feeding pens into smaller ones, making three out of one. This would give a breeding sow a pen five feet wide by twenty feet; or they might be cut up making them smaller by running a partition across the middle, so that they would be five feet by ten. The pens ought not to be any smaller. They should be tight except a small space on the outer side next to the floor through which the liquid manure could run out. In cold weather this could be closed up. The entire building should have a tight floor, so that it could be kept clean and to save the manure. The floor should be high enough above the ground to admit of a free circulation of air—at least one foot above the ground. A yard might be connected with each feeding pen, which would enlarge their capacity and allow more pigs to be kept in the pens, as there would be more room for the pigs to exercise, and less inclination to fight and injure each other. The floor should descend, the backside being at least three inches the lowest. The building need be no higher than eight feet, and might be open to the roof. A floor over-head would make it warmer and furnish handy storage room. The space in front of the pens could be used for the same purpose, and could be made narrower, but it would put the building out of proportion.

Cooked and uncooked Hog Feed, etc.

A. H. M., Marion, Kan., asks, 1, what is the relative value of corn, shorts, and potatoes cooked and raw as food for hogs; 2, how does soaked corn compare with dry corn for the same purpose; 3, what is the comparative value of rye and corn practically as food for hogs.

ANS.—1. When corn or corn meal is cooked its feeding value is increased fully one-third, that is to say, it will be digested and assimilated so much better in the stomach of the animal that the same quantity of meal or grain will make one-third more growth than when it is fed raw. The same is true of shorts. Potatoes are very poor food when fed raw, and will not fatten an animal; but, when cooked, the starch, which is the fattening ingredient, is put in a digestible condition, which is not the case when potatoes are fed raw. 2. Corn is rendered soft and more digestible by being soaked. When eaten without being ground or soaked it is not thoroughly masticated and is not reduced in the stomach to such a state that all its nutriment is absorbed, but it is voided to a considerable extent without any change in its condition, and of course does not increase the growth of the pig as much as when more of its nutriment is absorbed. 3. Rye and corn are about of the same value, pound for pound, as food for pigs.

Potato Planters and Diggers.

"No Name." Doniphan, Neb., asks some information about potato planters and diggers.

ANS.—A potato planter known as True's Potato Planter is in use in this country. It cuts the sets and drops them in a furrow and covers them. This machine has been well spoken of by Dr. Hexamer, a gentleman who grows a large quantity of potatoes and whose judgment is good. The mechanical arrangement of the machine seems to be fairly adapted for its special purpose, and it is used by many of the large potato growers. It is manufactured by Nash & Brother, of College Place, New York City. There are two or three potato diggers on the market. The best of these is that known as Allen's Potato Digger. It is a double-mold-board plow, to which is attached a set of finger-bars or prongs, which separate the potatoes from the soil and leave them for the most part on the surface. It is certainly an improvement on the plow for doing this work.

Grade Bulls.

G. E. N., Afton, N. Y., having seen it stated that in England all neat cattle that can show four top crosses of Short-horn blood are eligible to the Short horn Herd Book, asks why, in that case, a fifteen-sixteenths Jersey bull is not as good for all practical purposes as a thoroughbred for grading up native cows.

ANS.—In the United States animals are not admitted to the Herd Books unless they are thoroughbred. There is too much risk of atavism to the worst ancestor far beyond four crosses, to use grade bulls or allow them to be record d, and in many of the States premiums on grade bulls are not allowed to be offered by the agricultural societies. A bull fifteen-sixteenths is not as good as a thoroughbred even for grading up native cows, for the vice of some inferior ancestor is pretty sure to crop out in the offspring, and when pure-bred Jersey bull calves can be purchased at almost nominal prices, there can be no excuse for experimenting with grades. A grade bull is pretty sure to *degrade* his get, while a pure-bred will elevate his.

Labor-Saving Implements in the Garden.

J. L., Auburndale, Wis., intending to begin the cultivation of quite a large garden, asks whether there are any labor-saving implements the use of which will dispense with hand cultivation in the garden.

ANS.—Spade and other kinds of hand cultivation in gardens should be obsolete, as much so as hand labor in farm work. The plow can be made to do better work than the spade if it is rightly used, and the garden should be laid out so that everything can be planted or sown in rows and the plow and harrow be used everywhere After the plowing and harrowing are done the lighter work may be done by hand machines, of which there is a great variety. First, there are the seed drills, which sow all kinds of seed and cover them and finish the operation usually in a very satisfactory manner. There are also hand cultivators of various kinds, some (as the Planet Jr) which have two wheels and work each side of the drill or row of plants, quite close, and others which work the middles. A most useful garden implement is a hand plow which opens drills, covers them, cultivates the ground on each side, and can be worked between rows eight inches apart. Any of these tools may be used as fast as a man can walk, and is as effective in garden work as the horse cultivator is in field work, as compared with the common hand hoe.

Miscellaneous.

C. K. W., Mount Pleasant, Cass Co., Neb.—The sugar properties of the Rural B. Sorghum have never been tested, that we know of. It is as a forage plant that we so highly commend it. We do not think it will mature seeds with you.

C. A. W., DeKalb, N. Y., asks for a good work on phonography, and where can it be obtained.

ANS.—Munson's Phonography, published by Harper & Bros., Franklin Square, N. Y., price $1.50.

J. M., Kossuth, Iowa, asks where can the seeds of ornamental grasses, Zebra-striped Eulalia, etc., be obtained.

ANS—Alfred Bridgeman, 876 Broadway, N. Y., offers them for sale.

O. A. R., Endicott, Neb, asks where he can obtain Scott's Suburban Homes.

ANS.—From D. Appleton & Co., New York City.

J. G., Green Point, N. Y., asks how green manures should be used for liquid fertilizers.

ANS.—By steeping them in water until the latter is colored perceptibly.

W. F. A., Londonville, N. Y., asks how long Michigan White Cedar shingles last compared with those of pine.

MANY INQUIRERS.—The Hay Sling about which Prof. Roberts has written is now announced in our advertising columns.

(Continued on page 277.)

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, APRIL 16th.

J. T.—F. D. C.—C. R.—C. B. W.—J. T. J.—W. V A.—Mrs J. E.—McN.—C. B. W.—G. S.—A. B.—C. A. Mc C.—J. T. J.—A. E. S., thanks. Your paper is mailed from this office regularly.—B. P. —A. L. J.—R. R.—A. R. V. D.—H. B.—S. G.—W. H. M.—A. S.—M. E —J. P. S —G. G.—R. S.—R. G. G. S.—G. M. R —H. A. T.—M. M. S.—C. A. H — T. H. H —J. W. S.—E J. B.—A. B —J. G. B.—Ensilage.—W. D S., answer under Domestic Economy.—W. G. W., Sr., thanks —N K.—H. T. E.— J. M. C.—T H. H.—W. S. H.—J. T —H. S.—A L. J.—W. S. H.—J. W. V.—W. J. B.—C. H. D —J. J. J.—J. T.—J. B. N.—A. E. B.—Mrs. G. D, seeds received. Thanks.—T. T. L.—A. L. S.—F. McH.—Mrs. W. V. A.—Mrs. O. P. R.—Mrs. A. S. V.—

THE
Rural New-Yorker.

PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, APRIL 23, 1881

SPECIAL NOTICE TO THE SUBSCRIBERS OF THE RURAL NEW-YORKER.

We have sent our first "Free Seed and Plant Distribution for 1881 to all who have applied up to this date. Those who from any cause have not received it, will please notify us by postal card at once, giving the date of their application as near as may be, so as to aid us in looking it up and protecting ourselves against imposition. We request also that the name and address may be PLAINLY written. The applications of those who have not sent us *their* share of the postage (six cents) have been disregarded. As already repeatedly announced, however, those who have subscribed for the R. N-Y. in connection with the Inter-Ocean, Detroit Free Press, the Pioneer Press, N. Y. World, Globe-Democrat, etc., etc., are not *required* to pay *any* postage, provision having been made for this in the clubbing combinations with the publishers of those journals. Those who purchase the RURAL NEW-YORKER of newsstands or news agents (their names not being on our lists) are not entitled to our Distributions, and whether they pay postage or not, their applications are unavoidably disregarded. We do not SELL our seeds or plants under any circumstances.

BOOMS AND PANICS.—Already the newspaper prophets begin to tell us to look out for another financial crash, either this year or next, "certain." Well, the man who is out of debt, be he merchant, mechanic, or farmer, can sleep even with an approaching panic rumbling in the distance. "Out of debt, out of danger." "Booms" are times of free credit; "panics" are the times when debtors are sued up and sold out. The shrewd financier is a man who can say, with Iago, "either way makes my gain." The honest, cautious business man is the one who keeps off the shrewd financiers track, and is not run over by his panic train. Merchants and manufacturers perhaps cannot always do that. Farmers always can. If you owe anything *pay up*, pay up without delay, *while the times are good.* Utilize the "boom" to make all snug, and then let the panic take care of itself. This is the RURAL'S advice, first, last and all the time, to its readers, East or West, North or South. It is adapted to all parallels and all meridians. Do it!

"STATESMEN."—In the local phraseology of Westmoreland County, England, a man who farms his own land is called a "statesman." What a pity we cannot have a few such statesmen in the American Congress. But then we might if we wanted to. We are not absolutely obliged to send lawyers and professional politicians to represent us in the national assembly. Why do we? Is it for our interest or for the good of the country to take our lawmakers from the class of men who have been wrangling for a month over a few offices in the Senate to the neglect of the public business and at a great expense to the tax payers? Why do the farmers submit to this? Why do any of the industrial classes submit to it? Those who sneer at popular government say it is because there is not patriotism or good sense enough among the "dear people" to put an end to it, and that it will go on from bad to worse until popular government is proved to be a costly and ruinous failure. That is just what it looks like now.

AN INTERNATIONAL COTTON EXHIBITION will open in Atlanta, Georgia, on October 5th and last three months. From the starting of the project last October by Mr. Edward Atkinson, it has been received with much favor, and within two months after the opening of the work a charter was procured and the capital stock of $100,000 was promptly apportioned at Atlanta, New York, Boston, Baltimore, Philadelphia, Norfolk, Richmond and other cities. The scope of the exposition has lately been enlarged and its stock increased to $200.000, of which this city, without a moment's hesitation, contributed $25,000. The exhibits will include every article and process used in the production, manipulation and manufacture of cotton and its fabrics, and the manner of using each will be practically illustrated in field and in factory work. Moreover, there will be auxiliary exhibits in the interest of silk, wool, tobacco, rice, ramie, hemp and other Southern products. As a result of the exhibition we earnestly trust that a new impetus may be given to the industries of the South, encouraged by an increased influx of capital from the North and East.

A VERITABLE CURSE TO THE WORLD.—The rumseller is universally regarded as an injury and a nuisance to society. He takes advantage of human weakness and folly for his own profit, reaped in the suffering of mothers, fathers, wives and children. He cares nothing for all the misery his traffic inflicts. He is a Satan in the flesh. But how does the rumseller differ in his motives, his actions, or their results, from the usurer? Does he not also take advantage of human ignorance, weakness and folly to "make his pile?" Those who wish to enjoy before they have earned, those who dream of great profits from risky speculations, those who know nothing of the devouring hunger of ten per cent.,—these and the unfortunates who have done their best perhaps, and have lost, all go to the usurer for "help." He helps them to get rid of what they have left. One of them lately said to the writer, in reply to the question whether one of his debtors could make anything on the money he had loaned him, "No! I shall have all the d—d fool has got in three years." Keep clear of these fellows, brother farmers.

COST OF AGRICULTURAL LABOR.—From the report of the Statistician of the Agricultural Department it appears that the decline in agricultural wages since '79 has been followed by a slight advance in most places. In the country at large the average has increased from $20.26 per month, without board, to $21.75—or 7.25 per cent. The average price of labor with board is $14.56. In Texas, Minnesota and California wages without board share in the general advance, but with board they are lower than last year, owing to the inconvenience of lodging and feeding hired help in the newer settled sections. The greatest increase has been where agriculture has paid best, as in the States bordering on the Ohio and in some of the Cotton States, where the advance has been six to ten per cent. All kinds of labor are in active demand in the South Atlantic and Gulf States; but there the share system is not working satisfactorily and the freedmen are becoming land-owners, while in Mississippi and Louisiana the "Exodus" has made labor scarce. In the Middle and Eastern States the demand for trustworthy men has increased and so have their wages. In the Northwest skilled labor is chiefly in demand, for almost everybody owns land, and hires help only in harvest time. On the Pacific Coast and in the Territories, except Montana and New Mexico, there is a good demand for labor, while in Kansas the influx of "exodusters" from the South and immigrants from the rest of the country and Europe has nearly satisfied the present demand.

PROHIBITORY LIQUOR LAWS.

THE belief which has long been an "article of faith" among teetotalers, seems to be rapidly gaining converts from the public at large—that the most effectual way of dealing with the liquor question is to treat all intoxicants as poisons and prohibit their manufacture and sale wherever public opinion will support such a measure. The recent agitation on this question in various States is doing much to systematize the work and has created a growing tendency in many of the States to prohibit the sale and manufacture of intoxicating beverages by constitutional amendments, and to restrict the traffic in them as much as possible where public opinion is not yet prepared for extreme measures.

Next to Maine, Kansas has taken the most decisive step by enacting a law prohibiting the importation, manufacture and sale of intoxicating liquors except for medicinal, scientific and mechanical purposes. This bill passed the legislature of that State by a majority of over three-fourths, and in it we believe the moral sentiment of the people is reflected. It is entitled to a fair trial and hearty support.

In Missouri, the Lower House, and in North Carolina both Houses, reported favorably on a similar bill. In Texas the Senate asserts, by a vote of twenty-three to seven, that prohibition is there needed. In Arkansas the popular branch favors it; and in Indiana and Pennsylvania the amendment goes to the people for ratification. Wisconsin's "anti-treating" bill, though severely criticized and just declared inoperative by the courts on account of an error in the text of the bill, was also a step in the right direction, as it struck at the root of a pernicious evil—the custom of social "treating." This widespread agitation means something. It means a growing belief that while "moral suasion" is good as far as it goes, it is not sufficient. It means that the strong arm of the law is to be stretched forth to rescue the actual or prospective drunkard from his downward course, and to punish those who tempt him to degredation and crime while threatening his family with disgrace and penury. The temperance question is to have more weight than it has yet had in national and State legislation and politics.

AN OBJECTIONABLE BILL.

THE Assembly Committee that came to this city to investigate oleomargarine, was supposed to be acting in the interests of the producers and consumers of genuine butter. True, before their arrival here there were some ugly rumors that the outcome would prove that the appointment of the Committee was a cunning advertising trick of the oleomargarine and suine men. A year had passed since that festive party of Congressional junketers had given the stuff a puff, and it was about time to obtain another from some other legislative set of gullible ninompoops. The early labors of the Committee appeared well intentioned and honest, and we gave them due credit therefor; but our suspicions were aroused on learning that they, too, ended their labors by investigating the good cheer spread bounteously before them by the shrewd oleomargarine dealers. There were two obvious ways in which the Committee could pay for their entertainment; first, by making a report favorable to the spurious products and, second, by so framing a bill, founded on the investigation, as to render its passage impossible. The revelations made forbade the former course, and, either foolishly or shrewdly, the latter has been adopted.

The bill prohibits the use of coloring matter in oleomargarine butter and suine cheese and the sale or use by any person whatsoever of any such product in which it has been employed. It requires that every cheese which is not made wholly from pure milk shall be stamped across the center, and that the words "Imitation Cheese" shall be sunk into it in the process of manufacture, and stenciled upon the opposite sides of each cheese and the top and bottom of the containing box. It imposes a fine of not less than $50 or more than $200 or imprisonment for not less than 10 or more than 20 days for every violation of this provision. It makes it obligatory on common councils of cities, boards of trustees of towns, etc., to impose and collect license fees from all manufacturing, selling or dealing in imitation butter or cheese, to wit, from each manufacturer, $3,000 each for every establishment; wholesale dealers, $1,000 for every store or stand; retailers $500 for every ditto, ditto. The license must be kept conspicuously posted under penalty of a fine of $100 for every package of the imitation product kept or imprisonment in the penitentiary or county jail, not exceeding six months. There are also some other provisions of the same Draconian severity.

Does any sensible, practical man believe for a moment that such special legislation can be secured; or that if by some legislative freak the bill is passed its provisions can be enforced? We yield to no one in the earnest desire that our dairy products should be released from underhand competition with spurious imitations and from the evil repute likely to be brought upon them by such imitative frauds, but we insist that the warmest friends of these concoctions could not have framed a bill more to their own interest than the one above outlined.

BREVITIES.

SHOULD we now call butter-crackers oleo-crackers?

INSTRUCTIONS as to the treatment of the RURAL seeds are repeated in this number on page 274.

WANTED—The date and place of meeting of all Agricultural Fairs and Stock Exhibitions in this country for 1881. Secretaries will confer a favor by forwarding the same to P. O Box 3318, New York City, at their earliest convenience.

SUPPOSE, according to the belief we have several times expressed, that it turns out that the Black-bearded Centennial and Golden Grains Wheats are the same—what then? It will prove rather queer actions on the part of certain people

IN the United States, in the year 1879, 220,000,000 gallons of petroleum were consumed. With the exception of cotton, petroleum is the most valuable export of this country China and the East Indies alone took nearly 25,000,000 gallons in 1878.

"GALVANIZED" butter is the fraud which our neighbors of the Dominion are putting in competition with our "tallow" butter. The stuff is mainly composed of the poorest kind of lard or fat of any sort, thinly plastered over with excellent butter. Next!

It may be well to remember that as each female potato beetle is capable of laying about 1,000 eggs (so say entomologists), it is a matter of considerable importance that those which have passed the Winter in the ground and appear in the Spring should be as nearly exterminated as possible.

WE desire to send premiums, as promised, to those whose names appeared in the list of mangel cultivators, in the RURAL of Feb. 26; but only a part have sent us their addresses. Will the following persons please do so at once? Jasper Barnes, T. Leete, W. L. Day, W. Moore, J. L. Scott, L. Singer, B. P. Moore, W. H. Harter.

MICHIGAN has a local law requiring the immediate cutting down and burning of peach trees that show the slightest signs of the yellows. Inasmuch as we are strong advocates of the slaughter of infected cattle to prevent the spread of pleuro-pneumonia by contagion, we also wish, on the same principle, that this Michigan law with regard to peaches should be made general, to help to stamp out the yellows.

THE Late Snowflake Potato has received extravagant praise from many quarters. That it is of handsome appearance; that it is in quality, shape and size all that can be desired in a potato may be conceded. Under favorable circumstances, however, it has at the Rural Farm produced so small a yield as not to pay for the expense of its cultivation. Of over 60 different kinds tested last year this yielded the least. The vines were luxuriant and grew on without a check during the entire season.

VERMONT has a stringent law regulating the sale of bogus butter under its proper name; and a conspiracy of rascals now affords an opportunity for its vigorous enforcement at St. Albans. In that lively town resides a butter buyer who ordered from Boston a supply of oleomargarine and sent it out among neighboring farmers of the same fraudulent type. By them it was promptly returned as Winter-made dairy butter. The original "fraud" then sold it to another butter dealer, by whom it was disposed of to grocers, who finally distributed it among their customers for the usual consideration for prime creamery product. Pity the whipping-post does not stand and the cat-o'-nine-tails flourish in the Green Mountain State!

A CHOICE decoration for a roomy hall or porch is found in some of the rare dwarf evergreens grown in easily handled pots or boxes. If there are three or four, their arrangement can be occasionally varied and so freshened. Such as will endure a touch of frost are best for such a risky exposure Their effect, as the first thing met on entering a house during our dreary Winters, is very agreeable. English ivy, on a wire support, and Skimmia Japonica (flowers and berries fine) endure shade well and prefer it. So does Euonymus radicans. Golden Euonymus prefers light and poor, dry soil. Laurestinus likes damp air. Orange, or myrtle, or myrtle-leafed dwarf orange may be added in moderate weather as a contrast of color and figure.

NOTICES TO OUR SUBSCRIBERS.—Our readers are requested to send us, by postal or otherwise, interesting facts appertaining to agriculture or horticulture, which occur in their practice or of which they become cognizant. Reports of the condition of crops, the best varieties of seeds, fruits, etc., the price of farm produce are also respectfully solicited for our "Everywhere" Department. Sketches of farm helps or contrivances of any kind intended to facilitate farm or horticultural work, will be thankfully received, and if of any general utility will be drawn, engraved and published. In so far as it is possible for us so to do, we shall answer all questions as best we may either by mail or under our own Querist Department.

SALICYLIC acid has been widely recommended for the preservation of food of any sort, and is no doubt largely used for that purpose in this country. It is, therefore, to be regretted that it and its derivatives have been found detrimental to health by the Committee of Public Hygiene of France, who have been conducting a series of experiments with regard to it. They decide that it is dangerous not only because of its direct effect upon the system, but also because it allows the introduction of other unwholesome substances into food. M. Tirard, Minister of Agriculture, has consequently interdicted its use and directed the food inspectors to see that commodities submitted to them are free from it. Inasmuch as it has, from time to time, been recommended in the RURAL for the preservation of canned fruits as well as of fresh meat, dairy products, etc, in hot weather, we we call the attention of our readers to the decision of the French scientists.

ANSWERS TO CORRESPONDENTS.

[Continued from page 273.]

Cotton-seed meal and Corn-meal as Part of a Ration for Milch Cows.

J. M. C., South Jefferson, N. Y., asks, how many pounds of cotton-seed or linseed meal are equal to 100 pounds of corn meal for the production of milk.

ANS.—The practical results of a food will depend upon the combination in which it is fed. In certain combinations corn-meal would prove more valuable than cotton-seed meal, perhaps so with clover hay; but in intelligent farming, cotton-seed meal will prove much the more valuable. By the German standard, one of cotton-seed meal is equivalent to over three of corn-meal. According to this standard the cotton seed would be slightly more valuable than the linseed meal. In combination with corn fodder, cotton-seed meal is found to be decidedly more valuable for milk than corn-meal. As a safe estimate it may be put down as at least 50 per cent. more valuable, and as the difference in the market price is always less, there should be no difficulty in deciding which to purchase. With good hay the difference would be less between the value of cotton-seed and corn meal for milk production; but if the value of the manure is included, it is probably greater. No absolute value in practice can be given until the accompanying food is named. In practice, food values rest with the skill of the feeder in making his daily rations. We would feed cotton-seed and corn-meal mixed added to a corn-fodder and hay ration. Corn meal is a valuable butter food.

Grub-in-the-Head in Sheep, etc.

W. S. H., Labelle, O, asks, 1, for a remedy for grub-in-the-head in sheep: 2, has the Rural Branching Sorghum any saccharine properties.

ANS.—1, This ailment is due to the presence of "bots" in the nasal sinuses or cavities. The "bots" are the larvæ of the sheep gad-fly—œstrus ovis. This fly is a slender, bee-like insect that lays its eggs in the sheep's nostrils in July, August and September. The grub when hatched from the egg crawls up the nostrils, and lodges in the sinuses of the head where it remains feeding upon the mucus secreted by the membranes until the following Spring. In entering the nostrils and leaving them the pests cause much irritation to the sheep. In the proper season the fly should be prevented from depositing its eggs in the sheep's nostrils, which may be done by smearing the nose with tar diluted with grease, butter, glycerine or molasses. This either deters the flies from laying their eggs or destroys the eggs. It would be well also, to plow a few furrows in the pasture, and the sheep will instinctively thrust their noses into the loose soil, and this seems to prevent the young grubs from crawling up the nostrils, as they cannot adhere to the dust, and fall to the ground. When the grubs are crawling down the nostrils early in Spring they may be easily dislodged by blowing tobacco smoke into the nose through a pipe. 2. Yes, but they have not been determined.

Miscellaneous.

J. B. K., West Paulet, Vermont, asks what do we think of northern or eastern Georgia for general farming, that is, for producing oats, corn, potatoes, butter, cheese, etc.

ANS.—We must decline to recommend any particular section for settlement. A man's success in any place depends so much on his own abilities and character and on so many other conditions with which we cannot possibly be acquainted that it would be imprudent in us to give advice in such matters, especially as there is a natural tendency, in case of failure, to lay the blame on some one else. Georgia, however, is certainly not a first-rate place either for dairying or raising Irish potatoes, though Sherman's boys found it a splendid place for sweet potatoes.

J. H. V., Moore's Flat, Cal, asks for some preventive or remedy for green lice on cabbages and turnips.

ANS.—We do not know of any practicable remedy for these pests upon cabbages and turnips. Our friend probably knows that tobacco water will kill them, but the application costs more than it is worth. Before cabbages begin to head Paris green and flour in the proportion of one to 40 may be safely applied. But we do not care to recommend this remedy, open as it is to many serious objections.

L. D., Belmont, Nova Scotia, asks, 1, which is the better device for setting milk—the Ferguson Bureau Creamery, the Cooley Creamery, or the Lincoln Channel Can.

ANS.—There is no choice in either of these methods of setting milk so far as the yield of cream or quality of the butter is concerned. It is simply a matter of convenience and of water and ice supply. The best plan is to investigate each method and then use one's own judgement.

H. H. W., Cohocton, N. Y., asks, 1, if we are personally acquainted with the merits of the Wooster Creamery made by M. D. Chapin, Poultney, Vt., and, 2, if the manufacturer is trustworthy.

ANS.—1, This creamery was on exhibition at the New York State Fair in 1880, and met with favorable commendation from critical judges. 2, So far as our business relations go with Mr. Chapin, we consider him entirely trustworthy.

W. S. H., Oxford, Mich., asks where can Golden Grains or Palestine Mammoth Wheat be obtained.

ANS.—Seed may be purchased of D. M. Ferry & Co., of Detroit, Mich. or J. J. H. Gregory, Marblehead, Mass. We do not advise you to sow it largely.

N. Q. R., Gustavus, Ohio, asks where cions of the Primate Apple can be obtained, and the price per dozen.

ANS.—We find it in the catalogue of Ellwanger and Barry, Rochester, N. Y. Price $2.50 per dozen.

H. L., R. Sub Rosa, Ark., asks whether a specified Boston Tea firm is trustworthy.

ANS.—Yes. Why not send your name in full? Such queries we prefer to answer by mail.

W. H., Thompson Station., Tenn., inquires about the cultivation, etc., of mangel-wurzels

ANS.—See article on this subject under "Field Crops."

J. K., Golconda, Ill., sends flower for name

ANS.—Bird's-foot Violet—Viola pedata.

RURAL BRIEFLETS.

GRAPE-VINE cuttings may now be planted. Let them include two eyes and be from eight inches to one foot long. Cut just beneath the lower eye and an inch above the upper eye. Place them in mellow soil in a slanting position, just so that the upper end is left two inches above the surface soil. *Pack* the *earth closely* about them and cover with straw or litter until frosts are over. . . . . .

GOOSEBERRY and currant cuttings should be treated in the same way. Six inches are long enough for the cuttings. Set them where they are to grow. They will bear the third year. . . . .

THE editor of the Fruit Recorder says:—

What is J. T. Lovett trying to bring to life that old, worthless, defunct sort, the "Crystal White Blackberry," for?

It hasn't a single favorable quality or characteristic. Plant tender, berry bitter and small, and a poor yielder. See what he says in the RURAL NEW-YORKER, and as for the specimen berry there represented, we have grown them years, and have yet to see one two thirds as large as that therein represented. "*Let it rest.*"

This is scarcely just to Mr. Lovett, who wrote what he knew of this berry at our request. On page 19 of the RURAL Mr. Purdy may see a cluster of the berries of life-size, drawn in our office from a branch sent by a friend, which will prove that the *single* specimen he refers to is no larger than the largest of those. Mr. Lovett concludes his remarks as follows:—"While it (Crystal White Blackberry) is strikingly beautiful in fruit and intensely interesting, it will ever be valued more as a curiosity than anything else." . . . . . .

A READER sends us the following:—"Naturally I am interested in the question of ensilage; I cannot help it. I have read somewhat of all that is written, and yet I have not seen the Supreme Court sitting on that case yet. My impression of a Supreme Court is a good herd of cows telling the story through a careful, pains-taking, intelligent observer, and a candid judge whose opinion cannot be bought or sold. I am interested in settling every question connected with agriculture as far as possible, and not the least of the many unsettled questions is that of ensilage." . . . . . .

IT is sometimes said that it is not well to tell all one knows. In this regard the RURAL is perhaps open to criticism, for we are disposed to think that it is always ready to tell *all* it knows, and a captious critic might add, "and more." But we like the policy the longer we follow it, and believe that it tends to inspire the confidence of our readers; and in the management of this journal there is nothing we prize more. It may not be modest for us to publish the following from a late number of the Vermont Watchman. It may be the impulse of vanity; but it speaks the truth, and that sort of modesty which is incompatible with truth is, as a matter of fact, a silly affectation and an incipient fraud. Here's the article, and our thanks are due to the writer thereof:—

"The RURAL NEW-YORKER is managed on too liberal principles for some people to understand. The present publisher, having a fortune behind him and great zeal for the progress of intelligent farming and horticulture, has doubled the value of his paper by employing and liberally paying the best writers, draughtsmen and engravers he can find. He has reduced the subscription price from $2 50 to $2 a year. He makes annually gratuitous distributions of rare and promising new varieties of seeds and plants (a work the United States Department of Agriculture assumes to do, but does not do so well). He distinctly announces that these distributions are in no sense premiums, but voluntary gifts, made at his own option and in his own way and time. This is repeated in nearly every issue of the paper. Yet he finds among his subscribers those who insist on these presents being sent as soon as they subscribe, saying that they 'subscribed to get the seeds.' We don't wonder that the editor feels affronted, says he doesn't want such people's subscriptions, and advises them to wait two or three years until his choice novelties are for sale by the seedsmen and nurserymen. These presents are valuable, but the subscriber who has the bad taste to say to the giver that he esteems them above his splendid weekly, deserves to be snubbed." . . . . . .

BOOKS, CATALOGUES, ETC.

EVERETT & GLEASON, 34 South Market St., Boston, Mass. A very neat and comprehensive catalogue and retail price-list of vegetable and flower seeds, herb, tree and grass seeds, seed grain, flower roots, etc. We take pleasure in wishing this new firm success. Mr. Gleason has had 17 years experience in the seed business, and was one of the firm of R. H. Allen & Co., of this city until the present firm was formed. Mr. Everett was recently of the firm of Schlegel, Everett & Co., of Boston, and has had 37 years' experience. They are both, we believe, enterprising, capable, trustworthy men. The catalogues will be sent without charge to those of our readers who apply to them.

PROCEEDINGS of the New Jersey State Horticultural Society at its sixth annual meeting held at Newark, Feb. 10th and 11th, 1881. E. Williams, Recording Secretary, Montclair, N. J; J. T. Lovett, Corresponding Secretary, Little Silver, Mon. Co., New Jersey.

GEORGE SUCH, South Amboy, N. J. Catalogue of bedding plants, and of French Hybrid Gladiolus. Catalogue of rare plants for the hothouse and greenhouse including palms, orchids, ferns, etc., may be had on application.

PROCEEDINGS of the American Pomological Society, Seventeeth Session held in Rochester, N. Y., Sept. 17th, 18th and 19th, 1879. Robert Manning, Sec'y, Salem, Mass.

EIGHTH Annual Report of the New Jersey State Board of Agriculture. P. T. Quinn, Secretary, Newark, New Jersey.

PROCEEDINGS of the Western New York Horticultural Society of the twenty-sixth annual meeting held at Rochester, January 26th and 27th, 1881. P. C. Reynolds, Rochester, Secretary.

Literary Miscellany.

[Published by request.]

DRIVING HOME THE COWS.

Out of the clover and the blue-eyed grass
He turned them into the river lane;
One after another he let them pass,
And fastened the meadow bars again.

Under the willows and over the hills,
He patiently followed their sober pace;
The merry whistle for once was still,
And something shadowed the sunny face.

Only a boy! and his father had said
He never would let his youngest go:
Two already were lying dead,
Under the feet of the trampling foe.

But after the evening work was done,
And the frogs were loud in the meadow swamp,
Over his shoulder he slung his gun
And stealthily followed the foot-path damp;

Across the clover and through the wheat,
With resolute heart and purpose grim,
Though cold was the dew on the hurrying feet,
And the blind bats' flitting startled him.

Thrice since then had the lane been white,
And the orchard sweet with apple bloom;
And now when the cows came back at night,
The feeble father drove them home.

For news had come to the lonely farm
That three were lying where two had lain;
And the old man's tremulous, palsied arm
Could never lean on a son's again.

The Summer day grew cool and late;
He went for the cows when the work was done.
But down the lane, as he opened the gate,
He saw them coming, one by one:

Brindle, Ebony, Speckle and Bess,
Shaking their horns in the evening wind;
Cropping the buttercups out of the grass—
But who was it following close behind?

Loosely swinging in the idle air
The empty sleeve of army blue;
And worn and pale, from the crisping hair,
Looked out a face that the father knew.

For Southern prisons will sometimes yawn,
And yield their dead to life again;
And the day that comes with a cloudy dawn
In golden glory at last may wane.

The great tears sprang to their meeting eyes.
For the heart must speak when the lips are dumb;
And under the silent evening skies
Together they followed the cattle home.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 262.)

"These objections to the system" replied Mr. Glinden "presented some complicated difficulties in the early stages of its operation, but they have almost completely lost their force now. Inventions and discoveries, formerly, indeed, did produce complete revolutions in some branches of trade, so that there had to be much changing about from one trade to another among our people in order to equalize labor and its reward. The object of endeavor then, was to reduce labor by the aid of machinery so that the individual might have the greater portion of his time for mental improvement and the pleasures of social intercourse. It was found that four hours a day devoted by each citizen to his particular occupation was sufficient for the requirements of society, and necessary for the physical well being of the individual, and when this limit was reached in the different branches of trade, the stimulus to invention and discovery in the useful arts was withdrawn and this disturbing element has had little influence on the business of the country for four or five hundred years.

"By your second objection I suppose you refer to the fact that there may be some in the community, who if a living were assured to them, would, perhaps throw upon their family or their neighbors the burden of the olden time, we would indeed meet some difficulties in this objection, you must bear in mind, however, that the standard of morality is as high among us a single citizen who would not scorn to shirk any duty which he owed to his family or society.

"As to the complicated machinery of government necessary to preserve this system in its integrity, I may say, this objection is met by what I have just said in regard to the standard of morality among our people. In fact our government scarcely deserves the name of government, for the intelligence and morality of our people so direct and control their conduct that few laws are required, and these have only to be known to be obeyed. It is the views of men, which result from the unrestrained activity of their selfish and animal natures which require law. In a community where the moral and intellectual powers of the people are so habitually active that these inferior feelings are kept under control every individual is a law unto himself, and neither statues nor the power to enforce them is required. Of what use would be laws against murder among a people where murder is unknown and what need is there of laws against theft when every individual is honest or of laws against violence or fraud and deception of any kind where every citizen is the soul of honor and integrity.

"Wipe out from a nations statute books the laws which relate to these subjects, and what is there left? The mere skeleton of a constitution which prescribes the form of government, its offices and their duties.

'Complicated machinery,' as a term applied to government was very expressive and full of meaning in the olden time, but it has lost its appropropriateness now. Then the law-makers were law-breakers no less than the great mass of the people for whom the laws were made, and those who executed the law had to be hedged about and governed by the law even with greater vigilance than the people themselves. But among us no security is exacted from a public officer for the faithful discharge of his duties. And that complicated system of checks and balances which formerly made every officer of the goverment subject to the watchful scrutiny of some other officer has long since fallen into disuse. In fact that old question, whether that government which governs most or least governs best, has long since been solved in our experience, by the elevation of the moral and intellectual standard of our people, so that the wisdom and virtue of each citizen shall lead him to do right of his own free will.

"But even if any of our citizens should desire to accumulate wealth beyond the needs of life, such as they are regarded among us, it would be impossible for him to do so, because our habits and modes of life are founded upon such stable principles that demand, supply and value remain the same from generation to generation.

"I imagine the people of each ward of our city united by a social compact by which they agree to patronize only the tradesmen and manufacturers of their ward, and that the different occupations are skillfully divided that there is enough of business for each to give the same net income to all. Thus if it has been found by experience that ten grocers can maintain themselves in the ward by their business, in a style which corresponds with that of the people in general, the trade of the ward in their particular line is equally divided among them. If there are eight tailors, one-eighth of the population patronize each. If there are six boot-makers, each receives a sixth of the business, and so of all other occupations.

"As there are no fluctuations in our population, few changes of fashion, and great uniformity in our habits and modes of life, the tailor knows exactly how many suits of clothes he will have to make to supply his customers, the hatter how many hats, the boot-maker how many boots, the cloth manufacturer how much cloth, and even the farmer knows how much land to put under each crop so as to insure a ready sale for his produce, while the prices are so arranged that a uniform income is assured to every one. Extend this system so that it shall embrace the inhabitants of the country in conjunction with those of their neighboring city and you will have the explanation of your query. You will be also able to comprehend one important reason for that uniformity of social condition which is the great source of our happiness as a people."

"But, sir," said I, "are there no natural causes which sometimes completely subvert the regularity of this grand system of supply and demand?" A very wet or a very dry season even in the sparsely-settled countries of the olden time sometimes produced a famine, and what must be the effect of such seasons on a country like this, which has so nearly reached the limit of its productive capacity that it could not possibly sustain its inhabitants if they were increased by the addition of but one member to each family?"

"You must remember, my dear sir," replied Mr. Glinden, "that many things which were matters of ignorance and chance to the people of the olden time have become matters of knowledge and certainty to us. The vicissitudes of storm and sunshine, cold and heat are controlled by laws as immutable as those which govern the other departments of creation. Our ancestors did not know these laws and of course could not modify their conduct so as to make it harmonize with them. They sowed their seed in the Spring time, but could not tell whether they should reap twenty, thirty, fifty or a hundred fold or whether their labors should result in total failure.

"Now our knowledge gives us such a complete mastery over our soil and the causes which modify its productiveness that every farmer is as well assured of his regular income as the hat-maker or the tailor. There are no rots, blights, bugs, worms and beetles to destroy our crops. Those are only the parasites of imperfect modes of cultivation. While our knowledge of the laws which govern climatic changes is so complete that storm and sunshine are sufficiently under our control to insure uniform results to the tiller of the soil."

"What!" I exclaimed, "puny man control the elements of heaven!"

"Sufficient for our purpose," replied Mr. Glinden. "There is not a cloud which overshadows the sun, or a drop of rain which falls to the earth, but is governed in all its movements by uniform and immutable laws, which depend upon the condition of things on the earth and their relation to the atmosphere. Our progress in science has made us familiar with the causes which produce atmospheric changes, and enabled us to supply that condition of things which is favorable to such an alternation of storm and sunshine as will best promote the growth of the products of the soil."

"This is, indeed, wonderful!" I exclaimed. "What a blessing it would be to my country if I could only carry this knowledge back to it. And if I could introduce among my countrymen your marvelous system of supply and demand so that a good living might be assured to every one, I would doubtless have a monument erected to my memory as one of the greatest benefactors of my race.

"There are some serious drawbacks, however, to this system which naturally present themselves to my mind. And, first, are there not inventions and discoveries continually being made which have a tendency to increase production and diminish the hours of labor in many branches of trade, and thus cause great inequality in the amount of effort which your citizens of different trades must put forth to gain a livelihood? And has this system not a tendency to produce inactivity and lessen enterprise and thus throw upon the shoulders of some of your citizens a greater burden than they should justly bear? And surely a complicated machinery of government must be required to preserve this system in such a condition

that the rights of none shall be infringed, and each citizen's sense of justice shall be fully satisfied.

To be continued.

BRIC-A-BRAC.

SOME of the Chinese similes are said to be as pointed as they are sarcastic. They call a blustering, harmless fellow "a paper tiger." A man who places too high a valuation upon himself they compare to "a rat falling into a scale and weighing itself." A hunchback making a bow is what they call overdoing the thing. A spendthrift they compare to "a rocket," which goes off all at once, and a man who expends his charity on remote objects, neglecting his own family, is said to "hang up a lantern on a pole, which is seen afar, but gives no light below."—Gold Hill News.

The sexton's sweetheart's name was Nell
And she was called the village belle:
When hope had made the sexton bold,
One night his love for Nell he toll'd,
While to his neck she fondly clung,
And lovingly her hand he wrung;
Her sentiment with his just chimed,
And his appeal she thought well-timed,
And having toll'd his love so well,
She whispered he might ring the belle.
—Somerville Journal.

MARK TWAIN furnishes the following unique recipe for making a New England pie. To make this excellent breakfast dish, proceed as follows: Take a sufficiency of water and a sufficiency of flour, and construct a bullet-proof dough. Work this into the form of a disk, with the edges turned up some three-fourths of an inch. Toughen and kiln dry it a couple of days in a mild but unvarying temperature. Construct a cover for this redoubt in the same way and of the same material. Fill with stewed dried apples; aggravate with cloves, lemon peel and slabs of citron; add two portions of New Orleans sugar; then solder on the lid and set in a safe place till it petrifies. Serve cold at breakfast and invite your enemy.

CAPTAIN CORN.

Captain Corn in the garden,
Straight and strong and tall,
No matter how high his neighbors grow,
He overtops them all.
With silken plume and bright green cloak,
He really cuts a dash;
But when he marries Lima Bean,
He'll loose his rank—I think it's mean—
And be plain Succo Tash.

CURIOUS EPITAPHS.

Sometimes a pun or play on the name is introduced; such as in the epitaph on John White:

"Here lies John, a shining light,
Whose name, life, actions, all were White."

The following was rather epigrammatic than epitaphic in regard to the Rev. John Chest:

"Beneath this spot lies buried,
One Chest within another,
The outer chest was all that's good;
Who says so of the other?"

William Wilton, buried in Lambeth, certainly did not write the epitaph, which bears relation to him:

"Here lyeth W. W.,
Who never more will trouble you, trouble you."

Nor, we may safely assert, did Owen Moore himself pen the following:

"Owen Moore is gone away,
"Owin' more than he could pay."

More likely to be genuine are those epitaphs which involve a bit of bad logic, syntax, or grammar in their composition. In a graveyard at Montrose is said to be the following:

"Here lies the body of George
Young and all their posterity
For fifty years backwards.

And in Wrexham church-yard as follows:

"Here lies five babies and children dear,
Three at Oswestry, and two here."

Akin to this logical blunderlog is:

"Here lies the remains of
Thomas Milsolm, who died in
Philadelphia, March, 1752;
Had he lived he would have
Been buried here.

And another at Nettleben, in Oxfordshire:

"Here lies father and mother and sister and I;
We all died within the space of one short year,
We all be buried in Wimble, except I;
And I be buried here."

RUSKIN ON THE CLASSICS.—Books being "up" just now, I hear that the great Mr. Ruskin has been weeding out his library, and some of his works have brought absurdly high prices at a recent auction, not for the rarity and excellence of the books, but because they belonged to Ruskin. Such is the folly of the age. But, as usual, the money went into the pocket of the book dealer, and by a very cunning little device. Mr. Ruskin was asked if he wouldn't just write a line on the fly-leaf of the rejected volumes with his initials. So, in his innocent and frank way, he wrote on his "Demosthenes's Orations;" "Old school trash; never read a line of it. J. R." And on his "Pliny;" "Poor stuff, not worth the paper it's printed on," and so on. These books, with their quaint comments, sold for twenty times their real value.—London Truth.

The New England senators, a Washington correspondent says, would not average up over $150,000 apiece. Hale represents the most money, and Blaine perhaps next, nor can Rollins be a poor man. New England and the South send to the upper chamber men poorer in worldly wealth than either the Middle States, the West or the Far West of the Pacific coast.

For Women.

CONDUCTED BY MISS RAY CLARK.

SEE SPECIAL NOTICE TO THE SUBSCRIBERS OF THE RURAL NEW-YORKER on the editorial page.

CONCERNING THE BEHAVIOR OF GIRLS TOWARD YOUNG MEN.

MARY WAGER-FISHER.

MANY girls, during a season of gayety, as has been the past winter with its abundant sleighing which always develops social festivities, make the acquaintance—or fancy that they do—of "new" young men, with whom possibly they have "fallen in love," and expect to marry. To "fall in love" need not necessarily be an extremely serious matter, but to marry, *is*. As Mr. Talmadge very pithily put it, "marriage is to a young man the most tremendous thing between the cradle and the grave." If it be "tremendous" to a man, it is super-tremendous to a woman. Moreover, it is one of those arrangements, the force and importance of which, no one, before marriage can fully realize. It requires at least three or four years of married life, for either a man or a woman to understand its full significance and for some persons, even a longer time. The wedding-frock, the wedding, the honeymoon are very small account in comparison with what lies in the future. I believe that it is generally conceded that when a girl is bent on marrying a certain person that it is a waste of words to attempt to dissuade her otherwise. There may be some use, however, in attempting to persuade her to find out who it is, whom she is going to marry.

I have two cases in my mind; young women who married men with whom they were so very much in love that they would "die" if they had to live without them and who learned after a little while that the men had already been married, and their wives were still alive and well. One of these cases was a peculiarly sad one. The young lady lived with her parents in a university town in central New York, and the man she married, first saw her in the street, from the piazza of the hotel where he was stopping, inquired who she was, where she lived and learned various particulars about her family. Among other things, he learned that she had relatives living in an adjoining state. His first step was to forge a letter of introduction from one of these distant relatives, and then he called upon the young lady with his credentials. Of course, she and her parents thought it must be all right, and at the time gave the matter little thought. However, as the young man's attentions became very marked and the young people announced that they were "engaged," the parents thought it worth while to inquire into the young man's antecedents, etc, so they dispatched a letter to those distant relatives who returned answer that they had given no such person a letter of introduction, and the matter being pursued, it was found out that the fellow was from a certain town in New England where his wife was meantime living.

"Oh," exclaimed the mother with a deep sigh, "how thankful we should be that we have learned this before it was too late." "Ah, mother, it *is too late*," shrieked the stricken girl; "we are already married."—they had been secretly married a fortnight before, at the continued solicitation of the young man who was "so madly in love"—and the girl who, in her foolish fondness, thought her lover the most perfect person in the world, weakly yielded to his persuasions, and they were married by a country parson upon one of their many rural rides. The young man nearly escaped the officers, who were placed upon his track by the outraged father of the girl, but finally he was captured, tried for bigamy and sentenced to five years imprisonment in the Auburn State Prison. The affair killed the girl. On the day before the convict was to be taken to prison, she begged of her father as a dying bequest to be allowed to see the man she had married. Her request was granted and the sheriff brought him to her bedside, where she lay with the touch of death upon her. She stretched out her thin arms toward him, beseeching him in words that melted every one about her to tears, to promise her that he would reform and lead a better life. The fellow simply sneered at her prayers and when asked by the sheriff if he had no pity for his victim, he lightly laughed and said that girls who "took up with any fellow that happened along weren't worth much." On the following day she died.

As the bigamist was being escorted to Auburn there was one other person who should have gone along, manacled with him, for ten years' imprisonment, and that was the country parson who had married them.

The villain uttered a grave truth when he said that a girl who takes up with any fellow that happens along is not worth much. It is precisely what any girl who marries without knowing to whom it is that she intrusts her happiness may rightly label herself with "not worth much." And this leads me to what I had in mind to say at the outset, that very many girls now-a-days do not seem to put a very high valuation upon themselves. Only a few years ago young men felt obliged to behave themselves with outward decorum, at least, when in the presence of young women. They never presumed to make use of tobacco in their society. But now I see them smoking cigars, sitting or standing with hat on head, or lounging with crossed legs mounted comfortably high in the air in the immediate presence of young women whom they are supposed to respect, and all this with no protest from the young women themselves.

Women are unquestionably the conservators of society, and there is no moral force so strong to restrain vice of any description as the decided and emphatic protest of women against it. The man does not live who does not respect and honor a woman the more for such protest, and respects that woman most who puts him upon his best behavior, and develops within him best energies. If the young woman, who when asked if tobacco smoke is offensive to her, replies, "Oh, no, not at all!" thinks that her agreeable reply raises her in the esteem of the smoker, she is entirely mistaken. There are women who do *not* dislike fresh cigar smoke, at least they say so. But no woman likes stale smoke—the smell of tobacco six hours old, or the smell of a man's breath that smokes or chews. They are all disgusting and abominable, and nobody knows it better than do the men addicted to the vice, and who never fail to deplore seeing their sons form the habit. If a man uses tobacco before marriage with as much nicety as is possible, he will be very likely to indulge in it without the nicety in his own home, and the wife will have stale smoke and a disgusting breath to catch whiffs of, *ad infinitum*.

Some one has said, "Of course, marry for love; but when you are about to fall in love, see that it is with somebody who has money." Money, honestly earned, is never an objectionable feature in a matrimonial alliance, but what is of far more consequence, and far greater importance (as the other may be of no importance, whatever) is to marry a man of good family. Girls often say, "Oh, but I'm not marrying his family." But they do, in a way, nevertheless. One can't get away from early habits and early associations, and the influences under which the ordinary young man has grown up, fashions him for all time. A family may be very poor, and still be refined and gentle, but no amount of money or position can cover the vulgarity of low birth and low breeding, and no amount of love or fondness can long abide it with happiness.

Moreover, in marrying, a girl should bear in mind that she should consider the welfare of a probable posterity, as well as her own, and before accepting a man for her husband she should ask herself whether in all probability he will make a good father, as well as a good husband, and whether he is free or not from such taint in the blood as develops into scrofula, insanity or other painful and ruinous maladies. The sort of flimsy "sticks" that some girls accept for husbands, and *vice versa*, is amazing, and if a girl cannot marry, and satisfy her head as well as her heart, she had far better remain unwedded, which is both honorable and respectable, while to be married to an inferior or unworthy person, is continual degradation.

WINTER.

BERTHA A. WINKLER.

MATTER-OF-FACT people, those heavy stoics of the imagination who compose the world's solidity and maintain her steady equipoise on the other side of the soaring visionaries, tell us, in so many plain words, as though language was not used to adorn, that thou art nothing more than a quarter of time's cycle subject to northern winds and change of temperature. But eyes veiled in fancy's softer, richer hue, see thee more grandly and not less real. Art thou indeed only one-fourth of a year? A chill, empty space of time called Winter, nothing more? No, eternal monarch of the North, there is a dreadful grandeur in thy stern majesty; thy icy sway compels a fearful tribute of sacrifices and human woes when once a year thy freezing elements march beyond the boundaries of their icy home for tributary lands. Thy coming, thy presence and thy reign are imperious subjects of the poets feeble praise and destitute humanity's loudest wail. The fortune-favored may ignore thy power, secure in comfortable housings; thy piercing glance means only woe to those of scanty raiment.

Tender, thoughtful Nature, at the first approach of thy northern windy heralds, removed earth's green garb and wrapped her all in somber gray that thou mightst not find aught attractive or to blight. I wonder not that thou wax fiercer drawing nigh; thy searching eye met barren desolation far and wide, and thou hast acknowledged the cheerless welcome with the quick spreading of thy cold white mantle of charity in mock, bitter courtesy. Then were thy warring elements marshalled to the front, shrieking furies freezing and merciless shooting through the air, palsying all but the warm heart; storms, tempests carrying rude devastation in their eyes, playing with firm-rooted defiance on land, playing with iron-clad dwellings on sea; playing the game of destruction with all but the ocean's wild main, he, thy more than compeer in the hights of thy power, being conquered of none, thy courteous host in thy exiles tour, will open his watery arms to receive thy finally scattered and vanishing forces.

Thy fierce reign is drawing to its close. Nature, weary of thy icy breath and resenting the cold presumption which dared extend thy blighting sceptre over Southern climes, has welcomed to her bosom a queen gentle, reviving, whose coming stirs a life which thou never could'st call forth; in whose benign smile flourish beauties strange to thee. She will compel thee to yield thy temporary throne to her, yet not sternly. Thy conqueror is beautiful and gentle; she will melt thy tyrant heart and thou wilt depart, not like the storm-king thou hast been in the meridian of thy power, fiercely contesting every inch of thy possessions, but, like a huge frozen colossus, helpless of thine own severity, till her breath move thee to flee in the abject weakness of liquid grief towards the ocean's sources.

There is a strange charm in contemplation of thy breaking power, the fading of thy brilliant grandeur, and the slow dissolving of thy icy legions, who, mingling with the waters adding to the ocean's wealth, will never more unite. Like all things transitory, thou must hence with little else than name; like all great tyrants of thy scattered force, forsaken, we exultantly wait thee a long adieu! Roll on, ye frozen remnants of his memorable reign; thy tyrant-master is too weak to hold thee 'gainst the gentle force of Spring, and Earth's bosom heaves thee off for precious, fruitful weight! Roll on, ye icy legions, to the sea! Seek quarter in its annihilating waves! The queen of beauty, mildness, hope of plenty, has begun her reign.

CLOTHING.

[MARY BURROUGHS gave a description of clothing which, if memory fails not, is a counterpart of the following—however the information is good enough to bear repeating.]

The clothing described and recommended by Mary Wager-Fisher, is an improvement over the dress of some women; but I think it can be improved upon. It is not necessary to have more than one band at the most, while the described dress, contained three. All unnecessary thickness should be avoided about the hips and waist. I hope that the "lady readers of the RURAL," will think twice or more, before making a change for the Summer or Winter.

Here is my ideal dress for Winter, which I think will commend itself to every thinking woman. I would have the first garment, a white flannel chemiloon, reaching from the neck to the ancles, with an opening down the front and a necessary opening in the back. Over this I would have a colored chemiloon reaching a little below the knees. At the waist of this chemiloon I would sew six buttons, two on the back, one under the sleeves and two on the front. Next would be a skirt with a loose band containing button holes to correspond with the buttons on the chemiloon. Now comes the dress with skirt and basque attached in this way. The front and sides of skirt should extend about a finger up under the basque, and should just reach around to the side pieces of the back of the basque. These breadths are to be sewed firmly to the lining of basque. The back breadth of the skirt should be of the usual length, and extend up under the back part of the basque, and sewed to the seams of the basque after a band has been added. The dress being in one piece can be easily put on, and is as comfortable as a fitted wrapper, while it is a skirt, over-skirt and basque. I make my dresses this way, and I like it better than any other of the many ways that I have tried.

The whole dress contains but one band, excepting the little one on the back of dress. This one band can be avoided by attaching the under skirt to a sleeveless waist: but I do not think that the extra waist would be needed with the two flannel under garments. I am just selfish enough to say that I cannot see where this plan of dress can be improved upon. Some may prefer canton flannel for one of the chemiloons, or Shakers under the colored, or even canton over flannel; but no matter, every one must be their own judge as to the quality and kind of material used to secure the necessary protection. It is the *plan* that I wish to introduce. MRS. M—C.

FASHIONS.

The reign of handsome plain silks is coming again this Spring, we are glad to say. Faille itself—good, simple faille—will be once more employed for a great many toilets, but the plain tissues in the gros-grains, ribbed coteline, and Victoria styles will be most fashionable.

Black silk is very fashionable for dinner and evening-dresses. Black is generally becoming to both old and young, and it sets off jewels to great advantage. Gros-grains is combined this Spring with black brocaded silks and satins, black beaded lace, and embroidery.

SPRING dresses are made of fancy woolen materials, both plain and figured, combined much in the same way as those of the Winter in thicker fabrics. Such costumes require but little trimming. Some have the skirt of figured material, and the second skirt cut princess fashion all in one with the bodice; it is self-colored, of the shade prevailing in the figured fabric; shades of gray and prune are preferred. Pipings of satin are often added to give a certain degree of quiet elegance to the costume; these pipings should not be too bright, but of such tints of old-gold, steel-gray, nut-brown, dahlia, violet, or dark heliotrope, and are a very nice finish to simple woolen costumes. Young ladies add to such dresses a semi-long paletot of the same material, and trimmed to correspond; but matrons, who do not care to wear their handsome silk mantles with such dresses put on light shawls, either neutral-tinted plaids upon white grounds or self-colored. The light shawl is most useful at this season of the year for morning walks, shopping, and so on.

A pretty dress of prune ribbed silk is trimmed round the bottom with an extremely fine flutting. Above this comes a very deep flounce, put on in thick, separate pleats, then a drapery across the front. A tunic is pleated over the hips, then forms a puffed tournure at the back; the fronts of the tunic are edged with an embroidery pattern of irridescent beads. High-necked bodice, with long basques in front and at the back, slanted off over the hips; this bodice is trimmed with bead embroidery similar to that on the tunic.

CORRESPONDENT'S CORNER.

EDITORS are supposed to know everything, therefore I presume to ask a few questions, from Mary Wager-Fisher's article, headed "A Question," which appeared in the RURAL April 2, page 231. 1. Where does she live, and did she ever visit the rural districts? 2, Was she ever nurse in the army hospital, and did she ever feed any of the patients soup from a spoon? 3, Did she ever eat mush and milk or bean soup? In fact did she ever put on a clean calico apron, roll up her sleeves to her elbows and wash dishes, or get down on her knees and scrub the floor? That would give her an appetite, sure. A. B.

[We publish the above, presuming it to be significant to the writer, and perhaps to the person in question.—R. C.]

A subscriber asks, What is Cheviote cloth?

ANS.—It is an all-wool cloth having the appearance of flannel, somewhat rough on the face, the twill being more distinct on the under side. R. C.

Will you please tell us women readers that live in the country, away from many things we would like to get, something about Honey Comb Spirals, and where they can be obtained. W. C. S.

ANS.—Honey Comb Spirals are delicate shavings of wood in many colors. They are used for making boxes, baskets, frames and other articles useful or ornamental. Burt & Prentice of 26 Beekman Street, New York, will furnish a package of 250 spirals with wire and instructions for 21c.

We will answer inquiry of poem in a later issue if possible to do so. R. C.

Hop Bitters cures by removing the cause of sickness and restoring vitality.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

TUESDAY. There was a church social last night a few miles off, and as I had been appointed to recite, and Nora with Karen and Celia were part of the musical programme, it became a question how we should get along without Janet. But Lonsdale offered his services as nurse, with papa to look after the house, and as I was sure baby would sleep all of the evening I consented to go without any grave misgivings. And the result was all I could expect, for everything was peaceful on our return, and I was glad to find a boy could be a safe housekeeper. It is a great mistake not to teach boys as well as girls to help in the kitchen and to take it as a part of his duties to pare potatoes, clean knives and help with the dishes, and in the long Winter evenings to knit and mend for himself. It is a part of his education that will be very useful to him in after life. But you must begin *young* before other habits are formed, or it may not be possible to accustom him to the work as a matter of course. I do not think any action of a young lad can lower him more in my opinion in domestic matters than the act of giving his boots to his sister to clean, as is the case in some families. Of course, it is the parents' fault in the first place; but it shows a lack of common courtesy on the part of any young man to expect this work to be so done that he is fully as able to attend to as a young girl.

In using the last of our celery lately, we made a firm resolve to plant more of this pleasant, refreshing vegetable. For those who like it, nothing is better in April days than a relish of its crisp, tender stalks for tea, before radishes are plentiful. As a corrective to the system, now that fruit is getting scarce, I think it is valuable. I was saying to-day during dessert, that I hoped some day before long there would be found a grape that will keep, and a way of keeping it—to give us more variety in our Winter fruits. I have tried several plans, but the trouble is that the berries drop off the bunches, and defy all the recipes. Neither do they can successfully, though as a jelly the Concord is quite a treat at this season of the year. How glad one feels as the days lengthen for a good supply of preserves and jelly. It seems in country places the worst season for pies and puddings, unless one has plenty of eggs. A full supply of canned fruit is wholesome and profitable, something the housekeeper can appreciate after her hot summer's work. She will find it useful "after many days," and it is a comfort to think that there is some compensation for a housekeeper's toil, for I do not wonder that at times one feels inclined to be weary of well doing. "If things would only stay done for a while," I said, as I washed Alex's face for the fourth time, but things have to be done over and over again until the very routine grows wearisome. I do not know of anything that is a more grateful change in a woman's life, than that brought by the seasons—if she can give her mind to gardening. The changing flowers that come and go, the interest one can feel in their habits and duration, with the care of cultivation is a good panacea for care and discontent, and brings one nearer to Nature than any other occupation can do.

BREAD HEAVY IN STREAKS.

IN setting bread to rise, if the bottom of the pan is too cool and the atmosphere at the top of the loaf too hot, there will be a heavy blue streak at the bottom of the loaf and great unsightly bubbles at the top after it comes from the oven. To avoid this, set the pan on warm bricks, cover with a cloth, and put it in the oven just before it is light enough. The best bread is well kneaded to create small, even and regular bubbles, as there is a more perfect "rise," the evaporation is much less, and the bread when brought to the table is more moist. No one likes coarse-looking bread, distended with large bubbles and as dry as a chip. CHIEF COOK.

ROBBIN'S WASHER.

IS NOT the statement of Mrs. M. H. a little far-fetched regarding the Robbin's Washer? That *half a cord of wood* certainly goes beyond anything I have seen, though doing the washing for a dozen in a family. It would not do to depend *wholly* on the washer, but if the rules are observed it does not take long for a thick, full, constant stream of water to act upon the clothes and help the cleansing. For flannels, bed clothes and coarse, rough clothes it is admirable and labor-saving. I was sorry to see such a sweeping assertion. The greatest fault will be if the outer coat wears off, as was mentioned a week or two ago. Ours, however, is as good as new; but we do not expect it to do *all* the work. ANNIE L. JACK.

Trichinosis; The Cooking of Pork.

The following directions for well cooking the flesh of pigs we take from a circular published by the corporation of Birkenhead, England, during the recent trichinosis scare.

"Hams, sausages, and like articles, whether or not they have been smoked or salted, should never be eaten in the raw state.

To be efficient for the required purpose, the cooking of pork, or hams, and other articles should be prolonged for about half as much time again as is customary. The smallest joint should be cooked for not less than an hour, and whatever be the size of the joint it should not have less than half an hour's cooking for each pound of meat. No part of a joint that is seen to have an underdone portion in it should be eaten. In boiling hams or pork, the meat should be put into cold or lukewarm water, and the period of cooking should be reckoned from the time when the water boils.

In boiling several joints of pork or several hams (as required at institutions and elsewhere), they should not be put together in bulk at the same time into the same vessel. Each joint should be put into a separate vessel and boiled with a good quantity of water."

We advise our pork-eating friends to give a thought to the above.

Chief Cook's Pound Cake.

Mrs. F. James writes: "Will Chief Cook tell me if soda and cream-of-tartar are used in the recipe for pound cake? I cannot understand how the cake will be *perfectly* light without soda. Please give the recipe in *full*."

We believe the recipe was given in full in the RURAL NEW-YORKER of March 26. If Mrs. James will carefully read the directions given by Chief Cook, she will at once see that the ingredients are butter, sugar, eggs and flour and *nothing more*. It is the *thorough beating* of the first three articles that makes the cake light not soda, cream-of-tartar or baking powder.

DOMESTIC RECIPES.

Potted Fresh Mackerel.

LET the fish, after dressing, lie in salt water for half a day. For every five pounds of fish take three ounces of salt, two of pepper and one of cloves. Cut the fish into pieces and place in an earthen jar in which it is to be cooked, first a layer of fish then a sprinkle of flour, spice and bits of butter, repeating until all are in. Pour over equal parts, vinegar and water, and cover tightly with a floured cloth, so that no steam can escape, and bake six hours. Let remain in jar until cold. Cut in slices and serve for lunch or tea.

Floating Island.

Make a boiled custard of the yelks of six eggs, a large quart of milk, sugar to sweeten and a pinch of salt. The yelks must be well beaten and strained before adding to the milk. Flavor the custard and while boiling hot pour into a dish and spread the whipped whites smoothly over the top. Cover tightly to cook the whites. When cold, sift powdered sugar over the top, and you may if you wish, strew over grated cocoa-nut, or bits of jelly or jam. Very nice. MARY B.

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Its Economy,
One-half time, labor and expense.

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A boy twelve years old can operate it easily.

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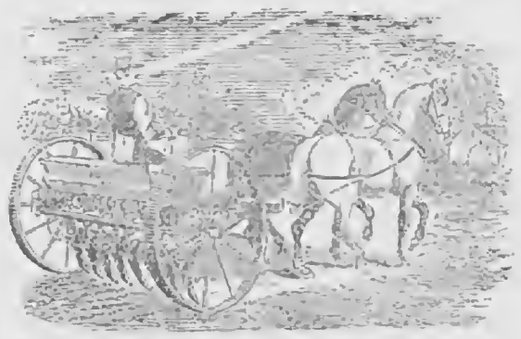

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Miscellaneous.

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Miscellaneous.

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WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

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20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

25 Large all Gold & Silver Chromo Cards with name 10c. Agents wanted. J. B. Husted, Nassau, N. Y.

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News of the Week.

HOME NEWS.

MONDAY, April 18, 1881.

In the vicinity of Yankton, Dakota, there has been more suffering from the floods. Nearly all the stock on the lowlands, hundreds of thousands of head, was drowned. Farm houses were submerged or floating about in the water. Of 20 houses on Green Island only one remains. One hundred and twelve persons were recently rescued from Mayville where they had been surrounded by ice and water two weeks. A careful estimate shows that fully 7000 people have been driven from their homes and one-half this number have lost everything but the clothing they have on. The Government is aiding the sufferers, but as this is meager help public aid is requested—to be sent to a relief committee organized at Yankton. The Governor advises the shivering sufferers to collect in churches and other large public buildings and burn as necessary fuel what remains of their homes, hoping that the government will make an appropriation to compensate their losses.

Still the Congressional "bull dogs" are holding on. Neither party is willing to yield to the other, simply on account of a few minor Senate offices. The senatorial wise-heads are trying to make the people believe that a great break in the South is impending and that as Mahone goes "so goes the Union"—of the Southern States. In the meanwhile all senatorial business is at a stand-still. Judge Robertson is not yet confirmed as Collector of this Port.

THE Tennessee debt settlement adopted last week is more favorable to the creditors of the State than any one of the plans before proposed for refunding. One plan took the debt at $20,221,300, with $4,000,000 of past-due interest, and proposed to scale this total 50 per cent. and pay four per cent on the amount thus obtained. The new plan proposes to issue dollar for dollar on all the principal and interest now due and pay interest at three per cent, coupons receivable for taxes. The debt now aggregates with interest due $25,685,000, and interest on this will be $770,550.

At a recent meeting of the trustees of Hamilton College, at Clinton, N. Y., the Rev. Henry Darling, D. D., of Albany, was elected President of the College. Rev. S. G. Brown, resigned. The new President's salary is $4,000 a year, with house.

The appropriations made by the last Congress amount to $177,846,993 87, being upwards of $6,000,000 more than the appropriations made for any fiscal year since 1872.

At the close of the meetings of Moody and Sankey, in San Francisco $82,000 were raised to pay off the debt of the Young Men's Christian Association building in that city. Mr. Moody pledged a large part of it and $60,000 was also subscribed for the evangelistic work of the Association. The evangelists have been laboring on the Pacific Coast six months and the result has been a large accession to all the churches.

Assistant District Attorney Bell on the 14th inst, in the General Sessions Court, in this city, called to the bar James O'Brien, alias Robert, or "Bob." Lindsay, who, during the last political campaign deposed that he knew H. L. Morey, the individual to whom it was alleged President James A. Garfield wrote what is known as the "Morey Chinese" letter, and who subsequently confessed that he had perjured himself. He pleaded guilty to the indictment for perjury presented against him, and Judge Cowing sent him to State Prison for eight years.

At the last meeting of the World's Fair Commission there were about as many reporters as Commissioners present. Subscriptions from the transportion companies are relied upon as the principle means towards success, and unless they respond liberally the fair cannot be held because other capitalists will not give money in advance of the railways.

The Illinois General Assembly has made a movement to place all cities of over 100,000 inhabitants under control of the State as far as the police is concerned. Much complaint comes from Chicago that the Mayor is unable to enforce the laws against rum shops, gambling dens, etc., with the present police system, since beer drinking policemen will not bring to account those who furnish them with liquor.

They have a novel way of depositing ballots over in Jersey City. The evening previous to the recent annual charter election, something wrong about the ballot boxes was suspected and on opening the boxes for examination, two of them were found to contain a bunch of tickets each, nicely inclosed in a rubber band and tacked to the top of the box. This is voting by proxy, you know!

One Hattie Duell, of Iowa City, has been trying to live on nothing, and she did so—until she died. For over 47 days she took no nourishment other than water. She was thought to be insane.

The salt discovery at Manistee, Michigan, gives confidence of a future for that place by the building up of a great industry in that region. The salt was discovered by boring at a depth of 1,950 feet. The salt stratum proved to be 31 feet thick. The brine flows freely and is found to yield salt of good quality. The bore was made by lumber dealers in Manistee, and extensive salt works will be started immediately. Fifteen or twenty new wells will be put down during the Summer, which will be sunk in the vicinity of the large steam saw mills in the place, and the refuse from the mills will be used in salt boiling. Manistee is on the east shore of Lake Michigan, 110 miles from Milwaukee and 180 from Chicago.

In consequence of a strike of the Chicago street car conductors and drivers Thursday, no cars were run on the west side lines, the company being left helpless. They attempted to run cars Thursday morning, but as soon as the passengers in the initial car understood the situation they dumped it into a ditch, and cheerfully resumed their journey down town on foot, and no other attempts were made by the company.

Another outbreak of the Utes seems probable at an early day. At the Uncompahgre agency the settlers have their cabins loophooled and sleep on their arms, anticipating trouble. There are seventy families in the Uncompahgre country, and only one hundred soldiers at the cantonment. The settlers have petitioned the Governor for protection.

"It Works Like a Charm."

A patient in Indianapolis, who was a great sufferer from *Rheumatism*, sent for Compound Oxygen, and a week after receiving it, wrote: "It works like a charm! *For six weeks I had suffered agony, and nothing relieved me until your medicine came.* It is one week to-day since I commenced the inhalations, and the improvement is wonderful, and I thank God and you." "Treatise on Compound Oxygen" sent free. Drs. STARKEY & PALEN, Philadelphia, Pa.

AGRICULTURAL NEWS.

ADVICES from Great Britain inform us that there is this year an unprecedented demand for polled cattle, especially for those of the Angus breed, for importation to this country.....Last Wednesday, the 13th, an examination was made by Dr. Paton, Chemist of the Chicago Health Department, of 400 hogs taken at random in the packing houses in the Stock Yards, 20 pieces being carefully inspected for trichinæ in most cases, but not a trace of the pest was discovered.....Selections of the Bow Park herd of Short-horns, raised by the Farm Stock Association, Brantford, Ontario, and owned by the Hon. George Brown, late editor and owner of the Toronto Globe, were sold at auction in Chicago last Wednesday. Fifty-four head of cows and bulls brought $27,915. Among the noteworthy sales John Wentworth bought the yearling, VIII. Duke of Kirklevington, for $1,700; C. A. De Graff, of Wisconsin, bought the Duchess of Oxford XXI. for $4,200; H. L. Stout, of Dubuque, bought the Duke of Oxford XLVI. for $2,350, and Kirklevington Duchess XXVI. for $2,550. This was the initial sale, and prices were much better than expected. .....The Wisconsin Legislature has appropriated $4,000 to aid the Professor of Agriculture to make experiments with Amber-cane sugar during the season. The original bill asked for $6,000, but as it was agriculture, not politics, that was concerned, the appropriation was cut down $2,000 ..... Over 80,000 buffaloes have within six months been killed in Montana, mostly for their hides, which bring from $2.25 to $2.75. The last wild Indian is likely, ere long, to ride to the "happy hunting ground" on the last buffalo.....

The aggregate pounds of hog product (hams, bacon, pork and lard) exported from the United States to principal consuming countries compare as follows for three years, ending June 30:—

	1880.	1879.	1878.
England	645,691,439	579,603,407	480,732,348
Scotland	58,027,572	57,115,226	73,364,644
France	123,528,287	98,133,780	105,346,385
Germany	113,612,667	128,179,048	114,078,481
Belgium	104,406,720	110,897,216	80,934,814
Cuba	31,137,218	33,062,818	34,345,076
Netherlands	16,994,845	19,225,375	12,881,561
Hayti	16,321,266	15,473,032	15,675,120
Quebec, Ontario, etc.	28,410,811	15,521,634	18,426,756
Sweden & Norway	7,708,974	10,925,989	10,593,429
British W. Indies	10,709,446	10,848,919	10,561,670
Other countries	75,252,930	63,765,291	49,622,603
Total pounds	1,330,702,175	1,143,309,938	1,007,469,860

The Milwaukee Republican of the 12th published advices from the Northwest as regards the Winter wheat prospect. It summed up by saying:—"In brief it may be said that the Winter wheat reports are decidedly unfavorable. Wisconsin is out of the deal, both as regards Winter wheat and the possibility of seeding before the first week in May; Iowa is in about the same condition as Wisconsin; Southwestern Minnesota will not sow before May; Southeastern Dakota is practically blockaded; but by far the greater portion of the Spring wheat area of Minnesota and Dakota is in condition to begin general seeding within a week or ten days, or, if the storm of yesterday has ceased, by the last of this week."....The Wisconsin State Fair is to be held at Fond du Lac, commencing Sept. 26..... The Governor of Nebraska has named the third Wednesday in April as Arbor Day.....

The Utica, N. Y., dairymen's board of trade will hold its first sale day for the season, April 25th. The annual election of officers will then take place.....The great parish of St. Pancras (London) which contain about 100,000 people, maintains a farm of eighteen acres for the instruction of pauper children in agriculture. By a report just made, it appears that the establishment netted $1,300 for the last half year.....President Parker, of the Produce Exchange of this city has written to Statistician Nimmo at Washington that it is within the powers of the Treasury, and probably not within the powers of the States, to provide for discrimination between butter and oleomargarine cleared for export at the Custom House..... Bradstreet published last Saturday a summary of the cotton situation with regard to both the old and new crop. Down to the end of March the port receipts and overland movement for this year amounted to 5,481,345 bales, against 4,959,194 for the same time last year, an excess of 522,151 bales. Estimating the receipts for the rest of the season as the same as those of last year, gives a total yield for the crop of 1881 of 6,283,403 bales. As yet there are no indications of any sudden falling off in the receipts. The stock at interior towns is no less than it was a year ago. The port receipts for the first 12 days in April have been 68,000 more than in the same time last year. Estimating the probable increase of receipts during the remainder of the year, the total yield is placed at 6,422,000 bales. The opinion is expressed that the present enormous consumption of cotton by the mills will still further increase. Regarding the outlook for the coming crop, the reports say planting is about fifteen days later than last year. In some regions operations are fully a month late. Fertilizers will be used more than heretofore, notably so in the Carolinas and Georgia. Present indications are that the cotton acreage, as compared with last year, will show some increase in the Carolinas, Georgia, Florida, and Texas, while there will probably be no change in Alabama, Mississippi, Louisiana, Tennessee, and Arkansas.

The Legislative Committee on Public Health which has been investigating oleomargarine here, consists of Messrs. Fenner, Palmer, Hayes, Roberts, Hunter, Campbell, Derrick, Lewis, Newman, Donoho, and Willis.....Three or four weeks ago we intimated here that the Hon. G. B. Loring, of Mass., had "the inside track" for Gen. Le Duc's place, and as time goes on, the probability grows stronger that he will get it—if it is vacated by the present incumbent.....Throughout Minnesota and Dakota the weather was still very unusually cold as telegraphed on the 15th inst., and the season later than for years. Minnesota mills will use all the wheat crop of the State. Rates on flour to this city averaged 80c. from Minneapolis. It is estimated that the wheat area will exceed that of last year by 300,000 acres.....The latest advices from the great cattle ranges of the West published in the Pioneer-Press, Globe-Democrat, Chicago Inter-Ocean and other leading Western papers, go to show that previous reports of the mortality among the herds and flocks on the great plains were very considerably exaggerated. The loss has been unusually heavy, 'tis true, but not so ruinously severe as earlier reports declared..... .....Mississippi has been visited by another destructive tornado that swept all before it for a space of some 200 to 300 yards in an easterly and westerly line passing near Hernando.

The Department of Agriculture's report of crops, etc., just published, includes reports received until April 1. These show an increase of nearly four per cent. in the area sown in Winter wheat. Kansas and Missouri show the largest increase; Ohio and Illinois a slight increase and Pennsylvania remains the same as last year. Indiana, Kentucky, Tennessee, and Virginia each report some decrease. Owing to the prevalence of snow at the date of the returns, the condition of the crops was not given in large portions of the principal wheat-growing States, but wherever mentioned, it was stated as below the average of last year. The alternate freezing and thawing during the month of March was the most detrimental of any weather during the Winter. The live stock of the country, notwithstanding the scarcity of food caused by the long and severe Winter, has come out in fair health, though reported as very low in flesh. No malignant or prevailing disease is reported over any large extent of country. Disorders of the lungs and stomach are often mentioned. Great losses from cold and exposure are reported from the plains of the far West.

There is still quite a free movement of Grain down the Mississippi, as the shipments from St. Louis last week were, for New Orleans, 146,417 bushels of Wheat, 210,328 bushels of Corn and 12,057 bushels of Oats. The export movement from New Orleans for the week comprised 205,778 bushels of Wheat and 250,820 bushels of Corn for Europe.....Rail freights from Western ports on grain have been reduced on the basis of 25c. per 100 pounds for Chicago to the seaboard, and on provisions to 35c. per 100 pounds on the same basis .....An early opening of the lake and canal navigation is not expected. The Straits between Lakes Huron and Michigan are usually opened about May 1. The time for the opening of the Erie Canal will be determined by the time of resumption of navigation on the lakes. The River St. Lawrence is believed to have already opened as the ice was cleared from it a day or two since, where the waters of Ontario debouch into it.....

Last Tuesday, the 12th inst., a considerable number of men interested in the culture of sorghum sugar cane and the manufacture of sirup and sugar therefrom in this State, met at Utica, and it was decided to organize a State association to be called the New York State Sugar Growers' Association. A committee was appointed to draft a constitution and by-laws, and directed to report the same at a larger meeting to be held at Bagg's Hotel, Utica, on April 22, when the topics of growing, gathering and handling the crop, as well as the best sort of machinery and processes of manufacture, will be discussed by different persons well acquainted with the various topics. This will be an interesting meeting, and all our readers interested in the matter, who can conveniently do so, should attend it.....An English company is to be formed, under the name of the Anglo-American Agricultural Co., for "the purchase, stocking, development, re sale and letting of lands in Russell, Marion and McPherson Counties, Southern Kansas, and of other desirable lands, and for making loans upon the security of improved farms," etc. President, Lord Dunmore; manager, M. G. Clapp; capital, $5,000,000 in 200,000 shares of $25 each. It is proposed, however, to call up only $5 per share, so that the actual capital will be only $1,000,000.

The Mohawk Valley Beet Sugar Company is the name of an association that started to establish a beet sugar factory at Schenectady, N. Y. It tried to get that costly machinery from the exploded Franklin, Mass., factory, but failed, so it has resolved to defer the enterprise for a year and will cancel its contracts with farmers for raising beets. It is proposed to get up a capital of $200,000. Dr. Blackwell from Portland, Me., is the prime mover in the scheme; but why he should expect to succeed in New York in an enterprise that failed in Maine, after a protracted struggle, is not apparent.

Beatty's Parlor Organs.

Attention is called to Mayor Beatty's large organ advertisement which appeared in our last issue. He refers to the following well-known and reliable parties who have purchased and are using his instruments, and who will cheerfully testify to their unrivaled qualities. Among many thousands may be mentioned the following:

Boston, Mass.—Moses A. Dow, publisher Waverly Magazine; G. H. Hart, shoe manufacturer, No. 99 Pearl street. New York City—I. W. England, publisher Sun; J. L. Everett, Cashier National Broadway Bank; G. W. Sickles, (Major-General Sickles's father,) No. 111 Nassau street; Bauer & Betz, brewers, No. 140 East Fifty-eighth street. Philadelphia, Penn.—William Underhill, Cashier Mechanics' National Bank. Pittsburg, Penn.—L. Halsey Williams, Cashier Fifth National Bank. Willimantic, Conn.—Henry F. Royce, Treasurer Willimantic Savings Institution. Newark, N. J.—Right Rev. Father Patrick Leonard, (St. Michael's Cathedral) Plainfield, N. J.—J. R. Vandeventer, President First National Bank.

In addressing the above-mentioned gentlemen, readers of our paper should inclose a stamped envelope for reply.

Refined Women.

Refined and Educated women will sometimes suffer in silence for years from kidney disease, or constipation and piles, which could easily be cured by a package of Kidney-Wort. Druggists sell both dry and liquid.—Home Journal.

Women that have been given up by their dearest friends as beyond help, have been permanently cured by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 50 cents per box.

You can save Doctor bills and keep your family always well with Hop Bitters.

Premature Loss of the Hair

May be entirely prevented by the use of BURNETT'S COCOAINE.

THE superiority of **Burnett's Flavoring Extracts** consists in their perfect purity and strength.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, April 16.

Chicago.—Winter rates of storage expired Saturday, the 16th, and Summer storage began. All deliveries are made on a basis of 1½c storage, with five days to run. WHEAT—No 2 red Winter, $1 02 cash; No 3 Chicago Spring, 93@97c.; rejected, 75@82½c. CORN steady at 42¼@42½c. cash; rejected, 41c. OATS fairly active and a shade higher at 34@34½c. cash; 35¾c. May and June; 34½c. bid July. RYE strong at $1 20¾. BARLEY strong at $1 03. PORK strong at $17 75 cash. Lard strong and higher at $11 23 cash; $11 27½ May; $11 37½@11 40 June; $11 47½@11 40 July. Bulk-meats strong; shoulders $5; short rib and short clear, $8 80. BUTTER—Choice to fancy creamery 29@30c @ lb; fair to good do 26@28c; fine fancy dairy 23@25c; good to choice dairy 20@23c; medium to fair dairy in shipping lots $14@16c; ladle-packed, good to choice 15@17c; fair to the best packing stock 12@14c; grease butter 8@9c. Fair to choice roll butter sells at 14@17c. CHEESE—Fine cheddar creams at 14c ₱ lb in a small way, and at 13c for car or shipping lots, and the only slightly skimmed flats at 9½@10c, but with the poor and the heavy skims dull at 8@8c for a fair quality to 4@5c for the refuse. EGGS—Sales were generally at 18@19c ₱ doz, the demand being quite good. HAY—No. 1 timothy was quoted at $15@16 ₱ ton; No. 2 at $13@14; mixed do at $12@13; upland prairie at $12 50@13 50; No. 1 prairie at $9@10; No. 2 do at $7 50@8 50. Small bales sell for 20@50c @ ton more than large bales. SEEDS—Good to choice medium clover at $4 50@4 75 ₱ bush; mammoth do. at $4 75@5 10; good to prime timothy at $2 45@2 50; choice do at $2 55@2 56, and flax at $1 17. WOOL—Dealers still report a slow trade in all grades and qualities, and prices rule easy and in buyers' favor. For assorted lots from store we quote Eastern Iowa, Wisconsin, and Illinois wools as follows: Tub-washed, bright 40@50c ₱ lb; do dingy and coarse 41@43c; fleece-washed medium 39@41c; do fine 35@39c; do coarse 33@36c; unwashed medium 32@34c; do coarse 25@27c; do fine bright 28@28c; do heavy 18@25c; buck's fleece 16@18c. Consignments from western Iowa, Nebraska and Kansas sell at about 2½@5c less than this range, and burry and poor-conditioned lots at 3@10c less. New Mexico wool (unassorted) is quoted at 22@26c ₱ lb for medium to fine; coarse to medium 18@22c, and black at 19@22c.

Cincinnati.—CORN No. 1 mixed 47½c. OATS dull; No. 2 mixed 41c asked, 40c. bid. RYE easier; No. 2 $1 34½@1 35. BARLEY quiet and nominal; No 2 Fall $1 10. PORK active and a shade higher; held at $17 75. Lard firm at 11½c. Bulk-meats higher; shoulders 5⅞b; clear rib 8½c; bacon active and a shade higher; shoulders 6¼c; clear rib 9¼c. Bacon—clear rib 9¾c. Hogs quiet and weak; quality poor, common $4 35@5 25; light and medium $5 50@6; heavy packing $5 35@5 65; butchers' selections $6@6 25. Butter weak and declined 1@2c; choice Western Reserve 24@25c; choice Central Ohio 20@32c. SUGAR steady and unchanged. Prices have about the same range as last week but a better grade is obtained for the same price, which is equivalent to a decline of 2@3c. per pound; the grade selling at 28c. a week ago will not bring over 25c, and anything bringing 28c. has to be really fine—almost as good as Creamery. Medium and low grades are dull and drooping. Fancy Creamery sells at 35@36c, prime do. at 30@33c. choice Dairy at 26c@28c, choice Western Reserve at 25@27c. prime to choice Central Ohio at 20@21c, and common to medium do at 15@18c, per pound. CHEESE cured factory at 13c, and prime Northwestern at 11½@12c per pound while inferior ranges down to low prices. HAY, Common sells at $18@19 prime do at $20@21 per ton, and Prairie hay at $12 50@13 50 per ton in bales on arrival. Wheat and Rye straw is steady at $8@8 50, and Oats straw firm at $9@9 50. MILL FEED.—Bran sells at $14 50@15, shipstuffs at $15 50@16, and middlings at $16@20 per ton in bulk, and 50c. more in sacks on track. SEED.—Prices of Clover and Timothy are lower the last week. Prime to choice Clover sells at 7¾@8c per pound, and Timothy at $2 65@2 75 per bushel from store. Round lots on arrival would not bring these prices. Flaxseed is steady at $1 10@1 12½ per bushel. German Millet sells at $1 50, common Millet at $1 25, and Hungarian Grass at $1 00@1 10 per bushel.

St. Louis.—WHEAT dull; No. 2 Red Fall, $1 08⅛ @$108¼, cash and April; $1 07⅞@1 08¼, May; $1 07⅞@1 07⅞, June; $1 03¼@1 03¾, July; $1 01¾, August; $1@1 01¼, all the year; No. 3 do., $1 04¼

@$1 04¾; No. 4 do., 98½@99c. CORN, 41⅛@41⅞c., cash; 41⅜@41⅞c., April; 41⅝@41⅞c., May; 41⅞@47⅞c., June; 42½@42¾c., July. OATS, 35¼c., cash; 35¼c., April; 35@35½c., May; 35¼c., June. 33¾@34c., July. RYE, $1 36 bid. BARLEY quiet at 75½c@$1 10. PORK, $17 75, cash; $18 20 asked, May. Lard higher at $11 20. Bulk-meats strong and higher; Shoulders, $5 50; Clear Rib, $8 60; Clear Sides, $8 85. Bacon higher and firm; Shoulders, $6 25; Clear Rib, $9 25; Clear Sides, $9 50. POTATOES—Choice N. Y., Peerless 85@87½c., Rose 93@91c, Burbank 93@95c., Peachblow 95@97½c., Western at 50@60 for inferior and dry-rotted to 75@85c for choice. ONIONS—Prime at $3 75@4 ₩ bbl or $1 65@1 70 ₩ bush; sprouted and damaged nominal at $2 75@3 per bbl. Sale part car Eastern red in sks at $1 65 per bush. WOOL—Quiet. Prime medium 25@26c for unwashed and 39@41c for washed; poorer grades proportionately less. Sale small lot tub 39c. SEEDS—Hungarian firmer at 70@75c; others quiet—German Millet $1 10 to $1 30, Clover, at $4 75@4 80, common Millet at 80@90c; Redtop do at 45@47c. Timothy $2 25 for inferior to $2 50 for prime; Orders are charged higher.

Fertilizers.

Mapes' Potato Manure, $50; Corn do, $50; Fodder Corn do, $47; Beet and Mangold do, $50; Cauliflower and Cabbage do, $49; Sugar Cane or Sorghum do, $47; Asparagus do, $52; Tobacco do, $53; Complete do, (for light soils) $53; Complete do, $52; Grass and Grain Spring-top Dressing, $52; Fruit and Vine Manure, $37; Lawn Top-Dressing—full strength—free from odor, $60; Lawn Top-Dressing (with plaster), ready for use without further mixing, $35; Potato Manure, (Ville Formula, $48 50c; Complete do. (Ville Formula) $49; Complete do. ("A" Brand) $42; Nitrogenized Super-Phosphate of Lime, $38; Nitrogenized Superphosphate of Lime, (with potash) $40; Ammoniated Dissolved Bone, (Moosehead) $36; Potash Bone Phosphate, $37; Ground Dried Fish, (8 to 16 per cent,) $40; Ground Dried Fish, (with phosphoric acid and potash added) $40; Prepared Fish Guano, $4; Pure Ground Bone, Medium, $36; Pure Ground Bone, Fine 38; Pure Ground Bone, Extra Fine, $40; Pure Ground Bone, Meal and Extra Fine, $41; Pure Ground Bone, for Feeding Stock, (in barrels about 200 lbs. each) $60; Muriate of Potash, 80 per cent, bags about 200 lbs each, $42 per ton; Kainit, or German Potash Salts, 24 per cent, bags 200 lbs each, $15; Sulphate of Ammonia, (barrels about 250 lbs) per lb, 4@5½c; Nitrate of Soda, 95 per cent—per lb, 4@4½c. All Chemicals subject to fluctuations.

BAUGH & SONS, Philadelphia, Pa.—Baugh's Twenty-five Dollar Phosphate at $25 for 2,000 lb; Baugh's Economical Fertilizer at $30 for 2 000 lb; Baugh's Raw Bone Super-phosphate at $38 for 2,000 lb; Baugh's Special Tobacco Fertilizer at $38 for 2,000 lb. All delivered on the cars or on the boat in that city.

PRICE LIST OF STOCKBRIDGE MANURES AND BOWKER'S PHOSPHATES.—For potatoes and roots, $50 per ton; corn and grains, $50; for stawberries and small fruits, $40; for grass, top-dressing, $50; hill and drill phosphate, $45; Bowker's phosphates, $40; Brighton phosphates, $38; soluble bone, $35; pure steamed bone, $40.

[Attleboro Chronicle.]

Carry the News.

Mr. John Eitzensperger, manufacturing jeweler of North Attleboro, Mass, lately communicated to us the following: I suffered so much with pains in my arm, that at times I was completely helpless, I used that incomparable remedy St. Jacobs Oil and was completely cured as if by magic.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 16, 1881.

BEANS AND PEAS.—There has been a sharp sudden advance in beans, and the new prices are supported with sales. Mediums and marrows hold the trade and prices for the other sorts are more or less sympathetic with the standard white. Green peas slow at $1.60. So. B. E. peas better; now $2.75@3 ₩ 2 bu, bag.

Medium and marrow beans, prime, $2.45@2.50; other $2.25@2.40; white kidney and pea $2.40@2 35 red kidney, prime $1 50@1.60, other, $1.40@1.50; black or turtle soup $1.60; Lima, $5@5.50.

BEESWAX.—Demand is small but offerings light and prices firm. Sales at 25@25½c.

BUTTER.—Receipts of new are quite liberal and as supplies from this out will continue free, buyers operate cautiously in view of obtaining the first invoices of improved quality that will soon appear. Prices are off from last week's rates for new and are very reasonable for old. The latter are down to figures that decidedly favor buyers, and of course are not paying ones to owners.

New Butter.—Creamery, choice Western and Pa. 31@33c, other 27@30c; sweet cream, 2@32c.; State half tubs, choice, 6@27c; fair to prime, 20@25c. Welsh, choice, 25@26c.; other 20@21c.; very common or state new 15@18c.

Old Butter.—State dairies, 13@20c.; pails and half tubs, 13@22c; Welsh, 18@19c.; fine Western, 23@25c.; fair to good, 12@20c; very poor, 12@13c.

Receipts for week 21,715 pkgs.

Exports do. 810 do.

CHEESE.—Export demand is moderate and the home trade is fair with prices firm and on choice stock a little higher. Quotations are for

Fancy at 13¾@14c.; do. good and prime, 12½@13¼c.; do. fair, at 12@12½c.; do. half-skimmed, 8@9c., Wisconsin factory, fine, at 13½@13¾c.; do. good to prime, 12¾@12¾c.; do. fair to good, 11@12c.; Ohio factory, fine, 1@13¼c.; do. good to prime, 11½@14½c.; do. flat, fair to good, 10½@11½c.; do. poor to fair 8@10c. Skimmed creamery, 5@7c.

Receipts for week, 8,339 boxes.

Exports for week, 11,125 boxes.

Liverpool cable, 69s.

Steam to Liverpool, 21s.3 1.@25s.

COTTON.—The market is quiet and varying slightly only, closing at for

April, 10 61@10 65c.; May, 10.69@10.70c.; June, 10.77@10.78c.; July, 10 8@10.86c.; August, 10.91@10.92c.; September, 10.60 and 61c.; October, 10 22@10 23c.; November, 10.10@10.12c.. December, 10.10@10.12c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	5⅞	7⅞	7⅞
Strict ordinary	7⅞	8⅜	8⅜
Good ordinary	8 15-16	9⅜	9⅜
Strict good do	9 7-16	9⅞	9⅞
Low middling	10⅛	10⅜	10⅜
Strict low middling	10⅝	10 15-16	10 15-16
Middling	10⅞	11⅛	11⅛
Good middling	11 9-16	11 13-16	11 13-16
Strict good middling	11 13-16	12 1-16	12 1-16
Middling Fair	12 7-16	12 11-16	12 11-16
Fair	13 3-16	13 7-16	13 7-16

STAINED.

Good ordinary	6 9-16	Low middling	8⅝
Strict good ordinary	7 11-16	Middling	10

Receipts for the week, 20,317 bales, Exports do. 12,479 do.

SEED.—Clover is quiet at 8½@9 for Western. Timothy is slow at $2.80@3.00.

DRIED FRUITS.—Apples have shown a good trade in evaporated, for which prices are slightly better; low grade of sun dried are in good demand for export: other qualities are dull and unchanged. Peeled peaches are scarce and firm. Small fruits are in small supply and generally strong. Quotations are for

Evaporated apples at 8@8½c. for prime and choice stock; sliced apples at 4¾@5¼c. for good to choice North Carolina; 4@4¼c. for Va. apples, 4@4¼c. for Tenn do; 4¼@5c. for State do; 4¼@4¾c. for western, Ohio and Mich. Peaches at 28@29c. for evaporated peeled; 18½c. for unpeeled do.; N. C. peeled at 19@24c.; for the better qualities, unpeeled peaches at 5½@5¾c. for halves and 5½c. for quarters. Plums at 15@16c. Blackberries at 8½@8¾c. for prime. Cherries at 16½@17c. Raspberries at 26c. Whortleberries 10@11c.

Receipts for the week, all kinds, 1,033 pkgs.

Exports dried apples, 3,384 pkgs.

EGGS.—Receipts for week, 21,073 bbls.; do. last week 18,818 do. Supplies are light and sellers are obtaining unusually high prices for Easter week. There will be no material surplus after Sunday but eggs will lose some of their special call and prices as quoted will not be sustained,

Near points, 20c.: State and Pa., 19¾c.: Western, 19½@19¾c.: Southern, 19@19½c.: poorly packed and small run 17½@18½c.; goose 45@48c. duck, 30@32c.

FLOUR.—The low grades are in active demand and well sustained in price: medium grades are favoring buyers; best lots of patent are wanted at firm prices.

Latest prices are; $3,70@4.35 for very inferior to choice superfine State and Western; $4.40@4 65 for poor to choice extra State and Western, odd lots and lines; $4.65@4.75 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.50@5 40; good to choice do at $5.40@6.25; (very choice up to $6 35@6.50 and fancy at $6.50@6.75;) red and amber winter wheat inferior to choice trade and family at $4.60@6.15; round hoop Ohio, $4.50@4 85; and trade and family brands of do. at $5.00@6.25, the latter for very choice: St. Louis $4.75@5 75 for inferior to good extra; $5.75@6.50 for good to choice, and up to $6.75@7 for very choice to very fancy brands; Minn. clear inferior to very choice at $4.40@5 85; Minnesota "straight," poor to very choice, at $5 35@6.75, and patent inferior to fancy at $5.75@8.15; city mill extra at $6.00@5 65 for the West Indies; do. for England at $4.40@4.75 for poor to choice spring wheat; do. trade and family extras $5 70@6.75; do. for South America $5.75@6.00, the latter for very choice: No. 2 at $3 00@3.70 for very inferior to very fancy.

Receipts for week, flour, bbls. 127,150 corn meal, do. 2,878; wheat, bush. 829,9.0; corn, do. 612,200; oats do. 256,050, rye, do 27,395; malt, do. 18,900; barley, do. 24,530; beans, do., 4 776; rice, pkgs. 900.

Exports for week, flour, bbls. 62,300; corn meal, do. 1,779. wheat, bush 859,110; corn, do. 810,700; oats, do. 1,325; beans, pkgs. 300, rice do. 850.

FRESH FRUITS.—Exports of apples for week, 6 600 bbls. The market is rather more active for prime red, but these are in few hands. The closing prices of the season will make up losses for many large operators this time. They have had to fight against interior shipments abroad which has competed with one of their outlets besides the long unfavorable selling weather has prevailed in this country,

Choice red $2@2.25; good other $1.50@1.75; poor $1. Cranberries lower with a pressure to sell. N J. crates quoted 80c@$1.50. Fla. oranges are in demand for special fruit stores; but the general trade that was needed and expected for as large a crop as the last does not and now cannot improve. The range as before is $1.50@3 for good to best half barrel cases. Fla. strawberries plenty and lower. Chas. are included in the offering at 45@60c. per qt.; hot-house Black Hamburg grapes $4@4.50 per lb. Peanuts are nearing a season for sales and prices are named with some confidence though the supply is large. Va. hand-picked 4½@4¾c; good to extra prime 3@3¾c; shelled 3@3½c; pecans lower 7@7½c.

CORN-MEAL.—Sales at $3.10 for Brandywine and $2 65@2,90 for yellow Western.

GRAIN.—Wheat has been active and variable according as the crop reports have been favorable or otherwise, but on the whole not much advance obtained for the week. Latest prices are—

No. 1 white at $1 20@$1.21. do. April at $1.19⅜@1.19⅜; do. May at $1.17⅜; do. June at $1.16⅜@1.17; No 2 white at $1.19@$1 19⅜; ungraded white $1.19; mixed Winter at $1.19½@1 19⅝; No. 1 red at $1.27@1.28⅜; No. 2 red at $1.22⅝@1.23⅜; do. April at $1.21⅞@1.21⅞; do. May at $1.20⅝@1.20⅜; do. June at $1.19⅜@1.19⅜; do. July at $1.17⅜@1.18 No 3 red at $1.19@1.19⅜; ungraded red at $1.18⅜@$1.27⅜; New York No. 3 Spring at $1.14@1,16.

Rye at $1.08@1.11.

Corn is higher on a short interest here and at Baltimore: latest sales are

New York No. 2 at 58½@58⅞c.; do. April at 57⅞@58⅞c.; do May at 55⅜@55⅜c.; do. June at 54⅞@54⅞c. do. old crop in store at 60c.; No. 3 at 54@51⅞c.; ungraded mixed Western at 54@59c; New York steamer mixed at 58⅛@58⅞c. closing at 58⅝c; No. 2 white at 60c.; white Southern at 60@60½c.; steamer white at 57@57⅞c.; low mixed at 59c.

Oats have a fair trade demand and prices firm; latest sales are of

No. 1 white at 48⅞c.; New York No. 2 white at 46⅜@46¾c.; No. 3 white at 45⅜; New York No. 2 at 41⅞@45c.; do. April at 44⅞c.; do. May at 44⅜; do. June at 43⅜. No. 3 at 44⅜@44⅝c.; ungraded white Western at 45@49, ungraded mixed Western at 44@46; white State at 48@50, mixed State 47, No. 2 Chicago at 44⅞.

HAY AND STRAW.—Low grades of hay are less wanted, and as they are still plenty prices are weak. Prime hay and straw have considerable demand and prices strong. Quotations are

Hay, prime timothy at $1.15@1.20 ₩ 100 lbs.; medium timothy at 95c@$1.05 do., shipping grades at 85@90c. do.; clover mixed at 85c.@$1.00, clover at 80@90. do. Straw—No. 1 rye at $1.10@1.15 ₩ 100 lbs.; No. 2 rye at 70@75c, do.; oat and wheat at 50@60c. do.

Exports for week, 1,454 bales.

HOPS.—Export demand continues slack and the brewers buy very moderately, with prices generally steady. Quotations are for

	Cents per lb
New Yorks, crop 1880, choice	23 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	12 @15
Eastern, crop 1880	14 @22
Wisconsin, crop 1880	14 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Pacific coast, new	19 @23
Bavarians	30 @35

Receipts for week, 734 bales.

Exports do., 174 do.

MAPLE SUGAR.—Supplies are small, but there is enough here to keep prices tame: Sugar 8@10c: for State and Western: Vermont, 12c. Sirup, 10@11 lb cans, 75c@$1. inc. package.

OIL-CAKE.—Western is quoted at $23.50@29.75 per ton.

POULTRY AND GAME.—Continued high prices for dressed have restricted even the moderate Spring demand; holders, however, still quote strong figures and the weather is favorable for holding. Capons are in large supply for that style of dressed and are easier.

Turkeys, choice, 17@18c: fair to prime, 15@16c.; Phila. broiling chicks, as to size, 30@40c, do. roasting, 23@25c.; N. J. 18@21c. Phila. fowls, d. p. 16@17c; N. J. 16@17c.; State and Western 15@16c.: fat lots, 14@15c.; Capons, large, 27@28c.; small and slips, 23@25c. Ducks, choice, 20@22c.; other, 15@18c. Geese, 10@12c. Squabs, white, $3 ₩ doz.; do. dark, $1 50@1.75

A few coops of Winter chicks have made 11@25c. ₩ lb. The demand has slackened, but prices are firm with no prospect of heavy supplies.

Fowls, 14@15c.; roosters, 9@10c.; turkey hens, 15@16c.; do. toms, 14@15c; ducks, 75c@$1.25 geese, $1.50@2.70 pigeons, 35@45c.

Game receives little attention; low-priced wild pigeons, usually plenty at this time, are not in stock.

Sand snipe, 40c. ₩ doz.; Eng. snipe, $1.25@1.50; plover $1@1.25; Canvas-back ducks sold at 87c.; other ducks range 20@50c. The season winds up May 1st.

PROVISIONS.—Hog products have been in good demand and advancing.

Mess pork quoted at $17.40@17.60; do. for May at $17.40@17.50; do. for June at $17.60; do. for July at $17.80. Bacon at 8⅞ for long clear and 9⅞ for short clear. Beef hams at $21@23. Western steam lard at 11 47½@11.50 for spot lots, 11,47½@11.50 for May, 11.52½@11.55 for June, 11.57½@11.60 for July, and 11 62½ for August. Stearine at 12⅜@12⅝. Tallow at 6 7-16@6⅝.

Receipts for week, beef, bbls. and tcs, 700 pork, bbls. 1,072; cut-meats, pkgs. 18,300; lard; do. 12,4 0.

Exports for week, beef, bbls. and tcs., 1 250 pork, do. 3,835; cut-meats, lbs. 4,605,030; lard, do. 3,738,960.

VEGETABLES.—Supplies of potatoes are moderate and with the strong advance in beans and the receding of other vegetables prices are very strong. The run is upon one quality especially as there is a good deal of seed buying for neighboring garden patches.

Bermuda potatoes $9@10 ₩ bbl.; 2d crop $7@7.50; Early Rose, Nova Scotia d.h. $2 75@2 87. Maine $2 62@2.87. State, $2.10@2 75; do. bulk. $2.37@2 62. Prolific, $2.25@2 37; Mercer, $1.87@2 Jackson White, d.-h., $2.12@2.37; Burbank, d.-h. $2 50@2 75; do. bulk, $2 50@2.63, Snowflake, $2.37@2 62. do. d.-h. $2.50@2.75, peachblow do. $2.00@2.12; Peerless, $2@2.12; sweet dull $1.50@2.

Southern supplies of green stuff are of irregular quality: quotations are only for prime showy lots. Bermuda produce arrives freely.

Fla. green peas per crate $1@4; Sav. do. $4@5; Fla. tomatoes, $1@3 ₩ crate; Bermuda do. 5-qt boxes, 80@90c; Fla. string beans, $3@3.50 ₩ crate; Bermuda beets $2@2,50 ₩ crate; do. onions, $3.25 ₩ crate; Norfolk Spinach, $3@4 ₩ bbl.; do. kale, $1.25@1 75; do. radishes, $1@1.50 ₩ 100 bunches; Chas. asparagus $6 50@7 50 ₩ doz.; cabbage, $4@5 ₩ 100; lettuce: $2.50@4.50 per bbl.; cabbages, $2.50@4 ₩ bbl, old crop; cabbage ₩ 100 $1@8 Hubbard squash, $1@1.25 ₩ bbl. marrow do. $1@1.25; onions, white, $3@5 ₩ bbl.; other in bulk, $3.25@3.50; carrots, $1@1.75; celery $1.50@3.

TOBACCO.—Export demand is moderate and the home trade fair, with prices firm. Quotations are for

WESTERN LEAF.

	Light.	Heavy
Lugs	4⅛@ 5½	5 @ 6½
Common leaf	5⅝@ 6½	6 @ 7½
Medium leaf	7 @ 8½	7½@ 9½
Good leaf	8 @10	9½@12
Fine leaf	9½@11	11 @12
Selections	12 @13½	12 @14

SEEDLEAF, CROP OF 1879.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@18
Fillers	5½@ 7
Penn. assorted, low	11 @13
Assorted, fair	14 @18
Assorted, fine	21 @25
Wrappers	18 @15
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7 @10
Wrappers	12 @18
Wisconsin assorted	6 @ 9
Havana seed	14 @18
Wrappers	10 @15

WOOL.—The market has not varied materially this week, with holders disposed to meet buyers promptly and purchasing moderate.

LIVE STOCK MARKETS.

NEW YORK, Saturday, April 16, 1881.

BEEVES.—Receipts for the week 11,573 head; do. last week 13 075 do. Strong prices still rule and though buyers begin to demur loudly and savagely at the high rates, the situation of the markets here and West support sellers' views. Good Cherokee stock sold at 10⅛c. to dress 55 lbs, less $1 ₩ head; even rough stags and oxen sold at 8¾@9⅛c. to dress 55@56 lbs. Twenty fancy Illinois steers sold at 12⅛c. to dress 58 lbs; other sales of native range at 10c, to dress 56 lbs, to 11⅛c. to dress 57 lbs. for common to very good steers.

MILCH COWS.—There has been quite an offering of common to good milkers quoted, with sales at $30@55 per head. A dozen imported Holstein cows and heifers were taken to Havana.

VEAL CALVES.—A couple of wet days kept back supplies and the market has ruled stronger than at our last. The most advance has been in under grades.

Live choice fed 7¾c: fair to prime 6@7c.; poor 5@5⅛c. Mt Holly, 5@8c; buttermilk 3@4c. hog dressed calves extra 10⅛c fair to prime 7⅛@10c; poor 5⅛@6⅛c.

SHEEP AND LAMBS.—Receipts for week, 19,141 head; do. last week 15 84 do. Supplies have run very light and prices have only a seasoned strength. Unshorn sold at 6⅝@7c⅛; clipped 5⅝@7⅛c. Spring lambs 23c per head with a good demand for Eastern.

SWINE.—Receipts for the week, 19,554 head; do. last week 21,188 do.

Live corn fed 15@6 per 100 lbs.; country dressed pork light, 8⅛@8⅜c.; medium, 8@8⅛c.; heavy, 7⅜c.; city dressed Western, 7⅜@7⅝c.

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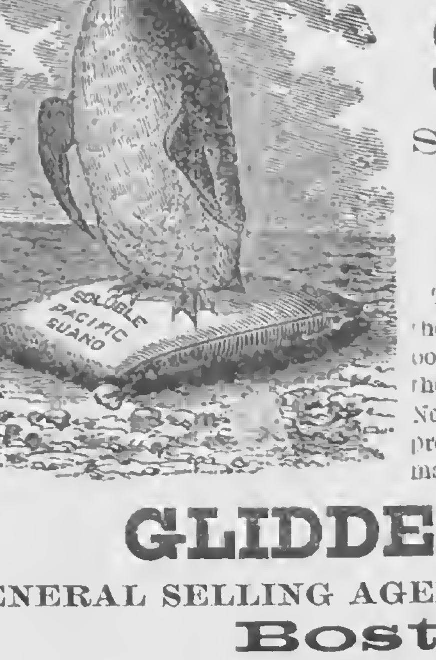

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Boston, Mass.

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 19.

HENRY STEWART.

Rotation of Crops.

WHY does a farmer change the crops of each field every year, growing first clover and grass and then corn, then oats, and lastly, wheat or rye, and again seeding down to clover and grass? It is because he knows that these crops succeed better when thus grown and that he cannot grow the same crop every year on the same ground, with profit. There is a good reason for this. It is because the nature of each of these different crops is not the same; that one seems to rest the soil, that clover actually leaves the soil better than it was before, besides adding to it in the shape of roots, stems and leaves, a large quantity of valuable plant food for the corn which follows it; that the culture of the corn kills a vast quantity of weeds and cleans the ground, and prepares it for the oats and wheat; that after the oats have been grown the soil has given up to that crop all the strength it possessed, and that it then requires help to restore it. This is given by the manure and fertilizers used to prepare for the wheat or rye and the clover and grass after it, and that by this treatment one can go on year after year, for a whole life-time, growing crops and then leave his farm still fertile and useful for his children, who may do the same, to be followed again by their children.

This method of culture is called the rotation of crops, and the usual rotation consists of the four crops mentioned, viz., clover and grass, corn, oats and wheat. This is called the four course system. Some farmers add other crops and so lengthen the course with great benefit to the soil; because in the four course system there is too much grain and too little fodder for feeding cattle and making manure, without which good crops cannot be grown. There are also not enough of the renovating crops, as those are called, in which either the soil is manured or rested, and restored, or in fact renewed in strength and power to produce the other crops which take more from the soil, and are therefore called exhaustive. For the principle at the bottom of this system of rotation is chiefly this: that the farmer must follow an exhaustive crop with a renovating one; that is, one that is hard or difficult to grow with one that is easy, and so give the soil an opportunity to recover before its strength is taxed too much.

Much injury has been done to many farms by an unwise neglect of this precaution and crops of wheat and corn have been grown year after year, until the soil has been made unable to produce enough to pay the farmer for his labor, or to support him and his family with comfort. It is in this way that farms have been worn out and people have been forced to go further west to get new land, that the same wasteful practice may be followed. Now that the west is becoming filled up and the best lands are occupied, this can no longer be done, and farmers are obliged to follow a more skillful practice and are forced to study more carefully the nature of their business that they may make their farms more productive.

The feeding of cattle and sheep is the most important part of the farm work and the growing of feeding crops therefore needs to be made a special study by the young farmer. A rotation then which can be made to include the largest number of feeding crops is the best. A seven course rotation is sometimes practiced in which clover and grass are grown one year for hay and a second year for pasture followed by corn, oats, roots (either turnips or mangels) barley, clover for hay, and wheat on the clover sod, followed by grass. This rotation has many advantages. It has two cultivated or cleaning crops, corn and roots; two sods plowed under, and four feeding crops, viz., corn, roots and two hay crops. Where it can be followed it enables the farmer to keep a flock of sheep or to keep cows and a dairy which is one of the most profitable and pleasant parts of farming, and gives the girls an agreeable opportunity of adding to the income of the farm and to their own resources, by making butter, as well as finds employment for the boys which is not so laborious as the constant raising of grain. When the rotation is chosen, the farm is divided into fields to suit the course, five for the four course, in which there are two in grass at the same time; and eight for the seven course rotation.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

The Water.

"I am so thirsty," said Daisy one morning, as she took a cup to the hydrant in the kitchen sink.

"Oh, come out to the *olla* and get your drink," cried Violet. "The water is so much cooler there than it is in the pipes."

So Daisy followed, obediently, to the wood-shed, though, as she afterward said, she had not the remotest idea whether an *olla* belonged to the animal, vegetable, or mineral kingdom. It proved to be a huge dark-red jar which was set in a wooden frame work and covered closely. Violet lifted the cover and dipped up a cupful of water for Daisy. "How nice and cool it is!" she cried as she drank hastily. "But what a queer arrangement for water!"

"So I thought when I first saw one," replied Violet, "but I don't know how we could get along without ours. We don't use it much in Winter, but in Summer the water in the pipes gets so warm that it isn't fit to drink unless you let it run a long time, while that in the *olla* is almost as cold as ice-water."

"Don't you have ice here?"

"Oh, yes; they make it in Los Angeles; but we have never used any, and you will be surprised to find how little we miss it."

"But why should the water be any cooler here than in a pail?"

"Because the *olla* is very porous, and if it is where the breeze can strike it, the water is cold. That is all I can tell about it. If you want more philosophy ask Bert or papa."

"Why don't you have it down on the ground?" inquired Daisy, who was curious to learn about this strange earthen vessel which made ice-water needless when the mercury stood far up in the nineties.

"Because the bottom is round and it won't stand up alone. The Mexicans make them in all sizes, from the little ones that hold a pailful to those as large as this, but they are all made after the same pattern. Some people suspend them from the limb of a tree, and claim that the water is cooler, as the *olla* is set in motion by every breeze. But ours is so large that that plan would not be practicable. I suppose it is because the ware is so porous that they break easily," continued Violet, as she pointed to the top of the *olla*, where a piece was broken from the edge. "That is some of Bert's foolishness. Boys think they know so much! Bert said it was not in a good place, and the water would be ever so much cooler if it was changed; so he undertook to move it alone one day, and the result was that he hit it against something and nicked that piece out. And the fun of it was that when papa found it out he had it taken back to its old place, so my learned brother had his trouble for nothing. But don't stay in the wood-shed all the afternoon when it is so much pleasanter outside. I know—let's go up to the reservoir; you haven't been there yet."

"Very well; only tell me the name of this jar once more."

"*Olla*; and you pronounce it in this way, *ol-ya*."

"*Ol-ya, ol-ya*," repeated Daisy, as the two girls went into the house for their hats.

"Where does all this water come from?" she asked a few minutes later, as they slowly walked along.

"From springs in the hills over there," answered Violet, pointing to the range of foot-hills seemingly at the base of the mountains, though in reality miles of uncultivated land intervened. "The stream flowing from the spring is piped to the reservoir, and from there to the different places on the Alhambra. And the water is so nice and soft, I don't think you could find better if you searched the State over."

They soon reached the reservoir which was circular in form, and nearly full of water. The bank of earth which surrounded it was flat on top, and up the girls climbed for a walk around the basin.

"People often think that is an artesian well in the centre, but it is only the water flowing from the main pipe that supplies the reservoir. There is the waste-pipe at the side, and you can see the water is nearly up to it."

"How much trouble it saves having the water piped into the house."

"Yes, there it is in the kitchen and bath-room and all we have to do is to turn the faucet. In this respect, we are better off than in the East, for there we pumped water from both the well and cistern; and yet some of our friends imagine we live in the backwoods, and pity poor Mrs. Erman who is wearing out her life in that uncivilized country!" concluded Violet with an upward turn of her nose.

"They had better bestow their sympathy on some one who needs it," laughed Daisy.

"But you mustn't imagine that all the people in Southern California have the water piped in their houses. In many places it runs for miles in open ditches or *zanjas*, as they are called. And then the people have such a time with the water in Summer. They have to take it when they can get it, whether or not it suits their convenience. I know a gentleman who had to irrigate on Sunday because his turn happened to come that day; but it certainly was a case of necessity, for a great many of his trees were wilting, and it would have been four or five weeks before his turn came round again. But the best of it was that he is a minister, and while he was preaching his morning sermon his boys were irrigating; and when he came home he took off his Sunday clothes and went to work with the others. Now, when papa wants to irrigate, it is only necessary for him to notify the *zanjero* a few days beforehand, and when the time comes he opens the hydrants and goes to work."

"Who or what may the *zanjero* be?" inquired Daisy.

"The man who takes care of the reservoirs. There are three besides this one, so I imagine he finds plenty to do. There he comes on horseback, with his shovel on his shoulder."

The girls descended from their lofty post of observation and turned their steps toward Rose Cottage.

"Everything is so beautiful and green now it don't seem possible that in a few months all this will be brown and bare," reflected Daisy, as she pointed to the fields of barley and *Alfileritta*, or native grass."

"You will find it quite possible this Summer," rejoined Violet. "And the reason why is because that land does not belong to the Alhambra, and has no water right. Its owner raises barley on it in the rainy season, but it stands idle in Summer, as he has no means of irrigation. And the Alhambra was in the same condition until water was found for it—good for nothing but Winter crops. A man may own thousands of acres, and yet his property will not amount to much unless he has a fixed water right with it."

Having reached the entrance to their place as she gave utterance to this opinion of weight, Violet challenged Daisy to a race to the barn, where they were going to hunt for eggs. "I declare," she panted, as she reached the door a trifle in advance of her friend, "California air is doing wonders for you! I shall have to look to my steps if I don't want to be left behind!"

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PROBABLY nearly all of the cousins have now received the seeds which have been sent to them. In the large envelope will be found seeds of the beautiful Japan Red Bud, and also a package of Crimson Dwarf Celery seed. I will give full directions next week as to cultivation.—U. M.

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Miscellaneous.

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BULBS Seeds, Plants,
5 pkg's flower seeds,.....25c.
5 good Gladioli,.....10c.
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Over 1500 distinct varieties. All strong Plants, each labeled, delivered safely by mail. Largest assortment. Low prices. In business 27 years. *Guarantee satisfaction.* Stock comprises *all desirable varieties.* Only mature plants sent. Our new Illustrated Hand-Book, sent free, contains name and description of each plant, with instructions for successful cultivation. *Don't purchase plants elsewhere before sending for our new* All lovers of *flowers* should have our HAND-BOOK Every buyer of *cheap plants* should have it. Every one wanting *new* and *choice plants* should send for our *Hand-Book.*

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P.&K. **Extra Early Tom Thumb Sweet Corn**, the earliest and sweetest grown; are good size, sweet and tender, and a good cropper; will yield more salable ears than any other sort. Per pkt., 10c.; per quart, 50c.; by mail, per ½ bush. $1.50; per bush., $3.00.

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"HAWLEY'S" Choice Onion Seed.
WARRANTED FRESH AND GENUINE

Early Red Globe	Pk't. 10c.,	oz. 25,	lb. $3 50
Wethersfield Large Red	" 10c.,	oz. 25,	lb. 3 50
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Egyptian Earliest Beet	" 5c.,	oz. 10,	lb. 75
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English Potato Onion Sets (Express),	peck $2;	bu.	8 00
Hawley's E. H'rf'd E. F'y Peas,	" " $1.75;	"	7 00
Little Gem Dwarf, Extra Early,	" " 2.00;	"	8 00
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If by mail, *in quantities of* ½ lb and upwards, postage at the rate of 16c. per lb must be added. *Catalogues free to all.* Wholesale Trade List, for dealers only. Address,
R. D. HAWLEY,
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By mail, BEST, 35c. each; 3 for $1. Cuttings, warranted to grow, 10c. each. W. A. SANDERS
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PLANTS for the million, at prices to suit the million. A superbly illustrated book, "SUCCESS WITH SMALL FRUITS," with a very liberal offer. ☞Catalogue sent free.
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GRAPE VINES.
All leading varieties in supply. Warranted true to name. Prices low. Also the celebrated NEW WHITE GRAPE, PRENTISS. Also trees, small fruits, etc. T. S. HUBBARD,
FREDONIA, N. Y.

PERSONAL ITEMS.

President Garfield's mother will go back to Mentor in May.

Pincess Dolgouroukl has about $30,000,000 to her credit in the Berlin banks.

Ex-President Hayes is said to be employing his leisure in writing a history of his administration.

Miss Ida Lewis, the heroine of Newport, R. I. who has saved the lives of so many drowing persons, cannot swim.

Mr. M. H. De Young turned his back upon San Francisco as soon as the verdict of acquittal in the Kalloch case became known to him. He is now in Washington.

Mr. Edward Scheffiein, one of the mining millionaires, was once a "mule-puncher" at Tough-Nut, Prescott and other camps. One day while at Camp Huachuca, he announced his purpose of starting out to make a fortune. "Oh, yes," replied a bystander, "you'll find a tombstone." Scheffiein soon afterwards "struck it rich," and named the now thriving camp Tombstone. His first act after making the strike was to settle $100,000 upon his mother.

[Detroit Post and Tribune.]

I have a little girl, said Mr. Henry Dole, of this city, in a conversation, who was troubled with a severe lameness in her legs, pronounced by some Erysipelas, by others Rheumatism. I had tried several remedies without effect, when I was induced to apply St. Jacobs Oil and I am happy to say that the use of but one bottle cured her, and she is now able to go to school again.

Stock and Poultry.

40 Clydesdale Stallions

AND MARES—Mostly Imported.

60 Hambletonian Stallions,

AND MARES OF THE FINEST BREEDING.

Largest Herd of

HOLSTEIN CATTLE.

With largest milk records in America.

Separate Catalogues of each class of stock with milk record of cows. Denote which is wanted.

☞ Correspondence solicited.

SMITHS & POWELL,
Lakeside Stock Farm,
SYRACUSE, N. Y.

HOUGHTON FARM JERSEYS
FOR SALE.

Address MANLY MILES, M. D., Mountainville, N. Y. The herd is led by RAMAPO, whose mother, EUROTAS, has a record of 788 pounds of butter yield in one year, and the Queens MYRA and LASSEDITH, who brought the highest price at the Kellogg sale in 1880.

DR. MANLY MILES'S Book on "BREEDING" will be forwarded on receipt of price $1.50, or it can be obtained at the office of the ORANGE JUDD CO., 751 Broadway, near Eighth Street.

EGGS FOR HATCHING

From all the varieties of Poultry—Brahmas, Cochins Hamburgs, Polish, Leghorns, Plymouth Rocks, Langshans; Rouen, Cayuga and Pekin Ducks. Our Plymouth Rocks and Pekins have never been beaten. Eggs, carefully packed, from our prize birds, $1.50 per 13; two or more settings at $1 per 13.

SMITH & BRO., STONY BROOK, N. Y.

EGGS FOR HATCHING.

Light Brahma, Duke of York Strain, Plymouth Rock, Bishop & Ayers Strain $2.00 for 13, or $3.50 for 26. Warranted to hatch well.

C. S. COOPER, Schraalenburgh, N. J

Miscellaneous.

BOWKER'S
HILL AND DRILL
PHOSPHATE

SEND FOR PAMPHLET.

This is a true bone superphosphate, and may be used *on any crop*, in the hill or drill or broadcast, either *with* or *without* manure, and will produce a much earlier and larger crop. In the Report of the Mass. Inspector of Fertilizers, its valuation is from $3 to $10 per ton higher than other Phosphates which sell at the same price. The past year over 3000 tons were sold against 100 tons three years ago, showing that it is liked by the farmers. If there is no local agent near you, send to us.

Also for sale OCKBRIDGE MANURES.

BOWKER FERTILIZER CO.
BOSTON & NEW YORK

ENSILAGE.

THE
ROSS GIANT CUTTERS

FOR ENSILAGE AND LARGE STOCK RAISERS

Of immense

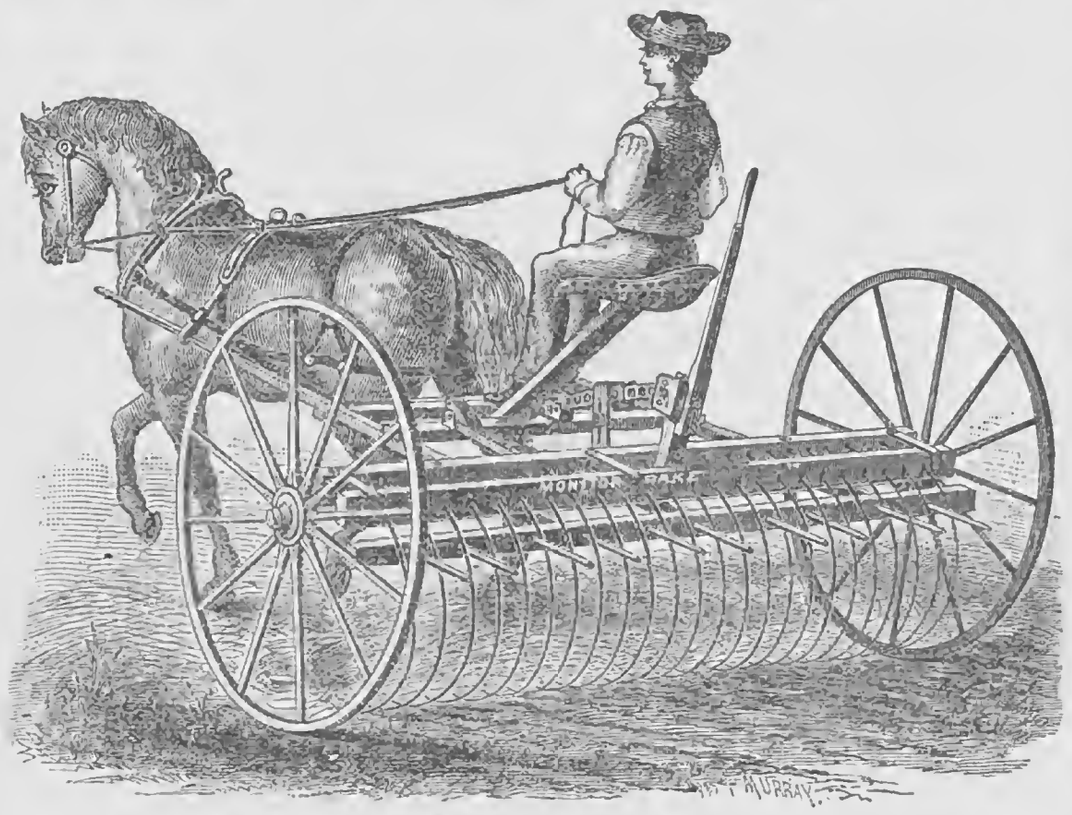
Size, Weight, Strength & Capacity

Guaranteed the best Cutter for the business. Send for Circulars to

E. W. ROSS & CO., Fulton, N.Y.

Implements and Machinery.

The Monitor Self-Dump Rake.



Of all the Rakes that I ever saw rake, I never saw a Rake rake as this Rake rakes! That is what they all say.

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COMMON SENSE ENGINE.

Simple, durable, of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3 horse power, $275; 5-horse power, $300; 7-horse power, $375; 10-horse power, $500. These engines fully guarranteed in every respect. Address Common Sense Engine Co., Springfield, Ohio.

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CHANNEL CAN CREAMERY.

Deep setting perfected. Gets all the cream in less than ten hours, with ordinary well or running water, or in two hours with ice water, with less than half the ice called for by any other process.

AGENTS WANTED. Send for Circular to WM. E. LINCOLN, Warren, Mass.

PENNSYLVANIA LAWN MOWER.

1881

Surpassing all others and pronounced **the** *best*, lightest, runs more easily, cuts longer grass, is more durable, requires less repair, cuts grass more smoothly, is less liable to obstruction, is of handsome appearance.

Penn. State Agricultural Society says: "It will, we believe, wear longer, do the work better, with less labor than any other Mower. One of the peculiarities is that it will cut higher grass than any other Mower."

Send for Illustrated Catalogue. Every machine warranted. Address

LLOYD, SUPPLEE & WALTON, Phila'a, Pa.

FISK'S AUTOMATIC SEED PLANTER

PLANTS WITH THE PRECISION OF A HOE

All the ground a person can walk over in a day.

THE EASIEST TO HANDLE AND THE FASTEST HAND PLANTER IN USE.

Every Planter fully warranted and satisfaction guaranteed. Inducements on samples this season. Send for circular. WALLACE FISK,
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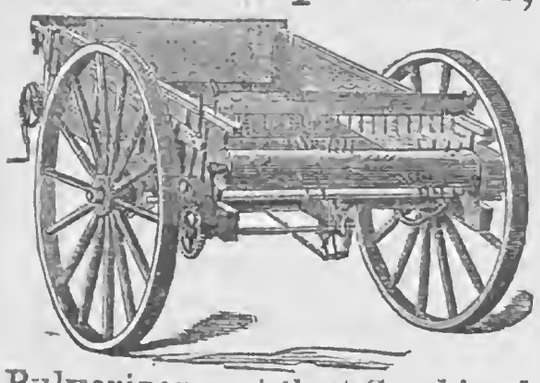
Vanderbilt Bros, No. 24 Fulton St., Agts. for N. Y. City. Hamlin Johnson, Providence, R. I., Agent for New England.

BEST WASHER AND WRINGER

in the world. Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of washer, $8. Sample to agents, $3.50. Price of Wringer, $7.50. Sample, $4.35. Circulars free.

ERIE WASHER CO., Erie, Pa.

KEMP'S
Manure Spreader,



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A new Farm Implement equalling the Mowing Machine. For particulars and illustrated circulars address KEMP & BURPEE M'F'G CO.,
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HEEBNER'S
LEVEL TREAD
HORSE POWER.

WITH
Speed Regulator.

Heebner's Improved
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"UNION" FEED CUTTER, CIRCULAR AND DRAG SAW MACHINES, &c.

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HEEBNER & SONS, Lansdale, Mont. Co. Pa.

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UNION RAILWAY
Horse Powers.
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These Powers are *guaranteed* to produce more Power with *less elevation* than any other Railway Power.

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Also Manufacturers of Premium Farm Grist Mill

NOYES' HAYING TOOLS.

FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

Save Labor and Money.

Are Simple, durable and cost but little. No trouble in getting over high beams, or to the end of deep bays. Hundreds are in use.

Anti-friction Hay Carrier. Grapple Fork.
Wood Pulleys, Floor Hooks, etc.

Send for circular and designs for tracking barns to U. S. WIND ENGINE & PUMP CO.,
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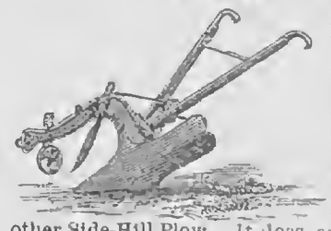

Manufacture this Plow of the *best Car Wheel Iron*; also of *Patent Hard Metal*. The beadles vibrating from one side to the other as the plow is turned at the end of the furrow, enables the plowman to walk squarely behind the plow—a feature not possessed by any other Side-Hill Plow. It does as good work as any Land-Side Plow. For further particulars and prices send for our new *Illustrated Catalogue*. Address

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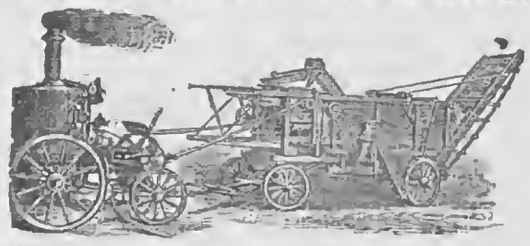

Threshing Machines
ENGINES & HORSE POWERS.

Grain Threshers, unequaled in capacity for separating and cleaning.

Combined Grain and Clover Threshers, fully equal to regular grain machines on grain, and a genuine **Clover Huller** in addition.

Engines, positively the most desirable for Lightness, Economy, Power and Safety. Boiler has horizontal tubes, and is therefore free from the objectionable features of vertical boilers.

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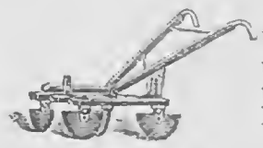

Half discs of steel. Will not break by contact with solid obstructions. Easily adjusted. BEATS THE WORLD. Address,

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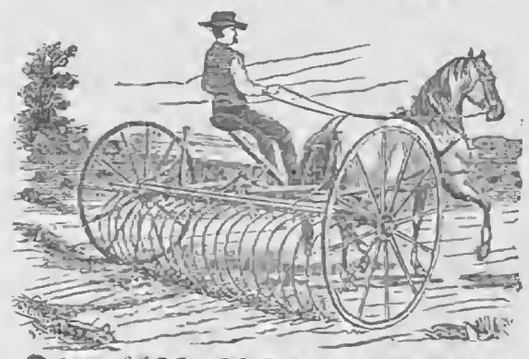

SULKY HAY RAKE.

This rake is very simple in its plan, and durable in all its parts. It has no ratchets, springs, or friction devices for dumping, which are liable to break or get out of order; and for ease of handling, and for doing good work, is unequaled by any hand dump Sulky Rake in the market. Send for circulars. Address

GREGG & CO., Sole Manufacturers.
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Also Manufacturers of Lawn Mowers, Plows, &c.

SEYMOURS SOLID STEEL SHEEP SHEARS

H. SEYMOUR CUTLERY Co. HOLYOKE MASS

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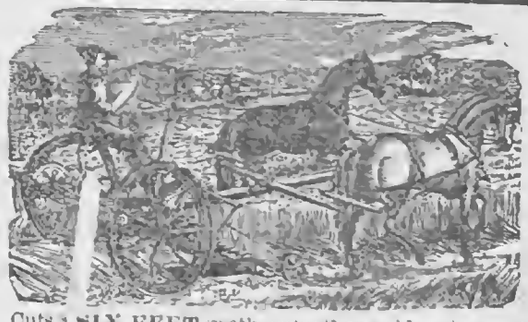

Cuts a **SIX FEET** swath easier than a side cut mower cuts four feet, and leaves the cut grass standing light and loose, curing in half the time. **Send for Circular.**

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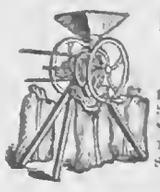

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Over 25,000 Now in Use.

Every Machine is fully Warranted. Price of Mills, $15 to $35. Shellers, $5. Don't buy a Mill or Sheller until you have seen our terms and Illustrated Circular. Address, with stamp, LIVINGSTON & CO.,
Iron Founders, Pittsburgh, Pa.

THIS IS THE

VICTOR Double Huller Clover Machine that beat the Hiebards, Monitor, Jr., and the Ashland Clover Hullers in a scientific test at the Toledo, O., Fair, Sept. 13th and 16th, 1880, in the presence of 30,000 Farmers and Threshermen of the West.

Committee's Report mailed free. 284 Victors sold last year.

HAGERSTOWN AGRICULTURAL IMPLEMENT MFG. CO.,
State where you saw advertisement. Hagerstown, Md.

Causes of Nervousness.

The maladies which above all others cause nervousness, are dyspepsia, biliousness and constipation. The great sympathetic nerve which connects the epigastric region with the brain, is always injuriously affected if the stomach and bowels are disordered; a permanent derangement of the functions of those organs reacts by sympathy upon the entire nervous system. Hostetter's Stomach Bitters, in restoring tone and regularity to the digestive apparatus, and overcoming constipation, permanently remedy the nervous complaints which originate in alimentary weakness or or disturbances. They are the very best nervine that can be used. By eradicating the exciting causes of nervous weakness, they permanently overcome the disability itself. But this is not all. By checking the maladies which cause nervousness, they build up anew the system weakened and depleted by nervous disease.

MAST, FOOS & CO.

Has no joints—made entirely of Iron

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Manufacturers of

BUCKEYE WIND ENGINE.

STRONG AND DURABLE.

AUTOMATIC **GOVERNOR.**

ALSO THE

BUCKEYE FORCE PUMP.

Never freezes in Winter. Send for circular and prices.

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Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.
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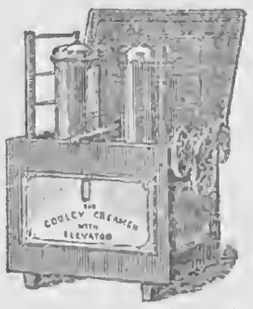
COOLEY CREAMER.

GOLD MEDAL, PARIS, 1879.



Butter made by this Process was awarded **Sweepstakes** at International Dairy Fair, 1878, and **Gold Medal** at same Fair, 1879.

Gold Medal at Royal Agricultural Exhibition, London, 1879.

MANUFACTURED IN FOUR STYLES and TEN SIZES.

THE REGULAR.—The cans in this, removed to bench for skimming automatically

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They require no milk-room. They raise all of cream between milkings. Impure air, dust or flies cannot reach milk set in them. The cans are submerged and water sealed in each style.

Each style has transparent panes for the purpose of determining when the milk is out, and cream about to flow. Our patents cover these processes.

No others have a right to use them.

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THE WOOSTER
CREAMERY

Perfect in Principle and in Operation.

Can be used with LESS ICE and LABOR than any other Creamery now in the market

For Circulars address

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Rectangular & Square **BOX CHURNS**

Cheapest and Best.—No inside fixtures, and *always reliable*. Six sizes of each kind made. Three sizes of the Lever Butter Worker made. Best material used, and every Churn and Butter Worker warranted exactly as represented. One Churn at wholesale where we have no agent. Send postal for Circulars.

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BOSS SICKLE GRINDER.

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No complicated Gearing. One man can do the work of two, and turn out a better job. The winner of First Premium wherever exhibited. Send for Illustrated Circular and Special Discounts to

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FACT.

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For Hunting and Target Practice, at all ranges, the "MAYNARD" more completely supplies the wants of Hunters and Sportsmen generally, than any other Rifle in the world, as many barrels can be used on one stock; and for accuracy, convenience, durability and safety, is not excelled. Send for Illustrated Catalogue describing the new attachment for using rim and centre-fire ammunition.

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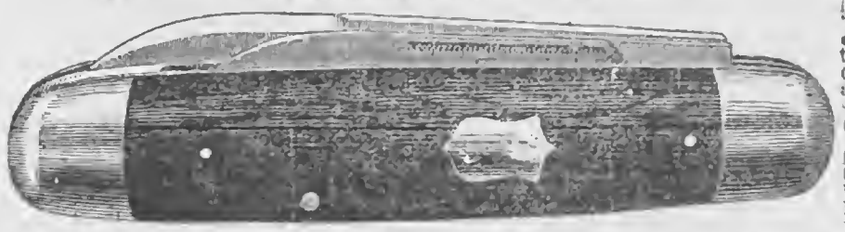
OLD FASHIONED HAND FORGED RAZOR STEEL KNIFE.



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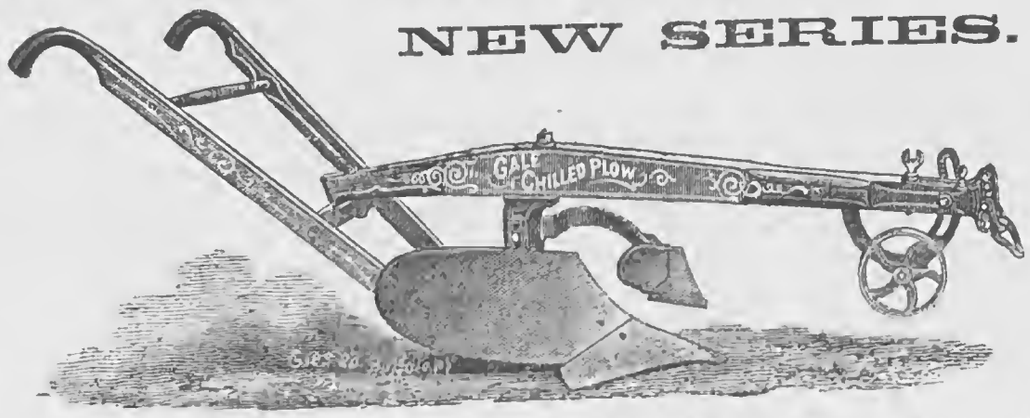
NEW SERIES.



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"OUR NEW SERIES" OF CHILLED PLOWS,

In *sizes* and *styles* for *two* and *three* Horse—Right Hand and Left Hand. **"Our New Series"** have the style of *wooding*, as above in cut. The beam shifts *independent* of *Jointer*, therefore its *adjustment* is *quick* and *simple* with line of *Draft* always direct. Its *Jointer*, improved with *Wrought Iron Arm*. New Mode of Attaching to the *Plow Standard*, and any *pitch* desired given Jointers and *Coulters*. Call on your Agent are absolutely "Anti-Clogging," and are justly called the *King of Jointers* and *Coulters*. 164 West Main St., Rochester, N. Y., for one, or address Gale Manufacturing Co., New York State Headquarters.
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SENT FREE | Treatise on improved methods. Tables yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa

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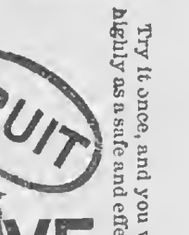

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BOSTON & NEW YORK.

THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Pomological.

PEACHES.

From Notes Taken at Maturity.

T. T. LYON.

BERGEN'S YELLOW is by no means a recent variety. I fruited it in Eastern Michigan more than thirty years since, and found that there it maintained its Eastern reputation for unproductiveness. The cause of this defect, as in the parallel case of the Susquehanna and some other varieties, seems not to be a deficiency of fruit buds; but rather a lack of hardiness, resulting in the winter-killing of a large portion, if not the whole, of the crop, even when most others escape unharmed. The foliage is unusually large, rich and glossy; and the tree very vigorous and abundantly hardy. I have never seen the genuine variety at the Lake Shore, although the name frequently appears in the lists of cultivators. The fruit, when produced, ranks with the very best of its class.

REEVES'S LATE YELLOW.—The tree of this variety, as it comes to us from Eastern sources, is hardy, vigorous, rather upright, with large, strong foliage and reniform glands. It bears abundantly. The fruit is large, roundish, pale yellow and bright red, dappled with dark purplish-red in the sun, with slight, dingy pubescence. Flesh, yellow, red at the pit, rather firm, yet melting in texture, juicy, sprightly, vinous, subacid. It ripened, the past season, at the close of September and the beginning of October. In size and character it is much like Early Crawford, and even more beautiful and desirable, with only the doubt whether it can be ripened perfectly, here, in unfavorable seasons. In spite of such doubt, however, since such seasons are of rare occurrence, I esteem it one of the most promising recent introductions, especially for market purposes.

SILVER MEDAL is another recent introduction from the Atlantic peach district. The tree is a vigorous grower, with broad, strong foliage, and leaves almost serrate. The fruit is of fully medium size, roundish, white, or faintly reddened in the sun, slightly pubescent. The color of the flesh is clear white, free from either red or brown at the pit which is light brown. Its firmness and moderate juiciness qualify it well for market handling; while its flavor is "very good." For canning or drying, when a white flesh is desired, I regard this as one of the best. It is, however, rather late for certainty in this climate, ripening at the end of September and beginning of October.

GUGEON'S LATE is another late, pale-fleshed peach, which comes to us from Ohio, with a local reputation in the vicinity of Cincinnati. The tree is strong, rather spreading in habit, with large crenate foliage and reniform glands. The fruit is large, round, greenish-white and dark red, with a very slight pubescence. Flesh white, slightly red at the pit. Texture fine-grained, tender, juicy; and flavor vinous, sprightly, pleasant; season, quite late—beginning of October.

STEADLEY is another recent introduction from the East, ripening with the above—about the beginning of October. Fruit medium to large, roundish ovate, creamy-white, with spots of red in the sun. Flesh dingy-white to the pit, firm, juicy, mild, rich. Should it prove adapted to our seasons, I regard it as a very desirable variety both for family and market purposes.

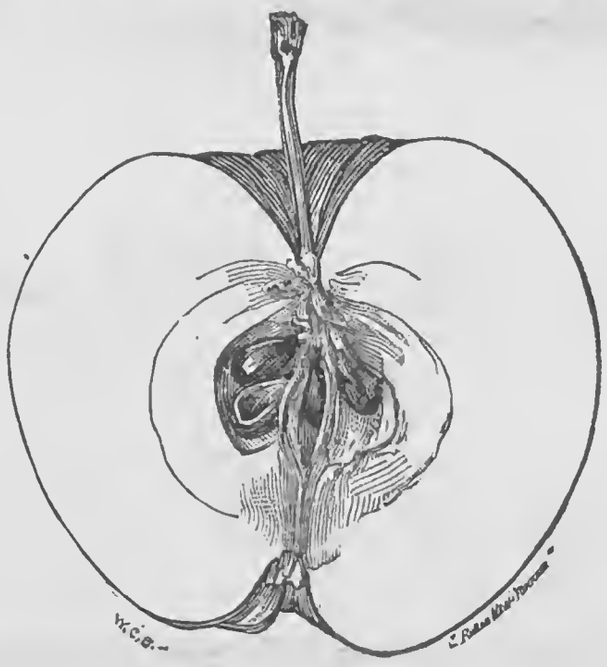
VARIEGATED FREE.—In preparing a notice of this peach some time since, its history had escaped my recollection. It originated with the late Isaac Pullen, of Hightstown, New Jersey. A figure and description by the editor (Peter B. Mead) will be found in the Horticulturist for September, 1863, from specimens received from Mr. Pullen.

SEEDLING JOE APPLE.

PETER B. MEAD.

SIZE, small, sometimes nearly medium. Form, oblate, with unequal sides. Color, red, striped and splashed with darker and lighter shades, with occasionally a little green and russet. Calyx, closed in a moderately deep, medium-sized basin. Stem, long and slender, inserted in a deep and rather open cavity. Flesh, white, slightly tinged with yellow, very tender, moderately juicy, with a sprightly and somewhat spicy flavor. Quality, very good. Season, early July to beginning of September.

The accompanying illustration is an excellent portrait of an average-sized specimen. The apple is a native of Westchester Co., N. Y., and is a seedling of the Early Joe. In fruit it also partakes somewhat of the character of the Summer Rose. The tree is a good grower and very productive, bearing in alternate years. In addition to its earliness, it is one of those tender-fleshed, digestible apples that commend themselves to those who regard the apple as an article of food rather than something to please the palate, and in its season we have none too many such.



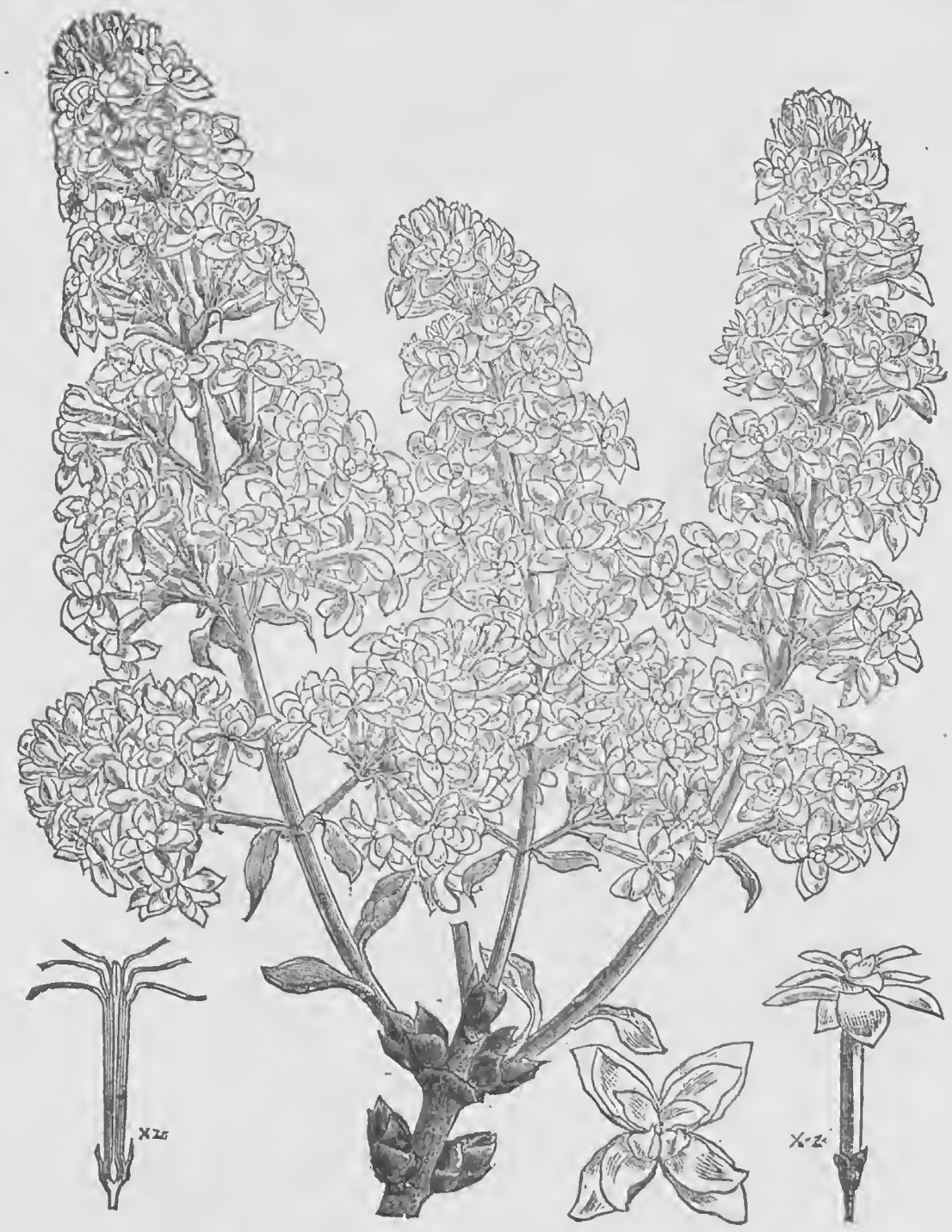
SEEDLING EARLY JOE—FROM LIFE.—FIG. 219.

EARLY JOE.—This apple succeeds best in Kentucky and Louisiana of the South, and fairly well in Georgia, Utah, Kansas, Iowa, Missouri, Illinois, Penn., New Jersey, Ohio, Indiana, Michigan, Ontario, New York, Mass. and Vermont. In quality it is rated "best." It ripens in late Summer.

Floricultural.

A New Double Lilac.

WE are glad to see anything that is likely once more to bring the beautiful but neglected lilac into notice. Some time ago we spoke of the double lilac, of which we are now enabled to place before our readers a cut re-engraved from the London Gardeners' Chronicle. It is called Lemoine's New Double Lilac. It is now in the hands of William Bull, the famous London seedsman—and will, no doubt, reach this country the present season. The flowers are said to be very double, as shown. There is at present a double lilac offered by some of our nurserymen—the flowers of which bear a double row of petals. It is said to be "neat and pretty and valuable for cut flowers."



LEMOINE'S DOUBLE LILAC—Fig. 220.

STARTING SLIPS.

As I have been very successful in growing plants from slips, I will send my method:—

I take common prairie loam and heat it in the oven to kill all larvæ; then, while this soil is cooling, I cut my pan of slips, using a thin, sharp knife, and taking great care not to crush, squeeze or mar the stems of the slips or cuttings. I use shallow boxes, as extent of surface and ease in moving are of much importance. A raisin-box will do, or even a cigar or fig-box; I have used them all with equal success.

Then, with my box of earth standing on the table, I empty my pan of slips beside the box. I have a four-bladed pen-knife, which is my only divider, pruner and trowel. With the largest blade, which is quite sharp, I cut the slips about two and a-half inches long for salvias, coleus and heliotropes, trim off all of the lower large leaves, letting only one full-grown leaf and the small ones remain. In cutting off the leaves, be very careful not to clip or shave the stem. Cut the leaf-stalk, or petiole, only. In dividing the main stem into slips I usually cut at or near a bud or axil, so that the base of each slip shall be a bud or joint, where young rootlets are observed to start soonest.

Having cut and trimmed eight or ten slips—enough for one row across the box—then with my knife I make an opening in the soil by inserting the blade straight down its full length; then, having pressed the earth towards me slightly with the side of the blade, a space is opened wherein I slowly slip down the cutting, remove the blade, and gently press the earth back against the inserted slip. In this manner the whole box is quickly filled. A medium-sized raisin-box will give space enough for 100 or more slips. I filled one last Fall with 108 slips, and all are now growing except three.

When the box is filled with slips it is then sprinkled with lukewarm water; this sprinkling of the leaves several times each day is continued till they begin to turn or grow towards the light, when I find by observation that all sun-seeking leaves have roots formed or started. I used to pull up my slips to see if the roots were formed, but now I watch the leaves; if they turn towards the light I am satisfied that roots are there without seeing them. Slips need plenty of fresh air, and if the

leaves are kept sprinkled they can stand in the strong sunlight; still it is better to give a mild light for the first day or two. Whenever a warm, gentle rain is falling, I always carry out my boxes of slips and set them in a safe place to enjoy the rain, and they reward my trouble by living and growing vigorously.

Momence, Ill. L. A. R.

CORCHORUS.

It is impossible in a great crowd to pay a formal tribute to every friend one sees. So in the immensity of horticultural collections some valued plants can only gain notice here and there and now and then. I have in a corner a pair of Prairie Roses, and growing up with them is a plant with similar but more slender, long, green twigs resembling compound leaves, and rose-like flowers that are bright yellow. But for these floral buttons of gold the plant might almost be taken in the Summer as a curious offshoot of the roses. It is, in fact, a near relation, being of the same great botanical family—the Rosaceæ—and of the same branch of it with spiræas, potentillas, strawberries, raspberries, etc. Three or four spiræas, too—red and white—are growing as a fronting to the group, hiding the bare stems of their taller relatives the little Callosa alba and Filipendula feathering down to the surface. When I planted the green-twigged companion of the roses it was called Corchorus, but it seems that it should be called Kerria. It comes from Japan, and I have since had the pleasure of an introduction to, and possession of, a dwarf variety of it with leaves of elegant figure, marked prettily with shaded green and clear white. This has the merits of equal hardiness with the type and of preserving its pleasing variegation bright and pure through all weathers to the end of Summer. I am told there is also a golden variegation of the Kerria, but I have not seen it. [It does not hold its variegation very well.—Eds.] I mean to put in slips of this pretty thing for fronting some beds of evergreens. It disposes itself naturally in a round, bunchy tuft. I think it will be better used as a "row of buttons" round a bed of shrubs than the Euonymus radicans, which resembles it, but is stiffer in its attitudes. I have used the Golden veined Honeysuckle as a continuous mass of low foliage in front of a bed of evergreens, with very good effect, and now I want to try silver. The Kerria is the more interesting when one knows that the jute fiber, which has become of late such a great item in the world's industries and commerce, comes from a species of Corchorus which also has long green stalks, reaching unbranched to an altitude of 10 to 15 feet, thus yielding a very long and even, as well as tenacious fiber, the cheapest that is known. This is grown in tropical countries, and chiefly in Bengal. Besides its use for the strong, coarse gunny cloth, the finer parts are used for shirtings, etc., and to mix with flax, wool, cotton, and even silk. W.

Horticultural.

RURALISMS.

In a recent number of the Rural there is an allusion to the supposed identity, by some, of the Burbank and St. Patrick Potatoes. I have seen it stated elsewhere in the most positive manner, that they are identical. How this identity is arrived at and established I do not understand. I had the potatoes from the original sources, and I never saw anything about them to arouse the least suspicion that they were identical. I think an examination of the skin, eye, flesh, and average size of each will lead to a different conclusion, to say nothing of the manner of growth. So, too, it is asserted quite as positively (and at this early date too) that the St. Patrick and the White Elephant are identical. [The difference in the time of ripening alone would settle such a question.—Eds.] And yet they do not grow alike, do not set their tubers alike, and their eyes are not alike, or my eyes are all wrong. I had my White Elephant also from original sources, and I cannot see where the identity comes in. All three of these potatoes resemble some other kinds much more than they do each other. It must be that the parties who see these identities have not the true kinds. But is it not pretty nearly time to begin to reduce the list of potatoes? What is the use of so many when they only serve to bother investigating minds?

H. T. J., in the Rural for April 9, expresses his regret that so little has been said about the Cut-leaved Weeping Birch. I hope it will be some sort of pleasure to him to learn that I agree with him in all he says in regard to its beauty. I cannot at this moment remember a tree that has greater claims for a conspicuous place on the lawn. I not only give it such a place on the lawn, but sometimes when the case will admit of it, put one on each side of the entrance gate, where they grow into exceedingly graceful trees, and make a pleasing first impression on entering the grounds. They serve another and a useful purpose when thus located: there will scarcely ever be a night so dark that their silvery-white trunks will not distinctly point out the place of entrance. They are lovely guide boards of Nature's own making. I, for one, am grateful to the Messrs. Ellwanger & Barry for having introduced and made known this very beautiful tree.

Years ago I pursued almost precisely the same plan as Gen. Noble in improving the sweet corn, and with similar results. At the end of six years I could rely upon three and four ears to a stalk, and I still have a handsome piece of silver to show for it. When this improved corn was distributed, however, no care was taken in the selection of the seed by those into whose hands it fell, and, in consequence, it gradually deteriorated. Let it be understood that such corn as I saw at the Rural Farm last Summer cannot be long grown without careful selection of seed and good cultivation. Improvements in corn made by selection can only be maintained by selection; and the same remark will apply to some other things as well as to corn. Gen. Noble's article is timely and to the point. If this matter of selection were carefully and generally observed there would be more frequent occasion to praise and less to condemn.

I like Mr. Wysor's criticism on the word "hillside," and all that it implies and involves. It is well taken, and excellent in manner, and I like it not only for this reason, but because it shows that farmers are not only becoming more careful cultivators of the soil, but also more careful cultivators, so to speak, of the terms used to express what they do and what they see.

If the Editor will put his tomato stakes in the ground just as he does, and then, instead of laths or sticks, use tarred twine in their place as the plants progress in growth, he will have a neater arrangement and save some time and labor. The tarred twine can be put around the stakes as soon as set, making a single hitch at each one, or it can be cut of a proper length, rolled into a ball, and put around as the plants increase in growth, and they will need but little other tying. Forgetting the hammer nine times out of ten led me to the tarred twine or marlin. The plan, whether laths or tarred twine be used, is, as the Editor says, an excellent one. Like him, I have never used an upright trellis that suited me.

It may not be improper for me to say, in reference to growing the Thunbergia on the ground, that I first received the suggestion from Mr. Charles Downing. I make the statement because I do not wish to take to myself credit which does not belong to me. I only varied the practice by confining the plants to a bed; but they may be grown on the ground elsewhere just as well. Horticola.

STRAWBERRIES AND THEIR NAMES.

"What's in a name? That which we call a rose by any other name would smell as sweet." The *newest* thing to me among strawberries is the nomenclature—and some of the names *are* fresh, very fresh—Imagine a scene like this:

(Young lady customer admiring some very fine berries.) "Beautiful! What is the variety?"

(Boy clerk.) "Them is Shirts."

(Young lady.) "How?"

(Boy clerk.) "Shirts."

(Young lady.) "Oh! Carl Schurz."

(Boy clerk desperate, but bound to be accurate.) No. ma'am, "S-h-i-r-t-s."

(Young lady.) "Oh—ah!"

(Young lady's face, boy-clerk's face, and innocent little box of Shirts all of one color.)

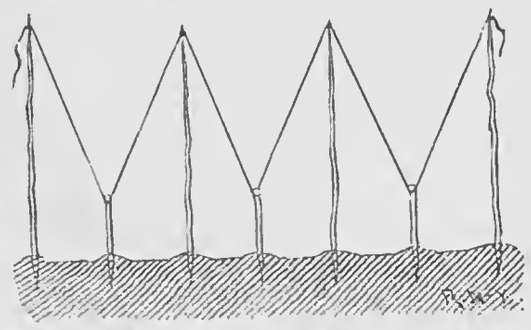
This reminds me of an incident of last Summer, that is encouraging to those who are growing fruit for market and take a pleasure in supplying the finest berries. Meeting a city friend whose taste had been previously "educated" by an afternoon spent at our place feasting on some of the choicest kinds, he wanted to know why growers didn't label the varieties they marketed to the storekeepers. He was sick of eating sour berries, and had discovered that there was a difference in strawberries; if berries were only labeled he would know which to buy. I had just stored away in my pocket the proceeds of a few crates of Monarchs and Jucundas, for which the magnificent sum of seven cents a box had been received, and was a little taken aback, but getting my hand into my pocket and grasping my wallet for reassurance, I replied that I was contemplating, if the price didn't fall off more than six or seven cents a box, throwing in a chromo lithograph with every box next season.

But, in truth, is it not an encouraging sign when customers begin to discriminate? Poor, pitiable city folks! What poor stuff they eat in the way of fresh fruits and vegetables! Many a man carries home from the market wilted, mashed and dried up berries (quite likely as good as can be bought there), who has unoccupied land enough at home to supply his table daily with berries as much better than those he can buy as cream is better than skimmed-milk! So they live, pitiable people! smacking their lips over poor, wilted berries, hardly ever tasting a berry in its delicious freshness; but if they wont read the Rural, what can we do for them!

A friend who retails many of my berries had often told me that his customers still liked the Wilson better than some of our choicest varieties; they bought the large and handsome ones because of their attractiveness, but after all preferred the flavor of the Wilson. At first I thought it a clear case of "depraved" taste; but I find the people are quite correct in their opinions. The truth is, nearly all of our finest berries rapidly deteriorate in flavor after picking, while the Wilson improves. Picked an hour or two before eating, nine out of ten people would prefer any of the choicer varieties to the Wilson; but if the berries be kept until morning, the Wilson will be preferred by the majority. Now, what is wanted for a market berry is one of large size, good color and form, as productive as the Wilson, but of better flavor. Customers are beginning to discriminate and will appreciate fine flavor. We have berries early enough and late enough and large enough; for home use we have plenty of handsome, superb delicious berries; but now we want for market one that will be of *good flavor when picked and just as good twenty hours afterwards.* When the "coming" berry comes, Mr. Editor, be at the christening and don't maim it with a name.

Rochester, N. Y. "Bannockburn."

Stringing Pole Beans.—I would like to tell the Rural readers my way of stringing pole beans. I planted the beans four feet apart each way, set a pole and stake at each alternate hill, and ran some strong cord from the end of the stakes to the top of the poles.



Method of stringing pole beans.—Fig 221.

By this means only half the amount of poles are required, and the effect is very fine if the beans are planted at the back end of a garden. Last season I planted white and scarlet runners—commonly called Dutch runners—and they were the admiration of all who saw them. A. W.

Field Crops.

TOBACCO CULTURE.—NO. 8.

G. A. GOFF, JR.

The Curing of Tobacco.

That the proper method of curing seed-leaf tobacco, and the correct mode of managing sheds in regard to ventilation while tobacco is being cured, are not generally known is shown by the conflicting opinions that exist on the subject among tobacco growers themselves. It is not unusual to find tobacco growers of wide experience who virtually disagree with regard to the manner in which the tobacco barn should be managed during the process of curing the tobacco. It is an important subject and one which deserves the closest attention from tobacco growers, for in a great measure the quality of the cured leaf depends on the manner in which it is cured. Color is an important element in the quality of tobacco, and it is only by proper curing that good colors can be obtained. The inexorable law of fashion at the present time demands rich, dark-colored wrappers for covering fine cigars; hence the importance of knowing how to obtain them.

As the natural laws which govern the curing of tobacco are not as yet generally understood, I cannot give *facts* in this part of my paper. The best I can do is to state my *beliefs* along with those of our most experienced and successful growers. It is a well known fact that tobacco in a given section in certain seasons cures with an exceptionally good color, varying only with the various conditions and qualities of soils, and, somewhat, with the kind of barn in which the crop is cured. At other seasons in the same section the color of the tobacco will be generally poor. The cause of such variations has not as yet been satisfactorily explained. It is the general belief that rapid drying tends to produce light colors, and the reverse, dark colors; but the difficulty lies in so governing the process that the curing shall be slow and gradual and yet escape the dreaded "pole-burn." After tobacco has been hung a few days in the curing barn it begins to sweat, or show considerable moisture on the surface of the leaves or stems. This, I believe, is a critical period and the time when pole-burning is most likely to occur. If this moisture dries off well there is less after-danger, yet it should not dry too rapidly for the best results.

In order to test the relative difference between rapid and slow curing, I selected two tobacco plants of equal size and in equal stages of development and hung them up at the same time, one in a dry, airy loft, where the drying was very rapid; the other in a damp cellar, where the curing must necessarily proceed very slowly. The result of the experiment proved a decided gain in favor of gradual curing—at least as far as color is concerned. The color of the leaf hung in the dry loft was very light, and, on the whole, very undesirable, while that in the cellar was a rich dark brown.

Undoubtedly much depends on the weather in the curing of tobacco. It is a well-known fact that in certain seasons tobacco in a given locality cures with too light colors. At other seasons a general complaint is heard among growers that their tobacco is pole-burnt. These variations of quality are probably owing to the general character of the weather during the curing process, or they may occur from the character of the growth of the plant. If the weather produces the colors, we might prevent danger either from too slow or too rapid curing by some artificial means. The loss in this section during some seasons from pole-burning unquestionably amounts to many thousands of dollars. This loss I believe might be avoided if our growers knew just how and when to produce artificial ventilation in their curing barns. We need to know at just what stage of the thermometer and barometer the burning begins and how to secure ventilation to avoid it.

Notwithstanding the fact that the subject of tobacco curing is not thoroughly understood, much can be done to regulate the process, tending towards the desired object. As a preventive of pole-burning the tobacco should not be hung thick. From 20 to 25 pairs of plants should be hung upon a 14 foot pole, the number varying somewhat with the size of plants and the distance they are hung from the ground, as the higher up they are hung in the barn the more rapid is the drying.

The method of managing the ventilating doors followed by our best growers is to keep them tightly closed in dry or windy weather and to open them freely when the air is moist or the weather is what is termed "muggy." It is during this muggy weather, when little air is stirring, that the pole-burning is most likely to commence, hence at such times it is advisable to admit as much air as possible, and to close the barn correspondingly tight during dry, windy weather.

MANGOLDS. EXPERIMENTS.—1880.

PROFESSOR I. P. ROBERTS.

Notwithstanding the marked success of some in the preservation of green fodder in silos for Winter feeding, there will still be a great want felt by the small farmer at least, for some succulent cattle food to give tone and health to his animals during the long, hard Winters. All things considered, nothing so perfectly meets that want in most parts of the United States as the mangold. The grasshopper damaged the experiment crop of 1879 and therefore I do not consider the results as reliable as they would otherwise have been. If they taught anything it was that Norbiton's Giant is a more productive variety than the Yellow Globe and that but a slight increase is produced by the liberal application of commercial fertilizers.

Fertilizers.

No.	Variety of seed.	Fertilizers per acre.	Yield per acre. Tons.	lbs.
1	Norbiton's Giant.	481 lbs. Pacific Guano Phos.	14	160
2	" "	No fertilizer	14	480
3	" "	480 lbs. Swift-Sure Phos.	12	1280
4	" "	No fertilizer	14	1680
5	" "	480 lbs. Sulphate of Ammonia	12	1120
6	" "	240 lbs. Sul. Am. 240 lbs. P. G. Phos	16	320
7	" "	No fertilizer	15	1200
8	" "	480 lbs. Plaster (Gypsum)	14	480
9	" "	Results of duplicate plots. 480 lbs salt.	18	860
10	" "	Results of duplicate plots. No fertilizer	15	160
11	" "	12 cords Farmyard Manure	20	800

The following are the results of *duplicate* plots. They were *all* treated to fairly rotted farm-yard manures at the rate of 12 cords per acre.

No.	Variety of Seed.	Yield per acre. Tons.	lbs.
12	Imperial Large Red	23	340
13	Carter's Warden Prize Yellow Globe	29	880
14	Yellow Globe	24	100
15	Norbiton's Giant	25	280
		Tons.	lbs.
The largest yield of any single plot in the experiments with varieties was produced by Carter's and gave		33	1520
The smallest yield was Yellow Globe		23	720
	Averages.		
Average yield of the four phosphated plots		13	970
" " of the four adjoining unfertilized ones		15	75
" " of nine plots treated to farm-yard manures		24	1777
One plot rotted		18	860

It will be noticed that the yield of Norbiton's Giant this year, as well as last, is larger than that of the Yellow Globe. The greatest yield of any single plot (Carter's) was 15,360 pounds per acre greater than that from the Norbiton's Giant plot, which was the next highest. Superphosphates, instead of increasing the yield, appeared to diminish it, not through any inferiority of the superphosphates, but owing, as I judge, to the excess of lime in the soil, which causes them to pass quite back into their original insoluble condition.

My experiments already point to the fact that superphosphates do far more good the second year than the first on *our land* and on all lands that have an excess of lime. This points towards the economy of using phosphoric acid in a form not too soluble. This explains, I think, why no increase of yield is produced by the application of these fertilizers. The actual diminution is caused, without doubt, by the phosphate taking up the moisture that the seeds require to cause them to germinate. There has been entirely too indiscriminate use of superphosphates, and if the scores of experiments with them conducted at the University, in which not one in a score has given any marked increase, are studied carefully, I trust it will induce more farmers "to prove all things," and in spite of flaming hand-bills and persistent agents, "hold on only to that which is good." I believe the superphosphates applied to lands rich in lime are far from being lost, and it is merely a matter of dollars and cents whether these expensive fertilizers can be applied profitably when the returns come in so slowly.

It should be taken into account, in arriving at conclusions, that the superphosphates in the above experiments cost but about one-third as much per acre as the farm manures. The farm-yard manures cost very nearly $2 per cord. This is expending $1 per ton for fertilizers alone, and adds quite largely to the cost of the roots, but it must be remembered that this land is now in a condition to produce, in an average season, 35 bushels of wheat or 80 bushels of corn per acre. My former experiments lead me to expect that the superphosphated plots will fall considerably below this, but will show an increase over the unfertilized plots.

The salt appears to have had a marked effect, raising the normal yield of 30,160 pounds to 36,860 pounds. The continuous use of the amount named above on clayey land for three years caused it to become very hard and lumpy and quite unproductive. After experimenting with salt for seven years my judgment is that it is usually beneficial to almost any crop in a dry season, and may be used liberally on sandy, gravelly, dry soils, but should not be applied continuously, or in large quantities, on heavy or wet lands.

SATIN GRASS.
(Muhlenbergia glomorata)

This grass has no common name except those given in certain limited localities, and such names are of little value. One such name is "Wild Timothy," another "Satin Grass." It is a rather striking grass, quite easily recognized and to most people it looks as though it were valuable. I have often been asked to name it, and I am glad to see a good cut of it. It is indigenous to bogs, marshes and dry, sandy barrens, especially northward. Its presence is no indication of improvement in a marsh and no indication that our common grasses will grow in the same place. The grass is sparingly branched; the stem quite hard and woody, especially near the base. The panicle is contracted into an interrupted lead-colored spike about three inches long. Experiments testing its feeding qualities are not yet to be found in any of our books. I have never seen it growing anywhere in great quantity, the plants usually appearing scattered here and there among sedges and other grasses. PROFESSOR W. J. BEAL.

A Small Patch of Beets.

As a garden crop I find this quite profitable. I have always sown them quite thick, as the thinnings were in good demand for greens, but last season they were entirely worthless for this purpose, as there were worms in the leaves. They were hard to discover until the greens were cooked when small white maggots appeared so plentifully as to entirely destroy our appetites for beet greens. As soon as I found the beets were worthless for greens, I thinned out the bed, leaving the beets about three inches apart, I planted Egyptian Beets and Bastian Half-long Beets which I recommend very highly, the first for earliness and the second for quality. When the beets were about half-grown I pulled them and tied them up in bunches and sold them at a good, round profit. I then set the ground to cabbages, and they were a good crop. This Summer I intend to sow some of the early varieties late—about the 1st of July—to see if I can get a good quality of Winter beets. ADELBERT WAKEFIELD.

Sheep Husbandry.

MORE ABOUT WINTERING SHEEP.

J. S. WOODWARD.

The many questions of Mr. Wilson, of Fayette Co., Pa., which the RURAL refers to me, can best be answered by a short article which shall cover the various points.

BARNS.—Our barn is 76 by 82 feet, having an above-ground basement under the whole; this is divided into 16 pens or four rows of four pens in each row divided by two alleys In addition there is a lean-to 26 by 76 feet with a basement also, and the floor above is also used as a feeding floor. These are both divided into pens, giving sixteen more pens 11 by 18 feet, which are used for feeding and shearling lambs.

WATER.—The whole is supplied with a system of water pipes running overhead in the basement part and under the floor in the feeding-room above, and these pipes are supplied from a large tank elevated 20 feet and filled by means of a wind engine and pump. Water is drawn into a trough in each pen, which is four feet long, four inches deep and eight inches wide, and kept constantly full, as each cock is allowed to drip just enough for that purpose.

GRAINING.—The sheep are put into these pens just as soon as frost deadens the pastures and before cold weather, and are kept there constantly until they are ready for market. We commence to grain as soon as they are put into the pens, beginning with a very light ration and gradually increasing it until we feed all they will eat with a good relish. Nothing about us is ever allowed to go hungry to "lean a streak of fat." We mix bran, oil meal and corn together but have no fixed formula. Sometimes oil-meal is cheaper than bran and then we feed more oil-meal; and so if bran is cheaper we feed more bran. We find we can do very well feeding corn and oil-meal with a little bran, or corn and bran with a little oil-meal. The great fattener is corn, and the bran or oil-meal furnishes the albuminoids. Still we prefer all three in the mixture. At present we are mixing three bags of corn, two of oil-meal, and two of bran, having bought at last Fall's prices.

SPIKELET OF SATIN GRASS.—FIG. 223.

RACKS.—We use several styles of racks, and for some purposes we like one best and for another, another; but for general purposes we like a rack that is so made that hay or straw, roots and grain are all fed from the same place. For breeding ewes and lambs a rack having a slatted V-shaped place above for forage and at the bottom on each side a V-shaped trough for grain and roots, suits us best.

ROOTS.—We have no more trouble to teach the sheep to eat roots, than we have in the horse to teach children to eat sugar. There is no teaching about it—they take to them naturally. The lambs, if they can get at a mangel, will scoop it out and eat it long before they will eat hay. We feed mangels twice each day; they are cut with a root-cutter that scoops them out with a circular knife which breaks them all up into little pieces about as large as a walnut. A pen of 20 sheep to do well should have two bushels of mangels each day.

SATIN GRASS—MUHLENBERGIA GLOMERATA.—FIG. 222.

KIND OF SHEEP.—Of all the sheep we have ever fed, we like Merino grades best—they are quieter and will bear close yarding, and do much less fighting than other sorts. If we feed wethers we like them to be from three to five years old and to weigh, when put in, as near 100 pounds as we can get them. This class we do not feed all Winter, but we hurry them along to sell them in February or March to make room for our lambs, and we usually get them by this time to weigh from 125 to 130 pounds. Coarse-wooled sheep will not bear being put in such large flocks either in the barn or in the pasture after we have bought them and before penning time.

We feed a good many shearlings, that is, lambs coming one year old. Like grades produced by using a Cotswold or South Down buck with a Merino ewe, we can make these run over 100 pounds by March 15th, and find rearing them to pay us much better than wether feeding.

COST OF FEEDING.—It will cost to keep a wether on full feed, for grain, hay and roots, counting roots at four cents per bushel (which is more than mine cost), 50 cents per month, saying nothing about the attendance which is much more than offset by the manure. So, if we keep a wether four months, the advance must be $2. to get out even, or for five months, $2.50. We should be satisfied if we got our money back paying for everything that is fed, because we get such a large quantity of very excellent manure; but we have always done better, even in the worst years making a fair profit. But we find the rearing of Winter lambs much the most profitable. We often make the gain of ewes pay the entire cost of keeping and get the lambs, which sell for from four to six dollars each, as clear profit, and when we can do that it is a very money-and-manure-making business. But let me say right here, as little as some *learned* professors think of mangels, any man who attempts to raise early lambs for market without an abundant supply is a *fool*, however learned he may be.

LAMENESS.—It is possible to feed sheep so irregularly and carelessly as to founder them the same as a horse is foundered; but the most cases of lameness are caused by the pens not being well littered or by not keeping close watch over the sheep. If you see a sheep showing lameness, catch it at once and examine its feet and clean between the toes, and if there is any symptom of rot, separate the animal at once from the flock and treat it for foot-rot.

GENERAL REMARKS.—Feeding sheep requires more care than any other branch of stock-growing. To succeed you must have system and regularity and be punctual in all operations. The sheep know as well as a clock will tell when feeding time has come, and they want their feed just then, and if you wish to be successful you must be on time They should also be kept very quiet. Never allow a dog in sight of the pen, and don't show strangers around any more than courtesy requires. The great secrets of success are, variety of foods, plenty of roots, prompt care, warmth of barns, good ventilation, plenty of fresh water, cleanliness of rack and trough, quietness, and, above all, a *gentle, loving shepherd.*

Close Confinement of Sheep.

Having formerly had considerable experience in wintering sheep, I desire to express my concurrence, generally, in the ideas expressed by J. S. Woodward in the RURAL of Feb. 5, in relation to the above subject, and to state a fact in my own experience:—Somewhere about the year 1845, I had on hand some 250 fine-wooled sheep, which I purposed to attempt to winter. Some of them were rather old, and others feeble from other causes. I put up a temporary shed of posts and loose boards in the corner of the yard, and inclosed a small space in front of it for their feeding ground in fine weather. I selected 20 of the most feeble ones from the main flock, such as I judged were not strong enough to compete successfully with the stronger ones, and put them in that yard at the commencement of Winter, and did not allow them to go out of it once during the season, which was a very severe one. I was particular to furnish them with good hay, and a fair feed of roots, each day. The result was they actually gained in flesh finely all Winter, and all came out in the Spring vigorous and in fine condition. Had I allowed them to run at large with the main flock, no doubt I should have lost a majority of them. As it was, I did not lose one.

Oneida Co., N. Y. "CLINTON."

The Herdsman.

NOTES BY A STOCKMAN.

The fighting Irishmen at the noted Donnybrook Fair go on the principle of "whenever you see a head hit it; never mind if it is your own father's; he must look out for his own." I like to act on this principle. I want to tell the truth and let consequences regulate themselves as they may. I know the RURAL desires the truth should always be told. We must all stand on that foundation or we must fall.

THEREFORE I have to say that when the RURAL (March 19, page 193), in its column of Brevities says, "Cows' milk causes worms" in puppies, it inadvertently (and I know uniu-

tentionally) helps to give credence to a popular delusion. A great many farmers believe that worms are *caused* by improper feeding. The truth is that these parasites are *encouraged* in that way, but they proceed from eggs, as all other live creatures do, directly or indirectly, and these eggs gain admission to the animal's stomach in a natural way, and by no means spontaneously originate there.

THE internal parasites of animals are wonderfully numerous and varied. From the microscopically minute organisms known as *bacteria*, of which millions may be engendered in one ounce of liquid, to the huge tape-worms many feet in length, animals suffer almost universally, more or less. It may be safe to say that the lower animals are rarely free from internal pests of some kind, the eggs of which are picked up with the food or swallowed with the water. When the animal is in vigorous health and all its functions are in good order and the wastes of the system are discharged regularly, the parasites find no means of subsistence and are either starved out or merely maintain a sort of paralyzed existence. But when from any cause these functions are deranged, the parasites find their proper food in the abnormal matter then abundant in the system and thrive and increase enormously. It would simplify this matter very much if we could always realize that parasites of all kinds—animal and vegetable—are introduced from outside sources and never come from within. Then we should also realize the fact that they may be prevented by avoiding the sources from which they are introduced, and by maintaining the health of our stock.

YOUR correspondent "Buckeye," page 194, hits the nail squarely on the head, when he asks "is not salt a preventive of this calf-killer black-leg?" It is; and thus:—Black-leg is a parasitic disease. The blood is invaded by organic germs which deoxygenate it and leave it filled with carbon and black, just as it is found when the lungs cannot or do not exercise their functions and remove the carbonaceous matter from the system. These germs produce in the blood plants of a very low order, which increase with amazing rapidity and soon cause the blood to become unfit to support life. The germs exist everywhere, just as the germs of mold are universally prevalent. When an animal becomes diseased by indigestion, overfeeding, or starving, the blood becomes in the right condition for supporting these parasitic germs and they at once germinate and increase in it until it is fatally poisoned. Now, salt is a great help to digestion; it supplies the blood and all the secretions derived from it with an indispensable constituent. Further, it is an antiseptic and acts not only as a nutriment but as a medicine. So that "Buckeye" is right; but at the same time any other means of securing the healthful assimilation of food and the perfect excretion of waste matter from the kidneys and bowels, will act as preventives. Yet salt is indispensable.

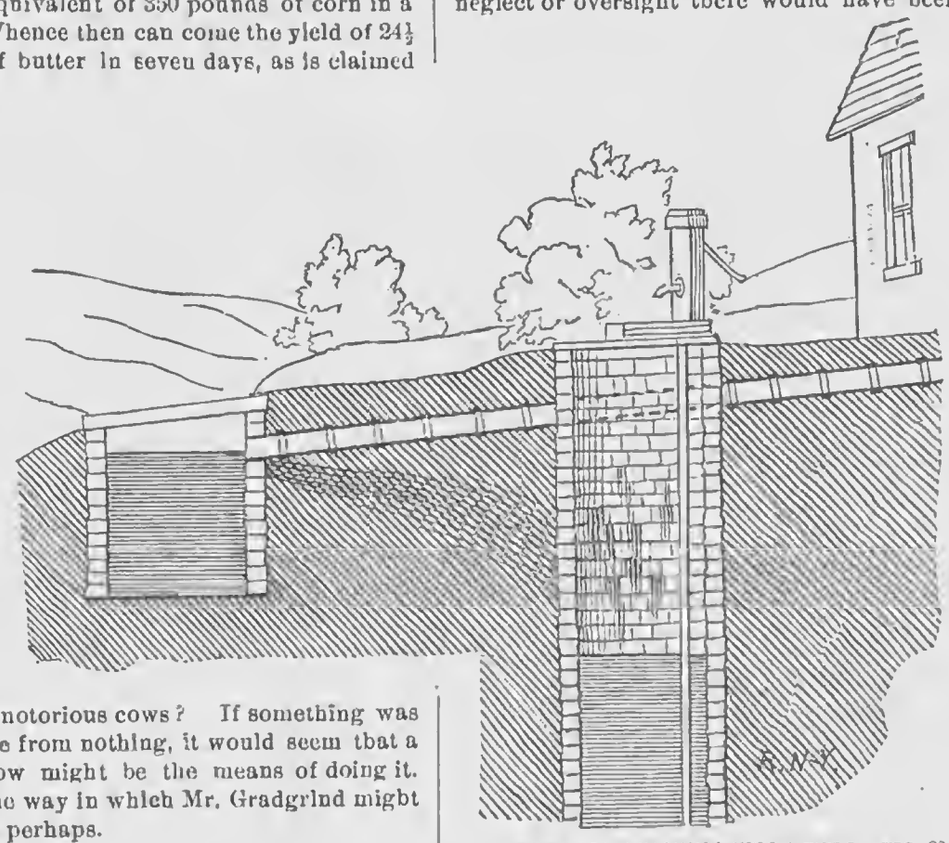
WE cannot believe too strongly, that perfect sanitary measures, both as regards feeding and cleanliness, are as necessary for the welfare of our domestic animals as they are for our own safety.

I AM glad to have the support of so trustworthy an authority as Mr. R. Goodman Jr. in my appreciation of our American Jersey, as also in my opinion of the value of judicious in-breeding for the building up of improvements in our live stock. In a recent contribution to a New England contemporary, he sums up his belief as follows: "The best Jersey cows living are in America. The best American Jerseys have the longest lines of American breeding behind them. We may expect to go on improving. It is to the prepotency gained by in-breeding that this improvement is due. A dash of entirely fresh blood is valuable." Mr. Goodman is undoubtedly right: but then unless this dash of new blood is of the right kind and is able to coalesce perfectly, harm may be done. And just here is the point where breeders too often hug the shore "and fear to launch away."

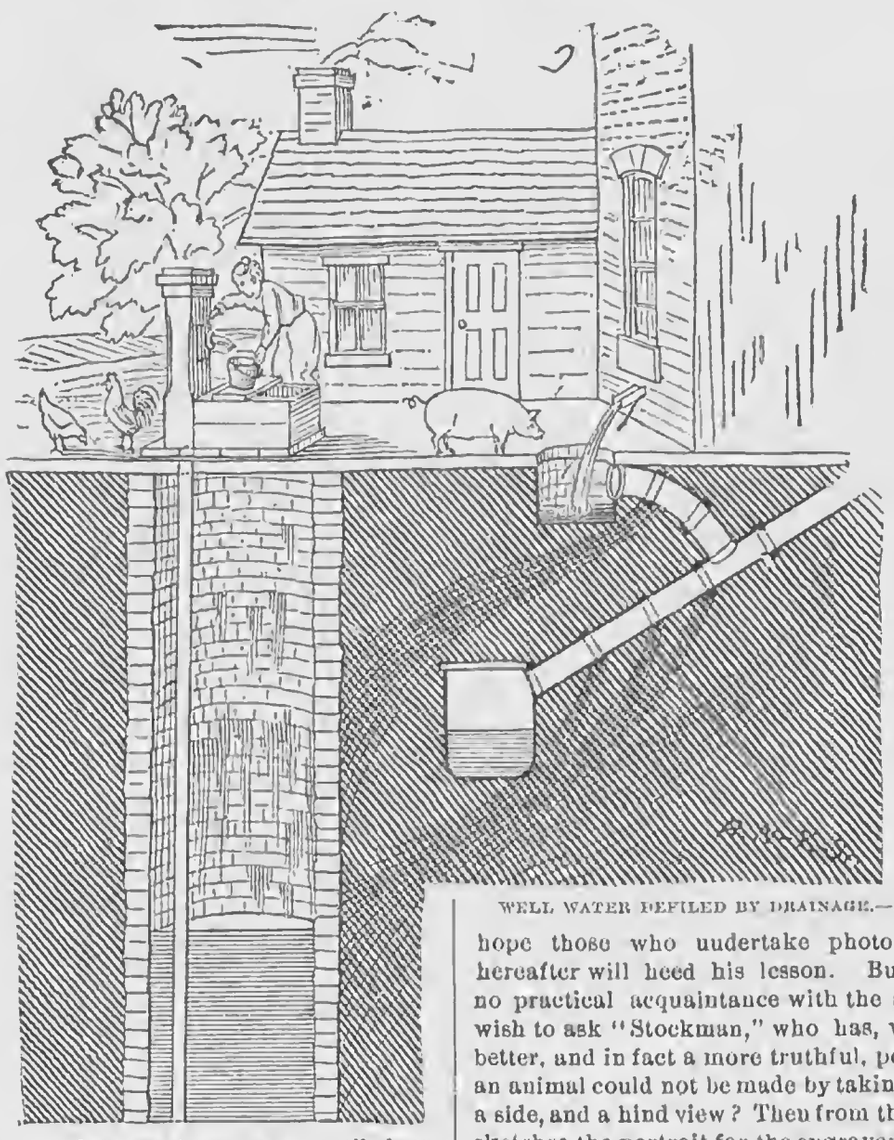
WHY will breeders continue to use words without meaning? What is the difference between a "thoroughbred" and a "full-blood"? As far as regards the meanings of the words, the two terms should mean the same. But "full-blood" is generally considered as really high-grade; six crosses at least of a thoroughbred. Many persons are misled by this use of the word "full-blood." If a Merino sheep or a Short-horn cow is admitted to entry in the Herd Books after six crosses of a thoroughbred, why is it not called a thoroughbred; and if not, after how many crosses does it become a thoroughbred and fit for use for breeding? This is a point that should be settled some time and when it is settled the misleading term "full-blood" will be no longer required.

A HUNDRED pounds of corn contain seven pounds of fat; and 1,200 pounds of hay, 24 pounds of fat. Now if a cow should turn a the fat of 350 pounds of corn or 1,200 pounds of hay into butter in a week, she might produce 24 pounds of butter in that time. If the starch of the food were used up to maintain the animal heat, and the nitrogen, in the waste of tissue and the production of milk, the fat *might* be turned into butter. But no cow ever eat the equivalent of 350 pounds of corn in a week. Whence then can come the yield of 24½ pounds of butter in seven days, as is claimed for some notorious cows? If something was ever made from nothing, it would seem that a Jersey cow might be the means of doing it. This is the way in which Mr. Gradgrind might look at it perhaps.

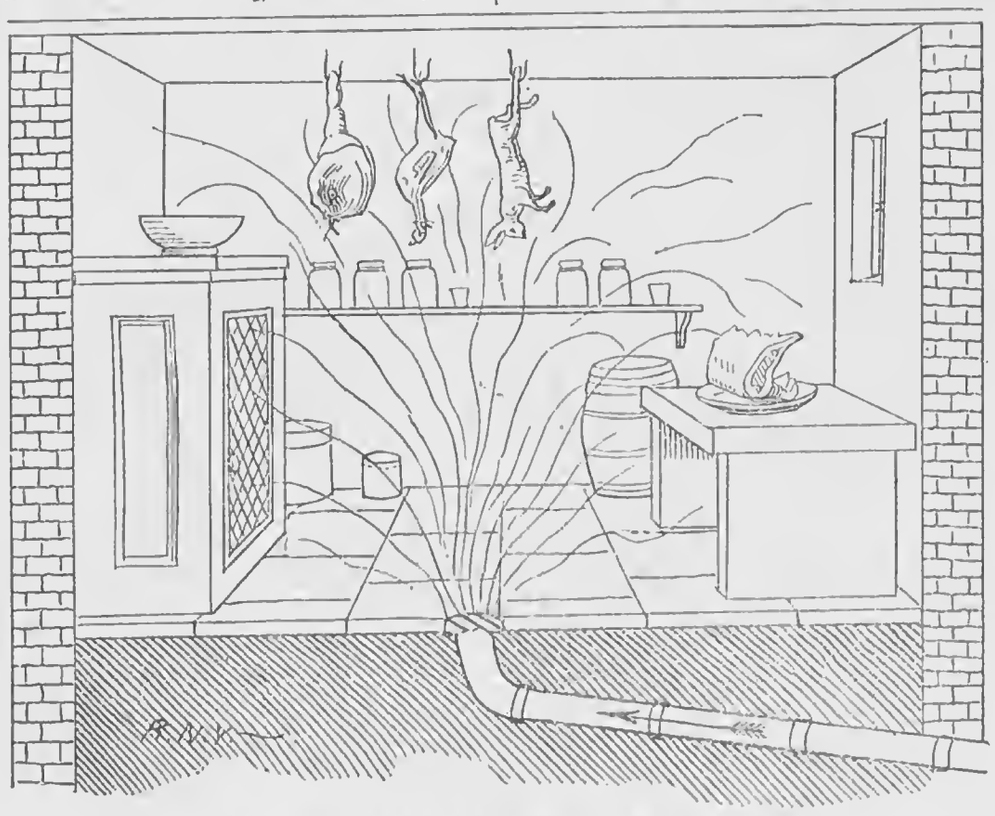
A cow is a delicate animal and the milk organs are the most tender part of the cow. A circumstance happened to me recently which shows how careful a dairyman should be with his cows. My cows are turned out into a yard for an hour at noon on fine Winter days only, and are there watered. By an oversight the cows were left out from noon until four o'clock, and one lay down on the frozen ground. The next day this cow fell off four quarts in milk. On looking for the cause, one side of the udder was found hard and inflamed and very tender. By immediate attention the disorder was remedied, but it was several days before the cow came fully up to her milk. The udder was gently rubbed with cosmoline (a preparation of petroleum) for 30 minutes and the swelling was removed in 12 hours. By neglect or oversight there would have been a case of garget, and no one would have known the reason. How many cases occur in this and other similar ways "unbeknownst."



A CESS-POOL LEACHING INTO A WELL.—FIG. 224.



WELL WATER DEFILED BY DRAINAGE.—FIG. 225.



FOUL AIR IN MILK AND PROVISION ROOM.—FIG. 226.

Animal Photography.

"Stockman" gave an interesting article on this subject in the RURAL of April 16, and I hope those who undertake photo portraits hereafter will heed his lesson. But, having no practical acquaintance with the subject, I wish to ask "Stockman," who has, whether a better, and in fact a more truthful, portrait of an animal could not be made by taking a front, a side, and a hind view? Then from these three sketches the portrait for the engraver could be made. It is well known that the point of an animal nearest the camera is usually given untruthfully; that is, in larger proportion than the one that is most distant. Now, by having three to draw from, taking the fore part from the first, the middle from the second, and the hind from the third, a truthful portrait would be insured. Now, as to the picture of Prince of the Realm, which "Stockman" exhibits as a sample of the way in which animals should be photographed: the hind-legs stand tolerably well apart, but it strikes me that the fore-legs are represented unnaturally close. It is possible, however, that I do not look at it aright. If not, I wish to have my error pointed out.

As to the bull itself, if this is a correct portrait, he has the great fault of a sway back, which I have rarely observed in this breed of polled cattle, although I have seen hundreds of them in Scotland. He is also somewhat short from the huckle-bones to the rump, and he has not a nice set of the tail. Do these faults characterize the living animal? A.

Hygienic Information.

CAUSES OF DISEASE.

MANY of the epidemic diseases, common to the country and city alike, are traceable to the presence of filth, in one form or another. The so-called "germ theory" throws much light on the causes, character and cure of such diseases as yellow fever, small-pox and diphtheria which are thought to be occasioned by the presence in the blood of certain minute, parasitic organisms which have their origin in filth, and which are capable of reproduction in the human system either by contagion or inoculation. The knowledge that these germs of disease, in many cases, enter the human system through the lungs or stomach, enables us to guard against them more effectually by taking precaution to remove or renovate the natural home where the cause of disease originates. The causes of much disease in the country, are the impure air arising from poorly constructed drains and ill-ventilated cess-pools, and the too close proximity of these drains and cess-pools to the wells from which water is daily used for drinking and culinary purposes. The accompanying cuts illustrate the point in question. As may be seen, the well is situated so near the house that the drainage from the kitchen sink and the cess-pool finds its way into it, defiling the water and making it the means of conveying disease germs to the human system.

Besides the almost unavoidable escape of the drainage into the wells, the cess-pool is a vast retort filled with foul matter and dangerous gases which often find no other means of escape than through the drain into the house. Better have the drainage delivered directly on the surface of the ground within 20 feet of the door than to have a cess-pool at that point. At Figure 226, is illustrated a milk and provision room, filled with impure air from an untrapped or unventilated sink. The "slops" and the washing of the floor, being thrown into the outlet, find their way to the cess-pool, but, as the cess-pool is not properly ventilated, the foul air and noxious gases find their way through the drainage pipe into the room, thus infecting the provisions and milk, making these unhealthful food. If, in the construction of drains and cess-pools, more care were taken as to their situation and ventilation, much disease and sickness would be averted. "An ounce of prevention is worth a pound of cure."

Miscellaneous.

A Cleanly Plan of a Cow Stable.

Always on the outlook for plans and suggestions that may be of use to our readers, we re-engrave for their benefit from a late issue of the Agricultural Gazette, England, the ground-plan of a cow stable represented at Fig. 227. The building, a portion of which is here illustrated, belongs to Mr. Tisdall, of Horton Manor, Epsom, about a dozen miles from London, and the firm of Tunks and Tisdall, of which he is the second partner, is one of the leading concerns engaged in supplying London with milk. All the arrangements and equipments of the structure are distinguished by neatness and thorough cleanliness. The cows stand on a bed of rammed chalk in front and of bricks behind, back of which runs a gutter. The entire arrangement is sufficiently explained by the engraving. Of course, in presenting to our readers various plans of farm buildings, etc., we neither expect nor advise that all or any of them should be followed exactly; but we do expect that the cuts will afford our friends useful ideas and suggestions for the construction of such buildings as they may from time to time require.

THE BUFFALO-BERRY.—A friend sends us a package of Buffalo or Bull-berry seed all the way from Fort Abraham Lincoln Dakota Territory, and says that if we succeed in growing it the plants will be quite ornamental, as the berries remain on nearly all Winter. There it is found on sandy soils, on which it appears to thrive better than on any other. The botanical name of this plant is Shepherdia argentea; it is of the natural order of Oleaster, and grows from 12 to 18 feet high, the fruit is usually scarlet and about as large as currants,

RURAL BRIEFLETS.

We have received a copy of Henderson's Handbook of Plants—a handsome volume of over 400 pages about ten by seven inches in size. The object of the work is to supply a dictionary of those genera and species of plants to which amateurs, or indeed professional, gardeners and florists or even farmers, have frequent occasion to turn as a book of reference. We have many such works—most of them, however, published in foreign countries and therefore not to be accepted as trustworthy guides in this country as regards methods of propagation and culture. In order to give the reader a more concise idea of Mr. Henderson's book, let us suppose he desires information respecting the Osage Orange. Not knowing or remembering the botanical name, he turns to Osage Orange (the arrangement is alphabetical), page 153. He is directed to Maclura, page 125. Here we find the following:

"Maclura—Osage Orange. Named after William Maclure, a North American geologist. Nat. Ord. Moraceæ. A genus of handsome, low-growing trees, generally attaining the hight of 30 feet. There are but three species included in the genus, two of which are common in the West Indies, and not hardy here, excepting in the extreme Southern States. M. aurantiaca, the Osage Orange, is a native of the Southwestern States and forms a spreading tree from 30 to 60 feet high, but easily kept dwarf by cutting back, and extensively used as a hedge plant in the Western States, for which purpose its rapid growth, together with its strong spines, renders it suitable. The wood is bright yellow and very elastic. It is called Bow-wood from its being used by the Indians for making bows. Young plants are grown from seed, which, if sown in good soil, will make very strong plants for the hedgerows in two years. Many prefer setting them one year from seed. This species is hardy in the vicinity of New York and is used for hedges and on the lawn."

Thus corn, wheat, oats and all field crops are treated as well as the leading vegetables, flowers, shrubs and trees of the garden or lawn. About 150 pages of the work are devoted to definitions of botanical and technical words, presented in large print. This handbook of plants is, in brief, a judicious selection from such books as Paxton's Botanical Dictionary, Gray's Manual, Chapman's Southern Flora, Lindley's Treasury of Botany, Miller's Gardeners' Dictionary and others, of much that is adapted to the needs of this country—re-written and presented in a compact and convenient form. We are glad to recommend this book as one which may well find a place in the library of all who are interested in plant life, let them be botanists, florists, gardeners or farmers.

Mr. Henderson is himself the publisher, and he has wisely made the price so reasonable that it should not stand in the way of the extensive sale it well merits. The book is announced in our advertising columns. . . . .

Those of our readers who have hardy vines to plant should not forget the beautiful clematis. There is no other vine that bears such beautiful flowers. They are borne also in great profusion and the colors range from lilac to deep purple—almost black—through all shades of blue, white and rose. . . . .

Nothing can be more striking in the floral way than arbors covered with clematis vines which bloom at the same time, bearing flowers the colors of which contrast the most effectively with each other. Arbors, however, are not necessary. They may be cultivated in flower beds the same as what are known as bedding plants, and left to trail and intertwine upon the ground. It is easy by clipping to confine them within the border. . . .

Among the best of the early bloomers bearing their flowers upon their old wood are Fair Rosamond, rosy-white with a reddish bar; Sophie, lilac; Stella, light violet with a plum-colored bar. Among Summer bloomers flowering on the old wood and bearing *double* flowers may be mentioned the Duchess of Edinburgh, pure white in color, and Fortune's Clematis (C. Fortunei), creamy white, sweet-scented and of a rosette form.

Among the later bloomers which bear their flowers upon short, lateral Summer shoots may be mentioned Clematis Henryi, bearing large (single) white flowers. We have measured them over six inches in diameter; C. Lawsoniana, rosy purple, and C. Symeiana, lavender blue. Clematis velutina purpurea bears flowers—and many of them—of the darkest color of any with which we are familiar, being of a blackish mulberry. This and Jackmanni bloom from late July to October. Jackmanni is of an intense blue or violet and is not yet surpassed by any of the newer varieties. .

A good deal has been said first and last of the Thermal Belt of North Carolina in these columns. A subscriber, Mr. A. Braman, living upon the side of the Tryon Mountain, writes us that peach buds have been damaged by frost owing to the cold, backward Spring. According to Dr. McAboy, who lives at the foot of Tryon, this has not occurred before in many years. . . . . .

Mr. Braman also writes us that he uses wild grape roots upon which to graft the cultivated varieties. . . . . .

We have received quite a number of letters criticising our remarks in opposition to barb-wire fences. One of these comments is as follows: "I think you will find yourself mistaken in regard to barb-wire fencing. As far as my experience goes, stock will let it alone and you cannot *drive* them on to it. If my farm were fenced with it, the snow would now be all gone, as there would be no drifts. As it is, the drifts are from one to three feet high." . . . . . .

We do not profess to speak from experience, and merely wish to arrive at the truth for the benefit of our readers. . . . . .

Among the many pretty annual vines seeds of which may be sown now, the Balloon Vine, Cypress Vine, Loasa, Sweet Peas, Nasturtiums (Tropæolum), Canary Bird Flower and Morning Glories may be mentioned. The Adlumia cirrhosa is excellent for rockeries or hot situations the first year, low-growing and fern-like as it is. It is a biennial and does not grow to vine or bloom until the second year. This is the Mountain Fringe of the rocky hills from Canada to North Carolina.

What Others Say

Mr. Mills, of New Jersey, uses covers of two-inch-thick spruce plank, tongued and grooved for his silos as covers for the ensilage. These in length are two inches shorter than the width of the silo and they are made in sections but four feet wide. As the ensilage is used, the covers are removed one by one, each exposing a surface four feet wide. Mr. Mills, according to Harper's Weekly, weights down these covers by distributing on the top of the planks fifty tons of grain or ground feed in bags, which he afterwards uses to mix with his ensilage at the time of feeding. He suggests in case grain is not handy, that barrels be filled with gravel or sand and used for the same purpose.

A thoughtful article in the Husbandman of Elmira reviews somewhat the services of previous Commissioners of Agriculture and the general inefficiency of the Department up to the time when Gen. Le Duc was appointed, four years ago. The article concludes as follows:

"Now with a new President there comes a cry for change of Commissioner. There are politicians to reward, and the places are coveted. Let it be noted that farmers are not asking that Gen. Le Duc be removed. On the contrary, they have spoken by thousands and tens of thousands in behalf of the present incumbent. They want him retained. The National Grange, a representative body, comprising members from every agricultural State of the Union, has made a formal request in writing, to which is appended the signature of every member of that body, for the retention of the present worthy and efficient chief of the Department of Agriculture. Other societies, clubs and associations founded on agriculture have repeated the request. Will their prayer be heeded? Will President Garfield remove the man who more than any other on this continent is approved by the farmers for great service rendered? The question is full of interest, not free from anxiety. Manifestly the country desires that Gen Le Duc be permitted to carry to their fruition plans inaugurated in behoof of an industry shamefully neglected in the past by the government that derives from it its chief support. Farmers so desire, if their voice is truth, as it must surely be since their representative bodies have displayed great interest in maintaining the efficiency of a service now for the first time in the history of the Department exerted with the specific object of promoting agriculture. The score or more of aspirants for the place redeemed by the present occupant from merited disgrace, have each local support—none of them more in a broad sense—while Gen. Le Duc is earnestly supported by good men in every agricultural community throughout the land. With what effect time will reveal. Let us hope that the disheartening influence of change may be averted by a timely declaration by the President, that merit shall be recognized, and the good servant approved.

To talk of any wheat being "virtually rust-proof" is nonsense, says the Mark Lane Express (London). Rust, like the potato-disease, will attack any variety of its host plant, though some varieties are less hospitable than others. For instance, a wheat with extra hard chaff-scale and straw offers greater resistance to rust than a soft-strawed wheat.

Oats are considered a hard crop on the land by most farmers, remarks Henry Stewart. This, however, will not bear the light of scientific examination, or even of careful observations. For, if we come to look into the composition of the inorganic elements of this grain, its ash, in fact, which is all that it takes from the soil, we find that it is not half so exhaustive as wheat, and where a crop of 25 bushels of wheat may be grown, at least 80 of oats may be taken with no more draft on the soil. Let us compare the following figures:

Composition of Ash of	Wheat.	Oats
Potash	31.1	15.9
Phosphoric acid	46.2	20.7
Soda	3.5	3.8
Magnesia	12.2	7.3
Lime	3.1	3.8
Silica	2.4	46.4

And we then see that 100 pounds of oats take from the soil half as much potash and less than half as much phosphoric acid as 100 pounds of wheat, and the great bulk of its draft on the soil consists of silica, of which there is a great abundance. This peculiar composition makes oats a crop adapted for light soils upon which wheat would not succeed.

An invaluable class of Summer-flowering plants, says Mr. W. C. Barry, are the delphiniums, or larkspurs, which exhibit a wonderful variety of beautiful colors and shades from pale blue to black. In the mixed border they are superb. Tall and conspicuous when in flower, they never fail to arrest the attention of even the most unobserving. Their culture is easy, and, like other perennials, they can be increased by division in the Fall. The following are choice tall varieties:—Ivanhoe: bright blue, double, superb; Louis Agassiz: blue, with purple center, double, very striking; Mrs. Goodell: dark blue, with purple center; Cœlestinum: very light blue, beautiful, double.

Swindling in Oleomargarine.—Every time a jobber sells a tub of oleomargarine as butter to a retailer or the retailer sells a pound of it to a customer as butter, he is defrauding his customer of the difference between the price of the genuine and the bogus butter, says the N. Y. Grocer. . . . . There is no system of business or any other kind of morals that we have ever heard of that admits that it is right for a man to put his hand in another man's pocket and take money out of it, and yet when a merchant sells oleomargarine for butter he does in effect precisely this thing. . . . . There is only one retail store in the city that we know of where oleomargarine can be bought as oleomargarine.

It is very useful and instructive for a farmer to go abroad occasionally and see what other farmers are doing. When one stays too much at home he is apt to think that his own neighborhood is the center of the universe.—N. Y. Times. . . . . A farmer writes to the Elmira Farmer's Club to condemn White Australian Oats. He says:

"White Australian Oats for seed are advertised this Spring. Touch them carefully, is my advice. A small package was brought from the Centennial Exposition and carefully nurtured until, last year, I sowed four acres of ground from the product. They were given the best part of the field, but only yielded 35 bushels to the acre, machine count, whereas the balance of the fourteen-acre lot sowed with the Yellow Golden Oat long in use, gave 61 bushels. Allowing for the great weight of the new variety, the aggregate cost of the experiment I figure in round numbers at 80 bushels. The Australian oats made the better appearance while growing, and the cleaned grain is a beautiful sample, but they have a hard shuck and I want no more of them."

The pointed comment of President McCann, says the Husbandman, was: "This is the honest expression of opinion by a man who knows."

[We have seen half-a-dozen different kinds of oats called Australian, merely because they came from Australia. We have known them to weigh as high as 52 pounds to the bushel, and as low as 34.—Eds.]

Mr. G. W. Hoffman, said: "A deep cellar with double walls and air-space between is a safe receptacle for milk. I know of such a cellar made for keeping fruit, and it has cool, dry air so that matches kept in the cellar may at any time be picked up and ignited by friction no greater than is required when they are kept in any other room of the house."

It may be said to be the greatest waste of the farm that costly implements rarely receive the care they should. . . . . It should always be borne in mind that the profit of farm machinery rests chiefly in the proper care and use of it. Hence it is that improved farm implements are not profitable investments to some, while to others they pay for themselves over and over again. . . . . Is the race of American Statesmen extinct?—Husbandman.

BOOKS, CATALOGUES, ETC.

We have received from the worthy Secretary, Robert Manning, Salem, Mass., the Proceedings of the American Pomological Society at its Rochester session in the Fall of 1879. It would be difficult to do justice to this valuable work in a brief notice of this character. We use it as a book of pomological reference during the entire year and it is to us next to invaluable. The address of its venerable president, Marshall P. Wilder, is full of eloquence, enthusiasm and love; the essays and correspondence are admirable in their way. The following is from Mr. Wilder in answer to a note from us.

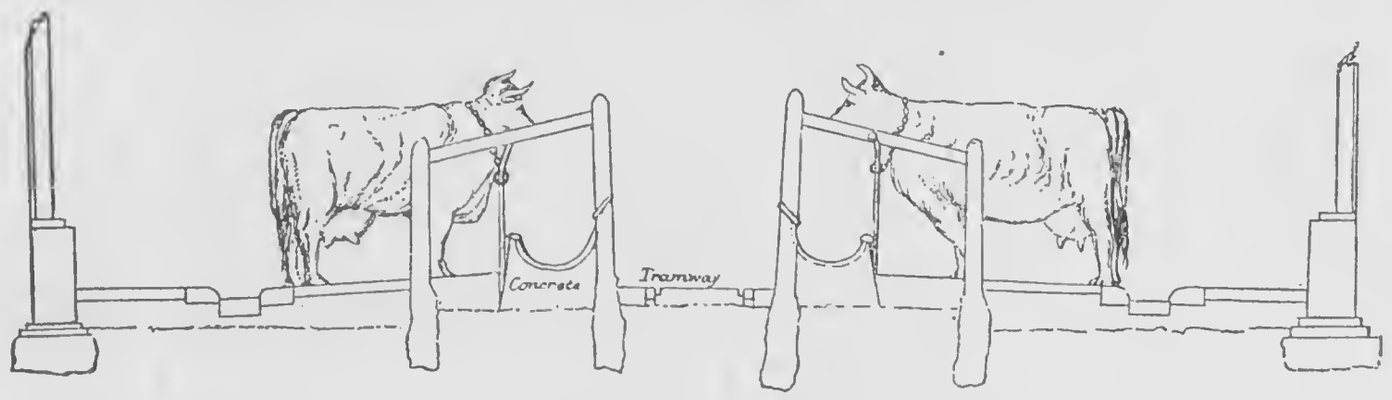
"The American Pomological Society was the first national society in the world, and has been followed by similar societies in Europe. It embraces the United States, Canada, and Nova Scotia, has held its meetings in the various great cities of our country from the Atlantic to the Mississippi. The 18th annual meeting is to be at Boston, the home of its old President, on Sept. 14, '81, when it is expected there will be, as on all its meetings here (this is the fourth), a grand gathering of the pomologists of America. The volumes of the society contain a vast amount of information in the Reports, etc., etc., and a catalogue of pages with lists of the fruits adapted to 50 States, Territories and districts, and columns of each prepared by the able Gen'l. Chairman of the Fruit Committee, P. Barry, a work of great care and experience. The present issue is a noble illustration of American enterprise, and was prepared by its Secretary, Mr. Manning, than whom no man is better qualified practically, scientifically and critically."

"Brief Essays on New Fruits, Ornamental Trees and Plants," is the title of a little book we have received from Mr. Wm. C. Barry, of the Mount Hope Nurseries, of Rochester, N. Y. It comprises 60 pages, and is filled with his own careful observations upon the subjects treated. Most of the essays were originally published in the Albany Cultivator, others in Moore's Rural Life (not published now), Rochester Democrat, Gardeners' Chronicle of England, etc. We are very glad to see this young gentleman, by education and by nature, proves himself so well fitted to maintain the well-earned reputation of this good old house. The pamphlet will be mailed prepaid for 25 cents. "Weeping Trees," "Herbaceous Pæonies," "Native Fruits," "Notes on Peaches," "Notes on Desirable Fruits," "Some of the Best Hardy Roses, with brief Hints as to Culture," "Vines and Creepers," "New Fruits in 1879," are among the essays presented.

Another Book on Ensilage.—"Please examine this book," says Mr. H. R. Stevens, the author, "and give it a good notice in your paper. I shall advertise it thoroughly in every agricultural paper in the U. S. You will notice that it is elegantly bound in cloth and is sold at the extremely low price of 50 cents."

The book opens with a cut of Blount's Corn, which is throughout the book commended as the best variety for ensilage purposes.

We have next a portrait of "Yours truly, H. R. Stevens." We have then a few remarks by the author and the rest is a series of correspondence with those who have investigated the system theoretically or practically. Nothing of importance is said in the book, as we can glean, that has not been said in the Rural New-Yorker. We are afraid that Mr. Stevens will not find the above such a review of his handsome little book of 120 pages as to induce him to include the Rural in his advertising



FLOOR OF A COW-STABLE.—FIG. 227.

list of agricultural papers. Sorry! The book is published by the author, 464 Broadway, Boston.

SECOND REPORT of the U. S. Entomological Commission on the Rocky Mountain Locust. This volume of 322 pages, issued by the Department of the Interior, relates chiefly to the labors of Messrs. A. S. Packard and Cyrus Thomas in their efforts, in 1878 and 1879, to discover some permanent means of preventing the excessive increase of the Rocky Mountain Locust in its native habitat and its migration therefrom into the more fertile portions of the trans-Mississippi country. The work is profusely illustrated with colored maps of the Western territory infested by the pest and with numerous diagrams relating to it.

JOHN S. CARTER, No. 28 and 30 James St., Syracuse, N. Y.—Illustrated catalogue of all kinds of apparatus and supplies for cheese and butter factories, creameries and dairies. Sent to our subscribers on application to Mr. Carter as above.

LIFE-SAVING Service Report for the fiscal year ending June 30, 1880. Issued by the Treasury Department.

ACTION of the New York Produce Exchange relative to canals—a six page pamphlet advocating free canals.

ISTHMUS SHIP CANALS, a speech of Hon. W. Windom, of Minn., advocating Eads's Ship-railway at Tehuantepec.

SUGAR BEET CULTURE and manufacture of Beet Sugar—a 20-page little pamphlet issued gratis by Gladden & Curtis general selling agents of the Pacific Guano Co.

Everywhere.

RURAL SPECIAL REPORTS.

ARK., Beebe, White Co., April 12.—We have a very late Spring. How the fruit will stand it is more than I can tell just now. Peaches began to bloom about three weeks ago. The blackberries are killed, though hitherto they always bore heavy crops. The last-picked cotton is selling for from 4 to 6 cents per pound, so that it does not pay nearly the cost of raising it. We finished sowing oats ten days ago; all the seed comes from the North. H. B.

CANADA, Fernhill, Ontario, April 9.—We have had a very steady Winter. It commenced on the 20th of November, and it was very severe; sometimes the thermometer registered as low as 36 degrees below zero, but the snow did not come very heavily until about the last of February; since then we have had occasional high winds sometimes accompanied with snow. Our Spring is very late; the frost is not out of the ground yet. But for the two last days the sun has been very hot, and the weather has looked more like Spring than any we have had yet. The cold has killed all of my rose bushes right down to the ground, except a very few which were covered with snow; everything else in the garden has done very well. The yuccas have wintered splendidly. Did you ever hear of chrysanthemums out-of-doors? I left some out last Winter, and they looked splendid after the leaves were removed to-day. It was a Chinese variety. Winter wheat does not look very well at present, as there was very little growth last Fall, it is only in exceptional places that it covers the ground; but we may have a very good crop yet if it is not heaved out by the frost. Feed is getting very scarce with some who thought that we were to have an early Spring and fed heavily at the start and wasted a great deal. It was a hard Winter on bees; there are very few stocks alive in this neighborhood, which will make people a little more careful in the future. Some of the peach buds are injured by the frost and others look all right. J. M. W.

CANADA, Province of Quebec.—We have still cold weather and plenty of snow. No hot-bed made yet. A. L. J.

FLA., Waldo, Alachua Co., April 12.—We have had more or less frost since the middle of December, the thermometer on one occasion going down to 16 deg, and ice forming three inches thick. In November I had around my house a large number of Australian forest trees, including some specimens of Eucalyptus globulus nearly thirty feet high; but all, with only one exception, are completely killed. The only evergreen trees or shrubs that seemed to withstand the season were the Cape Jessamine—Gardenia—and the Loquat-tree—Eriobothrya. The orange trees lost their leaves and sometimes all the young shoots, and plants which flourish indigenously in 43 deg. south latitude perished here in 29 deg. 30′. Bananas are, of course, cut off. I heard more than once that 25 miles south of this the oranges were not affected; but I got some of the fruit from that section and found that it, too, had been well frozen. In many instances cotton must be resown, the young plants being quite killed. Corn is also being sown by some a second time for the same reason, though a few farmers are abandoning the crop this year for rice. But although the Winter has been thus severe and in many respects injurious, the cold has doubtless done much good. Whole armies of insects must have disappeared and if the orange crop should be a little diminished this year, we are confidently looking forward to a great increase in 1882. The effects of the cold are rather peculiarly visible. Taking, for instance, a radius of, say, five miles from where I write, some gardens are utterly ruined and others hardly touched—this, too, without any very apparent cause. And the same, I am informed, is true throughout the State. I have a piece of land in common Dent corn, which must be resown, a few plants only having survived, while 200 yards away is a patch of sweet corn—Early Minnesota—that looks well. The plants are 14 inches high; they are strong and growing fast, only one here and there having felt the cold. Mold's Ennobled Oats received from the RURAL and sown in October are fine. I sowed them very thinly in well prepared soil, and they are now about three feet high, with leaf-blades more than an inch across. Measured an inch above ground, the plants have tillered out over circles varying from six to fourteen inches in diameter. The ground has been worked once only since sowing, with a hand cultivator. It is light and sandy and was fertilized from the cow-yard. My White Elephant Potatoes, also from the RURAL, are now in blossom. They are very luxuriant above ground, but not too much so. They have not felt the frost, though even the turnips a few yards away have shown that they did not like it. If the experiment be thus far any indication to go by, it would seem that the White Elephant resists cold better than the Rose. My Italian onions have been growing right through the Winter quite unheeding the weather and a recent change to more genial climate has made our gardens a mass of color with blossoms of verbenas, pinks, carnations, petunias, etc.—these last often three inches in diameter. Rice promises to be a great crop in this State. Three years ago it was hardly recognized. This year it will be largely sown. It withstands heat and rain better than anything else; it grows more freely and with less trouble on even poor land, and the longest-headed farmers are looking forward to rice becoming, ere very long, one of the staple products of the State. With care we can grow quite as good a sample as can be produced in South Carolina or Georgia. A. I. E.

ILL., Champaign, Champaign Co., April 10.—Though beginning late in October, the Winter in these latitudes is not over and occasional snow banks lie along the north sides of fences and timber belts. There is scarcely a sign of starting vegetation and the pastures and meadows hardly show a tinge of green. No plowing nor seeding has been done to amount to anything, but teams will be started Monday if storms do not come. There is a scarcity of all or nearly all agricultural products, and prices are steadily on the rise. For the entire State the country is shorter than for ten years of fat and stock hogs, butchers' stock, and No. 1 fat cattle, corn, hay, straw and "roughness" generally, vegetables of all kinds, eggs and poultry. Wheat is worth $1; corn, 35c; oats the same; rye as much as wheat; hay, $10 @$12 per ton; potatoes, $1@1.25; hogs, 5c; butchers' stock, 3½@4c. and for fine No. 1 fat stock nobody knows what would be bid. In short, for the last three or four years, agricultural products have been overestimated from 30 to 50 per cent. and the result is unexpected shortages along the whole line. The wheat crop north and south in this State, has been very seriously damaged, and the general estimate is not over half a crop. It has been ascertained that the hog crop is short 780,000 hogs and pork products are on the boom. B. F. J.

ILL., Edwardsville, Madison Co., April 11.—We have a very backward Spring. To-day only about one-half the oats are sown and hardly any potatoes are planted. Weather cloudy, damp and cold. Peaches, apricots and small fruits will be a total failure, except strawberries, which promise a good crop. Apples look all right. Wheat has suffered more than was at first expected—fully 20 per cent. has been frozen out. The acreage sown is 25 per cent. more than last year. Late-sown wheat has suffered the most, owing to the Winter setting in so early. C. P. B.

ILL., Highland, Madison Co., April 9.—We have never before seen such a long Winter. It is snowing again to-day after a big rain. Wheat looks well enough now; it has been killed in a good many places, however; some say they will have to plow much of their wheat land and put corn in. Wheat is worth $1 per bushel; corn, 35c.; oats, 30c. After such a long Winter many farmers are out of fodder and consequently cattle are suffering. C. S. R.

ILL., Dover, Bureau Co., April 4.—Snowing again to-day. Many roads blocked up so as to be impassable. Very little sunshine for the last four months. I've been in this State 34 years, and this is the hardest Winter I've ever seen here. C. A. T.

IOWA, Atlantic, Cass Co.—April 12.—We have had a very cold Winter, it froze up in November and has been steadily cold ever since. The ground has been frozen four feet deep this Winter. On the first of April the snow was all gone; now there are 14 inches, and, it is still snowing. The thermometer went 30° below zero at one time during the past Winter. Small fruits of all kinds are killed as far as I can find out. All sorts of stock have wintered well. A considerable amount of corn remains in the field yet. Corn, 27 cents; wheat, 85c; potatoes, 60c; butter, 20c; eggs, 12½c; stock cattle for feeding $4 per hundred; fat hogs, $4.60 per hundred; hay, $10 T. H. H. B.

IOWA, Cherokee, Cherokee Co., April 12.—Plenty of snow. No getting into the cornfields yet. No Spring work done. E. E. W.

KAN., Alamota, Lane Co., April 14.—We have a very fine country here, but every family coming should bring enough to "run" them at least one year. The past Winter was quite severe. The loss of cattle on the range was about 10 per cent. Weather now pleasant and prospects good for the season. N. R. V. D.

KAN., Norton, Norton Co., April 8.—Our Spring is tardy; we had snow yesterday. Patches of old snow are yet to be seen in the heads of the "draws;" still most of the ground is bare and people have been "breaking" and plowing for some time. Weather cool most of the time. Grass started. D E S.

MICH., Georgetown, Ottawa Co., April 3.—It is Winter here yet. Heavy frost every night; as cold as Midwinter, thermometer several degrees below zero, and snow about 12 inches all over the country, and the hopes for fruit very poor. H. A.

NEB., Orleans, Harlan Co., April 10.—Wheat nearly all sown. Owing to failure of crops last season nearly all seed is imported. With commendable liberality the B. & M. R. R. makes no freight charge on imported grain designed for seed. Congress made a special appropriation to procure seed for a portion of this State and Kansas. Harlan County's quota came last Saturday; a mail-sack full of small packages of Defiance Wheat—"only that and nothing more." It will not put one nickel in any one's pocket this year and another year probably we shall be beyond want. To hundreds it is yet an unanswered question; "How can we procure garden and field seeds?" It seems to us as if the $20,000 appropriated for seeds for this section had been spent in Washington red tape. A Farmer's Alliance is well attended in this village. R. H. C.

N. Y., Waterville, Oneida Co., April 10.—Good butter 28c. per pound and scarce at that; eggs, 16@18c. per doz.; hay $14@16 per ton. Wages $18@22 per month, with board; $1.25 @1.50 per day, without board.

OHIO, Columbus, April 12.—The morning of the 28th of March found a violent snow storm raging, and more or less snow fell every day for eight days thereafter, making a total fall of a foot or more, while the thermometer dropped to January weather on the mornings of the 5th and 6th of April. The drifts are not yet quite gone, but are going with rain, so that it will be another week at least before the plow can be started in stubble ground, and the probabilities are that it will be the last week in the month before any Spring grain or potatoes can be got into the ground, as almost no plowing, and quite no planting had been done before this second Winter set in. All this means poor crops of oats and potatoes, late gardens, hurried preparation for corn, and, consequently, a poor seed bed, while the outlook for this crop is rendered still more gloomy by the probability that the germinating power of a large part of last year's crop has been destroyed by the early and severe cold, just as it was during the Winter of 1878-79. Wheat started into the Winter in poor shape, owing to the dry Fall, and the drying winds of the latter part of March were not improving its condition, but the heavy snow has been of great benefit both to it and the young clover, for which the prospect is fine. The wages of farm hands have advanced from 10 to 25 per cent., owing to the stimulus of "good times," and altogether the outlook is not favorable for a money-making year for the farmer. C. E. T.

PA., Baden, Beaver Co., April 10.—Wheat is not looking as well as last year; acreage about the same. Of fruit there is a poor prospect; peaches are entirely killed. Cherries are killed in most cases. Apples, I believe, are not hurt; but as we had a large crop last year, we cannot expect many this. Some people think apples will not pay in the future, as the price is so low. What is your opinion on the subject? [The taste for good fruit is increasing even more rapidly than the population; and the raising of good apples is, we think, likely to pay proportionately as well as the raising of other crops.—EDS.] The prices of farm products are: wheat, $1.08; rye, $1.14; corn, 60c.; oats, 50c.; potatoes, 90c. to $1; apples, 40c. to 50c.; hay, $23 per ton; butter, 30c; eggs, 20c. Pittsburg is our nearest market—a very good one in most cases. F. W. S.

TEXAS, Caldwell, Burleson Co., April 9.—There has been a great deal of cotton plowed under. There will be a large crop of cotton raised this year, and pickers will be in demand next Fall if the season is favorable. Corn was a heavy crop. A great deal was wasted on account of sickness. All was not gathered last of March. Oats also were a heavy crop. Wheat was not of much account. Late frosts have damaged the peach crop on low lands; on prairie there will be a fair crop. The mast lies thick on the ground yet and stock hogs are unwieldly masses of oil. Corn has five leaves and cotton is large enough to chop out. Some years corn is three feet high on good land by the 10th of April. Bacon, 8c; corn, 40c; oats, 60c. D. H.

TEXAS, Agr. Coll., College Station, Brazos Co., April 16.—Crops throughout the State were damaged by frost on the 14th inst. The day previous the thermometer registered 78 degrees in the shade. C. C. G.

The Querist.

ANSWERS TO CORRESPONDENTS.

Brewers' Grains and Distillers' Grains.

R. H. L., Monsey, N. Y., asks, 1, what are brewers' grains; 2, are they healthful food for milch cows; 3, what is an analysis of them; 4, how do they compare in value and price with other sorts of food for milch cows; 5, how to keep them; 6, what is the value of the grains for manurial purposes; 7, what are distillers' grains and what is their value as food for stock.

ANS.—Brewers' grains are the exhausted barley of a brewer's mash. In the preparation of malt liquors from grain, the starch contained in the latter is converted into sugar by the action of a peculiar ferment called diastase, contained in the malt, and this sugar being fermented, yields alcohol. In this process the starch is almost the only thing extracted. Now starch is a carbohydrate or heat-producing food, while the quantity and quality of milk depend mainly upon the albuminoids—nitrogenous or flesh-producing foods—and these are not at all withdrawn from the grain in the process of brewing, as can be readily seen by microscopic examination which shows the gluten cells intact, while the starch is nearly all dissolved out of the tissues that contain it; so that the residue is relatively richer in albuminoids than the whole grain. 2, If fed in moderate quantity as part of a ration and while fresh, they are good food for milch cows or fattening animals; but they are not adapted for animals that have to perform severe work. If fed to milch cows heavily or when stale, they will injure the quality of the milk. 3, Brewers' grains are much more watery than the original grain, containing only about 24 per cent. of dry matter. Of them Prof. S. W. Johnson gives the following analysis:

Water	2.57
Albuminoid or proteine	20.38
Fat	6.40
Carbo hydrates (starch, sugar, etc.)	54.89
Fiber	11.79
Ash	3.97
	100.00

Dr. P. Collier, Chemist of the Department of Agriculture, gives the following analysis of brewers' grains and oats:

	Brewers' Grains.	Oats.
Water	10.2	11.8
Albuminoid or proteine	21.7	9.8
Fat	6.6	4.9
Carb. hydrates (Starch, Sugar, etc.)	43.9	58.0
Fiber	14.9	12.5
Ash	2.7	3.0
	100.0	100.0

When corn meal is used in the brewing, it considerably enhances their value as food for cows, and would make the grains show about the following: Proteine 5 20, fat 2 10, starch 18.50. 4. The relative cost of brewers' grains and other sorts of feed will vary, of course, with the season, the ratio of demand and supply and the freightage. In a recent argument before a Senate Committee investigating the healthfulness of these grains at Albany, the following relative values of 100 pounds of different kinds of food was given by the advocate of the grains:

		Proteine.	Fat.	Starch
Brewers' Grain	$ .25	4.73	1.50	14.29
Timothy Hay	1.00	3.02	1.57	48.58
Clover Hay	.75	7.83	1.48	39.71
Corn Meal	1.12	6 23	2.89	66.90
Cotton Seed Meal	1.30	33.00	10.89	12.65

This table shows that the proteine (albuminoids, flesh and milk-making elements) in brewers' grains and cotton-seed meal can be bought for about $3 75 per 100 pounds, while in corn meal it costs nearly $5 per 100 pounds, and in timothy hay $6.70 per 100 pounds. 5. As stale grains are objectionable feed, a fresh supply should be procured as often as conveniently possible. They should be kept in tight casks or other vessels each large enough to hold one day's feeding—one for each day between the dates at which the grain is received—as described by Professor L. B. Arnold, in the RURAL of April 9. The contents of these should be pressed down with heavy weights on movable covers, so that the pressure will be constant. A covering of water will exclude the air, and so aid in the preservation of the

grains. Salt sprinkled over them in Summer will prevent flies depositing their eggs on them and breeding maggots. They may also be kept in air-tight silos or pits, the same as green fodder; but owing to the inevitable access of air on the opening of these at feeding time, the other is the better method. The manure from animals fed on brewers' grains is considerably richer than ordinary barnyard manure, the ashes containing eleven per cent. of phosphoric acid and nine per cent. of potash. 6. One thousand pounds of brewers' grains contain 260 pounds of dry matter; of this 8¾ pounds are nitrogen, ½ pound potash, 1½ pound lime, 1¼ pound magnesia and 3½ pounds phosphoric acid. The value of these at the current rates is about $2 40, which would make the manurial value about $4.80 per ton. At the usual price of 10 or 12½ cents per bushel of 60 pounds, a ton would cost from $3 30 to $4. If applied fresh to the soil a great part of the value would be lost unless they were used in the hill with crops planted in that way. If composted with manure or earth with wood ashes or lime they would be made more effective.

7. The first stages of the process of manufacturing distilled liquors are essentially the same as those in the preparation of malt liquors, but after the fermentation, the mash is subjected to distillation to separate the alcohol. The residue remaining in the still constitutes distillers' grains or "slump." This has nearly the same composition as brewers' grains, except that it is much more watery, as it contains only about eight or nine per cent. of dry matter. Like brewers' grains the "slump" has lost chiefly its starch or non-nitrogenous substance, and is therefore a valuable addition to fodder poor in albuminoids. It gives good results in fattening or feeding for milk when properly used; but it is not found well suited for sheep, hogs or horses. In feeding these grains their watery nature should be borne in mind, and the health of the animal requires that they should be fed with some other fodder, like hay or straw. Much of the prejudice against "distillery slops" arises from the exclusive or almost exclusive use of the "slump" for feed, and from the usually filthy surroundings of the animals fed thereon, rather than from anything injurious in the stuff itself.

Foxtail and Hungarian Grass.

R. H. C., Harlan Co., Neb., asks, 1, the relation between Hungarian Grass and Foxtail Grass. The idea prevails thereabouts that millet and Hungarian are perfected Foxtail, and may therefore degenerate into Foxtail. 2, On Western soil extremely rich in all needed minerals, though somewhat deficient in vegetable mold, cannot a rank growth of Foxtail be utilized by plowing it under? 3, Can the area mowed once be profitably mowed again in the same season? 4, How should the grass be treated? 5, What would be the effect of shallow plowing.

ANS.—1, Both belong to the Gramineæ or Grass Family, but Foxtail is Setaria glauca and Hungarian, Italian Millet or Bengal Grass, is Setaria Italica, and the one would be no more likely to degenerate into the other than Trifolium pratense, Red Clover, would be likely to degenerate into T. repens, White Clover. 2, A rank growth of Foxtail may and should be utilized by plowing it under before it perfects its seed. 3, If this is done some time in June, and the land is thoroughly harrowed and rolled, another crop will frequently spring up and grow large enough to be of some value to cut for hay, by September. 4, Treat the product in curing the same as any other hay. 5, One shallow plowing will have no bad effect whatever on the land; it may effect the first crop following. We would not plow either late or shallow in order that the seed of the first crop should germinate to produce the second. There are usually enough dormant seeds in the ground to produce half-a-dozen crops. Thirty-four experiments with seven different soils, at the Cornell University farm, gave an average of 336 self-sown plant seeds that germinated in the first two inches of soil in each square foot, or 14½ million seeds per acre. (See first annual report of the Cornell University Experiment Station, 1879-80.) For comparison we might say that one peck of Timothy per acre gives about 87 seeds per square foot; the same amount of clover seed gives about 58 seeds per square foot.

A Cord of Manure; Sowing Clover in Corn Ground, etc.

C. H. D., Occoquan, Va., asks, 1, what is a cord of manure and how is it measured; 2, how would it do to sow clover on corn ground at the last working—would the ground be shaded too much; 3, is his White Elephant which resembles an Early Rose, the genuine article or has it been changed in the mail as the packet was received open; 4, should it be planted now—as it is sprouting—or kept until the usual time for planting potatoes thereabouts—June 15.

ANS.—A cord of manure is a compact heap eight feet long, four feet wide and four feet high containing 128 cubic feet, or precisely the same as a cord of wood or a cord of stone. The weight of a cord of manure is very variable and depends upon the water in it. The organic matter is lighter than water, and, when comparatively dry, horse stable manure weighs about 4,800 to 5,000 pounds. Waring in his Handy-book of Husbandry says a cord of well trodden stable manure weighs 7,080 pounds; which is 940 pounds less than the weight of the same bulk of water. Dana in his Muck Manual says a cord of green cow-dung weighs 9,289 pounds, which is 1,269 pounds more than the weight of as much water, and is therefore clearly impossible, as there is nothing in cow-dung heavier than water. But this author is by no means free from erroneous statements. Waring is more correct and the weight given by him is the maximum for fresh and wet manure. 2, It is not advisable to sow clover in the way mentioned. It is not giving the clover a chance. It cannot become well rooted before the Winter, will be trodden and damaged in harvesting the corn, and the corn stubble will be greatly in the way of cutting the clover. It would be better to plow the corn stubble in the Spring, harrow it thoroughly and sow the clover alone. If this is done early and the soil is good a crop of hay may be taken the same season. 3. Yes. 4. Now.

Abortion in a Mare.

H. B., Beebe, White Co., Ark, wishing to obtain a colt from a valuable mare that is half gone with foal, asks for some means of preventing abortion. She is six years old and has already aborted once.

ANS.—When half the time of pregnancy is over, the mare should have special care as she is then more likely to slink her foal than at any other period. Good feeding, careful handling and moderate exercise are the best preventives of this mishap. The rapid growth of the fœtus at that time makes on her system a constant draft that should be met with an extra ration of grain. A mare that has once cast her foal is likely to do it again at a corresponding period of pregnancy—especially if a similar provocation occurs. Among the various causes of abortion are blows, strains, violent excitement of any sort, sympathy with other mares that have aborted in sight, and nervous spasms due to a diseased stomach. The sight and smell of food which the pregnant mare likes, but which she is not allowed to eat, will also be likely to cause her to slink her foal. If symptoms of slinking are discovered in time, it may be prevented by burning feathers—preferably those of a pigeon—in a pan of coals so that she will be forced to inhale the smoke. Once a tendency to abort has been established, however, it is not easy to counteract it.

Cut Corn-stalks.

N. A., Dillsburgh, Pa., asks, 1, whether it would pay to cut corn-stalks for stock feed, and whether horses and cattle would eat the cut fodder; 2, is there any nutriment in corn-stalks; 3, where can a good cutter be obtained.

ANS.—1. When corn fodder is cut fine or short, cattle and horses will eat it all up. There is not much nutriment in the woody part of the stalk, but it answers for bowel distension, which is important to keep animals healthy. A half-bushel of cut-up corn-stalks three times a day, with two quarts of meal added, will make a ration sufficient for a full-grown animal. The meal may consist of equal parts in bulk of bran and corn-meal, or cotton-seed meal. 2 Cattle would not thrive on the stalks alone, but with the leaves added they will do well if they have enough to eat; but it would be better economy to feed less of the stalks when fodder is high and add the meal or bran. 3 A good one is made by the Belcher & Taylor M'f'g Co., Chicopee Falls, Mass. Nearly all dealers in agricultural implements keep the cutter.

Plants "Damping Off."

H. M. D., Parkersburg, Ill., intending to raise early tomatoes, sowed the seed in several boxes in the house. The plants came up nicely, but before the leaves were fairly started they lost their bright green color and began to droop, and on pulling them up the roots were found all gone except the main one, which was girdled or stripped of its skin. Cabbage, onions, dianthus and snap-dragon suffered like the tomatoes, and we are asked what ailed them.

ANS.—The probable cause of failure is want of pricking off into other boxes, want of air, or too much moisture. The plants are not "girdled" by anything, but merely shriveled up—"damped off," as it is called. All seedlings raised artificially, whether in the house or in frames, are better pricked out before the third leaf is formed.

Miscellaneous.

C. H. H., Castile, N. Y., plowed an old pasture last year and planted potatoes and beans on it, tilling it well: this season he intends to use it for barley and seed down, and not having any barnyard manure for it, he asks for an analysis of barley, showing the amounts of potash, phosphoric acid and nitrogen it contains so as to be able to judge what sort of fertilizer should be used to supply it with plant-food and also he inquires what would be the best application.

ANS.—Per cent. of ash, 5.10; potash, 21.6; soda, 4 5; magnesia, 2 4; lime, 7 6; phosphoric acid, 4 3; sulphuric acid, 3 7; silica, 53 8. As you do not know which of the above constituents your soil needs or supplies in sufficient quantity or in excess, it would be impossible to ascertain what fertilizer would be best to purchase except by experiment. As a matter of guess-work, we should recommend unleached wood ashes or potash in some form.

W. S. G., Ackworth, N. H., asks, 1, what is the best work on orange culture; 2, where can he get a good-sized map of Florida.

ANS.—1, Orange Culture in Florida, a very useful little pamphlet, by J. H. Fowler, was published in 1873 at Jacksonville, Florida, and can doubtless be obtained through the Florida Agriculturist or the Semi Tropical, both of which are published in that town. The standard European works are *Traité du Genus Citrus* by Gallesio, published at Savona, Italy, in 1818, and *His oire Naturelle des Oranges*, by Risso and Poiteau, an elegant work with 100 beautifully colored engravings, originally issued at Paris in 1818, and lately republished under the editorship of the distinguished arboriculturist, Du Breuil. 2; From Colton, Zahn & Roberts, map dealers, 172 William St, this city.

W. H. S., Galveston, Texas, asks for some means of preventing a horse from chewing the lines or other objects close by while tied or standing.

ANS.—The only effectual way to obviate the above is to use a strong, light chain for the hitching strap, and also for any part of the lines the horse is in the habit of chewing. Some who use rope or leather straps and lines, rub them with aloes liquid, boneset, tansy or other bitter juice, or water in which they have been steeped. Such liquids, however, soon dry, and are only effectual for a short time. If the horse is in the habit of turning his head around to chew any part of his harness, or blanket, or fly-net, hitch him so short that he cannot get at them with his teeth.

B. F. W., Cambria, N. Y., asks, 1, where Norway Oats can be obtained; 2, are they the same as the Ennobled Oats; 3, what are the White Russian Oats, and are they all they are "cracked up" to be.

ANS.—1. We do not think the Norway is a distinct variety at all. It was introduced years ago, and, being of large size, sold at high prices. This size was owing, we believe, to high cultivation, selection of seed, and a favorable climate, and under ordinary treatment it is soon lost. We do not know of any Norway Oats now offered. 2 No. 3. Some highly praise the White Russian, some condemn them. We shall sow one bushel and tell our readers how they behave at the Rural Farm.

J. H. S., Logansport, Ind., sends an apple for name.

ANS.—The apple was sent to Mr. Charles Downing as we could not identify it. Here is his reply: "The apple came safely and I regret to say that I do not recognize the variety as any I am acquainted with. There are several kinds similar to this in appearance, and it is difficult, without having them together for comparison, to decide their identity. I think it is an old variety mostly gone out of use."

G. H., Hackettstown, N. J., asks whether mangels can be transplanted the same as beets.

ANS.—Oh, yes; but as Col. Curtis said in his article on mangel culture in last issue, it will not pay to transplant them, as the transplanted roots seldom pay for the bother. When it is done, the large leaves should be twisted off, otherwise the evaporation from them will kill the roots.

J. G., no address, asks where pipe and other necessaries for making a "driven well" can be obtained.

ANS.—Not having our inquirer's address we cannot mention the name of any dealer in his neighborhood; but the nearest plumber will be able to supply all requisites either from his stock on hand or by ordering what is wanted.

W. F. C., Mars Bluff, S. C., asks, 1, the name of the white bean commonly called the Navy Bean; 2, can it be planted in corn to advantage.

ANS.—1. It has no other name that we know of. 2. It is planted largely in the West with corn and yields well.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, APRIL 23th.

Mrs. J. C. W.—M. B. C.—Mrs. L R.—W. J. F. Jr.—W. F. C.—Edgerton.—B. F. J.—J. P. R.—D. H. H.—D. E. S.—J A. S.—R. L'—A. B. A.—J. M. W.—S. R. M.—C. P. B.—N. K.—R. L—T. H. H B.—E. M. W.—M. V. R—G. E. N.—R. H. C.—O. C. D.—W. J. F.—E. C. T.—F. M.—T. N.—S. D. A.—S F. S.—H. H. B.—H. S.—W. H. N.—A. M. C—A. W—A L J—E F. M—M E. H.—J L—M. M.—G. K.—S. D. R.—G. G.—B. J.—D. G. S—A. L.—Mrs S C.—I. S.—C. M. H.—A. L J.—J. P B.—A. J. C., thank you,—J. E. C.—D S. M.—W. F. C.—A. M,—C.—A L B.—A R C.—C, A. M.—"Bidwell."—N, V. R., we shall try to answer.—S. E. S.—"Subscriber."—J. H. B.—M. B.—V. J. E.—G. W.

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Little Gem Dwarf, Extra Early,	" " 2.00;		" 8 00
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THE
Rural New-Yorker,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, APRIL 30, 1881.

SOME changes in our method of mailing having become necessary, subscribers would confer a favor if they would promptly notify us by postal card of the slightest irregularity in the receipt of the RURAL NEW-YORKER.

OUR Fourth Seed Distribution to the members of the Youth's Horticultural Club now numbering 1,000, is announced on page 298. As usual, no charge for postage is made and no application necessary. We trust our young friends may succeed well with the excellent kinds sent to them. The seeds of the Japan Judas Tree are very scarce and not offered for sale by anybody that we know of. Indeed, it rarely seeds in this climate. It is a grand shrub.

IN one of Dr. Lawes's experiments the produce of hay under a liberal supply of mineral fertilizers has been greatly increased. Though a large quantity of nitrogen has been removed, at the end of twenty-five years there is no evidence of a decline in the produce. The nitrogen of the surface soil shows "a considerable decline," otherwise, Dr. Lawe's says, "there is absolutely nothing to prove that the atmosphere has not been the source of the nitrogen removed in the produce."

WE are sorry to see it stated that eight and ten ears of corn grow upon Blount's Prolific Corn. Such statements work great harm. We have produced the largest well-authenticated crop of this variety on record, and we have yet to see a stalk with six perfect ears on it. The highest number of ears we have ever seen upon one stalk—and last season we examined *every* stalk in our field—was ten, six of which were nubbins. As a matter of fact, the average number of good ears to a stalk of Blount's Corn is a fraction less than three.

AMONG Summer vines we know of nothing more fragrant, more rapid in its growth, more glossy or luxuriant in foliage than the well-known Madeira or Mexican Vine — Boussingaultia baselloides—the tubers of which are offered by all seedsmen for five or ten cents apiece. The Chinese Yam—Dioscorea batatas—as a swift-growing Summer vine is also to be commended. It grows more rapidly than the Madeira Vine; its flowers are equally fragrant, but the joints are wide apart and the foliage scanty. The root, however, has the advantage over the tender Madeira Vine of being perfectly hardy. It may be left in the ground year after year. New tubers form and provide an unfailing and abundant growth of vine.

CATALPA SPECIOSA HARDIER THAN THE SPECIES.—We find that our specimens of Catalpa speciosa, or the Hardy Catalpa, as it is commonly called, have not been injured in the least by the past terrible Winter, while the species, Catalpa bignonioides, has been injured. The Speciosa trees are but two years from nursery plants a foot high. They grow with great rapidity and attain the size of from 12 to 20 feet, giving a dense shade and presenting a handsome appearance. The wood of this variety is now well known to be of great durability and, all things considered, we commend its use to our friends in general and to our Western friends in particular. Little trees may be purchased of leading nurserymen at a very low price.

TESTING OATS.—The field upon which last year we raised the large crop of Chester County Mammoth Corn, is now in oats of three varieties, viz., Russian White, Washington and English, the last weighing 50 pounds to the bushel and bearing no more specific name. We are now sowing in plots, varying from a half to one-fortieth of an acre, Mold's Ennobled Oats, imported seed, our own having become mixed; White Australian (54 pounds to the bushel!); Pringle's Excelsior-Hulless and about ten other kinds which have been commended highly as being "rust-proof," wonderfully prolific, or in some other respect specially worthy of cultivation. The season is such that we are quite ten days behind the usual time of sowing, for which reason, as well as from the fact that there is little time for thorough preparation of the soil, we do not anticipate very heavy yields.

IMMIGRATION.

STILL they come! On Tuesday last 6,881 immigrants landed at Castle Garden, and on Thursday 4,000 more disembarked. During the present month over 35,000 have arrived, and since January 1st over 80,000 have been added to our population—an increase of 20,000 over the arrivals for the same period last year. It is said that two-thirds of these immigrants go to develop the great West, and thus add much to the material wealth of the country. A fair estimate of the money value of an immigrant to a new agricultural country political economists place at $1,000, as the lowest figure, and this leaves out of consideration the money which the new settlers bring with them. In one week a single banking firm in this city paid out to immigrants brought over in three German steamers over $100,000 on bills of exchange. The Germans bring more money than any other nationality, and the Poles the least of all. An idea of the importance of these accessions may be formed when we remember that the 327,371 arrivals of last year, at only $1,000 a head, represented $327,371,000 added to the wealth of the country. According to careful estimates there will be not far from a half million souls added to our population by immigration this year. But the great question to be considered is, what will be the effect of the introduction of this vast foreign population, composed of different nationalities and coming from governments unlike our own, upon our social, political and moral status? This question will in the coming decade invite the closest attention of every one interested in the highest welfare of the country.

IMPROVED SEED-CORN.

AS THE time for planting corn draws near for the Middle and Northern States, we again urge it upon our readers to plant a small plot as far away from other corn as practicable. Let this plot be prepared as if it were a garden and let it be 33 feet square, or one-fortieth of an acre, which will be large enough to furnish seed sufficient to plant from six to eight acres next year. Let the rows be fully four feet apart, and drop a single kernel every six inches so as to insure a full stand. Then at the first cultivation cut out the plants so as to leave them from one foot to 18 inches apart in the row. As soon as the sets appear, and just before the pollen of the tassel is ready to fall, cut off the tassel from every stalk that does not show two or more sets according to the habit of the variety. If, for instance, it were Black Sugar Corn, we should leave the tassels upon only such stalks as had developed three sets or more; if Blount's, six to eight and so on. As, however, sets very often, instead of forming ears, change to lateral stalks or remain undeveloped, it is safest to mark the most prolific stalks before harvest and then select the best ears thereon for seed. This plan is attended with some trouble, to be sure. But we feel confident that those who follow it for two or three years will be well repaid for their pains by an increased yield of a better quality of corn.

We have seen the thoughtless and quite impracticable method advocated of going over an entire field in this way and emasculating the less productive stalks. Why do this when a small plot, with comparatively little labor and expense, may produce all the seed corn needed for another year, and that too which has had every advantage in the way of improvement that could have been given in large fields with forty times a greater amount of tedious labor? The sets in many cases, are by no means easily discovered at that time when the pollen is nearly ripe enough to be shed, and we don't believe there is one farmer in five hundred that could be brought to examine a ten-acre field in this manner.

A NEW MEANS OF PURIFICATION.

THE idea has hitherto prevailed quite generally that for purposes of disinfection we should seek to prevent, in so far as may be possible, any fermentation or putrefaction in accumulations of filth. To this end a great variety of powerful chemical agents have been resorted to, such as copperas, chloride of lime, permanganate of potash, carbolic and sulphurous acids, and so forth, which act by destroying the bacteria or other organisms which cause decay. Professor Alexander Mueller, of Berlin, has now proposed an entirely different method of procedure. He has recently patented a process for purifying drain-water which consists in systematically cultivating therein various yeast-like organisms, which feed upon the matters that would become offensive or dangerous if left to themselves. So far from using those kinds of chemicals which work to destroy the lower organisms, he adds to the drain-water such materials as may be needed to supplement the matters already contained in it, so that there may be a complete supply of food for the organisms he wishes to have grow. The liquid has to be neutralized also, and pains are taken to maintain it at an appropriate temperature; that is to say, to prevent it from becoming chilled. The idea is, of course, to foster and, as it were, cultivate the organisms to the utmost. Thus far it has not been found necessary to make any direct addition or "seeding" of the organism to the drain-water, since there are plenty of germs in the air which will develop of themselves in the liquid, provided it is in fit condition. The gases generated during the process are made to pass into a system of drain tiles buried in the earth, which absorbs them. A quantity of harmless mud, valuable for compost, settles out from the liquid, while the water itself becomes so pure that it might be used for almost any domestic or manufacturing purpose. The process is specially adapted for purifying the drain-water from beet-sugar factories, but is manifestly applicable to other cases where no very large amount of liquid has to be dealt with, and may perhaps be found applicable even to the sewage of cities.

AN APOSTLE AND HIS PROOFS.

M. LEON COTTEAU, the irrepressible Gallic apostle of Free Trade, whose arduous mission is the conversion of selfish America to the generous faith that to buy from our neighbors is to enrich ourselves, arrived at this port on the 21st instant for a third proselyting tour. His former missionary efforts were weakened by the objection from his infidel opponents that, with unapostolic selfishness, he had only the interests of his own fatherland at heart, since, in return for the privilege of injuring the producers and manufacturers of this high-priced-labor country by the free competition at their own thresholds sought for between their goods and the wines and wares of that low-priced-labor land, no equivalent was given, owing to the comparatively small amount of French importations of American products. The reciprocity of benefits on which the doctrine of Free Trade is founded, was all—well, nearly all—on one side, it was insisted, in this case. While indignantly denying the charge, the wide-awake missionary evidently felt its full force, for even before landing the other day his first words to a newspaper interviewer exultantly announced that he had succeeded in forming in Paris one company, with a capital of twenty million francs, for the importation of American live stock, and another, with an unmentioned capital, for the importation of all sorts of American products. Our wild exultation as farmers and Americans at these twin proofs of French mercantile enterprise is restrained only until time shall have told, first, what proportion of the millions of the first company will ever be called in; second, how much of the capital of the second, also, will ever be used; third, will either ever be different from the many other speculative European organizations projected within the last few years for trading with this continent, all of which went "sky-high" before rising to the dignity of usefulness; and, fourth, in the event of either of the companies ever enlarging the market for our products in France, will not the Government curtail it on some pretext as frivolous as that lately hit upon for embargoing our pork, hams and sausages? When time shall have dispelled our doubts on these points in accordance with our wishes, we shall exult in the establishment of these twin companies, not only as proofs of French enterprise, but also as specimens of the possible advantages of Free Trade.

BREVITIES.

FROM our Everywhere correspondence it will be seen that Eucalyptus globulus trees "nearly thirty feet high" have been killed in Florida the past Winter.

WE propose to offer a handsome prize for the best bunches of Argenteuil and Giant Dutch Asparagus raised from the seeds sent to subscribers by this journal—the second year.

IS THERE any other article of human food as nearly tasteless as potatoes of the Early Rose type? We want a variety of the Peachblow flavor, as early as the Early Rose or Beauty of Hebron, and as productive as the latter.

GENERAL LE DUC has sent us a quantity of the seeds of the great insect destroyer—Pyrethrum roseum, the flowers of which are ground into powder and called Persian Insect Powder and many other names. These seeds, put up in little packages, we shall send to our readers as far as they go.

WE hope that all of our readers who have no grape-vines will plant at least one this Spring. Make the soil mellow and fairly rich. Press fine soil over the roots, which should be carefully spread out as if upon an inclined plane, and not planted directly downwards. Permit two or three buds to push and then remove all but one—the strongest.

DR. LAWES of Rothamsted, England, in a private letter to the RURAL, states under date of April 11: "We have had a month without rain, which has been of the greatest possible benefit to us and all our Spring crops are well got in. After six very wet seasons in succession, we may expect some dry ones, but they will come too late for many of our farmers."

WE wonder who it was in Washington that informed "George Thumber, Ed., etc.," that O. Judd would probably be appointed Com. of Agriculture if it could be made to appear that a considerable number of farmers desired it. Evidently they were fooling the good Doctor. It would not be right that any agricultural editor, even though he were a capable, upright man, should fill that position.

ALTHOUGH we object to the present form of the bill before the New York Legislature relating to oleomargarine and kindred concoctions, still we urge our readers in this State to forward petitions in its favor at once to the Representatives and Senators from their respective districts. Our objections to it rest mainly on the belief that what legislation it seeks is both so harsh that even if secured it will be practically inoperative, and of such a special character that the Supreme Court, when appealed to, is likely to declare some of its provisions unconstitutional. The bill can be properly amended, however, before the Legislature, either in the House or the Senate, and it is to be hoped there are in both bodies a sufficient number of friends of the measure to see that it is put in proper shape. Moreover, the dairy interests of the country, the health of the public, and honest dealing, urgently demand legislative protection, and we are not so impractical as to reject all legislation except the best.

IN the good old times, the merry times, the innocent, unsophisticated, reverential, religious times of our forefathers, the life-time of a generation was thought not to exceed 33 years. This was before scientific progress, deterioration in morals, keen competition and eagerness for speedy enrichment poisoned with adulterations the food, the drink, and even the clothing of the people; before gaslight and its attractions kept the city-man and social parties, grange meetings, etc., with their mild dissipations, the countryman out of bed at unseasonable hours; before the increased wickedness of these latter days, about which we hear so much from the pulpit, the press and the chimney corner, sapped the health of the young and shortened the life of the old; before the turmoil and goaheadativeness of to-day shattered the nerves of the people, and the railroad, the steamboat, the reaper, the thrashing machine and the exploding boiler mangled their bodies. Yes, before all these and a multitude of other causes of early death vexed the world, the life of a generation was 33 years—vital statistics now put it at about 43.

A VALUABLE SHIPMENT OF LIVE STOCK.—A couple of weeks ago one of the most valuable consignments of pedigree stock ever exported from Great Britain was shipped at Liverpool on the Dominion Line steamer Texas. It comprised of Short-horns two Bates heifers and four valuable cows; of Jerseys and Guernseys, a number of bulls and heifers carefully selected in the Channel Islands; of Herefords, a bull from the royal farm at Windsor and upwards of sixty other higher-priced bulls from different parts of the country; of Polled Angus cattled, forty-five bulls and cows purchased in Aberdeenshire. There was also a very choice selection of Shropshire Down sheep from Lord Strathmore's flock and 200 Shropshire and Oxford Down sheep from other noted breeders, as well as two costly Clydesdale stallions from Dumfries-shire. These were all shipped by Hon. M. H. Cochrane, of Hillhurst, Canada. On the same steamer were also three prize Guernsey heifers, a choice lot of Shropshire Down sheep and ten valuable Clydesdale stallions for a couple of other Canadians. The value of the whole shipment was put at $150,000 in England. It would be interesting to know what their price would be on this side of the Atlantic.

THE agricultural evils of the vast military system of Europe are best illustrated in small States. At present Greece, which for some time back has had from 40,000 to 80,000 soldiers under arms, is grievously suffering agriculturally from this burden. Repeated levies have drained the rural districts and especially the islands, of nearly all their able-bodied laborers. The olive crop is the chief source of wealth to Corfu, and last year it was exceptionally abundant, but from sheer lack of hands to harvest the fruit it lay rotting on the ground. Eager women and children could not supply the want of men. Land-owners who are rich enough are sending this year to Italy for laborers, but the poorer farmers are in a wretched plight. Every belligerent news from Athens spreads consternation through the agricultural districts on the mainland and islands. Had our late "onpleasantness" resulted in the rupture of this country into two sections, the evil would not have stopped there, for it is not improbable that the country would have soon become divided into a number of petty States each without weight or respect abroad and armed to the teeth at home, just as Europe is now. In view, therefore, of the evils of militarism across the Atlantic, even the unsuccessful in the late quarrel must regard their failure as "a blessing in disguise."

Miscellaneous.

THE TRUTH ABOUT IT.

[THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

TRICHINA IN PORK.

A VAST amount of error and nonsense has been spread abroad of late in regard to a parasitic disease in pigs known as the spiral flesh-worm, *trichina spiralis*. The whole pork-eating world are in arms and dread to touch their favorite meat on account of the danger of infection from this parasite. The most foolish and surprising reports are made in respectable journals, by which the public who take their information at second hand are deceived and alarmed. Perhaps those enterprising persons who are known as the great pork speculators, who get up corners, and who, by false reports and doubtful schemes, gain the control of the whole pork product of the country, may have "a finger in this pie" in the effort to pull out a plum from it. Nevertheless there is a popular excitement altogether undue in its extent and wholly exaggerated in its character, which should be allayed by the very simple remedy of telling "the truth about it." Now the truth about this disagreeable little spiral flesh-worm is as follows:—It has been known for a number of years, but it is within 20 years that its deadly character in the human system has become notorious. In 1871 a large number of persons died in Cumberland, England—a famous bacon and ham district—from the disease, brought on by eating raw ham. Both before and since then it has occasionally appeared in localities where raw pork and sausages are habitually eaten.

The natural history of this pest is very simple and when known should both remove all misapprehension as to its character and suggest such effective precautions as would totally remove all danger from it. The prevailing ignorance in regard to it among educated people is surprising, and it shows how recklessly some writers for newspapers, who call themselves "journalists," make statements that are utterly unwarranted. For instance, a "special dispatch" from Boston is given in a leading Chicago paper, purporting to be copied from a Boston commercial journal, in which it is stated that an outbreak of trichinosis has occurred in Massachusetts, *but it is not expected to become epidemic*. The person who could write such a paragraph must be very ignorant of the subject, and none but a reckless person could so mistake, or so assert, without at least looking into the nature of what he is writing about. Such loose, ignorant statements do much to harm and greatly disturb and harrass people who cannot know any better.

Trichina spiralis is a minute worm which has an active and a dormant stage of existence; it is from one-sixth to one-twentieth of an inch in length and when encysted can be seen by the naked eye, and easily with the help of a small magnifying glass. It infests the muscles of mankind, the hog, dog, cat, rat, mouse, chicken, owl, hawk, and even the goat and rabbit; but it is always introduced through the stomach in food or something that is eaten. In the human body it can only enter with infested food; in other animals it may be taken in with the dung which is picked up eagerly by fowls, dogs, and hogs, or in the prey caught by cats, owls, etc. The larvæ or the mature and fertile worms may be swallowed in dung and the larvæ in their dormant and encysted state, in flesh. The worm matures in the intestines, and in seven days after it becomes fully grown, it produces a numerous progeny of very small hair-like larvæ and then dies. The larvæ at once pierce the walls of the intestines and penetrate the muscles all over the body. It is during this journey that the fatal effects, are produced. The irritation caused by the passage of myriads of these worms through the walls of the intestines and the peritoneum (the abdominal lining membrane) produces all the symptoms of intestinal or typhoid fever, or diarrhea and other complaints of the bowels, and their migration through the muscles causes severe pains, stiffness, and cramps in the limbs, which are similar to those belonging to rheumatism. These painful symptoms last from four to six weeks unless death sooner intervenes, and the recovery is slow and tedious. As soon as the worms become settled they are surrounded and enclosed in an oval or lemon-shaped cyst, and remain dormant, giving no further trouble for years, until by some occurrence the worms enter the stomach of some living animal when the cyst is dissolved, and in two days the worm becomes active, and fertile, and the same round is repeated with its progeny. It is said that the lower animals do not suffer in this way from the presence of the migrating worms, but this is scarcely reasonable and there is every probability that many of the obscure diseases which afflict these animals, such as intestinal fever, paralysis, stiffness of the limbs, and rheumatism in swine and poultry may be thus caused.

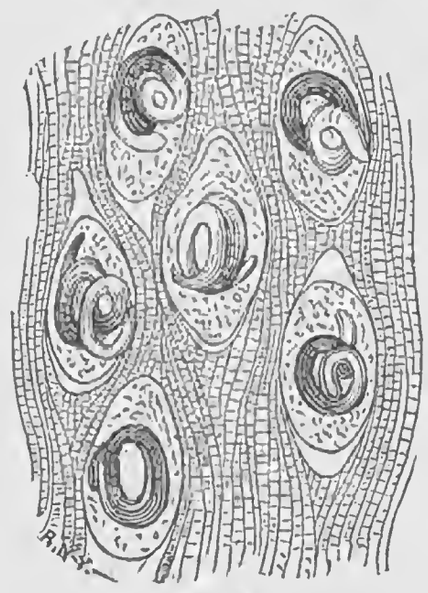

FIG. 228.

When the worms become encysted they appear as small, white oval grains imbedded in the muscles. They are never found in the fat, and this utterly disproves the absurd reports that they have been found in lard and other fat products. When very numerous, a ham or other flesh cut across may appear pale in color, and by close examination the white cysts may be seen by the naked eye. In cutting slices of muscles for microscopical examination with a fine blade, the gritty feeling may sometimes indicate the presence of the parasite. At Fig. 228 is shown the appearance of these cysts with the inclosed worms in muscular fiber magnified. At A, Fig 229 is shown a piece of pork infested with measles, a larval form of a tape-worm, *tænia solium*; the cyst with the inclosed worm being shown at C, Fig. 229, and the head of the worm at B, Fig. 229. From the marked similarity between the measle in its encysted form, as here shown, it can be readily seen that measles can be easily mistaken for trichinæ, and possibly sometimes are. But in truth there may not be much to choose between these two creatures, both sufficiently disagreeable; the tape-worm, however, remains in the intestines, and one may become

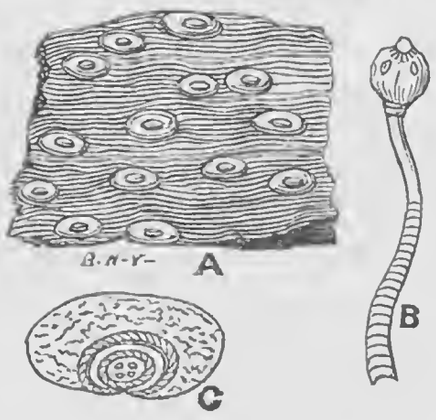

FIG. 229.

the unsuspecting host of a lively tape-worm without feeling much trouble, and be secure from any fatal results from it, while the trichinæ produce serious and frequently fatal disorders. All these pests, trichinæ included, are killed by exposure to a boiling heat; and thorough cooking is a perfect safeguard against them. Cleanly-fed animals are never subject to them. Where mice and rats abound, and where animals are suffered to consume the dung of others that are infested, or where dead animals are left to be devoured, this and other similar parasites may abound. It is thus seen that to consider this disease as liable to become epidemic is utterly unwarranted; also that it may be guarded against by the cleanly keeping of our pigs, fowls and dogs, and the abolition of mice and rats from the premises; and, lastly, if people will refrain from the savage and uncivilized habit of eating raw meat, whether it be salted or smoked (for these modes of preparation are futile against the danger), and will take care to cook their flesh meat thoroughly, all the danger may be averted. Another truth of this matter is that the present excitement is an instance of the spasmodic appearance of those popular delusions and apprehensions which are founded on *facts* drawn chiefly from the imagination of sensational writers for the public press. H. S.

POCKET SILOS.—There is no use in letting the rich farmers have all the silos, we poor ones ought to have a small chance according to our means. Let us all go to the boiler-makers and get sections of old boilers, fitted with a permanent bottom at one end, and a snap cover on the other; then let the rich philo silo-phers, with their steam power presses, cram our little silos full of greens or cow-crout, or whatever the right name is, and we will call for our little kettles and lug them home to our cows in our pockets, if our pockets are big enough, and if they ain't, why, we won't meddle with them, and all other men with big heads and little pockets will do likewisely. S. R. M.

Literary Miscellany.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

(Continued from page 278.)

CHAPTER XIV.

FIRST IMPRESSIONS OF THE COUNTRY.

WE had now arrived within a couple of miles of the city's boundaries, which fact was made known to me by Mr. Glinden, in answer to my inquiry concerning some objects which appeared to be moving about in the air at quite a distance from us. As we approached, these objects seemed to increase in number, and their movements became more complicated. Now one, appearing a mere speck in the distance, would gradually grow on our sight till my eyes, strained in the effort to discern its form and appearance, would find relief in its suddenly dropping from sight. Another would rise on my view, and gradually appear to diminish in size till it was completely lost to sight. There were others crossing and recrossing the tracks of these at all angles, and it certainly appeared to me that their movements were carried on at the imminent risk of collision. I could compare them to nothing else but the boats and ships in the harbor of some great city. In fact they were air-ships plying between the city and all parts of the country. It was necessary for them to have their stations on the outskirts of the city so that they might have plenty of room to make their ascents and descents in windy weather. Travel across the country was carried on almost exclusively by these air-ships which had arrived at such a marvelous degree of perfection both in their construction and management, that trips were made in them with absolute safety, and with much less hindrance from the winds and currents of the air than the ships of our day receive from the storms of the ocean. While the speed with which they traveled under favorable circumstances rivaled the flight of the swiftest bird.

It was certainly very awe-inspiring to me to look directly up at these great objects moving above me with so much gracefulness and majesty of movement. And when I reflected that from twenty to one hundred and fifty human beings were suspended in each of these great air-ships, my blood ran cold at the thought of the many frightful catastrophies which must happen among a great people whose chief means of travel is through the air. But Mr. Glinden informed me that there were so many safe-guards placed about these air-ships, and that they were built with so much care and skill, and were managed by men who were born to the occupation, and trained to it most carefully, that he had never known of a single accident which had been attended with loss of life.

They were constructed on the principle of phillego-motera, but beside the great disc which was much larger in them, they had sails which enabled them to utilize the wind, and a most ingenious apparatus for guiding their course, which was capable of being used almost as skillfully as a bird uses its tail for the same purpose. It was most marvelous to see how quickly the speed of these ships could be checked, and a descent effected when a station had been reached. Even if there was a considerable wind blowing, the skill of the æronaut enabled him to guage its force and his distance so nicely that he would bring his ship to its destination as accurately as the eagle swoops upon its prey.

I was surprised to find that the boundary of the city was as clearly defined as any street within it. The outside wards were made up as regularly of their hundred and forty-four squares about their parks as any ward in the heart of the city, while the streets which ran around the outside of these squares presented the peculiar appearance of fields of grain and other growing crops on the one side and closely built up houses on the other.

Our passage from the city into the country was therefore as abrupt as could well be imagined, and I must own that the scenes which now burst upon my sight, if they were less wonderful and magnificent, were no less interesting and pleasure-giving than those with which I had been so wonderfully entertained in the city.

As an appearance of thrift, wealth and refinement characterized everything about the city, so in the country there was nothing common or slipshod about the farmers or their homes. Everything spoke of the accumulated culture and prosperity of many generations of prudent, far-sighted and unstinted industry. The roads were wide and paved like the streets of the city, and on either side of them was a row of grand old elms, whose far-reaching boughs, the growth of many centuries, formed a complete canopy above them. There was also a well-paved sidewalk on either side of the road between the rows of trees and the lands of the farmers. No fences protected the crops from the animals which might pass along the road, nor were there any boundary fences between the lands of the different farmers. In fact, the only fences which I saw were those about the farm-yards where the cattle were confined.

I wondered at this, and also that the houses of the inhabitants were built in close proximity to one another so as to form a most attractive village. I observed that these villages occurred at regular intervals, and that they were invariably built at the intersection of two highways, which also invariably crossed each other at right angles.

I finally asked Mr. Glinden how it was that the country roads were laid out with the same regularity as the streets of the city, and why the people built their homes together at the intersections of these roads instead of singly, on their respective farms.

"The answers to these questions," he replied, "may be found in the methodical and social characteristics of our people. As our cities are divided into wards of a uniform size, so the cultivated lands of the country are divided into sections of about a mile square. Twenty-five families occupy each section, which they own and cultivate in common, and the proceeds of their labor is divided equally among them.

"The villages are composed of the families of four adjoining sections, and they are built at their contiguous corners so that the families of each section may occupy their own land and still enjoy the advantages of the larger society which this arrangement gives. Each village has its church, its gymnasium, its school and its library, as well as its embowered pavilion, where the people may meet in the evening for social pastime and enjoyment.

"Moreover, each section is associated with a ward of the city and finds a ready market for its productions in its own ward, and each ward receives an abundant supply of country produce from its own section."

"This is doing business on the co-operative and mutual benefit plan on a large scale, surely," I remarked. "But do you mean to say that every ward in the city has its particular farm in the country, so to speak?"

"Yes, sir, about every city there are as many sections of good arable land as there are wards in the city, and each ward is the market for a particular section. The farmers of each section, of course, are careful to put in such crops and such quantities of them as the demands of their market require, and by long practice they have learned to regulate this matter so that supply and demand are always equal. The farmer thus disposes of his crop without trouble or anxiety, and without even the necessity of accompanying it to market. In fact, the occupation of the farmer, which was formerly one of toil, uncertainty and anxiety, has lost these characteristics as completely as any occupation which our people follow. Our farmers have learned the art of keeping their land in the very highest condition of tilth, and the uniformity of our seasons in conjunction with this, insures a uniformity of production; and, consumption and value remaining ever the same, he knows before he sows his seed just what will be the income from his labor."

CHAPTER XV.

FARMING AS AN ART.

WE now approached the residence of Mr. Glinden's friend, and as we drew up in front of it, an old man who had been sitting on the spacious veranda came down to greet us.

"What, Elijah!" he exclaimed, "is that you? Joy and happiness be with you! I am glad to see you."

This was the common mode of salutation in this country instead of "How do you do? I hope you are well," etc., as with us.

Then peering very sharply at me the old man inquired, "Is this Helpo that you have brought with you?"

Helpo, I may explain, was a favorite monkey of Mr. Glinden's. It is also due to the old gentleman to say that he was well stricken in years, and that his sight was quite dim. And of Helpo it may be said that he was a very remarkable specimen of his species possessing the gravity, wisdom and physical perfection of many generations of progressive development.

When Mr. Glinden explained to the old man that I was a stranger from afar-off, and hitherto unknown country, he was equally surprised and abashed. He apologized for the error into which he had fallen by assuring me that when I had lived in the world a hundred and fifty-seven years, as he had done, it would not be strange if I sometimes mistook an inferior man for a superior monkey.

Here again I may explain that this people are so honest in thought, word, and deed, that they often discover the greatest simplicity in speaking what is in their minds. It was not the first time that I had been cut by such a remark as the foregoing, spoken without the least intention of giving pain, but with the artlessness of a mind which was incapable of concealment or deception.

The old man led the way into the house, which, by the way, was constructed on the same plan as the residences of the city. In fact, all the houses in the country were built of the same material as those of the city, and with no less skill and elegance in every detail of their construction.

We were cordially received by an elderly lady. I would call her old, had not our aged friend, Mr. Lenor introduced her as his daughter. She was in reality the wife of his son, and though as lively as a cricket, she had seen at least, a hundred and twenty summers.

Mrs. Lenor told us that all the other members of the family were out in the harvest field, and, knowing that she was fully occupied with household duties, Mr. Glinden proposed that we should go out and watch the operations of the men and women, I may add, in the field.

We could see them from the house scattered over the far side of the sections a small army of at least a hundred men and seventy-five women, mowing and reaping and gathering into the great stone barns, the grass and grain at it was cut. There were no horses connected with these labors, their places being fully occupied by the wonderful phillego. The phillego-engines were quite small and light as compared with our steam engines, and remarkably manageable in the hands of a skillful driver. Among the farmers this duty was accorded through courtesy to the women, as being less laborious than any other. My training led me to remark to Mr. Glinden that it would be an evidence of a truer courtesy on the part of the men, if they would take upon themselves the extra labor which the women performed, that they might be permitted to pursue duties which were more delicate and congenial where they would not be oppressed with the burden and heat of the day.

He looked at me in a reflective manner, as if he

were endeavoring to recall a scrap of almost forgotten history.

"I believe in the olden time, sir," said he, "that he people held peculiar ideas in regard to the sphere of woman. There were so many things which were deemed *unwomanly* which were not thought *unmanly* that the sphere of her efforts was narrowed down to a very circumscribed circle indeed. Guided by a more thorough knowledge of the laws which govern our physical and mental natures, we give to her sphere a much wider latitude. We say, that having a body which requires fresh air, sunlight and exercise no less than man's, and mental faculties which require a field of self-reliant and independent effort for their full development, the sphere of woman should be as broad as the demands of society require to make her life the most useful, and to secure the highest and best development of her physical and mental natures.

"Now, if the old, weak notions of woman's sphere prevailed among us, our women would be languid, inert creatures from mere lack of employment which would give energy to their physical natures. While our men would be oppressed with a superabundance of labor, which would weaken instead of giving tone and vigor to their bodies. The good sense of our women, therefore, and their fidelity to that popular principle among us which teaches us to bear one another's burdens prompts them to make themselve as useful as they can in any sphere where their own well being, as well as that of society, may be promoted.

"You must remember that our women are not the frail, delicate creatures of the olden time, but of perfect health and vigor, so that what would be laborious work to the women of old is little more than recreation to them. Beside, the perfection of our machinery has taken away heavy labor from the farmer's life, and made him a man of skill, instead of, as formerly, one of toil. And, like his fellow-countrymen of the city, his labor ends at noon.

"There is an illustration of the remark which I have just made," continued Mr. Glinden, as we now approached a field of grain which was being reaped by a phillego-reaper and binder, upon which sat a young woman, like a perfect Hebe, giving the directing power to the machine. It cut a swath of twelve feet; the grain as it was cut being received by three pairs of arms, in which it was securely bound and which threw it back upon an elevator that carried it still farther back to a phillego-motor wagon, where two men were stationed to receive and place the sheaves. When this wagon was full—its capacity was about six tons—it was moved off to the barn and another took its place. Thus while one wagon was being unloaded another was being filled, and the work of reaping went on continuously.

To be continued.

NEW PUBLICATIONS.

Testimony of the Ages, by REV. H. W. MORRIS D. D., (Formerly Professor of Mathematics in Newington College,) J. C. McCurdy & Co., Philadelphia, Pa.

This work is the result of many years of patient toil. It is a monument of learning and research, and it will take a leading position as a book on the Authenticity of the Old Testament and the Evidences of Christianity; the author is to be congratulated upon its completion. A valuable feature of this work may be found in the large number of fine engravings, on wood and steel, which not only adorn its pages, but also illustrate, explain and enforce the text. Many beautiful views are given of the cities and towns in which the Savior lived or which He visited in the course of His active ministry on earth. Bethlehem, and Nazareth, and Bethany; Cana, and Capernaum, and other cities and villages in which His "many mighty works" were done, are shown in all the rugged strength or quiet beauty of their various outlines and positions. Here are produced the testimonies of Geology and Astronomy to the Bible account of the origin and order of the work of creation, and the extent of the universe. Geography, Natural History, Physiology, &c.; the bondage and deliverance of the Hebrews; the recent scientific survey and explorations of the Wilderness of Sinai, and the whole land of Palestine are but a few of the many subjects that are enlarged upon. The Scripture student will, no doubt, find interest and profit within its folds. Its variedness gives it a power over similar but less attractive productions.

"Handy Book of Synonyms." Philadelphia. J. B. Lippincott & Co. Price 75 cents.

This little book is well worth its cost to any engaged in literary work. There is no excuse for a displeasing repetition of words with this at hand, and every writer and speaker will find it useful.

MAGAZINES FOR APRIL.

NORTH AMERICAN REVIEW.—Contents: Reform vs. Reformation; The Thing that Might Be; Religion in Schools; The Ownership of Railroad Property; The Historic Genesis of Protestantism; The Telegraph Monopoly; Henry Wadsworth Longfellow.

THE THING THAT MIGHT BE.—The tendency to go about showing other people what might be is widely enough shown by nature. But the mere tendency which exists in us all when young is unequally developed in later life, as individuals vary in observation of what is, power of imagining what might be, and energy of will urging them to replace what is by what might be. As we advance in life, many things occur to check the growth, or kill the germ of this tendency. The two main counteracting forces are: (1) The enlargement of our own knowledge, which discovers to us reasons why things are not better done than they are, which reasons had been before beyond our vision. (2) The discovery that the trade of general improver is one that is apt to make us very odious to our fellows, and that, even if we can show demonstratively that something better could be put in the place of something that is, we had better not say so.

Thus it comes to pass that every ingenuous and intelligent youth is sent into the world by nature with the initial promptings of enterprise and innovation, and that the same youth, by a process equally natural, is found in middle age a stout, conservative and sturdy champion of the thing that is. Thus there goes on in the social laboratory a constant manufacture of a generation of conservatives out of a generation of liberals; and by this thesis and antithesis of nature the equilibrium of a political community is maintained.—Mark Pattison in North American Review.

Scribner's Magazine; The Ladies' Floral Cabinet; Domestic Monthly; St. Nicholas; Godey's Lady's Book. Want of space allows but brief comment of receipt and usual standard of excellence of the above magazines.

International Exhibition.

A dispatch from Melbourne, Australia, states that the "*First Award of Merit*" was given to the "Davis Vertical Feed Sewing Machine," which is manufactured at Watertown, New York. A great effort was made on the part of the old-style under-feed machines to capture the prize, on account of the "Davis" having received the First Award at Sidney in 1880, but, as it appears, without avail. It is now generally conceded that the Davis has no equal in excellence of construction, great range of work, and ease of operation.

For Women.

CONDUCTED BY MISS RAY CLARK.

MADGE'S TEN POSTAL CARDS.

IT was rather trying to Madge to be laid up with a cold on a rainy day when she had planned such a splendid shopping day in the city with Carrie Lee.

"But the money will keep," she concluded philosophically, "and dry-good stores will not be quite sold out, probably, when I reach there. I wonder what I can do to amuse myself." She turned towards her open writing desk, which was always invitingly handy, and took up a new package of ten postal cards.

"I will just send off every one of these cards," she thought, "just for the fun of it, and write them just as fine and as full as I can. I will make folks put on their specs to read them," and laughing as she seated herself and dipped her dainty gold pen in the ink.

Madge always set about a thing at once when she had decided upon it.

"Poor Alice away in that Dakotah land, with a sick family to care for! I know it will give her memory a pleasant jog even to get a full postal from the old home-land." So she wrote her at least a dozen items of news on the small surface and set it up, after directing, on the edge of her book-case to dry off. The next was to a distant cousin, and it was easy to put in home news enough to fill it; just such chat as two girls would be likely to indulge in, if they met for a few minutes in any public place. Nothing important or very private, but quite interesting to hear, to one far away. The old associations it would bring up would linger pleasantly about the heart for days.

Madge had friends enough for the whole ten, and now she had got so fairly waked up to the subject of correspondence, she rather wished she had another package to begin on. The business had given her a pleasant morning's occupation, and as the cards went their several ways they did good like a medicine in a good many homes.

These little news items were talked over and commented on and better still, thought over until everything seemed brighter for this ray of sunshine coming in. Old friendships were cemented by this small outlay of time and postage and hearts were cheered. That rainy morning was a good thing after all.

How many who have not time to write a little could send a postal full of information and not leave absent ones to feel themselves coldly neglected. It would teach young people conciseness in expressing their views and discrimination in selecting the most important points. Like a deaf man who was always well informed on leading topics mainly gathered from conversation, who explained the matter by saying, "People do not talk nonsense to a man through a speaking trumpet," postal card correspondence generally has the merit of being sensible. AUNT EVA.

BEAUTY.

WHAT a wonderful gift beauty is! and what woman is there in the world who would not gladly see herself possessed of it? Of course, we all remember how our elder "sisters and our cousins and our aunts" used to check the stirrings of childish vanity, or endeavor to do so, by telling us that "beauty is but skin deep," "handsome is that handsome does" and so forth, and we may have come to understand the wise man's aphorism that "beauty is vain"; but still there is not one who would not be pretty if she could. Unfortunately, however, it is impossible, and there are noses, and mouths, and complexions, and even eyes that by no stretch of imagination or affection can be deemed lovely; and yet there are few who do not possess some feature or expression which redeems them from absolute ugliness. But though we cannot all have pretensions to beauty, every woman who will may be charming, and to be so is really part of her mission. Every one can cultivate the sweet tempers and obliging dispositions that mould our faces as well as our fates, and we can all keep ourselves sweet and clean, and to a great extent healthy. Health is a beauty in itself, and nothing conduces to it more than plenty of fresh air and pure water, a contented and cultured mind, and plenty of occupation.

Art and experience have taught civilized people a good many little "wrinkles" by which they can improve their personal appearance and keep themselves in decorative repair, even when youth has vanished, and there can be no reason why these should not be remembered and acted upon. They need not add much to the time spent upon our toilet, for if we only know what to use and how to do it, habits are formed in a manner which soon become second nature, and we make the best of our advantage and keep ourselves nice and attractive without bestowing much thought on the process.—*Correspondent.*

MODEL CHILDREN.

NOT very long ago an article appeared in the RURAL describing an only child who with extra care and painstaking had so far proved to be healthy and good tempered, what we should call "promising." That is all very well and every mother's experience is interesting to other parents but one thing was strongly brought before my mind by the article in question.

All children cannot be only ones, and, have the sole and undivided attention of their parents, neither is it desirable that they should because experience shows that children flourish best with a little wholesome neglect, that is, it need not be a life study as to what agrees with them, and what does not.

American children are more numerous among the middle classes, and the finest specimens of men and women to be found have come from large families. Children in such places are obliged to surrender their own wills now and then, and learn to "give and take" a habit much easier learned gradually in childhood than in maturer years. In large families of limited means there cannot be such particular attention paid to the diet of each child and other matters are only in a general way looked after, and yet with sensible parents how they thrive. Self reliance comes easily and naturally where a child is "turned off."

I have in mind a boy of nine years who ranks as number six in the family who was no trouble to raise, always good humored, healthy and happy who always ate whatever he relished from the variety of a farmers table without any fixed rules for diet, or over carefulness of exposure to the weather; whose tastes are pure and simple and whose hearty boyish enjoyment of life, study or play, it is a comfort to contemplate.

Such children are born, they are not made what they are by careful diet nor watchfulness; they are heaven's best gifts and human wisdom may not claim the work. B. C. D.

LITTLE HELPS.

MRS. J. E. S.

How to obtain perforated patterns for embroidering:—Take a figure in cretonne, one from wall-paper, or any you may chance to have, and to the back of it baste smoothly a white or light-colored paper. Throw the thread from off your sewing machine, and place your pattern ready for stitching, with the figure uppermost. Run the machine, stitching a perfect outline of the figure; remove it, and you will have a perforated pattern for stamping.

The powder can be made by mixing some finely-powdered gum-arabic with chrome blue for white or light-colored goods, and starch with the gum for dark ones.

To stamp, secure the perforated pattern exactly as you wish it to be on the goods, with a small brush or soft piece of white linen rub lightly a very little powder along the perforations; then remove the pattern and press with a warm flat-iron, thus melting the gum and making the powder adhere to the cloth, which keeps the pattern legible. Be exceedingly careful not to use too much powder.

With a little experience one becomes quite apt in making patterns and stamping.

ABOUT WOMEN.

MISS KELLOGG, on account of her mother's sickness canceled her engagement at St. Petersburg, and has gone to Nice.

OLIVE LOGAN says that American women should learn that it is as vulgar to dress splendidly for a hotel dining room as for a railroad journey.

MISS KATE PRIDEMORE, a talented young authoress, residing in Sioux City, Iowa, is a lineal descendant of Addison, the great English essayist.

MISS HARRISON, who is now Lady Arthur Hill, receives a royalty of $4,000 a year for her ballad, "In the Gloaming." She was formerly a governess.

MRS. YOSHIDA, wife of the Japanese minister at Washington, is described as a pleasant little lady and the happy mother of the first Japanese baby born in America.

MISS EMMA KINNEY holds the position of engrossing clerk of the Senate in Nebraska, Miss Outcalt, enrolling clerk and Miss Strickland engrossing clerk of the House.

MARIE VAN ZANDT appears to be the coming prima donna abroad, as, including Ambrose Thomas, no less than six composers are writing works for her acceptance. She sings "Dinorah" at her reappearance in Paris this month.

MISS KATE SMITH, an inmate of the Union Home for Old Ladies in Philadelphia, after three years' labor, has completed a quilt containing 55,552 pieces. She has been blind from infancy, but threaded every needle herself, and used 100 spools of thread in the work.

DORA YOUNG, a favorite daughter of the Prophet and one of the heirs of a large portion of his property, was lately to be seen at a Chicago hotel, and is described as a fine-looking person, dressed in good taste in black satin and brocade, with costly rings on her shapely hands. Her manners are pleasing, and her conversation interesting. She is attached to the memory of her father, although she is no longer a Mormon, calls the system a dreadful one, and says that the Mormon wives under their outward semblance of good-will, hate each other with a deadly hatred.

CORRESPONDENT'S CORNER.

ETIQUETTE.—Being an attentive reader of the RURAL for several years I have noticed that articles on good behavior have been very few and far between. Now if our paper is to be truly a "home paper," why do we confine the few suggestions we make entirely to dress and decoration of the house which can only please the eye, while many of us are daily perplexed with our ignorance of the rules of etiquette? Methinks I hear some one say "such knowledge is to be gotten from books on decorum and the like rather than from the columns of the weekly papers." Very well, you *can* enlighten yourself to some extent in this way but my experience has taught me only the fundamental rules of good manners without entering into the details.

Now I think if those of us who have questions we would like to ask on this subject would only be free and not feel afraid to show our ignorance, undoubtedly there would be many to come to our rescue with answers. In this way we might find ourselves much more deficient than we really gave ourselves credit for. We would learn, perhaps that we were repeatedly committing some blunder without thinking anything about it. For my part I have ever so many questions to ask that I have been unable to find in any book of etiquette, and which my good sense fails to answer satisfactorily. For instance a lady receives invitation from a gentleman to attend a party or for an evening's ride. She says she will be pleased to accept; now as it is strictly improper for a lady to thank a gentleman for his company, what should she reply to his thanks for her company? Is it proper for a lady to thank a gentleman for his attentions? Is it always the gentleman's place to ask to call? Should one or more persons be introduced to each member of a company or as a whole? Is it ill-bred to bow from a window?

These few interrogatives which I have mentioned as examples may seem very simple to some, but perplexing to others who do not know just what is correct. I shall be very much pleased to have some of the wise correspondents answer, and also make other suggestions on good behavior, *i. e.*, if such a subject will be deemed appropriate for this department. RURAL SISTER.

P. S. What is the best common sense work on etiquette?

Remember that a little Hop Bitters saves big Doctor bills, and cures when all else fails.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ALL-DAY VISITS HERE AND THERE.

ADELINE E. STORY.

"EVERYTHING goes as it happens at Diller's, indoors and out." I thought of this oft-repeated saying of the neighbors as, wrapped in a convenient mantle of invisibility, I entered the kitchen where Mrs. Diller holds sway, and ensconced myself in an out-of-the-way-corner preparatory to taking notes of all I saw. Who has not at some time wished to be a "mouse in a corner" to hear and see, unobserved, all that passed, nobody to be put out by the untimeliness of the visit, or to make unfriendly criticisms when it is over? I found Mrs. Diller in the pantry picking up dirty dishes for her daughter Sarah to wash, and from the fact that these had to be soaked for some time in hot water, I came to the conclusion that the picking-up process was gone through with only once in a while—perhaps only when rendered necessary either by a lack of clean dishes or shelves whereon to stand dirty ones. I was wondering why Sarah didn't think she would need more water than that in the half-empty kettle, when in came Tommy to know if he hadn't better stay home from school "'cause there was a hole in his pants?" Then followed Fred to "hurrah" that he was going to stay out to help his 'pa lay up the lane fence; whereupon Mollie teased to stay out too. She didn't like to go alone, and she "wanted to see 'pa and the boys tear down the hen-house; 'pa said he was going to this forenoon."

The school question was still unsettled when in came Mr. Diller for some fire-brands. He was going to set fire to five acres of brush and the three children tromped out after him—Mollie to see the dog catch the rabbits that would be sure to run from the brush heaps, and the boys to help to set them. Their going left Mrs. Diller a chance to think, and what she thought was that the washing had better be done that day. So Sarah left the dishes and got the boiler over, while Mrs. Diller gathered up the dirty clothes. Every closet and bedroom in the house furnished more or less. Table-cloths were produced from a "cubby hole" under the chimney and napkins from under the pillows in the baby's crib. Dresses were overhauled for collars, cuffs and handkerchiefs. When the pile was made up in a corner of the room, Mrs. Diller sat down to rest, and Mr. Diller returned to say that the brush didn't burn first-rate and he had made up his mind to kill the pig. He was very glad, he said, that the boiler was on and the water hot. It would save time. So the wash water went to scald the pig, and Sarah stuffed the dirty clothes into two pillow-cases with the remark that they were *picked up*, and she counted the washing as good as half done.

Mrs. Diller didn't care so much about the washing. She had a pain between her shoulders and now she could have a chance to tear rags for the carpet. With that she brought out some bright-colored worsted dresses and set herself to ripping them to pieces. At this juncture a neighbor came in and declared that it "looked to her like a poor plan to tear up good dresses that could be made over to look like new for *an old rag carpet*." But as Mrs. Diller never thought it paid to make things

over, and as, moreover, she wanted good colors in her carpet, she went on with her work till breadth after breadth of the really good dresses was torn into rags. Sarah was down on her knees before the stove blowing vigorously at a solitary live coal to coax it into a blaze, when her father called from outside to know if there was any more hot water. On being told that there was not, he came in declaring that the hairs wouldn't come and he didn't know any other way than to finish up with the razor, that it was an old thing and that he should never get a new one unless he finished it somehow. By twelve o'clock the pig was dressed and Mr. Diller and the boys came in to wash. "Where's the soap?" To this question Sarah replied that "there wasn't any, unless it was that in the shaving cup," and Mrs. Diller remarked that they couldn't have washed anyway, and that somebody must go to the store that afternoon and get some. Upon this she was reminded by Mr. Diller that his mother always made her own soap and that she never got out.

Mrs. Diller said nothing, for before she could frame a fitting reply a wagon drove up and stopped. Sarah withdrew her hands from the water in which she was washing potatoes for dinner, and gave her hair one downward brush with them as Tommy informed the family from the window that it was John Goff's folks and that "Sarah's beau was with 'em." Poor Sarah! her dress was dirty, her hair rough and the room untidy. "They'll come right into the kitchen of course; people always do. What's the good of a front door, I'd like to know?" Seizing the first cloth she could lay hold of—the dish cloth, as it happened—she wiped a puddle of water from one chair and brushed some bread crumbs from another. She "chucked" a pan of sour dough into the safe, thrust a pair of boots and two pairs of socks under the lounge, and turned with a very red face to speak to the visitors.

In the course of the afternoon dinner was got ready. On setting the table Sarah had found only an empty plate under the dripping-pan, where she had hidden a pie, and Master Fred got several angry pinches, slyly given, for purloining the same. The pie was gone, she told her mother, but there was the cake. But no; the cake-box had been left unlocked, and it was found empty. The pinch the urchin received on this discovery must have been given with no soft touch, as it caused him to cry out, "You be quiet" in a way that made the "beau" ask, in some concern, what was the matter. His reply, "Sarah keeps a-pinching me," did not seem very soothing to that young lady's feelings. Altogether the dinner did not pass off well. The baby was cross, and Tommy had to be sent from the table to 'tend her. That made *him* cross, and the result of that was a scolding from his father. Mrs. Diller was profuse in apologies. Her bread was too poor to be eaten; the butter had had but one working on account of their having been so busy that morning; the meat, she was afraid, was cooked too fast, and the tomatoes she just knew were scorched. Sarah said nothing; her face showed only one feeling—intense mortification. "See if I don't have things different after this," was her ejaculation when the visitors had departed. It was getting dark before the dishes were again washed and put away. It was so late Mrs. Diller concluded to have bread and milk for supper. After that the pig was brought in and laid on the table as being the only place safe against cats, and I took myself away, satisfied that where things go "just as it happens" they do not always go as well as they might

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

WEDNESDAY—"Keep a thing seven years and it comes to use at last." So I said to-day, when unrolling bits of lawn and fine muslin from the piece-bag, I found enough to make baby rich in bibs and pinafores. How different these stray savings looked when able to be utilized. It was only a roll of pieces before, but they have suddenly become worthy of interest and will blossom into a steady usefulness. Some lives are of this kind—nothing but a blank surface, uninteresting to all until they find their place in the world. Children are always at their best when they can be of use, and made to feel that you *need* them. So when Alex. comes to me and says, "Me want to work," I devise some occupation that will satisfy him; he is of great help to me, and it not only makes him happy, but teaches him habits that are valuable.

For the first time in my life I have succeeded in forcing the Lily of the Valley in Winter. It blossomed all the month of March and was a cheerful and fragrant box, the admiration of all who saw it. We took up plants in the Autumn, and left the box out-of-doors till Christmas; then brought them in and stowed them away in a shaded corner. No great amount of sunlight is needed, until the spikes of bells are formed when they need a little more light for perfecting their whiteness. I think my previous failures have been from too great care in Autumn and from not allowing the December freezing before forcing, which is as near as possible to the natural condition of the plant.

The most disagreeable duty of a housekeeper in cold weather, where no help is kept, is lighting the fire of the cooking stove. This imperative duty we found the most irksome, and took it in turn weekly to share the task. Lonsdale has now taken entire charge of this department for a trifling sum, and though he is not *always* "up first," it is a great help when he seems so willing to attend to it. The offer to do it being at first spontaneous on his part, caused me to tender him a trifling payment for his services. I always find children like pocket-money they have earned better than any that is given them for nothing.

A NEW STYLE OF MEDICAL PRACTICE.

EVERY family should have a medicine chest. It should have three divisions in it, of about equal size. Fill the first with *wheat flour* ground extremely fine, the second with coarse *Graham flour* and the third with *red flannel*. Never allow any of them to be used except for medicine, and use them as follows:

FOR DIARRHŒA, make of the wheat flour, a little milk and a pinch of salt, a minute pudding simply by boiling; let it be well cooked, and made very stiff. Eat it with pure *white* granulated sugar and a little milk at every meal till relieved.

FOR CONSTIPATION, make a cake or loaf of the Graham flour, and eat of it at every meal until relieved. For chronic complaints, these two dishes are the safest and best for a regular diet.

FOR A COLD on the lungs or chest or in the throat, take a piece of the flannel of sufficient size to reach from shoulder to shoulder and from the back of the neck down to the waist, tack it fast to the inside of the undergarment, and let it hang down the *back* next to the skin; wear it night and day till cured, and when cured take it off only upon going to bed. If these simple and inexpensive remedies are applied at once, without waiting for the complaint to become established, there will be very few sick people, large or small, and very little call for the doctor. MEDICO.

QUESTIONS FOR MRS. MARY WAGER-FISHER.

IS THERE any reason why "old-fashioned people" should crucify themselves simply because fashion dictates that they should not convey food to their mouths with the knife, without regard to convenience or the nine chances out of ten in favor of the knife, as to goring or cutting the mouth? Is there any reason why farmers should not do as they have earned the right to do, shovel, if you please, their food in an easy and natural way, as they do their grain, without affectation? Is there any reason why the "stuck-up" daughters should not sit in the corner and wait while the true and honest old father and mother cool and drink their tea from the saucer, and not from the scalding cup? Is there any reason why the mothers of to-day should not teach their children the respectful "yes, sir," "no, sir," instead of the flat, disrespectful "*yes*," "*no*?" Can you tell me why he who lifts his hat and makes a polished bow is more worthy of trust than he who nods his head and greets you with the weather-beaten "How are you?" Can you tell me why a lady should not show her smooth and intelligent forehead instead of her idiotic bangs!! Why is it not just as respectful for a gentleman to enter your house with hat upon his head, or to enter and thus sit in church, as it is for the lady by his side? Pray tell me, if you can, how much is added to true worth of character, to nobleness of soul, by many of the humbug fashions of the day? BUCKEYE.

That Robbin's Washer.

I have used the Robbin's Washer for a year and a half and it is as free from rust to-day as the first time it was used. But I have always seen that the person using it washed it in *clear* water without soap and thoroughly dried it before putting it away. The neglect of this is no doubt the reason why so many complain of the washer rusting. MARY B.

$500 will be paid for any case that Hop Bitters will not cure or help. Doubt not.

Miscellaneous.

VANSICKLE'S
Shir Sling, Hay & Grain Unloader
HAS NO EQUAL.

Its Economy,
One-half time, labor and expense.

Its Capacity,
Double that of any Horse-Fork.

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Unparalleled in Changing.

Its Adaptation
To all kinds of farm produce.

Its Facility.
A boy twelve years old can operate it easily.

Its Cleanliness,
25 loads unloaded and did not scatter one bundle.

WARRANTED in all the above statements, and to give satisfaction. For descriptive circular, address
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MANURES
SEND FOR PAMPHLET.
These manures are the richest fertilizers now manufactured, and the best substitute for, and costing *much less* than guano, which is now practically out of the market. Unlike guano, they *are not stimulants* and *exhaustive*, but *permanent* and *lasting*, being composed of bone, potash, etc. You can draw at one load enough for 3 to 5 acres, or as much plant-food as is contained in 20 loads of ordinary straw manure. Corn, potatoes, hay, etc., are bringing such good prices that it will pay to use the Stockbridge extensively. If there is no local agent near you, send to us.
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Miscellaneous.

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Miscellaneous.

CARPETS.

MOQUETTE CARPETS. — We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

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Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

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Little's Chemical Fluid.
Non-Poisonous. Non-Corrosive.
Specific cure for Scab, Mange and any skin disease. Ticks and Lice on all animals, Fleas on Dogs, Worms in the Throat and Internally, as well as sore eyes in Sheep and lambs.
It is before all other dips in the simplicity of its preparation. It mixes at once with cold water, and a single trial will prove that on coming into contact with the water the whole is changed into a milk-white Dip, which is distinctly not the case with any other material. Dispenses entirely with fires and boilers, which are necessary with Tobacco and other Dips. The sheep may be dipped with perfect safety in the coldest weather.
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USE ONLY THIS THE FIRST AND THE BEST

News of the Week.

HOME NEWS.

MONDAY, April 25, 1881.

The floods are still raging in the West. At Fond Du Lac, Wis., many of the streets were submerged by the overflowing river and were navigated by boats. Families were compelled to vacate their houses in several wards of the city. The damage is great. At Rockford, Ill., it is the busiest season with the manufacturers, but the recent floods throw some 1,500 men out of employment. At Elgin, Ill., buildings were swept away, railroad tracks were washed out and large bridges destroyed. Damage done to property there will amount to $200,000. Hundreds of men worked continuously to to protect the manufacturing interests at Rock Falls, Ill. At Fort Atkinson, Wis., all the low lands near the river were flooded. The ice rushing down the stream carried bridges, dams and everything before it. It is estimated that $300,000 worth of property have been destroyed in Kane Co., Wis. Heavy losses are reported in Minnesota and Nebraska.

Kansas has received into her limits and cared for over 10,000 of the freedmen since the exodus began and has been the means of turning 10,000 more into other States. All attempts to check the incoming of the colored people have failed as they are bound "to come to Kansas, the home of John Brown."

On the 19th inst. 6,891 immigrants landed at Castle Garden, this city, and on the 21st 4,000 more. Eight other steamers are due this week from Europe, carrying immigrants. The following statistics give the total number of immigrants landed in the years named:

In 1876	68,264	In 1879	135,070
In 1877	64,536	In 1880	327,371
In 1878	75,347		

A comparison with last year shows:

	1880	1881.
January	5,677	8,083
February	7,90	9,758
March	21,994	27,703

The Buffalo, New York and Philadelphia Railroad, running from Buffalo to Emporium, on the Philadelphia and Erie Railroad, with narrow-guage connections, has been purchased by a syndicate composed of the following gentlemen: J. & W. Seligman, Drexel, Morgan & Co., Winslow, Lanier & Co., Kidder, Peabody & Co, Clark, Post & Martin, and E. W. Clark & Co.

Ex-Gov. Morgan, of New York, has added to the $100,000 given a year ago, for erecting a library building for the New York Union Theological Seminary, a still further donation of $100,000 toward purchasing a site for the building. The erection of buildings for the uses of the seminary is contemplated, one of which will be named in memory of the late President Adams.

In a test case at Milwaukee on the 20th, to determine the legality of the celebrated anti-treating law of Wisconsin, it was found that the law was inoperative, because of an error in the text of its supposed enactment. The bill as drawn specifies the repeal of an old law that was dropped when the State statutes underwent their recent revision, and Judge Mallory held the law to be inoperative and void. The Illinois State legislature has reported favorably on an "anti-treating" bill. It imposes a penalty of $10 for each offense.

In a little over three months about $25,000,000 in specie have been imported into this country; and since January 1, 1879, about $200,000,000 of gold in coin and bars has been brought here.

The twelfth annual reunion of the Society of the Army of the Potomac will be held in Hartford, Conn., June 8th. General Wright will preside. Daniel Dougherty, of Philadelphia, will be the orator and Captain Summer, of Bridgeport, Conn., the poet of the occasion. It is expected that President Garfield and Generals Sherman, Sheridan, Slocum, Hawley and other officers will be present.

The new Postmaster General is instituting searching investigations into the mail service, and the need thereof is great. Mr. James will do well if he can bring some of these public swindlers to punishment. Gen. Brady, Second Assistant Postmaster General, has been discharged on account of his connection with the mail service frauds, and "there's more to follow."

The regular meeting of the World's Fair Commission was postponed until the 27th inst. in order to give the transportation companies time to increase their subscriptions. But there is little hope now of having the Fair in 1883. One of the Commissioners recently said:—"We are preparing to surrender the thing with decency and dignity."

There will be a convention at Davenport, Iowa, on the 25th of May to consider the most feasible plans for an enlargement and extension of water routes of communication between the great rivers of the West, the lakes and the ocean. Congress will be asked for appropriations to this end. The Governors of the States interested will appoint 10 delegates; each organized Board of Trade, five; each city or town having no Board of Trade, five; and each regularly organized Farmers' Alliance, three.

Senator Frye, of Maine, the youngest man in the Senate, "stirred up the camp" the other day by a vigorous speech against the Southern policy, and Mr. Coke of Texas, Mr. Call of Florida, Wade Hampton of South Carolina and others have felt called upon to reply to the charges made by the new Senator from Maine.

The old home of Lincoln was recently torn down at Springfield, Ill. A boy bought all the shingles for a dollar, and, with a scroll saw, is turning them into ornamental mementoes, which he easily sells at from 50 cents to $1 each.

What is fame anyhow? An Athenian paper publishes the Cabinet as: Secretary of State, Blanne; Treasury, Nin; Navy, Kelnf; Interior, Verkoyed; Postmaster General, Reames; Attorney General, HacVragh; War Secretary, Lincoln.

It is suggested that the good time coming when swords shall be turned into plowshares, etc., has dawned on Atlanta, Ga. The Christian Index, a religious paper published there, has a font of type cast from bullets used by the Union and Confederate armies before General Sherman entered the city.

A Wonderful Remedy.

Mr. R. P. Lewis, of East Saginaw, Michigan, writing to the editor of the Laporte (Ind.), Argus, says: "I wish you would allow me to say, over my own signature, a word in behalf of a remarkable curative agent—Compound Oxygen. It is not a medicine but a vitalizer, and its effects are natural, direct and permanent. Its use involves no risk or inconvenience of any kind. I speak both from observation and experience. I was induced to try it by the recommendations of such men as T. S. Arthur and Judge Kelley, and also a personal friend, *and have found it more than was promised.* This was over six months ago, and the *good effects have been permanent.* A gain of fourteen pounds in six weeks was the avoirdupois result, but my general spirits were lightened up at least a ton. There are three other men here who have tried the Compound Oxygen with even more striking results, and I am acquainted with the history of each case. One of them lost his voice last winter, and was so run down in general health that little hope was entertained of his recovery. The Oxygen cured him without change of climate or stopping work, and he says he is as well as ever. Another, who had worked for years as a paying-teller in a bank, and was all used up and not expected to live beyond a month or two, took the Treatment, and is a hundred per cent. better and recovering rapidly. Another, who was in the last stages of consumption, has tried it and is greatly improved. *He tells me he would have been dead long ago but for this remedy.* I have no axe to grind in making this statement, and if you should not publish it I would lose nothing by the refusal, though if you should others might be benefitted, which is all the end I have sought to compass." Any who may desire to investigate the claims made for this new and natural remedy, can receive pamphlet, testimonials, etc., postage free, by addressing MESSRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

FOREIGN NEWS.

At the ripe age of three-score and seventeen Benjamin Disraeli, Earl Beaconsfield, died in London, on April 19. His career was one of the most extraordinary in English history. Belonging to the Hebrew race against which, until lately, there was, in England, a bitter prejudice, which has not entirely disappeared yet, by genius and energy, unaided by family connections, in a country where family connections are all-powerful, he made himself leader of the House of Common, Minister of Finance in the most commercial of countries, and Prime Minister of one of the mightiest of modern empires.

[Des Moines Iowa State Register.]

We notice the following in an exchange: Mr. G. B. Haverer, Foreman N. Y. & N. H. S. B. Co., suffered for eight days with terrible pain in the back, almost to distraction, until he heard of and used St. Jacobs Oil, one bottle of which cured him comptetely.

AGRICULTURAL NEWS.

THE University of Vermont and the State Agricultural College form one institution, and have together the present year 321 students, of whom 143 are medical students, leaving 78 to pursue either the agricultural or classical course.....A telegram from Chicago on the 20th says that an unknown disease has broken out among the horses of that city. It begins with a swelling just below the fetlock, which after a little time, festers and becomes a discharging sore. It yields slowly to treatment; but unless taken early, the poisonous matter spreads itself upward and infects the blood, causing death The horses are, in any case, laid up from two to three weeks. About 350 horses belonging to the omnibus and express companies were laid up with it, to say nothing of the illness among the large number of other horses in the city....The butter dealers of Washington Market—the largest in this city—have unanimously agreed that they will not handle oleomargarine in any shape, so that they will henceforth sell it neither as butter nor oleomargarine.....Talk about the Jerseyman who stole that red-hot stove! here's a Kentucky man got away with four hives of bees!.....Gov. Ordway, of Dakota was in this city during the past week seeking relief for the 7,000 sufferers by the late Missouri flood. He says from fifty to a hundred thousand dollars are needed to relieve the present distress .....Lately 473 horses were on exhibition in Paris, France, competing for prizes aggregating $62,500....Turkey is the last European country to prohibit importations of our hams, sausages, pork and bacon....Reports dated Feb. 6 from the Argentine Republic say the wheat crop had just been saved in splendid condition; and farmers were asking high prices. Potatoes were the largest crop ever grown and, of course, prices had therefore fallen.....In New Zealand, according to early Feb. reports, wheat about to be reaped promised an abundant crop, and the area under it would be sure to increase for the next few years. The wool clip was the best ever known.

Arable land in England has been gradually decreasing in area, the decrease in five years being 442,000 acres; and there has also been a decrease in the number of cattle, a decrease of no fewer than 3,000,000 sheep since 1874, and an appreciable reduction in the number of pigs and horses..... The S. E. Australia Minister of Railroads, of Victoria, refuses compensation for damage to crops by sparks from engines, and expresses a belief that ricks are often placed where they may best catch fire.....It will be remembered that about two years ago, just after the English embargo on importations of American cattle, we announced that by order of Governor Robinson, of this State, the distillery cow stables of Graff, Fleischman & Co., Blissville, L. I., were quarantined to prevent the spread of pleuro-pneumonia from a lot of infected cattle on the premises. The above firm now claim $2,400 for rent which they could have got for the stables during the period of quarantine and $300 for board which "humanity obliged them to furnish to the imprisoned cows;" and the Supreme Court here has just ordered Gov. Cornell to show cause why the claim should not be paid out of moneys appropriated by the Legislature to prevent the spread of infectious and contagious diseases among cattle.

Mr. C. F. Mills, Springfield, Ill., announces that entries for the first volume of the American Clydesdale Stud Book close this month.....A disease called "black itch" has just broken out among cattle in Jones Co., Iowa. The affected animal violently scratches its head until the hair is rubbed off, and death follows in about two days. It is thought to be non-contagious..... The Governor of Michigan has appointed April 28 as Arbor Day, the idea being to devote the day throughout the State to the planting of ornamental and shade trees.....Strawberries sold on the Chicago market last Wednesday for 60 cents per quart. They were shipped from Mississippi..... .....J. H. Paine, of Wisconsin, has been appointed Chief Clerk of the Department of Agriculture to succeed Gen. E. A. Carmen, relieved.

California produced 10,000,000 gallons of wine during 1880, of which 700,000 gallons were sweet wine. Of brandy, 450,000 gallons were manufactured; also raisins to the value of $100,000. The sale of grapes for table use yielded $150,000. The total yield from the culture of the grape during the year 1880 amounted to $3,500,000... ...The Dakota floods have covered 227,000 acres of the richest Missouri bottom farms.....One of the largest cattle transactions ever made has just been closed by Messrs. Hughes of St. Louis and Simpson of Weatherford, Texas, purchasing the famous Millett ranch near Dallas, Texas, for $300,000.

Rail freights from Chicago to New York have been advanced to $6 per ton. They were $5 per ton on grain for a very short period.....In California and Oregon it is expected there will be 500,000 tons of wheat available for export, for which there will be no vessels to carry it until the present crop season shall have lapped on to its successor.....The New York canals will probably not be opened until from May 12 to 15..... The exports of wheat and wheat flour from Atlantic and Pacific ports since July 1st, 1880, have been equal to about 152½ million bushels of wheat.

The exports of grain from Lyttleton, New Zealand, have been:

	1880.	1879.	1878.	1877.
Flour, tons	4,529	5,063	6,596	5,474
Wheat, bush	3,583,943	1,314,926	1,175,514	983,029
Oats, bush	1,181,626	185,571	213,618	388,137
Barley, bush	323,847	80,461	101,416	98,680

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports and on rail from Western lake and river ports and frozen in on New York canals:

	1881. April 16, bush	1880. April 17, bush.
Wheat	20,456,502	23,002,047
Corn	13,378,708	13,969,947
Oats	3,050,061	2,085,255
Barley	1,599,935	1,350,585
Rye	329,644	544,070
Total	38,814,870	40,951,904

The Duchess of Marlborough has completed arrangements for the entire outfit of fifteen Irish families, who will be provided with free passes to Manitoba and located there in neatly-furnished farmsteads.....Land Commissioner Corlin, of the St. Louis & San Francisco Railroad, closed on the 14th inst. the sale of 138,000 acres of land in Barry County, Mo., to the Missouri Land Company of Scotland. A large number of Scottish colonists will be settled on the land.....According to statistics published in the Ceylon Observer, there are now 35,000 acres in the island planted with cinchona, the total number of plants being nearly 100,000,000, valued at $10,000,000. About 10,000 acres are planted with tea, giving an annual yield of 500,000 pounds. They relative importance of coffee in Ceylon has greatly declined.....The Brazilian newspapers were, at last accounts, discussing a law submitted by the Minister of Agriculture to the late Parliament for the creation at many points in the Empire of practical schools of agriculture, combined with model farms, similar to those in France, whence owners of estates can get superintendents.....The Secretary of the Interior has received a circular issued by the "Freedmen's Oklahoma Association" of St. Louis, J. Milton Turner, President, and Hannibal C. Carter, General Manager. It promises 1,600 acres of land to every freedman who will go and occupy the public lands of Oklahoma. Secretary Kirkwood has referred the circular to the Commissioner of the General Land Office, with a view to ascertaining the legality of the proposed occupancy of the Government reservations in that Territory.

In 1877 M de Lavergne estimated the value of the agricultural produce of France at $1,500,000,000—including wine, cattle and all other products of the soil. In 1878, Mr. Caird, who is to England what M de Lavergne is to France, estimated the total value of the agricultural products of the United Kingdom at $783,000,000. The area of France is double that of the United Kingdom..... ....The largest peach orchard in the world is said to be in Chambers county, Ala., near the Georgia line. It contains 250 acres, has yielded $70,000 worth of peaches and is owned by John Parnell, a brother of the Irish agitator. He came to this country some dozen years ago, and bought an old and worn out farm, which he has converted into this immense peach orchard, and is always the first to have early peaches on the market, for which he receives high prices. He is getting rich at the business.....The importation of American apples into Bristol, England, reached 14 543 barrels in 1880. The export trade in green or ripe apples from the United States has fluctuated widely heretofore. In 1870 the value was $230,000, declining somewhat in the next two years, but suddenly rising to $820,000 in 1873, falling to less than one-fourth that in 1874, and nearly recovering in 1875; it dropped again to $222,000 in 1876, rose to nearly a million in 1877, and dropped to nearly one-third of that in 1878; rose to $978,000 in 1879, and to $1,190,000 in 1880.....Owing to the increased demand and ready sale of Merino sheep throughout Addison Co., Vt., the listers in several towns are appraising them at $15 per head for entire flocks, which makes dissatisfaction among real estate owners, who are well aware that these Merinos will sell readily at from $20 to $50 per head for entire flocks. Single sheep in some of these flocks are worth $500 to $1,000 each, and the owners in several instances have refused to dispose of them at those prices, ... In Vermont there is some complaint among farmers that an unusual number of their dairy cows have "gone farrow" this season, which is attributed to drought so prevalent last Summer.....The Vermont Maple sugar the past season has never been surpassed for quantity and quality. Farmers report four pounds per tree in some orchards.....In one hundred years no three consecutive Januaries in England were so cold as the three last.....

Tormenting Piles.

Kidney-Wort is an unfailing remedy for that tormenting disease piles. It moves the bowels gently and freely, and thus removes the cause. Do not fail to try it faithfully either in dry or liquid form.—Sun and Press

LYDIA E. PINKHAM'S VEGETABLE COMPOUND is a remarkable remedy for all those painful complaints and weaknesses so common to our best female population. Send to Mrs. Lydia E. Pinkham, 234 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

No one can be sick if the stomach, blood, liver and kidneys are well. Hop Bitters keeps them well.

BURNETT'S COCOAINE

Softens the hair when harsh and dry,
Soothes the irritated scalp,
Affords the richest lustre,
Prevents the hair from falling off.
Promotes its healthy, vigorous growth.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, April 23.

Boston.—WOOL.—There is a steady demand for wool and prices are more settled than for some previous weeks. It looks as if bottom prices have been reached for fine Fleeces, and manufacturers have been operating more freely. The sales of the week have been upward of 2,000,000 pounds, of which 468,000 pounds were fine Ohio, Pennsylvania and Virginia Fleeces at 40c@41c for X, 40@42c for XX, and 43c@44c for XXX and fancy clips, and best XX Fleeces are now firm at 41½c. Michigan and Wisconsin X Fleeces have been selling at 37@39c, Vermont X at 35c, and New Hampshire X at 37½c. There is more doing in California Wool, with considerable inquiry for neighboring markets, New York buyers and others looking around. The sales have been 415,000 pounds, at 18½@30c for Spring, and 14c@25c for Fall. Pulled wools have been in demand, with sales of 331,000 pounds, including large lines of Western Supers at 32c@37c, and good and very choice Eastern at 40@50c. Some considerable X pulled has been sold at 35c@40c. In Unwashed Fleeces there have been sales of 280,000 pounds of all grades and quantities including the best mediums at 30c@32c. Combing and Delaine Fleeces are quiet, with a few sales of fine Delaine and Combing at 41c@45c, and unwashed at 30c. Coarse Combing Wools are dull Foreign Wool has been quiet, with sales of 144 000 pounds Australian at 39c@42c and 40,000 pounds, Montevideo at 30c@32c. Montevideo Wool is held with more firmness, but it is a hard article to sell on account of the small number of manufacturers who use it. Carpet Wools have been quiet.

Chicago.—Wheat unsettled No. 2 Red Winter, $1 11@1 11½; No 2 Chicago Spring, $1 04½@1 04¾, cash; No 3 do. 94c@$1; rejected 76c@84c. CORN active at 43½c. bid, cash, May, and June. OATS irregular at 36½c. RYE firm at $1 20½. PORK unsettled at $17 40, cash and May; $17 47½@17 50, June; $17 60, July. Lard active at $11 20, cash; BULK MEATS unsettled; Shoulders $5 75; Short Rib $8 50; Short Clear $9. BUTTER Creamery choice 32@33c; creamery fair to good 29@30c; dairy, choice 25@27c; dairy fair to good 20@24c; packing stock 13@15c; Grease 8@10c. CHEESE, full cream 13@14c; part skim, choice 10½@11c; part skim, fair to good 9@10c; part skim, hard 7@8c; low grades 4@5c. EGGS were plenty at 14c per dozen, SEEDS were a little more active for clover, firm and active for timothy and steady for flax. Hungarian was firm under active inquiry. Prime clover ranged at about $4 40@4 60, prime timothy at $2 55@2 60 and flax seed sold at $1 17. Sales were made of 33 bags clover seed at $4 50 for choice medium, and $4 90 for mammoth; two cars and 700 bags of timothy at $2 32½@2 40 for poor to good, and $2 53@2 60 for prime; three cars flax seed at $1 17 on a basis of pure; one car common millet at $2.00. Hogs market unsettled; fairly active; mixed packing $5 65@$6 05; light, $5 80@6 10; choice heavy, $6 20@6 45; culls $5@5 60. NOTE.—All sales of hogs in this market are made subject to a shrinkage of 40 pounds for each piggy sow, and 80 pounds for each stag. Dead hogs sell at 2c per pound for averages of 200 pounds and over, and at 1c. for average of less than 200 pounds. Cattle demand good and prices 10c higher than yesterday; common to fair shipping, $4 70@5 15; good to choice heavy, $5 50@5 85; exports nominally, $5 95@6 35; corn-fed Texans, $4 15@4 75; butcher's slow common weak at $2.50@4 20; stockers and feeders, $3 30@4 60. SHEEP market quiet and slow, but steady; good to choice, $5 60@6; few common and no fine here; prices nominally $4 50@0 25.

Cincinnati.—WHEAT strong; No. 2 Red Winter, $1 12@$1 14. CORN strong; No. 2 Mixed, 48c. OATS stronger; No. 2 Mixed, 41½c. RYE irregular; No. 2, $1 33@1 34½. BARLEY quiet but firm; No. 2 Fall, $1 10. PORK quiet, but firm at $17; held higher. LARD firmer at 11½c. Bulk-meats stronger; Shoulders, 5¾c.; Clear Rib, $8 60. Bacon firmer; Shoulders, 6¾c.; Clear Rib, 9¼c; Clear Sides, 9¾c. BUTTER—The receipts have not been unusually large, but the demand was smaller than it generally is, and prices have declined during the week 2@3c ₩ lb on the better grades, and even more than this on the medium and lower qualities, the latter, in fact are practically unsalable in

any large way. The supply of Ohio Creamery is steadily increasing, and the quality is improving, so that considering the quality the decline is really more than the difference in prices. Fancy Creamery sells at 33c, prime do. at 30@32c., choice Dairy, 35c., choice Western Reserve at 23@25c, prime to choice Central Ohio at 20@22c, medium do at 15@17c and Inferior is offered at 12c ℔ lb. CHEESE—The supply is light, and with a good demand the market rules stronger for choice cured factory, which sells at 12½@13c, and good to prime Northwestern at 10½@11½c ℔ lb. SEED—German Millet is in unusually good demand for this season of the year, and is higher. Prime to choice Clover sells at 7½@8c. ℔ lb, and Timothy at $2 65@2 75 ℔ bushel from store. Round lots on arrival would not bring these prices. Flaxseed is steady at $1 10@1 12½ ℔ bushel. German Millet sells at $1 55@1 60, common Millet at $1 15@1 25, and Hungarian Grass at $1 05@1 10 ℔ bushel.

St. Louis.—WHEAT—No. 2 Red Fall, $1.10¼, cash; offered at $1.10 at the close; $1.10, April; $1.10¼@$1.11½, May; $1.09⅜@$1.10½, June; $1.04⅝@$1 05⅝, July; $1.01⅞@$1.02¼, August; $1.00½@$ 00¾, all the year; No. 4 do., $1 01¼@$1.02. CORN, 42¼c, cash. OATS, 36½c, cash; 35½c, July. RYE firm at $1.20@$1.23. PORK dull at $17.70 asked, cash; $17 70, June. LARD dull at $11 12½, bid. Bulk-meats lower; Shoulders, $5.70; Clear Rib, $8.60; Clear sides, $8 85 asked. Bacon dull; Shoulders, $6.25; Clear Rib, $9.25; Clear Sides, $9.50. HOGS in good demand and steady; Yorkers and Baltimores, $5.75@$6.10; mixed packing, $5.70. Cattle stronger; exporters, $5.60@$6 10; fair to good Steers, $5@$5.50; common to medium, $4.50@$4.90; butchers' Steers, $4.25@$5 90; Colorado Steers, 4.40@$5 35; feeding Steers, $4.65@$4; stockers, $3 60@$4; Indian, $4.15@$1 75; South west Steers, $4.25@$5; Cows and Heifers, $3 50@$4 50. SHEEP scarce and firm; quotations, $5@$6.15.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 23, 1881.

BEANS AND PEAS.—Beans have again advanced and buyers seem forced to meet the situation. Exporters have appeared and the home demand is good. The crop of white is under good control here and in the interior. Red kidneys slow. Green peas plenty and dull at $1.60 for Wis, Southern B. E. peas firm at $3 per 2 bu. bag.

Medium and marrow beans, prime, $2.60@2.65; other $2.40@2.50; white kidney and pea $2.25@2.50 red kidney, prime $1.50@1.60, other, $1.40@1.50; black or turtle soup $1.45; Lima, $5@5.50.

BUTTER.—Supplies of new have attained a regularity and volume that have started prices downward. Buyers will purchase only for daily wants for a time as quality will improve steadily and no one wants to be caught with much white when grassy yellow is a feature. Any style of new that is at all below choice drops suddenly into the low scale of figures. New Western is quoted but not heavily as yet as intermediate markets absorb a good deal of first crop of later years. Old butter weakens as the tops of lots go off.

New Butter.—Creamery, choice Western and Pa. 28@30c, other, 22@23c; sweet cream, 24@26c.; State half tubs, choice, 23@24c; fair to prime, 20@22c, Welsh, choice, 22@23c; other 19@21c.; very common or stale new 15@18c.; Western imitation creamery 20@24c.; do dairy 15@22c.; factory 17@21c.

Old Butter.—State dairies, 13@20c.; pails and half tubs, 13@20c.; Welsh, 13@19c.; fine Western, 23@25c.; fair to good, 12@20c.; very poor, 12@13c.

Receipts for week 22,951 pkgs.

Exports do. 604 do.

CHEESE.—Export demand continues small and the home trade moderate with prices, however, held steady. The best new creamery have sold at 13½@13¾c. Quotations are for

Fancy at 13¾@14c.; do. good and prime, 12½@13¼c.; do. fair, at 12@12½c.; do. half-skimmed, 8@9c.; Wisconsin factory, fine, at 13¼@13¾c.; do. good to prime, 12½@12¾c.; do. fair to good, 11@12c.; Ohio factory, fine, 13@13½c.; do. good to prime, 11½@12½c.; do. flat fair to good. 10½@11½c.; do. poor to fair. 8@10c. Skimmed creamery, 8@8c.

Receipts for week, 14,910 boxes.

Exports for week, 14,300 boxes.

Liverpool cable, 69s.

Steam to Liverpool, 21s.3d.@25s.

COTTON.—Trade has been very slack this week with prices varying slightly only; latest prices are for

April, 10 53@10.54c.; May, 10.65@10.75c.; June, 10.64@10.65c.; July, 10.74c.; August, 10.8c.; September, 10.50@10.51c.; October, 10 14@10.15c.; November, 10.02@10.03c.; December, 10.02@10.13c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7	7¼	7¼
Strict ordinary	7⅝	8	8
Good ordinary	8 13-16	9⅛	9⅛
Strict good do	9 5-16	9⅝	9⅝
Low middling	10	10⅜	10⅜
Strict low middling	10½	10 13-16	10 13-16
Middling	10⅝	11	11
Good middling	11 7-16	11 11-16	11 11-16
Strict good middling	11 11-16	11 15-16	11 15-16
Middling Fair	12 5-16	12 9-16	12 9-16
Fair	13 1-16	13 5-16	13 5-16

EGGS—Receipts for week, 11,850 bbls.; do. last week 21,078 do. The market was well cleared for Easter use and with limited arrivals prices have held up unusually well. Quotations, however, are tender at the close, as Spring produce is becoming plenty enough to call home trade away from eggs and any material accumulation of the latter will at once depress prices. Duck and goose eggs have declined and will not recover, as their season is over.

Near points, 19½@20c.; State and Pa., 19@19½c.; Western, 19c.; Southern, 18½c.; poorly packed and small run 17½@18½c.; goose 35@38c. duck, 22@24c,

FLOUR.—There is a more active market, all grades participating in the trading with prices stronger. Latest prices are: $3.80@4.60 for very inferior to strictly fancy superfine State and Western; $4.45@4.70 for poor to choice extra State and Western, odd lots and lines; $4.70@4.85 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.50@5.50; good to choice do. at $5.50@6.35; (very choice up to $6.50 and fancy at $6.75;) red and amber winter wheat, inferior to choice trade and family at $4.50@6.25; round hoop Ohio, $4.50@4 85; and trade and family brands of do. at $6.00@6.25, the latter for very choice; St. Louis $4.75@5 65 for inferior to good extra; $5.65@6.50 for good to choice, and up to $6.75@7 for very choice to very fancy brands; Minn. clear, inferior to very choice at $4.45@5.85; Minnesota "straight," poor to very choice, at $5.35@6.75, and patent inferior to fancy at $5.75@8.00; city mill extra at $5.60@5.65 for the West Indies; do. for England at $4.45@4.75 for poor to choice spring wheat; do. trade and family extras, $5.70@6.75; do, for South America. $5.75@6.00, the latter for very choice; No. 2 at $3.10@3.75 for very poor to very fancy.

Receipts for week, flour, bbls. 98.850; corn meal, do. 4,560; wheat, bush. 1,018,300. corn, do. 616,700; oats do. 500,950; rye, do 6,150; malt, do. 54,750; barley, do. 149,300; beans, do., 6 930; rice, pkgs. 1,025.

Exports for week, flour, bbls. 103,900; corn meal, do. 7,325, wheat, bush 902,675; corn, do, 514,750; oats, do. 2,100; beans, pkgs. 1,174; rice do. 2,327.

FRESH FRUITS.—Exports of apples for week, 5,844 bbls. There is a steady retail demand for fine apples and the supply is fully up to its wants, Baldwins, $1.50@2.50; Russets, $1.75@2.25; these are the main sorts left. Cranberries were over-produced last season, though the bad selling weather has helped to make the surplus which is now such a drug. N. J, crates, 75c.@$1.50. Florida oranges quoted at the old range, $1.50@3.50 for good to best half-bbl cases; season almost over. Florida strawberries are plenty enough to make quite a general use. The closing range for Chas. and Fla. is 20@35c. Hot-house black Hamburg grapes lower, $2@3 ℔ lb. Peanuts dull at old prices; Va. hand-picked 4½@4½c; good to extra prime 3@3½c; shelled 3@3½c; pecans 7@7½c.

GRAIN.—Wheat has been active, exports for the week reaching 950,000 bush., with prices strong at a somewhat better range; latest sales are of

No. 1 white at $1.23½@1.24½, do. April at $1.23½@1.24¼; do. May at $1.21@1.22½; do. June at $1.19½@1.20½; No. 2 white at $1.22¼; ungraded white at $1.22@1.23; No. 1 red at $1.31@1.32; No. 2 red at $1.26½@1.29; do. April at $1.26@1.28¼; do. May at $1.23@1.24½; do. June at $1.22@1.23½; do. July at $1.20½@1.21¼; No. 3 red at $1.24½@1.25½; ungraded red at $1.18@$1.30; No. 2 Chicago at $1.26 asked; New York No. 3 Spring at $1,18.

Rye at $1.18@1.11.

Corn is in liberal demand and is more in favor of holders; latest prices are for

New York No. 2 at 60@60½c; do. April at 60@61½c.; do May at 56½@57½c.; do, June at 56@56½c.; No. 3 at 57½@58c.; ungraded mixed Western at 57@60½c; New York steamer mixed at 59½@60c No. 2 white at 62@62½c.; white Southern at 60@66c.

Oats have a good trade demand and prices firm; latest sales are of

No. 1 white at 52c.; New York No. 2 white at 49@50c.; No. 3 white at 48c.; New York No. 2 at 46@47c.; do. April at 46½c.; do. May at 45½@46½c.; do. June at 45@46½c.; No. 3 at 45½@46c.; ungraded white; Western at 46@5 c.; ungraded mixed Western at 45@47c.; No. 2 Chicago at 46½c.

HAY AND STRAW.—Demand is liberal and prices strong for prime stock, but other qualities favor buyers. Quotations are

Hay, prime timothy at $1.15@1.20 ℔ 100 lbs.; medium timothy at $1.00 do.; shipping grades at 85@90c. do.; clover mixed at 95c.@$1.00, clover at 80@85c. do. Straw—No. 1 rye at $1.05@1.10 ℔ 100 lbs.; No. 2 rye at 70@80c, do.; oat and wheat at 50@60c. do.

Exports for week, 4,000 bales.

HOPS.—Export demand is dull and the inquiry from brewers moderate with prices unchanged. Quotations are for

	Cents per lb
New Yorks, crop 1880, choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	12 @15
Eastern, crop 1880	14 @22
Wisconsin, crop 1880	14 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Pacific coast, new	19 @23
Bavarians	30 @35

Receipts for week, 864 bales.

Exports do., 425 do.

POULTRY AND GAME.—Dressed poultry continues scarce, firm and high; turkeys sell well for this late date.

Turkeys, prime fresh and frozen 18@20c; good 16@18c.; large coarse 13@14c; chickens Spring 50c; Western 30@35c; yearlings 20@25c.; good prime lots 17@23c; fowls, d. p. 16@17c.; scalded 13@16c. Capons, large, 27@28c.; small 23@26c. Ducks, choice, 22c.; other, 16@20c. Squabs, white, $4 ℔ doz.; do. dark, $2@2.25

Live poultry scarce but better supplies are expected next week.

Fowls, 14@15c.; roosters, 9@10c.; turkey hens, 17@18c.; do. toms, 13@15c; ducks, 65c@$1.25 geese, $1.25@2.50 pigeons, 35@40c.

There is hardly enough of anything except snipe to make a market. Ducks not wanted.

Eng. snipe, $1.25@1.57; plover $1@1.25; sand snipe, 50c. No wild pigeons.

PROVISIONS.—Are generally active and closed strong.

Mess pork quoted at $16.25@16.50 for old mess and $18 for new mess. Bacon at 9⅛ for short clear and 9⅜ for long clear. Beef hams at $ 20@23. Beef at $21@23 for city extra India mess. Tallow at 6 7-16@6½ for prime. Stearine at 13@13½. Lard Western steam at 11.70 for spot lots, 11.75 for May, 11.80 for June, 11.85 for July, 11.92½ for August.

Receipts for week, beef, bbls and tcs. 975 pork, bbls. 670; cut-meats, pkgs. 11,100; lard do. 6,7 0.

Exports for week, beef bbls and tcs., 2 200; pork, do. 3,100; cut-meats, lbs. 3,554,470; lard, do. 3,163,275.

SEED.—Clover is quiet at 8½@9c. Timothy is inactive at $2.80@2 95.

VEGETABLES.—Potatoes are higher; have been up to $3.25 during the week for choice double-head stock. Receipts have enlarged, but the market is strong for prime quality; demand almost exclusively local.

Bermuda potatoes $9@10 ℔ bbl.; 2d crop $7@7.50; Early Rose, Nova Scotia d.h. $2.87@3 00. Maine $2.87@3.00. State $2.62@2 75; do. bulk, $2,62@2 75. Prolific, $2.25@2.50 Mercer, $2@2 25; Jackson White, d.-h, $2.75@2.50; Burbank, d.-h. $2.75@3.00; do. bulk, $2 75@3 00, Snowflake, $2.75@3.00; do. d.-h. $2 12@2 87, peachblow do. $3@3.25; Peerless, $2,25@2.37; sweet Del. $1.50@2.75.

Southern truck is losing its cold-weather firmness in price; supplies will increase and dealers must not allow stock to die on the market.

Florida green peas per crate $1@2.50; Savannah do. $1@4; Charleston do. $3 50@4; Florida tomatoes, $3@5.00 ℔ crate; Bermuda do. 5-qt boxes, 75@$1; Fla. string beans, $1.50@2 ℔ crate; Bermuda beets $2@2.50 ℔ crate; do. onions, $1.75@2 ℔ crate; Norfolk Spinach, $1 25@2 ℔ bbl.; do. kale, $75c @1.25; do. radishes, 75@1.75 ℔ 100 bunches; Chas. asparagus $5@7 ℔ doz.; Fla. cabbage, $3@4 ℔ 100; lettuce, $2.5 @4.50 per bbl.; cabbage, old crop ℔ 100 $4@8. Hubbard squash, $1.25@1.50 ℔ bbl. marrow do. $1.25@1 50; onions white, $3@4.50 ℔ bbl.; other in bulk, $2.50@3.25; carrots, $1@1.75; celery $1.50@2. Hot-house mushrooms $1 ℔ lb.; lettuce 25@87c. ℔ doz.; radishes $2@3 ℔ 100 bunches; rhubarb, $4@3 do.; cucumbers $1@4 ℔ doz.

WOOL.—Trade continues slack with not much prospect of an improvement expected until the new clips appear. Buyers still have the advantage. Quotations are for

Ohio, Penn. and W. Va. XXX and picklock, 43@45c.; XX, 40@42½c.; X, 40@41c.; No. 1, 45@46c.; No. 2, 38@40c.; common, 31@35c.; fine delaine, 43@45c.; medium combing and delaine, 45@47c.

Mich., Ind. and Wis. X and XX, 37@39c.; No. 1, 42@41c.; No. 2 and common 32@37c.; fine delaine, 42@43c.; medium combing and delaine, 44@46c.

N. Y. State, N. H. and Vt. X and XX, 35@36; No. 1, 40@43; No. 2 and common, 32@35c.; fine delaine, 39@42c.; medium combing and delaine, 43@45c.

Iowa, Ill., and Western X and XX, 34@36c.; No. 1, 40@42c.; No, 2 and common, 32@35c.; combing, 40@43c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, April 23, 1881.

BEEVES.—Receipts for the week 12 818 head; do. last week 11,574 do. Cattle continue to make good average, but the weather is turning against the drover and buyers will be apt to bend things their way if supplies hold out heavy. Some rough oxen and poor steers sold at 8½@9¼c. to dress 55@56 lbs.; bulk of sales, ordinary to really prime steers, 9½c. to dress 56 lbs. and 11½c. to dress 57 lbs.

COWS AND CALVES.—The Spring demand has opened. A nice, fresh cow will bring $60. and if of fancy points $65@70 can be made. The range for fair to prime is $30@60, which is $5@10 better than the beginning of the week.

VEAL CALVES.—This market has suffered one of the heavy declines incident to heavy supplies of Spring, and until the glut is over prices will tend low, especially for dressed.

Live choice 1c@6½c; fair to prime 5@6c.; poor 3½@4½c.; Mt. Holly, 4@7½c; buttermilk 3@3½c; hog dressed calves extra 8½@9c.; fair to prime 6@8c.; poor 4@5c.

SHEEP AND LAMBS.—Receipts for week, 27,462 head; do. last week 19,141 do. Market dull and tending lower; about one-half of yesterday's offering was carried over. Unshorn sheep quoted $6.25@7.15; clipped $5.20@5.60. Yearling lambs $6.75@7.50. Spring lambs State and N. J. $3@6.50 ℔ head; Va. 10c. ℔ lb.

SWINE.—Receipts for the week, 19,703 head; do. last week 19,334 do. Good quality hogs active at the extreme.

Live corn fed $6@6.50 per 100 lbs.; country dressed pork light, 8½@8¾c.; medium, 8¼@8½c.; heavy, 8@8½c.; city dressed Western, 8¼c.

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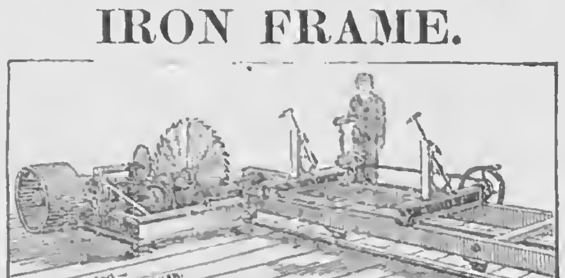

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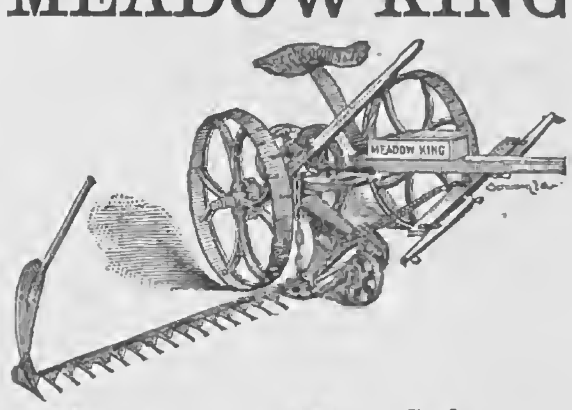

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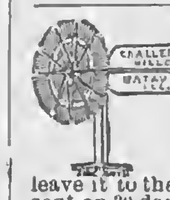

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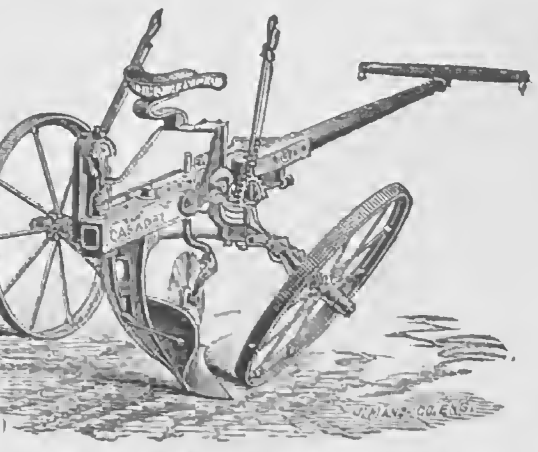

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Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 20.

HENRY STEWART.

Summer Fallows.

It would be a great mistake to suppose that books relating to the art of farming are new things. Some persons have made themselves merry over what they scornfully call "book farming," by which they mean farming by means of certain practices described in books. But these persons, who thus try to show their own peculiar wisdom, only prove their own ignorance, for books have been written about the art of farming for more than 300 years. These very farmers referred to grow clover and know its value and how they could not do without it, and yet it was by means of a book written by Walter Blythe about the year 1600 that the value of clover was first made known to English farmers. But there were even in those days silly farmers who scorned a book farmer, for clover came very slowly into use, and it was not until a second book was written, advocating its cultivation, by Sir Richard Weston, that it became a common farm crop. Richard Weston introduced the rotation of crops, and in his book explained its principles and described the practice.

Soon after, the benefits of draining wet land were made known in a book written by Samuel Hartlib, a friend of the great poet, Milton. Then followed a description of the feeding of sheep on green forage crops, which was published in a periodical devoted partly to agriculture, entitled Houghton's Collections on Husbandry and Trade, and this improved and valued practice was thus made known and became popular. After some other books on agriculture had appeared there came a most valuable one in 1731, entitled Horse-hoeing Husbandry, by Jethro Tull, who first made known the advantages of cultivating crops and of the Summer fallow.

This most especially concerns the subject we are now considering, and we need go no further in our reference to books on farming, and to book farmers, than to notice that the foolish people who joke about book farmers actually owe to them and their books everything of value that they now know and practice in their own farming. But for these men no doubt we might to-day be plowing with crooked sticks and growing our potatoes and corn among weeds and grass and on ground filled with water, and might have been as poor farmers and as poor people in every way as the poor Indians we think so much beneath us. But we want now to learn what Jethro Tull knew about summer fallows and what advantage they are to us in these later days, when we think we know so much more than our fathers and grandfathers did.

What is a summer fallow? It is the constant working of the soil during the whole summer season; plowing, harrowing and cultivating it, but without sowing any seed and without growing any crop upon it. For what purpose? For the improvement of the soil, by killing weeds and by adding to its fertility. We have learned that the particles of the soil are dissolved by exposure to air and to water, and we know that weeds rob the crop of food that it requires, and so prevent its full and profitable growth. And so in the working of a summer fallow the soil is turned and broken up so that the rains and dews can moisten it thoroughly and the air can penetrate it and the surface of each little particle becomes dissolved in the water held in the soil, and thus a new supply of plant food is provided and stored up for the next crop. Besides this, a vast number of seeds of weeds are made to sprout and grow, and are killed as fast as they appear, and so the soil is cleaned as well as made rich.

But wise persons live and learn, and we have learned a good deal in the past few years, since books and papers relating to farming have become abundant; and also since there have been more book-farmers or reading farmers For we have learned that it is a waste of time to work the bare ground which lies idle and produces nothing, when we can just as well grow a crop and gain all the advantages of the summer fallow. And so we plant the field that we wish to clean and enrich, with beans, or peas, or potatoes, or corn, and work these crops thoroughly with the cultivator, and the hoe, if need be, and kill every weed and stir the soil and gain all the benefits possible from these labors, and produce a crop besides. It was a part of the old system to spread manure on the bare fallow and work it into the soil by the repeated plowings and harrowings; in the new system we prepare the ground for future crops but secure that which we call the fallow or cultivated crop.

THE SEED DISTRIBUTION.

Our fourth annual offering of seeds to the members of the Horticultural Club was announced last week, and now a word on their cultivation.

The Japan Judas Tree or Red Bud, as the American Judas Tree is called, is attractive at all times during the season, but the rosy tinge of the small red buds among the shining leaves make it doubly beautiful in Spring. It rarely bears fruit and seeds in this climate, but the specimens on the Rural Grounds bore sufficiently the past year to enable us to send some seeds to the young folks. It was desired to place these in the regular Seed Distribution, but enough seed could not be procured, so the Cousins are to be congratulated on their good fortune.

The seeds should be sown in pots—about three seeds in each—as soon as received, and the pots should be put in the ground and covered with glass. See that they have good drainage and keep the soil moist. When four leaves have formed, remove the plants carefully and cover for the Winter. The seeds are slow to germinate, but patience in waiting will be amply repaid. I would thank the Cousins for leaves and flowers of the Red Bud, as any change in form may prove of value to those interested in its culture. The Judas Tree is classed on the lawn with medium sized, slow-growing shrubs; the leaves are sessile, *i. e.*, rest directly on the stem, and, as the pods suggest, it is a member of the pea family.

The Crimson Dwarf Celery is an excellent variety. The seed should be sown in light, rich soil in April or early May. Sow in rows about ten inches apart and about half an inch deep, and press them down to prevent drying up. Keep the young plants clear of weeds and in July they may be transplanted to rows four or five feet apart, and six inches apart in the row. The rows or trenches should be about eight inches deep. Two or three months after transplanting they may be earthed up in order to be well blanched before storing for the Winter.

Now, then, members of the Horticultural Club, there is a chance for you to compete with your parents, and I have no doubt but that you will surprise them with your successful attempts at gardening, and Uncle Mark for one hopes that this year may be the beginning of a happy horticultural career to many of the Cousins. We make no charge for postage, simply asking you to report the success you have in the work.

We have received from Commissioner Le Duc some packets of seed of the Pyrethrum Roseum or Persian Insect Powder. It has been much sought after and is raised in but one place in the United States, and the firm declines to furnish any one with seeds and plants, the object being to make a fortune out of it. Now if any of the Cousins wish to try to cultivate this plant and will use great care in doing so, I will send them free of postage and on their application, a small packet of this valuable seed, in so far as our limited quantity will permit me to do so. I hope none will apply who have not the facilities for giving these seeds good care and cultivation as I wish a good report from each one who receives the seed.

Uncle Mark.

Dyspepsia, Biliousness, Nervousness and miserableness all cured with Hop Bitters.

THE "YOUNG QUERIST."

M. F., Durand, Ill., asks if E. G. Rideout, of New York, is trustworthy.

Ans.—We believe he is.

W. S. B, Lime Hill, Pa., asks. 1, how to graft roses, and 2, how to propagate them from cuttings.

Ans.—The wood of the rose being, by nature, pithy, grafting is somewhat uncertain. The methods used are similar to those in tree-grafting, as illustrated in the Rural of Feb. 12. For cleft-grafting, the stock is cut off, with a sharp knife, just above a bud, so that the bud may help draw the sap up to the clon The stock can be split with a knife, making the cleft about an inch in length. The clon should be about four inches long. Make the lower part of the clon wedge shaped, and insert it, being careful to fit the bark of the clon and stock exactly. Bind the stock and clon with a strip of cloth covered with beeswax and resin in equal parts and a little tallow to make it pliable. The clon will unite in two or three weeks. Whip-grafting and rind-grafting are other methods, but cleft-grafting is the surest for new beginners. 2. Cuttings should be made in the Fall or early Winter. They should be about six inches long and of wood of the season's growth. Cut the lower end square, close to a bud, then put them in dry sand in the cellar. A callus will form on this end during the Winter, and when planted in the Spring, roots will at once shoot out Plant early in Spring in light, sandy loam, with at least one bud above ground. Tread down the earth about them and water if the season is dry. Cuttings can be made in Spring, but they are not as sure to grow.

A. L. P., Milan, N. H., wishes to know, 1, if the crab-apple called Briar's Sweet is a Winter apple, and 2, if Whitney's No. 20 is a good apple.

Ans.—We have never heard of Briar's Sweet Crab, and if there is such an one it must be of recent introduction. Can any of the cousins answer the question? 2. Whitney's No. 20 is a handsome and very good fruit; quite as good to eat out of the hand as to make preserves of.

LETTERS FROM THE COUSINS.

Dear Uncle Mark:—I like very much to read the children's letters in the Rural and would like to join the Club. I have several pets, but the greatest pet of all is a very large hen. When she was a very little chick, last Spring, her mamma died, and we had to put the little chick in a basket of cotton to keep her warm. We call her "Peep." She would fly upon our shoulders or heads to roost and would try to pick the food from our forks when we were eating. She likes to stay with us better than with the chickens. She comes to the house every day to lay her eggs. I like to go with my brother hunting after rabbits and squirrels, but when he goes for deer I stay at home. He shot at a young mountain lion last Summer. He thought it a large wildcat. It might have attacked him if he had not been high on the rocks above. He hit it, for he made the fur fly, but it only hissed at him and ran. I have a little garden every Summer and I like to work on it very much, but I like the flowers most. We have no schools here, so we have to study at home. We have a piano and mamma is going to teach me music.

Deer Valley, Park Co., Col. Alice Taylor.

Dear Uncle Mark:—I am so glad papa is sending his renewal. We can't do without the Rural for we like to read the letters from the cousins so much. Our flowers did well last year, and our Surprise Melons were so nice. We had some seed of Wax Ball, we call it, to send you, so you could raise some and tell us the right name, but the mice got them. It is a hardy shrub and has bunches of white balls which are so pretty in the Fall. It has been so dreadful cold this Winter we could hardly save our flowers from freezing. Our geraniums all froze but four. We thought our fuchsias were all dead, but now we see they are all putting forth their little leaves again. We have twenty fuchsias, geraniums, lantannas, etc. We think we will not loose any more with proper care. We had a salvia come up in one of our pots last February. It commenced to bloom the last of May and it was in constant flower until the middle of December. It was growing nicely until the night of December 27, which was too cold for it. We have another now about two inches high. We don't know whether we can save it or not.

From your little nieces,

Lizzie, Barbara and Eliza Pound.

Wilsonville, Spencer Co., Ky.

Dear Uncle Mark:—If you will let me I would like to join the Club and become one of the "cousins." My home is in Vermont, which is called the Green Mountain State, on account of its long range of green mountains. It is a very beautiful State, and it is said by people who have traveled a great deal that the scenery of this State is among the finest in the world. We have had a very cold Winter, but I expect we have not suffered with the cold weather as much as the people in the Western States, as we are more accustomed to the cold and are better prepared for it. My mother has taken the Rural New-Yorker a long time and we like it very much. I am very fond of flowers, and we have some beautiful plants. Mother had some pretty ones sent her from the Experimental Grounds, but some of the names were so twisted that we could not pronounce them, so we called them Rurals. Sadie.

Randolph, Vermont.

Dear Uncle Mark—We all look for the Rural as for a dear friend. We tease mamma or papa until they read the cousins' letters to us. We are two little girls, aged eight and five years. We have two little brothers. Clarence is three years and Georgie is three months old. We wonder where you get the seeds which you send to the cousins. Mamma says she don't know whether you have lots of house-plants or not, but we think you have. Mamma has some nice ones. The Rural flower seeds did not grow, but the garden seeds did well. We like to work in the garden, and are to have plots of our own next season. I (Millie) commenced to help mamma when two years old. She set a bed of onions and I followed, gathering them up in my apron. We would like to have this put in the Rural so we can hear it read.

Mildred and Kate Jack.

Rockland, Venango Co., Pa.

Dear Uncle Mark:—We have taken your paper for about two years and like it ever so much. I have always read the letters from the cousins, and have wanted to join the Club. I have one sister, named Edna, ten years old, and a little brother, Oscar, nearly two years old. We have no flowers now, except chrysanthemums, mignonettes, and a few pinks, but in the Summer we have a good many flowers. We sent and got seeds of John Saul last year. The seeds we received from the Rural did not grow. Papa raised a Mangold Wurtzel that weighed 13 pounds, but he was not trying for the premium. I am afraid this will reach the waste basket, so I will close. Your true niece,

Woodland, Yolo Co., Cal. Adella Fisher.

[Advertisement.]

A NATIONAL BLESSING.

(From the Philadelphia Record.)

The nineteenth century above all other ages has been noted for its many inventions; it has given us the steam power in its thousand-fold applications, the Telegraph, the Telephone, the Electric light, and innumerable other discoveries, all blessings to humanity; each day bringing us new surprises, until we have become so accustomed to the exhibitions of the genius of our century that any new development is at once received as a matter of natural consequence, and most people will simply remark, "I told you so." As an instance of this fact, we would only call attention to that wonderful discovery St. Jacobs Oil. A few years ago this great German remedy had never been heard of in this country; to-day you can hardly find a man, woman or child in the United States who has not used the remedy for some pain or ache, or at least has witnessed its use and seen its wonderful effects on a fellow being. St. Jacobs Oil has become a national remedy, for it is known in every city, town, village and hamlet in the country. It is a cosmopolitan preparation, for it is praised by the Americans, Germans, Italians, Bohemians, Danes, Swedes, Portuguese, Spanish, French, yes, even by the "Heathen Chinee." It may be termed the universal blessing, for it is indorsed by the rich and poor, the clergyman and the physician, the merchant and the laborer, in fact by all classes of the community. St. Jacobs Oil, by its almost marvelous properties, can be employed for a simple cut or sprain, or the worst case of inflammatory rheumatism. Persons who have been confined to their bed for years with that terrible disease, rheumatism, have been completely cured by the use of a single bottle. Such cases have been quoted by the leading journals of our country. For instance, the St. Louis Post-Dispatch says: Under the title of "Old Probabilities," one of the most useful and valuable officers of the U. S. Government, is most widely known. But quite as well known is Prof. J. H. Tice, the meteorologist of the Mississippi Valley, whose contributions to his favorite study have given him an almost national reputation. On a recent tour through the Northwest, the Professor had a narrow escape from the serious consequences of a sudden and very dangerous illness, the particulars of which he thus refers to: The day after concluding my course of lectures at Burlington, Iowa, on the 21st December last, I was seized with a sudden attack of neuralgia in the chest, giving me the most excruciating pain and almost preventing breathing. My pulse, usually 80, fell to 35; intense nausea of the stomach succeeded, and a cold, clammy sweat covered my entire body. The attending physician could do nothing to relieve me; after suffering for three hours, I thought,—as I had been using St. Jacobs Oil with good effect for rheumatic pains,—I would try it. I saturated a piece of flannel large enough to cover my chest, with the Oil, and applied it. The relief was almost instantaneous. In one hour I was entirely free from pain, and would have taken the train to fill an appointment that night in a neighboring town had my friends not dissuaded me. As it was, I took the night train for my home, St. Louis, and have not been troubled since. The Boston Globe says: Chas. S. Strickland, Esq, Builder, No. 9 Boylston Street and 106 Harrison Avenue, Boston, thus speaks: The pleasure which I hereby attempt to express, can only be half conveyed by words. Physicians of very high character and notoriety have heretofore declared my rheumatism incurable. Specifics, almost numberless, have failed to cure or even alleviate the intensity of the pain, which has frequently confined me to my room for three months at a time. One week ago I was seized with an attack of acute rheumatism of the knee. In a few hours the entire knee joint became swollen to enormous proportions and walking rendered impossible. Nothing remained for me, and I intended to resign myself, as best I might, to another month's agonies. By chance, I learned of the wonderful curative properties of St. Jacobs Oil. I clutched it as a straw, and in a few hours was free from pain in knee, arm and shoulder. As before stated, I cannot find words to convey my praise and gratitude to the discoverer of this king of rheumatism. The Chicago Times says: Everybody on the South side knows J. D. L. Harvey, Esq., who has been a resident of Chicago for over twenty years. Mr. Harvey expressed himself on the "oil subject" as follows: "I have spent over $2,000 to cure my wife of rheumatism. Two bottles of St. Jacobs Oil accomplished what all the medical treatment failed to bring about. I regard it as a greater discovery than electricity. It is a boon to the human race, and I am very glad to have this opportunity of testifying to its remarkable efficacy. I cannot speak too highly of it, and I would be recreant to my duty to those afflicted, did I not lift my voice in its praise."—The Philadelphia Ledger says: Mr. George I. Graham, 820 Nineteenth street, Philadelphia, is a journalist of many years' experience, and is actively connected with the Philadelphia Sunday Mirror, a leading theatrical and musical journal. During the "late unpleasantness" Mr. Graham was Captain of Company K., One Hundred and Eighty-third Pennsylvania Regiment, and through exposure in the field he contracted a variety of ills, and he says a very troublesome case of rheumatism in the right leg and foot was a war inheritance that he had in vain tried to get rid of, until he was recommended to try "St. Jacobs Oil." He states that he felt a slight relief even on the first application of the Oil. Before the first bottle he purchased had been used up he had but few traces of his rheumatism, and at this time he says the disease has entirely left him, which he attributes entirely to the use of St. Jacobs Oil. He remarks: "No person need suffer with rheumatism if St. Jacobs Oil can be obtained; to those who are afflicted with that complaint it is worth its weight in gold."—The Chicago Inter Ocean says: Capt. Paul Boynton, the world renowned swimmer, thus speaks of the Old German Remedy: "From constant exposure I am somewhat subject to rheumatic pains, and nothing would ever benefit me, until I got hold of this Old German Remedy. Why, on my travels I have met people who had been suffering with rheumatism for years; by my advice they tried the Oil, and it cured them. I would sooner do without food for days than to be without this remedy for one hour. In fact I would not attempt a trip without St. Jacobs Oil as I do not see how I could get along without it. St. Jacobs Oil has been endorsed by persons of national reputation; who would not lend their names if they were not convinced that it was a duty they owed to suffering humanity; they have experienced the wonderful effect of the great German remedy and they want their fellow creatures to know the result. We would only mention in this connection the Rt. Rev. Bishop Gilmour, Cleveland, Ohio: Excellent for rheumatism and kindred diseases. It has benefited me greatly—Mme. Marie Salvotti, Prima Donna Wilhelmj Concert Troupe: "Nothing can compare with it as a prompt, reliable cure for the ailments named."—Wm. H. Wareing, Esq., Asst. General Superintendent, New York Post Office: Proved all that is claimed for the Oil and found efficacious. Ready relief for rheumatic complaints."—Hon. Thos. L. James, Postmaster, New York: Referring to Superintendent Wareing's report concerning St. Jacob's Oil; "I concur."—Prof. C. O. Duplessis, Manager Chicago Gymnasium, Chicago, Ill.: "Our professionals and amateurs use it in preference to everything they have ever tried."—Major T. A. Hilliler, No. 2235 Master street, Philadelphia, suffered so with rheumatism that he was confined to his bed for weeks at a time, absolutely helpless, happened to hear of St. Jacob's Oil, tried it and was cured.—Geo. W. Walling, Esq, Supt. Police, New York City: "Member of this Department relieved of rheumatism by its use."—Stacey Hill, Esq., Mt. Auburn Inclined Plane Railroad, Cincinnati, Ohio: Undoubtedly it is a remarkable medicine."—D B. Cooke, Esq., American Express Co., Chicago, Ill.: "Gladly bear testimony to its efficacy."—Capt. Henry M. Holzworth, Chief Detective Force, Cleveland, Ohio.: "Surprising relief. A world of good."—Prof. Edward Holst, Pianist and composer, Chicago, Ill.: "Its effects are in harmony with its claims."..In conclusion we would say, that it is the imperative duty of every family to have a bottle of St. Jacob's Oil on hand for all emergencies; for the remedy is a true friend in need, and the occasion for its immediate use may come when it is least expected. Follow this advice, and it will not be long before you will join us in calling St. Jacobs Oil a National Blessing

PERSONAL ITEMS.

One son of Mr. Eoglish, the late candidate for the Vice-Presidency, married a pretty variety actress, and a second is betrothed to Minnie Kent, a skip-rope dancer.

All the inmates of the Soldiers' Home near Washington have signed a formal invitation and presented it to President Garfield asking him to make that place his summer residence.

The average age of members of the Garfield Cabinet is fifty-one. Mr. Gladstone's Cabinet averages fifty-eight. The youngest Cabinet Minister in America is thirty-seven, the oldest sixty-eight. There are two septuagenarians in the English Cabinet, but the majority are between fifty and seventy.

[Springfield (Mass.) Republican.]

Edgar T. Page, Esq., Druggist, writes us from Chicopee Falls, that Mr. Albert Guenther, under Wilds Hotel has used that remarkable remedy, St. Jacobs Oil, for a severe case of rheumatism and it cured him, as if by magic. He also used it with great success among his horses, in cases of sprains, sores etc., and it cures every time.

Stock and Poultry.

POWELL BRO'S,
Springboro, Crawford County, Pa.
THE MOST EXTENSIVE IMPORTERS OF
CLYDESDALES
IN AMERICA.

Two importations for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow.

Largest and Finest Collection ever seen on the American Continent.

ALSO,
HAMBLETONIANS,
And other strains of trotting Stock.
HOLSTEIN & DEVON CATTLE.
Catalogues sent free. Address as above, and mention the RURAL.

BERKSHIRES
AND
Small YORKSHIRES
THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to
Bagg's Hotel Farm,
UTICA, N. Y.

HOUGHTON FARM JERSEYS
FOR SALE.
Address MANLY MILES, M. D., Mountainville, N. Y. The herd is led by RAMAPO, whose mother, EUROTAS, has a record of 788 pounds of butter yield in one year, and the Queens MYRA and LASS EDITH, who brought the highest price at the Kellogg sale in 1880.

DR. MANLY MILES'S Book on "BREEDING" will be forwarded on receipt of price $1.50, or it can be obtained at the office of the ORANGE JUDD CO., 751 Broadway, near Eighth Street.

GATES'
GARGET CURE.
For the Cure and Prevention of Garget in Cattle.

Teats Partially destroyed, Restored to their Natural Condition. Kernels in Teats or Udder removed Speedily and Surely. All Stringy Substances or bunches in Udder removed by 1 to 2 bottles. Blood or Sediment in Milk, from 1 dose to 1 bottle.
SOLE PROPRIETOR,
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Worcester, Mass.
17 Harvard Street.
☞ Price 75 cts. per Bottle, or 3 for $2.

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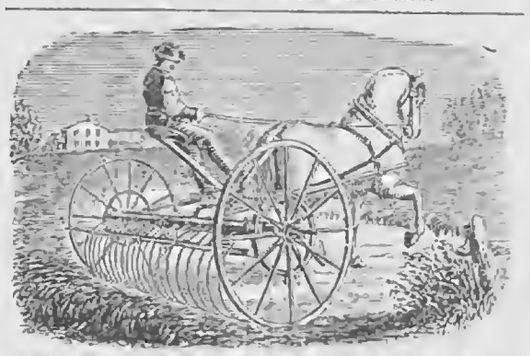
BOWKER'S
HILL AND DRILL
PHOSPHATE
SEND FOR PAMPHLET.
This is a true bone superphosphate, and may be used *on any crop*, in the hill or drill or broadcast, either *with* or *without* manure, and will produce a much earlier and larger crop. In the Report of the Mass. Inspector of Fertilizers, its valuation is from $3 to $10 per ton higher than other Phosphates which sell at the same price. The past year over 3000 tons were sold against 100 tons three years ago, showing that it is liked by the farmers. If there is no local agent near you, send to us.
Also for sale OCKBRIDGE MANURES.
BOWKER FERTILIZER CO.
BOSTON & NEW YORK

GENESEE VALLEY FARMS FOR SALE.—Some of the finest residences in the Valley, near R. R. Inquire soon of JOHN SHELDON,
Fort Collins, Colorado

Implements and Machinery.

THE S. R. NYE IMPROVED
BAY STATE RAKE.

MANUFACTURED BY THE
BELCHER & TAYLOR
AGRICULTURAL TOOL COMPANY,
Chicopee Falls, Mass.
This Rake received the highest award at the Centennial Exposition and Field Trial. The only Silver Medal awarded at the Paris Universal Exposition, in 1878. It is easily handled by a girl or boy strong enough to drive a horse. Send for circulars.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Can be Operated by the Foot Alone,
Leaving both hands free for driving. Can be operated as a complete Hand Dumping Rake, at the will of the driver. Can be operated easily by any Boy or Girl who can drive a horse. First-class in every particular. Stong and Durable, Best of Material, Well Finished. Thoroughly tested, never fails. Send for Circulars.
Address GREGG & CO., Sole Manufacturers,
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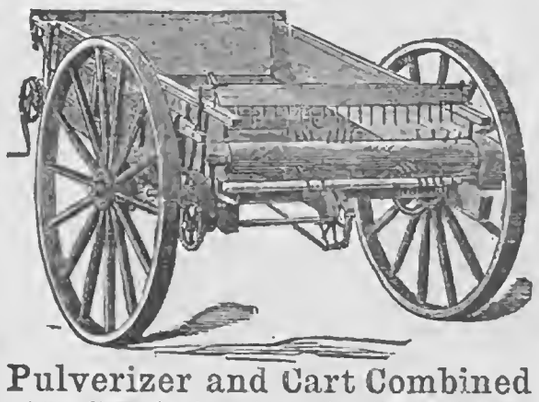
Pulverizer and Cart Combined
A new Farm Implement equaling the Mowing Machine. For particulars and illustrated circulars address **KEMP & BURPEE M'F'G CO.,**
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BEST WASHER AND WRINGER *in the world.* Guaranteed to do perfect work or money refunded. Warranted for 5 years. Price of washer, $8. Sample to agents, $3.50. Price of Wringer, $7,50. Sample, $4.25. Circulars free.
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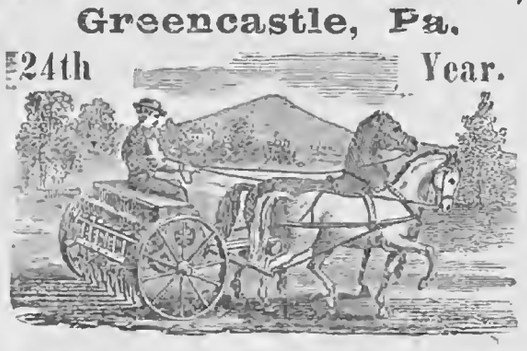
24th Year.

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Complete Force Feed, Rubber Springs, AUTOMATIC CUT OFF, saving Fertilizers. Agents wanted in territory not occupied.
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FISK'S AUTOMATIC SEED PLANTER
PLANTS WITH THE PRECISION OF A HOE
All the ground a person can walk over in a day.
THE EASIEST TO HANDLE AND THE FASTEST HAND PLANTER IN USE.
Every Planter fully warranted and satisfaction guaranteed. Inducements on samples this season. Send for circular. WALLACE FISK,
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Vanderbilt Bros, No. 23 Fulton St., Agts. for N. Y. City. Hamlin Johnson, Providence, R. I., Agent for New England.

TAYLOR 1, 2, AND 4-HORSE POWER.

Runs Feed Mills, Feed Cutters, Shellers, Elevators, Churns, Saws, Pumps, &c. Overhead, out of dirt and snow. Simplest, cheapest, best. Dealers in Machines of all kinds.
Send for circulars to TAYLOR HORSE POWER COMPANY,
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WITH
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Heebner's Improved
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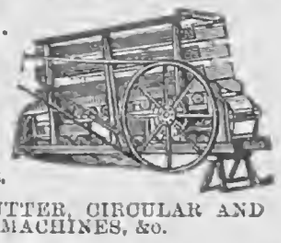
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25 per cent more power than any other. Has adjustable bridge. 30 lb dog will churn for 6 or more cows.
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BUGGIES for Dealers' Medium Work; Low Prices. UNION CARRIAGE M'F'G CO., Cincinnati, O. Catalogue FREE.

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The only easy riding side bar buggy in the world. Rides easier than Elliptic End Spring or Side Spring Buggies, hangs low, easy of access, elegant in appearance, and very stylish.
We manufacture over **100 a week** of these celebrated open and top, one and two seated buggies, **first-class** in every respect, and with the best of mechanical facilities, machinery adapted especially for this one style of buggy, can furnish SUPERIOR GOODS at LOWER PRICES than small manufacturers or other large manufacturers who build a variety of work. Send for Catalogue and learn your nearest agent.
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KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS
MACHINES SENT ON TRIAL. KENNETT SQUARE PA

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PEOPLE IN THE UNIT ED STATES ARE USING THE CELEBRATED
STUDEBAKER WAGON,
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Send for Illustrated Price List, mentioning this paper, to
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South Bend, Ind.

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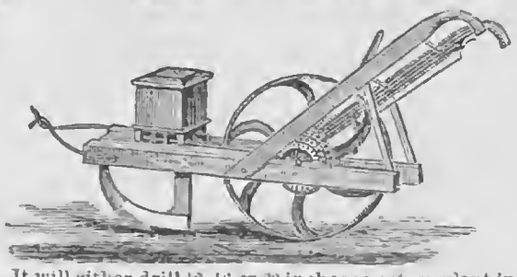
CORN AND CANE SEED PLANTER.

It will either drill 12, 16 or 20 inches apart, or plant in hills any desired distance. A perfect DRILL, and a perfect Check Row Planter.
We also have a stock of SELECT AND PURE CANE SEED which we will sell at low prices. Send for price and description to manufacturers.
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Best Harrow made. Cuts every inch of ground, & adapted to all kinds of soil. Peculiar shape of tooth makes it easy of draft and leaves the ground light and mellow. Relieves itself of all obstructions. Bundled very compact for shipment. 3 sizes cut 6, 8, and 10 ft. Agents wanted. Write for Circulars to
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PATENT TOOTH
HORSE RAKE
which does not scratch the ground and dust the hay. **Best Rake** made. Buy no other rake, and have clean hay.
New **Victor Lever Feed-Cutter.** *Largest and best made.*
The best **Champion Vegetable Cutter** made. Cuts a bushel of potatoes in 23 seconds.
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Every Machine is fully Warranted. Price of Mills, $15 to $35. Shellers, $5. Don't buy a Mill or Sheller until you have seen our terms and Illustrated Circular. Address, with stamp, LIVINGSTON & CO.,
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VICTOR Double Huller Clover
Machine that beat the Birdsells, Monitor, Jr., and the Ashland Clover Hullers in a scientific test at the Toledo, O., Fair, Sept. 15th and 16th, 1880, in the presence of 30,000 Farmers and Threshermen of the West.
Committee's Report mailed free. 284 Victors sold last year.
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A PRICELESS BOON to those who are UNABLE TO WALK. LEONARD BACON, D. D., HON. A. H. STEVENS, M. C., and OTHERS recommend them. SEND FOR CIRCULAR.

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Has the LARGEST SEPARATING CAPACITY
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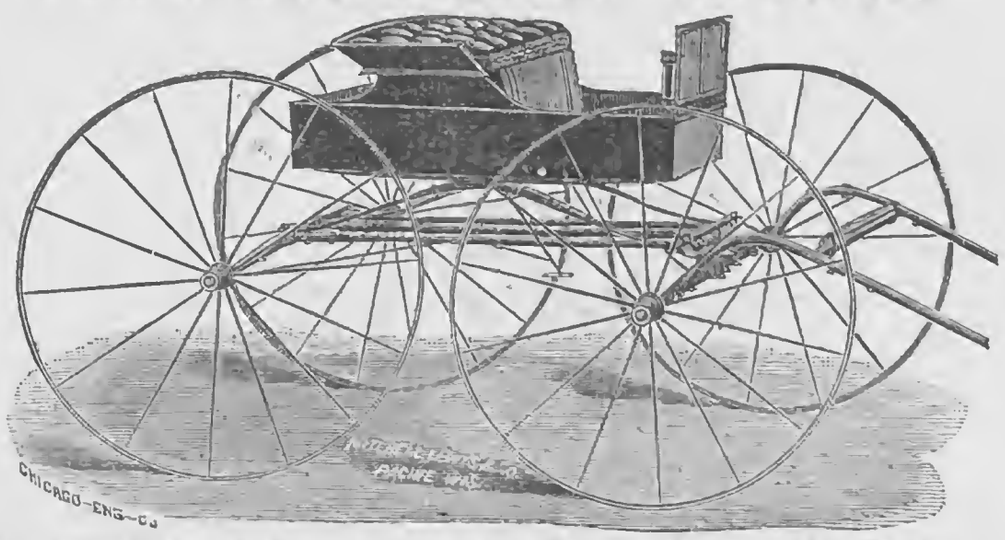
MANUFACTURERS OF
FARM AND FREIGHT WAGONS.


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The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List.
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Sour stomach.

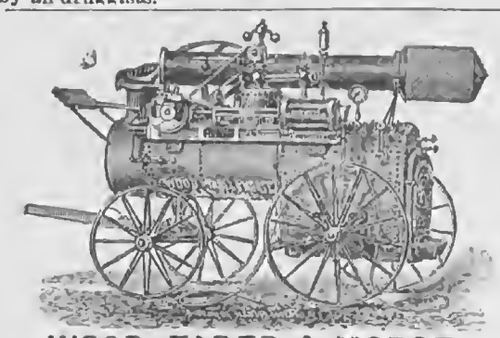
If the food taken into the stomach is not digested it decomposes. In the latter case a pungent gas is developed which causes sour eructations, or else the stomach itself secretes an acid, which, rising upward at intervals stinging the gullet sharply. These extremely disagreeable sensations are attributable to impaired digestion. To get rid of them, or prevent their recurrence, it is only necessary to tone and regulate the gastric organs with Hostetter's Bitters. It will not answer to postpone the great corrective with the idea that the unpleasant symptoms will disappear of themselves. So far from that being the case, they almost invariably culminate, if neglected, in chronic dyspepsia, with its concomitants of gnawing in the stomach, dizziness, perverted vision, headache and sleeplessness. It is true that all these disagreeables may be obviated by a course of the Bitters; but how much wiser to anticipate their arrival with one or two doses of that sure preventive of indigestion and strengthener of the alimentary organs.

COLUMBIA BICYCLE.

Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.,
595 Washington Street, Boston, Mass.

WILBOR'S COMPOUND OF
PURE COD LIVER OIL AND LIME.

To One and All.—Are you Suffering from a Cough, Cold, Asthma, Bronchitis, or any of the various pulmonary troubles that so often end in Consumption? If so, use "WILBOR'S PURE COD-LIVER OIL AND LIME." This is no quack preparation, but is regularly prescribed by the medical faculty. Manufactured only by A. B. WILBOR, Chemist, Boston. Sold by all druggists.



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MANUFACTURERS OF
PORTABLE AND AGRICULTURAL
Steam Engines
Of the HIGHEST STANDARD, in every respect of materials, and workmanship. Were pioneers in the manufacture of
Practically Portable Steam Engines,
And with determined policy to build only the BEST MACHINERY from the BEST MATERIALS, and in the BEST MANNER OF CONSTRUCTION, and with continued improvements, have attained the HIGHEST STANDARD in excellence of workmanship, simplicity of design and capacity of power. For a quarter of a century have maintained their manufacture, the
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of the world. Descriptive Circulars sent on application. Mention this paper.

THE OLD RELIABLE HALLADAY
STANDARD WIND MILL
20 YEARS IN USE.

GUARANTEED
Superior to any other make.
17 Sizes-1 to 40 H. Power
Adopted by U.S. gov. at forts and garrisons and by all leading R. R. Cos. of this and other Countries.
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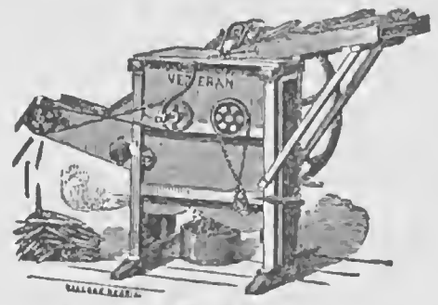

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THE RURAL NEW-YORKER

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Field Crops.

SORGHUM SUGAR-CANES.

I. A. HEDGES.

THE Chinese Sorghum, (Fig. 233), was first introduced from China into France and reproduced there; and from there it was brought into this country. The Imphee, or African, was introduced into France from Kaffraria by L. Wray, of London. It was reproduced near Toulouse on the farm of Count De Bouregard and imported here by Mr. Wray at the solicitation of the late Horace Greely, reaching here in May 1857. He brought 15 varieties varying greatly in appearance, that is, in the seed heads, as his was all in the head. I had the pleasure of witnessing the opening of his boxes and hearing him describe the various kinds as he held up one after the other. It is probable I am the only one left of those who heard his interesting history, which so impressed my mind that it still remains as clear as ever.

Now it is from these two sources that our multitudinous named canes come. It is possible that some fresh importations have been made from France; but I doubt it, because very little attention was given to the culture of the canes there—a fact I learned in a correspondence with M. Vilmorin, Andrieux & Co., of Paris, in 1863. The Chinese has held its own characteristic quality well. Its two great faults are a liability to fall before the wind, and, next, its inferiority as a sugar producer as compared with some of the Imphees, especially with hybrids of the Oom-see-a-na and Nee-a-za-na. These two appear to me to have produced the present valuable canes called Early Orange and Kansas Orange. The Oom-see-a-na at first attracted attention upon the farm of Mr. Hooker, of Schuyler Co., Ill., where an excellent sugar was made in a simple, rude box pan. The Nee-a-za-na is generally called White Imphee, and by some White Liberian, both misnamed and calculated to mislead.

I have never heard of any sorghum cane having been imported from Liberia. The term Liberian was doubtless applied to the variety to which it belongs either for speculative purposes or from an inability to remember its Kaffir name, which is Boom-viva-na. These native names are so difficult not only to remember but to pronounce that it is not strange that others have been substituted. The Liberian, so-called, is a late hardy cane and one that seldom falls before the wind. I have dropped it from favor because it is not a good sugar-producing plant, and because it is so late as to be liable to suffer from frost. It was a great favorite in Southern Illinois until last season, when Mr. J. S. Cross, of Randolph County, put in some of the Orange, and now this variety is greatly preferred.

The Honduras, so-called, is another misnomer. It is one of Wray's Imphees, Vim-vis-chu-a-pa, the largest and latest of all the family of African canes. I look upon it as a doubtful cane to handle. The seed is so much like that of broom corn—as may be seen from the illustration—that I greatly suspect it has been crossed to some extent. I distributed it with samples of Early Orange and Early Amber last season among several agricultural colleges and prominent cultivators in various latitudes with a request to have the samples tested side by side, and in every instance the Orange has far excelled. In Texas, Louisiana, Tennessee, Illinois, Missouri, Iowa, and Minnesota it has been quite satisfactory. It is called Orange because of its appearance; both the seed tufts and the ripe cane stalks are orange-colored and so also are the sirup and the raw sugar. It is not at all like any variety mentioned in Wray's descriptive catalogue. When I saw it first — a single tuft sent to the first meeting of the Mississippi Valley Cane-Growers' Association—I was struck with its beauty and its resemblance to what I thought was a cross of two valuable canes, and after two years' test of its qualities I am satisfied that my conjecture was well founded. It does not follow, however, that this is the *ne-plus-ultra* of cane improvement. If our cultivators will carefully cultivate and watch the developments consequent upon so vast a country and such a great variety of soils and climate as well as kinds of cane, and report the results of their observations to our Association, we shall make still further discoveries.

Mr. John Bartlett, of Oshawa, Canada, advises me that he has saved from a field of cane some few tufts that had superior qualities. He is sending them to me for inspection. I shall despatch them far down South for early planting in order to get a second crop from the same this season. He informed me that it was still earlier than the Amber and richer in saccharine matter. In like manner I have a seed tuft and samples of sugar and sirup sent from Mr. Kullum, of Petrie, Kansas, that give great promise of excellence. I have in a previous letter, I believe, expressed hopes that our State Legislature would do something to forward our efforts in an educational way by teaching the students of the Agricultural College farm, but I am sorry to say I am disappointed.

St. Louis, Mo.

HONDURAS CANE—Fig. 230.—See also page 308.

TOBACCO CULTURE.—NO. 9.

G. A. GOFF, JR.

Taking Down Tobacco.

As soon as the tobacco has become thoroughly cured in the curing barn it is ready for taking down. About three months are usually required for the tobacco to become perfectly cured—a condition which is known by the stems of the leaves having become free from their natural juices. Warm, damp weather is required to soften the tobacco so that it can be taken down from the poles. It is very important that the tobacco is in good condition as regards moisture, when it is taken down, otherwise artificial moistening or watering will be found necessary, which is not desirable, as it is costly and risky except when done by the most experienced of workmen. The leaves should be soft and pliable so that they may be doubled up in the hand without damage, or it is not in fit condition for taking down. When the tobacco is hung on poles with twine, as is the usual custom here, it is cut down from the poles and handed down in armfuls to a man who places the plants in a double "rank" with the butt ends extending outwards and the tips of the plants somewhat lapped together. When the other method of hanging is followed, the plants are slipped from the laths and handed down in armfuls or else passed down on the laths from which they are removed previous to being "ranked." After the stalks have been stripped of their leaves by small boys, the hooks are taken out and reserved for future use.

It is advisable for the tobacco grower to take down all the tobacco he can, if a good opportunity comes during the early part of Winter, for if the work is delayed and the opportunity passes, his tobacco may not become in fit condition for the work again until Spring, which will seriously delay him with other Spring work In the Winter several warm days are usually necessary to make the leaves soft and pliable so that the plants may be taken down. As soon as the work of taking down is completed the ranks should be carefully covered with boards or the like to prevent the tobacco from drying out. Great care should be taken in the different processes of manipulating a crop of tobacco to prevent it from drying. All the moisture that tobacco takes up from the atmosphere of itself while hanging up should be retained, and if this is done no artificial dampening will usually be necessary. To this end the prudent grower is always careful to keep his tobacco covered when exposed to a dry atmosphere..

Stripping.

The next process in the manipulation of a crop of tobacco is the stripping. This should be done as soon as possible after the tobacco has been removed from the poles, as delay in the work will endanger loss from the tobacco heating in the rank, caused by the fermentation of the stalk. This heating, however, in the pack does not usually occur except when the stalk is still green, as it is likely to be when taken down in the Fall or early Winter. The process of stripping consists in removing the leaves from the stalk. They are then tied up in small bundles weighing six or eight pounds each, and snugly packed away in a double rank, with the butt ends of the bundles extending outward and well covered to prevent drying. The stripping is usually done in the open shed, mild weather being chosen for the work. Sometimes, however, when the work is pressing, the tobacco is carried to the stripping and assorting room where there is a fire and where the work can be continued during cold weather.

When the tobacco is stripped it is ready for the assorting room, which has been described in a previous article. A considerable quantity of tobacco should be kept in the assorting room all the time, as it is essential to have it warm when it is assorted, as cold tobacco is always harsh and brittle.

Assorting Tobacco.

We now come to a part of tobacco work which requires more mind than muscle. Every tobacco grower who takes an interest in the business enjoys sorting tobacco. With a comfortable room provided with a good stove, the tobacco grower can sit at his bench and carry on the work during the most inclement weather of Winter. There is much to say relative to the necessity of assorting tobacco well. The work comes at a season

when the farmer is not pressed with other work, and hence, there is no good excuse for its being slighted. Neatness in the work is also an important factor and should not be overlooked.

The tobacco is assorted usually into four different qualities; sometimes six qualities are made as ordered by the purchaser of the crop. The customary four qualities are marked A. A., A, B. and C., according to grade, the A. A. meaning 1st wrappers, the single A. 2nd wrappers, the B. for binders and C. for fillers or "lugs," as they are sometimes termed. The work of assorting consists in placing a bunch of the tobacco upon the table or bench, loosening the string or band, and handling the leaves over one by one, and throwing them into their respective piles, each assortment by itself. The leaves are then tied in "hands" or "hanks" containing from 15 to 20 leaves each. Soft, narrow leaves are used for the "tiers" and are wrapped about the butt ends of the leaves forming the hand, the tip ends being tucked between the leaves of the hand, making a neatly-formed hank. Our most successful growers exercise great care in assorting their tobacco. The hands are made as nearly as possible of equal size, and are neatly tied with leaves suitable for the purpose. "Fat" or very inferior leaves should not be used for tying the hands. Tobacco assorted in a neat and workmanlike manner indicates care and painstaking on the part of the grower, which is recognized by the buyers and raises the reputation of the grower in their eyes. Tobacco before it is assorted should be in good condition as regards moisture, that is, the leaves must be soft and pliable, so that they will not be damaged by the handling necessary in performing the work well. It is also advisable in assorting to make the qualities *good*, that is, to make a good double A. and a good A wrapper; in other words, to put in a wrapper no leaves that do not absolutely belong there, leaving all poor and inferior leaves for the binders and fillers. Some growers endeavor to make too many wrappers, thinking thereby to get more for their crops, by making a large show of the higher grades. This is a mistaken method of assorting, and nearly always results unsatisfactorily. When six qualities are made in assorting, the A's and double A's are "sized," and the long and short leaves in each quality kept separate; they are then termed long A. A's. or short A. A's., etc. I have dwelt at considerable length on the subject of assorting tobacco, for the reason that there is no part of the growing and handling of a crop, that gives the grower so good an opportunity to build up a good reputation as the manner in which he "puts up" his crop. The growers in Lancaster County, Pa., and in the Connecticut Valley have built up a high reputation by the commendable manner in which they assort their crops. So with certain of our growers in the Chemung Valley, who have gained a favorable repntation among packers of the leaf, they owe their reputation to the care and painstaking which they exercise in assorting and packing their tobacco.

CORN CULTURE IN EASTERN OHIO.

With the farmers of this part of the country the corn crop is among the most important. In fact, I might say it takes precedence of all others. As the people are mostly engaged in mixed farming, the most prominent feature of which is wool-growing, this crop occupies a place as a food unsurpassed by anything else, and while there are but very few—mostly renters—that sell any, farmers generally calculate to raise enough for their own use. While it is no uncommon thing to see from 20 to 30 acres in corn on a single farm, the acreage is more frequently under than over that.

The general practice is to plow sod for corn. This is mostly the first plowing done in the Spring and is attended to as soon as the frost is ont of the ground; or, if the season is favorable, it is not an uncommon thing to see fields plowed in the Fall, and occasionally during the Winter months. It is a pretty generally accepted opinion that if the ground is frozen a few times after being plowed, the injury from cut-worms will not be so great the following season. Some do not plow until immediately before planting, and claim that owing to the fresh grass being then turned under there will be less danger from cut-worms than if the plowing is done at any other time; but there is danger of being caught by a dry spell about the last of April or first of May, and if the soil is limestone or heavy clay, one would have to wait for rain, which is a little risky.

When the season arrives for planting, the ground is harrowed and put in the best possible condition. Of course, a great many give it a "lick and a promise" and let it go; but this kind of carelessness is getting less frequent each succeeding year. The rows are run from three and one-half to four feet apart each way, or, if the ground is side-hill, it is common to plant closer and work but one way, and even on level ground it is not an uncommon thing of late years to see fields drilled either by hand or by a planter. There are not as many planters need as might be supposed for an old-settled part of the country, but they are coming into use more of late years. For running out the ground to plant some use a marker drawn by two horses, which makes three rows at a time; others use a one-horse bar shear plow, and only three or four years since I saw a man on a rented farm, who was putting in about 100 acres, furrowing it all with a one-horse plow, but this practice is a little too slow for this fast age, and will soon be entirely discontinued, except on very rough pieces of ground.

For cultivating, the one-horse cultivator and double-shovel plow are mostly used, but of late years a good many two-horse walking sulky shovel plows have been introduced, and an occasional riding sulky, but these are generally considered too expensive for the number of acres appropriated to this crop, and then we have considerable sidling and rough land in the counties bordering on the Ohio River. The hoe is not used in cultivating except to set up stalks. From two to three stalks are left in a hill. The yield per acre varies from 50 to 160 bushels of ears, and an occasional field gives more or less, as the case may be; but the most common yield is about 100 bushels, and as a general thing no manure or fertilizers are used, although an occasional field is manured in the hill.

It is a very rare thing to see a field of corn not cut off previous to husking, as the fodder is held in high esteem by all for feed for all kinds of stock. When it is cut off it is put in stooks of from 64 to 144 hills, the former being the rule and the latter the exception. At husking time it is tied into bunches containing from 40 to 60 stalks, of which from 10 to 20 are put together in stooks, where they are kept until feeding time, when they are hauled, as used, to the place of feeding. Of late years a good many have abandoned this plan, and as soon as husking is ended, the fodder is hauled to the barn and put in the mow or stacked out-of-doors convenient to the place where it is to be fed, and it is to be hoped the day is not far distant when, instead of this being the exception, it will be the rule. There are but very few that cut their fodder before feeding, and consequently it is about all fed out-of-doors on the ground. In preparing the grain to feed, some have it shelled and ground, but of late years mills for grinding corn and cob together have come into very general use, and the product is fed to horses, cattle, sheep and hogs. With sheep, however, a great many follow the old practice—feeding in the ear on the ground; while others shell and feed from troughs. As to kinds grown, they embrace all known sorts, but are mostly of the Yellow Dent variety. New varieties are tested from time to time, and, as is the case with everything else, any new sort has to make a very poor show indeed if it does not find a friend to advocate its merits, nor is it ever so good that there is not some one to point out its faults.

Jefferson Co., Ohio. M. N. Russell.

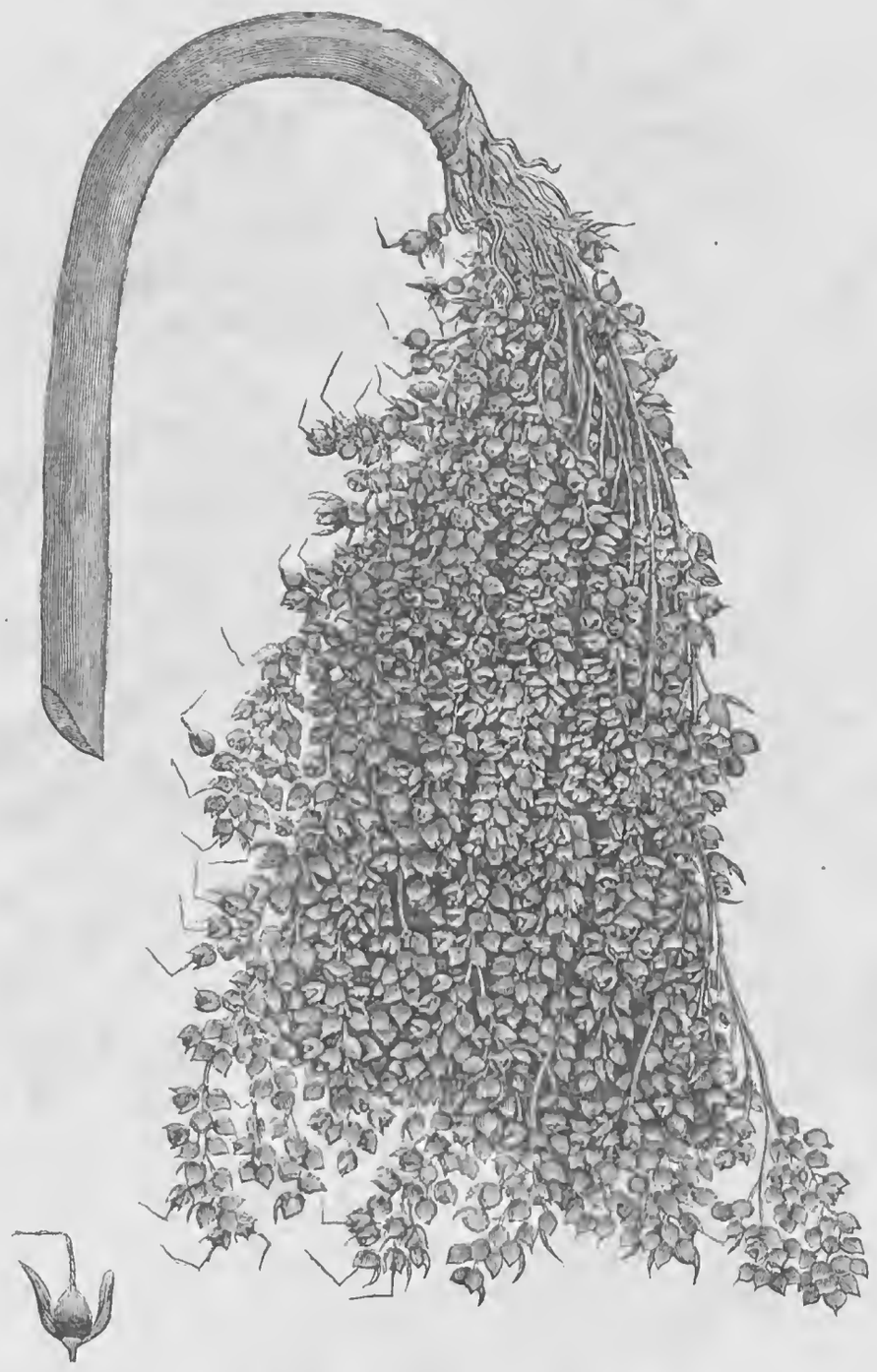
RAISING GOOD CROPS OF CORN WITHOUT HOEING.

I have always thought that hand hoeing in producing a crop of Indian corn absorbed such a large proportion of the profit that there was only a small revenue left as an equivalent for the money invested in the land and the cost of plowing and planting. Hence it has latterly been my practice to manage so as to prevent the expense incident to hand-hoeing as much as practicable. To save hand-hoeing, my practice is to defer plowing the ground until the time for planting has nearly arrived. The object is to plant as soon after the land is plowed as the work can be done. By adopting this practice the corn will come up quickly, get the start of weeds and grass, and with a very little work with hand hoes the growing crop will maintain the ascendency during the entire season. When land is plowed two or three weeks prior to planting, unless the culture has been unusually clean during previous years, grass and weeds will come up before the corn appears, thus necessitating a vast deal of expensive labor to weed the hills. Whatever may be the form of the plot of ground, if it is at all practicable, I commence plowing at the center and turn the furrow-slices all towards the center of the field. By this practice all middle furrows are avoided. Then, the ground is marked out in the modern quincunx order, or diamond fashion, so that any three hills at any part of the field standing nearest each other will each of them appear at a corner of an equilateral triangle. By this practice the horse-hoe can be run three ways as well as one way.

In order to mark out the ground in the modern quincunx order, the marks are made first one way, usually commencing on the longest side of the plot. After the ground is all marked out one way, if marks are made across the first marks at an angle of about sixty degrees, the hills will all stand diamond fashion, each hill at the corner of an equilateral triangle. Take three rails or poles or boards all of equal length (no matter how long if the three are of equal length); lay one pole in the first mark on one side of the field; then, place the ends of the other two poles or rails in contact with the first pole so as to form an equilateral triangle, somewhat like a three-square harrow, with one pole lying straight in one of the marks. The other two poles will indicate the direction for the cross marks. Three tall stakes can then be set up in a range with one of the poles as it lies on the ground, to guide in making the first cross-mark. The foregoing manner of determining the direction for making the cross marks, will be found about as accurate as it can be done with a surveyor's compass. By marking out the ground two ways, say three or four feet apart between rows, the rows will be three or four feet apart in three directions. Then, by starting the horse-hoe as soon as the growing corn is four or five inches high, and going through in three directions, one man or boy will be able to do all the hoeing, weeding and setting up the hills that are partially covered or bent over, as fast as another man can run the horse-hoe through one way. I prefer level cultivation.

Potatoes are planted in the same manner and the horse-hoe does more than eleven-twelfths of the hoeing. If the soil is generously seeded with noxious weeds, by running the horse-hoe three ways, when weeds are in the seed-leaf, or just out of it, almost every green thing, except the growing corn, will be covered up or rooted up. When weeds are small and tender they can be destroyed easily; but allow them to grow until they become rooted only medium deep, and they will cling to life with amazing persistence, especially if the soil is moist. S. E. T.

Orange, N. J.



WHITE LIBERIAN CANE—SEE PAGE 308.—FIG. 231.

BARLEY vs OATS.

Farmers this year will probably sow barley rather than oats wherever barley has heretofore proven a profitable crop. In many places barley cannot be grown, as it is peculiarly liable to injury from excessive heat in Summer. The region in Canada north of Lake Ontario has long been famous for barley, and its product bears a higher price than that grown on this side of the line. But good barley is grown in cool, moist soils in Western New York, and when the season is favorable it is a paying crop. As moist, cool soil is important a top-dressing of salt is one of the best possible applications for barley. The salt should not be drilled with the seed, but sown after the barley has begun to come up. One barrel per acre, or about 300 pounds, costing one dollar, is the right quantity. It will make the barley straw bright and the berry plump and of full weight, an item of great importance, for thousands of bushels of light barley are thrown out as unsalable for malting, and fit only for feeding. Barley is one of the best fallow crops for preceding wheat. It can be harvested two to four weeks earlier than oats, and the longer preparation of the soil this secures is very important for the wheat plant. It is also believed that barley is less exhaustive of the soil than oats, but this is not certain. Barley stubble is usually much lighter than that of oats, and therefore after plowing the mechanical condition of the soil is much more favorable.

W. J. F.

Over-Estimates of Corn Yields.

Professor E. W. Stewart states in an article on corn which appeared some time ago in the Rural, that 100 bushels of corn per acre are an "easily possible crop." I think the Rural readers will agree with me in saying that not one man in a hundred, if he should take ten acres on his own farm, even with the most favorable conditions in every respect can raise 100 bushels of corn to the acre, counting 56 pounds to the bushel of corn containing not more than 11 per cent. of water. These immense yields, so frequently reported, are too often computed by going into the field early in the Fall, husking a half dozen hills or a row, estimating the amount of ground and measuring the corn in a basket, but it will shrink from ten to twenty per cent. afterward. The science of agriculture can never progress rapidly in the face of inaccuracy and wild statements.

I. P. Roberts.

Farm Economy.

MOISTURE WITH MANURE.

Everything is adulterated now-a-days, sometimes with much and again with but little damage. All chemical fertilizers are adulterated, some with earth to make bulk and freight charges, some with plaster to attract moisture and also to make bulk, upon the principle that this manufacturer can give you as much for your money as the next man.

The addition of plaster to the other ingredients of a good fertilizer is only a damage in so far as it increases the cost of hauling. Moisture is so vastly necessary to the profitable employment of all fertilizers, that if the manufacturers could, they would add water *quantum sufficit* to irrigate the land during the whole growing season, without depending upon the usual rainfall. Plaster absorbs moisture from the air more abundantly than any other known low-priced chemical substance, and hence its value as a fertilizer not only *per se*, but in combination; for besides its own exclusive effect upon the insoluble constituents of soils, it also furnishes some extra moisture which enables other solubles to act. Therefore phosphatic fertilizers are benefited by its

addition, but when manufacturers will put up the usual constituents of their fertilizers without any adulteration, leaving the farmer to add at home either common soil or plaster as he can obtain either the cheaper, the saving in freight will be so great that for every ton now used, there will be hundreds. Then the great Northwest will buy fertilizers and ruin the Eastern farmers in ten years.

There is no doubt that a good fertilizer upon a prairie soil, would from the quality of the land already, produce far more per acre than on the best Eastern lands, last longer and yield heavy returns.

It is supposed by some farmers that manure of any kind is not needed until land is exhausted; but that is a false conclusion. It is cheaper to keep good land up *to* a paying state of fertility, than to raise poor soil up to that point. Land is very much like live stock, in that respect—it doesn't pay to starve either. Now let the fertilizer manufacturers leave out their adulteration for mere bulk, induce railroad companies to put freight on such goods down to cost or even less, and they will have to transport ten times the grain to the seaboard. The railroads may give away dollars, but they will get back thousands in return.

S. RUFUS MASON.

THREE HORSES ABREAST.—A correspondent writing from Princeton, Ia., on this subject, says: "Put the odd horse in the middle, snap the inside line of each outside horse to the bit of the middle one. Now you have only to run a strap from the inside bit ring of each outside horse through the hame ring and turret of the middle horse and buckle it to the opposite line, and after it has been properly adjusted as to length, you can control each of the three horses as readily as if you were using only two. Never drive three horses abreast unless they are attached to a load or implement, as they are apt to swing out to one side and get "mixed up."

Pomological,

PEACH CULTURE.

C. M. HOVEY.

NOT long since a discussion took place before the Massachusetts Horticultural Society upon peach culture, and though very interesting, because it is a subject on which all lovers of good fruit desire information, yet, singular enough, not an idea was advanced among the many advocated, but what was quite as well, if not more distinctly, stated nearly a century ago. Indeed, so far as peach culture is concerned we have made but little advance, and even as regards the production of new kinds, as compared with other fruits, the improvement has been very slight. It is doubtful if we have many peaches superior or even equal to George the Fourth, Grosse Mignonne, Cooledge's Favorite, Noblesse, Old Mixon Free, Early York, Jacques and some others. Almost the only exceptions are Crawford's Early and Crawford's Late, and within a very few years some early sorts of fair quality, though remarkable for nothing but their earliness.

In fact, as to peach culture, it can hardly be said it is so well known as it was years ago, if we are to judge by our markets; for less than 25 years ago excellent peaches of home growth could not be sold for much more than what the hard, half-ripe, or else soft, half-rotten ones, which come in immense quantities from the South, bring to-day. No doubt much of this must be attributed to the mistaken idea that our climate has changed and the peach can no longer be relied upon for a crop. Singular as it may appear, the same idea was prevalent one hundred years ago. Yet peaches are plentiful and always will be, if trees are planted, notwithstanding the apparent adversity of the seasons. An authentic historian, Paul Dudley, F. R. S. and Chief Justice of Massachusetts, whose garden was in Roxbury (now Boston), writes in 1726 as follows: "I have had in my own garden seven or eight hundred fine peaches of the Rareripes growing at a time on one tree," and further, "Our peach trees are large and fruitful, and bear commonly in three Years from the Stone. I have one in my Garden of twelve years' growth, that measures two Foot and an Inch in Girt a yard from the Ground, which two years ago bore me near a bushel of fine peaches." Cannot we do, in these days, what the stern old Puritans did, overwhelmed as they were with the cares and labors of an unsettled colony and in an untried climate? If peach trees were so vigorous then why should they not be so now?

Judge Peters, one of the most intelligent agriculturists of Pennsylvania, was an extensive cultivator of peaches, and has given his experience in the Proceedings of the Massachusetts Society for the Promotion of Agriculture. But for the date—which is September 1807—we might have supposed it written in 1880. The same ill success, the same insects to contend with—the same diseases and similar other causes that were named at the discussion alluded to; and he tried all the same remedies and all the same appliances (and many more) which were tried by those who gave their experience, in 1881. The result was then as it is to-day—if the season or a succession of seasons was favorable there was an abundance of peaches; if unfavorable, then the reverse.

The peach is a native of a warmer climate than New England, and a much less variable one than any part of the Middle or Northern States; and when this is taken into consideration, there can be very little doubt why our crops of this fruit are not as constant as the apple or the pear. Acclimatization has never accomplished anything in this direction. Only through hybridization of a tender with a hardier species or variety has anything been done to give hardiness to a semi-tropical or half-hardy plant. All attempts through successive generations of seedlings of the Indian Rhododendron from the Himalayas or the Chinese Rose from Asia, failed, until our native R. Catawbiense was crossed with the former, and the hardy rose of Europe with the latter.

Mr. Richard Cooper, of N. J., an extensive cultivator of the peach and a close observer, who has put on record his experience with peaches in 1779, remarks, "I am confident that not more than one of my peach trees has been killed by worms for 20 that have died in consequence of irregular Winters; and as I have observed the fluctuating state of the weather in Winter constantly to increase for more than 50 years, I conceive it must proceed from some certain cause."

EARLY AMBER CANE.—FIG. 232.

CHINESE SORGO CANE.—FIG. 233.

Judge Peters then describes his experiments in peach culture under date of September, 1807: "Having cultivated it from my earliest youth, it would seem that I could give some certain and profitable mode of remedying its tendency to decay and repelling the diseases to which it is invariably a victim. But I have found myself so frequently baffled in my endeavors, and have seen the fallacy of so many theories on the subject that I diffidently affirm anything respecting its culture or care. * * * * * * About 50 years ago (1760), on the farm on which I now reside, my father had a large peach orchard which yielded abundantly. Until a general catastrophe befell it, plentiful crops had been for many years produced with little attention. The trees began nearly all at once to sicken and finally perished."

Precisely the same thing has been experienced over and over again since that early date. In our younger days peach trees (1830) were 20 feet high and 20 years old, tall and lanky, to be sure, but still healthy and bearing plenty of fruit. Then came the same general catastrophe which befell Judge Peters. From 1845 to 1856 we again had the same plentiful supply. But with the terrible cold of 1857 and 1861 the general catastrophe overtook them, and they are again recovering and producing as abundantly as ever.

But we now come to the point, which was the real object of my remarks, viz: to show that in 1800 the very same insects and diseases that we are combatting to-day were quite as common, and the panaceas for a remedy just the same as were detailed at the recent discussion, with no better results than will accrue from them, should the seasons be adverse.

Judge Peters, whose patience must have been as great as his enthusiasm was remarkable, writes as follows: "I have failed in many things in which others are said to have succeeded. Straw and bass, or paper surrounding the tree, from the root to all distances from six inches to three or four feet—White-washing, Painting, Urinous applications, Brine, Soot, Lime, Frames filled with Sand, Oil, Tar, Turpentine, Sulphuric acid, Oil of Vitriol, Nitrous mixtures and almost every kind of coating. I ruined several trees by cutting them down, and permitting the stump to throw up new shoots, and branch at pleasure. All teguments kept the exudation from evaporating with freedom. The pores being closed, or too open, were alike injurious. Tegnments of straw or bass made the bark tender; and it threw out under the covering sickly shoots. The more dense coating stopped the perspiration. The oil invited mice and other vermin, who ate the bark thus prepared for their repast, and killed the tree. I planted in hedge-rows, and near woods, I paved, raised hillocks of stone—I have suffered them to grow from the stone only, grafted on various stocks and budded, hilled up the earth in the Spring, and exposed the butt in the Fall, sometimes I have used the knife freely—frequently have left the tree to shoot in every direction. I have scrubbed the stocks or trunks with hard brushes, soapsuds and sand, scraped them with proper instruments: I have, for a season or two under various experiments amused myself with the persuasion, that I had discovered an infallible Panacea. I had temporary success but final disappointment."

Can we find men to day, with the honesty of Judge Peters? We doubt it. In the place of acknowledging "final disappointment" the very same processes of Mr. Peters are affirmed to be positive successes, altogether over-looking the fact that the success is owing to the season, and not in the least to the *quack nostrums* employed; and forthwith they publish their wonderful discovery to the world, to be taken up by novices, who look to nostrums for a cure, while they neglect Nature's remedy, to "let well enough alone," and kill their trees by downright doctoring, when they need nothing but mother earth, a little manuring, and good generous care. It is no wonder we do not make more progress when all our practice has been anything but rational. Peach culture may be summed up in a few words:—Good trees, good varieties, good soil, favorable position, moderate fertilizing, intelligent pruning, (if any at all), death to the borer; and if the seasons are propitious there will be abundant crops. One word more. Plant a tree or an orchard every year. Cut down and burn up as soon as the trees show signs of decay. Throw away the knife and rely only on fresh young trees which bear freely the second or third year, and saving the "irregular winters" which we always have had, and which we always shall have, and, we would add, cold, wet Summers when the wood does not ripen, the peach is quite as sure a crop as the pear. Criticize Paul Dudley's statement. He says, "two years ago" his tree bore nearly a bushel of peaches. Why did he not say last year? Undoubtedly for the very good reason, that the previous Winter was a hard one and he had no crop, thus accounting for off years as we do now.

Horticultural,

FARMERS AND SMALL FRUITS.

J. S. WOODWARD.

IN traveling about the country among the farmers I have often wondered why so few of them raised small fruits. Not one in five, on an average, tastes any kind of small fruit of his own growing from one year to another. Formerly a few currant bushes struggled with the grass and weeds in the fence corners and gave an abundance of small but wholesome fruit, but, with the worm as a foe, the bushes were unequal to the contest; the grass waves triumphantly over their dead remains, and the farmer is entirely without small fruit. Why this great scarcity? Certainly not because farmers do not love fine fruit. Ask any one of them into your plat, and you will be surprised to see what capacity he has for stowing a large quantity in a small space. Nor is it because he is too stingy, for he will send the boys and girls, and even go himself, miles away to a few straggling wild bushes to pick a few poor berries that cost him two or three times as much as it would to grow those much better on his own farm.

There are three reasons to which we can attribute this lack of small fruits on the farm:—First comes carelessness. The farmer sees the fruit in its prime and resolves to raise plenty for his family, but before planting time comes he has partially forgotten his good purpose and lets the proper season go by. Second, the mistaken notion that prevails as to the great labor and expense of growing what would be needed to supply his family. The last and best reason is that the farmer does not appreciate the value of the small fruits to his family, both as food and as medicine. When he looks at the early strawberry blushing and nodding amid the dew-laden leaves, and his mouth waters for a taste, he does not realize that nature is yearning within him for the acid contained in the fruit, to help relieve the system from the accumulations of Winter and prepare it to endure Summer's heat. He does not consider that each of the fruits in its season contains some principle that is just adapted to the wants of the body at that time, and that many times the free use of each would save large amounts in doctors' bills, as well as much suffering, and, many times, the life of a beloved one. The average American farmer is not yet educated up to the full enjoyment of his high calling and God-given privileges. He does not yet realize that he is near the fountain-head, and is entitled to partake first and of the best of everything that grows, and that when he neglects to provide himself and family with these health-giving necessaries he is culpably responsible for the bad results.

To correct these false impressions, and to cause him to provide and enjoy these, his rights as the tiller of the soil, would be conferring on himself and family a great and lasting benefit. One acre of good land, properly divided and cultivated, would furnish any ordinary farmer's family all the fruits, fresh and canned, needed from the earliest ripening of the strawberry to its coming again. To what other use could an acre of land be put that

would add so much to health, comfort and enjoyment? In planting, the farmer should not fall into the too common error of using small beds or plats here and there scattered about, but let the rows run the whole length, and so place them that the main cultivation can be done with a horse. This will save much hard work and valuable time in hoeing. Another fact he should remember: "The easiest cultivation is thorough cultivation"—no half-way business. It is much easier to keep the land entirely clean than to keep it half overrun with grass and weeds. He should remember this acre is worth two in corn or potatoes and give it good care, allowing nothing but fruit to grow. Of kinds, it should contain at least strawberries, raspberries (red and black), currants, blackberries and grapes.

In selecting varieties of each kind he should remember that the first requisite in the family is quantity. They would much prefer a quart of Wilson Strawberries to a half-dozen berries of any of the most exquisitely flavored that "ever graced the vine." He should not run after every novelty he sees advertised, but first content himself with those known to be fairly good and that will give plenty of fruit every time. On the other hand, he should not plant a fruit, however much it may bear, that, like the Champion Grape, is only "good to look at," and that even the birds will not eat. Let quantity be a first and quality a second consideration in selecting sorts. With a proper selection of varieties and division in quantity, and with good care, the acre should give him bushels and bushels of the best and most health-giving food the good God ever created for man's use, and if the capacity of his family should ever outgrow the ability of the acre to supply it, he should be only too glad to devote more land to this use, and when he is rejoicing in the abundance he will not regret the small amount of labor required, and should not forget to be thankful for the great blessing, or to share a portion with his less fortunate neighbor, and thus perchance he may induce him to "go and do likewise."

Thoughts on reading in "The Garden."

More than fifty years ago I read an old book, "Hervey's Meditations among the Tombs and among the Flowers." I was too young to admire the first part, but the second filled my mind with a first sense of the beauty and splendor of Nature, increasingly appreciated ever since. I used to take the book to the garden and read it there clinically. I remember well that I could not (then) see the force of the author's objections to the gaudiness of some of the brilliant flowers from warm climes. The old dispute over this goes on. The "Garden," a beautiful London periodical, exponent of all garden charms and lore, a delight to every horticulturist, continues to argue for the restoration of the soft-toned and fragrant flowers of former generations—the primroses, cowslips, violets, daffodils, daisies, forget-me-nots, etc., which have been pushed almost out of sight by their more splendid but later sisters. Few of these have fragrance, save the heliotrope. The vernal flowers seem to say, "Love on and linger"; the glowing strangers say, "Worship and go." And people do go, says the Garden. "The electric light is very beautiful but for a continuous object the softer light of the moon is preferable." A bit of glowing color here and there is very desirable, but there are so few who can deal with it in mass. "What a guy do some of these gaudy daubers make of Flora!" says a charming writer in the Garden.—S. R. H. No amount of beauty can stand a green bonnet with blue ribbons, a yellow body with a crimson skirt, black stockings and white shoes, mauve parasol and vermilion gloves! One is always safe with the old style of mixed border, or with a few good flowers in a corner. Nature sees to the harmonious arrangement and outline of her own. The green carpet of clipped grass is the one-half of the best lawn or house-yard. New arrangements of its floral edging can be made every season, if notes are made when the desirableness of some change becomes apparent. "W."

Soaking Asparagus Seed.

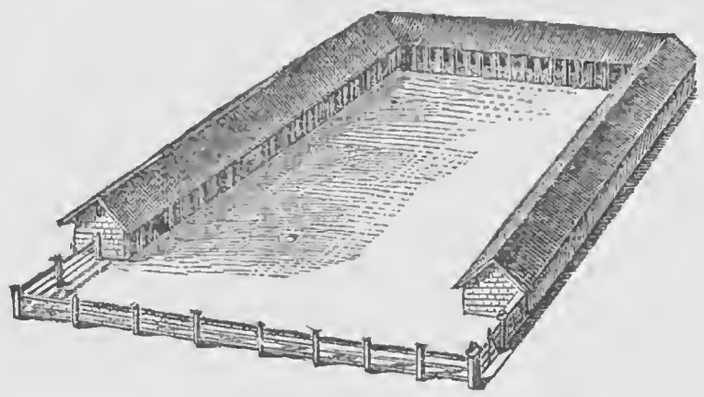
In reading the directions for treating the seeds of the RURAL'S Free Seed Distribution, I notice that soaking the asparagus seed is not mentioned; but my experience leads me to believe it to be of great advantage, whatever may be said of soaking seeds generally. Asparagus seed, on account of its hard, horny, outer coat, is very slow to germinate, and, as usually treated, often fails to germinate at all. It should be soaked in warm water for a week or ten days before sowing, or until the sprouts begin to show on the seeds. The dish containing the seed should be placed where it will keep warm (the top of the reservoir to a kitchen stove is a good place), and have the water changed several times. Treated thus, asparagus seed will "come up" as quickly as corn, and not only save weeding but add a month to the length of the growing season, which will make quite a difference in the size of the plants the first year. L. W. GOODELL.

Rural Architecture.

SHEEP BARN AND SHED.

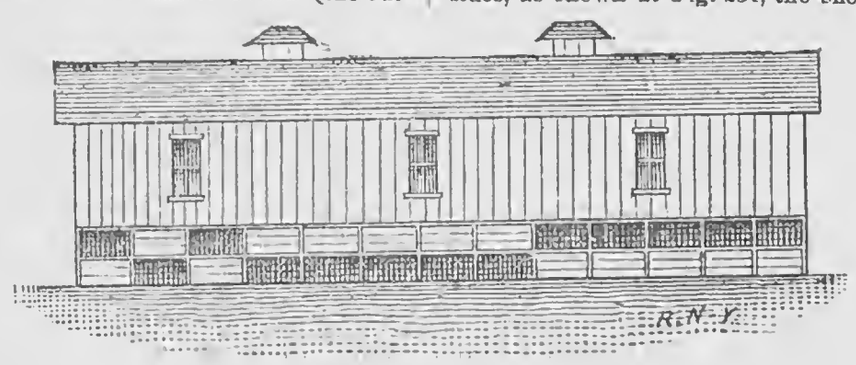
A VERY common mistake made by owners of sheep is to suppose that these animals will thrive without care or shelter. It is a common error to believe that sheep do not need water; that in Summer they manage to get a supply from the dew or rain on the grass, and that in the Winter they can lick the snow for drink. So, with regard to shelter, it is often supposed that with their woolen jackets they are proof against rains and storms and need only the lee side of a fence or the side of a barn (the outside) for shelter. This mistaken practice yearly causes enormous loss, for which the sheep are held responsible, and an idea becomes prevalent that these animals are weak and tender and that one always has bad luck with them. It is most true, on the other hand, that sheep will repay, as well as, if not better than, any other animal, all the reasonable care and attention that can be given to them, and that, for the money invested in them, they will return a larger profit than any other live stock. Shelter is the principal thing, and it is not shelter from rain and storms alone that is required by sheep; they need to be sheltered from exposure to damp, from foul air and from unwholesome sweating in confined, ill-ventilated pens and stables. In short, they require all the sanitary precautions which every thoughtful man knows to be necessary to health, both as regards lodging as well as feeding. Luxury and costly provisions in the sheds are not needed. The roughest hemlock board, a strip of bark, a wall wattled with straw or coarse hay or light poles—any of these will provide as good and comfortable shelter as a dressed and painted pine board.

A shed may be made by setting two rows of poles in the ground about 10 feet apart in the rows and the rows 16 feet apart. The front row may be eight feet high and the rear row five feet. A roof of poles and strips covered with thatch may be made and the ends and rear side filled in with coarse hay or straw,



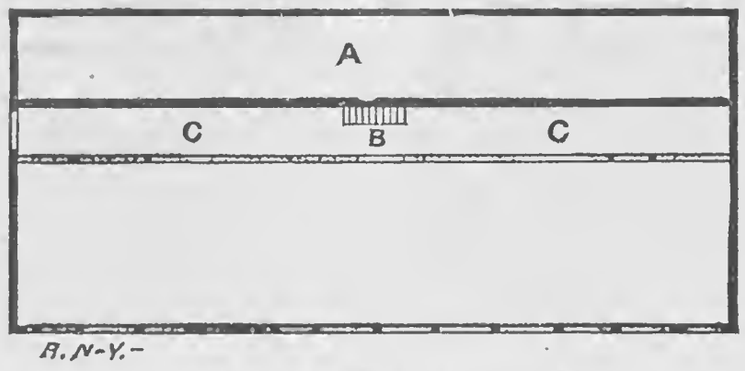
SHEEP SHED.—FIG. 234.

or even pine or hemlock brush, held between light strips nailed on both sides of the upright posts. For Western and Southern shepherds, this will make a serviceable shelter, and, being left open to the south, will afford protection against the prevalent storms. If the shed were continued on the east and west sides, as shown at Fig. 234, the shelter would



SHEEP BARN.—FIG. 235.

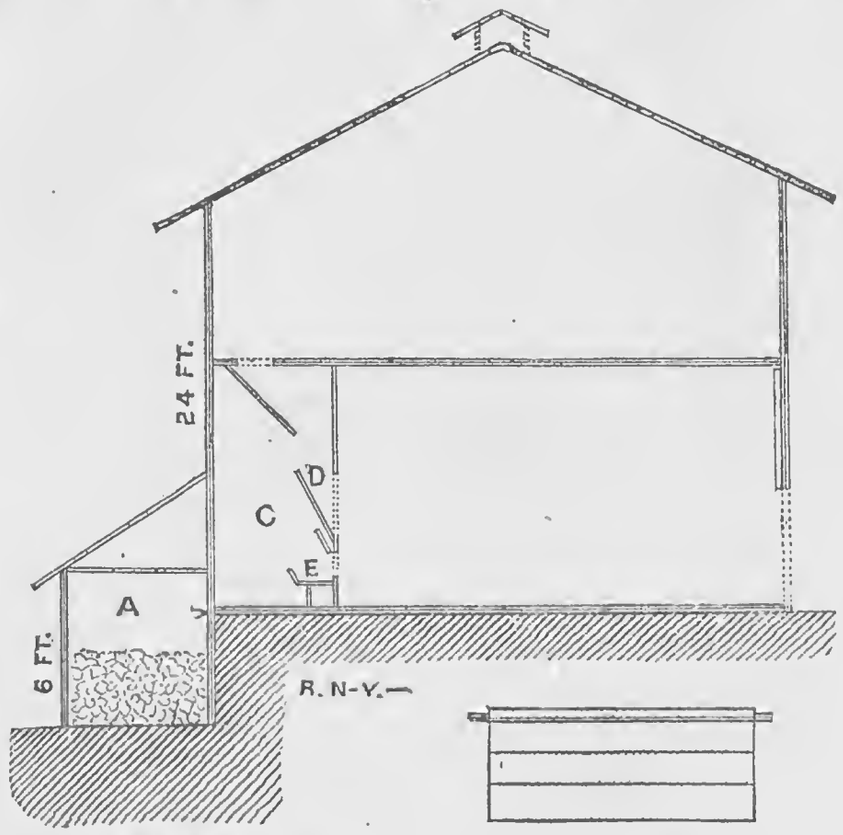
be perfect, and a fence in front would confine the sheep in a yard, in which they could be fed in stormy weather. For a more pretentious sheep shed the same plan can be adopted, as shown in the illustration, Fig. 234, which is intended to represent sheds for a flock of 100 or more sheep. If it is desired, room may be made above the shed for hay,



GROUND PLAN OF BARN.—FIG. 236.

and in that case the poles should be 10 or 12 feet high; the hay floor being made about seven feet above the ground. The shed may be 16 feet wide, with a full roof. A feed rack should run around the whole shed and other racks may be kept in the yard.

A barn that has been found very convenient for sheep is shown at Fig. 235. This is made



SECTION OF BARN.—FIG. 237.

DOOR.—FIG. 238.

with the pens eight feet high; the posts are eight feet apart and swinging doors are fixed between each pair of posts. The doors are double, one hung above the other, so that the upper or lower one, or both, can be closed when desired. The doors are hung upon pins fitted into the ends, as shown at Fig. 238. Some of the pens may be inclosed and kept for separating ewes from the flock at lambing time. The upper part of the barn is kept for fodder and the interior arrangement is shown at Fig. 237, and the ground plan at Fig. 236. In the rear of the barn (at A, Fig. 237), is a root-cellar. At C, C, Fig. 236, is the feeding passage, over which are hay chutes to carry the hay into the rack D, Fig. 237, which opens into the stable by lathed bars placed up and down. The bars are not more than three inches apart, to prevent the sheep from pushing their heads through and tearing the wool from the necks. A feeding trough, E, Fig. 237, for grain or chopped roots, is under the hay rack and is opened or closed by a falling door or shutter, which when open, is held by cords and hooks to the sloping bottom of the hay rack. A stair-case or steps B, Fig. 236, leads from the feeding passage to the hay floor and the hay should be so arranged as to leave a passage-way above. The hay floor should be of matched boards to prevent dust and chaff from dropping on to the sheep and getting into the wool.

Although abundant ventilation is provided for by the ample doors in front of the shed, it will, nevertheless, be advisable to have at least two air-shafts from the stable to the roof. These should be about four by six feet, and made of matched boards some of which should be hung on hinges and fastened by bolts that they may be used to pass hay down to the stable floor at times. These chutes should be two inches larger each way at the bottom than at the top, so that the hay will not lodge in them. The feed passage communicates with the root cellar by two or three doors, as may be convenient. With a cellar arranged as on this plan the method of preserving corn fodder by ensilage may be very easily practiced if desired.

Dairy Husbandry.

THE DAIRY COW. NO. 31.

HENRY STEWART.

Breeding Dairy Cows.

THE dairy cow is an artificial production. As such she is subject to continual improvement. We cannot tell within reasonable bounds what may be the maximum product of a cow in butter, although there are physiological bounds within which the product of milk must always be confined. A cow can never produce more milk than the capacity of the udder permits, and there is a limit to the size of the udder. It may perhaps, however, be justly considered that we have reached the extent of all reasonable demands upon the cow's power of producing butter, if we are to believe that this product may have reached the astounding quantity of nearly 800 pounds within a year and from one calf to another, as has been claimed for more than one or two cows. If a cow can be made by the most careful breeding and feeding to produce half of this quantity, or an average product of one pound per day through the whole of a year, we may consider, perhaps, that we have reached the ultimate capacity of an ordinary cow. But it may very well be believed that this may be done by a continued course of judicious and skillful breeding.

To do this the cow must be thoroughbred; that is, each dairyman must for himself undertake a course of breeding in his herd, which must be rightly begun and rightly continued, and with a right selection of materials. By continuing this course the dairyman will have, in time, a thoroughbred herd, in which there will be a concentration of the best blood and the best qualities of the animals he has been able to secure for his use. Now one may start with but commonplace materials, and by selection and the use of better blood from without, he may in a few years have a herd of cows that will possess a similarity of character, being closely related both in blood and milking quality. But if the dairyman can afford to begin with a selection of good cows and introduce the blood of a superior kind of dairy stock, he can do in five years what he could only hope to do with poorer materials in twenty. In this case time and money are equivalent and by the expenditure of money, the labor of many years may be saved; on the other hand, by this labor the money that would otherwise have to be expended is saved.

The dairyman, then, who desires to set about improving his stock of cows from within his own herd will select the best cows he can procure and will mate them with a bull of known pedigree and pure blood. This is the first essential. Without this there can be no success. It is the very corner-stone of improved breeding, and the ignoring of this requisite has led to the loss of years of labor, and to weary disappointment. The bull having been procured and the cows selected, it is well to have the animals mated in March, April and May if possible, for this will bring the calves at such a season that they will be weaned and put on grass at the age when they can have

the most benefit from it, and will make a good growth and become strong before their first Winter arrives. The rearing of the calf is the building that is to be put upon the foundation mentioned; and that is of sufficient importance to be referred to more particularly hereafter. But a good summering on grass will have the effect to enlarge the frame of the calf and to develop its digestive powers, both being essential to a good cow. It is also a good season for the cow to begin milking, and she will come into her full flush when the first grass is ready; the calf will then be out of the way; and the whole attention can be given to the butter-making.

When the cow is young and has her first calf, it is advisable to put off her second breeding for six months after her first calving, so as to form a habit of persistent milking and the milking should also be continued as long as any milk is yielded, if it is only a quart, or even less. A young cow at this period, is in course of training for her future usefulness and this is a part of her breeding. She should therefore be induced or compelled to contract a habit of long-continued and copious milking, and only such cows as possess this quality should be kept for breeding. A heifer should be bred, too, at an early age. Twelve to fifteen months is late enough so that the young animal should come into profit at, or a little before, two years of age. Her first breeding should be carefully managed, for the first mating will exert an effect upon all her future progeny. If a coarse, common bull is used, the damage will remain during all her after life and all her future progeny will bear some of the marks of the first parentage. This is one of those curious conditions of animal physiology and is difficult to account for, but it has been so often observed and proved that one cannot reasonably doubt the truth of it. On this account the first breeding of the heifer should be the best that can be secured. The calf of a heifer may safely be bred to its sire, and this is even advisable when an improvement is designed to be fixed upon an animal. If the sire has improved the dam he may be expected to improve still further the second generation, and a third cross may even be given, in special cases. Then a young bull from the best cow of the herd may be used, rather than to bring in outside crosses, unless there is the best reason for it. Some of the best herds that ever existed have had no outside blood introduced for many years, and this course is the best adapted for the improvement of dairy stock. There are exceptions, of course, and the breeder should be able to judge when he has gone far enough in line breeding, and make a wise and judicious infusion of new blood when it is necessary. But in this case the introduction should be from a source superior and never inferior in character to his own herd. Every step in improvement should be fixed and made a basis for another step in advance, and the greatest care should be taken that progress is not arrested by a mistake, else all that has been gained in several years of patient effort may be lost. The aggregate value of our dairy cows may easily be doubled in five years, if dairymen would take some trouble in breeding better stock, and abandon the wasteful and mistaken policy of producing calves of any kind whatever, never caring how poor they may be so that the dam may be brought into a milking condition. Such a method is too much like the mistake of killing the goose for the sake of the eggs it might be supposed to contain, and for a small, insignificant present advantage sacrificing a future profit, the aggregate value of which might be enormous, and which would not only accrue to the present generation but would go on increasing in a wider and larger scope year after year for the benefit of our children and their children after them.

The Swine-Yard.

BAD EFFECT OF IN-AND-IN BREEDING OF PIGS.

A CORRESPONDENT of the English Live-Stock Journal says that the largest number of really bad and valueless pigs he ever saw was in the year 1851, at the farm of the late Mr. Fisher Hobbs, at Colchester. There were about 100 of them, from two to four months old, not worth five shillings each for even fattening purposes, as they were very pot-bellied and of all shapes, with bandy legs, warped spines and all sorts of other deformities that one could mention. These bad points came, not from neglect, as they had the best of food and attention. It was solely from the result of too much in-and-in breeding. Aside from the above deformed, a few good ones were dropped now and then, which Mr. Hobbs sold for breeding purposes at from 10 to 20 guineas each; yet all these were soon used up. This shows how careful every one should be in undertaking too close breeding. In-and-in breeding may be practiced safely and advantageously to a certain extent and under certain circumstances; but when carried too far it may prove not only injurious, but even destructive to the lives of the over-closely-bred animals.

Mr. Hobbs, above mentioned, was a noted breeder, and at one time his pigs were highly popular. They were of a pure black color, and in shape much like the Small White Yorkshires of the present day, a fine specimen of which was represented in an engraving in a late RURAL. They were fine in all their points, matured early, fattened easily, and made tender, excellent side pork, but it was too fat for good hams and bacon. The males were excellent for crossing on a lean sort of common female swine, and these grades made good, thrifty porkers. A.

The Poultry Yard.

American Sebrights.

THESE beautiful bantams, referred to in the RURAL of April 19, originated, I am pretty confident, with Sir John Sebright (I think his first name was John), [Yes, M. P. for Hertfordshire.—EDS.]; at any rate he was an English knight. Many years ago several friends and myself kept these beautiful birds, and they bred as true as any other sort of our flocks. If they do not breed true now, I presume it must be in consequence of some out-cross of another kind of fowl which has been taken on them since coming to America. It is a great pity that this has been done, for they were not only among the handsomest of the poultry-yard, but also of the most hardy, thrifty and among the best layers, sitters and nurses. A. B A.

[The Sebright to which our correspondent alludes, as mentioned in Querist Department of above date, is not the old-time Sebright breed produced by Sir J. S. about 60 years ago, but, as stated, a recent mongrel American sort, which has been exhibited at several poultry shows. The former, here and elsewhere, still breed as true as when our friend and his friends kept them; but the latter do not and never did.—EDS.]

Industrial Implements.

The S. R. Nye Improved Bay State Rake.

This rake is manufactured by that trustworthy old firm, the Belcher & Taylor M'f'g Company, of Chicopee Falls, Mass., a sure guarantee that it is made of first-class material and in a thoroughly workman-like manner. It is an implement so strongly made in every part that the chances of its getting out of order are reduced to a minimum. The peculiar shape of the teeth prevents them from scratching the ground so that the gathered hay is unusually free from dust, and the position of those at the ends of the rake in advance of those in the center, prevents the hay from scattering—a feature of special advantage on a hill-side or

THE S. R. NYE IMPROVED BAY STATE RAKE.—FIG. 239.

gleaning The teeth, being held in their places by a guide, do not flop about, while as each acts independently of the others it can pass over an obstruction 20 inches high without affecting those alongside of it in the least, thus enabling it to rake uneven ground in a clean manner. Being dumped almost entirely by horse power, a foot pressure of only a couple of pounds is needed. We strongly advise all who may be in need of a rake the coming season to send to the above address for circulars describing this one more in detail and containing a number of testimonials speaking highly of its efficiency from various prominent farmers in different parts of the country. G. E. B.

MR. J. R. WHITTEMORE, Chicopee Falls, Mass., is the manufacturer of a rake with independent teeth so constructed that they do not catch up the dirt or old rubbish while raking up the hay in a cleanly and easy manner. His advertisement appears in this issue.

Miscellaneous.

"KNOWLEDGE, NOT GUESSES."

GEN. WM. H. NOBLE, BRIDGEPORT, CONN.

I HAVE just been shown the comments of H. S. in the RURAL of Jan. 23d on my Christmas article headed as above. Had his murder of logic and discolor of my sayings and moods been seen when first out, he would have won a straight reply. So far as personal to myself, what he says about my temper and purpose in writing is not deserving of notice. The great public of readers have no stake or interest in H. S. or "Gen. Noble," beyond the soundness of their facts and logic. But in behalf of right thinking and writing, and the courteous brotherhood becoming the garden and the farm, I invite notice of the facetious shams and unfairness before which H. S. postures himself as a literary athlete.

And first, H. S. says that I write in a "real state of mind," in "ill humor, or mad about something;" as if my moods had anything to do with my facts or logic! What help doth the world get to right methods in rural life out of facetious smartness over another's infirmity? But neither did I in that article, nor do I ever, vent the spleen, of which I have a good share aboard, through the columns of a rural journal. If I write at all, I write to help its work, and not to let out my ill-humor, or to make a spread of how much I (or anybody) do or do not know. H. S. will find it much easier to set up and ride down with literary lance shams about facts or temper, than to deal with their solid front and sound logic. No unfairness towards another, no parade of what you do or you do not know, will make up for the want of these.

H. S. next says that my charge against crude and thoughtless writing was aimed at your graceful and senseful corps. It's enough to say to this that I am not so big a fool as not to know sense and good English and sound logic, from anything that apes either.

H. S. then tries his hand at the reasoning art. The paint of linseed oil, advised to kill the coccus, killed both the coccus and my trees, H. S. says I have no right to grumble: that the killing was the logical result of the prescription given to cure. This is good news for quacks. H. S. can now take the head and cake on logic. When the doctor cures the disease by killing the patient it's all right! It's just the logical result!! Nobody is to blame!!! That will do, H. S. Go up to the head.

If such logic is not one of Wendell Phillips's "Lost Arts," it ought to be. In it the world's history has only two rivals of H S—the immortal Bunsby, whom Capt. Cuttle so worshipped in Dombey & Son, and the Heathen Chinee. The likeness of H. S. to Bunsby is rather in lucid profundity than in feature. But he is the very Dromio of the "Moon-eyed."

Hear the great Bunsby roll out his logic and opinions to Capt. Cuttle: "If so be he's dead, my opinion is he won't come back no more,—if so be as he's alive, my opinion is he will: do I say he will? No. Why not? Why not? because the bearing of this observation lies in the application on't. For why? which way? if so, why not? therefore!"

But the Heathen Chinee's invention of roast pig is a case in point, going, as the lawyers say, on all fours with H. S. The Flowery Land first tasted the toothsome viand of a roasted suckling when a litter was cooked in the flames of a burning dwelling. Directly John Chinaman saw the "logical result" as clearly as H. S. Roast pig and burning houses became chronic together. The method was rather allopathic, to be sure, a good deal of roast, for a very small pig. But in this the Heathen Chinee and H. S. are peculiar. "The bearing of this observation lies in the application on't." To cure the disease, kill the patient. Mr. Bunsby can now "step down and out." H. S. and the Heathen Chinee have the floor.

Just as wide of the mark, but in better taste, is H S.'s attack upon my text, "Knowledge, not Guesses." I say again, "not even well-thought-out opinions are wanted, unless backed by facts and logic." I put neither a brake nor embargo on any man's thinking or telling what he thinks, if he only backs it by the why he thinks. When H. S. says he thinks the English sparrow picks the corn-grub as well as the grain from his ears, and backs that opinion by the next year's freedom from the pest, he gives us a chance to judge about how rightly he thinks. We can tell about the matter just about as well as he. It becomes pretty plain that the English sparrow wants a deal of study on his grub work. Before H. S. has a right to say that he eats the grubs, we need more years and closer scan of where the grub goes to—into the sparrow's crop or into the ground.

Before H. S asks this *thought* of his to save the sparrow, and get him a better name, he should show us how much among the cornfields the sparrow roams; how many other worms and grubs he gobbles. Above all, a good place to see where the grub goes to, is in the sparrow's crop. That is where are found the tell-tales about bird work on insect, grub, or grain. Such looking at one fact, and guessing at a conclusion, sometimes called thinking, no more warrants an opinion than one swallow makes a Summer.

So I say to H. S., and all; study out your opinions, through facts and trial. There is need of careful search and test, to save the seeming facts from becoming a mental delusion and a snare of thought. It is only courageous patience that winnows the chaff from the grain of opinion. It is only the short-sighted guessers who hurry up to say: "I think," and "I think," "because I saw this and I saw that." It's just this sort of hurry which entails a lot of blunders, springing up into a ten-fold harvest of follies and failures. A blunder is just as much a crime in the garden or the farm as elsewhere.

Yes, tell us what you think, but in the same breath tell us why you think so. The history of human effort and reach of knowledge in every line of life, is filled with apt indorsement of my text. At the same time, I fully heed that forecast of intuition, which, in all we know and enjoy, has by methods of the brain, too rapid to trace, grasped the great truths and inventions which hold and move the modern world. The apple's fall, revealing to Sir Isaac the force that swings the universe, was but one of the lightning methods by which the airy visions of some intellects, over the great drift of facts, settle into solid knowledge, and "reason for the faith that is in us." The grand results of human effort all through the life of man on earth, are largely due to a lightning grasp of truth by methods whose "ways are past finding out." Steam's mighty sway and push of industries, the lightning's voice and light, the foretelling of the storm and the tidal currents of the air, the fire-fed iron horse and all his wondrous work for man were born of rapid "thought's pale forecast." With wings as of the morning light, by paths and methods without trail or span, intuitive thought has forecasted the grandest achievements in human life. Of such is the mental quality that lifts the generations to higher planes of what we know, and to surer standing ground. The world owes as much to this lightning process as to the Baconian methods It's true, the latter are a good deal safer for the average brain. But all along the stations of man's advance, at rare intervals, God has stamped on some one an intellectual or moral divinity. The thoughts of such are not guesses, or airy muslugs, or jumps from very small facts to very big conclusions. They are intuitions that speak by results. Let mortals of slower movement and shorter reach of thought, beware how they ape the eagle's flight. I am content to feel my way along the paths of knowledge, and to never tell what I think, till I have studied out the why.

BOOKS, CATALOGUES, ETC.

THE SOCIETY FOR THE PROMOTION OF AGRICULTURAL SCIENCE will hold its annual meeting at Cincinnati, on Tuesday, August 16, 1881, the day preceding the sessions of the American Association for the Advancement of Science. It is hoped that every member will endeavor to be present, or will send a paper to the Secretary to be read. The announcement of the hour and the place of meeting will be made at a later date. The following gentlemen have indicated to the Secretary their readiness to present essays at the coming meeting:—Professor S. W. Johnson: Patrick Barry; Professor W. J. Beal, subject, Testing Seeds; Professor J. Henry Comstock; Professor E. W. Hilgard; Professor R. C. Kedzie, subject, The

Ripening of Wheat; Professor A. J. Cook; J. J. Thomas; L. B. Arnold; E. Lewis Sturtevant, M. D. The members are earnestly requested to forward to the Secretary the titles of essays they are preparing to present, in order that such may be incorporated in a circular to follow this. The meetings for reading papers and discussing the same will be open to the public, and all persons interested in the promotion of scientific agriculture are earnestly invited to be present.

W. J. Beal, Lansing, Mich., President.
E. Lewis Sturtevant,
So. Framingham, Mass., Secretary.

Our thanks are due H. D. Woodford, of Auburn, N. Y., for a copy of the Premium List of the Central New York Fair, to be held at Auburn June 7, 8, 9 and 10, 1881.

RURAL BRIEFLETS.

Professor Blount would oblige us by stating whether the corn named after him was originally the Peabody Branching Corn. Mr. Waldo F. Brown, an excellent farmer, as we should judge from his writings, claims that they *are* the same.....

The question is whether glucose made from corn is as legitimate an article for sale and consumption as whisky, both being manufactured from corn. Two wrongs don't make one right. But as between the mountain and the mole-hill of evil, it is better to direct our energies towards whipping the giant and to deal with the comparatively innocent little fellow afterwards.....

We have raised several varieties of the Italian Rocca Onions. They are of unsurpassed flavor (aroma—or would bouquet be better?); the bulbs grow to a large size and are of the handsomest appearance. But these fine onions do not keep well.....

Of lettuce we may now sow in the open ground Golden Stonehead, Tennis Ball, Early Curled Simpson. For succession, American Gathering and Shotwell's Brown Head are best. We cannot understand why the Cos Lettuce is not more generally planted. We have raised it for several years in the open ground, and without tying the heads to blanch them as many do; the leaves are tender and crisp....

Of cabbages we may commend the Early Wakefield, Early York for earliest, Early Winningstadt and Fotler's Brunswick for second, Silver Leaf Drumhead, Large Late Drumhead and Large Flat Dutch for the main crop. Probably for family use the Drumhead Savoy is best. A few heads of red cabbage should not be forgotten. It is excellent for pickling, and its bright color makes it preferred to the white kinds.....

The Early Bassano Beet is as good as any for early Summer, and the Early Blood Turnip Beet for the main crop. We have never raised a beet that for its tenderness and sweetness we prized more highly than Vilmorin's White Sugar. It is, however, of small size, and not well suited to cultivation for market.....

There are no better greens than half-grown beet leaves. For this purpose it is well to sow a few rows thickly and to thin them out for greens as needed.....

We urge our friends of the West to plant Catalpa bignonioides speciosa for its quick growth, the durability of its wood, and its fine appearance as a shade or ornamental tree. It will endure 16 deg. below zero at least.....

We are very sorry to see that, through errors which have arisen from a confusion of names, Durra, Donra, Egyptian Corn, Rice Corn, etc., are advertised by some seedsmen as throwing up several stalks from one seed, which may be cut several times during the season. We have tried the different kinds named above and found that, as a rule, but one stalk grows from a seed, and that, like Indian Corn, when it is cut that is the end of its growth. Besides, the stalk is heavy and woody, and the leaves present, comparatively, a smaller extent of surface than those of Indian Corn.....

We learn from certain retailers that they are selling ten tubs of oleomargarine to one of dairy-made butter.....

What Others Say.

The Unwisdom of the Cotton Planters.—If the determination of the size of the cotton crop were left with one financial interest not more than four million bales would be raised next year, says the Macon Telegraph and Messenger. When the Dutch East India Company find they are raising too much Java coffee to command a good price, they have two ways of disposing of it. One is to lock up the excess and hold it for a short crop, and the other is to burn it in furnaces made for that purpose. They have no idea of raising coffee to lose money on it. But we people of the South have little practical idea of doing anything else. Cotton lint is many times more indispensable and valuable than coffee. It is far more exclusively a product of one country. The Southern people could just as easily get 20 cents a pound as 10 cents, and it would make us all happy and comfortable. We could live liberally and pay our debts. But simply because all of us are struggling to swell the crop to the largest possible dimensions, under the silly idea that we can make more money out of it, we ruin ourselves and toil from year's end to year's end without accumulating a cent of profit.

Another Wonderful Butter Cow.—An unpretentious looking little cow was led through this city yesterday, en route to the farm of Mr. Erastus Corning, says the Albany N. Y. Argus. The animal was purchased by Mr. Corning, of Mr. Burns, at Middletown, Herkimer County, whence she came to this city by express. She is of the Jersey breed, is five years old, and bears the handsome name of "Gold Thread." It is claimed that 23 per cent. of her milk is cream, and that she can produce 18 pounds of butter per week. It is understood that she was purchased for Mr. Corning's private use, and that the sum paid for her was $1,500.

In systematic breeding we seek to have control of the two parents, says E. L. Sturtevant in the N. Y. Tribune. In the ox tribe, we seek to exercise selection upon the cow and the bull, by seeking those animals which come nearest to the ideal that we have in our mind, and also animals which we know are descended from parents possessing the qualities that we are after. Let this same idea be exercised upon plants, and we may have seed breeding.

The N. Y. Sun says, speaking of trichinæ and trichinosis, that cleanliness in the hog pen and yard is the first step, and the second is to avoid allowing hogs and pigs to catch or eat rats or mice, which are really the most prolific disseminators of these dangerous parasites. It is a very common practice with many farmers to throw all sorts of offal and filth into their hog pens, and if their boys happen to kill or wound a rat, he goes in among the rest, thereby endangering the life of every person who may eat pork raised on that farm. [We wonder if the Chinese suffer from trichinosis more than other people?—Eds.]

German country roads are to a great extent kept in repair, according to Dr. Englehardt, by sale of the product of fruit trees and grass grown at the roadside. Sections are kept in repair by officials who accept the proceeds of the fruits and hay for a large proportion of their services.

Mr. Stewart says in the N. Y. Times that the potato contains 75 per cent. of water, two per cent. of nitrogenous matters or flesh-forming substances, 21 per cent. of carbohydrates, chiefly starch and digestible cellulose; 0 3 per cent. of fat, and the ash is rich in potash, of which it contains 59 per cent. with 19 per cent. of phosphoric acid. . . . . This shows conclusively that the potato is a food that should be productive of a strong, sound, animal existence. The large proportion of carbohydrates is peculiarly adapted for the support of a laboring man whose exertions stimulate the functions of the lungs excessively, and require a corresponding supply of carbonaceous matter to support the quickened respiration and the increased animal heat. . . . . It requires a deeply plowed, mellow soil, in which the roots may spread and feed plentifully, for this crop is a hearty feeder. Well-rotted manure, a well-turned sod, wood-ashes, superphosphate of lime, with a light mixture of guano or poultry manure and compost of swamp muck, lime, salt, and well-decomposed hog or cow manure, are always beneficial. . . . . .

In the putting up and shipment of goods the Grocer gives these general directions:—Send only good articles. The freight and other expenses eat up poor goods. Put up everything in good order. An attractive look secures examination, and often makes a sale where a dirty package or a slovenly appearance fails. Pack securely, so that the motion will not allow the contents to change about. Use plenty of clean, dry, fine-cut straw with eggs. Mark plainly with paint—a stencil plate is best—and note contents on the box or barrel, stating the amount also. Secure for yourself a reputation for fine goods, put up in the best shape, so that your mark is in demand.

We find the following in the London Agricultural Gazette:—"The Americans have gained a market for meat on this side of the Atlantic, and they will no doubt keep it; they expect to be able to supply 'a hundred millions' worth' of meat for exportation, and in time they may do it. . . . . The Americans themselves anticipate an enlarged continental trade in meat, and the ablest European statisticians have expressed the opinion that if all goes well they will not be disappointed. . . . . There are thousands of herds which only require the introduction of 'pure-bred' and 'first-class' bulls of the respective breeds which may suit the different neighborhoods, to increase their value most materially. . . . . An eminent Shorthorn auctioneer has declared that a bull is half a herd."

And again, referring to the sale in England of oleomargarine, it says:—"The substances thus sold under a misleading designation are not in themselves unwholesome, and Government will do nothing to check their importation. The essential difference between butterine and good butter lies in the difference of flavor. Let only good butter be made, and butterine will never injuriously affect the price of English dairy produce."

The Agricultural Gazette says that editors in search of copy are apt to be indiscreet. . . . . Lord Brougham said—when he heard that Lord Campbell, a rival Lord Chancellor, was writing his life—such publications add "a new sting to death." . . . . . Mr. Crawford, of Ohio, says that it is easier to plant a new bed of strawberries than to clean out an old one. . . . . The people who never furnish any chips to help keep it warm are the most vociferous in calling this a cold world. . . . . .

Everywhere.

RURAL SPECIAL REPORTS.

Fla., Starke, Bradford Co., April 14.—I suppose our Winter has been like Summer compared with yours, yet we have had the coldest Winter and Spring known here for many years. All through March we had very cold winds with occasional frosts, and on April 2 we had ice as thick as window glass, doing a good deal of damage as far south as Enterprise. It continued very cool until the sixth when it became so very warm we thought Summer had nearly come, but find we were mistaken for it is now cool enough to make a good warm fire comfortable to sit by. Notwithstanding the cold weather our yard is full of flowers—roses, honeysuckles, verbenas, pansies, wistarias, jessamines, phloxes. The last has been in bloom all Winter, is self-sown in endless variety and so thick all over the yard, in the paths and everywhere, one can't help walking on it. It is like a weed but so beautiful we just let it grow. In a few weeks the hot sun will burn it up and the most of it will disappear until next Fall. We do not think the December freeze hurt our orange trees at all, but the cold winds and frost this Spring have injured the fruit to a great extent. Our guavas, lemons, limes and citrons of commerce were killed to the ground. Eucalyptus trees were entirely killed. Tea plants and olives were not hurt. Our raisin grapes came through the Winter in good condition. They are two years old from cuttings, and some of them are fruiting. The La Conte Pear trees are doing finely here. Peaches, plums and quinces are well loaded with fruit. Everybody has had to plant cotton the second time on account of frost. Early vegetable raisers will make no fortunes this year; everything grows so slow; the nights are too cold. We have fodder corn that has been growing two months and it is only six inches high now; last year it was fit to eat at this time. I. S.

Iowa., Emerson, Mills Co., April 18.—Our Spring is backward, but we have had a few days of fine weather. The frost is nearly out of the ground, and if fine weather continues we shall seed some this week. Planting will be late for this section, but I think the land will be in fine condition. R. P.

N. C., Henderson, Granville Co., April 16.—Now that the Spring (although a cold one) is opened, I find that about 1,000 out of the 7,000 of my budded peach trees are as full as possible of healthy blossoms—all were in a corner slightly protected from the west by woods. All about this region, wherever peaches were protected by pine groves at the west, they are entirely uninjured; where no such protection existed all is a perfect blank as to blossom, but the wood of the trees is not hurt. One large orchard about 30 miles from here, occupying about 400 acres, is entirely sound and a mass of blossom, as I heard this morning; so, after all, North Carolina may furnish perhaps at least half a crop for the market. A week or ten days ago, for several days, such severe cold westerly winds, with thick ice at night, visited us, that, but for the excessive dryness then prevailing, there would have been a total destruction of the peach crop, at least, and probably also of pears, cherries, plums, etc., which, like apples and grapes, promised the most abundant crop ever known about here. Our season, however, will be all of four weeks later than last year. Strawberries and Fall wheat are much hurt in places, being so exposed to the unprecedented cold at times without any covering of snow, of which during the whole Winter we have had none worth speaking about. Only once for a short time have we had ice of sufficient thickness for sliding or skating, and only at short intervals was plowing suspended, and rarely, if ever, has this been the case after mid-day. So we feel that we are not located in the worst place in the United States, especially when reading the heart-rending news from the West, etc. Still no person living ever saw such a Winter here before. H. S.

N. C., Brookston, Warren Co., April 12.—We have had some pretty severe weather for April—temperature at sun-rise on the 5th, 27 deg. The peaches that escaped death in Winter are "done for" now. M. B. P.

N. Y., Sharon Center, Schoharie Co., April 23.—After five months of severe Winter weather Spring is here at last. We had freezing nights until the 20th inst. No farm work of any moment has been done as yet. Grass and grain are looking fine. We need a good rain to clean the snow off. We have hitherto had no rain or southerly winds as usual to liquify it, and we still have a good supply of it. Wages for farm hands are from $12@18 per month and board. Hay is worth $13@15 It has been $20. Cows are selling for $30@35; oxen are in demand at $125@150; butter 20@24 cents; eggs, 15 cents; potatoes, 50 cents and scarce; apples $1 a barrel. Incog.

Ohio, Napoleon, Henry Co., April 20.—The season is at least three weeks later than usual. Leaves have not yet been put forth by any tree or shrub; even the catkins have not yet appeared on the willows. No one has started the plow, and few have even begun gardening operations. Last year at this time oats were sown and all were busy plowing for corn. This is one of the most fertile parts of the State. There is still plenty of room for settlers. Potatoes are worth 80c.; apples, 40c.; butter, 18c.; eggs, 10c; fat hogs, 5c. per lb., live; horses of all descriptions are high. V. J. E.

Ohio, Camden, Preble Co., April 22nd.—We have had a very late Spring and but little plowing has been done here yet. This week has been fine and there has been a considerable area of oats sown since it turned warm and dry. Grass and wheat are starting nicely. Wheat in this locality looks quite well. A friend of mine has just returned from Fountain County, Ind., about 150 miles west of this, and he tells me the prospect for wheat is very poor. He passed through Richmond, Indianapolis, and Crawfordville. Wm. M.

Ohio, Aurora Sta., Portage Co., April 19.—We feel good in Ohio. The last of the snow went to-day, and the sun came out warm and Spring-like and the ground begins to take a greenish hue. Farmers have just commenced plowing for the Spring crops. In addition to this, I carried my milk for the first time this season to the creamery, and for it received 10 cents per 10 pounds. J. G.

Pa., Light Street, Columbia Co., April 18. The wheat looks as if it would make about 75 per cent. of a full crop. The Winter has been the coldest known here for many years. On the 2d of February the mercury was 26 deg. below zero. But little plowing has been done yet for oats. Bees have wintered badly; two-thirds of those in this county are dead. I lost about half of my colonies. H. H. B.

Pa., Winterburn, Clearfield Co., April 18.—Spring is opening slowly, there being plenty of snow to be seen yet. The Winter here was the severest ever known. We had good sleighing during four months. The dry Winter has made fodder scarce. Hay is worth $20, and scarce at these figures. Where wheat has emerged from the snow it looks well. H. F. S.

Texas, Waco, McLennan Co., April 14th.—I am more than thankful for the "Free Seeds" the Rural sent us this Spring. I have planted them, and they have all germinated well. I was surprised to see the asparagus seeds coming up so soon, as I was under the impression it took a long time for them to germinate. I have not a good stand of the Branching Sorghum, but this may be all the better, as it will have more room to branch. A "norther" came down upon us on the 12th and closed up last night with a severe frost, that has played sad havoc with our fruit and vegetables. Ice was formed on still water, and all the fruit and garden vegetables are destroyed. Corn and potatoes are badly damaged; the new growth of grapes killed; peaches and plums as large as acorns are black and wilted. This is a severe blow to us, as we had hoped to have a crop of fruit—the first in three years. Last year our destructive freeze occurred on March 13, just one month earlier. Our season is later than usual, but vegetables, etc., seem to be ahead of the season. Very little, if any, cotton is up yet, which is fortunate for the planter, as it is a very tender plant. The ground is dry on top, or the corn and potatoes would have been entirely destroyed; as it is, they are only partially so. Some of the seeds of the "Iris Lævigata," received from the Rural, and planted on March 31, last year, are just coming up. I left the boxes undisturbed sunk in the ground, and I hope yet to be rewarded for my patience, by having some of the magnolias to come up. I am sorry to see so much opposition expressed against our worthy Commissioner of Agriculture, Gen. Le. Duc.

I have watched his course pretty closely for the last two years, and from my stand-point I can see no reason why a change should be desired. 'Tis true, there have been many things done by Gen. Le Duc, that I would not have done, or perhaps would have done differently; but it is a mooted question whether either would have been an improvement on the present administration of the Department. I hope the President will not be induced to make a change, merely to gratify the aspiration of political office-seekers, and especially of the individual who thinks himself so eminently fitted for the position. A passion for flowers has taken possession of many of our people in the last few years, and ere long we shall be able to vie with Florida for the name of "The Land of Flowers." The yards of the residents along the streets of Waco are a perfect wealth of bloom, and their fragrance perfumes the very air we breathe in passing by. My yard is now a perfect blaze of blooming flowers of various kinds, from the rose, the "Queen of Flowers" to the modest mignonette. I have the handsomest phloxes I have ever seen anywhere, and the greatest variety of them. I think I have a novelty in one plant that bears two separate and distinct kinds of bloom. One is a deep purple, with a dark center, and the other is white with light purple center; and they do not change to these colors, but open up as such. I have also petunias that have a solid deep purple bloom, and white-and-pink stripes on the same plant. Are these things common? [Quite. Eds.] I received a lot of roses a few weeks ago from Louisville, Ky., and among them was the "Countess of Oxford" bearing a full bloom, packed in the box with a large lot of others. I planted it in a pot, and it never lost a leaf, and the bloom remained fresh and fragrant for eight days. This rose attracted a great deal of attention, and its safe arrival must be regarded as a great and noteworthy feat in the packing and shipping of plants; and it goes to show that when plants are packed by parties who know the wants of the different varieties there will be no losses in plants received from abroad. The fact is, I received at the same time about 100 roses in a box, and have not lost a single one, and but few of them dropped their leaves. I attribute it to the manner of packing, but it may have been owing to the vigor of the plants. We had our first mess of strawberries a few days ago, but I fear the freeze last night will put an end to that luxury. A. S. S.

TEXAS, Dallas Co., April 16.—We are getting fearfully dry down here. No rain since the 18th of March. We are needing a shower very much at this time; more rain and less frost is what we want. On the 14th inst. we had a hard frost and the fruit was all killed, even to grapes which, being out, were killed. Corn, too, was killed to the ground and some cotton was up and got bitten. My Washington Oats were up and looking very well, about half the plot was killed. None of my other RURAL seeds were up. I think the White Elephant is too late for this climate; none but early potatoes will do any good here. Our prospects are rather gloomy at this time for a crop of any kind. N. H.

TEXAS, Dayton, Liberty Co., April 14.—Spring is very backward, and yet most of the corn planting was done ten days ago, while a few are even planting cotton. One of my RURAL Distribution magnolias has come up after lying in the ground a year. It is now about six inches high. In the same plot is an ash that has grown wonderfully, and is now in full leaf. Last season it grew seven feet. I fancy it must have got mixed up in your seeds somehow, as there are no ash trees within miles of my residence. G. G.

VA., Wythe Co., April 18.—High wind still. We never had so much cold wind in April. The growth of grass is checked and cattle owners are anxious about feed. We are still feeding in stanchions on cut fodder. Vegetation is backward, and there has been but little weather suitable for plowing. Corn-planting will be much delayed. However, we have improved every moment and have much plowing done, potatoes planted, fences made, and orchards pruned. Peas, onions and radishes are growing, hyacinths, narcissuses, and Crown-Imperials blooming, cherry, lilac and spirea buds swelling, and, altogether, there are some signs that Spring may come in May. We hope to derive one blessing, from this severity—fruit. It often blooms too soon and is killed. M. L. S.

WEST VA., Short Creek, Brook Co., April 20.—In this county there are some very fine farms and very fertile tracts. It abounds in bituminous coal and limestone, and the latter being very near the surface seems to impart to it some of its fertilizing properties. We have a fine growth of grass always and never miss a splendid corn crop, three corn crops in succession yielding not less than 60 bushels to the acre and often 100. Farms are worth $100 per acre. Our great staple product is wool—Merino of a fine quality. Farmers are backward with their work owing to the coldness of the Spring. Never in the memory of the "oldest inhabitant" have we had such a severe Winter. Wheat looks exceedingly well; peaches are entirely killed. What the apples will be time will tell. P. D.

WIS., Bay View, Milwaukee Co., April 18.—We have had a very severe Winter, with much snow. For the past few days the snow has been rapidly melting. J. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

The 12-Spotted Diabrotica.

J. A. S., Van Wert, Ohio, has been growing cucumbers on a large scale for pickles, and last year they were for the first time infested by a bug resembling the squash or cucumber bug, except that this had a longer body and was speckled all over with small, glossy, yellow, gray and dark spots. It began operations on the base of the vine, eating holes all through the stock. Shortly afterwards the vines wilted and instantly died as if cut clean off. These new pests are now ten times worse than the old sorts, for the remedies that would end the ravages of the latter haven't a bit of effect on the former, and our friend asks what is the name of the persistent newcomers, and whether there is any remedy for them.

ANS.—While it is impossible to say positively, yet we think from the description that the "bug" is the 12 Spotted Diabrotica (Diabrotica 12 punctata). It is more or less abundant every year in gardens and has been found imbedded in the rinds of cucumbers, squashes and melons, though we do not know of any instance where it has before been found boring into the stems of cucumber vines. If the cucumbers are raised on a large scale in the field it is probable that planting in another field at some distance from the one infested last year, would be a partial remedy, as the beetles pass the Winter in the ground. As soot is very distasteful to all insects, it is perhaps as good as anything that can be applied to prevent the ravages of these beetles. A little mixed with the soil with which the seeds are covered will serve to keep grubs and worms away from the stems and roots just below the surface, while a small handful thrown on the hills below the leaves, in such a way as to be close to the stems, will probably keep them from being injured. If this be done in the morning while the dew is on, or the plants be sprinkled so that the soot may stick to them, it may be more effectual.

Late-Blooming Peaches and Apples.

O. C. D., Wellville, Va., asks what varities of peaches and apples blossom late so as to escape the late frosts, which are the chief causes of injury in that section.

ANS.—Among peaches the difference in the season of blooming is very slight—at the most not exceeding three or four days. The very early varieties, such as Hale's Early and those of that type, so far as we have observed, usually bloom a little in advance of the average season. It may even be a matter of doubt whether nearly or quite the entire difference of time may not be more properly chargeable to difference in soils, vigor of trees, exposure or aspect, than to any innate difference of varieties. So far as apples are concerned, the great mass of varieties, so far as we have had opportunity for observation, differ little, if any, more than peaches, and seem to vary in season of bloom mainly from similar causes. Still, among apples there are a few varieties, such as Rawle's Janet and Northern Spy, that serve as marked exceptions, usually opening their blossoms a week or ten days later than others. The two named, however, are the only well-known sorts that show such tardiness in a marked degree, so far as we are aware, although there doubtless are others possessing this peculiarity, but only locally known. The planter, in the locality indicated, as well as all orchardists, except, perhaps, at the extreme north, will be likely to find it one of the most safe and ready means of preventing too early blooming, to choose a northerly or northeasterly aspect for the orchard. This is found to be desirable even as far north as the latitude of Michigan.

Feeding Twin Lambs.

A. M. W., Rome, N. Y., asks what extra feed should be given lambs when the ewe has had twins and hasn't milk enough to support both in good condition. He has always fed cows' milk, but the lambs have generally got dull and died when a few days or a week old.

ANS.—Lambs are very easily over-fed when cows' milk is given to them and the milk is not a wholesome food for them. When a ewe has twins and has not milk enough for them, it is better to feed the ewe extra food to increase the milk than to give the lamb cows' milk. A quart of oat-meal gruel well boiled and sweetened with a little molasses, and a handful of bran, given daily, will generally be sufficient to enable the ewe to rear the extra lamb. If it is necessary to feed the lamb it is to be considered, first, whether it is better to have two poor lambs or one good one, by sacrificing one of them; and, second, whether one cannot be taken away and raised by hand, leaving one with the ewe. The writer has raised good lambs on cows' milk given fresh and warm from the cow out of a common one-quart kerosene oil-can with a long spout, with a piece of sponge wrapped around with a piece of cotton rag attached to it, to make a nipple. In feeding milk it should be taken slowly and by suction, otherwise it loads the stomach up too fast.

Merino Buckwheat.

D. G. S., Middletown, N. Y., sends us a sample of Merino Buckwheat and inquires whether it is of any particular value. It has, he says, a yellow blossom, is sown in Spring about the same time as oats, its flour makes a yellow batter, like that of corn-meal, and it is claimed that it does not produce itching like ordinary buckwheat.

ANS.—The seed sent is known as Merino Buckwheat, which goes under the name of India Wheat in parts of New England and New York. It takes the name of Merino Buckwheat probably from the wrinkled appearance of the grain. The grain is small, pyramidal in shape and has a suture on one side; the skin is thick and wrinkled; the plant is a constant bloomer and bears blossoms and seed, ripe and unripe, until killed by the frost. It yields flour that is coarse in quality and deficient in quantity and is altogether inferior to any other kind of buckwheat. It yields well in grain and serves a good purpose to grind with rye and corn for horse feed. It is equally heating as a food, when used constantly, as other buckwheats, but the itching complained of is doubtless due as much to the fat pork eaten with the cakes as to the meal. Buckwheat is not a good food for constant use, unless plenty of vegetables and pickles are also made a portion of the aliment. It is also better to use molasses or honey with it than fat pork.

Dressing for Lawn.

S. G., Goochland Co., Va., says:—"All agricultural books and papers advise the use of potash on grass lands. Supposing I cannot get any wood ashes, will a solution of concentrated lye, applied with a watering-pot, be of any good to a small lawn, or will it hurt? How much water should I use for one box of lye so as not to hurt the lawn?"

ANS.—This would be a practicable method of applying potash, but costly, excepting in a small way; only the potash lye should be used, and a pound box would be sufficient for two barrels of water. If you can procure guano from any of the grocery stores, that would be preferable. Potash alone is not sufficient for grass; nitrogen is even more necessary than potash. An excellent dressing for a lawn of a few square rods would be:—two pounds of fine bone, two pounds of Peruvian guano, two pounds of gypsum, and a pailful of fine, rich earth, well mixed, for each square rod.

Remedies for Girdled Fruit Trees.

J. S., Bay View, Wis., has an orchard of some 200 trees, some of which have been barked during the past season clear around for a space of from four to twenty-four inches and he asks, 1, whether anything can be done to save them; 2, if this is impossible will it be best to dig them out and plant others or cut them close to the ground and graft on to the stump.

ANS.—With regard to fruit trees girdled completely by field mice, in Winter, Downing says that all that is necessary to save them is, as soon as the sap rises vigorously in the Spring, to apply a new piece of bark taken from a branch of proper size, tying it firmly and drawing up the earth so as to cover the wound completely, the gnawed edges of the bark having been previously cut evenly down so that the pieces of applied bark will fit properly. When the tree is too large to apply an entire ring, separate pieces carefully fitted, will answer. It is well to reduce the top somewhat by pruning, that it may not make too large a demand on the roots for food. Another practice, which the same authority thinks more easily applicable, is to take several large grafts or strong twigs of last year's growth, and after splitting them in halves, pare each end down to a thin edge and insert them underneath the bark of the tree just above and below the wound. Tie the whole firmly with strong bass matting and draw up the earth to cover the place and keep out the air. In the RURAL of April 23 a correspondent says that an application of clay on the denuded part of the tree will cause the bark to grow again without a scar. According to our own experience, unless operated upon by an expert, those trees which are wholly girdled had better be dug up; those which are not should have moss or cow manure or something of the kind bound about the injured parts to retain moisture and protect against the air and sun. The cause of the injury is not stated. Tying laths about the trees or washing the stems for a foot or so above the ground with whale-oil or carbolic soap will repel rabbits.

Miscellaneous.

J. C., Valley Falls, Kan., asks, 1, whether there is any difference between Hungarian and Millet Grass; 2, is millet in any way injurious to horses given in reasonable quantities.

ANS.—1. Millet grass is botanically Millium effusum and is of no value for cultivation, so far as known. The Hungarian Grass mentioned we presume to be Panicum Germanicum and, according to analysis, it is one of the most nutritive forage plants in cultivation, and is all the while gaining friends. The grain is good for cattle or fowls. It requires about 80 days to mature. One bushel of seed to the acre is sufficient. The land should be pulverized and the seed harrowed in. 2. The seeds of all the millets are usually considered dangerous for horses and often for cattle also, probably because the animals are apt to swallow so much of the fine seeds without crushing them that they do not digest well. But if ground and fed judiciously they are doubtless wholesome food for all sorts of stock.

G. K., Litchfield, Mich., asks, 1, which is the better—felt or asbestos roofing, and where can the better sort be procured and at what price.

ANS.—1. The asbestos roofing we consider the better sort, as it is just as good a roof as the other for all ordinary purposes besides being a better protection against fire. It consists of strong canvas combined with asbestos-coated felt and manilla lining, rendered water-proof and compressed into a compact, flexible sheet resembling leather. It is furnished ready for use in rolls 65 feet long and 38½ inches wide, containing 200 square feet, with allowance for 1½ inch laps, weighing 60 pounds per 100 square feet. The manufacturers advise that it should be protected with asbestos roof-coating and what is called white fire-proof coating. The cost of the roof and the two coatings is $4 25 per 100 square feet. Sold by J. W. Johns, 87 Maiden Lane, this city.

J. E. C., Wichita, Kan., asks for some other way of destroying the green aphides besides hand-killing. Smoking them with tobacco has killed the plants while the pests hid in the earth, and after fumigation was over came out safe and lively—would sulphur or red or black pepper be useful against them.

ANS.—That they "have the start" is the trouble. Nothing is better than smoking. Smoke them oftener and less powerfully. We should not advise sulphur. Use tobacco tea for the soil.

B. F. H., Seguin, Texas, asks whether sulphur placed in the drill with vegetable or other seeds, or plowed under before these are planted, would be of any use in preventing the depredations of the "grub worm," and whether it would injure vegetation.

ANS.—We have tried sulphur for this purpose without any effect. We do not think it would prove injurious to vegetation.

M. M., Grundy Centre, Ia., asks, 1, whether the Hungarian Mulberry is a desirable tree to plant extensively and whether it would be hardy in that climate; 2, is the European Larch hardy there.

ANS.—1. We don't know anything about the tree. 2. Yes—quite.

S. D. R., Newfane, N. Y., asks, 1, where can he get a good subsoil plow to be used in preparing farm land for small fruit raising and other garden purposes; 2, is there any garden hand seed-drill with fertilizer attachment.

ANS.—1, R. H. Allen & Co., 191 Water St., New York City. 2. We do not know of any.

J. L., Oskaloosa, Ia., asks where tare seed can be obtained.

ANS.—We find them in several of the catalogues we have noticed. Try D. M. Ferry & Co., of Detroit. Price four dollars per bushel—25 cents per quart. Hiram Sibley & Co., of Chicago, should have this seed.

J. C. M., South Jefferson, N. Y., wants the address of a breeder of thoroughbred Chester White hogs.

ANS.—We do not know the address of any breeder of these hogs in N. Y. State. Thomas Wood, Doe Run, Pa., however, is an old breeder of them.

C. B. E., Reynale's Basin, N. Y., asks where can information be obtained about the United States lands that are for sale or settlement.

ANS.—If anywhere, from the United States Land Commissioner's Office, Washington, D. C.

H. M. D., Camden, Del., asks where can he obtain a machine for making bricks.

ANS.—Address J. W. Penfield, Willoughby, Ohio.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, APRIL 23th.

B. F. H.—J. A. H.—J. P. B—S. E. T.—C. C. G., thanks for the cactus and seeds.—D. H. H., will attend.—N. H.—J. S.—A. C. W.—A. S. S., thanks.—E. L. B., we do not sell seeds or plants.—H. S.—G. B., the plan is easily tried.—P. D.—R. P.—H. H. B.—J. C.—A. F., please. We received no card—or it was mislaid.—L. W. G., thanks.—S. R. M.—W. W. T.—D. E. M.—W. S. B.—B. A. W.—B. R.—Mrs. A. W.—A. McM.—Miss E. S.—C. P.—E. C.—Mrs. N. G.—Mrs. A. G.—R. L. M.—H. C. B.—G. H. P.—A. G. W.—F. E. L.—G. H. F.—D. G. M.—L. G. M.—R. D. B.—W. M.—E. W. S.—W. S. M.—H. R. P.—C. H. B., Jr.—S. B. P.—T. W. H., Bermuda, thanks for seed.—F. de S. M.—E. W. S.—P. B. M.—M. W.—F.—A. L. C.—B.—Subscriber.—B. F. P.—V. J. E., thanks.—J. G., thanks.—F. B. T.—J. V. N. G.

THE
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ELBERT S. CARMAN.

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FOREST FIRES.—A dry Spring, like this and the last, seems pretty certain to cause disastrous forest fires. About a twelvemonth ago a vast amount of loss in New Jersey and Pennsylvania was due to this cause, and during the past week destructive fires have already been raging in both States. The Bureau of Forestry estimates that as much timber is annually wasted by such fires throughout the country as is cut for all useful purposes—an estimate that can hardly be thought exaggerated on considering the great extent of some of the conflagrations in unsettled regions where dense, virgin forests afford ample fuel. In the old-settled States, at the recent rate of denudation, it will not take many years to clear the country east of the Alleghanies of forest trees. Cannot some means be devised, at least in the thickly settled States, for preventing or checking such disasters? If the underbrush is kept down and the timber kept open enough to prevent the accumulation of dry leaves, fires cannot travel far, so that the clearing of our forests seems a safeguard.

WHY not? We certainly strongly advocate the measure. In these days, when every dairy product is liable to be adulterated by dishonest producers or dealers, every honorable preventive of such an abuse shall receive from us a hearty support. If the honest manufacturer finds it to his profit to obtain a trade-mark which shall distinguish his goods from rivals of an inferior make, why should not the honest dairyman, as well as the honest manager of a creamery or cheese factory, find a like practice proportionately profitable? We are therefore decidedly in favor of a bill now before the Legislature of this State the object of which is to enable any dairyman to assume for his goods a trade-mark which shall be distinctive and which no one will have a right to erase or the liberty of imitating without incurring legal penalty—the privilege of taking such a mark to be confined to full-milk and genuine dairy goods. The honest dairymen of every State in the Union might profit by such a measure.

LAST week we mentioned the project of the "Freedmen's Oklahoma Association," of St. Louis, to settle 10,000 freedmen in Oklahoma with a promised grant of 160 acres to each adult settler. A telegram from Washington announced last Thursday that the Commissioner of the General Land Office had pronounced the project illegal—a decision about which there could be no reasonable doubt from the start. J. Milton Turner, Ex-Minister to Liberia, the head of the enterprise, might easily be engaged in a more reputable business than this attempt to illegally intrude an ignorant crowd of his race, without business training or capital, into a wild waste where poverty and disaster would certainly await them, even if they succeeded in evading or overcoming the United States forces that must bar their way. When Captain Payne, a few months ago, attempted to start an "Oklahoma boom," we strongly reprobated the projected occupancy of the Indian Territory, and we are not a whit more tolerant of misconduct in a colored "man and brother" than in a white man. The Government prevented the intended outrage by the former, and there is little fear of its intention and ability to prevent that by the latter.

FORTY POUNDS OF BUTTER A WEEK FROM ONE COW are reported to be sold by a petty farmer who owns only a single bovine near Elgin, Illinois. Jersey Belle of Scituate is said to have given 705 pounds of butter a year, and Eurotas, 778 pounds in eleven months and six days, while Gold Thread is modestly credited with 18 pounds a week, but what are these reported yields to that of this nameless Western marvel! Forty pounds of butter a week from a single cow! Great Milky Way!! It is also reported, however, that this "owner of one cow" buys butterine at the rate of about forty pounds a week, and, judging from the alleged practices of some of his neighbors, it is more than suspected that his large weekly sales of butter are connected, otherwise than through the cow, with his large weekly purchases of butterine. Indeed, it is currently reported East and West, and in the intermediate country, too, that "honest," "simple" farmers are among the best customers of the manufacturers of butterine and similar concoctions. Of course, the number of rural rogues who palm off such stuff on their customers as genuine butter must be comparatively small, but, inasmuch as they are dishonestly injuring their own class and calling, every legal penalty should be more stringently enforced against them than against other rascally dealers in bogus dairy products. The Green Mountain State is not the only one in which the cat-o'-nine-tails should make intimate acquaintance with the bare backs of such rascals.

A NEW DANGER TO OUR CATTLE.

A CABLEGRAM from Liverpool, on April 28, announces that foot-and-mouth disease has just been discovered among the cattle landed at Birkenhead from the British steamer, Lake Manitoba, which left Portland, Maine, on April 16th and arrived in the Mersey on April 26th. As this disease, owing to its extremely contagious nature, is more dreaded than any other by English farmers, stringent precautions, we are needlessly told, were at once taken to prevent it from spreading. During the last six months we have heard of a couple of cases in which this disastrous disease was supposed to have made its appearance among our native cattle; but in each instance investigation decided that the report was unfounded and, a short time back, Professor Law, our best veterinary authority, wrote a lengthy article proving that no well authenicated case had ever been found here. A few months ago we announced the arrival at this port of a herd of infected Jerseys which were quarantined on the discovery of this disease among them. Have other infected animals brought from the United Kingdom or the Continent, been allowed to pass without having been subjected to the detention authorized by law? We have had occasion, more than once, to censure the carelessness shown in such matters, and if the disease is in reality among our herds, its presence there *must* be due to this carelessness. But is the disease here? Mindful of the nature of the evidence on which the existence of pleuro-pneumonia among imported American cattle was announced at Liverpool two years ago, and also of the eagerness of the British agricultural interest to discover some pretext for the enforcement of a more stringent embargo on importations of live cattle from this country, we are not prepared to accept the announcement of the Birkenhead veterinarians as conclusive proof of the nature of the malady discovered in the shipment by the Lake Manitoba. Should their diagnosis prove correct, however, and should the disease have really established a foothold among our herds, it is not improbable that a vigorous agitation will be promptly started across the Atlantic looking to the entire exclusion of importations of live cattle from this country. Considerable as would be the consequent injury to our cattle interests, it would be a mere trifle in comparison with the loss from the spread of the disease among the vast herds throughout the country.

SORGHUM.

WITH regard to the several kinds of sorghum illustrated in our pages this week, little can be said as to their relative value for the production of sugar and sirup in the Middle and Northern States. The sorgho industry has not yet progressed far enough. Experiments are needed. Though none may prove better than the well-known "Minnesota Early Amber" or the "Orange" cane, yet further crosses may show that there is a wide margin for further improvement. The relationship of these canes to what is variously known as Dhouro, Durra, Doura, Guinea Corn, Jovaree (in India), Nagar (in China), Chicken Corn, Rice Corn, Egyptian Rice, etc., is very close. That illustrated—on page 302—with a drooping panicle, is evidently a variety of Sorghum cernuum which itself is probably a variety of S. vulgare. The spreading, compact, large or small, upright or drooping forms of the heads, as represented, are not sufficiently distinctive to entitle them to be considered distinct varieties, much less species, since we have seen in our own plants, raised from the seeds of the same head, differences approaching to those which appear in the engravings. We may therefore presume that this common sorghum varies the same as Indian corn varies or perhaps even to a greater extent. The different sorts also vary greatly in saccharine properties. Most kinds sent up but one stalk from a seed, though it often branches, developing several seed heads differing in size from the smallest of those illustrated to a foot or more in length and weighing two pounds. Heads of this weight are not unusual in California, a specimen of which lies beside us, sent to this office by Mr. Saunders of that State.

The saccharine properties of the variety which we have called the Rural Branching Sorghum are not ascertained. The surprising amount of stalks and leaves produced from a single seed would, however, give it the preference over all other tried kinds even though less rich in sugar; while for ensilaging we know of no other forage plant that promises to be of more value since in this climate it may be cut twice and thus produce a heavier yield than any of which Indian Corn is capable. That, also, it will luxuriate on poor soils; that the stalks are rarely (never, we should say) broken or lodged by the wind, and that they are sweeter, less woody, more succulent than those of maize are further items to its credit. The only item to its debit that we have been able to discover is its sluggish growth in the early part of the season and the necessity, therefore, of raising it upon clean land. We shall await with a keen interest the reports of the thousands to whom we have sent trial packets.

NO MEDDLING WITH THE TARIFF ON WOOLS.

THE United States Supreme Court recently decided that imported worsted stockings are legally liable only to a duty of 35 per cent. on their value, instead of the compound duty of 35 per cent. on their value and 50 cents a pound on their weight, which had previously been charged on them according to rulings of the Treasury Department. Basing its action on this decision the Treasury Department, under date of March 29, issued a circular directing Customs officers in future to assess duties of only 35 per cent. *ad valorem*, instead of 35 per cent. *ad valorem* and 50 cents per pound, on what are technically known as "knit goods," including caps, gloves, leggins, mitts, socks, stockings, woven shirts and drawers, and all similar articles made on frames, of whatever material they may be composed, except silk and linen. This ruling has given rise to a great deal of well-founded agitation among the manufacturers of this class of goods in New England. They say that the removal of the 50-cents-a-pound tax on imported articles will enable foreign countries to undersell them in our home markets, and that, should the ruling be maintained, they will have to sacrifice their establishments here and go to Canada to make their goods, because there, owing to the low price of the materials, they can manufacture the wares so much more cheaply that by importing them into this country they can make a much better profit, after paying the import duty of 35 per cent. *ad valorem*, than could be realized by manufacturing the goods here. They insist that the great cost of such goods made here is mainly due to the high tax—averaging 70 per cent.—on all imported fine wools entering into their production, and that nearly all the wool employed in making "knit goods" is foreign, and most of it necessarily so, owing to the inadequate supply of domestic wool of that sort.

They declare that they cannot continue to give employment to thousands of hands in this country unless either the former tax on imported knit goods is reimposed, or the duty is lowered on the imported fine wools necessary for their manufacture. The Supreme Court's decision related to worsted stockings only, and there is grave doubt whether it covered other sorts of knit goods, as the Treasury Department has assumed. Owing to the vigorous remonstrances of the manufacturers, the Secretary of the Treasury has suspended his late ruling and will give a final decision on the question in a few days. Should this decision admit the goods at the lower rate of taxation, then we insist that the tariff shall be promptly revised in the direction of imposing a heavier duty on imported knit goods, for we cannot for a moment consent to any lessening of the duty on imported fine wools to the injury and discouragement of American wool producers. Many of the political papers are urging such a measure, and their arguments are not without weight, but they would be equally powerful if directed against any form of protective tariff, and so long as this exists we shall insist that it shall protect the wool raiser as well as the wool manufacturer.

BREVITIES.

FROM good seeds only can good crops grow.

THE Army-worm has been found at the Rural Farm and in its neighborhood several times during the Winter.

THOSE about to plant our Argenteuil and Dutch asparagus seeds are advised to read Mr. Goodell's note in another column.

POA ANNUA, the Dwarf or Early Meadow Grass, blooms this year April 23d. This can never become valuable for pastures, we presume, but it is the first to lighten up lawns in the early Spring.

BEES should be high-priced this season, as the past Winter has destroyed a great number of colonies in all parts of the country, according to a large number of reports gathered from a multitude of our "exchanges."

ONE oleomargarine dealer declares that good oleomargarine is better than a medium grade of butter. Well, why not sell it as oleomargarine and color it blue, red, green—anything but golden yellow. Then it would have a fine chance to popularize itself upon its own merits.

IN the monthly report of the New York Horticultural Society for April appears an interesting essay on the cultivation of mushrooms, by Mr. Samuel Henshaw. We regret that we cannot find space to republish it in our columns. It is probable that the obliging Secretary, Mr. James Y. Murkland, 12 Cortland Street, N. Y., would furnish copies to those of our readers specially interested in mushroom culture who apply, inclosing stamp for postage.

THE American farmer has gained as a dairyman the trifle he has hitherto lost as a hog-raiser by the European trichinosis scare. With short rations of American pork our trans-Atlantic customers are bound to have full rations of American cheese—hence a large increase in our exports of that commodity. During the month of March our exports of it were worth $455,562 against $196,450 in the same month last year, and for the three months ending March 31 we sent abroad the worth of $2,358,472 against, $1,458,200 in the same period in 1880.

LAST year the appropriation made by the Legislature of this State for the support of the State Fish Commission failed for lack of the Governor's approval, and we expressed our regret at the unwise policy that withheld it. The same misfortune is likely to occur again from the same cause this year, and regard for the best interests of the farming community as well as of the public at large, makes us still more emphatic in disapprobation. Rarely has public money been appropriated to an object so beneficial to the people as in this case. If properly supported, the labors of the Commission must soon render large tracts of unproductive water as profitable, acre for acre, as the richest land, and add to the diet of the people in all parts of the State a healthful and palatable variety of food. Strong advocates as we are of the most rigid economy with the people's money, we are decidedly of opinion that a failure to grant the present appropriation would be an unwise and short-sighted parsimony.

IN the struggle between the American Hog and the governments of Europe the American Hog is very likely soon to prove victorious through its own multitudinous merits, the vigorous diplomacy of its friend, Secretary Blaine, the good sense and love of its trans-Atlantic admirers and the rashness and inconsiderateness of its trans-Atlantic defamers and antagonists. Already the French lovers of good pork are "crying for" the American article and vilifying their government, as only Frenchmen can, for having deprived them of the luxury. Already Austria has been taken sternly to task for excluding hog products from this country, while admitting those from other lands, despite the treaty obligations to place this country, commercially on the same terms as the "most favored nation." Hints at claims for damages to our trade through violations of treaty obligations may soon become demands, not with regard to Austria alone but other countries also that have in the same way rashly declared war against the American Hog.

LAST Thursday that dignified body, the Senate of this State, grew really unbecomingly hilarious over what was facetiously styled a bill about "Bugs and Humbugs." For years it has been customary to put into the Supply Bill an appropriation for the work of an entomologist in the State Museum of Natural History at Albany. The duties of the position have for a long time been quietly performed by Professor Lintner, and to make the position permanent a bill was this year introduced by lawyer Fowler providing for the office of State Entomologist with a salary of $2,000 per annum. Seldom has an appropriation of $1,000,000 aroused such a manifestation of feeling. Lawyers, manufacturers, store-keepers, and all the nondescript tribe of "politicians" began at once to harangue vociferously, if not wisely, on the agricultural interests of the State, while some of the veteran leaders of the Senate, according to immemorial custom whenever the welfare of the farming community is discussed, showed their wit and humor by appropriating antiquated jibes and stale jokes about entomology, its multitudinous classifications, sesquepidalian nomenclature, bifalutin' pretensions and inadequate performances. Finally, the debate waxing personal and political, agriculture and its needs were forgotten, and the bill was shelved. What a fuss is always made over any trifling agricultural appropriation, not in this State alone but in others also and by the General Government, while millions are constantly voted for all sorts of other purposes without a murmur!

*A DREAM OF PARNASSUS.

The Era of Cheap Books, and what the Immortals think about it.

I slept where the moon, serenely bright,
Shone full in my face through a Summer night;
I dreampt I was in a Land of Light,
With Fielding and Moore and Shelley and White,
And Shakespeare and Milton—a goodly sight!—
With Addison, Dryden, and others, quite
Too numerous to mention;
And there the worthies, one and all,
Whom we the "classical authors" call;
Beneath the shade of Parnassus tall,
On Pegasus Place, in Helicon Hall,
Were holding a big convention.

Virgil was sitting beside Voltaire,
Boccaccio chatting with Dumas, pere,
And Pope curled up in the corner there,
While old Sam Johnson was in the chair,
Wall-eyed and grim, with carroty hair,
And he said, "Of course you are all aware,
Of the latest earthly advices:
The publishers seem to be going to smash
Beneath the great 'economy' lash,
For the Book Exchange is cutting a dash
Exceedingly reckless and awfully rash
In selling for almost nothing for cash,
And ruining regular prices!

I hold in my hand a letter from four
American publishers who feel sore,
And they speak for a score, or possibly more,
Who live by a traffic in printed lore,
I read: 'We pray from this earthly shore—
Ye authors of old attend us!
O, give us a lift in this hour of need,
For the publishing business is going to seed;
The Book Exchange is making with speed
As many books as the folks can read,
And selling disgracefully low, indeed;
It cheapens your fame—for you we plead!—
Ye talented ghosts, defend us!'"

"What word shall we send to this earthly band?"
Then Scott, with GOOD LITERATURE in hand,
Arose (Amid cries of "Take the stand!")
And said, "This scheme will possess the land;
No good is the Harper or Scribner brand.
While Alden shows that he can command
The brains of sage and scholar:
A shilling for Pope—good binding on;
The same for the poems of Tennyson;
Six cents for your Pilgrim's Progress, John;
For the Iliad, thirty cents; and Don
Quixote for half a dollar!"

Then Chaucer said, "I am rather old,
But I am mighty glad this day to be told
How cheap my Canterbury Tales are sold,
And the poets and wits of the Queen Ann fold,
Steele the bright and De Foe the bold,
Berkeley the sober and Swift the scold,
From the time of Sir Walter Raleigh;
Shakespeare's works, and Smollett's and Sterne's,
Bacon, Bollingbroke, Byron and Burns;
And Babington Lord Macauley."

Charles Dickens said, "'Twould be foolish to let
Good luck of mortals cause regret;
For the price of a theater-ticket they get
Milman's Gibbon—the perfect set—
Dante and Virgil, two shillings net,
For a dollar Adam Smith on Debt,
And Mill on the Laws of Nations;
And I see by this wondrous circular
Set up by the Book Exchange that for
Three cents you get the Seven Years' War
For a dime King Henry of Navarre,
And for thrice the price of a good cigar
Will Shakespeare's inspirations."

Then Goldsmith rose and expressed it thus:
"It is simply a case of de gustibus,
But I see no reason for all this fuss,
For publishers never did much for us,
While needy, Summer and Winter;
Therefore, confreres, I hold this view:
The high-price houses are doubtless blue,
But unto the man our thanks are due
Who sends our thoughts each palace through,
And into the humblest cottage too,
For the Many are always more than the Few
And the People are more than the Printer!"

A slight shade rose—'twas Edgar Poe—
Who said, "I've been talking here with De Foe;
We agree, and the ancients have told us so,
That who makes two printed leaves to show
Where only one did formerly grow
Is as good a man as we want to know;
And this letter here, from the realms below,
Reveals its earthly animus;
I move it be not received!" About
A thousand voices removed all doubt,
Ben Johnson and Halleck and Hood spoke out,
Kit North and Irving and Father Prout,
'Mid a storm of cheers and a mighty shout,
And the motion passed—unanimous!

* This unique production is from the pen of one of the most widely celebrated of American humorists, who, in this case, seems disposed to add to his fame by assuming the even more widely known name, "Anonymous." The Manager of the American Book Exchange wishes it to be distinctly understood that he is not responsible for either the titles, rhymes, or price! The far-sighted poet who is able thus to report the convention on Parnassus has, perhaps, also had a vision of some future catalogue and got the facts mixed with announcements already made. A corect catalogue of our present list of publications may be had upon application to the Headquarters of the Literary Revolution, No. 764 Broadway, New York.

[Louisville Home and Farm.]

Frank O. Herring, Esq., of the Champion Safe Works 251 and 252 Broadway, New York, reports the use of St. Jacobs Oil for a stiffness and soreness of the shoulder, with most pleasant and efficacious effects.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 55, APRIL 5, 1881.

543. Night soil. Received March 15th, from William Burr, Fairfield.

This sample represents the material gathered from village privies during cold weather in the Spring season. For comparison the analysis of a sample from a large quantity taken in the village of New Canaan in 1859 is given.

Chemical Analysis of Night Soil.

	Fairfield. 543.	New Canaan.
Water	53.06	66.74
Organic matter*	14.62	17.68
Sand, soil and coal ashes	29.76	8.59
Potash	.21	.65
Soda	.26	
Lime	.82	2.27
Magnesia	.60	
Iron oxide and alumina	1.79	3.69
Phosphoric acid	1.41	1.38
Sulphuric acid	.39	
Chlorine	.08	
	100.00	100.00
*With nitrogen	.74	.87

No closer agreement could be expected in two samples of this material than is seen in the above analysis. The larger quantity of lime found in the New Canaan sample might have come from a sprinkling of oyster shells or the like. The large admixture of sand, soil and coal ashes is what can hardly be avoided.

The most valuable fertilizing elements of the night soil, viz., nitrogen, phosphoric acid and potash, may be bought in other forms for 20 cents, 9 cents and 7 cents per pound respectively in the fertilizer market. The highest commercial value of these ingredients in 100 pounds of night soil, 543, is as follows:—

Nitrogen	0.74 x 22½ cents	= 16.6 cents.
Potash	0.21 x 7 "	= 1.5 "
Phosphoric acid	1.41 x 9 "	= 12.7 "
Total		29.8 "

The other substances present do not materially add to the value, and the commercial worth of the night soil is not more than 30 cents per 100 pounds, or $6 per ton, on the most favorable reckoning.

Maize Ensilage.

Sample sent by B. C. Platt, of Suffield.

ANALYSIS.

	Fresh.	Water-free.
Water	82.09	
Ash	1.04	5.84
Albuminoids	1.27	7.07
Crude fiber	5.76	32.15
Free acid*	0.66	3.69
Nitrogen-free extract	8.84	49.34
Fat	0.34	1.91
	100.00	100.00

* Calculated as acetic acid.

BULLETIN NO. 56, APRIL 15, 1881.

549. Bone saw dust, manufactured and sold by the Holyoke M'f'g. Co., Holyoke, Mass.

550. No. 1 Peruvian guano, sold by Seth Chapman, 170 Front Street, New York.

551. Tortoise-shell sawdust, manufactured and sold by F. S. Johnson, Plainville, Ct.

All the above were sampled and sent to the station by J. W. Hemingway, Plainville, Ct.

	549.	550.	551.
Nitrogen	3.72	5.57	14.72
Soluble phos. acid		3.22	
Reverted phos. acid		4.23	
Insoluble phos. acid	25.67	8.62	trace.
Potash		2.40	
Estimated cost per ton	$41.00	$50.15	$32 38
Cost at Plainville	$37.00*	$60.40†	$30.00

—*At Holyoke, $35.00 per ton.
—†At New York, $2.90 per 100 lbs. =$58.00 per ton; at Plainville, $3.03 per 100 lbs.

Peruvian guano, as sold here three years ago under guarantee, was an excellent and cheap fertilizer, as that could be depended upon when purchased from agents of the Peruvian Government. Now the case appears to be otherwise. The Chincha Island high-grade deposits are exhausted and the material that is now put upon the market is of variable and often of inferior quality.

The complete analyses of the sample 550 is as follows:

Organic and volatile matter	29.77
Sand and insoluble matter	10.15
Iron oxide	1.08
Lime	13.58
Magnesia	2.10
Potash	2.40
Soda	11.39
Phosphoric acid	16.18
Sulphuric acid	8 14
Chlorine	6.75
	101 54
Deduct oxygen equivalent to chlorine	1 54
	100.00
With nitrogen	5.57

S. W. JOHNSON, Director.

Veterinary.

PREVENTION OF CONTAGIOUS DISEASES OF ANIMALS.

D. E. SALMON, D. V. M.

BEFORE active measures can be adopted for the prevention of a disease, it is very plain that we must know its nature, we must know if it is contagious; we must know how the germs are scattered, how they are preserved, how taken into the system, how destroyed and how to enable the animal body to resist them. Without such knowledge it is absolutely impossible to make headway against a disease; and with it we must employ rational measures based upon it before practical results are obtained. When a person is sick we call a physician, learn the nature of the disease and receive a prescription with directions for treatment, but the patient is not benefited unless the directions are carried out.

So with contagious diseases of animals: hog cholera has been demonstrated to arise by contagion, and preventive measures founded upon the nature of that contagion have been recommended, and if these recommendations are not put into practice, it certainly can be no more the fault of those who made the investigations than the refusal of a patient to take medicine is the fault of the physician who prescribes it. And yet only a few weeks ago, Mr. L. B. Wing, President of the Ohio State Board of Agriculture, in an address at the Inter-State Agricultural Convention on Contagious Diseases of Farm Stock, is reported, on good authority, to have said:

"I haven't much faith in the present financial value to the farmer of the work of the scientists. Various learned gentlemen have been appointed, from time to time, to investigate the causes of and suggest a remedy for the hog cholera. Their researches are probably of interest to themselves and to science, but if there has been any abatement in the losses from this cause, it is not in the least degree to be attributed to anything they have suggested. So in this matter of diseased cattle, it is proper that these gentlemen should investigate the nature and cause of the disease; but it will require strong practical and what physicians call 'heroic' treatment, to rid ourselves of this scourge."

What are the facts in regard to hog cholera? Why, before the investigations of 1878, there was no certainty that hog cholera meant any particular disease, and many of our leading agriculturists contended that pneumonia, enteritis, dysentery, charbon and many other diseases were all classed together as cholera, and that this term was simply the expression of the losses from all the various diseases to which swine were subject. Agriculturists were widely divided as to the existence of any contagious disease to which the name cholera was applied. In other words, the general knowledge of this subject was so slight as to discourage the most simple precautions towards preventing the ravages of a contagious disease.

Now who can doubt, from the results of these investigations, that the great majority of deaths among hogs in the various parts of the country, is caused by one and the same disease, and that that disease is intensely contagious? Further, it is shown by these investigations that this disease generally, and probably always, results from contagion; that in a number of States, it was never known till introduced from infected districts.

Are such facts as these of no financial value to the farmer? Is it possible that since the contagiousness of this disease has been made so apparent, our large hog raisers have not profited by the suggestions to separate the healthy hogs from the sick ones and place the former on grounds that are not infected? Is it possible that no precautions have been taken by the owners of healthy herds to prevent the sick animals of neighboring farms from mixing with or coming near them? I cannot believe that our intelligent American farmers have so neglected their interests. But suppose Mr. Wing is right; is the work of the scientists of any less value because their suggestions have been in no respect heeded? A general plan was marked out for exterminating the disease from the country, but as the first step has not been taken to test the practicability of that plan, I cannot see how its value can be so readily determined.

Turn to cattle diseases, if you please, and how could "heroic" measures be adopted without the assurance from scientists that pleuro-pneumonia is a contagious disease; that it arises exclusively from contagion, and that the virus in stables may be destroyed by certain agents known as disinfectants? And who but scientists are able to go into a stable where there are chronic cases of pleuro-pneumonia and unerringly pick out the affected and dangerous animals, though their coats are glossy, their general appearance and appetite good, and their yield of milk from ten to fifteen quarts a day?

And yet Mr. Wing hasn't any faith in the financial value of such facts, nor does he believe that the abatement of such diseases is due to any suggestions of the scientists. Mr. Mr. Wing may honestly hold such views; there are some things that cannot be accounted for, but it is hardly possible that any considerable number of intelligent farmers coincide with him.

The Apiarian.

KING BIRDS AND BEES.

THAT sap sucking question started by Gen. Noble reminds me of a mystery which unaided I have been trying to solve. A friend of more experience than myself remarked that the king birds did no harm to the bees as they caught only the drones. After watching their operations a few days, I resolved to get at the bottom facts, and with gun in hand I brought down a bird then busily engaged in intercepting bees as they were returning to the hive; transferred the same to a dissecting table, but was much surprised to find neither drone nor worker stored away in its crop. Repeated examination resulted in the same way.

Now is its digestion so powerful that all traces of a bee disappear in a few moments after being taken, or does it give the bee one loving embrace for the good that is in it and cast its lifeless body to the ground? C. L. S.

We are of the opinion that the king bird catches not only drones but workers and queens also. Examination of the king bird's crop scarcely ever reveals the presence of bees except in such a condition as to be quite beyond identification. A gentleman once noticed a king bird catching bees and, on close observation, saw small particles drop to the ground which proved to be both the bees' extremities, and he concluded that the bees were caught in such a manner as to secure the honey-sac only. If this be true, search for bees in the king bird's crop would be in vain.—EDS

Literary Miscellany.

A VOICE OF SPRING.

WHEN in early Spring the branches
Don their livery of green;
When amid the springing grasses
Early violets are seen;
When each bird and bough and blossom
Brimming over with glee—
Voices of the early springtimes,
Hours of sadness bring to me;
And I dream of other springtime,
And a day of long ago,
When beneath the open window
Little feet went to and fro,
When amid the dreamy silence
Came a step upon the stair,
Came a sudden gleam of brightness
From a baby's tangled hair;
Then a shower of blossoms
And a laughing voice said low:
"Violets are blossomed, sister,
And I knew you loved them so!"

Spring has come again—the meadows
Dotted are with violets blue,
But a little voice is silent
And a little heart so true,
Underneath the early blossoms,
Slumbers all the springtime through.
Thus when bird and bough and blossom
Brimming over seem with glee,
Voices of the waking Summer
Hours of sadness bring to me;
For each waking bird and blossom,
As I listen whispers, low:
"Violets are blossomed, sister,
And I knew you loved them so!"

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

CHAPTER XV.

(Continued from page 294.)

Having arrived at the barn the sheaves were rapidly unloaded on an elevator, which was also a drier, and in their passage up and across this they were thoroughly deprived of moisture. A threshing machine received them from the elevator, and the straw, being threshed and bound again without the direct aid of human hands, was borne away to its appropriate quarter, while the grain, thoroughly winnowed, was carried down by a shute into the granary.

Grass was treated in a similar manner, being taken directly from the mower, artificially dried, and stored in the barn without having once touched the ground.

This is but a sample of the labor-saving and time saving methods by which farming industry was carried on in this country. Every new operation which I saw was a fresh source of wonderment to me at the marvelous perfection and ingenuity which was displayed in the construction of the implements and machinery for carrying on the work of the farm. While the completeness of arrangement in the farm buildings and in the ground alloted to each crop seemed to indicate that convenience had become a veritable art among this people.

The farm buildings were located by the side of the railways, which divided the section into two equal parts. They were built most substantially of stone, and like the houses, they were fire-proof. There was a barn appropriated to each variety of grain, one to the hay intended for city use; the other to that to be consumed on the farm. Connected with this barn were also the stables where the animals of the farm were confined. There was a building appropriated to the storage of vegetables, and a most wonderful house for preserving fruit. This art had arrived at such a degree of perfection among this people that the season of every variety of fruit was perpetual, and the fruit itself had every desirable quality developed to perfection, while there were many most excellent varieties among them which are entirely unknown to us.

The amount of fruit consumed by this people was truly marvelous, which is not strange when we reflect that a dish of strawberries, cherries, peaches or grapes could be had for the asking every day in the year. It was fruit at breakfast, fruit at lunch, and fruit at dinner. In fact, fruit was the universal and only dessert among this people.

I must not forget to mention the building which was appropriated to domestic fowls. It was most complete in its appointments, a regular palace for its kingly and queenly occupants. Kings or queens every one of them would certainly be among the best bred fowls which are known to us. I wondered why the art of singing was denied them, they looked so beautiful, yet I fancied that there was something superior in their crow and cackle to correspond with their high breeding.

The cows, the sheep, in fact, all the domestic animals of this country were perfect models of beauty and utility. The cows in particular attracted my attention. They were the only animals which were raised to any extent in this part of the country. Sheep were raised almost exclusively in the mountainous districts, and horses being used chiefly for driving, there were few required among the farmers, while the race of swine which are the source of so large an industry among us, I found entirely extinct among this people. Each section being the source of milk and butter supply to its particular ward in the city, quite a herd of cows became a necessity to it, and such wondrously beautiful, gentle and high bred creatures it had never been my pleasure to look upon. When I came to see them milked, stood amazed at the quantity of this fluid which was drawn from them, no less than at the manner in which it was drawn.

One man had charge of the cows at the milking. There was a pail for each cow, or rather a tub, for it was twice the size of an ordinary milk-pail. These

were tightly covered with a sharply sloping cover through which four India-rubber compressors protruded which were operated by a little implement directly under the cover that was wound up like a clock and gave the necessary motion to the compressors. A pail was set under each cow in turn, the compressors were adjusted to her teats and set in operation. By the time the last cow was reached the first one was milked, and so nicely were the cows trained that when their milk was completely drawn from them they would step aside, leaving the tub sitting where it was placed.

Thus when the attendant had adjusted the milking machine to the last of the ten cows, all he had to do was to go back to the first and collect the milk from each in turn. The milk-house was near the stable and there the milk was taken at once and disposed of. That which was intended for the city was placed upon a platform which was so arranged that it could be submerged to any required depth in a spring of the coldest water, while the butter and cheese milk had each a room appropriated to them, where it was cared for in a manner which to my mind was high art as compared with the manner in which butter and cheese are commonly made in my country.

Lest I weary the reader, I will conclude my observation on the wonderful farming of this country by some statistics which will give an idea of the productiveness of the soil, and the high condition of every department of this industry among this people. On reflection, however, I know that I would not be believed by one in ten of my readers, and as I have an inborn disinclination to talk to the incredulous, I will let the matter pass.

CHAPTER XVI.

A TRIPLE WEDDING.

SOCIAL life in these little farming communities was as pure, refined and exalted as it was possible for it to be. We naturally look to the city for culture and refinement, and we expect to discover in the people of the country more or less of unsophisticated simplicity of manners, together with a want of familiarity with the progress of events in the world at large. But though I was ill qualified to pass judgment in these matters, I could not discover that the people of the country were one whit behind those of the city either in refinement of their thoughts and feeling, or the accuracy and extent of their information on every subject which could interest people of culture and intelligence. While their social intercourse was marked by a thoughtful regard for each other's feelings and a spirit of obliging and self-sacrificing interest in each others welfare and happiness to which even the courtesy and good feeling among the people of the city, which had so won my regard, seemed somewhat stilted and formal. This was probably owing to the facts that society in the country was more circumscribed, more isolated and that it was bound together by a community of interest which did not exist among the people of the city. Moreover, communication between city and country was both rapid and complete, and the expense of traveling was ridiculously small, so that the people made frequent visits to the city and thus familiarized themselves with city life and the many objects of interest which are to be found only in the great centers of population.

It was my good fortune while here to witness the marriage of three fair daughters of this happy little community. It seems that in this country marriage days come quarterly like some church ordinances in my own. It is customary for the minister to remind the people of the approach of marriage day, when it is at hand, and to request that any who desire to be united in the bonds of wedlock may present themselves on that occasion. From this it will be understood that the marriage ceremony is always performed in the church.

I have read a burlesque on the parade which is usually made over the marriage ceremony in my country, where Jane, who is washing when the minister arrives, dries the suds off her hands on her apron, and runs out to find John, who is working in the field. They stand up at once and are married, and as soon as the ceremony is over Jane returns to her wash tub and John goes back to his plow.

The marriage ceremony in this country is not characterized by the rude simplicity which is here portrayed, but it is simple enough when compared with the display which is usually made over it among the people of my own land.

If there is a marriage to take place, when the day comes round the people assemble in the church. The couple, or couples—for sometimes four or five couples are united on the same occasion—arrive at the appointed hour, dressed in their ordinary best suits, and accompanied by the relatives of each. They are welcomed by a chant from the choir, which recounts the joys of domestic life.

In the ceremony which I witnessed the three couples stood up before the desk of the minister after the chant was finished, while he made a brief address to them on the nature of the obligations which they were about to assume. Then, addressing himself to each couple separately, he repeated a form of vow to which they severally assented, whereupon he pronounced them husband and wife. Then invoking the Divine blessing on the new relations which they had assumed, the ceremony was concluded.

The organ now pealed forth a joyful air, and the choir sang an appropriate selection while the newly-married pairs marched down the aisle, followed by the relatives who formed their respective households. First their parents, second their grandparents, third their great-grand-parents, and fourth their parents of the third remove.

This was to me the most touching and interesting part of the whole affair. The parent rank was full—six stalwart men in the prime of manhood moving by the side of as many noble women. The grand-parent rank was full, though a generation had whitened their hair somewhat, but had not taken from their lively expression of countenance, their erect carriage, nor their elastic step. The great-grand-parent phalanx, upon some of whom time seemed to have begun to press heavily, was also full, save one—an old dame, whose face looked peculiarly sad and pensive, moved down the aisle with a vacant place beside her. Of the great-great-grand-parents there were but three, two women and a man. Bent in form, feeble in step, and oppressed with the infirmities of age, it seemed a matter of no little effort for them to hold their place in the procession.

What a picture of human life, thought I, is here presented! Surely, human existence in the present world, is but a procession in which those who have marched longest, fall farthest to the rear, while the young and vigorous ever occupy the van, instructed by the wisdom and profiting by the experience of those who must soon be left behind to death and forgetfulness.

Upon reaching the side-walk, the brides and grooms were met by a company of children, who scattered beautiful white flowers before them, as they led the way to the pavilion, at the entrance of which the newly wedded pairs stood and received the congratulations of the whole populace, who had followed them from the church. A simple lunch was here spread out, of which all the people partook, and the remainder of the afternoon and evening was spent in social enjoyment. Promptly at nine o'clock the chimes from the village church rang out, and the hymn of praise being sung, the company dispersed, and the bridegrooms led their brides away to their new homes

"Is this all there is to your weddings in this country?" I asked Mr. Glinden, as we walked homeward.

"Is'nt it enough?" he asked in reply. "What more is necessary?"

"Why, in my country," said I, "this would be thought a very tame affair, even for a single wedding, but for a triple one it would be regarded as niggardly, indeed.

"In the first place, among people of social standing, the groom would be richly dressed, and the bride would be arrayed in the most expensive apparel. She would be accompanied by from two to six bridesmaids, in like manner, expensively dressed, while all the relatives and friends of the couple would make it an occasion for a grand display of jewels and costly clothing. There would be an expensive feast when the ceremony was over, a great wedding cake, and dishes rare and rich, which no skill of such a little village as this could supply, but which must be the work of some experienced artist of the great city. Then there would be an array of imported waiters to serve the feast, and an imported band of musicians to supply another prominent feature of the occasion. The bride would also be the recipient of costly wedding presents. And after all this ostentatious parade was over, the couple would make a wedding tour of one or perhaps several weeks before settling down to the joys of home and wedded life."

"I remember of reading about old-time weddings," replied Mr. Glinden, "which were even grander than your description, and I must confess that to my mind, such expensive displays are an evidence of a no very flattering degree of mental development in the people of that time. They show a regnant vanity and love of applause which are unworthy the true dignity of man's nature, because their gratification is sought in the pomp and parade which only wealth can give. They also had a tendency to induce a popular sentiment in favor of costly display on these occasions which had an evil effect on many a young couple who could ill afford to do it.

To be continued.

NEW PUBLICATIONS.

Down South.—By OLIVER OPTIC. The fifth and last volume but one of the "Great Western Series." Boston: Lee & Shepard.

This narrative continues the history and experiences of the young yachtman and his Western crew into the "land of flowers," and although the action of the story is confined entirely to Florida, the resolute, straightforward hero and his companions appear as much at home as though sailing on the blue waters of Lake Michigan. Some new characters are introduced and share in the excursions and adventures of the party on the St. Johns River, Ocklawaha and Indian Rivers, besides a trip to the Lake country and shorter runs up the smaller streams of the State. The story is made interesting by numerous incidents and bits of information pertaining to the country. Some successful alligator shooting, and an attempt on the young captain's life, are facts noted in the adventures.

How we Fed the Baby.—By DR. C. E. PAGE. New York: Fowler & Wells, Publishers.

This little book will be welcomed by many mothers. As the health, growth and happiness of the child depends greatly upon the proper care of its digestive organs, all information tending to throw light upon this subject should be appreciated. Many children, no doubt, suffer unmeaning torture from those most deeply interested in them, occasioned by ignorance of necessary laws of health. The experience of the author will serve to instill the spirit into parents' minds, which, in all probability, will develop into a degree of practice.

Poems of Many Years and Many Places. By Wm. Gibson, Commander U. S. Navy, Boston. Lee & Shepard, Publishers. Price $1.50.

This little volume has been preceded by "A Vision of Fairy Land and Other Poems," by the same author.

The first impression received is of the tastiness of its binding. Further examination presents (as the title suggests,) a diversity of poetical subjects. Repetition of thought is happily avoided in this little casket of literary gems.

The Longfellow Birthday Book.—Arranged by CHARLOTTE FISK-BATES. Boston: Houghton, Mifflin & Co. $1.25.

The exterior and interior of this little volume invite the eye and mind to more than a passing notice. The illustrations serve to increase its attractiveness, being pretty embellishments of its pages. A fitting souvenir for a birthday gift.

For Women.

CONDUCTED BY MISS RAY CLARK.

ARBUTUS.

JOHN G. WHITTIER.

I WANDERED lonely where the pine trees made
Against the bitter east their barricade,
And guided by the sweet
Perfume I found, within a narrow dell,
Amid dry moss and dead leaves at my feet,
The trailing spring flower, tinted like a shell!

And bending o'er it not irreverent
I thought of lives thus lowly clogged and pent
Which yet found room,
Through daily cumberings of deep decay and deaf,
To give to heaven the sweetness of their breath,
And to the earth the beauty of their bloom.

"GATHER UP THE FRAGMENTS."

MARGUERITE.

"There, you pretty purple worsted, I've saved you every stitch,
For if we are wasteful, we never can get rich."

These lines, from the little kindergarten girl in St. Nicholas, I hear Gertie repeating when she is taking special care of something, and it pleases me well, for I believe we, as Americans, are very apt to throw away the threads, thinking that they do not amount to anything.

We need to be more careful about the little things. Christ's command was, "Gather up the fragments *that nothing be lost*," and sometimes I wonder if the whole secret of success does not lie just in "Gather up the fragments."

The other day a successful merchant sat near me at a friend's house. The lady picked up some pieces of well-worn, snowy muslin that had been left over after binding up a wound, and threw them in the open grate and passed out. "That was not right," said the merchant to me. "Oh, it wasn't much," I answered; "hardly worth going to the rag-bag to deposit." "But the principle it involves is immense," he answered. "Directly under the table where we receive the mails is a barrel. The order from the Post Office Department is to 'cast all wrappers around packages receivable at this office into it; also registered envelopes, etc.' It seems like a small matter, but when one thinks of the amount of waste paper in all the Post Offices in the United States they find the aggregate great. Another barrel stands under my private desk. I fill it in about a week. The value of paper in it amounts to, say, twenty cents. I am conscientious, too, about anything being put in mine that belongs in the other. 'Faithful in little, faithful in much.'"

Oh, what a stingy man! I hear you exclaim. I protest against the charge. He is careful, but not avaricious, as his family, his church and the poor around him can testify.

Another successful merchant in one of our large cities pointed out to an observer two clerks who were in his employ. One, he said, "cuts the strings when he opens a package, the other unties them." The former he prophesies will be a clerk all his life, while the latter will eventually sell his own goods.

This idea of being careful should be taught in the nursery, and if the money spent in sugar-plums should be given to the children, to be used for benevolence or to be laid up for them in time to come, it would be more profitable.

What! says some one; I never have anything to deposit in bank but pennies and nickels. Very well, begin with them, and give one-tenth of the increase to the Lord.

Mr. Fawcett, the blind Member of Parliament, whose personal misfortune makes him quick to apply sound common sense to the misfortunes of others, has issued a bill in the British Parliament, authorizing Post Masters to issue blank forms containing places each the size of a penny stamp. Any person or child returning it, filled, will be credited in the postal savings bank for the amount. A penny any one can save, and once invested in a stamp the owner becomes a bank depositor.

Some one says, "Away with the stingy rich and the improvident poor." Herein lies the secret. The wealthy, as a rule, gain what they have by prudent foresight and keep it by thoughtful care. Some poor despise the small economies and think the ones higher up the ladder are above them. Not so. Mrs. A., wife of one of our comfortable men, takes pleasure in using her own and her husband's cast-off garments for the children, making handsome suits. Mrs. B. scorns these little economies, declares remodeling clothes is something she abominates and knows is poor policy. Her children do not look as well dressed as her neighbor's, for the new material is inferior to the old in quality. Suddenly sickness comes in Mrs. B.'s family and the death angel takes a lamb. The father's purse is empty, so they borrow money of Mr. A., (who, thanks to his wife's economy and his own good management, has it to lend).

Thus it goes on and on. One might write a book about it, and even then the story would not end.

A GOOD BEGINNING OF THE DAY.

"HURRY, Mabel, or you will not be ready to eat breakfast with father; he has to go away to the upper town to work on a house this morning, so is obliged to leave earlier than usual."

In a minute the little bare feet were out on the warm carpet, and the process of dressing went on rapidly in mother's cosy room, where there was always a fire in cold weather.

"We'll keep the house warm and snug up stairs and down, Susan, if we can't wear much finery; don't you say so?" said father. Susan was of the same mind and a cosier little home for a working-man you could not find anywhere. The helpful fingers of the older sister soon made both tidy and sweet as two pinks and then they tripped down the stairs and made a rush for the first kiss from father. He had a good strong arm to wind around each and thus they carried him (or he them, it was hard to say which) out to the breakfast table.

"This is the kind of drink to keep the cold out," he said as he passed his cup again to be filled from the steaming, fragrant coffee pot. "I think if all of our men had such coffee at breakfast and such a home they wouldn't stop at the dram-shop on their way to work."

The excellent breakfast was eaten with its accustomed good cheer and there was time afterwards for a Psalm and an earnest, humble prayer for God's blessing upon them through the day. Then the substantial dinner was packed in the handy pail with compartments, and while he was buttoning his rough, warm coat and drawing on his buck-skin gloves, Mabel came dancing up and saying: "Can't I walk just up to the corner with you, papa?"

"Isn't it most too cold deary? but just as mother says."

"If you will wrap up warm you may," said mother. The thick, wadded sack and warm knitted hood were on in a minute and Mabel tripping along happily over the crisp snow. The corner was quickly reached when father stooped down for a good-by kiss, and then both went their way for the day. It was a happy way to begin it, and left each heart in the best possible frame for continued enjoyment.

I see a carpenter go to his work every Summer morning accompanied by his little girl "as far as the corner." Then he kisses her and she trips back to her home. I do not know anything further about them but I feel sure he is a good father, and that they have a happy home. OLIVE.

FASHIONS.

DOTTED and flowered Swiss muslin dresses will be worn again.

Black Chantilly lace is coming again into vogue.

The poke bonnet in its modified shape is a decided favorite.

Satin is still the most popular material for the dressiest toilet.

Colored lace mits in every style will be more worn this season than ever before.

Steel buckles are shown for wear with the new steel laces used for dress trimmings.

Flowers and feathers will again be mingled in bonnet trimmings.

Ginghams of all kinds, plain, plaided, checked and striped, will be worn.

Lisle-thread gloves will be as fashionable this summer as they were last.

Boots laced up the instep are coming largely into favor for the promenade.

Shirring is seen upon skirts, bodices, tabliers, scarfs, mantles and bonnets.

Muslin and lace fichus and collars bid fair to take the place of linen collars.

Dark-red holly berries are very effective on simple dresses of pure white organdie.

Massed wreaths of daisy buds on flexible stems are exceedingly pretty and graceful.

Leg-of-mutton sleeves appear on new toilets.

Shrimp, a yellowish pink, is among new colors.

Breakfast caps take on square shapes both in front and back. They are made of rows of plaited white lace mounted on a net crown, three rows being turned each way from the crown and the join hid by a small jabot. The only trimming is a pair of very small rosettes made of double Surah and placed on the left side.

For a young girl a pretty toilet is of lavender-colored surah. The round skirt is trimmed with three narrow-pleated flounces. Over this skirt there are three draperies of brocaded lavender surah; the middle drapery is edged with fringe. On each side there is a band of plain surah, embroidered with lavender and white beads; the draped back width is of brocaded surah. The basque-bodice has square pockets and revers of the same.

Children's dresses are still made in the sack-princess style, but the fronts and back, instead of being plain, are gathered full into the neck and continue full down to the bottom, while a band confines them round the waist. Underneath is the usual kilt skirt, which may be made separately or sewn to the edge of the polonaise, forming but one dress. Instead of a band a sash may be worn round the waist, which is tied at the back a little to the left side.

In wash dresses for the warmer season, the princess shape is to be most general. A very pretty costume is made of pale pink percale, figured with tiny sprays of flowers in their natural hues. The overdress is caught up in the back with bows of pink and white percale. The underskirt is of pink linen, flounced up the front to the waist with narrow plaited frills edged with tiny scallops in white button-hole embroidery. The overdress is bordered with a gathered ruffle to correspond with those on the skirt front. A graceful little fichu is added, trimmed all around the edges with a similar ruffle.

CORRESPONDENT'S CORNER.

RURAL SISTER:—In reply to a communication in last issue, we would say that we have endeavored to vary the spirit and letter of the columns as much as space would allow but suggestions and questions are acceptable, as our pleasure is the interest of our friendly patrons.

The subject of etiquette is one that allows of much individual applications as to propriety. Circumstances influence decision of right or wrong, but true politeness is one of the surest guides to good manners. Ward's Etiquette and American Code of Manners (the latter a late edition), are good books of etiquette from which no doubt you will obtain answers to your queries. Information may only meet your case in the main, your personal judgment will supply the rest.

CAN you tell me what will remove dandruff from

the head and make the hair grow? Are there not simple remedies that will answer the purpose as well as expensive hair restoratives? Carbolic acid is good for diseases of the skin; will it injure the hair if it is made very weak or put in oil?

MRS. I. T.

ANS.—A weak solution of borax or ammonia is excellent for cleansing the head and hair, and a tea made of rosemary will promote growth.

While not feeling confident enough to recommend the use of carbolic acid, we would say that our own judgment favors it.

No matter what your feeling or ailment is, Hop Bitters will do you good. Prove it.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

HOW TO BIND THE RURAL.

GEORGE SINCLAIR.

ANY agricultural paper that is worth its subscription price is worth preserving. An article that we pass by as being of no special value to us

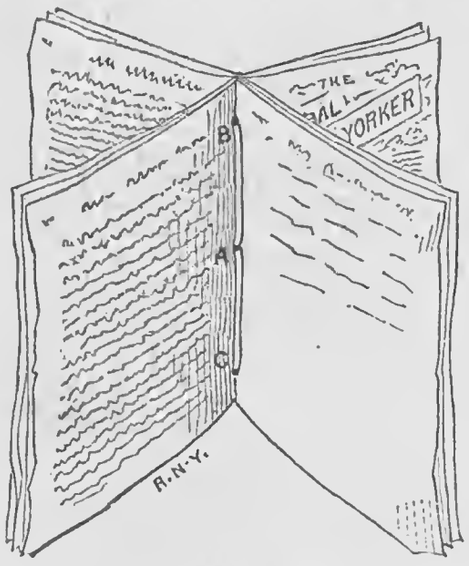

FIG. 239.

now, may contain items of information that will be of great service to us at some future time.

The farmer who receives the RURAL every week and takes care of it has an ever increasing fund of practical information. But it may trouble him somewhat to find any particular item when he wants it if his papers are thrown together loosely; then, too, the leaves get ragged and torn from frequent handling. It is a great convenience to the reader to have the papers bound, and any one can bind his own RURAL at the cost of a very few cents per volume.

If you would have a neat book you must begin to take care of your paper as soon as it comes—keep it neat and clean. A piece of newspaper large enough for outer leaves or covers should be sewed on at the time you sew and cut the papers; this will answer a good purpose and may be torn off at any time.

It is a good plan to sew the papers together in pairs, as in Fig. 239, when you are ready to bind. Open them at the middle, place the backs together, pass the thread through both papers at A, back again and through at A, down on the other side to C, then back to A and tie.

Take three pieces of tape, or three strips of strong cloth half an inch wide; give them a coating of paste and dry them.

Sew the papers to the tapes, passing the thread around the tapes and through the papers inside of the threads by which they are fastened together. Round the backs a little and give them a coating of thick glue. For covers, take two pieces of pasteboard a little larger than the leaves, glue the tapes to the inside of the covers, glue a piece of cloth over each tape to hold it firmly. For the back use a strip of strong cloth wide enough to lap onto the covers an inch or more and long enough to turn in and fasten on inside covers. Cover the boards with dark cambric, letting it lap well on inside around the edges.

Cover inside with white paper.

This makes a cheap but neat binding. Colored leather for the back and marbled paper on the covers will make a more stylish binding.

The work is all done with common glue.

Put your book under a firm weight for a few days.

I have just finished binding a lot of agricultural papers and feel well paid for my trouble. If I had attended to it at the end of each year, several val-

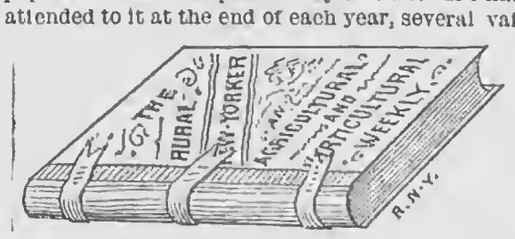

FIG. 240.

uable numbers that are now missing would have been saved.

Fasten a small tin can inside a larger one by passing a couple of wires through the top of each and you have a good glue pot.

Paste-board boxes to make covers of may be had of any dry goods or boot and shoe merchant for the asking.

ASPARAGUS.

ANNIE L. JACK.

THIS season of the year is noteworthy. The budding lilacs and flowering bulbs, the tender grass and fresh leaves brighten the days. The housewife finds amid the cares of the dinner-table a pleasant variety. Crisp lettuce, spinach and cress infuse added brightness to the meal, and that choice, healthful vegetable, asparagus, is with us for six or seven weeks. Cut every morning fresh from the garden, it is indeed a luxury, a dainty dish, and can be prepared in so many ways that children care but little for meat while it lasts. Mrs. Henderson, in her "Dinner Giving," gives the simplest way of cooking as follows:—"Tie the stalks in bundles, keeping the heads one way, and cut off the stalks so that they may be of equal length. Put them into well-salted boiling water and cook until they are tender. While boiling, prepare some thin slices of toast, arrange the asparagus, when well drained, neatly upon it, and pour over a white sauce, as for cauliflower. Time of cooking asparagus, about eighteen minutes."

The points of the shoots, cooked like peas, form a very choice dish and a novelty. As a breakfast dish, or for children, it is very nice cut into small pieces the size of peas, with an ounce of butter, a tablespoonful of cream, the same of gravy, and a little pepper and salt. Boil in just as much water as will cover it first, then pour this off and add the above ingredients, also three well-beaten eggs. Stir over the fire a minute to set the eggs, and pour over slices of bread that have been dipped in boiling water and butter. As a blood purifier and a diet to supply albumen, asparagus is a valuable article of food, containing more of this element than anything except eggs.

COOKING VEGETABLES.

To have vegetables in perfection they must be gathered for the day's use before sunrise while they are cool, and then kept cool in a cellar or in cold water till the time for cooking them. If, however, they are stale when brought to the kitchen, cut off all the stems fresh and put them in cold water till wanted. Boil in soft water to preserve their color, but if only hard water can be got, add a little soda. Salt the water, let it boil, put in the vegetables and boil briskly; then take them out as any delay after they are done spoils them. To get rid of snails, slugs and worms, which sometimes lurk among the leaves, wash in warm salt water, but at once put them in cold water to maintain their crispness. Beets must not be cut or the color and flavor will boil out. Turnips must be boiled in their skins; potatoes must be put in the pot filled with cold water three hours before boiling, then set on to boil in the same water. If these directions are carefully followed, many people will come to a knowledge of the capabilities of an important branch of food but little understood by nine out of ten.

CHIEF COOK.

ROBBINS' WASHER.

THE Bissell Manufacturing Co., writes to us as follows:

"If you will notice the directions and notes given below, you will perceive that it is only through negligence and carelessness that clothes ever rust or turn yellow.

When the washer is in operation, always raise the lid by placing a stick across the boiler, or leave it off entirely.

In every instance give full time to the operation of the washer.

Dry the washer thoroughly immediately after using by placing it on the top of the stove.

If the cover is kept closed, the effect of the alkali will yellow the clothes, while, if it is raised or removed so as to admit the air freely the effect will be to bleach the clothes thoroughly.

The washer must not be allowed to cool while wet. Take it in pieces and dry thoroughly the moment it is removed from the boiler. With this care it will last a life-time."

From our own experience with this washer, we must believe that where it does not give satisfaction it is because the person using it *does not follow directions*. And to this we may add that many women expect too much of the machine.

Reply to Mrs. Wager Fisher.

First, I would say some persons think themselves possessed of sufficient independence to act in such small matters as they please. Second, if the knife is clean enough to cut the food without contaminating it, the rule that forbids its being carried to the mouth is one of extreme folly. Finally, fathers and mothers who have handed down to their grown-up daughters any claims to superiority must have many qualities that such daughters would do well to notice, admire and cultivate. And by so doing they would cultivate the heart, so that such a small mannerism as drinking from a saucer could not materially affect them. Grown daughters who would allow themselves to feel *mortified*, must be lacking in good sense, in natural affection, and in true nobility of soul. From such deliver us. E. M. W.

COLORING RECIPES.

To Color Yellow.

GET a half bushel of hickory bark; boil it in brass or copper with water enough to cover the bark. When the strength is out, take out the bark and put in one-fourth of a pound of alum. Put in your rags, keep them hot one hour, then, take out and dry.

To Color Cotton Blue.

Dissolve one ounce of copperas in hot water; put it in a tub or kettle large enough to hold the goods, let them be in one hour then take out and rinse. Take one ounce of prussiate of potash dissolve it in water enough to wet the goods or rags, add one tablespoonful of oil of vitriol; stir well and dip one hour. Have the liquid a little warm.

To Color Green.

Put some of the yellow rags in this blue dye after you take out the blue rags.

MRS. F. A.

To Color Cotton Chrome-Yellow.

The directions given are for coloring 15 pounds of goods. Dissolve eight ounces of white sugar of lead in a tub with water enough to work the goods. In another tub, with same quantity of water, dissolve eight ounces of chrome. Put goods first into the sugar of lead water, take out, wring, shake and return. Do this five times. Then put through the chrome water in the same way. Return to the sugar of lead tub, treat as before, rinse well and dry. E. I. J.

It is impossible to remain long sick or out of health where Hop Bitters are used.

Miscellaneous.

Back Supporting Shoulder Brace

Is so constructed that it gives a strengthening support to the back, and draws the shoulders back so as to expand the chest, throwing the body into an erect and graceful position. Price $1.50 by mail. Give waist measure. Send for circular and illustrated price-list of

Hygienic Undergarments

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Mrs. A. FLETCHER & Co.
6 E. 14th St., New York City.

VAN SICKLE'S
Shir Sling, Hay & Grain Unloader
HAS NO EQUAL.

Its Economy,
One-half time, labor and expense.

Its Capacity,
Double that of any Horse-Fork.

Its Convenience,
Unparalleled in Changing.

Its Adaptation
To all kinds of farm produce.

Its Facility.
A boy twelve years old can operate it easily.

Its Cleanliness,
25 loads unloaded and did not scatter one bundle.

WARRANTED in all the above statements, and to give satisfaction. For descriptive circular, address

G. VAN SICKLE & SON,
Shortsville, N. Y.

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

IT PAYS to sell our Rubber printing Stamps. Samples free. J. M. MITTEN & CO., Cleveland, O.

Agents Wanted.

$100 A MONTH for Agents on our new Book: THE GOLDEN DAWN; or Light on the Great Future. Send for Circular. Also send address of 3 or more Book Agents, and 10 cents for cost of mailing, and receive The People's Magazine for 6 months. P. W. ZIEGLER & CO., 915 Arch St., Philadelphia, Pa.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

AGENTS WANTED FOR THE
SUMMIT
Stove-Pipe Shelf.—THE MOST convenient article ever offered to Housekeepers. One Agent made $144.67 in ten days. No freight charges.
Address, B. S. HARTZELL & CO.
126 South Third St., Philadelphia.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.**, 409 Washington Street, Boston, Mass.

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine.

ACTIVE AGENTS, Teachers, Students, Men And WOMEN Wanted to Sell TESTIMONY OF THE AGES. By Herbert W. Morris, D. D. Author of Science and the Bible, etc. A Grand Array of Evidences to the Truth of the Word of God from History, Natural Sciences, Modern Research and Every Department of Human Knowledge. Recommended by the Press and Leading Clergy of all Denominations. A Magnificent Volume Suited to the Times. Clear Type. Fine Illustrations, Paper and Binding. Sells rapidly and Agents Easily Clear **$60 to $100 per month.** Send for Description and Terms to
J. C. McCURDY & CO., Philadelphia, Pa.

$5 to $20 per day at home. Samples worth $5 free. Address Stinson & Co., Portland, Maine.

Miscellaneous.

CARPETS.

MOQUETTE CARPETS.—We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS.—Having exhausted our first offering of 75 cent Tapestry Carpets, we have placed on sale for a few days, another lot of the SAME GOODS at the SAME LOW PRICE. These goods are equal to those sold elsewhere at 90 cents and $1. We have other goods varying in price up to $1.15.

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

INGRAINS—We have of the best Extra Superior Grade a very full line from 75 cts. to 90 cts. per yard. Also, a line a grade lower at 65 cts. to 75 cts. —all wool.

Persons in want of CARPETS will do well to call on us before purchasing. Every Carpet is warranted as represented. Full satisfaction guaranteed or the money refunded.

J. & J. DOBSON,
CARPET MANUFACTURERS,
40 and 42 WEST 14th ST., NEW YORK.
John Van Gaasbeek, Manager.

SEND STAMP for New Book on RUPTURE, Rubber Truss Co., NEW HAVEN, CONN.

HOPE FOR THE **DEAF**
Garmore's Artificial Ear Drums
PERFECTLY RESTORE THE HEARING and perform the work of the **Natural Drum.** Always in position, **but invisible to others.** All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular.
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S. W. Corner 5th & Race Sts., Cincinnati, O.

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102 **YOUR NAME** In New Type on 102 Chromos, 10c. All new styles, designed by best artists. *Bouquets, Gold Chromo, Birds, Landscapes, Panels, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

40 Happy Day, Chromo, Lace, &c., Cards, with name & morocco case 10c. H. M. COOK, Meriden, Conn.

The Ladies AGENTS WANTED for "The Ladies of the White House or in the Homes of the Presidents," the most interesting book of WASHINGTON LIFE ever published. A History of every Administration from WASHINGTON to the present time. Includes much Personal and Private history never before published. Address BRADLEY & CO., 66 N. Fourth St., Phila., Pa. —OF THE— **White House.**
☞ Our new edition contains portrait and sketch of MRS. GARFIELD.

Trade **LONDON PURPLE.** Mark

The best insecticide ever used for the destruction of the Potato Bug, Cotton Worm, and Canker worm Sold by all wholesale druggists and stores throughout the United States. If not obtainable of nearest dealer send direct to sole manufacturers. HEMINGWAY'S LONDON PURPLE CO., (Limited.)
60 Mark Lane, London, England. 90 Water St., N. Y. P. O. Box 990.

Professor C. V. Riley says: "It can be more effectually sprinkled or sprayed on to the plant than Paris green by virtue of its greater fineness."

Professor C. E. Bessey says: "It quickly kills both the Larvæ and the Winged Insects."

Professor A. J. Cook says: "With this cheap poison we have no longer reason to fear such enemies as the canker worm, etc."

Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground, either dead or in a dying condition, in less than six hours.

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BAUGH'S ECONOMICAL FERTILIZER.
Price $30. Per Ton of 2,000 Pounds.
☞ CONSULT YOUR OWN INTERESTS AND SAVE MONEY BY USING THESE FERTILIZERS.
Circulars giving guaranteed analysis sent free upon application.
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PERFECTED **BUTTER COLOR**
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
★ USE ★ ONLY ★ THIS ★ THE ★ FIRST ★ AND ★ THE ★ BEST ★

News of the Week.

HOME NEWS.

MONDAY, May 2, 1881.

The floods in the West have been doing much damage since our last report. At East St. Paul, Minn., streets were submerged and at Carver, the inhabitants in the lower part of the town were obliged to flee to higher ground. The lowlands along the Mississippi were flooded. Much damage was done to crops and stock. Near Des Moines, Iowa, twenty families were kept out of their dwellings for several days. Near Quincy, Ill., a strip of highly cultivated land, from three to eight miles wide and 50 miles long, was completely submerged. The Missouri River at Atchinson, Kan., was over 22 feet above low water mark, and the flood there equals the notable one of 1844. At Nebraska City, Neb., about 400 persons were rescued from the floods, whose houses were swept away and 8,000 head of stock were lost. At Kansas City, Mo., the waters rushed over the lower town so rapidly that the inhabitants could only flee for their lives without being able to remove their household goods. It is said that fully 6,000 people in Missouri were driven from their homes.

A bill has been introduced into the New York Legislature requiring telegraph and telephone wires in the city of New York to be put under ground. With the new system of electric lighting, which will be undoubtedly introduced in all cities of considerable size, there will be an additional reason for getting the wires out of the way. In Germany the wires have been put under ground with manifest advantage.

We have to record this week the death of two eminent men of letters—John G. Palfrey and James T. Fields. The former, the historian of New England, died on the 26th inst., aged nearly 85 years. He was born in Boston May 2, 1796, and graduated at Harvard in 1815. He was at one time editor of the North American Review and also at various times held office under the government. He has written a large number of books on a wide range of subjects.

James T. Fields, poet, lecturer and publisher, died in Boston on Sunday evening, the 24th inst. He was born at Portsmouth, N. H., Dec. 31, 1817. He studied at the Portsmouth High School, but did not receive a collegiate education. He was for some time a member of the publishing firm known as Tichnor & Fields, Boston. He was a poet of considerable reputation, a lecturer of acknowledged power and grace, a man of most genial manner.

A sensible bill has recently been introduced into the Massachusetts Legislature, which provides that before a liquor saloon is opened for the sale of intoxicating liquor the consent of a majority of the property owners in the vicinity shall be obtained. It is on the ground that a liquor saloon partakes of the character of a nuisance.

President Garfield received a miniature bale of cotton the other day from an ardent admirer at Fort Worth, Texas. It was neatly bound with polished brass strips, and marked as if ready for shipping. It was accompanied by the following letter: "By this mail I send you a bale of cotton to enter your cabinet of curiosities. The fortunate people out here are free from general elections for two years, and have devoted their time to increasing the importance of their king—cotton—and enhancing the value of his empire—Texas.

Vermont is the only State that has not a single Chinaman. North Carolina and Delaware have each one, and Alabama four. The largest number in any Southern State is 435, and Louisiana is the State. Sugar growing has brought them there. The other States and Territories in which they are most numerous are: Pennsylvania, 170; Illinois, 214; Utah 518; Arizona, 632; New York, 942; Montana, 1,764; Idaho, 3,378; Nevada, 5,423; Oregon, 9,515, and California, 75,122.

Contracts have been made to carry 60,000 emigrants from Norway and Sweden to Hull, whence they will proceed to Liverpool and thence to America.

On the 25th inst. the statue of the late Admiral Farragut, U. S. N., was unveiled at Washington with imposing ceremonies. The statue represents Farragut with a marine glass in his left hand, his foot on a block and tackle and supposed to be standing on the Hartford. President Garfield, Gen. Maynard and Senator Voorhees made the addresses of the occasion. The statue cost $20,000, and Vinnie Ream was the sculptor.

The question of free canals was settled, for the present, in the State Senate on the 27th inst. Mr. Forster's resolution amending the Constitution so as to abolish all tolls on the Erie canal and providing for its maintenance by a tax on the people, failed to pass. The prevailing belief is that a free canal is not so much needed as an enlargement or increase of its capacity, but the present Constitution does not permit the State to make any improvement beyond keeping it in repairs.

Illinois affords a slight indication of what may be expected when the women vote. They are asserting their new rights mostly in temperance issues. In one town in Illinois over a thousand votes were polled by the women, and in another all their candidates were elected by a majority of 500.

The executive committee of the World's Fair Commission held a brief session on the 27th inst. No business was transacted, the regular public meeting of the commission being adjourned until next Wednesday. It is stated that T. F. Talcott, one of the active promoters of the project, has resigned from the commission. Talcott is reported as saying, that the transportation companies wanted to reap without sowing. Their policy was disheartening, and he washed his hands of the whole affair. The citizens had raised a million, which was enough to show their earnestness.

The sum of $1,630,000 is required to pay the salaries of the members of the House of Representatives and their mileage. In addition to this the last House voted itself $125 for each member for newspapers and postage stamps, making an additional $37,725. The clerk disbursed on account of salaries to stationery clerks $221,449 last year, exclusive of $25,000 which the Treasury Department paid direct to the stenographers. During a recess the persons who receive compensation are only about one hundred less than at other times. The cost for the Senate is about $600,000 a year, nearly $400,000 going for salaries and mileage.

Secretary Blaine recently authorized the preparation of working drawings and estimates of the erection of the monument to George Washington at his birthplace in Virginia. The sum appropriated was $30,000.

The developments of the Star Route mail service jobbery promise to open one of the most discreditable chapters of our interior political history. For the people to be robbed of millions of dollars by rascally contractors and their confederates is bad enough, if that were all; but when the stolen money goes, as is charged, to swell a corruption fund and to buy votes by wholesale, the climax of outrage is reached and the infamy becomes, as it were, monumental.

The prohibition law in Kansas has not gone into effect till to-day, yet in most towns saloons are already closed, and there was not to be an open bar in the State at the beginning of this month. The Governor of the State says that many of the saloon keepers have removed to Missouri, "but for every saloon keeper that goes out of Kansas on account of the prohibitory law a sufficient number of sober, industrious, energetic families come into the State to build a school-house."

There is a movement on the part of certain persons who profess to be governed by a desire to improve the condition of the colored race in America to found a colony in New Jersey, where all the industrial pursuits will be taught to colored men, with a view of their becoming qualified to fill responsible positions in factories of all kinds.

The flood of immigrants across the State to the West is as great by the Erie as by the Central. Last week the Erie carried 2,661 immigrants into Buffalo, 2,071 of whom went West by the Great Western Railroad.

After June 1st postal cards will be unmailable if anything but the address is written on the address side. An order to this effect was issued recently by the Post Office Department.

Good news! The Senate, it is reported, will soon take up the executive business, for which it was called together. The unopposed nominations will be at once confirmed, the Chinese treaty will be at once considered, and the intolerable proceedings of the past few weeks will be brought to an end. Can it be!

North Carolina is agitating the temperance question. A Prohibition Convention was held on the 27th inst., about 450 delegates being present, representing every county in the State. State, district and county committees will be appointed to push the work, and the campaign against intemperance promises to be a lively and aggressive one. The popular vote on prohibition will be taken on the first Monday in August.

A Miserable Little Woman.

A lady writes: "Looking back to the time when I commenced using your Compound Oxygen, I can scarcely believe myself to be the miserable little woman I was. I had not had one day's good health in almost seven years, and was going down every day. Can now work with delight; am still gaining in flesh. *My case seems somewhat tedious, but none the less sure.*" Treatise on "Compound Oxygen" sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

AGRICULTURAL NEWS.

Upon motion of Sir. H. Maxwell, the British House of Commons, April 1, after prolonged debate, resolved, by a vote of 75 to 59, to put the trade in adulterations of butter and substitutes for it under strict governmental supervision ...A bill enacting severe penalties for adulteration of butter and cheese is before the Illinois legislature. It also provides for a State inspector of these commodities..... The London Times reports that in the small county of Bedfordshire 15,000 acres have been put out of cultivation by reason of agricultural distress. .....The Welland Canal has been opened to-day..... ..Last Thursday the Girard Point Grain Elevator, situated near the junction of the Schuylkill and Delaware Rivers, Philadelphia, with a good deal of the surrounding property, was destroyed by fire along with its contents—67,000 bushels of wheat and 30,000 bushels of corn. Total loss about $700,000

The Texas wool clip is a fortnight later than usual.....A canning factory is projected at Poughkeepsie, N. Y., mostly for tomatoes..... The St. Louis Grand Jury last Wednesday made a report to the Criminal Court of 17 indictments against Robert L. Lindsay for connection with the Missouri land swindle, recently unearthed, nine against John Brady, and four against Herman Schuster, also connected in the land frauds..... Two of the largest and handsomest maple groves in this State are at North Harpersfield, Delaware County. They contain 4,200 trees, and will furnish seven tons of sugar. In 1875 there was 200,000 pounds of sugar made in the town of Harpersfield, and it is estimated that the production this year will exceed that enormous quantity.....At Blidah, Algeria, may be seen eucalypti, only five years old, 60 feet high.....A skeptical Frenchman writes to the Prefect of Police at Paris that all the asserted discoveries in regard to trichinæ are mere inventions of vegetarians, and he offers to prove it by living three days off nothing but pork that is alleged to be diseased, if the Prefect will supply the meat—a Gallic mode of suicide..... A resolution has been introduced into the Arkansas Legislature to hold a U. S. Convention of farmers in St. Louis next October.....That project of the Freedmen's Oklahoma Association, promising 160 acres of the public land to every freedman that settles in Oklahoma, has been declared illegal by the Commissioner of the General Land Office in Washington. The government which prevented Col. Carpenter and Capt. Payne and their white followers from occupying the Choctaw Indian reservation is not likely to be more complaisant to the colored "man and brother."..... Special efforts are being made for the success of the meeting of the Mississippi Valley Cotton Planters' Association at Memphis, May 25. Delegates are invited from all the Cotton States, and from various manufactories of this country and England interested in agriculture or cotton manufacture. It is proposed to make the Memphis gathering a tender for awakening popular interest in the exposition at Atlanta in October..... ... The bill introduced into the Massachusetts Senate, allowing the alumni of the Agricultural College representation on its Board of Trustees, has been defeated by means which the editor of the Haverhill Gazette, who was present, characterizes as "a disgrace to the trustees and the Senate."..... Gen. Le Duc has published a pamphlet showing why he should "stick," by showing the good he has done.....The Illinois Agricultural College, at Champaign, has now 280 students and a newly-elected Regent, Dr. Peabody..... ..Iowa has $5,000,000 worth of real estate exempt from taxation under the Timber Culture Act.....That beet sugar company at Franklin, Mass., will try the experiment another season. The property of the old company has been sold to a new one for $60,000. Contracts are to be made at once for a supply of new beets, and the probabilities of complete success are thought to be stronger than ever before.....Flax culture is growing rapidly and largely in the West. .....The Russian Government announces that the grain crop of the old Caucasus is almost certain to prove a failure; that locusts have begun to appear in incredible numbers in all districts upon the Caspian Sea; that no such visitation has been known before, and that in one district 39 tons of locusts' eggs were destroyed. The Government also points out that in the event of the grain crop failing (and Tiflis merchants indorse the same view), the United States will have to supply the grain, which they can do cheaper than the planters represented by the merchants of Odessa and Tanganrog.....With regard to the prices of wool, it is safe to say that no important improvement is likely to take place in the near future, owing to the nearness of the new clip, and the large supplies of foreign and domestic still available on the seaboard. The 1881 clip of California is held at San Francisco at prices too high to tempt Eastern purchasers in the present condition of their market, and all indications point to correspondingly extreme views on the part of growers in the South and West..... The New York State Legislature has appropriated $15,000 for the support of the State Fish Commission.....A Swiss colony has been established in Laurel county, Tenn. Cattle breeding, cheese making, tanning and wine growing are the industries which the settlers will become interested in. The colony is aided by a company of capitalists who planted a very successful Swiss colony at Highland, Ill, about 1830. Tennessee is to be congratulated upon so industrious and hardy an accession.....Seth Green states that he is convinced, on investigation, that an acre of water can be made to produce as much food as an acre of land. He adds that the improved acres of land in New York State are valued in the aggregate at $1,221,472,277, or $76.94 per acre, on the average. At this rate of valuation, the 647 inland lakes in New York State, covering an area of 466,457 acres, if properly stocked with fish, would be worth $35,889,200 as sources of food supply.

During the past week extraordinary depression has prevailed here in the line of ocean steam freights, which fell to quotations the lowest made in this market in a long period, leading, however, to freer movements, and, toward the close, a slight revival of firmness. Grain hence, by steam, for Liverpool, which went down 2½@2¾ pence per bushel, closed at 2¾d. bid; for Glasgow at 5d; for London at 4d; Bristol, Avonmouth and Cardiff at 5@5¼d.; Hull at 3⅞@4d., Havre at 11@13c., Antwerp at 4@4¼d., Rotterdam at 4⅛@5d., Bremen and Hamburg, on prompt shipments, at equal to 5@5½d. per bushel.....Owing to the low rates of freight, dealings in apples on export account have been lively here the past week. On the basis of 2s. 6d. to 2s. per barrel freight, contracts were made for 10,000 barrels to all ports against 3,100 barrels last week.....The arrivals here of hops since September 1, 1880, have been given at about 84,250 bales, against about 76,100 bales the preceding season; exports hence, in the same time, about 40,700 bales, against about 42,500 bales in the corresponding period in 1879-80.....

From European advices of April 11, we learn that in Germany Spring work was late, and the Wheat plant generally backward, but strong and healthy. In Holland vegetation was backward, and the Winter barley suffered from the severe frosts. In Roumania the weather had been favorable, and the growing crops were reported as being in healthy condition. In France the young wheats continued in a backward condition, but the greater part of the Spring sowings had been satisfactorily accomplished. In the United Kingdom there had been a week of dry and scorching east winds, which brought vegetation to a standstill. The wheats were looking very brown, but held their own fairly well. They were late for the time of year; not more forward than generally is the case the first week in March. On light soils the weather was injuring the wheat plant at the roots

A General Company of Preserved Food and Salted Provisions has just been formed in France. Its object is to form "preserving" establishments at home and abroad, and especially in the Danubian regions where there are great numbers of beeves, hogs and sheep whose preserved flesh it is proposed to introduce into France. Under Ministerial letters this Company is entirely exempt from taxation for three years—wonder whether its formation has had anything to do with the embargo on our "preserved" hog products!.....

An Important Statement.

[Boston Globe, March 22.]

Most of the readers of this paper will remember an article published in our columns some time since regarding the remarkable case of Mr. B. F. Larrabee, of the New York & Boston Dispatch Express Company. Mr. Larrabee had been given up to die by a number of our best physicians, his trouble being Bright's disease of the kidneys in its most aggravated form. To-day he is as well and healthy appearing a man as can be found upon our streets, and a goodly portion of his time is spent in answering letters and inquiries regarding his case, and in telling of the wonderful power which saved his life, restored his health and has kept him well ever since. These are facts which any one can readily verify by communicating with Mr. Larrabee.

In this connection there is an important fact which we specially desire to state. When we published the account of Mr. Larrabee's remarkable recovery many people said: "Oh, that is paid for." People seem willing to read column after column about the sufferings of humanity and the horrors of disease, but as soon as a newspaper, in the interests of its readers and humanity, points out a pure and valuable remedy for alleviating these sufferings or of curing these diseases, they say: "Oh, that is paid for." This is all wrong. We know whereof we affirm regarding Mr. Larrabee's case, and knew it at the time we published it, and the present case of Dr. Whitney, which follows, is of precisely the same nature We have friends who have been cured, and from personal knowledge we affirm as we do. The newspaper is the servant of the public, and as such should study the public needs. Bright's disease has ever been Considered an absolutely fatal complaint, but from the remarkable cases which have come under our observation we do not hesitate to pronounce it curable, even in its final stages. These are facts which the public are entitled to know, and as such we publish them. The following editorial, copied from the Marlboro (Mass.) Times, we give entire for the benefit of our readers:

"Dr. Alston W. Whitney, of West Newton, who was recently in the Massachusetts General Hospital to be treated for Bright's disease, is now at home, and what is rather remarkable for a regular old school physician is doctoring himself with a patent medicine, to wit: Warner's Safe Kidney and Liver Cure. And it is doing him good, too, and strong hopes are felt by all his intimate friends that he will soon be almost as good as new. We don't advertise the Safe Remedy, and so what we say of it is not a paid-for puff, but we cannot forbear saying that we consider it a most remarkable medicine for the relief of all urinary, kidney and liver troubles, and we have known of its having wonderful and most astonishing remedial effects in some chronic cases of derangement where all other specifics had failed. We have had occasion to recommend its use in several cases, and have never known anybody to use it that was not *immediately* and permanently benefited."

FOREIGN NEWS.

Across the Atlantic the United Kingdom, the first place we come to, is still chiefly interested in the "Irish Question" in home affairs, while in foreign matters the Eastern Question has been temporarily over-ridden by interest in the Tunisian Question. Gladstone's Irish Land Bill does not content the Irish agitators, though its provisions are so liberal to the tenantry as to greatly displease both many of the Liberals, headed by the Duke of Argyle, who has resigned from the Cabinet in displeasure, and all the Conservatives, headed by Sir Stafford Northcote, who has succeeded Earl Beaconsfield as head of that party. It is doubtful if the extreme Irish party would be satisfied with any land measure that fell short of making a free gift of the land to the tenants—and then some of them would want donations to stock, till and fertilize it, the last preferably with the carcasses of the late landlords. Arrests still continue in Ireland under the Coercion Acts, chiefly of loud-mouthed nobodies, although it is now announced that Mr. John Dillon, M. P., and the other prominent members of the Land League will be promptly added to the number of prisoners. Dublin has just been "proclaimed"—that is, announced by the Government to be now subject to the Coercion Act, so that there, as in the other "proclaimed" districts, anybody may be arrested without charge and imprisoned without trial until the term for which the act was passed expires. The "proclamation" of Dublin causes "intense excitement," we are told by this morning's cable. .....The "Eastern Question" having been *temporarily* settled by the acceptance by Greece of Turkey's *ultimatum* with regard to its concessions of territory, the "Tunisian Question," as foreshadowed in our editorial of a few weeks ago, has taken the foremost place among the possible causes of a European embroglio. Tunis, under a ruler entitled Bey, is nominally a part of the Ottoman Empire, owing allegiance to the Sultan, but usually paying to him neither that nor anything else in the shape of revenue or reverence. On its Western borders, adjoining the French dependency of Algeria, live a bigoted Moslem tribe known to the "Frankish Infidels" by the name of Koumirs. They have always been hostile to the French in Algeria and showed it a few months ago by killing three of 'em. Of late Italian and French influences have been diplomatically contending in Tunis and the latter, formerly all-powerful, has been much weakened by its rival. The murder of those three Frenchmen by the semi-savage Koumirs has been seized upon to replace the "losable" French influence by "tenable" French domination. So war nominally against the Koumirs really against the Bey, was declared a couple of weeks ago, and a body of 40,000 picked French troops have surrounded "Koumirland," and seized upon the chief frontier points on the way to Tunis. The Bey, *in extremis*, appealed to the harrassed Sultan who blustered a

trifle as usual; Italy was "agitated" so that the ministry was overthrown for allowing the French to begin the war. The succeeding Ministry has done nothing to check it, however, yet it has just received an overwhelming "vote of confidence." France will "push things"; Italy will grumble anyhow and if she can get powerful "backing," like Bismarck's, for instance, will go to war; Turkey will continue to protest and the future will show the end of it all.

Kidney-Wort is a remedy which removes foul humors from the blood, and creates healthy action in every organ. Torpid kidneys and liver lead to gravel, diabetes, constipation, piles and rheumatism. Kidney-Wort is the surest and safest remedy now to use.—Rocky Mountain News.

LYDIA E. PINKHAM'S VEGETABLE COMPOUND is a remarkable remedy for all those painful complaints and weaknesses so common to our best female population. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Why do Hop Bitters cure so much? Because they give good digestion, rich blood and healthy action of all the organs.

BURNETT'S COCOAINE

Promotes a Vigorous and Healthy Growth of the Hair.

It has been used in thousands of cases where the hair was coming out, and has never failed to arrest its decay.

USE **Burnett's Flavoring Extracts**—the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, April 30.

Boston.—The following are the prices paid by receivers: BUTTER—New Northern — Vermont dairy lots, choice, 24@25c; New York dairy lots, choice, 23@24c; fair to good, 15@20c; New Western—Choice creameries at 28@30c, do. fair to good at 22@27c, ladle-packed choice at 21@22c, do. fair to good at 16@18c; old butter—Creameries at 18c, Fall made dairy at 18c, choice dairy at 16@18c, common to good dairy at 10@15c, and Western ladle-packed 10@15c. CHEESE—Northern factory—choice 13¼@14c ₩ lb; fair to good at 11¼@13c, anti skim at 8@11c; Western factory—choice, 13¼@14c; fair to good, 11@12½c; skim, 7@10c. EGGS—Eastern at 16@16½c, Northern 16@16½c, Western 15½@16c ₩ doz. BEANS—Northern hand-picked Pea at $2.50@2.55 ₩ bushel; do New York at $2.45@2.50; do. common to good $2.25@2 40; medium choice $2.40@2 50; common to good $2 20@2.30; Yellow Eyes $2 10@2 50; Red Kidneys at $1.90@1.70. Canada Peas 75c@$1. 10 ₩ bushel for common to choice. Green Peas at $1.25@1.70. POTATOES are very firm; we quote Aroostook Rose at $1@1 05 ₩ bushel; Maine Central Rose at 95c@$1; Northern Rose at 90@95c; Prolifics at 90c@$1, and Peerless at 85c ₩ bushel. APPLES at $1 @2 50 ₩ bbl. Cranberries at $3@6. Onions, Red, $3@3 50, White $3 75@4 ₩ bbl, and Bermuda $2.25@2 50 ₩ crate. PROVISIONS—Have been unsettled with a fair demand. Quotations: PORK, extra prime, at $13.50@14 ₩ bbl; mess at $17@19; Boston clear at $21.60@22, and backs at $22.50@23 ₩ bbl. BEEF is steady; we quote Western mess at $10@10 50 ₩ bbl; extra mess at $10,50@11 50; and extra plate at $13@14; Beef Hams at $17.00@18 50, and Beef Tongues $26@27 ₩ bbl. Smoked Hams steady; we quote Western smoked at 10½@11½c ₩ lb; Boston at 10½@11¼c, and 11½@12c for fancy in bags. LARD at 12¼@12½c for Western kettle rendered, and 12¼@12½c ₩ lb, for Boston rendered. Hogs at 6¾@7¼c ₩ lb live weight, and 8¼@8½c ₩ lb for city dressed. SEEDS—Calcutta Linseed is now nominally $2 05@2 10 ₩ bushel. There is a good demand for Grass Seed. We quote Clover Seed at 8@9c ₩ lb for Western and New York; Timothy at $2.75@2.80; Red Top at $2.05@2.15 ₩ bag; and Canary Seed at $1.50@1.75 ₩ bag.

Chicago.—WHEAT active but unsettled; No. 2 red Winter, $1.04@1.05; No. 2 Chicago Spring, $1 00¾@1.00¾, cash; No. 3 do., 90@95½c.; rejected, 73½@80c. CORN steady with a fair demand at 42½c., cash; rejected, 38½c. OATS quiet and weak at 35½c. RYE strong at $1.14. BARLEY dull at $1.05. FLAX SEED, $1.15. PORK quiet but steady at $17 40, cash and May; $17.42½ June; $17.52½ July. LARD in fair demand but lower, at $11.20@11.22½, cash and May; $11.27½, June; $11.35, July; $11 40, August. BULK MEATS steady and unchanged. EGGS, 11½@12c. BUTTER—Creamery, choice, 32@33c.; creamery, fair to good, 29@30c.; dairy, choice, 25@27c.; dairy, fair to good, 20@24c; packing stock, 13@15c; grease, 8@10c. CHEESE—Full cream, 13@14c.; part skim, extra, 10½@11c.; part skim, fair to good, 8@9½c.; part skim, hard, 6@7c.; low grades, 3@5c. SEEDS—The offerings are generally light; clover steady, with prime seed quotable at $4.40@4 50, and mammoth at $5@5 40; Timothy rules steady, with prime salable at $2 80 and choice seed at $2 90; flax is a trifle weaker, selling at $1.17@1 17½, delivered; Hungarian continues firm at $1.55@1.75 for German. HOGS—Demand moderate; mixed packing, $5 75@6 05; light, $5 85@6 10; choice heavy, $6 10@6 40; prices 5@10c lower. CATTLE—common to fair shipping, $4 60@5 10; good to choice, $5 40@5 65; butchers' steady at $2 50@4 50; stockers and feeders, $3 20@4 80; extra feeders, $4 90@5 20. SHEEP—Market strong and brisk; common to medium, $4 90@5 30; good to choice, $5 60@6 25.

Cincinnati.—WHEAT in fair demand; No. 2 Red Winter, $1 12. CORN steady; No. 2 Mixed, 47½c. OATS firm; No. 2 Mixed, 40c. RYE dull; No. 2 at $1 22. BARLEY scarce and firm, No. 2 Fall held at $1 15. PORK firm at $17 50. Lard in fair demand at $11 20@11 25. Bulk-meats firm; Shoulders, $5 75; Clear Rib, $8 55. Bacon firm. Shoulders, $6 75; Clear Rib, $9 37½; Clear Sides, $9 75. BUTTER—Prices have suffered a farther decline of fully 2@3c ₩ lb on all grades during the week. All butter should now be sold packed. Fancy Creamery sells at 29@30c, prime do at 25@28c, choice Dairy at 23@25c, choice Western Reserve at 20@23c, prime to choice Central Ohio at 17@18c, medium do. at 13@15c and inferior is dull at $10@12c ₩ lb. CHEESE—There is a moderate supply of choice cured factory offered and it sells at 12½@13c, but prime to choice Northwestern is selling at 10@11¼c ₩ lb. Some new Ohio factory is arriving, but it is poor and unsalable. SEED—Clover and Timothy are dull and nominal but Millet is in active demand, scarce and higher. Prime to choice Clover sells at 7½@8c ₩ lb, and Timothy at $2 65@$2 75 ₩ bushel from store. Round lots on arrival would not bring these prices. Flaxseed is steady at $1 10@1 12½ ₩ bushel. German Millet sells at $1 90@2 00, common Millet at $1 40@1 50, and Hungarian Grass at $1 25 ₩ bushel. Hogs quiet; common and light, $4.50@$6; packing and butchers' $5.50@6.35.

St. Louis.—WHEAT No. 2 Red Fall $2.06⅞ cash; $1.07@1 07⅛ May; $1.06@1.07 June; $1.01@1.01⅝ July, 98¼c. August; 97½@97⅝c. all the year; No 3 do $1.02⅛ bid; No. 4 do 92c. bid. CORN dull at 42¾@43c. cash; 42⅛c. May and June; 42⅝@42⅞c. July; 43⅛c. August. OATS firm at 35⅜@35⅝c. cash 34⅞c. May; 32⅜c. July. RYE $1.10 bid. PORK quiet; jobbing at $17.60. Lard dull at 11⅛c. bid. Bulkmeats firm with a fair demand for car lots; shoulders $5.70; clear rib $8 60; clear sides $8 80@8.85. Bacon firm; shoulders 6¼c.; clear rib $9.20@9 25; clear sides $9 50. Hogs fairly active; Yorkers and Baltimores $5 85@6; mixed packing $5 75@6; choice to fancy $6 15@6 35; pigs $5@5.40. CATTLE Supply very light; little doing; prices weak on heavy grades—quotations the same as those last given. SHEEP steady; wooled $4 60@5 70; clipped $3.75@4.50.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, April 30, 1881.

BEANS AND PEAS.—Another advance is noted in beans and the high prices do not check the demand for home or export use. Very choice medium and marrows are held at $1.75 for small trade. Red kidneys do a shade better for selected. Prime green peas have a fair sale, poor lots neglected; prime Wis. $1.57@1.60; Southern B. E. peas $3.10@3.20 per 2-bu. bag, an advance.

Medium and marrow beans, prime, $2 65@2.70; other $2.50@2 60; white kidney and pea $2.30@2 60 red kidney, prime $1 60@1.65, other, $1.40@1.50; black or turtle soup $1.45@1.50; Lima, $5@5.50 nominal.

MAPLE SUGAR.—The demand is over for steady purposes and the light supply is quoted easy. Sugar 7@10c.; syrup 10@11 lbs. to gallon, 60@$1 in can.

BUTTER.—The market is in a broken, unsettled condition and prices show a marked decline. Supplies have come forward faster than could be used, with quotations where they were a few days ago and what accommodation that has thus formed has produced the decline. Consumption will increase if prices favor retailers, and dealers look for an active trade especially as quality favors buyers in almost all cases. Common butter is hardly looked at while good to prime table stock is quoted where it is. Exporters are doing a little more but the demand is not a feature.

New Butter.—Creamery, choice Western and Pa. 24c. other, 23@23c; sweet cream, 22@23c.; State half tubs, choice, 21c; fair to prime, 17@20c. Welsh, choice, 20@21c.; other 17@19c.; very common or stale new 14@17c.; Western imitation creamery 17@21c.; do dairy 15@19c., factory 15@17c.

Old Butter ranges 25c.

Receipts for week 20,365 pkgs.

Exports do. 1,150 do.

CHEESE.—Receipts have increased moderately only and prices have tended lower on new with 13c. the outside rate. Old has been held steady. Exports the past week have been 17,890 boxes. Quotations are for

New at 13c. for best full cream; 11½@12½c. for fair and good lots; do. full-skimmed at 4@6c. old as follows fancy at 13¾@14c.; fine and prime, 12¾@13¼c.; do. fair, at 12@12¼c.; do. half-skimmed, 8@9c. Ohio factory, fine, 13c.; do. good to prime, 11¾@12¾c.; do. fair to good, 10½@11¼c.; do. poor to fair 8@10c. Skimmed creamery, 4@6c

Receipts for week, 16,796 boxes.

Exports for week, 18,391 boxes.

Liverpool cable, 70s.

Steam to Liverpool, 17s.6d.@22s.6d.

COTTON.—Trade has been slack this week and prices varying slightly; latest prices are for

May, 10.40@10.5 c.; June, 10.58@10.59c.; July, 10.67@10.68c.; August, 10.74c.; September, 10.46@10.47c.; October, 10 11@10.12c. November, 10@10.02c., December, 10@10.02c.; January, 10.10@10.12c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7 1-16	7 5-16	7 5-16
Strict ordinary	7 11-16	8 1-16	8 1-16
Good ordinary	8⅜	9 1-16	9 1-16
Strict good do	9¾	9 9-16	9 9-16
Low middling	9 15-16	10 5-16	10 5-16
Strict low middling	10 7-16	10⅜	10⅜
Middling	10 1-16	10 15-16	10 15-16
Good middling	11¼	11⅜	11⅜
Strict good middling	11¼	11⅜	11⅜
Middling Fair	12¾	12⅜	12⅜
Fair	13	13¼	13⅜

STAINED.

Good ordinary	6⅝	Low middling	8⅛
Strict good ordinary	7⅜	Middling	9 13-16

Receipts for the week, 16,300 bales, Exports do. 13,718 do.

DRIED FRUITS.—Apples have a good inquiry and rule firm in price. Peaches are wanted at steady prices and small fruits generally are quiet but firm. Quotations are for

Evaporated apples at 8½@9c. for prime and choice stock, sliced apples at 4¾@5¾c. for good to choice North Carolina, 4@4½c. for V., apples, 4@4½c. for Tenn do. 4½@5c. for State do; 4½@4¾c. for western, Ohio and Mich. Peaches at 23@25c. for evaporated peeled; 13½c. for unpeeled do; N. C. peeled at 19@22c.; for the better qualities of new and 12@13c. for old; unpeeled peaches at 5¾@5¾c. for halves and 5½c. for quarters. Plums at 15@16c. Blackberries at 9c. for prime. Cherries at 15c. Raspberries at 24@26c. Whortleberries 11@11½c.

Receipts for the week, all kinds, 330 pkgs.

Exports dried apples, 3,925 pkgs.

EGGS—Receipts for week, 14,115 bbls.; do. last week 11,820 bbls. The market has fallen into a cheaper position and can hardly recover again at this part of the season. Since our last best fresh are 5c. off per doz. Duck and geese are also lower. Southern here are not turning out good with warm weather at both ends of the line of shipment.

Near points, 16@16½c.; State and Pa., 15½@15¾c.; Western, 15@15½c.; Southern, 15c.; poorly packed and small run 14@14½c.; goose 27@28c. duck, 20@21c.

FLOUR.—Offerings are larger and prices weak at a decline in sympathy with wheat.

Latest prices are: $3.80@4.50 for very inferior to strictly fancy superfine State and Western; $4.10@4.65 for poor to choice extra State and Western, odd lots and lines; $4 65@4 85 for choice to fancy do.; Inferior to good white wheat, trade and family extras, $4.50@5.50; good to choice do. at $5.50@6.35, (very choice up to $6.50 and fancy at $6.75) red and amber winter wheat inferior to choice trade and family at $4.50@6.25; round hoop Ohio, $4.20@4 85; and trade and family brands of do. at $5.00@6.25, the latter for very choice; St. Louis $4.75@5.65 for inferior to good extra, $5.65@6.50 for good to very choice, and up to $6.75@7.00 for very fancy brands; Minn. clear, inferior to very choice at $4.50@5.85; Minnesota "straight," poor to very choice, at $5 40@6.75, and patent inferior to fancy at $5.75@8.00; city mill extra at $5.55@5.70 for the West Indies; do. for England at $4.50@4.75 for poor to choice spring wheat; do. trade and family extras $5 70@6.75 do. for South America, $5.75@6.00, the latter for very choice; No. 2 at $3 00@3.75 for very poor to very fancy.

Receipts for week, flour, bbls. 110,600; corn meal, do. 4,605; wheat, bush., 903,530, corn, do. 559,250; oats do. 469,700; rye, do. 3,672; malt, do. 55,000; barley, do. 79,710; beans, do., 2,960 rice, pkgs. 828.

Exports for week, flour, bbls. 77 500; corn meal, do. 7,575; wheat, bush., 1,005 054; corn, do. 472,151; oats, do. 2,239; peas, do. 6,650, beans, pkgs. 497. rice do. 610.

CORN MEAL.—Quoted at $3,25 for Brandywine and $2.75@3.25 for yellow Western.

FRESH FRUITS.—Exports of apples for week 7,265 bbls.; since June 1st, 180,300 do.; same time last year, 85,800 do. Apples are plenty and dull for most grades. Some well kept Spys are retailing for $2.50. Baldwins and Russets range at $1.25@2.25. Cranberries quoted without sales at 75c.@$1.50. Hot-house grapes, black Hamburg, $2@2.50. Strawberries are very variable in condition; prime are worth 40@50c. ₩ qt., but many sell at 25@35c.; sift lots, 6@10c. Peanuts begin to move and prices are a shade better. Va. hand-picked 4¼@4¾c.; other, 3¾@4½c; shelled 3@3½c; pecans 7@8c.

GRAIN.—Wheat closed weak after an active week's business, with shipments for the week of 1,035,000 bush.; latest prices are for

No. 1 white at $1.23¾@1.24¼; do. April at $1.23@1.23¼; do. May at $1.19¾@1.20¼; do. June at $1 18@1.18½; No. 2 white at $1.21¼@1.21¾; ungraded white $1.20@1.23. No. 1 red at $1.23¼@1 30½; No. 2 red at $1.26¼@1.27½; do. April at $1.25¼@1.27¼; do. May at $1.21¾@1.22¾; do. June at $1.19¾@1.20¾; do, July at $1.18@1.18¾; No. 3 red at $1.23¾@1.23½; do. steamer at $1.12; ungraded red at $1.10@$1.29. No. 2 Chicago Spring at $1.24¾@1.25; No. 2 Northwest at $1.23.

Rye at $1.10@ .15.

Corn has been active and higher, but closed weak, with sales of

New York No. 2 at 63¼@63c; do. April at 63@64¼c., do May at 56¾@56¾c.; do, June at 54¾@54¾c.; do. July at 55¼c., No. 3 at 56¾@57¼c.; ungraded mixed Western at 57@64c; New York steamer mixed at 59½@60c.; New York yellow at 63c.

Oats have been in liberal demand and closed at for

No. 1 white at 53c.; New York No. 2 white at 50c.; No. 3 white at 48c.; New York No. 2 at 45¼@46c.; do. April at 45½c.; do. May at 44¾@44¼c.; do. June at 44¾@45c.; do. July at 45c.; NO 3 at 45c.; ungraded white Western at 46@51½c.; ungraded mixed Western at 44@46¾c.; No. 2 Chicago at 46c. asked.

HAY AND STRAW.—Offerings continue liberal of low grades for which prices are easy; prime hay is in fair demand, small receipts and firm. Quotations are as follows:

Prime timothy hay at $1.10@1.15 ₩ 100 lbs.; medium timothy at 95c.@$1.00 do., shipping grades at 85@90c. do.; clover mixed at 95c.@$1.00. clover at 80@85c. do. Straw—No. 1 rye at $1.05@1.10 ₩ 100 lbs.; No. 2 rye at 65@70c. do.; oat and wheat at 60@60c. do.

Exports for week, 2,314 bales; since Jan. 1, 1881, 26,237 do.; same time last year, 33,800 do.

HOPS.—Exports for the week only 220 bales. There is a dull shipping demand and moderate trade from brewers, but prices hold steady. Quotations are for

	Cents per lb	
New Yorks, crop 1880, choice	22	@23
Do. medium	19	@20
New Yorks, crop 1880, low to fair	12	@15
Eastern, crop 1880	14	@22
Wisconsin, crop 1880	14	@22
Yearlings, crop 1879, choice	12	@18
Olds, all growths	4	@10
Pacific coast, new	19	@23
Bavarians	30	@35

Receipts for week, 938 bales.

Exports do., 280 do.

BEESWAX.—A small trade noted and a steady market, quoted at 25@25½c.

POULTRY AND GAME.—Prices are strong but the demand is limited to special buyers at this sum. Some remote packers begin to ship in ice.

Turkeys, prime fresh and frozen 18@19c.; good 16@18c.; large coarse 13@14c; chickens Spring 60@70c; Winter 50@55c; yearlings 18@20c.; good prime lots 16@17c; fowls, d. p. 15@16c.; scalded 13@16c. Capons, large, 28@30c.; small 25@27c. Ducks, choice, 25c.; other, 15@22c. Squabs, white, $4 ₩ doz. do. dark, $2.25@2 50.

Squab active in the absence of much game.

There is not much activity in hye as wants are small and about supplied by dressed. Prices are quite easy at the close.

Fowls, 12@13c.; roosters, 7@8c.; turkeys, 13@14c.; Spring chickens per pair, 75c.@$1.75; ducks, 87c.@$1.12; prime, 60@80c., other geese, $1@2; pigeons, 35@50c.

Game is of no moment. A few English snipe and plover, $1.75@2.

PROVISIONS.—Hog products have been more freely offered and prices weak.

Mess pork quoted at $16.00 for old and $17.75 for new, $17.25@17.50 for May delivery. Bacon at 8¾@9c. for long clear and 9¾ for short clear. Lard—Western steam at 10.62½ for May, 10.60@10.63½ for June, 10.67½ for July. Stearine at 13¾ Tallow at 6¼@6 9-16 for prime.

Receipts for week, beef, bbls. and tcs. 865; pork, bbls. 1,352; cut-meats, pkgs. 12,317; lard: do. 6,498.

Exports for week, beef bbls. and tcs., 1 130 pork, do. 3,878; cut-meats, lbs. 1,760,958; lard, do. 1,470,148.

SEED.—Clover is quiet at 8¼@9c. Timothy is inactive at $2 80@2 90.

TOBACCO.—Exporters have bought very moderately and the home trade has been without much animation with prices held steady. Quotations are for

WESTERN LEAF.

	Light.	Heavy
Lugs	4 @ 5½	5 @ 6½
Common leaf	5¼@ 6½	6 @ 7¾
Medium leaf	7 @ 8¾	7¾@ 9¾
Good leaf	8 @10	9¾@12
Fine leaf	9¾@11	11 @12
Selections	12 @13½	12 @14

SEEDLEAF, CROP OF 1879.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	5½@ 7
Penn. assorted, low	11 @13
Assorted, fair	14 @18
Assorted, fine	21 @25
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7 @10
Wrappers	12 @18
Wisconsin assorted	6 @ 9
Havana seed	14 @18
Wrappers	10 @15

VEGETABLES.—Some of the standard fine marks of potatoes hold good prices; newer sorts are lower. There is not likely to be a general advance, as the variety of Spring produce enlarges.

Bermuda potatoes $8@10 ₩ bbl.; Florida, $5@7; Early Rose, Nova Scotia and Me. $2 87@3 00, Maine $2.87@3.00, State, $2 50 do. bulk, $2.37@2 50, Peerless, $2.25@2.50 Mercer, $2@2 25 Jackson White, do-h, $2.11@2.37; Burbank, do-h, $2 50@2 62; do. bulk, $2 50@2.62; Snowflake, $2; do. do-h, $2.10, peach-blow do, $2 75@2.87. Peerless $2@2.25; sweet Pot. $1 50@2.50.

Some Southern stuff shows wide ranges; old stock almost nominal.

Florida green peas per crate $1@2; Savannah do. $1@3 Charleston do. $.@3 Florida string beans, 75c.@$1.50; do. tomatoes, $2.50@2.75 Bermuda do. boxes, 75c@$1; Fla. squashes ₩ crate 1@1.25; cauliflower do. $1.50@3 ₩ bbl., cabbages $2.50@3 50, Bermuda beets $2@2.50 ₩ crate; do. onions, $1.25 ₩ crate; Fla carrots $3.50@4 ₩ 100 bunches W. turnips N. C. $3@4; Norfolk Spinach, 25@.0c. ₩ bbl. do. radishes, 25@50c. ₩ 100 bunches; Chas. asparagus $4@6 ₩ doz; lettuce $2.50@3.50 per bbl.; cabbage, $2@3 ₩ 100 bunches; old turnips 50@75c. ₩ bbl.; beets 75c @$1; Hubbard and marrow squash, $1.25@1.50 ₩ bbl.; carrots $1@1.75; onions red $1.50@2. Hot-house mushrooms $1 ₩ lb.; lettuce 25@87c. ₩ doz.; radishes $1.50@2 ₩ 100 bunches; rhubarb, $2.50@3 do.; cucumbers $1@3 ₩ doz.

WOOL.—Trade has been dull again this week and the market has an easy look without, however, radical change in prices. Quotations are for

Ohio, Penn. and W. Va. XXX and picklock, 43@45c.; XX, 40@43½c.; X, 40@41c.; No. 1, 45@46c.; No. 2, 38@40c., common, 34@35c.; fine delaine, 43@45c.; medium combing and delaine, 45@47c.

Mich., Ind. and Wis. X and XX, 37@39c.; No. 1, 42@44c.; No. 2 and common 32@37c. fine delaine, 42@43c.; medium combing and delaine, 44@46c.

N. Y. State, N. H. and Vt. X and XX, 35@36; No. 1, 40@43; No. 2 and common 32@36c.; fine delaine, 39@42c.; medium combing and delaine, 43@44c.

Iowa, Ill., and Western X and XX, 34@36c.; No. 1, 40@42c.; No. 2 and common, 32@35c.; combing, 40@43c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, April 30, 1881.

BEEVES.—Receipts for the week 12 621 head; do. last week, 12,503 do. The later markets have been poor for drovers; some of them complained of losing $25@50 per car load. Butchers took fair quantities but trade was not animated enough to stiffen prices. Some trash, in the shape of poor steers, rough oxen and stags, were closed out at 8¾@9¼c., to dress 55@56 lbs., but sales generally of decent to strictly prime steers were from 9¾c., to dress 56 lbs., to 11¾c., to dress 57 lbs.; and a number of distillery and corn-fed bulls changed hands at 4¾@4¾c., live weight. The yards were not entirely cleared.

COWS AND CALVES.—The market has been a tame one even with light receipts; a good range is $30@55; selected singles from the quality now arriving, $60.

SWINE.—Receipts for the week, 28,016 head; do. last week 19 703 do. Western live corn fed have declined a shade within a day or day two. Prime light State hogs are doing well, other weights only steady.

Live corn fed $6.25@6.50 per 100 lbs.; city dressed State pork light, 8¾@9c.; medium, 8¼@8¾c.; heavy, 8@8¼c.; city dressed Western, 8½@8¾c.

VEAL CALVES.—The market has been heavily supplied during the week and prices for live or dead have ruled as at our last.

Live choice fat 6½c; fair to prime 5@6c.; poor 4@5c.; Mt. Holly, 6@7½c.; buttermilk 3@4c; hog dressed calves extra 8¼@9c.; fair to prime 6½@8c; poor 4@5c.

SHEEP AND LAMBS.—Receipts for week, 16,958 head; do last week 27,462 do. Supplies were very light and sales were quick. Unshorn sheep sold at $6.50@6.75 per 100; clipped $5.25@5.75; clipped yearlings $6.50. Spring lambs $3.50@6.50

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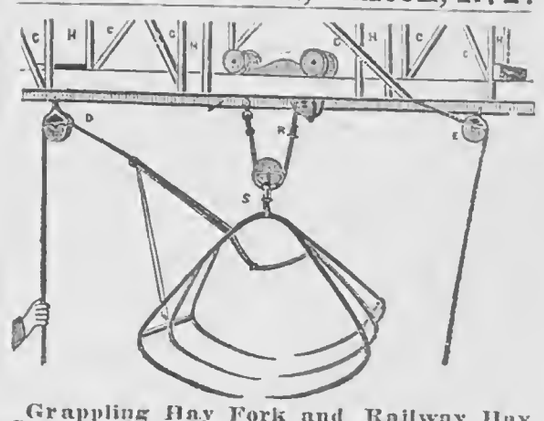

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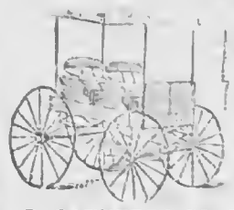

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Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 21.

HENRY STEWART.

Cultivated Crops.

If one should doubt the useful effects of cultivating crops, let him leave a few rows of potatoes or corn in a field to grow up with weeds, or with the soil hard and beaten with rains, or baked with the sun, and notice the effect as compared with the other rows that have been worked with the cultivator and the hoe. Every farmer knows how poor will be the crop unless it is well cultivated, and every farmer's boy knows it, too, although he may not very well understand the reason for it. It matters not what crop it may be; it may be corn or potatoes, or it may be an apple tree in the orchard or onions in the garden. A farmer who grew the largest crop of potatoes ever known, and received a large premium for it, said his success was owing to the fact that he hoed the crop every day. This may be true, because there is no doubt that without this constant stirring of the soil the manure used would not have been fully prepared for the complete nourishment of the crop; for the effect of the frequent cultivation of the soil is very varied. In the first place, it enables the air to circulate in the soil; next it enables moisture to penetrate to the roots; then it helps to attract moisture in a dry season and also helps to retain it in the soil; lastly, it prevents the growth of weeds. Let us consider how these effects are produced.

It is well known that when earth is moistened and spread and plastered and packed down tightly, the air will not penetrate it. We have heard of mud cabins, and many of us have either lived in log houses that have been chinked with mud, or we have known persons who have lived in them, and these houses are very warm and comfortable, although poor and humble. They are warm because the cold air is kept out, but if the mud becomes cracked and open and full of crevices, through which the wind passes, all the warmth and comfort is gone. It is precisely so with the surface of the soil. When this is beaten down and plastered and packed by the effect of rain storms and wind, the air cannot pass through it. The moisture-laden breezes blow over it without adding a particle to allay its drouth; the rains fall upon it and flow away without sinking into it; the hot sun dries and bakes it, and it is unable to support the life of a plant; because where air goes moisture goes with it—the air is never free from moisture. A cubic foot of air will dissolve or hold in suspension a cubic inch of water, but the power of air to hold water varies with its temperature. Very hot air will hold the most water, and as the air cools the moisture becomes condensed and appears as mist, gathers in drops on the leaves, grass, twigs of trees and the surface of the ground as dew, or falls in rain. Now, when the surface of the soil is loosened by cultivation and becomes warmed by the sun, the air in it is warmed, and dissolves moisture from as far below as the warmth reaches; then, when the soil is cooled in the night, and the air shrinks in cooling, air from without goes into the soil, carrying more vapor with it. This vapor is condensed and absorbed by the soil, and every warm Summer's night millions of gallons of water may be thus carried into the soil on a moderate-sized farm, and the crop is refreshed.

But this constant circulation of air has another effect. It meets with organic matter in the soil and this is acted upon by the oxygen of the air and decomposed. The air deprived of a part of its oxygen has then a surplus of nitrogen and we have reason to believe that in this oxidation of organic matter, nitrogen is left free and forms nitrates in the soil, and these have a most useful effect upon plant growth. So the circulation of air in the soil has both these useful effects. Then when a shower falls upon the loose soil how fast it sinks into it and becomes absorbed. This water forces out air and as it sinks and becomes absorbed, fresh air returns again so that the effect of the water is to help the air to exert its effects. And when this water has become spread through the loose soil and the space is then re-occupied by air, the great heat of the sun does not penetrate so far, to dry out this water, as it would if the soil were hard. So that the loose soil acts to let the water in and to keep it there when it has entered. Thus by cultivating the soil we keep it moist and make it fertile. We are manuring it in fact, for this tillage, in effect, produces elements of fertility in the soil that would not exist there without it. Therefore when we say tillage is manure, we only state a fact. Lastly we prevent weeds by cultivation. If we were to give a horse a feed of oats, and a dozen or two of rats should come and help him to eat them, as indeed some farmers permit them to do, that horse would become poor and thin. He would not thrive, because he had not enough food. It is precisely the same with a a hill of corn or potatoes. If we permit a dozen or two of weeds to feed with it, it is robbed of a portion of its food and becomes poor and weak. And it is to avoid this that we carefully cultivate these crops. Many farmers suppose this is all that they do by their work, but the other effects pointed out are far more beneficial to the crop and of far greater advantage to the soil.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

The Citrus Fair.

"I AM so glad you happened to come in March," said Violet, "for the fair is next week, and I'm sure you will like to go."

"What kind of a fair is it? asked Daisy.

"Oh, it is not our regular display," said Mr. Erman, "where everything is exhibited, from a huge squash to a patchwork quilt; that comes in October, when it is out of season for oranges. So they determined to hold a Citrus Fair at Los Angeles this Spring, so that the people of Southern California might have an opportunity to compare the oranges and lemons of different localities. It is our first attempt at anything of the kind, but I think that everyone is determined to make it a success."

The fair opened Tuesday afternoon, and on Monday Mr. and Mrs. Erman and Bertram took a wagon-load to Los Angeles and stayed nearly all day arranging and setting in order. On Tuesday the whole family set off in the two-seated spring wagon.

"You haven't been in Los Angeles since the day you came, have you, Daisy? And that is two weeks ago. But you won't see much of the city to-day. Does the pavilion look very nice, mamma?" questioned Violet.

"I am not going to tell you anything about it. Surely you can wait a little longer, as we are almost there; and then you will like it all the better if you do not know just how everything is arranged."

Los Angeles is pre-eminently a city of hills, and on one of the loftiest hights the Horticuttural Pavilion is situated. This is a large building surmounted by two towers, and when finished the city will have just reason to be proud of it. In the meantime the indefatigable managers of the Horticultural Society are each year pushing the work toward completion.

Mr. Erman drove slowly up the winding road, but the summit was reached at last, the horses were cared for and our little party found themselves within the Pavilion.

"Oh, oh!" cried Daisy half under her breath.

"I supposed they would have a good many oranges in boxes and some on the tables, but I never thought the building would look like this," remarked Violet with her superior knowledge.

Well, it *was* a beautiful sight. Fruit and flowers seemed to be the order of the day. In the center was the sparkling fountain with plants tastefully disposed about the basin. Each pillar was twined with Monterey Cypress and English Ivy, intermingled with snowy callas, and everywhere was piled the golden fruit, which was arranged according to districts or settlements. "Where shall we begin? asked Daisy, "for I want to see every bit of it."

"You'd better commence with the San Gabriel display," said Bertram. "That is the most tastefully arranged, in my opinion, though I suppose I ought to say nothing, being an interested party. There it is," he continued, "just opposite the door at the further end of the building. Come and see how we have been working."

Certainly much time and labor had been expended, but the workers had the satisfaction of knowing that the result was well worth all their painstaking. In the center stood a Chinese pagoda made of oranges and sprays of English Ivy. Within it was an orange tree laden with fruit. Rustic hanging baskets filled with plants, and clusters of oranges were suspended from the sides. Noticeable among the latter was a cluster of seventeen Konah oranges exhibited by Mr. Erman—the largest cluster in the pavilion. Above the pagoda were the words "SAN GABRIEL," made of limes strung on wires—a pretty change from the ordinary placard

On either side of the pagoda were tables bordered with green and adorned with flowers, where plates of fine fruit were displayed. One table was for Mr. Erman exclusively, and on it were arranged many varieties, from the Dwarf Mandarin orange, hardly larger than the end of my thumb, to the Navel and Konah, thirteen and fourteen inches in circumference. And over all was the delightful fragrance of the orange blossoms, for they were lavishly used to adorn the golden fruit.

"Did all these come from our place, Bert?" asked Violet.

"Everything, my beloved sister, except the paper on the table; I believe that was procured at the printing office. But come, don't spend your whole day looking at our own productions. I know Daisy wants to see what other people can do."

On the other San Gabriel tables were to be found various additional fruits. There were the Japanese persimmons, some last year's pomegranates which well displayed their "keeping" qualities, large glossy citrons, some twigs bearing green almonds freshly picked from the tree, and huge pear-shaped oranges, nearly a foot in diameter, which elicited an exclamation of wonder from Daisy. "What *can* those be, Bert?"

"They are called the Pumalo orange, but are not fit to eat. People grow them for ornamental purposes." ("Delicate little ornaments they are," put in Violet.) "Then just beyond you see the Shaddock, which is round, although it belongs to the same class. Those are nearly as large as your head."

A little farther along were glasses of orango marmalade, and large glass cans of preserved lemon peel and citron. The latter was very fine, cut in halves and thickly sprinkled with sugar.

"Doesn't that look as if it would be delicious? Now I would like to set my teeth in it! Where did it come from?" and Violet bent over the table as she examined the label. "It's from Mrs. Dickson. I'm going down there before long and ask her to let me taste it, and get the recipe for mamma."

Farther on they found factory-preserved citron, but it was not as fine-looking as the confection prepared by their neighbor from San Gabriel.

"Now let's go to the Pasadena 'show,'" said Violet. "We know so many people there, and they always take so much pride in putting their best foot forward."—[To be continued.]

THE YOUNG QUERIST.

WILL G. M. R., Canada, and E. J. A., Guilford Centre, N. C., please send full name and address.

R. V., Bucklin, Mo., asks if the carnations sent out in the Seed Distributions are the garden carnations or the ever-blooming varieties.

ANS.—You can leave them out of doors or take them in the house as you choose. They are "ever-blooming" and with you will prove quite hardy.

J. W., New York, wishes to know if the Japan Red Bud is to be covered for the Winter immediately after transplanting from the pot.

ANS.—Our directions on this point were a little obscure. After four leaves appear transplant the plants but do not cover them until they are liable to be frost-bitten in the Fall. Then cover for the Winter.

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Miscellaneous.

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M. M. B. Goodwin, an editor in Chardon, Ohio, says he was not expected to live, being bloated beyond belief, but Kidney-Wort cured him.

Anna L. Jarrett of South Salem, N. Y., says that seven years suffering from kidney troubles and other complications was ended by the use of Kidney-Wort.

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PERSONAL ITEMS.

Mrs. Abraham Lincoln is now in Illinois, but will soon return to her former home in Pau, France.

Gen. Louis Von Benedek, the Austrian commander in the war of 1866, died at Gratz, Austria, Wednesday.

Vanderbilt has made another little investment of $5,000,000 in government bonds—part of the spoils of the late telegraph deal?

Dr. Kidd, who was Lord Beaconsfield's regular physician, has the largest regular practice in London, and is an eclectic. With the exception of this gentleman, it is a curious circumstance that all around the bedside of the dying ex-Premier.—Dr. Quain, Lord Burrington, Lord Rowton, James McClennan, his servant, and the two nurses—were Irish, "the sentimental and self-sacrificing race," as he has styled them.

[Freeport, (Ill.) Bulletin.]

There is now a substance which is both professionally and popularly indorsed and concerning which, Mr. J. B. Ferschweiler, Butteville, Oregon, writes: I have often read of the many cures effected by St. Jacobs Oil, and was persuaded to try the remedy myself. I was a sufferer from rheumatism, and experienced great pains, my leg being so swollen that I could not move it. I procured St Jacobs Oil, used it freely and was cured.

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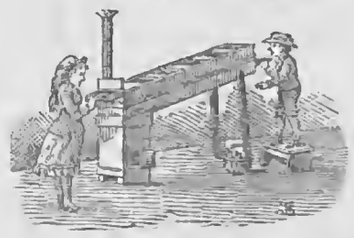

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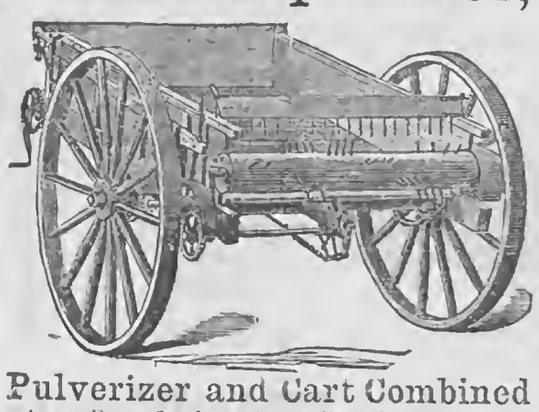

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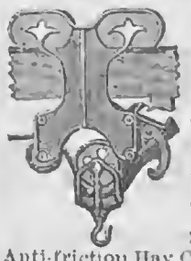

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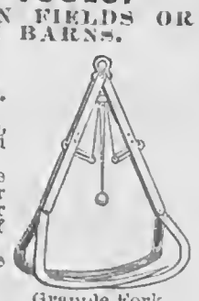

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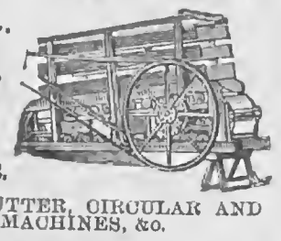

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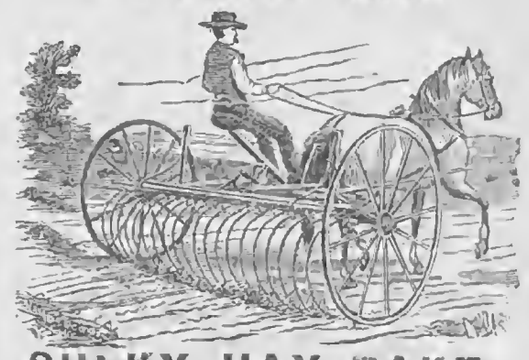

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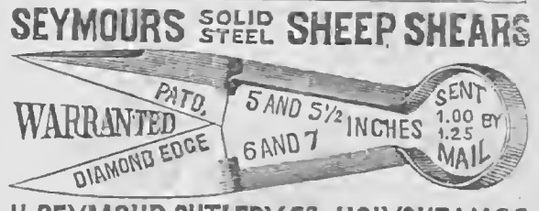

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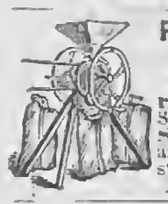

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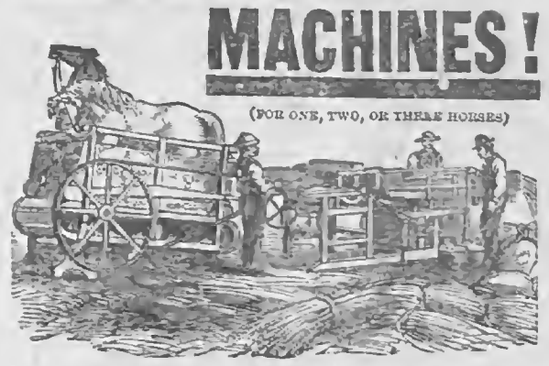

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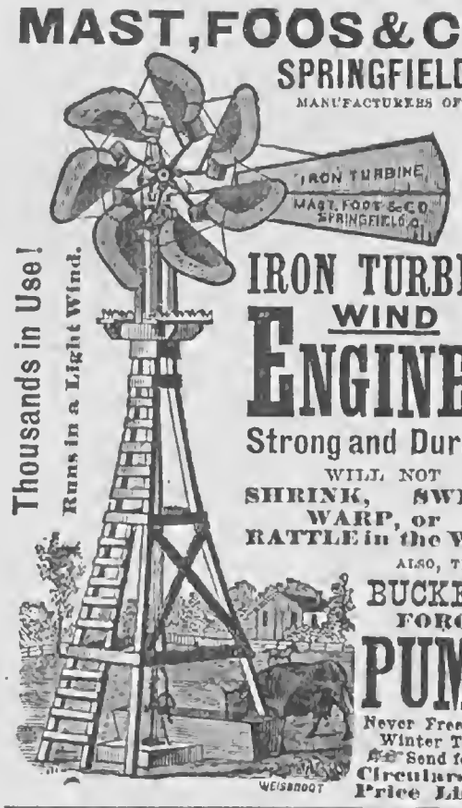

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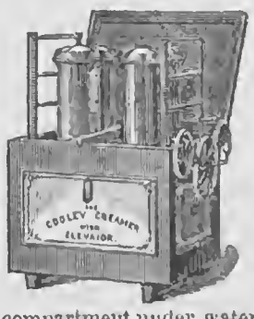

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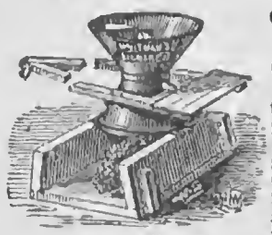

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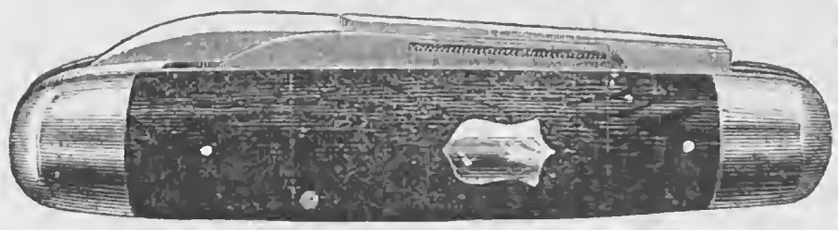

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 20. WHOLE No. 1633. | NEW YORK, MAY 14, 1881. | PRICE FIVE CENTS. $2.00 PER YEAR.

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The Horseman.

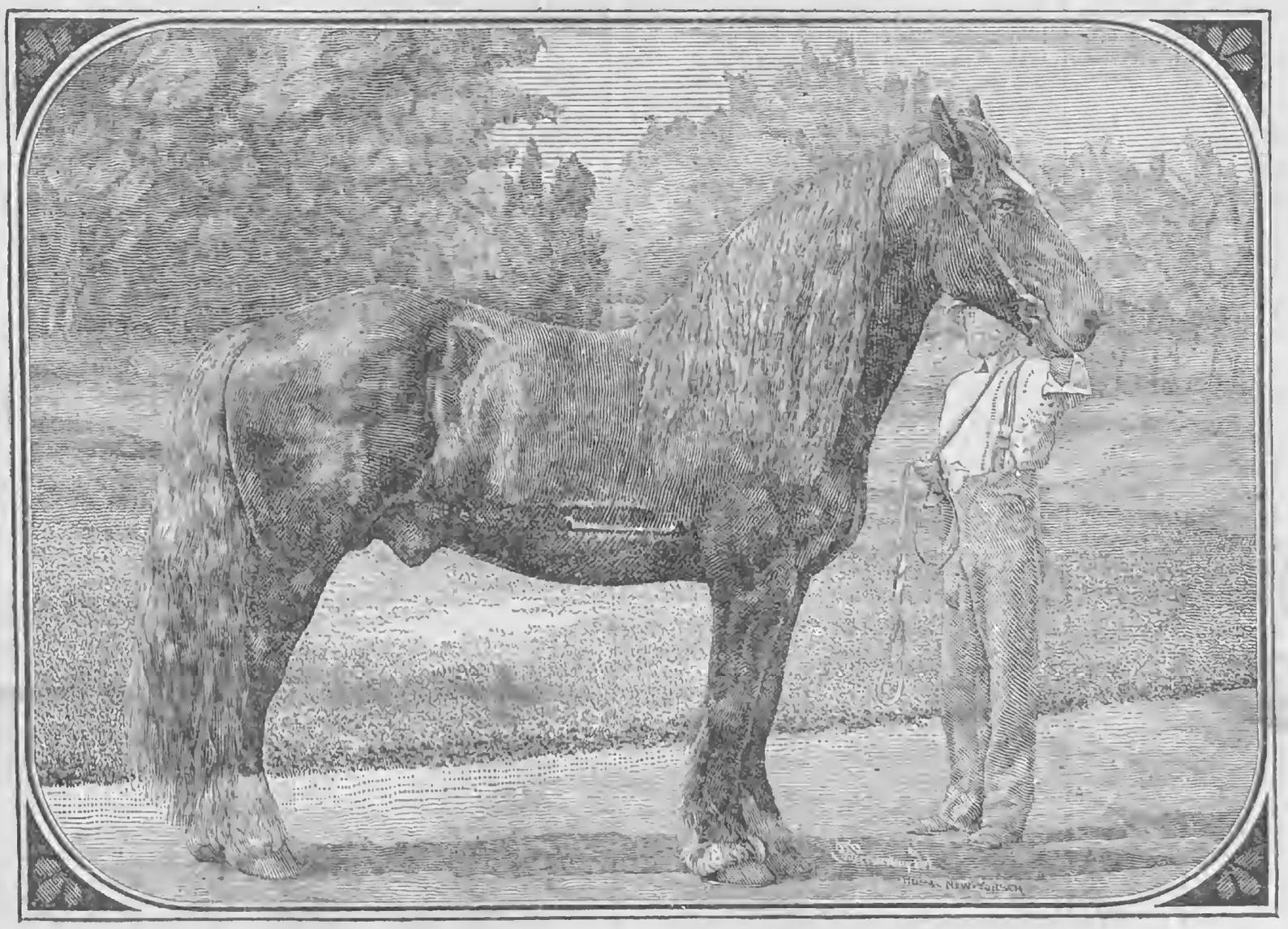
MOST PROFITABLE FARM HORSES.

AN interesting question to every farmer who rears even a single foal is, What sort of horse will it pay me best to breed? and the interest should increase with the number bred. In bringing up a colt or filly a fair measure of good feeding and care is, of course, needed to produce satisfactory results with any animal, and even with the best bred one the lack of these is pretty sure to disappoint any hopes of a profitable horse. Fair attention, however, being stipulated, what is the difference in the expense of rearing a horse which can either do excellent work on the farm or be sold for a highly remunerative figure, and one that will "eat his head off" on the farm and which cannot be sold for the cost of rearing him? The extra cost of service of a stallion good enough to beget the superior animal is a mere trifle in comparison with the higher value of his progeny on the farm or in the market. What sort of horse, then, will it pay a farmer best to breed?

Not a trotter, certainly. To train a horse, even of suitable descent and capacity for speed on the trotting track, so as to develop his powers in that line, demands much more skill, time and patience than are at the command of the ordinary farmer who attends properly to his legitimate duties. Moreover, even with the best management on the farm not one horse out of a score intended for speeding would ever repay the outlay upon it. Few of the large establishments specially devoted to the production of flyers, and possessing the best skill and conveniences, would make expenses if they confined their efforts exclusively to that line of business. No; the trotter decidedly is not a profitable horse for the farmer to breed; but carriage and heavy draft horses are. Both of these kinds are scarce in all our large cities, and the demand for them, being constantly greater than the supply, prices are always remunerative. Indeed, it is very likely that for years to come no sort of farm stock will be more profitable than horses of these two classes. The first should be from 16 to 17 hands high, and weigh from 1,200 to 1,300 pounds, and the second from 16 to 17½ hands, and not less than 1,400 or over 1,800 pounds.

The carriage horse should have a good share of thoroughbred blood in his veins, otherwise he will be deficient in the style, spirit, action and endurance which constitute the chief value of that class. In view of the small size of most of our draft horses, there is little doubt but the best way to remedy this defect is the employment of the best type of imported draft stallions. Among these the Percheron and the Clydesdale appear to be the best adapted to this country, either for the production of suitable heavy, pure-bred draft horses or for the improvement of our common native animals by crossing. Both of these breeds have been largely imported and tested in the Eastern as well as in the Western States, and both have many warm friends and supporters; but the Percheron, probably in great part through carelessness in selecting choice animals for shipment, appears to be losing ground, while its rival is steadily advancing in public favor. First-class Percherons seem to be rare among our importations of that breed; while a great deal of care appears to be taken to select only first-rate Clydesdales for importation.

In the RURAL of March 26th a brief sketch of the history of the Clydesdale breed was given, together with a short description of a typical animal. We here again present to our readers a likeness of a choice specimen of the breed, Donside Champion, one of the importations of Messrs. Smiths & Powell, of Syracuse, N. Y. Within the last 20 or 30 years constant study and care have greatly improved this breed in its native land, and removed nearly all the defects and blemishes which were to be met with among many of the Clydes of a quarter of a century ago. The principal objection still urged here against them refers to what in their native land is considered a sign of excellence—the hair on the back of their legs. This, it is said—and justly, too—has a tendency to superinduce "grease," and the English Clydesdale Stud-Book acknowledges that short, coarse, matted hair decidedly suggests the disagreeable ailment; but, as it also remarks, the high value set upon nice silky hair is on account of its being in all cases a certain indication of a strong, healthy bone. Of course, Clydes are also more or less liable to most of the other ails horse-flesh is heir to; but, all in all, we know of no breed of heavy draft horses more valuable on the farm, either as pure-breds or to improve our native horses.



DONSIDE CHAMPION.—From a Photograph.—Fig. 240.

Dairy Husbandry.

DAIRYING ON 24 ACRES.

AGRICOLA, Morris Co., N. J., writes: "I have a farm of 24 acres in six fields: Field A, four acres, good meadow, overflowed each Spring; fields, B and C, three acres each, poor pasture; field D., four acres, poor clay loam; E, three acres fair clay loam; F, four acres, excellent clay loam — 10-year-old sod plowed up last Fall. Rocks abundant all over. I desire to keep a dairy and stock farm, besides selling grain. I should replace grain for my cattle by cotton-seed meal. Will you oblige me by stating: 1. what system of rotation would you advise; 2, how many cattle could be kept on the above; 3. will it be advisable to soil the cattle and take the poor pasture fields into tillage; 4, what grain will pay best."

ANS.—Agricola has laid out the points for a small treatise upon agriculture. The possibilities of that little farm would astonish its quiet neighborhood. We shall not attempt to develop them all. A dairy and stock farm with large exports of grain from 24 acres! Yes, this is all possible. And our friend has shadowed the road that might lead to its accomplishment. The stock should be fed upon rich grasses, supplemented largely with that albuminous and phosphatic bye-product, cotton-seed meal; but not be restricted to this alone, (as nature and animals love variety). Let the food they eat than is generally supposed. If kept for growth or fattening, the toll taken is only to produce the extra weight of flesh and bones, or, if for the production of milk, it is only the nitrogenous and mineral substances of the milk that are supplied from the food and lost to the land, even if the milk be sold; and if only butter be sold, then only the bones and flesh of the young animals grown by skimmed milk are lost to the land. The food that is taken to supply the waste of the animal body is merely exchanged for the waste of muscle and bone, which passes into the droppings and is ready again to be converted into new crops of food. Nature is always forming new combinations and dissolving old ones, but the elements are all preserved, nothing is lost. When stock feeders shall learn to save and scrupulously apply all the droppings, both liquid and solid, from their animals, then will the land remain fertile for the coming generations; and when large amounts of nitrogenous and phosphoric food are purchased and fed to animals upon the land, its fertility will rapidly increase. And now to the questions.

The system upon this farm must be wholly the grass system; "all flesh is grass," and this is to be a stock farm. Turn no furrow in a field that yields a large crop of grass. Everything should be done to provide the fertility requisite to the growth of grass. Perennial grass is king. No other crop pays as much clear profit.

Let us examine this point. In the Woburn experiments, Timothy Grass grown on a clay loam produced, at flowering, a little over 40,000 pounds green per acre. This is what may be done on Agricola's land when all the conditions are the most favorable; but let us estimate one-half of this (20,000 pounds) or three and one-half tons of hay. This would have a value in the barn, on the average of ten years, of $15 per ton, or $53.50 per acre. The cost of cutting this and putting it in the barn need not exceed $7.50 per acre, leaving a profit of $45 per acre; or, if fed to a cow, it would furnish her a ration of 10 pounds for every day in the year. Three pounds of cotton-seed or linseed meal added to this would furnish a complete ration for milk, and ought to produce 2,800 quarts, which should bring, at the farm, $84. The manure, if estimated at two-thirds of the standard fixed by Dr. Lawes, would be worth $22.50, and would be much cheaper at that price than commercial fertilizers yielding the same amount of nitrogen, phosphoric acid and potash. The extra food beyond the hay would cost about $15, leaving $7.50 to be added to the product of the cow. If $20 are allowed to balance the labor account per cow, it would leave $70 as the clear product of the hay crop per acre, when fed to good milch cows, or if the manure is not counted, a profit still of $50 per acre. Now, if we estimate 40 bushels of barley, 60 bushels of oats, 35 bushels of

wheat or 50 bushels of Indian corn per acre, no such clear profit can be obtained from either of these. For feeding purposes the clover crop will pay somewhat better than Timothy, easily yielding in two crops three and one-half tons. In feeding this, 15 pounds of clover per day and eight pounds of wheat middlings, or five pounds of middlings and three pounds of corn meal, will make an unsurpassed ration for the production of milk, and one acre will furnish one cow clover for 465 days.

Orchard Grass and clover will give several cuttings, yielding three and one-half tons per acre, and which may be fed to equal advantage. Where the land is in good condition oats and peas drilled together (one bushel of oats with two of peas per acre) will produce a valuable crop to feed green or to cure into hay when in blossom. One acre will feed 12 cows 30 days, but it will become too ripe, and a portion must be cured for hay, in blossom. In seeding to permanent meadows seek a variety of grasses.

As this is to be a stock farm, when a field is to be seeded, instead of a regular grain crop, take one of the following methods: Sow Winter rye in the last of August or first of September. If it should grow rank in the Fall, turn the cows in an hour or two in a day and let them feed it off as evenly as possible, but not short. Seed it with Timothy and other perennial grasses at the time of seeding the rye. Early in the Spring sow six pounds of clover seed and run a smoothing harrow over it. This will help the grass seed and cause the rye to tiller. Cut this rye for green soiling, beginning before it reaches the head, and this part of the field you may cut again. The second cutting is often heavy. The Germans cut Winter rye two to four times, as they never allow the head to appear except at the last cutting. If land is plowed for a corn crop, this may be followed with rye the same year. By using the system of flat cultivation in the corn, rye may be sown among the corn at the last cultivation, and it will become well set before cutting the corn, and grass seed may be sown with the rye. If, on plowing up a meadow, a crop of oats and peas is first taken, rye may be sown after this crop is taken off. Rye is one of the best crops with which to seed to grass.

2. It will be seen from the answer to the first question that when these 24 acres are put in proper condition, 24 cows may easily be kept with the aid of a small amount of cotton-seed and linseed meal, middlings, etc. And, besides this, if butter is made, six to ten calves may be kept to eat the refuse milk, and these may be sold at $20 per head when six months old.

3. Soiling or stable-feeding will be absolutely necessary to success, and the means to do this are pointed out above. Winter rye, clover, oats and peas, fodder corn, millet, and the meadow grasses in their season, will be the soiling crops. That this system may be successful, there must be no failure in the saving of manure, both liquid and solid. And the best way to do this, in dairying, is to place the cows upon a self-cleaning platform, which will keep them clean and deposit the manure in a water-tight receptacle below. The old style of throwing the manure into piles, allowing it to soak into the ground, exhale into the air and be washed away by rains, will defeat the effort to enrich the land so as to raise those large crops. The liquid and solid should be carried to the field together, and applied in Fall and Spring as a top-dressing, and in the heat of Summer to the growing corn crop or the fallow and be cultivated in. Applied fresh to the growing corn, followed by the cultivator, the liquid will take an immediate effect, and all will be absorbed by the soil. We have tested this for several years and found it satisfactory.

The system of ensilage appears now likely to be a great aid to soiling, and will enable small stock farms to carry a much larger proportion of stock. It is, no doubt, quite possible, under this system, to carry 36 head of cows on these 24 acres, and get a maximum yield of milk.

THE DAIRY COW. NO. 32.

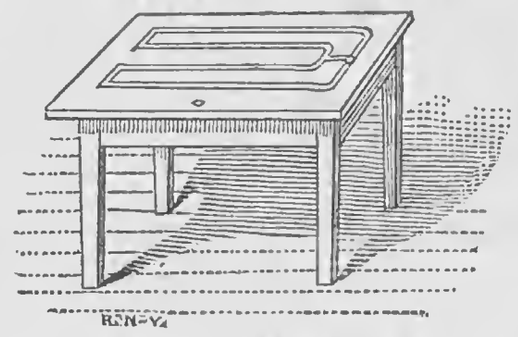
HENRY STEWART.

Home and Fancy Dairies.

The dairy of one or two cows may become a veritable creamery, if the owner wishes it. That is, it may be so arranged that to the family supply of butter may be added a supply of cheese of various kinds, to be eaten fresh or kept for future use. For there are times when the fresh cow gives more milk than can be consumed, and the waste of a large quantity of skimmed milk left after the butter is made, is a source of regret to the economical housewife. Instead, then, of throwing away this useful article of food, it may be made up into several agreeable forms and kinds of cheese. When a domestic calf is sent to the butcher, fattened for veal, the stomach should be recovered and preserved and made into rennet, as has been particularly described in a previous article, for use in cheese making. Some kinds of cheese may be made without rennet by merely coagulating the sour milk by heat, but the tender curd that may be cured with the soft, rich, butter flavor requires t be made with rennet.

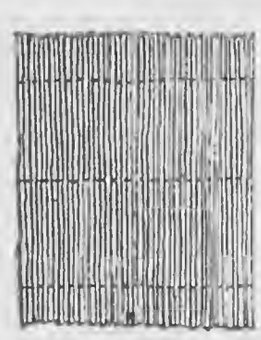
Pot Cheese.

The simplest form of domestic cheese is the "pot cheese." This is made of curd from sour skimmed milk gradually heated to 100 degrees, when the whey separates. The curd is dipped into a square of thin muslin gathered into a loose bag and hung up on a convenient hook or to a peg purposely placed in a hole made

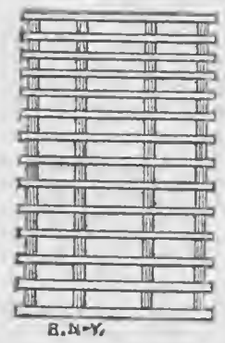


DRAINING TABLE.—FIG. 241.

for it near the edge of the draining table, Fig. 241. This is a common table with a white-wood or maple top, in which a few grooves are cut leading to a drain hole, as shown; a pail placed under the drain will serve to catch the drip from the table. The cloth containing the curd hangs from the edge of the table and drains into the pail. The curd may be pressed slightly in small hoops and sprinkled with salt on both sides; then placed on a mat made of green rushes sown together as shown at Fig. 242, and turned three or four times a day for four days and salted slightly once a day on each side. These cheeses may be kept for some weeks to cure and will acquire a very fine flavor. The curd may be kept in the cloth for two or three days and each day an additional quantity may be made until sufficient is gathered to make a cheese of several pounds, when the whole of the curd may be put together for a few min-



RUSH MAT. FIG. 242.

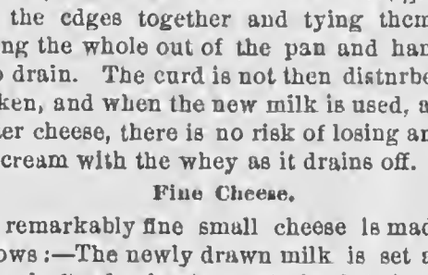


CURING FRAME. FIG. 243.

utes into warm whey and then put to press together. Curd may be made in the cloth, by laying this in the pan in which the milk is curdled, and when the curd is formed, gathering the edges together and tying them and lifting the whole out of the pan and hanging it to drain. The curd is not then disturbed or broken, and when the new milk is used, as for better cheese, there is no risk of losing any of the cream with the whey as it drains off.

Fine Cheese.

A remarkably fine small cheese is made as follows:—The newly drawn milk is set away to cool after having been strained twice and poured from one pail to another to air it thoroughly. After three hours it is slowly heated until the usual pellicle forms upon its surface. When the pellicle is firm enough to be lifted, the milk is removed and one teaspoonful of rennet is added and stirred in to 20 quarts of milk. The evening's milk may be skimmed and warmed in a separate vessel, to the right point, and then mixed with the morning's milk, and the rennet added. Or, by keeping the milk in ice water in deep pails, it may be preserved sweet for two or three days and then made into cheese; or the curd may be kept as above mentioned and added to the new curd, in which case the rich quality of the cheese may be preserved. The milk may be curdled in a large jar or tin pail or in several of them, and the curd may be carefully lifted with a common dipper or ladle, and placed at once in small cylindrical molds of tin, Fig. 244. Empty fruit cans, from which the top and bottom have been melted, and which have been cut down to four inches in length, will serve the purpose



TIN CHEESE MOLD.—FIG. 244.

very well. From five to six hours are required to form the curd. The molds are filled with the curd as they stand on the rush mats on the draining table before described; the whey gradually flows away and in two days the cheeses will have become firm enough for the mold to be lifted off from them. The cheeses are sprinkled with salt and left on the mats for three or four days, when they will be ready for the curing. This may be done on a shelf of narrow laths placed six inches apart. The cheeses are placed on a frame of laths shown at Fig. 243; the frame being kept on the shelf, but removed to the table when it is necessary to salt and turn the cheeses. The cheese during the curing should be exposed to abundant currents of air, for it is on this airing that the effect of the curing depends. It is this system of curing which gives the exquisite flavor to the small foreign cheeses, as the Roquefort, the Camembert, and others, and these are precisely the kinds that can be made very well in family dairies, or in other small dairies where a dozen cows are kept.

The cheeses in such a process of curing require to be turned every second day for three or four weeks. If mold gathers on them it is wiped off, and when moisture is perceived upon the surface this stage of curing is completed. The cheeses and the frame are then removed to a dry, close cellar, where they are kept for one month, being turned every second day. The cheeses at this period will have shrunk to one inch in thickness and three in diameter. If they are kept after this they should be wrapped in paraffine paper or tin-foil. The delicious English Stilton cheeses, weighing from eight to twelve pounds, and six or seven inches in diameter by nine or ten in hight, are made in this manner, but with the addition of cream to the new milk. The milk of Jersey cows, having 20 per cent. of cream, would make a very rich cheese, and if the curing were as well done, it would equal this famed English cheese.

Fancy Cheeses.

The Stilton cheese is one specially suited to a small dairy. It is made in the following manner, to which all its peculiarity is due:—A strong brine is made of salt and cold water and a number of sweet herbs, thyme, hyssop, sweet briar, marjoram, dill and savory, tied in bunches, are steeped in it with a few whole pepper-corns, for four days, when the clear liquor is racked off. The calves' stomachs are steeped in this brine for five days, when the rennet is kept for use. The morning's new milk is mixed with the cream of the previous evening's milk in a narrow, deep pail. The milk is heated to 90 degrees, and the rennet added. The pail is lined with a cloth, so that when the curd is formed it can be lifted out without breaking and placed in the mold. The curd is set in a warm, airy room. The mold is pierced with small holes to permit the whey to drain off without pressure; after a short time a light pressure is made upon the curd. When the cheese has sufficient consistence it is removed from the hoop and bound with a cloth, which is changed and tightened every day as the cheese shrinks. It is turned and wiped daily. When the crust is firm the cloth is removed and the surface of the cheese is brushed twice a day for three months. It is then placed in the curing-room, where it is kept to ripen for a year or 18 months. No salt is used in making this cheese. Veins of green and blue mold are formed in the cheese by thrusting into it thin skewers which have been rubbed with some old cheese in which the mold has been developed; the mold spreads from these places through the body of the cheese, giving it a peculiar marbled appearance.

Sage cheese is another kind that may be made in a small dairy. This is also known as green cheese. For a cheese of eight pounds two large handfuls of green sage and half as much parsley and marigold leaves are bruised and infused over-night in a portion of new milk. The colored milk is added to one-third of the milk to be curdled, and this and the rest of the milk are curdled separately. The curds are drained, scalded and broken in the usual manner of the Cheddar system, and the colored curd is then mixed, either evenly or in various shapes and devices, with the other curd as it is placed in the hoop. Much ingenuity is sometimes exercised in forming these devices by means of appropriate cutters and molds, and incorporating them with the white curd. The cheese is pressed and cured in the usual manner. Small green cheeses are made by bruising young sage leaves and spinach leaves in equal parts in a mortar and squeezing out the juice. The juice is added to the milk before the rennet is mixed, and the curd being formed, it is carefully broken very evenly, and put to press with gentle pressure for five or six hours. It is salted twice a day for five days and turned daily for 40 days, when it is ready for use. This is a delicious cheese when made of rich milk and skillfully handled. It is made of small size, weighing less than one pound.

The Herdsman.

NOTES BY A STOCKMAN.

Mr. Talcott is a very good defender of his views upon the question at issue between us, viz.: the merits of occasional and judicious close breeding, but he is a special pleader so far as he greatly extends my statements and makes me say more than I have said, so that he may have a more excellent chance to argue for his own case. He would make as good a lawyer as he is a breeder and a writer. Let us go back to the starting point and confine this question to what I really did state at the onset, and to the idea I intended to convey, and perhaps Mr. Talcott and I may shake hands and agree to differ in peace. I want farmers to believe that sometimes they need not fear to use a closely related male animal on their stock, for the reason that such close breeding has very often been found to be useful in perpetuating and fixing the good qualities of the parents upon the progeny. I don't advise farmers to go into line breeding to found new races or families, for then they may be "playing with edged tools" that have sometimes cut the fingers of professional breeders.

But when a farmer has procured a costly bull in the attempt to improve his dairy stock, or a high-priced ram for his flock, I would have him consider and believe that he will be safer in using this animal on his own progeny, for two or even three generations, than to cast aside his good animal and run the risks of bringing in another which may cause him to lose all he has gained. Further, I would have a farmer study the principles of breeding and its history, and act with knowledge and intelligence in this matter, rather than to imbibe a prejudice and find himself frightened and tormented with any bugbear (I think I once used this word in this connection) whatever.

It is said "a little learning is a dangerous thing." That is a poetical foolishness. The poet did not mean what these words convey, at least on the surface. He had to sacrifice sense to sound in a measure, or he might have said "ignorance is a dangerous thing," for that is the real meaning Pope intended to convey. We are in more danger from what we don't know than from what we do know, and I would therefore recommend every farmer, especially him who wants to improve his stock, to study the history and practice of breeding as well as the science and practice of feeding. The former is the foundation on which he must build; the latter the materials with which he builds. But let him be liberal in his views of things. Cannot we shake hands on this, brother Talcott? And by all means let us work together towards this end. There is too much work to be done by the army of Rural writers and teachers in helping the world of rural workers, to lose time over differences of opinion upon subjects which can never be reduced to rule and tape-line and arithmetic; and differences which can never be adjusted.

Shepherds ought to rejoice at the prospect before them, and yet "rejoice with fear and trembling." Consider the following figures: The last quarterly report of the Bureau of Statistics shows the quantities and values of raw wool imported into the United States from foreign countries from 1875 to 1880 inclusive. The totals are as follows:

Fiscal Year—	Pounds.	Value.
1875	54,901,760	$11,071,259
1876	44,642,836	8,247,617
1877	47,171,192	7,156,944
1878	48,449,679	8,363,016
1879	39,005,155	5,034,545
1880	128,131,747	23,727,650

An increase of nearly 90 million pounds and 19 million dollars' worth of wool in one year's imports. Nearly $24,000,000 are the prize which American sheep owners have to contend for, and with a handsome bonus in the shape of a tariff on foreign wool, we certainly ought to thrive. But let us make haste slowly and surely; it is wool and mutton we want; not fancy strains of this or that stock, but every-day sheep which can be kept at a profit with wool at 40 cents per pound. Sheep keepers should study the market reports closely and they will find that the staples of the markets are the domestic wools known as XX and XXX, which are produced by the Merinos and their grades and crosses.

The business of cattle herding on the Western plains has received a serious check the past Winter. Much has been told about this business that has been false and delusive. Reports of great fortunes made in it have been rife, but the fortunes have been made by those who have sold out to new-comers or by those few who began at the beginning and who have had a series of fortunate years; but

"The third day comes a frost; a killing frost,"

and now everywhere tales of disaster and ruin are heard. Among the losers, Mr. Groom, of Kentucky, deserves special sympathy. Unfortunately cast ashore and wrecked in his Kentucky ventures by the sudden fall of the tide of the Short-horn flood of some years ago, he went out to Montana as the manager of a large English cattle adventure, and the past Winter has once more ruined his business. Many others have lost their all in the same manner.

The whole business of cattle and sheep herding on the plains, so much vaunted as one of great profit, is wrong at the foundation. It is cruelty to animals on the vastest scale. To herd hundreds of thousands of cattle on the

open plains without shelter and store of food, so that at the best, thousands are lost during the Winter by starvation and exposure, and at the worst, in a severe Winter as the past has been, whole herds are left to perish for want of food and water and shelter, seems a great cruelty and an enormous crime, in which man's greed brings vast pain and suffering to the unfortunate animals. The glamour and delusion are now over and the costly reality will perhaps bring its own remedy.

THE worst sufferers are the pure Short-horn bulls that have been taken to the plains to improve the hardier natives. These are reported to have been all but extinguished, and the damage is not confined to the present losses, but will extend to future years for want of progeny the coming season. After all, it gives a secure promise to farmers that the rearing of breeders will never be taken out of their hands by the semi-savage, pastoral herding sytsem of the plains. It therefore opens up to the farmers a steady business of the most profitable kind, and one that lies at the very basis of successful and improving agriculture; viz: the production of choice beef animals by means of stall feeding or partial grazing, in conjunction with grain and root raising.

THE Short-horn, Hereford and the Polled steers and the dairy cow, are the chief stars of the agricultural firmament which are about to come into conjunction. The live stock interests of America promise to become permanently paramount. Hereafter it would seem that to know how to feed one's products will be of even greater importance than to know how to grow them; for if a man can feed them successfully, the growing question will take care of itself, being helped by the most important element of plenty of manure.

IT follows, then, that if we can increase our yield of corn and grow roots in abundance, Eastern and Western and even Southern farmers can compete with the graziers of the plains in producing beef, mutton and wool. In view of this, the efforts of the editor of the RURAL NEW-YORKER to popularize improved methods of growing corn have a most useful bearing upon this, the grandest agricultural industry.

Field Crops.

EXPERIMENTS WITH POTATOES AND WHEAT.

A FRIEND, writing from Ottoville, Ohio, says: "I send you a trial paper of Italian Rye Grass; it can be sown either in the Spring or Fall, but, if sown in the Spring alone some of it will produce seed the first season, whereas, if sown with oats or other small grain, it will not do so. It is of a more spreading habit than Timothy here. I send you some specimens of seedling potatoes also. I selected them out of about 1,000 seedlings, and I think they are all very good varieties. I saw a remark in the RURAL about the Mammoth Pearl Potato having been selected out of 2,500 seedlings. I am not disposed to dispute it in the least, because I selected mine in the same way, I should judge. In selecting from seed I took the largest and those ripe the earliest the first season, and planted one or more of each; the second season I selected the best and planted them, and from these the varieties I send you were selected. It doesn't require a large farm to grow a large number in this way; a small patch is sufficient. I have managed my experiments with wheat as follows: In 1877 I sowed two small patches adjoining each other, one with Smooth Ohio River Bottom Wheat and the other with Bearded Wool Wheat, selected seed. In 1878 I selected the best ears of both patches and sowed the grain from them close together again, and also a patch of Bearded Egyptian Wheat. In 1879 I had Bearded Wheat in the smooth and smooth in the Bearded patches. In the Fall of 1879 I sowed the best kernels of them close together, and in 1880 I had five distinct varieties out of three, none of which resembled the old kinds, but all had larger ears and were better filled and plumper kernels. Other varieties I have raised in the same way, but from different seed wheats. Moreover, I have three varieties I got from Europe, that I am trying to acclimatize. One of these does very well and stands the Winter well, but the others don't turn out well, yet they may after they become acclimatized. As yet I have not got beyond experiments."

REMARK.—It has been said, and we believe generally taken for granted, that wheats do not "cross," because the stigmas receive the pollen before the anthers appear outside of the pales and glumes. From several who have studied the matter we learn that there is good reason to doubt this theory and that different kinds of wheat *do* or may intercross.—EDS.

Reed Meadow Grass—Glyceria aquatica.

This tall grass grows three to five or more feet high, and thrives in wet grounds northward. The leaves are long, about half an inch wide, and flat. The panicle is much branched and is often 18 inches in length. The flowers appear in July. It may be sown on wet land, though it has seldom been tried in this country. The quality is thought to be excellent. The panicles of this grass are very ornamental and it is well worth cultivating for that purpose. The spikelets much resemble those of Briza, though they are much smaller.

PROF. W. J. BEAL.

SPIKELETS OF REED MEADOW GRASS.—FIG. 245.

What Shall be our Best Wheat?

Mr. Wysor, in a late number of the RURAL, attempts to answer this question, and probably does so satisfactorily for his locality. The RURAL has also, at different times, attempted to answer the same question. The two differ in conclusions, yet probably both are correct for their respective localities. No one kind will do well in all places. For this region (Northwestern Ohio) I think that the conclusions of the RURAL are about right. Clawson, Fultz and Shunmaker are the varieties commonly grown. Clawson is perhaps the most prolific, but it is more liable to spoil in the shock or bin and is almost always light in weight. Fultz is nearly, if not quite, as prolific as Clawson and is superior in every other respect. Shumaker is also well liked. I never like to depend on one variety only. This year I sowed both Fultz and Clawson. The Clawson will not be fit to cut until the Fultz is all harvested, thereby avoiding the waste always attending the cutting of overripe wheat. Why do not millers pay for wheat in proportion to its flouring qualities? The best flouring kinds are not usually prolific, but if sufficient difference were made in prices, farmers would as lief raise kinds satisfactory to the millers as to raise the Clawson, and then we might hear less complaint of poor flour. V. J. E.

Henry Co., Ohio.

[We should much like to know more of the flouring qualities of Shumaker. It is an admirable variety at the Rural Farm. EDS.]

REED MEADOW GRASS—GLYCERIA AQUATICA.—FIG. 246.

Farm Economy.

EXPERIENCE WITH ENSILAGE.

With others I was, last season, induced to experiment with ensilage. I built my silo 17x25 feet and eleven feet deep, so that it had a capacity for about 60 tons, and I nearly filled it from two acres of land. I experimented with different methods of sowing the corn—in rows, two feet, three feet, four feet apart and I used seed at the rate of from two bushels to one half bushel per acre. The conclusion I have arrived at is that I shall sow in rows four feet apart, and kernels from five to six inches apart in the row. I know it is cheaper to raise one five-pound stalk than five stalks of a pound each, and the larger you can get them the better they are, and the less liable to fall down. I put 230 one-horse loads into the silo readily, in the morning there was none left in the mangers. I fed once a day a ration of a bushel to each grown cow, together with one quart of cotton-seed meal, and hay once. After one week I gave ensilage only. I afterwards increased the grain to two quarts. Ever since I have fed 19 head of cattle, equal to 16 grown cows, exclusively upon ensilage, and I never had my cows look as well as they look this Spring, and the young stock which have had ensilage without grain have grown nicely. A few days since my "help" took a short vacation, and in the morning there was no ensilage out (I take it out 12 hours before using it so as to have it ferment), and I fed them hay which they refused and bellowed until they received the usual portion. The milk is unusually sweet, and the butter is very satisfactory to customers. I know I make more from the same number of cows than I ever did before, and that of better quality. I had enough ensilage to feed the stock to May 1st.

One piece of good land, well prepared, gave me a return of 60 tons to the acre by weight and measure. The stalks weighed from seven to eight pounds and were 14 feet high. I think my silo cost me, filled, nearly $500, and contained ensilage enough to keep one cow six years with a fair amount of grain, and this year with hay at $25, per ton, it is quite a help.

Bloomfield, Conn. D. W. THRALL.

Horticultural.

GARDEN HINTS.

SPRING work in the garden is backward this year; for that reason I find great advantage in having my plans laid during the Winter; seeds and necessary tools purchased, and, last but not least, manure and fertilizers all prepared. These form the ground-work of all good gardening; manure first and good cultivation afterward, is my rule. I use this year on one acre of ground about eight tons of stable manure which will cost me a dollar a ton. For fertilizers I shall pay:

8 tons stable manure	$8.00
400 lbs. of superphosphates	7.40
20 bushels of wood ashes	4.00
15 " of hen manure	3.00
Total	$22.40

With this amount of fertilizer I expect to carry through a double crop worth $500, and leave the ground in as good condition as at present. Where is the bank that will pay such a dividend? Truly the earth is kind to the husbandman. You will say I look entirely on the bright side—and I know of no reason why I should not. I am going to take the RURAL'S advice and put my seed in better prepared soil than ever before, for I have always noticed that it is the poorly prepared soil that suffers most from too little as well as from too much rain. I find there is a chance for a good deal of study in laying out an acre of ground, to plant to a variety of vegetables where two crops are expected in one season. Small vegetables that cannot be cultivated with a horse, should be separated from those that can. I leave a strip through the center of my garden, about one rod wide by 20 rods in length, which is occupied with beets, onions, salsify, parsnips, etc. The rest of the garden can be cultivated with a horse. I believe in planting hardy vegetables as soon as the ground can be worked after the first of April. I would not plant in February or March even if the ground was dry, as it would get entirely out of condition before the seed would germinate. Last Spring I planted some peas on March 5, and although they were three or four days earlier than those planted in the middle of April, they were not nearly as satisfactory a crop and did not stand the May drought as well. The soil had become hard, had become too good a conductor of moisture, had, in fact, conducted all the moisture from below off into the air. My theory is that if the soil near the surface is loose and broken, it acts the same as a mulch and prevents the moisture, that is continually coming from below, from passing off into the air except through the leaves of the plant.

[Stones, sticks, lumps of earth, etc., lying upon the surface arrest moisture. Sand arrests moisture. The pulverization of most productive soils, according to *our* theory, serves to *increase* evaporation, and the pulverized earth does *not* act as a mulch. More moisture (rain and dew) is admitted, and, as capillary action is more active, more moisture returns and passes off into the atmosphere. This theory, which we first advanced several years ago, as the teachings of a series of experiments, was widely discussed at that time. Eds.]

Raising radishes is an easy matter, if the right kind of soil can be obtained. A light yellow, sandy soil, about the consistency of molding sand, I consider the best, and the best fertilizer in my experience is wood ashes. The radish bed should be entirely free from stones, and no kind of stable manure should be used. The soil should be in condition to pack firmly together without being lumpy or inclined to bake. If these conditions are observed, the radishes will be of a handsome shape and ex-

tirely free from worms. They must not be planted in the open ground until the weather is settled and warm, as rapid growth is absolutely necessary in order to have first-class radishes. I usually mark the rows off about eight inches apart, cover the seed by drawing the back of a rake crosswise of the rows, and then pat the bed down with a shovel or spade, after which I dust the bed with wood ashes or soot, as this will protect the bed from the ravages of the Turnip Fly, which will sometimes penetrate the soil and destroy the seed as soon as sprouted. I have tried a good many varieties but still prefer the Long Scarlet.

Oneida Co., N. Y. ADELBERT WAKEFIELD.

LOSSES AND PLEASURES OF HORTICULTURAL EXPERIMENTS.

IN my horticultural pursuits I look to every possible source for light, and, taking the last year for an example, I have found the lessons from the RURAL NEW-YORKER more profitable on the culture and varieties of small fruits than those of any book or paper which is devoted to this special subject. I think every investigating amateur must lose in experiments, while his neighbors who go plodding in the beaten track do a safer and more profitable business. But I am sure I find more enjoyment, even in my failures, than I could possibly find in their dull routine. I lost $50 in planting Sharpless Strawberries before I found, from my own experiments, and from the later teachings of the RURAL NEW-YORKER, that this variety is of as little value for field culture on light soils as Great American or Jucunda. From the advice of the R. N-Y for 1879, I thought it was the coming berry, but I have gained enough knowledge of the adaptation of soil and varieties to more than compensate for the loss by the Sharpless. It cost me $800 to learn how to ship and handle evergreens, and even a small bed of lilies (five by twelve feet) has cost me over $30, and but one variety (Lancifolium) is left. I have tried nearly every tree and shrub in the market, which is considered hardy for this latitude, and have retained not over one-half. So, in the greenhouse I have discarded nearly one-half of my purchases as worthless. But in all these experiments I have no regrets for my failures, and should feel disappointed if there were no new trials to be made.

The Special No. of the RURAL on shrubs and trees was excellent, but in some respects it was incomplete, particularly in mentioning the hardiness of varieties. For instance, the Rose of Sharon will not stand our Winters at all, and the Tecoma radicans, the Deutzia, the Japan Quince and even Prairie Roses must be protected in severe Winters or there will be no blossoms. One would infer from the reading that Akebia quinata, Aristolochia Sipho, Magnolia glauca, Mahonia and Daphne Cneorum were hardy in this climate, where we have peaches (seedlings) nearly every year—100 miles directly west from Chicago. All the Japan Evergreens I have tried do well, but I think Retinispora plumosa (not aurea) is the finest of all. Irish and Swedish Junipers are eventually winter-killed, but the Pyramidal Arbor-vitæ is a good substitute. I have had no trouble in planting the tulip-tree, persimmon or chestnut. G. W.

Rock Falls, Ill.

REMARKS.—At the Rural Farm the Rose of Sharon (Hibiscus Syriacus) is winter-killed. The soil is gravelly and dry. At the Rural Grounds it has stood unharmed 20° below zero. Soil, clayey and moist. The Trumpet Flower (Tecoma radicans), Deutzias and Japan Quinces are never seriously harmed. We should certainly suppose Akebia quinata, Aristolochia Sipho (Pipe Vine) and Magnolia glauca would prove hardy in Illinois—even in the Northern boundary.

Floricultural.

A LILIPUTIAN FLOWER GARDEN.

A FEW years ago my husband leased some property near his place of business. As it was to be our home a few years, I determined to have a flower garden. About 14x23 feet was my limit, and I was told it was too small for anything, especially as it faced the north, and a two-story building shut out the eastern sun and threw on it a blinding heat in the afternoon. Late in May even it was damp and cold. But I began, marked out my plan, gathered cobble-stones to underlie the walks, and carried, in a tin pail, sand to cover them and prevent weeds from growing. As I had no rose-bush, I decided to obtain a small, dead peach tree and trim it to suit, and then transplant it into the center plot, A. At the foot I planted Madeira and Cypress Vines, which soon clothed the dead branches, and many a one inquired, "What is that beautiful tree?" A wreath of pansies, B, and a border of turf taken from the watercourse along the sidewalk, finished the center. Every bed was bordered with turf, cut with a table-knife in narrow widths, and kept trimmed with a pair of common shears. But the crowning feature was the motto; one year it was "Love at Home;" another year, "Home, sweet Home," and last, "Welcome Home." This was also made of the same sort of cut turf, trimmed with shears, and many a blister my borders cost my hands.

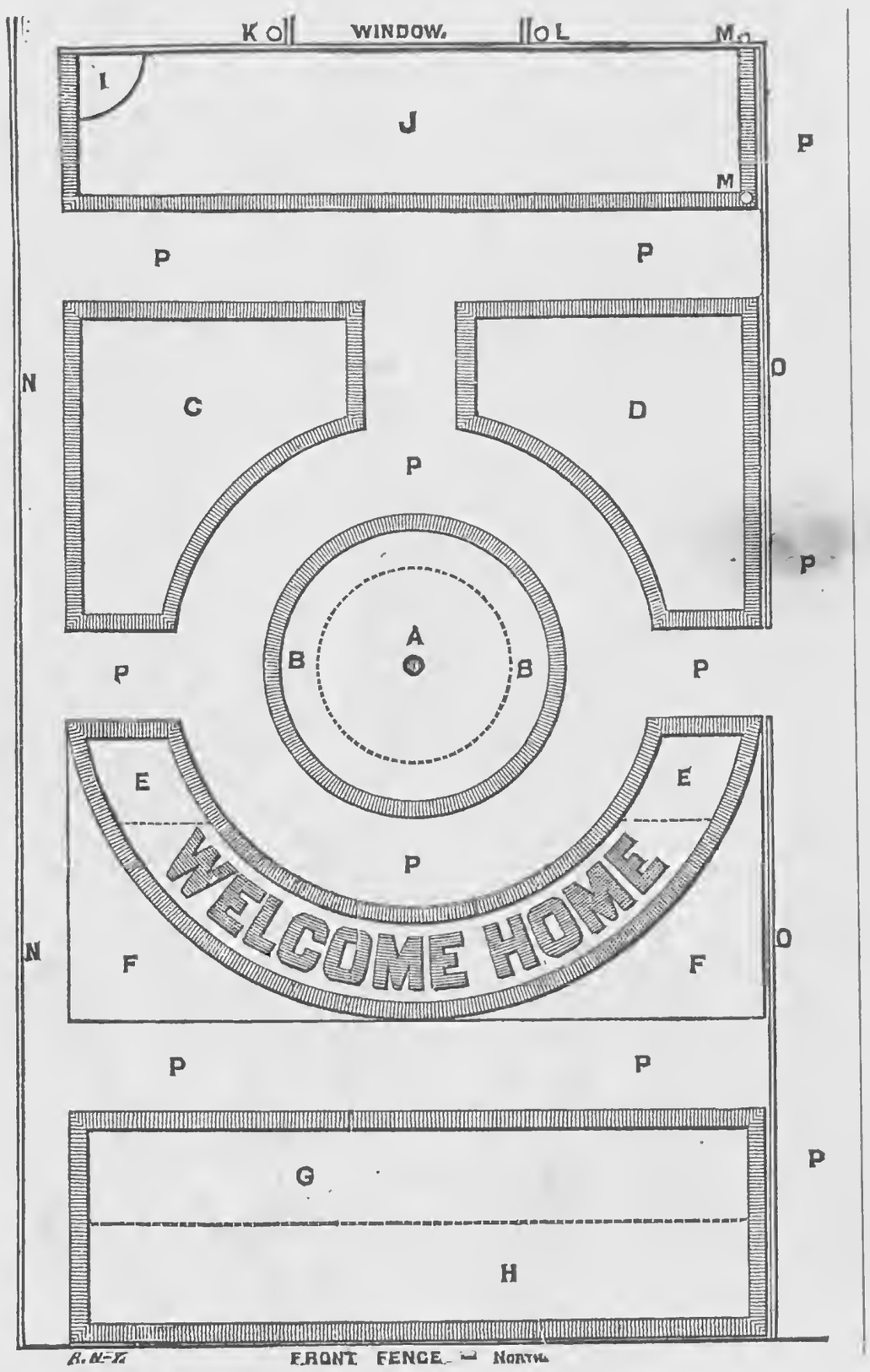
One Spring I was contemplating omitting it and having a bed of flowers instead. A little boy was looking over the fence.

"What motto are you going to have this year, Mrs. C.?"

"I don't know about the motto," I replied; "it makes more work than the flowers."

"Well," said he, "it's the prettiest part of the garden, and I'd rather help you than not to see it." So I took fresh courage. After the letters were all made, the fine sand sifted and spread between, little "Pansy Puller" said, "When brother comes home, he'll think that it's meant especially for him." Some months afterwards, as I was trimming off the fading pansies, some one said, "You're fond of flowers?" I looked up, and a sun-browned man was looking over the fence. Disinclined at first to answer the stranger, upon second thought I replied, as I picked a handful, "Yes, would you like a few?" and looking up in his face I met the laughing eyes of that long absent boy. "Was that motto put there for me?" So the little girl was right.

The vines, climbing on strings against the brick wall, N, prevented the glaring heat and refreshed the eye. The mignonette, H, under the fence, did not tempt little hands in passing, as brighter flowers would have done, and was just as sweet. Half a block east of us was a large hotel, on the same side-walk, and the hacks and omnibuses always showed their occupants looking our way.



PLAN FOR FLOWER BEDS.—FIG. 247.

A morning-glory trellis, O, walled in our garden on the west side, and then came the path from the front gate to the house and back-yard. This also was defined by a morning-glory trellis 56 feet long—our western boundary. Beautiful in the morning, shading our yard all day and inviting the hummingbirds all Summer, it was a continual delight. This joined a Summer bower, 12 feet square, of morning glories and scarlet runner beans, where the little ones kept house. An old Scotch gardener told me I had a wonderful amount of beauty in that small space, and the flowers were all common ones too. Where the two honeysuckles, M, M, are designated is the east side, and on the west side opposite, six feet distant, were two more which grew over an arch, thus forming a pretty entrance to the door-yard from the path. MRS. A. J. C.

Salt lake City, Utah.

A, Bed six feet in diameter, with dead peach tree in center for Cypress and Madeira Vines to climb on. B, Wreath of pansies. C, Jessamines and violets—mixed colors. D, Verbenas—mixed. E, Candy-tuft. F, Portulacas mixed. G, Larkspurs, pinks, bachelor's-buttons, marigolds and forget-me-nots. H, Mignonette bed. I, Canterbury Bells. J, China Asters—mixed. K, Madeira Vine. L, Ivy. M, Honeysuckle. N, Trellis of Sweet Peas trained against two-story brick building. O, Morning-glory trellis. P, Walk, two feet wide. The shaded portion represents a turf border six inches wide.

Plant Freezing.

As a jar of sirup or other dense liquid will resist frost longer than one of thin and simple water, so it has been found that the contents of the cells in plants do not congeal until after all the watery liquid in the spaces between the cells is frozen, and much of the watery part of the contents of the cells has exuded through the walls and become ice. If the frost continues beyond a certain limit the thick protoplasm within the cell succumbs, the cells themselves are ruptured and the injury is beyond remedy. Decay sets in. This explains why a degree of frost which throws the stems and leaves of a plant out of their normal form, as we see in celery on a cold morning in October, does not necessarily destroy the tissue, but allows the plant to recover on thawing, the cells reabsorbing enough of the water to mix with the condensed but unfrozen protoplasm. It also shows how much more danger of mortal rupture there is when the whole tissue is yet gorged with watery sap than if it is comparatively dry and at rest. W. G. W., SR.

The Vineyard.

THE SECRETARY GRAPE.

HAVING several times seen disparaging remarks about the Secretary Grape in the RURAL NEW-YORKER and in other papers, I beg space in the columns of the RURAL to correct some misstatements about it. I desire to see the Secretary and every other grape pass for just what each is, and nothing more. Some time ago I noticed in the RURAL a paragraph announcing that the Secretary was a failure at the Rural Grounds, and that it was intended to pull it out. This was not strange to me, for being so close to the sea, it could not reasonably be expected that anything in the grape line would succeed there except the iron-clads, and varieties that are perfect failures there in most cases succeed inland on soil and in situations favorable to the grape culture, and though this grape is a failure, it does not follow that it is so in other localities. [The Rural Grounds are 11 miles from the sea.—EDS.] To a certain extent this adaptability of a variety to special soils and situations holds good with all other grapes. The Catawba with me ripens to perfection nine times out of ten; while with my neighbor, less than a third of a mile from me, it fails to ripen three times out of five, and so it is, in my opinion, with most varieties. A variety that is successful in one locality often fails in another. Practice has long since proved this, and the only way to learn how a variety will succeed is to try it.

I also notice in the RURAL of April 16th a paragraph saying that W. C. Barry pronounces the Secretary a great failure, the fruit being small, the quality not so good as that of the Clinton, while the vine is styled a miserable grower, the foliage poor, etc. Mr. Barry does not say where it is a failure. Now I wish to say, in reply to Mr. Barry, that with only ordinary care and culture the fruit of the Secretary will compare favorably with that of the Catawba for size, and its quality is certainly better, and is so considered by Mr. Downing, who pronounced it one of Ricketts's best in quality, and it was so pronounced four or five years ago by others of the highest authority. Its habit of growth is somewhat slender, and the wood is short-jointed, and, as for hardiness, it stood 18° below zero the past Winter without protection. The foliage is somewhat inclined to mildew in bad seasons, but not more so than that of the Delaware and some of Rogers's. As for its quality, Mr. Barry is certainly mistaken. J. G. BURROW.

Fishkill, N. Y.

The Apiarian.

HOW TO HANDLE BEES.

SOME persons who would like to keep bees are dissuaded by the fear of stings, but they would not hesitate had they seen some experienced bee-keeper handle his bees. The worker bees are all armed with a dreadful sting—a weapon feared by everybody, and which was designed by nature to protect their race against extinction. Yet this weapon is but an instrument of defense. A bee, far from its hive, will never sting unless hurt. It is only near its habitation that a bee volunteers an attack, and only when it fears that its abode will be disturbed. Quick motion near the hives, such as running or walking fast, or fast movements of the arms are often considered menaces by the bees; hence it is always safer to locate the apiary in a secluded spot, far from frequented thoroughfares.

An experienced bee-keeper is rarely stung if he takes the trouble to use the usual means of quieting the bees before disturbing the interior of the hive. The best, I would say the only, medium to be used in the dealings with bees is smoke. There are now several good kinds of smoke, invented by Yankee geniuses, especially contrived to quiet bees. A few puffs of smoke at the entrance of the hive and a few more on the frames as soon as they are partially uncovered, are generally sufficient to pacify bees to such an extent that they allow the entire removal of their combs without the menace of a single sting. I say *generally*, for there are exceptions. Some colonies are more irascible than some others. Hybrid bees are noted for their anger. By hybrids I mean a cross between the peaceful Italians and the common bees. At times the most gentle bees cannot be easily controlled. Smoke is very offensive to bees; as soon as they smell it their instinct seems to inform them that they can be compelled to abandon their hive. Then they fill their sacs with honey, so as to have a provision of food to last till they find a new lodging; and as a bee well satiated, like a man after a good meal, is always of good temper, you can demolish the hive without a single sting.

But sometimes there is no honey in the hive, or there is so little of it that it is impossible for all the bees to reach it immediately. At such times the operations with bees are more difficult, and it is only with caution that you can open the hive. It is then necessary to give the bees some sirup and to wait until they have filled their empty stomachs. We can therefore say that when bees are harvesting honey they can be handled with the greatest facility, even, most of the time, without using any smoke; while during the time of scarcity they are more irascible. The quality of the honey harvested seems also to have some influence on the temper of bees. During the Spring crop, in April, May and June, they are very peaceable, while when they harvest the darker grades of honey, in Summer, they are more easily irritated.

There are some points that every bee-keeper should always keep in mind:—He should avoid carefully to stay in front of the hive, I mean in the line of flight of the bees. Every motion around the apiary, or while opening the hives, ought always to be slow, and every operation

with bees be made calmly; for a quick motion or a small jarring of the hive can be misapprehended as a menace by the bees, who would have remained quiet but for this unhappy accident. An irritated bee, unless very angry, announces its anger by quick flight around the head of the intruder. This anger is easily discernible by the strident sounds that the bee emits, being altogether different from the gentle humming of a bee going into the fields after honey. As soon as he hears this menacing language a skillful bee-keeper lowers his head, sends some more smoke inside the hive, and waits till the anger of the bee has subsided before resuming his operations. C. DADANT.

Industrial Implements.

A SUCCESSFUL IMPLEMENT FOR CULTIVATING CORN.

THE accompanying illustration shows a rlding corn cultivator at work. This machine is made by Edmiston & Waddell, 281 Greenwich St., New York City. The advantages of this riding cultivator, or, as it is more commonly called, sulky cultivator, have been demonstrated to the entire satisfaction of thousands of practical farmers all over the land.

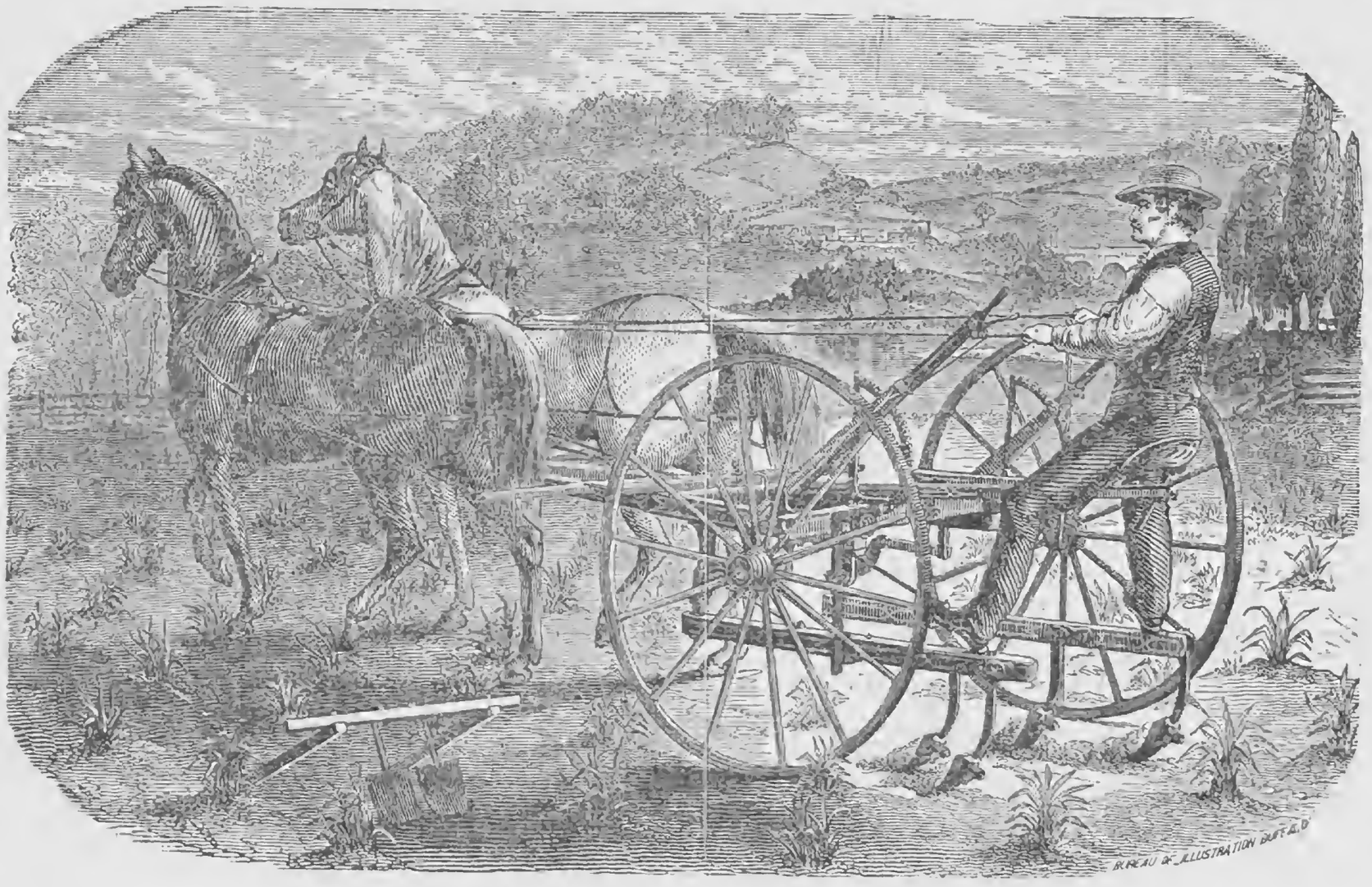
The construction of the machine secures strength and lightness both of the working parts and draft. The drag bars, or beams, to which the shovels or teeth are attached, are connected with the main frame by wrought-iron hangers and a substantial self-adjusting device which admits both of a lateral and vertical movement of the beams. These always move in a horizontal plane when moved from right to left or *vice versa* while the machine is at work. They are under the easy control of the driver, enabling him to dodge hills that are out of line and avoid plowing them up. The beams are so well balanced that they are easily managed by the feet without weariness to the legs. They are raised and lowered by long, easy-working levers which are within a few inches of the operator's hands. Each side can be raised or lowered or held in any desired position without in the least affecting the working of the other side, a feature that all corn raisers understand, where there are dead furrows or uneven surfaces to cultivate.

The shape and pitch of the shovels, the length of the beams and their connection with the main frame at a sufficient distance from the shovels, all tend to make the plowing deep. Its depth, however, is under the control of the driver by means of the raising levers.

A further adjustment to regulate the depth of plowing is afforded by the standards to which the shovels are attached, which can be instantly raised or lowered on the beams. The shovels can also be veered to throw the dirt to or from the corn, or moved nearer or further apart.

Farmers who have used sulky cultivators testify that they are most economical and profitable machines to have on the farm. By their use the farmer can raise better corn, because his fields are better and more thoroughly cultivated; he can raise more of it, because his ground is cultiva'ed deeper and hills out of line are not plowed up, and because shiftless or careless field hands cannot prevent this machine from doing good and thorough work, and by cultivating more rapidly he can give his corn more attention and go over it oftener than without the machine. A pair of shields are furnished with this machine, each of which works independently of the other and with the drag bar to which it is attached. They are held to the drag bar by a neat patented device, which allows them to be adjusted to suit the work to be done and to be instantly detached or put into position. This device effectually prevents the covering up of the small and young plants when cultivating. Moreover, the owner of such a machine can raise corn cheaper because it is so simple and so easily handled that a boy old enough to drive a team can plow corn all day with it and be fresh and able to do the chores at night, thus doing in one day what a man would take two days to do under the old method.

The machine is also specially adapted for preparing ground for seeding, or for cultivating in seed sown broadcast. For this purpose an additional shovel is furnished, and when the cultivator is used with five shovels in seeding, the ground is left almost, if not quite, as smooth as when harrowed. It is also excellently adapted for marking out corn rows. For this work the cultivator is used with four shovels; one row is marked at a time, and the furrow receives the same outside plow on returning, the rows are kept of uniform width, and with the four plows the ground under and next to the seed is still better pulverized. For the cultivation of cotton a pair of sweeps are furnished with each machine, all ready for work, and which can be attached to the machine very easily, each sweep having a standard of the same size as the shovel standard, and which fits into the casting on the beam. The sweeps take the place of the rear shovels. The machine has also been used with considerable success in the cultivation of tobacco and potatoes. K.



RIDING CORN CULTIVATOR.—FIG. 248.

Miscellaneous.

BOOKS, CATALOGUES, ETC.

LANDRETH'S RURAL REGISTER AND ALMANAC for 1881—67 pages, illustrated. Sent gratuitously to all who apply to D. Landreth & Sons, Philadelphia, Pa. The frontispiece presents a bird's-eye view of their home seed-farm, 500 acres in extent. This is but one of four farms worked by this firm, and not, in area, the largest. The Register is full of practical and valuable information.

SORGO HAND BOOK. A treatise on Chinese and African Sugar Canes, varieties, culture and manufacture. By the Blymer Manufacturing Co., Cincinnati, O. Sent without charge to our subscribers who apply to the above firm.

What Others Say.

DR. FENNER says that it is easy to show by facts and figures that as much imitation butter may be made from the offal fats of the beef alone, in the United States, as will exceed all the present dairy product, by three or four times. Besides, it may be, and is, made from the fat of the swine, or lard, which places its possibilities almost beyond computation. It can be produced at a profit for nine cents per pound and ought to be retailed on the market for ten to fifteen cents per pound to those, if any, who wish to eat it.

GREEN OATS FOR FODDER.—Mr. W. A. Armstrong offers his testimony to the excellence of the fodder made from oats cut when green. He has fed many crops cut when the grain was nearly full, a period indicated to the eye by the gray appearance of the field. At this stage there is almost completed growth, but the ripening process has not begun, the sap is in the stalks and the heads almost formed. After wilting in the swath a few hours in good weather—a longer time in poor weather for curing—the oats are bound in sheaves of moderate size and at once set up, two-by-two, in shocks where they are left until dry enough to draw in, the degree of curing being dependent somewhat on the conditions of storage. If the sheaves are to be put on scaffolds and not packed to a great depth, little care need be taken to secure thorough curing in the field. Now, as to value, oats so gathered, he thinks, are worth more for feeding milch cows than the best hay, if made a part of the daily supply. He has never fed exclusively on oats. Cows in milk, and doing well on good hay, will at once show increased yields, when given a suitable allowance of oats cut green and cured in the way here described, and they will eat all the straw as cleanly as they consume the best hay. The fodder is good also for horses, better than ripe oats for horses not steadily employed, for they keep the coat good, and digestion unimpaired.

LANDRETH'S Rural Register says that the Public School law passed in Austria in 1869, provides that "in every school a gymnastic ground, a garden for the teacher, according to the circumstances of the community, and a place for the purposes of agricultural experiment, be created." The school inspectors of each district are instructed "to see to it that in the country schools *school-gardens* shall be provided for agricultural instruction in all that relates to the soil, and that the teacher shall make himself skillful in such instruction." The general law declares, "Instruction in natural history is indispensable to suitably-established school-gardens. *The teachers must therefore be in a condition to conduct them.*" Contrast this thoughtful care with the system, or rather want of system, for the finer instruction of the mind pursued in the public schools of our rural districts!

THE Farmer, of England, speaking of a patent egg box, says that the idea is to fit boxes, trays, and such like articles, with spring holders which will hold the eggs securely, notwithstanding variations in size, at the same time preventing injury from ordinary shaking and concussion. Several forms of the holder in question are claimed, some being for retaining the egg in an upright position, and others with the ends parallel to the bottom of the box. For cheapness and simplicity, however, nothing will beat the card-board trays now coming into general use.

THE Germantown Telegraph says that the French preserve eggs by greasing the surface with a mixture composed of four ounces of beeswax and eight ounces of warm olive oil.

IT is somewhat surprising, remarks Coleman's Rural World, that up to this time there have been no fruit or vegetable canning establishments in the West or South. The West affords such a good field for the consumption of such goods, and also offers the supplies in abundance and in great variety—every advantage, in fact, that the management of such enterprises could desire.

MR. REYNOLDS says about two-thirds of all our sugars imported from abroad is beet sugar, but to manufacture this successfully there have to be from five to ten thousand acres of beets raised to furnish a single factory and a capital stock of over a million dollars, and as yet the beet sugar industry has not been a success in this country, but the Amber Cane and corn-stalk sugar manufactory has been a grand success.

THE World's Fair project is apparently on its death-bed. We quote from the N. Y. Times. Half a dozen estimable gentlemen still insist that the fair ought to be held, but they cannot get other people to sympathize with them.

THE Centennial Exhibition was all very well, for the public understood that it was in some sense a patriotic celebration, and that it would not be repeated for another hundred years. It was endured with great fortitude and resignation by the people of the United States without distinction of party. The newspapers wrote of it daily for at least a year, and in spite of the awful weariness with which so chronic a topic was necessarily approached, no candid man can deny that the press habitually spoke of it with a noble assumption of cheerfulness. Even Philadelphia itself was uniformly patted on the back, and characterized as a deserving town which displayed a degree of enterprise that only large and important cities had hitherto shown. People came from all parts of the country to Philadelphia, and carried home with them the germs of malarial fever and a profound admiration for the abilities and wealth of Philadelphia hackmen. Many of them went so far as to say that they enjoyed the Exhibition, and were quite willing that their creditors and personal enemies should attend the next one. After such a display of magnanimity and unselfishness it is a little too much to ask people to undergo another exhibition, even if it is to be held in New York. A sense of duty to one's country may induce a man to join a suffocating crowd in order to gaze on the Corliss engine and the latest patent churn, or to buy preposterous boxes from alleged Japanese, and to eat atrociously bad dinners in a Polynesian pavilion; but having done these things once in his lifetime, the good citizen should be formally declared to be exempt from all further World's Fairs.

ALL the exhibitors who received certificates that their particular articles were the best in the exhibition have since occupied themselves in quarreling with one another, while three exhibitors who failed to receive first-class certificates were naturally very angry.

To hold a World's Fair to enable foreigners who do not want to buy our manufactures to exhibit goods that our tariff will not permit them to sell here, is to spend time and money to no good purpose. Such an exhibition may be an entertaining "show," but it would be much more honest to borrow a name from Barnum, and call it "the Greatest Show on Earth," than it is to call it a World's Fair.

BUT let us not trouble ourselves. We may have the cholera, and there is no doubt that we are in danger of an epidemic of typhus fever, but the danger of a World's Fair has very nearly passed away. Our people—according to the disappointed advocates of the scheme—are so disgustingly prosperous that they do not see any reason for dropping their present dollars in order to clutch at the possible prosperity that a World's Fair might bring them. The Executive Committee will probably hold a few more meetings to bewail the apathy of the people, and will then officially declare that the World's Fair is dead and buried.

EIGHT out of every ten hotels and restaurants in London supply their guests with artificial butters. So says the London Farmer.

. . . . . Col. Colman says that some

of the finest sirup that he has ever tasted made by farmers, was raised on their sandy soil, and some of it soil that would not raise corn. . . . . Mr. Schwarz, it appears according to the same authority, has been raising cane upon the same field for eight or ten successive years, and every year he has obtained a better quality of sirup and about as much cane, if not more, per acre. He is very careful to keep his ground as clear of weeds as possible. . . . . The first accurate analysis of a vegetable was not made till the year 1810, and so late as 1838 the Gottingen Academy offered a prize for a satisfactory solution of the question whether the ingredients of the ashes are essential to vegetable growth. . . . . The N. Y. Herald makes the too-sweeping assertion that Guinea fowls will keep all bugs and insects of every description off garden-vines; that they will not scratch like other fowls or harm the most delicate plants. . . . . An exchange publishes an article headed "How to Tell a Mad Dog." We have nothing to tell a mad dog that we cannot communicate by telephone or postal card.—Boston Transcript. . . . . "Pa, what is ensilage!" "Why—h'm—ensilage, my son, is ur-ensilage is—oh, something like mucilage, my son; something like mucilage; used to stick things together, you know. There now, run away to your play, and don't distrub me now.—"Boston Transcript. . . . . Whenever, says the editor of the New England Farmer, we look over another's farm that shows in any way superior management, we always want to get out our note book and sit down and quiz him—"interview" is the American word. . . . . The Prairie Farmer thinks from present indications the yield of wheat will be at least one-fourth less than the Winter wheat crop of last year.

ATTENTION is called to the advertisement of Geo. E. Pomeroy, Toledo, Ohio. An opportunity is here offered for any one desirous of obtaining a good farm on easy terms.

Everywhere.

RURAL SPECIAL REPORTS.

ARK., Poteau, Scott Co., April 27.—Fruit is about all killed here. Peaches *all* killed; apples about half. This has been the latest and coldest Spring for years. H. C. B.

GA., Washington, Wilkes Co., April 27.—In reply to an inquiry made by J. B. K., of West Paullet, Vt., in a late RURAL, as to the adaptability of Northern and Eastern Georgia for general farming, that is, for producing oats, corn, potatoes, butter, cheese, etc., you say Georgia is certainly not a first-class place either for dairying or raising Irish potatoes. I live in the eastern part of the State, and think I can give your correspondent a correct statement of some of the productions of this section. Oats are raised by some farmers as the main feed crop; 60 bushels per acre can be made easily. Corn is grown successfully both on uplands and lowlands; as much as 120 bushels per acre have been gathered from bottoms in this county. Irish potatoes are not raised for market, but I believe no place in the United States will produce larger crops per acre, and two crops every year at that. Dairying, as a business, is not followed by any of our people; but why cannot butter and cheese be made where clover, lucerne, all grasses, cow-peas, sweet potatoes, corn, oats, wheat, barley, turnips, beets, carrots, and, last but not least, cotton, can be raised in abundance? Cotton is mentioned in this connection, because I have found nothing better to produce large quantities of rich milk and butter than cotton-seed and cow-peas mixed. The farmers are behindhand here in getting in their corn and cotton on account of bad weather. The oat crop is looking splendid, acreage large; wheat is backward, little sown; barley is in full head, tall and luxuriant; strawberries and other garden crops will be abundant from present appearances. J. C. D.

ILL., Pana, Christian Co., April 30.—About February 25, I wrote you that the prospect for the wheat crop was good. So it was at that time, but at this date I must say the outlook for the Winter wheat crop is bad. During the latter part of March and the fore part of April it was nearly ruined. On the prairie there are not more than 15 acres of wheat out of every 100 acres sown last Fall. In the timber it is a little better, and there it will be about 33 per cent. of a full crop. I think apples, cherries, raspberries and pears are not injured. Cherries are blooming. Some think the grapes are injured somewhat. The weather is fine. Oats are sown and plowing and planting corn are under way. Grass is coming on finely. Some are turning out their stock after five months of steady Winter. D. B. P.

ILL., Godfrey, Madison Co., April 25.—The prospects are good for a fair crop of strawberries, raspberries and blackberries. A great many of the strawberry plants in old plantations, however, were killed by the crown borer in the Fall of last year. The Wilson and Kerr's Prolific seem to be particularly subject to its ravages. W. J.

KAN., Parsons, Labette Co., April 25.—Weather for two weeks unpreecedentedly fine. The pole and the equator have embraced; heat and moisture in abundance. Corn planting two-thirds done, and much corn up and looking well. Wheat splendid, but chinch bugs thick. Grass enough for stock. Latter very scarce and high. Apples going out of bloom. J. D.

KAN., Roxbury, McPherson Co., April 23.—We have had a very late Spring—three or four weeks later than usual. All farming Spring operations have, therefore, been kept back. No corn has yet been planted and very little plowing has been done for it. Fall-sown wheat has been badly hurt by the alternate freezings and thawings in March, but the weather is very favorable now—cool and wet with no frost. Peaches were killed except in well protected situations. The outlook for small fruits is very promising. L. C. M.

KAN., Salina, Saline Co., April 23.—We are having nice warm showers and everything is growing finely. The prospect for wheat is excellent; I have lived here 12 years and never saw it look better. Peach buds were nearly all killed; but in favorable localities a few are still uninjured. A. G. W.

MICH., Athens, Calhoun Co., April 25.—After a long and tedious Winter, Spring has finally come again. Fully two-thirds of the wheat are killed, so the prospect for a good harvest has failed; but if the weather is favorable we may get enough to live on. A great many farmers are talking of re-plowing and putting in Summer crops, and others have locked their granaries and intend to keep the wheat they have. Peaches are all killed in our section here, and most, if not all, the cherries and raspberries. There is a fair prospect for pears and apples. R. D. R.

MICH., Martin, Allegan Co., April 25.—The past Winter was the coldest and this Spring is the most backward I have seen in 20 years. Wheat has been very badly winter-killed. Wheat is worth $1 per bushel; corn, 50c; oats, 40c; hay, $12 per ton. R. J.

MICH., Schoolcraft, Kalamazoo Co., April 23.—Winter wheat is very badly killed in this county. Some of it is being plowed up; it looks now as if there would not be half a crop. G. H. T.

MINN., Winnebago City, Faribault Co., April 25.—The long Winter terminated quite suddenly to-day, when the mercury at 2 P. M. marked 83 deg. in the shade. Less than a week ago the snow lay over the land several feet deep in many places. The fields are settling and drying fast. I think wheat sowing will commence in earnest about Tuesday the 26th inst. Although wheat is the principal crop hereabouts, oats, barley, corn and potatoes give good returns. Sorghum sufficient for home use is raised by nearly every farmer, and the yield is about 200 gallons per acre, with good cultivation. We have cause to be thankful, as we have had no suffering greater than cold feet during the long, severe Winter just ended, and no floods to seriously damage property. The Blue Earth River, which flows north through this town emptying itself into the Minnesota 18 miles north of here, is full to overflowing, but is passing rapidly on its course carrying off the surface water made by the melting snows fast enough to prevent alarm. Our stock wintered well. Work horses are "spoiling" for work; nearly every farmer hereabouts keeps from four to ten horses. Hay and coarse grain are plentiful. Seed corn scarce; in fact, there is none at all. Not one in ten that depends, as heretofore, on crib corn will find any that will grow. I picked mine early and hung it up in a dry place, but all failed to grow except that which I hung in the Summer kitchen near the stove. This is a fine corn-raising country. Farmers plant enough annually for feeding purposes for all their stock, horses and hogs; it yields well—40 to 50 bushels per acre. Price of produce and stock: wheat, No. 1, 85 c.; barley, No. 2, 65c.; oats, 20c.; corn, 30c.; potatoes, 50c.; butter, 15c.; yearling steers, $15; milch cows, $25; work horses from $100@125; hay, per ton $5; fat hogs, per cwt., $4.50; improved farms of 160 acres, $3,000; raw prairie, per acre, $10; oak wood, per cord, $3; bass wood, $2.75. H. P. S.

MO., Richmond, Ray Co., April 23.—We have a fine county here for raising corn. Many ears measure from eight to ten and even eleven inches in circumference, and I have shelled off of one ear nearly one quart of grain. I claim that the larger the ears grown the greater will be the yield. T. N. C.

NEBRASKA, Plum Valley, Knox Co., April 20th.—I have just come to this State, but people who have lived here 15 or 20 years think the past Winter the hardest they remember. Snow commenced to fall last October and, remaining on the ground ever since is four inches deep now, and lots of old snow drifts are from five to ten feet deep. Farming and stock raising are the general industries here. A great many cattle have died; some estimate the loss in the State at half of all the cattle in it—cause poor feed and poorer care. Very few have what can, even by courtesy, be called barns. Usually crotched sticks are stuck in the ground and poles laid in the crotches and straw piled on them for a cattle shelter. Some dig a hole in the side of the bluff, put poles across the top, then pile on some straw and the cattle shed is completed. I ask how many cattle would live through the Winter in York State in such a place. But here stock so sheltered are well off, for many have no shelter, and no food but what they can pick on the prairie—I think this sort of stock-keeping cruel. Wheat is worth 75c; corn, 40c. on the cob; potatoes, 50c; cows, $25 to $40; oxen, $100 to $120, a pair; horses, $100 to $125 per head, ponies, $15 to $50 per head; hogs, live, $4; dressed, $5.50; bacon, 10c. This part of the State has been only eight years settled. We are 20 miles from the Missouri River. J. P.

N. Y., Clyde, Wayne Co., April 26.—A few light showers greeted us to-day, the first rain this Spring. We had numerous snow storms up to the 13th, and freezing nights till the 18th; at present we have very hot weather. Plowing began on the 9th, and a general commencement was made on the 14th. Sowing began the 18th; all of this first sowing which was rolled is now up. Wheat appears desperately poor. Too thin seeding, sowing a trifle late and poor preparation of the ground for sowing last Fall, ill prepared it for Winter the latter part of which was extremely severe, while the wheat was entirely unprotected by snow. In driving through the country one cannot, on an average, see more than one good piece to five miles. Or one may stand on the highest hill-top and yet not see a single entirely even green slope or flat. Still, nearly all those pieces which were put in with great care, well fertilized and sown early, are beautiful to look at now, except on steep hill-sides. In such places the wheat is thick and even and stands nearly six inches high. The buds of peach trees are quite large, and on opening, one can see the stamens, etc., of the as-yet-uninjured flower. The wild flowers, Blood-root (Sanguinaria Canadensis), Adder's Tongue (Erythronium Americanum), Squirrel Corn (Dicentra Canadensis, and the Dutchman's Breeches (D. Cucullaria), were in bloom a week ago. The Japan Quince (Pyrus Japonica) is just in blossom. Not as many apple trees were planted as in former Springs. In pruning fruit trees, some time ago, I found the common pocket pruning knife an excellent tool for sprouting old apple trees, being far handier and quicker than a saw. W. X.

N. Y., Rockwell's Mills, Chenango Co., April 29.—The first thunder storm of the season came to the Unadilla Valley on April 26. It found the roads thick with dust while snow could be seen on the northern slopes of the hills. A hasty change of toilet during the shower brought out the russet fields in robes of emerald. Farmers have generally sowed their oat fields. The creamery is in full blast with 600 cows. A private dairy is becoming exceedingly rare in this section of Chenango County. Two or three skilled workmen do the work of 20 or 30 and do it much better, as the facilities are much better. E. J. B.

N. Y., Ithaca, Tompkins Co., April 25.—A cold, raw wind blowing from the northwest for almost a month has been very hard on the wheat. The difference where good culture and plenty of fertilizers have been applied is plainly seen. The prospect for wheat is not nearly so good in this locality as it was last year. Yesterday and to-day extremely warm; thermometer at 80°. Indications of rain which is needed very much, especially to start the grass. Prospect for fruit good. I. P. R.

N. C., Lynn, Polk Co., April 21.—We shall have plenty of fruit of all kinds. Spring is here and the woods look like one vast flower garden. D. E. M'A.

OHIO, Mount Eaton, Wayne Co., April 27.—We are having a very late Spring, and farmers are behind time with their work, as no oats have been sown yet, nor will any be for a few days. About the 1st of April snow fell on the level about two feet, and lay on the ground for about ten days. It has only been a day or two since there was any plowing done and the ground is wet enough yet. Wheat looks well in general, and I think, if no mishap occurs to it yet, we shall have a full crop. Fultz is mostly grown in this part. It averages from 25 to 40 bushels per acre, according to conditions and quality of soil. Our large farmers do their own harvesting almost entirely with the use of self-binders. The thrashing is done by steam rigs which thrash from 500 to 1,000 bushels per day. Horse-power thrashing is a thing of the past in this section. Land is worth $75 to $125 per acre, according to improvements. Wheat, $1.06; corn, 48c. to 50c.; oats, 37c.; hay, from $12 to $15 per ton and scarce at that; butter, 18c.; eggs, 12c. The thermometer indicates 87°. W. H. P.

OHIO, Mt. Vernon, Knox Co., May 2.—We have had a very cold and snowy Winter. It has killed all the blackberries and raspberries so far as I can learn, but strawberries promise well. Peaches have a fine prospect for a good crop. I cannot see why they were not killed. Potatoes are very high-priced—$1 per bushel; corn, 50 cents; wheat, $1; oats, 40 cents; onions, $2. M. W.

PA., Northumberland, Northumberland Co., April 29.—Spring has come to stay, though fully two weeks late. Farmers are putting forth their best energies. The usual area of oats and corn will not be sown, on account of the lateness of the season. All kinds of stock look bad this Spring, and a bad distemper has broken out among the horses. About the usual quantity of tobacco will be grown this year, though very few sales have yet been made of last year's crop. Winter wheat—no Spring wheat is raised here—is looking well, especially along the rivers. Wheat, $1: corn, 50c.; oats, 40c. No barley is raised here. Butter, 25c.; eggs, 14c. We have no creameries here, but we have a life insurance company which is just as bad (Oh!). This has been the best season for rafting for a number of years, some 2,000 rafts have passed down the West Branch of the Susquehanna to market. R. C. M'W.

S. C., Greenville, Greenville Co., April 23.—The past has been the severest Winter I have ever seen. Did you know the California Poppy is an evergreen? [Not here.—EDS.] It makes a nice border alongside walks. Euonymus plants have been generally killed here, except the small ones. I am expecting a great many plants and 500 Chinese Arbor-vitæ from Saul, the Washington nurseryman. The Arbor-vitæs are intended for a hedge; others of the same sort have endured the Winter well here. I get a great many seeds from Vick, who is always reliable, and a great many from Berckmans, of Augusta, Ga., who is as honest a man as one can find. B. F. P.

TEXAS, Seclusion, Lavaca Co., April 25.—Spring has been very dry and late, but we had a very heavy rain this week which was very unfavorable to the crops just planted. Some think of planting over again. C. D. P.

WISCONSIN, Spafford, La Fayette Co.—The Winter here has been long and tedious. Very little Winter wheat is sown in this vicinity, but what there is has come out very well. Farmers have just commenced work this week. Spring work is fully three weeks later than usual. W. S.

WIS., Madison, Dane Co., April 18.—We have a late Spring for this locality. No Spring work done yet. Large snow drifts are still hard about the fences and considerable frost is still in the ground. Just now the weather is favorable. W. B.

The Querist.

ANSWERS TO CORRESPONDENTS.

Mange in a Horse.

H. A. M., Marion, N. Y., asks for a remedy for mange in his horse.

ANS.—Mange in the horse, as in all other animals, is due to the irritation and ulceration caused by the burrowing of minute insects. The disease is contagious, only requiring for its development the passage of the mites or their eggs from infected to healthy animals. This transfer may take place by the sound animal coming in contact either with an ailing one of the same sort, or with some object on which the mites or their eggs have found a resting place. Moreover, any animal may accidentally be the carrier of this little pest from infected to clean subjects. Various causes predispose animals to afford development to the mange parasites and to aggravate their ravages, such as neglect, dirt, starvation, ill usage, etc., and in curing the ailment these should be remedied. The disease, in horses, usually first shows itself on the side of the neck just at the edges of the mane, and on the insides of the quarters near the root of the tail. Thence it spreads along the back and down the sides. The first symptom is an excessive itching, causing the horse to rub himself eagerly against any obstacle. The skin becomes scabby, the hair falls off in patches, leaving the skin at first smooth with a few small, red patches, each of which contains one of the parasites, technically known as acari. In time the pimples multiply, harden into scabs, under which the acari may be found like mites in cheese. The constant irritation soon makes the infected horse feverish, thin and wretched.

TREATMENT—The only way to rid any animal of the mange is to kill the mites and their eggs. This can be done only by the application of a remedy to the parts affected; for although internal treatment is often beneficial, the mites must be killed by external local applications. Just like the itch-mites on the human subject, the mange mites on a horse can be certainly destroyed by sulphur, turpentine, arsenic, hellebore, and corrosive sublimate; but inasmuch as some of these are almost as dangerous to the horse as to the parasites, milder remedies are preferable. As a first measure the infected animal should be as thoroughly as possible cleaned of scab and dirt with a wisp of hay and the light, gentle use of the curry-comb. Then prepare one of

the following recipes, the first for a mild case, the second for a severe one: First, common sulphur, six ounces; sperm or train oil, one pint; spirits of turpentine, three ounces. Mix and rub well into the skin with a flannel, or, in preference, with a painter's brush. Second, compound sulphur ointment, eight ounces; train or sperm oil, one pint; spirits of turpentine, three ounces. Mix and use in the same way as the other. Whichever of these dressings is used should be well rubbed in every third day for a couple of weeks in trifling cases, and for three or four weeks in severe ones. Another effective recipe is the following: Animal glycerine, one quart; creosote, one gill; turpentine, one pint; oil of juniper, one gill. Mix well together and shake, and saturate the whole skin with it as nearly as possible, rubbing it thoroughly in with a soft cloth. After leaving it for two days, wash the animal with warm water and soft soap; rub him until dry; after which rub him again all over with the same dressing; and repeat the operations until a cure is effected. Usually three or four applications will be sufficient. All the stable fittings and all objects with which the infested animal came in contact, and against which he or others may come in contact afterwards, should be thoroughly washed with a solution of corrosive sublimate, made in the following proportion: corrosive sublimate, one ounce; methylated spirits of wine, six ounces; water, one gallon. Dissolve the sublimate in the spirit by rubbing in a mortar, then mix with the water and use with a brush, stirring it up constantly to prevent settling. Of course the druggist will "fix" the above recipes. Infested clothing should be destroyed as it is nearly impossible to cleanse it thoroughly. If the use of it is risked, it should be thoroughly washed, and when dry saturated with spirits of turpentine.

Arresting Fermentation in Cider.

W. T. B., Madalin, N. Y., asks for some method of clarifying cider by which the impurities held in solution in it may be removed. He has been told that "fish glue" is sometimes used for the purpose and he asks where can it be obtained and how should it be used.

ANS.—Our correspondent should have stated the present condition of the cider. When cider has advanced far into acetous fermentation it is not worth while to attempt its purification. There are various applications recommended to counteract fermentation. The "fish glue" mentioned is isinglass, which can be found at any druggist's. Isinglass and brimstone (one ounce of the former and two of the latter for 30 gallons), after being reduced fine in a mortar, are stirred into the fermenting cider. Sulphite of lime, or, preferred by some, sulphite of potash, is also applied to arrest fermentation. Sulphur has a strong influence in arresting fermentation in all bodies, but if too much is used in cider it affects the taste somewhat disagreeably. Sulphur is also applied in the form of sulphurous acid gas, in the following manner:—Put two gallons of the fermenting cider into a purified empty cask, then introduce through the bung hole, a lighted sulphur match by means of a piece of wire not so long as to reach the fluid. The match is made of thick linen dipped into melted brimstone. The linen is wetted at the end attached to the wire, and when the brimstone is consumed in the barrel, the wire is withdrawn, the bung closed and the barrel rolled to and fro for some time to cause the absorption of the sulphurous gas by the cider. The barrel is then filled with the cider, and is to remain quiet till the subsidence of the ferment effected by the sulphurous gas. But it sometimes requires several repetitions, according to the degree of acidity. This was the plan used thirty years ago. But if the writer were to try the renovation of too-much-fermented cider he would filter the cider first through rectifiers, wood charcoal, excluding the air as much as possible, and then apply one ounce of salicylic acid to 30 gallons. The filtering would reduce the ferment and purify the cider, and salicylic acid would prevent further fermentation. This acid is dry and very light. Should be completely mixed in the cider before putting in barrels. In putting up cider in the Fall, after filtering out all pomace, if about six pounds of fine charcoal are put in each barrel and all stirred up, it will look like ink at first, but after it subsides it will be very clear and fermentation will be slow. It requires a good deal of practice to make the best cider.

Dropsy in a Horse.

J. C., Stewart Minn, asks the cause of, and a remedy for, dropsy in a horse.

ANS.—Several parts of the horse may be affected by dropsy—the heart, the brain, the chest, the scrotum, and the abdomen; but probably dropsy of the abdomen is referred to by our inquirer. This is generally due either to chronic inflammation of the peritoneum,—a tough, white, membrane that lines the abdomen and covers the bowels—or to injuries to it, both of which cause it to secrete a watery fluid, which fills the abdominal cavity and unless attended to causes death. It also sometimes arises from obstructed circulation caused by disease of the liver, lungs or heart, as well as from a poor, watery state of the blood, brought about by exhaustion or poor or scanty food. Whatever the cause, the chief symptoms are thirst and loss of appetite; hard, small pulse; paleness of the nasal membrane; a dry mouth; drooping head; general weakness and languor; loose, staring coat; tenderness and enlargement of abdomen; constipation, etc. Treatment when the disease has advanced far is powerless; but in the early stages the food should be small in bulk but highly nutritious in quality; no work should be imposed; the animal should be placed in a dry, well ventilated stall and, nights and mornings, given a tonic ball composed of an ounce of powdered digitalis and half an ounce of sulphate of iron. Mix with mucilage and a spoonful of linseed meal to form a ball. As it is important that the kidneys should be kept active, the following diuretic should be prepared: soap two pounds; nitrate of potash, two pounds; resin, three pounds; Venice turpentine, two pounds; oil of turpentine, half a pint. Melt the soap and resin slowly together, and stir in the other ingredients while the mixture is cooling. Make it into two-ounce balls with linseed meal, and give one at a time as often as necessary to keep up a free action of the kidneys. When water accumulates its presence can be ascertained by placing the ear against the abdomen at one side while somebody strikes the opposite side. When it has gathered in a large quantity, it should be drawn off by means of a fine trocar plunged into the lowest part of the distended abdomen.

Heating a Small Greenhouse with Sawdust.

C. P. B., Edwardsville, Ill., has a greenhouse 10x12 feet, heated by a brick flue. A friend, on inspecting it, said he had seen houses of that size—and larger ones, too,—in Europe, heated by sawdust, which was placed in a bin alongside the bench, and which, in heating, gave out heat enough for all purposes, the heat being increased when desirable by stirring up the sawdust, and we are asked what we think of this mode of operating a small greenhouse.

ANS.—The use of manure, leaves, sawdust, etc., is an old and very primitive method of heating small *sunken* greenhouses, pits, etc., but has been superseded by the far better methods of the brick flue and the hot-water pipes. The manure, leaves, etc., are still commonly used for pits, hot-beds, etc., both in Europe and in this country; but for a greenhouse or a hot-house there is no well-tried method nearly so good as hot-water pipes, and in the end they are the cheapest, besides being thoroughly reliable, quite free from danger, and cleanly and tidy, which the other methods are not. When plants, such as the pineapple, that require a moderate bottom heat, are grown in a hot-house, the pots are usually plunged in a bed of tan or sawdust, and this bed nearly always runs through the middle of the house, and is probably what your friend saw; but even here hot-water pipes are superseding sawdust and tan. In such houses, however, there are always pipes or flues in addition to the bed. In a climate like ours the sawdust plan is not to be thought of. If you wish to change your flue, take a step forward and use hot-water pipes. Sawdust would require a good deal of "stirring up" to heat your greenhouse, with the thermometer looking sharp toward zero. In a mild climate, where only a moderate heat was required, and labor very cheap, sawdust and manure would answer very well; but it is a dirty and laborious plan, full of vexation and toil.

Worms in Horses.

H. B. K., West Paulet, Vt., asks the symptoms of worms in horses and a remedy therefor.

ANS.—The general symptoms of intestinal worms in horses are, a rough, staring coat; loss of condition generally; an irregular but voracious appetite; fetid breath; passing of mucus with the dung; colicky pains; itching and pulling of the anus, etc. The horse will often lift its upper lip and rub it against any near-by object; while colts will often pick the hair from their bodies and limbs. The intestinal worms of horses are either tape-worms or pin-worms. When these are suspected, it is well to obtain positive proof of their presence by giving the animal an ordinary dose of physic or the following purge:—aloes, four drachms; powdered male fern, one ounce; oil of worm-seed, 20 drops, to be given in a pint of gruel an hour before feeding in the morning. If on examining the evacuations, one or more worms are noticed, give this vermifuge:—tartar emetic, one drachm; powdered ginger, one drachm. Mix with enough of linseed meal, wet with boiling water, to form a ball, and give one every morning for a week, before feeding; then give a pint of linseed oil. Let the stomach rest a week and then give another lot of balls, followed by the dose of linseed oil. Then give good diet with daily tonics, say, two drachms of sulphate of iron, or four drachms of gentian in the food. For tape-worms an ounce of areca nut, fasting, followed with four drachms of aloes, should be given if the horse is weak; if the animal is strong, however, a better dose would be an ounce of oil of turpentine in an ounce of water, to be followed in four hours by another dose, which in its turn, is to be followed in an hour by four drachms of aloes.

Miscellaneous.

A. M. C., Coe Ridge, Ohio, says that in jarring the curculio from plum trees, it is recommended to drive into the tree iron spikes to strike upon, and he asks how can these be driven into the limbs without splitting them. He has tried jarring with a padded mallet, but it bruises the bark badly.

ANS.—Messrs. Ellwanger and Barry tell us they never employ iron spikes for this purpose. In their practice they find it a very good plan to cut off a small branch leaving a stump to strike upon.

S. V. W., Jericho, L. I., asks how to treat the Night-blooming Cereus.

ANS.—There are several Night-blooming Cereus. C. grandiflorus is the type. The size of the flowers varies from five to fifteen inches in diameter. C. McDonaldii is said to be the largest. Most of them will not bloom until they have attained to some age. They begin to unfold their flowers early in the evening. They last but a few hours. A light, sandy soil is required. Water freely while in bloom and sparingly at all other times.

A. M. W., Rome, N. Y., has sent to us an apple for name. He has kept specimens for nearly two years.

ANS.—Unable to name the apple, we sent it for identification to Mr Charles Downing, who replies as follows:—"I am sorry to say that I don't recognize the apple as any variety I am acquainted with, and it is probably a local apple. It is pretty and of a smooth, regular form, and no doubt a long keeper; but the quality is not equal to that of many of the old varieties."

S. B. P., Ottonelly, Ohio, desires to know how many years it requires to have potatoes attain full size from seed.

ANS.—We start our plants from seed under glass and transplant to open ground about May 20. At the end of the first season the tubers average an inch in diameter. Eyes from these will grow to the full size in another season.

C. H. B., Steward, W. Va., sends us from his young orchard a couple of twigs on which there are small knots, and he asks what causes them, and whether it—whatever it may be—is likely to injure the trees.

ANS.—The distortion in the growth is due to an insect, as will appear from cutting into the enlargement. We should not in this case fear any serious injury.

J. B. D., Oakley, Ohio, asks who are the makers of a corn-husker he describes.

ANS.—Philips Spiral Corn Husker Co., Hudson, New York, are the manufacturers of the machine. The corn is fed to it from the shock and it husks, crushes the stalks and separates the ear from the husk. We have heard it spoken of highly and seen it in operation—it appears to do its work thoroughly.

D. D. McA., Lynn, N. C., wants to know if sawdust may with advantage be used as a mulch for strawberries and potatoes.

ANS.—Our answer would be in the negative. It makes a hard cover and an excellent harbor for many kinds of insects. Would our readers who have had experience please give their views.

G. C. L., Philadelphia, Pa., asks where can he get—and at what price—the Report of the New Jersey State Board of Agriculture.

ANS.—The Eighth Annual Report is just issued and can be obtained from the Secretary, P. T. Quinn, Newark, N. J.; price probably 25 cents.

A. L. J., Canada, wishes to know what would be our choice of gladioli were we confined to six.

ANS.—Mary Stuart, Shakespeare, Octavia, Addison, Eugene Scribe, Mad. Desportes.

Several Subscribers ask where can Persian Insect Powder be obtained.

ANS.—Any druggist or seedsman can either supply it from his stock or get it to order.

T. E. S., Burbank, Ohio, asks for a remedy for the currant worm.

ANS—Hellebore is a specific. Use dry or mix with water.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MAY 7th.

W. W. J.—Mrs. S. A. M.—W. S.—M. M.—T. E. S.—F. S. (Ill.), thanks for potatoes.—J. C. D.—D. W. T.—G. E. N.—E. W. K., thanks for vines.—D. B. P.—J. A. B.—C. D. P.—W. H.—Mrs. T. C. B.—Miss L. F.—Constant Reader.—P. L. R. F.—L. P. N.—E. A. H.—C. D., thanks.—A. M. W.—E. W. K., thanks for vines and seeds.—L. G. S., thanks for corn.—W. F. C.—A. M. C.—J. E. S.—E. J. B.—J. G. B.—J. P. R.—C. J. R.—Invererity, thanks for seeds.—A. V. R.—Mrs. V. A. R.—C. H. D.—U.—W. C. McV., the oats we suppose to have come from you are sown. Thanks.—W. H. P.—D. S.—W. B. N.—G. A. G., Jr.—W. J.—W. H. L.—H. J. Wedell, Texas, request at once attended to—F. H. S.—F. E. H.—T. A. C.—R. T. J.—H. P. S., Los Angeles, Cal., thanks for seed.—M. W. F.—R. L.—S. J. P.—N. W. R.—Messrs. Hale, thanks for plants.

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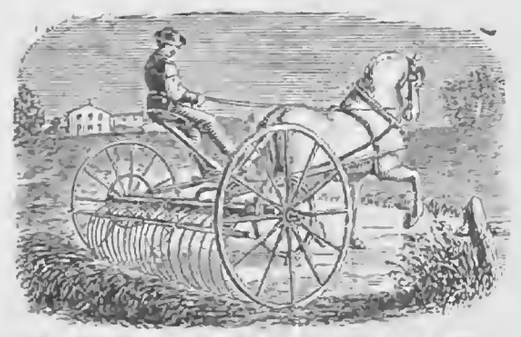

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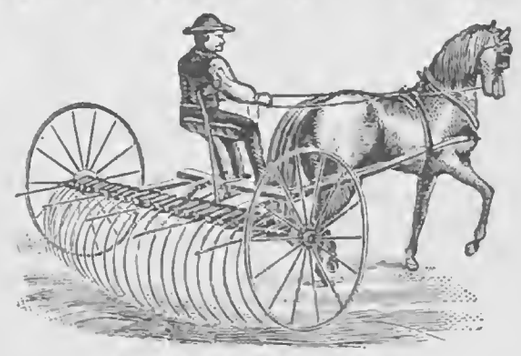

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SATURDAY, MAY 14, 1881.

ALL OF OUR SUBSCRIBERS, WHO ARE ENTITLED TO IT, WHO HAVE NOT RECEIVED OUR PRESENT SEED DISTRIBUTION WILL KINDLY NOTIFY US AT ONCE BY POSTAL.

FARMERS or gardeners who were prevented from doing so before crops were planted will in many cases derive valuable information by sowing unleached ashes, nitrate of soda and superphosphate upon different plots of the same crop—be it oats, corn, grass or vegetables—as a top-dressing. Then two of the above fertilizers and, finally, all may be mixed together for other plots. The results may give a hint as to whether potash, phosphoric acid, ammonia—one, two or all—is most needed.

SENSUAL pleasures, outside of their legitimate use, are transitory, and leave a bitter, often a life-long, sting. They "die a-borning," but their carcasses offend and poison the life of him who has sought their perilous joys. Intellectual pleasure, the pleasure of acquiring and using knowledge, is pleasant and is cheap. The expansion of our thoughts, the working out of our plans are a constant spring of enjoyment which ought to be and may be always innocent, and within their scope, yield satisfying pleasures. But the cheapest of all pleasures are the pleasures of the soul. To see ourselves growing, by faithful effort, daily more honest, more useful, more generous, more kind,—these are the happinesses which last. More than that, they are the pleasures that pay as they go, that yield a compound interest which is never defaulted, and increase with the using. They are cheap enough for the poorest, satisfying enough for the most ardent, enduring enough for immortals.

OLEOMARGARINE.—It seems that it is impossible to distinguish by taste good oleomargarine from butter. Is it unreasonable to suppose that there will be improvements in its manufacture, and that ultimately—possibly in the no distant future—it will entirely take the place of butter from milk? Displeasing as the thought of such a possibility may be, no harm can arise from looking at the contingency squarely in the face. Greater changes have happened in other industries, and in the face of the bitterest opposition at the outset have finally been accepted as steps of legitimate and wholesome progress. We have opposed oleomargarine from the beginning, and, wisely or otherwise, cannot overcome an intense prejudice against the "stuff." All should insist that it be sold under its real name; that it stand upon its own bottom and rise or fall according to its own worth or worthlessness. If it is a healthful article of food and the people like it—there is nobody who can say them nay. But at present while it would appear that a great majority of the people of cities are eating oleomargarine there are few who would purchase or eat it knowingly.

FRAUDS IN THE MAIL SERVICE.

IRRESPECTIVE of all party bias the Postmaster-General is doing a creditable work in bringing to light long concealed frauds in the Star Route service. The Star Routes over which mails are carried by means other than the railways are contracted for by men at a certain price and they, in turn, contract with others who perform the actual service of conveying the mails from place to place. The way frauds are perpetrated by these contractors is somewhat as follows: Bids are advertised for a line with slow service and infrequent trips. These sharp contractors, who are in the ring, bid very low and the lowest bidder, of course, gets the contract. In a few months petitions are gotten up for more frequent trips and more rapid service, and the contractor then, without competition, on his own affidavit, renews the contract at about his own terms. In this way one Miner, contracted, at first, for a route of 310 miles, one trip a week, for $2,350. Two months later he was fortunately ordered to run three trips a week for which he received $32,650 more, and in August of the next year, six trips a week brought him $35,000 more.

In this way a route in Colorado, 31 miles long, was raised from $317 a year to $2,812; in Idaho, one 52 miles long from $720 to $3,360; one in Wyoming from $11,777 to $78,266, and one in Dakota, 250 miles long, was raised from $2,350 to $67,650 a year. The recent investigations show that there has been an addition of over $2,000,000 to the expenses of this one branch of the Government service without any explanation or apparent cause. A thoroughgoing reform is needed, and we hope that no guilty man will be allowed to escape.

PREPARING FOR OUR NEXT CORN CROP.

VARIOUS have been the surmises as to the special cause or causes of our great corn yield of last year. We would be very glad if it were possible to ascertain to what extent the commercial fertilizers used assisted in the production of that crop. We have now prepared a six-year-old grass field of about seven acres for corn. No manure of *any* kind has been spread or sown except upon one measured acre, 132x330 feet, and upon this we have sown 600 pounds of corn fertilizer, the analysis of which is as follows:

Ammonia	4.50 to 5.00 per cent.
Phosphoric acid	10.00 to 12.00 " "
Potash	6.00 to 7.00 " "

Now if this one acre should produce a decidedly heavier yield than the rest of the field, it would be reasonable to attribute the excess to the fertilizer, since the measured acre as to fertility seems to be a fair average of the field, in so far as it may be judged by the eye alone. We have no remembrance that this field has been manured since we have owned the Rural Farm, a period of fourteen years. The sod was plowed under in late March. It has been harrowed thoroughly, rolled once and again harrowed (east and west) and is now being marked out (north and south), so that the drills will be three feet and ten inches apart. The same method of cultivation in all respects as last year will be followed this.

Presuming that our agricultural contemporaries are more or less interested in agriculture, we must suppose that the reason why they have not alluded to our corn crop of last year was that they doubted the truth of the reports that were made. This year, should we again be favored with immense yields, we shall invite the proprietors of our esteemed contemporaries to come and see for themselves, so that they need not thereafter entertain scruples as to placing the facts before their readers.

WHEAT PROSPECTS.

THE conclusions with regard to the wheat crop, here briefly condensed, are the result of a careful comparison of the crop reports in our own columns with a much larger number that have appeared within the past week in various papers scattered throughout the country, supplemented by condensations of still later reports telegraphed yesterday from Chicago and other important points in the West. From all these sources we gather that fall-sown wheat has been much injured in Ohio, Illinois, Wisconsin and Iowa; yet even there the damage is somewhat less than was anticipated before the late mild spell had helped to invigorate feeble growth. Kansas will have an enormous wheat crop this year unless drought between now and harvest shall blast present hopes and indications. Winter wheat has there generally supplanted Spring sowing. Missouri also has almost abandoned Spring for Winter wheat, and the outlook there is highly promising. Reports of the Winter wheat in Michigan, however, are very discouraging. In the Middle States complaints of injury to the crop are considerably diminished, but it is hardly likely that the yield there will equal that of last year. On the whole, it is not unlikely that the increase in acreage under Winter wheat this year will go a good way towards making good the damage by winter-killing so far as regards the country east of the Rocky Mountains. In California the rainfall has been excessive and considerable injury has been done by floods in low-lying valleys, while the area under wheat this year is less than last, so that the aggregate yield is sure to be smaller. Owing to low prices the past season on account of inadequate ocean transportation, a large quantity of the crop of 1880 still remains in the State. In the Northwestern States—the chief spring-wheat region—the weather has been very favorable for seeding, which has been in progress for two or three weeks, most of it being now completed. Where the plant is already up it looks bright and thrifty. The ground is generally moist and in fine condition. In some of the bottom lands, however, floods have so thoroughly soaked the soil as to render wheat raising impossible. In Minnesota, Nebraska and Dakota, where Spring wheat is raised almost exclusively, the outlook is excellent and there is a large increase in the acreage. In Illinois, Wisconsin and Iowa reports of the Spring wheat are conflicting, ranging all the way from "very good" to "very poor." The acreage generally is much smaller than last year, as farmers have found that Fall sowing is better than Spring. There is a good deal of difference of opinion as to the area that will be planted, some maintaining it will be smaller than last year, while others think it will be greater. Probably it is too early yet to decide the matter. On the whole, the outlook in the Spring wheat regions of the Northwest is highly encouraging. It is by no means likely, however, that the aggregate wheat crop of 1881 will be larger than that of 1880, though it it is hardly probable it will fall much below it.

THE INTERNATIONAL MONETARY CONFERENCE.

REPRESENTATIVES from 15 nations, including Messrs. Evarts, Thurman and Howe from this country, are now in session at Paris with the primary object of securing an international agreement that silver shall be considered an unlimited legal tender, side by side with gold. To accomplish this object it would, of course, be necessary that all consenting nations should coin silver in unlimited quantity, and should fix upon some common ratio of value between gold and silver. The market value of the former here to-day is about 18½ times that of the latter, while the Bland Bill of 1878 makes the weight of the coined silver dollar 412 grains, or 16 times the weight of the gold dollar; and in France, Germany, Switzerland and nearly all other European countries the present ratio is 15½ of silver to one of gold. It will thus be seen that while the commercial ratio between the two metals is about 18½ of silver to one of gold, our government puts it at 16 to one and France and the other members of the Latin Union at 15½ to one, thus giving to silver a value considerably higher than its due.

Inasmuch as the annual production of silver and that of gold do not bear any fixed ratio, the relative market value of the two metals must, it seems to us, vary from year to year according to the greater or less production of either of the metals, despite any conventional standard agreed upon by any number of governments. As a matter of fact, during the 116 years between 1760 and 1876, according to the Report of the United States Monetary Conference, published a few years ago, the ratio of value between silver and gold changed 107 times, the extremes being 13.64 and 17.83 of the former to one of the latter. In that period the ratio of value remained the same for three years only once, and for two years only nine times. Yet it is proposed by the present Conference to fix it now internationally at 15½ to one until 1900—for 19 years! Less than three years ago a similar Conference, held at the same place, dispersed without accomplishing anything, and we greatly fear the issue of this will be equally abortive.

This unsatisfactory outcome is likely to be brought about, not only by the difficulty of deciding upon a fixed ratio of value, but also because France and the United States, by whose persistence the Conference was assembled, are the only countries deeply interested in securing the objects for which it has come together. France, having given a fictitious value to silver, has found that other countries in which it is cheaper have been paying her for her wares in that metal, while draining her of gold for the goods they have sold her. Accordingly while the Bank of France, in 1876 held, in round numbers, $300,000,000 in gold, and only $125,000,000 in silver, the proportion at present is abont $100,000,000 of the former, and $250,000,000 of the latter. What, then, can be more natural than that, being anxious to stop this excessive influx of silver and outflow of gold, she should endeavor to persuade other nations to adopt her ratio of value, use their silver at home and thus remove the cause of her trouble. The United States, being one of the greatest silver-producers in the world, is also naturally anxious to increase the market for it by inducing the whole of Europe to place no limits on its coinage. At present India is the chief market for the silver of the globe, that country, where it is the only legal tender, having taken two-thirds of the $1,800,000,000 produced between 1835 and 1875. Moreover, of the $84,000,000 minted here since the passage of the Bland Silver Bill in '78, two-thirds lie still in the Treasury owing to the impracticability of getting it into circulation, and it is thought that this could be more easily accomplished if other nations used silver freely.

BREVITIES.

IF *any* of our subscribers who are entitled to it have not received our present Plant and Seed Distribution, we must insist it is not our fault. *Every* application has been filled.

A TELEGRAM just received from W. I. Chamberlain, Secretary of the State Board of Agriculture of Ohio, says of the wheat crop in that State:—"Condensed reports from 1,000 township correspondents give the probable outcome of last year's wheat crop at 85 per cent. of a full crop. The probable total yield, with an average season till harvest, will be 45,000,000 bushels."

VANILLA OR SENECA GRASS blooms this year at the Rural Farm May 5. This is botanically Hierochloa borealis, the generic name, from two Greek words meaning sacred grass, it being usual in the North of Europe to strew it before places of worship on certain festival or saints' days. Its odor, which is between that of clover and vanilla, is powerful—a few panicles sufficing to perfume a room. It is said to be of little value for cultivation, for the reason that it has "powerful, creeping roots and very slight Spring foliage." It seems, however, to make very slow progress at the Rural Farm, though it has a congenial situation to spread over, viz., moist meadows.

WEEK before last the remark was made in our Agricultural News Department that out of 321 students at the Vermont University and Agricultural College, 132 were medical students, leaving only 78 to study classics and agriculture. We have since been informed, however, that not a single student in the University is now studying agriculture, and that there have been only two students in the agricultural department since its establishment sixteen years ago. The agricultural part of the University was started and has been kept up merely to obtain and retain the Congressional appropriation for a State Agricultural College. What would be the fit characterization for such a trick, according to the ordinary code of morality?

CORN YIELDS—A CORRECTION OF A "HEEDLESS STATEMENT."—We have just received the following note from Professor E. W. Stewart: "I was surprised at seeing, over the signature of Professor I. P. Roberts, on page 302 of the RURAL, that 'Professor E. W. Stewart states in an article on corn which appeared some time ago in the RURAL, that 100 bushels of corn per acre are an easily possible crop, and Professor Roberts properly speaks of such a statement as a great exaggeration, and that 'the science of agriculture can never progress rapidly in the face of such wild inaccuracy.' But attributing this to me is a greater 'inaccuracy' still, since I never made such a statement in the RURAL or in any other paper. I presume my friend did not intend to misrepresent me, and let us hope that he is more careful of his facts in instructing his classes. This statement is the more annoying to me, since within a year I have written a number of articles to show the harm done by such loose estimates of the corn crops, and especially with reference to 60 to 90 tons of green corn to the acre."

A COUPLE of weeks ago we expressed an opinion on this page that the provisions of the anti-oleomargarine bill introduced into the N. Y. Legislature were too severe to be passed or enforced. Since then the investigating committee, through Mr. Fenner, has wisely reduced by about one-half the license fees to be required from manufacturers and dealers of the product. Last week we expressed doubts, here also, of the existence of foot-and-mouth diseases among the American cattle landed at Birkenhead, England, and since then the cable informs us that the report was unfounded. Greater care in such matters is needed among either the trans-Atlantic veterinarians or newsgatherers. It is to be hoped, however, that the alarm the false report caused on this side of the water, will give rise to a stricter quarantine of all imported cattle so as to reduce to a minimum the danger of spreading the disease among our vast herds from any infected importation. Our remarks here last week with regard to the objectionable character of that project of the "Freedmen's Oklahoma Land Association," have been since emphasized by a telegram from Wichita, Kansas, dated last Tuesday, announcing that "Oklahoma" Payne had just received news there of the unfavorable result of his trial before the United States Court at Fort Smith, Arkansas, for having started a similar project. The Bill which created such a commotion before the Legislature of this State last week, giving $2,000 a year to the State Entomologist, was taken down from the shelf last Friday and passed. It is satisfactory to see that our State Solons are not so pacydermatous as to be insensible to a good pen-lashing. The dispute over the duty on "knit goods," we commented on here last week, has since been temporarily settled. The Supreme Court has granted leave to file a petition for a retrial of the suit on the decision in which the late ruling of the Treasury Department was based; and accordingly the Secretary has now revoked his order changing the rate of duty. This re-establishes the specific duty of 50 cents a pound on all "knit goods" in addition to 35 per cent. *ad valorem*; and as it must take a considerable time before a decision can be reached, the manufacturers need not just yet carry out their threat of packing off to Canada. Meanwhile there will be ample time for Congress to remove all doubt about the proper taxation by passing a law imposing the higher rate, thus "protecting" alike the manufacturers and raisers of wool.

Miscellaneous.

RURAL BRIEFLETS.

PROFESSOR TRACY, of Detroit, writes us that he has just examined his Winter wheat which was so placed that a part of each variety was protected and the remainder exposed and in unfavorable conditions. The result is that of the 15 varieties tried, the Mediterranean is the only one entirely uninjured. After it the Zimmerman (Tappahanock). Early May has suffered most, closely followed by Arnold, Gold Medal and Silver Chaff. Such results are very different from those obtained at the Rural Farm, which we shall place before our readers in due time.....

REFERRING to an inquiry about Bermuda Grass in the RURAL of April 16, Mr. Jones (of Binghampton), writes us that during a late visit to Texas he learned that this grass was highly esteemed there and a common method of cultivating it was to set out bits of the sod about four feet apart each way, and the first year to raise a crop of corn between these "seed" bits. The cultivation of the corn instead of disturbing the grass, is good for it, and the second season it spreads so rapidly that it mats the ground.....

IN Georgia the roots are cut into pieces two inches long, spread thickly upon the ground and then spaded under. Notwithstanding the hot suns, if mowed as we mow Northern lawns, it keeps green during Summer. As a forage plant, Mr. Berckmans, as we have already stated, deems it invaluable, ten tons per acre having been harvested upon land that would not produce 20 of corn per acre. It now appears that Bermuda Grass so dreaded in years past is now cultivated and considered a boon to the people of the South.....

SEE that the lawn-mowers are in order.....

THE mistake is often made by inexperienced hands of screwing the revolving blades too close upon the horizontal blade. A new lawn-mower, when properly set, should last two years upon an acre lawn, without resetting....

ONE of the showiest annual foliage plants, to our thinking, is the Purple-leaved Ricinus. The flower buds should be pinched out as soon as they appear. It is astonishing to what a hight the large-growing kinds of Ricinus will attain if planted in rich soil and all lateral shoots and flower buds be pinched out. We know of one plant thus treated that grew to the hight of over 20 feet.....

OUR friend, the Maine Farmer, makes the queer statement that Early Amber Cane "is only a variety of corn, and has most of the valuable characteristics of that valuable cereal." We thought that Early Amber was a variety of sorghum.....

"THE trouble with Quack," remarks the Elmira Husbandman, "is only in the pertinacity of its growth. Considered as a pasture grass it is entitled to high rank, so far as quality is concerned. Cattle eat it greedily, it starts early in Spring, and when closely grazed it is very quick to send up new growth with the first favorable condition; but its roots pervade the soil, and have almost unquenchable life, so that ground once occupied by them can be freed for other uses only at the expense of great labor and watchful care." The fields of the Rural Farm may be said to be filled with Quack Grass (Triticum repens). The fields in which we last year raised our Chester and Blount Corn were matted sods of Quack. We plow our sod ground, plant corn, then oats, wheat and seed down. The roots of the Quack live through it all and contribute an essential part of the grass and pasture. It inconveniences us in no way. We would not get rid of it if we could, and we could not if we would, without an impracticable amount of labor. It obliges us to cultivate hoed crops oftener, and the crops are the better for it. It is a rich grass and the roots are rich, and we have no doubt their annual decay adds to the fertility of our soil as few other grasses would. Quack annoys the farmer until by experience he is made aware of its great value.....

IT is well to prepare the ground now for Lima Beans, the most tender and delicious of all garden beans. We are now preparing a plot of a quarter of an acre. The ground has been well harrowed and fertilized with concentrated manure; holes a foot in diameter have been dug and old manure spread in the bottom. This was covered and a spat of the hoe made upon the top of the hill. In the middle of each hole a stake six feet high is stuck, and four beans will be pressed in an inch deep around the poles about the 10th of May. The holes are two feet apart—the rows three and a-half.....

LIMA BEANS should be secured to the poles by tying them with bast as the vines grow, and it seems to us best to pinch the ends of the vines as soon as they reach the top of six-feet poles, rather than to let them grow higher. It induces a stockier growth, more beans and an earlier maturity.....

THE variety of Lima which we shall plant is the finest we have ever seen, and our object is to raise them for distribution among our subscribers. Here is the note from the originator of the variety, who has never offered them for sale:—"The accompanying Lima Beans have been kept strictly pure in one family for three generations, being constantly improved by saving seeds from the strongest vines that produced the largest number of beans in the pod. When green they are very compact in the pod, and will yield almost double the bulk of shelled beans to the bushel of any other Lima. The majority of the pods contain five beans, and occasionally six.....

FARMERS and farmerines who find it very unsatisfactory to attempt the cultivation of flowers in open borders or beds, can produce a splendid effect in color about their dwellings by putting a border of flowers around their piazzas. Construct boxes about a foot deep and a foot and a half wide, or less, and of a length that will fit in between the posts or pillars; of course, leaving a space in front for entrance. Into these long boxes, or troughs, all potted plants may be set and the interstices filled with good soil, with drainage of course, at the bottom. Paint the boxes bright red, or gray, and fill them full of petunias, geraniums, nasturtiums, lobelias, asters, thunbergias, ageratums, or other bright flowers that will blossom throughout the Summer or Fall. Cypress-vine seeds dropped in at intervals will produce a graceful, drooping foliage all around. With enough petunias of varied colors—the striped and blotched varieties are most effective, with white—there will be a rim of color around the piazza until frost comes. Keep the hight of the plants equal by trimming, preserve a rounded surface, give sufficient water, and you will have a "a thing of beauty," particularly recommended to persons whose hens "scratch everything endwise." If preferred, the boxes may be covered by bark, tacked on, producing a rustic effect. Store the boxes under shelter for the Winter.....

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 57, APRIL 21, 1881.

552. Commonwealth Bone Meal, made by Rafferty & Williams, foot of 44th St., East River, New York. Sampled and sent by Staples, Coley & Co., dealers, Westport, Ct.

553. Lister's Celebrated Ground Bone, made by Lister Bros., Newark, N. J. Sold by Simon Banks, Southport, Ct. Sampled April 6th, by Geo. P. Jennings, Greens Farms.

555. Pure Ground Bone, made by Stevens & Draper, Long Hill. Ct. Sampled and sent April 8th, by Geo. P. Jennings, dealer, Greens Farms, Ct.

Mechanical Analyses.

		552	553	555
Finer than	1-50 in. per c.	48	28	15
" "	1-25 " "	21	20	25
" "	1-12 " "	13	17	30
" "	1-6 " "	11	17	30
Coarser than	1-6 " "	7	18	0

Chemical Analyses.

	552	553	555
Organic Nitrogen	1.48	3.44	4.09
Phosphoric acid	12 11	14.19	21.03
Salt cake, etc., soluble in cold water	very much	much	
Estimated value per ton	$17.36	$23.61	$32.41
Cost per ton	30.00	31.00	34.00

554. Cooke's Dissolved Ground Bone, made for E. F. Cooke, 38 Platt St, N. Y., by the Bowker Fertilizer Co., N. Y. Sample sent by Geo. P. Jennings, dealer, Greens Farms, Ct.

556. Cook's Blood Guano, made and sampled as 554.

Analyses.

	554	556
Organic Nitrogen	0 21	2.49
Soluble phosphoric acid	7.40	6.16
Reverted " "	2.01	1.97
Insoluble " "	4-20	5.14
Potash		2.26
Estimated value per ton	$28.00	$37.11
Cost per ton	31.00	46.00

560. Muriate of Potash, "Test 80 per cent." Sampled by C. E. Bunce of South Manchester, from stock of Mapes Co., Branch Hartford.

Analysis.

Potash	45.87
Muriate of Potash	73.65
Selling price per ton	$42.00
Cost of "potash" per 100 pounds	4.58

S. W. JOHNSON, Director.

Keeping Fruit.

I wish to score two for the wet theory of preserving fruit. A number of years ago I planted an orchard in Kansas, and as soon as it came to bear I was curious to know what varieties would keep the longest. I had an outside cellar or cave, and I selected specimens of several varieties and placed them on a shelf in the cave. At that time I had not read about the dry theory advocated by pomological writers—whose statements I never venture to doubt. Rawle's Genet kept till the next September, Winesap till July or August; English Golden Russet not quite so long. A considerable portion of the time moisture was visible on these specimens. Again, an extensive fruit grower near this place plowed his orchard when the fruit was about half-grown and covered most of the apples brushed off by the team. The next Fall or the following Spring—I am not positive which—he again plowed it and turned up a good many of these apples, all in as good order as when buried.

Hot Springs, Ark. T. J. B.

Literary Miscellany.

BIRD OF SPRING.

HAIL to thee, bird of Spring,
Blithe be thy welcoming,
Send thy sweet carol o'er woodland and plain;
Sweeter notes ne'er were heard,
Sing thy song, bonnie bird,
Gladden our hearts with thy music again.

Swells thy song on the air,
Making the world more fair,
Chasing all sorrow and gloom from the brow;
Flowers will welcome thee
Gladly, dear bird, as we,
Who such a joy-giving creature as thou?

Hail to thee, bird of Spring,
Hark! now the woodlands ring,
Echo repeats every note of thy lay;
High on thy fleet wing soar,
Sing to us evermore—
Bird of the Spring-time, ah, stay with us, stay!

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

CHAPTER XVI.

(Continued from page 310.)

Moreover, the custom so common among the people of old, of celebrating social events by a feast in which human ingenuity was taxed to concoct rich and expensive dishes whose only recommendation was their capacity to tempt the appetite and please the palate, while their real effect was to induce surfeit and indigestion, must be referred to an age in which appetite is in the ascendency, and in which the intellect is used as its tool rather than its guide."

These words of Mr. Glinden's put me in a reflective mood, which for two hours after I retired to rest, kept my thoughts occupied in recalling the countless instances in the customs and habits of society in which the intellect is really used as the tool of the propensities rather than their guide.

CHAPTER XVII.

A VOYAGE THROUGH THE AIR.

I long had a desire to try a voyage through the air, but found it difficult to muster up courage enough to take it. The familiar sight of air-ships flying to and fro over the country, however, had the tendency to diminish my fear, so that when, on the day after the wedding, I received an invitation to make one of a party which should accompany the three bridal pairs on a trip to Mount Kopiah, I thought that no more favorable opportunity could be presented to look upon the world from the clouds. Especially, thought I, will the fates be propitious to a voyage which is undertaken chiefly for the pleasure of three blooming brides.

Mount Kopiah, I may explain, was a mountain peak nearly two miles and a-half high, which towered so much above all objects lying about it that an unobstructed view of the surrounding country could be had on every side. Its apex was nearly covered by a large and very substantial building, in the tower of which was a very remarkable instrument, which had the power of throwing on one of the walls of the building a panoramic view of the country for hundreds of miles in every direction, so that every object was as distinctly seen as if it were brought within the range of half a mile.

We made preparations to start before dawn that we might witness the rare sight of day breaking over the world as disconnected if not altogether disinterested spectators. There were to be ten in our party, and the air-ship which we were to use had a capacity for just that number. I may say here that every village owned an air ship of about the size of this one for the convenience of the people when they had occasion to mount the air, while if a larger one were required it could readily be obtained.

The air-ship when filled with phillego presents the appearance of a great, oblong, circular bag, of a uniform diameter for about two-thirds of its length, but terminating in an apex at either end. This bag is made of a material called plymer, which has some of the properties of rubber, but much stronger and denser, and of a lightness even greater than silk. A net work of strong cords adds strength to this material, and from these are depended the car, in which there are most luxurious seats which are single, and turn upon a swivel. Directly over the car is a sort of compliment of itself which may be lowered in cold or stormy weather, and which accurately meets the edges of the car, something after the manner that the two halves of a bivalve are brought together. In this upper part there is a continuous row of projecting windows which leaves the view of the voyager scarcely less circumscribed when it is down than when it is up. Moreover the phillego possesses wonderful heating qualities, so that when the car is closed the passengers may ride most comfortably at high elevations even in the coldest weather of Winter.

The material of the car, which was some preparation of paper, combined the qualities of strength and lightness in a marvelous degree. It was skillfully painted so as to represent the exquisite shading of a beautiful shell. In fact, when closed, it naturally suggested the envelope of some great mollusk of the deep. Beneath the car, and attached to its exposed edges, was an apparatus made of the same material as the air-bag of the ship, which when filled with phillego performed the office of a buffer when a landing was desired.

Our arrangements for an early start having been perfected, the first faint flush of approaching dawn found us all seated in the air-ship with provision, extra clothing, and all other things necessary for an air journey of five hundred miles.

The captain, or manager of the ship occupied an enclosed place in the center of the car in which he sat with all the apparatus within his reach necessary for the complete control of the ship. The balloon was filled with gas before we entered it, and ourselves and belongings being suitably placed, the captain, at the word "ready," touched a spring with his foot, and we shot up into the air like an arrow.

It was a warm morning; there was not a breath of air and the sky was perfectly cloudless. We rose almost directly upward till we had reached an elevation of nearly two miles. How rapidly did the dawn seem to break upon us in this upward journey! And what a rapid change of temperature did we experience in the morning air! Comfortable in linen when we started an overcoat became necessary within five minutes.

When we had reached the elevation of nearly two miles the captain set his propelling apparatus in motion and we traveled off rapidly toward the rising sun. We really see med flying to meet "the King of Day rejoicing in the East." He was already beginning to tip the tops of the distant mountains with his golden light, and was rapidly changing the blush of the morning into the brilliant brightness of his own strong beams. While below us lay the earth, still dark with the shadows of the early dawn. But even these seemed to lighten up rapidly as we sped swiftly eastward, till we were gradually able to distinguish the cities, then the villages, then the farm buildings and, finally, by the aid of our glasses the people themselves.

I thought I never saw a grander sight than when the sun began to peep above the horizon. Its bright rays glanced from the polished surface of our air ship and bathed us all in their genial light. We could see them running down the eastern slope of a mountain range on our right, while the shadows on the opposite side seemed by contrast to grow more dense. Before us the crescent of golden light was deepening every moment. Behind us the earth still looked cold in twilight shadows, from which we seemed to be speeding in our aerial flight to a region of genial warmth and brightness.

Having witnessed the glorious sight of day breaking over the world from this lofty elevation we descended to a warmer region of the air, and to a nearer distance from the earth, that we might obtain a better view of the country over which we were passing. At a hight of half a mile from the earth we struck a current of air which was so favorable to our course that our captain stopped the propeller and unfurled his sails, which operation he accomplished without moving from his seat. No ship was ever managed by crew of sailors more skillfully than was our air ship by its conductor sitting in his easy chair and quietly directing its course. So quietly was every operation performed that it really seemed as if the ship itself was an obedient intelligence to which it was only necessary for the captain to whisper his command that it might be at once obeyed.

We were now speeding along at the rate of a hundred miles an hour, and cities, villages, trees and all the other objects on the earth appeared at times to be flying by us with a rapidity which threatened their destruction. It was only when we looked steadily at any of the objects beneath us that we became conscious that it was not the earth but we ourselves who were in motion.

"What a country, and what a people!" I involuntarily exclaimed again and again as we sailed away over great cities, villages, and extensive farming districts. Our course lay along a wide valley stretched out between two ranges of mountains. That upon our right seemed but a few miles away while upon our left there was a great river flowing through the center of the valley, and beyond it the blue peaks of the other range could be seen, far in the distance.

The country between these two ranges of mountains was thickly settled. Great cities were spread out on either side of the river at frequent intervals, while all about them little villages thickly dotted the landscape with as much regularity almost as the streets and parks of the city. Indeed the mathematical precision with which the whole country was laid out was to me one of the most wonderful things that I saw among this wonderful people.

The natural impediments which the topography of the country must have originally presented to the laying out of rural roads and farming sections with the precision of a city seemed, in the open country at least, to have been almost completely overcome. The rugged mountain sides of course presented barriers to the engineer which it would have been neither profitable nor necessary to surmount. Among these nestled the little villages of the herdsmen, whose flocks roamed in the mountains, and were the source of supply for their peculiar product to the people of the cities and plains. But in the open country I could trace the highways by the double row of grand old elms which lined, and quite concealed them, running as straight as arrows betwen the cities, while at regular intervals other roads would cross them at right angles, thus dividing the country into rectangular sections of uniform size, except where some lake, or river, or mountain spur presented a natural boundary. When, on the main highway, at every other intersecting road, clustered the homes of the farmers, making villages of uniform size and similar appearance. The church, the school-house, the gymnasium, and the social pavilion invariably occupied the four corners where the roads crossed.

We passed over many cities in our journey, and the same appearance was presented by all. Parks of uniform size with the same number of blocks intervening between them. The same number of public buildings similarly located, and similarly constructed occupied each park, and the character of the houses about the parks was the same in all. The course of every street was marked by the all-prevading spreading elm, which seemed to be the national tree of this country, and the streets crossed each other as rigidly at right angles as the compass could lay them out. In fact, the people

seemed to live in right angles, rectangles and squares. If they had a national emblem, which, by the way, I forgot to inquire into when I was in the country, it was doubtless made up of these geometrical figures, for they were as exact and clearly defined in their modes of thought and habits of life as though they were laid out like their cities and farms, with compass and square.

There was so much sameness in the appearance of the country over which we were passing, that, despite its wondrous beauty, and the complete, prosperous, and contented aspect which it presented, we, after a time, grew weary of looking down upon it, and turned our eyes for relief to the broad river and the distant mountains, both of which presented ever-varying scenes to claim our attention.

The river especially presented an interesting sight because of the many boats which were plying upon its waters. I was surprised to see them move along so rapidly with neither steam nor sail and, upon asking from what source they derived their propelling power, I was told that it was from that very powerful factor in the marvelous time and labor saving appliances of the country, Phillego. Not only did it propel the boats, but it buoyed them up and thus by causing them to draw less water contributed to their speed.

Many other air-ships in the progress of our journey, especially near the cities were met by us, or crossed our path, or sailed for a time by our side. One of these last belonged to the trans-continental line, and was an immense thing, carrying over a hundred and fifty persons. It was really a frightful sight to me, so many persons suspended in the air, and moving through it with terrible speed under the direction of a single individual, by whose ignorance or carelessness they might all at any moment be hurled headlong to the earth below. And yet the sight was really grand, such an immense thing floating along in majestic silence, which was broken only by the merry jokes and laughter of the apparently thoughtless people whom it bore along.

For more than half an hour it sailed by our side within speaking distance. When it was known by the passengers of the Halyric—that was the name which we read on the great air bag of our fellow voyager—that we were from the city of Good-will-to-men, there was a shout of inquiry about the curious stranger who had lately appeared in that city. How did he look? How was he dressed? Was he really a fossil of an age long passed, who by some strange process had been put to sleep, and now, after the lapse of centuries, had been restored to life? And what sort of a creature must he be to belch forth smoke from his stomach!

These and a dozen other questions and exclamations on the same subject entertained me not a little, and were answered at my urgent request by Mr. Glinden, who was loth to play the deceptive part of concealing from our passing companions the fact that the very person concerning whom they were inquiring with so much freedom was within sound of their voices.

I would have made myself known to them after the conversation was over, but Mr. Glinden dissuaded me from it. He said that they would feel very much mortified if they knew that I had heard the remarks which they had made so freely about me, and his kindly regard for their feelings kept me down in my seat, out of sight.

The Captain of the Halyric had slackened his speed to keep by our side while we passed the time of day with each other; he now again set his propeller in motion and soon left us far behind. Within an hour the Halyric had entirely faded from our view.

To be continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

DESCRIPTION OF CUTS.

FIG. 249.—EDGING: CROCHET AND WAVED BRAID.

For the edge: One double treble into the right-hand side of a wave of braid, three chain, one treble into the side of point, three chain, one treble into next side of point, three chain, one double treble into the side of wave, one double into next point. Repeat from the beginning of the row.

FIG. 249.

2d Row: Six trebles under three chain, one double, three half trebles, five trebles, two half trebles, one double under next, three chain, six trebles under next, three chain. Repeat.

For the heading—1st Row: One double into two points of braid together (see design), fifteen chain. Repeat from the beginning.

2d Row: One treble separated by one chain into each alternate stitch of last row.

FIG. 250.—LINEN COLLAR.

The collar is of linen, edged with pointed tabs, under which kilted lace is placed; blue silk cravat bow.

(In issue of Feb. 19th will be found the remarks referred to below. This insertion has been unavoidably delayed.]

INCREDULITY.

I AM sorry to have stirred up Alline Ray's unbelief in my "Female Farming Extraordinary," to the extent of being called upon to "explain immediately."

I will say, although I am not actually fishing for gudgeons, I should have felt somewhat disappointed without a nibble. Whoever the gentlemen (Eli Twain and Mark Perkins) may be, I claim no relationship with them whatever, but am of an entirely different family. Having been in this State for thirty years, I am what may be called an original jayhawker, with none of the marvelous or romantic in my nature.

I now turn this matter, with its many inquiries, over to the author of the work, who can rise and explain. W. F., JR.

FEMALE FARMING EXTRAORDINARY EXPLAINED.

IT pains me to find myself the object of ridicule

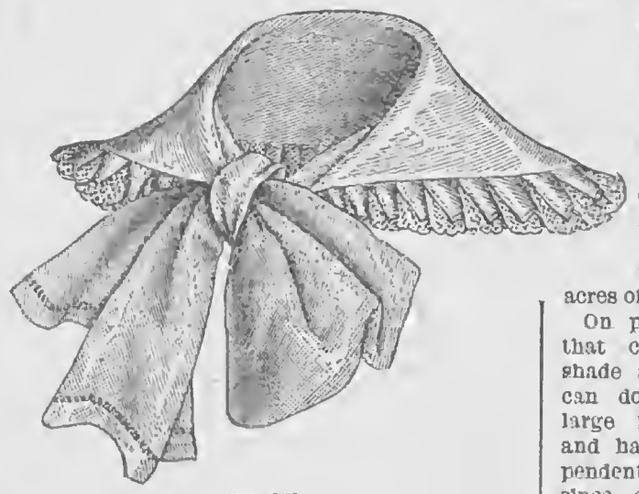

FIG. 250.

and derision in the columns of the highly prized and, with us, long loved RURAL.

My husband is somewhat given to a weakness with his pen, and last June, when he was taking the census in our district, he was a little surprised to find, even in our far western country, the female portion of the population in the majority, and naturally thinking of a means of support for them—the office of teaching being already filled to overflowing—he at last bethought him of our broad, level prairies, and, presto! why not turn their attention to agriculture? With the improved farm machinery now in use, each implement being provided with a nice spring-seat for riding, any lady can perform the work—that was once a dreary round of endless toil and drudgery—with both pleasure and profit, we, not being blessed (?) with a house full of boys to do the farm work. I have improved my spare time during the last few years assisting on the farm with very flattering success, and have not grown "gaunt and bony," but weigh twenty-five pounds more than when I commenced. To prove the feasibility of his plan, and not through any spirit of braggadocio, he innocently cited our experience. Alline Ray says she "can't believe it." Now, as this work which my husband speaks of was actually

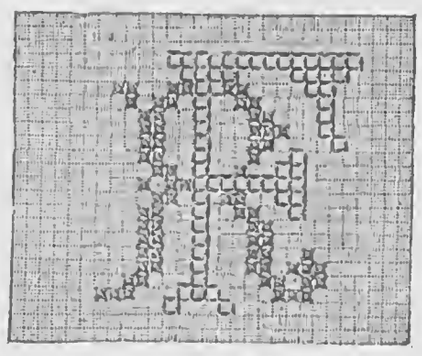

FIG. 251.—MONOGRAM IN CROSS AND STRAIT STITCH.

and fairly done by myself and daughter, I feel it necessary in justice to ourselves to confirm my husband's statement.

"I have thought of that house, wondered how many beds there were to make, and if the *extra*-ordinary (what an ugly word Mrs. Alline, it gives me the shivers just to look at it) female did them; if she got the breakfast, what was cooked for dinner? etc., etc.," are the words of Alline.

As there are but three in our family, and we are living together on the very best of terms, it follows that there are but two beds used, consequently but two to make. The breakfast is prepared and the house put in order by myself and little daughter, and by eight or nine o'clock at farthest everything is completed and we have until half-past eleven for out-door employment. We usually remain at the house two hours and a half at noon, and for dinner, as we are tea-drinkers, we have tea, warm biscuit, either cold or warm meat, vegetables and fruits in their season, butter, honey and generally some easily prepared dessert. So you see we don't starve. For supper, we have only tea, toast, sauce and honey, or something that is easily prepared.

Our family being small we wash and iron on the same day. The sewing is all done in the Winter or early Spring—I have a horror of sewing in warm weather.

Now, as I have explained explicitly how our housework is done, I will do likewise with the out-door work. But first, that little girl was fourteen years old at the time the work was done, and was in rather delicate health, so much so that we seriously thought of sending her to the mountains, but, thanks to her out-door exercise, she enters her fifteenth year rosy and blooming. Really, I don't know how to explain about the farm work! If Mrs. Alline is of some far Eastern town, as Dr. A. E. S. suggests in his reply to "Old Maids," page 90 of the RURAL, possibly the farming there is carried on in so diminutive a way that a two-acre corn-field or a three-acre wheat-field—what we would call out here a mere "truck-patch"—is considered a farm. If such is really the fact, what must she think of our Kansas farming?—wheat-fields that run all the way from forty up into the thousands of acres, and corn in a like proportion. I will try to explain, as briefly as possible to her comprehension, how our work was done.

The ground was broken with two 16-inch riding plows, one following the other, each plow drawn by three quick-stepping horses, managed by my little daughter and myself. The harrowing was done by the same three-horse teams; on the back of each "near" horse a side-saddle was placed for our accommodation.

Alline says she has been over all those 65 acres of corn. Well, so have I, three times. It was "tended" with a riding cultivator that has a wide spring seat and was drawn by two lively thoroughbred horses that never required speaking to. This part of the work I have always considered a real pleasure, and, Mrs. Ray, if you will pay our part of the country a visit next June—we will say when the corn is about up to the girths of the horses—I should like to persuade you to share my seat for one "round" behind the horses, and if you are not fascinated by the exhilarating motion and the fragrant perfume of the shimmering green sea of corn, then I am mistaken.

One more question—"that dirty work on the farm." Well, it consisted in watering, feeding, grooming and harnessing all those horses, milking those 10 cows, chopping wood, and grubbing and breaking 25 acres of sumac ground.

On page 59 of the RURAL I find an article that completely throws my farming in the shade and shows what an enterprising woman can do. A lady of New York inherited a large farming property, heavily mortgaged, and had at the time five helpless people dependent on her. In fourteen years, that have since elapsed, she has taught school, managed the farm, going into the field herself out of school hours, paid off the mortgage, and become an extensive stock raiser. I have done nothing of this kind—paid off no mortgage, nor had any helpless ones dependent upon me—but I have helped to pay for 80 acres of land that we added to our little farm last year.

As the statement was doubted, I have been forced to enter into a somewhat lengthy detail, but I rely upon the forbearance of editor and people.

MRS. L. F., JR.

APRONS.

APRONS and aprons, big ones, little ones, light ones and dark ones; every woman and every child should possess a good supply of these. I will go farther and say, *can* possess them if they will. But, says Mrs. Poverty, I should like aprons, but we have so much to buy that is necessary there is never anything left for them.

Yes, says Mrs. Showy, aprons *are* real nice, but I have so much to do that is necessary I cannot find time to make aprons even for the children. And so Mrs. Poverty goes on in her penny-wise way, wearing out her dresses with washing, or, worse yet, wearing them so dirty that they are disgusting. Mrs. Showy sits down to make lace bibs for her little girls, in a cambric wrapper that is so soiled you can scarcely distinguish the figures on it. These bibs are *necessary*, you know, and so are the ruffles and pipings and folds that adorn all the clothing of mother and children in the Showy household. You and I know plenty like Mrs. P. and Mrs. S. Maybe some of them read the RURAL; if so, may they repent of their ways and go to making aprons.

Mrs. Poverty, when you get a new calico dress, omit the over-skirt and have two aprons; this will give you a start, then take the back breadths of your old dresses and make some more. You need not put much work on the making, and they will pay you. Why, before you know it you will have a good supply of these real necessary articles.

Mrs. S. has only to have some of her clothing made up plainly and time will be found to enable her to have the means of cleanliness in the shape of aprons.

What a comfort a drawer full of kitchen aprons is; with these at hand one is always ready for any unexpected call to work.

Pretty white aprons for mother's and the girls's afternoon dress up, are both useful and ornamental. They need not be expensive or fussy, but if clean will give an air of refinement to their wearers, no matter how plainly the dresses may be. Every one with common sense must see the necessity of aprons for children, and I wont waste words on the subject, but will suggest that it might be well for every farmer (man) to have at least one big butcher apron to wear on occasions when extra dirty work is to be done. I do it, how-

FIG. 252.—BOUQUET FOR THE HAIR.

ever, with fear and trembling, knowing *men* are not fond of "apron strings." MILLY BIRD.

HOW TO MAKE A DOLL'S HOUSE.

I WOULD like to tell mothers, sisters, and other friends of the little girls how to make a doll's house that will cost only a little time and patience and give as much pleasure to all concerned as one that is much more costly.

Perhaps I can tell better "how to do it" by describing how one was once made for a little friend. A large, strong pasteboard box was the empty, unfurnished house. It was opened at the side. A gay pattern for Berlin wool-work, cut out of a fashion magazine, was pasted on the bottom for a carpet. Some small pictures from papers, framed in strips of bright paper were hung, or, for safety, perhaps pasted on the walls. The furniture, a sofa, bedstead and table, was made of stiff box-board; the different parts cut out with sharp shears, and securely joined with needle and thread, then covered with paper of a light color, and finished at the edges with strips of blue paper. The back of the sofa and the headboard of the bedstead were adorned with tiny, bright pictures. To make the table, a round piece of box-board was attached to each end of a spool, and the whole was covered with blue cloth, a piece of ribbon tied just around the middle or the spool gave it an hour-glass shape. The bed was furnished with matresses and sheets, a little quilt made of tiny patchwork pieces, and pillows in little cases trimmed with edging.

A new doll to inhabit this small house was also manufactured, a real rag doll, with an attempt at shape that gave her a very round face and a semblance of neck and shoulders. Eyes, nose and mouth were added with a lead pencil. A "lock" from and old mohair switch furnished her head with hair which was braided and tied with a narrow ribbon. Then a neat blue dress, trimmed with white made her very presentable.

FIG. 253.—MONOGRAM IN SATIN STITCH.

This inexpensive doll's house gave pleasure, though in different ways, both to the little owners and to the grown-up designer.

The finishing and furnishing of such a doll's house may be plain or elaborate, or as the materials at hand permit. A light wooden box may be used, if pasteboard is not considered strong enough. Remnants of wall paper can be used to cover the floor and walls or a piece of cretonne would make a carpet. If a window is wanted the outline may be drawn on paper with a lead pencil and pasted in its place; curtain and cornice can be made out of a scrap of muslin and a bit of gilt paper. The furniture may be designed after any easy pattern, and covered either with paper, or with remnants of a bright colored dress. In almost every house in the land there are little chromo cards that will be "just the thing" to hang on the walls, and tiny scrap pictures may be used to decorate the furniture. It will not be difficult to design an ornamental roof, if such an addition is desired.

If any reader of the RURAL determines to make a house on this plan, she will find pleasant recreation in the work and may give untold pleasure to some little girl whose dolls have no home to call their own. If you have any taste, real or fancied for artistic furnishing and decorating it may be exercised *ad libitum*. MARIGOLD.

AMERICAN CARPETS.

IF any one should be so much behind the times as to suppose that under the head of "American Carpets" something patronizing and encouraging is to be said of a new American industry, let him disabuse himself of this prejudice. The manu-

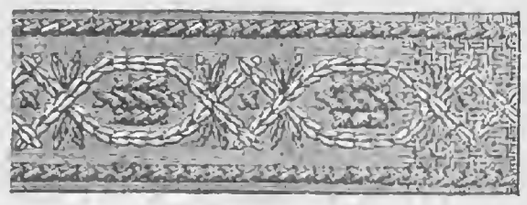

FIG. 254.—DESIGN FOR BORDER EMBROIDERY.

facture of American carpets has passed that stage where it stood in need of kind and condescending words. It now challenges rivalry, not merely in those simpler and less expensive carpetings that have been chiefly in demand in this country, but with all the finer products of the European looms. As we have said, the American manufacturers have now carried their products to so high a degree of perfection that they are willing to place them in open competition and comparison with the best European work. This is especially true of Messrs. J. & J. Dobson, 40 and 42 West Fourteenth street., the leading carpet manufacturers of this country. The extent of their business may be gathered from the fact that their works on the Schuylkill River employed two years ago more than two thousand hands. Since that time the rapid increase of the demand for their fabrics has compelled them to enlarge their works, add new looms, and engage a larger force of skilled weavers and dyers.

Their house in this city, where the products of their looms are placed on sale, is one of the places visited not only by throngs of buyers but by the inquisitive stranger who is interested in the progress of American industries. It is well worth visiting. The fabrics here displayed are of a rich and substantial quality. Let the visitor compare the axminsters and moquettes, the wiltons and brussels and the tapestry carpets with the foreign carpets of the same kinds. In the quality of the material, the thoroughness of the texture, the beauty and richness of the dyes, and the artistic character of the designs he will find no inferiority. But in one respect he will find an inferiority, especially this spring—an inferiority of price.

Mr. John Van Gaasbeek, the manager of

Dobson's New York house, has the advantage of a long experience in this business, and is well qualified to assist in supplying the wants of all in any style of floor covering.

CORRESPONDENT'S CORNER.

WILL Mary Wager-Fisher tell me how long it will take mulberry trees to grow from cuttings? Her letter on silk culture interested me greatly, and I would like to ask for more information. Will it be best for me to write to the Association for said information? I am anxious to make a "Little Money," and what she says about silk culture seems to make it an easier way than school teaching. What color is a topaz, and how does it rank in value compared to other precious stones? Respectfully, MRS. V. A. R.

We submit the first questions to the person queried. Topaz is generally yellowish, sometimes of other shades. It admits the passage of light, although not transparent, hence its variation of color. The topaz and amethyst are of equal value.

Hop Bitters have more patience than Job, curing thousands of patients daily.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

THURSDAY—Several of the neighbors came in today and our talk was of the foolish changes made by fashion in our dress and the extra work it entails. Mrs. Merrett, who has four little girls, says she gets her dresses made and lets them be worn out without any alteration except such as is necessary from growth of the wearer or in repairing. I talked of my troubles and how useless I thought the double amount of cloth was in making suits, when the plain princess was so much neater than all the shirring and plaiting. How tired I am of going into a house and seeing the women devoting all their spare time to the plaiting machine, that superfluous attachment of the sewing machine. Yards and yards of cloth wasted, and time and strength too. They laughed at my old-fashioned ideas, and one lady, looking at my plaited skirts, quoted:

"She blamed and protested, but joined in the plan."

Yes, so do we all, for who dare risk the charge that any deviation brings forth. "She is rather eccentric," with a volume in a shrug of the shoulder.

Then we talked about breakfast, and I said it was the most troublesome meal of the day to prepare. Men who have to work, either with head or hands, require something nourishing and substantial. In our home we take oat-meal porridge, made with good, coarse Scotch meal, every morning as a first course. But the trouble seems to be to get variety for the second part of the breakfast without the time or trouble required by an elaborate meal. "I like to see the table neat and garnished with pretty things," said one of my callers, "but the trouble is to get leisure for such, when there is so much of the inevitable to do."

It is a pity that when people call they would not always study to talk on subjects that will help them to strengthen each other by a multitude of counsel. I sat silent for an hour one day not long since when calling on a dear friend whom I had journeyed ten miles to visit, while a neighbor called in and regaled us with the accounts of her last change of servants; how this one was dishonest and that one impertinent, and when the caller left I breathed a sigh of relief and thought regretfully of the precious hour we had lost.

Karen tried her hand yesterday at making a very economical pudding. She had found the recipe in some newspaper, and, though I doubted her skill it seemed cruel to refuse her permission to make it. The ingredients were flour, a little sugar and a few raisins, mixed to a proper consistency with a little butter-milk in which half a teaspoonful of soda had been dissolved. It was put in a mold and boiled two hours. Eaten with sweet sauce, we did not fail to praise the little cook, though at one point she had been near spoiling the whole. Looking into the pot while the boiling process was going on, she saw the water had evaporated, and, taking a dipperful of *cold* water, was about to pour it in when I stayed her uplifted arm with the remark, "That will make your pudding heavy. You must keep boiling water with which to renew." It is by being allowed to experiment, and sometimes even to spoil a thing, that children learn many arts they must in some way reach.

MAKING OMELETS.

CHIEF COOK.

THE foundation of an omelet is a very simple affair upon which many a magnificent structure may be built. Beat up six eggs to a stiff froth, add a gill of cream or milk. Pepper and salt and fry in hot lard. That is the foundation. Fry brown on the lower side and when done turn one-half over on the other, but never turn it as in cooking pancakes. That is the way to cook it. Now there is no end to the embellishments, and they are all delicious. To make a cheaper article add bread crumbs or pounded cracker, or flour, or even Indian meal; these are hearty food and more solid than the foregoing. Again, chopped ham, or chopped onion, or chopped parsley, or chopped tomatoes, or chopped oysters or clams, or fish well freed from bone, crumbs of old, dry, high-flavored cheese, tomato sauce, tomato catsup, shalots, in fact, anything which may be eaten with eggs or milk is suitable, and may be used singly or in combination to suit the fancy. So much for pepper and salt omelets.

For sweet omelets, a rare dish, any high-flavored preserves of fruit may be employed. It must be remembered that the milk and eggs are only a vehicle to carry the flavor, which must be piquant. Adhere to the foundation, and then let your fancy dictate the rest.

HELPS.

MENDING WORKING PANTS.—I find it economical to use No. 8 thread instead of black linen; it answers the purpose just as well. As soon as pants get thin at the knee I cut the legs off one inch from the seat; then neatly darn, laying a piece under the thin place if necessary, after which I back-stitch the right leg on the left top, and *vice versa*, thus placing the thin part at the back, where the darning receives no more strain and is unobserved, when the front is so thick over the knee that it will last as long as the remainder of the pants and shows much less than a "patch" if the above seam is nicely pressed.

KITCHEN APRONS.—I have, to my notion, just "the thing," and it is an improvement over those banded at the waist, wrinkling a freshly-ironed sack. This kind entirely protects one's dress. I take one breadth of cheviot the length from the back of my neck over the shoulders and reaching to the bottom of my dress in front; then cut out the neck and sides of waist full width of front, having it rounded to come about to bottom of waist; then measure from the waist down, and split, sewing raw edge to each side. Round the lower corners and either take a very long strip of some other color to face it on the right side, three-fourths of an inch wide, or hem it all around. It is nice to get blue and brown cheviot and trim one with the other. Put a button and button-hole back of the neck and waist. One lady cuts the top straight across and pins the bib, but I prefer it to go around my neck and neatly button. The neck should be cut sufficiently large to show one or two buttons on front of dress.

WORKING DRESSES.—For a long time I have been convinced it was better economy to use for working dresses cheviot or gingham than calico. It wears two or three times as long and requires but one making. Thanks to Mrs. Fisher for the idea of the sleeveless basque, as it obviates the gathers at the back. MRS. J. M. MATTHEWS.

DOMESTIC RECIPES.

Salad Dressing.

THIS is especially nice for lettuce and as it will keep two or three weeks, if bottled, corked and set in a cool place, it is very convenient to have on hand. The yelks of eight eggs beaten light, to them add a cup of sugar, a table-spoonful of made mustard, one of salt, one of black pepper, a little cayenne and a half teacupful of thick sweet cream. Mix thoroughly. Put over the fire one and a half pint of vinegar and a cup of butter. Let boil and pour over the other ingredients, stirring as you do so.

To Color Madder-red

For four pounds of goods take two pounds of madder and four ounces of madder compound. First soak the madder for 24 hours in soft water enough to cover the cloth, then add the madder compound. Wet the cloth in soft water, wring out, put with the dye into a kettle over the fire and bring to almost the boiling point. If a light red is wanted, keep the goods in the dye at that temperature for half an hour. If a darker shade is desired keep in longer. Rinse in soft water.

To Color Tan.

For 10 pounds of goods. Boil for four hours half a bushel of ground tan bark in water enough to well cover the cloth. Strain the dye and put in the cloth. Let stand three or four days in the sun or by the stove airing several times a day. Keep goods under the dye. Rinse in clear water and dry in the shade.

Rhubarb Pudding.

Strip the stalks and cut into half inch lengths. Cover the bottom of a pudding-dish (earthen is best) with slices of light bread, buttered, strew over the rhubarb and sprinkle liberally with sugar. Thus alternate until the dish is almost full. Cover and bake three-fourths of an hour, then remove the cover and brown. J. L. X.

Strawberry Wine.

One quart of juice (mash and strain the fruit through a flannel bag), a quart of water and a pound of white sugar. Stir until the sugar is dissolved. Let ferment in a clean jug, leaving the cork out. When done working turn off into bottles, cork and keep cool. Very nice for coloring puddings or flavoring sauces.

Pickled Cherries.

Pickle as soon as taken from the tree. Leave the stems on. For every quart bottle allow a coffee-cupful of good vinegar, two table spoonfuls of white sugar, with a few whole cloves and sticks of cinnamon. Bring the vinegar, sugar and spice to a boil, then turn into an earthen dish, strain out the spice and let get cold. Nearly fill the bottles with cherries and pour the cold vinegar over them, Cork tightly.

Orange Roly-Poly.

Make a light paste as for apple dumplings, roll into an oblong and cover thickly with oranges peeled, sliced and seeded. Sprinkle with sugar. Roll up closely, folding and pinching down the edge to keep in the syrup. Steam an hour and a half. Eaten with cream and sugar, hard or liquid sauce. MARY B.

A palatable dish for dessert is

Oatmeal Pudding.

Take of cooked oatmeal (frequently left over from a meal), one cupful, to which add two and one-half cups of sweet milk, two eggs and one-half cup sugar. *Stir well together* and season with nutmeg, then bake. If the whites of the eggs are beaten separately and, after the pudding is baked, laid upon it and allowed to brown nicely, it is dainty enough to set before royalty. MRS. J. E. S.

Keystone Washer.

Will some of the lady readers of the RURAL give their experience with the Keystone Washer, and oblige MRS. V. A.

Purify the blood, Cleanse the Stomach and Sweeten the Breath with Hop Bitters.

Miscellaneous.

GOLD MEDAL, PARIS, 1878.

BAKER'S

Vanilla Chocolate,

Like all our chocolates, is prepared with the greatest care, and consists of a superior quality of cocoa and sugar, flavored with pure vanilla bean. Served as a drink or eaten dry as confectionery, it is a delicious article, and is highly recommended by tourists.

Sold by Grocers everywhere.

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Shir Sling, Hay & Grain Unloader

HAS NO EQUAL.

Its Economy, One-half time, labor and expense.

Its Capacity, Double that of any Horse-Fork.

Its Convenience, Unparalleled in Changing.

Its Adaptation To all kinds of farm produce.

Its Facility. A boy twelve years old can operate it easily.

Its Cleanliness, 25 loads unloaded and did not scatter one bundle.

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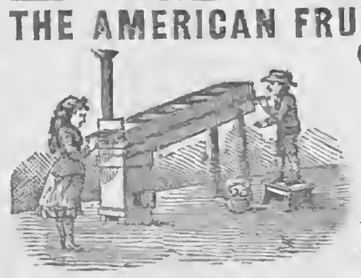

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MOLE TRAP!

IS THE BEST IN THE WORLD!!

It Never Fails to Catch and Kill,

Lawns, Gardens, Parks and Cemeteries cleared of this aggravating pest in short order by using this trap. Can be set in an instant by anyone. Does not get out of order. **Price, $3.00 Each.** For sale by seedsmen generally or sent by express on receipt of price, by

YOUNG & ELLIOTT,
12 Cortlandt St., NEW YORK.
Send for Circular of Testimonials.

Agents Wanted.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.,** 409 Washington Street, Boston, Mass.

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine.

ACTIVE AGENTS, Teachers, Students, Men And WOMEN Wanted to Sell TESTIMONY OF THE AGES. By Herbert W. Morris, D. D, Author of Science and the Bible, etc. A Grand Array of Evidences to the Truth of the Word of God from History, Natural Sciences, Modern Research and Every Department of Human Knowledge. Recommended by the Press and Leading Clergy of all Denominations. A Magnificent Volume Suited to the Times. Clear Type. Fine Illustrations, Paper and Binding. Sells rapidly and Agents Easily Clear **$60 to $100 per month.** Send for Description and Terms to
J. C. McCURDY & CO., Philadelphia, Pa.

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Miscellaneous.

CARPETS.

MOQUETTE CARPETS.—We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS.—Having exhausted our first offering of 75 cent Tapestry Carpets, we have placed on sale for a few days, another lot of the SAME GOODS at the SAME LOW PRICE. These goods are equal to those sold elsewhere at 90 cents and $1. We have other goods varying in price up to $1.15.

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

INGRAINS—We have of the best Extra Superior Grade a very full line from 75 cts. to 90 cts. per yard. Also, a line a grade lower at 65 cts. to 75 cts. —all wool.

Persons in want of CARPETS will do well to call on us before purchasing. Every Carpet is warranted as represented. Full satisfaction guaranteed or the money refunded.

J. & J. DOBSON,

CARPET MANUFACTURERS,
40 and 42 WEST 14th ST., NEW YORK.
John Van Gaasbeek, Manager.

102 YOUR NAME In New Type on 102 Chromos, 10c. All new styles, designed by best artists. *Bouquets, Gold Chromo, Birds, Landscapes, Panels, Water Scenes, etc.* Best collection of Cards ever sold for 10c. Sample Book containing samples of all our Cards, 25c. Largest Card House in America. Dealers supplied with Blank Cards. AMERICAN CARD CO., Northford, Ct.

Trade Mark.

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KNICKERBOCKER
RAW BONE

PHOSPHATE and DISSOLVED BONE. Composed of Raw Bone, Flesh, Blood, Acid and Potash. Prompt action combined with lasting effects. Highest possible degree of excellence attainable. Applicable to all crops and every variety of soil. Guaranteed analysis on every package. Shipments made direct from the Western factory and DELIVERED at ALL principal railroad depots at LESS than WHOLESALE prices in New York.

☞ Special Fertilizers for Corn and Potatoes.
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Address JOHN RALSTON,
170 Front St., N. Y.

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ROSS GIANT CUTTERS

FOR ENSILAGE AND LARGE STOCK RAISERS
Of immense
Size, Weight, Strength & Capacity

Guaranteed the best Cutter for the business. Send for Circulars to

E. W. ROSS & CO., Fulton, N.Y.

BEATTY'S ORGANS, 22 STOPS, 14 Octaves of Reeds, *With Elegant Stool Book and Music, Boxed and sent* ANYWHERE *on* 1 MONTHS *Test Trial for* $55

MAGNIFICENT 7 1-3 OCTAVE PIANO *Rosewood Case with complete outfit for* $145 *Catalogue FREE. Address,* BEATTY, *Washington, N. J.*

Trade LONDON PURPLE. Mark

The best insecticide ever used for the destruction of the Potato Bug, Cotton Worm, and Canker worm Sold by all wholesale druggists and stores throughout the United States. If not obtainable of nearest dealer send direct to sole manufacturers. HEMINGWAY'S LONDON PURPLE CO., (Limited.)
60 Mark Lane, London, England, 90 Water St., N. Y. P. O. Box 990.

Professor C. V. Riley says: "It can be more effectually sprinkled or sprayed on to the plant than Paris-green by virtue of its greater fineness."

Professor C. E. Bessey says: "It quickly kills both the Larvæ and the Winged Insects."

Professor A. J. Cook says: "With this cheap poison we have no longer reason to fear such enemies as the canker worm, etc."

Professor J. L. Budd says: A single application placed every one of the pests on their backs over the ground, either dead or in a dying condition, in less than six hours.

ASK FOR

Wells, Richardson & Co's PERFECTED BUTTER COLOR

It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.

USE ONLY THIS THE FIRST AND THE BEST

News of the Week.

HOME NEWS.

MONDAY, May 9, 1881.

Last Thursday the "deadlock" in the United States Senate was broken by the Republicans, who consented to an "executive session" for the consideration of the treaty with China, and for the confirmation or rejection of a large batch of folks whom President Garfield had appointed to fill various offices "by and with the consent" of a majority of the Senators, as provided by the Constitution. The "deadlock" as mentioned in a former issue, was due to a wrangle between both parties about the appointment of the officials attached to the Senate. The present office-holders were appointed by the Democrats who then had a majority; and the Republicans having lately obtained a majority by the vote of Senator Mahone, attempted to substitute Republicans, which under ordinary circumstances there would have been no difficulty about, according to the customary routine in such matters. The Democrats, however, insisted that Mahone's vote was won by a "bargain" that he should be paid for it by getting the Federal patronage in Virginia. This, it was feared, would enable him to carry that State against the straight-out Democrats next Fall, and to begin a split of the "Solid South." His chief aid in Virginia politics was a former Confederate officer named Riddleberger, and him the Senators nominated to the position of Door-Keeper who has a good bit of patronage in his gift. Gorham, the last Republican Secretary of the Senate and a friend of Mahone, was renominated to his former position, and the Democrats, objecting to both of these nominations, prevented their confirmation by raising dilatory motions, similar to Parnell & Co.'s "obstructive tactics" in the British Parliament. The Republicans, maintaining that it is the privilege and right of the majority to rule in such matters, insisted on the confirmation of their nominees, knowing that success would aid Southern malcontents to split the "Solid South"—hence the deadlock. It added to the complication that President Garfield had renominated Judge Robertson, a bitter enemy of Senator Conkling, to be "Collector of Revenue" at this port, the richest berth in the gift of the Government—worth from $100,000 to $250,000 a year—and one with so much patronage that its incumbent, if an active politician like Robertson, could greatly cripple Conkling and his "stalwart" following in this State. The two Senators from New York, Conkling and Platt, and Vice-President Arthur, without whose knowledge the nomination was made, strongly objected to the confirmation of their foe, and won over enough Senators to "hang up" the matter in the Senate. The "putting off" of this question added to the deadlock.

The Republican Senatorial caucus which last Wednesday decided to break the deadlock agreed not to act in the Senate upon any of the President's nominations in States whose two Senators objected to the nominee. This was to prevent the confirmation of Robertson. On Thursday the President withdrew from the Senate several rather important nominations he had made among the friends of Conkling before he had decided to "make war" upon him, intimating that if Robertson were confirmed he would re-nominate Conkling's friends, but not otherwise. The New York Senator is a sturdy fighter and it now seems impossible to avert a four years' struggle between him on one side and the whole force of the President with his vast patronage on the other. The battle is really for the next Republican presidential nomination, though immediately it is about the "spoils," but mainly on account of the influence their possession will have on the nomination, which Garfield and Blaine are afraid Conkling may prevent either of them from obtaining. Republicans are distressed; Democrats jubilant.

A reception to Gen. Grant by the American Minister at the city of Mexico, the other night, was attended by the Mexican Cabinet, Supreme Court, Members of Congress, the Diplomatic Corps and an immense throng. There was great cordiality.

The project of establishing a grand International Park at Niagara has broken through for the present, the authorities of this State not being willing to incur the expense of co-operating with the Canadians.

The ratio of vote to population in this city, at the last Presidential election, was about one to five; in Philadelphia and Chicago, one to six; Boston and St. Louis, one to seven; in New Orleans, one to nine, and in Providence, one to eleven.

The World's Fair which was to be held in this city or neighborhood in '83, won't. The Executive Committee last Wednesday about decided to ask Congress to discharge them from the duties they accepted under the statute. There are at least 5,000 splendid, unanswerable reasons why it is to the honor and benefit of this city that the fair should not be held; but want of space, of course, prevents us from giving them here.

A million dollars of marriage portion is said to have gone with Whitelaw Reid's bride.

Kenward Philp, the Truth editor, arrested for criminal libel in writing the editorial, "Lying and Sticking to It," will prosecute the papers and parties who instigated his prosecution.

John M. Wilson, United States consul at Panama, who has lately arrived in Washington, says nothing like serious work has yet been attempted on the De Lesseps canal. No houses have been built, but the men are living in tents and will soon be driven out by the storms. It does not look as though De Lesseps ever intends to dig a canal there, he says.

In Canada, it is claimed that the protective tariff against the United States has largely increased the price of every article of consumption, and that a corresponding increase of wages should be given.

It is discovered that Erie, Pa., has not had a legal grand jury in ten years, owing to the jury box being sealed with mucilage instead of wax, as required by law.

The New York state geological survey has lasted over 40 years, cost over $1,000,000, and is not completed yet. There is a disposition on the part of Gov. Cornell to drop it, by vetoing the current annual appropriation for a salary to the State geologist, James Hall, appointed in 1835.

Gen. Wiltz, of Louisiana, is improving in health, and has left New Orleans for the parish of St. Martinsville, hoping to gain increased strength from the salt breezes from the Gulf of Mexico.

The largest tannery in Canada, situated on the lower Lachine road, four miles from Montreal, was burned on the 5th. Loss, $75,000.

Col. Fred Grant, who has resigned from the army, is to be President of the Texas Western narrow-guage railroad, a line 660 miles long, from Houston to El Paso, of which 42 miles only have been built. Capital has been subscribed for the entire line and 200 miles are to be built, it is said, this year.

The lumber cut upon the Wisconsin shore of Lake Superior has increased from 4,000,000 feet in 1874 to over 22,000,000 feet in 1880–1881.

The total loss of property by the floods in the Missouri River and its tributaries between Sioux City, Iowa, and Bismarck, Dakota, is estimated at $2,500,000. Below Sioux City, including the damage at Omaha, Council Bluffs, Kansas City and thence to St. Louis, the loss is estimated at $1,500,000, making the aggregate $4,000,000. Five or six days ago the flood had reached St. Louis, where it has submerged the low-lying districts on the west side of the river and the greater part of East St. Louis on the opposite side, doing a great deal of damage to the railroads and to all the other property there. On its way towards the Gulf it is sure to do a world of mischief along the rivers. The other Western floods are subsiding.

Senator Edmunds has gone to his Vermont home on account of continued ill-health, and will not return during this session.

Sarah Bernhardt and her company sailed Wednesday for France on the steamer Amerique.

A Physician's Report

Many physicians are using Compound Oxygen in their practice, and with remarkable success. One of them writes: "My patient has now been under treatment about four weeks. His condition at *the time of beginning the Treatment was very unfavorable indeed;* he was very feeble, severe cough, expectorating pus in considerable quantity; he suffered with night-sweats; all of his friends considered his case as hopeless. Every symptom has improved; his cough is very much better; his strength and general appearance has improved a hundred per cent.; in fact he has the appearaco of a new man." Our Treatise on Compound Oxygen, containing large reports of cases and full information sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

Large amounts of California barley travel 3,000 miles to be malted in Chicago.... ....A beet sugar factory at Schenectady, N. Y., expects to get back its cost—$150,000—in four years, by jewing down farmers to $4 per ton for beets.....By Indiana's new Road Law, local supervisors have been abolished, and Township Superintendents, chosen for two years, substituted, who take entire direction of road and bridge making and improvements. A capitation tax of $2 per annum is levied on every able-bodied man between the ages of 21 to 50 years inclusive, which the citizen may "work out," and Superintendents receive $2 per diem.....Among charges preferred by the faculty of Dartmouth College against President Bartlett before the Board of Trustees is that he has shown a positive hostility to the agricultural school connected with the college—the man is also accused of being rude and overbearing to the faculty and of having incurred the intense dislike of the students..... In reply to a resolution passed by the Board of Aldermen of this city, Pres. Chandler of the Board of Health reports to that body that in his opinion no legislation about oleomargarine is needed to protect the public health. The process of manufacture, he says, is cleanly, the materials used are unobjectionable, and the product is a wholesome food, equivalent chemically to butter, palatable, and better, as well as cheaper, than much of the dairy butter sold in this city. On this point he says chemists who have looked into the subject are agreed, and he quotes the right Hon. Dr. Lyon Playfair as saying that good oleomargarine at 1s. the pound is a great deal better and cheaper than bad butter at 1s. 4d. In saying this Pres. Chandler merely repeats the paid-for opinion he gave some time ago for advertising purposes to the Commercial M'f'g. Co., of this city, the largest makers of oleomargarine in the country..... There arrived at the New York Central Stock Yards Monday night from Cincinnati what is called by the company owning it a "parlor cattle car." It contained 20 cattle in two rows of stalls, built at an acute angle with the sides of the car, with an aisle between the rows. The cattle could lie down, and were fed and watered on the journey by a system of water and grain pipes, leading to galvanized iron troughs, and fed from outside the car. The heads of all the cattle were toward the side of the car, and the floor has a slight pitch toward the center, where it is drained through an iron grating in the center. A maximum of carrying capacity, with a minimum of weight is claimed for the parlor car.....The Raleigh (N. C.) News notes the great increase in truck farming in the eastern part of North Carolina in recent years, and predicts that this is to become the most important source of the future wealth of that section.....The Trustees of the Maine Agricultural College announce that they will be compelled to charge a tuition fee of $30 per year hereafter, because of the failure of the State Legislature to make adequate provisions for the support of the college. .....All the small fruits in the Hudson River fruit region give promise of good yields, the growers maintaining that the extreme cold and snow have been favorable, having kept the buds back and prevented them from bursting forth and being blasted by Spring frosts. Good crops of strawberries, raspberries and blackberries are expected. About 200,000 peach trees in Marlboro come into bearing this year for the first time..... Henry Ward Beecher while passing through Baltimore, Wednesday, was served with a summons to answer a suit against him by the Western Maryland Agricultural Society, for failure to deliver an address as agreed upon at the Society's fair two years ago .....In Colorado it is said that 97 per cent of the cattle have survived the Winter. If this proves to be, in general, true of the high lands in the arid belt, and there is reason to believe that it is, the loss from the Winter will prove less than was expected.....The following reports are condensed from the latest telegrams and exchanges: Richmond, Va., reports: "We are to have a good peach crop this year if no further damage is sustained." .....Galveston, Texas, reports heavy frosts throughout the State that have done great damage to cotton, corn, fruits, and vegetables..... In the old North State, a wonderful place for blackberries and huckleberries, half the crop was killed by the frost of April 6.... ...All the fig trees around Opelika, Ala., were killed last Winter, and the peach crop will be an entire failure. The wheat looks very fine..... A Macon paper says: "The plum crop is successful so far, the apples are still unhurt, and the peach trees are literally laden with fruit."....A great fruit grower of Oskaloosa, Kan., reports his peaches killed, as well as his cherries, except the late Duke and the Richmond varieties.....No peaches, a light crop of raspberries and blackberries, a heavy crop of apples, and an average yield of strawberries are the prospects reported from near Terre Haute, Ind.....In Texas some varieties of peaches are seriously injured, but others are yet good for a full crop if there is no more frost. Grapes, berries and plums are reported to be all right.....Fruit growers of Maryland and Deleware have no encouraging reports to make. One farmer in a celebrated peach center says that he cannot find a live peach bud on 10,000 trees..... Abbeville, S. C. reports that but slight harm has been done thus far to the fruit crop. The cold has killed a good deal of the fruit about Anderson, S. C. but enough is left for ordinary uses..... Illinois fruit growers from the east shore of Lake Michigan say the crop near the lake is not materially damaged, but four miles inland scarcely any live buds can be seen. The trees are not injured. ..... Sweet corn in the South was planted early in March, and came up late only to be bitten by the April frost. The ladies of Macon, Ga., are crying over their flower gardens, on which the cold snap has worked havoc....The Charleston, S. C. News says that the recent frost was terribly fatal to fruit and early vegetables, though not nearly so bad as it would have been if the unusually cold Winter had not retarded their growth. .....There is general promise of fine crops of cherries, plums, grapes, raspberries, and strawberries in Michigan which is the great source of the late fruit supply for Chicago. St Louis, Cincinnati, and even the Eastern markets.....Thirty special reports to the Telegraph and Messenger of Macon, Ga., indicate less than a half crop of fruit in middle and southwestern Georgia. The fig trees are killed, plums a half crop, pears and cherries badly damaged, apples and strawberries not much injured, and the Le Conte pear a failure. .....California comes in with more cheering reports. Sacramento growers say that not more than thirty-three per cent of the fruit crop will be lost. Oranges are a good crop. Red Bluff, Tehama County, reports a full half crop. The Amador County peach crop is not so badly damaged as was thought. Fruit trees, other than the peach and almond, are now in full bloom. Napa County reports that cherries only have suffered by frost, and they only a little..... Over $23,000 were paid for a herd of Jersey cattle, consisting of six bulls, fifteen cows, and twenty-one heifers, on Thursday last, at the American Institute Building, this city. They were sold by Peter C. Kellogg & Co. for John D. Wing of Millbrook, Dutchess County, N. Y. The pure Alphea bull Polonius was purchased by the Alma farm for $4,600. Horatio, sired by Polonius, was sold to William Crozier for $560. Fancy Fan, a cow, was bought by the Alma farm for $2,000. Holly Branch, a cow was knocked down to John J. Holly for $550. Young Duchess, a cow, was secured by the Alma farm for $1,200, and Palm, a cow, for $1,550. The largest price, $1,258.50, for a heifer, was paid by John J. Holly for the Surprise of Maple Shade, a yearling. Glint, a heifer calf, was sold for $250, and Fancy Fan for $375..... The softer and inferior qualities of wheat are of little use to Minneapolis millers, and measures are being taken to provide the Minnesota farmers with the best seed wheat obtainable. To that end the Minneapolis Millers' Association has been purchasing a considerable amount of "No. 1 hard," at from $1.10 to $1.13 per bushel, all of which will be sold to farmers at the uniform price of $1.10..... ...At Chicago it is said that several of the leading packing houses which have been idle for a considerable time are now getting to work again. This will increase the requirements for hogs, which are expected to move more freely to market henceforth.....Navigation on the lakes has been resumed between Toledo and Erie, and quite a number of vessels have cleared from the former for the latter port. Several vessels have cleared from Milwaukee and Chicago, but the ice, at the latest accounts, was still obstructing the passage of the Straits. Buffalo reports several arrivals and departures of vessels by lake, and Oswego has received by lake from Canadian ports quite a quantity of barley, rye and peas.....The Eastern division of the Erie Canal is to be opened on the 12th instant, and the remainder on the 18th instant. The opening of the Eastern division will release about 1,200,000 bushels of wheat, about 3,800,000 bushels of corn and a few thousand bushels of oats, barley and rye..... ....Last Saturday Commissioner Le Duc exhibited, here 19 samples of tea grown under his direction at McIntosh, Ga. The tea was a heavy black sort for which there is little market here, though it is largely used in England for mixing with other kinds. Experts who tested the beverage made from it say it has a strong body, but little flavor. The Commissioner hopes to be able to use machinery in some parts of the process of curing it...

Large quantities of potatoes are being shipped from Canada to the "States," 16,000 bushels having lately been sent across from Montreal, in one week.....The sale of the farm belonging to the Minnesota State University, near Minneapolis, is under consideration, on the ground that it has failed to interest the students in agricultural practice. The University, having gobbled up the U. S. endowment for an agricultural college, now seems to wish to crawfish out of all obligations in that connection.....A telegram from Chicago this morning announces that Railroad Commissioner Fink on Saturday informed railroad agents there that rates on live stock will be reduced, beginning to-day, on the basis of 35 cents per 100 pounds gross and 25 cents net to New York. The regular tariff rates are 60 cents gross and 50 cents net. On dressed beef the rate is reduced from 80 to 40 cents. These reductions are made on account of persistent cutting by various roads.

(Advertisements.)

A Railroad Engineer

in the employ of the C. M. & St, Paul R. R., had been greviously affected with diabetes for six years. He took four boxes of Kidney-Wort, and now writes that he is entirely cured. Get a box or bottle and try it.—Tribune and Farmer.

Thousands of women have been entirely cured of the most stubborn cases of female weakness by the use of LYDIA E. PINKHAM'S VEGETABLE COMPOUND. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

DANDRUFF

Is Removed by the Use of Cocoaine.

And it stimulates and promotes the growth of the hair.

Burnett's Flavoring Extracts are the best.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Remember Hop Bitters never does harm to the smallest child, but good, always and continually.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, May 7.

Cincinnati.—WHEAT strong; No. 2 Red Winter $1 13; CORN strong; No 2 Mixed, 47½c@47¾c. OATS dull No 2 Mixed, 39½c. RYE strong; No. 2 at $1 23@1 25. BARLEY scarce and firm; No 2 Fall, $1 15. PORK buoyant at $17 50. Lard quiet at $11 10@11 15 Bulk meats quiet, but steady; Shoulders, $6; Clear Rib, $8 60. Bacon scarce, firm and unchanged. BUTTER.—There has been a decided improvement in the average quality of Creamery, but the supply is much larger and the tendency is still downward. Fancy Creamery sells at 27@28c. prime do. at 25@26c, choice Dairy at 22@23c choice Western Reserve at 20@21c, prime to choice Central Ohio at 15@18c., medium do. at 12@13c and inferior at 10c ₱ lb. CHEESE.—The supply of choice cured factory is exhausted and some good to choice new Ohio factory is arriving and selling at 10@11c per lb. There is still some Northwestern which is offered at the same prices. Eggs have been in less active demand during the week and have further declined, closing dull at 10½@11c per doz. Packers bid only 10c for round lots. SEED.—There has been some demand from the Eastern markets for Timothy and some inquiry for Clover Seed but for the latter at lower prices. German Millet has been active and has sustained a further advance. Prime to choice Clover is held at 7½@8c ₱ lb, and Timothy at $2 65@2 75 ₱ bushel from store. Round lots on arrival would not bring these prices. Flaxseed is steady $1 10@1 12½ ₱ bushel. German Millet sells at $2 25, common Millet, at $1 50, and Hungarian Grass at $1 25 ₱ bushel.

Chicago.—WHEAT in fair demand; No. 2 Chicago Spring, $1 03½@1 03⅝, cash; $1 05@1 05⅛, June and July; $1 01, August. CORN active at 43⅜c, cash: 42¾@42⅞, June; 43⅜c, July; 44⅛c., August. OATS steady and firm at 38½c, cash; 33½c, May; 37½@37⅝c June; 36½@36¾c, July; 29½@39½c, August. PORK easy at $17 30@17 35, cash; $17 30, June and July. Lard active but lower, at $11, cash and June; $11 05, July; $11, August. Bulk-meats irregular; Shoulders, $5 80; Short Rib, $8 70; Short Clear, $8 95. BUTTER—Choice to fancy creamery, 23@24c; good do., 20@22c; choice to fancy dairy, 20@22c; good do, 15@17½c; common to good Summer and Fall made, 9@10c; good ladle packed, 12@13c; good to fine do 16@18c; the outside prices are only obtained for small lots. CHEESE—Full cream, good to choice, 13@14½c; flat, part skimmed, prime, small way, 9@9½c; do. in lots, 8½c; sour and hard skimmed to medium stock, 3@6c; Cheddar, skimmed, good to prime, 6½@8½c. GRASS SEEDS—Timothy in good supply, but chiefly included fair to medium qualities for which there was only a moderate demand, and prices rather easy. Timothy good at $2 62@$2 75; and small lots of fancy at $2 80; common to fair $2 40@2 50. Clover dull at $4 for prime medium down $3 70 for common do. Mammoth at $4 80@$5 50. Hungarian at 90c@$1. Millet at 90c @$1 30 for common, and $1 50@1 65. Flax active at $1 15 for crushing. HOGS—Fair demand, chiefly for packing; mixed packing, $5 70@6; light, $5 75@$6 10; choice heavy packing and shipping, $6 10@$6 85. CATTLE—market strong and active; fair to good, $5@5 60; choice, $5 75@6 15; no extra here; distillery Steers strong and plenty at $5 60@5 75; tailings, $4 30@5; butchers' very strong and active at $2 75@5; stockers and feeders in good demand and firm at $3 85@4 95. SHEEP—Market weak with a decline for the week of fully 75c; shorn, $4@4 50; wooled, $5 70@5 75; no extra heavy here.

Boston.—GRAIN.—Corn, 60@61c. for mixed and yellow; no grade at 55@58c. ₱ bush.; and to arrive at 60@60¾c ₱ bush. Oats have been quiet, with small sales of No 1 and extra white at 52@55c.; No. 2 white at 50@50½c; and No 2 mixed and No. 3 white at 48@49c ₱ bush; rye at $1 25 ₱ bush., and barley at $1 05@1 15, ₱ bush; shorts at $19@19.50 ₱ ton; fine feed at $18.50@19, and middlings at $20@21 ₱ ton. BUTTER — New

Northern—Vermont dairy lots, choice, 21@22c.; N. Y. dairy lots, choice, 21@22c.; fair to good, 14@18c. New Western—Choice creameries, 21@25c.; do. fair to good, 20@23c.; ladle packed, choice, 18@19c.; do. fair to good, 15@17c. Old butter—Creameries; 18c.; Fall made dairy, 18c; choice dairy, 10@13c.; common to good dairy, 10@15c., and Western ladle packed 10@15c. CHEESE — Northern factory, choice, 13½@14c. ℔ lb.; fair to good, 11½@13c.; skimmed, 6@11c.; Western factory, choice, 13½@14c.; fair to good, 11@12½c.; skim, 7@10c. EGGS—Eastern at 15½@16c.; Northern, 15½c.; Western, 15@15½c ℔ doz. BEANS—Northern hand-picked pea at $2.70@2.75 ℔ bush.; do. New York at $2 60@2.70; do common at $2 40@2 50; medium choice, $2.55@2 70; common to good, $2.40@2 50; yellow eyes, $2 20@2 55; red kidneys, $1.60@1.80. Canada peas, 75c@$1.10 ℔ bush. for common to choice; green peas, $1.25@1.70. POTATOES are now dull; we quote Aroostook Rose at 90@95c. ℔ bush.; Maine Central Rose at 80@85c.; Northern Rose at 80@85c., and Peerless at 70@75c. ℔ bush. APPLES at $1@2.50 ℔ bbl. CRANBERRIES at $3@6. ONIONS—Red, $3@3.50; white, $3.75@4 ℔ bbl., and Bermuda $1.50@1.60 ℔ crate.

(Advertisement.)

South Bend Evening Register.

When certain powers are claimed for an article, and everybody testifies that it does more than is claimed for it, to gainsay its worth is useless. This is the substance of the St. Jacobs Oil record.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 7, 1881.

BEANS AND PEAS.—High prices have caused a pause in the bean trade and there are enough weak-kneed holders to quote a decline. Others feel assured that when buyers have to again call for supplies the moderate supply here and in the country will harden rates again. Green peas quiet, with few making $1.55@1.60; Southern B. E. firm at $3.25 ℔ 2-bush. bag.

Medium beans, prime, $2.55@2.60; other, $2.25@2.50; marrow, prime, $2.60@2.65; other, $2.40@2.60; white kidney and pea $2.25@2.55; red kidney, prime, $1.60@1.65, other, $1.40@1.50; black or turtle soup, $1.45@1.50; Lima, $5@5.50 nominal.

BUTTER.—With enlarged supplies of fodder grades the trading has ruled weak. At the close an inquiry from exporters has caused a better feeling, but prices as quoted are full. The home trade too has increased, and if the market is not swamped with supplies a steadier week is looked for. Poor or stale white State or Western soon drops to grease prices. Fine half tubs are having a good ready sale, frequently moving quicker than some of the real and fictitious creamery.

New Butter.—Creamery, choice Western and Pa. 23@24c. other, 20@22c.; sweet cream, 20@22c.; State half tubs, choice, 22c.; fair to prime, 18@20c.; Welsh, choice, 18@20c.; other 17@19c.; very common or stale new 12@16c.; Western imitation creamery 15@20c.; do dairy 15@19c.; factory 12@16c.

Old Butter ranges 10@18c.

Receipts for week 27,350 pkgs.

Exports do. 2,281 do.

CHEESE.—The new have shown a little more freely in the supply and export interest has been stronger; prices on choice stock have been well sustained. Shipments for the week 24,887 boxes. Quotations are for

New at 12¾c. for best; 11@12¼c. for fair and good lots; do. skimmed at 7@8½c, old as follows, fancy at 13½c.; do. fair to prime, 11¾@13c; Ohio factory, good to prime, 11@12c.; do. fair to good, 10@11c.; do. poor to fair, 8@10c. Skimmed creamery, 4@6c.

Receipts for week, 24,029 boxes.

Exports for week, 18 591 boxes.

Liverpool cable, 70s.

Steam to Liverpool, 23s.6d.

COTTON.—The market has been very quiet and showing slight changes only; latest prices are for

May, 10.33@10.34c.; June, 10.43@10.44c.; July, 10.52@10.53c.; August, 10.58c.; September, 10.34@10.35c.; October, 9.99@10c.; November, 9.88@9.89c., December, 9,88@9.89c.; January, 9.97@9.99c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	6 15-16	7 3-16	7 3-16
Strict ordinary	7 3-16	7 15-16	7 15-16
Good ordinary	8¾	8 15-16	8 15-16
Strict good do	9¾	9 7-16	9 7-16
Low middling	9 13-16	10 3-16	10 3-16
Strict low middling	10 5-16	10⅝	10⅝
Middling	10 9-16	10 13-16	10 13-16
Good middling	11¾	11¾	11¾
Strict good middling	11⅞	11⅞	11⅞
Middling Fair	12⅜	12⅜	12⅜
Fair	12⅞	13¼	13¼

STAINED.

Good ordinary	6¾	Low middling	8¾
Strict good ordinary	7¾	Middling	9 11-16

Receipts for the week, 18,084 bales, Exports do, 7,9.4 do.

DRIED FRUITS.—Apples have a fair ranging and hold to firm prices. Peaches are in moderate demand. Small fruits are quiet and unchanged. Quotations;

Evaporated apples at 5½@5¾c. for prime and choice stock; sliced apples at 4½@5¾c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn do; 4½@5c. for State do; 4¼@4¾c. for western Ohio and Mich. Peaches at 25@26c. for evaporated peeled; 13½c. for unpeeled do; N. C. peeled at 19@22c.; for the better qualities of new and 12@15c. for old; unpeeled peaches at 5¾@5¾c. for halves and 5½c. for quarters. Plums at 15@16c. Blackberries at 9c. for prime. Cherries at 16c. Raspberries at 24@26c. Whortleberries 11@11¾c.

Receipts for the week, all kinds, 1,700 pkgs.

Exports dried apples, 1,375 pkgs.

EGGS—Receipts for week, 24,081 bbls.; do. last week 14,115 bbls. The market has resumed its usual Spring course when supplies are free; prices are down and buyers can force them to keep near their views with an assured supply.

Near points, 14½c.; State land Pa., 13½@13½c.; Western, 13¾@13½c.; Southern, 12½@12¾c.; poorly packed, and small run 12@13½c.; goose 23@24c. duck, 16@17c.

FLOUR.—The market shows a fair degree of activity and prices closed strong. Shipments for the week 1,936 bbls. and 46,200 bags.

Latest prices are: $4.75@4.50 for very inferior to strictly fancy superfine State and Western; $4.40@4.60 for poor to choice extra State and Western, odd lots and lines; $4 60@4 75 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.50@5.50; good to choice do. at $5.50@6.35; (very choice up to $6.50 and fancy at $6.75;) red and amber winter wheat inferior to choice trade and family at $4.50@6.15; round hoop Ohio, $4.50@4 85; and trade and family brands of do. at $5.00@6.25, the latter for very choice; St. Louis $4.75@5.65 for inferior to good extra, $5.65@6.50 for good to very choice, and up to $6.65@7.00 for very fancy brands; Minn. clear, inferior to very choice at $4.40@5.75; Minnesota "straight," poor to very choice, at $5 35@6.75, and patent inferior to fancy at $5.75@8.00; city mill extra at $5.55@6.70 for the West Indies; do. for England at $4.40@4.75 for poor to choice spring wheat; do. trade and family extras $5.70@6.75; do. for South America, $5.75@6.00, the latter for very choice; No. 2 at $3 00@5.55 for very poor to very fancy.

Receipts for week, flour, bbls. 93,000; corn meal, do. 5,314; wheat, bush., 712,575. corn, do. 524,700; oats do. 173,700; rye, do 4,020; malt, do. 37,750; barley, do. 32,300; beans, do., 5,152; rice, pkgs. 1,145.

Exports for week, flour, bbls. 68,200; corn meal, do. 4 500; wheat, bush. 917,700; corn, do. 491,500; oats, do. 3,550; peas, do. 2,501; beans, pkgs. 1,353; rice do. 1,117.

CORN MEAL—Sales at $3,25@3.30 for Brandywine and $2.75@3.25 for yellow Western.

FRESH FRUITS.—A few choice apples go abroad as freights are low and the risk is small; exports for week, 1,300 bbls.; specially saved lots are firm but ordinary orchard packings are irregular. Prime stock, $2@2.25@2.10; common to fair, $1@1.50; other from 75c. indefinitely downward. Cranberries have scarcely any sale; fresh rhubarb helps to put them aside; N. J. crates, 75c.@$1.50 as to hardness. Strawberries turn out fine and sell briskly; quoted 35@40c., mostly clear stock. Hot-house grapes—Black Hamburgs, $2 ℔ lb. Peanuts have a fair sale at firm prices; Va. hand-picked 4½@4¾c.; other, 3¾@4¼c; shelled, 3@3¾c; pecans 7@8c.

GRAIN.—Wheat has been active and closed higher; exports for the week have been 800,000 bush.; latest prices are for

No. 1 white at $1.26@1.27¼ do. May at $1.22½@1.23¼; do. June at $1 20¼@1.20½; do. steamer grade at $1.21@1.21½; No. 2 white at $1.24½@1.25; ungraded white at $1.20½@1.26; mixed Winter at $1.25@1.26¼; No. 2 red at $1.29@1.29½; do. May at $1.25@1.26; do. do. June at $1.22½@1.23¾; do. July at $1.20@1.20½; do. August at $1.15½@1.16; do. steamer grade at $1.26; No. 3 red at $1.24½; ungraded red at $1.18@1.28; No. 2 Chicago and Milwaukee Spring at $1.26@1.27; N. Y. No. 2 Spring at $1.23; No. 3 Milwaukee Spring at $1.19½.

Rye at $1.09@1.11.

Oats are being taken freely at strong prices; latest sales are of

No. 1 white at 55c.; New York No. 2 white at 52@53c.; No. 3 white at 50c.; New York No. 2 at 46½c.; do. May at 46½@46¾c.; do. June at 46½@46¾c.; do. July at 46¾c.; No. 3 at 46@46¼c.; ungraded white Western at 47@55c.; ungraded mixed Western at 46@47½c.; No. 2 Chicago at 47c.

Corn is in liberal demand and firm at higher prices; latest prices are for

New York No. 2 at 61½@62c.; do May at 57¼@57½c.; do. June at 55¾@56c.; do. July at 56@56½c.; No. 3 at 58¾@59½c.; ungraded mixed Western at 58@63c; New York steamer mixed at 60½@62c.; No. 2 white at 64@65c; white Southern at 64c, New York yellow at 63@64c.; steamer yellow at 60½@62c.; yellow Southern at 63c; low mixed at 62c.

HAY AND STRAW.—Retailing grades of hay are in small receipt, fair demand and firm in price; other qualities are plenty and freely offered. Straw is selling well. Quotations are for

Prime timothy hay at $1.10@1.15 ℔ 100 lbs.; medium timothy at 95c.@$1.00 do.; shipping grades at 85@90c. do.; clover mixed at 95c.@$1.00, clover at 80@85c. do. Straw—No. 1 rye at $1.05@1.10 ℔ 100 lbs.; No. 2 rye at 65@70c, do.; oat and wheat at 45@55c. do.

Exports for week, 2,215 bales.

HOPS.—Export demand continues slack and the demand from brewers moderate; but prices are held steady. Quotations are for

	Cents per lb.
New Yorks, crop 1880, choice	22 @23
Do. medium	19 @20
New Yorks, crop 1880, low to fair	12 @15
Eastern, crop 1880	14 @22
Wisconsin, crop 1880	14 @22
Yearlings, crop 1879, choice	12 @18
Olds, all growths	4 @10
Pacific coast, new	19 @23
Bavarians	30 @35

Receipts for week, 882 bales.

MAPLE SUGAR.—The demand is moderate but likely to use up the crops. Sugar 7@10c.; syrup 10@11 lbs. to gallon, 75c.@$1 in can.

POULTRY AND GAME.—Prices are high for dressed but supplies merely fill a special class of trade at this season. Spring chickens are very scarce. Coarse fowls are as low as 10c.

Turkeys, prime fresh and frozen 18@19c.; good 16@18c.; large coarse 13@14c; chickens Spring 75c@$1; Winter 60@75c; Winter, 30@75c, Fall 20@24c; fowls, d. p. 13@14c.; scalded 12@13c. Capons, large, 32@33c.; small 28@30c. Ducks, choice 23c.; other, 16@20c. Squabs, white, $4 ℔ doz.; do. dark, $2.

The market is weak for cooped stock; everything lower.

Fowls, 10@12c.; roosters, 7@8c.; turkeys, 12@13c.; Spring chicks per pair, $1.25@1.50; ducks, 60c.@$1.00; geese, 75c@$1.75; pigeons, 35@50c.

Game is small in offering; pigeons wanted. Eng. snipe $2.25@2.50 per doz; plover $2@2.25; sand snipe 50@60c; wild squab $2.25@2.50.

PROVISIONS.—Hog products have been in good demand and strong in price.

Mess pork closed at $16@16¼ for old and $17.75 for new, with May at $17.75; June at $17.75@17.85, Bacon at 9c. for long clear and 9½c. for short clear. Lard—Western steam at 11.55 for spot 11 10 for May, 11.50 for June, 11.52½ for July, and 11.52½ for August. Stearine at 13¾@13¾. Tallow at 6 5-16@6 9-16. Beef hams at $22.50@23. Beef for extra India mess, at $22@23.25 for city. $11.50@12 for extra mess; nominal for plain mess; packet at $12@13.

Receipts for week, beef, bbls and tcs, 1,100; pork, bbls. 1,300; cut-meats, pkgs. 13 300; lard do. 11,400.

Exports for week, beef bbls and tcs., 1 800 pork, do. 4,500; cut-meats, lbs. 4,346,080; lard, do. 1,5 9,900.

SEED.—Clover is quiet at 8¾@9c. for Western. Timothy is firm at $2.90@3.

TOBACCO.—Export demand is firm and the home trade good, with prices firm.

VEGETABLES.—Potatoes are in better demand and prime sorts favor the seller.

Bermuda potatoes $7@9 ℔ bbl.; Florida, $4@7; Early Rose, Nova Scotia d. h. $2 87@3 00. Maine $2.75@2.87; State, $2 50; do. bulk, $2.37@2 60. Prolific, $2.25@2.50; Mercer, $2@2 25 Jackson White, d.-h., $2.12@2.37; Burbank, d.-h. $2.50@2.62; do. bulk, $2 50@2.62; Snowflake, $2; do. d.-h. $2.50, peach-blow do. $2.75@2.87; Peerless, $2@2.25; sweet Del. $1 50@2.50.

Green stuff is of very irregular quality and only useful packages are quoted. Demand improving. Some extreme Southern items are giving place to nearer rates.

Florida cucumbers, per crate $4@5; North Carolina green peas, per ½ bbl. $3; Savannah do. 50c.@$1.25; Charleston do. 50c@$1; do. tomatoes, $2@3.50; Bermuda do. boxes, 75c@$1; Fla. squashes ℔ crate $1@1.25; cauliflower do. $1@4 ℔ bbl.; cabbages $1@4; Fla. beets $1.50@2 ℔ crate; Bermuda onions, $1@1.12 ℔ crate; Fla carrots $3 50@4 ℔ 100 bunches W. turnips, N. C. $3@4; do. radishes, 25@50c. ℔ 100 bunches; asparagus, Oyster Bay, $4@4.50 ℔ doz.; other, $1@3; rhubarb, L. I. $1.75@2 ℔ 100 bunches; old turnips 50@75c. ℔ bbl.; beets 75c @$1; Hubbard and marrow squash, $1.25@1.50 ℔ bbl.; carrots, $1@1.75; onions, red, $1@1.50. Hot-house mushrooms $1 ℔ lb.; lettuce $2@2.50 ℔ bbl.; radishes $1.50@2 ℔ 100 bunches; cucumbers $1@2.25 ℔ doz.

WOOL.—Trading has been very dull again the past week and prices unsettled and easy. Quotations are for

WASHED FLEECE.

Ohio, Penn. and W. Va. XXX and picklock, 43@44c.; X and XX, 40@42c.; No. 1, 42@45c.; No. 2, 38@40c.; common, 32@35c.

N. Y., Mich., Wis, and Ind. X and above, 37@40c.; No. 1, 41@43c.; No. 2 and common, 30@38c.

Ill., Iowa and Missouri, X and above, 35@37c.; No. 1, 38@40c; No. 3 and common, 28@30c.

Superior tub-washed, 43@45c.; average, 40@42c.

Medium washed combing wool, 44@47c.; medium low, 40@42c.; Canada, 42@43c.; Kentucky unwashed, 25@30c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, May 7, 1881.

BEEVES.—Receipts for the week 10,997 head; do. last week 12 621 do. The offerings have been light throughout the week and sellers have made the most of it. The market was one of the quickest of the season. The stock trains did not reach the Jersey City yards until 7 a.m., and in less than two hours every bullock was sold; at 50th St. a full clearance was made before 7 a.m. Prices were rated ½@¾c. higher than Wednesday and ¼@1¼c. higher than last Monday, and at the advanced rates there was not enough stock offering to go round. No cattle sold below 10¼c. to dress 56 lb., less 50c. per head, and two car loads of choice Illinois steers went at 12½c. to dress 58 lb; the bulk of the sales were at 11@12c., to dress 56@57 lb. Yesterday dressed beef sold mainly at 8@9½c.; to-day 9½@10c. were the leading prices, and an active market was reported. Exporters were not operating, prices being too high.

COWS AND CALVES.—No variation to note. Really good cows depend upon private sale at this season, when farmers can utilize new milk.

VEAL CALVES.—A very light trade was reported, but the feeling was firm and yesterday's prices were fully maintained. Grassers are quoted at 3½@3¾c.; mixed lots at 4@4½c., and common to choice veals at 5@6c.; few selections reach 6¼@6¾c. There has been a good dressed calf market all the week; to-day country dressed were selling mainly at 7@9c., few up to 9½c.

SWINE.—Receipts for the week, 28,320 head; do. last week, 28,016 do. Market firm for live hogs at $6.20@6.50 ℔ 100 lbs. City dressed State 7¾@9c.; do. Western 8¼c.

SHEEP AND LAMBS.—Market steady with small supplies. Poor to good clipped were sold at 4½@5¾c; two loads of unshorn do. at $6.75@6 80; clipped yearlings at $7, and a number of Spring lambs at $8@9.25 each.

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IN CHAINS!
A few centuries ago the few Bibles in existence were commonly chained in the churches and accessible only to a few. Those who attempted to free them, translate them, and give them to the people, had the stake and the scaffold for their reward. This new version of the Testament was completed, printed, and bound months ago in England, but that the English publishers might be able to monopolize its sale, and make a few hundred thousand dollars the more, it has been withheld from the public. The Copyright Law in England is such that at least two newspapers, which, by some method, secured copies of portions of it, and published extracts, with comments, were compelled to desist from repetition of the "crime," and to publicly apologize for their "wrong." We are in favor of an equitable international copyright law that will give authors due reward for their labor, but Americans will not care to see such an English law transferred to this country.
On May 17th these monopolists promise to unbind the "chains" and release probably a million testaments to the world. They promise one edition in very small type in paper covers at 15 cents per copy.
We propose to give with speed never before equaled in the history of publishing, in type of nearly double the size used by them, the New Testament complete for 10 cents, the Four Gospels complete for 7 cents, the Gospels separately, each for 2 cents; and in many various forms and styles up to full Turkey morocco, gilt edges, for the new and old versions on pages facing for $1.50.

GOOD WORK,
Remembering the past, our friends will not be surprised that the publishers and booksellers who do not like the Literary Revolution are slandering in advance our editions of this work, pretending that there will be many errors, resulting from its hasty production. In reply, we can only promise to those who have trusted us, and have not found us wanting, that it shall be, typographically, one of the most accurate works ever printed on this Continent. The printing house of S. W. Green's Son, Nos. 74 & 76 Beekman Street, which will do the work, has no superior in this country in the character of its workmen, and equal in its ability to do good work quickly. They will take double pains to do the best work possible, as this will be, for their reputation, the most important work they have ever printed, and following them, our own proof readers and critical scholars engaged on our Encyclopedia will all unite to make the work absolutely free from error.

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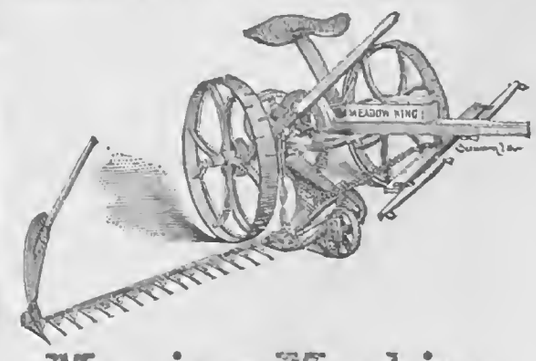
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Also Manufacturers of Lawn Mowers, Plows, &c.

Reading for the Young.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

The Citrus Fair—Continued.

The most conspicuous feature of the exhibit from Pasadena (a thriving colony in Southern California) was a huge tent-like structure composed of boxes of oranges—one hundred and forty-four in number—and decorated with evergreens, roses and callas. On the adjacent tables many varieties of oranges and lemons were displayed, among them a Konah orange which measured sixteen inches in circumference.

"Oh, see those strawberries!" exclaimed Daisy, pointing to a large case filled with boxes of the Monarch of the West.

"That is nothing," said Violet. "Our vines are full of green berries now. Last year we had plenty of them ripe before this time; but for some reason they seem to be later this Spring."

"What are those?" inquired Daisy, pointing to an odd-looking bunch of green.

"Bananas," replied Bertram. "But they are not ripe. Didn't you ever see a picture of a banana tree with a negro standing beside it? There was one in my old geography, and I used to think the trees and the long bunch of fruit must be very wonderful, but you can see them here any day."

"If you go where they grow," added Violet.

"That is understood, of course. Now girls, don't stop to look at these flowers. I'll show you the prettiest thing in the whole Pasadena collection. There," as they obediently walked along, "what do you say to that?"

"That" proved to be a boat about two feet in length, made of flowers. The hull was composed of variously colored rosebuds, heliotrope and smilax; while the sails were fashioned from the same graceful vine interspersed with white flowers—laurestinus, spiræa, rosebuds, orange blossoms, and the most delicate little pinks; and above all floated a small flag inscribed PASADENA.

"How I wish mother could see that!" said Daisy, for the twentieth time since she entered the building. "I imagine she would be as disgusted with her house-plants as I am."

On the table from Orange they found a fine display of citrus fruits, including another orange that measured sixteen inches. Some of these oranges were wrapped in tissue paper on which was printed the name of the owner's grove, and underneath—"Each orange is warranted sweet and juicy."

"Why are some of these wrapped in paper?" inquired Daisy.

"To make them sell better," laughed Bertram. "I remember when we first came to the State, father bought some oranges that had some such inscription, and I declare if they were not as sour as I ever tasted."

Scattered about the table were views of one of the finest groves in the prosperous settlement of Orange. Boxes of raisins were displayed, as also were many beautiful flowers—some handsome leaves of the Madame Pollock Geranium being especially deserving of praise. But the greatest curiosity to Daisy was some twigs of the Australian Saucer peach, on which some of the thickly-set young fruit were as large as hickory nuts, though picked before the middle of March.

At the Santa Barbara table they found luscious canned fruits, walnuts, almonds, and views of the old Spanish Mission. Here also they saw the custard apple—a queer, brown, scaly-looking fruit that did not ripen till summer, and had been picked three weeks—so it did not look very inviting.

On the San Diego table were arranged a number of bottles of pickled olives in addition to the fine display of citrus fruits.

"Oh Violet, stop and see these beautiful shells!" exclaimed Daisy as they were passing some cases containing fancy articles. The gentlemanly attendant noting the girls' interest told them the names of the various shells, which were all found on the Southern California coast. Some were very handsome, particularly the rainbow and pearl *abalones*. Then there were walking sticks of native woods; and lovely pampas plumes packed ready for mailing to Eastern friends; and sleeve-buttons of orange, lemon, manzanita, acacia, pepper, and other woods with which all Californians are familiar. Daisy wanted to buy a pair for her father, and wavered some time between the orange and manzanita, but finally decided in favor of the orange.

Across the building was another display of fancy goods, and here they found jewelry made from the lustrous *abalone* shells, set in silver and gold. There was a hand mirror with a shell frame and a lily in mosaic on the back. "*Only* twenty-five dollars," said Bertram when Violet wondered how much it cost. Then there were crosses and picture frames from the same shining *abalone*, and paintings on large round shells from the Tahiti Islands—among them a familiar San Gabriel view. At this table Daisy invested in *abalone* pins in the form of a dagger and bird to send to her mother and sister.

After they started on their homeward journey late in the afternoon Mr. Erman asked Daisy what she thought of the fair.

"I don't believe I ever had a pleasanter day in my life; and if father had seen what I have to-day I know he would want to try his hand at growing fine oranges."

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—As I have seen but few letters from old members lately, I concluded I would write. I would like to awake the cousins to a fact. Spring is here. The crocuses and hyacinths are shooting into the light, robbins are hopping merrily around, grass is growing green, and Spring rains have melted nearly all the snow from the ground. We have all had Winter enough. The snow has not entirely disappeared here since the first of November. Well, cousins, I hope this Summer will be a favorable one for us in many respects, but we ought to bear our disappointments as cheerfully as others. I know it is hard to see the few little plants, rare to us, perhaps, choked by the drouth or destroyed by the bugs. I, for one, am going to do more this year. Settle down and work. It would be nice for each one of us to have some specialty. Raising new plants from seed, or perfecting ourselves in some branch of horticulture. But that is an old worn-out saying. We all have heard it fifty times or more. How many of you are intending to make a Japanese quilt like the one spoken of in the RURAL? Its very irregularity has a charm for me. I could almost imagine, by looking at home, that I was advising the handiwork of some far-off "Jap." But I shall tire our good Uncle's patience, so for the present, adieu. MINNIE S. WHITE.

Alden, Erie Co., N. Y.

UNCLE MARK:—This has been a long, cold Winter, and if snow falls this month it will be seven months of snow. The weather kept so cold that the snow melted away very slowly; only in the middle of the day could we see any change upon our high banks until April 1st. There was one on the west side of our house that was up to the top of the window. It looked then as though there would be snow there in June. We received the package of seeds you sent, and also the White Elephant Potato. We thank you very much. I am very impatient to have the weather get warm and the garden made, so I can get the seeds in and see things beginning to grow. I start my seeds in a hot bed and then transplant the little plants. In this way I have very good success and have early flowers, and nice, early vegetables. From your niece, CLARA.

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Dewing's Early Turnip Beet	" 5c.,	oz. 10,	lb. 50
Imp't Dw'f Celery, *The Best* of all	" 10c.,	oz. 50,	lb. 6 00
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English Potato Onion Sets (Express),		peck $2;	bu. 8 00
Hawley's E. H'rtf'd E. E'y Peas,	"	" $1.75;	" 7 00
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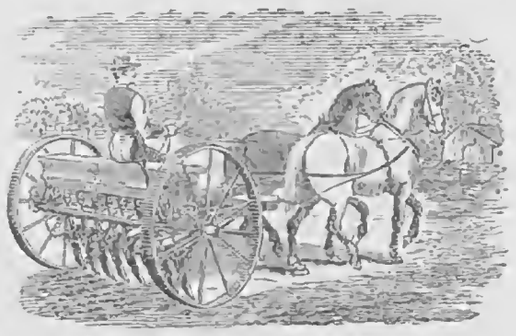

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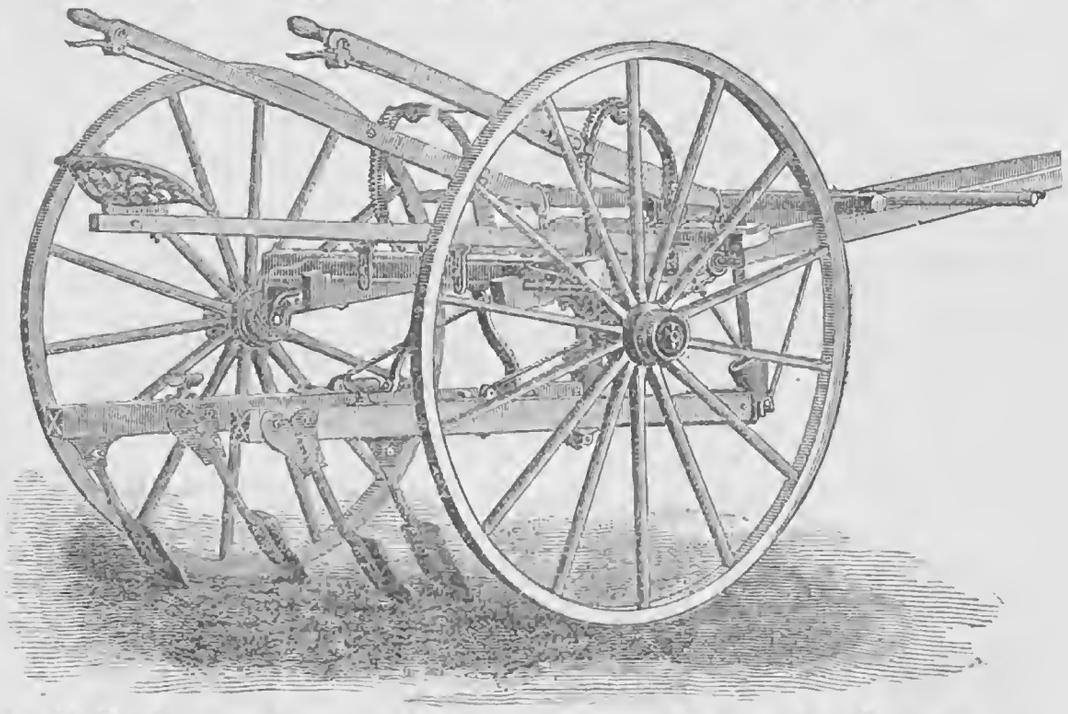

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PERSONAL ITEMS.

Gen. Joseph Lane whose death last week in Oregon was chronicled by a line in the dispatches, was a candidate for the Vice-Presidency in 1860, on the ticket headed by Breckenridge and nominated at Baltimore, a senator from Oregon from 1859 to 1861, governor of the State in 1863, and a major-general in the Mexican war.

Mr. Walkins is a Sacremento artist. His most ambitious painting, a landscape with cows, was sold at auction for $530, and he was elated at the price. The purchaser was the proprietor of a dairy farm, and he placed the picture in his window with a sign painted on each of the picturesque cows: "Morgan's pure milk producer." The artist sought to stop this use of his work, but was advised that the present owner could do as he pleased with it.

As a test of the personal concern which members of the British Government have in land laws, we may note the possessions of some of them. Mr. Gladstone is the possessor of 7,000 acres: the Marquis of Hartington is heir to 200,000 acres; Earl Spencer owns 27,000; Earl Kimberley, 11,000; Lord Northbrook, 10,000; Mr. Dodson, 30,000; Lord Huntley, 30,000; other members have lesser estates, and Mr. Bright is the only prominent man in the Cabinet who has no landed possessions in fee worth mentioning. The Duke of Argyl, who has retired, owns 175,000 acres, but his rental is a little more than a fourth of the Duke of Devonshire's.

[Battle Creek. (Mich.) Daily Journal.

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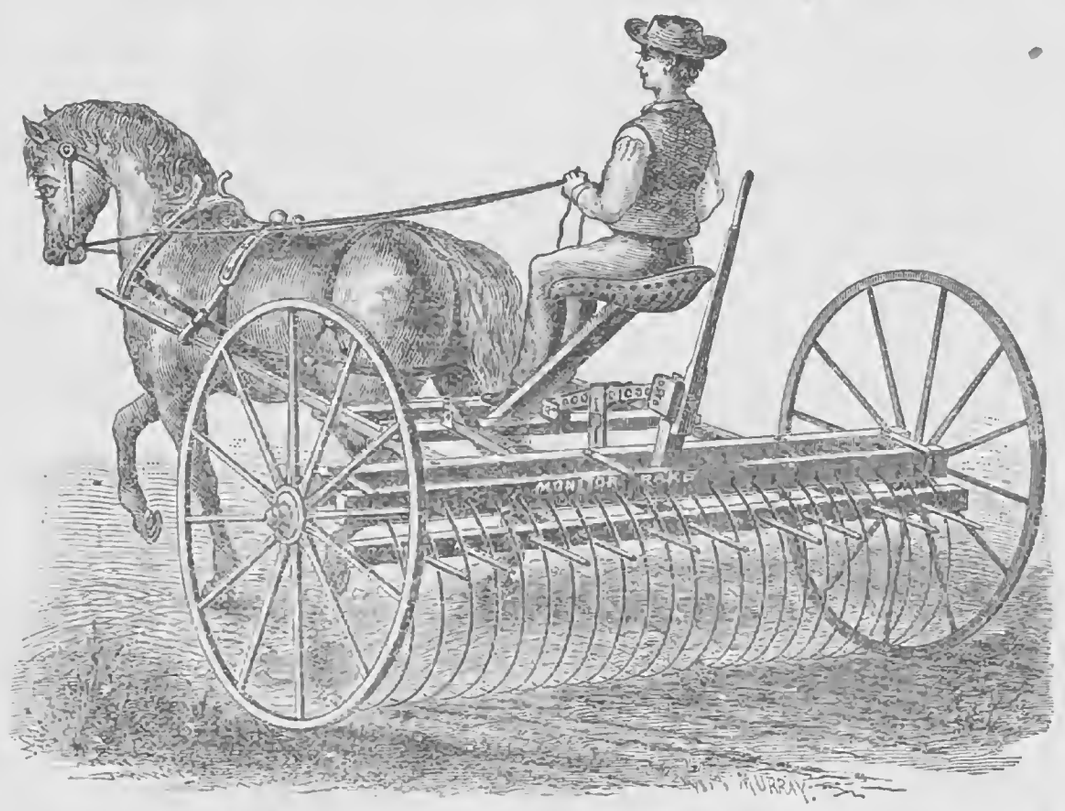
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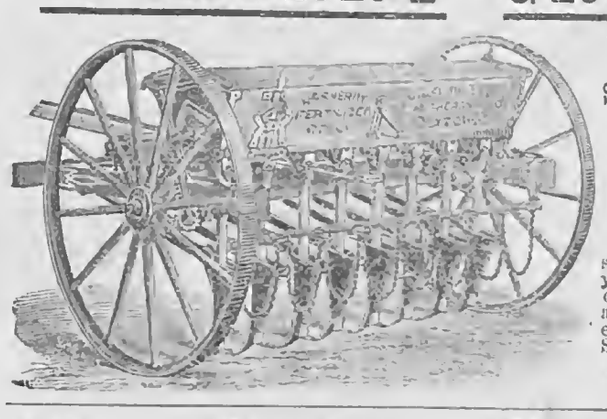
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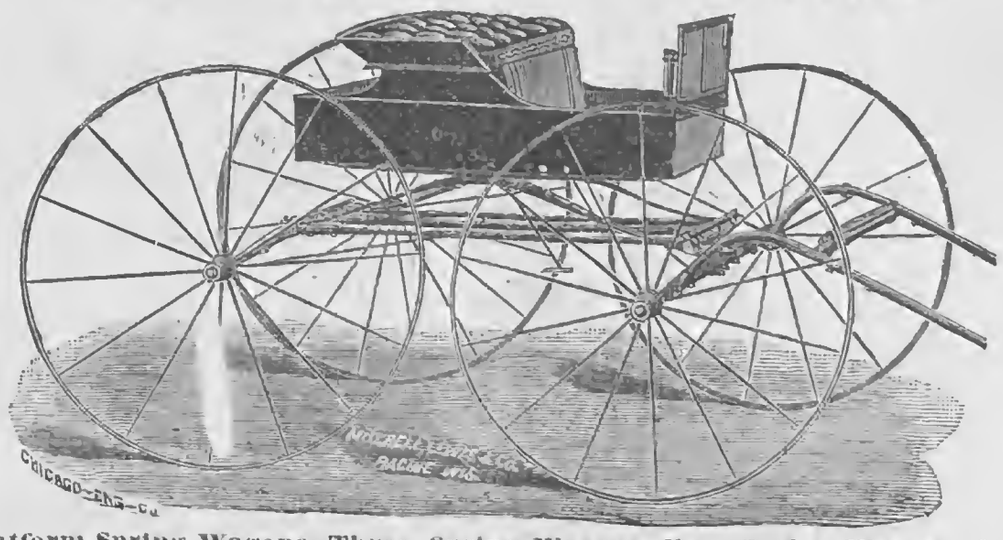
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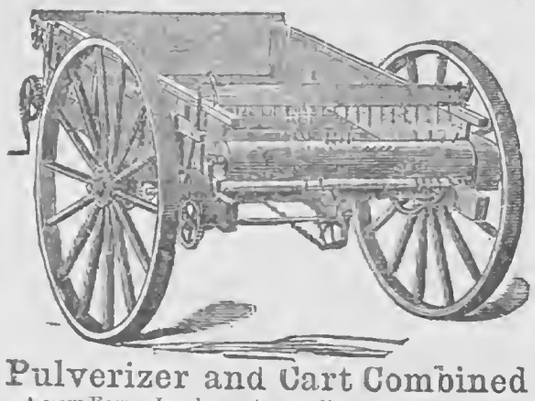
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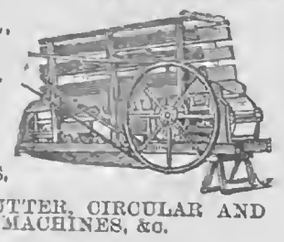
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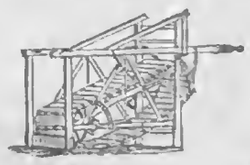
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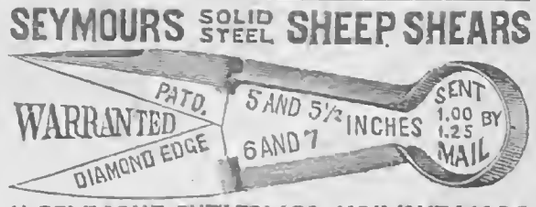

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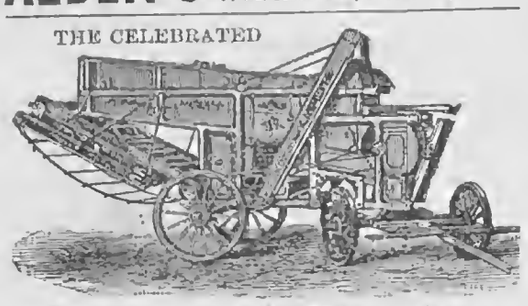

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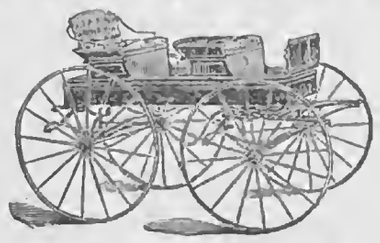

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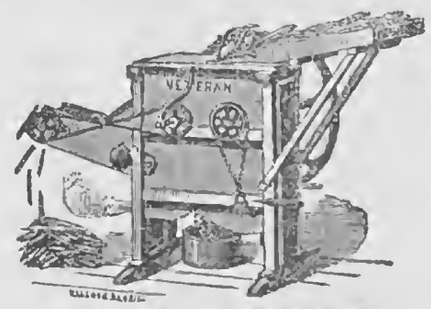

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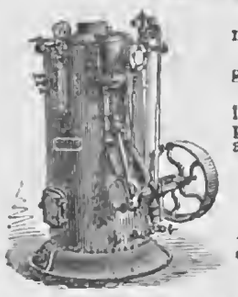

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4½	"	280
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THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL.—No. 1634.} NEW YORK, MAY 21, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

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Farm Economy.

NOTES FROM THE RURAL FARM.

As we pen these notes, a gentle steady rain is falling to gladden the hearts of farmers. It was much needed. Oats, owing to the backward season were sown late; the ground was dry, so that their germination was so slow as to endanger the prospects of even a fair crop had the dry weather continued a week longer. The grass crop too—so sensitive at this season to drought—is now receiving all the rain that is needed. Our present experiments with oats will give us a fine opportunity of judging of the advantages or disadvantages of thick or thin seeding. Some plots received but three-quarters of a bushel of seed per acre—others as high as three bushels. But this is a question that must ever rest upon the fertility or poverty of the soil, its mechanical character, the kind of manure used whether farm or commercial fertilizers, moisture, drainage, etc. If we could have a soil in every way adapted to oats and could control the seasons, no doubt less than a bushel of seed to the acre would serve. As, however, unfavorable conditions are encountered, we must make up by thicker seeding what is hazarded thereby.

How easy it is for even the best of farmers to arrive at wrong conclusions! A new method or implement tried one season under conditions specially favorable to its success, is very likely to induce an undue valuation of that method or implement until by a disastrous failure, or so, its real worth is ascertained.

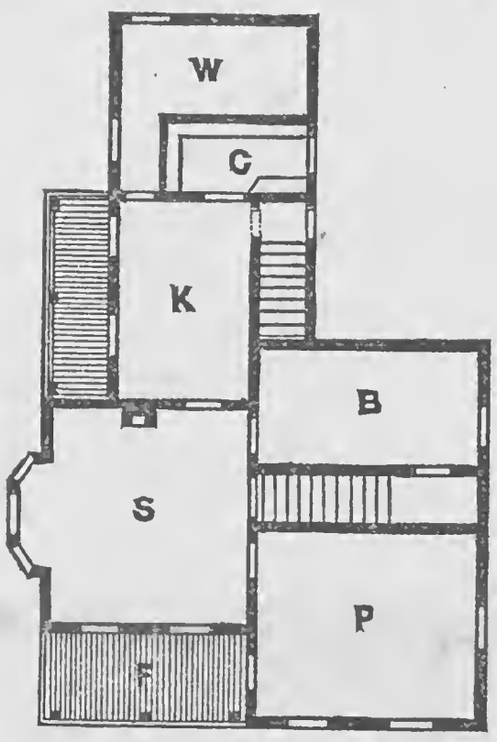
The roller is with us a very valuable implement on certain fields and during dry weather. To harrow, roll and harrow a dry field will effect a finer pulverization of the soil than any number of harrowings alone. Again, a sandy soil may be advantageously rolled, if dry, after sowing. The soil and seed are thus brought into contact or closer contact, and a speedier if not a surer germination is the consequence. But if the soil is adhesive or wet, or even moist, then the roller, we think, would do more harm than good.

The surface is compacted—cemented as might almost be said. The access of air is less free; rain instead of passing through it readily, is retained upon the surface long enough still further to glue the particles together, as it were, and to present a surface which is soon baked and hardened by the sun's rays.

The severity of the past Winter has well tested the endurance of our many kinds of wheat, not only as regards their power to resist mere cold, but which are best adapted to light or sandy soils, which to lowlands, which to poorly drained land. Indeed, the information already obtained has repaid us for the time and labor which the experiments have involved. This subject, however, will prove more acceptable to our readers if considered later.

FAST PLOWING, OR FAITHFUL.

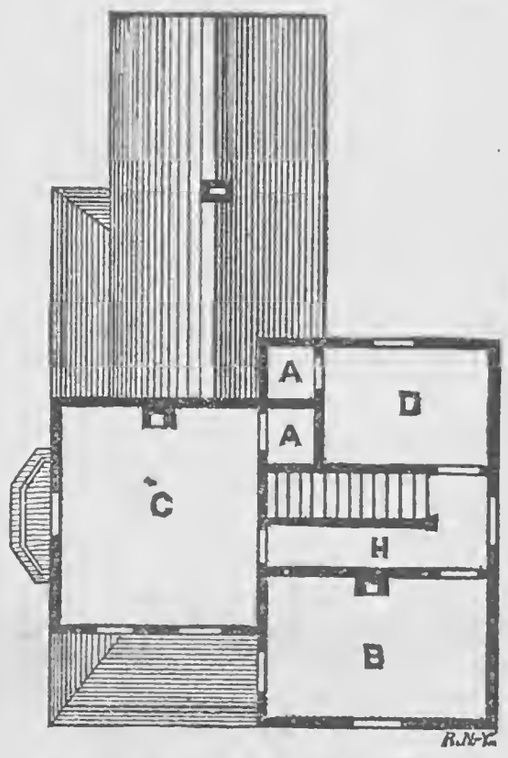
All day long have I followed the plow, watching each furrow turn with assiduous care, and on stony places backing my team whenever the plow, striking a stone, got the advantage of me, now and then loosening a large one and lifting it to the top of the furrow. Although the field is only 30 or 40 rods long, I cannot readily urge my team to take a furrow across without stopping once—I never carry a whip. I say this to draw attention to the amount of soil they are turning in the furrow, which is about a cubic foot to the foot,



GROUND PLAN OF COTTAGE.—FIG. 253.

actually nine or ten inches deep and thirteen wide. The plow throws up now and then the yellow soil at the bottom of the furrow, which in this land is of the same consistency as the upper soil for at least a foot—gravelly loam. The team I am using is one of common size, and, of course, the horses are doing nearly their utmost and require very great care, and not the least attention is given to their breasts and collars to prevent galling. The team which my man is using is a heavy one, but the horses are already galled, though they walk faster and do more work.

I write the above thus to indicate some particulars of our work. It gives me pleasure to look back on my furrow and see the soil reefed up true and slick, and the apex of each furrow slice even with the top of the rest—an achievement the make of plows of to-day can so readily accomplish if rightly rigged and operated. What a grand improvement on the plow in use when I began plowing 10 years ago! The finest sight of all in plowing, to my fancy, is where the furrows are all smooth and give a



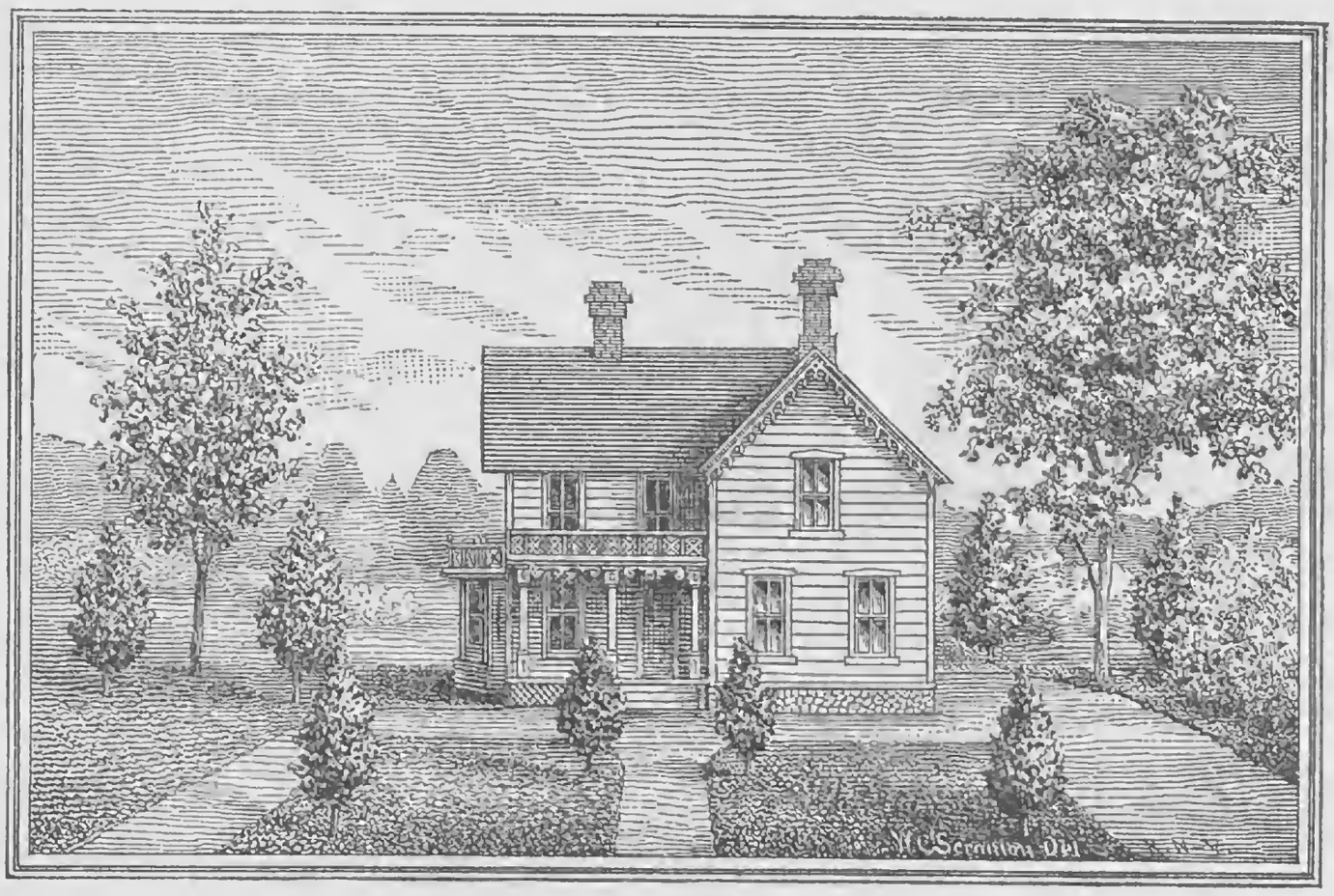
SECOND STORY OF COTTAGE.—FIG. 254.

very regular appearance, and yet the ground is dotted here and there by large stones and small bowlders which the plowman has lifted to the surface. In doing the above plowing I would not expect to get over more than one acre per day. If a workman on our farm should report plowing two acres per day, I should feel like inspecting it at once.

Imagine my surprise, then, when a neighbor, on his way to town towards sun-down, stopped at my field and stated that he was doing railroad business at plowing, turning over "mighty close on three acres per team per day." Two teams plowed 13½ acres from Monday morning, April 18th, to four o'clock p. m. the following Wednesday, each day drawing a lumber wagon two miles and back, and, on deducting one hour and a-half for nooning, making about nine hours of plowing per day, or 25 hours for the 13½ acres. I am generally too busy to examine my neighbors' plowing closely, but as soon as I could I turned inspector of fast plowing, and tramped that farm over, and although I did not get all around before twilight, I can say that, in my judgment, it was awful. The 13½ acres were corn stubble, undragged before plowing; level ground, gravelly, and in one part clayey, without any stones. But the plowed lot presented the appearance of a billowy sea; every little while a long channel extended at places nearly across the lot, and here there would be space of a foot, or even two feet, from the apex of one ridge or furrow slice to that of the next, and here and there I saw a curved pit making a depression about the size and depth of the place in which the rower is seated in a fine race boat. One of these ridges I scraped off and found a narrow ridge of the surface soil which had not been cut and turned by the plow. The dead furrows were not filled up by turning back three or four furrows. In brief, the plowmen had been taking enormously wide and shallow furrows in corn stubble. Now, this cannot be done nearly as well as in clover sod or even wheat stubble. On passing into the next field I found the plows in the furrow. The plowing appeared pretty good here in wheat stubble; but on stepping into the furrow and walking along, I found it would hardly average ankle-deep—no galled horses here. On an adjoining hillside the plowing gave evidence of some of those mammoth furrows which can so readily be rolled down in such a place. After tumbling about in the furrows a little longer in the fast-receding twilight, I decamped with many remarks made to myself.

Now is this fast kind of business—which some of our excellent modern tools assist very much in doing—ideal farming? Are we all to be classed together as farmers, or is there a soil-loving class, called agriculturists, who do not seek to hurry through and get done, to "go a-fishing" or to "take it easier," but who expect never to get through, and, indeed, never want to, only in so far as to attend to each crop in its season, who have no choice of work so long as it appertains to the growth and care of crops or farm improvements?

After all, does the extra labor pay in extra crops, above all extra connected costs? That neighbor of mine, whose plowing was so careless, raises good crops, and no year passes without his boasting on something. Comparatively little money is expended on his crops. He will drill the above field after harrowing but once. Of course, it is not probable he would change these methods unless he could see that excellent tillage gave nearly double the yield, and then it would be almost impossible to convince him that the RURAL, or any other agricultural paper, is a useful journal. AGRICOLA.



ELEVATION OF COTTAGE.—Fig. 255.

BLOWING OUT STUMPS.—L. S. writes us from Clinton Co., Michigan, that he has just cleaned one of his fields of a lot of stumps that has been an eyesore and an annoyance. For the purpose he used dynamite cartridges put up in waterproof oiled muslin, much like a candle in appearance. With a crowbar he bored a hole under the stump, inserted a piece of cartridge about an inch in diameter and from two to four inches long, according to the size of the stump, exploded it by means of a percussion cap inserted in one end, and the stump was blown out, often in fragments.

Rural Architecture.

A SMALL, CONVENIENT HOUSE.

THE accompanying plan of a neat and convenient house suitable for a small family, was sent us by A. B. T., whose address has, unfortunately, been mislaid. The plan is so clear and simple that it can be readily understood and followed by any one without much explanation. The parlor, P, is 14x16 feet, with one door opening into the porch, F, and another, into the sitting-room, S, which is 14x16 feet. Off it is a large bed-room, B, 8x16 feet, which has a closet under the stairs. Back of the sitting-room is the kitchen, K, 10x14 feet, to the rear of which is the pantry, C, 5x10 feet, from which stairs descend to the cellar, and behind all is the wood-room, W, 7x14 feet.

On the second floor there are two bed-rooms —B, 10x16, and D, 8x14 feet; the chamber, C, 14x16; the closets, A and A, and the hall, H.

AN OHIO CREAMERY.

THE admirable dairy articles furnished to the RURAL by Henry Stewart, find in me an interested reader, and having written an article or two myself for the press upon similar topics, I ask for permission to furnish my model creamery plan, a creamery, in fact, in operation, and, so far as I know, the largest in the world, consuming, as it does, over 30,000 pounds of milk per day, when it can be obtained. Originally the creamery was a full stock cheese factory, but three years ago it was turned into a creamery, though flat, white cheeses of very superior quality are made from the "denuded" milk.

By reference to the accompanying plan, an idea can be readily obtained of its characteristics and the handiness and dispatch with which the labor can be performed. The water is very abundant, that from three large Springs being conveyed into the buildings, while the butter house, F., has a Spring of very cold water within the building. The curing house and milk house are 30x40, and 30x90 respectively, the curing house being two stories in hight. The floors of the milk house are built crowning upon an independent foundation, so as to allow an inch gutter to be cut in the floor entirely around the room, rendering slops upon the floor impossible.

The manner of making both butter and cheese does not differ probably from that followed in any well regulated creamery. The cream, when removed, is put in ten-gallon cans, and set in the the tank, *h*, which is supplied with its own spring, the water being at a temperature of 51°. The churn is of the barrel description, revolving end-over-end. The butter-room is a double-walled building, the inner wall of stone, plastered upon the inside; the outer wall of battened boarding. The proprietor, Mr. Frank Hurd, is a veteran in the business, having, in 1864, erected the first factory in Ohio, that from the first purchased the milk—a plan he has always adhered to, and now his example is followed by a great number of the largest creameries and cheese factories in the State.

GROUND PLAN.—A, milk-room; B, press-room; C, cream-room; D, curing-house; E, engine-house; F, butter-house; G, ice-house: *h*, cream-tank; *i*, churn; *k*, engine for churning; *l*, platform for receiving and weighing milk; *m*, covered drive-way for dump; *n*, milk vats; *p*, presses. J. G.

Aurora, Ohio.

Field Crops.

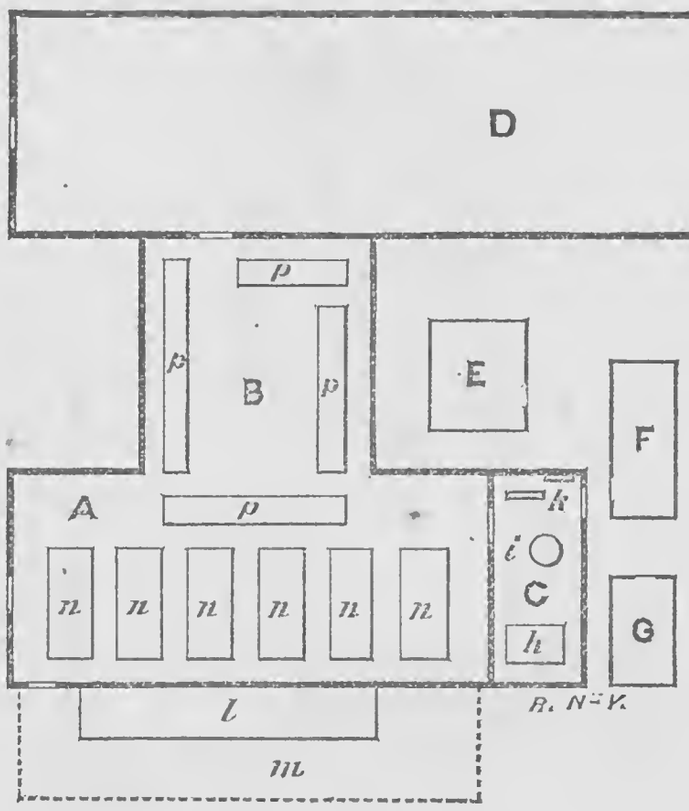
TOBACCO CULTURE.—NO. 10.

G. A. GOFF, JR.

Packing the Tobacco.

IF the tobacco is in good condition when it is assorted, that is, if it is neither too dry nor too damp, and the butts of the leaves are dry, it may be packed immediately. If this is not the case, the first step is to put it in the required condition. If the butt, or stem, ends are soft and clammy, as they frequently are, the "hands" should be packed up in an open "rank" with the butts exposed to the air, and there left until they are sufficiently dry to go into the case. This condition is best brought about by placing guide boards against which the butts of the "hands "are placed while they are being packed; or, in other words, pack the tobacco temporarily in a box with movable sides as far apart as those of the case in which it is to be finally packed, and—in arranging the tobacco in it—set the butts against the sides, which must be removed when the box is full, leaving the butts of the leaves exposed to the dry air. The top and ends of the rank should, of course, be well covered. Care should be exercised in this work to keep the leaves straight, for, if once doubled up, it is difficult to straighten them again, especially after they have remained for a length of time in the rank. When the tobacco is in good condition for casing—which will require some judgment on the part of the grower to determine—it is packed in boxes, each kind by itself. To prevent danger from the rotting of the butts "head boards" should be placed at the ends of the cases. These "head boards" are simply short boards one inch thick placed vertically between the corner pieces of the cases. Against these the butts of the "hands" are placed while packing. When the case is filled the boards are removed, which leaves a space one inch wide between the tobacco and the ends of the case. This allows some circulation of air and prevents the accumulation of moisture, which sometimes causes the rotting of the butts.

In casing tobacco, the "hands" are placed in pairs about the case in layers, commencing at one corner and passing across the case to the other corner, and the same at the other end of the case. Great care should be taken not to injure the leaves by heavy, coarse boots or by any injudicious handling. The "hands," as they are laid in the case, are "kneed in," that is, the packer, who stays within the case, presses down each pair of "hands" with his knees as he lays them in place. The number of pounds to be packed in a case should vary somewhat with conditions. A fine leaf will not bear as tight packing as a coarse leaf, nor will damp tobacco stand as tight packing as dry. Therefore, I recommend that for fine wrappers, sufficiently damp to handle nicely, 350 pounds be considered sufficient. If the leaf be heavy or coarse, so that it will stand a heavy "sweat," 375 or 400 pounds will not be too much. This applies to the usual size of cases, which will be noted further on. With binders and fillers, which are usually drier than wrappers, I consider 400 pounds to the case about right. In all instances, unless the tobacco is too wet, some kind of a tobacco packer will be necessary. The packing or pressing is done by lever power. Various patterns of presses are in use, which space will not permit me to describe here, but which may be invented and made by any person of ordinary ingenuity. Cases should be placed on their sides when stowed away, and they should be up out of the water and wet. Tobacco should be packed lengthwise of the case in every instance.



GROUND PLAN OF CREAMERY.—FIG. 258.

Tobacco Cases.

Tobacco cases should be made of pine, dressed on both sides with corner pieces of hemlock or spruce so that they will hold the nails well. Our present cases are three feet six inches long, by two feet six inches high and wide, the measures being computed from outside to outside. Inch boards are used. The corner pieces should be two inches square; eight-penny nails should be used for nailing the sides and ends and ten-penny nails for the top and bottom where they are driven into the edges of the boards. About 50 feet of lumber are required for making a case of the above dimensions, excluding corner pieces. They are usually put together by men who make it a business, and they are sold for from 80 cents to $1 each, according to quality and price of materials. It is important that they should be dry when tobacco is packed in them, otherwise the moisture in them will become absorbed by the outside leaves and these will be stained.

Moreover, they must be weighed before the tobacco is packed in them, and in order that their right weight may be ascertained they must be *dry*. Right here is a point where dishonest growers have been found to resort to knavery, some weighing cases that are wet, and others adding three or four pounds to the actual weight of dry cases. The cases should be weighed *correctly* and the weights marked plainly on the ends with red chalk or a blue pencil. Sometimes when unusually long tobacco is had, a larger size of case is made and the length is increased from three feet six inches to three feet eight or ten inches. In the same way very short tobacco may be packed in shorter cases than usual, with good judgment.

Horticultural.

RURALISMS

THE destruction of cabbage and cauliflower plants last Summer by the maggot of a fly, whose name at this moment I cannot recall, was very great. This is a visitor from the West. I found, as the result of some experiments, that a large percentage of the plants could be saved by dipping the roots, before planting, in a puddle made of lime, soot and earth; and I think that lime and earth would answer nearly as well. The lime should predominate. It involves some trouble on a large scale, but the experiment is worth repeating. To *know* whether it is worth anything, a portion of the plants should be put in without recourse to the puddle. In some localities near New York, but more especially west of it, the cabbage, radish, turnip, and allied plants were a complete failure, the roots being eaten off of many of the plants while still in the seed-bed. One market gardener assured me that he had lost over five thousand plants from this cause. The maggot seemed to be particularly fond of the delicious yellow turnip. I did not succeed in raising a single root. Where this maggot abounds, a heavy application of shell lime before sowing the seed, would probably have the effect of checking its ravages.

THAT excellent and usually reliable evening daily, the New York Commercial Advertiser, a few days since said, "The first producer of the Lawton Blackberry was buried yesterday," alluding to the death of Mr. Lawton, formerly a member of the New York bar. Mr. Lawton, however, was not the "first producer" of the Blackberry alluded to, though it has been so stated many times. I have had occasion to correct this and similar errors before. As the New Rochelle Blackberry may be said to have been the pioneer of improved blackberry culture, a few words in regard to its early history may be interesting to the readers of the RURAL. Mr. Secor, of New Rochelle, first saw it growing wild; and being struck with its remarkable size, productiveness, and fine quality, removed the plant to his garden, where it soon multiplied. He gave it freely to such of his neighbors as would accept of it, Mr. Lawton being one of them, and one of the very few, in fact, who thought it worth a place in the garden. I will state, as an interesting fact connected with this famous blackberry, that Mr. S. P. Carpenter told me that for about nine years he could scarcely find a man who would accept a plant as a gift. To cultivate the blackberry seemed at that time preposterous. Times have changed since then.

To Mr. Lawton belongs the chief merit of having changed all this. With characteristic shrewdness, he saw money in this fine fruit. Having first propagated it largely, he took a liberal supply of the ripe berries to a meeting of the Farmers' Club in New York, where its large size, handsome appearance, and real excellence created a sensation; nothing like it had ever before been seen. Mr. Lawton asked for a committee to visit his farm and see the plants in fruit. A committee accordingly made the visit, I being one of them. They made a report which increased the sensation, led to much talk, and in this way secured the success and popularity of the blackberry, and a nice little sum to Mr. Lawton for his perseverance. The change was remarkable. In a few weeks, instead of being unable to find a man who would accept a plant as a gift, the difficulty was to find plants enough to supply the demand at almost any price. It was planted by the acre, and thus led the way to the cultivation of the blackberry as a profitable crop for the market.

A discussion speedily arose as to the name of the plant. Some thought it should be called the Lawton, in recognition of that gentleman's labors in bringing it to public notice; others thought it should be called the Secor, as Mr. Secor had originally discovered it, and it was locally known by his name; still others, and much the greater number, thought it should be called the New Rochelle, as that would settle the dispute and honor the place where it originated; and by the latter name it has since been generally known. This, briefly, is the early history of the New Rochelle Blackberry.

I LEARN by inquiry among commercial florists around New York that more than one-third of all the plants they ship go west of the State of New York, and that many more would go in the same direction were it not for the heavy express charges. This fact, in connection with what I learn from private correspondence, leads me to believe that many of our Western friends are not one whit behind us in plant culture; and it is very pleasant to know that this is so, for a real love of flowers not only exercises a very soothing influence over the cares and sorrows of life, but goes a great way in developing and fostering that home feeling which, as yet, is one of our greatest wants as a people.

WHAT has become of Cercis Siliquastrum, the European Judas-Tree? I miss it latterly from the catalogues. It is a form intermediate in size between C. Japonica and C. Canadensis. It can hardly be that it is omitted for want of hardiness, as I know it to be perfectly hardy in New York and in some of the New England States, as trees some 30 years old abundantly testify. I have often found that Cercis Siliquastrum could be effectually introduced on moderate-sized lawns better than the larger C. Canadensis (American Red-bud or Judas-Tree), and have several times recommended it this Spring, but it could not be found. It is too handsome and useful a tree to be lost. A suitable place can always be found for C. Japonica, even on a city lot, and it is pretty enough to command a place anywhere. Let me say to the readers of the RURAL, however, that it is not a bedding plant, neither is the peach. I mention this because I have just seen both used in that way on the lawn of a wealthy gentleman; that is to say, in an oval bed, eight by fourteen feet I found two Cercis Japonica, one Purple-leaved Peach, two Double-flowering Peaches, one lilac, three spiræas, one Cydonia Japonica, two upright honeysuckles, two syringas (Philadelphus), and two deutzias. This bed had been recently planted by a man who calls himself a gardener, and it does infinite credit to his ability to make little out of much. The C. Japonica is much like a shrub in size, but it should *always* be planted by itself as a single specimen.

Arboricultural.

THE PRESERVATION OF OUR FORESTS.

"CLINTON."

TREES may be considered as marking the highest point of the vegetable growth. I claim that from the first they were essential to the perfection of many others of the creations connected with our earth; essential to its preparation for the habitation of the human race; essential in furnishing food and protection to the animals which were to become subservient to man's will and use; essential in their sheltering and modifying influences for the protection of the smaller vegetation so important for man's comfort, both directly and indirectly; and essential, also, in furnishing him with the three most important requisites for his continuous existence on earth, viz., food, fuel and shelter. True, after man's seemingly permanent establishment by the aid of these, substitutes might be devised for a portion or all of them, but that militates not in the least against the positions I have taken.

In a former article I attempted to show that our supply of timber was being rapidly diminished, and that the original forests of our country are being swept off with alarming and wanton recklessness. It is not from the people of our older-settled States alone that the cry of alarm comes up. Michigan and Minnesota, as well as Maine, are each sounding the note of alarm, in view of their now devastated forests but so recently their pride and their protection. Even our neighbors on our northern borders respond to, or unite in, that cry of alarm, and through their public journals are calling upon their Provincial Government to check the evil. The Quebec Chronicle of recent date says:—"The valuable forests which cover large portions of our territory are being so rapidly swept away that the supply in the course of a few years must be entirely exhausted." The Toronto and Ottawa papers express similar apprehension.

In view of this condition of things the question naturally arises, what remedies can be devised to check or retard the evil that seems to threaten us? The first and most obvious one would seem to be the *conservative policy*. This, if I understand aright, is what the late President and the Secretary of the Interior endeavored with such earnestness to recommend

the last Congress at its last session to adopt, or, rather, to enforce with more stringent provisions. It was not the first time that the matter had been urged upon the attention of Congress, but then, as lately, without manifest results. Another year, therefore, must pass before any move can be hoped for in the desired direction.

"But," says one, "have we not already sufficient laws for the preservation of our public forests?" True, we have, if those laws were rigidly enforced. But, unfortunately under our form of government, it seems to be difficult to enforce such laws, or, rather, we have not, properly, any officer whose special duty it is to see to their enforcement. Under a monarchical government it would probably be different; but under our free government the opinion has seemed to be quite general, that the public forests being the property of the public, every individual member of that public was part owner, and consequently had a right at any time to take and appropriate to his own use or benefit such portions of such timbers as he desired. Admitting that it was known that such trespasses were prohibited by law, yet from its non-enforcement the prohibition came to be considered as merely nominal, and the success of the trespasser in managing to escape any penalty or forfeiture came to be regarded as evidence of his peculiar smartness, even by those whose duty it was to prosecute the offender. And, indeed, we have good authority for asserting that our Government has, on some former occasions, paid extravagant prices to contractors for ship timbers which were stolen from its own lands. It is some satisfaction, however, to know that recently such trespasses are occasionally detected, and the trespassers properly punished.

Now, this matter of the preservation of our forests, is one which immediately affects the interests of all our citizens, but more directly the interests of the agriculturist, which is my apology for attempting to call the attention of that class of citizens to it through the columns of the RURAL NEW-YORKER, in which it might otherwise, perhaps, be considered out of place. Let each one of that class see to it (and their proportion of our voting population is very large) that *his* Representative is properly posted on a subject so immediately affecting his interests. It cannot be denied that as a rule, a treeless country is but another name for a desert land. There may be some exceptions, it is true, but still the rule is a very general one. Under it successful agriculture becomes almost an impossibility without a great outlay for irrigation, and that is not always practicable or even possible. Witness the vast desert plains of portions of Asia and Africa, once the seats of civilization, and the proud possessions of the most powerful peoples of the earth; but now only desolate wastes, unoccupied, or occupied only by wandering tribes of nomadic savages and robbers. Witness the central and some of the southwestern plains of our own territory, now so treeless and naked and almost streamless for many hundreds of miles in some directions, where one may travel for days in what evidently were once the channels of large streams; but in which now scarcely a drop of water ever appears. And yet there is good reason to believe that on these vast plains, trees once grew and flourished, and that the land was once occupied and successfully cultivated by a race, long since extinct, who were of a much higher grade of civilization than those we are accustomed to term the aborigines. The conservative policy is therefore, I claim, the true policy of our Government with reference to its public forests. True, that policy may not be of much avail in the existing States, although the General Government claims to have its reservations in some of those States; and further reservations should be judiciously made in its remaining territories; and if made, let us see to it, that those reservations are properly respected.

In most of the countries of Europe the forests are placed in the direct charge of public officers, appointed for that special purpose, and called "Masters of the Forests," or "Conservators of the Forests" or by some other equivalent title. For such a course we have a precedent of ancient date, for we read that in the days of David, King of Israel, a special officer, Baal-hanan, the Gederite, was appointed to superintend "the Olive trees, and the Sycamore trees, that were in the low plains." In England the "Crown Forests," as they are called, are specially and carefully guarded, and, contrary to our practice, their extent is being gradually increased from year to year. In France the main supervision of all matters pertaining to the preservation of the forests has heretofore been in the hands of the Minister of Finance; but recently a move has been made to transfer all these matters to the Minister of Agriculture, as being more appropriate, for valid reasons given.

Would it not be well for us to give the charge of our national forest reserves to our Commissioner of Agriculture? or at any rate to give the supervision of them to officers specially appointed for that purpose, as in Europe? The idea seems to me worthy of serious consideration. It may be objected by some that it would not only involve additional expense, but would furnish additional offices for partisan purposes. But to these objections it may be replied, first, that the object is worthy of the expenditure; and second, that the same objections would apply to any other of our executive officers.

I claim then, that the conservative policy is the true policy of our government in regard to its remaining forests, in which the whole country is interested. But as connected with this whole subject, every individual, especially every land owner, has a duty to perform but of this I have not space to speak at present and therefore must let it pass till time and opportunity shall seem favorable.

EXPERIENCE IN RAISING TIMBER ON THE PRAIRIE.

HAVING settled down here upwards of 40 years ago, I am well acquainted with all the trees that thrive in this neighborhood, and for growth of tree and durability of wood and general usefulness I know of no tree so valuable to the farmer on the Western prairies as the European Larch.

Some six years since I saw a note in the RURAL NEW-YORKER that Robt. Douglas, of Waukegan, this State, had larch plants for sale. In the Spring I visited his nursery and found him packing them by the thousands and sending them in about all directions. I ordered 4,500 of those about 12 to 15 inches high and about as large as black-lead pencils. I had the land plowed deep and made mellow, planted the young things four feet apart each way in straight lines; planted two grains of corn on the south side of each young tree to act as shade when the hot and dry weather should set in. I cultivated the land well. The ears of corn were the largest and best filled on the farm. This I attributed to there being only two grains in a hill and to the crop being well tended. I followed this plan for two seasons. Two years afterwards I ordered 4,500 more and planted them as above. All have done well. Neither heat, cold nor insects have injured them so far. I tried to cultivate them the third year, but found I could not get the horse and cultivator through without injuring the young trees. To-day many of those trees stand 16 to 18 feet high, and are six inches through, two feet from the ground. The thinning out will soon furnish me all the posts I need, and they will last longer than any other timber I know of.

Some 25 years since I visited my native home, England, and saw hundreds of acres that had been planted since my remembrance: some on as good land as I ever saw, and some on land as poor as could be found—gravelly hillsides as steep as the roof of a house, land that as far back as I can remember did not yield the owner one penny per acre; yet the timber even on this poor land, if sold now, is worth double the price of the best meadow or arable land on the estate.

It may be asked why I did not plant sooner. The answer is, first, I had plenty of timber; second, I did not know where to get the plants. I settled on the open prairie where the wind in Winter cut like a two-edged sword; I had often to face about in going from the house to the stable to catch breath when it was blowing one of those northwestern blizzards we often experience on the prairie. I began to plant trees—hard maple—the first year, some forty years since. They grew well and are now large trees. Next year I bought some locust seeds and planted about half an acre in drills. They grew fast, and had got large enough for posts when the borer attacked them and destroyed the whole, so that I had to dig them all up. Now the ground is covered with maple, larch, elm, black-walnut, butternut and even evergreens of different sorts. My house, outbuildings and orchards have the protection I have long wished for.

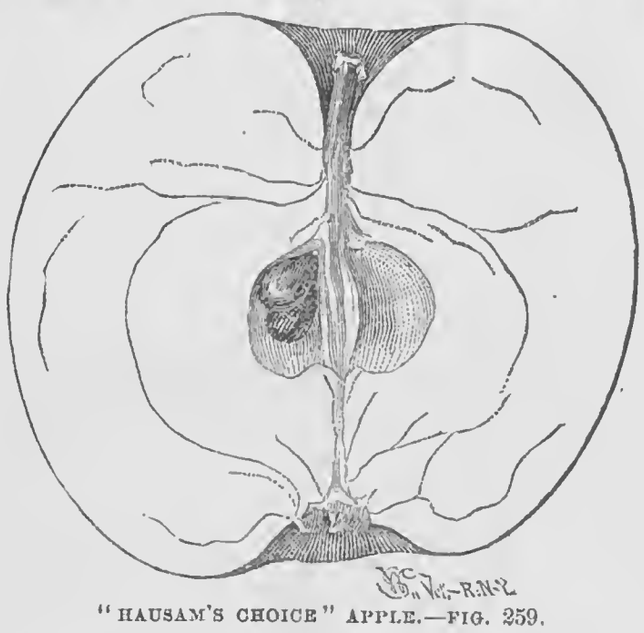
I often hear folks say: "I have no luck in planting, like you." The great secret in planting is to get your land in good and deep tilth. Don't be niggardly of your labor if you want the trees to grow, for if you try to cheat them, it's likely you will get cheated in the end. To me it is a desolate sight to see a house and outbuilding and stock on a cold day without a wind-break, when so little time and labor are required to raise one, and we now know what to plant with safety. For many years past we have had more black-walnuts and butternuts than our family can use, grown from the seed.

Winnebago Co., Ill. THOMAS LAKE.

Pomological.

"HAUSAM'S CHOICE" APPLE.

IN the year 1816 Daniel Lane, the first white man that settled in this county, two years before Illinois was admitted into the Union and eight years before Paris, our county-seat, was laid out, planted two apple orchards with yearling seedling trees brought from Vincennes, Indiana. One of these was a small orchard of about 30 trees planted where his barn was built some years later. These trees received the wash of the barn and feed lots, and, doubtless, many of them were destroyed by the stock. Twenty-five years ago not more than half a dozen of them were living. Fifteen years ago all had disappeared but a single tree. This is now 60 years old, having outlived all its fellows.



"HAUSAM'S CHOICE" APPLE.—FIG. 259.

It is known throughout the neighborhood as the "Lone Tree," and might with great propriety have been named the "Lone Apple." I have just examined it. It is perfectly hardy; there is not a blemish on it; its trunk, two feet above ground, measures eight feet three inches in circumference. It is 25 feet high with 18 feet spread of the branches. The past season it has made a moderate growth, and has annually, within the recollection of the oldest observer in the neighborhood, been producing full crops of fine, smooth fruit noted for its long-keeping property. It usually keeps through May. D. S. Curtis, the oldest nurseryman in this county, has named it Hausam's Choice, in honor of the son-in-law of Mr. Lane, who now owns and lives on the farm.

B. O. CURTIS.

REMARKS.—The shape is shown by the engraving. Skin rather hard. Flesh nearly white, mild, sub-acid, of agreeable flavor; not very juicy. Dark red, streaked with darker red.

PEACHES.

In the Michigan "Fruit Belt."

T. T. LYON.

PULLEN'S SEEDLING is a yellow peach, ripening about the middle of September. It originated with the late Isaac Pullen, of Hightstown, N. J., two or three years before his death, which occurred in 1868. It possesses desirable qualities as a market fruit, and ripens after the hight of the peach season—a circumstance that renders it the more desirable. As far as known, it is grown by very few persons, but is esteemed valuable by those who know it.

REEDING'S LATE RED has fruited here but a year or two, and is not at all disseminated. It is a handsome, creamy-white peach, with a red cheek and white flesh, reddened at the pit; tender, melting, juicy, mild in flavor. It seems to be a desirable dessert peach for its season, which is after the middle of September. It is a freestone.

KEYPORT WHITE is one of the latest peaches generally grown here. It is, in fact, one of the latest that can be relied upon to ripen perfectly in unfavorable seasons, and can only be recommended for southern localities. It is a large, roundish, white peach, with a brilliant cheek, very attractive in appearance—a freestone; but it cannot be rated very high in quality. It has been long known here; but has not been extensively planted.

YELLOW OBLONG is a name that comes to us from Pennsylvania, designating a peach very similar in season and general character to Smock Free, and of the same season, although differing from it in several respects. It seems to be a good bearer, and promises well as a market peach; but its reputation in this particular is yet to be established.

LADY PALMERSTON is one of the late Thomas Rivers's seedlings, of large size, yellow with a rich, dark-red cheek; flesh, rich, firm, moderately juicy, yellow; flavor, subacid, vinous, sprightly. Ripens at the end of September. It is entirely new here. I regard it as very promising for market purposes. The tree is hardy, vigorous and productive; and the foliage broad, large and rich, with reniform glands. Freestone.

WILKINS'S CLING is a name which comes to us with trees from Central Ohio, but which is not recognized by pomological writers, so far as I know, even as a synonym. The trees have borne, the past season, for the first time here; and, although I have had no opportunity for comparison, I from recollection, strongly suspect it to be Large White Cling. Be this as it may, it is certainly an exceedingly beautiful peach, of fine quality, and productive, ripening the last of September. Its leaf glands are obscurely reniform; while those of Large White Cling are said to be globose—a difference which may possibly be due to hasty observation.

SHEPHERDIA ARGENTEA.—In connection with your notice of the Buffalo Berry in the RURAL of April 30, the fact should be mentioned that not only is the tree ornamental, but the fruit is useful. The tree is sexual, requiring both male and female to produce fruit, but when thus grown the fruit is so abundant as to show its brilliant color to the tips of the branches. The trees require annual pruning to maintain a good form. The berries, when canned, make a serviceable sauce and a pleasant pie in Winter. A few trees in any neighborhood would soon incite to their general introduction. Your Rural Brieflets are very interesting, but the clematis, in the same number, did not receive full justice, as you did not mention one of the very best—C. viticella venosa. Were you to limit me to one variety for Summer blooming, I think this would be my choice. It is just the thing for covering stumps or for rock-work; a vigorous grower, and gives an abundance of quite large, reddish, purple-veined flowers.

A. A. B.

Newburgh, N. Y.

The Herdsman.

NOTES BY A STOCKMAN.

IN regard to the photographing of animals, I might have very properly said in my former remarks on this subject, in the RURAL of April 16th, that the photographer should use the long-focus lens with which he takes landscapes, and make the animal the center of the picture. This lens possesses what microscopists call penetration as well as breadth; that is, it gives depth to the picture, while one used for portraits has neither breadth nor depth and the focus is short and no more than a point. If one rolls up the hand so as to form a sort of tube, and looks through it with one eye at the picture of Prince of the Realm, in the above issue, the bull will be seen to stand out solidly from the distance and then the space between the fore feet will be seen naturally.

"A" is correct in the RURAL of April 30, in his remarks about this bull. The animal was only 15 months old, in ordinary store condition when pictured. When the loin is well filled up with full-grown muscle or inside fat, the fault in the back will doubtless disappear. A year's growth, too, would lengthen the thigh and raise the rump and square out the end so as to remove the ill setting of the tail: at least, that is my judgment. I have not seen any of these fine cattle "on their native heath" for more than 25 years, and they have been greatly improved since then. I entirely agree with "A," whom I think I recognize as one of the oldest and best informed judges of cattle, as to the demerits of this particular animal; but among the photographs of other cattle sent me by his owner there are some which I am sure "A" would consider equal to the best. But this was selected to point a moral in regard to photographing live animals.

I DON'T think the plan suggested by "A" for getting a picture would do. If the artist had the experience and the eye for the unities of a beast, which "A" possesses, it might do; but I fear a picture so made up would be a thing of shreds and patches," and as unlike a good cow or a good bull as Barnum's wooly horse was unlike the Hambletonian. We cannot reach perfection and must take the best we can get.

A GREAT deal is said just now about abortion among dairy cows. It is causing serious loss in many herds. All sorts of reasons are assigned for it; but the true cause is overlooked.

This is infection. It is known to be as infectious or contagious a disease as pleuro-pneumonia in cattle or the scab in sheep. It can be conveyed by inoculation. When the truth is known it is not difficult to find a remedy. And the disease has been shown by Pasteur to be due to infusorial germs similar to those which produce cholera in swine or in poultry. When we know that it can be easily carried from cow to cow or from stable to stable by the air or by persons attending to the animals, one means of prevention at least is obvious; however difficult it may be to find a cure.

By and by, there will be complaints about loss of lambs by the disease known as the pale disease, paper skin, anæmia, bloodlessness, cough, husk, hoose, etc., etc., and persons will be inquiring, What shall we do to save our lambs? Here is another serious trouble which has a most simple remedy. All that is required is to keep the lambs off from pastures where old sheep have run. The old sheep void, in their dung, myriads of eggs of the worms, (thread worms, Strongylus filaria), which cause in the lambs this disease with so many names. The eggs adhere to the grass and are taken into the lambs' stomachs, or they are also taken in with water that is drank, and from the stomach the worms proceed to the intestines causing trouble there, or ascend the gullet and pass into the wind-pipe and descend into the air passages and the lungs.

What is the Poland-China hog coming to? And where will soon be the Poland-China about it? This used to be a black-and-white-spotted animal descended from variously claimed races, but never a word was said about any Berkshire in it. But year by year it has been changing its spots and growing in blackness until now it comes out black all over, except four white feet and a white stripe down its face. Now the question is, if such a pig is a Poland-China, what is a Berkshire; and has a Poland-China been improved into a Berkshire? A recent illustration in a Western Stock Journal of a sow, Black Beauty 10th, which is said to be a Poland-China, is certainly provocative of such an inquiry as this. If this is a true representation of a pig of such breeding, then all the Poland-China has been bred out and all Berkshire has been bred in. Then what comes of the claim of the Poland-China breeders that their sort was the best pig for all uses that was ever produced.

Per Contra, the Berkshire breeders may feel a little set up about such an event.

A Prolific Breeder, Indeed.—W. S. Moore, Jr., of New Berlin, N. Y., referring to Frank Snedd's boast in a late Rural about an Oregon cow that was "some pumpkins" on calf-getting, says that it would take half a dozen such cows to equal one owned by Mr. Burrows, in that neighborhood. This cow, our veracious correspondent asserts, has given birth to six calves this Spring. Knowing there may be some incredulity with regard to the entire accuracy of this statement, he refers all "doubting Thomases" to John Gaskin, New Berlin, N. Y., "who now has the calves."

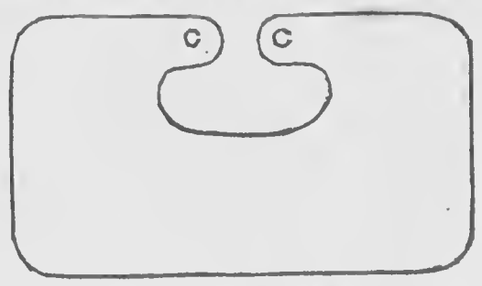
Dairy Husbandry.

OLEOMARGARINE FROM A FARMER'S STANDPOINT.

Among other good articles on various subjects that are constantly appearing in the Rural was a late editorial on tallow butter and lard cheese. Farmers in this county are specially interested in the condemnation of these concoctions, for this has long been a dairying and hop-raising section; and, of course, we are honestly opposed to all spurious imitations of our genuine dairy products. Already many of our well-to-do dairy farmers are turning their attention to hop culture and sheep raising almost exclusively, because their butter has to meet the competition of the counterfeit article. It is only the large creameries and dairies that pay nowadays. The outcome is likely to be that the butter-buying public will soon either have to pay an extravagantly high price for real butter, or rest content with the miserable trash miscalled by that name, but made of any sort of animal fat or oil, which misapplied chemistry, capital and brains can transform into an imitation of the genuine product of the cow. That there is money in the business of making the spurious stuff the many factories in different parts of the country bear witness; but that the imitation pays is a convincing proof of the superiority of the original for which it is sold. We consider the making and selling of bullock butter and hog cheese just as bad as the making and selling of ardent spirits. The business is dishonorable inasmuch as the dealers, as a class, cheat the public by obtaining their money without giving them what they paid it for. We believe in calling things by their right names, and such dealing we stigmatize as swindling. While regretting the manufacture of the stuff as injurious to our own interests, to the health of the public and the morality of all who deal in it, our main ground of objection to it is that it should be sold under the name of a product for which the dairymen of the country, by years of study and labor, have won the reputation which now makes its counterfeit salable. The dealers in the spurious concoctions make use of our good deeds to injure us. W. B. Nearing.

Otsego Co., N. Y.

An Anti-self Milking Device.—Our friend J. G. B., of McGrawville, N. Y., sends us the accompanying sketch of a device for the above object. In describing it he says: "A piece of half-inch basswood board, seven by four and a half inches, is all that is required, and the contrivance can be made with a jack-knife in five minutes by following the diagram. The space



ANTI-SELF-SUCKING DEVICE.—FIG. 260.

between the arms, C, C, should be only half an inch. Insert one arm in one of the nostrils of the cow and then by a peculiar "twist" slip the other arm into the other nostril, and the job is done. The device will in no way prevent the cow from grazing, but it will prevent her mouth from touching either her own teats or those of a companion. During the past couple of years I have seen it used on some of the worse self-sucking cows in this neighborhood, and I have yet to hear of the first instance where it has failed to effect a complete cure. I do not know whether it is a new invention, but I have never seen it described either in the Rural or any of the other agricultural papers."

Remarks.—This nose-piece was first described about 20 months ago in Professor J. P. Sheldon's Dairy Farming, from which the illustrations and description thereof were promptly reproduced in the Rural New-Yorker of Dec. 6th, 1879. Both were again reproduced in the Rural of April 17th, 1880, in the Querist Department, in answer to an inquiry about the best anti-self-sucking device. To show how the nose-piece is used we once more present to our readers one of our former illustrations—that which shows how the device appears when fixed on the cow.

DEVICE ON COW.—FIG. 261.

We know that our friend of McGrawville has been an ordinarily attentive reader of the Rural for more than two years; but his forgetfulness shows how many really excellent things in it are not noticed so as to be remembered by many readers.

Casting the Calf-bag.—A friend referring to our directions for treating inversion of the womb in a cow, in the Rural of April 2, says that he had a cow which was troubled in that way for several years *before* calving, and he always found the following remedy efficacious. It must not be prepared, however, until needed: Clean the parts and sprinkle freely on them the following mixture finely powdered;—two tablespoonfuls of burnt beans; one tablespoonful of black pepper; one tablespoonful of chalk; one tablespoonful of alum. Replace the parts and put on harness, as directed in article above referred to.

Remarks.—A cow *never* casts her "withers" or "calf-bag" *before calving*. It sometimes happens, however, that from various causes the vagina or the rectum of a cow becomes inverted, and it must be to such a case our friend alludes. Only a strong cow could survive the application of the recipe he gives, if used as directed. The best treatment in such cases is the same as that described in our article of April 2.

A Large Milk Yield.—Mr. Gerrit S. Miller, Peterboro, N. Y., writes under date of May 3, as follows: "My Holstein Cow Ondine (winner of first prize at the last N. Y. State Fair) during ten days of last month produced 84 6 pounds of milk on *dry* feed. For eight days her daily average was 85 pounds 10⅘ ounces. The highest yield in one day was 90½ pounds. She is now milking about 80 pounds per day."

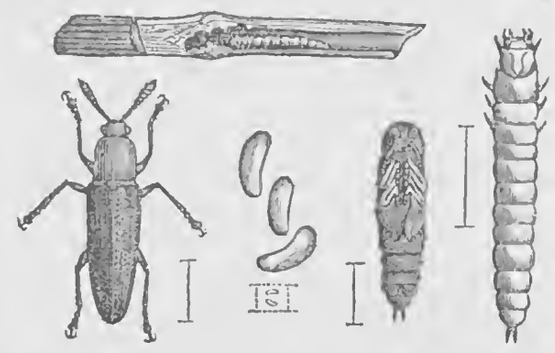
Entomological.

THE CLOVER-STEM BORER—Languria Mozardi.

Though the larval habits of this insect have been but recently described, (See Prof. Comstock's report in Department of Ag. Report, 1879,) yet the beetle has been known for some time. It had been supposed that most of our species of the family to which this belongs, lived in fungi—puff-balls, toad-stools, etc.—though some of the tropical species are leaf-eaters.

The illustration represents the full-grown larva, the chrysalis, the eggs, the beetle and a stem of clover cut open to show the larva on the inside. The beetle is small, slender, reddish, with dark blue wing-covers. It gnaws the sides of the stalks of Red Clover in the early part of the season. After properly preparing the place the female beetle deposits a small, yellowish egg as far into the gash in the side of the stalk as she can push it. The egg soon hatches to a slender grub that feeds wholly upon the pith of the stem till it has attained its full size, being then of the length of the line by the side of the larva in the cut It changes to a chrysalis in the lower end of its burrow, from which the beetle in due time emerges.

A single one of these borers in a stem of clover does not kill the stem, but it serves to weaken it, and when the borers are very numerous they do considerable damage. Prof. Comstock thinks that when the clover is cut early in the season, and then again late, little harm can be done by these borers. As



CLOVER-SEED BORER.—FIG. 262.

the beetles do not come out till August, cutting the clover early would make it probable that the larvæ would not live in the dry stems of the hay, while cutting a second crop would head off those that had come from eggs laid after the first cutting. If the cutting were only partial, the clover left in the corners of the fences or elsewhere would serve to develop beetles enough for "seed" for another year. There is probably but one brood of the insects in a season, hibernating in the beetle state.

Carbondale, Ill. Prof. G. H. French.

Farm Topics.

A CORD OF GREEN COW-DUNG.

In the Rural New-Yorker of April 30, page 291, I notice a criticism upon Dana's weight of a cord of green cow-dung, which should not pass unnoticed. Probably no man in America was better qualified to state absolutely the weight of that one commodity than he, for his connection with a large calico printing establishment which uses immense quantities of it, made it as necessary for him to know its weight as that a grain merchant should the weight of a bushel of corn. The statement that "there is nothing in cow-dung heavier than water" must be erroneous, as cow-dung always sinks in water like a stone. I took a sample this morning within one minute after it was dropped and put it in a pail of water. It went to the bottom instantly, and remains there still as compact as when put in, several hours ago. Even horse-dung sinks, as I have had frequent occasion to know. O. S. Bliss.

Remarks.—Will Mr. Bliss kindly state what there is in cow-dung that is heavier than water and why our statement "*must be* erroneous." Seventy-five per cent. of it is water, or 77½ per cent., according to some authorities, and the remainder is vegetable matter, with some little animal matter as mucus, all of which is of less specific gravity in its natural condition than water. We, too, have this moment of writing placed in water a compact fresh dropping from a cow that is fed upon eight quarts of grain food daily with clover hay, and whose dung is unusually solid, and we find that it floats in quite a lively manner. Mr. Bliss must know very well that circumstances—unless they are exceptional—do not alter cases that are founded upon such a reasonable and certain basis as the specific gravity of substances. If the cow eats hay, or grass, or bran, or cornmeal and drinks water, and digests from the food the most solid portions, rejecting chiefly the lighter cellulose and the water, how can the rejected parts be made heavier than the original matter by passing through the cow? The corn is certainly heavier than water, but the rest of the food is not, and the whole is lighter. Even the dung of horses fed wholly on oats, without hay, floats in a trial made at this writing. Mr. Bliss has had his own fights on this question of specific gravity with regard to cream, and knows we think too much about it to defend what is a clear error of Dr. Dana's. The statement that Dr. Dana should know the weight of cow-dung because he was connected with a calico printing establishment should have no effect on this question.

A chemist is employed in printing works, not to *weigh* cow-dung, which is used as a mordant in the dyeing of the cloth, but to watch its chemical reactions as well as those of the various dye stuffs and colors used. The specific gravity is of no importance whatever, and it is improbable that Dr. Dana ever considered it in this light in his connection with calico printing. A precise analysis of cow-dung, made by a chemist of a print works now before us, is as follows:—water 69.58 per cent; bitter matter 0.74; sweet substance 0 93; chlorophyl 0 28; albumen 0 63; muriate of soda 0 08; sulphate of potash 0.05; sulphate of lime 0 25; carbonate of lime 0 24; phosphate of lime 0.46; carbonate of iron 0.09; woody fiber 26 39; silica 0.14; loss 0 14. Of these the mineral matters—1.31 per cent—are heavier than water and 28 97 per cent are lighter. On the whole this analysis would show that cow-dung should be lighter than water. If not will our friend show why not?

ORCHARDS, PIGS AND CLOVER.

Corn is perhaps as well suited to our apple orchards, until the trees are of good fruiting size, as any crop we could plant. The cultivation required for corn is such as also suits the growing trees, and it ceases at a time when they should not be pressed to further growth for the season, allowing them to rest and ripen for Winter. The corn also gives the necessary shade which the trunks, while young, require. Artichokes are also good to be planted in the tree row—not nearer to each tree than four feet.

Pigs are the best stock to have access to the orchard. They will do the most good and the least harm. They may be given free access to the orchard as soon in Autumn as the corn is cribbed. They will glean the corn-field, harvest the artichokes and give the land a pretty thorough Fall plowing. They will also spread much valuable manure and destroy millions of hurtful vermin in the larval state. The artichokes promote the health and rapid growth of the pigs, which, without other food, will be half fattened by the time the frost stops their rooting. Then liberal "corning" soon fits them for the butcher.

When the orchard is older, the trees well grown and required to fruit, the crop may be changed from corn to clover. This does not promote the rapid growth of the trees, but it increases the fruit, and is very beneficial to the soil and young roots of the trees, protecting also the whole surface from the scorching sun in Summer and severe frosts in Winter. At the same time it affords a real paradise for the pigs, which may now occupy the orchard through the Spring, Summer and Autumn. A large number will find ample, nutritious food in the succulent, growing clover, upon which they will thrive and grow rapidly, doing no hurt to the trees, but much good by catching bugs and worms a thousand boys or men would never find. The apples which drop prematurely contain worms, which caused their fall. The pigs pick up this worthless fruit and with it eat the worms, and thus prevent an increase to millions more. On this fine pasturage the pigs are so well grown as to be ready for sale in September, as feeders, and all the growth is profit. "Jot."

Springfield, Mo.

A Stone Drain.—Referring to the method of making a stone drain, mentioned in the Rural of April 16, in answer to a correspondent, E. W. S. writes us from Afton, N. Y., that instead of laying a row of stones close to each side of the ditch for flat stones to rest on, as there described, he would lay only one row of stones in the ditch, and then lay large, flat stones with one end resting on the bottom of the ditch and the other on the stones along its side. Speaking from experience, he says that a drain laid this way is more durable than one made after the other fashion, because, as the flowing water wears away the bottom of the drain, the two rows of stones along the sides will "work" together, an end that is hastened by the action of frost and the pressure of the sides of the ditch. As they are forced close to each other, the drain is gradually damaged, and finally destroyed on their coming together. On the other hand, when only a single row of stone is laid along one side of the ditch the flat stones lying at an acute angle with it, press it against the side of the drain, so that it can be forced out of its proper place, neither by outside pressure, nor by the action of the water as it washes down the middle of the ditch or drain.

An Evil Without a Remedy.

A FRIEND writes us from Van Wert, Ohio: "I would like to ask how farmers near to cities and towns can prevent persons, both those grown up and children, but especially the latter, from traveling over their fields. I am pestered too much with people gathering grasses, hunting flowers and birds' nests, shooting, hallooing on Sundays, getting dirt for flower pots and rambling through fields and woods for no purpose whatever but to while away the time and amuse themselves. They frighten my stock and keep them on the move by throwing at them. Now what shall I do! I apprehend that it would displease many to prevent them from going where they choose. Is there a remedy?"

REMARKS.—We cannot give one. Many such trespassers do not regard polite requests not to do so, and their offenses are scarcely of such a character as to be stopped by legal proceedings. We have at the RURAL FARM many causes of such complaints, and patience is often tried beyond endurance. But we have found no effectual remedy.

MOST profit is found in growing tobacco on farms where the business is carrried on to a small extent, and where great care is exercised to enconomize fertilizers. A few acres of the best part of the farm devoted to this crop with garden culture and such care given the crop as will produce the largest percentage of the best leaves, will doubtless prove profitable.

Industrial Implements.

The Greencastle Grain Drills.

These drills, a cut of one of which is given herewith, have been in general use for the last 25 years, and are built at Greencastle, Penn., by J. B. Crowell & Co., who are devoting their entire attention to machinery for seeding purposes. While building plain drills for sowing grain and grass seed only, they also make a specialty of a combined drill that sows phosphates, guano, or any of the properly prepared commercial fertilizers that are found in the market. The latest improvement connected with this implement is an Automatic Cut-off, which at once shuts off the flow of the fertilizer, when the hoist lever handle is raised, thus saving, as is claimed, an amount equal to 15 or 25 per cent. of the cost of the drill alone each year.

By using fertilizers the wheat can be sown somewhat later so as better to avoid the attacks of the fly, and yet enable the plant to form a good root and thus withstand the freezing out that Fall wheat is often subject to.

The simplicity and durability of the drill built by J. B. Crowell & Co., at once commend it to the farmer. There is no change of gear wheels to regulate the quantity sown, and the spring hoes which are attached to all their No. 1 drills, enable the farmer to pass over ordinary obstructions without breaking pins, and then stopping the team to replace them. Immediately upon passing over the obstruction the point finds its way into the soil, and commences planting the seed in the furrow, causing no "skips."

Spring hoe drills are now largely used in the rocky, limestone districts of Pennsylvania, Maryland and Virginia, and their sale is being rapidly extended throughout North Carolina and Tennessee, as well as throughout the Western States, where they have been recently introduced. All applications for circulars or for further information, which will be promptly given, should be made by our readers to the above address.

The Horseman.

The Warden.

This fine bay Clydesdale stallion with black and white points, is one of the importations of Messrs. Powell Brothers, Springboro, Pa. He was foaled May 19, 1876, and won first prize in a class for yearling stallions at Castle Eden Show, open to the United Kingdom, in August, 1877. Again, as a two-year-old, he was placed second in a large class of stallions at the Yorkshire Show, at Northallerton in August, 1878. He was sired by "The Swell" (870) winner of the Castle Eden premium of £50 ($250). He by "Farmer's Fancy" (303) by "Lofty" (455) winner of first prize and silver medal at Glasgow. He by "Farmer's Fancy" (298), winner of first prize at the Highland Society's Show at Glasgow in 1844, and second at Dumfries in 1845. He by "Clyde alias Glancer" (153) by "Broomfield Champion" (95) by Glancer 2d, (337) winner of second prize at first show of the Highland Society held in 1826. He by "Glancer 1st (336) by "Glancer alias Thompson's Black Horse" (335) that was foaled about 1810, and was the most noted of all the great founders of the Clydesdale breed.

The Warden's dam was the Marquis of Londonderry, prize mare "Blossom." She was got by a celebrated horse, "Prodigy" by "Samson," winner of first prize at the Royal Agricultural Society's Show at Shrewsbury in 1845, first at Leicester and first at Newcastle in 1846 The Warden's grand dam was by the famous "Bay Wallace" (38), winner of the premium at the Highland and Agricultural Society's Show at Berwick in 1841, and he traveled the Cumberland district for a premium four years in succession. He by "Old Bay Wallace" (572), winner of the Dumfries premium in 1831.

HOW TO PREVENT HORSES FROM CHEWING THE BRIDLE OR HARNESS.—Referring to an inquiry on this subject in a late RURAL, a friend in Middle Tennessee sends us a plan which has there always proved effectual in the worst cases. A goodly quantity of Cayenne pepper is mixed with a lot of grease and the mixture is liberally applied to the parts of the bridle, harness or other object the brute is accustomed to bite. A few trials of the stuff are generally quite enough for the most inveterate harness-biter.

Miscellaneous.

A PROTECTION AGAINST RABBITS.—A correspondent writing from Fredericksburg, Va., says that he has found by experience that if a plank not less than two feet across, is whitewashed on both sides and fastened in the ground, rabbits will not come within 20 yards, or more, of it.

PROTECTING TREES FROM RABBITS.—A friend writes us from Mount Pleasant, Mo., that he lately saw a very neat way of doing this, which was new to him. The trees were small and were protected by corn-stalks tied closely around them, the stalk having been split open and the pith removed.

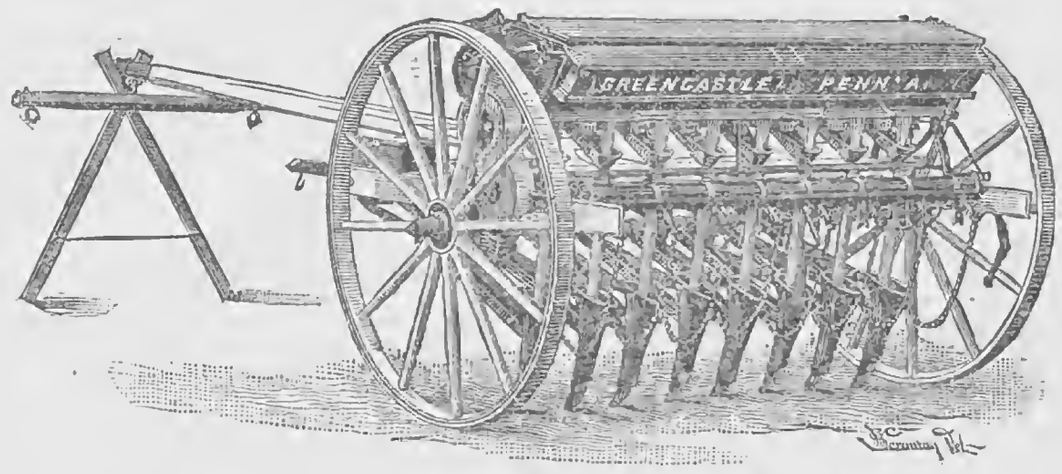
BOOKS, CATALOGUES, ETC.

ANNUAL REPORT of the Commissioner of Agriculture of Georgia—J. T. Henderson. According to this report the year 1880 was not propitious to grain crops, and wheat, oats and rye were almost entire failures. In South Georgia particularly were the crops very poor. The corn crop was short, the average yield per acre being only 9.7 bushels. In cotton the yield was very satisfactory, the condition of the crop being reported 104; the average yield per acre was 541 pounds of seed cotton, or little over one-third of a bale of lint. The yield per plow was five bales of 470 pounds each. Sugar cane also did well, 190 gallons of sirup being the average yield per acre. It must be remembered, however, that in Georgia all the cane juice is made into sirup. The cultivation of upland rice is beginning to attract more attention in Georgia, and quite a large area was planted; 35 bushels of rough rice was the average per acre, though as high as 100 bushels are reported when the conditions were very favorable. Sweet potatoes averaged 110 bushels per acre, but the humid weather was unfavorable to keeping and large quantities were lost. The yield of sorghum was 68 to 88 gallons; ground peas, or peanuts, 23 bushels; chufas, 35 bushels, and hay about two tons. There was a slight increase in the amount of pork cured.

THE AMERICAN HEREFORD RECORD. Vol. I. Compiled by the Breeders' Live-stock Association, Beecher, Ill. This handsome volume of 384 pages 8 vo, contains 2 915 entries of American-owned Herefords, the descent of all of which is traced back through the ten volumes of the English Hereford Herd Book. Fifteen pages at the end of the work give a brief sketch of the history of the Hereford breed both in England and this country. As the first of a series the compilation of this book must have cost a great deal of labor and research. A second volume of the Record has already been begun, for which 1,000 entries have been received. These will be issued in book form under paper covers, without waiting for the completion of a full volume. The charges for entries for the present work have been, for each animal to be entered, $2; for animals to connect with the English Herd Book, 50 cents each. We suppose the same charges will be made for the entries in the second volume.

THE AYRSHIRE RECORD, New Series, Vol. III; American and Canadian Record (old series Vol. IV) published by the Ayrshire Breeders' Association. John Davis French, Editor, North Andover, Mass. This Association now numbers 119 members, and the number of entries in the old and new series of Herd Books is 5,470 bulls and 2,535 cows—total, 7,995. These figures do not include those in the registry of "cattle not tracing directly to importation," which has been discontinued. The North American Ayrshire Register has been consolidated with the Record, so that hereafter there will be only one Ayrshire Herd Book, which will be published under the title of Ayrshire Record; Dr. E. L. Sturtevant hereafter working in harmony with the Association.

USURY.—A pamphlet of 116 pages. This is an anomaly in the way of publications in this country, though in some of the European countries—Russia, for instance—its most characteristic feature is doubtless often noticeable in works of a "compromising" nature. It has neither the name of the author, publisher or printer, a word of preface or a hint outside that in the text, as to its object, which, from a very cursory glance, seems to be to show the worthlessness of usury laws.



THE GREENCASTLE GRAIN DRILL.—From a Photograph.—FIG. 263.

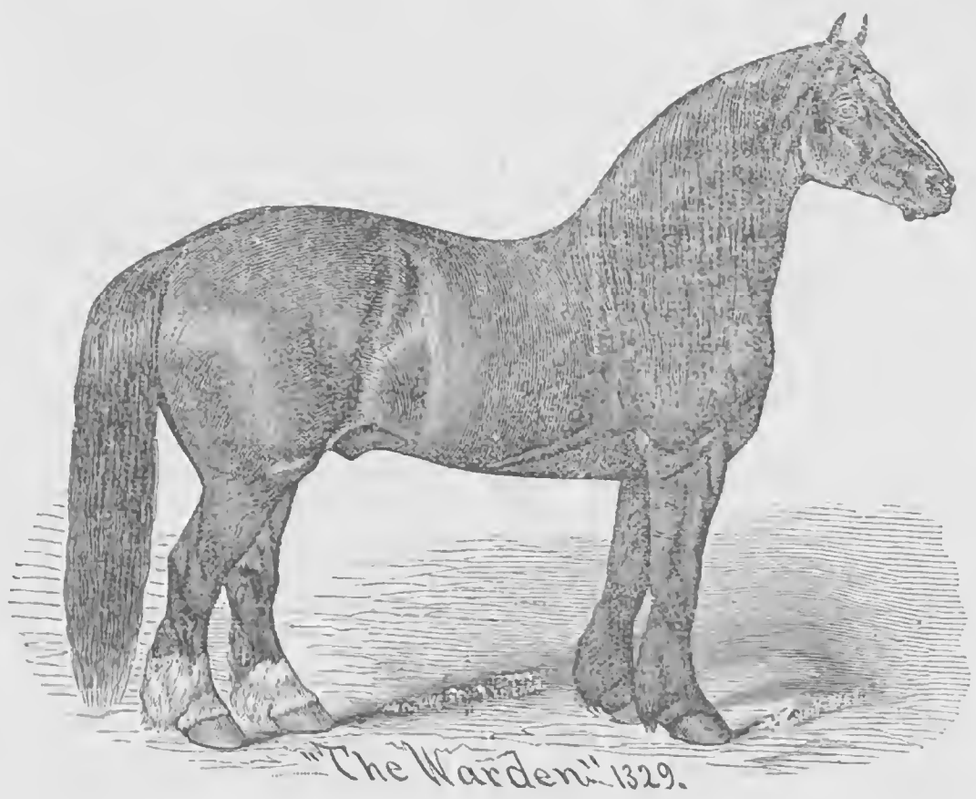


FIG. 264.

THE WISCONSIN CENTRAL RAILROAD LANDS.—A pamphlet of some 60 pages descriptive of the lands for sale by the W. C. R. R., together with an account of various attractive inducements to purchasers. Sent, postage-free, to all applicants, by C. L. Colby, Land Commissioner, Milwaukee, Wis.

A CONTRAST.

I HAVE before me the Ulster County Gazette of January 4, 1800, published by Samuel Freer and Son, at Kingston, N. Y., Volume 2, No. 88. It contains four pages of coarse print, each page nine by sixteen inches inside the blank border. Two pages are devoted to the death and burial of ex-President Washington, to correspondence between the United States Senate and President John Adams, a poem on the occasion by "A Young Lady," some London correspondence, news from Holland and France, "received by the British Packet, Princess Charlotte." These two pages are surrounded by black lines, nearly a quarter of an inch wide, and each column by similar lines of less width.

Forty-two letters are advertised as remaining in the Post Office addressed to persons living in thirteen different places: twelve sheriffs' sales are advertised by Peter Van Broech, Sheriff. There are eight advertisements of real estate for sale, in one of which is a sawmill, "also a stout, healthy, active Negro wench," four merchants' advertisements, one of which is "dry goods and groceries by Samuel Freer," the above publisher.

One man advertises his wife "forbidding all persons from harboring, keeping or trusting her on my account." There are two or three estrays, one of a red bull with P. T. B. branded on his horns.

The correspondence between the United States Senate and the President is dated "United States, January 10, 1799—no place named. There are no subscription or advertisement prices named. No doubt this was a very useful newspaper, well-adapted to the wants of the place and the times, forming a part of the history of both.

In contrast with the above, I have before me the RURAL NEW-YORKER of January 1, 1881, published 81 years afterwards. My object in this comparison is to show the progress that has been, in the meantime, made in this class of literature, as well as to excite the imagination of newspaper readers as to what 81 years more will accomplish. For, in spite of whatever may be said against the indulgence of imagination, there is much of innocent pleasure and even profit in it, as witness the "Siege of Troy," "Aladdin's Lamp" and the "Seven Voyages of Sinbad the Sailor;" the virtues and vices which are therein depicted have embellished the literature of all modern languages.

In the RURAL there are four times as many pages of about the same size, with at least sixteen times as much reading matter, with a very great improvement in type, paper and mechanical execution. And as to the subjects of its contents, it requires very much more labor to describe them than to state what there is of use to the average man, woman or child, that it does *not* contain. If you are engaged in the raising of, or dealing in, horses, cattle, sheep, poultry or pigs, in it you not only find on the subject the concentrated wisdom and experience of the age, but pictorial illustrations of the most approved varieties; and so with fruits, grains and vegetables. And should you fail to find in it everything that you wish to know, from the solving of a problem in Euclid down to the best pattern for a pig-pen, ask the editor and he will be most sure to enlighten you.

Not the least of the advantages to be derived from the possession of the RURAL, is its record of its experiments made on its experimental farm of 80 acres, not for *its* special benefit but for yours; for experiments are costly, and pay, in general, little or no profit above cost to the experimenter. I might also claim great merit for it for its donation of seeds, tubers and plants to its patrons, of new or improved varieties for their (not its) special benefit or profit. It claims to be an agricultural paper, but the man of any profession or calling will surely find in it matter of more value to him than the money he pays for it, if the latter were invested in matters of mere ornament or pleasure. And the woman or child who takes pride or delight in floral ornamentation will find in it information of great advantage.

VIELLARD.

What Others Say.

SPURIOUS BUTTER.—The following is a verbatim report of the speech on this subject by Dr. Lyon Playfair, M. P., in the House of Commons on April 1, as reported in the Scotsman newspaper, as copied by the London Agricultural Gazette. We confess to being heartily opposed to oleomargarine in any shape or form.

Nevertheless it is the RURAL NEW-YORKER'S duty to present both sides of all questions to its readers, and the *other* side seems ably presented below:

Dr. Lyon Playfair said: The member for Wigtownshire (Sir Herbert Maxwell) is naturally alarmed at the competition which British dairy farmers experience by the great development in the manufacture of oleomargarine. This increase arises from various causes, but especially from two, the first being the greatly increased consumption of butter among our population, and the second, the improvements made by chemistry in the manufacture of those fatty bodies which are known to us under the name of butter. The increased consumption leads to an increased supply, and the augmented demand naturally stimulated invention as to new sources of supply. These alarm the baronet and others interested in dairy farming. Not many years ago the foreign butter imported was only 1½ pound per head of the population; now it is about six pounds. The exports of butter from Holland were 20,294 000 kilogrammes in 1869 [A kilogramme is somewhat less than two and a quarter pounds.—EDS.]; but in 1879 they had increased to 36,451,000 kilogrammes. During that time Holland has been largely importing oleomargarine from America. Her imports of fats were only 9,374,000 kilogrammes in 1869, while in 1879 they amounted to 37 461.000 kilogrammes. I understand that 12 000 000 pounds of oleomargarine were imported into Holland last year from America, and in all probability a good deal of this oleomargarine comes to us in the excellent butter, which we get from Holland. This oleomargarine, no doubt, comes to us directly under its own name as a butter substitute, though also in concealed admixture with American, French, and Dutch butters. The acknowledged oleomargarine exported from New York is already half the declared value of butter, though doubtless there is a good deal of concealed oleomargarine in the butter which is imported as dairy produce. The declared value of butter exported last year from New York was $5,179.071 and that of oleomargarine was $2,581,3.7. But the manufacture is not confined to America, for France, Holland, and England are actively engaged in making oleomargarine. Undoubtedly this artificial butter is rapidly pushing inferior butter out of the market.

Oleomargarine simply consists of butter fats got from an ox instead of butter fats from a cow, and therefore is simply one form of agricultural product interfering with another agricultural product. The fats which constitute butter, for the main part at least, can be got from different sources, and are not even restricted to animals, for such fats are found abundantly in plants as well as in animals. The chief solid fat in butter is the principal ingredient in palm oil, while the chief liquid fat of butter abounds in olive oil. Even the soluble aromatic fats which give to butter its peculiar taste and flavor are found abundantly in cocoanut oil. If we could extract butter fats economically from vegetable oil, and give a sound, healthy butter from them at a cheap rate, it would be a matter of indifference to the public whether the butter came from the cow or from the vegetable.

Let me here give an illustration of my argument. Milk contains four pounds of cheese for every 100 pounds of milk, but peas and beans contain 20 pounds of cheese for every 100 pounds. The Chinese, who are a great experimental nation, actually do make cheeses from peas and sell them in their markets. These cheeses are highly esteemed in China, but to our palates are insipid because they do not contain butter fats. But I look forward to the day when cheeses will be made from beans, peas and lentils, and after being mixed with good oleomargarine may form palatable and and very economical cheeses. Would the honorable Baronet stay the progress of chemical invention and prevent the manufacture of such cheeses from peas simply because they would interfere with dairy produce? Now, to come to oleomargarine. That substance, by purifying the more fusible parts of beef suet, and separating from it the less fusible fats and cellular tissue which exist in all fats, practically gives true butter fats, with the exception of about five per cent. of aromatic soluble fats, which give to good butter its delicious flavor, but that five per cent. makes all the difference as regards flavor and taste between good oleomargarine and good butter. The two cannot come into competition any more than inferior American cheeses will compete with our best Cheddar and Cheshire cheese. The American cheeses do knock our bad cheeses out of the market, and so certainly good oleomargarine will and ought to drive our bad qualities of butter out of the market. Much of the butter sold to the poor is reduced in nutritive value by salt and water, and readily becomes rancid. Such inferior butter ought to be substituted by oleomargarine, which, if carefully prepared, has little tendency to rancidity. Although oleomargarine can't compete with good butter, yet I am sure it will so thoroughly compete with bad butter that dairy farmers will be compelled to improve the quality of their butter. Unless thorough cleanliness is observed in the treatment of the milk of butter, the aromatic fats, which give superiority to good butter become the source of rancidity to inferior butters, and render them positively unwholesome. But even when butter is not rank, it is so often brought into the market adulterated with so much salt and water that its nutritive value is much deteriorated. Natural butter may contain from 12 to 16 per cent. of water, and from one to two per cent. of salt. But many of the inferior butters contain 20 to 25 per cent. of water, and from five to ten per cent. of salt. Such butters are a fraud upon the poor, and are far inferior in nutritive value to well-prepared oleomargarine, which rarely contains above 12 per cent. of salt. It is with poor butter of this kind that oleomargarine will and ought to compete. Bad, rancid butters are quite as unwholesome as bad specimens of rancid oleomargarine; only it is rare to see oleomargarine rancid because it is manufactured on a large scale, and with the care which large operations receive by skilled superintendence.

As to the relative wholesomeness of good butter and good oleomargarine, I do not think there is anything to choose between them. It has been said that, as oleomargarine is not heated above 120° Fahr. it may contain the the germs of disease in the animals, but so may the fats constituting butters which have not been heated above 99° Fahr. in the body of the cow. So far as we know, when the fats derived either from the cow or the ox are not rancid they are equally wholesome. In both cases when they are rancid they are equally unwholesome. Surely, carefully prepared, wholesome butter fats called oleomargarine are much better for the poor at 1s. a pound than badly prepared and dirty butters at 1s 3d. or 1s. 6d. per pound. How does the Hon. Baronet propose that Government is to carry out his resolution? The law already provides that an article of food sold under a name to which it is not entitled is punishable at law. Oleomargarine should certainly be sold as artificial butter, and not as dairy butter. But how are you to enforce the law in this case, when the products of the cow and of the ox only differ in five parts out of the hundred. I should be very sorry to decide upon a sample of artificial butter, whether it was from the cow or ox; and when it is used for admixture with dairy butter the case is still more difficult. Very few chemists would be prepared to swear that a butter made half from the cow and half from the ox was unquestionably an adulterated article. It is not like chicory and coffee, for chicory is chicory, and coffee is coffee. But oleomargarine and butter are practically identical, except as to their source and the absence of five per cent. of aromatic fat which probably before long may be added from cocoanut oil or other sources. The resolution goes on to say that such artificial butters as are hurtful or dangerous should be prohibited altogether. Certainly, rancid oleomargarine is a nasty and hurtful compound, but not any more so than nasty and rancid butter which abounds in many markets. Both are unfit for human food, although both may be purified by well known processes. The farmer has a much better method than legislation to protect his dairy produce from cheap substitutes for butter. Let him cultivate improved methods of preparation, strict cleanliness, sufficient washing of the butter, and fair treatment. Let him send such butters to the market without being laden with salt and water to increase the weight, and his superior and well-flavored butter, with little tendency to rancidity, will keep its own position in the markets in spite of the equally salubrious but less well-flavored oleomargarine, which will certainly drive bad butters out of the field, but cannot compete with really good butters.

AT a recent meeting of the Western N. Y. Farmers' Club, as reported in the Rural Home, Mr. Fowler said that shippers were paying $1 per bushel for Burbanks and but 90 cents for other potatoes. Quality fair, but not quite equal to Early Rose. Mr. Wall said he could grow large crops of Burbank, but couldn't eat them. The introduction of self-binding reapers, it was remarked, would work a revolution in harvesting wheat. Few farmers will themselves own a self-binder, but men who do will go round the country taking jobs, as they now do at thrashing, with the disadvantage for harvesting that it mostly comes all together, and must be done all at once or loss will follow.

WE confess to a sort of belief in "luck," says the Agricultural Gazette (England), in the sense that even the most careful managers are apt to suffer severe losses, and careless managers who neglect all the recognized rules are sometimes able to flaunt their good luck as an argument against the sound advice of experienced men. Still we may be sure that in the long run good management has the pull over bad. Liberal feeding upon cake and corn pays in three ways; (1) in making our sheep worth more money; (2) in keeping a larger number of them alive; (3) by improving the land. The lives saved will alone pay for a very considerable portion of the cake bill.

TREATMENT OF A CHOKING COW.—Mr. G. W. Hoffman remarked to the Elmira Farmers' Club that he had that day a cow that got choked by a turnip that resisted the usual treatment—pressing upward with the thumb and fingers below the obstruction. He got a piece of inch and a quarter rope and soaked it thoroughly in warm water, then in cold water to stiffen it, wound cloths at one end, and used that to push the turnip down. The trouble was soon ended and the cow returned to her mess.

President McCann asked why was the rope better than a broom stick?

Mr. Hoffman replied that it was more pliable and yielding. He prefers to effect the dislodgment of the offending substance by pressure applied externally. This is done by grasping the gullet just below the obstruction and squeezing it upward. In most cases quick relief may be obtained by this method and it has the merit of being free from risk. But in the case referred to it was not effectual. He even resorted to the harsh treatment of trying to mash the turnip by placing a block at one side and striking a blow against the turnip on the other side, but without effect.

President McCann said there was an element of cruelty in that treatment—so there is in pushing the obstruction down with a stick; yet he had to employ that means with a heifer that got choked on an apple and was badly bloated in consequence. She frothed at the mouth, and was nearly gone, but the stick shoved the apple down, and the heifer was very soon ready to resume eating.

Mr. Hoffman said he had seen that tried on a cow—she died.

Mr. Compton said his father had one treated by that plan—she died.

DR. J. B. LAWES, of Rothamsted, is writing a series of articles for the Agricultural Gazette of London, under the general title of "Fertility." From the latest of these we quote the following as of special interest to our farmers:

FIRST of all, and this is a most important point, the United States farmer himself is usually well educated and intelligent; he is both owner and occupier of the soil, and does as much as possible of the work of the farm himself, employing for the purpose the most improved labor-saving machinery; he is lightly taxed, has cheap modes of transit, and, above all, is in possession of an almost unlimited extent of untouched fertility. These circumstances all combined reduce the cost of growing grain almost to a minimum, and the result enables him to deliver his wheat at the doors of the owner of the land, in some parts of Great Britain, cheaper than it can be raised in the adjoining fields. In a word, they enable him to regulate the price of grain throughout the world.

THE idea that the fertility of these (our new) soils must shortly come to an end, or that grain crops cannot be produced at the present prices is altogether illusive.

The stock of nitrogen in immense areas of the United States soils must be competent to yield crops, equal to those given in the table, for a long time, and even when they begin to fall off, the residue of nitrogen may still be sufficient to allow of a fresh development of fertility, by the employment of some cheap mineral manure, such as plaster or phosphate of lime; if this be so, the necessity of employing so costly a substance as nitrogen may not be apparent for two or three generations yet to come.

Before this period arrives the United States farmer will have become so well acquainted with the action of manures, that the profit or loss attending their application will not be a question of chance, but one subject only to the contingency of favorable, or unfavorable seasons; a contingency from which it will be impossible to escape.

THUS says the Nebraska Farmer:—The prospects for a crop of Winter wheat in Kansas, Missouri, Iowa, Illinois and Michigan are the poorest for years, and the indications are that wheat will rule high during the next year. So far as Kansas and Missouri are concerned this is very decidedly opposed to nearly all reports we have seen with regard to the outlook for wheat from our many correspondents there.

ENSILAGE.—Says the agricultural editor of the N. Y. Times:—One of the most conspicuous features about the present excitement in regard to ensilage is that the most prominent writers about it have all some private axe to grind in the shape of hooks, or seed, or plans, or implements connected with the process, to sell. Precisely what we think about it is this, that if it is a good thing it will keep, and there is time enough to try it when it is known to be good.

WIRE-WORMS.—"I planted my corn in the usual way, but in one row I put wood ashes, in a second land plaster, and in a third common salt," says a correspondent of the N. Y. World. "There was little difference, if any, in the first two, and these I had done nothing with, but where I put the salt about nine-tenths of the corn came up well. So I concluded to doctor the whole piece, and sowed a good coat of salt and stirred the ground well, and then sowed another coat not quite so heavy. I then marked out and planted my corn and it gave me a good stand, something I never had on that piece before. It made an average yield of corn and put an end to the wire-worms."

DR. KEDZIE says that he believes the cheapest and easiest way to bring up a run-down farm—one that any and every man can use—is by green manuring. . . . . He also remarks that some one has wisely said, "In building a house, build as if you expected to live forever." The same rule is emphatically applicable to farming. Manage your farm as if you expected to live forever. Whatever treatment will injure your farm in future time, avoid in the present time. . . . . Can a man be rightly said to be "on his legs" again when he has sold his horses and carriages for the sweet sake of his creditors and is compelled to walk? . . . . . Don't forget that the celery plant is a semi-aquatic. Give it moisture if you would have crisp, sweet stalks. . . . . It is foolish to grieve over what can't be helped and still more foolish, because needless, to grieve over what can be. . . . . Some conceited folk think they fill a large place in the public eye when in reality it is all in their own. . . . . The RURAL NEW-YORKER will this year send to its subscribers not *less* than 868 pages—all for two dollars. This is not "What Others Say," however; it is what WE say. . . . . It is time to make the second planting of peas, radishes, sweet corn and lettuce.

Everywhere.

RURAL SPECIAL REPORTS.

CAN., Emsdale, Muskoka, Ontario, May 7.—We have had a very fine, dry Spring, but owing to the wind keeping in the north it has been cold. The rivers are very low and, unless we get rain, the lumbermen will have hard work to get their logs down. The farmers in this neighborhood have all their grain sown with the exception of barley. I planted my White Elephant Potato on the 25th of April. I cut it to single eyes, eight sets, total weight two and one-quarter ounces; planted about 10 inches apart. I also planted eight sets of Early Rose (single eyes and same weight) at the same time, so as to be able to tell which does the best in this climate. H. R. D.

[This is an excellent way to test a new kind. —EDS.]

CAL., Carpenteria, Santa Barbara Co., April 29.—The weather is just now delightful, but it has been rather moist and gloomy for this country for some time, but not cold enough to be disagreeable or to keep vegetation back. Land is in fine condition to plant corn and beans—never was better at this season of the year. Planting has commenced. Hay has been cut here and there, so the wheel keeps rolling and there is little rest for the farmer. Apricot trees are well filled with growing fruit and we have good promises for most other kinds of fruit. O. N. C.

DAKOTA TER., Marion Junction, Turner Co., May 2.—Snow blockade and no trains from Feb. 1, to April 17. Winter and last snow storm ceased April 10, with snow nearly two feet deep. Thaw began April 13. April 18, railroad was washed out in very many places in Northwestern Iowa and Dakota, and every water-course was an unfordable river. Snow all gone by April 25. Land now in fine condition except on bottoms. Wild grass starting rapidly. "Dry" runs empty; small streams falling fast. Large streams will require a week yet to get within their banks. No trains since April 18, and many new settlers of last season west of here, who depend on seed wheat to be brought from the East this Spring, find themselves sadly behind. Many who went East last Fall to spend the Winter have not yet been able to return to put in their crops. Prospect excellent for those who were ready for seeding. New country. No fruit nor Winter wheat. Stock rather thin, owing to the extremely long Winter. J. B. E.

ILL., Holt's Prairie, Perry Co., May 4.—We, here in Egypt, are now very busy planting corn, about one-third of which is planted. We are late, as corn should all be up now. We are having a cold, drizzly rain to-day, with the thermometer at 63°, which will rot the corn planted if it continues. Prospect gloomy. Wheat badly frozen out—a light yield inevitable. Owing to short crops of corn, hay and oats last year, our stock have come out of the long, hard Winter thin in flesh, and, as feed is very scarce, the grass on our meadows and pastures has come to the rescue most opportunely. Wheat is worth $1 per bush.; corn, 50c. to 75c.; oats, 35c. to 40c; hay, $10 to $12 per ton; potatoes, $1 per bush. R. M. D.

ILL,, Rockford, Winnebago Co., May 8.—Wheat is nearly all killed except where protected by snow-banks. Raspberries were badly frozen. Oats are about half sowed. Butter is worth 20c.; corn, 38c.; oats, 30c.; potatoes, $1.10 per bushel. W. D. H.

IOWA, Shell Rock, Butler Co., May 1.—We are having as early a Spring as could be expected after having had so severe a Winter. Stock are looking first-rate and will be turned out to grass in about a week, if grass grows as rapidly as it has for the last two weeks. Seeding is nearly finished and some pieces are up, and look splendid. Wheat has been almost a failure for the last two years owing to the devastation of the Chinch bug; many pieces have not paid the expenses of harvesting, but we are in hopes the pests will not bother us this year. Flax seems to be the main crop this season. The yield last year was thirteen bushels to the acre. By the way, there would be a splendid opening for some smart, energetic capitalist who wished to erect a paper mill at this place and thus amass a snug little fortune. In this way, thousands of tons of flax and other straw that will be burned, could be made to pay a handsome profit to the farmer and manufacturer. There is good water power. Who will be the lucky man to build the mill? Winter rye looks well and will be a pretty fair crop. Corn, 25c; wheat, 80@90c; potatoes, 50c; butter, 13c; eggs, 8c; hogs, $4 75@5. W. H. B.

IA., Wellman, Washington Co., April 25.—We had a long, cold winter and plenty of snow from Nov. 15, to April 15. Spring work will begin one month later than last year. Fall wheat was all frozen out. But little Spring wheat will be sown. Oats and corn are the farmer's main hope here now. Cherries are all killed. We shall have about half a crop of other small fruit. Apples are not killed. A new creamery is being built near this place. We need something of that kind here. Hogs are worth from $5 to $5 30; wheat, 70c. to 90c.; per bu.; oats, 30c; corn, 29 to 31c.; hay, $8 to $10 per ton; butter, 13c. per pound; eggs, 10c. per dozen. E. B S.

IA., Utica, Van Buren Co., May 3.—Some grain has been sowed here but not much, as the ground has been too wet. The weather is fine now and farmers are busy putting in oats and "breaking" for corn. I don't think we shall have many apples this year; last season we had a large crop. R. J.

KANSAS, Walnut, Crawford Co., May 6.—Wheat, of which quite a large acreage was sown last Fall, is looking very fine, and the farmers are hopeful of a good yield of this cereal. The extremely cold Winter just passed injured some pieces of wheat that were sown broadcast, as the freezing and thawing raised the roots out of the ground and left them so exposed that the wheat was entirely killed in patches. Corn will be nearly all planted this week, and it is now "all work and no play" with a farmer, as we all know by experience that nine times out of ten the early planting insures the best yield. The most terrific rain and hail storm that I ever witnessed swept over here yesterday, doing much damage to window glass, fruit blooms and gardens. The hail continued to rattle down for 30 minutes, making it almost deafening in a house. Some of the hailstones were as large as walnuts. In my garden the gooseberries, about one-third grown, were nearly all cut off, and garden vegetables, such as beans, cabbage and lettuce, were almost ruined. The young shoots on my grape-vines, six or eight inches long, were cut and broken off in a shocking manner. Our druggist gathered three pailfuls of the hailstones to use in his soda fountain. The streak of hail was not more than a mile and a-half wide, coming from a little north of west. I hope to see more from our Western farmers in the RURAL NEW-YORKER, giving their experience in agriculture, horticulture, stock, etc. The seeds from your distribution are all planted. The White Elephant Potatoes, Branching Sorghum and oats are up and looking very nice. B. G. S.

KAN., Sterling, Rice Co., May 5.—We have had a glorious rain, succeeding several fine showers, and everything looks prosperous. Wheat looks fine; corn is coming up; gardens are prospering, and the peach and cherry trees are in bloom. J. W. M'C.

KENTUCKY, Paducah, McCracken Co., May 2.—The weather is very pleasant to-day after a long, cold Spring and Winter. My three-year-old peach trees were frozen just above the ground; they are entirely dead; although they were full of bloom and the leaves put out, they soon began to look sickly and on examination I found they were winter-killed. We have a fine prospect for a crop of strawberries Blackberries are killed. There will be a light crop of apples and peaches here. A smaller acreage than usual of wheat was put in last Fall on account of wet weather, and what was put in looks bad. G. W. R.

MICH, Eastport, Antrim Co., May 2.—We have had a very severe Winter—any amount of wind, snow and extremely cold weather, with but very little change from the 1st of November until the 1st of March. Since then we have had pleasanter weather than people generally look for during the months of March and April. We have not had any rain to speak of this Spring. The great depth of snow has been gradually wasted away by the sun until it is nearly all gone, a little being still left in some places in the woods. Fall wheat was injured somewhat last Autumn, either by some insect or disease, so that it withered and became thin on the ground. What survived was badly smothered in places by the formation of a hard crust on the snow. One could travel over it with a team and loaded sleigh. People have just begun Spring work. The ice is not out of Grand Traverse Bay yet, which makes the weather quite cool. Fruit buds appear to be all right, with the exception of pears, which seem to be partially injured. Raspberries, blackberries and the young stock of peaches are winter-killed to some extent. M. M. C.

MINN, Warren, Winona Co., May 2.—Seeding Spring grain just done. Weather very good. Earth quite moist from the deep snow of last Winter. No rain yet except light showers. Grass and all plants growing fast. Season, medium late. Rivers in all parts of the State rising fast. Inundation imminent in low lands. Wheat, 95c.; corn, 45c.; oats, 35c.; barley, 90c.; potatoes, 90c.; butter, 20c.; eggs, 10c.; hay, $10 to $12 and scarce. B.

MO., Pleasant Mt., Miller Co., May 2.—Farmers are through sowing oats. Owing to the late season the acreage was not as large as it otherwise would have been. Farmers are very busy planting corn. Owing to the late opening of Spring this will hardly be finished until the last of this month. Wheat, taken altogether, looks fully as well as usually, and unless some unforseen calamity occurs, will make a good crop. Locusts are making their appearance through the ground. We shall have some fruit, though not a full crop by any means. N. G. S.

NEB, Pleasant Hill, Saline Co.—We have had a very severe Winter here, but Spring has set in in earnest. Our wheat and oats are already sown and look very promising. W. A.

N. J., Ocean Co., near Barnegat Bay, May 6.—To give an idea of the late season here this year, I note that the flowering shrub forsythia began to bloom April 20, peach trees, 27, pear, cherry, Pyrus Japonica, and shad-bush, May 1. Peas up April 20, and now six to eight inches high. Radish and lettuce almost large enough to pick, and *one spear* of sweet corn two inches high. Pie-plant large enough to pull April 25, and asparagus to cut on the 30th. The wind for the past seven days has blown lightly from northeast to southeast, but the weather kept fair until the night of May 5, when it began to rain gently, continuing through the 6th. This is much needed for our light soils, as it has been rather dry for ten days past. On the nights of 3d and 4th of May there was a light frost which has done no injury. Rye sowed last September for soiling is 18 to 24 inches high and will be soon large enough to cut for our cows. A. B. A.

N. Y., Clifton, Monroe Co., May 9.—The first strawberry blossoms appeared here yesterday, also the first cherry blossoms. Fruit buds are not seriously injured here. The Cuthbert Raspberry may be called hardy here; it comes out better than I expected. C. A. G.

TENN., Thompson Station, Williamson Co., May 2.—In this portion of Middle Tennessee farmers are nearly, or quite, two weeks later than usual in getting in their crops—cotton and corn, of course—which delay has been caused by continual wet weather preventing us from getting our plowing done in season. Few of our farmers are more than half through planting. Very little tobacco is raised in this or the adjoining counties—too little money in it. We ought not to grow cotton, but it is always ready money when ready for market, and a negro in Middle or West Tennessee thinks he cannot live unless he has a cotton crop to sell about Christmas time; and, in truth, most of our white farmers entertain the same notion. This county is one of the finest countries in the world for stock raising; and it will not be many years until that industry will be the leading one of our people, especially of the more enterprising and progressive portion. Our wheat is looking fairly promising only, having come through a hard Winter and cold, wet, backward Spring in a better condition than was expected. The acreage of wheat for Middle Tennessee is, however, considerably less this year than usual, owing to Winter setting in and staying with us nearly two months earlier than has been the case for years before. My Washington Oats are up and looking as well as could be expected after so much rain. I shall stir the ground in a day or two. The Rural Branching Sorghum was planted to-day in a very rich mellow place—an old fence row [It does not *need* rich ground. Eds]. My white Elephant Potato is doing splendidly *above* ground; how it is under the surface I cannot tell—not having grubbed there as yet. I am only fearful that some of our thieving negroes will do that work for me, and shorten or destroy my crop. W. H. C.

TEXAS, Dayton, Liberty Co., May 1.—Although the season is about two weeks later than usual, corn and cotton are nearly all planted. Our Winter was very severe, and yet our prairie cattle have come out unusually well. I do not think the loss will average over *one per cent* This is somewhat different from the Dakota outlook, as we read of it in the newspapers. Oats are now being harvested. I am now eating Early Rose potatoes every day. I think it would have done the editor's heart good to have seen my sorghum plot. The garden is 200 feet long, and I have two rows planted about four feet wide, the seeds about six inches apart. It is as smooth as a billiard table, and as I have had no other kind, and there is no other in my neighborhood, the outcome is bound to be true to name. G. G.

WASHINGTON TERRITORY, Cedar Creek, Whitman Co., April 21.—This has been the earliest Spring we have had for a long time. Although Winter commenced about the 20th of November, it broke up about the 15th of March. We began seeding about the 20th of that month and now the farmers have almost finished. Winter wheat looks fine, but very little has been sown here. Small fruits were not injured except blackberries. The prospects for a good crop are first-rate. J. L'D.

WIS., Dodge's Corners, Waukesha Co., May 6.—Spring is at least a month behind time this year. Spring wheat is not all in yet. Winter wheat, unless in a sheltered situation, is injured badly. Many have plowed it up and are sowing the ground to Spring wheat. A great many early potatoes are raised here for market. Some have put in as many as 20 acres already. We are in the great "fine-wool" region of Wisconsin. Yesterday was the 16th annual shearing of full-blood Merinos. There was a fine show of sheep, probably no better exhibit of thoroughbreds was ever made in the United States. But few were shorn, on account of cold weather. The heaviest clip was 27 pounds. Hundreds assemble every year at this annual gathering. Reporters from Chicago and Milwaukee and other neighboring places are always present. A sumptuous dinner is provided by the ladies and a happy day is spent by all. It has come to be a day looked upon by all, far and near, as the Spring festivity, as much as the "fairs" are the Fall festivities. Dairying has hitherto received little attention, each farmer being content to keep eight or ten Short-horns or Jerseys as the fancy of each might suggest, for the all-absorbing interest has been sheep But this year there is a little awakening on account of a creamery that buys the cream of the farmers and makes high-priced butter, so that dairying promises to be as remunerative as sheep raising. Many are losing young sheep with "grub-in-the head." F. C. P.

The Querist.

ANSWERS TO CORRESPONDENTS.

Introducing Italian Queens to Common Black Bees.

C. W. W., Lowville, N. Y., asks, 1, can an Italian queen be introduced into a colony of common black bees; 2 where and of whom can Italian queens be purchased.

ANS.—1. Yes; but be sure, in the first place, that no queen is in the hive into which the new queen is to be introduced. Italian queens may be introduced in various ways, but that recommended by Professor Cook is as good as any. Put the queen into a wire cage, made by winding a strip of wire-cloth three and a-half inches wide, and containing 15 to 20 meshes to the inch, about the finger. Let it lap half an inch; then ravel out the laps and weave in the ends of the wires to form a tube. The ends of the tube may be pinched together after the queen is inserted. Now place the cage, with queen, in the hive between two adjacent combs containing honey upon which the queen may feed. After 48 hours smoke the bees and open the queen's cage at the ends, but do not remove the cage. If the bees, on entering the cage, attack the queen, re cage her for another 48 hours. It is well to let some honey drip on the queen as soon as the cage is opened. If an imported queen is to be introduced into a new colony of young bees, smoke the bees well, sprinkle them with sweetened water and the queen with honey, and introduce her immediately. 2. We would advise you to consult G. M. Doolittle, Borodino, N. Y., J. G Bingham, McGrawville, N. Y., or Chas. Dadant & Son, Hamilton, Ill., on the purchase of Italian queens.

When to Castrate a Colt.

W. H C., Thompson's Station, Tenn, asks, what is the most suitable age to castrate a colt, horse or mule.

ANS.—The proper time for castrating a colt will depend a good deal on its development; for the longer he remains uncut, the more is the fore quarter developed, and especially the head and neck. If these parts are already well developed, therefore, the operation should be performed early, while, if they are poorly developed, gelding should be postponed until later; but in no case is it wise, as a rule, to defer it beyond the age of twelve months. The longer it is put off, up to this period, the more of the natural vigor and style of the stallion does the animal retain. From the middle of May to the first of June is generally found to be the best time to perform the operation in the North, and about the time the young grass gives a full bite, in the South. What is true of the horse, is true of the mule in this connection.

Miscellaneous.

J. C. H., Richfield, Utah, asks information about a large number of papers without naming the place where they are published.

ANS.—We cannot undertake to hunt up information of this sort. It is of use only to an individual inquirer, and to obtain full particulars would cost us far too much time—which is money. Whenever the information sought is of general interest, we spare neither trouble nor expense to supply it, and even for each individual inquirer we are willing to go to a fair amount of trouble. In the present case neither we ourselves nor the American News Company can furnish any more of the information sought than the following:—Papers treating of "turning" and wood-working: Junior American Mechanic, monthly, 75c., 1434 Hanover St., Philadelphia; Scientific American, weekly, $3 20, 37 Park Row, N. Y. No information with regard to other papers inquired about in this connection. Papers treating of mining:—The Mining News, daily, $6, 15 Frankfort St., N. Y.; Mining Record, weekly, $3, 61 Broadway, N. Y. Papers treating on sanitary matters:—Herald of Health, monthly, $1. 15 Laight St., N. Y; Foote's Health Monthly, 50c., 129 East 28th St., N. Y.

J. P. C., Dubuque, Ia., asks, 1, what is the difference between flax-seed and linseed; 2, why is foreign flax-seed more high-priced than home-raised; 3, could not the latter be made as good as the former by cultivation.

ANS.—1, Flax seed and linseed are two words for the same thing. 2, Because greater care is bestowed in raising a better article, to say nothing of the cost of bringing it here, etc. 3, Probably, yes; but it is doubtful whether the extra care would "pay" so long as labor here is so much dearer than in Ireland, Holland, Belgium or Russia, whence almost all imported flax seed comes.

W. H. C., Thompson Station, Tenn., asks, 1, how to grow late cabbages for Winter use; 2, what varieties would be most likely to thrive in that locality: 3, when should the young plants be set out. He has already several young cabbage plants set out, and he inquires, 4, if they thrive well, is there any way of preserving them for Winter use.

ANS—1 They are grown the same as early cabbage. 2. Drumhead, Flat Dutch and Drumhead Savoy. 3. Sow in this latitude about middle of May, farther south they may be sown earlier. 4 Plant out in July, 5. We do not think there is.

J. C. H, Sevier Co., Utah, says that they have been blessed with tree peddlers from Kansas. They sold a good many trees at high prices. They said they procured their stock from the biggest nursery in the United States, viz, the Fairmount Nursery, of Topeka, Kansas. He asks if there is such a nursery.

ANS—We have not heard of it before.

N. W. R, Mount Vernon, N. Y., asks, what is the best time in the year to clear a piece of ground of a thick growth of brush and briars which have covered it probably for twenty years. He has been told that if the job is done in Winter, the roots will be killed "entirely."

J. W. D., Floresville, Texas, asks where can he get a good book of architectural designs and its price.

ANS—Bicknell & Comstock's Cottage and Villa Architecture, price $6, published by B. & C., 198 Broadway, N. Y.; Reeds "House Plans," $1 50, American News Co, N. Y.; Palliser's American Cottage Homes, $5, published by Palliser & Palliser at Bridgeport, Conn., are good works.

"*Subscriber*," *Genesee, N. Y.*, asks for a remedy for a cow that leaks her milk.

ANS—The only remedy we know of for this failing is to milk the cow often—say three times a day—so as to relieve the teat of pressure until it has become strong enough to bear it.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MAY 14th.

A. B. B, received rather late for this season.—S. C. G.—W. B H.—J. B. N.—Rev. D. M L.—J. B.—H. S.—B. B K.—P. B. M.—A. B.—F. C. P.—J. L. D.—"Elsie"—J. B. B.—R. M. D—W. D. H.—E. B. S., Wellman, Iowa, thanks, young gentleman—You'll make an excellent farmer if the tree be inclined as the twig is bent.—O C. C.—H S.—G. S. H.—O. S. B, thanks.—F. S.—M H R, thanks for plan.—C. W K, the reason why we do not sell anything to subscribers is that we do not wish to place ourselves in a position that might justify our readers in suspecting that our advice is *interested* Journals that offer their own goods for sale are trade journals so-called.—H W.—L. V—"Sigma" O. N. C.—T. B., Madison Wis, thank you for plan—W H. C, thanks—G C—N. J. S—M. M. C—H. W.—L J. B—E. E. T.—W. H.—A. G G.—W. V. A. E K. B.—W. A. E.—G. S. J.—Subscriber—H. R. D—N. D.—E G. B. G. S.—M C. H.—S. C. G.—W. I. C.—F. H. S.—S. W. J.—T. R.—

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MAY 21, 1881.

A farmer friend and neighbor, who has known the Rural Farm for many years, and who is quite familiar with the field upon which we have planted our main crop of corn, was greatly surprised upon being informed that, except upon one acre, no fertilizer of any kind had been used. "How many bushels of shelled corn will you give us per acre," we asked—"40 bushels?" "No," he replied, "not 25."

Small Savings — Small Losses.—The man who saves something every year is on the road to prosperity. It may not be possible to save much. If not, save a little. Don't think a dollar or a dime is too small a sum to lay by. Every body knows how little expenditures get away with large sums. But few seem to know that the rule is one that works both ways. If a dime spent here and a dollar there soon make a large hole in a man's income, so those dimes and dollars laid away soon become a visible and respectable accumulation. In this country any man may make himself independent, or keep himself under the harrow for life, according as he wastes or spends his "small change." How many things do individuals and families buy that they do not need, or cannot afford. Think twice before you spend that small coin. Don't be stingy or mean, but also don't be foolishly self-indulgent. The self-indulgent person is far more likely to be ungenerous than the self-denying one. The money wasted on hurtful things alone—the drugs and medicines we mingle with our diet in the forms of tea, tobacco, alcohol and the like,—stand on the very threshold of prosperity, and bar the way of thousands to a home in their old age.

THE GREAT COTTON EXHIBITION.

The success of the great exhibition of cotton and other agricultural products of the South, to be held at Atlanta next October, seems already assured. Thus far, $200,000 have been raised toward meeting the expenses of the undertaking, and advices from all the chief Southern cities tell of enthusiastic co-operation everywhere. Last Monday 300 men were set to work on the main building, which will occupy the race-course in Oglethorpe Park, and be 750 feet long by 90 wide with a transept 500 feet long. This will be devoted to exhibits of textile fabrics and the machinery for producing them. Another building 250 feet long and 100 feet wide will be filled with machinery for preparing sugar, rice and similar products, and a still larger one will contain all varieties of tobacco, its products and the machinery used in connection with it. Another large structure will be devoted to a comprehensive display of the agricultural produce, minerals and woods of the South. An annex to the main building will be known as the Foreign Department, and will be a bonded warehouse under charge of a Treasury Special Agent, for the display of foreign exhibits on which the proprietors do not wish to pay duty. Thirty acres of the park have been laid out in half-acre lots and assigned to as many different planters for competitive trials of skill in the cultivation of cotton. Great efforts have been made to make this a display of every variety of cotton in the world, seed having been imported from Egypt, Guinea, British India and other cotton-cultivating parts of the globe, sometimes at great expense, a single half-pound of one rare sort having cost $200. This plantation has already been seeded down, and is expected to be a peculiarly attractive exhibit. If this enterprise shall be carried out as now designed, it will be the most important measure accomplished by the South since the war, and as a stimulant of fraternal feeling and good-will, it must be a source of gratification and advantage on both sides of Mason and Dixon's line.

INJURY TO RARE PLANTS BY THE PAST WINTER.

With regret we are obliged to state that the Japan Maples, or such of them as we have been testing at the Rural Grounds—have not proven hardy during the past Winter. We regret this the more, inasmuch as the Rural New-Yorker has made a pet of these incomparable little trees and has praised them from the beginning as their beauty richly deserves. We took for granted that they were hardy, having been told years ago that trees, ten years old perhaps, in suburban grounds of New York city had never been harmed. Upon careful examination we find that the Purple dissected-leaf Japan Maple (Acer polymorphum dissectum atropurpureum), really the handsomest of all, and the Various-colored (A. p. versicolor) are killed back to half their hight. The Red-margined Japan Maple (A. p. roseo-marginatum) is killed to within five inches of the graft; while the species, Acer polymorphum, is killed to the ground, and we are not confident that even the roots are alive.

We have also to report that Retinispora pisifera, which has never before been harmed here, and R. plumosa aurea (the Golden-plumed Japan Cypress of which so much has been said) are seriously harmed half way to the ground; while the beautiful Golden Pine which we have alluded to as the finest variegated evergreen in cultivation, is harmed in many parts, though the buds—we are glad to say—are intact.

We are inclined to think of evergreens, as of raspberries, that there is no kind which may be called perfectly hardy. They may stand many seasons without injury, but, sooner or later, a year will come to kill or disfigure them. Not so, however, with deciduous trees, some kinds of which are absolutely hardy, if that word can be said to have any well-defined signification. But among these the Japan Maples—as they grow at the Rural Grounds—should not be placed, though we doubt not they will endure in this climate, eight years in nine.

COMPETITION IN FREIGHT ROUTES FROM THE WEST TO THE SEA.

New Orleans reports that a grain fleet of 29 steamships and 19 sailing vessels left her levee in April, carrying out for foreign markets an aggregate of 1,427,200 bushels of corn and 566,000 bushels of wheat, making the grand total export thence from September 1, 1880, to May 1, 1881, 5,906,600 bushels of corn and 4,267,300 bushels of wheat, against 6,483,300 bushels of the former and 2,713,100 bushels of the latter for the corresponding eight months of 1879–'80. This is an aggregate increase of 977,500 bushels of grain; quite a respectable increase, to be sure; but hardly large enough to justify the cry of alarm raised within the last week by some of our great dailies about the danger to the commerce of this port threatened by the diversion of the exportable grain of the West from the route to market by way of the Atlantic ports to that by way of the Mississippi.

Upwards of a month ago we told of the departure from St. Louis for New Orleans of 680,000 bushels of grain in one day—April 9. Our city dailies seem to have only lately heard of this shipment, as some of them have, within the week, printed the figures in large capitals at the head of alarmist articles on the prospective decadence of the commerce of New York. We wonder whether their anxiety that the legislature should declare the Erie Canal free, had anything to do with their fear for our commerce. There is no doubt, however, that shipments of Western exportable grain by way of the Mississippi will continue to increase in any event with the enlarging area under cultivation in the West; and this increase will be rapid and to the detriment of the commerce of Atlantic ports, so long as the railroad charges to the seaboard are so exorbitant as they are at present. Last Thursday Mr. Joseph J. White, of the Committee on Legislature of the Board of Trade and Transportation of this city, presented to that body a report of his personal investigation of the transportation business of the United States. According to this report grain can be shipped from St. Louis to Liverpool, *via* New Orleans for 17 cents per bushel, while the rate *via* New York is 29½ cents. The rates from St. Paul, Minnesota, too, show a difference of 15½ cents per bushel in favor of the Crescent City. Unless railroad charges on the surplus agricultural products of the West on their way to tide-water, are greatly reduced, New York, Boston, Philadelphia and Baltimore are pretty sure to suffer on account of much of the products that should appropriately pass through them, seeking a cheaper outlet to market not only by way of the Mississippi River, but also by way of the Lakes, the Welland Canal and the St. Lawrence.

DUTY OF INCREASING OUR FOREIGN MARKETS.

"The capacity of this nation of ours for production is unlimited, but the market for these productions is limited," said Secretary Windom last Tuesday night at a banquet given here on the 113th anniversary of the foundation of the Chamber of Commerce, and he insisted that it is the duty of the Government to aid in enlarging our present foreign markets and in opening new ones. In this opinion we heartily coincide. It is by such policy, vigorously and often unscrupulously carried out, that Great Britain has become the foremost commercial nation in the world. Not only have her agents been constantly and laboriously eager to extend the sales of her wares in all civilized lands, but the bayonets of her armies have often opened the road to markets for them in savage and semi-civilized countries. It is by such energetic and far-sighted policy that to-day she rules the markets of the West Indies, Mexico, South America, China and Japan, whose needs ought, geographically, to be supplied from this country. What has the Legislative or Executive Department of our Government done to secure to our agricultural and manufacturing industries their fair share in the trade of these and other lands?

In this connection not only has the Government left undone many of those things it ought to have done, but it has done at least one of those things it ought not to have done, and on one point, at least, helped to curtail instead of to enlarge the foreign markets for our products. One of the most effective means adopted by Great Britain and most of the other prominent European powers for the increase of their export trade has been the encouragement given to the growth of their mercantile marine; whereas since early during our civil troubles the policy of this Government has tended directly to lessen the number of American vessels afloat on the ocean. Before the late war our mercantile navy was second only to that of Great Britain; to-day, so far as the ocean carrying trade is concerned, we have none—worth mentioning. This is well illustrated by the fact that during the first four months of the present year not a single American vessel was loaded with grain at New York for any foreign port. During January there were shipped from here 3,371,744 bushels, in 106 vessels; during February, 4,213,863 bushels, in 125 vessels; during March, 6,645,712 bushels, in 173 vessels; and in April, 6,752,680 bushels, in 171 vessels; or a total of 20,983,999 bushels, in 575 vessels, not one of which bore the Stars and Stripes!

Not only are our citizens not allowed to buy ships where they are cheapest, on the plea that home ship-building must be "protected;" but American ships have been subjected to taxes from which competing foreign vessels have been exempt. For eighteen years a mere semblance of life has been kept in the ocean ship-building industry of the country at the cost of the extinction of life in its ocean ship-owning interests—isn't it about time to put vigorous life into the latter even at the risk of endangering the moribund existence of the former? Already the prophets of evil are foretelling another era of national adversity; but when this comes it will be when we fail to find a market for what we have to sell. Then there will be a glut at home, prices will go down, and the sun of our prosperity will be overcast. The best way to defer that evil day is to enlarge our foreign markets, and one of the most effective means towards this end is to increase the number of American ocean-going vessels. Away, then, with all legislative obstructions on the road to this object!

BREVITIES.

We are sorry to say that of our Black-caps, the Gregg—the best of all—is the one most harmed by the past Winter.

Of all our wheats Shumaker at this time (May 12) looks the best. That is, it is the tallest, thickest, and bears the broadest leaf.

We have received from Dr. M'Aboy of the Thermal Belt, N. C., a sprig of the peach six inches long and bearing 13 peaches the size of peas. This does not look as if the peach crop had been seriously harmed in that genial region.

Our very much esteemed contemporary, the American Dairyman, objects to our equanimity under what it considers the great misfortune of the projected World's Fair *fiasco*. It does not see where the fun to the farmer comes in, nor can we see where the sorrow to the farmer comes in. What profit did the farmer derive from the Philadelphia Show? What glory did the dairyman reap there? Still, in view of the possibilities of benefit to the farmer therefrom, we did our share towards helping the project along, but we believe it better to laugh than to cry over "spilt milk."

Sealed milk-cans or jars, wherever they have been introduced, have inspired city people with a good deal of confidence in the purity of their contents, but of late this confidence is being rudely shaken by the bluish tinge the milk often presents at breakfast, and its streaky, queer appearance when it has rested some time. Water is more plentiful and therefore cheaper than milk on some farms, and on a few of them it is to be feared more of it gets into the milk-can than ever passed through the cow. Moreover, a good deal of the milk sold in these receptacles is put into them at the various milk depots, and the folks there know the right proportions of milk, water, chalk and flour to make a salable article. It is a misfortune to farmers as well as to all other classes that the dishonesty of a few among them is likely to bring blame and loss on many of the best of them.

The shipments of flour from New York during last March exceeded those during March, 1880, by 1 500 000 barrels, and there are strong indications that, ere long, exports of flour will supersede those of wheat to Europe, South America and especially to China. It is estimated that by sending flour instead of wheat from the West across the Atlantic about 30 per cent of the weight and consequently of the freight charges are saved. If, therefore, the freight of wheat to Liverpool, Glasgow, or Bremen be reckoned at 50c. per bushel, the saving would render the wheat worth about 16 cents more where it is produced. This calculation may be a trifle high, but we may safely consider the increase in its worth at 10 to 12 cts. a bushel—an important margin to the farmers of the country and one which would give us a strong hold on our foreign markets. So great is the increase that is being made in our milling capacity that by next harvest there will be facilities for grinding a large proportion of the wheat crop.

The wretchedness of our mercantile navy saves us from some disgraceful losses incurred by over-covetous or dishonest British ship-owners. Lately four English grain-laden vessels were sent to the bottom by their excessive loads. Last April the Belize, with a registered tonnage of 1,768 tons, put to sea from Halifax with a cargo of 2,330 tons, and foundered, as might have been expected at that stormy equinoctial season. The steamer Marlborough, again, left this port with a load of 3 370 tons, though her registered tonnage was only 2 308, and went to the bottom during the first gale. Across the Atlantic, the steamer Constance put out from Cardiff with a load nearly double her registered tonnage and foundered and the Kensington with a registered tonnage of 1,401 and a load of 2,033 tons shared the same fate. The greed for high freight returns or for insurance money must have been the cause of over-loading these vessels and there is evidently need of more stringent legislation to prevent not only the inevitable loss of property, but also the probable loss of life consequent upon such reckless greed.

Pellagra is a disease which of late has become unusually prevalent in some parts of Italy, especially in the provinces of Brescia, Padua, Piacenza and Ferrara, the ratio of those afflicted in Brescia being about eight per cent. of the population. Sardinia and Sicily are exempt from it, and it seems to have been unknown before the middle of last century. Even now its ravages are confined to those of the rural laboring population who are ill-fed and over-tasked—people morally reduced to the level of brutes and physically ruined by the inhuman severity of their labor, the infamous quality of their food and the utter wretchedness of their lodgings. The earliest symptoms of the disease are an itching and redness of the hands and feet, and a scaliness of the skin. The body gradually wastes away and dries up until the patient becomes a mere listless, insentient mummy. Great efforts have been made to discover the cause of the evil, which has been assigned mainly to poor food. Its unusual ravages of late having aroused the attention of the government and of the municipal authorities of some of the chief cities, further investigations as to its origin have been made, which have resulted in what is considered a solution of the mystery. Indian corn meal, or maize flour, is the staple food of the smitten peasants who rarely use it in a wholesome state, but when more or less fermented make it into bread which even the pigs refuse. This is washed down with unwholesome water and is now considered the main cause of pellagra.

Telegrams from Omaha dated the 11th and from Chicago dated the 12th, announce that Eastern Nebraska and Western Iowa are suffering great losses by a disease which veterinary surgeons pronounce to be malignant anthrax, a highly contagious malady known also as carbuncular erysipelas, charbon, bloody murrain, black-quarter, black-leg, black-tongue and by several other names according to the particular form in which it becomes manifest. The chief causes are: pasturing on swampy lands in Spring or Summer, drinking stagnant water, change from scanty, dry feed to abundant, succulent pasture. Young cattle are especially liable to it and those in prime condition. The attack is frequently so speedily fatal that the dead bodies of the animals seen in the pasture in the morning often give to the owner the first intimation of the existence of the disease among his herd. On the first discovery of this malady in a herd the sound animals should be at once removed to fresh pastures where there is pure water and where the usual remedies should be promptly used. It should be borne in mind that the poison of malignant anthrax can be carried to healthy animals in any part of an affected one, even in the excrement, or by flies, etc. It is also communicable to man either by eating the diseased flesh or by the blood or saliva of an infected beast coming in contact with a sore, no matter how small. Should this occur the sore should be at once cauterized with lunar caustic. The carcasses of infected beasts should be buried so that pigs and dogs cannot get to them to spread the malady. Owing to the late severe floods on the bottom lands throughout the West, this disease is likely to be very prevalent there this season among herds feeding on the swampy pastures dotted with stagnant pools—hence this early note of warning to our readers.

Miscellaneous.

RURAL BRIEFLETS.

KEROSENE the nests and roosts of the poultry houses. Whitewash everything in them—ceilings, roosts, nests and all. Sprinkle a little flour of sulphur in the nests. First, however, change the hay or straw. If confined in runs, give them daily a quantity of grass and clover. Provide lime. A little bone flour mixed with their food is excellent, and helps provide material for shell-making. Keep the houses clean.

.....

WE are well satisfied from experiment that rolling (should the weather be dry) after planting corn is advantageous in securing the germination of the seed. The best stand of corn we have ever raised was sown not until June 10, and the land was rolled with a heavy iron roller after planting. The earth is thus brought in close contact with the kernel and the radicle (rootlet) finds support as soon as it emerges from the seed.....

NOT less than 50 of our readers have written us to say that the potatoes received were *not* White Elephants, but Early Rose, Beauty of Hebron, or other old varieties. Not so, good friends. They are—every one—White Elephants, as those who plant them will ascertain.....

A FARMER and subscriber called at the office a few days ago to make inquiries as to certain kinds of corn. In the conversation which followed we had occasion to allude to our crops. "Then," said he, "you really *have* an Experiment Farm, without any humbug?"

We are not surprised that people are incredulous as to much that they read in newspapers. But it had never before occurred to us that any reader of this journal could have doubted that the Rural Experiment Grounds were an actual existence.....

HERE is the first report from the White Elephant Potato. It comes from Richard Lee, of Florida:—"Dug White Elephant to-day (April 26th). Ten pieces were planted, of which six bloomed. The frost had no effect upon the plants. The yield was 72 tubers—38 of large size; 30 average; nine smaller, and five small.

.....

DUCHESS STRAWBERRY is, as usual, the first to bloom at the Rural Grounds. At this time (May 3) Iowa Prolific, Franklin, Emma's Favorite, Memphis Late are looking rather more vigorous than other kinds—though all look well, and an immense crop is promised.....

NITRATE OF SODA, superphosphate (burnt bone treated to sulphuric acid), muriate of potash, the three most important sources of plant food, are now furnished in small quantities by dealers, for the purpose of enabling farmers to determine what their soils most need, at a low cost. Thus, if phosphoric acid alone produces as good results as nitrogen, potash and phosphoric acid combined, it would be a sad waste to apply all three. And so of the others. Full and very plain instructions accompany each bag of these trial sets, which may be purchased for five dollars the set. We are assured by our leading fertilizer firms that this price barely covers the cost of preparing the sets, the object being to familiarize farmers with their economic use....

WE are now preparing to plant the following kinds of sweet corn, viz., Minnesota, Egyptian or Washington Market, Evergreen, Black Sugar, Mammoth, Asylum, Tuscarora, Triumph, Hickox, Concord and Narragansett. All that bloom at the same time will mix, of course. Our object, however, is to note the time of ripening, the yield of each, the hight, the quantity of leaves, as well as the quality of the corn, and all this may be ascertained as well if they do mix somewhat as if they do not.....

IT has been ascertained that in many cases the silk of a given ear must depend upon the pollen from other plants for pollenation—in other words, the embryo kernels (ovules) must depend upon other pollen than that which matures upon the tassel of their own stalk, for fertilization. Three years ago we planted in about one acre not less than 60 varieties of field corn. The ears showed about 25 per cent. of intermixture. An unusual percentage of a failure of the kernels to form, that is, missing rows on the cob, was also apparent. That, however, but 25 per cent. of the grains showed intermixture is no proof that a much larger percentage was not mixed. Many times, without doubt, a kernel may have every appearance of the other kernels upon the same cob, but when planted, *its* progeny may show a decided intermixture. In our attempts to produce a rose-colored sweet corn from a cross between the Black Mexican and Stowell's Evergreen, a considerable percentage still comes black, though *only* rose kernels are planted.....

ONE of the most remarkable results of the experiment above alluded to (60 varieties), was that though no black seed was planted, an occasional black kernel appeared in the product.....

IT would appear by the experiments of the farm superintendent of the Ohio State University, Mr. C. E. Thorne, that the value of the seeds of the Early Amber Cane is only less than that of Indian Corn. He says an acre should yield over 20 bushels of seed. There are other varieties of sorghum, however, that, though their sugar qualities have not been ascertained, would give twice that amount of seed per acre. . . . . Mr. Thorne gives no encouragement to the ordinary, average farmer that he can ever hope to make sugar economically by the appliances within his reach. The required machinery is too expensive, and it requires a special knowledge that he does not possess.....

THE Prairie Farmer concedes that Gen. Le Duc "is an earnest and not entirely impractical man."....

"IT is possible," Mr. Meehan says, "that Bermuda Grass will not (in the South) stand the close clipping of a lawn mower—Has any one tried it?" We would reply that Mr. P. J. Berckmans, of Augusta, Ga., has tried it and finds that it *will* stand the lawn mower.....

THE best material for plant labels is a perennial, evergreen subject of talk. We have shown that common lead-pencil marks upon zinc will endure for years—will, indeed, grow more distinct with age. Such marks become, also, indelible after a few months. May we not accept the lead-pencil and zinc label and call the controversy closed?.....

WE take the risk of displeasing Mr. Woodward by publishing the following business letter:

"Inclosed I send you draft for $66.10. You will observe this is $10 above the amount of bill; but our trustees, appreciating what the RURAL had so generously done for the "Niagara," unanimously voted to add the above amount over. I guess everybody takes and reads the RURAL, for the answers to our advertisements still come pouring in. We have had abundant success with our plan of placing "Niagara." All our vines are placed and we are compelled to refuse dozens of applicants who insist on being supplied, and some even insist on now making contracts for 1882 planting. The vines have come out of the Winter in fine order, although many other kinds were injured."....

ONE of the foremost aims of the RURAL NEW-YORKER is to have a hand in introducing new plants of value. We do not know of any other way in which we can better aid the people for whom we write. The trouble is to escape undue praise in speaking of new plants; for where one is offered that is really an improvement over old kinds, hundreds are announced that prove inferior. It is next to a certainty that our praise of the Niagara is well deserved and we are glad of the above frank recognition that the RURAL has so aided in its distribution.....

WE are continuing the present season to test all the new agricultural plants that we can get a hold of, and, as heretofore, we shall report upon them according to their *merits* without the slightest regard to the introducers' interests. We hope to control the RURAL NEW-YORKER long enough to prove to certain liberal-minded advertising patrons that there are other considerations which we prize far more highly than even their gracious patronage.....

A RESPECTED friend and one who is doing a noble work for American agriculture, though his name is rarely permitted to appear in print, writes us as follows:

"I just happened to fall into conversation to-day with a practical farmer who was once a mechanic. He was speaking of the farmer's life and occupation as so much more an art, so to speak, than those of the average carpenter, surveyor, engineer, and a multitude more in the same class. I was so deeply impressed with the truth of this observation, that I was prompted to write and suggest to you whether it is not one of the mistakes commonly made, that people think farming a low and inferior occupation. Now, it seems that I could more readily turn out a hundred mechanics of any ten trades you can mention, than one good, well-trained farmer that could be ranked first-class. It occurred to me that if you could present this thought and view to your readers you would be doing an essential service to the interest of good farming, and help to honor and dignify the cause. If this suggestion can be of any service to you, I shall be glad."

A "SURE" SAFEGUARD AGAINST MOSQUITOES has just been sent us by a friend in Charleston S. C. and in view of the speedy appearance in this latitude of musical Mrs. Mosquito (the females alone annoy us) with her odious little "bill," we hasten to present it to our readers. The use of it may not be considered "nice" or practicable by all of them, but those of them who are in the open air at night would often doubtless be thankful for its protection. Macerate one part of Pyrethrum roseum in four parts of dilute alcohol; dilute the mixture with ten times its bulk of water, and apply it to any exposed parts of the body, and "it gives perfect security against all vermin."

Literary Miscellany.

LARRIE O'DEE.

Now the widow McGee
And Larrie O'Dee
Had two little cottages out on the green,
With just enough room for two pig-pens between.
The widow was young and the widow was fair,
With brightest of eyes and the brownest of hair,
And it frequently chanced, when she came in the morn
With the swill for the pig, Larrie came with the corn,
And some of the ears that he tossed from his hand
In the pen of the widow were certain to land.

One morning said he:
"Och? Misthress McGee,
It's washte of good lumber, this runnin' two rigs.
Wid a fancy partition between our two pigs!"
"Indeed, sure it is!" answered widow McGee,
With the sweetest of smiles upon Larrie O'Dee.
"And thin it looks kind o' hard-hearted and mane,
Kapin' two friendly pigs so exsadingly near
That whenever one grunts thin the other can hear,
And yit kape a cruel partition betwane?"

"Shwate Widow McGee,"
Answered Larrie O'Dee,
"If ye fale in yer heart we are mane to the pigs,
Ain't we mane to oursilves to be runnin' two rigs?
Och! it made me heart ache whin I paped through the cracks
Of me shanty, lasht March, at yez shwingin' yer ax,
An' a-bobbin' yer head, and sthompin' yer fate,
Wid yer purty white hands jisht as red as a bate,
A-shplittin' yer kindlin'-wood out in the sthorm
Whin one little sthove would cape us both warm!"

"Now, piggie," said she,
"Larrie's courtin' o' me,
Wid his delicate, tinder allusions to you;
So now yez musht tell me jusht what I musht do.
For, if I'm to say *yes*, sthir the shwill wid yer shnout;
But if I'm to say *no*, yez musht kape yer nose out.
Now, Larrie, for shame! to be bribin' a pig
By tossin' a handful of corn in its shwig!"
"Me darlint, the piggie says *yes!*" answered he,
And this was the courtship of Larrie O'Dee.

—Independent.

ADVENTURES OF AN ANTEDILUVIAN

In The Land of Promise.

BY JAMES M'NEILL.

CHAPTER XVIII.

TELERAMIC VIEWS FROM MOUNT KOPIAH.

We were now nearing our destination. We could discern Mount Kopiah, like some tall monument, towering far above the lesser peaks of the mountain range, and, by the aid of our glasses, the substantial building which crowned its summit was distinctly brought into view. It was massive in its architecture, and looked not unlike some ancient castle. And though in its construction the idea of resistance to the high winds of its altitude was ever kept in view, it was not wanting in architectural beauty. The fact that it had the appearance of being chiseled out of the crown of the peak, and that the peak itself was of the purest white marble, would have invested it with an interest and beauty in my eyes, independent of any architectural taste displayed in its construction.

It was circular in form, its walls being relieved by eight low and very substantial round towers. Its roof was a dome, from the center of which another tower rose to the hight, perhaps, of twenty feet above it. It was in this tower that the instrument was placed which made Mount Kopiah famous. It could be seen by us in the open space of about ten feet below the roof, which was a dome in form, and was supported by six iron pillars, which at the same time served the purpose of bolts to hold the roof against the power of the hurricanes.

Our captain now began to increase his altitude so as to strike the level of his landing-place. This was a wide terrace some ways down the sides of the peak, which extended completely around it; so that from whatever quarter the wind might blow, a landing could be effected on the opposite side of the peak without difficulty.

As we approached nearer we could see several air-ships laid up on this terrace, their balloons being emptied and folded by the side of the cars. One was hovering above the terrace like a bird preparing to light, while we could count twelve others approaching from different quarters.

When we came within about a third of a mile from our landing the captain began to reduce his speed, and so skillfully did he gauge the distance that our ship came to a full stop just above the terrace, and, without a moment's delay, down it went to terra-firma, with not a jolt or a jar more than would be experienced on the elevator of some great hotel.

The phillego was almost instantaneously resolved, and the balloon lay a placid heap of cordage and plymer upon the ground. Attendants were at hand who quickly disposed of our ship where it would not interfere with the landing of others, while we passed on to the inclined railway, by which we were to be borne up to the summit. Here again the all-potent phillego was brought into requisition. By its lifting power, the car, which had a seating capacity of twenty passengers, was borne rapidly up an incline of only about twelve degrees from the perpendicular. There were grooves in the rails, as on the elevated railways, which kept the car from leaving the track if a gust of wind should suddenly strike the balloon. I was told that there were eight of these inclined roads at regular intervals around the terrace, and that in pleasant weather they were kept constantly busy carrying passengers up and down.

There was a party of ten seating themselves in the car by which we were to ascend, so that our party just filled its complement of passengers. Scarcely were we well seated when the manager shouted "all ready," and we shot up the incline of over two thousand feet with a terrible whir which makes me shudder even to this day, when I think of it.

Having reached the summit, we stepped out on a marbleized terrace which completely surrounded the building to a width of twenty-five feet, being guarded at its outer edge by a stout iron railing.

It was now eight o'clock, A. M., and, as we had left home shortly after three, we had made the distance of five hundred miles in less than five hours. Yet we had only drifted leisurely along with a favorable current, without any attempt at speed.

I was greatly surprised at the number of people who were constantly appearing on the terrace from the inclined roads. I was told that the building had a seating capacity of 10,000, but I began to think it prudent to secure a seat, especially as the air was thickening with ships approaching from every quarter like bees flying home to their hive.

As I entered the door of this immense building, I stood for a minute lost in wonder at the magnitude of its interior. The wall upon my right was a plain surface, perhaps four hundred feet long by forty high. From each end of this, the rest of the wall extended in the form of an elongated semi-circle. The seats were arranged in rows which followed the curve of the wall, and which rose with a gradual ascent from front to rear. They were not hard and uncomfortable benches or settees, as one might expect to find in a place of such magnitude, and which was frequented only during a portion of the year, but luxuriant chairs, in which one could sit for hours without weariness.

There were nearly a thousand persons already present, and others were crowding in so rapidly at every entrance that we thought it advisable to secure our seats.

The entertainment began about half an hour after we were seated. The room was suddenly darkened, and the next instant a great white object appeared on the plain surface of the opposite wall, which the manager informed us was a snow-capped mountain peak some four hundred miles away. Gradually it moved over the surface of the wall, and lesser peaks and gorges filled with snow and ice were brought into view. Down the side of the mountain we seemed to travel. Now a peak still snow capped crossed the field of our view, around the side of which we continued our descent. Little rivulets were forming from the melting snow, and suddenly a mountain torrent, foaming along between its rocky barriers, burst upon our view.

An exclamation of delight arose from the audience as this swift stream crossed the field. It appeared so near us, and looked so real that it seemed as if we ought to hear the splash of its waters as it dashed down over its rocky bed.

The snow was now left behind us, and we emerged upon green hillocks and grassy slopes whose flower be-spangled freshness was indicative of the Springtime. The trees were putting on their Summer foliage. Birds were flitting about among their branches, building their nests, and making their Springtime loves. While now, and then a fine gray squirrel would scurry across our field of view as though it felt the magnetic influence of five thousand pairs of eyes upon it, and was disposed to hurry out of sight. Next appeared a man sitting on a ledge of rock with a long staff beside him. "Ah!" said the manager, "here is a shepherd. Let us look for his sheep, for they are doubtless near." Then we seemed to travel off to the right again, then up a little, when suddenly the exclamation burst from the audience "There they are!" and sure enough, in a little grassy valley, many of them quite concealed from view, a flock of noble looking sheep appeared, quietly grazing.

Halting awhile to allow us to fully take in this scene, the panoramic views again passed on. The next object of interest which came within the field of the instrument was a herdsman's village. Situated in a delightful valley, which was guarded on either side by a mountain spur, and which seemed to form a passage-way from the plain into the heart of the mountain range, it presented a most picturesque appearance. Great was my surprise to find that in every detail of construction and arrangement its houses were as tasteful and complete as those in any village of the plain. It was not more than half the size of these, but it had its church, its school-house, its gymnasium, and its pavilion. While a dam thrown across a mountain stream farther up the valley caused fountains to play all along the well paved street, and brought an abundance of water into every house.

The men and women were out in the fields, which extended all about the village, harvesting their crops. There was nothing in this part of the scene which was new to me. The implements which they used were the same as those which I had seen. The barns were as commodious and well arranged. The manner of harvesting the crop was the same, and the crop itself was as abundant as any which were raised on the plain. There was not, of course, the same variety to the productions of this mountain village; for by their location they were shut up to a single branch of husbandry. And except the few products of the soil which the people of the village themselves required, their agricultural labors were directed to the maintenance of their flocks.

This picture was the most pleasing which was presented to our view. There was something so cosy in its aspect, and such an air of peaceful contentment and isolated enjoyment about its every feature that I felt as if I should like to fly away to it and dwell for the rest of my life within its happy precincts.

From this mountain village we traveled down into the plain and across a great expanse of country which presented many interesting objects to our view. But upon these I will not dwell, as most of them were similar to the scenes which we had seen in our aerial voyage, though much more distinct and complete.

The range of mountains in which Mount Kopiah was situated now crossed the field, but such was

tho wonderful power of the instrument that the objects which were now thrown upon the wall, though only a few miles distant, were no larger nor more distinct to our view than those four hundred miles away. As the views had been approaching us on our right, having crossed our position, they now began to recede upon our left. The manager now gave us a great variety of pleasing scenes. Long practice with the instrument had enabled him to find readily every important scene in this very interesting section of country within a radius of over four hundred miles, so that, sitting in our easy chairs, we were in effect traveling rapidly from one interesting point to another over the country and feasting our eyes upon every variety of scenery. Cataracts, lakes, rivers, wild mountain views, peaceful rural scenes, and the busy scenes of the cities were thus in succession brought before us, till we had traveled over the country on our left a distance of nearly three hundred miles from Mount Kopiah.

Here a most interesting scene was reserved for us. Old ocean, with its swelling waves beating against a rock-bound coast, now crossed the field of our view.

We wandered along the shore, feasting our eyes upon a great variety of coast scenery, till we came to a great maratime city. Here we stopped awhile to view the shipping in the magnificent harbor. By the wonderful power of the instrument the whole bay could be thrown on the wall at once, or a ship enlarged so as to cover half its surface.

These ships were queer looking things, without masts, or sails, or smoke stacks. They were constructed of wood which was covered with a preparation of blisten, which made its surface, at least on the bottom and sides of the vessel, as hard and smooth as glass. They were all propellors, having philiego as their motive power. They also had philiego sails, to be used on the ocean, which, being self-sustaining and controlled by suitable tackling, entirely did away with masts and spars. In unfavorable weather these could be folded away and the ship managed by her propeller.

After lingering awhile in the harbor and along the wharves of this city, we passed out to sea that we might gain a view of a ship under sail. Diminishing the magnifying power of the instrument so as to take in a larger surface, the manager scoured the sea for some time before the desired object was discovered.

Appearing first a mere blurred spot on the surface of the water, the ship gradually grew in size and distinctness till it occupied in length about thirty feet of the wall. With all sails spread it seemed to be cutting its way rapidly through the gently swelling waves. We could see the spray dashing back from its prow, and the long line of agitated water which it left behind it. The sailors also could be seen moving about at their various duties. We saw them so distinctly that we almost wondered why they were so indifferent to our presence. They looked to us as they would from a cliff but a few hundred yards from them, though they were in reality nearly four hundred miles away.

While we gazed upon this pleasing spectacle, a man whom we took for the captain came forward to the prow with a spy-glass in his hand, and stepping to the gunwale, earnestly scanned the horison. He called two others to his side, and they in turn looked through the glass. They seemed to confer with one another, and then the first looked again. After which he folded the glass abruptly and appeared to be giving orders to his crew.

"A storm is coming," said the manager.

Scarcely had he uttered these words when the sails fell to the deck and an animated scene was presented to our view as the sailors flew about to get the ship in order for the approaching gale. The deck was soon cleared of tackling, everything was made secure and the sailors stood round upon the deck, earnestly scanning the horizon, and apparently waiting for the storm. Soon the waves began to swell and the ship rose higher and sank lower at every undulation. Then the gale seemed to burst upon it in all its fury. The sailors disappeared from the deck, the hatches were closed and the ship like a dismantled and deserted hulk scudded before the breeze, while the foam-crested waves broke over her deck and sometimes nearly buried her from sight. Then a mist came over the scene, which deepened rapidly till it assumed the black appearance of a fierce thunder storm.

A sound as of rain pattering on the roof was now heard which soon became the roar of a deluge. In the midst of this a blinding flash of lightning illumined the scene, and a peal of thunder followed which fairly caused us to shake in our boots.

Never was there a more realistic scene. Indeed, diffidence alone prevented me from running to the door to see if a storm were not actually raging without, while the thought flashed across my mind: perhaps all these scenes which have been presented to us as actual existences are merely painted representations thrown upon the wall by an instrument of the magic-lantern order.

This thought did injustice to the entertainment. It was everything that it was represented to be and these accessories of rain, thunder and lightning were the results of mechanical appliances made use of to lighten the effect of the scene, when, as was often the case, a storm came within the scope of the instrument.

The roar of the down-pour was now subsiding, the flashes of lightning became less vivid, and the roll of the thunder seemed to be dying away in the distance. Soon the mist on the wall lightened, and dark clouds could be seen rolling away across its surface. Then, just as the roar of the storm had completely ceased, a gleam of sunlight was thrown upon the scene, and the next instant the bow of promise appeared in the clouds, spanning the whole length of the wall with its graceful arch. Never was anything more natural, more artistic, or more skillfully executed than this whole storm scene. Growing so naturally out of the grand ocean view, every step in the progress of the scene seemed to heighten its effect, till, when the violence of the storm had passed and the bow of promise appeared in the clouds, the enthusiasm of the audience could no longer be restrained, but found expression in a shout of delight.

This was a fitting conclusion to the entertainment. It had held our unwearied attention for three hours, and we were satisfied to leave, that the vividness of this last grand science might remain unmarred by anything which might follow.

A busy scene was now presented as the great audience of five thousand souls made preparations to depart. During the entertainment nearly all the ships had been elevated to the terrace immediately about the building, where they were ranged side by side with their prows turned outward, almost as thick as they could stand. To avoid collision each tenth one was filled first, and, as soon as it had taken the air, the one on its left was quickly prepared to follow. By this arrangement between thirty and forty rose safely in the air together, and in a little more than half an hour all had departed. The larger ships remained on the lower terrace, and to these their passengers descended by the inclined roads. It was really a hair lifting sight these great air ships, filled with human beings, shooting off into the air one after another from this dizzy hight with the same boldness and confidence that a flock of birds would take the air. But of course I was a stranger to such scenes. It was about twelve o'clock when our party got started on its homeward journey. We had to strike a higher attitude than that by which we came to find a favorable current, and then we made but half the speed of our outward trip, still we had all the afternoon for our journey, and we were willing to have it prolonged.

As soon as we were well settled on our course we turned our chairs inward and spread out our lunch. This was the last thing which I remember. A giddiness here came over me, and it seemed as if the captain had lost control of the ship, and it was whirling wildly through the air, and sinking rapidly toward the earth. This feeling lasted perhaps a minute. Then there came a crash, and I woke to consciousness.

I found myself seated in my easy chair, where I had thrown myself the previous night, the morning light was streaming in through the closed window blinds, and my friend, grown anxious because of my non-appearance at the breakfast room, was pounding on my door, and calling out excitedly to know what had happened to me.

I sprang up and opened the door, and with my finger on my lip enjoined silence. "Say not a word," said I "lest the spell be broken. But take your pen, and sit down quickly." Then throwing myself on the lounge, and covering my eyes from the light, I never got up till I had dictated to him my vision.

THE END.

For Women.

CONDUCTED BY MISS RAY CLARK.

HER SECRET POWER.

EDGERTON.

THERE lived a spinster maid, in days gone by,
Of age most doubtful and of habits sly,
(Exactly where she lived, is now forgot,
But this unto my story matters not,
My readers all, no doubt, can fix the place,
Since she is still well known this day of grace—)
Who had a secret power of finding out,
Whatever happened, and whate'er about;
A most mysterious power it sometimes seemed;
She'd tell you things of which you never dreamed
And oftentimes would cause you great surprise
By that which happened just before your eyes.
The sacred secrets of a neighbor's house—
As they supposed, kept stiller than a mouse—
Flowed just as glibly from her rattling tongue
As though in public they'd been preached or sung:
The little courtships of the girls and boys,
She played with, as do children with their toys—
This seemed, in fact, to be her favorite theme,
She loved so well to baffle, plot and scheme—
And many a young heart did she bring to grief,
By pilfering secrets like a common thief.

At last, her victims, who could bear no more,
Went to her with their wrongs, laid at her door
And asked of her, in mercy to refrain,
From idle tattling which might cause them pain;
And also sought of her to kindly tell,
How all their little secrets she found out so well?
And she their anger only more to chafe,
This explanation to them did vouchsafe—
"The secret of my power has ever been,
A blue-bird nestling under my warm chin!"

YOUR CHILDREN'S FRIENDS.

I KNOW that childrens' company is apt to make some trouble to a home-mother, but it is a kind of trouble that pays. It makes children so much happier to have their little friends made welcome, at their own home. It raises mother in their esteem to have other little folks think she is "nice." Children are sharp little critics; form their opinions, and speak of them to others, quite as decidedly as their elders do.

A little girl who had displeased her mother was "punished" by having her little playmate sent home with sharp and angry words, which were entirely unmerited. The heart of the little visitor was greatly shocked at the rude blow to her spirit and never, even to the grown up years, could look at that woman except with aversion. She was an excellent woman in the main, but she had her "cross spells," like some others we may know. Everybody appears at their worst when such spells are on.

It is an excellent thing to know with whom your children play, and how they deport themselves. If they are made welcome at your home, you have the very best opportunity of gaining this information. It need not be very irksome if you keep the number within bounds. In Summer our little visitors like to sit out with their playthings on the shady porches, or in the door-yard. In cold weather they can have the warm dining room. If disposed to run over the house, it is sufficient to say decidedly, "Don't run up stairs, please, just play in the dining room," and I have never known a child to disregard the request.

It is worth a great deal to make children happy. They remember little treats longer than we suppose. A lady once said that one of the pleasantest recollections of her childhood was of sitting on a grassy bank, and of a fair hand reaching from a window and placing a handful of large, delicious strawberries in her lap.

I often set out a plate of sandwiches, cookies, apples, or whatever is handiest in the pantry and then let the little girls arrange them to suit themselves on this little sprigged tea-set. A little coffee and sugar and milk in their small dishes makes their happiness complete.

Be a lady to your boys' friends and leave a good impression upon them, if you wish to retain the respect of your own dear boy. It hurts boy's feelings, and mortifies them intensely to have mother speak snappishly to them before companions, making them feel that they are not wanted. Such boys are apt to wander away, with most resentful feelings, to seek such company as the mother would dread to have for their associates. But whom should she blame the most? OLIVE.

HINTS.

HOW TO WASH THE FACE.—Many people object to use of soap, disliking the shiny, polished appearance it gives, but any who use Dr. Wilson's directions will find that objection removed. They are as follows: "Fill your basin about two-thirds full with fresh water; dip your face in the water and then your hands. Soap the hands well and pass the soaped hands with gentle friction over the whole face. Having performed this part of the operation thoroughly, dip the face in the water a second time and rinse it completely. You may add very much to the luxury of the latter part of the operation by having a second basin ready with fresh water to perform a final rinse."

RENOVATING OIL CLOTH.—Oil cloth washed in hot water or in soapsuds, or with a brush, will look dingy when dry, and soon crack and peel off; but when always washed in luke-warm water with a piece of soft old flannel, and wiped perfectly dry each time, will last longer and retain its young looks down to old age; it greatly improves its appearance to use half milk and half water. Skim milk, if not sour, is just as good as new milk. This makes oil cloth look as if varnished. Neither soap, hot water or brush should ever be used on it.

TO CLEAN MATTING.—In cleaning matting wash twice during the Summer with salt and water—a pint of salt to half a pailful of warm, soft water; dry quickly with a clean soft cloth. Treated in this way the matting will not grow yellow. Or, if preferred, apply a thin coat of varnish to the matting. That will make it more durable and greatly improve its appearance. If varnished, it will not need washing. Now and then wipe with a wet cloth and dry quickly. Use white varnish on white matting. Be sure and have the varnish thin or the matting will crack.

FASHIONS.

STRAW-COLORED net is used to line the Tuscan lace bonnets.

Folded stocks of illusion are worn with high-necked white gowns.

Jet bands are worked on the wrists of black gloves to simulate bracelets.

Collars of white linen embroidered with small dots to match the color in the dress are to be worn with gingham suits.

Old Pekin striped basques are brought out, furnished up, and worn as new striped garments, superseding the old brocade.

Rough-and-ready straw sailor hats are worn by young girls.

Black is the favorite color this spring, for handsome toilets.

Sashes will be much worn.

Argent is the new name for silver grey.

Striped fabrics are very fashionable.

Open yellow straw, figures largely in Spring importations.

Silk bonnets are in high favor and are made to match the toilet.

Cheese cloth comes in a much improved form for Summer suits.

Large white collars of linen batiste will be much worn this Summer.

Uncut velvet in changeable colors will be used this season as a dress trimming.

Gloves to be fashionable must be loose in the hands and fingers, but actually wrinkled around the wrist.

Shaded or ombre effects are a decided feature in Spring fashions. Shaded feathers, shaded flowers and shaded ribbons are already plentiful.

English and French women are adopting the American fashion of tying a length of gauze veiling over the hat and around the neck. By and by they will send it back to us.

Dressy aprons of tinted mull or of silk in delicate colors are hand-painted in clusters of blush roses, dandelions, forget-me-nots and sprays of holly berries and leaves, and edged with slightly gathered frills of Newport point lace.

ABOUT WOMEN.

MRS. LOUISA G. ALLAN, the wife of the Allan who adopted Edgar Allan Poe, recently died at Richmond in her 83rd year.

MAGGIE MITCHELL'S season, the largest she has ever played, will close in May.

MARIE ROZE made her last American appearance at the Smalfield concert in New York and delighted a large audience with a series of English ballads.

MRS. FRANCES HODGSON BURNETT, at a recent meeting of the Washington Literary Society, read two short original poems.

MRS. GEAR, the wife of the Governor of Ohio, has, with the help of several ladies, been engaged in encasing the torn battle flags of the State in strong gauze, that they may be kept from harm and yet not concealed from sight.

A LONDON letter says: "It was rather romantic, the first meeting of the Baroness and young Bartlett. It seems he was a boy at Highgate School, and Lady Coutts chanced one day to be present at a school exhibition and heard him recite some poetry. She took a fancy to the boy there and then, 'tis said, and invited him, with one of his school-fellows, to visit her. He did so, and in the lulls between lollipops and jam tarts recited his poetry over again, to what effect on the heart and feelings of the old lady the culmination can testify."

MRS. BLAINE can keep a secret and ward off the inquisitive. One day, a short time ago, a fellow with a curious mind thought to ascertain from Mrs. Blaine whether the then Senator would become Prime Minister under Garfield. "I suppose you will be delighted when the Senator goes into the Cabinet?" said Curiosity. "Indeed," replied Mrs. Blaine in apparent astonishment, "I have noticed considerable comment in the newspapers on the subject. Pray, tell me what you know about it."

MRS. OLIVER Wendell Holmes, Jr., recently sold one of the beautiful pieces of embroidery which were at the Boston Art Museum for $500. It is a view of the Charles River wrought on dark-blue satin. Aside from the fact that it is always pleasant to see men or women use their talents, this will help some young women, who foolishly are unwilling to work for pay, to see that wealthy women are not above receiving remuneration for work done by them.

CORRESPONDENT'S CORNER.

I HAVE just read Mrs. Wager-Fisher's article on "Silk Culture in America," and wish the RURAL, as she suggested, would give its readers as much general and particular information on this subject as would be reasonable, or necessary to profitably carry on the business on a small scale. I, for one, would be very grateful, as I have been quite enthusiastic over silk culture ever since it has been started, but could get no *satisfactory* information concerning it. Please tell us where the cuttings and young trees can be obtained, as many of us, no doubt, must begin at the foundation.

Wishing much and long-continued prosperity, I am always the RURAL'S friend, EXPERIENCE.

IN a recent issue a request was made for information regarding graduating dresses—something inexpensive and such material as could be laundried. Also request for color, &c. of silk for dress for young lady.

We reply:—Get nun's veiling, which is very thin wool stuff, at an average cost of 50c. per yard—lower and higher rates according to quality. Make it with short or demi-train skirt with narrow plaiting at the foot.

Drapery in the shape of a pointed apron in front and two or three wide plaitings that cover the back from the left to the bottom of skirt.

For waist have a basque, square or pointed in the neck, and elbow sleeves.

Use the new d'Aurillac lace for trimming the entire or a part of the suit, as fancy requires.

This may be laundried, but with care can be worn a considerable length of time without the need of it. The lace may be bought for from 20 cents per yard upwards.

We think black silk would be the best selection in view of the requirements. Bottle green or navy blue would be a second choice.

Weakness and sickness changed to health and strength with Hop Bitters, always.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING SHOPPING.

MARY WAGER-FISHER.

To go to "town" to shop or "trade" is for many country women an event of real importance and often of very great fatigue, especially where the wants are many and there is only a little money to cover them. To be obliged to select and to decide upon fabrics or furniture within a given time is particularly wearisome to women who, as a class, are not trained to decide quickly in affairs of business.

In order to shop expeditiously, you should begin a week or two beforehand and make a list of everything you need to buy, or hope to be able to buy. After this list is complete, revise it by putting groceries in a column by themselves, and do the same with "notions," which include needles, pins, thread, buttons, trimmings etc., and classify fabrics in the same way. In making this revised list place at the top of the columns the most important articles—those that must be had at all events. Give yourself plenty of room, so that opposite each article you can note down the quantity required, with space also left for what you pay for it. With this prepared list in hand, you know very nearly what you want; nothing is forgotten and you are saved from confusion. In making your purchases first buy the material things, and then use the means left for those next in order.

I have shopped in many cities and villages, and with all my shopping I have found that I get the best satisfaction and the most for my money when I go to a first-class place where there is no deviation from a fixed price and where I have reason to believe that the shop or store is conducted in an honest way. I have never found it profitable to go from store to store hoping to find an article at a less price. A good article is never "cheap," and it is reasonable to suppose that a large dealer can

supply goods at a lower price than a small dealer can. But it is not wise to buy an article that does not suit you, and in order to be suited it is, of course, sometimes necessary to go from shop to shop. There is one sort of clerk by whom those who are not very strong-minded are in danger of being imposed upon—the clerk that tries to bully you into buying what you do not want. At the outset it is best to recognize the fact that the business of the clerk is to show you goods, but that you are by no means under obligations to buy. If you wish to look at goods with a view to future purchase, say so, and the clerk, if he is obliging, will show them to you cheerfully without urging you to buy at the time. No good woman will unnecessarily consume the time of clerks, as she values her own time too much to waste it.

In buying many articles, the buyer is no judge of their quality, and under such circumstances it is best to trust to the experience and honesty of the person of whom you buy. Especially is this true of silks and the finer class of fabrics. There is nothing gained, as a rule, in pretending to be wiser than you are, or assuming to yourself capabilities that you do not possess. In 99 cases out of 100 the average woman might as well buy black silk for her frock with her eyes shut and her hands tied as to look at it and finger it for half a day.

In buying ready-made clothing look well at the sewing. If there are ruffles, examine the hemming. If you are buying suits for children, ask for pieces of the same to patch elbows and knees. Before having the articles worn, see that the buttons are well sewed on, and fasten the ends of all seams so that there will be no ripping.

If you wish to have yourself and your children look the best possible, and close economy be at the same time desirable, you will avoid the purchase of light-colored fabrics in goods that cannot be washed. If you are over tall, or over stout, choose dark garments if you wish to diminish the appearance of your size. Do not buy light-colored mixed goods. Buy black or brown for yourself; navy-blue, bottle-green or dark maroon are all good colors for young girls. Whatever color is most becoming that adhere to, and don't change it for the sake of a "change," unless you have plenty of money, for a different colored frock necessitates a difference of hat, gloves, necktie and wrap, maybe. Moreover, it is pleasant and it gives one individuality to be associated with a certain kind of dress and a fixed way of arranging the hair.

For little girls or misses, a fine dark gingham is in better taste and better style for a frock than any light-colored fabrics that come under the head of "mixed Summer goods." For afternoon frocks for young or middle-aged women they are preferable to lawns or to linens, and if a modest pattern be chosen they will look well for several seasons.

In buying bonnets or hats never invest in a cheap *white* straw. Especially for children do not choose such, nor white straw trimmed with cheap light-colored stuff and flimsy artificial flowers. Select, instead, a stout brown or black straw of good quality and simply trimmed. Such a hat will look well until worn out, and not be spoiled by rain or damp weather. If one child outgrows it it will do for the next one. Train your children to prefer plain, substantial things to cheap and showy ones.

For boys from three and a half years of age upwards, it is fashionable as well as sensible to make their drawers of the same material as that used for their frocks. If ready made suits of cloth are bought you can find flannel of a similar color for the drawers.

Stockings are a very expensive item in a child's wardrobe, and any suggestion as to how the knees may be saved will, I am sure, be acceptable to mothers. "Creepers" are sold at the shops for this purpose, but they can be home made. To a square or oblong piece of thick cloth, large enough to cover the knee well, two elastics are attached at each end to the opposite corners of the cloth—the elastics passing around the under side of the leg, one above and the other below the knee, being of a length to hold the cloth firmly to the knee. Another method some mothers employ is to take a part of the leg of worn-out stockings and draw it over the knee of the youngster after his stockings are on. An old stocking is also the best material to use for lining the knees of stockings, because of its elasticity. It is an economy and a convenience to buy stockings of one color "year in and year out," as you then have to supply yarn of but one color for all the darning. "Odd" stockings can be paired and mended more easily and satisfactorily accomplished.

In brief, if you are obliged to be economical, confine your wardrobe and that of your children to one or two plain and modest colors, if you wish to be tastefully attired. Avoid "fancy" things and things "fanciful," as they prove in the end to be not only extravagant, but a snare and delusion to weary of, and then to be hung away to be food for moths until they become fashionable again, which they never do—quite.

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

FRIDAY.—Sweeping up-stairs takes a part of the morning. Sometimes I wish our bed-rooms could be brighter and more cheerful, though there is no need to say that about Nora's for she has a woman's knack of making "things pleasant in one little place," like Mrs. Whitney's Barbara. But the rooms are small, the furniture old, and I should like to have them renovated according to my taste. But the children are satisfied: they are not yet tall enough to touch their heads against the top of the door, as one of my neighbor's sons can do. I often think one has the greatest pleasure while they are so content, before worldly ambition comes in and does away with their sweet trust and confidence. But I was talking of bedrooms. It seems better for me to hire a charwoman once a month and have the up-stairs put through a process of soap and water early in the morning. It seems to make everything fresh and clean; for carpets cannot cover everything, and I like best those rooms of our house where the floors are of hard wood, with rugs instead of carpets, which are so easily washed that the work is not considered a task by any of the family. And every year these floors improve in richness of coloring, needing only a yearly coat of boiled linseed oil. I rejoice in these pretty wooded floors and wish every woman who has to scrub or even use a painted floor could have them, also for bed-rooms and living-room especially. And as the "melancholy days" are robbed of their terrors where carpets are dispensed with, the sooner the day of hard-wooded, polished floors comes, the better for all.

I was told to-day that Lonsdale "said a bad word." Where do children pick up vulgar or profane expressions? I do not wonder in families where the parents are addicted to this distressing sin, but even where they are not, the young boys seem to learn these things better than their lessons. Perhaps they think it manly; if so, the sooner they are taught differently the happier will be the lot of those around them. I used to wash the children's mouths when they were little and threaten them with soap for the purpose, as a punishment for using rude and vulgar expressions. How hard it is in a family to watch all the sayings and doings of each member and administer the right treatment.

PASTRY.

CHIEF COOK.

SIFTED flour of the finest quality; butter washed the day before in cold water; a heavy, broad-bladed table-knife; a large wooden spoon; ice or ice-cold water and a marble slab to work on instead of a pie-board, are necessary to make such puff paste, as is seen at the best confectioners'. Take one pound of flour and one pound of butter. Cut the butter into four equal parts and then cut one quarter of the butter into thin, very thin, slices. Do not touch it with the hands, the object being to keep it as cool as possible. Then make a dough with the flour, butter and cold water, dredge the slab and roll the dough quite thin. Cut another quarter of the butter as before, lay the chips on the dough, fold it over after dredging with flour, roll thin, add another quarter of the butter, dredge and roll, and then add the last in the same manner, but this time leave it one-half to three-quarters of an inch thick. Cut the dough into as many pieces as is required for the number of pies, or tarts, and as nearly of a size as may be. Place on a plate upon ice till wanted, say for three or four hours. For making the crust for pies or tarts, use a small rolling-pin, only three inches long, by two inches thick, and with this roll the middle of the bottom crust quite thin, leaving the edges three times as thick. The top crust may be nearly as thin as the middle of the bottom one. Have the filling thoroughly cooked before it is put in the pie, and always bake in tin, and then let the oven be so hot that ten minutes time will bake it. For tarts or open top pies, bake the crusts, let them get cold, and put in the fruit just before serving. This makes the finest puff paste. Cheaper kinds are made by adding more and more flour to the pound of butter as above, and again by substituting half butter and half lard, or all lard for the original pound of butter.

THAT QUESTION.

"IT is hard learning old dogs new tricks."

The above ought to be an answer to M. W.-F. "Old-fashioned people" do not care to cut beans in halves and carry a half at a time to their mouths, as I knew a would-be lady to do. But when the lady of the house stepped out of the room she "shoveled them into her mouth as if that receptacle were a granary;" as a little four-year-old grandson said after the extra-nice lady had left, "Oh! grandmamma, I wish you could have seen Mrs. M—— shovel the beans into her mouth after you went out."

What were saucers made for? FARMER.

DOMESTIC RECIPES.

Indian Bread.

Four cups of corn-meal, two cups of graham (or white flour), two cups of sweet milk, two cups of sour milk, one or one-half cup of molasses, one teaspoonful of saleratus. Steam two hours and then bake slowly one hour. If made thinner, by leaving out part of the meal, and a pint of berries added (dried or canned ones will do), it makes a delicious plain pudding. Eat with cream and sugar.

Ginger Drops.

One cup of molasses, one cup of brown sugar, one cup of cold water, one-half cup of butter, one teaspoonful of saleratus, one teaspoonful of ginger (cinnamon is very nice in place of ginger). Stir rather hard and bake in a quick oven. Drop on buttered tins.

Ginger Cookies.

Two cups molasses, one cup butter or lard, one teaspoonful saleratus, one tablespoonful ginger, flour to knead. Roll and cut in squares with a knife.

Washington Cake.

One cup of sugar, one-half cup of butter, one-half cup of sour milk, two eggs, one-half teaspoonful of saleratus, one and one-half cup of flour, lemon to taste.

If you wish cream cake, make two loaves, split open twice, and spread between the layers the following cream: One-half pint of milk, one-fourth cup of sugar, one egg, one-half cup of flour; boil the milk, beat together egg, sugar and flour, and add enough cold milk to stir; stir the mixture into the milk and let it boil till done; then add one-half tablespoonful of extract of lemon; spread when cold EXPERIENCE.

Hop Bitters strengthens, builds up and cures continually, from the first dose.—*Adv.*

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Miscellaneous.

The Literary
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To keep in good humor the good people who delight in good books; to wake up the slow booksellers who are inclined to go to sleep in the summer, instead of, like a 'possum, in the winter; and to prevent our friends, the Cheap Books. book publishers, from forgetting us, we have concluded to publish a few more cheap books. If we are to name him at all, we must, of course, head Shakespeare the list with the immortal Shakespeare, and will give you either his "Merchant of Venice" or "Hamlet," or any one of his fourteen other principal plays, in beautiful type, for 3 cents. At Three Cents. the same price you may have Macaulay's "Life of Frederick the Great," former price $1.25, or Carlyle's "Robert Burns," or Lamartine's "Life Washington Irving. of Mary Queen of Scots," or Thomas Hughes's "Manliness of Christ." Washington Irving's wonderful, delightful, heretofore inaccessible "Sketch Book," which contains the incomparable Rip Van Winkle, you can have for a dime. For the same price A Dime. Tom Brown we will give you "Tom Brown at Rugby," the best boy's book ever written, except "Robinson Crusoe," which you can have also Crusoe. for 10 cents. To charm those who delight in fiction, we give also for 10 cents each, Cooper's "Last of the Cooper's Mohicans," one of the most justly celebrated American novels, and Charles Kingsley's "Hypatia," Mohicans. which worthily ranks at the very front of famous historical fiction. These are only specimens of the cheap books we publish, are all in good type, neatly printed, and are not in the broad side or any other "side" or "square" style, but handy pocket volumes, of course in paper binding. Our motto, however, has always been that a book worth reading is worth preserving, as well as worth owning, and our large list of standard books, to which we are making additions, with speed unprecedented in the history of publishing, are all elegantly and strongly bound, in cloth or better style, and sold at prices proportionately low with those in paper covers. We issue these few only in pamphlet form, as specimens of the quality of our good literature, and these special terms will not be long continued. 5,000 Booksellers throughout the United States and Canada are prepared to either abundantly supply or liberally slander our publications. We give liberal terms to clubs where no bookseller acts as agent. Descriptive Catalogue, and illustrated pamphlet describing book-making and type-setting by steam, will be sent free, on request AMERICAN BOOK EXCHANGE, 764 Broadway, New York.
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$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

Miscellaneous.

CARPETS.

MOQUETTE CARPETS.—We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS.—Having exhausted our first offering of 75 cent Tapestry Carpets, we have placed on sale for a few days, another lot of the SAME GOODS at the SAME LOW PRICE. These goods are equal to those sold elsewhere at 90 cents and $1. We have other goods varying in price up to $1.15.

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News of the Week.

HOME NEWS.

MONDAY, May 16, 1881.

As we go to press telegraphic reports announce the resignation of Senators Conkling and Platt from their seats in the United States Senate.

IT is stated that the President is anxious to consider a practical and speedy plan of dealing with the Mormon question. The recent attacks of the Mormon leaders on Governor Murray of Utah, and General Bane, have excited considerable feeling in the President's mind. Senator Logan, to whom the President confided the championship of the anti-polygamy policy in the senate is actively considering legislation.

The New York musical festival just closed, scored a great success. In no particular was failure written against it. The seven concerts were attended by more than 80,000 people. The receipts were between $80,000 and $90,000, and the expenses about $10,000 less. The music was of a high order and satisfactorily rendered.

One of Green's coal shafts at Carbondale, Kansas, caught fire on the 6th inst consuming all the timbering at the foot of the shaft. There were twenty miners at work and none could escape until the fire was extinguished. Men were then lowered down the shaft and rescued fourteen of them alive. Three were dead and three cannot be found and are probably dead. Several of the rescued were badly suffocated.

The first batch of copies of the revised New Testament have been received in this city for distribution this month to persons who have contributed ten dollars or more to the expenses of the revision incurred by members of the American committee. About eleven hundred persons living in different parts of the country are down on the list of contributors. The total amount contributed up to March 1, 1880, was $32,234 88.

The Rev. Dr. Edwards of Chicago is an enthusiastic bicycle rider. He spins into the city from his home in a suburb, nearly every day, and attracts much attention. He intends next Summer to make a bicycle tour of England.

The late General Emory Upton left an estate worth more than thirty thousand dollars, consisting of an interest in a rolling mill at Battle Creek, Mich., a place upon the Hudson near West Point, and considerable personal property. The income from his tactics is about one thousand dollars per year. His principal heir is his sister Sarah.

The mayor of Cincinnati issued a general order on the 7th, for saloons to be closed on Sunday, but the saloon keepers held a meeting and resolved to keep open, and every saloon was running Sunday. There are 1,500 saloon keepers in the city, six times as many as there are police, and they feel confident that they can successfully resist the authorities.

D. O. Mills, of San Francisco, told Hester Brothers, of New York to furnish the New York residence of his daughter, who has just married Whitelaw Reid, in their own way. Their bill was $460,000, which he declines to pay.

There is a little righteous indignation on the part of some congressmen because Senator Conkling who was seemingly much devoted to upholding the "eternal principles" during the deadlock, now says his action was simply to allow the President to withdraw Robertson's nomination.

The people of Springfield, Ill., amply made up for the snobbery which led the hotel keepers of that place to refuse recommendations to the Fisk University Jubilee Singers. They entertained them at their private houses, and ex-Gov. John M. Palmer preceded their concert with an address of welcome. When there is added to this local demonstration President Garfield's statement that he would invite the singers to the White House if the Washington hotels should decline to take them, the Springfield tavern keepers may begin to discover that the guests of Queen Victoria, the Emperor of Germany, and Mr. Gladstone are not unworthy to enter their establishments.

The plans for a new capitol building at Austin, Texas, have been accepted. The Legislature appropriated $1,500,000 for the purpose, but experts say it will take $3,000,000 if the selected design is followed. Wonder if it will be modeled after ours!

It is believed that the postal revenue for the year will exceed $36,000,000, which is $4,000,000 more than the estimate 18 months ago. The excess is due to the revival of business.

President Garfield has been presented with a letter from President Grevy, acknowledging and accepting the invitation extended to France to attend the centennial anniversary of the battle of Yorktown, October 19th next.

A reinforcement of Mormons arrived at New York recently, 200 strong, under charge of 10 elders, and bound for Salt Lake. They have arrived in time to take part in the rowing up Salt River, which President Garfield is desirous of giving the whole Mormon multitude.

The Cowpens Monument was unveiled at Spartansburg, S. C., on the 11th inst., in the presence of 20,000 people. Gov. Hagood, of South Carolina, presided. The Rev. A. Toomer Porter, of Charleston, opened the proceedings with prayer, reading from a prayer-book found on the battle-field. Thirteen hundred volunteer troops of the State of South Carolina were reviewed by Gen. Henry Hunt, U. S. Army. The granite base and pedestal of the monument were built by the joint contributions of the old 13 States and Tennessee, and the bronze statue of Morgan on top was contributed by Congress and made by Ward.

Prof. Richard A. Proctor, the English astronomer, and Mrs. Sallie D. Crowley, of St. Louis, were married recently. The church was filled with an unusually brilliant assemblage. The bride is a daughter of Charles M. Thompson, of St. Louis, and a niece of Gen. Jeff. Thompson, of Confederate fame.

The strange spectacle of a church floating down a river was seen during the prevalence of the recent floods in Dakota. It was constructed of strong timbers securely fastened, and as it floated down the Missouri the bell in its steeple could be heard above the roar of the flood and crashing of the ice.

The Burlington, Cedar Rapids and Northern Railroad Company propose to take paternal care of their employes, who will be required to sign a pledge of abstinence from liquor, billiards and profanity, and to give the company the right to pay their debts, deducting the amounts from their monthly wages.

Scribner & Co. announce their change of name to "The Century Co.," and "Scribner's" is to be known as "The Century." The change will take place probably some time during the coming Autumn. Wonder if the hieroglyphic cover will be retained!

Boston wants to show New York how to do it. Rumors are afloat that a project for a World's Fair at the "Hub" will soon be set on foot. Well, Boston being one of the suburbs of New York, will be a good place for the Fair, and we won't have to bother with it!

It is stated that a contract has been made with the Wilson line of steamers by parties in Norway and Sweden to transport 50,000 Scandinavians to this country this Summer.

Three colleges are in trouble for various reasons. The academic department of the New York University has been abolished by a vote of its council, at Dartmouth College President Bartlett is at loggerheads with the faculty over the matter of the lecture system, and at Cornell University Acting President Russel has been requested to resign for certain ill-defined, personal reasons. What next!

The first "hot wave" of the season came upon us on the 11th and 12th insts. Several cases of insolation are reported, the most from this city. At Troy, N. Y., the mercury marked 98° and in this city 91°. At Chicago the heat was oppressive, men and horses being overcome with the heat. At Toronto, Canada, the thermometer registered the highest temperature for May since 1841, viz: 90°. Port Jervis, N. Y., 100°.

Mr. Stanley Matthews has been confirmed Associate Justice of the Supreme Court by one majority. Had Senator Anthony, who was against confirmation, not left the room just previous to the balloting the vote would have been a tie, and Mr. Matthews defeated by the chairman's vote. The President will not withdraw the nomination of Robertson for Collector of the Port, and it will probably be confirmed soon.

(Advertisement.)

Dreadful Paroxysms of Asthma.

"I was having *dreadful paroxysms of Asthma* when the Compound Oxygen came. I am very grateful to inform you that in that respect I am greatly relieved." Treatise on "Compound Oxygen" sent free. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

AGRICULTURAL NEWS.

THE known exports of oleomargarine from this port last year amounted to 11,000,000 pounds, of which Rotterdam took nearly 7,000,000 pounds and Glasgow 1,500,000 pounds.....Assemblyman Crasper, of this State, has captured the four cheese factories at Gouverneur for the manufacture of cheese adulterated with lard, but a full-cream cheese factory is about to be started there, too.....There are now over forty butter creameries in Iowa, and about the same number in Wisconsin. They are organized on the Fairlamb system of gathering the cream daily from the farm, paying for it monthly by the inch. The price has ranged in the past year from 12 to 20 cents per inch, the average being about 16 cents per inch.....The Cincinnati Gazette announces it has some good Blount corn for sale for a friend at 25 cents per pound and postage.....In 1792 France and England had each 150,000 land owners, To-day France has 600,000; England, it is asserted, only 30,000..... ...The latest advices from the Northwest say that sickly Winter wheat has recuperated wonderfully under the stimulating influence of the late mild weather.....The Denver (Col.) Inter-Ocean says that enough alfalfa has been sold in that State this year to seed 10,000 acres, which next year will give an increase of 60,000 tons of hay worth $1,250,000, estimating the yield at six tons an acre. On some farms near Denver it has produced eight and nine tons..... John Archer, a vigorous farmer of 45, living at Randolph, in this State, died early last week, in the opinion of his physicians, from poison received into his system while spreading a prepared phosphate on a field. He perspired freely and the poison, it is thought, was taken in through the pores of the skin and into the lungs. It is claimed that when animals die of certain malignant diseases, the poison penetrates even their bones and may be retained in the phosphate prepared from them.....Capt. J. J. Claque, Commissary of Subsistence, sent by Gen. Terry to investigate the losses and destitution caused by the floods in the Missouri Valley, has made his report. In his statement he says that from the mouth of the Big Sioux River to Yankton, the bottom land on both sides of the river was covered with water its entire width, and looked like an inland sea, with occasional huge drifts of black ice somewhat resembling lava beds. Such sudden and merciless destruction is seldom witnessed in a life-time. On the Dakota side alone it is estimated that about 225,000 acres of fertile land were submerged. Some idea of the destruction may be conceived when it is known that here was one of the oldest and most prosperous settlements in Dakota, said to average a family to about every 20 acres, and having a railroad traversing its length for about 50 miles, passing through six thrifty villages, now all submerged with water or entirely washed away, Elk Point Station suffering the least on account of its elevation. It may safely be said that no one living on this bottom was left free from serious loss, many having their all swept away—lands, houses, grain and stock. On the Nebraska side the destruction was much less, as the bottom was not so thickly settled, and did not contain so much land. The most wonderful thing in this whole catastrophe is the small loss of human life.....George Morton, a Canadian cheese exporter, will undertake a scheme for a great dairy colony in the Northwest. There are to be 224 farms of 160 acres each, stocked at the outset with thirty cows each. The novelty will be a narrow-guage railroad, with a station on each farm, so that milk can be carried to a central cheese factory twice a day..... Four car loads of California oranges arrived in Chicago on the 13th. They were in good condition and came from a 400-acre orange farm near Los Angeles. More are coming. The promises of orange culture in the Golden State are now being fulfilled.

Mr. Conlan of Talbot Co, Maryland, is unhappy because in his orchard of 1,000 peach trees one-third of the buds have unexpectedly blossomed. On examination of his trees some weeks ago every bud appeared to be killed, and in his discouragement he offered to sell the entire prospective crop for $5. Mr. McCaffrey, a blacksmith promptly accepted the offer, had the crop transferred in legal form, and now even in the joy of his good luck he stubbornly refuses to share any part of it with the disconsolate Conlan. It is said that if one bud out of five bears fruit, a fair crop is assured—which will probably account for the frequent heavy crops after assurances that the buds had all been killed....

Sussex cattle have at last got an English Herd Book.....English papers tell of a large number of grocers in various towns who are hauled before the magistrates and fined for selling "butterino" for butter... ....The Peasant League is the name of an Austrian association of agriculturists which is asserting the rights of the tillers of the soil.... ....According to Buenos Ayres advices of March 14, six weeks of dry weather were causing farmers and stockmen to fear a winter drought. All the bullock carts in the country were busy taking to the "outside camps" posts and wire fences to inclose new stock ranges starting in all directions. Estrancias, or ranges, 24 leagues in extent were being inclosed by their owners, and land was rapidly rising in value owing to a large immigration—mostly from Southern Europe—and to the development of the country.....Australian news of March 5, tells of a rat plague in Queensland. Many lambs were killed by the vermin, which were doing a world of other mischief.....In New South Wales the wool statistics for the season show an increase of 34,703 bales.....In Sidney the weather was fine and pastures abundant, though it was the second month in the Summer. From nearly all quarters reports about grain were satisfactory.....In Victoria the rabbit nuisance had triumphed over Government control. Guns, traps, dogs and poison were seldom able to protect the crops from the famishing pests.....

The Indiana Short-horn Herders' Association meets at Indianapolis, Tuesday, May 24. The State Wool-growers association convenes at the same place and time.....Georgia farmers have been heavily importing Northern and Western hay, buying at $1 45 per 100. Much Western corn at $1 to $1 15 per bushel, is also being purchased, which Commissioner Henderson regards as a bad sign for Southern planters.....In 1874 Georgia planters used 50,000 tons of commercial fertilizers; this year 150,000 were sold. The acreage of wheat and oats in Georgia is short, but such grain as is planted looks well. Corn is 20 days behind, but the acreage is large.....Southern reports from North Carolina to Texas show a considerable increase in the acreage of cotton, the gain in Georgia being estimated at from 20 to 25 per cent. For the last fortnight the weather has been unusually favorable and the young plants promise fine crops. Corn is being neglected greatly for cotton, ..On May 13 snow was still deep in many parts of the Catskill region, N. Y. Near Gibbon a row of cherry trees were in full bloom standing in a snow bank five or six feet deep.... ...The peach trees in Southampton County, Va., are so full of blossoms that it is feared the matured fruit will break the branches.....Partial records of the live stock interests of Texas show a yearly yield of something over 400,000 head of cattle. Eight dollars per head is about the average market price at San Antonio... ....A telegram from Worthington, Iowa, on May 13, says a storm that afternoon lifted the barn of John Pitman, containing six horses, and carried it a distance of half a mile without injury to the horses; also, two barns belonging to R. Baker were blown a distance of two miles. No lives were reported lost.....In the Illinois House of Representatives the bill prohibiting all railroads in that State from changing their rates of freight without first giving sixty days' notice of the change by posting the same in every station along the line, under heavy penalties, was passed last Friday.....Last Thursday the New York Legislature passed the anti-oleomargarine bill.... ....At Baltimore, May 13, George H. Williams, attorney for the Agricultural and Mechanical Society of Western Maryland at Cumberland, filed his declaration to the suit against Beecher. The declaration alleges that in July, 1878, Beecher agreed for $300 and his expenses to deliver an address for the benefit of the society at its fair on October 23, 1878; that by reason of said agreement the plaintiff was obliged to spend large sums of money in advertising to induce a great attendance of visitors, and large sums to accommodate them, which would not have been expended but for the agreement made with Beecher; that Beecher utterly disregarded his agreement and contract without pretence of excuse. Wherefore the plaintiff claims $10,000 damages.

In December last Nelson Morris, of Chicago, shipped from Baltimore on the Spanish steamer Enrique a number of cattle for Liverpool. During the voyage the vessel encountered severe gales, and it is charged that 126 head of the cattle were thrown overboard. Subsequently Mr. Morris libeled the Enrique, bringing suit to recover $7,500, the estimated value of the cattle lost. Judge Morris, in the United States District Court, filed his opinion in the case last Thursday, dismissing the bill, the bill of lading signed by the agent of the shipper of the cattle having stipulated that the cattle were to be carried on the upper deck and that the steamship owners should not be responsible for any loss that might arise through the cattle being washed overboard or jettisoned .....A New Orleans report says that the Anchor line of steamers are about to take eight of their largest vessels out of trade between our Atlantic ports and Europe and run them between New Orleans and Liverpool. The great increase of grain shipments down the Mississippi is the cause of the transfer...

Rates of lake freights from Chicago to Buffalo opened at 5c. for Wheat and 4½c. for Corn per bushel.....Ocean freights hence to Liverpool have been for a few days 1½@2d, but higher rates are demanded, caused by the expected arrival this week of about 5½ million bushels of grain that was frozen in the canal last Fall.....A Detroit paper of May 4 has reports of the wheat crop from 33 counties out of the 77 in Michigan: of 91 towns 17 report an average; 1, fair average; 2, low average; 33, ¾ crop; 4, ½ crop; 1, 3-5 crop; 6, ⅔ crop; 14, 2-3 crop; 1,30 per cent under average; 2, 2-3 to ¾ crop; 2, ½ to 1-3 crop; 4, average 8 to 10 bushels per acre; 1, considerably injured; 1, poor; one, bad condition. Rains and warm weather have since probably improved the outlook.

A telegram from Washington yesterday says that the investigation made by direction of the Department of State, with a view to correct the exaggerated reports circulated in Europe concerning hog cholera and trichinæ among American swine, has resulted in the following conclusions: That American swine are of the best and purest breeds and are fed and fattened for market on corn; that the reports published in Europe concerning the deaths of American hogs from hog cholera are gross exaggerations; that American hogs which have died or may die of cholera or from any other cause can have no relation to the meat product except to decrease it, as such animals cannot by any possibility pass the severe scrutiny and inspection to which hogs destined for killing and curing are subject; that, even if it were possible to pass such inspection, no art of the curer could convert such animals into meat which could pass the inspection even of a blind man; that the merchantable lard cannot be produced from animals which die of hog cholera or from any other cause; that the freedom from trichinosis of the two great pork-consuming centers of the West, Chicago and Cincinnati, furnishes the strongest possible evidence of the purity of American pork; that the reported cases of trichinosis have resulted from eating uncooked meat, shown to be inferior or rejected, and that thorough cooking entirely destroys this parasite and removes all danger in this regard from eating pork.....Certain returns just made in England in reference to 16 counties show that farms are going a-begging. There are no tenants to take them. Good land in the fen district of Huntingdonshire, which formerly—five or seven years ago—brought from 32 to 40 shillings per acre, is now let with difficulty at from 15 to 25 shillings; clay land, which let at 30 shillings may now be had at from seven to ten, if any one can be got to take it. In Leicestershire things are not much better. A farm of 150 acres, half grass, which had been let for 30 years at 35 shillings an acre, has just been relet for 20 shillings..... ...The Mark Lane Express of last Monday says: "Wheat has but slightly progressed, severe night frosts retarding it. Its appearance, however, remains healthy, and the crop prospects are favorable."

THE French Government has largely enlarged the bounties to French shipping, with a view to increase the French mercantile navy, and Bismarck has just laid before the German Reichstag a paper on these bounties, in which the action just taken by France is made the basis of a suggestion that Germany must enter upon the same course. This paper states the French shipping bounties at $1,800,000 annually; English, mainly in postal subsidies, at $3,205 000; Italy, $1,800,000; Austria-Hungary, $1,085,000; Belgium, $185,000; Netherlands, $65,000; and Germany only $50,000. The United States at present pays nothing but ocean postage to mail steamers, and it practically supports its consular service abroad off American shipping.

(Advertisements.)

His Last Dose.

Said a sufferer from kidney-trouble when asked to try Kidney-Wort for a remedy. "I'll try it, but it will be my last dose." It cured him and now he recommends it to all. If you have disordered urine don't fail to try it.—Yokohama Dispatch.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of Lydia E. Pinkham's Vegetable Compound. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

No health with inactive liver and urinary organs without Hop Bitters.

BURNETT'S COCOAINE,

The Best and Cheapest Hair Dressing.

It kills dandruff, allays irritation, and promote a vigorous growth of the Hair.

Burnett's Flavoring Extracts are invariably acknowledged the purest and best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, May 14.

Boston.—Receivers pay the following prices: BUTTER—New Northern—Vermont dairy lots, choice, 19@20c.; New York dairy lots, choice, 17@19c.; fair to good, 14@16c.; new Western—Choice

creameries, 22@23c.; do. fair to good, 18@21c.; ladle-packed, choice, 15@17c.; do. fair to good, 13@14c.; old butter—Creameries, 18c; Fall-made dairy, 18c.; choice dairy, 15@18c.; common to good dairy, 10@15c., and Western ladle-packed, 10@15c. CHEESE—Northern factory, choice, 13½@14c. ₩ lb; fair to good, 10@12c., and skim at 8@11c.; Western factory, choice, 13½@14c.; fair to good, 11@13c.; skim, 7@10c. EGGS—Eastern, 13½@14c.; Northern, 13@13½c.; Western, 12½@13c. ₩ doz BEANS—Northern hand-picked Pea, $2.65@2.70 ₩ bush.; do. New York, $2.50@2.60; do. common, $2.30@2.40; medium choice, $2.40@2.55; common to good, $2.30@2.45; Yellow Eyes, $2.15@2.40; Red Kidneys, $1.60@1.75. Canada peas, 75c.@$3.10 ₩ bush. for common to choice; green peas, $1.25@1.70. POTATOES are in demand; we quote Aroostook Rose at 90@95c. ₩ bush.; Maine Central Rose at 85@90c.; Northern Rose at 85@90c; Prolifics at 85@90c, and Peerless at 70@75c ₩ bush. APPLES $1@2.25 ₩ bbl. CRANBERRIES $3@6. ONIONS, red $3@3.50; white $3.75@4 ₩ bbl., and Bermuda $1 37½@1 50 ₩ crate. Steamer CORN at 60@61c. for mixed and yellow; no grade at 55@59c. ₩ bush; and to arrive at 60@60½c ₩ bush. for steamer. OATS firm; No. 1 and extra white at 55@57c.; No. 2 white at 53@54c; and No. 2 mixed and No. 3 white at 51@52c. ₩ bush. RYE in small lots at $1.25 ₩ bush, and barley at 95c. @$1 15 ₩ bush; shorts at $17@18 ₩ ton; fine feed at $18@18.50, and middlings at $20@21 ₩ ton.

Chicago.—WHEAT active; No. 2 Chicago Spring $1 01¾ cash. CORN active, 41¼@41¾c. cash; 42c. August. OATS active 36½@36¾c. cash; 37c. May; 36@36¼c. June; 35¼c July; 26¾c. August. Barley 98@99c. PORK dull and drooping at $16 15, cash and June; $16.20@16 25 July; $16 22½@16 25 August. Lard in fair demand but very weak at $10.00¾ cash and June; $10,12½@10 15 July and August. Bulk-meats dull, weak and lower; shoulders $5.55; short rib $8 20; short clear $8 60. BUTTER—The general run of sales has been at 18@22c. for dairy, tub packed; Iowa creamery 25@28c; choice State creamery 23@25c; choice dairy, in tubs 18@20c; choice prints and rolls 18@20c; fair to good rolls 12@16; low grades 8@10c. SEEDS.—Grass seeds—medium red clover $5 25 per bu; timothy $2 65; red top 80c; blue grass $1 35; Hungarian $1.25; millet $1 50 Corn—Sweet $2 50@4; field—King Philip and yellow Dutton $1.75. Minnesota Amber Cane 15c per lb. Onion $3@3 50 per lb. Peas wrinkled varieties—Philadelphia extra early $7 per bu; Champion of England $6; field—green field $2.15. Tree claim seeds per bu. measure—White ash black ash and box elder $2 50; butternut $2. Flax seed $1.10@1.15. WOOL—Quotations nominal; very fine 18@20c; coarse do. 18@22c; medium do. 20@23c; fleece-washed, fine 25@28c; coarse do. 27@30c; medium 29@31c; tub-washed 29@31c; sheep pelts, wool estimated, washed 30c. per lb; green shearlings 10@60c; lambskins 20@60c. HOGS—Market active; common to good mixed packing $5.60@5.95; choice heavy packing and shipping $6@6 25; light $5 60@6; culls $5.20@5 40. CATTLE—Market fairly active and steady; exports $5 65@6 25; good to choice shipping $5 50@5 65; common to fair $5@5.35; distillery cattle $5 30; butchers' and canning $1.25@5; stockers and feeders moderately active but weak at $3.50@4 90. SHEEP—Market weak; choice wooled $6; common to medium $4 40@5.25; shorn $4@5; closed dull, but all sold.

Cincinnati.—WHEAT dull No 2 Red Winter $1.11 CORN dull No 2 Mixed, 47c. Oats active and firm: No 2 Mixed 40c@40½c. RYE dull; No 2 $1 20@1 32. Barley dull at 70c@90c. PORK dull; held at $17 $16 50 bid. Lard dull and nominal at $10 15@10 20. Bulkmeats steady; Shoulders, 5½c; Short Rib, 8½c. Bacon active and firm. Shoulders, 6½c; Clear Rib, $9 15; Clear Sides, 9.40. BUTTER dull, fancy Creamery, 23c@25c; choice Western Reserve, 16@18c; choice Central Ohio, 13c@16c. SUGAR firm; Hards, 10½c@10½c; New Orleans 7c@8c. Hogs quiet; common, $4 55@5 35; light and medium, $5 60@6; heavy packing, $5 15@5 93; butchers' $6@6 25; receipts, 630 head; shipments, 515 head. Fancy Creamery sells at 25c, choice Dairy at 20c, choice Western Reserve at 17@18c, prime to choice Central Ohio at 13@15c, medium do at 10@12c and inferior 6@8c per pound. CHEESE Prime new factory sells at 10@11c, and common at 8@9c per lb. Eggs mainly at 10c per dozen for round lots, but small sales are made to the local trade at 10½@10¾c per dozen. SEED. Flaxseed is steady at $1 10@1 12½ per bushel. German Millet sells at $2 25, common Millet at $1 50, and Hungarian Grass at $1 25 per bushel.

Nothing purifies and enriches the blood and destroys all poisons in the system like Hop Bitters.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 14, 1881.

BEANS AND PEAS.—The bean market is very quiet and prices are easier; still there are no free sellers at the cheaper rates. Wants of local consumers are small and Cuban buyers say they cannot operate at high figures. Green peas dull and lower; Wis. $1.50@1 55; Southern B. E. $3.25.

Medium beans, prime, $2.50@2.55; other, $2.20@2.45; marrow, prime, $2.55@2.60; other, $2.35@2.45; white kidney and pea $2.25@2.40 red kidney, prime, $1.60@1.65, other, $1.40@1.50; black or turtle soup, $1.45@1.50; Lima, $5@5.50 nominal.

BUTTER—The market has ruled fairly strong on quotations. Sudden hot weather has hurt the showing of goods and many shipments from remote points will turn out badly. There is a showing of grass in many invoices, and that, of course makes a premium to sell white. Western is most irregular in quality.

New Butter.—Creamery, choice Western and Pa. 24@25c. other, 20@22c.; sweet cream, 20@24c.; State half tubs, choice, 22c.; fair to prime, 19@21c.; Welsh, choice, 22c.; other 19@21c.; very common or stale new 12@16c.; Western imitation creamery 16@22c.; do dairy 15@19c.; factory 9@14c.

Old Butter ranges 10@18c.

Receipts for week 28,081 pkgs.

Exports do. 2,800 do.

Receipts and exports of butter have run very uniformly for the past three years from June to date.

CHEESE.—The market is weak and tends in buyers' favor. Shippers seem to feel that prices opened above a reasonable prudence and they are in no hurry to operate largely.

State factory ranges from 10@12½c., fair to fine, 8½@9½c.; Ohio factory, 8½@11c.; skim, 3@7½c.

Receipts for week, 31,428 boxes.

Exports for week, 23,660 boxes.

Liverpool cable, 69s.

Steam to Liverpool 15@23s.

Trade has been more or less retarded by a strike among cheese coopers, or scalers as they are called.

COTTON. The market is quiet and weak at for May, 10.22@10 23c.; June, 10.28@10.29c.; July, 10 37@10 38c.; August, 10.45c; September, 10.20@10 21c.; October, 9 87@9.88c.. November, 9 75@9 77c.; December, 9.78@9.77c.; January, 9.87@9.89c.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas*
Ordinary	6¾	7⅜	7¼
Strict ordinary	7⅜	7⅞	7⅝
Good ordinary	8 9-16	8¾	8⅞
Strict good do	9 1-16	9¾	9⅞
Low middling	9¾	10⅛	10⅛
Strict low middling	10¼	10 9-16	10 9-16
Middling	10¾	10⅝	10¾
Good middling	11 1-16	11 5-16	11 5-16
Strict good middling	11 5-16	11 9-16	11 9-16
Middling Fair	12 1-16	12 5-16	12 5-16
Fair	12 13-16	13 1-16	13 1-16

DOMESTIC ESSENTIAL OILS.—Oil peppermint in tin $2 45@2 50; do. in glass $2 10; oil lemon $2.40@2.60; do. wintergreen $2 25@2 30; do. sassafrass 39@40c; oil penny royal $1@1.05.

DRIED FRUITS.—In apples evaporated stock has a fair demand and is firm in price, as also sun-dried lots. Peaches are quiet and firm. Small fruits are at steady prices. Quotations:

Evaporated apples at 8¾@9c. for prime and choice stock; sliced apples at 4¼@5¼c. for good to choice North Carolina; 4@4½c. for Va. apples, 4@4½c. for Tenn. do; 4¼@5c. for State do; 4¼@4¾c. for western, Ohio and Mich. Peaches at 28@29c. for evaporated peeled; 13½c. for unpeeled do; N. C. peeled at 19@22c.; for the better qualities of new and 12@13c. for old; unpeeled peaches at 5¼@5½c. for halves and 5½c. for quarters. Plums at 16@16c. Blackberries at 9c. for prime. Cherries at 15c. Raspberries at 24@26c. Whortleberries 11@11½c.

Receipts for the week, all kinds, 500 pkgs.

Exports dried apples, 2,400 pkgs.

EGGS—Receipts for week, 21,413 bbls.; do. last week 24,100 pkgs. Supplies are large, the weather hot and buyers begin to clamor for "loss of." Southern eggs are losing badly. Prices have dropped to a speculative point but there is not much buying for above use with July weather in May.

Near points, 13½c.; State and Pa., 12½@13c.; Western, 12@12½c.; Southern, 11@12½c.; poorly packed, and small run 11c.; goose 20@22c. duck, 14@15c.

FLOUR—Demand is very good, but the increased receipts, low grain prices and the warm weather injuring stock, prices show a decline.

Quotations are: $3.90@4.55 for very inferior to very fancy superfine State and Western; $4.50@4.65 for poor to choice extra State and Western, odd lots and lines; $4.65@4.85 for choice to fancy do.; inferior to good white wheat, trade and family extras, $4.60@5.50; good to choice do. at $5.50@6.35; (very choice up to $6.50 and fancy at $6.75;) red and amber winter wheat inferior to choice trade and family at $4.60@6.15; round hoop Ohio, $4.60@4 90; and trade and family brands of do. at $5.00@6.25, the latter for very choice; St. Louis $4.75@5.65 for inferior to good extra, $5.65@6.50 for good to very choice, and up to $6.65@7.00 for very choice to very fancy brands; Minn. clear, inferior to very choice at $4.75@5.75; Minnesota "straight," poor to very choice, at $5 35@6.75, and "patent" inferior to fancy at $5.75@7.75; city mill extra at $5.75@5.85 for the West Indies; do. for England at $4.50@4.85 for poor to choice spring wheat; do. trade and family extras, $5.75@6.75; do. for South America, $5.85@6.10, the latter for very choice; No. 2 at $3 00@3.55 for poor to fancy.

Receipts for week, flour, bbls. 83,625; corn meal, do. 3,925; wheat, bush., 855,650, corn, do. 542,800; oats do. 175,800; rye, do. 19,300; malt, do. 68,400; barley, do. 12,650; beans, do., 5,438 rice, pkgs. 650.

Exports for week, flour, bbls. 50,300; corn meal, do. 4 200 wheat, bush. 707,900; corn, do. 358,900; oats, do. 4,400; peas, do. 2,150; beans, pkgs. 605; rice do. 800.

FRESH FRUITS.—Apples have only achance trade with a range of 50c.@$4.25 ₩ bbl. for common to best. Since our last, at Albany the Hon. J. Stanley attempted to revive the Apple-Barrel bill by reconsideration of the vote whereby the act fixing a standard size of apple-barrels was rejected. The motion to reconsider was lost and the apple-barrel question settled for this session. Cranberries are a drug at 50c.@$1 per crate. Strawberries are an important feature; Charleston is sending some fine Young American. New York and N. C. 25@35c.; Charleston and Florida, 25@35c.; poor, 15@20c. Hot-house grapes—Black Hamburgs, $2 ₩ lb. Peanuts have a fair sale at firm prices; Va. hand-picked 4¼@4¾c.; other, 3¾@4¼c; shelled, 3@3¼c; pecans 7@8c.

GRAIN.—Wheat has declined on the average respecting the crops, which are unusually promising Latest sales are for

No. 1 white at $1.24¾@1.25¼, do. May at $1.22¾@1.22¾; do. June at $1 19; do. July at $1.18¾; do steamer grade at $1.22@1.22¾; No. 2 white at $1.22@1.22¾; ungraded white at $1 18@1.22 No. 1 red at $1.29¼@1.30; No. 2 red at $1.25¼; do. May at $1.23¾; do. June at $1.21@1.21¾; do. July at $1.18¾@1.19; do. August at $1.15; No. 3 red at $1.21¾@1.22¾; ungraded red at $1.14@$1.27; No. 2 Chicago Spring at $1.22¾@1.23; No. 3 spring at $1.16.

Corn is freely offered at lower prices latest prices are for

New York No. 2 at 59½@60c.; do May at 56½@56¾c.; do. June at 54@54¼c; do. July at 54¼@54¾c.; do. August at 54¾@55c.; No. 3 at 56¾@56¾c.; ungraded mixed Western at 54@56c; New York steamer mixed at 58c.; No. 2 white at 58¾c; white Southern at 54¾c; damaged corn at 38@52c.

Oats are in very good demand and realizing an advance; latest prices are for

No. 1 white at 55c.; New York No. 2 white at 53@53¾c.; No. 3 white at 50@50½c.; New York No. 2 at 46¾@47c.; do. May at 46¾@46¾c.; do. June at 45¾c.; do. July at 45¼@45½c.; do. August at 39½@39¾c.; No. 3 at 46c.; ungraded white Western, at 47@50c.; ungraded mixed Western at 46@47½c.; white State at 53@55c.; No. 2 Chicago at 47c. asked

HOPS.—The demand from brewers has improved slightly; the export trade is quiet. Prices are held firmly. Quotations

	Cents per ₩	
New Yorks, crop 1880, choice	22	@23
Do, medium	19	@20
New Yorks, crop 1880, low to fair	12	@15
Eastern, crop 1880	14	@22
Wisconsin, crop 1880	14	@22
Yearlings, crop 1879, choice	12	@18
Olds, all growths	4	@10
Pacific coast, new	19	@23
Bavarians	30	@35

Exports for week, 495 bales.

Receipts for week, 904 bales.

HAY AND STRAW.—For hay demand is fair, but with large receipts prices are easy. Straw is in fair demand. Quotations are for

Prime timothy hay at $1.05@1.10 ₩ 100 lbs.; medium timothy at 90c.@$1.00 do.; shipping grades at 80@85c. do.; clover mixed at 90@95c, clover at 70@80c. do. Straw—No. 1 rye at $1.10@1.15 ₩ 100 lbs.; No. 2 rye at 60@65c. do.; oat and wheat at 45@55c. do.

Exports for week, 1,787 bales.

POULTRY AND GAME.—Frozen dressed turkeys have nearly run out, and very little fresh dressed of good quality is here. Market full for choice and weak for other grades. Chickens are plentier as N. J. begins to ship. Ducks dull.

Turkeys, prime fresh and frozen 18@19c.; good 16@18c.; large coarse 12@13c; chickens Spring 60@80c; Winter 30@60c; Fall 20@23c; fowls d. p. 16@17c.; scalded 13@15c, capons out of market; Ducks, choice, 25c.; other, 15@20c.; Squabs, white, $3.75@4 ₩ doz.; do, dark, $1.75@2.21.

Cooped fowls have been scarce and prices are strong. Spring chickens easier. Ducks and geese still offered at the recent decline.

Fowls, 14@15c.; roosters, 9@10c.; turkeys, 13@14c.; Spring chicks per pair, 75c.@$1.50; ducks, 60c.@$1.00; geese, 75c@$1.75 pigeons, 35@50c.

In game a few wild squab quoted $2.25@2.50; Eng. snipe $2.25@2.50 per doz; plover $2@2.25; sand snipe 50c.

PROVISIONS.—Hog products have been fairly active firm.

Mess pork quoted at $16 for old and $16.75@17 for new. Bacon at 8¾c. for long clear and 9¾c. for short clear. Lard—Western steam at 10.90 for spot 10 85 for June 10.83½ for July, August, and Sept. Tallow at 6¾@6 9-16 for prime. Stearine at 13 Beef hams at $22.50@23.50. Beef at for extra India mess, at $23 50@24.50 for city. $11.50@12 for extra mess; nominal for plain mess; packet at $12@13.

Receipts for week, beef, bbls and tcs, 1,750; pork, bbls, 650; cut-meats, pkgs, 8 835; lard do. 9 691.

Exports for week, beef bbls. and tcs., 1 800; pork, do. 3,250; cut-meats, lbs. 4,570,753; lard, do. 4,055,850.

SEED.—Clover is quiet at 8¾@9c. Timothy is firm at $2.90@3.

TOBACCO.—Export trade is moderate and the home demand fair, with prices generally firm.

VEGETABLES.—Potatoes begin to break in prices' Many begin to sprout, and besides green stuff is now plenty enough to call off a large portion of local trade. Sweets not wanted.

Bermuda potatoes $7@8 ₩ bbl.; Florida, $3@7; Early Rose, Nova Scotia d. h. $2 50. Maine $2.50@State, $2.12; do. bulk, $2@2.50; Prolific, $2 87 Mercer, $2@2 25 Jackson White, d.-h., $2.25; Burbank, d.-h. $2 25@2.50; do. bulk, $2 25@2 50; Snowflake $2; do. d.-h. $2 50, peachblow do. $2 25@2 75; Peerless, $2@2.12; sweet Del. $1@2.

The weather has been severe upon tender sorts of Southern garden truck and the range of prices is consequently wide.

Florida cucumbers, per crate $1.10@4; North Carolina green peas ₩ ½ bbl 75c@$1.50; Sav. do. 25@50c. ₩ crate; Charleston do. 25@50c; Fla. tomatoes, $2@3.50; Bermuda do. boxes, 50@75c; Fla. squashes ₩ crate $1@1.25; cauliflower do. $@4 ₩ bbl. cabbages $2@3; Fla. beets $1,25@1.50 ₩ crate; Bermuda onions. $1@1.12 ₩ crate; Fla carrots $3 50@4 ₩ 100 bunches W. turnips, N. C. $3@4; do. radishes, 25@50c. ₩ 100 bunches; asparagus, Oyster Bay $1 50 ₩ doz.; other, 75@$1 25; rhubarb L. I. $1@1.50 ₩ 100 bunches; old turnips 25@50c. ₩ bbl.; beets 75c.@$1; Hubbard and marrow squash $1.75 ₩ bbl.; carrots, $1@1.50; onions, red, $1@1.50 lettuce $2@2.50; Southern string beans, $2@4.50 ₩ bbl. Hot-house mushrooms $1 ₩ lb.; cucumbers 75c@2.25 ₩ doz.

WOOL.—The market has been very quiet the past week; not much life is expected until the new clips come in; prices are held steady.

LIVE STOCK MARKETS.

NEW YORK, Saturday, May 14, 1881.

BEEVES.—Receipts for the week 12,971 head; do. last week, 10,997 do. Cattle rule high though showing a falling off since the early part of the week. Market closes with a weak tendency. Col. stillers sold at 11c. to dress 56 lbs.; native do. 10@11¼c. to dress 56 lbs. fat still bulls 4¾@5c. live weight; corn-fed steers 10c. to dress 56 lbs. 10 12c. to dress 57 lbs.

SHEEP AND LAMBS.—Receipts for the week 20,093 head; do. last week, 26,980 do. Demand for sheep moderate at 5@5¾c. for clipped. No wool sheep arriving. Lambs are plenty and easy; Va. Spring 8¾@9c. ₩ lb.; N. J. $3@5.75 ₩ head.

MILCH COWS.—There is a steadier tone but with the small supplies the market is unimportant; common to good cows have sold during the week at $55@55 per head; a few picked at $60.

SWINE.—Receipts for the week, 25,812 head; do. last week 28,820 do. Market weak at $6 @6.25 per 100. City dressed State 7¾@8¾c.; do. Western 7¾@7¾c.

VEAL CALVES.—Live are steady but low. Few exceed 6c. Near point, up-river, hog dressed are the only dead worth quoting these being, 7¾@8¼ fair to choice. Live milk-fed choice 5¾@6; fair to prime 5@6c; poor 4@4¾c; buttermilk 3@3½c; Mt. Holly calves 6@7c, 220 to 160 lbs.

FARM IMPLEMENTS & SEEDS.

Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above. Address 189 & 191 Water St.

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---TO---
CONSUMERS
---OF---
TEA & COFFEE.

We have made a specialty during the past four years of GIVING AWAY as PREMIUMS, to those who get up CLUBS for our Teas, DINNER SETS GOLD BAND TEA SETS, SILVER-PLATED WARE, and other articles both useful and ornamental,

We import and buy direct from manufacturers all the goods we handle, and own them at the *lowest possible price* cash will purchase. During the past four years we have sent from our store over 12,000 of these orders, and they have gone into almost every State in the Union.

We keep in stock *every variety* of Tea known, and at all prices.

Oolong, Japan, Mixed, English Breakfast, Old and Young Hyson, Imperial, 50c., 75c., very finest $1. Gunpowder, Black Japan, Foochow 75c., $1. Orange Pekoe and Assam, 85c and $1.

Below are a *few* of the many Premiums offered:

With a $5 order we send a *Silver-Plated Caster.*

With a $10 order we send an *English China Tea Set of 45 pieces.*

With a $15 order we send a *Silver-Plated Caster, Pickle Dish and Butter Dish* or an *English China Decorated Tea Set of 44 pieces.*

With a $20 order we send a *French China Gold Band Tea Set of 44 pieces,* or an *English China Dinner Set of 106 pieces.*

We have *hundreds* of letters like the following:

LIME ROCK, Conn., April 30th, 1881.

Gentlemen—Please accept thanks for the beautiful Tea Set, which is much nicer than I expected, and indeed it is surprising to every one how you can do so much for so little. All are so well satisfied with the Tea that I think you will receive another order soon.

Yours truly, MRS. A. THORPE.

TAUNTON, Mass., March 8, 1881.

Gentlemen—I have forwarded eight different orders for Tea, and have received as premiums a tea set, a silver-plated caster, a dinner set, a glass set, a case of silver-plated knives and forks, a pair of French china fruit dishes, and *two ladies gold watches*, and am now on my ninth order. Both Tea and premiums I am well pleased with, and have found perfect satisfaction with both. Yours truly.

MRS. MARIA C. LYNCH.

Orders, with P. O. Order, or money enclosed in registered letter can be sent at our risk. All checks or Post Office orders should be made payable to F. M. LINNELL.

We also send Teas by mail, Without premium, postage paid, at list prices, to those who wish for choice goods and are so situated they cannot obtain them at home. For full price and premium list, send us postal, with address PLAINLY WRITTEN,

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Reading for the Young

FARMING FOR BOYS AND GIRLS—NO. 22.

HENRY STEWART.

Feeding Crops.

AMERICAN farming is different from that of any other country. We have the rough and ready methods used in countries that are only partly civilized and also those highly skilled methods practiced in England and other lands where the soil is cultivated in the most skillful manner. In our vast and almost boundless territory which we call the great West, our system of growing crops is very simple. The soil is plowed and sown with wheat or corn for several years and all the produce is sold. This is kept up as long as the rich soil will grow crops with profit and then a change must be made. Instead of growing crops for sale, feeding crops must be grown; stock must be kept to consume these crops; beef, mutton, wool, pork, butter, cheese or milk must be produced for sale and manure made to keep the farm in a productive condition.

It is fortunate for the farmer if he makes this change before the land is so worn down that it will not produce sufficient crops to support him with comfort. Many farms have, in past years, been so exhausted by long continued cropping that the farmers could not make a living upon them; their children have left the homes where they were born and have gone into distant places, and in course of a few years the lands have gone into the hands of new comers, who, at great expense only, have been able to make them productive again. To prevent such consequences, the farmer should begin in time to grow feeding crops and keep stock, by which the soil is kept fertile.

The crops usually grown for feeding are clover, grass, millet, tares, turnips, mangels, beets, fodder corn, oats and corn for grain. Besides these, hay and straw of rye, wheat, or barley, are fed or used as litter. In feeding these crops, it is the aim of the farmer to get back the market value of them with some profits to pay for the labor and cost of keeping the stock, and to have the manure left free without any cost. If this can be done a great advantage is gained, and the farm can be worked from year to year without losing any of the fertility of the soil, or may even be made richer and more productive. More labor is thus required than in growing grain, and there is less leisure for the farmer.

But labor is the basis of all wealth and nothing of value is ever gained without work. We are told by the wise man that "in all labor there is profit," that is, true labor, which is labor wisely spent and rightly directed. And in this labor of growing feeding crops there are several things that must be done right or we cannot secure the ends we are aiming at; for instance, we must grow the right crops and in the best manner, and we must feed them to the best kinds of stock in the best manner. So that the farmer who keeps stock in the hope of making a profit from them, must study and learn and know what are the right crops to be grown and how they should be grown; and also know which are the best kinds of stock to choose for feeding these crops to; and lastly, he must know all about the business of feeding animals, so that food is not wasted or ill spent.

THE YOUNG QUERIST.

"Experience," Hornellsville, N. Y., asks how to make tuberoses bloom.

ANS.—The bulbs should be potted and set to growing in March, if flowers are wanted in August. Remove the loose rind, offshoots, etc., from the main bulb, being careful not to injure it. In potting, mix a little fine compost with the soil and shake it down. Press the bulb down gently to within a quarter of an inch of its upper surface. Set the pots in a hot-bed until the plants are three or four inches high, then transfer them to the green-house and give them plenty of light, air and water. In June plant in open ground. While in the hot-bed keep the young plants shaded from the hot sun, cover with mats at night, and give them but little water. They should begin to flower the latter part of August.

M. F., Mondovi, Wis., asks if gladioli are often double, and if the same bulb which has produced double flowers will be apt to do so another year.

ANS.—Double gladioli are by no means common. We have seen both single and double flowers on different stalks from the same bulb and also on the same stalk. The bulb of a double gladiolus will probably produce double flowers again.

E. P., Perry Center, N. Y., asks how huckleberry bushes taken from a swamp should be cultivated. The RURAL, a few years since, spoke of huckleberry bushes laden with fruit, taken from a swamp.

ANS.—When transplanted the bushes should be cut down to within two or three inches of the ground, and as much soil transferred with the roots as possible. As yet huckleberry culture on high ground has not been generally successful.

M. P. B., Peoria, Kansas, asks, 1, how to take care of celery in the Winter, and, 2, how to raise seed from it.

ANS.—1. To store celery in large quantities, for the Winter, select a well-drained spot and in it dig a trench about a foot wide and of a depth a few inches less than the hight of the celery. In this set the plants closely together in an upright position. When cold weather comes cover the celery with leaves or straw and place boards on the top to keep out the moisture. The covering should be gradual to prevent heating and decay. When but a small quantity is raised it is a good plan to leave the plants standing where they have grown and earth up about two feet, and, in extremely cold weather, cover with leaves or straw. The celery tops should be dry when packed. 2. Celery for seed should be sown now and transplanted when two or three leaves appear.

NOTES.

THE children's Seed Distribution will be discontinued May 21st the date of this number of the RURAL. I hope to have interesting reports from all parts of the country next season, on the growing of the seeds of this Distribution. I am glad to say that nearly all our Pyrethum Roseum seeds have been applied for, and that a thorough trial of the same is promised by so many.

The packet of seeds from "Elsie" will be tested at the Rural Farm, as desired. We are always glad to receive any new or rare seeds of flowers, etc.

We wish to acknowledge the receipt of a nice box of California raisins and a pair of orange wood sleeve buttons from the talented writer of our "California Sketches." The raisins were made from grapes by drying the latter in the sun, and turning them but once.

In our "Queriet" of April 30th, A. L. P., asked if Briars Sweet Crab is a Winter fruit, to which query we could give no definite reply; but O. C. C. of Oconto, Wis., writes us that this apple ripens in August; is larger than the Transcendent and is one of the best, if not the best, there is. Thanks for the information.

Now, young friends, is the time to study the nature and habits of insects and animals, the growth of plants and flowers. Just by the roadside there may be many little flowers, fragrant and beautiful, whose names are unknown to you now. Why not study about them this Summer? And then the insects which cross your path as you go to school, what are they? What their habits? I am sure a vast amount of pleasure and much profit will be found in acquiring an exact knowledge of these "little things," and should you fail to name them everyone, you can forward them to this office and I may be able to assist you in your search. In sending plants for name be sure to send both leaves and flowers. U. M.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I thought it would not be anything amiss for me to write and let you know how we get along in the Sunny South. As we read the RURAL, I never have seen anything from any of the cousins in Guilford, so I thought I would let you know that you have one, and a dear lover of the RURAL. I think it is the best paper that is published anywhere. We have had the severest Winter that was ever known in Guilford. The last of December and first of January the thermometer was 12 deg. below zero. Peach and apple trees were killed to the ground, and in many places the young trees in nurseries were killed. I have 30 different kinds of roses, besides a great many other flowers. I don't think any of the cousins have good ripe pears to eat, as they don't say anything about it, but I have, and have had all Winter, and would like to send one to Uncle Mark if they were not too mellow. The horticultural leech spoken about in "Woman's Column" we are acquainted with here, and he will stick to you, too, and if you try to knock him off he gets mad.

As ever your friend, E. J. A.
Centre, Guilford Co., N. C.

DEAR UNCLE MARK:—We have long wished to join the Horticultural Club, but mamma said that we must try and raise some flowers or vegetables first, so that she could see how well we would take care of them, before she would write to you. So last Spring sister and I took our money and bought some flower seed. I like zinnias the best so I bought them and balsams and pinks. Sister bought aster, candytuft and double portulaca seed. Mamma had a variety of other flowers and she let us have a place in the yard to plant our seeds and gave us some plants so that we might learn how to transplant flowers, and when the dry season set in she had us water them every evening and sometimes in the morning too; the result was we had nice flowers until late in the Fall and could cut a fresh bouquet every morning for papa's room for he has been laid up with paralysis since last July and could not come out to see how nicely our flowers were growing.

WILLIE AND GERTRUDE MARTIN.
Omph Ghent, Mad. Co., Ills.

DEAR UNCLE MARK:—Papa takes the RURAL and I read the letters from the cousins and have longed to join the Club. I am a little boy ten years old. Papa is a landscape and market gardener, so you may imagine we have plenty of flowers and vegetables and strawberries, which is true. I have planted a few ground peas and hope I will have success with them, I love them so well. I have two little brothers and only one sister. I am the eldest of the children. I have always said I wanted to be a preacher. What do you think of the idea? Some tell me I must not be. Please accept me as a member of your Club,

Your little friend, WILLIE B. DECKNER.
Atlanta, Ga.

[The desire to be a preacher—a minister of the Gospel—is a very worthy one, but your parents and friends can advise you best about preparing for that profession. Many things must be taken into consideration.—U. M.]

DEAR UNCLE MARK:—I have never written to you but once, and I thought I would try again and see what I could do. Last night my father was reading the cousins's letters and I thought as there were so many children asking to join the Horticultural Club, that I would like to join it too. My brothers and I have a little garden which we cultivated last year, and in which we planted mangels, cabbage, and other vegetables. Our mangels yielded a very large crop for the first time. Father and I took three horses, one colt, three head of cattle, six Golden Ovoid Mangels and six bunches of celery to the fair and received first premiums on all. The premiums amounted to $27. This Winter I have been feeding six sheep that are very tame. Two of them are mine, one is my brother's and the other three belong to Father.

Lamartine, Pa. WILLIE W. RUGH.

(Advertisement.)
[Rockford (Ill.) Register.]
Fell Against a Sharp Edge.
This is furnished by Mr. Wm. Will, 1613 Frankford Ave., Philadelphia, Pa.: Some time since I received a severe injury to my back, by falling against the sharp edge of a marble step, the stone penetrating it at least a half-inch, and leaving a very painful wound. After suffering for a time, I concluded to apply St. Jacobs Oil, and am pleased to say, that the results exceeded my expectations. It speedily allayed all pain and swelling and by continued use, made a perfect cure. I really think it the most efficacious liniment I ever used.

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The above have splendid general collections of songs.

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Always cures BILIOUSNESS, CONSTIPATION, PILES and all FEMALE Diseases.
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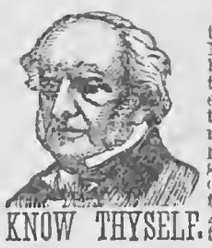

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20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

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A CYCLOPÆDIA WAR.

An honored publishing house whose history is reputed to extend back into the last century, and whose wealth has been estimated at $8,000,000, is that of J. B. Lippincott & Co., Philadelphia. The largest and most important publication ever issued by them was in connection with the great publishing house of Chambers, of Edinburgh, Scotland, and London, England, that of Chambers's Encyclopædia, which, many years ago, they published at the price of $50, (so called) low afterwards reduced to $40, and some years later, as the result of a rupture with the British house, in consequence, (it was said) of the Lippincotts making changes in the American edition contrary to the spirit while still using the name of Chambers, the same Encyclopædia was brought down to the still lower price of $25. Now, in the glorious year 1881, moved, of course, not by the spirit of rivalry, but by the generous and laudable purpose of placing useful knowledge within reach of the people, without regard to the question of profit or of loss to themselves, they are issuing an edition of this same great work, Chambers's Encyclopædia, which *is said to be* revised to date (edition of 18-sixty something), which they are offering at the wonderfully low price of $15 for the work complete, in 10 great octavo volumes. Even at this astoundingly low price they allow the large discount of 40 per cent. when purchases are made in large quantity. The army of the Literary Revolution always rejoices at the multiplication of good books at low prices, and the AMERICAN BOOK EXCHANGE is delighted with the opportunity of uniting with the great publishing house of Lippincott in furthering the sale of this work; and to demonstrate the earnestness of their good-will they propose, so long as the Lippincotts choose to continue the manufacture at this nominal price, to furnish the public with the Lippincott edition at the low price of $3.50 per set, (the 50 cents for cost of handling,) delivered in New York city, or sent by express or freight to any part of the United States or Canada. Considering the munificent liberality of the Lippincotts' terms, it has seemed a great pity that their modesty should prevent them from advertising more widely, and we therefore supplement their generosity by scattering this advertisement broadcast for them at our expense.

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Free Advertisement.

The Literary Revolution

Has not the honor of a century's history, and its present cash capital is only about $175,000. It was started only so long ago as September, 1875, with $70 cash and a few old books, and two years thereafter had reached the dignity of a garret in an Ann Street junk shop, its "army" consisting of one man and a small boy and from the character of the place, *circa* (b-d b-ge) being far more numerous than customers for books. But by January, 1879, the Revolution had accumulated sufficient strength to print one small volume, which was increased to a product in 1880 of *over one million volumes*. Its business offices and retail store now occupy entire a magnificent six-story building on Broadway, and its factories several other buildings elsewhere in the city, and it gives employment to about 600 hands. One item of its present large list of standard publications is an edition of Chambers's Encyclopædia, in 15 handy, beautiful cloth-bound volumes, which it is selling at the low price of $6 per set, (lately reduced from $7.50). This edition is a verbatim reprint of the London edition of 1880 (instead of that of 18-sixty something, as in the case of the Lippincotts, with the alteration of a few census figures). Chambers's Encyclopædia, however, is a foreign work, and it could scarcely be expected that such a work, edited and published for a foreign market, would give as much prominence to American topics as American readers might desire. To supply these and other deficiencies, we are now issuing under the Title of the "Library of Universal Knowledge," a new edition in fifteen large octavo volumes, large type, in which a large force of American editors and writers have added about 1,500 topics, covering about 3,000 octavo pages, thus thoroughly Americanizing the work, and making it nearly 40 per cent. larger than the original Chambers's, 10 per cent. larger than Appleton's, and 20 per cent. larger than Johnson's Cyclopædias. Of this edition, ten volumes are now ready for delivery. Volume XI. will be ready May 20, and the remaining volumes at intervals of a few days thereafter. Price per volume in cloth, $1; in half Russia, gilt top, $1.50.

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Of course the 15,000 topics and 3,000 pages of new matter added to this edition are not to be found either in the Lippincott edition, nor in our own $6 edition. Both of them, however, are excellent works, remarkably cheap, and serve a good purpose for those who cannot afford the new and enlarged edition. Specimen pages, showing type, and giving full particulars, will be sent free on request. Throughout the United States and Canada are prepared to either abundantly supply or liberally slander our publications. We give liberal terms to clubs where no book-seller acts as agent. Descriptive catalogue and illustrated pamphlet describing book-making and type-setting by steam, will be sent free on request.

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PERSONAL ITEMS.

Ex-Vice President Wheeler has become a member of the Malone, N. Y., School Board.

Seven ex-Governors of Texas, Messrs. Bell, Pease, Lubbock, Throckmorton, Davis, Coke and Hubbard, are still living.

President Lincoln's widow is confined to her bed with sickness at the home of her sister in Springfield, Ill. Her recovery is said to be doubtful.

Congressman W. A. Wood, of New York, has just received an award of the first degree of merit for his reaper and mower at the Melbourne International Exhibition in Australia.

Vanderbilt holds $60,000,000 in United States bonds, and their market value is $70,000,000. Other property brings his wealth up to about $120,000,000. The assessed value of all the taxable property in Chicago is $117,000,000. In 1870 the assessed value of all the taxable property in Arkansas was $94,528,843; in Kansas, $92,125,161; in Minnesota, $84,135,332.

(Advertisement.)

[Chambersburg, (Pa.) Herald.]

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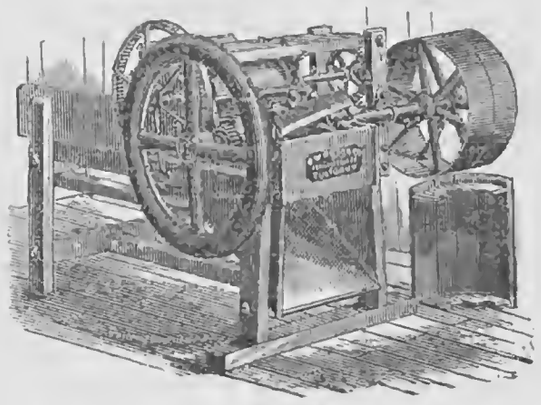

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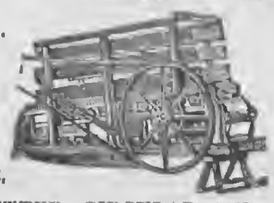

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THE BIGGEST BARGAIN EVER OFFERED.

A $20 BREECH-LOADING GUN FOR $7.00.

NEW, PERFECT, FRESH FROM THE FACTORY AND GUARANTEED IN EVERY RESPECT. EVERY ONE THOROUGHLY TESTED AT FACTORY BEFORE EXPORTATION.

Owing to the failure of the LONDON & LIVERPOOL FIRE ARMS CO., of London, England, we have secured a consignment of their celebrated Breech-loading Shot Guns **THE CHAMPION,** at thirty-three and one-third cents on the dollar of the actual cost of manufacture. One hundred thousand stand of these Guns have been thrown on the European and American market, only a small portion of which have come to America. These we have secured entire control of and offer them for the purpose of introduction at less than cost of manufacture until **JULY 15th, 1881,** when the price will be advanced to the regular rate **$20.00 each.** This Shot Gun fills the long-felt want for a **reliable Breech-loading Shot Gun at a reasonable price.** The country has been flooded with cheap, worthless American fire-arms, made of inferior material miserably put together, and as far as reliability or accuracy are concerned perfectly useless. **THE CHAMPION** is new and perfect, finely finished, case-hardened and blued, made of very best materials, and by the Improved Attachments, as shown in cuts Nos. 1 & 2, are rendered superior to any other English or American Shot Gun. They are too well-known to need extensive description, when we state that they are perfect, and warranted **Genuine CHAMPIONS,** that is sufficient. Every Man or Boy in this country who needs a Shot Gun should purchase one of **THE CHAMPIONS,** as they are the biggest Bargain ever offered in America, and will never be offered again. We **GUARANTEE** these Shot Guns to be in every respect as represented or Money will be refunded. You cannot let this opportunity slip if you want a Shot Gun, and as a chance for speculation it is well worth your attention. You can at any time sell the Shot Gun for a great deal more than you gave for it. **THE CHAMPION** is a great favorite with Sportsmen on account of the rapidity and ease with which it can be loaded, and its superior Shooting qualities. That it stands unrivaled, as a first-class Fire-arm, is shown by the thousands of English testimonials on file. The editor of THE ATLAS (N. Y.) says: *"They are the most extraordinary bargains I ever saw. They shoot equal to my $90 Scott Gun."* He has bought two. R. E. Reed, Secretary of the New York Ducking Club, says: *"Your CHAMPION IMPORTED BREECH-LOADING SHOT GUN is an unheard-of Bargain and worth at least $20.00. Our Club will have several. Heartily endorse your assertions: this Shot Gun will more than satisfy every purchaser."* **ORDER AT ONCE** as our consignment is only **ONE THOUSAND** and our limit is **JULY 15th, 1881.**

TAKE NOTICE—We will send (until July 15th, 1881,) **ONE CHAMPION IMPORTED BREECH-LOADING SHOT GUN** as described above, carefully boxed, for $7.00, and when Cash accompanies the Order will give Free one of our new Sportsman's Cartridge Belts, as shown in cut, also 50 Metallic Reloadable Shells (*last a life-time*).

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BOLSTER SPRINGS FOR FARM WAGONS.

Made of Best Oil Tempered Steel

SOMETHING NEW!

They save largely from wear and tear in every part of the Wagon. They remove all necessity for a Spring Seat. They convert a common Lumber Wagon into a Spring Wagon, making it equally comfortable for from one to twenty persons. They are admirably adapted to the wants of Fruit and Vegetable Growers. They are suited to all makes and sizes of Farm Wagons, and can be attached by any one. They make the cheapest and easiest riding Spring Wagon in the market. These Springs have been in practical use for over three years, and are a pronounced success. No Teamster or Farmer can afford to be without them.

We want Agents everywhere. Send for description and prices, and mention this paper.

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All the ground a person can walk over in a day.

THE EASIEST TO HANDLE AND THE FASTEST HAND PLANTER IN USE.

Every Planter fully warranted and satisfaction guaranteed. Inducements on samples this season. Send for circular.

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FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

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Anti-friction Hay Carrier. Grapple Fork.
Wood Pulleys, Floor Hooks, etc.
Send for circular and designs for tracking barns to
U. S. WIND ENGINE & PUMP CO.,
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SENT FREE Treatise on improved methods. Tables yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa

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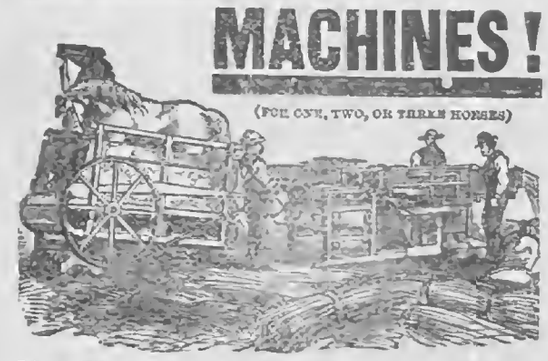
LATEST IMPROVED HORSE-POWER MACHINES!



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For Threshing and Cleaning Grain and Sawing Wood.

THE MOST SATISFACTORY MACHINE IN THE MARKET.

They will develop more power, do more work, run with less elevation, than any other machine made; and are easier for the horses.

Highest Award at all Competitive Exhibitions
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PENNSYLVANIA LAWN MOWER.

1881

Surpassing all others and pronounced the *best*, lightest runs more easily, cuts longer grass, is more durable, requires less repair, cuts grass more smoothly, is less liable to obstruction, is of handsome appearance.

Penn. State Agricultural Society says: "It will, we believe, wear longer, do the work better, with less labor than any other Mower. One of the peculiarities is that it will cut higher grass than any other Mower."

Send for Illustrated Catalogue. Every machine warranted. Address

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These Powers are *guaranteed* to produce more Power with *less elevation* than any other Railway Power.

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Also Manufacturers of
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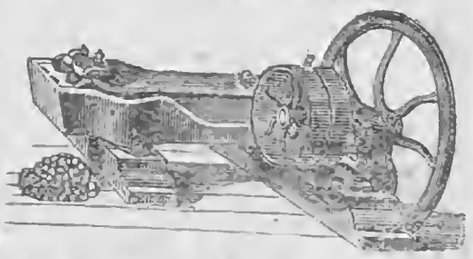
COMMON SENSE ENGINE.

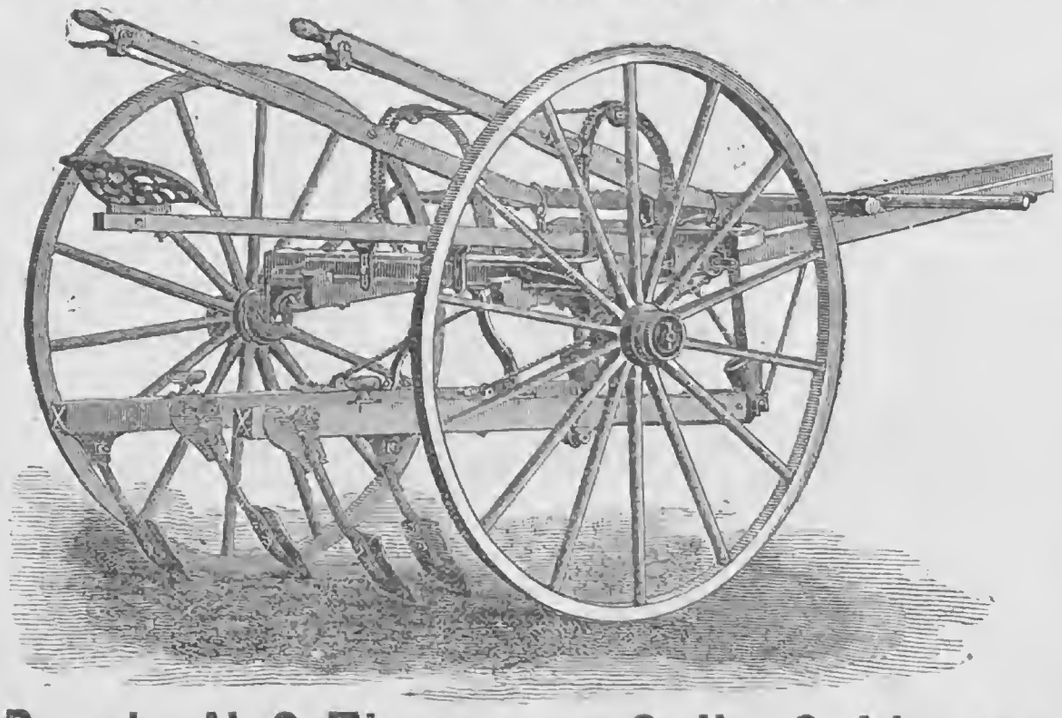
Simple, durable, of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3 horse power, $275; 5-horse power, $300; 7-horse power, $375; 10-horse power, $500. These engines fully guaranteed in every respect. Address Common Sense Engine Co., Springfield, Ohio.

CHEAPEST AND BEST FERTILIZER---FOLLOW NATURE.



Which USES GROUND RAW LIMESTONE in MAKING THE SOIL. There were no Lime Kilns around burning lime when the good **Limestone Farming lands** were originally made. Every Farmer can prepare his own Fertilizer with an **ordinary Horse Power** by using **FORSTER'S COMBINED CRUSHER & PULVERIZER,** which takes a lump of Limestone three to five inches square, and Crushes and Pulverizes it in **one operation,** same as Burr's. Farmers use the Ground Raw Limestone, and drill and sow it just as it comes from the machine. W. W. Reed, of Erie, has tried it 6 years, and says it shows a profit over Bone Dust of $4.96 per acre; over Phosphate of $4.28 per acre; over Guano of $9.70 per acre; over Salt of $5.90 per acre, **and that it will last twice as long."**—John G. Barr, of Montgomery, Lycoming Co., says: "I believe it to be the cheapest and best Fertilizer in this country. *It is worth three times as much as Burnt Lime, and with this machine does not cost half a much as Burnt Lime to make."*—H. C. Falls, New Castle, Pa., says: "I used the Ground Limestone last year with great satisfaction as to results, and cannot too strongly recommend it for farm and garden purposes Where I dropped my corn on top of it, the corn came up first, and was strong and thrifty—the Limestone drawing the moisture to the roots. Used in place of Paris green on Potatoes, it kept the Bugs away and made the plants thrifty and strong; being washed into the ground, it benefited the Potatoes in an astonishing manner. Address only **TOTTEN & CO., Pittsburgh, Pa.** ONLY MAKERS.

THE BEST IS ALWAYS THE CHEAPEST.



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EVERY FARMER SHOULD HAVE ONE.

See Illustrated article in edition of May 14th. Special prices to Farmers for introduction into localities where we have no agents. ☞ Send for Circulars, Prices and Terms, to

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Thousands of Travelers by land and sea have vouched for the efficacy of Hostetter's Stomach Bitters as a preventive of the physical disturbances which ordinarily arise from change of climate and the changes of diet, water, &c., incident to a wandering life. Upon systems toned, invigorated and regulated by this genial vegetable antidote the external causes of debility and disease seem to produce little or no effect. Forearmed with Hostetter's Bitters the voyager may bid defiance to sea-sickness and encounter the chilling fogs of the British Isles, the coast winds of the Antilles, the icy temperature of Northern Alaska, or the burning heat of the tropics with equal impunity. The effect of this admirable medicated stimulant is greatly to increase the vital energy of the system, thereby enabling it to resist and repel the exciting causes of disease.

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A full assortment of seasonable French and English novelties.

Swisses. (Ecrue and White.)
Fancy Mulls.
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Organdies.
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Tidies in great variety.

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Broadway and Twentieth Street.
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Cabbage Plants by the Million. 150 Good plants of the best varieties sent, PREPAID, by mail to any address for $1.00. Also Cauliflower plants, large quantities, at mere nominal price. Send for circular. Address JOSEPH HARRIS, Moreton Farm, Rochester, N. Y.

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A GIANT HORSE & GIANT OX.

Will pay the PRICE OF A GOOD FARM for any such animals now in existence that may be larger than those we now exhibit. Answer by mail, giving hight, weight, length, girth, age and all particulars. Must be sound, healthy and docile.
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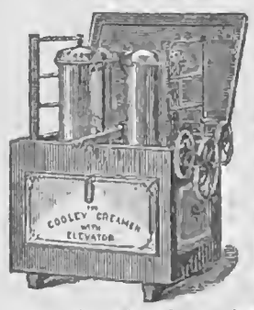
GOLD MEDAL, PARIS, 1879.



Butter made by this Process was awarded **Sweepstakes** at International Dairy Fair, 1878, and **Gold Medal** at same Fair, 1879.
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MANUFACTURED in FOUR STYLES and TEN SIZES.
THE REGULAR.—The cans in this, removed to bench for skimming automatically
THE JUNIOR.—Skimming done automatically without removing cans. THE UPRIGHT OR CABINET.—Has a compartment under water tank, the illuminated conical point of cans projecting into this compartment, skims without removing cans.
THE ELEVATOR.—Has a hoisting arrangement for raising cans out of tank. Milk drawn off automatically before removing cans form platform of elevator.
They require no milk-room. They raise all of cream between milkings. Impure air, dust or flies cannot reach milk set in them. The cans are submerged and water sealed in each style.
Each style has transparent panel for the purpose of determining when the milk is out, and cream about to flow. Our patents cover these processes.
No others have a right to use them.
☞ Send for "DAIRYMAN" giving particulars.
VERMONT FARM MACHINE CO.,
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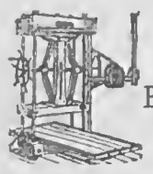

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$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

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A Sketch from Life in New York.

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ARE ABSOLUTELY PURE.

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The character of LANDRETHS' SEEDS has been substantiated *beyond all question.*
They are the STANDARD for Quality.
Over 1500 acres in Garden Seed Crops under our own cultivation.
Ask your Storekeeper for them *in original sealed packages,* or drop us a postal card for prices and Catalogue.
Wholesale trade prices to dealers on application.
Founded 1784. **DAVID LANDRETH & SONS,** 21 and 23 S. Sixth St., Philadelphia.

Established 1848.
He the LARGEST SEPARATING CAPACITY
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LINCOLN PATENT
CHANNEL CAN CREAMERY.

Deep setting perfected. Gets all the cream in less than ten hours, with ordinary well or running water, or in two hours with ice water, with less than half the ice called for by any other process.
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164 & 166 West Main St., Rochester, N. Y. General Agency and Headquarters for all the best Agricultural Implements needed by farmers. Send for Circulars.

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CREAMERY
Perfect in Principle and in Operation.
Can be used with LESS ICE and LABOR than any other Creamery now in the market
For Circulars address
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$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine

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TROPIC FRUIT
LAXATIVE
Prepared from tropical fruits and plants.

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PRICE 25 and 60 CTS. SOLD BY ALL DRUGGISTS.

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FOR EVERYONE
AT WHOLESALE RATES.
Petunias only 6c. each; Pansies, 4c.; Coleus, 4c.; Heliotrope, 6c; Geraniums, 8c.; Lemon Verbena, 8c.; Fuchsias, 6c.; Verbenas, 4c.; or, 50 Plants, suitable for a small flower-garden, for $3; or, 100 Plants for $5. All other plants as cheap.
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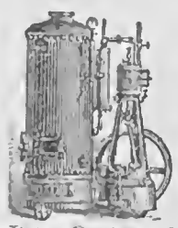
Established 1840.



Patent spark-arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from $150 upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to
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Only mills made with Cast Cast Steel Grinders.
Warranted superior to any in use, for all purposes. Will grind faster, run easier and wear longer. *Satisfaction guaranteed.* Also, Corn Shellers, Feed Cutters, Cider Mills, &c. Send for circulars containing our challenge, open to all, and prices. Manufactured by
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Name this paper in application for circular.

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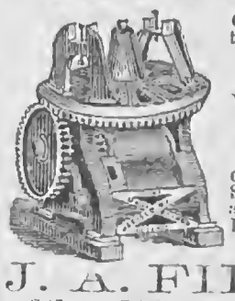

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CHEAPEST MILL MADE.
Warranted in every respect. We manufacture
Ten Different Styles
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Send for Circular to
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MANUFACTURERS OF
REAPERS, MOWERS, COMBINED MACHINES AND
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Since 1877
The Machines of this Company
HAVE BEEN AWARDED
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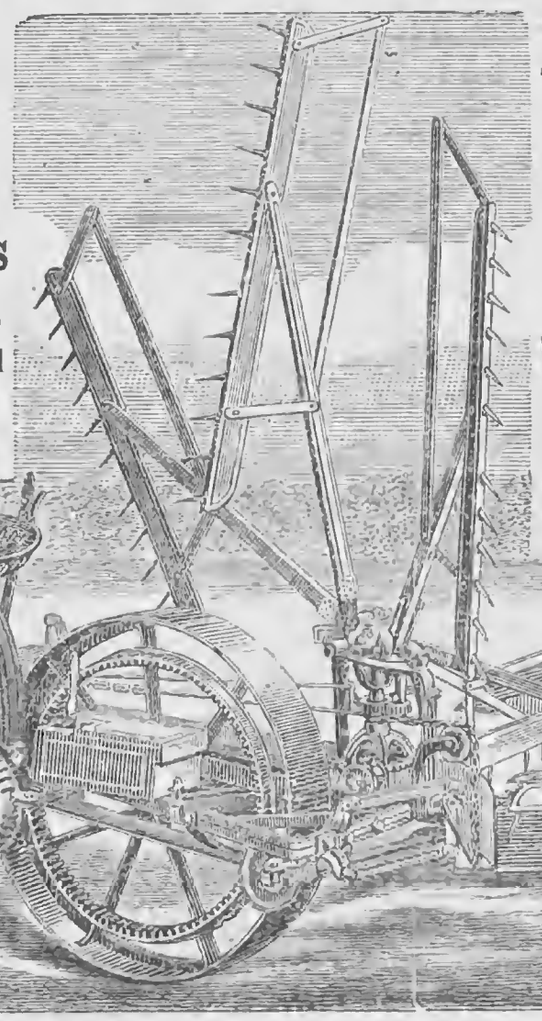
IN ACTUAL FIELD TESTS,
In competition with all the Leading Machines of the World.



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WROUGHT IRON HARVESTER
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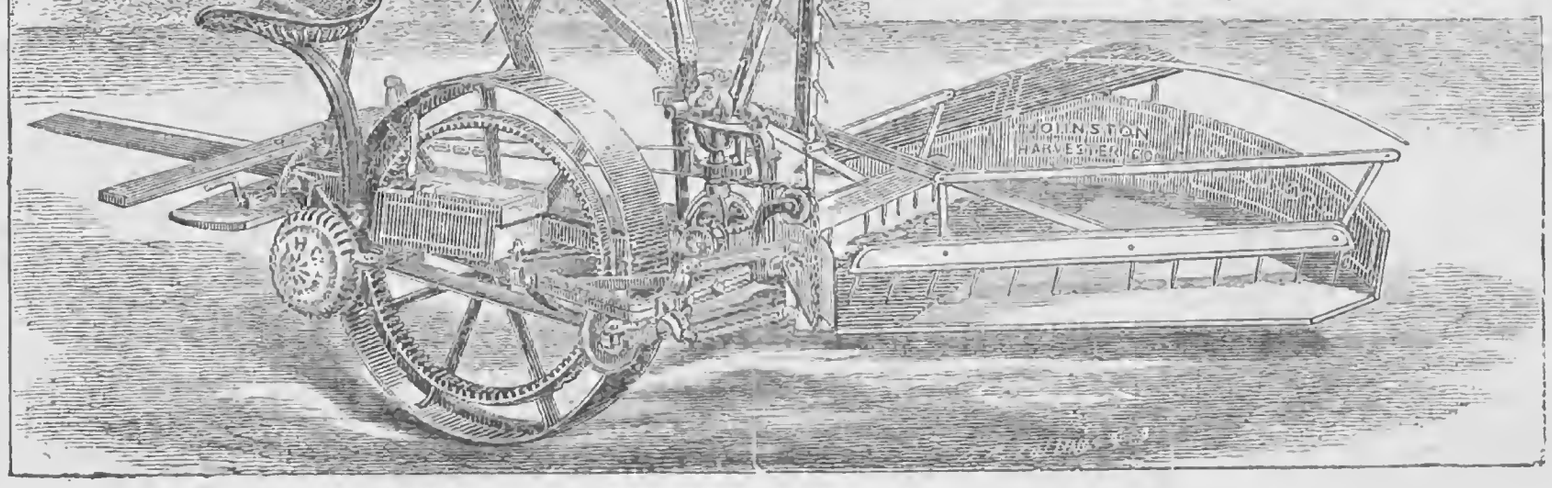
It has worked its way through the most difficult fields of grain, and in all parts of the grain growing counties of the world, and always with the same satisfactory result.



THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL.—No. 1635.} NEW YORK, MAY 28, 1881. {PRICE FIVE CENTS $2,00 PER YEAR.

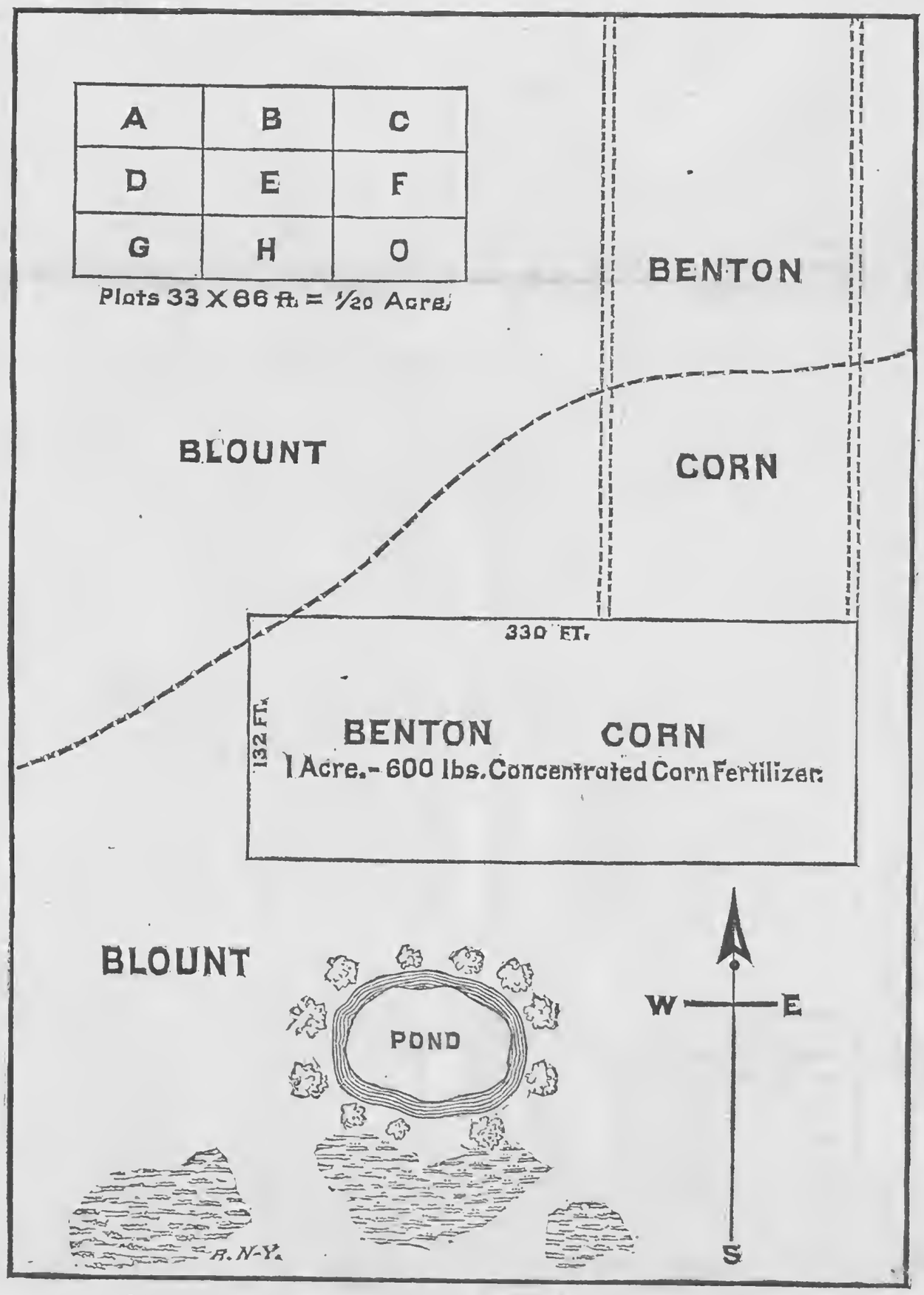
[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Field Crops.

NOTES FROM THE RURAL FARM.

Corn Experiments.

IT is very desirable that all of our farmer readers should familiarize themselves with the experiments we are making in connection with the cultivation of corn the present season and with the field itself in so far as this is possible. We have, therefore prepared a diagram which will serve to place the matter clearly before them. This field of about six acres—we have not yet measured it—has been, as already stated, in grass and pasture for six years. The sod which was thin and worn out was turned late in March. April 24 to 27 inclusive it was harrowed three times; then rolled and again harrowed, no manure or fertilizer of any kind having been spread upon it. An acre, as shown, 132x330 feet, was then measured off and 600 pounds of "corn manure," extended with about the same bulk of earth, thoroughly mixed, were sown upon this acre which was at once harrowed again. The entire field was marked off North and South, the marks precisely three feet ten inches apart. Upon the measured acre we drilled in four quarts and a pint (kernels one foot apart) of what we shall call BENTON Corn. This same corn was also drilled in upon little less than an acre upon the land between the double-dotted lines connecting with the acre to the South, so that we should have the required data for comparison between the product of the manured acre and that of the natural soil. The plots A, B, C, D, E, F, G H and O are each 66 feet long by 33 feet wide, or one-twentieth of an acre. The A-plot is manured with seven and a-half pounds of nitrate of soda, furnishing, according to analysis, 1½ pound of nitrogen. B-plot is manured with 17½ pounds of superphosphate supposed to furnish 2⅝ pounds of phosphoric acid; the C-plot with 7½ pounds of muriate of potash furnishing three pounds and three-quarters of actual potash. The D-plot combines the nitrate of soda and superphosphate; E-plot the nitrate of soda and muriate of potash; F-plot the superphosphate and muriate of potash; G-plot nitrate of soda, superphosphate and muriate of potash; H-plot 20 pounds plaster (sulphate of lime) only; O-plot no manure. In the present experiment the "no-manure" plot is really not needed, since, with the exception of the one acre noted, no other portion of the field is manured. It will be seen that the "G" manure is what has been termed a "complete manure" for the reason that it is supposed to furnish the essential plant-food which it is presumed does not exist in soils that have been cultivated for many years in sufficient quantities, viz., nitrogen, phosphoric acid and potash. It may be, however, that a given soil is already well supplied with one or two of these ingredients, as, for example, potash and phosphoric acid. In such a case it is plain the A-manure which furnishes nitrogen should produce as large a crop as the G-manure which furnishes all three. So, again, perhaps the soil is well supplied with nitrogen and potash. In such a case it is reasonable to suppose that nitrogenous and potassic manures would add nothing to the crop, but that phosphatic manures (as the B-manure) would produce a marked effect. Thus on the one hand it is the design of this experiment to determine whether our soil needs one, any two or all three of the chief ingredients furnished by farm manures and imitated as nearly as may be by concentrated commercial fertilizers, or, on the other, to ascertain if the use of these fertilizers pays in *any* form. In the case of the acre experiment, 600 pounds of commercial fertilizer have been used, costing about $15.00. This so-called "corn fertilizer" is prepared by the manufacturers to supply not only all the food which corn requires, but also, in a measure, in the needed relative quantities of each chief ingredient as determined by chemical analyses. Let us see: As the acre is a fair average of the entire field as to fertility, etc., unless we should produce upon it at least 20 bushels more than the average crop per acre of the rest of the field, we shall have, in so far as this one test is concerned, no reason to believe that the "corn fertilizer" has paid for itself.



CORN AND FERTILIZER EXPERIMENT FIELD AT THE RURAL FARM.—Fig. 265.

Again referring to the diagram, it may be said as an aid to the interested reader in forming correct conclusions when our crop report shall appear, that to the north of the curving dotted line running east and west is rolling land and a very gravelly soil. Many stones are from three to four inches in diameter. From that line to the pond it is less gravelly and more sandy. From the pond to the southern boundary the soil is the same, a sandy loam, but there are three places, together about half an acre in extent, that are not well drained. These are indicated by the three clusters of shading.

As above stated, nearly two acres are planted to what we have called Benton Corn, the finest white dent we have ever seen. The rest of the field is planted to Blount's White Prolific with seed which we have with the utmost care selected for three years.

Upon the field which last year gave us the great yield of Blount's Corn, we have this year planted the Chester County Mammoth, using 400 pounds of "corn fertilizer" from another manufacturer. Adjoining is another acre (or thereabouts—we have not yet measured it) without manure.

In odd corners of the farm, selected with a view to prevent intercrossing as far as possible, we have planted little plots of different kinds of corn which with high commendation have been sent to us for trial by kind friends.

Acquaintances hereabout with whom we have talked, are free to express the belief that our corn crop from the unmanured land will be light, and the impoverished appearance of the field for several years past justifies this belief. But there is nothing surprising or instructive in the matter of obtaining fine yields from superb land. If we *should* get a fine yield from *this* land, it would be both surprising and instructive, as it would demonstrate—but perhaps we had better wait until the fine crop is secured before we tax our good readers with a statement of what "it would demonstrate."

CLOVER AND TAME GRASSES IN THE SOUTHWEST.

IT is pretty generally conceded now by the best informed that the cultivated grasses can be successfully grown at the Southwest, although I think the masses do not yet believe it. Even those who own that they can, make the concession with a good deal of qualification, as though raising grass were not profitable and easy, and as if it could be successful only in a limited way, and with great management, and in exceptional areas. For about seven years or more I have made the adaptation of Mississippi (more particularly) to the grasses a special study. I have not only sent out letters of inquiry by the hundred, but numberless times have ridden hundreds of miles merely to see a demonstration. In this and some future articles I shall give to the readers of the RURAL the results of my experience and investigation with regard to clover and the tame grasses, particularly in Eastern Mississippi and Western Alabama.

Red Clover—Trifolium pratense.

This will succeed almost anywhere in Mississippi and Alabama. I have sowed it in Southern Mississippi in sandy soil, and have seen it growing luxuriantly on tracks of railroads in sand taken from 30 feet below the surface. While clover here is not a Summer pasture in the sense that it is North and East, it furnishes a food supply a longer time, by keeping green more months in the year. It begins to give considerable food in late October and will grow much, if not all, the time in an average Winter, suffering a check and killing in cold spells, but furnishing abundant subsistence underneath the general mass. It grows steadily in almost any Winter after the middle of February, and holds on until well in June or July, when it dies down generally, to come on again in October. I do not think its uselessness from hot weather can last over six weeks to two months more than at the East, while it can certainly be said to be in good season at least eight months in the year. It certainly cannot be said to do as well at the North.

By seeding clover upon Bermuda sod a perpetual pasture may be had, thus not only affording a fine "foot" for stock in our open Winters (particularly serviceable in stiff prairie soils), but giving a change for stock during a good part of Spring and Summer. Bermuda Grass will furnish fine grazing from mid April until mid-October, thus supplementing clover completely. Of the value of Bermuda Grass as a Summer pasture it ought to be superfluous to speak, standing, as it does, the hottest suns and driest weather, and surpassing al-

most all grasses in nutritive properties. It is almost ineradicable, and many suppose it will extirpate clover. This is a great mistake. I have seen pastures where both have been flourishing for over 30 years and both were in unimpaired vigor. I have no doubt that they will coexist until the end of time on the same sod. I know of well-authenticated instances where clover has lived over 40 years without having been re-seeded. I think it will bear three crops of seed in a year; certainly two. The first is considerable, and this explains the presence of much young and tender clover when the crop which bore the seed has become tough and woody. This not only insures a perpetual stand, but a greater fertilization of soil, as well as a fresh pasture. It is doubtless the explanation of the fact that clover, under good treatment, never requires re-seeding.

I might give illustrations without number of how long clover will "run" without re-seeding, even where cultivated crops have been raised for several years in succession. I will only mention two, where crops of corn or cotton were raised, in the one case for seven consecutive years and in the other for nine, on a clover sod, and then a good stand was obtained without re-seeding. I give an instance of this sort. Clover was seeded with oats. In June the oats were cut and the stubble pastured. In the Fall the ground was again sowed to oats, which were again cut and the stubble again pastured This plan was followed for 11 years consecutively. The clover was never re-seeded. At the end of that time the stand of clover was unimpaired. It is amazing how well clover will succeed in an indifferently-prepared soil. Nothing is more common here than to sow it on the ground where corn has been planted. It yields all that could be desired in most cases, particularly when sown in October. It is considered a great chance to have a good Bermuda sod upon which to seed it. It is sown on the ground, with no preparation of soil and no work after seeding. I have been sowing some 80 acres of Bermuda sod, part of the sod being 30 years or more old. I did not begin until the middle of February and I have not finished yet. I expect to fence part of it and cut at least four tons per acre in the two mowings I shall get this Summer and next Fall, and, maybe, three. On the remainder I shall soon turn stock and graze it unremittingly, and the work is done for all time. I never expect to have to re-seed it. It is quite common to sow clover in Spring and turn stock on it at once, and never take them off.

I have known clover sown in the Fall to be cut twice the next Summer, the mowings being only six weeks apart. As high as 9 000 pounds of hay per acre have been cut at one mowing. If any one doubts this, let him ask Dr. D. B. Phares, Professor of Botany at the Agricultural and Mechanical College, Starkville, Miss., who has done it, and he admits that he has been surpassed. It grows very commonly four feet high in good soil, and I have known it in one instance nearly six feet. Of course, it does not stand up when so high. Two crops of hay may almost always be counted on; occasionally three. It ought to be sown in October, as it then gets the best of the weeds, which often interfere if it is sown in the Spring. Many, however, sow it in February; but this is risky, as a freeze sometimes kills the young plant. An October seeding I have never known to fail. More seed seems to be required here than at the North. It may be owing to the fact that we lose some by our indifferent preparation of the soil. A bushel to six acres is little enough, as it is generally sown.

The prairie soil of East Mississippi and West Alabama is particularly fine. I have never seen any equal to it. It is a deep, black, rich soil, very close and limy. The rain-fall doubtless contributes greatly to the wonderful success of the grasses, as there are about 60 inches of rain-fall per annum, and it is distributed throughout the year. In some of the Summer months there are from seven to nine inches of rain-fall.

Clover hay will sell at from $15 to $20 per ton, and one gentleman in the prairies of East Mississippi is preparing to bale it.

Mobile Co., Ala. M. B. HILLYARD.

Propagating Choice Potatoes.

Years ago when the Early Rose Potatoes were first sent out, a neighbor who had raised them the year before, brought me seven quite small tubers to start with. In his presence I cut each eye out, leaving with each a fair proportion of the potato. Then I cut each eye through the center in one, two, three and four different directions, according to size, so as to make of each eye two, four, six and eight different pieces, each shaped like a pyramid and having a skin surface of about one-fourth of an inch. These I planted about a foot apart in good soil and harvested two bushels of potatoes, with a good proportion of large ones, after cooking a mess or two to try them. Each piece of the eyes grew. While preparing the seed my neighbor remarked, "I would plant *one* at least in the usual way, as none of these will grow," hinting, I suppose, that no future generosity would be wasted on a fellow who slashed into such costly potatoes in that way. I have since let him have seed potatoes from the product of that donation. A. C. S.

THE WINTER WHEAT CROP OF ILLINOIS, according to reports made to the State Department of Agriculture down to May 2, promises 69 per cent. of an average crop in the Northern Division of 23 counties; 62 per cent. of an average crop in the Central Division of 38 counties, and 77 per cent. of an average crop in the Southern Division of 41 counties. This condition, although discouraging, is not so bad as predicted by several Western papers, and the large acreage sowed to Spring wheat will doubtless, partially at least, make up for the Winter wheat area that has been plowed up, and the poor condition of some of the growing Winter wheat.

Farm Economy.

WORTHLESS COMPOUNDS OF NITROGEN IN SOME COMMERCIAL FERTILIZERS.

PROFESSOR F. H. STORER.

THE precept can hardly be too often enforced that in buying mixtures of commercial fertilizers the farmer must be on his guard lest inferior or even worthless kinds of nitrogen compounds be imposed upon him as if they were the best. It is an easy matter, for example, to dose many of the mixtures known as "ammoniated superphosphates" in such a manner that, while they show a high percentage of nitrogen on chemical analysis, they may really be worth nothing whatever as nitrogenized manures, because the nitrogen contained in them and exhibited by analysis may be in such forms that it is inert, undecomposable in the soil, and practically worthless as a plant-food. To take an extreme instance, coal-dust contains more or less nitrogen, and so do peat and bog-mud, and it would be practicable to incorporate a certain proportion of these materials with any dark-colored superphosphate; though the risk of fraud from the use of these particular substances cannot be great since the proportion of nitrogen contained in them is, comparatively speaking, small. But with leather the case is different. Here is a substance containing five or six per cent of nitrogen, or sometimes even more, which, when properly incorporated with a superphosphate, might appreciably increase the proportion of nitrogen to be indicated by analysis without adding anything to the fertilizing power of the material.

Chemists have often called attention to the possibility of this particular kind of fraud, but the general feeling seems to have been that a supposed difficulty in reducing the leather to powder would greatly hinder, or even wholly prevent, its being used in this way. There is, however, no great difficulty in reducing leather to powder. As every one knows who has happened to leave his boots too near the fire, leather quickly becomes brittle and friable when it is heated somewhat strongly, and after having been thus superheated, or almost charred, it admits of being ground to meal. Moreover, there is already in the market, and to be had at an extremely low price, a kind of leather-scrap which is dry and brittle enough, as it stands, to be ground to powder without need of any preliminary heating. This product is a residue obtained by certain manufacturers who make a business of extracting from ordinary leather scraps the oil and grease which have been put into the leather in the processes of currying and blacking it. To recover this grease the scraps are boiled and steamed at a heat high enough to melt the fatty matters, and they are then subjected to pressure powerful enough to squeeze out both the water and the melted grease. There is good reason to believe that the dark, friable residue which comes from the presses is sometimes used in the manufacture of commercial fertilizers. It is evident that it might readily be used to this end, particularly in the process of manufacture employed at some works, where fish scrap, acid and phosphates are churned together, and it would probably be no easy matter to detect the adulteration of fertilizers prepared in this particular way. Since the pressed leather scrap above described may be bought at rather less than a sixth of the price it could readily be sold for in the form of superphosphates, there is all the more reason for the buyer of fertilizers to be on his guard against it. The chemists who are chiefly occupied with the analysis of fertilizers will do well meanwhile in trying to devise some means of detecting this particular form of adulteration.

The real lesson taught by the risk of adulterations such as the foregoing, seems plain enough; namely, that the farmer had in general much better buy *separately* each particular kind of fertilizer which he may happen to need. He will commonly do well to avoid all mixed preparations. If any one wishes to use a superphosphate, for example, let him buy that material by itself, in the form of "plain" superphosphate of lime; and if he wishes to use fish-scrap or oil-cake in conjunction with the superphosphate, let these things be bought as such, so that he may know just what he is doing. The risk of adulteration would in this way be greatly diminished, inasmuch as there would be much less profit and considerably more difficulty in trying to conceal the leather-scrap in either of these materials than in ammoniated superphosphate or other mixed fertilizer of high price and no characteristic appearance. As a rule, materials thus bought separately should cost less than those upon which the manufacturer has spent time and labor in the processes of mixing. They may be spread upon the land one after the other or mixed immediately before use, if mixing be deemed advisable. The shoveling together of harmless powder is neither a complex nor a difficult operation. It is quite within the powers of even the stupidest laborer.

FOUL SEEDS IN WHEAT BRAN.—I recently bought some Western wheat bran which was literally full of foul seeds, evidently the screenings of the wheat. In a single ounce, taken at random from the stock, I counted 97 seeds besides many broken ones. A portion of the excrements of the animals to which the bran was fed, was washed, and hundreds of the seeds were found to be apparently wholly unimpaired in vitality. The increase of weeds of new and old varieties has caused in this section much distrust of grass, clover and other seeds; but this experience suggests that the mischief is due largely to the culpable practice of the millers of putting the screenings into the bran. If they must utilize the weed seeds, they should be compelled to grind them before putting them into the feed.

Georgia, Vt., O. S. ELLIS.

The Herdsman.

NOTES BY A STOCKMAN.

THE Alphea Jerseys bid fair to rival the history of the Duchess family of Short-horns. By judicious puffing through the papers, and by extraordinary claims for heretofore unheard of butter production, this strain has become notorious. And the effect of this notoriety is to put money in the purses of speculators in this strain of Jersey stock. The owner of an Alphea bull or heifer may count his thousands as good as in his purse. Never before, perhaps, has so much money been paid on the strength of the mere unsupported statement of a hired man whose interest is to please his employer, as in these purchases. There is perhaps nothing objectionable in it all; the money is as well on the "Wing" as in the pocket, and whether Alma Farm pays it and Maple-shade takes it, all is one to the speculator who never had a thousand dollars to invest in an Alphea calf. Truly, this is a revival of the worship of the golden calf when a little year-old brings $900 and another $1 258 50, precisely to a cent. How accurately must her value have been gauged to figure so close as to 50 cents!

So long as this speculation is confined to wealthy persons, no harm is done. It amuses them and hurts nobody. But no farmer or dairyman should be tempted to take a hand in this business, because it will not pay him, even should every claim made for these animals be justified by the actual facts.

BUT——there is always a "but"—did Eurotas ever make 778 pounds and one ounce of butter (again a circumstantial and particular account to a dot), within 365 days and between two calves. I venture to say that this question will be always as uncertain as that regarding the person who struck William Patterson.

JUST now there is a dispute going on as to whether sheep or cattle are the most profitable for a farmer to keep. In discussing such a question as this, the advocates on each side only seek to support their own views, and no one should be misled by the figures they show. One man says he made $54 on 10 sheep in one year. I have done better than that on five times as many. But to infer that if 10 sheep pay $54 in one year, a thousand will pay $5 400, would be very unsafe. A small flock is proportionately more profitable than a large one, no doubt, but no flock ever paid more than 50 per cent clear profit on its cost, in a year, except under specially favorable circumstances. But that should satisfy any reasonable man. I think it is safe to believe that a man who understands well the management of sheep and devotes his attention to a flock, can realize a profit of 50 per cent. on his investment, not counting the interest on the cost of his land unless it is very cheap indeed. No man can keep sheep exclusively for wool and mutton alone on land costing $100 an acre. He may make a profit on the sheep, charging them no rent of land; and that will be fair because the sheep are a sort of "saving bag" into which odds and ends that would be wasted are gathered.

WHERE a person designs to devote himself to sheep-keeping alone, he must go West where the range is practically free and where a homestead for winter occupation and to be cultivated for winter feeding can be procured for $10 an acre. A homestead of 160 acres would sustain 2,000 sheep upon corn, millet and other feeding crops with rye sown among the corn for Winter pasture, and with a free range in the Summer. And a flock thus kept should pay one dollar a head clear profit; or, if the wool is made to pay all expenses, the increase, which should be 75 per cent., would be equal to a profit of more than 50 per cent. on the value of the flock.

No herd of cattle kept entirely for increase ever did or ever can do this; simply because it requires too much labor in the management, in proportion to the capital and the income, and it does not pay two dividends as a flock does, viz., a fleece and a lamb every year. Even where cattle are grazed without any cost for land, as in some localities on the great plains, there are many deductions to be made for losses and expenses, which greatly reduce the profits. The dairy is, after all, the most profitable branch of cattle keeping. One needs no figures to show it. He can do better; he can show land constantly improving in character; a herd constantly increasing in number and value; a farmer always with money in his pocket, and the lightest labor of all farm work.

Some Eastern New Jersey farmers may "point with pride" to their success with fat pigs. They show every year how it pays to manufacture raw products into finished articles when it is well done. A pound of cotton worth 15 cents is made into cloth worth 50 cents A pound of iron worth a cent is made into nails worth five cents; and into steel watch springs worth hundreds of dollars. A bushel of corn worth 50 cents is made into pork worth 80 cents by these New Jerseymen, not to count a quantity of valuable manure left. The following are the particulars concerning these Jersey pigs:

Mr. Southard's 29 pigs ranged from 657 to 855 pounds.
Mr. Harrison's 20 pigs averaged 767 pounds.
Mr. Carter's 20 pigs averaged 766¾ pounds.

Mr. Harrison fed his pigs and 30 head of cattle on 50 acres of corn and had 1 000 bushels left in the crib. At 50 cents a bushel the corn would have been worth $1 600. His pigs alone brought this sum and the feeding of 30 cattle and the 1 000 bushels in the crib were the profit. For several years past there has been a vigorous contest in Burlington County, N. J., to raise the heaviest pigs, and this is a sample of the result. It is worth making a note of.

"Nothing succeeds like success." When a man makes a conspicuous success like this his neighbors begin to strive to beat him. Perhaps one succeeds, and this gives piquancy and interest to the struggle, which is continued from year to year; first one takes the lead and then the other, and so the contestants persevere and persist, and perseverance and persistence in keeping any kind of live stock are indispensable to success. Those succeed who stick to their chosen business; those fail who are ever changing. "Unstable as water they cannot excel." And I would just here emphasize this note, that if a man desires to have a profitable flock or herd, he must make it his life's business to cultivate it. Choose well; and choose for better or worse; but stick to it and it will always be better and never worse.

Large Sale of Jerseys.

During the past week a large auction sale of Jersey cattle took place in this city. On Tuesday, May 17, 64 head were sold for the aggregate sum of $18 505—an average of $289 14. The following is a list of the highest-priced animals sold, with the names of buyers and prices:—

Leda, 799, cow, 12 years; William Simpson, New York and New Hudson	$3,000 00
Queen of the Farm, 9,069, cow, 6 years; John I. Holly, Plainfield, N. J.	1,300 00
Malita, 5,169, cow, 3 years, and heifer calf; T. A. Havemeyer, New York	1,300 00
Daisy Maid of Bloomfield, 8,352, cow, 3 years; T. A. Havemeyer, New York	1,200 00
Hohokus, 5 569, bull, 1 year; P. S. Gobel	1,000 00
Phrynette, 9,089, heifer, 2 years; P. S. Gobel	675 00
Pierott's Rosebud, cow, 4 years; Edwin Dana	660 00

Leda, sold for Mr. A. B Darling, is a pure Alphea cow, and brought the highest price ever paid for a Jersey cow, though her son, Polonius, was sold for $4 500 on the 5th inst. She is now in calf by Duke of Darlington, son of the famous butter cow Eurotas. Her purchaser, Mr. W. Simpson, now owns all the pure Alphea cows. Queen of the Farm is an imported cow.

The sale was concluded on Wednesday, when 64 animals were sold for $18 717 50, which gave an average of $292 46. The following is a list of the highest-priced animals sold, with the names of the buyers and prices:—

Satin, 10,329, heifer, 3 years; T. A. Havemeyer.	$2,050 00
Petronella, 8,819, heifer, 2 years; Moulton Bros.	2,050 00
Favorite's May, 8,662, heifer, 2 years; T. A. Havemeyer	1,625 00

Pyrrha 2nd, 9,561, heifer, 2 years; Moulton Bros.	850 00
Bonnie Grisette, 6,979, cow, 4 years; T. A. Havemeyer	800 00
Heifer calf 20 days old; W. R. McCreary	730 00
Nonesuch of Jersey, 9,982, cow, 5 years; Paul Dana	500 00

Satin and Petronella are of Alphea blood, and with Leda, sold the day before, form the highest-priced trio of Jerseys ever sold At the close of the sale the Breeders' Cup, donated by several members of the Cattle Club for the best average price of not less than five head belonging to one owner in the sale, was awarded to Mr. John I. Holly, of Plainfield, N. J., who sold 6½ head (cow and calf counting as 1½) for an average of $1 085 39, while Mr. A. B. Darling pushed him so closely on an equal number as to average $1,085, leaving Mr. Holly a lead of only 39 cents per head. The best price obtained by Mr. Holly was $2,050 on the heifer Petronella, by Polonius, in calf by Uproar, and as Mr. Darling bred the last-named animals and sold them to Mr. Holly, he won in reputation as a breeder by his rival's success.

Dairy Husbandry.

OBSTRUCTIONS IN COWS' TEATS.

H. C. B., Lanesborough Pa., has a cow that dried up three-tenths; then gave a full yield of milk which came from every teat; but now three of her teats give only about half a pint at each milking while the other one gives four or five quarts, and our correspondent asks the cause of this condition and a remedy therefor.

ANSWER BY PROFESSOR L. B. ARNOLD.

The cause of stoppage in the flow of milk in cases like the one described by H. C. B., lies in the closing of a small aperture located at the junction of the teat with the udder, through which all the milk must pass to enter the teat. A little explanation will make the situation clear. The interior of the bovine udder is not, as some suppose, a single sack for holding milk. While milk is being secreted it is held in small reservoirs distributed through the entire substance of the udder, varying in size from a pin head to a pea, and in some very large milkers, to the size of a cherry. These little reservoirs are all connected by small tubes leading from one to another, and finally to a central cavity located immediately over the teat. There are but two cavities of any considerable size in each quarter of the bag. One of these is the cavity in the teat and the other is the central one above it just referred to. The two are separated only by a thin partition of tissue covered with the mucous membrane lining the two cavities and forming a sort of diaphragm with a hole in its center, about the size of a small pea, for admitting milk into the teat. The relative size and position of these two cavities and the separation between them will be seen by reference to Figure 266. The cavity above the teat, like the one within it, varies considerably in different cows, running from the size of an egg to the capacity of a pint or more.

Where the membrane doubles over to form the edge of the hole, it incloses a small tendon made up of very fine, elastic fibers, forming a ring, which has a connection with muscles upon the abdomen under the control of the cow's will by the contraction or relaxation of which she closes or opens the aperture at pleasure, so long as the tendon remains in a healthy condition. But this little delicate cord gets out of order quite easily. By the influence of continued inflammation it often contracts and becomes rigid, closing up the aperture for admitting milk into the teat and thus giving rise to the difficulty described by H. C. B. When once contracted there is no let-up to its rigidity. It remains permanently contracted, unless per chance, it may yield a trifle while under the influence of some strong laxative. The contraction makes a hard bunch, apparently about the size of a buck shot or a little larger, which may be felt by pressing the teat at its connection with the udder.

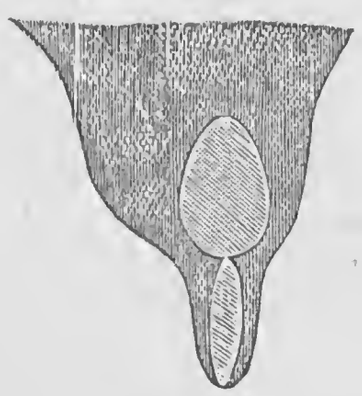


FIG. 266.

The remedy for this misfortune consists in forcing open the closed passage. This may be done in several ways, two of which will be described. The first is to crowd into the passage a smooth plug of metal, ivory, bone, or hard wood, as shown in Figure 267. Whatever the material, it should be well oiled to prevent injury by needless friction, and should have an enlargement near the lower end to prevent it from dropping out of the teat while it is carried by the cow between milkings. The orifice by being continually strained will soon adapt itself to the size of the instrument. A small plug may be used at first and a larger one afterward. One advantage of this method is, it can be executed by any skillful dairyman when once he sees what is required to be done.

The remedy which has proved the most successful and satisfactory consists in cutting open the obstruction with an instrument invented by Wm. Horne of Janesville, Wis., the structure and full size of which are shown in Figure 268. It is a metallic concave, half-round, and looks like a little cheese trier or a a butter trier in miniature. The end inserted is made sharp so it will cut upon a little pressure. It is used by entering the teat the same as shown in Figure 267 but instead of *crowding* its way through the obstruction, it *cuts* its way through with a half-round cut, a form which does not close up so readily as a strait

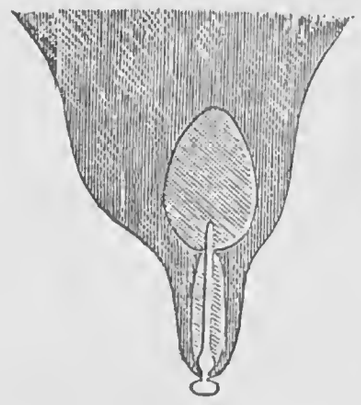


FIG. 267.

incision. By noticing the illustrations it will readily be seen that if used when the cavity above the teat is filled with milk, there can be no danger of injury to the udder as the instrument will only extend into the milk without touching the walls of the cavity. This rarely fails to be effectual. If the cut is inclined to grow up, it may be kept open by using the plug as in Figure 267, till it begins to heal. Any farmer with ordinary tact can use it without the aid of a veterinarian. But prevention is better than cure. The obstruction can be avoided by avoiding the causes which produce it. One of these is high feeding with heat-producing food, such as corn meal, before the cows come in. The bag in such cases becomes unduly swelled and hardened, and severe and long continued inflammation follows with a tendency to contracting and closing the orifice as described. Heifers are apt to suffer more than old cows from this cause.

Another cause is too much pulling and jerking down upon the teats in milking. The teat is so intimately connected with the parts which surround the passage liable to be closed, that violence to the teat affects them. The jerking method of milking is always objectionable at any time, but it is especially so when there is any inflammation about the udder.

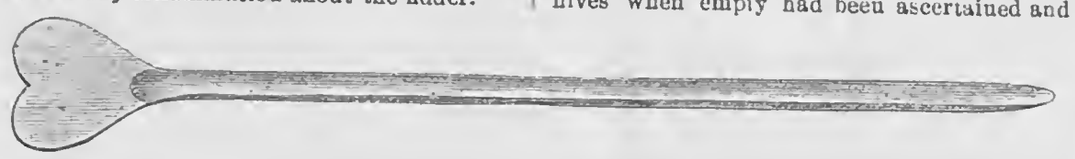


FIG. 268.

The most common cause of stoppage arises from a want of proper care and skill when cows are being dried off. Milk is apt to be left too long in the bag. It fills into the cavity over the teats where it lies till it curdles. The serum or whey separates and is soon absorbed away, but the curd becomes hard and remains till it becomes a serious source of irritation and inflammation in the parts upon which it rests, and hence is all the time tending to induce contraction in the very parts where the stoppage occurs. Cows which are hard to dry off have the most sensitive udders, and the greater crowd of milk makes them much the most liable to injury. The strictest attention in drying them should always be observed.

By watchful care in guarding against the various causes of obstruction and giving prompt attention when a case occurs, in applying the remedies pointed out, many of the the good cows which go to the shambles every year from having obstructed teats, may be saved for a better fate.

The Apiarian.

THE TRUE THEORY OF BEE CULTURE.

WHILE scientific men of all ages and countries have puzzled their brains to discover the principles that govern the growth of vegetation, in order to improve the arts and science of husbandry, apiarian science, the most interesting and profitable of all rural pursuits, has been comparatively neglected. Though a few important improvements and advantages have been secured by a better adaptation and arrangement of the habitations to the natural habits, wants and instincts of the insect, the true theory of bee culture is correctly understood by only a few. He who would succeed in directing and shaping the action of a colony of bees so as to secure the greatest amount of profit, and proceed with a certainty of success, must study and apply that system of principles which constitutes the foundation on which bee culture rests.

In the application of these principles he should possess sufficient tact and judgment to enable him to vary their application so as to reach the exigencies of each particular case. Has this degree of proficiency yet been attained by any of our bee-keepers in this stage of progressive bee culture? I believe it has, and with it the dawning of a day when thousands of toiling men will teach their children to bless and honor the names of those instrumental in hastening the good time coming.

I believe that by the unremitting toil and study of years by some of our scientific bee-keepers, a theory has been discovered and applied that will satisfactorily account for the large returns that have been secured of late years by Doolittle, Captain Hetherington and other "great lights" in the business. The practice of bee culture, in accordance with the principles involved in this theory, if persevered in, cannot but be productive of results in the highest degree satisfactory. It is a fact well known to bee keepers, that at times and under certain conditions colonies of bees, in the accumulation of stores and in the general economy of the hive, will so far exceed the general average of colonies equally strong, as to fill the apiarian with astonishment and almost persuade him that they are a superior kind of bee. In my own practice I have oftentimes had colonies to work with untiring diligence weeks after the labor of others had ceased. So, too, every bee keeper is cognizant of the superior thrift and industry in which a swarm newly made, whether naturally or artificially, will excel others by its side, having perhaps twice its number of bees.

I once had a swarm issue on the last day of June from a common box hive, after having doggedly refused to do so for nearly a month, the bees all this time lounging inside and out on the sides of the hive without apparently increasing the honey stores of the hive. This swarm, with about the average number of bees, was put in a frame hive of the capacity of about 2,200 cubic inches, inside measure, having a glass in the back with a blind to intercept the light and darken the chamber. In two weeks from the time this swarm was hived, such was the extraordinary rapidity with which it worked that its hive was filled to overflowing with combs and honey, and 30 boxes or sections of the capacity of one pound each, placed on top, were filled likewise. The boxes when filled were taken off and an estimate formed of the honey stored in both hive and boxes. This estimate could be made with some degree of certainty as the weight of the hives when empty had been ascertained and marked on their sides. After making the necessary deduction for bees, brood, etc., I estimated the amount of honey gathered at 80 pounds, after apportioning 50 pounds to the brood chamber, which I deemed moderate, considering its capacity. Here is the large amount of 80 pounds of honey secured by a colony of bees in two weeks while under the honey-gathering impulse excited by swarming, which impulse or propensity for gathering honey can be generated in a colony of bees at any time when there is bloom, and maintained throughout the honey season. The extraordinary industry in newly made swarms (but by no means peculiar to them) has often been remarked by bee keepers, and has given rise to much speculation as to the true cause of its development.

Among many causes assigned in explanation of this seeming mystery perhaps the most plausible is the theory which supposes the queen's age and fertility to govern the industry of the hive. But, admitting the full force of this assumption with full conviction of the advantages secured to the apiarian by the continued presence of a young and prolific queen in each and every colony, there are times and instances in which even this fails to furnish the explanation required; as, for instance, the case already cited, in which prior to the issuing of the swarm, a few bees only left for forage, while the much larger portion lounged on the sides of the hive for days feeding on the stores already garnered. If the queen's extra fertility be urged as a proper solution of the rapidity with which this swarm filled all its tenements to overflowing, we must imagine her to have suddenly acquired some new capacity for laying, else the difference of the bees in point of industry, before and after swarming, cannot be satisfactorily accounted for.

The point to be gained by the bee keeper of the present time is to ascertain, if possible, the true cause of the honey-gathering impulse in bees; the conditions necessary to its continuance throughout the season; and the most efficient means of generating and stimulating it to its fullest capacity in order to secure the largest returns. If the product of a swarm of bees incited to labor by causes in accord with their natural habits and instincts will reach the amount I before stated, in the short time of two weeks, to what amount will this increase if the honey-gathering propensity is, by judicious treatment, fostered to its fullest capacity and retained in this condition throughout a long and inviting honey yield?

Cortland Co., N. Y. J. G BINGHAM.

Scientific and Useful.

NEW JERSEY AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 13.

Land Plaster.

A CONSIDERABLE number of samples of this old and well-tried fertilizer have been sent in for examination this year. The principal varieties in market come either from Nova Scotia or from Central New York. That from Nova Scotia is white, while that from New York State is grayish or ash-colored. From this difference in color buyers are led to fear that there may be important differences in composition. Such, however, is not the case. Of the samples examined at this Station last season, and this year also, there was none that had been fraudulently adulterated. The transparent lumps occasionally seen in unground plaster are specimens of the pure substance, gypsum or sulphate of lime. They are composed of:

Lime	32.6 per cent
Sulphuric acid	46.5 "
Water	20.9 "
	100.0

Most ground gypsum contains at least one or two per cent. of harmless impurities, and some of it contains 20 30 or more per cent. of impurities. In the plaster from New York State the impurities consist mainly of carbonates of lime and magnesia.

As the plaster is sold for the amount of pure gypsum in it, we have only determined the percentage of that substance in the samples sent to the Station.

Station No. 94—Cayuga Land Plaster; sent by John T. Cox, Readington.

Station No. 95—Nova Scotia Land Plaster; sent by John T. Cox, Readington.

Station No. 112—Nova Scotia Land Plaster sent by Frank P Haines, Camden.

Station No. 113—French's Selected Land Plaster; sent by Frank P. Haines, Camden.

Station No. 126—Nova Scotia Land Plaster; sent by D K. Craig, Somerville.

Station No. 127—Nova Scotia Land Plaster; sent by D K Craig, Somerville.

Station No. 128—Onondaga Land Plaster; sent by D K. Craig, Somerville.

Station No. 94—Contains 63 08 per cent. pure plaster; costs $6 per ton.

Station No. 95—Contains 92 78 per cent. pure plaster; costs $7 50 per ton.

Station No. 112—Contains 90 28 per cent. pure plaster; costs———

Station No. 113—Contains 98 75 per cent. pure plaster; costs $8 per ton.

Station No. 126—Contains 98 per cent. pure plaster; costs $8 50 per ton.

Station No. 127—Contains 96 52 per cent. pure plaster; costs $7.50 per ton.

Station No. 128—Contains 73 08 per cent. pure plaster; costs $6 50 per ton.

Nos. 94 and 128 contain considerable quantities of calcium carbonate.

Gypsum or plaster was much used as a fertilizer on our best farms many years ago, but its use had fallen off to a great extent, and is now again increasing. The reasons for its use are derived entirely from experience. No satisfactory explanation in regard to the theory of its action has been made. But farmers find it beneficial to sprinkle on manure and compost heaps in order to fix gases and to rot coarse manures, in preparing home-made fertilizers, and in sowing on young clover and potatoes.

Some very suggestive experiments as to the proper season for applying plaster to crops have been made by Prof. Marker, at the Experimental Station in Halle, Germany. He sowed the plaster in March and December, and while the increased crop was very satisfactory in both cases, that following the application in December was from 15 to 50 per cent. greater than that from the one in March. The particulars of his experiments are given in the annual report of this Station.

Ground Bone.

Station No. 109—Commonwealth Bone; from manufactory of Rafferty & Williams, New York.

Station No. 118—Pure Ground Bone; from manufactory of Jas. Depue & Co., Belvidere, New Jersey.

Station No. 119—Swift Sure Bone; from manufactory of M. L. Shoemaker & Co., Phila.

Station No, 120—Swift Sure Bone Meal; from manufactory of M. L. Shoemaker & Co., Philadelphia.

Station No. 132—Smith's Pure Ground Bone; from manufactory of John I. Smith, Trenton.

CHEMICAL ANALYSIS AND VALUATION.

Station Nos.	109	118	119	130	132
Nitrogen	1.20 per cent	3.53 per cent	6.25 per cent	6.36 per cent	4.59 per cent.
Total Phos. Acid	10.61 per cent.	21.16 per cent.	30.00 per cent	20 11 per cent.	22.40 per cent.
Estimated Value	$14 83	$31 51	$39 19	$41 37	$33 40
Cost	$33.50	$30.00	$32 00	$38.00	$35 00

MECHANICAL ANALYSIS.

Station Nos.	109	118	119	130	132
Fine	40.5 per cent	12.1 per cent.	35 1 per cent	32.8 per cent.	5.0 per cent
Fine Medium	8.5 per cent	33.5 per cent	38.8 per cent.	38.2 per cent.	13.0 per cent.
Medium	16.3 per cent	40.7 per cent.	14.6 per cent	9.0 per cent.	45.0 per cent.
Coarse Medium	11.7 per cent.	14.7 per cent.	11.5 per cent.	0.0 per cent.	36.0 per cent.
Coarse	3.0 per cent.	0.0 per cent	0.0 per cent	0.0 per cent.	0.0 per cent.

Ground Bone has been used by farmers longer than any other of the high-priced fertilizers, and it still holds its rank in their estimation. The chief change made in preparing it for market is in grinding it finer than was formerly done. That fine ground bone should be quicker than coarse bone in its action, and should either produce better effects or else should answer its purpose with smaller quantities is naturally to be expected, and the experience of good farmers has fully sustained this expectation. The Station prices for bone of different degrees of fineness were deduced from the market values of the various grades of ground bone.

An examination of the mechanical analysis given above, and of the valuations compared with the selling prices, shows very plainly the greater worth of the bone that is ground fine, and the loss which comes from sending it into market imperfectly ground.

GEO. H. COOK, Director.

New Brunswick, N. J., May 5, 1881.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 58. APRIL 28, 1881.

Superphosphates, Guanos.

568. Soluble nitrogenous phosphate.

567. Pine Island guano.

The samples named above were manufactured by the Quinnipiac Fertilizer Co of New London, Conn., and sold by Olds & Whipple, Hartford, Conn.

565 Soluble Pacific guano, manufactnred by the Pacific Guano Co., Boston, Mass., and sold by H. A Stillman & Co., Hartford, Conn.

561. Mitchell's standard phosphate, sold by H. A. Stillman & Co., Hartford, Conn.

	568	567	565	561
Soluble phos. acid	5 70	5 34	5 90	0 14
Reverted " "	4 61	1 93	1 36	5 08
Insoluble " "	1 16	0 52	4 05	2 19
Nitrogen	2 41	4 20	2 61	1 06
Potash	2 70	2 94	2 28	....
Chlorine	2 84	1 08	2 45	....
Estimated value per ton	$36 01	$38 65	$35 36	$16 26
Cost per ton	40 00	45 00	45 00	40 00
Cost exceeds valuation	3 99	6 35	9 64	23 64

Potash Salts.

559. Sulphate of potash, imported and sold by the Mapes' Formula and Peruvian Guano Co., New York and Hartford.

572. Muriate of potash, imported by the Bowker Fertilizer Co, Boston and New York; sold by Wilson & Burr, Middletown, Conn.; sent by J. M. Hubbard, Middletown.

	559	572
Potash (potassium oxide)	43 23	49 02
Sulphate of potash	79 95	....
Muriate of potash	....	77 63
Chlorine	0 88	....
Potash guaranteed	43 80	50 54*
Cost per ton	$65 00	$45 00
Cost per 100 pounds potash	7 52	4 59

* "Guaranteed 80-85 per cent. muriate of potash" equals 50.5-52.7 potash.

Salt, Plaster.

570. Salt, manufactured by the Onondaga Salt Co., Syracuse, N. Y., sold by Bronson & Fitzgerald, Hartford.

562. Plaster, ground by G. A. London, Berlin, Conn., sold by Olds & Whipple, Hartford.

	570	562
Chlorine	56 80	....
Sodium chloride	93 60	....
Sulphuric acid	....	44 46
Hydrated sulphate of lime	....	95 57
Carbonates, etc	....	1 93
Insoluble matters	....	2 50
Cost per ton	$10 00	$9 00
100 pounds of pure gypsum cost	....	47

Bone, Fish, Castor Pomace.

569. Pure bone meal, made and sold by the Mapes' Formula and Peruvian Guano Co., New York and Hartford.

566. Dry ground fish guano, made by the Quinnipiac Fertilizer Co., New London, sold by Olds & Whipple, Hartford.

564. Castor pomace, made by H. J. Baker & Bros., New York, sold by Olds & Whipple, Hartford.

563. Castor pomace, made by H. J. Baker & Bros., sold by Buckland & Hardin, Glastonbury, Conn.

	569	566	564	563
Nitrogen	2 46	8 54	5 47	5 08
Phos. acid	27 46	6 96	1 51	1 60
Potash	....	....	0 90	1 12
Est. value per ton	$40 33	$43 59	$20 33	$18 97
Cost per ton	42 00	45 00	25 00	25 00
Cost exceeds valuation	1 67	2 49	4 68	6 03

With the exception of 572 all the samples reported in this Bulletin were taken and sent by E C. Bunce, of South Manchester.

The bone meal 569 all passed holes of 1-50 inch.

Trade Values for 1881.

For 1881 the following revised TRADE VALUES will be employed for comparing fertilizers. These values are with two exceptions the same as given in Bulletin 52 and in the Station report of 1880. Here the prices of potash in sulphate and muriate are increased, the former one-half cent, the latter one cent per pound.

	Cts. per lb.
Nitrogen in nitrates	26
" in ammonia salts	22½
" in Peruvian Guano, fine steamed bone, dried and fine ground blood, meat and fish, superphosphates and special manures	20
" in coarse or moist blood, meat or tankage, in cotton seed, linseed and castor pomace	16
" in fine ground bone, horn and wool dust	15
" in fine medium bone	14
" in medium bone	13
" in coarse medium bone	13
" in coarse bone, horn shaving, hair and fish scrap	11
Phosphoric acid soluble in water	12½
" " "reverted" and Peruvian Guano	9
" " insoluble, in fine bone and fish guano	6
" " " in fine medium bone	5½
" " " in medium bone	5
" " " in coarse medium bone	4½
" " " in coarse bone, bone ash and bone black	4
" " " in fine ground rock phosphate	3½
Potash in high grade sulphate	7½
" in low grade sulphate and kainite	5½
" in muriate or potassium chloride	4½

There has been some advance in the cost of ammonia salts and animal matters, and, as a consequence, the selling prices of these articles and of superphosphates, etc., are often higher than last year. The Station valuations should be regarded as approximate, and while they cannot in every case fix the absolute money value of fertilizers, they may commonly be relied on for purposes of comparison.

S. W. JOHNSON, Director.

Entomological.

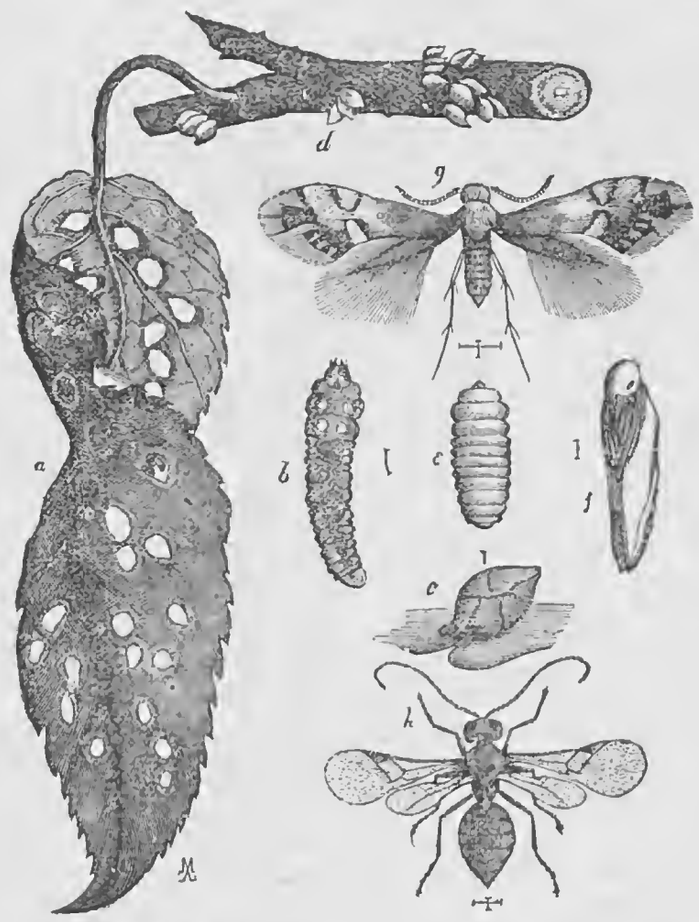
THE RESPLENDENT SHIELD-BEARER.
(Aspidisca splendoriferella.)

PROFESSOR G. H. FRENCH.

SOME of our comic newspapers a few years ago facetiously represented the prospect for raising a crop in some of the States west of the Mississippi, by picturing a hill of corn surrounded on three sides by a close fence, the owner sitting in the opening on the fourth side to watch the hill, while hungry grasshoppers were peering over the fence, patiently waiting for the old man to fall asleep that they might eat the corn. The idea we may get from the picture—that eternal vigilance is the price of a good crop—is true of more than one of the plants cultivated for food. Most of them have been brought from the Old World, and with them have come their insect enemies, leaving behind many of the parasites that kept these enemies in check. When we add to these the insects native of this country, that may feed upon the same plants, it is easy to see that watchfulness is necessary to successfully raise almost any of our cultivated crops. Perhaps there is no one plant among those generally cultivated of which this is more true than the apple tree. A host of caterpillars may destroy the leaves, lice may suck the juices from limbs and twigs, or the borers may riddle the trunk and branches. If the tree escapes all these, and bears fine-looking fruit, even this may be found to be pre-empted by the apple worm.

One of the smallest of the insects that feed upon the apple tree is the one named at the head of this article and represented in its various stages in the accompanying illustration. The moth is represented at *g*, larger than in nature, the true size being shown by the crossed lines between the hind pair of legs. This deposits its eggs on the upper surface of the leaves soon after they are fully expanded. Professor Comstock, Entomologist to the Department of Agriculture, in his last report gives quite a full account of the habits of the larvæ of this little moth. As soon as the egg hatches the young larva eats its way into the green pulp between the thin skins that cover the upper and lower sides of the leaf. Here it lives, feeding upon the green matter and leaving the thin films of tissue above and below until it has attained its full size and is ready to change to a pupa. Figure *b* represents the insect at this time, the mark at the side, as in other cases, representing the true length.

It now cuts out an oval or somewhat triangular section of the dry, epidermal tissue above and below it, fastens these together by their edges with silk, all except a small space through which it can pass its head and the first two or three segments of the body. With all of its body except the front part in this case, it now walks a short distance on the leaf, but apparently soon tiring of that mode of progression, it fastens a web to the leaf or limb and lets itself down. Blown by the wind against the limbs or trunk of the tree, or any other object, it soon finds some convenient place where it may fasten its case. This done, it retreats to the inside, changes its position somewhat, and in a short time changes to a chrysalis, shown at *f*. Figure *a* shows a leaf in which several of these little worms have been at work, each cutting out its case. Figure *d* shows a limb with several of these cases attached. In the more northern portions of the United States it is probable there is only one brood of these worms in a season, the larva assuming the form of *e* in the case, in which condition it passes the Winter, to undergo its changes the following Spring. Farther south there are, Professor Comstock says, two broods, the first entering the cases the fore part of July, to come out as moths from the latter part of July to the first of August, the second brood to enter the cases to pass the Winter some time in October. The moth has the base of the wings leaden-gray, the outer half golden, marked with silver and brown, as seen in the figures.



THE RESPLENDENT SHIELD-BEARER IN VARIOUS STAGES.—FIG. 269.

But the question of most importance is, can we prevent the depredations of these little pests? In spite of its protecting case, ants feed upon the caterpillar, and there are at least two species of small hymenopterous insects that are its parasites. If there are but few of the worms little harm can be done, as they are so small; but if they occur in great numbers their ravages make a serious draft upon the nourishment of the tree. Professor Comstock says that the only way to cope with them is to destroy the cases in the Winter time, and he recommends spraying or painting the limbs and trunk of the tree with a mixture of kerosene and water in the proportion of three parts to 100. A mixture of lime and sulphur, dissolved in hot water, has been used with good effect.

Carbondale, Ill.

Pomological.

THE FAMEUSE APPLE.

T. T. LYON.

W. C. BARRY, in the Country Gentleman, has taken occasion to commend this old favorite of the Northern orchardist, as a highly desirable dessert apple. His remarks seem to have provoked criticism by another correspondent, to which Mr. Barry replies in a recent issue of the same paper.

I altogether agree with Mr. Barry as to the great beauty and fine quality of this apple when well grown; but, while it is, in a peculiar sense, a Northern apple, failing wholly south of New York and Southern Michigan; even in that and other northern latitudes, as soon as the trees acquire a moderate age it is exempt from cracking and fungus only in exceptionally favorable seasons; while, at the same time it is so prone to overbear, that only the best of management, including high culture, judicious pruning, and persistent thinning, will prevent the carrying of more fruit than can be fully matured. This I understand to be true of this fruit in that paradise of the apple, Western New York, and it is equally true in Michigan; while the reports of societies in the British Provinces characterize it as liable to the same objection there. Such being the almost universal experience with the Fameuse, I review the article of Mr. Barry for the purpose of proposing a substitute for his recommendation. More than a quarter of a century since a seedling of Central Michigan, originating in all probability from the Fameuse, and named, from its place of origin, Shiawassee Beauty, was brought to public notice. Possessing the white, delicate flesh, juiciness and refreshing flavor of its supposed parent; of similar size and appearance, and of the same season, when specimens were sent to Mr. Charles Downing, it was long before he became satisfied to consider it as distinct, so very similar are it and the Fameuse in quality. Experience, however, shows obvious differences. The Shiawassee Beauty is more distinctly oblate in form with a brilliant blush, such as is only occasionally seen upon the Fameuse, while the distinct stripes of the latter are never seen upon the former. The similarity in flavor, texture, juiciness and color of flesh is so marked that, with the skin removed, it is scarcely possible to distinguish the one from the other. So far, then, there would be little choice between the two.

The advantages that give the Shiawassee Beauty the preference, in my estimation, are, that the flavor is somewhat richer; that the fruit is much less liable to scab and crack; while I have never known it to perceptibly suffer in quality from overbearing. The size will also average larger than Fameuse.

The tree is slightly more upright in habit, equally vigorous, and, so far as I have been able to learn, fully as hardy. It has been widely tested in Michigan and proves universally successful. I have heard little of its success in other States, although many years since cions were widely disseminated. I can imagine no good reason why it should fail in any locality to which the Fameuse is adapted. One reason why it is not generally known may be, that no person seems to have made a specialty of its growth and dissemination, and since the texture is rather delicate for rough handling, and it is, therefore, only adapted to near-by marketing, it has never attracted the attention of commercial planters.

Industrial Implements.

The New Buckeye Senior Riding Cultivator.

This excellent cultivator is made by Messrs. P. P. Mast & Co., of Springfield, Ohio. It is strictly a riding cultivator, having higher wheels and a greater weight than the Buckeye Junior. It has been furnished with all possible improvements to fit it better for this season's work. Among its many claims to the favorable attention of our readers, we have space only for a few: It is equipped with seven shovels, wood beams, wood standards and seeding attachment, though it is sold either with or without the last, and can be used with four or six shovels for corn. It has rotary shields which experience has shown to be the

best. Its improved beam coupling or hinge holds the beam firmly in an upright position, making it run steadily and easy to handle. The shovels are strong and adjustable so as to throw the dirt to or from the corn. The foot treadle, or levers for raising the shovels when turning round at the end of a row or to pass an obstruction, are especially convenient. The high wheels enable it to pass over corn in the last plowing. The seat is adjustable and can be readily balanced for a heavy or light driver. For fallow five, six or seven shovels can be used. The shovels are arranged in an A-shape so that the trash is carried out on each side and clogging is thus prevented. The rear shovels, being narrow, leave the ground smooth and free from ridges. We recommend all our readers in want of such an implement to send to the above address for descriptive circulars of this one, which will be promptly forwarded on application. G. B. B.

THE LINCOLN CREAMERY, made at Warren, Mass., is a very rapid and successful separator of cream from milk. Experiments with this creamery at the New York State Fair, in 1880, were made for the satisfaction of the Examining Committee. The milk was set in water at a temperature of 56 deg., without ice, and showed a perfect separation of cream inside of six hours. It is made in fine style and has many excellent points, worthy of examination.

Miscellaneous.

BOOKS, CATALOGUES, ETC.

STATISTICAL ABSTRACT OF THE UNITED STATES, 1880. Third Number. Treasury Department, Washington, D. C.

EIGHTH ANNUAL REPORT of the New Jersey State Board of Agriculture, 1881. P. T. Quinn, Secretary, Newark, N. J.

NINTH ANNUAL REPORT of the Board of Trade of the City of Newark, for the year ending January 12, 1881. P. T. Quinn, Sec., N. J.

KENTUCKY GEOLOGICAL SURVEY and Bureau of Immigration. This pamphlet of 29 pages is intended to give information about the climate, soil, timber, etc., etc., of Kentucky, to those either from Europe or elsewhere who are seeking new homes. To be had, *gratis*, we suppose, from J. R. Proctor, Frankfort, Ky.

THE MAY CROP AND STOCK REPORT of the Ohio State Board of Agriculture, in addition to the following figures on wheat, gives much valuable information on the condition of other crops, fruits and farm animals, forwardness of Spring planting and sowing, wages paid for farm labor, etc., etc. It is a pamphlet of 32 pages and contains a "Wheat Map" of Ohio, showing by counties the present condition of wheat, the probable yield for 1881, and the amount of old crop still in producers' hands. The information is based on estimates made by about 1,000 correspondents in nearly all the townships of the State, mostly practical farmers, capable of judging of the matters they report on, and can be depended on as approximately correct. The figures show that only 19 per cent. of last year's crop, or 10 378 299 bushels of wheat, are still in the hands of the producers, and that the probable yield of the State this year, if we have a *fair average season* from now till harvest, will be, as telegraphed to us week before last, about 44,895 653 bushels, or 85 per cent of last year's fine crop. The wheat map shows the best wheat this year lies in the level, black-soil counties of the north-west part of the State. These average fully 100 per cent. as compared with a year ago, while the rolling counties further east and southeast, average only a little over 80 per cent., and the hilly Ohio River counties, only about 65 per cent of last year's yield in the same localities, respectively. This is usually true after a snowy Winter like the past, while in a very open, rainy Winter, like that of 1879-80, the level counties suffer most. The wheat map also shows that the wheat is best in the northerly part of the State where there was most snow. The report will be sent to any Ohio address upon application. The outlook is certainly more encouraging for Ohio farmers than for those of most of the other Winter wheat States, where there was, as a rule, less snow in early Winter; and hence, poorer crops and firm prices. The figures given are only *estimates* at best, but after traveling through sixty of the eighty-eight counties of the State, during the last two weeks, to examine the wheat, Secretary W. I. Chamberlain is convinced the estimates are fairly given for the various localities, and not in the interests either of "bulls" or "bears" among speculators, but of *truth*. His own estimate for the State would have been *a trifle lower* than 85 per cent.

THE JOURNAL OF THE AMERICAN AGRICULTURAL ASSOCIATION.—This book of 250 large pages, (six by nine inches) the first number issued, is highly creditable to the secretary, Mr. Jas. H. Reall, involving, as it must have done, an immense amount of tedious labor which seems to have been performed in a faithful, painstaking manner. Many important agricultural topics are ably treated by such writers as Dr. J. B. Lawes, Prof. J. P. Sheldon, Prof. James Law, Dr. John A. Warder, and others quite too numerous to mention. This work may be procured of the Secretary by addressing him at 127 Water St., New York city. Price 75 cents which it is assuredly well worth.

QUARTERLY REPORT of the Kansas State Board of Agriculture for the quarter ending March 31. J. K. Hudson, Topeka, Secretary.

"OLEOMARGARINE as a Pure Food Product." A pamphlet of 24 pages issued by the Commercial Man'f'g. Co., of New York.

RURAL BRIEFLETS.

MR. J. BURWELL, of Rensselaer Co., N. Y., favors us with a statement which, if trustworthy, is of considerable importance and should place all cultivators of the currant under obligations to him. It is as follows: "One pound of alum dissolved in two gallons of water and sprinkled on currant bushes will kill the currant worm every time, with no danger of poisoning those who eat the fruit. I have used it for years and it has never failed in a single case."

FOR this climate, it is now time to rub off all but the strongest shoots of grape vines planted this Spring or last Fall. If more than one bud is left, there will be no chance of fruit another season and the chances of a third season are not so good. The one shoot left should be tied or supported as soon as it has made enough growth for that purpose.

WE find that our specimen of the Kieffer Hybrid Pear has from some cause been killed nearly to the ground. We should like to hear how this much-puffed pear has stood the Winter elsewhere.

THE Variegated Abutilons and Purple-leaved or Rural Bronze Castor-oil plant are splendidly adapted for forming beds of handsome, vigorous foliage. The Castor-oil plant will need to be pinched back from time to time.

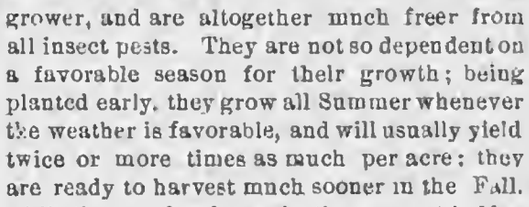
THE present is as good a time as any in the year for layering plants of which it is desirable to increase one's stock. Vines, all sorts of ornamental shrubs and many evergreens can thus be propagated. It is only necessary to bend down a branch into a little trench beneath five or six inches deep and cover it firmly with soil. In the Fall the layer may be severed from its parent stem and planted.

DR. LAWES has said in a late article, published in the Agricultural Gazette of London, that even if it were resolved generally to carry out a system of high farming by a supply of purchased fertility, the supply could not be obtained except at a price that would prohibit its use.

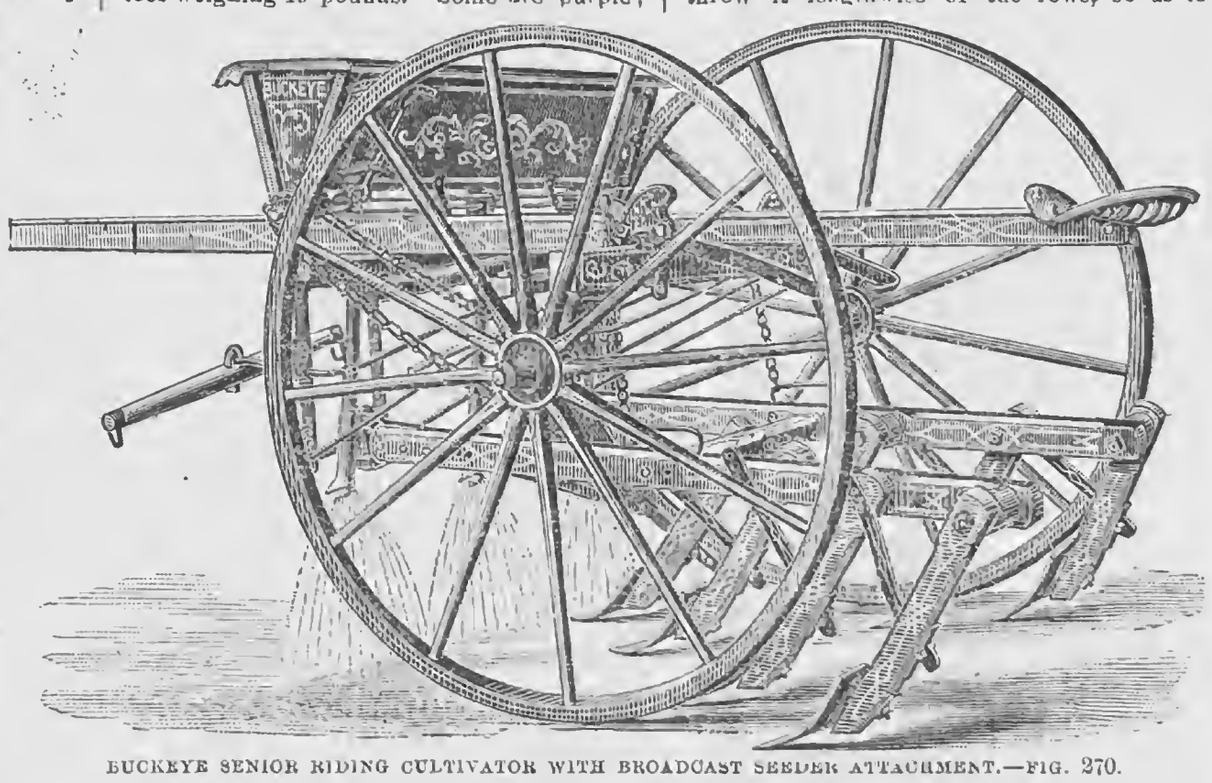
WE have received a box containing 26 potatoes weighing 19 pounds. Some are purple; some white. They resemble in shape the White Elephant. We have received no letter regarding them and the box gives no clue as to the sender or the place from which they were sent.

A SUBSCRIBER, while at the office the other day, said that, contrary to the RURAL'S advice, he had drilled in with wheat 250 pounds of tan bark unleached ashes per acre and the wheat was looking remarkably fine. We feared that unleached ashes in contact with the seed would harm them.

THE destruction of the currant worm should not be delayed. If the work be thorough one season, few will appear the next. If one has no hellebore, then hand-picking should be resorted to—a very trying, tedious job. Slaked lime and alum water are recommended in these columns. But hellebore is certain and swift destruction to the currant worm. It may be mixed with flour or plaster and dusted on the leaves while moist with dew. Or it may be steeped a few moments in hot water and applied with a whisk broom when cool. One ounce of hellebore to a pailful of water is enough.



VALUE AND CULTURE OF MANGELS.—From the pen of our occasional contributor Mr. J. S. Woodward we find in the agricultural columns of the N. Y. Tribune the following timely suggestions on mangel culture: Learned men, Mr. Woodward says, may laugh at the root crop as much as they please, and prate that roots are nothing but water; but when he looks at his stock he feels that if what they say is true, then "great is water and greatly to be praised," but he much prefers to have it inside the skin of a mangel, and so does his stock. . . . . He last year had eight acres that averaged not less than 1,400 bushels per acre. . . . . While carrots are better than swedes and swedes are richer in food-elements than mangels, still he prefers mangels, for the following reasons among others: They can be planted early, before the press of other work comes on, and can be cultivated and the principal part of hoeing and weeding done before the hurry of harvest time; they are never attacked by those little black fleas that are the bane of the swede grower, and are altogether much freer from all insect pests. They are not so dependent on a favorable season for their growth; being planted early, they grow all Summer whenever the weather is favorable, and will usually yield twice or more times as much per acre: they are ready to harvest much sooner in the Fall, while the weather is good; they are not half as liable to heat and spoil in pits or cellars as the swedes. Besides all these, for meat making, and especially for milk and butter making, they can be fed in much greater abundance without the bad results of imparting a bad flavor to the products. If you raise the Long Mammoth varieties, you must thin to single plants about sixteen inches apart, but for the main crop he greatly prefers any of the very many varieties of Yellow Globe or Ovoid; really in all these he can see but very little difference. . . . . Any good rich soil, the richer the better, will give a paying crop of mangels. A strong gravel is good, or a sandy loam, but he prefers a pretty heavy loam, almost a clay; if naturally or artificially underdrained, this, if rich, will give the very best results both as to quantity and quality. . . . . The main point is to have the land rich and fine; plow deep and be careful to plow well; harrow, cultivate and roll till the surface is mellow and no lumps are left; mark for rows 30 inches apart, with a marker similar to a corn-marker. Sow not less than 200 pounds of bone-flour and three bushels of salt per acre; to do this, throw it lengthwise of the rows, so as to get all you can immediately on them. . . . . Any good seed drill will answer, sowing as directly on top of ridge as possible, and using plenty of seed, not less than five pounds per acre. He starts the cultivator as soon as he can see the rows plainly, and by using, on side of cultivator next the mangels, a tooth made of steel and L-shaped, he can run very close to them without injuring the plants. As soon as weeds start he again cultivates, and when the leaves of the young mangels are about two inches long, he "chops out," i. e., cuts with a sharp hoe through and removes one foot of row, then leaves six inches and cuts out another foot, and thus goes through, leaving hills six inches along the row and one foot between hills. In about a week after this "chopping out," he cultivates again and then weeds; in doing this he uses hoe and hands, taking out all weeds and from the hills all plants except from three to four in each. He does not get as large roots, but he gets a much larger yield per acre by raising in hills, and he much prefers moderate-sized roots; they handle better and are not so coarse and woody as the very large ones. . . . . In harvesting he pulls by hand, and, having a leather mitten on his hand, twists the top off, throws four rows into a single row, and from these throws directly into the wagon. At cellar they are thrown on a rack or riddle, made of strips two inches wide placed one and a half inch apart lengthwise; this is about eight feet long and one end is placed on wagon and the other on window or trap to cellar, and by rolling down this the dirt is nearly all rattled off and falls to the ground through the openings between the strips. If not plenty of room in cellar to store crop, they must be pitted. Make pits on dry ground any length desired, and let the bottom be about five feet wide, and sunken a foot or more in the soil if dry enough; place the mangels in this as high as they can be made to lie easily; put on plenty of straw and cover one foot deep with earth; place a ventilator consisting of a four-inch drain tile, or a box four inches square, into the top of the pit, every six feet, letting it project two or three inches above the dirt covering. This will carry off all moisture from the mangels as they season, and will keep them perfectly dry—a very important thing in keeping them well through the Winter. Before very cold weather, remove the ventilators, filling the holes with straw, and cover the heap a foot or more deep with coarse straw manure; or in the absence of this, give another coat of straw and another foot of dirt. They must not be allowed to freeze if we would have them keep.



BUCKEYE SENIOR RIDING CULTIVATOR WITH BROADCAST SEEDER ATTACHMENT.—FIG. 270.

SKIPPERS or worms found in hams and bacon are the larvæ of some kind of an insect, says the Sun. Usually they are the grubs of the bacon beetle, a dark-colored beetle, about a quarter of an inch or a little more in length, with a whitish band across the back. Now, as the female beetle must get to the meat in order to deposit her eggs, it is quite evident that if she is kept out there will be no skippers in the meat. The same is true of other insects infesting meat, and the simple preventive is to keep the meat wrapped in heavy paper and lime-coated cloth, through which the insects cannot find a passage. Tight boxes, barrels, or even a moderately tight smoke-house, will usually answer, having a fine wire screen over the ventilator or chimney. The sugar-cured hams found in our markets are first wrapped with brown paper, then inclosed in cloth bags and these painted with yellow-ochre or some similar cheap paint. None of the meat-infesting insects can get at these hams when surrounded with such materials. Rusting of bacon is caused by exposure to the air, or perhaps moisture, air and heat. It should be put in tight boxes and in a cool, dry place, and there will be no trouble with rust.

SAYS the Live Stock Journal of London: "It is not a little startling to find that whilst we have been making recent outcries against the importations into this country of oleomargarine, butterine, and other villainous compounds, which are palmed off as Irish and English dairy produce, establishments for the manufacture of these same articles are springing up in our midst."

QUITE recently harvesters using cord for binding have been invented and are now taking the lead, and are preferred to those using the wire. The change from wire to cord has created a new and very large demand for the latter article, and the Prairie Farmer estimates that during the present year no less than 5,000 tons of cord will be required for binding grain alone and by 1885 not less than 40,000 tons will be needed to supply the demand. Where all this is to come from, and out of what kind of fiber it is to be constructed, are questions which remain to be answered.

ANOTHER LAND OF PROMISE.—This time it is not in Manitoba, or in some far off region difficult to reach or explore, but in the old State of Massachusetts, remarks the Inter-Ocean. An English farmer, who has resided several years in Massachusetss, writes home that there is room for thousands more of good farmers in the Bay State, where they can, by judicious investments and management of their land, secure double what is possible in England. He says land can be obtained at from $5 to $25 per acre, and on credit, if desired.

GOOSEBERRIES, says the Gardeners' Chronicle (London), are, as a rule, vapid and inflated, and that is one reason for the objection raised in certain quarters to gooseberry shows and kindred displays, which tend to foster qualities which it is not desirable to encourage, at least at the expense of other more valuable properties. A good crop of gooseberries of moderate size and superior flavor would, with most people, be far more acceptable than a bushel of "Thumpers" and "Roaring Lions."

Big gooseberries are, however, just what we are working for here—big ones that will not mildew. It is surprising what a fascination big fruit, though generally of inferior quality, carries with it.

YIELDS OF EARLY AND LATE POTATOES.—In regard to the time of maturity of the later sorts of potatoes, Mr. Jonathan Talcott states in the Albany Cultivator, that all else being equal, the later sorts will produce a larger crop on the same soil than the earliest sorts, in the same season, as they have a longer time for growth, and especially if the latter part of the season be showery so that the ground is kept well moistened throughout the period of the growth of the tubers. In such cases he has known the same sorts planted both early and late on the same farm, with the same cultivation in both cases, when the later planted would produce nearly or quite double the quantity to the acre that the earliest planted did. . . . . His experience has been that the last half of May is the best time to plant potatoes. With the ground well fitted, and with good cultivation afterwards, he has thus succeeded in growing the best crops of potatoes, having never failed, while he has failed with an occasional early planted crop.

THE Scientific American finds still another use for empty fruit cans. It recommends piercing several small holes in the bottom and sides and sinking them in the earth near the roots of strawberry or tomato or other plants, the holes to be made of such size that when the can is filled the fluid can only escape into the ground very slowly. A very little care in filling the cans occasionally will keep the ground well irrigated. Tomatoes would scarcely need the watering—but the plan might prove excellent for strawberries.

EXPERIMENTS IN HOG FEEDING.—An Iowa farmer, says the Ag. Ed. of the N. Y. Herald, put up 20 one-year-old hogs, and for the first 28 days fed them on dry shelled corn, of which they ate 83 bushels and gained 837 pounds—over 10 pounds to the bushel of corn. He then fed the same hogs for 14 days on dry corn-meal, during which time they consumed 47 bushels and gained 553 pounds, or 11¾ pounds to the bushel. The same hogs were then fed 14 days on corn-meal and water mixed; they consumed 55½ bushels of corn and gained 731 pounds, or 13 1-6 pounds to the bushel of corn. He then fed them 14 days on corn-meal, cooked, and after consuming 45 bushels of the cooked meal, they gained 799 pounds, or very nearly 15 pounds to the bushel of meal.

A MEDIUM-SIZED potato, says Dr. Roland, is more certain to mature than a small one; and best results are obtained from large potatoes, as the eyes or germs are more vigorous, and there is more substance to feed them in the beginning.

SWEET WILLIAMS.—A bed of Sweet Williams, to be really effective, says Gardening Illustrated, should have the leading shoots tied to stakes, or the wind will blow the plants about and make a wreck of many of them. The flowers of a good strain are so bold in appearance, so varied in character, and so handsomely marked, that they will repay a little extra attention at the proper time.

THE Detroit Free Press says that country people pity the denizens of a city who have to use lake or river water, but when an Ohio farmer cleaned out his well last week, he fished out two cats, a paint keg, two old brooms, an old hat, a boot, and a dozen shingles.

JUMPING THE ROPE, says the N. Y. Herald, has just killed a little girl in Wisconsin, as it has done elsewhere. Parents and teachers never seem to realize that the emulative spirit kills children more rapidly than it does adults. . . . . The Red Cloud Indians are to have a boarding school. As soon as the institution begins business the pupils will begin to write to their parents for money. Then the proud old braves will learn some of the miseries of civilization. . . . . Hebrews are not to blame for feeling sore about the hotel restrictions that their whole race is subjected to because of the alleged undesirableness of a few vulgar fellows; but if all men are free and equal why do not some members of the ancient family go into the business themselves and teach their contemners how to run a hotel? . . . . . It was a young "æsthetic" from Boston, who on first seeing Niagara said, "What a beautiful bang!"

Everywhere.

RURAL SPECIAL REPORTS.

Kansas.

AGENCY, Osage Co., May 9.—Spring is two weeks later than usual; but it has been favorable for work. Corn all planted and some of it up nicely. Wheat came through all right and the late rains have sent it up with a rush, and the outlook for a good crop is very flattering. The peach trees are full enough for a good crop; and there will be plenty of apples and an abundance of small fruits. Taken altogether, the prospect for a year of *plenty* is very good. D. B. R.

PARSONS, Labette Co., May 14.—The season opened two weeks later than the average. Now it is 10 days earlier. In the immediate vicinity wheat is very good and headed. Further to the northwest the damage from chinch bugs is general and serious. Corn unusually promising. The earliest is six inches high. J. B.

Missouri.

GRANT CITY, Worth Co., May 6.—After a long, severe Winter, we are having nice Spring weather. Winter wheat looks as if it might make half a crop. Spring wheat and oats are up and looking well. Farmers are plowing; the ground is in splendid condition. J. T. O.

Nebraska.

ST. JAMES, Cedar Co., May 9.—The "Old Muddy" or "Big Muddy," as the Missouri is familiarly called, has been dreadful this Spring, but is now returning to its banks and to its ordinary yellow, dull career. Small grains are nearly all sowed. People are preparing to plant corn, most of which will be put in within two weeks. A little snow still lingers in drifts about shady places. J. N. L.

New Jersey.

QUINTON, Salem Co., May 12.—Our Spring opened late and cold. Grass and grain are consequently backward, and need rain badly. It is now hot and dry. We have had but one light shower this month. Farmers are mostly through planting corn. E. H. S.

New York.

NORTON HILL, Greene Co., May 16.—We have a fine growing time here at present. On the 11th a terrible tornado passed over this place, unroofing buildings, smashing windows, tearing up apple trees and carrying them bodily over fences. Hail stones came with the wind and cut crops and trees considerably, but as the trees were not fully in bloom I think we shall have some fruit. The storm was only about two miles wide by about 14 in length, so far as we can hear at present. Everything looks prosperous. Oats are just coming up, and more acres than usual have been sown. Fall-sown grain looks much better than last year, owing to its being covered with snow most of the Winter. A larger area was sowed to it than usual. Corn is now being planted, and there is a large increase in acreage. Last year's was the best crop we have had, and it has induced farmers this year to plant more. I think, as a whole, corn averaged 40 bushels of shelled grain to the acre all through this country. Flint is the only corn planted here. Dent will not ripen. Of course, there were some fields that averaged as high as 70 bushels of flint corn. We call that a big yield here, and when we can get that yield we are satisfied with our crop. It is all hilled cultivation as flint corn will not stand up well unless it is braced with the dirt of the hill. Farmers, as a rule, here are in good spirits, and don't buy oleomargarine to make their cows yield 40 pounds of butter per head per week. We are now looking for the boarders from New York who visit this section every Summer, and who will make a market for much of our produce. They have brought a good deal of money into this country, which has been laid out on farm buildings, and their presence here has caused the setting out of a great amount of fruit, so we think our country looks much better than it did ten years ago. We like to report progress, and I think we gain a little every year. There is a falling off in the dairy interest, as there is so much "composition" butter being thrown upon the market. Last week all through the thermometer was in the eighties and nineties, so we find Summer is upon us. W. H. I.

STERLING STA., Cayuga Co., May 10.—We have had a very cold Spring with little rainfall; but yesterday the mercury rose to 84 deg. in the shade, and we had a shower in the evening. To-day is nearly as warm and the sky looks showery again. A large acreage of potatoes is being put in hereabouts. The few Burbanks planted last year yielded so well that they are being largely planted this year in place of other varieties. The appearance of our fruit trees gives promise of an abundant crop of all sorts, and many new orchards have been set, one farm in our vicinity having been enriched by the setting of fruit and ornamental trees, shrubs, etc., to the value of $800. Such orders as that are worth looking after by agents. By the way several of our young men are "tree peddlers," and I have learned by experience that one is just as safe in buying from them as from "first hands." One young man filled his small fruit orders last year from stock procured of J. T. Lovett. This year his stock comes from E. P. Roe. Many a home rejoices in luscious fruits procured through the solicitations of an agent, that would otherwise be as destitute as a treeless prairie. Farmers usually do not take kindly to sending off for things themselves, and improved implements as well as fruits are introduced by the irrepressible agent. Quite a start was made here last year in the growth of Amber-cane; but owing to the lack of suitable apparatus for working it up a considerable part of it was foduced out. The only convenience for expressing the juice was through home-made wooden rollers worked by horse-power, which was not very satisfactory. Enough was obtained, however, to prove that the product was of excellent quality and could be produced at a profit. Those who had any surplus sold it readily for 60 cents per gallon wholesale. The sugar beet was also quite extensively planted last year, simply to test its adaptability to our soil and climate, and the results were so favorable that had Oswego capitalists started a beet sugar factory, as they proposed, they could have drawn their supplies largely from this region, provided, of course, the prices were satisfactory. Wheat in this section looked well when snow went off, but the Spring has been so unfavorable that the present outlook is poor indeed. More than ever before am I convinced of the advantage of early sowing and ample fertilizing for this crop. Some fields that look as if they would hardly return the seed, show rank-growing patches wherever a load of manure was put last Fall. Superphosphates are not very extensively used here yet. E. K. B.

North Carolina.

BROOKSTON, Warren Co., May 11.—There will be some peaches here yet. I find that in our haste to be the first to report either good or evil we are often mistaken. Many large orchards did not average one bloom per tree, while others were not injured by the Winter's frosts. We now find that the frosts of early April left enough for a fair crop. The acreage planted in cotton is much larger than last year. In April I reported to our Commissioner of Agriculture an increase of eight per cent., but now I think I made it too low. M. B. P.

Ohio.

LITTLE HOCKING, Washington Co., May 15.—The farmers were very late about plowing owing to wet weather, but planting is going on rapidly now. Ground in good condition. Wheat promises about three-fourths as much as last year. Grass is doing finely. Pastures were never better at this time in the year. Apples about half a crop; peaches abundant; blackberries generally killed. Cattle wintered well, but sheep look bad. A. L. C.

Texas.

SAN ANTONIO, Bexar Co., May 8.—Are not the inclosed specimens of grass Bermuda? It makes an excellent lawn, with a thick, tough sod, smothering everything else and remaining green the entire year. It seeds the second year after planting. [Yes. Our friend is probably mistaken as to its "seeding." We would feel obliged for some of the seeds.—EDS.] Our crop prospects in Southern Bexar are good. We had frost the morning of the 14th of April, but it did very little damage. We will have plenty of peaches and plums. Early corn, peas, beans, Irish potatoes, and, in fact, most kinds of garden truck, are now usable. J. M. M.

West Virginia.

LUMBERPORT, Harrrison Co., May 10.—We had a long, cold Winter, a late, wet Spring, so that farmers generally are far behind with their Spring work. Very little corn has been planted. Wheat looks well; grass is fine and vegetation is making a rapid growth. W. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

Hardy Grapes, Peaches, Pears, Plums and Apples.

R. T. J., Austin, Texas having seen it stated in various catalogues that Moore's Early Grape is frost-proof or, in other words, that it will stand 10° to 15° below zero—asks, 1, whether it will do so in that climate, and whether it is likely to thrive there; 2, are there any peaches, pears, plums or apples that are really iron-clad.

ANS.—1. Moore's Early is recommended more especially because, while of only fair quality, it is pretty sure to ripen at the extreme North. It will doubtless prove abundantly hardy where the temperature does not range lower than 15 degrees below zero, should it be able to withstand also the Summer climate of that locality. It is new and hence comparatively untested; still it seems quite as likely to succeed as Concord or Hartford Prolific, both of which are esteemed valuable in Texas, and are as nearly "iron-clad" as anything we know among grapes. 2, The difference in mere hardiness among varieties of peaches is, in our estimation, rather slight; and so subject to variation from the influence of soil, cultivation, season, and possibly other causes, that we regard it as nearly or quite useless to take it into account, in the selection of varieties for planting. The difference in hardiness, among pears, is measurably of similar character; although a few, like Seckel, Flemish Beauty, and especially many of our American seedlings, are held to be hardier than the average of European seedlings. Plum trees rarely suffer from the severest Winters, except at the extreme North, unless they have suffered the premature loss of their foliage during the previous growing season—a malady to which they are quite subject—or unless from some cause, they have failed promptly to ripen their young wood. The American varieties, and especially Prunus Chicasa, are free from such tendency and are eminently hardy, although they lack somewhat the luscious qualities of the common garden plum, Prunus domestica. In apples the difference in hardiness is greater, and more distinct, although it seems to follow no recognized rules, unless it be this, that Southern varieties are (almost, or quite,) universally hardier, at the North, than the average of Northern varieties. We have never known a variety, originating south of the Ohio River, to prove otherwise than hardy in the climate of Michigan; although Eastern sorts, such as Baldwin and Roxbury Russet, are often seriously injured by the severer Winters. 3. Many of the newer sorts of apples, originating at the Northwest, are designated as "iron-clad;" while some of Northern and Eastern origin may, with more or less propriety, assume this title; among which may be named Fameuse, Northern Spy, Talman Sweet, Golden Russet, Wagener and others. These, however, generally fail on the Western prairies; while few of the Northern varieties (except the earlier ones,) are found successful as we go South.

Color in Jerseys.

H. C. P., Albion, Mich., says: "I am offered a Jersey bull calf two months old of a light fawn color; white underneath and on inside of legs, with black markings about the head. The lower part of the tail is black with a white switch. But when the hair is parted it is dark underneath and the skin is blue, and where the outer hair is white (on belly) it is *darkest* toward the skin and the skin itself is the bluest. In every other respect (except this darkness of the hair) he is a fine specimen. His sire is black with fawn around the mouth and eyes—not a very good animal. His dam (half sister to sire) is a brindle mixed with fawn, two years old and gives eight or nine quarts of good milk daily. Her dam is a fawn with black head markings, six years old and gives 18 quarts daily of good milk. The grand-sire on the sire's side is black. Query.—Is such an animal a good one to place at the head of a herd, or is his blue skin objectionable?"

ANS.—It has been said that "a good horse may be of any color,' and the same has been applied to a cow. But in this popular adage there is something delusive when it is applied to animals of any particular and well established pure breed. In this every characteristic is important; for if the peculiar and established markings are not present it is more than likely that the more essential characteristics will be found wanting. With regard to Jersey cattle there are some points which have become so fixed that they are accepted as infallible guides in denoting the character of the animal. Thus one of the best established points of the breed is a deep yellow skin, and this is so indispensable a requisite that no person who keeps Jerseys would care to keep in his herd an animal with a blue skin. But, then, this blueness of the skin may be caused by the new hair of a darker shade coming through. A young calf changes color at this season, as well as older animals, by the change of the coat; and before a calf with good ancestry is rejected on account of the color of the skin, it should be ascertained if the color really belongs to the skin or is caused by the growth in it of new hair of a black color. The black markings of the parents of the calf would indicate to some extent that this might be taking place. But, after all, the colors and markings of the animals are more like those of a grade Jersey than of a pure-bred one, and the performance of the dam is not that of a really good Jersey. So that it would be wise to examine the calf closely before taking it.

Budding Peach-Tree Seedlings.

F. E. H., Harlan, Kansas, says:—"I have just set a lot of yearling seedling peach trees for budding stocks. As they had grown up with many branches, I cut them back to the ground, intending to train up one strong, clean shoot in which to bud. 1, Was this right? 2, Will they do to bud this season? 3, Will buds of this season's growth do to put in? 4, How high above the ground shall I place the bud?"

ANS.—1. The usual, and we think the preferable, age at which to bud peach-tree seedlings is, as soon as they are large enough to receive the bud, or, perhaps, when one and a-half or two feet in hight; then a few inches of the lower part of the trunk may be cleared of leaves and branches, and the buds be inserted, preferably on the northerly or shaded side. This, at the North, will be better done about August or September, and the buds should be started by cutting away the top above them the next Spring. At the South, we doubt not,

the buds may be inserted earlier in the season and the tops cut away and the buds pushed into growth the same season; or the trees may be budded in the Spring from dormant buds of the previous year's growth, and the buds started by cutting away the tops as soon as they have well "taken." 2 Yes, as soon as vigorous growth is commenced. 3 Buds for this purpose should be taken from the current year's growth as soon as it shall have become sufficiently ripened or hardened, except in case of Spring budding, in which last year's buds must be used. 4 Young stocks will form straighter and finer trees if buds are inserted within three or four inches of the ground, otherwise this is a matter of little consequence, except only that buds will "take" more certainly in the wood of the current year.

The Niagara Grape.

W. A. E., Statesville, N. C., wishing to plant an acre of grapes and having received a proposition from the Niagara Grape Co., to furnish him with vines of that variety on certain terms, asks whether the grape is really a good sort and worth what is asked for it.

ANS.—We have nothing to say as to the method adopted by the Company to introduce their grape. It is not our affair. We believe the Niagara to be a remarkable grape, all things considered. The vine is perfectly hardy at the Rural Farm and of great vigor. Planted last year, it promises to fruit this. The quality of the grape is to our taste better than that of the Concord. From our best information this variety is one of the most prolific of any of which we have any knowledge. We have no information as to how well it is adapted to various climates, soils and situations.

Miscellaneous.

J. N. L., St James, Neb, asks, 1, the address of some one who has Leicester and Cotswold sheep to sell in Illinois or Iowa; 2, how to proceed to recover money left for certain parties in the Bank of England; 3, whether an inclosed powder is gold, and if not, whether it is worth anything.

ANS.—1. I L Neuman, West Jersey, Stark Co., Ill. 2 We do not believe it would pay once out of 1,000, aye, once out of 10 000 times to hunt after the money that is said to be waiting for heirs in the Bank of England. Still, if a person insists on spending money in the vain pursuit we advise him to trust the matter to an honest lawyer; first, because an honest man will be benefited by the undertaking anyhow; and, second, because in some places the fortune-hunter is likely to give up his pursuit in despair if he defers the spending of money on it till he discovers an honest lawyer to handle it. 3 The sample is iron pyrites, or sulphide of iron. It is of no value itself, unless it is found in large beds, when it can be employed for the manufacture of sulphuric acid. It often *accompanies* gold, and its discovery would justify an assay of the rock containing it, to see if gold is present. The sample sent was too small to assay.

W. C. L., Homer, N. Y., says, "The seeds from the RURAL Free Seed Distribution are received. Among them are two kinds of asparagus seeds and our liking for asparagus would lead us to give these seeds a good place in our garden and good cultivation if our experience with it in the past were not so disheartening. Some years ago we purchased seeds of Conover's Colossal, treated them as directed, not forgetting a heavy coating of manure in the Fall and a top-dressing of salt in the Spring, and were rewarded by large, tender stalks: but when cooked what was our disappointment to find they were as bitter as quinine. Not liking to give it up so, we cared for the bed another year, giving it a covering of manure in the Fall, but the next year it was the same, and we plowed it up. Now what shall we do? Have you heard of any one having a like experience and, if so, is there a known remedy."

ANS.—We should be pleased to hear from some of our asparagus growers respecting the above. The bitterness may arise from some peculiarity of the soil, and we could only advise trying another part of the farm or garden.

M. H. R., address mislaid, has a valuable cow that lately bruised her hip so badly that the skin was broken through and the extreme point of the hip-bone broken. The skin opens of its own accord and the uncovered bone is about two inches across. The animal is quite healthy and hearty, without any lameness, but there is an unsightly break in the hide, and our inquirer asks how to get rid of it, as it does not seem to heal.

ANS.—Keep the animal perfectly quiet in her stall until the wound has healed. If any pieces of broken bone remain, remove them. Once a day spray the wound with a solution of sugar of lead, one drachm to three of water, and, while the wound is wet, dust on it a powder made of pulverized gentian root, one ounce; alum, one drachm. This will unite with the moisture and form a crust on the face of the wound, protecting it from atmospheric influences.

L. M. N., Kalamazoo, Mich., asks, 1, whether the pinks sent out in the Free Seed Distribution will live out-of-doors without protection in the Winter; 2 referring to the statement made some weeks back in the RURAL, that J. M Thorburn & Co. control the entire sale of the White Elephant Potato, we are asked how comes it that two named parties—one in Indiana and the other at Albany, N. Y.—offer it for sale.

ANS.—1. We should prefer in your climate to protect them a little. They are hardy here. 2. It is quite true that Messrs. Thorburn & Co. control the sale of this variety of potato. Any firm or person, therefore, offering the genuine White Elephant for sale must have purchased it from them.

W. A. H., Carlisle, N. Y., asks for a recipe that will keep horses, cattle and hogs in good condition without pampering them.

ANS.—Give regular feed of good quality and generous in quantity together with well lighted and clean quarters. Throw physic to the dogs and give your animals a chance to keep well; when they are sick, it is time enough to call on experts for advice. No powder or other medicament will keep domestic animals healthy without this care, and with it they are not needed.

J. C., Homer, N. Y., asks whether Fall-sown rye can be cut twice this Summer for hay or to be used instead of hay.

ANS.—Rye cannot be cut after the seed stalk has appeared, and make a second growth that will be worth anything. If it is very luxuriant and thickly sown it may be cut before the heads are formed and will then make a second growth: but a larger yield will be procured by cutting the rye when full-grown and just as the blossom appears than by making two cuttings.

J. M. M., San Antonio, Texas, asks at what velocity should a blower revolve which has eight fans 3x4 inches, and is 11 inches from center of axle to end of fans, to give a blast equal to that of a blacksmith's ordinary hand bellows, worked as it usually is.

ANS.—It depends greatly upon the shape of the fans and the angle of inclination, also upon the fixing of the fan. Three hundred revolutions a minute ought to produce a much stronger blast than a smith's bellows.

A. C. B., Warren's Corners, N. Y., sends two samples of oats which agents are there selling as White Russian Oats, and he asks which specimen (if either) is the genuine White Russian.

ANS.—No. 2 more nearly resembles those we sowed. They were purchased from D. M Ferry & Co., Detroit, Mich., which firm is, we believe, headquarters for the variety.

D. M. L., Okolona, Miss., asks how to train and trim tomato vines so as to make them fruit well—his usually run to vine without bearing much fruit.

ANS.—The tomatoes are planted in soil that is too rich. They do not need training or pruning unless confined to arbors If tied to stakes branches may be cut off as needed.

M. B. H., Canandaigua, N. Y., asks, 1, whether the Rural Branching Sorghum will seed after it has been cut, and, 2, after the seeds are ripe will the stalks be good for fodder.

ANS.—1, No, not in this climate. 2, As good as or better than those of Indian corn.

G. G., Dayton, Texas, asks if picotees, carnations and pinks will transplant, adding that they have come up very thick.

ANS.—Yes, very readily. If permitted to remain so thick they will soon become "drawn," feeble and worthless.

C. A. R., Tallahasee, Fla., inquires as to the proper time to cut Hungarian Grass.

ANS.—We have sown it the present season for the first time, and therefore cannot speak from experience. It is said that it should be cut while in bloom.

C. C. M., Danby, N. Y., asks where sheep-shearing machines can be obtained, and whether they are a success.

ANS.—American Shearer Co., Nashua, N. H. The machines are used to a considerable extent and in practiced hands are successful.

J. H. S., Carthage Landing, N. Y., sends insects for name.

ANS.—Hairy necked Leaf-eater, known to entomologists as Phyllophaga pilosicollis.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MAY 21.

Mrs. W. R. S.—J. O.—Miss R. G.—J. J. C.—Mrs. S. H. H.—S. A.—J. B. L., many thanks—J. B.—A. L. C.—C. H. D.—M. W. F.—W. H. I.—F. M. H.—G. E. G.—K. C.—G. C., M.D.—H. C. B...L. B. A.—L M. N.—M. B. P.—J. M, M.—I. N. S., Fort Atkinson, Wis., new blackberry received and planted.—A. C. B.—L. S.—G. W. T.—J. F. F.—I. P. R.—W. H. M.—E. J. R.—E. M. B., Detroit, Mich. Thank you much. We shall plant the seed.—H. C. P., answer at once.—D B. R.—E A.—T. H. H.—J. C.—E. L. B.—J. S. C.—A. C. S.—T. T. L.—E. H. S.—J. E.. M. E T., many thanks.—J. R.—E. P. D.—H. J.—E. R. V.—L. B.—T. W. B.—C. A. S—A. G. A.—S. C. W.—R. N. M.—T. H. O.—W. H. G.—R. T.—C. A. S.—B. M., many thanks.—R. M. W.—T. O.

Implements and Machinery.

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RIDING
CULTIVATOR,
For 1881.

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Junior Buckeye
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CULTIVATOR,
For 1881,

Have many New and Important Advantages.

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They have four or six Shovels for Corn, or five, six or seven for shovels Fallen, and they are the best Fallen Cultivators in the market. They have the Patent Rotary Shield and Foot Treadles for raising the Shovels.
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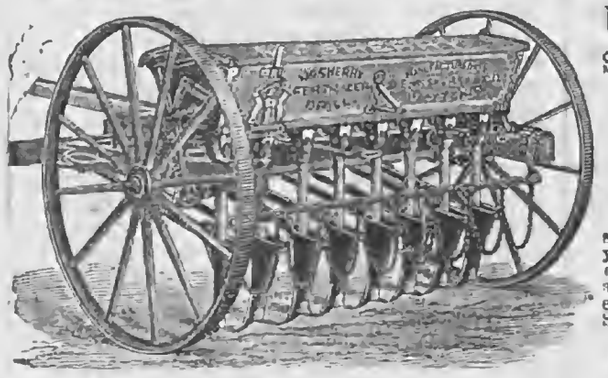

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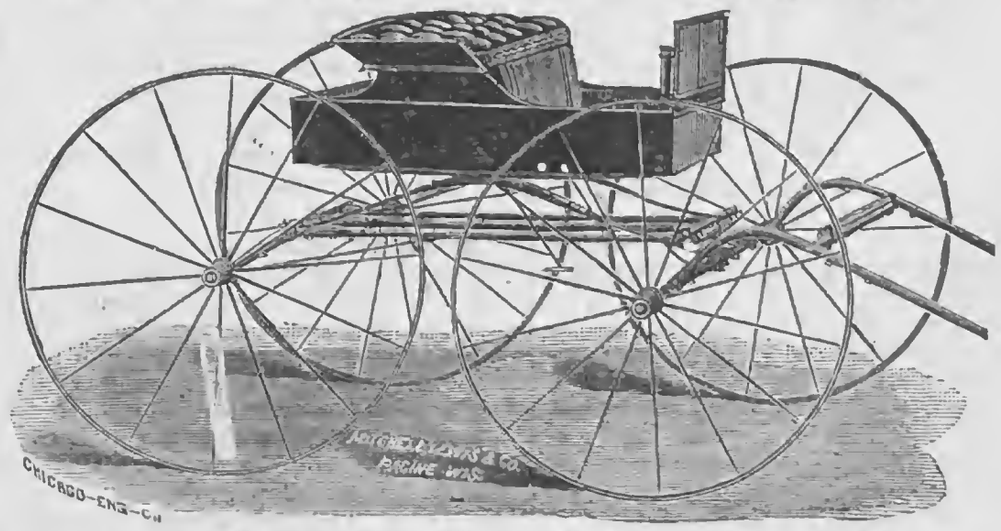

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THE
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A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, MAY 28, 1881.

The Regular Plant and Seed Distribution of the Rural New-Yorker, announced in our Fair Number, is now closed. We can still send most of the kinds offered, however.

The Rural New-Yorker begs to offer in articles of its own selection, for the longest and heaviest five heads of wheat from the next crop, $50.00, to be divided into first, second, third, fourth and fifth premiums. The awards will be published in our Special Wheat Number, and drawings presented of the prize heads.

The Rural New-Yorker of June 11 will be a special cattle number.

The attention of our farmer-readers is called to the article "Notes from the Rural Farm" and the accompanying diagram in another column. Not that they are particularly interesting in themselves, but because they will familiarize them with experiments to which frequent reference will probably be made in the future.

Cotton Planters' Convention.—We are glad to note the increasing interest in the South, in industrial exhibitions. It speaks loudly of that prosperity which Southern planters, farmers and mechanics have hoped for so long and which they are now, let us hope, beginning to enjoy. Last week we spoke, editorially, of the great Cotton Exposition to be held next Fall at Atlanta, Georgia, and now we note another exhibition of a similar nature which is to be held at Memphis on the 25th inst., when all the new inventions and improved machinery for cultivating and preparing the crop for market will be practically illustrated and their merits explained. Such exhibitions of the Southern industries will incite to greater enthusiasm in the great work of redeeming the South from her long period of industrial adversity and will communicate a powerful impulse to the interests of agriculture.

Chestnuts.—As a remunerative crop, chestnuts have not received their share of attention and we presume it will be long ere the raising of chestnut trees is made a part of our rural industries. But may there not be money in it? In some foreign countries the chestnut crop is equivalent to the wheat crop in America, both as respects its money value and the uses to which it is put. Chestnut bread, a thing of which Americans are wholly ignorant, constitutes the principal food of thousands of people in Europe and Asia. The fruit is ground into meal, and puddings, cakes and bread are made from it. Ohio's statistics show that her chestnut crop is valued at $60,000, and it could soon be made to reach ten times that amount. The tree is of quite rapid growth, attaining the hight of 15 or 25 feet in five years from the seed; it is, as we know, valuable as timber; can it not be made more valuable here for its fruit?

There seems no reason why we should not raise the Pyrethrum roseum, from which that most valuable insecticide known as Persian Insect Powder, is manufactured in this country or in some parts of it. The plant is already known to thrive in California, and a company is established there for the manufacture of the powder from its flowers. It would seem that these flowers contain a principle which, though deadly poisonous to nearly all kinds of insects, is yet harmless to man. It has proven as destructive to potato beetles, army, cotton, and cabbage worms as it is to bed bugs, roaches, hen lice and the like. It seems to be, in fact, the perfect insect destroyer, and we have now simply to ascertain where it can be most profitably grown and then to cultivate it in such quantities as will admit of its being sold at a very low price. We repeat the request which we made three weeks ago, that those who have received packets of the seeds from the Rural New-Yorker will give them careful treatment.

High-priced cattle. — Lately there has been quite a large number of auction sales of pure-bred neat cattle in different parts of the country, and prices, as a general thing, have been high enough to satisfy the sellers. Probably the most notable sales have been those of Jerseys in this city, and of Short-horns at Port Huron, Michigan. On the 5th inst., the Maple-Shade herd of Jerseys, the property of Mr. John D. Wing, sold here, brought the unprecedented average of $517.32 on 46 head, the top price being for the pure Alphea bull Polonius, which was bought by the proprietor of Alma Farm for $4,500, the highest price ever given for a Jersey bull; and at last week's sale Leda bought $3,000, the top figure ever given for a Jersey cow. High as are these prices, however, they are greatly exceeded by those given for Short-horns at the Port Huron sale of May 18, where Airdrie Duchess the Tenth, brought $7,525; Airdrie Duchess the Second, $7,000; and Airdrie Duchess the Eleventh, a mere calf, $5,055. These prices may be considered fairly indicative of the value placed by the public on the best specimens of these two breeds, as the Alphea family is now considered to embrace the best type of Jerseys, and the Airdrie branch of the Duchess family, owing to the decadence here of the pure-bred Bates Duchess tribe, is generally considered second to no Short-horn strain among us.

OCEAN CATTLE TRANSPORTATION.

Last Wednesday a cablegram announced the decision of the English Courts against the legality of carrying deck loads of live stock on the Atlantic steamers. Henceforth shippers will be without compensation when their stock are either washed overboard in stormy weather, or cast overboard for the safety of the vessel and the rest of the cargo. In ordinary cases, when one part of the load of a vessel is jettisoned to lessen or remove danger to the vessel and the rest of the freight, the loss is made good by levying a contribution on the gross value of the ship and cargo at risk, and saved by the sacrifice. As the carrying of stock on deck is now declared illegal, nothing can henceforth be collected, by this system of general average, for losses voluntarily incurred to lighten the vessel or adjust the cargo; neither can insurance be collected in Great Britain on stock accidentally washed overboard. The underwriters of this city have lately condemned the practice of carrying cattle on deck in the Winter months, on account of the great risk thus incurred, but except in July and August there is not a month when deck loads of cattle are not likely to be either greviously injured or washed overboard during rough weather on the Atlantic. Humanity therefore, should be congratulated on this decision.

A twin barbarism, however, and one more flagrant during the heated Summer months than at other times, is the packing of beasts between decks in ill-ventilated, over-crowded quarters. Animals weltering below in such places suffer as much from the heat of Summer as do those shivering on the weather deck from the cold of Winter. Moreover, the flesh of animals that cross the Atlantic cooped up in a half-poisonous atmosphere, and which have to be slaughtered soon after landing, can hardly be healthful. Some of the heaviest losses incurred by shippers of live stock have been due to defective ventilation on steamers ill-adapted to the trade.

GAMBLING IN LIFE—A NEFARIOUS BUSINESS.

Northern Maryland and Southern Pennsylvania are just now violently agitated on account of a large number of novel life insurance companies that have lately started in business there, and are doing a "roaring" trade. One of these impecunious concerns having once obtained a charter, straightway floods the surrounding country with glib agents who find little difficulty, during the present "craze," in persuading sharpers and nincompoops alike to take out policies on the lives of some of their acquaintances or even of strangers who are likely to die soon. The companies are gotten up on what their organizers term the "mutual benefit" plan—a plan which must confer a benefit on themselves, however disastrous it may prove to the insured and the insurers. Whoever holds a policy in any of the concerns is assessed a sum proportioned to the amount covered by this policy, on the death of any one insured in the company. From this contribution the amount of the policy is paid, leaving a snug bonus for the managers of the institution. As fifteen thousand dollars is the greatest risk taken by any of the concerns on a single life, some persons who have risks covering from fifty to two hundred thousand dollars on one person, are policy-holders in quite a large number of companies, and as deaths must occur frequently from the very nature of the risks taken, the assessments must be onerous in many cases.

It is therefore of the first importance to the insurer that the "subject" insured should be as short-lived as possible both to escape assessments and to pocket the insurance. Accordingly the whole "afflicted" region is being ransacked for good subjects—tottering old men and women from seventy-five to eighty-five and the moribund of all conditions who cannot possibly survive long. Many of the best subjects—those whose deaths have already enriched the holders of policies on their lives—were inmates of alms'-houses, decrepid wretches who for years have been supported by public charity. Quite a large number of the "best" people of the region—laymen and clergymen—are said to be connected with the companies as policy-holders, agents or organizers, and not a few of them must wish, if they pray not, for the "translation" of some poor old wretched stranger whose death will confer on them riches he never owned in life. This nefarious mode of gambling is spreading; it is provocative of recklessness, thriftlessness and murder. It is against public policy and the welfare of the community, and it is therefore the duty of the legislature promptly to suppress it.

WANTED:—A COMPLETE DICTIONARY OF THE ENGLISH LANGUAGE.

The question is perhaps an open one whether it is more or less creditable to American scholarship that a discussion about the making of dictionaries should appear in the columns of an agricultural newspaper. The very fact of such discussion points emphatically to the general intelligence of the agricultural community, for most certainly the Rural would make no allusion to such a subject unless we were well assured that large numbers of our readers would be interested in it. But on the other hand it must be said that if the dictionary-makers were fully up to the times and did their whole duty, there would be little need of criticising or discussing their work.

This train of thought has been suggested to us lately while browsing in the new edition of Worcester's large dictionary, where, without the least intention of seeking out imperfections, we have noticed the absence of several words which unquestionably ought to have been included. Some weeks since we objected to a misleading definition of the word ensilage. We wish now to call the publisher's attention to certain other imperfections which have obtruded themselves upon us. We note the absence of the words *resting-spore*, *stage fright*, and *self-contained*, (as said of men, and, by the Scotch, of houses). Neither "hectograph" nor "London-purple" is given, though papyrograph and Paris-green are both mentioned. Curiously enough, one of the most familiar words of Old England, "*rod*," is not defined in the English sense. For many generations, the rod with which most European children are punished is not a single switch, as with us, but a collection of several twigs. It is a small handful of twigs, as it were, fastened together with twine at the butt. It is strange, indeed, that Worcester makes no allusion to this meaning of the word.

The term "graded," as used with regard to cattle is explained, but we find no special reference to graded schools. "Blue-joint" is defined as a kind of grass (etc.), and perhaps the term as thus corrupted, is used in some localities, but it should have been explained that the true name of Calamagrostis Canadensis, is blue joint-grass, that is to say, as every intelligent farmer knows, it is a joint-grass whose purple blossoms suggested to our ancestors the idea of calling the grass blue. There is nothing blue about the joints of this grass.

We infer from the foregoing examples, which have come to us spontaneously, that there is real room for improvement in the newest of our dictionaries. And it seems to us very desirable that the publishers of both Worcester and Webster should issue frequent supplements and sell them by themselves, apart from the old stereotyped dictionaries proper. It would, of course, be a very expensive matter to prepare a new edition of a great lexicon, but the cost of manufacturing a supplement is comparatively small, and there is scant justice, anyway, in compelling the owner of the old dictionary to buy a second example of it in order to obtain the supplement with which it has been bound up. Since the supplement alone contains all the new words, it is the only part of the "new edition" which is of real value to those persons who already possess an example of the earlier issue.

BREVITIES.

The "California" Privets at the Rural Grounds are killed to the ground.

Now we are putting up 1 800 feet of barbed-wire fence at the Rural Farm just to try it.

Cut out the blooming stalks of pie-plant. In this vegetable we want tender leaf-stalks—not fruit.

Good tools—the most improved implements—do not make energetic farmers. We think they tend to make lazy farmers lazier.

The past Winter—the severest for years—has not harmed peach blossoms in the least at the Rural Farm. Cherry, pear and apple trees also bid fair to produce a large crop.

We wish to thank many friends for the seeds and plants which they have sent to us to be tested at the Rural Ex. Grounds, and regret that the pressing labors of a short season have prevented us in many cases from expressing our thanks by letter.

There is no difficulty in raising tea plants in most parts of the South. The writer has seen dozens of plants in Aiken, S. C, growing under the shade of peaches and pears among the weeds with no care of any kind. The seeds had been planted there the year previous. It was at first supposed that the plant required moist situations, shade while young and a good deal of fussy attention.

As we go to press the following note is received from the Rural Farm:—"The past week has been cold and rainy. Corn comes up yellow, and probably much seed is rotted in the ground. Clover and Timothy fields are looking splendid, and it would seem that a full hay crop is assured. Wheat is making a rapid growth, and most of our many different kinds that stood the Winter, look well, except Silver Chaff, which is rusting badly."

Monday, May 16th, witnessed the opening of a part of the new Welland Canal, connecting the upper lakes with Lake Ontario. By this means Canada expects to secure a great proportion of the grain traffic of the West, as the grain, it is expected, can be shipped at lake ports on board ocean-going vessels, which, sailing down the lakes, will pass Niagara by way of the canal, and then find their way to sea by way of Lake Ontario and the St. Lawrence.

Prohibition meets many obstacles in Illinois. The order of the Mayor of Springfield, that all the saloons in the city should be closed on the 15th inst. (Sunday) was violently opposed by a mob assembled at Lincoln Park. The halcyon days of temperance are still in the future and an earnest, aggressive, unyielding policy, only, can advance the cause. This outspoken opposition to legal authority, in a matter involving the best interests of an order-loving people, should meet at once with their earnest protest in public assembly and at the polls.

It is a good plan to tie about tomato and cabbage plants pieces of card-board to prevent the cut-worm from severing the stem near the soil. It is easily done and is a better protection than mounds of earth which, it has been said, cut-worms cannot climb up. This idea is a mistake. We last season placed 25 cut-worms in a hole about eight inches deep, the sides of which were nearly perpendicular. We watched them at intervals during two hours and found that, though many attempts to escape were ineffectual, some were successful.

We have forwarded little gifts to those of our subscribers who kindly interested themselves in the cultivation of the mangel seed sent out by the Rural New-Yorker, and who have sent us their addresses as we requested. We should have been glad to have remunerated, in some small way at least, all those whose names appeared in the list of mangel raisers published in the Rural of Feb 26, but, not being able, even at reiterated requests, to obtain the addresses, which were at first mislaid, of all, we are unable to comply with our own desires.

George Bailey Loring, of Salem, Massachusetts, who last Wednesday was confirmed by the Senate as Commissioner of Agriculture to succeed Gen Le Duc, is in his sixty-fourth year, and in one capacity or another has seen a good deal of public life during the past thirty years. He graduated at Harvard University in 1838 and received the degree of M. D., from the Harvard Medical College in 1842. Seven years afterwards, in 1849, he was appointed Commissioner to assist in revising the United States hospital system, and later on he acted as post-master of Salem. In 1866 and 1867 he was member of the lower House of the Massachusetts Legislature, and served as president of the Senate from 1863 to 1876 inclusive. He has been a delegate to three national republican conventions, and been member of Congress for his district during two terms. He has for the last quarter of a century been prominently connected with agricultural matters in Massachusetts, during which period he has delivered many addresses at agricultural meetings and conventions.

For Women.

CONDUCTED BY MISS RAY CLARK.

SAVING MOTHER.

THE farmer sat in his easy chair
Between the fire and the lamplight's glare;
His face was ruddy and full and fair,
His three small boys in the chimney nook
Conned the lines of a picture book;
His wife, the pride of his home and heart,
Baked the biscuit and made the tart,
Laid the table and steeped the tea,
Deftly, swiftly, silently;
Tired and weary and weak and faint
She bore her trials without complaint,
Like many another household saint—
Content, all selfish bliss above
In the patient ministry of love.

At last between the clouds of smoke
That wreathed his lips the husband spoke:—

"There's taxes to raise, and int'rest to pay—
And ef there should come a rainy day,
'Twould be mighty handy, I'm bound to say,
'T' have sumthin' put by. For folks must die
An' there's funeral bills, an' grave-stones to buy—
Enough to swamp a man, purty nigh.
Beside there's Edward and Dick and Joe
To be provided for when we go.
So 'f I was you, I'll tell ye what I'd du:
I'd be savin' of wood as ever I could—
Extra fires don't du any good—
I'd be savin' of sope, an' savin of ile,
And run up some candles once in a while;
I'd be rather sparin' of coffee an' tea,
For sugar is high,
And all to buy,
"And cider is good enough drink for me;
I'd be kind o'careful about my clo'es
And look out sharp how the money goes—
Gewgaws is useless, nater knows;
Extry trimmin'
'S the bane of women.

"I'd sell off the best of my cheese and honey,
And eggs is as good, nigh about, as the money;
And as to the carpet you wanted new—
I guess we can make the old one du,
And as for the washer, an' sewin' machine,
Them smooth-tongued agent's so pesky mean,
You'd better git rid of 'em slick and clean.
What do they know about women's work?
Du they calkilate women was born to shirk?

Dick and Edward and little Joe
Sat in the corner in a row.
They saw the patient mother go
On ceaseless errands to and fro,
They saw that her form was bent and thin,
Her temples grey, her cheeks sunk in.
They saw the quiver of lip and chin—
And then, with a wrath he could not smother,
Outspoke the youngest, frailest brother—

"You talk of savin' wood and ile
An' tea an' sugar all the while,
But you never talk of savin' mother!"

DESCRIPTION OF CUTS.

FIG. 271.—DRESS SLEEVE OF SILK SERGE.

The upper part is cut open to the elbow and lined with close folds of silk. A thick silk cord is threaded through the serge and tied at the elbow in a bow and ends with tassels. At the wrist a frill of silk.

FIG. 274.—MUSIC STOOL.

The stool is of walnut wood; the top is made of a stripe of embossed velvet worked with filoselle; the colors must be chosen to suit the drapery of the room; the sides are puffings of satin; a very rich furniture fringe finishes the stool.

FIGS. 272 AND 273.—BASKET FOR CLOTHES-BRUSH.

The basket is of very fine wicker, in the form of a cone; it is ornamented with an embroidered drape, which may either be finished with a narrow furniture gimp or tufts of crewel; the bottom is covered with silk, which is drawn to a point at the end, and finished by a tassel; the top is ornamented with two woolen tassels and a rosette.

THAT BOY.

REV. MR. VINCENT of the Chautauqua Institution, has been delivering lectures in this neighborhood, the subject of one of which was the above heading.

FIG. 271.

Being indisposed I did not hear him, but had I known the subject I should have strained a point and listened, for I take a deep interest in "that boy." The great question with me is, what shall we do with him? One of the ancient wise men was asked, "what ought boys to be taught," his reply was, "that which they are to practice in after life."

Are there any wise men of the present age who can give a better answer? *Our* wise men, whether they assent to this doctrine or not, certainly do not practice it. They seem to hold that the children of the State belong to the State, and that as such they are entitled to a *literary* education at the State's expense, or rather that the property of the district shall be taxed for building and furnishing the school house, paying the teacher and providing the fuel, and in certain cases, furnishing the books. The reasons given for this (to say the least) arbitrary legislation is, that by this course the children make better citizens, that the tax paid for their tuition is fully compensated by the

FIG. 272.

FIG. 273.

consequent reduction in the tax for the punishment of criminals and the support of the poor.

Very good logic if it were only true. The first necessities of life are food, clothing and shelter, and a knowledge of the means for procuring these prime necessities is of the next first importance, and why should not the State take this matter in hand as well as the more showy but less solid literature? The late Col. Crockett thought that as far as book learning was concerned, "the three R's, reading, riting and rithmetic," was all that was necessary, but so far as spelling was concerned, he thought common sense better than silent letters, and his instructions to the compiler of his autobiography was not to change his orthography in any case. Had the Col. lived in the present age of spelling reform, who knows that he would not have been the standard?

He held to another principle also, "to teach the young idea how to shoot," and when we consider his isolated pioneer life and that his rifle was his protection from his biped and quadruped savage neighbors and that it was the means of procuring food for his family, who shall say he was not right? The Col. was certainly a man of *mark* and if I recollect aright, he was sent by his neighbors a representative to Congress.

Now, this is an extreme case, but is it any more so than a smattering of foreign and dead languages with the higher mathematics and other studies that are termed scientific but which are not thorough enough to make either of them a business for life? They are just enough to disqualify the man for any more ordinary occupation by which he can earn a livelihood for himself and the family he ought to have and support. Don't accuse me of speaking disrespectfully of the study of the foreign languages, or of any scientific or literary studies; if acquired they are useful or may be made so in every occupation, but a very important question to be raised while pursuing them is, what are you going to do with them when acquired?

It is not always the most illiterate that are the most vicious, it is not the dunce alone who steals our fruit and robs our harvests, it is more often he who knows no legitimate business with which he can obtain an honest living. The man who counterfeits coins and bank notes is a man of science, and he who contrives to blow up a ship with dynamite in order to get the insurance he had obtained on a box of worthless stones, was not an ignoramus.

Five to ten years ago I should not have dared to risk what reputation I have for patriotism, by assailing the Free School Law, but for the past two or three years I find it severely criticised by men much higher in the scale of philanthropy. The man who lives in a graded district and owns merely a simple shelter for his family, and whose children are obliged to work as soon as able, is willing to be taxed for the teaching to them of the rudiments, but winces when he learns that a part of the tax he pays, goes to pay for the tuition of his rich neighbor's sons in the higher branches, and to fit them for college. The man who has educated his children under the old Rate Bill system and is now taxed severely to support Free Schools, the pupils of which steal his fruit if not protected and damage his exposed property because it is not all free like the schools, wonders if this is the "value received" he was promised under the newer law.

I miscalculate the reports of the newspapers, get wrong impressions from what I see, hear and suffer, misinterpret the signs of the times, if every species of crime, especially juvenile depravity, has not increased since the passage of free school laws. I would not swear that free schools are the authors of vice but that they have not been the cause of the promised reform I can affirm. It is a maxim as old as history, that that which costs neither money or labor is never very highly prized.

VIEILLARD.

LITTLE COMFORTS.

"You are the first woman I ever saw, aunt Phœbe, stop in the midst of dinner getting, that, too, when you are belated, and rub off a stove."

"It has not taken me three minutes, Susy, with this stove polish powder, and how much better it looks and how much better I feel. That spotted stove hearth was a hindrance to me every minute. It annoyed and confused me. Now I can go ahead with vigor, just so I have often cleared up a table nice and clean before I began to wash my dishes, for my own comfort while I was working. 'Follow things that make for peace' in your own mind as well as in the family. I often think of the advice of a good old lady who had been a working woman. 'Take comfort, girls, take comfort.' If I had my life to live over again I would take more comfort as I went along.

"Happiness turns on very little hinges and trifles that hinder it are worth putting out of the way. Every thing cooks better for me, on a clean stove; or I think it does, which is the same in effect. I know that I can work better and faster if my mind is not every minute taking exception to my surroundings. Some days when work drags and I feel generally out of sorts, I often go up to my room and put a drawer or a set of boxes in the very best order, perhaps bringing down some crumpled linen or laces and freshening them up, laying them over a chair in dainty array; this makes me feel in better spirits right away. Better still is the effect when I take my little garden tools and go out for a half hour among my flowers, loosening the earth about the roots of my darlings and nipping the head of every weed that shows itself. The fresh air, the sweetness of the flowers, and the tidy garden beds all conspire to chase away the low spirits that will sometimes creep over us all. Sacrifice to the spirit of neatness and good order, and you will always find you have been the gainer. Every time I look at that shining stove hearth it gives me a quiet satisfaction, which is an element of happiness. You will always work better and swifter if you are happy. Yet how many busy women would despise such little self-indulgences as something almost childish.

"Don't be afraid, Susy, to take all the comfort you can get out of life, and be content to take it as the sparrows do their food, a crumb and a seed at a time. Great causes of happiness are few and far between in this world, but little comforts may almost always be had for the taking." OLIVE GRAY.

HINTS ON CALLING.

Do not stare around the room.
Do not linger at the dinner hour.
Do not lay aside the bonnet at a formal call.
Do not fidget with your cane, hat or parasol.

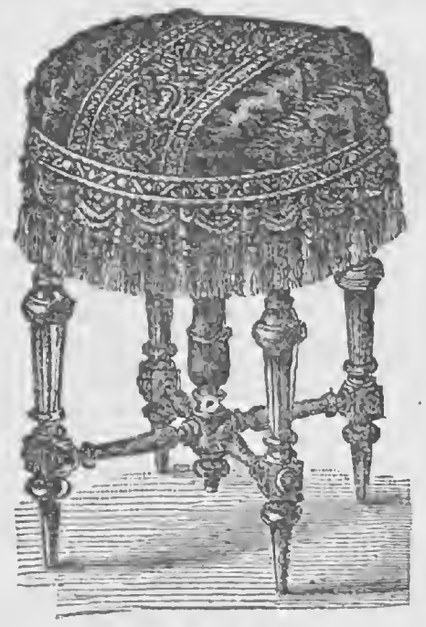

FIG. 274.

Do not make a call of ceremony on a wet day.
Do not turn your back to one seated near you.
Do not touch the piano unless invited to do so.
Do not make a display of consulting your watch.
Do not handle ornaments or furniture in the room.
Do not go to the room of an invalid unless invited.
Do not remain when you find the lady on the point of going out.
Do not make the first call if you are a new-comer in the neighborhood.
Do not open or shut doors or windows or alter the arrangements of the room.
Do not enter a room without at first knocking and receiving an invitation to come in.
Do not resume your seat after having arisen to go, unless for important reasons.
Do not prolong the call if the room is crowded. It is better to call a day or two afterwards.
Do not tattle. Do not speak ill of your neighbors. Do not carry gossip from one family to another.
Do not, if a gentleman, seat yourself on a sofa beside the hostess, or in near proximity, unless invited to do so.
Do not, if a lady, call upon a gentleman, except officially or professionally, unless he be a confirmed invalid.
Do not take a strange gentleman with you, unless positively certain that his introduction will be received with favor.—Hill's Manual of Social Forms.

FASHIONS.

Figured delaines to match and combine with plain ones appear among the Spring novelties.

Embroidery of the finest kind is considered more elegant on mull dresses than lace.

Little puffed pockets of ombre and Bayadere silks are worn, with sashes to match.

Bright gold color, not to say yellow, is one of the most popular shades in dress.

Black costumes are brightened with ombre Surah or Bayadere striped goods.

FIG. 275—MONOGRAM, A. I.

Steel appears as a part of the decorative effects of every dressing toilet.

Mixed black and white feathers are used to trim black rough straw hats.

Gilded bamboo and violet wood sticks are the most popular for parasols.

Tan-colored undressed kid gloves are worn with white costumes.

Sateen or satinette is the most popular wash fabric of Parisians.

Mother Hubbard is the fairy godmother of fashion this Spring.

All young women wear short, untrained skirts on all occasions.

Sashes of ombre ribbon will be much worn with white toilets.

White and pale pink bonnets are most worn at receptions.

Steel and gold are the admired combination this Summer.

Walking jackets never go entirely out of fashion.

Necklets of beads are becoming very fashionable.

Very little jewelry is worn with white costumes.

Pompadour flowered cretonnes are revived.

Pink crape has been revived for bonnets.

Pokes grow larger and larger.

GRAY Summer silk suits are beautifully brightened with collars, cuffs and accessories of Bayadere stripes in shades of peacock blue, maroon, garnet, old gold and steel.

Bayadere striped goods form the cuffs, collars and revers of all dressy costumes of silk or wool in solid colors or cheviot mixtures.

Brocaded stuffs, with the flowers and figures outlined in gold or silver, are used to brighten dark and dull tinted toilets.

CORRESPONDENT'S CORNER.

E. E. Fay, of Mentor, Iowa, says: "Is The American Book Exchange all right? I sent them money more than a month ago. I have their receipt of registered letter, but do not get my books."

ANS.—We have often said in the RURAL columns that they are considered perfectly responsible. They are at times obliged to delay the filling of orders; this no doubt is the cause of non-receipt in your case.

A WAYSIDE COURTESY.—I was once walking a short distance behind a handsomely dressed young lady, and thinking, as I looked at her beautiful clothes, "I wonder if she takes as much pains with her heart as she does with her body." A poor old man was coming up the walk with a loaded wheelbarrow, and just before he reached us he made two attempts to go into the yard of a small house; but the gate was heavy and would swing back before he could get through. "Wait," said the young girl, springing lightly forward; "I'll hold the gate open." And she held the gate open till he passed in, and received his thanks with a

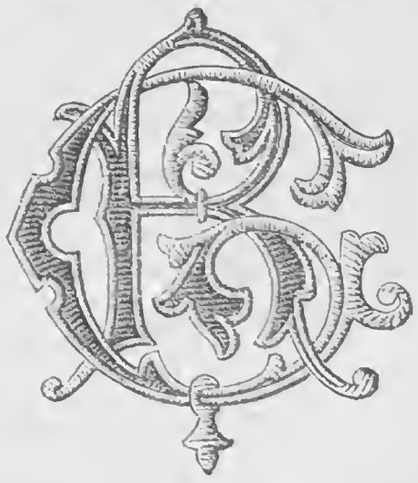

FIG. 276.—MONOGRAM, G. R.

pleasant smile as she passed on. "She deserves to have beautiful clothes," I thought, "for a beautiful spirit dwells in her breast."

[Chicago Western Catholic.]

The latest man who has been made happy through the use of this valuable liniment is Mr. James A. Conlan, Librarian of the Union Catholic Library of this city. The following is Mr. Conlan's indorsement:

UNION CATHOLIC LIBRARY ASSOCIATION,
204 DEARBORN STREET.
CHICAGO, Sept. 16, 1880.

I wish to add my testimony as to the merits of St. Jacobs Oil as a cure for rheumatism. One bottle has cured me of this troublesome disease, which gave me a great deal of bother for a long time; but thanks to the remedy I am cured. This statement is unsolicited by any one in its interest.

JAMES A. CONLAN, Librarian.—*Adv.*

Literary Miscellany.

BRAZOS PETE.

T. A. GERE.

"Say! 'fore you start another dance
Just let me speak a word,
For when the music's goin'
I mightn't p'r'aps be heard,
A sick gal's lyin' in this house
With fever;—awful bad;
And when you swing them hoofs around
The noise 'most drives her mad.

"I heard you tell her mother
'Stuff cotton in her ears,'
And lots of other drunken gab;
Besides, I saw her tears
When she told me that the doctor says
The gal *must* be kept still,
Or else what she's a sufferin'
Is pretty shure to kill!

"So I thought I'd come myself this time
And hint to you galoots,
That if that fiddle squawks agin
Or cornet howls its toots,
And you go prancin' round this room
Like frightened Texan steers
When first they feel the lasso fall,
Why, then, it just appears—

"I'll hev to jine the orchestra;
I'll hev to lead the band:
I play a one-keyed piccolo
With any in the land;
And, if I sound its gamut while
I stand beside this door,
You'll recognize old Brazos Pete,
If you never did afore!"—N. Y. World.

VIOLET'S WAGER.

"Done?" interrogated Dr. Franks, with an amused smile.

"Done," replied his companion, placing her hand laughingly in his.

"It is a foolish wager on my part, Violet," concluded the doctor, kissing her hand with eager tenderness; "for I, above all people, know that there is something about you that no one can resist."

* * * * * * *

"You surely are joking, John? I cannot believe it! You would not, without first consulting me, go and propose off-hand to a girl I have never seen, know nothing about and whom you yourself never saw until a few months ago? And," continued Miss Franks, without giving her brother a chance of replying, "to think of you beginning to talk of love and marriage and all that sort of nonsense, when you will be 36 on your next birthday! You ought to know better!"

"My dear Emily," began John.

"Don't 'dear Emily' me, sir!" interrupted Miss Franks. "I can't be very dear to you when, after keeping your house for more than twelve years, you treat me in such a manner. However, I have no doubt Miss What's her-name will attend to the messages, study economy, and have your interests more at heart than I, who am only your sister, have had."

"I told you I had proposed, Emily; but you interrupted me before you knew whether I had been accepted or not."

"'Accepted or not,' indeed!" said Miss Franks, satirically. "Of course, you're accepted—snapped at."

"Well," remarked John, "I am sure that, when you know my future wife, you will believe that I have chosen for my own happiness;" and, believing that, I know you too well to doubt the reception she will receive at your hands. And of one thing be very sure—I shall never forget your unselfishness, your patient striving for my welfare, your ever-ready sympathy and loving care."

"Don't talk like that, John," said Miss Franks, tearfully; and, taking his face between her hands, she kissed him impulsively, and hurried from the room.

Dr. Franks sat down in a rather disturbed frame of mind. He loved and respected his sister, and was grateful to her; she had kept house for him since he had been in practice, studying his comfort in every way; and he was really sorry that she should feel herself personally slighted at the first mention of his approaching marriage. No idea of marriage had entered the doctor's head until quite lately, when he had fallen desperately in love with a niece of a new patient of his; but he had thought it better to be assured that his love was reciprocated before taking his sister into his confidence.

At dinner, Miss Franks was evidently determined, by an extra display of dignity and ceremony, to efface all remembrance of her previous weakness; but, after a time, her curiosity overcame all other feelings.

"Pray, John, what is this child's name?"

"What child? Oh, I beg pardon! You mean Miss Lloyd—Violet Lloyd."

"Did you say she was seventeen?"

"No," replied the doctor, smiling; "she is twenty-three."

"Oh, no matter! It is very nearly the same thing—she is quite young enough to make ducks and drakes of your money before you've earned it."

"Emily," said the doctor, more sternly than he had yet spoken, "I hardly think it fair, and certainly very unlike your usual self, to form an opinion of a person you have never seen. I am the more hurt at your prejudging Violet, as I had hoped you would remain with us to help her in the management of the house. Of course we cannot expect a 'child' like her to know anything of such uninteresting though important matters."

"No, John, thank you all the same," answered Miss Franks, in a modified tone, without noticing the quizzical twinkle in the doctor's eyes; "such an arrangement would be far from pleasant to me or to your future wife. I shall take lodgings near at hand, so as to be of use to you should you want me."

"I am afraid Violet will be disappointed. She had quite settled that you would retain your own rooms, joining us only when you liked."

"I am much obliged to her," replied Miss Franks, stiffly; "but you know I never get on well with young people."

"At any rate, do me one favor; don't make any arrangements until you have seen her."

"I suppose that means that you wish me to call upon her very soon? When is the wedding to take place?"

"We have not yet decided; but not before the Autumn."

"Of course you have taken into consideration that a wife, and especially a young wife, is an expensive luxury? Or perhaps Miss Lloyd is an heiress?"

"I'm afraid not," laughed the doctor. "Heiresses would not, as a rule, reside in —— Street."

"In —— Street! Do you mean to say that there is where Miss Lloyd lives?"

"Why shouldn't she? The houses are small, 'tis true, but the neighborhood is good; and an aunt and niece would scarcely require a larger house—in fact, I found them their little house myself, about two months ago."

"Two months ago, John! Why, I thought you said they were quite new friends and patients!"

"Well," said the doctor, "you can scarcely call an acquaintanceship of six months a long one."

"Quite long enough," replied his sister, with a grim smile. "Is she an orphan?"

"She is. Her father, an officer in the army, died only a year ago—six months after his wife. Since then Violet has lived with her invalid aunt, who, after our marriage, will go to live with friends."

"Well," said Miss Franks, as her brother rose from the table, "I hope you will not find you have made a mistake when it is too late to remedy it."

"I hope not," he rejoined, quietly.

After the doctor had seen his patients he went, according to promise, to tell Violet how his sister had received the news.

"I am so sorry," said Violet, as the doctor—not very wisely—gave her a full account of his sister's disturbed state of mind. "I suppose it wouldn't do for me to call on her first?"

"I would not do that, Violet: she is ceremonious, and will, I am sure, come here very soon."

"Then," said Violet, lifting her radiant face to his, "let her come, and I will conquer."

* * * * * * *

"Is my sister in?" inquired Dr. Franks when he came home to luncheon the next day.

"No, sir," answered the servant; "I was to ask you not to wait for her, as she might be rather late."

The doctor had just sat down to his solitary meal, when Mr. Shaw, a neighboring practitioner, was announced.

"Sorry to disturb you, Franks," said he on entering; "but I must ask you to come at once to —— Street."

"To —— Street!" echoed the doctor in alarm his thoughts at once flying to the one person that Street contained for him, "What number?"

"No. 17. A lady has met with an accident; and, Franks, I am sorry to say it is——"

"Not Violet?" interrupted Dr. Franks, rising in agitation.

"Good gracious!" thought Mr. Shaw. "Who would have thought he could be so fond of that stiff backed sister of his? My dear fellow," he continued aloud, "Miss Franks will do perfectly well if she is kept quiet. It appears that she was crossing —— Street and was knocked down by a cab. Some one in the crowd recognized her as Dr. Franks' sister; and a lady who was passing insisted on her being taken to her house, where, I fear she will have to remain for the present."

On reaching —— Street the door of No. 17 was opened to them by a neat housekeeper, who asked Mr. Shaw to step into the drawing-room for a moment and then mysteriously beckoned Dr. Franks away. Entering a little snuggery, with which he seemed quite familiar, he was greeted by a warm clasp of soft hands and a kiss.

"Oh, John, I'm so glad you have come! Mr. Shaw says that, though your sister is not seriously hurt, she ought not to be moved; and aunt won't hear of the attempt being made."

"Well, darling," said the doctor, reassuringly, "I will get a nurse for her, and——"

"You stupid old John! Do you think I would let any one but myself nurse her? But I have not told you half, yet. The fortunate part of the affair is, that she doesn't know who I am. She asked me, just now, in whose house she was. I gave her aunt's name, so she is under the impression that I am Miss Matthews."

"Capital!" cried the doctor. "Let me see her at once."

He then proceeded to the drawing-room, and afterwards went with Mr. Shaw to look at the patient. He found there were no serious injuries; but Miss Franks had sustained a severe shock, and it was decided not to attempt to remove her. Although forced to admit the wisdom of the decision she was made terribly peevish by it.

"I shall be a burden in a strange house," she began, as soon as Mr. Shaw left the brother and sister alone—"and all through your Miss Lloyd. I was on my way to see her, when that wretched cabman drove right over me—I believe he did it on purpose. And now, John, I trust to your making arrangements concerning a nurse for me; and if the owners of the house can spare me this room until I can be moved, that is all I want. I must be under no obligation to them, mind; for attention or nourishment, or anything of that kind. I merely wish to be left alone."

"I will see to everything," replied the doctor, "but I am afraid there will be a difficulty about the nurse, for the young person I saw down-stairs seems to have quite made up her mind to attend upon you herself."

"What 'young person' do you mean? Miss Matthews?"

"Oh, is that her name?" said the doctor, carelessly.

"Yes, it is, sir; and I think you might speak more respectfully of people who have been so kind to your sister."

"I am afraid you misunderstood me, Emily. The girl appears very well-meaning and good-natured; but I don't like the idea of her having entire charge of you. She seems such a child."

"Child!" cried Miss Franks. "A more beautiful woman I have never seen; and she's five-and-twenty if she's a day. But there; I suppose you have no eyes for anyone but that baby-faced chit you are going to marry. Had you seen how that 'child,' that 'young person,' has managed everything since I was brought in, and how she has cared for my comfort in everyway, you would scarcely sneer at her and call her 'a child!'"

"I am sure," replied Dr. Franks, with a gravity that did him infinite credit, "I am exceedingly obliged to her, and will thank her personally when I go down."

Miss Franks was seated in a lounge-chair in the cosy bedroom given up to her by her young hostess who had been reading aloud, but, fancying her companion seemed inclined to doze, had let her book fall from her hand, and was gazing into the fire, which, in spite of the soft air of fast approaching Spring, had been lighted for the invalid.

Miss Franks, however, was not asleep, but was looking, with half-closed eyes, at the picture the fitful blaze lit up with rich, artistic coloring.

Violet's rounded figure was shown to perfection by the unstudied grace of her attitude as she leaned back in her low chair, her hands clasped behind her head. Her rich dark brown hair grew low on her broad fore-head, her soft, hazel eyes—in sunlight blue, at night black—seemed ready to brighten to a smile, ready, too, to darken to a grave and tender sympathy. Miss Franks, though naturally a shy woman, was quite at home with her lovely, cheery young hostess, and even allowed herself to be scolded and petted by her to an extent not a little amusing to the grave doctor.

With an impatient sigh, the invalid broke the silence.

"Really, Miss Matthews, I can't allow you to give up so much of your time to me."

"Nonsense, Miss Franks," replied Violet, startled from her reverie. "What have I to do? Aunt sleeps half the day, and her maid is within call; besides making myself useful will keep me out of mischief, as Dr. Franks says."

"It is very impertinent of him," observed Miss Franks; "but I must say he has been most attentive to me. I'm sure I have told him over and over again that I do not need two visits a day; but he will come. I only wish he came to see some one else."

"What do you mean?" asked Violet, innocently.

"Oh, never mind, dear! I won't think of the subject—it is a most painful one to me. Perhaps I may tell you some day, if you care to be bored with my troubles."

To be continued.

NEW PUBLICATIONS.

Hand-book of English Synonyms. By L. J. CAMPBELL, Boston: Lee & Shepard.

This valuable little book will be found acceptable to beginners of literary work and also of much use to those of greater attainments. It has an appendix showing the correct uses of prepositions; also a collection of foreign phrases. Repetition of words may be happily avoided and the proper use of prepositions; correct rendering and translation of foreign expressions learned, by reference to this compact edition of knowledge.

MAGAZINES FOR MAY.

The Atlantic Monthly.—Contents: Some Personal Recollections of Carlyle; Rabbi Ishmael; The Martyrdom of an Empire; The Portrait of a Lady. XXV.-XXVIII; Three Sonnets. I. Nativity II. Circumstances III. Providence; Study of an old Southern Borough; Reminiscences of Washington. XIII. The Fillmore Administration, 1850-53; Friends. A Duet. XI. XII; Eugene Scribe; Lawn Planting for Winter Effect; Dementer's Search; Correspondence with a British Critic; The Head of Medusa, and other Novels; The New Edition of Gilchrist's Blake; The Contributors' Club; Books of the Month.

Harper's Magazine—Contents: I Held Love's Head While it did Ake; Music and Musicians in New York; "Aprille," a poem; Athens; Decorative Pottery of Cincinati; The Indian Girl, a poem; Anne, a novel; The Return Message, a story; The Market Bell, a poem; Camp Lou; The Unexpected Parting of the Beazley Twins: Thomas Carlyle; George Elliot; The Speaker's Ruling; Contrast, a poem; Two, a poem; A Laodicean, Book the Second, Dare and Havill; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

The American Naturalist.—Contents: The Endocranium and Maxillary Suspensorium of the Bee; Mya arenaria in San Francisco Bay; The Squid of the Newfoundland Banks in its Relation to the American Grand Bank Cod Fisheries; The Brain of Embryo and Young locust; Editor's Table; Recent Literature; General Notes; Zoology; Entomology; Anthropology; Geology and Palæontology; Geology and Travels; Microscopy; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

Lippincott's Magazine.—Contents: Granada and the Alhambra; Zoological curiosities; Craque-O'-Doom; The House of Commons; In Search of a Soul; Oyster Culture; Pringle's Flat; Two Lives; The Indiscretions of Madame Jaubert: The Truth about Florida; A Lucky Misfortune; Our Monthly Gossip; Literature of the Day.

North American Review—Contents: Centralization in the Federal Government; The Old Version and the New: The Needs of the Supreme Court; Utah and its People; Shall Americans Build Ships? The Life-Saving Service; The Ruins of Central America, Part VII; What Morality Have We Left?

Scribners', St. Nichol as, The Young Scientist American Antiquarian Journal, Appletons' Journal, Musical Herald, Godey's Lady's Book are among receipts, contents of which are not given. The character of the productions is as well sustained as usual. Lateness of insertion will not warrant more extended notices.

Sixty-eight towns and cities of the Republic made last year weekly death reports to the National Board of Health, which, after aggregating and tabulating them, has published the results. These show that Vallejo, Cal., was the healthiest place reported in 1880, and Norfolk, Va., the unhealthiest. The average life in the former town is set down at 83.6 years—certainly an extraordinary figure—and but 1 person in each 1 000 of the population—the entire number of the inhabitants is about 2 000—died there of consumption. The average life in Norfolk was 27.9 years; and 1 person out of each 241 died of consumption. The entire population of the 68 towns was 7 359 937; the the average duration of life in them was 44.5 years; deaths of consumption, 1 to every 326, and from acute pulmonary disease, 1 to every 829. Or out of every 100 deaths 24.4 were from pulmonary causes, 14 of them from consumption, and 10.4 from acute affection of the lungs. Four of the healthiest cities were Yonkers, in this State average life 70 years; Omaha, Neb., average 68 years; Utica average 67.5 years; Keokuk, Iowa, average 67.1 years. Four of the unhealthiest cities were Jacksonville, Fla., (probably the invalids who go there and die in Winter were included), average 35 years; Vicksburg, Miss., average 34.8 years; Charleston, S. C., average 31.3 years; Savannah, Ga., average 30.6 years. In Boston the average life was 42.5 years; deaths from consumption, 1 in 246; from acute lung diseases, 1 in 326. In New York, average life was 37 years; deaths from consumption, 1 in 254, from acute lung disease, 1 in 314. In Philadelphia average life was 47.8 years; consumption, 1 in 314; acute lung disease, 1 in 844. In Cincinnati, average life was 47.8 years; consumption, 1 in 346; acute disease, 1 in 494. In Louisville, average life was 47.4 years; consumption, 1 in 300. In Chicago average life was 48 years; consumption, 1 in 593. In San Francisco, average life was 51.8 years; consumption, 1 in 295. In New Orleans, average life was 41.3 years; consumption, 1 in 256. In St. Louis, average life was 52.5; consumption 1 in 447; Next to lung disease, diarrheal disorders were most fatal. In every 100 deaths from all causes in the 68 towns, 10 were from those ailments, and there was 1 death therefrom in each 436 of the inhabitants.

BRIC-A-BRAC.

I've a letter from thy dad,
Baby mine, baby mine.
He is feeling awful bad,
Baby mine, Baby mine.
For the place he didn't get,
He is coming back, my pet,
And he'll stay at home, you bet,
Baby mine.

Bjornson's publisher: Bjornstone Bjornson, the Norwegian poet, is writing a new book of poems. We have the contract for printing it, and have ordered seven hundred pounds of lower case "j's" for an emergency. One of the poems reads:

"Mjeet mje bjy mjoonlight, mjy djear,
Ojt tjhe njight ajir ajou njeed hjave njo fjear,
Yjou mjay tjhink tjhis ijs ajwfully qjueer,
Bjut tjrust Bjorstone Bjornson, mjy djear."

Wilhelmj willj seljthej abovej to music.—Gate City News.

IN THE SPRING-TIME.

In the spring the gentle tom cat
Takes his station on the shed.
In the spring the thoughtful farmer
Puts his onion seed to bed.
In the spring the gladsome sunshine
Sends fresh hope into the sad.
In the spring a prudent person
Buys himself a liver pad.

In the spring the little song birds
With their music fill the glen.
In the spring the busy housewife
Spanks the boys and sets the hen.
In the spring the bees are bumbling,
Full of business are the ants,
In the spring the average young man
Buys two pairs of striped pants.

PERILS OF HOUSEKEEPING.

Have you paid the milk bill? The wood is out. The stove wants fixing. The night-key is broken. The front door bell wire is loose and the bell won't ring. Get some cat's meat. That cat hasn't had anything fresh for nearly two days. She won't eat cooked meat. The poker is broken. Get some screw hooks for the cupboard. We must buy a new clothes line. The salt is out. Mark's last butter was bad. Must buy somewhere else. Get some wire, oxalic acid, bug powder, and nutmegs. Shall we buy a new parlor carpet? The old one's getting faded. Want a new stewpan. The teapot leaks. Send for the furniture man and find out how much he asks for re-covering the sofa. Buy a new market basket. The old cat has four kittens. How many shall we drown? We suspect our hired girl of stealing the tea. That last half pound went very quickly. Schnapps, the grocer, will persist in giving us coffee which has been ground too long and has lost its flavor. Change him. Somebody's stolen the asu-box again. Fifth in three weeks. Get a paper of tacks. Mrs. Doe borrowed our tack hammer a month ago and has never returned it. The canary bird is sick. Buy a ball of twine, six small screws

and a hatchet. The iceman forgot us to-day. The cold meat and milk are spoiled. The cat persists in carrying her kittens all over the house, and won't s ay in the nursery soap box we fixed for her. Get some naptha. The water-pipe leaks again. More plumbers. Mrs. McGoolish complains to the landlord that the water we use on our window-sill geraniums drips, to the detriment of her window panes below. Our girl has left in a huff. The coffee-pot leaks. The last kindling's too damp. Won't burn. Out of soap. Out of matches. She wants some worsted three shades darker than the last lot, but one shade lighter than the first lot. And so on, and so on, time without end, forever and forever. Is life worth living.

[Kansas City Mail.]

Member of this Department relieved of rheumatism by the use of St. Jacobs Oil, says Geo. W. Walling, Esq., Superintendent Police, New York, in one of our exchanges.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

SATURDAY.—To-day, while we were busy doing up our work, we had a visit from old farmer Tompkins. He is affable and intelligent, and interested in all good works, but after dinner Celia said to me, in a complaining tone, "Why does Mr. Tompkins put his knife in his mouth so much when he eats his dinner?" Her aggrieved manner was amusing for one so young, and I told her that old people were allowed many of their old-fashioned ways that were not tolerated among a younger generation. I once spoke to an old gentleman on the subject, and he answered me: "Fashion, ma'am, fashion—the difference between cutting with a knife and spearing with a fork." I must own, however, that I am somewhat like Celia, and do not think there was any need of farmer Tompkins using his knife as a shovel, or making a dive at a piece of cheese at dessert with the same implement, then, after lifting it in that way, conveying it to his mouth. Children are very observing, and their remarks often denote more thought than we give them credit for. "I think, mamma," said a little girl lately, "you ought to go to school and learn grammar." This remark was caused by the outspoken child noticing little breaches of grammatical rules in her mother's conversation.

We were talking at table to-day about *frogs* as food, some of our city friends regarding them as a delicacy. I do not think I could be induced to eat them, though my lady friends who do so are very dainty in their food and manner of cooking. Karen brought Mrs. Henderson's Cook Book, and we read the instructions there given for frog manipulation. She says: "Frogs are such a delicacy it is a pity not to prepare them with care. The hind legs only are used. They may be made into a broth the same as chicken broth, and are considered very advantageous diet for those suffering from pulmonary affections. To fry, put in salted boiling water with a little lemon juice and boil three minutes; wipe them; dip in cracker dust, then in egg (half a cupful of milk mixed in two eggs and seasoned with pepper and salt); then again in cracker crumbs. When they are all breaded clean off the bone at the end with a dry cloth. Put them in a wire basket and dip them in boiling lard to fry. Put a little paper on the end of each bone, place them on a hot platter in the form of a circle, one overlapping the other, with French pease in the center. Serve immediately while they are crisp and hot." Such an air of disdain as we all put on at the very recipe, but tastes differ, and it is a good thing for the world that they do.

How enjoyable a Saturday afternoon always seems to me. I think the children will remember all their lives that this day was different to the others—not by its extra house-work, but by the quiet and added neatness consequent on the preparation for the Sabbath. Of course, I have more care than when Janet was here—a real *help*—but we are happier than if depending upon unskilled aid from uninterested people; and I think when there are young girls in a household it is the best and safest course to have them learn the details of housekeeping without the intervention of a servant, and, much as the wealthy ignore the duties of home, it is a fact known to more than the poet Saxe "That wealth's a bubble that comes—and goes." As an old lady I once knew used to say, "'Can do' is easily carried about." The cares of housekeeping are lightened or made heavier according to the manner of the inmates, and if I were to mention three blessings necessary to insure comfort in doing one's own work, I should say, first, a husband and children who are mindful and self-helpful; second, good kitchen appliances, and, third, plenty of soft water in the kitchen. With these "helps" one pair of hands and the little helpers can do a great deal, and if I wished to state the housekeeper's bane in the same class, I should say, first, a smoky chimney and used-up stove; second, untidy men folks, and, the only water for use farther than a stone's throw off. So many women have to work with poor utensils that I am sure Mrs. Lewis's new stove, of which notice has been given in the RURAL and elsewhere, should be in every house, if only to save the back-ache, to which we women are so subject, and which is greatly augmented by the low, inconvenient stove.

ICE CREAM.

CHIEF COOK.

THE ingredients for ice cream of the finest quality are as simple as those for pound cake—only cream (not milk), sugar and flavor. Notice that there are no eggs, no corn starch, no boiling, no nonsense. Take fresh cream. To every quart add a half pound of pulverized sugar, mix these well in the freezer; do not add the flavor till the cream is partly frozen. The freezer (of such size as will hold twice as much cream as you put in it) must be placed in a wooden tub three inches larger all round, and six inches higher than the freezer when covered. Break up some ice to the size of walnuts; set the freezer in and throw in some salt—about one quarter the bulk of the ice. Coarse salt is best, but any kind will do. Fill up around the freezer within three inches of its top when uncovered, with alternate layers of ice and salt in the same proportion as before. Let the cream and sugar stand until they begin to freeze around the sides of the freezer; then begin to beat with an "ice-cream beater, the only tool which will make superior ice cream. This is a tin paddle something in the shape of a spoon, with a stout wooden handle about as thick as a broom handle. The beater may be six inches long by four inches wide. Any tinman who makes freezers can make one.

Set the freezer in its tub where you can walk around it, and beat the cream by a peculiar stroke down the sides of the freezer so as to scrape at every stroke the frozen cream from its sides; continue this till the whole mass is perfectly fine, and until the cream has risen' till the freezer is nearly full. This is the perfection of ice cream making. When so far done cover it up, fill up to the top of the tub with ice and salt as before; lay a blanket or piece of carpet over all; set away in a cool place for three hours to ripen. Then serve generously, as very few people except in Philadelphia, (where this mode is universal) ever get such a dish. Serve two flavors on the same plate, like lemon and strawberry, etc.

Flavors for Ice Cream.

Flavors of all kinds can be purchased at grocers' and druggists' stores, and may be added to suit the taste; a flavor may be too rich but never let it be poor. If lemon or orange juice, or the juices of sour fruits are used, do not add them to the cream till it is half frozen or they will turn the cream sour.

Water Ices.

These are made of the juice of very ripe fruits, such as peaches, plums, pears, apples, cherries, strawberries, raspberries, pine-apples, lemons, oranges and tamarinds. Select fruits having a very rich juice, add sugar to taste, and freeze as for ice cream, except that this will not rise as cream does.

Frozen Fruit.

This is exactly like water ices, except that one portion of the fruit is used to furnish the juice, and another to be cut up into small pieces, mixed in the juice, sweetened to taste and frozen as before. In regard to sweetening frozen confectionary, one thing must be noticed, that is, that cold destroys the sweet taste, and what would be very sweet if eaten warm, would be quite insipid when frozen. This will account for the sickening sweet taste of ice cream which has become melted down in the dish by heat.

Iced Fruit.

Select very fine bunches of grapes, currants, raspberries, etc., etc., on their stems; remove all imperfect berries; dip them in white of egg tempered with water, or weak gum arabic water. Sift finely pulverized sugar over them; set away to dry and then serve. Any larger fruits of rich flavor, such as apples, pears, plums, peaches, may be iced in the same way, whole or sliced into ornamental shapes after removing the seeds. In the hands of a lady of taste in decorating, iced fruit is always a great success on a table.

QUESTIONS ANSWERED.

CAN you tell me the cause and prevention of infants repeatedly vomiting up their food? At first, after nursing, the milk looks fresh and sweet when thrown up, but afterwards it looks like thick, sour milk. The child generally seems well but very fretful. I have heard it said that it is a sign of a healthy child, but I have seen just as healthy children as mine who never throw up their milk. It does not seem comfortable for the child to do so, besides being very uncleanly. My babe is six weeks old and every hour that she is awake she vomits up her milk more or less. I have had eight children and they all have done the same until they were six months old, when they begin to substitute other food for breast milk. For ought I know, I work and eat as other mothers do so I cannot see why my children should be so troubled.

ANSWER BY T. H. H., M. D.

It is impossible to make a positive prescription without seeing the case. A few questions to the mother and an examination of the child would give a clear view not attainable otherwise. The most frequent cause of vomiting the milk is the pernicious custom of giving the child the breast too frequently and irregularly. Mothers say it is done to stop crying, and take the cry as a sign of hunger, when really it may be due to repletion, or colic caused by over-feeding, or too frequent feeding. The children of vigorous families, inheriting strong digestive organs will suffer little, perhaps, from this bad method, while more delicate infants are got into a bad condition very soon, and lay the foundation of a poor digestion and life-long ailments in consequence of irrational nursing. Once in three hours is often enough to nurse a child. After six months one nursing in the night is enough. Above all things, don't suppose that every time a child cries it must be put to the breast. The vomiting is nature's way of relief and in that sense it is "healthy." *Don't* use "soothing syrups."

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Miscellaneous.

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Miscellaneous.

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News of the Week.

HOME NEWS.

MONDAY, May 23, 1881.

This has been an eventful week at Washington. Senators Conkling's and Platt's resignations, noted here in last issue, threw the political world into quite an uproar, as the action was entirely unexpected. They wrote an extended letter to Gov. Cornell explaining the course they had taken and the reasons for it. The State Legislature has not yet acted upon their communication. On the 18th inst, the long-pending nomination of Judge Robertson to the collectorship of this Port was confirmed, which was considered a victory for the Administration. Salutes were fired in New York, Albany, Hudson, Rochester, Utica and other cities over Robertson's confirmation. On the 19th, the President sent in another batch of nominations including, with two exceptions, those recently withdrawn from the Senate. Mr. Loring of Massachusetts was nominated and confirmed Commissioner of Agriculture, vice Le Duc resigned. On the 20th inst., the Senate rejected the nomination of Wm. E Chandler, as Solicitor-General bya vote of 24 to 14, and at 6 P. M. it adjourned *sine die*.

A small colony of Latter-Day Saints, on their way to Salt Lake City, landed at San Francisco on the 19th inst., from Australia in the steamer City of Sydney. They proceeded to Utah by the first train.

The contract for postal cards, which has been awarded to a New York firm, will result in a saving of $30,000 to the government during the contract term of four years. The number of cards required is estimated at 2,000,000,000.

Both houses of the Michigan Legislature have passed the amendment to the liquor tax bill, whereby the tax on retail sellers of malt liquors is raised to $200, and on distilled liquors to $300. Wholesale malt liquor dealers' tax is raised to $200; distilled liquors to $500.

It is stated that the Interior Department will devote $30,000 to build a boarding school for Indians, accommodating 300 pupils at the agency of the Red Cloud Indians, in Nebraska.

An enthusiastic meeting has been held in Denver, Col., in favor of a national mining and industrial exposition. A committee representing various business interests, was appointed to arrange preliminaries.

The following is a statement in detail of the net annual saving in the cost of star route and steamboat mail service under the administration of Postmaster General James —For the month of March, $215,490; for the month of April, $84,531; From May 1 to May 13, $112,013; total, $412,034. This saving has been effected without in any way crippling the service or curtailing its efficiency, and has been made on exact information gathered by inspectors of the department who have carefully examined the various routes. Much of the reduction is the result of the labors of the commission sent to Memphis to investigate the river service ramifying from that point. A very considerable additional reduction will be made on the 30th of June next, when useless service will be allowed to lapse.

Among the applicants for admission to the bar at Ithaca, N. Y., last week, was Frank Walworth, who was pardoned out of the State prison four years ago, where he was serving a sentence for the murder of his father, on the ground that his physical constitution had entirely broken down. Through strong influence, soon after his imprisonment he was transferred to the insane asylum, on the ground of insanity, but from this he was afterwards discharged, his sanity having been established.

In the Pennsylvania State Senate a resolution was unanimously agreed to and sent to the House for discussion, looking to the transfer of the remains of William Penn from Jordan Meeting-house graveyard, Buckinghamshire, England, to Philadelphia. The resolution also provides that copies be sent to Peter Penn Gaskell, Ireland, and William Stewart, England, representatives at law of William Penn, asking their co-operation in the matter, and requests the co-operation of the President of the United States.

The work of naming and numbering the streets of San Antonio, Texas, was begun recently. Although the city is over 150 years old, but few of the streets have been named, and none numbered.

Utah is just now the chosen field for considerable Christian missionary work. There are forty-four Presbyterian missionaries in the Territory, maintained at an annual cost of $36,000, the Congregationalists are spending $30,000 in new school houses and churches, the Methodists have twenty missionaries on the ground, and other denominations are represented. These tremendous onslaughts have incited the Mormons to renewed zeal.

The revised New Testament was given to the public on the 20th inst. The advanced sale reached 800,000 through the New York and Philadelphia agents. The book is issued in several styles of binding and is sold at from 15 cents to $10 a copy.

A fire involving a loss of $500,000 occurred in Nashville, Tenn., on the 17th. The Western Union Telegraph building was among the first to succumb.

The memorial monument of George B. Armstrong who organized the United States postal railroad service, was unveiled on the 19th inst., at Chicago in the presence of 5,000 people. An oration was delivered by Schuyler Colfax.

Several hundred passengers arrived on one steamer at San Francisco, the other day, from the Australian colonies and Honolulu, nearly all of whom are traveling through America on their way to Europe for a tour of pleasure. This happens frequently, and these travelers spend money freely on the way.

The occasion of the decoration of confederate soldiers' graves at Memphis., Tenn., was characterized by the presence of 6,000 persons gathered to scatter their floral offerings. Casey Young delivered the oration and Miss Olivia Hall read a poem.

"VICTORY!"

Under this caption, a gentleman in Iowa, who had procured the Compound Oxygen Treatment for his wife, writes: "*I am surprised at finding her so much improved in health.* When she began using the Oxygen she could not sit up more than four hours at a time; could not walk a quarter of a mile. Improved from the first inhalation, and now, having used the treatment for six weeks, does considerable work around the house, and can *walk two miles and not be tired.* Raises no more bloody matter. No cough. Sleeps and eats well. All that I can say is, 'Thank God and Drs Starkey & Palen!'" Our treatise on Compound Oxygen, its Nature, Action and Results, *sent free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

THE Wisconsin Legislature has appropriated $4,000 for experiments with Early Amber Sugar-cane.....The next great Texas cattle drive is estimated at 250,000 head with a supplementary drove of 50,000 from the Northwestern part of the State.....In the Smithsonian grounds, Washington, 50,000 bedded plants were set out last year. .....Potato bugs have appeared in such numbers in Bergen County, N. J., as to threaten the total destruction of the crop as fast as it appears. They are to be found on the highways and fences in swarms. They have also put in a numerous appearance in Ulster, Orange and Dutchess, Delaware, Sullivan and Schoharie Counties, N. Y..... A telegram from Oswego, N. Y., on the 18th., says:—The Army worm has made its appearance in this section, destroying all kinds of vegetation. Several fields of grain have been destroyed and hundreds of acres of pasture land have been stripped of every green thing. Reports from all parts of St. Lawrence County indicate that the ravages of the worms extend over the whole of Northern New York. Serious consequences are feared, and many of the farmers are greatly agitated.....

A dispatch from Rhinebeck, N. Y., on the 20th says:—The Army-worm has made its appearance in southern Dutchess County. It is reported that it is doing great damage to vegetation, especially to tomato and cucumber plants and the various early vines.....Another dispatch of same date, from Orange, Sussex Co., N. J., says:—The Army-worm is causing consternation among the market-gardeners of New Jersey, who grow early produce for the New York market. Already the worms are disastrously active, despite the cool weather, and thousands of early plants are destroyed every night, causing heavy losses. The tomato plants are attacked principally.....A telegram from St. Louis on May 19 says:—Reports are received from various counties in the Southwestern part of Missouri to the effect that the fly has already ruined thousands of acres of wheat, and fears are entertained that the crops in that section of the State will be more than half destroyed.....

It has been decided by the English Courts, that to carry deck loads of live-stock is illegal, and that if the animals are washed or thrown overboard no damages can be obtained for their loss from the owners of the vessel, and if they are jettisoned for the safety of the other cargo nothing can be recovered in the way of a general average .....

From sixty-eight to seventy-two per cent. of the total wheat yield of the country is Winter wheat. .....The Hereford breeders propose to hold a Convention at the Grand Pacific Hotel, Chicago, on June 22.....The Delaware Beet Sugar Company has leased 300 acres in favorable locations in Delaware for the purpose of raising its own beets, as farmers seem to take little interest in raising a supply..... To April 20, the entries in the Jersey Cattle Club Register for the current year were: bulls, 1,030; cows, 2,202. The total numbered registered to that date was 17,503..... The new officers of the Jersey Cattle Club are: John D. Wing, New York, President; Geo. E. Waring, Jr., Rhode Island, Secretary; H. M. Howe, Rhode Island, Treasurer; Edw. Burnett, Mass.; Edw. E. Barney, Ohio, were elected directors to serve two years, along with John I. Holly and W. S. Taylor, formerly chosen.....

.....At an auction sale of a herd of Short-horns on May 18, at Port Huron, Michigan, on the farm of Avery, Murphy & Stebbins, about two hundred cattle breeders were present from Iowa, Illinois, Michigan, New York, Pennsylvania, Missouri and Kentucky. Among the highest prices were; $7,525 for Airdrie Duchess the tenth, calved in 1880 by the twenty-third Duke of Airdrie; $3,000 for Airdrie Duchess the fifth, calved in 1874; $7,000 for Airdrie Duchess the second, calved in 1871, and $5,055 for Airdrie Duchess the eleventh, calved in 1881.....According to the schedule of the Illinois Central Railroad tomatoes are vegetables—not fruits, and therefore pay 25 per cent. less freight charges than they otherwise would..... .....Indiana has 103,000 acres of flax, yielding 1,135,000 bushels of seed—or about six bushels per acre —and 156,000 tons of fiber..... Chas. A. Davis, a graduate of the Mich. Agr. College has been chosen for the chair of Chemistry and Mathmetics in the Colorado Agr. College.....Louisiana is threatened with a disastrous flood from the turbid Mississippi.....Since 1871 the grain crops of the United States have been valued at the enormous sum of $10,000,000,000, or an average of $1,000,000,000 per annum. Of this total about one-half, or $5,000,000,000 has been the value of the corn crop, while the wheat crop during the same period has aggregated a value of $3,500,000,000. In the year 1880 the United States exported 144,493,007 bushels of wheat, valued at $171,420,195, and 7,128,164 barrels of flour, invoiced at $39,613,847.....

On May 15th the towboat Oakland left St. Louis for New Orleans with a tow comprising 150,000 bushels of wheat; 200,000 bushels of corn; 5,000 barrels of flour and 500 tons of miscellaneous freight, making in all about 11,000 tons.....On the next day two other tows followed with about 250,000 bushels of grain each..... ....A telegram from New Orleans announces the safe arrival of the Oakland and her tow last Saturday.....The Mark Lane Express (Eng.) of last Monday says: "Dry harsh winds during the week have materially reduced crop prospects. A change, unless it comes shortly, will be too late to save Spring wheat, which begins to look yellow." Altogether the season is among the latest on record.....The bill providing for the adoption of trade marks for dairy products in this State has passed both Houses and was signed by the Governor last Thursday..... A project for building a grand Horticultural Hall is under way in this city. It is said $55,000 have been already subscribed and $10,000 more promised. It is thought that enough to begin operations will be collected by the middle of July.....

The remarkable growth of the beet sugar crop in Europe is made the subject of an interesting article in a late number of the London Grocer. The following exhibits the number of tons of beet sugar produced in former years:—

	1879-80.	1878-79.	1877-78.	1876-77.
Germany.....	411,600	420,700	383,800	291,200
France.....	277,900	422,660	298,100	243,300
Austria and Hungary.	406,400	405,900	330,800	247,200
Russia and Poland....	225,000	215,100	220,000	250,000
Belgium, Holland, etc.	83,600	69,500	88,100	69,500
Total number tons..	1,403,900	1,574,150	1,420,800	1,101,200

In the annual report of the Minneapolis Board of Trade for 1880, attention is called to the fact that actual sales of spot wheat at that city are greater than at either Chicago or Milwaukee..... ... The National Cotton Exchange of America will hold a convention at St. Louis on Wednesday, July 20. Various matters of importance to the trade and planting interests will be considered, among which will be the special reports from exchanges on the subject of selling cotton by net weight..... ....Rail freights on grain from Chicago and Milwaukee to New York are $6 per ton of 2,000 pounds, or 18 cents per bushel of 60 pounds. Lake freights from Chicago and Milwaukee to Buffalo are 5½ cents for wheat of 60 pounds, and 5 cents for corn of 56 pounds per bushel.....The Western Division of the Erie Canal was opened at Buffalo on the 18th inst. Canal freights from thence to New York are, wheat 7 cents and corn 6¾ cents for 60 and 56 pounds respectively. The water rate is 12½ cents on wheat, against 18 cents by rail.....Ocean freights, with increasing receipts at New York, improved, and closed at 3 pence for grain from N. Y. to Liverpool, Saturday.... At latest postal advices navigation had been reopened at most of the Baltic ports.....In Germany, per Hamburg advices, under date of April 30, the weather was still cold, with night frosts. The autumn-sown crops were all backward. Many fields had been damaged by the severe Winter, but complaints were not serious.....The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and seaboard ports, and on rail from Western lake and river ports and frozen in on New York canals, is:—

	1881. May 14. bush.	1880. May 15. bush.
Wheat.....	16,277,622	20,357,348
Corn.....	11,047,188	12,092,167
Oats.....	3,154,761	2,024,787
Barley.....	856,326	636,787
Rye.....	322,909	480,693
Total.....	31,558,806	35,592,382

A cablegram from London announces that the Privy Council has ordered that all cattle from Spain and Portugal shall henceforth be slaughtered at the port of debarkation. Hitherto cattle from these countries were allowed to be sold to farmers and graziers to be fattened after landing, as no contagious disease was known to exist among the herds at home. Now they are put on the same footing as cattle from this country on account of the discovery of foot-and-mouth disease among some of the herds in the Peninsula.....The largest orchard and vineyard in Western Texas is that of D. G. Sabin. He has 9,000 vines, 6,000 of which are in bearing. He has also 3,000 bearing peach and plum trees.....A trial box of Florida oranges from Jacksonville arrived in London in excellent condition after a journey of three weeks. Only three oranges were damaged. The experiment is to be repeated..... .A cotton closely resembling wool has been grown by Burnett Salmon of Oglethorpe, Ga. The seeds were picked up on a vessel from Zanzibar in port at Charleston, and planted out of curiosity.....A Charlottsville, Va., company has just sold to a firm of this city 10,000 gallons of Virginia claret. The Piedmont section and the Eastern slopes of the Blue Ridge promise to take rank among grape-producing districts.....The Farmers' Home Journal of Hardin County, Ky., says gloomily: "Stock of all kinds are thin, hogs dying with the cholera, distemper prevailing among horses, peaches nearly all killed, and wheat crop not promising."..... A Georgia paper says of the devotion of that State to cotton planting: "Simply because all of us are struggling to swell the crop to the largest possible dimensions, under the silly idea that we can make more money out of it, we ruin ourselves, and toil from year's end to year's end without accumulating a cent of profit."..... Judge Travers of the Iowa Supreme Court decides that railroad companies are liable for injuries to animals run over on Sunday, no matter how carefully the trains are operated, because the running of trains at all on Sunday is unlawful.....Lightning singled out a $5,000 stallion to kill at Bloomington, Ill., leaving eleven comparatively valueless horses uninjured. The owner, who had been an earnest Christian, resigned his church membership, and resumed a long-neglected habit of profanity, declaring that Providence was against him anyhow.....The Canadian Pacific Railroad Sydicate advertises its lands at $2 50 per acre, with a rebate of $1.50 on all improved within three years. The government will also reduce the price of pre-emption lands in that section from $5 to $2 50.....Michigan bee-keepers report a loss of 55 per cent. of the stock during the past Winter. .....

Mr. Charles D. Hunter, of the long prominent New York butter firm of Messrs. Hunter, Walton & Co., died this week. Mr. Hunter was well known in this State and for many years personally attended to the country interests of his house.....

A meeting of firms interested in the cider trade was held in this city on May 14, at which it was decided to hold a cider and cider-vinegar makers' convention at Syracuse, on June 7 and 8. To this meeting all interested in this industry are heartily invited..... .The Michigan Horticultural Society will hold its Summer meeting at Benton Harbor on June 7, 8 and 9. Railroads will carry visitors at reduced rates, and the citizens of the town will accommodate all. The convention will open in Antisdale's hall at 7½ o'clock on the evening of June 7, and all delegates are requested on their arrival to repair to the hall and register, when the reception committee will care for them. It is desirable that there be an exhibit of such fruits as may be in season, especially of new and promising varieties. T. L. Lyon is President and Charles W. Garfield Secretary of the Society.

A Reliable Remedy.

Kidney-Wort, not only cures bad cases of piles and all disorders of the kidneys and liver, but is a reliable remedy for a debilitated constitution. It acts on the bowels as a mild cathartic, carrying off the obstructing elements which cause sickness.—Plaindealer.

Thousands of ladies to-day cherish grateful remembrances of the help derived from the use of Lydia E. Pinkham's Vegetable Compound. It positively cures all female complaints. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Sour stomach, sick headache and dizziness, Hop Bitters cures with a few doses.

Cabinet Organs.

There are numerous firms throughout this country who advertise Cabinet or Parlor Organs, claiming superiority from facilities of manufacture, when in reality they never were manufacturers of any portion of an organ, and are simply agents and middlemen for firms who dare not, owing to the inferior quality of their instruments, advertise them over their own names. It is a well known fact that the United States leads the world in the manufacture of Organs in quality of tone, excellence of mechanism and beauty of design, and no manufacturer stands higher in every respect than the Hon. Daniel F. Beatty, of Washington, New Jersey, whose manufactory is now the largest in the world that ships direct. This enterprising gentleman was the first to offer the music-loving populace an opportunity to purchase direct of the manufacturer, thereby saving the public the enormous profits of agents and middlemen. He has made many liberal offers and has never failed to keep every promise and more, we have yet to receive the first complaint from any of our readers who have dealt with him. His last and grandest offer outstrips all others and is an evidence of his unparalleled success The Beethoven Organ is the most brilliant and powerful musical combination ever perfected, and its superiority over all other Organs is attained by the valuable Patent Stop Action held only by Mr. Beatty. The reader should bear in mind that the "Beethoven," which is shipped on one month's trial, has 27 stops, 10 full sets of Golden Tongue Reeds, and is in every respect and detail the finest instrument in the world. The price at which the Beethoven is offered, $60, which includes stool, book and music, must bring it within the reach of every one. It is important that any one desiring one of the Matchless Organs should order and remit at once by a Post Office Money Order, Bank Draft, Registered Letter or Express prepaid. Nothing is saved by correspondence, as the orders for this particular style are coming in so rapidly that the capacity of the Beatty Manufactory is being tested to its utmost, and cash orders very naturally take preference on order book. The feature of this great offer, viz, to refund money sent and pay all freight charges if the instrument is not as represented. Is not this sufficient guaranty of the fair dealing of Mayor Beatty?—*Adv.*

Premature Loss of the Hair

May be easily prevented by the use of BURNETT'S COCOAINE.

HOUSEKEEPERS should insist upon obtaining **Burnett's Flavoring Extracts**, they are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, May 21.

Cincinnati.—WHEAT strong; No. 2 red Winter $1.11@1.12. CORN strong; No. 2 mixed 48c. OATS strong; No. 2 mixed 40½c. RYE in fair demand; No. 2 at $.26. BARLEY dull; No. 3 Spring 92@93c. PORK firm at $16.50@16.75. Lard strong and higher at $10 50. Bulk-meats stronger; shoulders $5 62½; clear rib $8.35. Bacon in fair demand and firm; shoulders $6 62½; clear rib $9 25; clear sides $9 62½. BUTTER easier, but not quotably lower. SUGAR firm; hards 10¾c@10¾c.; New Orleans 7½@8¼c. BUTTER—Fancy creamery sells at 24@25c; prime do at 22@23c; choice dairy at 19@20c; choice Western Reserve at 16@18c; prime to choice Central Ohio 12½@15c; medium 10@12c; and inferior 5@8c. per lb. CHEESE—There is a better supply of prime new Ohio factory and the market rules easier at 10@10½c. and good do is selling at 9@9½c per lb., but inferior has to be worked off at whatever it will bring. SEED—The demand is very light. Flaxseed is steady at $1.10@1.12½ per bushel. German millet sells at $2,25; common millet at $1,50

and Hungarian grass at $1 25. WOOL.—There has been no improvement in the market. The London sales while progressing satisfactorily as to the amount sold, show that lower prices prevail, but not enough lower to materially affect the markets in this country. The sales in the Eastern markets indicate no greater but rather less strength. In our home market there is no demand of consequence from manufacturers, and while dealers are making no effort to buy they are taking the current receipts of the new clip, which are not large, at about the same prices as a week ago. HOGS firm; common and light $4.50@6; packing and butchers' $5 45@6.30.

Chicago.—WHEAT unsettled; No. 2 Chicago Spring, $1 04@1 04¼ cash; rejected, 74@78c. CORN unsettled at 44¼c. cash; rejected, 38c OATS active at 37⅛@37¾c. RYE firm at $1 17. BARLEY easy at 92½@95c PORK firm at $16 45 cash and June; $16 50 July and August. Lard strong and higher at $10 75@10.77½ cash and June; $10.80 July and August. Bulk-meats active, firm and higher; shoulders, $5 60; short rib, $8.40; short clear, $8.75. BUTTER—Creamery, choice, 21@22c.; do. fair to good, 19@20c.; dairy, choice, 18@19c; do. fair to good 15@17c; packing stock, 10@12c; grease, 7@8c CHEESE.—Full cream, new, 10½@11½c; part skim, extra, 8½@9c; do fair to good, 6@7c.; low grades, 3@5c. WOOL.—The market continues dull and listless at our quotations: Good to choice medium and fine, 28@32c; coarse and dingy tub, 33@37c; fine and unwashed fleece, 19@24c; coarse and unwashed do. 18@22c; medium unwashed do. 25@27c; medium washed do. 35@38c; fine washed do 35@36c; course washed do 30@35c. HOGS—Market strong, active and 5c. higher than yesterday; quality very good; market closed steady, with all sold; common to good mixed packing and shipping, $5 70@6; good to choice packing and shipping, $6.10@6 40; bacon, 15 95@6.05; common to fair light, $5 75@5.90. CATTLE.—Good active demand; fat, 10c. higher than yesterday; exports, $6 20@6 50, fair to good shipping, $5 50@5 90; distillery cattle fairly active and firm at $5 40@5 65; butchers' plenty and slow at $5.25@6; oxen, $4@5; stockers better, with a fair demand; common to fair, $3 50@4 20; good to choice, $4 50@5 20. SHEEP.—Demand brisk; common to medium shorn, $3 75@4.60; good, $5; common to choice wooled, $5@6 25.

To restore nerve and brain waste, nothing equals Hop Bitters. Believe this.—*Adv.*

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 21, 1881.

BEANS AND PEAS.—Medium and marrow beans are steadier with the shaded prices, but the demand for home use is moderate. Exporters have a mewhat enlarged their purchases, taking 1,199 packages for the week, but the demand is not sharp enough to give holders much advantage. White kidneys and pea beans neglected red kidneys very dull. Wisconsin green peas sell in a small way at $1.35 Southern B E meal about used up; last price $3.60 per 2-bush. bag.

Marrow beans, prime, $2.55@2 60; other, $2.35@2.45; medium, prime, $2.50@2.55; other, $2.20@2.45; pea, $2.25@2.50 white kidney, $2.30@2.50, red kidney, $1.40@1 60, black or turtle soup $1.45@1.47.

Receipts of beans for week, 1,961 bush.

BEESWAX.—Market quiet at 23@25c., with small supply. Exports for week, 1,045 lbs.

BUTTER.—With moderate receipts and improvement in quality, many parcels now showing grass, the market has ruled steady during the week and closes with considerable strength. Fine State tubs are selling quite as readily as creamery pails in fact the demand runs mostly for State. There is some call for tinkins at this early date for Southern consumptive use; at the moment they would do as well as tubs. Welsh tubs are scarce and not likely to come forward freely, as cheese-making has become a feature in their district. Only the best established brands of creamery make the extreme rates. Exporters are looking for best stock on late orders from abroad, but the full prices and they want best stock will not offer a margin. Western butter under creamery grade is rather irregular, and a large proportion of it is white, or nearly so and is offered at the cheaper figures. Still the market trade will use it when sweet and sound during the firm condition of State.

Creamery—Western, good to prime, 23@26c.; Penn. 25@26c; State, 23@26c.; fair to good, 21@22c.; sweet cream, 22@24c., State pails and half tubs, choice, 23@24c.; fair to prime, 19@22c.; Welsh tubs, 20@22c.; poor State, 12@18c.; Western imitation creamery, 16@22c.; do. dairy, choice, 18@20c.; other, 16@17c.; factory, best, 20.; other, 16@17c.; old, 9½@10c.

Receipts for week, 26,100 pkgs.; exports, 3 275 do.

CHEESE.—The market has declined fully 2c. during the week and with the break in prices shippers seem more disposed to operate freely. A good deal of stock got into bad repute during the hot spell and the fact has had much effect in forcing down quotations. The demand is only for fine State in a wholesale way and with the improved quality looked for since grass is arrived, the market closes with a feeling of confidence in an outlet, but not for high prices. Skims are decidedly lower and very dull. Flat-shaped cheese quiet.

State factory fine 8¾@9c., fair to prime, 9¼@9¾c; fair to good 8¼@8¾c.; poor to fair 6¼@8¼c.; Ohios fine, 7¾@9¼c.; part skimmed creamery 3½@4½c.; full skims 2@2c.

Receipts for week, 45,250 boxes.
Exports for week, 40,300 boxes.
Liverpool cable, 63s.
Steam to Liverpool, 17s. 6d.@@25s.

COTTON.—The week has been a tame one and there have been no decided changes. Speculators have no pointed inducements for operations, either at home or abroad. Closing prices for contracts:

May, 10.04@10.05c.; June, 10.69@10.70c.; July, 10.74@10 75c.; August, 10.79@10.80c; September, 10.48@10 49c.; October, 10.08@10 10c. November 9 98@10c. December 9,98@10c.; January, 10 08@10.10 February 10 19@10.21.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7 1-16	7 5-16	7 5-16
Strict ordinary	7 11-16	8 1-16	8 1-16
Good ordinary	8¾	9 1-16	9 1-16
Strict good do.	9¾	9 9-16	9 9-16
Low middling	9 15-16	10 5-16	10 5-16
Strict low middling	10 7-16	10¾	10¾
Middling	10 11-16	10 15-16	10 15-16
Good middling	11¼	11¼	11¼
Strict good middling	11¾	11¾	11¾
Middling Fair	12¼	12¼	12¼
Fair	13	13¼	13¼

STAINED.

Good ordinary	6¾	Low middling	8¼
Strict good ordinary	7¾	Middling	9 13-16

Receipts for the week, 16,876 bales, Exports do. 13,433 do.

DRIED FRUITS.—Evaporated apples now have a better hold on trade, especially for local use, as green lots have become very uncertain in quality. Exporters are taking what good lots they can find at 8@8¼c. Sun-dried are neglected. Peaches are quiet but firm; it is thought that the entire surplus can be used before new are of moment. Small fruits quiet as a rule blackberries lower.

Apples evaporated choice 8¾@9c; fair to prime 7¾@8¾c. North Carolina sliced, common to best 4@5c. Va, do. 4@4¼c; Tenn in bbls. 4¼@4¼c. do in bags 4c; State fine cut 4@4¼c. quarters 4¼@4½c; Western, 4@4¾c, evaporated peaches peeled 27@30c.; unpeeled 13@14c; sun-dried peeled 17@22c; unpeeled 5@6¾c. Plums 12¾c. Blackberries 8@8¾c. Cherries 14@14¾c. Raspberries 23@24c. Whortleberries 11¾c.

Receipts for the week, all kinds, 979 pkgs.
Exports, dried apples, 4,754 pkgs.

EGGS.—Receipts for week, 15,200 bbls.; do. last week 21 413 do. The very low tone of the early part of the market checked supplies, but buyers have resisted any attempt at a strong advance. Quotations will soon be at "loss off" for Western. Southern eggs are nearly all loss and shipments are discouraged.

Near points, 14¾@ 5c.; State and Pa., 14@14¾c.; Western and Canadian, 13¾@14c.; Southern, 12@13c.; duck, 14@15c.; goose 20c.

FLOUR.—Receipts for week, 74,323 bbls; exports, 86 8.2 do. Supplies of high grades are abundant and sales for domestic use have been fairly free. Low grades for export are scarce and very saleable at the close. Rye flour has advanced.

Flour, No. 2 $1.25@3 85; State and Western superfine, $4.25@4.65; city mills extra, $5@6; Spring wheat do. $4.65@5; Spring XX and XXX, $5@6.25; patents, $6.50@8; Ohio round hoop shipping $5@5.40; trade brands, $5.50@6.25; St Louis extra, $5.10@5 50; do. double extra, $5.60@5 90; do. family, $6@6.50; Southern extra shipping, $5 25@5 75; do. XX and fancy, $5.85@6.75. Rye, $5.50@5. Corn-meal, Brandywine, $3.30@3.35; Western, $2.90@3.15.

FRESH FRUITS.—The apple season is about over; a few selected Russets range at $2@3; but there are many rejections closing out at 50c @$1.25. Strawberries are abundant and fine. The rainy week has caused a dull market and the chief trade has been with restaurants. Norfolk is now the principal shipping point but Maryland has begun to pick. Charleston and N C qts 14@18c; Norfolk 14@20c Md. 18@23c. Cranberries nominal, 50@$1 ₱ crate. Hot-house black Hamburg grapes $2 ₱ lb. Peanuts dull and a shade further in buyers' favor: Va. hand-picked 4¾@4¾c; extra prime 4@4¼c; good to prime 3¾@3¾c., shelled 2¾@3c; pecans 7@8c.

GRAIN.—With the bright crop prospects for wheat the market has ruled in buyers favor. The market has opened strong on several days with some advance but the improvement would be lost before the close of 'change. Corn is easy owing to large receipts, but the decline lead to a large business. Oats steady.

Wheat, Spring $1.10@1.21; red Winter No 2 $1.26@1.29½; red Winter $1.24@1.28; white Western and State $1 12@1.25. Corn, Western mixed 54@58c; do. No. 2 56@57½c; do. yellow 57@59c; white Western 58@62c; white Southern new 62@63c, yellow do. 58@60c. Rye $1.10@1.15. Oats, white No. 1 53c; white No. 2 50c.; white No 3 48c; mixed No. 1 45@45½c do. No. 2 45@45½c; do No. 3 44½@44½c.

Receipts for week, wheat, bush., 1 511 100; corn, do. 1.717,200; oats do. 150,600; rye, do 29 700; malt, do. 60,500; barley, do 48 000; rice pkgs. 770

Exports for week, wheat, bush. 620,378; corn, do. 419,224; oats, do. 3,518.

HOPS.—The market is firm with a good brewing demand. Exporters are not active though it is thought that late favorable London advices will stimulate activity.

Choice 20@21@22c good to prime 18@20c; fair to good 15@18c poor to fair 12½@15c. 79's 15@17c; California 19@23c; Bavarians and Bohemian 33@35c.

HAY AND STRAW.—Exports for week 1,400 bales. Choice retailing hay is very scarce; in fact special wants have to be supplied by careful selection. A few car-loads of fancy Jefferson Co. will exceed the extreme.

Prime timothy hay $1.05@1.10 ₱ 100 lbs.; medium 90c.@$1.00 do.; shipping 80@85c. do.; clover mixed 80@85c, do. pure 70@75c.; prairie hay, 65@70c. Long rye straw $1.10@1.15 ₱ 100 lbs.; short do. 70@75c. do.; oat and wheat 45@55c. do.

MAPLE SUGAR.—The remnant is offered at 7@10c. ₱ lb. for sugar; syrup, in cans of 10@12 lbs. 75c@$1 ₱ gal.

MILK.—The weather has been cool and rainy and the market easily overstocked. Prices, however, show a great improvement upon last week, running from $1.50 to $2 50 ₱ can of 40 quarts. New York prices are made up on Tuesday of each week. Total receipts for week, 40,300 cans milk, 350 cans cream.

POULTRY AND GAME.—A few parcels of frozen turkeys remain quoted at 16@20c; fresh killed are poor in quality and slow. Chickens and fowls are quite active. The latter are very firm owing to no reserve of live here.

Turkeys, fresh dressed prime 14@17c; coarse 12@13c; Phila. Spring chicks 50@65c; N. J. 50@60c; Phila. Winter 30@35c, do. Fall 22@25c; do. fowls d. p. 20@21c.; N. J. d.p. 19@20c. scalded 18@19c; State and Western d.p. 18@19c; scalded 18@19c; Ducks 16@23c.; Squabs white, $3@3.50 ₱ doz.; do. dark, $1.50@1.75.

Live fowls have sold very high all the week. When chickens do not exceed two pounds per pair they are hard to sell.

Chickens Spring prime ₱ pair $1.@1.20; poor 40@60c. Fowls, ₱ lb, all 17c; roosters, 10@12c.; turkeys, 14@15c. ducks, per pair, 60c.@$1.12; geese, 75c@$1.75; pigeons, ₱ doz 35@45c.

The offering of game is uninteresting. Wild squab wanted. Snipe must be in perfect condition to make rates.

Wild squab ₱ doz. $2@2,25; Eng. snipe $2@2,25; plover $2; sand snipe 50@60c.

PROVISIONS.—Hog products have had quite a boom this week owing to light stocks and a resumption of the export demand for many items that have been inactive. The stock of lard is unusually light and is under good speculative control.

Pork extra prime $13 50@14; Western mess new $16.75@17; old $15 75@16. Lard—Western steam 11@11¼c; city No 1 hams smoked city 18@11¾c pickled Western 10@10¾c; shoulders smoked city 8¾@8¾c; picked 7¾@7¾c; rib pickled 8¾@9¾c. Bacon long clear Western 8¾c. Beef Western mess $9 50@10. extra mess, $11@11.50; family $12@13 India's $22@24; beef hams $24@23. Tallow, city 6¾@; country 6¾@6¾c. Stearine 13@13¾c.

Receipts for week, beef, bbls. and tcs, 412 pork, bbls. 879; cut-meats, pkgs. 11,050; lard do. 15,012.

Exports for week, beef, bbls. and tcs., 2,150; pork, do. 4,680; cut-meats, lbs. 3,050 150, lard, do. 3,708,750.

SEEDS.—The market is very quiet. Clover ranges 7¾@8¾c.; Timothy $2.30@3.15.

TOBACCO.—There are no new features. A good call exists which steadies prices.

VEGETABLES.—Potatoes are in very full supply for the date and the best are no higher than at our last. Anything under prime is weak.

Bermuda potatoes $7@8 ₱ bbl.; Florida $3@7; Early Rose, Nova Scotia d. h. $2 50. Maine $2.37@2.50; State, $2@2.12 do. bulk, $1.75@2; Prolino d. h. $1.25 Mercer, bulk $2 Jackson do, $2; Burbank, do. $2 12@2 25; do. d.-h., $2@2.37; Chili Red. $2@2.25; Snowflake, bulk, $2@2,37; do. d.-h. $1 87@2.25, peachblow do. $2 25@2 50; Peerless do. $1.75@2; do. bulk, $1.75@2; sweet not wanted; $1@2.

Bermuda steamers are running very full and supplies from the South are enlarging. The weather has been against an active trade and prices have ruled irregular for many sorts of green stuff. Asparagus has been cheap enough for preservers to use it freely, but the market has worked up some in the past day or two.

Cbas. and Sav. string beans $1.50@1.75 ₱ crate; do. cabbages, $2@3 50 ₱ bbl.; Norfolk do. $2@2 25; Fla. do. $2@3.50; do. cucumbers, $2@3.50 ₱ crate; do. wax beans, $1.50@2; do. string beans, flat, $1@1.50. do. do. round, $1 50@2; do. squash, $1; do. beets, $1.25; lettuce, $1.25@2 50 ₱ bbl.; white turnips, $2@2. 5 ₱ 100 bunches; rhubarb, $1.50@1.75 do.; radishes, 50@75c. do.; asparagus, Oyster Bay, $2@2.25 ₱ doz.; other, $1.25@2 Bermuda onions, $1.12@1.50 ₱ crate; do. beets, $1.25. do. tomatoes, 50@60c, ₱ 5-qt. box; Fla. do. $2@4 ₱ crate; old carrots, $1@1.25; hot-house cucumbers $1@1.50 ₱ doz., choice culls, 25@50c.; mushrooms, $1; carrots, $1 ₱ 100 bunches.

WOOL.—The market continues quiet and is likely to be until new wools form a feature. There is no disposition to hold supplies.

Ohio, Penn, and W. Va. XXX and picklock, 43@44c.; X to XX 38@41c.; No. 2 to No. 1, 38@41c. course, 33@36c. combing 39@45.

State and Western X and XX, 36@38c.; No. 2 to No. 1 36@43c.; coarse 30@35c.; combing, 38@44c.; combing unwashed 26@31c.

Va., W. Va. and Md. unwashed medium 26@33c.; Ga. and Lake unwashed medium 26@28c.; coarse 22@24c burry and slightly burry 14@19c; Cal. Spring choice free 25@27c.; fair to good 20@23c., low grade and burry 16@20c. Fall choice 21@23c., low grade and burry 13@18c. Texas choice free 24@26c.; fair to good 20@24c.; low grade and burry 13@18c. Pulled super 38@42c.; extra 35@38c; No. 1, 20@23c; combing 38@43c. lambs 38@42c. Two washed, fair to choice 35@42c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, May 21, 1881.

BEEVES.—Receipts for the week 12,720 head; do. last week. 12,930 do. Prices have continued high and butchers in many instances purchased only for immediate wants. By neglecting one yard for another they have succeeded in getting something off at the close, though perhaps not more than $1 per head compared with Wednesday's market. Coloradas brought 10¾@11¾c. light to prime. Common to fair native steers 10¾@11¾c, to to dress 56@57 lbs.; good to prime, 11¾@12¾c. to dress 57 lbs. Several car-loads distillery-fed bulls 4¾@5¾c. live weight.

COWS AND CALVES.—The market is without quotable change. A fair range for a very light offering is $35@55 per head.

VEAL CALVES.—Live are doing a shade better than they did early in the week. Prime N. J. fed, 6@6¾c.; do. State, 5½@6c.; poor to good yard lots, 4@5¾c; Mt. Hollys, 6@7c.; buttermilk 3½@4c. Up-river dressed, 7¼@9c.

SHEEP AND LAMBS.—Receipts for the week 28,550 head; do. last week, 20,993 do. Free supplies made trade in the main a buyer's market. Owners did not strive to sell out clean at the rates feeling that a small surplus will do better or at least as well. Some very common sold at 4½c; while a number of fine wethers brought 6¼c for general stock, clipped sheep sold at ranges of 5¾@6c. Va. and Ky. lambs sold at 7¾@8¼c; N. J. $6.50@6.50 ₱ head.

SWINE.—Receipts for the week, 25,590 head; do. last week 25,812 do. All sold early to packers and cutters. Nominal price for corn 5¾@6¼c. City dressed State 7¾@8¾c.; do. Western 7¾c.

WANTED.—The date and place of meeting of all Agricultural Fairs and Stock Exhibitions in this country for 1881. Secretaries will confer a favor by forwarding the same to P. O. Box 3318, New York City, at their earliest convenience.

VICTORIES UNEQUALED.

In the only machine that received an award on both Horse-power and Thresher and Cleaner, at the Centennial Exhibition; was awarded the two last Gold Medals given by the New York State Agricultural Society on Horse-powers and Threshers; and is the only Thresher selected from the vast number built in the United States, for illustration and description in "Appleton's Cyclopedia of Applied Mechanics," recently published, thus adopting it as the standard machine of this country. Catalogue sent free. Address

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GARGET CURE.

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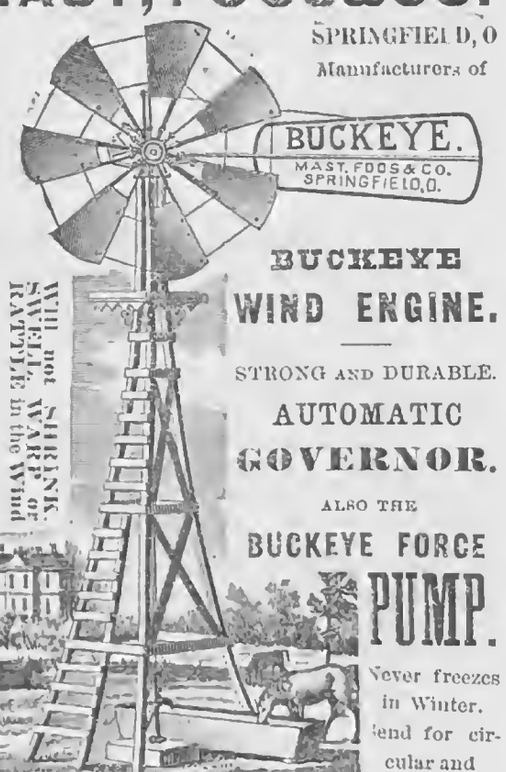

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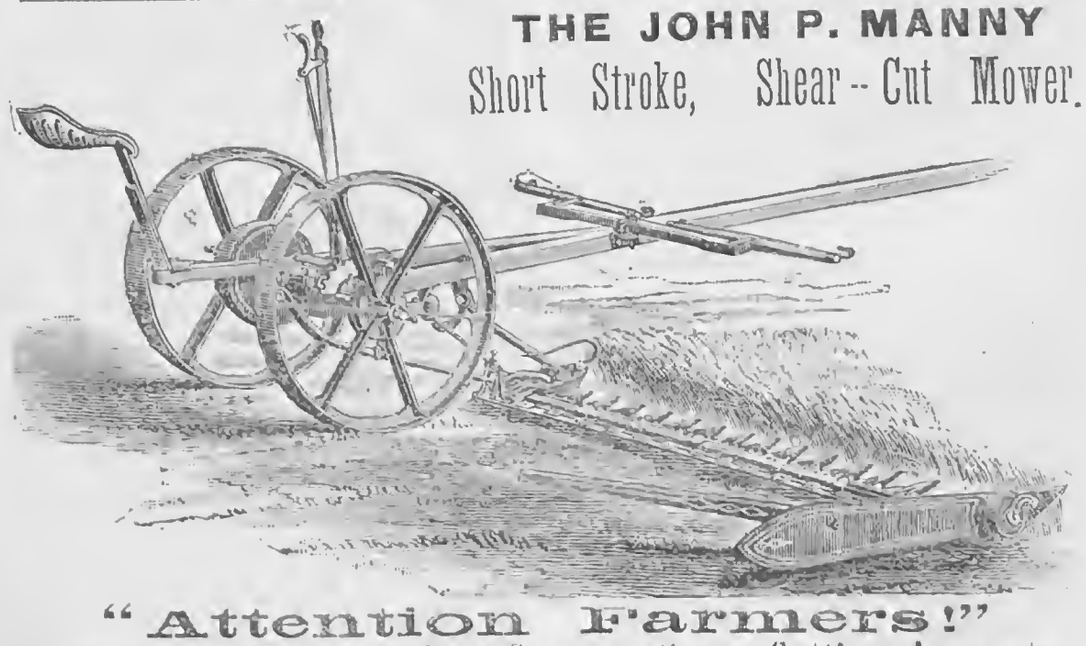

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☞ See illustrated article explaining our Cultivator in Rural New-Yorker of May 14, 1881.

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 23.

HENRY STEWART.

Feeding of Animals.

PLANTS and animals, both, live and grow by feeding. The food provided for them is absorbed, that is, taken in, and made a part of their substance. It is digested and assimilated. Digestion is the process of reducing it to a fit state for assimilation and assimilation is the process of converting it into plant or animal substance. The process of feeding is very much alike in both plants and animals. In both, the food is reduced to a solution and absorbed through the membranes into the circulating fluid, the sap in plants and the blood in animals; and is changed into living substance by deposits in the tissues from these fluids. Indeed so much alike are some of the lower classes of plants and animals that it is only by the different manner of taking their food that we are able to distinguish one from the other.

But there is one grand distinction which seems to mark the difference between a plant and an animal. This is, that a plant absorbs its food through external organs and membranes, while an animal swallows its food and absorbs it through internal organs and membranes. It may be said, then, that an animal has a stomach of some kind or other, however crude and imperfect it may be in some of the lowest species, while a plant has none. Besides, the food of animals is always organized matter; that is matter which has grown and been built up by growth, while that of plants is inorganic, or, at least, the elements of organized substance which have been reduced to their first or inorganic condition. This, however, is one of the interesting facts relating to this subject, but it is not of any practical value, further than that the more we can learn of the true nature and character of out work, the more pleasing and interesting it becomes to us.

The farmer has very much to do with the real knowledge of the feeding and nutrition of animals; because much of his profit is derived from this use of his crops and the more he knows about feeding, the better he can feed and the more profit he can make from his stock.

In the life of every animal there is a continual wear and tear and waste and loss of weight, and it is to restore this loss that food is required. This food must be supplied at short intervals, otherwise the time in which repair is going on would be too short to make up for that longer time in which waste and loss are occurring. A young animal that is growing rapidly requires to be fed several times a day; a young chicken, for instance, needs food every hour in the day, and a young calf every three hours, or the growth is stopped for a part of the time. The food, too, must contain all the elementary parts which make up the animal—flesh, blood, bone, hair, feathers, horn and skin—or the health will suffer. There are fifteen of these elementary substances in the body of an animal, and the animal will not thrive if one of these be lacking. Some of them must be supplied in the daily food and some may be given occasionally, but all must be given in sufficient quantity and at proper times. Thus a farmer should not only know something of the nature of his animals and their needs, but he should know something of the character of the different feeding substances which he grows or which he buys. All this knowledge comprises the science of feeding animals, and it is the most important part of a farmer's knowledge.

An animal takes its food within its body. The food enters the mouth, goes down the gullet, passes into the stomach, thence into the bowels; from the part that is absorbed as nutriment is taken into the veins, or the lacteal vessels, and thence into the blood, which flows to every portion of the body by means of arteries and veins, some of them so small and close together that the point of the the finest needle cannot prick the skin without sounding one or more of them or drawing blood. The fine net work of vessels which connect the arteries and veins serve to distribute from the blood the matter which repairs the waste of the body and builds up and renders the muscles, the fat, the bones and sinews and the skin, with all the membranes and tissues, which, altogether, go to form the whole animal system; and to gather up the worn-out part and return it through the veins to the lungs, the liver, and the kidneys, through which it is passed out of the body as waste, along with that part of the food which is not used in supporting the body. The whole system by which the food is taken into the body and digested, filtered and separated from the waste, and by which the waste is carried off, is called the alimentary canal.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK—We wanted to report to you regarding the seeds you sent us last year, long ago, but we have not been able to do so. Our Surprise Muskmelon and Mignonette did nicely, but the others, although sowed in boxes and placed in papa's propagating bed, failed. Our cotton crop did nicely, and as fast as we picked our own we took it to papa's gin, which he had just built, and had it weighed, just like the big folks. If you will allow us we would like to tell you and the cousins about our chickens being troubled by owls that roost in a big tree. Papa shot one, after which he put a pole in the ground the hight of the tree, a few feet away, and put our trap that we catch gophers with (a common steel rat trap) on top, all ready set, and tied it securely, in which way we caught two, making three in all. I wish you, Uncle Mark, could have seen how pretty "Mr. Owl" appeared, looking down one side and then the other, the next morning, with just his toes holding him, "making him ashamed," our little brother thought. HARLEY AND ELLA MATTHEWS.

Miscellaneous

THE TRUE TEST.

The Merit of Religion, Government, Persons and Things Must Rest upon a Basis of Worth.

Some Truths Illustrating this, and Testimony of Value to All Readers.

(*Christian at Work.*)

The true test of any religion is the effect it produces upon the lives of those who profess it. And, indeed, the test of real merit everywhere must be the power it possesses of accomplishing desirable results. In this age of the world men are not judged by what they claim to be able to do, but by what they can do; not by what they are reputed to be, but by what they are. Here is where the religion of our own country rises superior to the faith of Mohammedan or Hindoo lands; for while there is much hypocrisy in the church, and far too much worldliness, there is yet an absence of those sensual and brutal elements which characterizes the religions of Arabia and the Ganges.

This principle is equally true in all other departments of life. The same rule which applies to persons is equally applicable to things. Unquestioned merit must characterize them all, or they cannot be acceptable, much less popular. The clear and well arranged lecture delivered by Dr. Chas Craig before the Metropolitan Scientific Association appeared in the columns of this paper a short time since. In this lecture so many truths were brought to light bearing directly upon, and affecting the interests of the entire community. These facts, as stated by the doctor in his lecture, have been discussed in the columns of the religious press to a considerable extent in the past, and that, too, by very prominent personages. A few years ago the Rev. J. E. Rankin, D. D., of Washington, who is prominently known among the Congregational denominations of the country, published an article upon the same subject which drew forth most bitter replies from prominent physicians, and in response to these articles Dr. Rankin published long communications in the New York *Independent*, the Boston *Congregationalist* and the Chicago *Advance* reiterating his former statements and strongly emphasizing them. In these articles Dr. Rankin frankly stated he was as strongly convinced of the efficacy of the means used as he was that the Genesee river emptied into Lake Ontario. He further said: "I have known, too, of its use in similar cases by physicians of the highest character and standing, and I want, in the interest of humanity, to recommend Warner's Safe Kidney and Liver Cure."

Now, while very few persons are afflicted as severely as was Dr. Craig, or the cases Dr. Rankin refers to, still it is a lamentable fact that the great majority of people, in all parts of the land, are suffering to a greater or less extent from ill health and that this lack of health arises from either disordered kidneys or liver. Some additional facts, from the highest sources, of special interest upon a subject of such importance to the community, have, therefore, been collected by this paper, and are herewith given:

Rev. D W. Bartine, M. D., D. D., is known in all parts of the land as a prominent and efficient leader of the Methodist denomination. In speaking upon this same subject, as shown in his own experience, he said: "Some few months since I found myself suffering from a kidney difficulty which I knew to be the first stages of Bright's disease. By the use of a reliable test I found that my system was giving off albumen, and in some instances in a coagulated state. I also suffered severely from dropsy, particularly about the ankles, together with slight pains about the kidneys, derangement of digestion and great dryness of the skin. I had at all times much thirst, and of course this was followed by a gradual failing of strength. This was about the state of things when I commenced using the preparation known as Warner's Safe Kidney and Liver Cure. I took about six tablespoonfuls every day for a week, and found all my symptoms decidedly improving. I continued taking the remedy until I entirely recovered."

In a communication made by Rev Dr. C. A. Harvey, the well known financial and educational secretary of Howard University, Washington, D. C., the Doctor said:

"I have for the past few years been acquainted with the remedy known as Warner's Safe Kidney and Liver Cure and with its remarkable curative efficacy in obstinate and so-called incurable cases of Bright's disease which occurred in this city. In some of these cases, which seemed to be in the last stages and had been given up by practitioners of both schools, the speedy cures which were wrought by this remedy seemed to be little less than miraculous. I am convinced that for Bright's disease in all its stages, including those first symptoms of kidney troubles which are so easily overlooked, but are so fraught with danger; no remedy heretofore discovered can be held for one moment in comparison with this, and I hope that Warner's Safe Kidney and Liver Cure may become as widely known as is the existence of the maladies which it will cure."

Rev. A. C. Kendrick, D. D., LL.D., who is Professor of Hebrew and Greek languages in the University of Rochester, N. Y., and who is one of the American revisors of the New Testament, in speaking of the effect which Warner's Safe Kidney and Liver Cure had upon himself, stated most emphatically that he had received marked benefit from it, and he cordially recommended it to the use of others.

Rev. A. Bramley, pastor of the Arsenal street M. E church, Watertown, N. Y., testified in a recent interview that the first few bottles of Warner's Safe Kidney and Liver Cure had entirely removed the distinctive features of a severe kidney difficulty, and that while he had not been able to lie upon his back without great pain for more than five years, he was now not only able to do so, but slept soundly, ate heartily and calls himself a well man.

Rev. A. P Hill, of Shoeheel, N. C., having been troubled with a severe kidney and liver disease for a number of years, said: "I have been praying for relief for four years, and I believe I got it in answer to prayer. May God bless the firm who manufacture Warner's Safe Kidney and Liver Cure. Many of my friends have also used it with marked benefit, and I hope my testimony in its behalf may save the lives and relieve many who are now severely suffering from kidney or liver troubles in some of their many and dangerous forms.

Rev. P. F. Marklee in writing from Montgomery, Ala. said: "I have paid at least one thousand dollars for doctors and medicine and never received any relief until I commenced taking Warner's Safe Kidney and Liver Cure. I am too thankful to express in words the benefit this medicine has done my family and myself. I have been to the hot springs, sulphur springs and several other places noted for the curative properties of the waters, but this great remedy did for me what everything else failed to do—it cured me. I hope the Good Father may crown the efforts of those who are manufacturing it, for the noble work they are doing.

There are no more reliable endorsements be found in this land than those above given and coming from divines of such prominence they prove beyond a doubt the value of the great remedy of which they speak. It should also be remembered that Mr. H. H. Warner, the proprietor and manufacturer of this remedy, was himself cured by its use after having been given up to die by several physicians. So grateful was he for his remarkable cure that he determined the world should know of this remedy, and he therefore began its manufacture. Mr. Warner is also a prominent patron of other public enterprises and the sciences and by endowing the Warner Astronomical Observatory at Rochester, as well as by his many other public benefactions, has become known to, and respected by the whole land. His standing alone is an ample guarantee of the purity and worth of the remedy he makes, but the thousands of testimonials from all parts of America gratefully telling of the relief it has given, prove it beyond a question. As a result it is attracting great and universal attention throughout the entire country. No one fact has been more apparent in the past few years than that kidney and liver troubles are alarmingly increasing. When, therefore, a remedy has been found which not only cures the worst as well as all minor troubles of this nature, but also regulates, controls and keeps in perfect order these most important organs at all times, it is certainly cause for gratitude. This is just what has been done in thousands of cases, in addition to those above mentioned, and it is what will be done in tens of thousands of other cases in the very near future.

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Miscellaneous.

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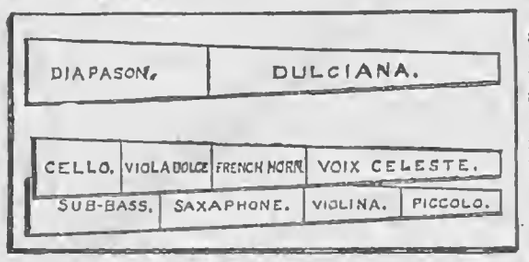

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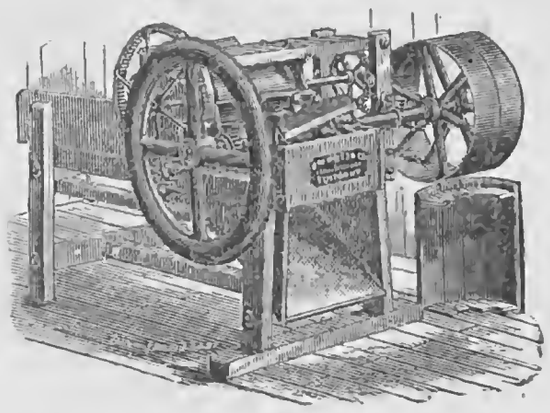

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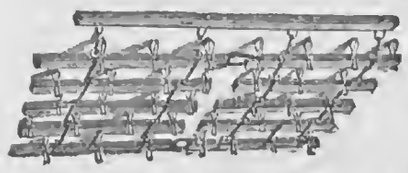

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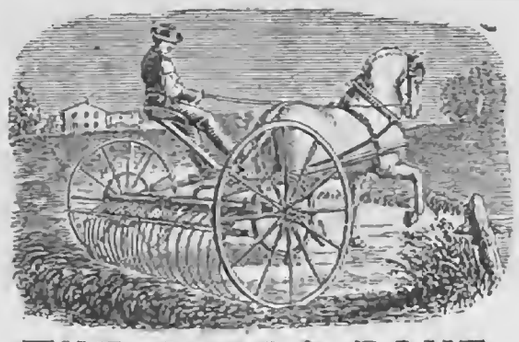

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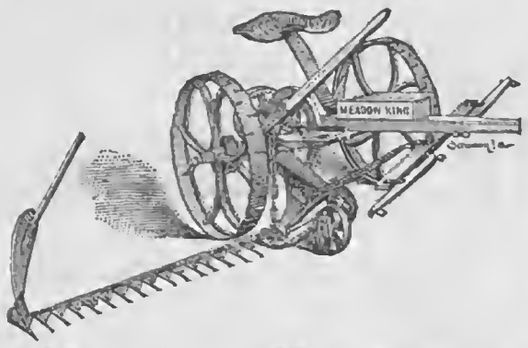

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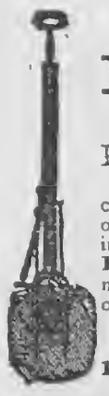

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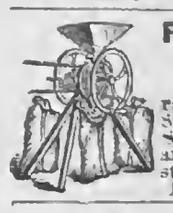

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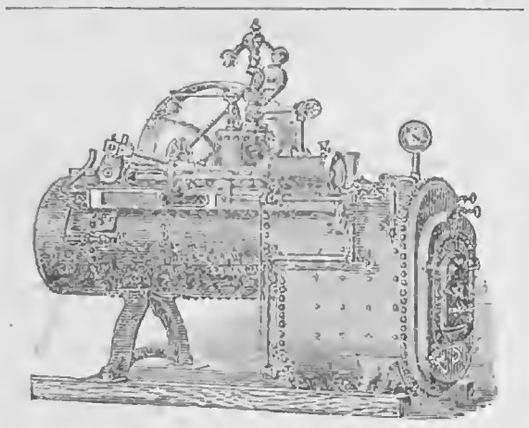

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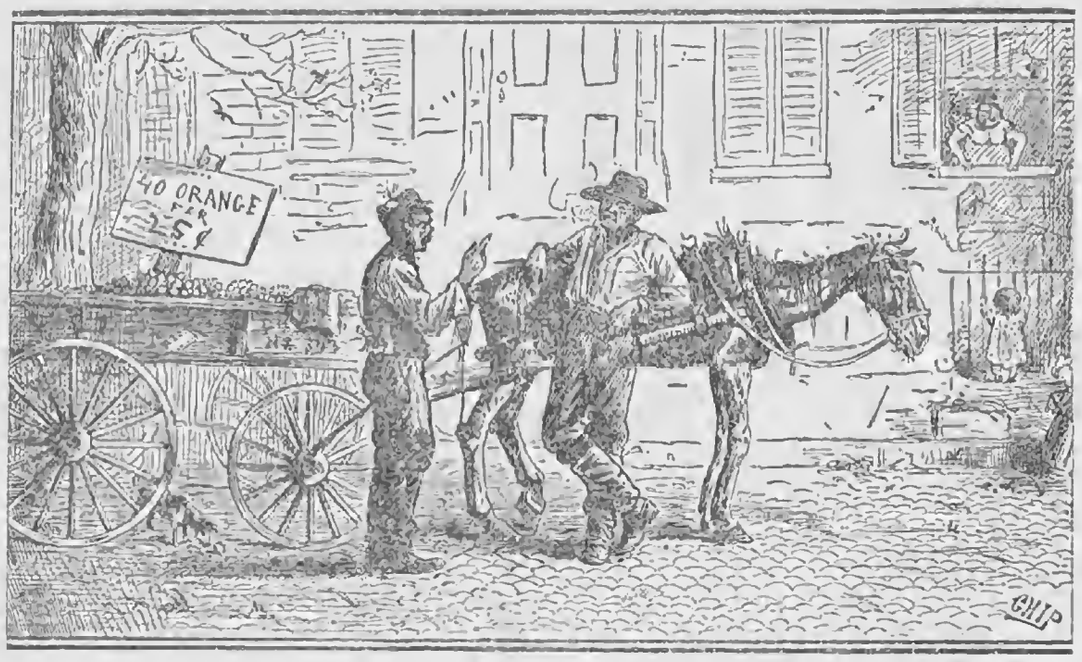

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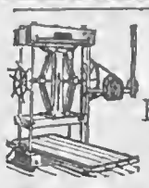

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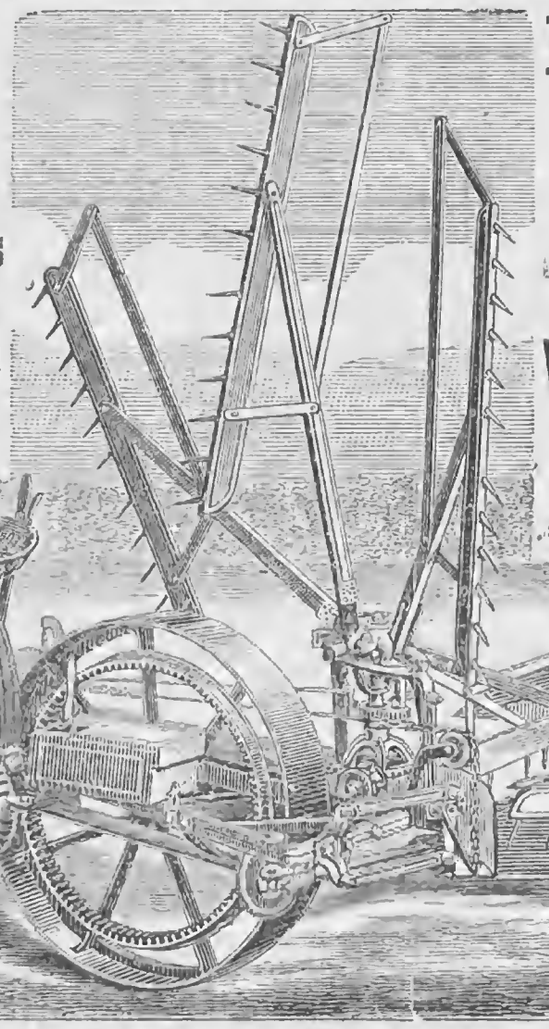

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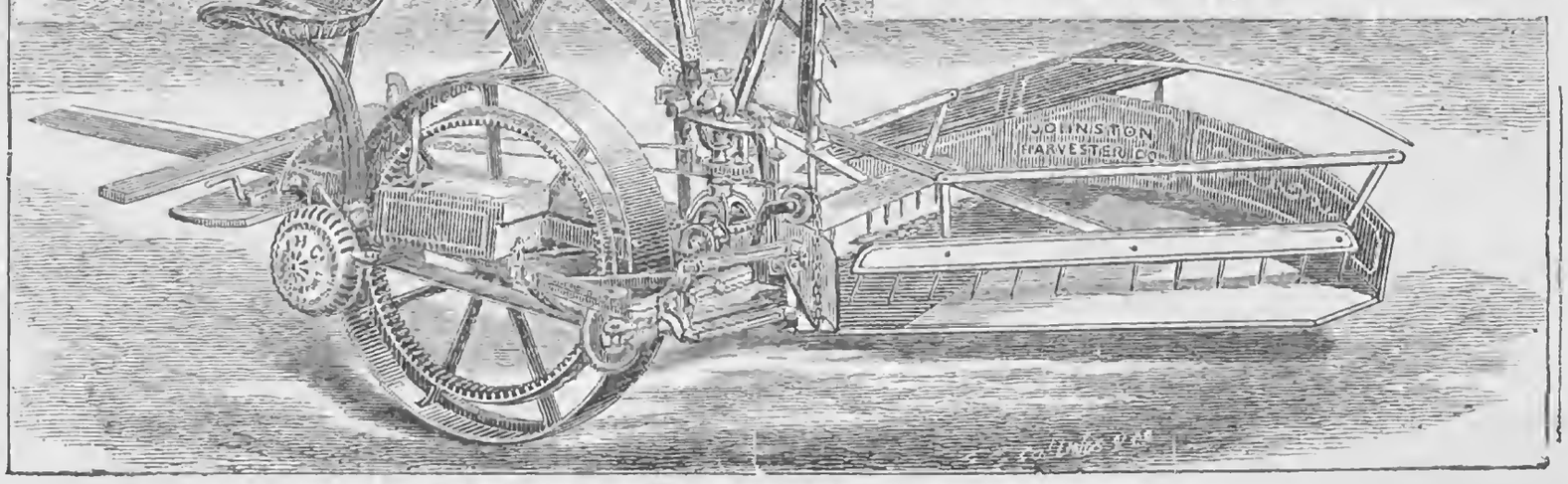

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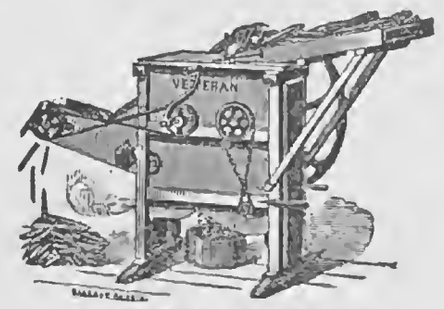

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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The Swine-Herd.

OUR ANIMAL PORTRAITS.

The Essex Boar, Black Duke.

To the Eastern Farmer who is also a fruit grower, the question of what hog to keep is an important one. He has two objects in view in keeping pigs;—one to have them help eat the prematurely fallen and wormy fruit, and the other to make the largest amount of the most desirable meat, for the food consumed. While some may desire a hog "as long as a rail" for the sake of getting plenty of side pork and bacon, it must be remembered that all that class of hogs are thick-hided and voracious eaters, and soon eat themselves up. Moreover, one can hardly feed them so much that they will not squeal for more, and of all musicians the most discordant is a squealing hog. For all purposes in the East, no pig so fully "fills the bill," as the Essex. He is always quiet and peaceable, always in good condition; his meat is fine-grained, and a very large proportion is ham and shoulder, the highest-priced and most desirable meats, and when slaughtered very little is wasted, and where it is best known the meat commands the highest price.

An excellent specimen of the Essex breed is shown by Fig. 277. This is the boar, Black Duke, 1067, the property of Mr. J. S. Woodward, of Lockport, N. Y. He was farrowed October 15th, 1879; sire, Duke of Richmond, 21; he by Imported Negro; dam Sister Sally, by Imported Raven; grandam, Lucy Long, by Stockwell; great-grandam Hester, by Black Prince; great-great-grandam, Imported Queen May.

It will be seen he has some fine blood in him and he is worthy of his ancestry. He is remarkably fine-limbed, thin-skinned and short-nosed, with small, fine ears. In reality he is in every way better than he is here shown, owing to the unfavorable position in which he was taken. He gets remarkably fine stock, and took first premium at the New York State Fair at Albany.

Apiarian.

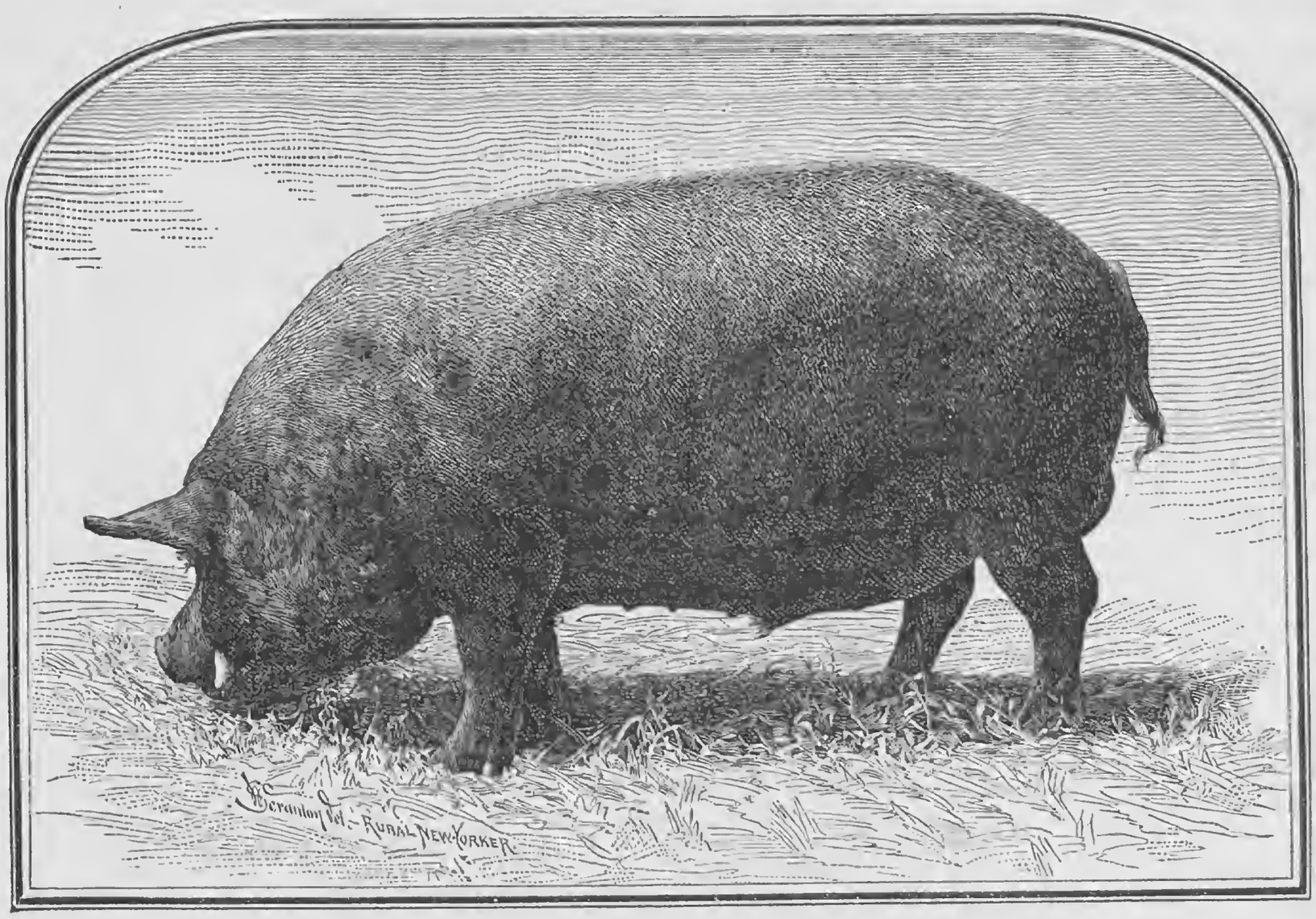
A FEW WARNINGS TO BEGINNERS IN BEE CULTURE.

Bee culture, to be successful, requires brains, study, work and perseverance. The regretted Samuel Wagner, originator of the American Bee Journal, has defined these requisites in a few words: "To know what to do, and to do it in time."

Within ten years very many enthusiasts have engaged in bee-culture with the vision of sudden and untold riches to be reaped without work; and have bought the hives and implements necessary for large apiaries. But in nearly every instance, their bright anticipations have ended in disappointment, if not in disaster; for an inexperienced person who has suddenly become the owner of a large apiary is overwhelmed by a work with which he is not familiar, and which ought to be done well and at the right time. He thus makes blunder on blunder, and the final result is loss instead of profit. My advice to beginners is, therefore, to begin slowly; to buy one or two colonies of Italian bees only, in movable frame hives of the Quinby or Langstroth pattern; then to buy a few books on bee culture and study in the books and in the apiary. All the outlay ought not to exceed $50, including the cost of the books, of two or three empty hives of the same pattern, and of a few other implements, such as a good veil, a smoker, etc. Then, after a season in the study of the pursuit, if the work has proved pleasant, the number of colonies may be increased, little by little. If, on the contrary, the pursuit seems distasteful, the loss will be small and the riddance easy. Everybody is not fit to become a successful bee keeper. The business requires a tendency to observation, that only some persons possess.

There is also another danger against which a beginner ought to be warned. It is the persuasion that bee-keeping is a very profitable business. No doubt there is money to be made in bee culture; but for a few who have succeeded, hundreds have abandoned the pursuit, or have relegated it to the second place, conducting it with some other business. I know some, among these last ones, who have become very good bee-keepers, and who increase largely their income with the profits derived from their apiaries. To sum up, I advise those who desire to try their hand at bee-culture, to begin slowly; to continue their regular business, if they have one; and to make of bee-keeping a pastime before investing largely in bee-hives. There is something very fascinating in the reports of large yields of honey and enormous profits therefrom, but only those who have had long experience in bee-keeping, need look for such grand results.

Hancock Co., Ill. CHAS. DADANT.



THE ESSEX BOAR, BLACK DUKE.—From a Photograph.--Fig. 277.

Field Crops.

ONION GROWING IN VERMONT.

T. H HOSKINS, M. D.

Wherever the professional knowledge of farmers advances beyond the hay, oats and potatoes period—the elementary stage, so to speak—the first sign is shown in the courage to attempt a garden. The garden vegetables most desired in a farmer's family are beets, cabbages and onions. Beets almost anybody can grow as soon as he has learned to thin properly, and keep out the weeds. Cabbages are work for a higher class in the graded school of horticulture. Thanks to the greater skill and honesty of seedsmen, the worst of all the old obstacles, "they won't head," is not now often met with, except by those who still buy their garden seeds out of the peddle-boxes annually left in the grocery stores. Good cabbage seed is sold by all responsible seedsmen, and with Wakefield, Winningstadt, Fottler or Stone-mason, the non-heading trouble is eliminated. But cabbages suffer from the cut-worm, the cabbage-worm and lice. Club-root is not often seen in farm gardens, where only a family supply is grown. Soon the gardener learns that a turn of stiff paper around the stem of the young plant excludes the cut-worm, and that a few judicious dashes of scalding water slay the cabbage worms and the aphides. Then cabbages are plentiful on the farmers' tables. The full course in farm gardening is made when success with the onion is attained. This is reached in Vermont by not more than one in a hundred. The three or four farmers in a town, who can succeed, have then in their hands a most profitable crop. Onions are almost a legal tender in most towns in Northern Vermont at a dollar a bushel. This is about as low as they can be brought here by our merchants, and well-ripened home-grown bulbs are preferred. The growers wagon them about and soon dispose of 300 to 1,000 bushels in every township.

Where the season is long enough and the soil most favorable, the Yellow Danvers Onion is preferred as a market crop by most of our growers. Some of the towns are quite onion towns, often shipping large quantities to the Boston market. This is notably the case with Cornwall, in Addison County, where excellent schools and a free library have developed the intelligence of the people far beyond the average. The Red Wethersfield, however, is still preferred by many who grow for their own use. The old large variety of this onion is rather later than the Danvers, but, when well ripened, red onions are better keepers than the yellow kinds. The Early Red Globe and Early Flat Red are beginning to be tried with satisfaction where the seasons are rather short, or the soil not quite warm enough for the Large Red or the Danvers. But for market, only the Danvers is planted. If the land is well prepared and manured in the Fall and the seed put in as early as possible, the crop of the latter usually ripens well. But there is very little margin in the season, and the loss of a week in planting is often the loss of half the crop.

After the right preparation of the soil is mastered, a knowledge (very important) of the best strains of seed secured, and skill in culture and handling attained, the onion worm still remains a standing menace against the unskillful or the dilatory. Usually a small bed of black-seed onions will be destroyed by them, or nearly so, in spite of every care, especially in the years when they appear in unusual abundance. Some rely upon salt and some upon hot water for protection, but usually a farm garden is not looked after close enough to stop their ravages before it is too late. The onion worm is decidedly the greatest of all obstacles to amateur onion growing, and from that point of view the greatest of all benefits to those who make a business of onion raising. The latter rely only upon digging up promptly with a trowel (taking dirt and all) every plant that by wilting shows the presence of the worm. A two weeks' campaign, vigorously pushed, wins the victory. The fire or a deep-dug grave is the only safe depository for the captured worms.

Those who object to this work and yet will have onions, usually plant the Potato Onion or top varieties, which start large and strong, and do not readily succumb to the attack of the worm. Both of these kinds are unprofitable for market on account of poor yield, though they are often grown for an early supply, as well as for home use. I know of but one variety of the top onion, and that is both a poor keeper and a poor yielder. But there are several strains of the Potato Onion or "multiplier," which vary greatly in their characteristics. Some are of even less value than the top onion as a commercial crop. Seven or eight years ago I found, growing in

a friend's garden, a "multiplier" of remarkable vigor and productiveness, the seed of which he said had been sent to him from California by his son, who obtained them from a Chinese gardener. I purchased a peck of these onions and have grown them more and more largely, latterly to the gradual exclusion of black-seed varieties, the "multipliers" now forming two-thirds of my crop. This onion is so vigorous as often to produce bulbs of over a pound in weight from the smallest sets. Larger sets produce circles of bulbs from the size of a breakfast plate to the size of a dinner plate, containing sometimes as many as 40 onions. The outer ring of these clustered bulbs are of good merchantable size and symmetrical form, resembling the Danvers, though not so globular as the best strains of that variety.

Within this outer circle the bulbs are smaller, a central bunch of from six to a dozen being pushed up by the growth of the outer circles and forming a cluster of small sets like a bunch of top onions. The yield, under proper cultivation, is from 10 to 14-fold. The crop here (45° north latitude) is usually got into the ground at the last of April and harvested by the middle of July, being followed by late cabbage, set between the rows at the last of June. It is usually said that "multipliers" do not keep well, but mine are the best keepers of any sort I have ever grown. Yet to keep well they must be carefully handled. A bruised one always rots. After drying a couple of weeks in an airy loft, I bunch them upon straw, about a peck in a bunch, and hang them up in the cellar. For several years I have wintered 100 bushels in this way with almost no loss. Left hanging in the Spring, they will keep the Summer through, with no disposition to sprout. In quality they are everything that could be asked for. I believe that these "multipliers" planted in Carolina would be ready to market as early as the Bermuda crop, and would out-sell them.

TOBACCO CULTURE.—NO. 11.

Profits.

THE acreage devoted to the growing of tobacco in the Chemung Valley, is constantly increasing. It has been increasing slowly but steadily for 20 years, and if our farmers continue to receive remunerative prices for their crops, undoubtedly it will continue to increase as long as good soil is available. From this constant increase of the business it is quite evident that the growing of tobacco here pays. While this is undoubtedly true in most instances, it is necessary, in order to draw correct conclusions, to study into the matter and take into consideration the varied changes in the soil due to long-continued cropping, the outlay necessary to commence the business, the immense cost of growing a good crop, and the risks of failure, which no foresight or care can remove.

It is a well established fact that tobacco is a heavy feeder and draws heavily from the fertility of the soil. Land devoted to this crop must receive annual applications of manure, or both the crop and the soil will suffer. In the light of these facts it is not surprising that some of our farms are already deteriorating in fertility and depreciating in value. Farmers who have found little profit in ordinary farm crops have rushed into tobacco growing, almost heedlessly planting a large part of the best portion of their farms to tobacco, hoping thereby to obtain large profits. In some cases profit has thus been realized and farmers have thus placed themselves out of debt; but if the business is continued it must end with positive loss, for it is only on an exceptionally rich farm that a large percentage of the area can be planted year after year to so exhaustive a crop without causing permanent injury to the land, unless great care is taken to keep up the fertility of the soil.

The immense amount of labor necessary to produce a good yield of tobacco must not be overlooked in judging of the profits of the crop. From the day the seed is sown in the plant bed until the last case has been delivered at the depot whence it is shipped to the buyer, tobacco requires attention. The labor necessary in the various processes of growing and handling the crop, is so great that other portions of the farm frequently suffer neglect. Hence it is that we find on some farms where tobacco growing is made a specialty, dilapidated buildings and fences, neglected crops and a general state of untidiness. In such cases there is less profit from tobacco growing than is usually supposed. Tobacco is a money crop; of this there can be no denial, but because it yields to the grower more ready cash per acre than most crops, it does not follow that it is always highly profitable. The greatest hindrance to making tobacco culture profitable is lack of manure. If our growers had good stable manure in unlimited quantities, they might mine money from their tobacco fields. But this is not the case, and it can only be had in limited supply. What is made in the city, which is little in comparison with the demand for it, is eagerly sought after by market gardeners and near-by tobacco growers, and bought as rapidly as it is made. Commercial fertilizers have not proved a substitute for stable manure, and green manures are not suited to the wants of the plant.

Our farmers must pay more attention to the careful handling of their tobacco crops. Less quantity and better quality will in most cases, produce more real profit to the grower. Much attention should be paid to making and saving manure, and clover should be freely used to maintain the fertility of the soil. With proper care on these points, tobacco does not "run down land," as is frequently stated; but, on the contrary, the judicious rotation of crops, the abundant fertilization and the thorough cultivation of the land necessary for good management in tobacco culture, bring the soil into the best possible condition for growing general farm crops; and hence tobacco culture improves rather than injures the farm.

ORIGIN OF BLOUNT'S WHITE PROLIFIC CORN.

PROFESSOR A. E. BLOUNT.

IN a late issue of the RURAL I am asked whether my White Prolific was not originally the Peabody Branching Corn. The two are about as nearly related as the Berkshire hog is to the Chester White. A short history of the White Prolific may show its origin and genuineness.

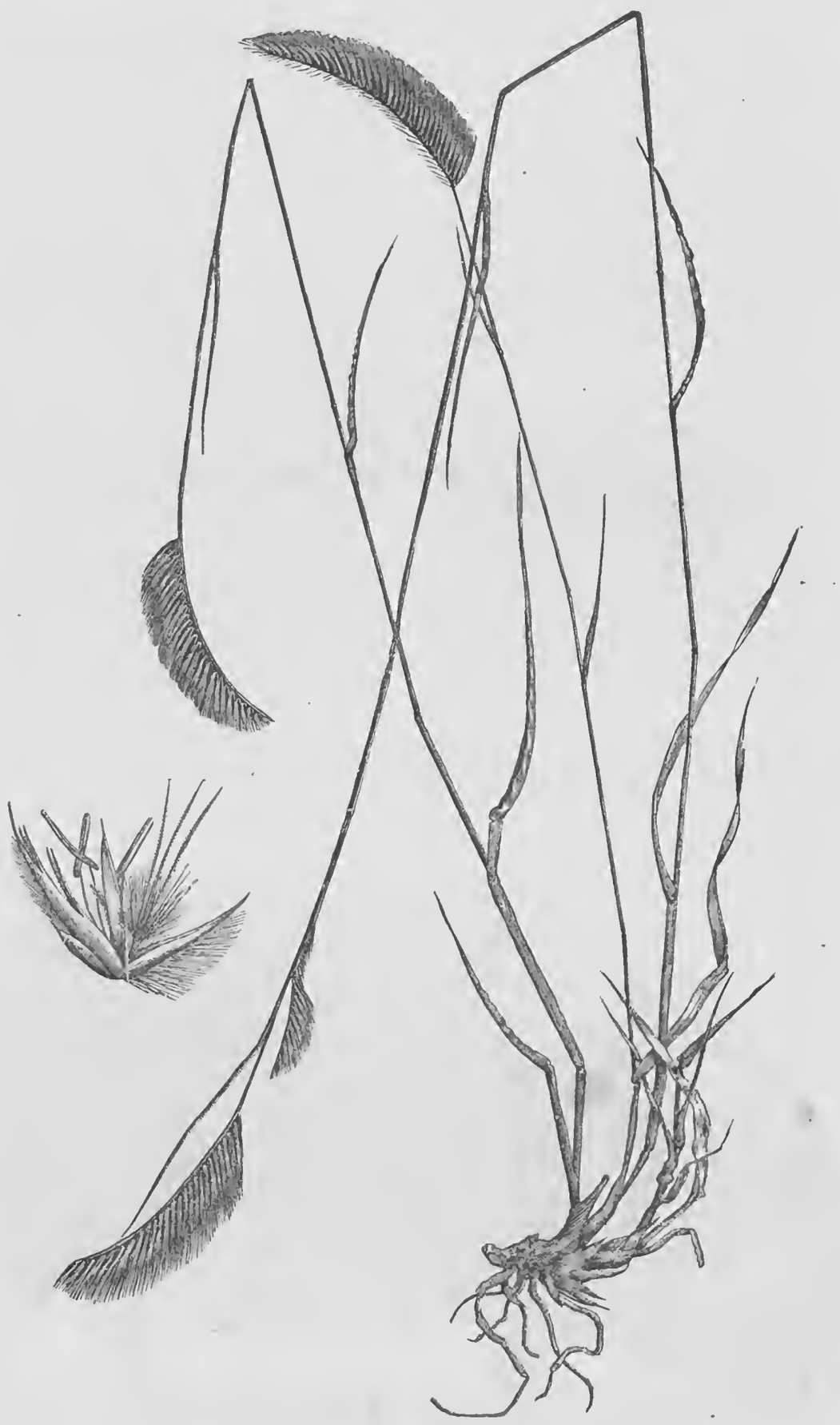
In 1871 I raised my second crop of corn—10 acres—the seed of which I obtained of a very nice and particular farmer on the Tennessee River. It was a soft white dent and of long life, taking 175 days to ripen. While this crop was tasseling I found several stalks ripe enough to cut up. Acting on the idea that an earlier corn was desirable, I saved from these a few ears and planted the grain alone the next season. This ripened in just 150 days. I watched and studied its habits, cultivated and trained it according to theories of my own, some of which I will enumerate. Just before silking I covered about 100 ears with thin muslin to keep all foreign varieties from mixing with them. When in full tassel and full silk, I pollenated every ear with tassel of another stalk of the same kind. When these ears ripened I saved the earliest ripe, best shaped ears with the smallest cobs, straightest rows, hardest and best formed grains. I saved those that grew on the best proportioned stalks, that bore the finest fodder, and last, but by no means the least important, I selected the top ear on those stalks that had two or more of good size.

In 1873 the result of my labor was so satisfactory that I gave my corn the name it now bears. All my theories were soon confirmed by actual facts. I found improvement in every direction.

My corn ripened earlier by 10 to 15 days the third year; the ears were larger, the cob smaller, the grain finer and harder, the stalks finer and more perfect in every way. In 1879 I sent over 50 bushels to the RURAL, with what results the world on this side of the Atlantic well knows.

I am aware that several attempts have been made to missell my Prolific by the name of Mammoth and of some other varieties. If not too far deteriorated, I am pretty sure the stamp of my improvements is still on the ear, as was clearly shown in the ear I received from the RURAL office two weeks since. For the benefit of Waldo Brown and others who think they have discovered a great secret, you may answer, if you think it necessary, by a short extract or two from this letter, which I am by no means writing for publication.

[We cannot improve upon the letter.—EDS.]



GRAMA OR MUSKIT GRASS.—FIG. 278.

Grama Grass, Muskit Grass.—Bouteloua Oligostachya.

This is a rather small, slender grass of peculiar appearance owing to the comb-like, one-sided spikes, and when in flower the anthers are orange-colored or red. It might be called an ornamental grass, but this is also true of most other grasses. It grows from Northwestern Wisconsin westward and southward and is of considerable importance as a pasture grass, though rather short and thin for mowing. It seems well adapted to dry land, and does not seem to improve with much moisture.

Mich. Agr. Coll. PROFESSOR W. J. BEAL.

Farm Topics.

NOTES FROM THE RURAL GROUNDS.

OF all Mr. Ricketts's seedling grapes, perhaps Lady Washington up to the present time has excited the most widespread interest. Wherever exhibited its semi-transpareney, rose-colored bloom, and large, showy bunches have been admired by all. The vine, besides, wherever tried has made a strong growth; the leaves are large and we have not hitherto seen a doubt expressed as to its hardiness. Our own specimen fruited last year, and two canes made a growth, each, of about 12 feet. We were surprised therefore, and make the statement with regret, that last year's growth has been killed by the past Winter and the new shoots appear only from the old wood near the ground. We have also two vines each of Highland, Newburgh and Eldorado, and one of Ricketts's No. 1, which have been injured in the same manner.

Our readers should not accept this report as proof that the above varieties of grapes are not "hardy." It proves that they can not stand the rigors of an exceptionally severe Winter in a situation which itself is exceptionally trying to the grape. Let us hope that elsewhere they have passed the Winter without harm. All of our small fruits have been treated peculiarly the past Winter. Cuthbert Raspberries in a new plantation are in full leaf to the very tips; while one in an old patch is killed to the ground. Of two Philadelphias four feet apart, one is killed to the ground and the other scarcely hurt. Caroline is looking fine, while Turner is badly injured. "Henrietta" and Belle De Fontenay are not harmed. We preserve the different names the same as if there were still doubt as to their being the same.

Our blackberries are all more or less seriously injured, except Snyder which is not harmed in the least. Among our trial plots of strawberries (about 75 different kinds) Duchess is the first, America the second, and Miller's No. 5. the third to set fruit.

Hall's Apple (Malus Halleana) is now in bloom, and a beautiful object it is, with its large, white blossoms and pear-shaped, glossy leaves.

We planted a number of the new and much-talked-of potatoes in trial plots side by side, weighing the pieces planted and being in every way careful that each receives the same treatment, as nearly as may be. They are all above ground. Potato beetles were never before so abundant. As Paris-green or London-purple cannot well be applied to the young shoots we are obliged to pick them off twice each day.

IMPROVING PERMANENT MEADOWS.

THERE are some sections of the country where, owing to their general character, it is undesirable that meadows should be brought under the plow. This is particularly true of considerable portions of New England; and this is the reason why certain parts cannot be brought under such a system of rotation as prevails, for instance, to a considerable extent, in portions of New York State. With a soil naturally rugged for cultivation, owing to the presence of numerous rocks and boulders beneath the surface, when once turned from the plow to meadow, with a laborious task of picking up and removing the stones, the farmer naturally feels a strong disinclination to repeat the operation any oftener than is absolutely necessary. But it is a law of vegetable economy that no field that is continually cropped can maintain a continued state of suitable fertility, and so, this being the case, some provision must be made for the restoration of such elements as are withdrawn from the soil by a hay crop; and, if plowing and the usual modes of application of fertilizers are to be abandoned, some other course must be pursued. With a great many, and especially upon some soils, it is believed that a surface application of manures is the most desirable; here, then, is a solution of the question regarding permanent meadows. Under ordinary circumstances any of the chemical fertilizers that are of value to the farmer can be spread upon the surface, and by means of the falling dews and rains these are carried to the roots of the grass—the very point where fertility is useful. Such fertilizers being largely soluble their effects are active but not permanent. For permanence there is nothing better than ordinary farm manure applied as a top-dressing. But in order that it may be no obstruction to the use of the mower or rake, it should be thoroughly decomposed by means of composting or else by being worked over sufficiently to induce such fermentation as is necessary to break it down and make it fine so as to spread more evenly. Farmers who have not tried this mode of maintaining meadows will be surprised at the result. Fields in which the crop of grass is light, by a small annual top-dressing of well pulverized manure will produce a great increase from year to

year. It is a question if this is not the best mode of enrichment the farmer can employ in case of such fields as have been described.

Tolland Co., Conn. WM. H. YEOMANS.

A Three-Horse Evener.

Having seen several engravings of three-horse eveners lately in the RURAL, I send a sketch of one in common use in this section. While using it one horse walks in the furrow and the other two on the land. It is very convenient, and has the added advantage of being easily and quickly put together. To make it, all that is needed is a pair of common doubletrees, one singletree and a piece of timber long enough to reach from the center of the former to that of the latter. In this bore holes near each end, through which to fasten the double and singletrees. Then, having measured the distance between these holes, bore another one-third of the length from the end with which the doubletree is to be connected; thus the single horse will have twice as much leverage as the team, and will therefore be able to pull evenly with them. A, singletree; B, doubletree; C, connecting piece of timber; D, connection with plow. N. J. SHEPHERD.

Miller Co., Mo.

[REMARK.—The principle of construction of the above, it will be seen, is the same as in the three-horse eveners previously illustrated in the RURAL. The long evener in this case takes a horizontal position with reference to the furrow, while in the former illustrations it was perpendicular to the furrow line.—EDS.]

Dairy Husbandry.

THE DAIRY COW. NO. 33.

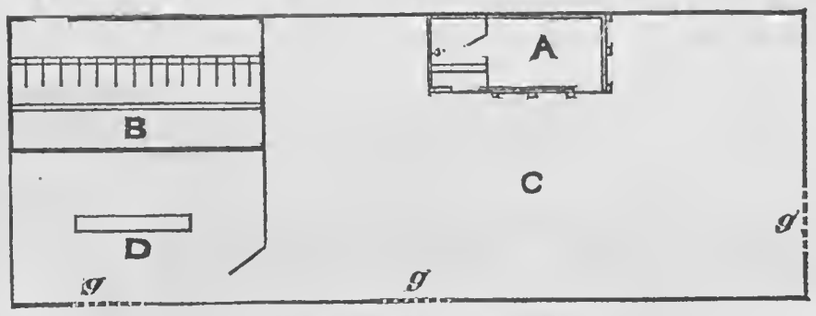
HENRY STEWART.

Selection and Care of a Bull.

THE dairyman may make it a part of his business creed to believe that dairy cows must be bred and reared especially for the dairy. He cannot afford to pay a breeder to do this work for him. The mere milk-producer may do passably well by buying cows in the market and using them as long as they are milking freely, and then fatting them and disposing of them to the butcher and replacing them with fresh cows. To do this with profit, however, requires a concurrence of favorable circumstances, good judgment in buying and selling, and a market for the fat cows in which they can be disposed of without loss. It is even a question for the milk dairyman to consider if the expense of feeding a good cow during the period when she is falling off in her milk and approaching parturition again, may not really be less than the inevitable losses arising from the frequent sales of dry cows and the enforced purchase of fresh ones. In general, and without exceptional facilities, with the advantage of considerable capital, and sometimes the profit to be derived from supplying neighboring dairymen with cows purchased and brought in with his own, the dairyman will find that he can breed and raise his own cows and keep them over their dry period at far less cost than he can buy fresh cows and sell the dry ones. And this will be found true even without taking into account the important advantage accruing from the possession of a herd of extra-good cows, which milk well in their flush and continue without unnecessary failure in quantity for a long period. With the butter-maker no question of this sort arises. *He must breed and rear his cows*, for they are not to be purchased at such a price as he can afford to pay, and it is a palpable fact that *it costs no more to rear a good cow than a poor one.*

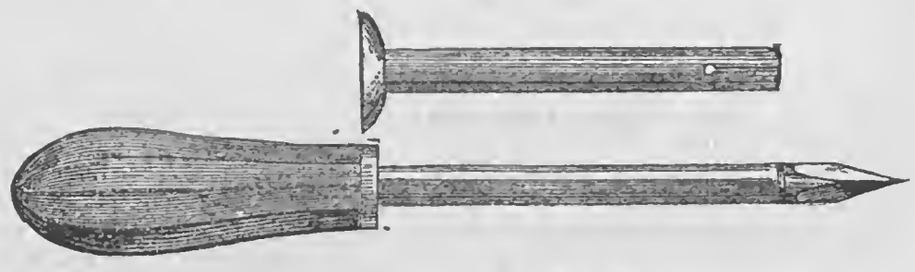
This being the case, the selection and care of a bull for dairy purposes becomes an important part of the dairyman's business. This influences the character of the progeny, and, to some extent, the sex of it; and it goes without saying that it is to the dairyman's interest to have as many heifer calves as possible. To secure the first effect, the bull should be taken from a herd of known good character, consideration being given not so much to the fact that the bull's dam was a good milker, or a large producer of butter, as to the certainty that the line from which the bull came was good. A phenomenon in the dairy is apt to disappoint expectations. The descendants of some of the most noted cows have been very ordinary animals, and some have been very poor ones; but if the habits of the family, dam and grandam, sisters, nieces and aunts, has been good, without any one possessing extraordinary capability, the result will be more satisfactory. From what has been said previously on this point, the writer's views have been sufficiently explained, and need no repetition here.

To secure a preponderance of heifer calves it is advisable to use a young bull—one not older than five years. For a small herd an animal 18 months old may be used to begin with, and if he is kept until he is five years old he may make two crosses on his own heifers, and be the sire of his own granddaughters, which will be far enough to go in line breeding even with the most satisfactory materials. The effect of using a young bull upon aged females has been conspicuously noted in sheep breeding. An instance out of many may be given as follows:—A flock of ewes, served by rams under 18 months old, produced from two-year-old ewes 14 male and 26 female lambs; from three-year-olds, 16 males and 29 females; from four-year-olds, 5 males and 21 females. There were several twin births. Another flock, served by rams over four years old, produced from two-year-old ewes 7 males and 3 females; from three-year-olds, 15 males and 14 females, and from four-year-olds, 32 males and 14 females. There were no twin births in this flock. In the former flock there were in all 35 male and 76 female lambs, and in the latter 55 males and three females. This remarkable result has been verified by other instances, and although it may not serve as a basis for a special rule, yet it points very strongly towards the existence of a physiological law of which we have evidence in the highest race of animals, as well as among the lower ones.

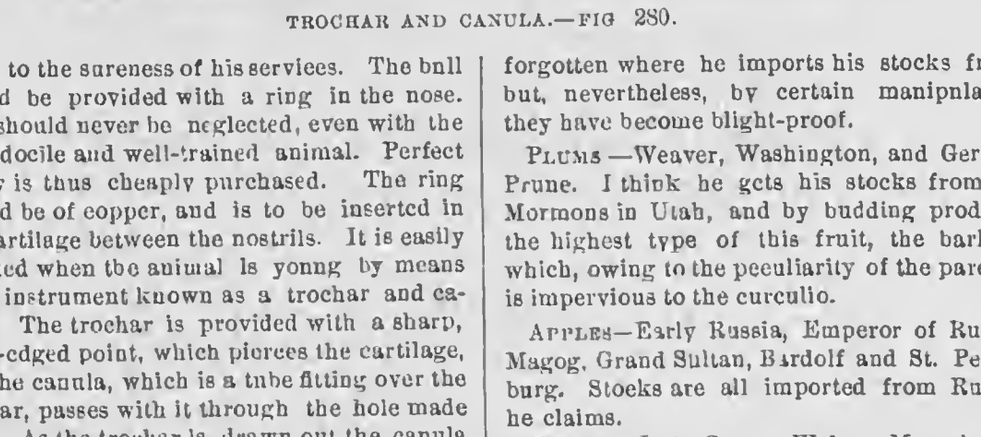


YARD FOR BULL.—FIG. 279.

It is advisable to keep the bull in active work and only moderately well fed. A luxurious, idle life is highly objectionable. Work may always be found for a bull on a dairy farm. He may be trained to work in a horse-power and do the churning and the fodder cutting. He may be harnessed to a cart and haul feed from the fields, or do considerable light work in many ways. This will keep him docile and add much to the sureness of his services. The bull should be provided with a ring in the nose. This should never be neglected, even with the most docile and well-trained animal. Perfect safety is thus cheaply purchased. The ring should be of copper, and is to be inserted in the cartilage between the nostrils. It is easily inserted when the animal is young by means of an instrument known as a trochar and canula. The trochar is provided with a sharp, three-edged point, which pierces the cartilage, and the canula, which is a tube fitting over the trochar, passes with it through the hole made by it. As the trochar is drawn out the canula is left in the hole, when one end of the open-jointed ring is inserted, and this is drawn through with the end of the canula. The ring is then closed and fastened with a screw riveted at the end, to prevent it from coming out. The annexed engraving—Figure 280—shows the form of these instruments. A strong staff made of tough hickory, furnished with a spring hook at the end, is used in handling the bull, and the constant use of this keeps the bull perfectly docile and quiet. The animal should never be led out without it. It is also advisable to provide a separate pen and yard adjoining the cow yard, for the bull. A high and tight board fence, nailed on the inside of the posts, should be built around the yard, and a convenient door made in it, through which a cow may be led into the yard. The plan, Fig. 279, shows the arrangement in the writer's yard, which has been found convenient. The pen is furnished with a feed trough, supplied from the passage in the front, and a strong ring-bolt is fixed near the feed trough for tying the bull when required. But it is never found necessary, as he is always quiet, secure, and easily managed in this safe confinement.



TROCHAR AND CANULA.—FIG. 280.



ARRANGEMENT FOR USING THREE HORSES ABREAST.—FIG. 281.

Pomological.

FRUITS FOR SOUTH CAROLINA.

I was visited a few days since by a nursery drummer or tree peddler, representing the "Fairmount Nurseries" of Troy, Ohio, George Peters & Sons, Proprietors. The drummer exhibited colored plates of fruits and flowers, and also samples of fruits in alcohol. His tongue worked as if it had been hung amidships and flapped both ways; but as I have been a constant reader of agricultural papers, I was a little shy of the gent, and while apparently taking all he said for truth, I determined to have some better evidence of the suitability of his wares to our climate before I made any purchase—hence this letter. I give herewith a list of his varieties that suited my fancy:

PEACHES—Alexander, Downing, Foster, Reine de Vergers, Crawford's Late, Salway and Hopkins. He avers that they import the stocks of wild Canadian peaches, set them out and bud upon them with native varieties, which causes the peach so produced to bloom some three weeks later than the usual kinds, and makes it especially adapted to the South. The Hopkins, he claims, is the largest peach in existence, and he declares it reproduces itself from the seed.

PEARS—Souvenir du Congres—fruit weighs two to two and a half pounds—Brockworth Park, Louise Bonne de Jersey, Beurre Clairgean, President, and Doyenne d'Etc. I have forgotten where he imports his stocks from, but, nevertheless, by certain manipulation they have become blight-proof.

PLUMS—Weaver, Washington, and German Prune. I think he gets his stocks from the Mormons in Utah, and by budding produces the highest type of this fruit, the bark of which, owing to the peculiarity of the parents, is impervious to the curculio.

APPLES—Early Russia, Emperor of Russia, Magog, Grand Sultan, Bardolf and St. Petersburg. Stocks are all imported from Russia, he claims.

GRAPES—Lady Grape, Walter, Moore's Early, Croton, Lindley, Rodgers's No. 9; Early Dawn.

CHERRIES—Olivet, Mammoth, Biggarrean, Toronto. I have forgotten where the stocks are imported from.

GOOSEBERRIES—Woodward's Whitesmith.

CURRANTS—White Grape and Long-branched Holland.

STRAWBERRIES—Sharpless.

RASPBERRIES—Thwack. I simply ask that you examine the list, and inform me which, if any, are suitable to our climate, and also tell their qualities. My soil is mostly a clay loam with a red clay subsoil, but a part of the plantation is sandy with a clay subsoil. W. F. C.

Mar's Bluff, S. C.

REMARKS.—Alexander and Downing resemble each other. Both are early and of good quality. We have no information as to whether they will succeed with you. Foster is late and good: succeeds well in S. C. Reine de Vergers is an old French peach, but little known in this country. Crawford's Late is large, yellow, juicy and good; succeeds well in S. C. Salway is yellow, of fair quality; medium late. We do not know that it has any record in S. C. We know nothing about Hopkins. Many peaches reproduce themselves quite nearly from seed. We should doubt the statement as to the wild Canadian peach. Souvenir du Congres is a very large pear of fair quality. One pear was raised by Ellwanger & Barry weighing 21¼ ounces. It was figured and described in the RURAL NEW YORKER June 5, 1875, and again in the issue of March 30, 1880. It is of too recent introduction to have much of a record anywhere. Brockworth Park resembles the Bartlett, and is of good quality. It often cracks badly. Louise Bonne de Jersey ripens in mid-Autumn here. It is very productive. It is one of the few sorts that succeed well on quince stock, that is, as a dwarf. It is not of the first quality, but really ranks among the first for many merits. Beurre Clairgean succeeds well in S. C. It is late, large, very handsome, sometimes good, but notably variable. The President is a very large pear, roundish-obovate; flesh yellowish-white, rather coarse, juicy, slightly vinous. The tree was raised by Dr. Shurtleff, of Brookline, Mass. We have no record of it in S. C. Doyenné d'Eté is a very good Summer pear, succeeding well in S. C. The claim that it is blight-proof is absurd. The Washington Plum is large and very good. We doubt if it will succeed in S. C. Just the same may be said of the German Prune. The statement as to the curculio is not true. We know nothing about the apples named, except the Magog, which we suppose is the same as the Magog Red Streak, a Russian apple figured and described in the RURAL of January 24, 1880. The others also, judging from their names, seem to be Russian, and these kinds were imported, not for the temperate or warm climate of the South, but for the cold Winters of the extreme North. The Walter Grape has the reputation of thriving nicely in S. C. The Lady (white), Moore's Early (black), and Early Dawn are comparatively new. They are all very good kinds where they thrive. There are many kinds of Biggareau Cherries. We know nothing of the others named. Late Duke, May Duke and Morello would suit your climate best for cooking kinds. Woodward's Whitesmith is a large, green foreign kind. It will not thrive in S. C. White Grape and Red Dutch are good kinds of currants. The Sharpless has done well in several parts of S. C. that we know of. In one place, however, it did not thrive at all. The Thwack Raspberry we have been trying to drive out of the market since it was tested by us several years ago, before it was offered for sale. The berry is nearly tasteless; bush not fruitful. It suckers frightfully. Turner, Caroline, Cuthbert are good kinds.

Sheep Husbandry.

DOGS AND SHEEP.

SOME years ago I accompanied a drover who took a flock of 100 Leicester and Cotswold sheep to one of the richest and best settled parts of Indiana. They were a fine lot, and it was expected they would be readily bought by the farmers in that section. But we were told it was almost useless to attempt to keep sheep on account of the dogs from the villages. Upon a close investigation, however, I came to the conclusion that the farmers' dogs, in all probability, were just as bad as the village curs, and that they had themselves to blame, in part at least, for their losses in sheep. Throughout that whole section I did not see a single canine that had either the appearance or the action of a good farmer's dog. There were hounds of all sorts, setters, spaniels, pointers, bulldogs, Newfoundlands, crosses of the above sorts and mongrels of every description; but not a solitary shepherd or collie. In the sweeping denunciations generally written against dogs, the whole lot are declared to be unmitigated nuisances that should not be tolerated on the face of the earth; but with our utilitarian views why not make exceptions. The Scotch collie is a valuable and faithful assistant on the farm, and during varied and somewhat extended observations on this class of dogs, I have never heard of a single instance where loss has resulted by ravages on flocks, committed by them. It cannot be denied, however, that a cross between this breed and the sporting dog or Newfoundland, is very apt to become a sheep-killer. The true collie has been inured from generation to generation to the tending of flocks and herds and has acquired the habits proper to this service. It is as natural for him to watch and attend generally to the care of cattle or sheep, as it is for the hound to chase the fox, or for the bulldog to hold on when he has once firmly fixed his teeth. As a companion, the collie is faithful and affectionate, and with his intelligent look and symmetrical form, his beauty is surpassed by none. With proper care in training he becomes a most valuable assistant in the management of stock on the farm. FARMER.

METIS-MERINO SHEEP.

THE accompanying illustration—Fig. 282—represents a group of Metis-Merino sheep, the property of M. Paul Bataille, and winners of the first prize for this breed at the recent live stock show at Paris, France. M. Bataille farms over a thousand acres at Passy-en-Valois, and is one of the most successful breeders of Metis-Merinos, the formation of which breed was begun about 60 years ago by his grandfather, by a careful selection of rams of the purest Merino blood. From the first no other blood has been permitted to mingle with the Merino, although some time back, owing to the width of the chest of sheep of this breed, it was reported that at some time an English dash of Leicester or Cotswold blood had been introduced. To settle the question, M. Gustave Heuzé, a French agricultural inspector, was charged to examine the animals and their pedigrees, and pronounced them to be perfectly pure.

At present M. Bataille's flock is composed of over 1 200 sheep, and 200 rams are either sold or let every year. At their first appearance at the Paris live stock shows they obtained the medal of honor, and they have maintained their high reputation ever since. The following technical details will enable amateurs to judge their respective merits:—

1876. First prize for 3 sheep, weighing 683 lbs.
1876. " " " 15, same age, 2,823 lbs.
1877. " " " 3 ewe lambs, 14 months, 507 lbs.
1878. Second prize for 3 sheep, 13 months, 518 lbs.
1878. First prize for 15 ditto, 2,738 lbs.
1878. " " " 3 ewes, 588 lbs.

The three last were retained for slaughtering, that the commissioners might verify the meat-producing qualities. Each heart was found to give an average of 64 per cent. of meat. With regard to the wool, the sheep produce 13 pounds per fleece, and the rams from 15 to 17 pounds, of very superior quality. Our illustration has been re-engraved from the Live Stock Journal (England).

AN ARRANGEMENT FOR DIPPING SHEEP.

THE arrangement for dipping sheep here illustrated I have found very convenient. A, is the heater which can be made of inch-and-a-half plank closely fitted and strapped across with hoop-iron. The bottom should be of sheet-iron, and the heater should be placed on a furnace a foot and a half high, so as to leave room for a brisk fire. Strips of iron should run across under the pan to support the weight. B, is the dipping vat, twenty feet long, five deep and three wide at the top and one at the bottom which slopes upward to the draining pen, so that the sheep can walk out. This vat should be set on a level with the ground. C, is the draining pen which should be on sloping ground, or be raised near the the chute. D, is a form of chute that is much used in California and maybe elsewhere. It should be 16 inches wide for Merinos. The best material for it I have tried, is smooth wire three inches apart supported by posts at intervals of from four to six feet. E, is the catch pen.

F. is a gate which swings so as to close the catch pen and let the sheep run out of the chute, or swings and catches, closing either way. G. is a partition used in crowding the sheep close to the dipping vat to save time in catching. L. is the gate-way through which the sheep should always be driven except when they are to be driven through the chute, D. The continuation of the line from the gate L. is a dividing fence between the two main corrals and should be made of something that will prevent the sheep in one corral from seeing those in the other. M. and N. are the main corrals.

The Herdsman.

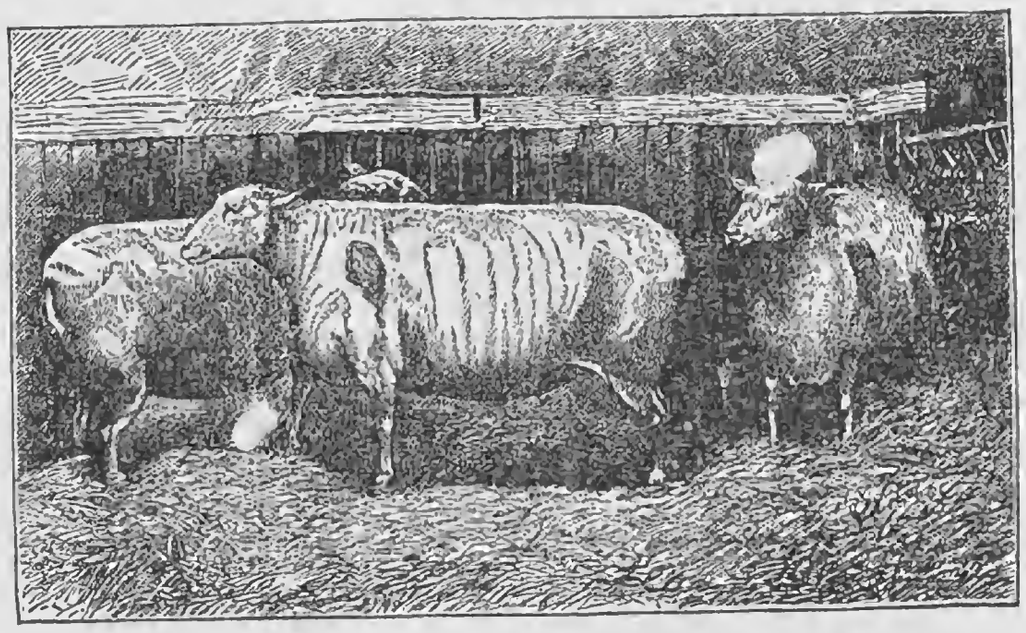
NOTES FROM MY BARNYARD.

"SHEEP will live and do well where other animals starve," but Seth says there is no animal that repays you so well for extra care as the sheep. We have from a one-year-old ram over 15 pounds of wool; from another 12. Last year one of these just bought from a farm flock, sheared about six pounds. They had, besides their hay, an occasional handful of oats; and were most of all greedy for a share of the boiled vegetables thrown in twice a day to the hens. They were also housed very comfortably. During the Summer they are changed every two weeks between two small half-acre lots that open into each other; into these lots we throw additional feed of beets and sowed corn. The one thing above all others that a sheep delights in is beet leaves. I doubt if any one can show a better record than 26 pounds of wool from two sheep.

Seth says he doesn't like animal profanity. "An ugly animal always bellows as if she were swearing," he says. "There, that Ayrshire will never lie down after a good meal and enjoy herself. 'Tisn't in her any more than a Yankee can sit still in a chair. She's always on the look-out for a bit of mischief; and her low is as profane as Tim Burn's execration. I like gentle-spoken beasts."

The other day Seth and I went out to buy sheep. "Let me see their faces," he said; "I can learn all I want to know from their faces. If the face is pinched, or coarse, or wild, or stupid, the body and habits will correspond." Look at five cows in the faces and see for once how character looks out. Let a painter draw an Ayrshire head and a Jersey head and a Durham and a Holstein, and any good judge could construct the rest af the animal all right to fit. He would not get a Durham on a Holstein. More than that, every cow has her individuality in her face. Seth says this is increasingly true of animals that have long associated with man. Bad men degrade stock; good men ennoble them; so that while wild animals of a species average much alike, domestic animals of the same species widely differ. "Cats are not all cats," he adds.

"Talk of heredity," Seth says, "that's something; but it's very early education that does the thing in the barn-yard. There's that mare, she never was unharnessed in her life without pretending to want to eat you up. She learned it when she was three years old—she's nineteen now. Can't cure her. People fool with colts and barn-yard stock that are young, just as they do with babies, and then try to whip the tricks out of them. You see the time to begin training is as soon as they are born."



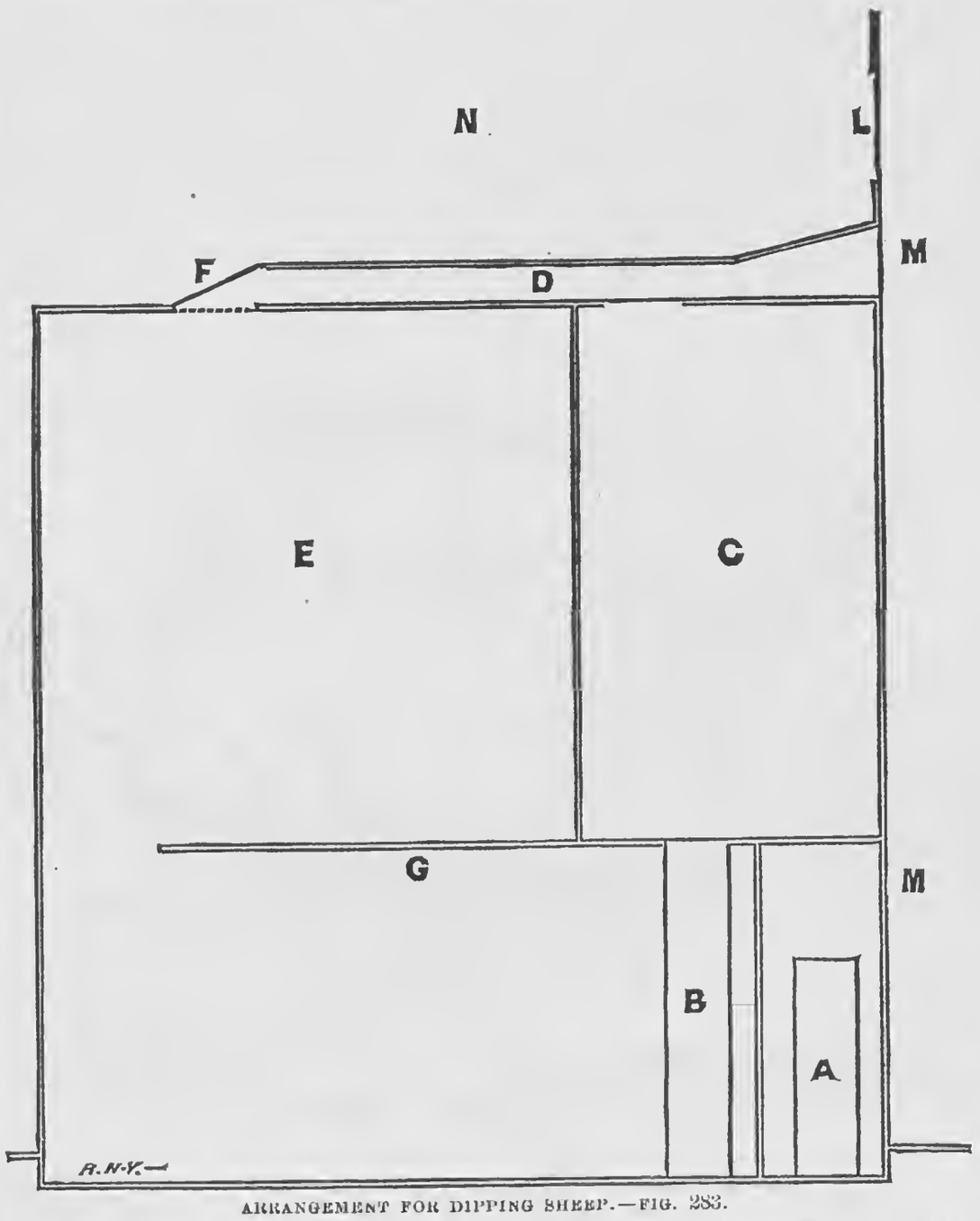
A GROUP OF METIS-MERINO SHEEP.—FIG. 282.

The Horseman.

BRAW LADDIE.

THIS bay Clydesdale stallion was foaled May 14, 1877, and imported from Scotland in 1880 by Powell Brothers, Springboro, Crawford Co., Pa. He was sired by "Tam O'Shanter" (851) winner of first prize at the Royal Agricultural Society's Show at Bedford, in 1874. He by "Rantin Robin" (685), winner of first prize at the Highland Society's Show at Dumfries, in 1870. He by "Bergamie" (44), winner of first prize at the Highland Agricultural Society's Show, at Kelso, in 1863. He by "Johnnie Cope" (417), by "Mulrcock" (550) by "Clyde *alias* Glancer" (153), by "Broomfield Champion" (95), by "Glancer 2d" (337), by "Glancer 1st" (336), by "Glancer, *alias* Thompson's Black Horse" (335) that [illegible] ied about 1810 and was the most noted of all the great founders of the Clydesdale breed.

Braw Laddie's dam "Jean" was winner of the following prizes: In 1872 second prize at the Northumberland Show; first prize at West Lothian; first at East Lothain United; second prize at the Highland Agricultural Society's Show for district of East Lothian; and first prize at Dalkeith Agricultural Society's Show. In 1873 first at United East Lothian Show: first at Highland Agricultural district Show; first prize given by town of Haddington (as one of a pair); first at Berwick, with foal by her side, prize worth £25 ($125); at same show a silver cup valued at £35, as best cart mare at the show; first prize at Richmondshire show, also first prize as one of a pair: first prize at Crook; first at Stockerlay; first at Darlington; first at Colborn; first at Barnard Castle; first at Malton, and first at North Allerton, and several other first prizes. She was by "Campsie" (119), winner of first prize and gold medal at the Highland Society's show at Kelso in 1863; the Fife and Kinross premium two years in succession; the Shotts and Whithurn premium four years in succession, and the Ayr County premium in 1868. He by "Johnnie Cope" (416), winner of first prize at the Highland Society's show at Glasgow in 1857. He by "Justice" (420) by "Prince *alias* Prince Charlie" (603), winner of second prize at the Highland Society's show at Glasgow in 1856; was Brechin Premium Horse in 1851, and Lanarkshire in 1852. He by "Clyde *alias* Prince of Wales" (155), winner of first prize at the Highland Society's show at Glasgow in 1844. He by "Clyde *alias* Glancer" (153), by "Broomfield Champion" (95), by "Glancer 2nd" (337), by "Glancer 1st" (336), by "Glancer *alias* Thompson's Black Horse" (335).



ARRANGEMENT FOR DIPPING SHEEP.—FIG. 283.

TO PREVENT A HORSE FROM CHEWING THE LINES.—Referring to the query on this matter in the RURAL of April 30, our friend, M. B. P., writes from Brookston, N. C. that a good preventive is to soak the lines in pepper tea, or to wet some ground Cayenne pepper and rub it well into the ropes or straps. The same application to the mane and tail of the dam will prevent a colt from biting either. The only effective remedy for a horse's wickedness in eating his blanket is to place it beyond his reach—on some better-mannered horse.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 60, MAY 12, 1881.

Fertilizer Analyses.

608. Muriate of potash, from stock of Mapes Formula and Peruvian Guano Co.

609 Muriate of potash, from stock of Wilson & Burr, Middletown. Both the above sampled and sent by Charles Fairchild, Middletown.

	608.	609.
Potash	53.91	50.16
Equivalent muriate of potash	85.3	79.4
Cost per ton	$88.00	$42 50
Actual potash costs; or 100 lbs.	3.52	4.24

586 E. Frank Coe's phosphate, from stock of Simon Banks, Southport.

587 Forrester's special manure, from stock of S. B. Wakeman, Saugatuck.

588. Forrester's special onion manure, from stock of S. B. Wakeman, Saugatuck.

Nos. 586, 587, 588 were sampled and sent by George P. Jennings, Green's Farms.

589. No. 1 standard Peruvian guano, from stock of F. Ellsworth, 44 Market Street, Hartford.

590. Ammoniated bone phosphate, made by Rafferty & Williams, New York, from stock of F. Ellsworth, Hartford.

592. Export bone superphosphate, from stock of Mapes Formula and Peruvian Guano Co., Conn. Valley Branch, Hartford.

593. "A" brand Mapes complete manure, from stock of Conn. Valley Branch, Hartford.

	586.	587.	588.	589.	590.	592.	593.
Nitrogen as nitrates							.42
Nitrogen as ammonia		4.32	5.42				.32
Organic nitrogen	.54			6.73	2.00		1.56
Soluble phosphoric acid	7.49	4.30	5.09	2.28	8.05	12.99	3.40
Reverted phosphoric acid	2.11	1.07	.75	4.53	7.23	2.58	7.53
Insoluble phosphoric acid	2.69	.37	.08	4.70	1.38	.55	2.27
Potash		9.05	6.76	2.94	2.53		3.25
Chlorine		4.53	1.12	9.00	2.24		3.18
Estimated value per ton	$27.93	45.52	46.70	50.05	34.54	37.76	37.55
Cost per ton	$36.00	48.00*	48.00*	66.00	†	36.00	42.00

* In New York.
† $4.20 per bag of 200 lbs.

The Station is advised by several firms whose character stands high as producers of fertilizers, that the present wholesale cost of the elements of fertilizers is as great as, or greater than, the Station values for 1881; that accordingly, the Station valuations of certain fertilizers, as recently published, are lower than the articles can possibly be made for, and that therefore these valuations are unjust and injurious to the manufacturers, or at least are likely to be interpreted to the prejudice of the latter.

The "Explanations" which accompany the manuscript reports of analyses, and which are printed in the Annual Reports, are believed to be sufficient to forestall such a result. Since, however, the Bulletins may be read by those who do not see those Reports, some passages from the latter are here reproduced:—

"Nearly all of the less expensive fertilizers have variable prices, which bear no close relation to their chemical composition, but guanos, superphosphates and other fertilizers, for which $30 to $80 per ton are paid, depend chiefly for their trade value on the three substances, nitrogen, phosphoric acid and potash, which are comparatively costly and steady in price. The money value per pound of these ingredients is easily estimated from the market prices of the standard articles which furnish them to commerce."

"These trade values of the elements of fertilizers are not fixed, but vary with the state of the market, and are from time to time subject to revision. They are not exact to the cent or its fractions, because the same article sells cheaper at commercial or manufacturing centers than in country towns, cheaper in large lots than in small, cheaper for cash than on time. These values are high enough to do no injustice to the dealer, and accurate enough to serve the object of the consumer."

"The uses of the 'Valuation' are, first, to show whether a given lot or brand of fertilizer is worth, as a commodity of trade, what it costs. If the selling price is no higher than the estimated value, the purchaser may be quite sure that the price is

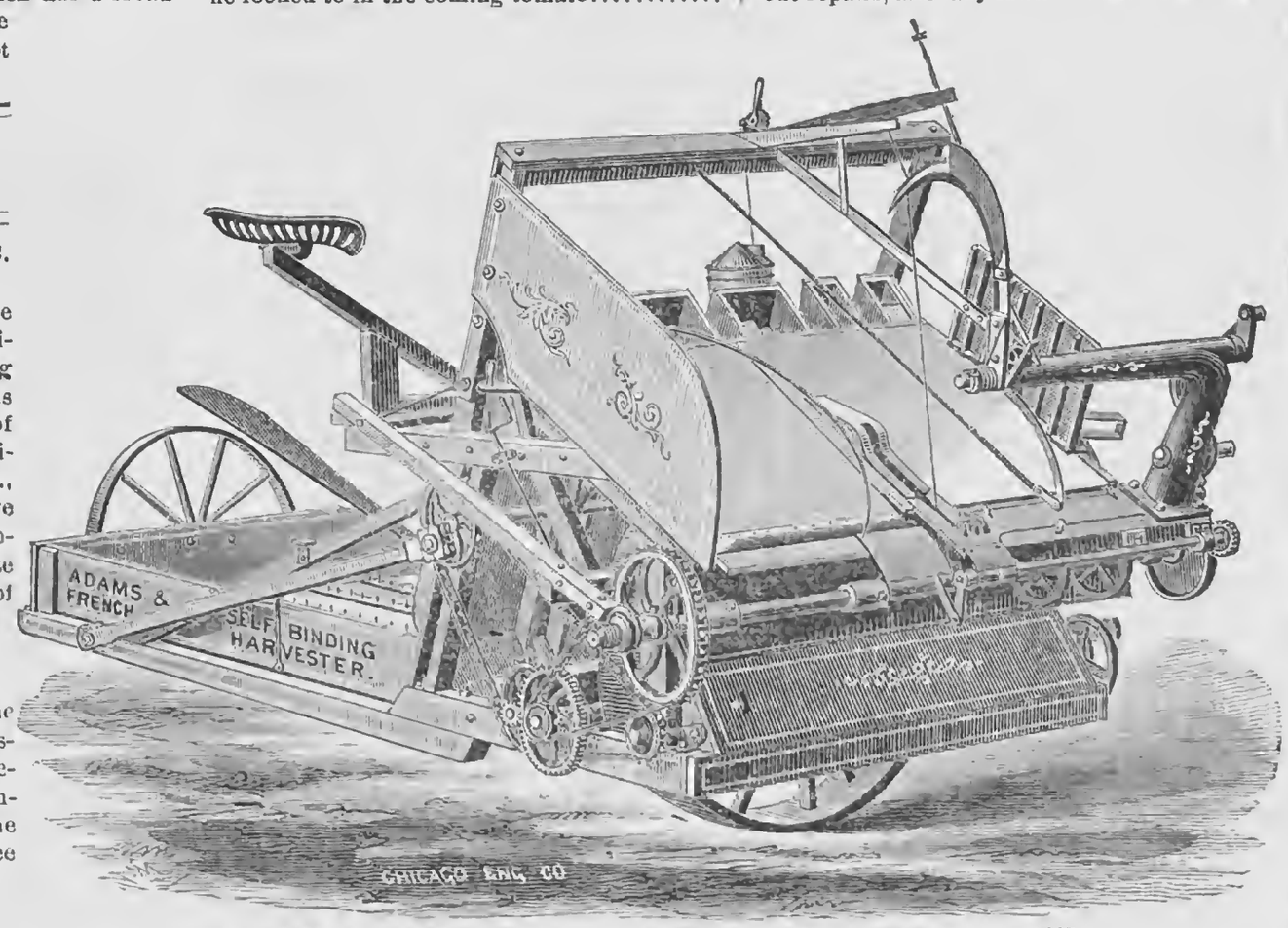
reasonable. If the selling price is but $2 or $3 per ton more than the estimated value, it may still be a fair price; but if the cost per ton is $5 or more over the estimated value, it would be well to look further. Second, comparisons of the estimated values and selling prices of a number of fertilizers will generally indicate fairly which is the best for the money. But the 'estimated value' is not to be too literally construed, for analysis cannot always decide accurately what is the *form* of nitrogen, &c., while the mechanical condition of a fertilizer is an item whose influence cannot always be rightly expressed or appreciated."

S. W. JOHNSON, Director.
New Haven, Conn.

Industrial Implements.

THE ADAMS AND FRENCH HARVESTER
With the Travis Cord Binder.

SO EXTENSIVE must be the employment of cord-binding harvesters in future that it has already become a problem where all the fiber for making the necessary cord is to come from. A first-class machine of this kind should be simple in its construction, so that any intelligent hand can run it, and so that, owing to the small number of its parts, the risk of breakage and derangement is reduced to a minimum. It should be strong enough in every part to bear every strain that may come upon it, without breaking or getting out of order, as the loss or diplacement of a part of a complicated machine generally causes vexatious delay at the best, and at the worst renders the machine worthless at the busiest season. It should he durable, so that the owner may recover hy its use the difference between its cost and that of cheaper implements for harvesting. These three essential requirements of a good machine are combined in the Adams and French Harvester with the Travis Cord Binder, made by the Sandwich Manufacturing Company, Sandwich, Ill. Last year a thorough trial was made of this machine, which at the opening of the harvest was put to work in Texas and kept constantly busy, as it moved north, until the last grain was cut in Northern Dakota. The manufacturers also put it into the hands of a number of farmers in different sections, and whatever imperfections were discovered in its working have been remedied, and all suggested improvements made, so that they offer to the public for the present year a cord-binding harvester which, they claim, is as near perfection as any in the market. The accompanying cut shows not only the binder itself, but its position on the harvester and the connection by which it is driven. As will be seen, it is firmly attached to the frame, and is placed so that the weight is as nearly as possible over the main wheel. There are no gear-wheels about it, except the one shown at the right hand, which is operated by a few cogs on the wheel below it. The binding-arm, with the frame which supports it, the compressor-arm, and the butting-board, with the shaft for driving them, constitute the whole of the binder, as seen from this point. The machine has no straps or belts, no leather or rubber to wear out or to break down. The motion of every movable part is positive and direct, and the sickle, reel, elevators and binders are driven as directly as possible from the main wheel, which has a broad face, and, carrying the whole weight of the machine, is not liable to slip.



THE ADAMS AND FRENCH HARVESTER, WITH TRAVIS CORD BINDER.—FIG. 285.

Miscellaneous.

BOOKS, CATALOGUES, ETC.

QUARTERLY REPORT of the Kansas State Board of Agriculture for the quarter ending March 31, 1881. This contains reports as to the condition of Winter wheat, rye, farm animals, meterological data, &c., and also a very instructive paper by our contributor, Professor E. M. Shelton of the State College, on the tame grasses of Kansas.

J. K. HUDSON, SEC.,
Topeka, Kansas.

QUARTERLY REPORT of the Chief of the Bureau of Statistics, Treasury Department, relative to imports, exports, immigration and navigation of the United States for the three months ended Dec. 31, 1880.

RURAL BRIEFLETS.

OUR readers should bear in mind that pyrethrum powder—sold by seedsmen and druggists—will kill cabbage worms. Professor Cook's experiments show that one tablespoonful of the powder to 40 pounds of flour, or one tablespoonful of the powder to two gallons of water, is fatal to the worms.....

ATTEND to the seedling asparagus bed. Old heds should he thoroughly weeded at this season. A dressing of salt will often serve to keep the weeds down and, away from the seashore, will prove heneficial to the plants. The Rural Farm being upon the ocean, the air is impregnated with salt and its application to any crop produces no appreciable results....

FIG. 284.

WE hope our Northern friends have not ere this sown the Rural Branching Sorghum.....

WE advise our friends not to set out tomato plants too early—not before the first of June for this climate. We cannot change the nature of plants, and tomatoes must have settled warm weather or they will not thrive. The recommendation to wrap a piece of firm paper around the stems when they are transplanted, is a good one as a protection against the annoying cut-worm.....

THE new growth of raspberries and blackberries will soon require support. Let it be considered that the canes merely need protection against strong winds. They should not he drawn so closely as to deprive the leaves and fruit of sunlight and air. A common mistake in tying up tomatoes is that the stems are drawn too closely together, and the same may be said of grape-vines.....

TOMATO cultivators may congratulate themselves that we are not in the future very likely to he pestered with new varieties of tomatoes that are "earlier by ten days" than others. The earliest tomatoes are always of inferior quality, which makes them less desirable than those which were canned the previous season. And people have now found this out and the pink-skinned, sick-looking things that are the first in the market are every season finding a less ready sale. Shapeliness—that is freedom from deep seams—keeping qualities, freedom from acidity: these are the qualities most to he looked to in the coming tomato.....

We find the above in the N. Y. Tribune. Several years ago we thoroughly tested this Pearl Millet both at the Rural Farm and Rural Grounds. We were so impressed hy what certain persons said in its praise that we purchased a large quantity of the seed at a high price and made it one of the packets of our then seed distribution. We have not received one favorable report from the seeds thus sent out, except from the South, where it was already well-known as Cat-tail Millet. Our seasons are not long enough for it. The stalks are woody and though when cut they continue to grow, they cannot be cut until so late that the second growth is next to worthless. We hope there is no danger of another talk about this plant. At any rate, let us again assure our readers north of Virginia and Kansas that it is not even worth a trial.....

WE are glad to see that Gen. N M. Curtis has offered $150 worth of prizes to the farmers of St. Lawrence County for the best yields of Indian corn.....

WE have from time to time spoken of all the prominent lawn mowers of known excellence. A few weeks ago the Pennsylvania was sent to the Rural Grounds for trial. This is not a new lawn mower, but the only one of well-known make that we had not tried. It matters little in how many respects a mower may excel, it must be *durable* or it is a failure. It should endure constant use, if careful, not less than three years without repairs, and any lawn mower that would not stand such a test we should not care to recommend. The reputation of the Pennsylvania is that it excels in this respect, as well as in simplicity of construction, light-running qualities, and last, though not least, in the fact that it will cut taller grass than many others. Except as to its enduring powers, of which, of course, we have had no experience, we find that it is in fact just what is claimed for it....

PROFESSOR KNAPP writes, in the Iowa Homestead, against Pearl Millet for forage in that State; It is as coarse as Western corn-stalks, and as difficult to cure; sweet corn would be better for soiling, and if it has the advantage seedsmen claim for it of furnishing two or three cuttings each season, "Mammoth Clover" meets that condition. But it does not seem to establish these claims for itself, as appears from the following statement of personal experience at the Agricultural College: "Last year we selected a warm and very rich piece of ground on which we sowed one pound of Pearl Millet seed; at harvest there were twelve large Cat-tails—much like swamp Cat-tails, fully as coarse—these were cut and preserved. Afterward the millet sent up a few leaves, but not enough worth calling a second crop."

What Others Say.

SPEAKING of the Department of Agriculture under the direction of Dr. Loring, the new Commissioner, the Nation says:—"We trust that in his hands the Department will quietly establish its claim to higher public estimation, which it will best do by sustaining and strengthening its scientific corps. For example, the present entomologist is a most indefatigable investigator, whose two years' service, it is hardly extravagant to say, shows more solid results than can be gathered from the entire previous history of the Department. His volume on cotton insects is, for one year's work, a marvel of industry and originality."

TRICHINÆ RATHER SCARCE.—The New York Sun alludes to the fact that the Department of Natural Science in the State University of Iowa has been examining pork for the purpose of ascertaining what proportion of that raised in the State was infested with trichinæ. One hundred different pieces from as many different hogs were inspected without finding a single specimen of trichinæ, or any evidence that this parasite was present. This is certainly a good showing for Iowa pork, and upon a careful investigation it will probably be discovered that trichinæ are not so very abundant as many persons have supposed them to be.

MR. W. I. CHAMBERLAIN concludes an article in favor of tile-draining as follows:—"But it never should be forgotten that tile-drainage is not needed on lands that have a gravel or porous sub-soil; and that, even on soils that do need it, drainage is only the basis for good farming, and will never pay unless followed by good farming."

ONE reason that is known to us, says the London Field, why rearing poultry in very large numbers fails is, that where large numbers of fowls are kept together, the place becomes tainted with decaying manure, and disease and failure are sure to follow."

E. P. ROE remarks in the Christian Union that varieties of strawberries that thrive well on light land will thrive equally well, and often better, on strong, heavy soils, but the reverse is not the case. If he were limited to one strawberry, his choice would be the Charles Downing. It succeeds everywhere, is very productive, even under rough and careless culture, and the quality of the fruit is excellent. He does not know a variety with the flavor of the Downing, that will produce as much fruit with the same culture.

THE POTATO possesses the property of converting a very much larger portion of the manure ingredients of the soil into human food, than any of the cereal grain crops: for instance, to every bushel of wheat about 100 pounds of straw are grown, while the haulm of the potatoes when dry is so light, that in our experiments we do not think it worth while to weigh it. These properties, when combined with a suitable climate, enable the cultivator to produce, upon a given area of ground, a larger amount of human food from the potato than from any of the cereal grain crops. So writes Dr. Lawes in his series of articles in the London Agricultural Gazette.

A WRITER in the same journal remarks that many labor-saving implements have of late been introduced, but judging from what one not unfrequently sees, the men appear to regard these things as intended to save their bones and muscles rather than their employers' pockets.

AMBER SUGAR CANE AS A FODDER PLANT.—Mr. Henry Stewart calls attention to the Amber Sugar-cane as a fodder plant. It is, he says, remarkably sweet, but not very leafy, and the stalk is hard and stiff; nevertheless, a full-grown stalk 11 feet long, has been taken by the butt by a horse, and chewed and swallowed completely to the end. From its certain prospective value as a source of sugar and sirup of domestic manufacture, it is a crop that should be grown for fodder, for which it is valuable, so that with facility thus acquired it may be easily grown for sugar when it is so desired. It is as prolific of fodder and of grain as corn, and the grain, whole or when ground, furnishes an excellent feed for stock.

DAIRY PRODUCTS AND SUBSTITUTES.—Railroads have ruined canals; steam-ships have caused sailing vessels to lie and rot in idleness; glucose takes the place of cane sirup, and on every hand we see substitutions which take the business from one to give it to another. And why should the dairy be exempt? It has no mortgage on the future. It must look out for itself, and if it cannot hold its own in competition with new devices and methods it must go to the wall. If there is not a large opening to receive the enormous product of artificial butter and cheese without detriment to the dairy interest, this must suffer. But we have no fear for this result, at least as yet. [We are quoting from the Ag. Dep't of the N. Y. Times.] There is not as yet on the markets a tithe of the butter and cheese that

can be consumed. Millions of the poorer people in Europe know not the taste of butter, and it may be said with truth that millions of the richer people really have no knowledge of what good butter should be. There is, then, a very large opening for the consumption of a cheap article of food which is unobjectionable in regard to its wholesomeness when properly prepared, and which fills the place which cannot be occupied by dairy products. All that the dairy interest can demand is that the new product shall sell upon its own merits and under its own name.

THE AMERICAN BANNER ROSE, according to a writer in Vick's Magazine, is now almost universally acknowledge to be, in this country, a decided failure, wanting in vigor, fullness, perfume, and prolific bloom; while in Europe, grown as a budded plant, it is meeting with much favor, and is highly spoken of as regards vigor of growth, reasonable fullness, and profusion of bloom; in fact, displaying in an eminent degree the identical qualities it seems to lack here.

ADVERTISING PAYS. W. W. Rathbone, sweet potato culturist, writes, "I have made numerous sales to your readers."

THERE is more money in righteous apple-culture to-day, I believe, than in orange planting.—Hartford Courant.....The following is the closing paragraph in a letter from Benjamin Disraeli, dated Dec. 28, 1880: "With regard to trees, I passed part of my youth in the shade of Burnham Beeches, and have now the happiness of living amid my own 'green retreats.' I am not surprised that the ancients worshipped trees. Lake and mountain, however glorious for a time, in time weary; sylvan scenery never palls.—Yours faithfully, Beaconsfield.....A stranger in St. Louis, thinking he recognized his coat on the back of a pedestrian, shouted, "Stop thief!" and about thirty of the inhabitants suddenly disappeared down a side street—Boston Post.....Dr. Abr. Robertson prophesied, according to the N. Y Tribune, that the silo system in America will die young. .....How time changes! In the good Old Testament days it was considered a miracle for an ass to speak, and now nothing short of a miracle will keep one quiet.—Wheeling Leader.....According to our respected contemporary, the St. Louis Globe-Democrat, the pedigree of the tree peddler runs straight back to Annanias.....In 1850 the education of each child in Massachusetts cost the public $4.81 per year; now it costs $13.55. This seems all the more remarkable from the fact that Massachusetts' smartest men were educated thirty years ago.—Norristown Herald. .....If we refuse to go halfway in our approaches to others, we have no right to expect them to come more than this distance in their approaches to us.—Morning Star..... Rich buttermilk, that will shorten bread in cooking, is always an evidence of faulty churning, or a fault in the preparation of the cream before it is put into the churn, says Mr. Cheever, in the New England Farmer..... The Herald says: "When a man begins to tumble up stairs every one helps him to get to the top, and when he begins to tumble down stairs all the world seems anxious to have him reach the bottom." The RURAL concludes, therefore, that we may in any case trust the world to help us.....We all like to have full justice done to every other rogue in the world except ourselves.....Transplant—thin—weed—hoe.....Plant bush beans for succession—plant Lima beans, melons, cucumbers. Sow lettuce and cabbage in drills.

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

MT. PLEASANT, Ontario, May 21.—The Winter has been a most disastrous one to peaches; even large plum trees were killed outright. Cherries, peaches and plums will be scarce here this season, and this being the "off" year for apples, they will not be a drug. Grapes, where not laid and covered, have suffered severely—even the Old Clinton, which we have looked upon as hardy as an oak, has in many cases been killed to the ground. Fall wheat will not be much more than half the crop it was last year. Spring grain is coming up well, and Timothy and clover are splendid. We are having cool weather with occasional showers, and the country is looking its best. J. G.

Dakota Territory.

LINCOLN, Clay Co., May 14.—We have had a terrible time here of late, owing to the disastrous floods along the Missouri bottom lands. Quite a large number of old settlers who had lived here for over 20 years, and who had amassed from large to quite respectable fortunes, have lost everything now. Most of them had to quit their homes in haste, saving nothing except their lives and the scanty clothing on their backs. The water and ice swept away our houses, out-buildings, grain, furniture, stock, fences—everything, everything we had worked for during years of hard frontier labor. Now most of us have neither houses nor stock of any kind, nor timber to build or fence with; and many of us have not been able to do any planting or sowing this Spring. In this township alone there have been very distressing losses, the following being the names of some of those who have suffered most severely:—C. Larson, $4,350; H. Gunderson, total loss $3,400; Lewis Iverson & Brother, $3 166; T. W. Thompson, total loss, $3 100; H. J. Hanson, $1,299; G. S. Myron, $1,250; I. A. Iverson, $2 140; H. Lewis, $1,884; L. B. Larson, $1,700; C. B. Larson, $1 575; O. B. Larson, $1,459; John Lewis, $1 488; H. Johnson, $1,466; T. A. Thompson, $1 260; Mrs. Annie Olson, $1.-124; Lambert Vald, $1,072, and a large number of others, whose losses, not estimated, but calculated closely, range under $1 000. Many of us who were quite comfortably well off will have to begin the struggle for a competence anew as poor in worldly goods as when we settled here years ago in the wilderness, or even poorer, with the discouragement of having lost the fruits of our labor for many years taken out of the best part of our lives. H. G.

Florida.

MANATEE, Manatee Co., May 13.—Commencing last Christmas, we have already shipped over 1,000 boxes of tomatoes from this river—the Manatee—and still they are going off. So soon as folks are through with this business they will begin clearing new land, for where one acre has been in cultivation this year, ten will be under tillage the next. The first of the seeds are planted early in September, and planting is kept up a long time afterwards. G. C.

Kansas.

EDGERTON, Johnson Co., May 26.—We are having plenty of rain here now, and crops of all kinds look well. Wheat, however, is not generally looking as well as it was last year at this time. A large area of flax has been sown, and corn is about all planted, and is mostly a good stand. Apples, peaches, cherries and plums will be abundant. Blackberries are considerably damaged. Grapes are good. Raspberries, strawberries and gooseberries were never more promising. Wheat is worth 90 cts.; corn, 33 to 35 cts.; oats 30 cts.; butter, 16 cts.; eggs, 7c. A. B. D.

EL DORADO, Butler Co., May 20.—We are having plenty of rain now, having already enjoyed a down-pour for 36 hours without a moment's let-up. The outlook for crops is good, everything having been put in except millet and flax. Spring wheat and oats look well, but Fall wheat has been badly injured by chinch bugs. Fruit of all kinds, except blackberries, will be full crops. Butter is selling at 15c.; eggs, 8½c; hogs, $5@5 25; corn, 50@55c.; prairie hay, $5 per ton. L. K. W.

Louisiana.

MONROE, Ouachita Parish, May 17.—We have had, during the past Winter, the longest and most severe cold ever known here. Winter opened on November 16 without warning, by sleet and snow—thermometer 18° Fah. The average temperature—two observations *per diem*—from 28 December to 31 January, 35½°; January, 38°; from December 28 to February 14, 38¾°; from January to February 14, 40¾°. The lowest reading was 6° (not exposed to wind) on the morning of December 30th; when exposed to the wind the mercury fell to 2°. There were five snow and sleet storms, and two other occasions on which it sleeted and snowed a little. Ever-blooming roses were killed to the ground, which has never before happened within my knowledge. There was great loss of cattle—frozen to death. The heaviest snowfall was four inches on January 1. Our fruit crop (except berries) was almost completely destroyed on April 2. The last frost was April 15th and Spring finally opened on 16th. Crops are generally backward; gardens two months later than last year. Corn is doing fairly well; cotton feeble. "G."

Michigan.

HART, Oceana Co., May 17.—This Spring has been peculiar. The snow was not gone till April 27, though hills and fields sloping to the south were bare earlier. We had but half a day's rain and a day and a-half of south wind to help get rid of the great body of snow, which measured 23 inches in depth April 10. It was well settled—almost granulated ice. The soil being sandy and free from frost, vegetation soon started, and in the woods the Liver-leaf (Hipatica) showed its bright, cheery blossoms, in proof that Spring was coming, almost before the earth about it was free from snow. The leeks were two or three inches high under the snow, and soon furnished a green bite for the cattle. On the morning of May 8 the forest showed a slight tinge of green and in five days the trees were in full leaf. Though this county is comparatively new, it is rapidly settling. "Land lookers" are numerous this Spring, and the number of "wild lots" is growing less. Wheat is generally looking very well, promising a much better crop than was at first anticipated. Some few fields were plowed and put into oats. We shall have a light yield of apples, but other fruits promise well. Small fruit plants were much injured by the heavy snows of the past Winter. Some are planting corn. During last week we had two very heavy rains, which have made the weather cooler, and on the morning of the 16th there was frost in places. A. H. B.

Nebraska.

AUSTIN, Sherman Co., May 20.—It rains nearly every day. Our prospects are bright. For wages I pay $15 and board for good hands, $8 for a boy, $1.50 for a maid-servant. For boarding the price is $1 a head for cows, $2 for colts. All our hay is sold for $4 a ton. My Osage Orange seedlings, planted in 1880, are nearly all winter-killed. The few left are opening their leaves now. N.

New York.

WATERTOWN, St. Lawrence Co., May 13.—We have had a fine, dry Spring, with ground in good condition for putting in crops, and they are nearly all in except corn. We had but little rain until the night before last when it began raining and has continued up to the present time with but a short intermission. It is quite cool. Grass looks well. Winter wheat was badly injured by freezing and dry weather in March and April. Spring grains are starting finely; a large breadth is sown and the prospect is favorable for a good yield. C. A. G.

FULLER'S STATION, Albany Co., May 21.—Plenty of rain, and crops growing finely. Farmers in high spirits. Some corn is planted—mine isn't. I think the seed would rot, as the ground is very wet. There are a great many apple blossoms in my orchard, as this is my "on" year. Rye is very poor here, the cold Spring having hurt it very much. A. M. L.

Ohio.

BELLEVUE, Huron Co., May 23.—The season is at least two to four weeks late. Everything looks promising. Wheat is splendid. My crop of 50 acres is better than last year at this time. Not more than three-fourths of last year's acreage has been planted hereabouts, however. A great many farmers are now waiting for rain in order to get the ground in good shape for putting in more. There will be a fair crop of all kinds of fruit. Hay was sold last Winter at $16 per ton in the barn and $18 to $20 delivered; corn, 45c; oats, black, 38c; wheat $1.05. The weather is now quite cool and very dry; we need rain to make us all happy. P. R.

Vermont.

TROY, Orleans Co., May 16.—We are having a cool, wet time. Just now it is almost impossible to do anything but plow seed land and fix fences. Some of my neighbors have planted their corn and potatoes, while others have not sowed their wheat. The Lost Nation Wheat is having quite a run about here, and the White Russian is being introduced a little. My Washington Oats are up. Plum trees are in bloom and apple trees are just beginning to leaf out. I think that old Vermont has done her share in the maple sugar business this year. D. A. B.

Virginia.

MIDDLEBURG, Loudoun Co., May 18.—Corn has come up very badly in this vicinity owing, it is supposed, to the germ of the grain having been frozen during the severe cold of the Winter. Of necessity there will be much replanting. The wheat crop presents more flattering prospects since the recent much-needed rains. Cattle were well wintered and went on grass in good plight. W. C. B.

The Querist.

ANSWERS TO CORRESPONDENTS.

Grass in Orchards.

W. H M., Payson, Ill, asks, 1, what is the best grass for a peach orchard; 2, is clover injurious to peach trees.

ANS.—1, The best grass for a peach orchard, or, in fact, for any orchard, is *no grass at all*. While trees are yet young no other treatment can fully supply the place of constant cultivation. With older trees grass may be tolerated, if kept closely fed or cut, and none of it be taken off the ground; but all of it be made a mulch of coarse manure placed about the tree, as far as the roots extend, and cultivated in as it decays. For such purpose the "best grass" is such as will make the least growth. Soils fit for peach growing are not over-rich, and their fertility must be maintained. To accomplish this rye may be sown, to stand over Winter, and to be lightly plowed under in the Spring, before it has grown too tall. Even clover may be used for this purpose, the chief objection being that it should stand over one season, and hence the trees will receive a serious check before the advantage can be realized. The soil may be improved and the ground shaded by growing and turning under a crop of oats, or even of buckwheat; but this should be done early, or else so late as not to occasion a late growth of trees, at least at the North, where all cultivation of peach orchards should be avoided after the early part of August, till the season's growth has become thoroughly matured, and the weather too cool for its removal. 2, Clover is doubtless the worst of all forage crops to be grown in an orchard, especially of young trees. If allowed to grow without being kept down by pasturing, and especially if kept as meadow and the growth cut and removed, will surely ruin any orchard, whether young or old. Indeed, an orchard of not more than five or six years' growth were as well pulled up and consigned to the brush pile at once as to be left standing, year after year, in a sowed crop of any kind, especially clover, the powerful tap roots of which will rob the roots of any tree that may be planted among them. A single crop of oats or barley, and especially of rye, wheat or clover, will be pretty sure to nearly or quite ruin any newly-planted orchard.

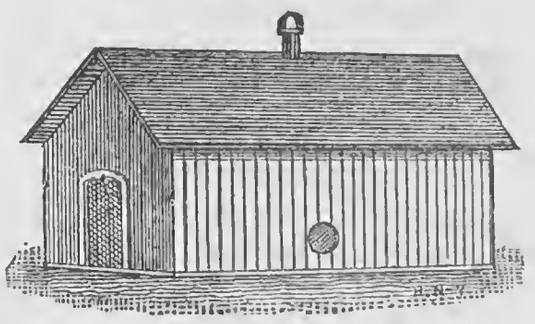
Horticultural Queries.

"*Novice*," *Darien, Conn.*, having met with ill success in raising cauliflowers, asks, 1, how should they be treated and when planted; 2, by sowing seeds of Brussel's sprouts the same as spinach, in August, can he have sprouts very early in Spring, or must the seed be sown in Spring; 3 will a piece of turf turned over after mowing (in July or August) be in condition for setting strawberries next Spring; if so, would it be necessary to plow it again before setting in the Spring or would a thorough harrowing be all that is needed; the meadow referred to, is level and well drained; 4, in our experience is London-purple as effective a "bug" exterminator as Paris-green, and is it any safer; 5, as his White Elephant Potato differed considerably in appearance from that represented in the engraving that was given in the Fair Number of the RURAL, he asks whether it is likely to have been another sort; 6, his Turner Raspberries were for the first time since he obtained them somewhat winter-killed last Winter while the Caroline, though on higher ground, was not harmed in the least.

ANS.—The Cauliflower will not thrive in hot, dry weather. Hand watering, although perhaps of some utility, does not pay at all unless one has but a few plants. Then water thoroughly. Scrape away the soil from the plants, water and then replace the earth when the water has soaked into the ground. We should plant here as early as April 1st. They will then have a good chance to get well rooted before hot and dry weather. 2 No, it is not hardy enough. It must be sown in April and planted out, say in July. 3. Yes, it would. Turn in July if possible. A shallow cultivator and then a harrow would properly fit it for the plants. 4. We used London-purple only last year. It is just as effectual as Paris green, though scarcely less dangerous. It has several advantages over Paris-green: cheapness, adhesiveness, color, for instance, and the one disadvantage that, if used a little too strong, it is more liable to injure the plants. 5. It is the White Elephant. A larger size would have cost us rather too much postage. As it was, the postage on the potato was in most cases seven cents—one cent more than the charge for postage on both seeds and potato. 6. That is precisely our experience, as stated elsewhere.

Keeping Potatoes.

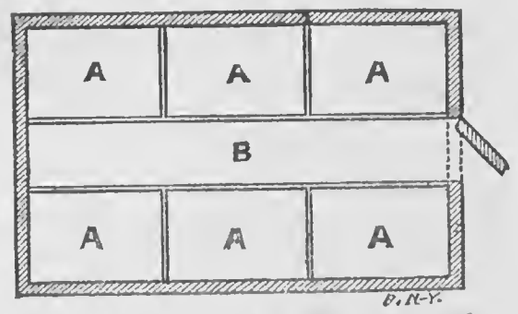
M. V. R., Charleston, Mo., sends us the plan, Fig's. 286, 287 and 288, of a potato house he was thinking of building for the storage of from



ELEVATION OF POTATO HOUSE.—FIG. 286.

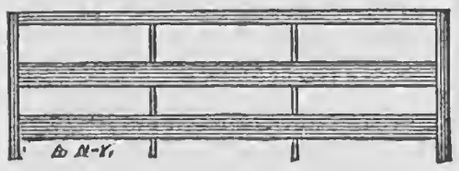
500 to 800 bushels of tubers, and asks, 1, is the plan practicable; 2, to what depth can potatoes be piled in bins or on a cellar floor without injuring them; 3, would potatoes keep better and maintain a more even temperature in cellars if they were covered one or two inches with dry sand; 4, would dry wheat straw well tramped and changed every Fall, answer the same purpose as sawdust for the packing between the walls of a cellar.

ANS.—1. Yes. 2 Potatoes are not injured by being piled up eight or ten feet high, provided they are dry and sound when stored. The horizontal tiers, except the lowest one are useless, if not actually damaging, and a waste



A, BINS; B, PASSAGE-WAY.—FIG. 287.

of room. If ventilation through the body of the pile seems necessary it is better to place, through the middle of the bin, before filling it, narrow open boxes made of slats and reaching from the bottom to above the top of the pile. 3. The principal point in preserving potatoes is to keep the temperature as near the freezing point as possible without letting it fall below



SIDE-VIEW OF BINS.—FIG. 288.

that point. The potatoes should therefore not be covered until the entire bulk has become sufficiently cooled. Afterwards a covering with sand is beneficial. 4. Wheat straw cut short in a straw or feed cutter would answer the purpose fully as well as sawdust.

When to Feed Grain to Horses.

L. M. N., Michigan, asks which is the best time to feed grain to horses—immediately after watering them, or after they have eaten hay a while.

ANS.—Horses are provided with an unusually large development of the salivary glands, and an enormous quantity of saliva is secreted during the eating of a feed of grain or hay. This copious supply of saliva is amply sufficient to moisten and dilute the food, so that it can be digested perfectly without the help of water. Water is absorbed by the coats of the stomach and enters the blood with such rapidity that a thirsty horse will drink in two minutes considerably more water than the stomach will contain at one time, and the water begins to pass off through the kidneys in such a case after the lapse of a very few minutes. So that, knowing these facts, one may reasonably infer that a horse may be watered a few minutes before feeding with more advantage than soon afterwards, because in the former case the water has been absorbed before the food is swallowed, and digestion cannot be interfered with by the presence of too much water in the stomach, as might happen in the latter case. The best practice is that usually followed, viz., to give the horse a very little water on starting out to work after feeding in the morning; to water on coming in at noon and in the evening, before unharnessing and feeding. This gives time for the absorption of the water before the food enters the stomach.

Watermelon and Cantaloupe Culture.

T, P., Charleston, W. Va., asks how to grow watermelons and cantaloupes.

ANS.—New ground from which the brush has just been removed is the best adapted to growing watermelons. Mark out your ground in rows eight feet apart each way, and make holes at intersections of rows, in which put a couple of shovelfuls of yard manure and leaf-mold; then make a hill over the compost in which plant six or seven seeds. When the plants first appear sprinkle them with finely ground bone-meal to keep off the "striped bug." Three vines to the hill are sufficient. It is well to start the seeds in a hot-bed. The culture of the cantaloupe is quite similar to that of the watermelon. It thrives on a thoroughly worked, sandy loam. Mark out the ground in rows five feet apart each way and manure as stated above. Plant about a dozen seeds in a circle on each hill and cover about one-quarter inch deep. When two rough leaves are formed, thin out to three plants in a hill, and when these begin to run pinch them back twice to the third joint. One ounce of seed will plant 25 hills.

Blind Staggers in Pigs.

S H D., Eagle Mills, N. Y., has a sow that staggers about as if she had fits; runs against "things" as if she were blind, and refuses to eat. She has not been shut up, but has been fed on whole corn and swill. She has four pigs eight weeks old and doing well. A couple of years ago he lost a number of hogs by the same disease, and he asks what it is and how to treat it.

ANS.—This pig is suffering from acute indigestion, commonly known as "blind staggers," or stomach staggers. This produces congestion of the brain to a serious extent by disturbing the circulation through the inactive state of the stomach. The remedy is to give a liberal dose of linseed oil, for instance, a teacupful, and repeat the third day; then give some bran mash with a teaspoonful of ginger in it, once a day for a week. The pig has been having too much whole corn no doubt. This is not a good food for pigs as a steady diet, and is dangerous when the pig is not well supplied with water.

Destroying the Apple-tree Borer.

A. F., Durand, Ill., asks how to destroy apple-tree borers.

ANS.—Attend to the matter at once. If they are near the bark, cut them out with the point of a knife. If deeper, use a wire to punch into the hole. The perfect insect may be in the tree beyond the reach of a wire. To prevent it from depositing eggs upon the tree, wash with a mixture of lime-water, aloes, whale-oil soap, carbolic soap, sulphur, etc.; all or several. Color with lamp-black and a little red mineral paint. The stems from a little below the surface of the ground 18 inches up, should be washed two or three times during the Summer. A little soap boiled in with the mixture will give some adhesive power.

Information Wanted about Silo Building.

E. J. H., Scotia, N. Y., says: "I hope to get information from some of the readers of the RURAL on the following question. I have a two-story barn with three large bays 20x24 feet and I would like to convert a couple of these into silos; but not wishing to incur the expense of building a concrete wall, I have thought that by ceiling up the bays with matched plank and pitching the joints, the boarding would do just as well as a brick, stone or concrete wall, as it is only necessary to exclude the air—if I understand the matter aright. I would like to hear the opinion, on this subject, of some one who has had experience with ensilage and is willing to help another in a dilemma."

Miscellaneous.

G. E. N., Afton, N. Y., asks, 1, how to remove a lump the size of a hen's egg from the udder of one of his cows; 2, a remedy for ticks on sheep.

ANS.—A positive prescription cannot be given in a case like this, except from personal examination. This bunch on the bag may have come from being hooked by another cow or it may have received a blow, or been rubbed hard against something. In such a case washing it in water as hot as the hand can bear, every hour or two during the day, may allay the swelling. Or it is possible that it ought to be poulticed, and when it comes to a head by showing a soft, dead-pale spot, like a boil, be lanced and the pus and blood gathered there pressed out. Repeat this pressing for two or three days till the bunch has gone down and that part of the bag has again become soft. Keep the heifer, if lanced, where flies cannot get at the sore, and when it is well cleaned and she is ready to be turned out to pasture, spread a little tar over the wound. 2. As good a remedy as any we know of, and one that is as easily applied, is Little's Chemical Sheep Dip, T. W. Lawford, agent, Baltimore, Md. Or rub the infested parts—usually the side of the neck and the inner parts of the thighs and arms—with some of the following preparation: lard, one pound; flowers of sulphur, two ounces; creosote, twenty drops. A pint of sweet oil may be used instead of the lard.

A. S. C., Anamosa, Ia., has a pure-bred Short-horn Duke bull, six years old, which has been used pretty freely and fed in a stable on hay, corn and oats. Last Fall at fair time he weighed 1960 pounds as a show animal, and about two months ago his weight was 1305 pounds. Within the last couple of months he has served four cows, three of them twice each, and the other, three times, at intervals of about two weeks in each case. He serves without hesitating, but as none of the cows are with calf our correspondent thinks the bull has become sterile and asks whether anything can be done to render him productive.

ANS.—We should not condemn the bull yet. It is not uncommon for cows to "come around" three or four times at intervals of two to three weeks, before they are really served. Give the bull moderate feed of hay (or grass) and oats—no corn. Give him plenty of exercise in a paddock at least ten feet square for at least half of each day. Let him serve the cow after she is well on in her heat—not in the earlier part of it; and let him give her one good leap and one only.

D A. J., Roslyn, L. I., has a horse that seems perfectly healthy, but which persists in a fashion of rolling in the shafts after eating his dinner, although he has been doctored in various ways in the attempt to break him of the habit, and our correspondent asks for some remedy.

ANS.—As we have occasionally seen other horses affected in the same way as that of our correspondent, we have no doubt it is a mere trick with this, as it was with them. We do not think he has any disease, and medicine consequently can be of no benefit. The only way we have been able to prevent a horse from lying down and rolling in harness was to keep his halter on him, and when we stopped, to hitch his nose within a foot or even still closer to the post. This has invariably prevented his lying down or attempting to roll, with us. When such a trick is acquired it is almost impossible to break the horse of it, and it would be better to devote him to plowing and general farm work, where, when stopped to rest, if he lies down in light, loose harness simply, he can do no injury.

J. W., Marion Center, Kan., asks what is the best place to learn telegraphy.

ANS.—In nearly all our large cities there are schools or business colleges in which telegraphy is taught either as a specialty or along with other subjects. Generally they advertise in one or more of the local papers, and there is never any difficulty in finding their location. We have never tried any of them and therefore cannot say which of all of them is the best. The art is taught gratuitously here at the Cooper Institute to those who secure admission to the course of instruction there given, and there is also a considerable number of private institutions where instruction is given in it.

C. W., Evanston, Ill., asks, 1, whether the Kieffer Hybrid Seedling Pear is hardy, and if it is likely to withstand the Winters in Illinois, 12 miles north of Chicago; 2, is the Paradise stock a good one on which to graft apples for village lots.

ANS.—*We* should say not. Let others who have tried it answer. It did not stand last Winter at the Rural Grounds. 2, The Paradise stock is to the apple pretty much what the quince is to the pear; but a given kind of apple grafted on the Paradise is not, as a rule, so prolific as a given pear on quince roots. They are handsome little trees and well adapted for small places.

"*Rural Reader*," *Tioga, N. Y.*, referring to the recipe given for curing mange in a horse in the RURAL for May 13, asks what are the ingredients of the "compound sulphur ointment" there mentioned.

ANS.—Sulphur, six ounces; white hellebore, two ounces; niter, one drachm; soft soap, half a pound; lard, a pound and a half; oil of bergamot, 30 drops. In the writer's young days almost every country druggist kept this ointment already prepared, but of late many of them don't know even the formula for compounding it.

"*Subscriber*," *Cedartown, Ga.*, asks what will kill the little striped "bug" that infests melon plants, without killing the plant also. Last year he tried Paris-green and several other insecticides, but death to the pests was death to the plants.

ANS.—Mr. Henderson recommends several applications of bone dust. We have never tried it. Try Persian insect powder. We last year used London-purple and plaster (proportions, one to 40) for this pest. Our remembrance is that it was effective.

T. P., Charleston, W. Va., wishes to know, 1, if he can be enlisted in the U. S. army; 2, are clothes furnished those who join; 3, where can he do so; 4, what salary is paid; 5, how old must he be for admission; 6, how long must he serve.

ANS.—1, That depends on your physical condition, age, etc. 2, Yes. 3, At recruiting stations in any of the principal cities. 4, $13 00 per month. 5, Between 18 and 36. 6, Five years.

G. G., Dayton, Texas, has carefully planted an acre with peach trees, but the moles are tunneling under the roots and destroying them, and he asks what ought he to do.

ANS.—A few feet from the trees—say six—pour a little coal tar on their tunnels. Beyond, towards the trees, press down the soil that they have displaced, firmly with the foot. Continue this management for a week and please report.

W. D., Union Mills, Ia., asks which crop of Mammoth Clover should be saved for seed—the first or second.

ANS.—Mammoth Clover is nothing but a large variety of the common red clover, and has precisely the same habit of growth. The second crop is cut for seed.

C. B C., Bangor, Mich., asks where machines for grinding sickles of mowers can be procured.

ANS.—Powell & Douglas, Waukegan, Ill., or Watertown Portable Engine Co., Watertown, N. Y.

ASBESTOS ROOFING.—G. W. T., of Stelton, N. J., referring to the inquiry on the above subject in the RURAL of May 7, says he has used this sort of roofing and it has proved entirely satisfactory. He is now using the Asbestos paint and he says it makes a smoother surface and is more easily applied than any other paint he has ever used. He has no reason whatever for recommending it, he says, except the desire to make known a good article.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, MAY 28.

D. M. J.—Mrs. W. B. H.—A. S. H.—Mrs. S. H. H.—B. C. D.—H. G.—R. T. T.—T. E. T.—W. J. B.—E. H.—F. B R.—Dr. R. T. L. R. L. S.—T. R. H.—L. K. W.—C. A. R.—J. L. P.—P. J. N.—P. B. M.—A. M. L.—W. J. B., what number.—A. E. B.—J. G. thanks for wheat.—B. T.—F. G., Monroe, La., thank you for report.—W. F. C.—A. H. B.—L. S.—A. G.—T. R. H.—Mrs. S. H. R.—G. O M.—G. B.—P. B. M.—W. C.—J. B., La Salle, N. Y., strawberries received.—J. H. H., quince received.—One dozen blackberries without name.—W. M. N.—W. A. B.—C. W.—R G., Jr., thanks.—D. A. J.—T. H. H., M. D.—G E N.—D. A. B.—E B. W.—J. H.—D. B P.—J. A. W.—O A. G.—E E. W.—A. F E. M., potato received.—C. W. D., potato received.—E. P. R., plants received, thanks.—J. B N., thanks.—E. E. H.—J. S. C., no, we can take no interest in such inventions.—A farmer's wife, thanks.—W. C. B.—W. J. R.—M. C. F.—G. G.—V. A. H.—A. C.—H. S.

Stock and Poultry.

40 Clydesdale Stallions

AND MARES—Mostly Imported.

60 Hambletonian Stallions,

AND MARES OF THE FINEST BREEDING.

Largest Herd of

HOLSTEIN CATTLE.

With largest milk records in America.

Separate Catalogues of each class of stock with milk record of cows. Denote which is wanted.
☞ Correspondence solicited.

SMITHS & POWELL,
Lakeside Stock Farm,
SYRACUSE, N. Y.

Miscellaneous.

PROFESSOR
HORSFORD'S
PHOSPHATIC
BAKING
POWDER

Made from Professor Horsford's Acid Phosphate.
Recommended by leading physicians.
Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.
In cans. Sold at a reasonable price.
The Horsford Almanac and Cook Book sent free.
Rumford Chemical Works, Providence, R. I.

CARPETS.

MOQUETTE CARPETS.—We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS.—Having exhausted our first offering of 75 cent Tapestry Carpets, we have placed on sale for a few days, another lot of the SAME GOODS at the SAME LOW PRICE. These goods are equal to those sold elsewhere at 90 cents and $1. We have other goods varying in price up to $1.15.

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

INGRAINS—We have of the best Extra Superior Grade a very full line from 75 cts. to 90 cts. per yard. Also, a line a grade lower at 65 cts. to 75 cts. —all wool.

Persons in want of CARPETS will do well to call on us before purchasing. Every Carpet is warranted as represented. Full satisfaction guaranteed or the money refunded.

J. & J. DOBSON,

CARPET MANUFACTURERS,
40 and 42 WEST 14th ST., NEW YORK.
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20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

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THE
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PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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SATURDAY, JUNE 4, 1881.

Proffessor I. P. Roberts writes us: "I acknowledge myself corrected by Professor Stewart. The article referred to by me in a paragraph in one of your late issues, containing the expression "an easily possible crop is 100 bushels of grain (corn) per acre," was by Mr. Henry Stewart, not Professor E. W. Stewart. I beg the Professor's pardon; the mistake is no less annoying to me than it was to him."

Where potato beetles abound, the shoots of potatoes are attacked and devoured as soon as they appear above the ground. The vines have no chance. Poisons cannot be applied since there is nothing to apply them to. In such case, we cut potatoes in slices, sprinkling them with Paris-green or London-purple, and strew them over the ground. The potato-beetles will prefer the slices of potatoes to the vines, and the new sprouts are thus given a chance.

A contemporary states, in answer to a question, that the Army-worm does not attack corn. This is a mistake. It attacked many corn fields on Long Island last year—one on a farm adjoining the Rural Farm. Several men for several days were employed picking them off, or the crop would have been ruined. They are, in fact, more destructive to corn than to wheat. When the Army-worm attacks the corn plant, we should advise the immediate use of Paris-green.

There is quite as much necessity for barn cleaning on the farm as for house-cleaning, and if farmers were as punctilious about the renovation and purification of the out-buildings as farmerines are about the dwellings, there would speedily be an improvement in the appearance of things; and of conveniences too. Lost, or misplaced tools are brought to light, barn, shed and shop furnishings put in order, space gained and a revival of cheerfulness everywhere. Find time for barn cleaning.

If there ever was a time when people who get their living from the soil had cause to congratulate themselves, it is at the present moment. What with the adulterations that enter into sugar, tea, flour, milk, soda, butter, vinegar, spices and nearly every prepared article used as food and in food, that people buy, it should be an immense comfort to farmers to know that their fare, luxurious or plain as it may be, is wholesome and pure. With the exception of sugar and tea, both of which are much more largely used than necessity requires, farmers can raise their own supplies and escape the slow poisoning dealt out by the grocer. Coffee should be bought green and roasted at home, and as for soda, or baking powders of all descriptions—the housewife who knows how to cook and to prepare food for her family in the best way, will need to use "precious little" of the stuff.

OUR EXPORTS OF BREADSTUFFS.

The exports of breadstuffs from the United States during the ten months ending April 30, 1880, amounted to $233,844,387, and during the ten months ending April 30, 1881, to $225,155,801, a falling off of $8,688,586. In the former period we sent abroad 130,054,110 bushels of wheat, worth $160,876,592, and in the latter, 129,337,068 bushels, worth $143,023,881. A little figuring will show that in the first case the wheat was worth $1.23⅞ cents per bushel and in the second only $1.10½, a difference of 13¼ cents, which on the total wheat export during the last period, amounted to $16,737,061, nearly double the amount of the diminution in the value of all our exports of breadstuffs. Of wheat flour we exported in the first period 4,953,316 barrels, valued at $29,182,323, and in the second period 6,638,264 barrels valued at $37,496,623. Here, too, it will be seen that prices have fallen off; for in the first case the prices averaged $5,97⅓ per barrel, and in the second, $5.64⅞, a diminution of 32½ cents per barrel, or $2,157,433, on the total shipment. Of corn we exported in the first period 72,214,558 bushels, valued at $40,003,639, and in the second, 75,086,895 bushels, valued at $41,194,111, the average price in the first case being 55⅓ cents per bushel and in the second a trifle less than 55 cents. We also sent abroad during the first period 266,693 barrels of corn meal, worth $740,301, or an average of $2.81⅓ cents, and during the second period, 342,280 barrels, worth $996,316, or an average of $2.90 a barrel.

TREE CISTERNS.

It has long been known, through the reports of travellers, that in certain arid districts of Africa water is often found, even in the driest seasons, in hollow trunks of the great baobab tree (Adansonia) and it was supposed that this provision of water was, so to say, natural; but it appears from the investigations of officers attached to surveying parties sent out by the Egyptian Government that these reservoirs are neither formed nor filled by the accidents of nature. They are in reality prepared and filled by the inhabitants of the country who carefully remove the decayed and spongy fiber from the interior of the trunk and laboriously transfer water to the cisterns thus made, bucketful by bucketful, from neighboring pools in which it collects at the rainy season. The importance of these reservoirs is illustrated by the fact that trunks containing 15,000 gallons of water are not uncommon in Kordofan, and that individual trunks have been measured which might store 33,000 gallons. The officers of the survey urge that it would be well for the Egyptian Government to organize a service for the protection and maintenance of these trees on the post-roads and telegraph lines so that couriers, linesmen, inspectors, etc., might always find a store of water. They cite one particular post-route where in times past the people of the country had carefully filled the Adansonia trees during the season of rains, and thus insured water during the dry season for much travel. But when troops were moved in that direction the inhabitants took alarm, abandoned the vicinity and neglected to fill the trees so that the road became as good as impassable.

PARASITES AND THE RESISTANT THEORY.

In order to deal effectually with the various kinds of parasites which infest stock, we should be familiar with their nature, habits and methods of propagation. One class of parasites pass only a portion of their lives in their host; another feed upon the skin and suck the blood of the animals they infest, while yet another, as the internal parasitic worms, live wholly within the flesh, muscles or intestines. There are also parasites of the vegetable kingdom, known as microscopic fungi, from whose attacks no cultivated plants are entirely exempt.

The mission of these parasites seems to be to prey upon, and hasten the destruction of, the feeble, both of animals and plants, while they shun the vigorous and hearty. If the farmer neglects to give his stock the proper care; if scanty and innutritious food is given them, and they are kept in filthy pens and dirty stables; if grooming is neglected, innumerable hordes of parasitic enemies will attack the poor brutes, which, for want of strength to resist their attacks, become the natural prey for parasites both internal and external. The very immediate connection of such diseases as foot-rot, thrush, mange, etc., with a want of nutritious and sufficient food is a matter too often overlooked by the stockman, while he wonders why it is that his cattle and horses are so often victims to these various diseases.

We wish, therefore, to call the attention of our farmer-readers, especially, to what may be termed the resistant theory which assumes that these fungoid diseases and parasitic enemies may be largely, if not wholly, averted by generous feeding, proper care and sufficient exercise of stock. With due attention to these things we strike at the source of possible disease by seeking means of the prevention rather than remedies for the cure of parasitic diseases, of whatever name or nature.

A GREAT WESTERN CANAL CONVENTION.

During the past week a convention of prominent Western men, interested in cheap transportation, has been in session at Davenport, Iowa, with the object of promoting the improvement of the present Illinois and Michigan Canal and its extension from Hennepin, on the Illinois River, to the Mississippi River at Rock Island, a distance of 65 miles. Now the canal extends westward with a slight trend to the south from Chicago to La Salle on the Illinois River, a distance of 96 miles, and it is proposed to utilize the slack-water navigation on the river over the 19 miles between La Salle and Hennepin, and then strike across the country in a westerly direction to the Father of Waters. The design is to have the canal 60 feet wide at the surface, 36 feet at the bottom and six feet of water, with locks 150 feet by 21. When the project is accomplished the Upper Mississippi and the vast agricultural territory of the Northwest will have water transportation to the seaboard, by canal from Rock Island to Chicago, thence to Buffalo by way of Lakes Michigan, Huron and Erie, and thence to this city through the Erie canal and Hudson River. It is figured out by those who advocate the scheme that the cost of transportation from St. Paul, Winona, La Crosse, Prairie Du Chien, Dubuque and other up-river towns to Chicago would then be reduced fully 50 per cent. from the present rates by rail or rail and water—a great gain to the rapidly increasing population of the great Northwest.

In view of the great importance of this link in the internal water communication of the country, it is proposed to ask Congress for an appropriation of $4,500,000 to complete it as a national work. Against such a grant it may be urged that, although the work is conceded to be of great importance, still only the Northwestern States and especially Illinois and Chicago, will be directly benefited by it, and that, just as New York had to build the great length of the Erie Canal at her own expense, because she was to be the chief beneficiary by it, so Illinois should complete this little bit of canal which cannot cost a tithe of the outlay made by this State on the Erie. Surely it will not be said that Illinois is poorer now than New York was when the Erie was built? It is in contemplation here to widen and deepen the Erie Canal enough to allow the passage of ocean-going vessels, is the General Government to be asked to pay the cost of this improvement, on the principle advanced by our Western friends?

Then again, producers in this section strongly object to pay anything towards providing the means by which the products of the low-priced lands of the West can be still more cheaply put in competition in the home markets with the products of the high-priced lands of the East; for it cannot be denied that already Eastern farmers are suffering from Western competition in agricultural products only a few degrees less than are the farmers of Great Britain.

Moreover, while it is unquestionably of interest to the whole nation that the products of any part of it should reach foreign markets at the least possible cost of transportation, yet it is of no consequence to the people at large by what particular route this is effected, and, so far as we have seen, it still remains to be proved that transportation to Europe by way of the lakes, the canals, Chicago and New York, is cheaper than by way of the Mississippi, and New Orleans. On the completion of the canal, however, the Western farmer is likely to be benefited more by the possibility of cheap rates of river transportation, for in the present absence of competition, middlemen and freighters take all the profit.

On principle we are strongly opposed to grants of public money or land by the General Government for projects which are to benefit particular persons, corporations or sections. We believe that by far too much of that sort of thing has been done in the past, and we shall contribute our share towards the formation of a public opinion which shall prevent such grants in the future. In the present case we are decidedly of opinion that the canal should be completed by the State of Illinois; but we are still more decidedly of opinion that it should be completed. The competition of water with rail is of vast importance to the public all over the country in the way of lowering rates, and the importance of it is increasing daily with the growing monopoly created in rail transportation by the frequent consolidation of competing lines. The completion even of rival water routes is also a benefit in the same direction—and so long as millions are yearly appropriated by Congress for the "improvement" of petty creeks, streams, pools and harbors, we see no reason why an appropriation should be refused to a work of such wide importance. So long as public money is lavishly spent to benefit Little Peddlington, why should it not be economically spent to benefit the great Northwest?

BREVITIES.

We are glad to know that Prof. A. E. Blount intends to compete for the Rural wheat prizes.

From our extensive everywhere correspondence and from the various reports we have seen in other publications, we judge that the general prospects for the crops of 1881 are not unfavorable.

The owners of the flotilla that, early in April, carried nearly 700,000 bushels of grain along with other freight from St. Louis to New Orleans, are reported to have boasted that they had cleared $70,000 by the trip—more than the entire outfit was worth. As stated in our issue of May 21, it is said, on good authority, that wheat can be carried from St. Louis to Liverpool for 12½c. a bushel cheaper by way of the Crescent City than by way of New York. This is quite a large margin of profit for somebody. Who gets it? Do the farmers who raise the wheat shipped by this cheaper route get any of the 12½ cents, or do middlemen take the whole of the sum—down to the half cent?

Mr. E. H. Libby has had "hard luck," as the saying goes. He founded the Scientific Farmer which was not a brilliant success. Then he was made the editor of the Broadway Agriculturist, and we judge he was happier when he got out of that than while he was in it. Then he founded Land and Home which, to our mind, was a bright, sparkling little paper. It failed for want of funds to establish it. Now, we see, he is the agricultural editor of The Farmers' Review of Chicago. Well, the Rural has wished him success in all of his several undertakings and now it wishes him success again. We have always thought that there "was something in that young man" and now, let us hope it will have a good chance to come out.

A cablegram last Wednesday announced that M. Tirard, the French Minister of Agriculture and Commerce, in answer to a question put by a member of the Assembly, stated that he was not yet prepared to raise the embargo on importations of hog products from this country, inasmuch as examination still showed the presence of trichinæ in some of the imports. Unless the cablegrams erred soon after the imposition of the embargo, M. Tirard then promised to permit the importations so soon as qualified inspectors of pork had been appointed at ports of entry and at the chief markets. It has taken a long time to appoint these—for a willing government. Wouldn't it also be well to inspect French pork with a view to forbid its sale absolutely in case trichinæ were found in any of it? Surely American trichinæ cannot be more dangerous than the Gallic sort.

In view of the fuss that is constantly being made in this country over every little appropriation sought for in behalf of the agricultural interests of the nation, it would be well to compare the sums appropriated by our Republic and by the "effete" monarchies of Europe for the advancement of agriculture. The latest general statistics on this subject at hand are those of 1877. In that year France appropriated $20 534 410 for Agriculture and Commerce; Russia, $14,826,184 for Agriculture and Public Lands; Austria-Hungary, $5,495,125 for Agriculture; Prussia, $2,612,340 for Agriculture; Italy, $2 715 095 for Agriculture and Commerce; Great Britain, $795,690 for Agriculture; Sweden, $651,739 for Agriculture: the United States $174 686 for Agriculture—less than a quarter of the appropriation made by Sweden with an area 21 times less than that of this country, and a population about one-twelfth as great!

All over the country the agricultural sufferers during the last Winter found some consolation for its severity in the hope, generally felt and frequently expressed, that its unusual rigor would destroy or greatly diminish some of the multitudinous species of insects that injure vegetation and the farmer. From present indications this hope appears to have been fallacious. Reports from most parts of the country declare that insect pests are already unusually numerous and destructive. In the East the potato beetle and the Army-worm seem to be particularly aggressive, and chinch bugs and other grain-harming pests in the West and Northwest. Late reports from Colorado say that the State is also threatened with a grasshopper plague. In the frontier States and Territories some apprehensions are already felt of a locust visitation. A hot season, with dry westerly winds, is specially favorable to the easterly movement of these voracious pests. In view of the fact that the loss from this scourge is calculated by the Entomological Commission that lately investigated the matter, at upwards of $45,000,000 in 1874, a like visitation this year would be ruinous to the afflicted region and disastrous to the nation at large.

The recent alarm in this city at the diversion of a good deal of the Western grain trade to New Orleans, was doubtless unduly increased by what is mildly called a "joke upon the brokers." It seems that a short time back some unknown parties in the Crescent City sent despatches to the principal Eastern ship brokers, as well as to others in Liverpool and Antwerp, instructing them to engage all the available tonnage in their respective ports to export grain from New Orleans. Fortunately most of the craft here were already engaged, and some of those idle were unwilling to risk a southern voyage, yet several steam and sail vessels were chartered at the Eastern Atlantic ports and others in Europe. Some of these started at once in ballast for the Mississippi, but on their arrival it was discovered that the orders for tonnage were bogus, the leading ship-brokers in whose names they were sent promptly repudiating them. Accordingly rates of freight dropped heavily as the supply of tonnage was enormously in excess of the freights seeking transportation. Whether the misleading forgeries were the work of some designing rascals who plotted for cheap rates of freight, or of those pests of society, "practical jokers," who, according to the habit of their tribe, were eager for a little foolish "fun" at the expense of others, has not yet been discovered. It is to be hoped the culprits will soon be detected and severely punished if the trick was a swindle, and still more severely if it was meant for a "joke."

Literary Miscellany.

REMORSE.

EDGERTON.

THERE lived a good old man, some years ago—
How many, just, is not for me to know,
But this, perhaps, will little difference make,
As no important interests are at stake:
The facts which in my story I relate,
Remain the same, without regard to date:
Suffice to say, he lived in years gone by,
Omitting here the *Anno Domini*;
Nor can I mention his particular name,
But still insist, the facts remain the same;
When he was born, or where he chanced to live,
Are facts which I shall not attempt to give;
Nor, is it necessary to my plan,
To specify the color of the man.
He may have been as fair as you or I,
Or, like the ace of spades, of darker dye;
These minor things are foreign to the facts,
I speak not of the man, but of his acts—
But as my muse has shied and "flew the track,"
I'll bear upon the bits and bring her back.
This man—of whom I first set out to tell—
Was honest as the day, and kind as well,
His motives, all, were good and strictly pure,
And knowingly, he did no wrong, be sure;
But then again, the man, try as he would,
Could never, somehow, compass any good;
His plans, whatever he might chance to lay
Were always sure to balk, or go astray;
He seemed possessed of energy and pluck,
But somehow, never had a bit of luck;
While all his neighbors round were doing well,
He, far behind in worldly goods had fell.

At last, in moody, melancholy fit,
The man resolved this unkind world to quit,
Took down a vial of poison cold, and shook it,
Poured out a great heroic dose and took it.

Post-mortem observations proved the fact,
The man had done a very foolish act;
The only real cause for his remorse,
He'd always hitched his cart before the horse.

VIOLET'S WAGER.

[Concluded from page 358.]

"Tell me now," pleaded Violet, "and perhaps I can help you."

"Help me, indeed!" exclaimed Miss Franks. "The only way you could help me would be to marry my brother."

"My dear Miss Franks," said Violet, laughing, "how can I do that when he is engaged to some one else, I think you told me?"

"No, I did not," returned Miss Franks, sharply; "I never mentioned anything about it; but that's my trouble. He has proposed to some young chit no more fit to be his wife than—than——"

"I am," put in Violet.

"Thank you, my dear!" exclaimed Miss Franks, pulling her toward her and kissing her affectionately. "If she were one quarter as suitable as you, I should not mind."

"But," argued Violet, with diffident boldness, "how do you know that your brother has chosen unwisely? Perhaps, when you see more of the girl he loves, you will like her as well as you do me."

"Never!" rejoined Miss Franks, emphatically. "I have never loved any young person as I have learned to love you. No one could have resisted such unfailing kindness. I only wish that, when this hateful marriage takes place, I could have this room for my own. I shall have to find some home near."

"Do you really mean that you would like me to be with you always?" asked Violet, with sparkling eyes.

"Indeed I do, dear, I could not be so much with you without discovering that a home with you must be a happy one—without feeling the charm of your brightness, your sweet temper, and utter unselfishness."

"Thank you!" said Violet, earnestly, pressing Miss Franks's thin hand caressingly to her fresh young face. "And now," she added, "as you have told me your trouble, I will tell you a secret. I am going to be married in the Autumn."

"Oh, dear!" exclaimed Miss Franks.

"But my marriage need not form an obstacle to your coming to me; for we shall have two comfortable rooms to spare. We had hoped that a favorite sister of my future husband would have lived with us, but she has declined. She thinks I am too young and inexperienced to be able to make a home comfortable."

"She's a fool, then," curtly replied Miss Franks, "and can't know you. I certainly know something of housekeeping, and I consider you an excellent manager. If I could only live with you, I should think myself a fortunate old woman, indeed: but then there's something about you no one can resist."

"John's own words," thought Violet, triumphantly. "Well," said she, "we will talk this over to-morrow, when perhaps aunt will be well enough to see you. And now will you promise me something? Will you come down for a little time after dinner? Dr. Franks says you may; and I want to introduce some one to you. You must guess who it is;" and, with a saucy nod of her pretty head, she was gone.

After dinner Miss Franks without waiting for Violet, made her way down to the drawing-room. A fire was burning cheerfully, and on a small table near an easy chair was placed a fragrant bouquet of spring flowers, tastefully arranged. Violet entered in a few moments, looking radiantly happy, and, coming up to the old lady, kissed her, saying impulsively: "Promise always to love me as much as you do now."

"Bless the child!" exclaimed Miss Franks looking in amused surprise at Violet's beaming eyes and flushed face. "Is that the barefaced way you make love to that unfortunate man you have made your slave?"

"There he is!" cried Violet, as a knock was heard; and darting from the room, she left Miss Franks to smile over the impetuousness of lovers.

The afternoon was so lovely that she was tempted to open the creeper-covered window which overlooked the garden, and breathe the balmy, Spring air and sweet scents.

Presently voices beneath the window attracted her attention.

"I must get just one peep at him," said she to herself, cautiously putting her head a little way out of the window. Then she heard the unmistakable sound of a kiss, and Violet's smothered voice, said remonstratingly: "How can you be so rash? Suppose she is at the window? It would be such a pity to spoil it all after my deceiving her so beautifully."

Miss Franks sank back suddenly, with a suppressed exclamation, for she had seen a fine, manly figure bent caressingly toward an eloquent upturned face, two pretty hands clasped on a broad shoulder, a strong arm encircling a slendor waist!

"So she's been deceiving me all this time," murmured Miss Franks—"been carrying on this outrageous flirtation with my brother under my very nose! And to think that he, too, should behave in so dishonorable a manner! But Miss Lloyd shall hear of it, poor, ill-used child! And so shall the other poor dupe."

Here the sound of approaching footsteps made her seat herself at the other end of the room, and the offending couple entered, both looking very innocent.

"I am so glad to see you down stairs," said the doctor, heartily, as he took a chair by his sister's side; "but you look as if the exertion had been a little too much for you."

"I certainly feel more overcome than I expected," replied Miss Franks, primly, adding, with an emphasis Violet's woman's wit detected at once, "I found great difficulty in getting back to my seat after standing at the window for a few minutes."

Violet blushed deeply, and looked reproachfully at John, who, however, was quite at his ease, and ready to be "rash" on the slightest provocation. She saw that Miss Franks was still in the dark as to how matters really stood, and determined, with characteristic courage, to rush boldly to the attack.

"Dear Miss Franks," she began, in her soft, low voice, "will you forgive me for trying, under false pretences, to make you love me? And may I still believe that I have not tried in vain? John, come here." Then, putting her hand in his, she continued with a proud humility new to her: "This is the man I have promised to marry, who has made me so happy with his love, so honored me by his preference."

As Violet paused, John looked at her with loving admiration blended with astonishment.

"But," began Miss Franks.

"One moment, Emily," interrupted her brother, drawing Violet closer to his side. "I, too, have a few words to say. When I told Violet of your probable displeasure at our approaching marriage, she was conceited enough to wager that in less than a month after you knew her you would love her. If she has won her wager—and I see she has—can you wonder at my boundless love? I have had the opportunity of seeing her in private society, in domestic life; I know her forbearing kindness, her tender charity, her sincerity and unselfishness. Oh, my darling," he went on, gazing into Violet's gentle eyes, "I don't know how to thank you for what you have just said! You know how inexpressibly dear you are to me; and, if love, lasting love, can make you happy, happy you shall be."

"Darling," murmured Violet, nestling close to him in her gentle, womanly way, "all the happiness shall not be on my side."

"But," put in Miss Franks, with a bewildered air, "who are you?"

"Violet Lloyd, at your service," replied Violet, recovering her natural gaiety and dropping a mock courtesy—"the 'baby-faced chit' you dislike so much."

"You naughty girl," said Miss Franks, nearly crying for joy; "I'll never forgive you for letting me make an old donkey of myself! Why, you told me youself that your name was Matthews!"

"No," laughed Violet; "I told you my aunt's name was Matthews; and, as you persisted in thinking it was mine, I did not like to be so rude as to contradict you. I hope," she added demurely, "that you do not contemplate altering the plans we discussed this morning."

"Get along with you both, do, and have another walk in the garden. I won't peep this time. I know how it was that my brother paid me such extraordinary attention. Ah, John," she added, earnestly, "Violet has won her wager; but you have won something of priceless value in gaining her love."

SALT AND SUITORS.

"MR. JEWILL, what is to happen? My peace of mind is gone for the evening!" was the half-jesting, half-serious exclamation of a young lady—only just "out," although in the present instance a guest at a large and gay dinner party.

The gentleman thus addressed gazed in comical dismay at his neighbor, and then at a heap of salt which lay before him on the damask table-cloth, and which he had just deposited there by the awkward reversement of a salt-cellar.

"I am extremely grieved, Miss Mordant, to cause you such prolonged distress of mind," he replied, calmly. "But even now I am in perfect mystification as to the exact cause. The purity of the table-cloth is not injured, nor is your fairy-like dress soiled, I hope."

"Worse than that, Mr. Jewill. I really blush for your ignorance of 'useful things worth knowing,'" she replied, archly. "Is it possible that you do not know the penalties that attend the spilling of salt?"

"*Peccavi!* I confess my sins. I really have no idea of such a superstition; and, what is more, I really have no faith in such nonsense," he went on, rather impatiently.

Kate Mordant looked indeed daunted for a moment. She was so young and so unaccustomed to receive any check to her playful fancies, that the rebuff chilled her.

Her other neighbor, however, came to the rescue.

"Do not attend to such heresy, Miss Mordant, but let us rather attempt a remedy for the misfortune. Can we not avert the evil?" asked Mr. Franklin, a more experienced "diner-out" than Charlie Jewill.

"Oh, dear, no! I consider it far too serious for any such precautions," replied Kate, regaining her spirits. "We must only trust in our good fortune to avert any calamity from this event."

Charlie Jewill looked at the fresh, pretty creature at his side with unmistakable, though perhaps somewhat doubting, interest:

"Do you really believe that any harm can come to you, Miss Mordant?" he said, in a low tone. "You look to me like a fresh rosebud with the morning dew upon it, which has neither known a cloud, nor fears a storm."

"Do I look so very juvenile- so very inexperienced, then?" asked the girl, eagerly.

"O, dear no! Only that, meeting you here, I am—what shall I say?—surprised at seeing you at such a gathering of 'grave and reverend seniors,'" he returned, smilingly.

Katie laughed gaily.

"You are a very formidable personage," she said; "but I can very soon explain all your doubts. The fact is, that I am here only as a substitute for a more worthy and dignified guest.

"Is it really your first dinner-party?" asked the young man, eagerly.

"If you mean as a visitor, yes; but I have been drilled into proper behavior," she said, laughingly, "by being present when the table was not full at my own home I hope I have not committed any solecisms of good-breeding?" she added, demurely.

"I am afraid you have committed a more serious robbery than of silver spoons or jewelled napkin-rings," laughed Franklin. "However, it will be time enough to accuse you of the sin when you have refused to atone, Miss Mordant. A sort of hue-and-cry—eh, Jewill? for stolen goods."

Luckily, at that instant the hostess rose from the table, and Katie Mordant was spared the embarrassment of replying, to her no small relief.

The evening progressed as all such evenings do Gossip, music, coffee, ices, contrived to make the next two hours endurable.

And then, rather early in the evening, the carriage was announced which was to convey Mrs. and Miss Mordant to their home, which was some three or four miles from that of their kindly entertainers.

"A pretty, sparkling creature, that. She will ripen well, I expect—eh, Jewill?" said Mr. Franklin, critically. "She will want a little sobering and then she will become a very fine girl, I don't doubt."

Charlie Jewill looked gloriously indignant at the cool commentary on the most exciting hour his own rather phlegmatic temper had known; but he had enough control to reply carelessly:

"Ah! yes, no doubt; only I am wearied enough to prefer some variations from the established rule and plummet. It is rather refreshing to meet a girl who is not as drilled as her own riding-horse to certain paces, in my opinion."

And Charlie turned on his heel, and left the man of the world to his own reflections.

* * * * * * *

"I hope Mrs. and Miss Mordant got home well the other evening, Mrs. Fitzhugh, I understood they lived at the very antipodes of your house," said Charlie Jewill, when he made his duty-call at the house of his hostess, and, what was not so entirely his duty, at the time when he believed she would be at home.

"Well, I can scarcely go so far as to say yes," replied the lady, half-laughingly; "and, what is yet worse, Mr. Jewill, I am afraid you are to be held responsible for the misadventure."

"I, Mrs. Fitzhugh? What unlucky and unknown sin have I committed?" asked Charlie, in unfeigned surprise.

"Well, then, you must judge for yourself. Katie Mordant lost a bracelet—a very pretty bracelet, and, what is more, one that had been left to her by her god-mother and aunt."

"May the old lady rest with Noah! I presume I am not supposed to be responsible for the safety of her heirlooms," returned Charlie, gravely.

"Probably not; but so far as Katie told me, between smiles and tears, when I saw her, she placed the calamity to the account of your having cast some evil spell on her, which terminated in this catastrophe," returned the lady, laughingly, "Whether the omen could extend its power over the bracelet-snap, or the honesty of the finder, it is not for me to say."

And Mrs. Fitzhugh turned to receive some other guests as she spoke.

"Was it really a valuable trinket?" he asked, when his hostess could again turn her attention to him.

"Well, I fancy it had rather a sentimental than a financial-value," replied the lady. "It was a sort of Indian-chain gold band, fastened by a diamond, and emerald, and pearl clasp of curious workmanship. I expect Katie has, or will have, dozens more valuable jewels when the first regrets and reproaches are over. I do not doubt she will get over the scandal and the scoldings. Mrs. Mordant is a little straight-laced, I fancy."

But Charlie Jewill had found a favorable key to the door he was striving to open for his admission, and he soon took his leave, with a brilliant scheme in his head for turning evil into good, and shaping his blunder into a dexterous means of accomplishing his object.

* * * * * * *

"Heigh-ho! that weary bracelet!" exclaimed poor Katie Mordant, throwing herself into a chair as her mother left the room, after a renewed search among dresses and jewel cases, in the forlorn hope of discovering the missing ornament. "As if it could signify, or my venerable god-mother rise from her grave to ascertain its safety! I am sure it was not my fault. It was all that horrid salt being spilt."

"Mr Jewill, if you please, miss, is in the drawing-room, and wants to speak with you; I think it is about the bracelet," said the maid, who waited on Mrs. Mordant and her daughter, and whose entrance had been unnoticed by Katie in her pre-occupation of mind.

The girl colored scarlet.

The little boudoir opened out of the drawing-room by a folding door, and she fancied that Charlie might have overheard her soliloquy.

"Is mamma there, Wilson? Have you told her?" she inquired.

"No miss. Mr. Jewill asked for you, I—I knew my mistress was going to lie down, with a headache, when she went up-stairs. Shall I disturb her, miss?"

"She can scarcely have had time to lie down yet, Wilson. Yes; you had better tell her," was the stupefied response of the embarassed Katie.

And the maid proceeded leisurely to perform the behest.

"Miss Mordant, I really must apologize a thousand times for the intrusion; but the fact is, I heard of your loss, and it seemed to me that this bracelet, which I came across accidentally, very much answers to the description," he stammered, with a hesitation quite equal to Katie's hurried reception of her unexpected guest.

Katie's color rose rapidly.

"Indeed! How very kind of you! Where did you find it?" she asked, quickly.

"First, let me ask your verdict on it," returned Charles, with an enforced carlessness of manner, drawing the little packet from his pocket as he spoke. "The truth is, Miss Mordant, I have felt so extremely penitent for the awkwardness that seems to have heralded your misfortune, that I have left no inquiry unturned to remedy it. I shall never be happy till I have succeeded," he went on, with a significant look that brought a lovely bloom on the girl's cheek.

Katie eagerly unwrapped the dainty paper that surrounded the carefully-packed trinket, and examined it with anxious solicitude.

"It is very like—very like," she said; "but it is not the same, I am afraid. If it is, there will be the initials 'K. F.' on the clasp. They were my god-mother's initials," she went on, perceiving a half-comical, half-triumphant smile on her companion's features.

"I really have not quite so closely examined it, Miss Mordant," he said, coolly; "but you can easily ascertain it by inspecting the place where they should be found."

"Yes, and there is also a little fracture where the link was mended a little while ago," pursued the young girl, anxiously.

Again a look of demure amusement crossed the young man's features.

"You are extremely precise in your description, Miss Mordant. You might have taken lessons from a detective officer," he replied, laughingly. "However, it is in your hands, and I must leave it to your critical decision. Ah! Mrs. Mordant, I see. I hope you are recovering from the annoyance your daughter's unlucky loss must have caused you," he said, suddenly turning to the delicate, formal-looking widow, who was entering the room as he spoke.

"Mamma, Mr. Jewill has brought this bracelet, which he thinks answers to the description of my missing one," broke in Katie, fearing some ebullitions of her mother's well-worn lamentations.

"Indeed! Well, I should know it from a thousand, Katie, and so ought you, when your too kind and indulgent god-mother gave it to you," returned Mrs. Mordant, reprovingly. "Where did you find it, Mr. Jewill?"

The young man shrugged his shoulders.

"Pardon me, my dear madam: I obtained it on condition of keeping all those circumstances a profound secret," he said, mysteriously nodding his head, with a world of meaning in the gesture. "And if it is not the missing jewel, I have faithfully engaged to return it to whence it came."

Mrs. Mordant put on her glasses, and, taking the glittering trinket in her hand, she began to examine it with keen and eager curiosity.

"It is—yes, it certainly must be the same," she said, musingly. "There are the exact characteristics of the bracelet, Katie, though, perhaps, there is a slight difference in the color of the gold. It has more of a bright yellow tint than the precious one you lost so carelessly."

"Perhaps it has been brushed up, my dear madam. There might be very good reasons for that," said Charlie, significantly.

"Well, I am sure we are exceedingly indebted to you, my dear sir; and I quite hope you will remain and share our family dinner, though women's fare will be scarcely worth your attention," said Mrs. Mordant, graciously.

"I shall be enchanted, Mrs. Mordant," he replied. "And I will not spill the salt, if I can help it," he went on, archly, with a glance at Katie.

Charlie remained till prudence warned him not to try Mrs. Mordant's patience any longer.

And that visit was only the first of many a pleasant hour spent with the widow and her fair daughter, till at length Charlie proposed to unite the trio as tenants of one home; and after due maiden's shyness on Katie's part, and some natural reluctance on that of her mother's, the agreement was duly and amiably made, and Miss Mordant in due time was transformed into Mrs. Charles Jewill, and mistress of a handsome house and ample rent roll.

But it was not till long after the magic ceremony that the husband confessed to his fair wife that the bracelet in question had been the production of the jeweler who had repaired the lost legacy of the venerable god-mother, and that the ruse was

graciously forgiven by her as one of the stratagems lawful both in love and war.

"WELL, what do you want here?" remarked Mr. Smith, as he sat up in bed and addressed a professional burglar who stood in front of the bureau: "I want money and bonds," hissed the burglar, through his clenched teeth, "and quick about it too." "My friend," retorted Mr. Smith, "I've been looking for those things for the last 20 years without success but go on with your burglary, I'm sleepy."

BUB'S composition on the rhinoceros: The rhinozerus lives in Azher and you kant stick a pin in 'im cause biz werskit is bilt ov old stoves. Wen a rinozerus iz gonter be kild yu mus alwaze go up to him from before so az he'll kno somethin of it an' try to' mak a place for a bullit to git in. His nose is got a upper teeth that's got no businez ware it iz and if a boy shood set down on it he better sta plugd up with the tooth reis he'll be all won pore. I'd rather be a polliwog if I wuz a rinozerus, tho' I spose if I wuz I woodent.—Yonkers Gazette.

For Women.

CONDUCTED BY MISS RAY CLARK.

ONE AND THEN ANOTHER.

ONE step and then another,
And the longest walk is ended;
One stitch and then another,
And the longest rent is mended
One brick upon another,
And the highest wall is made;
One flake upon another,
And the deepest snow is laid.

So the little coral workers,
By their slow and constant motion,
Have built those pretty islands
In the distant dark blue ocean;
And the noblest undertakings
Man's wisdom hath conceived,
By oft-repeated effort
Has been patiently achieved.

Then do not look disheartened
On the work you have to do,
And say that such a mighty task,
You never can get through;
But just endeavor, day by day,
Another point to gain,
And soon the mountain which you feared
Will prove to be a plain.

"Rome was not builded in a day,
The ancient proverb teaches.
And nature, by her trees and flowers,
The same sweet sermon preaches.
Think not of far-off duties,
But of duties which are near,
And having once begun to work,
Resolve to persevere.

GRADUATING DRESSES.

A REQUEST for hints on graduating dresses appeared in the RURAL recently and having had considerable experience with graduating students, I will make that knowledge the basis of a few kindly remarks and suggestions.

Perhaps the first requisite in selecting any costume is suitability, for this covers occasion, becomingness, comfort, and the station and purse of the wearer. We smile to see women who have passed their first youth, tricked out in juvenile finery; common sense suggests plain attire for traveling and even for church, having the showy and elaborate for entertainments, balls, parties etc.

We dislike to see the freckled, red-haired woman who is fond of pink and orange, and the sallow brunette who admires pale blue above every other color—we dislike to see them ignorantly gratify their uneducated tastes.

Many a tall woman, who could eschew stripes likes stripes and, hence, wears them; while a short, roly-poly figure goes waddling in huge palm-leaves or plaid. And no one admires the daughter of poor parents in feathers too fine for her circumstances, for we cannot but often wonder whether they are paid for or not, or what had to be stinted in order do so.

In the present instance we have girls and young women who have been spending a number of years following a certain course of study, at the end of which they are to take up new work and enter upon new duties. They have not finished as too many superficial thinkers suppose. Commencement means to *commence* with the help of the culture and discipline these years of study have given them; to commence to do better work and lead nobler and more useful lives.

The wiser ones of the world shake their heads at many of the arbitrary frivolities of fashion. Study is expected to make men and women more sensible, to give ballast to their minds, and hence, really well-educated, scholarly women will avoid extremes and showy, conspicuous fashions.

One of the first essentials then for the graduating dress, it occurs to me, is simplicity. By this I do not mean annually recurring rows of white muslin dresses, though for classes of young girls white is always pretty. But colors are also perfectly admissible even for girls in their teens, and for college classes of those more advanced in years, decidedly preferable.

When the class is small, as it so often is in our high schools and smaller seminaries, there is often a desire to rival one another in dress. The platform is an overwhelming temptation to length of train, which is always very dear to the youthful feminine heart, and very often there is a sad discrepancy between the poverty of ideas in the reader's essay and the gorgeousness of her array.

A year ago I attended the closing exercises of a small class, each member of which appeared on the stage. One young lady of seventeen advanced in her turn; she wore a trailing blue silk with over-dress of fine embroidered muslin; elbow sleeves with very long white kid gloves. Real lace finished her dress at neck and elbows and a rich white satin sash banded the waist. The dress was looped in a very stylish manner, and the girl looked very pretty but very much out of place. She began to read and the whole article was barren of thought, it had not a single admirable, enjoyable literary quality. I felt the color stealing into my face and was really ashamed for her. If she had not been dressed so finely the sparseness of ideas in her essay would not have been half so apparent.

I knew another young lady who graduated from one of our best colleges. She was a fine student and a good writer, and she charmed her audience on commencement day though her dress was only an inexpensive cream colored bunting.

Muslin in white or figures, the blue or fawn colors with Silesia linings to match make up very prettily and are useful for other occasions. I have known two classes who chose calico and cambric dresses. For matured college classes silk is always good, if not made up too fancifully, even dark or black silk relieved with white lace ties and ruches is appropriate. Excess of ornament should alwa s be avoided.

Short dresses are now in universal favor. If muslin is chosen for the material, it would look well made with a group of ruffles at bottom of skirt, a prettily draped overskirt, and for a slim figure a surplice waist, the folds crossing the bust edged with narrow lace very slightly fulled. For thicker materials a kilted skirt, drapery caught with shirring bows of ribbon or cords and tassels, a shirred yoke and pointed bodice laced with cord to match the dress or ribbon.

Girls, nobody blames you for wishing to look as well as you can, but do not over dress on commencement day. There is much harm done to the cause of education by the example of those who have been favored with heavy purses. for a poor student has not always the moral courage to stand up in a cheap dress beside her class mate arrayed in elegant silk, and many parents, anticipating the mortification of such a comparison, give up the attempt to send their child to college.

The occasion, too, is very different from a reception or party, the participants should shine according to intellectual attainments, not by display in dress. R. B.

WRITING FOR THE PRESS.

[THE following from the Boston Transcript, so well expresses the feelings and need of newspaper disciples that it bears an insertion here.—R. C.]

Write upon one side of the sheet only. Why? Because it is often necessary to cut the pages into "takes" for the compositors, and this cannot be done when both sides are written upon.

Write clearly and distinctly, being particularly careful in the matter of proper names and words from foreign languages. Why? Because you have no right to ask either editor or compositor to waste his time puzzling out the results of your selfishness.

Don't write in a microscopic hand. Why? Because the compositor has to read it across his case, at a distance of nearly two feet; also, because the editor often wants to make additions and other changes.

Don't begin at the very top of the first page. Why? Because if you have written a head for your article, the editor will probably want to change it; and if you have not, which is the better way, he must write one. Besides, he wants room in which to write his instructions to the printer as to what kind of type to be used, where and when the proof is to be sent.

Never roll your manuscript. Why? Because it maddens and exasperates every one who touches it—editor, compositor and proof reader.

Be brief. Why? Because people don't read long stories. The number of readers which any two articles have is inversely proportioned to the square of their respective lengths. That is, a half column article is read by four times as many people as one double that length.

Have the fear of the waste basket constantly and steadily before your eyes. Why? Because it will save you a vast amount of useless labor, to say nothing of paper and postage.

Always write your full name and address plainly at the end of your letter. Why? Because it will often happen that the editor will want to communicate with you, and because he needs to know the writer's name as a guarantee of good faith. If you use a pseudonym or initials, write your own name and address below it; it will never be divulged.

"These precepts in thy memory keep," and for fear you might forget them cut them out and put them where you can readily run through them when tempted to spill innocent ink. Causer's word for it, those who heed these rules will be beloved and favored in every editorial sanctum.

DRESS REFORM.

BLESS Mary Wager-Fisher for the interest she takes in one subject upon which I have expended much thought, viz: dress reform. For ten years my back has troubled me, and now for the first time in my life I am obliged to do the family washing, so that the pain in my back has become chronic; I therefore feel the need of relieving it of all unnecessary weight. Two years ago I devised almost exactly the union under flannel garment described. and it fits me like a basque. I did it by laying a Butterrick basque pattern and open knit drawers on a paper, and allowed plenty of room between at back; then by paper pattern I cut my red flannel suit bias, which I think wears much better than straight, using narrow cotton tape to sew in with the seams; I think flannel gives better satisfaction made by hand instead of machine. Outside of this I have used the old-time chemise and drawers, not thinking just how to better it, yet feeling the drag of the band of the latter garment on my weak back *constantly*.

Now, I am going to make me a muslin suit after the same pattern, to be worn alone in Summer and over the flannel in Winter, the difference being fuller at the bottom and banded and trimmed to button just above the calf. Then I shall use a "chemise-basque" cut after the loose basque pattern lengthened, so as to ruffle the bottom in lieu of an underskirt, cutting it low neck and short sleeves same as chemise, but will obviate all gathers and bands, by simply having it faced and trimmed. MRS. J. M. MATTHEWS.

DO THEY?

I WAS sitting in a crowded depot; two ladies were sitting near me, when a lady friend of theirs passed with her husband; her countenance and speech both betokening a strong will and an ill-regulated spirit. "What a pity," said one of the ladies to the other, "that that woman never had any children; it would have enlarged her heart so much and given her a more sympathizing spirit with every one around her. I often think what a misfortune it is that she has no little ones to educate her, in spite of herself, to the milder virtues which she now lacks." "Do you believe it?" replied the other. "Such has not been the result of my observation. Children only make a selfish person more intensely selfish, just as it makes a generous one more open-hearted. A parent who is self-willed and devoid of self-esteem will encourage her children in little trespasses on the rights and feelings of others, which a just one would condemn and correct promptly.

"I do not think that children develop every lovely quality in their parents unless they have self-knowledge and rule their own spirits as they ought to." As they rose and passed out of sight I wondered which was right. B. C. D.

STOVE HOLDERS.

TO-DAY I read the article on Stove Holders which was written by "Grandmother," in the RURAL of March 16th. I had never given the matter a second's thought until my mother read it night before last.

If "Grandmother" had known my case, and also my sister's, she could not have hit our particular failing better. And it was only two nights ago I was guilty of one of the acts mentioned in that article, but I won't give you the satisfaction of knowing which bad habit it was, as mother has just finished some new holders, and I have commenced to reform and will try to continue. I hope to hear some more good hints from "Grandmother" through the RURAL.

I will add that in frying eggs they are liable to break when turning them. To prevent this, when they first begin to fry put into the skillet about a tablespoonful of scalding water; then, when the eggs become covered nicely on top, remove into the dish. M. A. C. A.

CORRESPONDENT'S CORNER.

MISS RAY CLARK:—You told a "Rural sister" in last week's issue that rosemary tea would promote growth of the hair. I wish to know if it will darken the hair; also what is rosemary and how to prepare the tea.

Is there anything that will make the hair two or three shades darker. I do not want these patent hair dyes—that is not some of them. Don't you or some of the readers of the RURAL know of something? Are there brushes that come to darken the hair, and where may they be obtained? By answering these questions you will oblige.

M. E. H.

ANS.—Rosemary is an herb. It is defined, "A plant growing in South-eastern Europe, also Asia Minor and China. It has a fragrant smell and a warm, pungent, bitterish taste." It is not a dye and will not darken the hair. We do not know of any brushes but there are leaden combs that will make the hair of darker shade. Any dealer in hair and fancy articles will no doubt be able to supply them.

NOTE.—We have received other requests for information which we hoped to reply to in the current issue, but a delay is necessary to insure accuracy.

It is with pleasure that we receive notes for this corner, for by this means we are better able to do our "mite" of assistance, than if obliged to anticipate the need of friends.—R. C.

We know there is nothing on earth equal to Hop Bitters as a family medicine.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING JELLIES AND PRESERVES.

MARY WAGER-FISHER.

I HEAR so much fault-finding among housekeepers anent the glasses with metal covers for jellies and "small" preserves, that I think it worth while to mention it, for the benefit of such as may have it in mind to purchase them on account of their convenience. The complaint is that in putting on and in taking off the cover small pieces are frequently broken from the rim of the glass, which fly into the preserves, which spoils them for anybody who does not wish to swallow so dangerous a thing as a piece of glass. An entirely satisfactory way of putting up jellies and preserves which are to be used in small quantities, is to put them in plain glasses, which cost about 33 cents a dozen—the cheapest sort of tumbler. As soon as the jelly is cold, a piece of white paper, cut round to fit the glass, is dipped in brandy and laid smoothly and closely on the top of the *jelly*, while over the top of the *glass* a piece of muslin is pasted, flour paste being used. Half a pint of brandy will suffice for the preserving of an entire season, unless the quantity put up be large, as a tablespoonful of brandy will saturate several pieces of paper. It is a great economy to make use of the brandied paper, as all the mold which collects on the top forms on this paper, and is readily removed without loss of the preserves. The cost of the brandy is trifling, and it pays for itself many times over when used in this way; so, before beginning to preserve, first secure the brandy.

One year, ants infested my preserve closet and made havoc with some glasses of strawberry and pine-apple, that had only paper pasted over the top, by eating their way through it. I have had no such trouble when muslin has been used. Apropos of brandy: if any one can recommend a substitute for it, that is equally good for topping off preserves, please let us know of it.

Now that rhubarb (pie-plant) is in season, it may not be amiss to remind RURAL readers that it makes a very nice jelly, to be served with meats or spread on layers of cake for "jelly cake." The color of it is fine and the taste excellent, the flavor of the rhubarb being so slight as not to be at all objectionable to persons who do not like it, while being agreeable to persons who do. It is more easily made than any other jelly, which is no small recommendation. After cutting off the leaves, wipe the stalks clean (without peeling); cut into inch-long pieces; put into a porcelain-lined kettle with a very little water—just enough to prevent burning until the juice comes from the rhubarb; cook slowly until the stalks are thoroughly tender; strain, and to a pint of juice allow a pint (which is a pound) of granulated sugar; boil until the mass "jellies," which should be in about fifteen or twenty minutes. Label the glasses you put it in.

Those Tomatoes Again.

I have something more to say concerning "canned tomatoes." Last Fall I canned my tomatoes in the "hight of the season," using Whitall and Mason glass jars, and glass bottles, known as the Rochester beer bottles, that have the patent rubber stoppers. About three-quarters of all the tomatoes put up, regardless of what "can" they were put in, have been found to be sour. In every instance the sealing was *perfect*. Some of the cans were kept in the cellar, some in the attic. The "cause why" some remained good and others did not I have been unable to determine. A lady, who prides herself upon her success as a tomato "canner," assures me that nearly all housewives cook their tomatoes *too much*; that the fruit, after being scalded and peeled, should be slightly cooked—only thoroughly heated; that her own plan is to put the tomatoes in the jars, set the jars in water, and when all come to a boil, scald at once. Her tomatoes have a delightfully fresh taste. I shall try her plan the next time, for after two years of defeat and disaster I am prepared to hang my hopes upon any new idea belonging to the tomato-canning business, that I hear of; and there may be others who will be glad of this suggestion, too.

Lard vs. Butter.

Anaximander lately had occasion to hire a number of workmen, and among them were two German-Poles, three days "landed." They boarded themselves, and "A.," in talking with the German-speaking one about their food, learned that they used lard with their bread instead of butter, and spoke of it as being a great deal better than butter! They much preferred it. It illustrates the saw, "There's no accounting for tastes;" but on this instance, as in many others, it was but the result of habit. The men were good-looking and well-mannered, evidently from the better class of peasants.

OUR GRANDMA.

HELEN BARRISTER.

ON running into a friend's house some weeks ago, I noticed her busy cutting out "blocks" for piecing a bed quilt.

"Are you preparing to piece a quilt?" I queried.

"No," she said. "I am cutting these blocks for work for my husband's mother. We use pieces left from our dresses for this work. She always does her own cutting, but her eyes are weak now, and these colors are trying to them. She is over at Cousin Mark's taking a vacation for a few days not intending to sew a stitch while there, to let her eyes rest. We are getting this ready for her, as she wants the quilt for a present to a fresh aspirant for the honors of housekeeping," and a merry laugh ran around the circle in the sitting-room. At the table sat the youngest girls threading needles with busy fingers guided by bright eyes.

"There, that will do now, girls," said the mother.

"Yes," said one, "we've threaded enough to last Grandma two days, I believe;" and away they scampered for a play in the yard.

"Threading needles for her, too! Why, I never heard of such a thing Do you always thread her needles for her?"

"Not always, but often when we have calls the girls take their Grandma's needle book from her stand drawer, and thread a parcel of needles with colors of thread to match the work on which she is engaged. She says its handy to have them ready for her. It is often a pleasant surprise for her, as she rarely ever sees them doing it, and says 'You dear, thoughtful girls! When did you have time to do this for me?' or some such grateful reminder of her thankfulness for the loving act."

"But where do you find time to prepare work for your mother-in-law? I believe I should get yarn and start her on a knitting crusade for the rest of her life, if I were in your place."

"I do not find time," she said. "I use it daily for all my hands find to do, and have enough left to fix work for a mother that helped to train up such a good son as my husband," and tears glistened in her eyes as she spoke. "She has knitting

for visiting-work, but does a variety of things when at home. She reads, sews, tends the birds, waters the plants, weeds among the flowers, gathers seeds, presses ferns, etc. Knitting is too monotonous for any person, whether old or young. Fancy knitting or crochet work does well for occasional business, but sewing on various materials is better for the mind. You remember Mrs. Corwin's mother did so much knitting that her hands grew deformed and she finally became unfitted to do anything but a little reading and aimless wandering about. No aged person around me will be allowed to do so. Mother makes all her own underwear. Occasionally she makes a pair of sheets, a quilt, and two pairs of pillow-cases for the bed. Last Summer she made pillow and sheet shams, also new curtains and lambrequins for her room. Kate hemmed the ruffles on the sewing machine, but all the rest was done by herself. Her white tufted spread was made two years ago. Anna helped her to make it. Afterwards she made one for a present for Mr. Power's mother, who is blind. She cushioned her large rocking chair, using a dress for her upholstering She covered an old lounge (which she had when she began housekeeping) with another dress and sent it to the Barwell family when they were burned out. She has no old garments, for she is constantly replenishing and frequently giving away. She consults us before giving, and while advising, we never oppose her. She pays a visit somewhere nearly every week. She writes letters often. As her hands are slightly tremulous, she writes only a few lines every day until a letter is finished. We never allude to her increasing infirmities, and mean always to keep her young."

JESSIE SEABRIGHT'S SCRAP JOURNAL.

MAY MAPLE.

THE head of our family is not fond of warmed-over potatoes, even at their very best, and when the new cook, who is only a school girl, brought them to the table, I saw his lip curl, and his nose take on a look that said as plain as words, "The potatoes are not fit to eat." This I well knew would be the case when I saw Susie preparing them. But, then, I thought it was well enough to learn how those outside our own household lived and their manner of cooking the various viands that grace our table. Susie sliced the potatoes, put them in the spider with plenty of warm water and a little salt; when they were warmed through, which did not chance to be very quickly as her fire had burned low, she mashed them, retaining the water, and, of course, they were "pasty," yet the girl had followed the home lessons. The next time that we had potatoes to warm, I told Susie to put some meat drippings into the frying-pan, and let it get hot, and then put in the sliced potatoes, with a good sprinkling of salt, and a little pepper; cover closely till they were well heated through; then stir them up, and set them back on the stove where they would still keep hot without burning till wanted upon the table. The potatoes generally steam enough to moisten them all that is necessary. Susie brought no more "soggy" potatoes to the table.

While visiting with my old friend, Mrs. White, not long since, the subject of washing clothes easily and quickly was discussed. "Just look at that long line of clothes across the road," said she: "how white and nice they look; yet one of her boys has done the washing all Winter; and he is not long about it either. But she has a new recipe for soap, which cannot be beaten. I use the same kind now and will give you the recipe to copy if you would like it. It is as follows:

Recipe for Soap.

Seven pounds of bar soap, (soft will do as well), cut in thin slices and put in a dish. Then put two pounds of sal soda and one pound of unslaked lime in another dish and pour over it two gallons of boiling water; stir this well and let it settle, and pour off the water into the dish containing the soap. Put this on the stove and let it remain until the soap is dissolved; stir well and add one ounce of alum, and two ounces of benzine; cut into bars as soon as cold.

"Soak the clothes" she continued, "about 20 minutes in warm water, add enough of this soap to make a good suds; then wring out and rub all soiled places thoroughly with the soap and put the clothes into the boiler of cool or cold water. Boil fifteen minutes, rub out in the sudsing water, and thoroughly rinse.

The Robins' Washer is nice for white clothes but calicos are seldom improved by boiling.

PUDDINGS.

CHIEF COOK.

THE variety of puddings is immense, and it would naturally be supposed that any "good things," mixed and cooked for the table, would make a good pudding, but we all know better. Still, there are many very poor puddings made and served. I divide puddings into two great families—those which have all their value in themselves, and those which depend entirely on the sauces to be eaten with them. The first is a mere rich feast, the second is an agreeable surprise, which is often better. There are some "hybrids," however, which partake of the best points of both families. Plum pudding and its sauce are both rich; so is a rice pudding with cranberry sauce Boiled puddings, if well prepared, are a proof of skill in the cook—a moment too much or too little spoils them. Baked puddings, having milk and fruit as components, will turn to curd in the hands of a poor cook If there is any part of the cook's duties which must be performed in a manner perfectly cleanly in every point, it is making and cooking a pudding I never mention cleanliness in a recipe as many do, because with most people it is a comparative term, but here it must be not only positive, but superlative. Dirt puddings and pies are only tolerated among children in a mud puddle. The office of a pudding in a dinner, is that of a peace-maker. If there has been any failure in any of the meats, or the vegetables, the condiments, or in the set-out or manner of service, a good pudding restores every one to a contented frame of mind. Therefore, let it be of delicate flavor, not served too copiously, just enough on the plate to cause the guest to dispose of the last morsel with a sigh, and to enable the "lady of the house" to cap the climax by an offer (very pressing) of "just another piece, my dear." Food of the finest and most delicate kinds may be so presented as to spoil the cook's art entirely; to obviate which, the pudding and its sauce should be served together on one plate, a thick sauce at one side, a thin one to be poured on top.

DOMESTIC RECIPES.

Headache.

I find when I have a sour stomach or head-ache, nines times out of ten, it is relieved by taking one-fourth of a teaspoonful of common baking soda at intervals of one hour, which at once relieves the acidity of the stomach; if the head ache still lingers, at night I relieve the over-stocked stomach by retiring without my supper. For with Dr. Dio Lewis I firmly believe there are more people who die from over eating than from starvation.

Feathers Stripped.

As the family increases, each little one wants a pillow of its "very own," and as I have no geese, but use a great many chickens, I have learned to utilize hen-feathers by stripping them. I place them in a pan to dry, with a sieve over them, and then, some odd time, remove all harshness. They do nicely for "up-stairs" pillows.

Sour Rising.

When limited for milk, I keep some corn-meal and water mixed together, which answers the exact purpose of sour milk in soda biscuit, or corn bread.

Healthy Biscuit.

Many of the RURAL sisters may be surprised to know that they can make just as tender soda biscuit by using a little meal instead of grease.

Sweetening Meat.

This Winter I have found by boiling a piece of borax with strong bacon or beef a little soured, it becomes sweetened. MRS. J. M. MATTHEWS.

Dandy Jack Pudding.

To one quart of boiling milk add the yelks of four eggs, one-half cup of sugar, two even tablespoonfuls of flour well beaten. After dipping this out in the dishes you wish to serve it in, beat the whites of the eggs to a stiff froth, add sugar to stiffen, spread this over the pudding and set in the oven to brown.

Plain Pudding.

One pint of milk, three eggs, one teaspoonful of soda, two of cream-of-tartar. Grease pudding pail; pour this in, set it in a pot of water nearly boiling, and boil one hour.

Hard Soap.

We make very good hard soap as follows: Buy resin in balls. To each ball add three gallons of water and two ounces of fine salt. Put the water in a large kettle, let it nearly boil (take five pounds of grease to a ball); then add the grease and resin; stir until perfectly smooth. Keep boiling all the time. Last of all, put in salt; as soon as taken from the fire dip out in wash-tubs and set in cellar to cool. In two days it will be hard enough to cut. A FARMER'S WIFE.

[New York Union.

Did Him Good.

Mr. Charles H. Bauer, editor of the above paper and Notary Public, in a late issue mentions the following: Patrick Kenny, Esq., some time ago, suffered much from rheumatism and tried almost every means to rid himself of this painful evil, but in vain. He was advised to use St. Jacobs Oil, which he did so successfully, that all pain has left him and he is as healthy and strong as ever before. Mr. Kenny is an enthusiastic advocate of St. Jacobs Oil, and it has done him good.—*Adv.*

WONDERS IN MECHANICAL SCIENCE.

What the Davis Vertical Feed Sewing Machine will Do without Basting.

It will sew over uneven surfaces as well as plain.

It will sew over seams in any garment, without making long or short stitches, breaking of thread, or puckering the lining of the goods at the seam, requiring no assistance from the operator, except to run the machine and to guide the work. A point which no other machine possesses.

It will sew a curved piece on a straight one, or two curved edges together.

It will make wide and narrow hems, and hem all kinds of goods, such as soft merino, or goods difficult to hem on other machines.

It is the only practical machine for hemming bias alpacas, poplins, muslins and other similar goods without basting, and it is the only machine in the world that will turn a wide hem across the end of a sheet without pulling the under or upper side of the hem.

It will turn a hem and sew on trimming at one operation.

It will turn a hem and sew in a fold at one operation.

It will do felling bias or straight, on any cotton or woolen goods.

It will fell across seams on any goods

It will bind dress goods with the same or other material, either scallops, points, squares or straight.

It is the only machine that will bind hats, cloaks or other articles with bias satin or silk, from one half to three inches in width without basting.

The only machine that will make and bind cardigan jackets or other knit goods without basting.

It will put on dress braid and sew in facing at one operation, with or without showing the stitches.

It will put on dress braid and sew in facing and a bias fold at one operation, without drawing either dress, braid or skirt, and without showing the stitch on right side.

It will make French folds.

Make French folds and sew on at the same time.

Fold bias trimming and sew on at one operation.

Make milliners' folds with different colors and pieces of goods at one operation.

Make milliners' folds with one operation and sew on at the same time.

It will turn the edge of bias bands and sew on either one or two pipings, and stitch them on the dress at the same time.

It will sew bias bands on a dress and run in either one or two pipings without showing the stitches.

It will cover cord and sew it in between edges at one operation.

It will cover the cords for seams of waists, cushions or furniture covers and sew the seams at the same time.

It will sew in a sleeve, covering a cord and stitching it into the seam at the same time.

It will sew the cord on the edges of military coats, jackets, &c.

It will gather without sewing on. It will gather and sew on at the same time.

It will gather between two pieces and sew on at the same time.

It will gather between two bands, showing the stiches on the right side at one operation.

It will make and sew a ruffle on any part of a dress skirt, and sew on a bias fold for heading at one operation, showing the stitches on the right side.

It will gather and sew on a band with pipings between ruffle and band at one operation.

It will sew a band and ruffle on a dress skirt, stitching on piping at the head of band at one operation.

It will make plaited trimming either straight or scalloped.

Make plaited trimming and sew on at the same time.

Make plaited trimming either scalloped or straight and sew on a band, and edge stitch the band at one operation.

It will make plaited trimming either scalloped or straight, and sew a piping on at the same time.

It will make knife plaiting.

It will shirr any kind of goods.

It will, with one operation for each variety, without basting, execute 20 practical varieties of ruffling, being 12 more than can be produced on any other machine with same number of operations.

It will make a more elastic stitch than any other machine.

It is the only machine that will sew velvet or plush without drawing or puckering.

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Miscellaneous.

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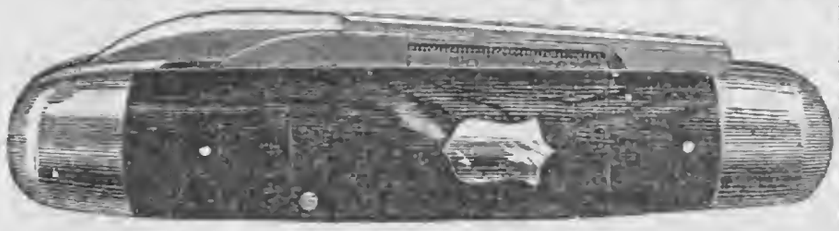

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News of the Week.

HOME NEWS.

MONDAY, May 30, 1881.

The political fight has been waxing warm this week, and the battle ground has been at Albany. Conkling and Platt have been leading their forces in person, while the "half-breeds," or friends of the Administration, have been led by Robertson. Secretary Blaine has been "hovering around" New York, ostensibly on private business. From the events of the past week it seems evident that Conkling and Platt cannot be re-elected to the Senate by this Legislature, at this session, without the aid of Democratic votes. Beyond this everything is uncertain. It is to be hoped that before the week ends some definite conclusion of this "unseemly" matter may be reached. Just how, it is quite impossible now to state.

The bronze statue of Admiral Farragut was unveiled at Madison Square, this city, on the 25th inst. Jos. H. Choate was the orator of the day. Addresses were made by Ex-Gov. Morgan, W. H. Hunt, Secretary of the Navy, Mayor Grace and others. There was a large crowd of spectators and an imposing military display.

The funeral of Thomas A. Scott, who died on the 21st., took place from the family residence at Woodburn, Pa., on the 24th inst., and the remains were interred at Woodlands Cemetery. The Pennsylvania railroad will drape all their vast property in black for several weeks.

The Cornell University boat crew have been ruled out of the Thames (England) Royal Regatta, in which they were expecting to participate. They did not submit their certificates prior to March 1, according to the rules. They, however, sailed for England and if no arrangements can be made whereby they can enter the race they will challenge the winners to a contest.

The reduction in the cost of the Star Route mail service now reaches the large sum of $500,000. The aim has been to economize by cutting off the extra service contracted for solely in the interests of the "ring." On one route alone $36,000 a year is to be saved, and the people along the line will be served with their mail as well as they were before. There have been some revelations of official looseness in the Treasury Department at Washington during the past week. There seems to be a general renovation going on under the new administration.

Commodore Nutt, the celebrated dwarf, died in this city on the 25th inst. He was born April 1, 1844 at Manchester, N. H. and at the age of 17 was first exhibited by Barnum. At the time of his death he was three feet seven inches tall.

At the annual Sunday School anniversary and parade held last Wednesday in Brooklyn, N. Y. 51,000 children and young people were on the march. The Mayor reviewed them at Prospect Park. It was a gala day for the children.

Mr. William W. Long, president of the Southwestern Immigration Commission is considering the best manner of procuring immigrants for the States of Louisiana, Arkansas and Texas, whose Commonwealths Mr. Long represents. He sailed for Europe Saturday the 21st, and intends to bring back with him or arrange for the coming of several thousand desirable settlers for the Southwestern country, where farmers and agricultural laborers are most in demand. He stated that the railroad companies traversing the three States mentioned have agreed to pay all the expenses of transporting desirable immigrants and will give them land and employment on very desirable terms.

The number of immigrants arriving at New York last week was 9200; the total for the month being 41,611 and since January 1,146,902. The arrivals for May are now estimated at 70,000, and for the year at 730,000.

President Garfield and Secretaries Blaine, Windom, and Kirkwood will take part in the ceremonies in the National Cemetery at Gettysburg on Decoration Day. Gov. Hoyt and staff, with the heads of departments and both Houses of the Legislature, have accepted invitations to be present. Hon Julius C. Burrows of Michigan will deliver the address. The Presidential party will arrive this morning and remain until to-morrow evening.

Here is an indication of how the great West is filling up. One thousand emigrants, en route to the West, took breakfast at the Crestline lunch counter Thursday morning. They filled three trains.

The centennial celebration of the capture of Fort Galphin from the British, during the Revolutionary war, by Americans under Gen. Henry Lee, took place on the 21st. The fort is located on Savannah River, twelves miles below Augusta. An address was made by Col. C. C. Jones of Augusta, a descendant of the founder of the fort, who acted as master of ceremonies.

Jefferson Davis has gone to Canada, in order to be on British soil when his history of the rebellion is published in England, and thus secure an English copyright. This plan is said to be feasible, because he is not legally a citizen of the United States.

Petitions from "thirty States and Territories, representing some 300,000 members of churches and temperance societies," have been presented to President Garfield, praying that orders may be issued forbidding the sale of fermented liquors at forts and posts occupied by the army.

The Yorktown Centennial Commissioners have been offered, for $1,000, a glass goblet out of which Lord Cornwallis drank. Unfortunately, the purse of the Commission is not very heavy; and if much lightened by the purchase of even such valuable historic relics as a glass goblet, at $1,000, it will probably not be adequate to sundry other things of greater importance in the practical celebration.

Ex-Gov. Washburn has conveyed his Edgewood property, consisting of 34 acres, with all buildings and improvements thereon, located on Lake Wingert, a few miles south of Madison, Wis., to the Sisters of St. Dominica, who are to establish an educational institution there. The conveyance is made without consideration, and the gift adds another to the record of the ex-Governor's magnificent public benefactions.

The Texas Pacific Railroad management have asked that a company of United States troops be sent to the western terminus of their road to protect the workmen and property from depredations by a gang of lawless men who have congregated there.

The three million and a-half of newspaper subscribers in the United States pay $26,250,100 annually for the news. The daily papers published in the country number nearly a thousand, but it would be an easy matter to count the great dailies upon one's fingers.

A building is about to be erected in Chicago upon the spot where the great fire of 1871 started, and the Historical Society of the city is taking steps to have a memorial tablet placed upon it, and also to place a tablet or monument at the northern terminus of the fire.

An army of over twelve thousand men draw pay from the Chicago, Milwaukee and St. Paul Railroad company. This is an increase of 2,102 since last June. How these great corporations do grow, and the country is developing to a corresponding degree in the golden Northwest.

A novel race occured in Rochester between Elsie Von Blumen on a bicycle and trotting and running horses. Three straight heats were won by Miss Von Blumen against the trotting horse, and she also won easily in the race with the running horse.

Five hundred children have within the past few days been withdrawn by their parents from the public schools in Atlanta, Ga., on account of a deadly disease which made its appearance there last week in the family of Mr. Perkins, Forsyth Street, carrying off his wife and all his children, three in number, in thirty-six hours. Eighteen physicians are of the opinion that it is malignant scarlet fever. One pronounces it yellow fever, and another poisoning from water.

The international grand lodge of Good Templars is in session at Topeka, Kan. The order comprises 78 lodges and 310,000 members. The next session will be held at Charleston, S. C.

The excursion season has been inaugurated by a terrible accident near London, Ontario. An overloaded steamer went to the bottom with 600 souls on board. About 200 bodies have, up to this writing, been recovered.

An American bark, from Boston, has been unjustly seized by Mexican authorities at Merida, Mexico. This is the first case under the new administration calling for armed interference to maintain the honor of our flag in foreign waters.

Can Eat All I Want.

A dyspeptic who had procured Compound Oxygen, makes this report: "I eat like a farm hand; no more distress in my stomach. *Can eat just all I want and then forget I have a stomach*, until about time for the next meal." Treatise on "Compound Oxygen" sent free DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

A London cablegram of the 27th says that several well-known Scotch farmers are about to start on a tour through this country with a view to obtain information regarding the prospects of agricultural immigrants.....The returns of the commerce of Austria and Hungary for January and February show that the import of wheat exceeded the export by 22,800,000 cwts.....The last panacea for the woes of the British farmer is that he should grow tobacco. A writer advocates its cultivation in the midland and southern counties of England, and asserts that it would yield, if properly grown, a profit of £20 an acre. The cultivation of tobacco is at present forbidden in England, under an old Act of Charles II., and in Ireland by an Act of 50 years ago. Tobacco was cultivated in Ireland for some 30 years previous to that date.... ....After repeated trials at Paris, it has just been decided that 20 eggs count as a kilogramme, or 2 1-5 pounds. The breeds of fowls that lay large eggs, averaging seven to a pound, are La Fleche, Houdans, Creve-Coeurs, and Black Spanish; those laying medium-sized eggs, averaging eight or nine to the pound, are Leghorns, Cochins, Brahmas, Polands, Dorkings, Games, and Sultans; the Hamburgs lay about ten eggs to the pound. Duck eggs weigh from two to three ounces apiece; turkey eggs three to four ounces; goose eggs from four to six ounces.....A cablegram of May 27 says that according to official returns up to the 15th inst. the crops in Bohemia, Lower Austria, North Tyrol and Dalmatia have suffered somewhat from frost. The prospects in the Central and Southern zones are good. In the North wheat promises well. Excellent results are expected from the vintage and fruit harvest....Quail are very abundant in Santa Barbara County, Cal. In some places the farmers are compelled to poison them in order to protect their growing crops. Five acres of Lima Beans were wholly destroyed by these birds on one farm..... ....The Galveston (Texas) News thus speaks of one of the tricks of the trade:—"Some Texas papers print fabulous accounts of the weights of fleeces from Merino sheep. The discount for dust is not given. Texans seldom wash their sheep before shearing or scour the wool afterwards."..... Caterpillars in enormous droves have appeared in parts of New Zealand, destroying field after field of oats. Near Turakina hundreds of thousands of them were passing across the country to a new field for depredations, when they found themselves obliged to cross a railroad track. As a train came along, thousands of them were crushed beneath the wheels, and finally the train was brought to a full stop by the slippery condition of the rails. When the engine and carriages were examined after the stop had been made they were found covered, in many places, inside and out, by the crawling vermin..... Landlords in Scotland have found it a wiser course to reduce their rents than to keep them up at the risk of a possible land agitation. Farms the leases of which recently expired or are soon to expire have been relet at rents varying from 20 to 50 per cent. lower than before. On the estate of Lord Lamington, in East Lothian, where some of the best lands in the country are found, a farm on a former rent of about £1,000 was relet a short time ago at a reduction of over 40 per cent. The tenant is said to be one of the most enterprising and skillful agriculturists in Scotland, but has met with heavy losses of late, and was obliged to stipulate for this reduction before he would take another lease.....

Secretary Allen of the Omaha Board of Trade, estimates the grain crop of Nebraska for 1881 at 105,000,000 bushels, an increase over 1880 of fully 30 per cent. The wheat crop is estimated at 16,000,000 bushels, a gain of about 50 per cent.....The exports of domestic provisions, tallow and dairy products from the United States during April amounted to $8,133,164, against $12,962,672 in April, 1880. For the four months ending April 30, 1881, they were $52,405,350, against $44,286,762 for the same period in 1880. The value of provisions and tallow for the six months ending April 30 was $73,360,712, against $58,484,014 for the six months ending April 30, 1880. The value of dairy products for the 12 months ending April 30 was $23,458,781, against $16,607,950 for the same period in 1880 ..... About Battle Creek, Mich., sheep are dying in great numbers. They appear dumpish, refuse to eat, lie down and die. No remedy yet hit upon. .. ....Upwards of 100 representatives of the Cotton-seed Crushers' Association of the U. S., convened at Cincinnati on May 24 and 25. The object of the meeting was to adopt measures whereby the mills belonging to the association can monopolize the trade and thus regulate the price of seed, and crush out the smaller firms not belonging to the association. Several delegates were expected from Chicago, but they failed to come.....To all present appearances the yield of strawberries along the valley of the Hudson this season will be the largest ever obtained, and the berries will also be larger than those of last year. The first of the fruit will be shipped to the New York market toward the close of this week. The bulk of the crop will reach the market about the 20th of July.....Senator Williams has introduced a bill at Albany to convert the Erie canal into a ship canal by lowering the channel one foot and raising the bank two feet, thus giving three additional feet depth of water, and thereby allowing the passage of propellers of 1,000 tons from the lakes to New York City. Eight million dollars is named as the probable cost of the work, and the constitutional restriction as to the annual expenditure for canal repairs it is proposed to do away with, on the ground that this will be essentially a new enterprise.....The San Francisco Commercial Herald, of the 12th of May, 1881, says: "Wheat crop prospects are brilliant, and the harvest will begin by the 23d. of May, and new wheat from Tulare County will be in market by the first of June. The surplus crop of old wheat is very large.....By advices of May 8, wheat and rye in the south of France had begun to ear. Weather generally favorable for the back crops. .....In Spain the prospects for the cereal crops were satisfactory... ....In Germany the season was backward, but the wheat plant had satisfactory appearance and rye also.....In Hungary and Roumaria wheat was looking well.... ....In Russian Western and Southern Governments the crops appear to be in good condition, but in the Eastern they have fared badly.....

The N. Y. State canals, which were formally opened on the 17th of May, had last Friday delivered at tide-water 451,400 bushels of wheat, 1,766,000 bushels of corn, and 58,000 bushels of other kinds of grain, against, in the season of 1880, to date (the canals then having been opened April 20, nearly a month earlier), 3,195,000 bushels of wheat, 1,921,000 bushels of corn, and 663,000 bushels of other descriptions of grain.....Of wheat, the visible supplies at latest dates stood at 16,561,800 bushels. Of corn, the aggregate is 11,233,000 bushels. At the corresponding date in 1880 the total of wheat was 19,608,500 bushels, and of corn 13,146,400 bushels.....The New Zealand Gazette contains a notice that a bonus of £500 ($2,500) will be given for the first 25 tons of butter and the first 50 tons of cheese produced in a factory worked on the American principle, and to which any farmer, subject to certain conditions, may send his milk, which shall be exported from New Zealand and sold at such prices in a foreign market as shall show that the articles are of fair quality.....

The New York Brazilian line of steamers was withdrawn on the 20th inst., foreign competition proving so great that it had to succumb..... A young man of Indianapolis, Ind., a practical pork-packer, has been astonishing the people of Boston with the operation of a machine that takes the bristles from scalded hogs, scrapes and cleans them at the rate of eight a minute.....The receipts of cattle at the Union Stock Yards, Chicago, from January 1, to May 7, 1881, are reported at 369,591 head; same time in 1880, 445,975; same time in 1879, 386,228, showing a falling off from 1880 of 74,384, head, and 16,637 less than in 1879.....

Exports of breadstuffs from the United States in the ten months ending with April 30, in each of the last two years:

	1880. Barrels.	1880. Values.	1881. Barrels.	1881. Values.
Wheat flour	4,957,316	$29,182,323	6,638,264	$37,496,628
Corn-meal	266,693	750,301	342,280	996,316
	Bushels.	Values.	Bushels.	Values.
Wheat	130,054,110	$160,876,592	129,337,068	$143,023,881
Corn	72,214,558	40,003,439	75,056,845	41,194,111
Rye	2,569,528	2,069,699	1,628,929	1,773,300
Barley	1,094,204	766,402	853,974	530,259
Oats	498,010	195,421	308,851	141,306
Grand total		$233,844,387		$225,155,801

Nutritious Food.

The names of Prof. Horsford and the Rumford Chemical Works (Providence, R. I.) have become so identified with the manufacture and sale of phosphoric acid and the phosphates, that they are justly considered as the highest authority in this country, if not in the world, upon those articles.

The former, (Prof. H.) has made the subject of wheat and its conversion into bread, a life long study, and was the first to suggest the use of the phosphates as a cream tartar substitute, whereby the nutritious elements which are taken from the flour in boiling are restored.

The phosphatic preparations of the above firm have received the hearty recommendations of the highest medical and chemical authorities in this and other countries, so that their healthfulness and utility are beyond question. They have been put upon the market in various forms, the latest, and one which will undoubtedly prove the most popular, being "Prof. Horsford's Phosphatic Baking Powder," which is packed in tin cans like the ordinary baking powders, and is to be used in the same way. It is made from Prof. Horsford's Acid Phosphate in powdered form. It contains the same ingredients, mixed together, as the famous Horsford's Bread Preparation, is fully equal in strength, if not superior, to any of the ordinary first-class baking powders, and is sold at reasonable prices.

The Works have issued for the present year, their "Horsford Almanac and Cook Book," which is sent free on application, and will be found well worth sending for.

THE IMPROVED MONITOR RAKE.—This excellent rake is made by the Higganum M'f'g Corporation, Higganum, Conn. It is a self and hand-dump rake, which is simple and neat in appearance, rakes cleanly, lifts easily and falls back lightly. In construction it is simple and very strong and durable. Special care has been taken to insure that it can be dumped easily by hand.

The Reason Why.

The tonic effect of Kidney-Wort is produced by its cleansing and purifying action on the blood. Where there is a gravelly deposit in the urine, or milky, ropy urine from disordered kidneys, it always cures.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Women that have been bedridden for years have been entirely cured of female weakness by the use of Lydia E. Pinkham's Vegetable Compound. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

Take Hop Bitters three times a day, and you will have no Doctors bills to pay.

A Pure and Effective Hair Dressing.

COCOAINE, a compound of Cocoanut Oil, beautifies the hair and is sure to allay all itching and irritation of the scalp.

THE superiority of **Burnett's Flavoring Extracts** consists in their perfect purity and strength.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, May 28.

Chicago.—WHEAT active, but unsettled and irregular; No. 1 red winter, $1.09@1.16; No. 2 Chicago spring, $1.12½@1.13½, cash; $1 12½, June; $1.14@1.14½ July; $1.11¾ August; $1.08½ September; No. 3 do., 97c.@$1 02½; rejected, 76@82½c. CORN unsettled at 43c. cash; 42⅝c. June; 43¼c. July; 43¾c. August. OATS in good demand at 37⅝c., cash. RYE firm at $1.16. BARLEY firm at 97½@98c. FLAX-SEED, $1.13@1.14½. PORK, $10, cash; $15.90 June; $16.05@16 07½, July; $16 20, August. LARD, $10 55@10 57½, cash and June; $10 62½@10 65, July; $10.65@10.67½, August. BULK MEATS easier; shoulders, $5 60; short rib, $8 25; short clear, $8.75. BUTTER—Creamery, 20@22c. for choice; ordinary, 18@20c.; fair to choice dairy, 13@17c.; white and streaked, but sweet, 8@9c.; grease, 6@7c. CHEESE—New, full creams, 9@11c; part skimmed cheddars, 6@7c.; do. new flat, 4@7c.; do, old and sour, 2@4c. per pound. GRASS SEEDS—Timothy lower at $1 75@2 for common; $2 10@2 20 for fair to good; $2 25@2 40 for extra to fancy. Clover dull at $3 50@4 for common to choice medium; Hungarian at 60@75c.; flax firm at $1 15 1,18 for pure crushing. HOGS—Arrivals increasing, quality good; market fairly active but unchanged; packing dull and weak at $5 50@5 90; good to choice packing and shipping, $5 95@6 25. BACON mainly at $5 85@5 90, a few extra at $6; poor to fair light dull at $5.40@5 65; market closed weak and a few left over. CATTLE—Market steady with a fair demand; exports, $6@6 25; good to choice shipping, $5 75@6; poor to medium, $5.25@5.50; stop fed, $5.40@5 65; butchers' active but weak; scallawags, $2@3; fair to good, $3 25@4 50; choice, $4.75; fair to good grassers, $3 65@4 40; Colorados, $5@5.70; stockers and feeders quiet and slow at $3 50@5. SHEEP—Demand good; quality poor; common to fair shorn, $1.50@4.75; Texans, shorn, $4; best natives, $5.50; best heavy wooled, $6.20@6 50.

Cincinnati.—WHEAT firm; No. 2 Red Winter, $1 12@1 13. CORN irregular; No. 2 Mixed, 48c. OATS strong; No. 2 Mixed, 42@42½c. RYE dull and nominal; No. 2, $1 20@1 24. BARLEY scarce and firm; extra No. 3 Fall, $1 05. PORK quiet at $16 50. Lard dull at 10½c. Bulk meats dull: Shoulders, $5 62½; Clear Rib, $8 30. Bacon quiet and unchanged. SUGAR strong and higher; hards, 10½@11c; New Orleans, 7½@8½c. BUTTER—Fancy Creamery sells at 24@25c, prime do at 22@23c, choice Dairy at 17@18c, choice Western Reserve at 15@16c, prime to choice Central Ohio 12½@15c, medium do 10@12c, and inferior 5@8c ₩ lb. CHEESE—There has been a fair demand, but the receipts being liberal prices have declined to 8½@9½c per lb for prime Ohio Factory, and 8@8½c for good do, but inferior has to be sold at lower prices. NEW POTATOES are in ample supply and fair demand, but prices are lower, with sales mainly at $5@6 ₩ bbl. STRING BEANS are in light supply, and meet a good demand at $2 50@2 75 ₩ bushel in crates. CABBAGE—The market is easier at $4@5 per crate for prime to choice. TOMATOES—Bermuda sell at 75c@$1 per pk crate. CUCUMBERS in good demand at 50c ₩ doz. ONIONS—Bermuda sell at $1 75@2 ₩ bush crate, and New Orleans at $5 per barrel. GREEN PEAS—Home grown are selling at $1 25 00

$1 50 per bushel. Southern not wanted. Hogs—quiet; common and light, $4 50@6; packing and butchers', $5 40@6.

St Louis—Wheat active; No 2 Red Fall, $1 14¾@1 14¾, cash; $1 15, May; $1 14¾@1 15, June; $1 11¾@1 12¾, July; $1 08¾@1 09¾, August; $1 08¾ September; $1 07@1 08¾, all the year; No 3 do, $1 07¾ bid; No 4 do, $1 02¾@1 02¾. Corn 45¾c@45¾c, cash. Oats 38c, cash and May; 33¾c@34c., July. Pork quiet; $15 60. Lard firmer at 10 50 bid. Bulk-meats dull; shoulders, $5 50; Clear Rib $8 40; Clear Sides, $8 60. Bacon firm; Shoulders, 6¾c; Clear Rib, $9 15; Clear Sides, 9 30@9 45. Hogs fairly active; Yorkers, $5 70@5 75; mixed packing, $5 50@5 85; choice to fancy, $5 90@6 15; Pigs, $4 90@5 25. Cattle inactive; exporters, $6@6 20; good to prime Steers, $5 40@5 90; common to fair, $4 90@5 35; butcher Steers, $4 85@5 25; Colorado Steers, $4 90@5 60; feeding steers, $4 90@5 35; corn-fed Texans, $4 30@5 20; grass do., $3 25@4 25 native cows and heifers, $3 25@4 40. Sheep prices nominal at $3 00@4 25.

Hop Bitters purifies the blood, and removes all pimples and eruptions.—*Adv.*

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, May 28, 1881.

Beans and Peas.—The bean market is quiet as a rule; marrows held with some confidence, but mediums and other sorts are offered freely. Colored beans have a rather better outlet: Green peas slow, stock is poor; quoted $1.55@1.60 ₱ Wis. bbl. Southern B. E. peas nominal at $3.45@3.50 ₱ 2-bush. bag, which is easier.

Marrow beans, prime, $2.55@2.60; other, $2.35@2.45; medium, prime, $2.15@2.50; other, $2.20@2.35; pea, $2.25@2.50 white kidney, $1.50@2.40; red kidney, $1.45@1.65; black or turtle soup $1.45@1.50.

Receipts of beans for week, 4,750 bush.

Exports do. 437 pkgs.

Butter.—The market disclosed a very unsettled feeling yesterday and prices show a marked decline on best grades compared with three days ago. Stock is rapidly going from white to yellow, and with some surplus of the former buyers have been able to dictate and sellers have been forced to comply. Exporters have paid pretty full prices but are not keen buyers at the close as the market seems turning in their favor State continues the lead the best demand, and Western, when sound and sweet, is attractive at the prices for medium-class wants. Firkins are not plenty and quotations are not fixed.

Creamery—Western, good to prime, 20@23c.; Penn. choice, 27c; State, 23c.; poor, 19c.; sweet cream, 20@22c.; State pails and half tubs, choice, 22@22½c.; fair to prime, 19@21c.; Welsh tubs, 18@22c.; poor State, 12@18c.; firkins yellow, 20@22c.; Western imitation creamery, 16@20c.; do. dairy, fine, 19@20c.; other, 14@18c.; factory or ladle-packed best, 15c.; other, 10@13c.

Receipts for week, 35,225 pkgs.; exports, 3,501 do.

Cheese.—The market was a tough one during the early part of the week and it was difficult to say where prices would stop in their downward movement. Since Wednesday the call from shippers has been steadier and prices for best factory have gained ½@¾c. Ohio flat dull. Skims freely offered at quotations.

State factory, fine, 9¾@10c., fair to prime, 8¾@9¼c; poor to fair, 6½@7¾c.; Ohios, fine, 7@8¼c.; part skimmed creamery, 4@5c.; full skims, 2@3c.

Receipts for week, 43 830 boxes.

Exports for week, 52,474 boxes.

Liverpool cable, 55s.

Steam to Liverpool, 15@20s.

Cotton.—There has been quite a long dull term for cotton: Liverpool advices furnish no incentive for speculation. For spinners' use there is a fair demand at the spot prices. The closing prices are firm and quoted as follows:

May, 10.78c.; June, 10.73@10.74c.; July, 10.79@10.80c.; August, 10.8@10.81c.; September, 10.50@10.51c.; October, 10.13@10.14c.; November, 10@10.01c.; December 10@10.01c.; January, 10.12@10.14 February 10.23@10.25. —showing, as compared with yesterday the following changes, all higher May 12@14 points; June 7; July 5. August 5; September 3@4; October 3@4; November 2. December 1; January 2. February 1.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	7 5-16	7 9-16	7 9-16
Strict ordinary	7 15-16	8 5-16	8 5-16
Good ordinary	8⅜	9 3-16	9 3-16
Strict good do	9⅜	9 11-16	9 11-16
Low middling	10 3-16	10 5-16	10 9-16
Strict low middling	10 9-16	10⅞	10¾
Middling	10 13-16	11 1-16	11 1-16
Good middling	11⅜	11⅜	11⅜
Strict good middling	11⅞	11¾	11¾
Middling Fair	12⅜	12⅜	12⅜
Fair	13⅜	13⅜	13⅜

STAINED.

Good ordinary	7	Low middling	8⅝
Strict good ordinary	8	Middling	9 15-16

Receipts for the week, 11,056 bales. Exports do. 11,751 do.

Dried Fruits.—About the only item that moves with freedom is evaporated apples. Further calls from foreign shippers stiffen prices and best marks may soon go higher. Sun-dried are moving but not to a large extent. Peaches are quiet but not pressed upon the market.

Apples evaporated choice 8¾@9c; fair to prime 7¾@8½c North Carolina sliced, common to best 4@5c. Va. do. 4@4¼c; Tenn in bbls. 4¼@4¾c. do. bags 4@4¼c; State fine cut 4@4¼c. quarters 4¾@4¾c; Western, 4¼@4¾c; evaporated peaches peeled 27@30c.; unpeeled 17@20c. very poor 10c; sun-dried peeled 5@5¾c; unpeeled 3@3½c. Plums 12@12½c. Blackberries 8@8½c. Cherries 13@13½c. Raspberries 23@24c. Whortleberries 11¢c.

Receipts for the week, all kinds, 1,540 pkgs.

Exports dried apples, 1,677 pkgs.

Eggs—Receipts for week, 15,300 bbls.; do. last week 15,200 do. Supplies have been comparatively moderate and prices have favored sellers. The market, however is tender at this season, and what might be termed an easy supply one week would prove heavy and lower; especially when eggs show heat in transportation.

Near points, 15¾@16c.; State and Pa., 15@15½c.; Western 14½c.; Canadian, 14½c.; near Southern, 14c.; duck, 15@16c.; goose 22@23c.

Furs and Skins.—Political affairs in Russia have shortened the season on the continent and the market here is very quiet All desirable lots of the catch are thought to be here. The following are the ruling rates for prime No. 1 quality:—

	Nor. & East.	W. & S. W.
Fisher	7.00@10.00	6.00@9.00
Black Bear	7.00@14.00	5.00@9.00
Cubs and yearlings	3.00@ 5.00	2.00@4.00
Otter, each	8.00@10.00	6.00@8.00
Beaver, per lb	2.50@ 3.50	2.50@2.75
Mink, dark	1.00@ 1.25	60@ 75
Mink, pale	60@ 75	40@ 50
Red Fox	1.40@ 1.60	1.00@1.35
Grey Fox	80@ 90	50@ 70
Raccoon, each	70@ 80	45@ 60
Skunk, black	1.00@ 1.10	80@1.00
Skunk, half-striped	55@ 60	50@ 55
Skunk, striped	25@ 30	25@ 30
Skunk, white	10@ 15	10@ 15
Opossum (trash-out)	... .	11@ 14
Muskrat, spring	16@ 18	14@ 15
Muskrat, winter	12@ 15	10@ 12
Muskrat, fall	9@ 11	8@ 10

Flour.—Receipts for week, 101,670 bbls; exports, 50,200 do. Receipts corn meal, 4,300 bbls.; exports, 2,550 do Flour has been in sympathy with the active breadstuffs; market is well held at the advanced prices.

No. 2. ₱ bbl. $3.30@3.90; State and Western superfine, $4.35@4.75 city mills extra, $5@6; Spring wheat do. $4.85@5.10, Spring XX and XXX, $5 25@6.10; patents, $6.50@8; Ohio round hoop shipping $5.10@5.40.; trade brands, $5.50@6.25; St. Louis extra, $5.15@5 50; do. double extra, $5.60@5 90; do. family, $6@6.50; Southern shipping, $5 30@5.85, do. XX and family $6@6.75. Rye, $5.50@6. Corn-meal, Brandywine, $5.30@5.35; Western, $3 90@3.15.

Fresh Fruits.—A few Russet apples are quoted at $1.75@2.50 per bbl. Strawberries are abundant and cheap; fine Maryland and Delaware, 9@12c.; other, including New York, 4@8c. Hot-house grapes, Black Hamburg, $2 per lb. Peanuts were active; Va. hand-picked, 4½@4¾c. per lb.; fancy, 4@4¼c; extra prime, 3¾@4c.; good to prime, 3¼@3½c.; shelled, 2¾@3¼c.; pecans; 7@10c.

Grain.—Wheat shows the largest business ever attained here in one week. Yesterday alone over 2,000,000 bushels sold for future delivery and 350,000 cash. The market became more or less feverish, but closed with prices fairly supported. Corn exhibits a good trade. Oats depend upon a speculative trade.

Wheat, Spring $1.17@1.22; red Winter No. 2 $1.26¼@1.27½; red Winter $1.24@1.28; white Western and State $1.23@1.25. Rye, $1.00@1 14. Corn, white Western mixed 55@59c.; do. No. 2 58@59c; do. yellow 58@60c; white Western 58@63c; do Southern 63@66c.; yellow do. 58@60c. Oats, white No. 1 58c.; white No. 2 56c.; white No 3 48¼@49c; mixed No. 1 46c; do. No. 2 45¾@46c; do No. 3 44@45c.

Receipts for week, wheat, bush., 1 514,185; corn, do 2,111,150; oats do 323,350; rye, do. 86,808; malt, do. 58,540; barley, do 28,375; rice pkgs. 632.

Exports for week, wheat, bush 774,583; corn, do. 1,705,255; oats, do. 1,633.

Hay and Straw.—Exports for week 1,300 bales Since Jan 1st, 31,050 do; same time last year 44,500. The market for hay is easier; buyers begin to object to paying high rates for such low qualities now pressed upon the market. Straw also lower.

Prime timothy hay $1.00@1.05 ₱ 100 lbs.; medium 85@90c, do. shipping 75@80c.do.; clover mixed 80@85c.; do. pure 75@80c.; prairie hay, 65@70c. Long rye straw $1.05@1.10 ₱ 100 lbs.; short do. 60@65c. do.; oat and wheat 45@50c. do.

Hops.—The market is quiet under an absence of export demand and no important call from brewers. The crop of American in London is put at 1,500 bales.

Crop 80 choice 21@22c good to prime 18@20c; fair to good 15@18c poor to fair 12½@15c; eastern 13@21c; 79's fair to prime 15@17c; 78 6c.

Exports for week, 1,441 bales.

Receipts for week, 679 bales.

Milk.—Supplies have exceeded the demand as the week has been mostly cool and adverse to consumption. The market has been unprofitable for commission milk and dealers have advised farmers to hold back shipments while the flow is so large in the early pasture season. The average price at platform for the week ending May 21 was 83c. per can of 42 quarts the range being $1.25 to 60c., opening and closing prices.

Maple Sugar.—No further shipments are urged; sellers anxious to close out what is here. Prime molds, 9@10c.; other, 7@8c.; sirup, 10@11 pounds to gallon, 75c.@$1 per gal., with can. Duxbury, Vt., has a tree which has yielded this season 1½ pounds of sugar to 16 quarts of sap.

Poultry and Game.—Prime turkeys are scarce. Chickens are easier but are doing well. Fowls are quite plenty and are marked down.

Turkeys, fresh, prime, 14@17c large toms, 12@13c; Phila, Spring chickens 35@55c; N J. 35@50c; Phila, Winter 30@35c; do. Full 18@22c; fowls Phila. d.p. 15@16c.; N. J. d.p. 14@15c.; do. scalded 13@14c. State and Western d.p. 13@14c; scalded 13c; poor 11@12c. Ducks, Spring, 30@40c.; old 16@22c.; Squabs, white, $3 ₱ doz.; do. dark, $1.50@1.75.

Cooped stock is abundant, but the market is not steady, as a good many small lots arrive, which distracts quotations. Many chickens are arriving too small to suit any trade, hence the wide range.

Chickens ₱ pair 25c@$1, Fowls, ₱ lb. 13@14c; roosters, 6@7c.; turkeys 10@12c; ducks, 60@90c; geese, 75c.@$1.50; pigeons, 30@50c.

A New York State pigeon-shooting tournament is set down for June 20 at Coney Island. It is expected that 20,000 birds will be required; about 12 000 are on the way eastward and will stop at St. Louis for a few days' rest. A contractor for the match is engaged in the Indian Territory with Government permits to trap and fill up the required number.

Provisions.—The bulk of all supplies is in few hands and the market has ruled strong all the week and at times has been almost optional with the sellers.

Pork extra prime $13 50@14; Western mess new $16,50@16.75; old $15 50@16.75. Lard.—Western steam $11@11.05 per 100 lbs.; prime city $10.75@10.90; Hams smoked city 10@11¼c. pickled Western 10@10½c; shoulders, smoked city 8¼@8½c; picked 7¼@7¾c; rib, pickled 8¾@9¾c. Bacon long clear Western 8¾c. Beef plain mess $9 50@10.50. extra mess, $11@11.50; family $12@13; India $22@24; beef hams $20@23.

Receipts for week, beef, bbls. and tcs, 1,415 pork, bbls. 775; cut-meats, pkgs. 17,100; lard: do. 11,780.

Exports for week, beef, bbls. and tcs., 1,024; pork do. 1,758; cut-meats, lbs. 3,641,053; lard, do. 3,737,300.

Tobacco.—A fair business is reported for hhds. and cases.

WESTERN LEAF.

	Light.	Heavy
Common lugs ₱ lb	4½@ 5¼	5 @ 6
Good lugs	5¼@ 6¾	6 @ 7½
Common leaf	6 @ 6½	6½@ 7¾
Medium leaf	7 @ 8	7¾@ 9¾
Good leaf	8 @10	9¾@12
Fine leaf	9 @11	11 @12½
Selections	12 @15	12¾@15

SEEDLEAF, CROP OF 1879.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	6 @ 7½
Penn, assorted, low	11 @13
Assorted, fair	14 @18
Assorted, fine	21 @25
Wrappers	18 @15
Fillers	6 @ 7½
N. Y. assorted, common to medium	8 @11
Assorted, good	12½@16
Ohio assorted	7 @10
Wrappers	12 @18
Wisconsin assorted	6 @ 9
Havana seed	14 @18
Wrappers	10 @15

Vegetables.—Potatoes are 25c. firmer for choice double heads, but the market has no real strength.

Bermuda potatoes now $8 ₱ bbl.; Chin and Sav. new prime $6@7; seconds and culls $3@4; Florida $3@7; Early Rose, Nova Scotia do. $2 50@2.75; Maine do. $2.50@2.75 State, do, $1,87@2; do. bulk, $1.75@1.87; State inferior $1.50@1.62; Prolific eastern, per d. n. $2.12@2.25; Mercer, eastern bulk $1.75@2 Jackson do. $2@2.25; Chill Red, N. S. bulk, ₱ bbl, $2@2.25; Burbank, do. $2 12@2 25; do. bulk $2@2.25; Snowflake, per d.-h. $2.12@2.37; bulk, $2@2 25; peachblow per d.-h. $2.25@2 50 Peerless do. $1.75@2; do. bulk, $1.75@2.

Green stuff shows more animation with seasonable weather for use: asparagus low and plenty.

Green peas, Md. per bbl $5@5.50; Balt. $3@3.50; Norfolk per ½ bbl. $1.50@1.75; Chas. and Sav. string beans $3@2.50 ₱ crate; cucumbers, Fla. $1@2 50; do. tomatoes, per bu. box, $2@3; Bermuda ₱ 5-qt. box 50@60c.; squash Fla. per bu crate 50c@$1; cabbages, Norfolk $1.50@1 75; Ch'n & Sav. $3@3; Fla. new $1.50@3; beets, L. I. 100 bchs. $5@7; Norf. $4.50@5; onions, Bermuda $1@1.12 ₱ crate; lettuce, $1@1.25 ₱ bbl.; asparagus, Oyster Bay, $1.50@1.75 N. J. $1.25@1.50; radishes, L. I. per 100 bchs $1; round, 50@75c; rhubarb L. I and J'y do. $1@1.25; hot-house mushrooms $1 ₱ lb; carrots, $2@3 ₱ 100 bunches.

Wool.—The market is quiet and without new price features. California and Texas quotations show a decline. Southern unwashed arrives in small lots and is irregular in price.

Ohio, Penn. and W. Va. XXX and picklock, 43@44c.; X to XX, 38@41c.; No. 2 to No. 1, 38@41c. coarse, 33@36c. combing 39@45.

State and Western X and XX, 36@38c.; No. 2 to No. 1 36@43c.; coarse 30@35c.; combing, 38@44c.; combing unwashed 26@30c.

Va., W. Va. and Md. unwashed medium 26@29c.; Ga. and Lake unwashed medium 26@28c.; coarse 22@24c burry and slightly burry 14@19c; Cal. Spring choice free 28@29c.; fair to good 22@26c.; low grade and burry 18@21c.; Fall choice 22@24c. low grade and burry 15@20c. Texas choice free 25@28c.; fair to good 22@24c.; low grade and burry 15@20c. Pulled super 38@42c, extra 35@38c; No. 1, 20@23c: combing 38@43c. lambs 39@42c. Tub washed, fair to choice 35@42c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, May 28, 1881.

Beeves.—Receipts for the week 12,355 head: do. last week, 12,720 do. Cattle have sold steadily and the result was a better market than was at one time expected. Medium-class cattle have held up well in price. The closing sales were as follows: Native distillery fed, 9@11½c.; still fed bulls, 5@5¼c.; light Cherokee, 9c.; Colorado stock mixed, 10¼c.; native corn-fed steers ranged 10c. to dress 56 lbs. to 12¾c. to dress 57 lbs.

Cows and Calves.—Supplies continue moderate and the market is firm for good animals. There is a good strong range of $35@55 per head, with $60 firmly asked for a cow of really fine points and good present yield. Heavy supplies are not urged; when received are liberal a good many common head are apt to appear, and the market is injured thereby from top to bottom.

Veal Calves—Have had a good sale during the week and the market closes firm at the prices:—Prime N. J. fed, 6¼@7c.; do. State, 6@6¼c.; poor to good yard lots, 4¾@6c.; Mt. Hollys, 6@7c.; buttermilks, 4@4¾c; up-river dressed, 7@9¾c Our quotations include West Washington Market stock.

Sheep and Lambs.—Receipts for the week 29,130 head; do. last week 28,559. Sheep have ruled dull and a large portion of the offering was left over. The small sales of sheep were at 4@5¾c. with a few extra at 6c. Some very common Va. sold at 3½c. Some lambs quoted 7@8c.; a few State at 9c. and N. J. 9½@10c.

Swine.—Receipts for the week 27,583 head. do. last week 25,290 do. Market steady for Western corn fed at 6@6¼c; soft hogs rejected. City dressed State 8@8¾c. heavy to light; do. Western 7¾c.

We learn that Higgin's Eureka Salt received first premium at the Australian Exposition, which is another added to the many triumphs of the Higgins improved process for salt manufacture.—American Dairyman.

FARM IMPLEMENTS & SEEDS.

Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above. Address 189 & 191 Water St.

AN OFFER
---TO---
CONSUMERS
---OF---
TEA & COFFEE.

We have made a specialty during the past four years of GIVING AWAY as PREMIUMS, to those who get up Clubs for our Teas, DINNER SETS GOLD BAND TEA SETS, SILVER-PLATED WARE, and other articles both useful and ornamental.

We import and buy direct from manufacturers all the goods we handle, and own them at the *lowest possible price* cash will purchase. During the past four years we have sent from our store over 12,000 of these orders, and they have gone into almost every State in the Union.

We keep in stock *every variety* of Tea known, and at all prices.

Oolong, Japan, Mixed, English Breakfast, Old and Young Hyson, Imperial, 50c., 75c., very finest $1. Gunpowder, Black Japan, Foochow 75c., $1. Orange Pekoe and Assam, 85c and $1.

Below are a *few* of the many Premiums offered:

With a $5 order we send a *Silver-Plated Caster.*

With a $10 order we send an *English China Tea Set of 45 pieces.*

With a $15 order we send a *Silver-Plated Caster, Pickle Dish and Butter Dish* or an *English China Decorated Tea Set of 44 pieces.*

With a $20 order we send a *French China Gold Band Tea Set of 44 pieces,* or an *English China Dinner Set of 106 pieces.*

We have *hundreds* of letters like the following:

LIME ROCK, Conn., April 30th, 1881.

Gentlemen—Please accept thanks for the beautiful Tea Set, which is much nicer than I expected, and indeed it is surprising to every one how you can do so much for so little. All are so well satisfied with the Tea that I think you will receive another order soon.

Yours truly, MRS. A. THORPE.

TAUNTON, Mass., March 8, 1881.

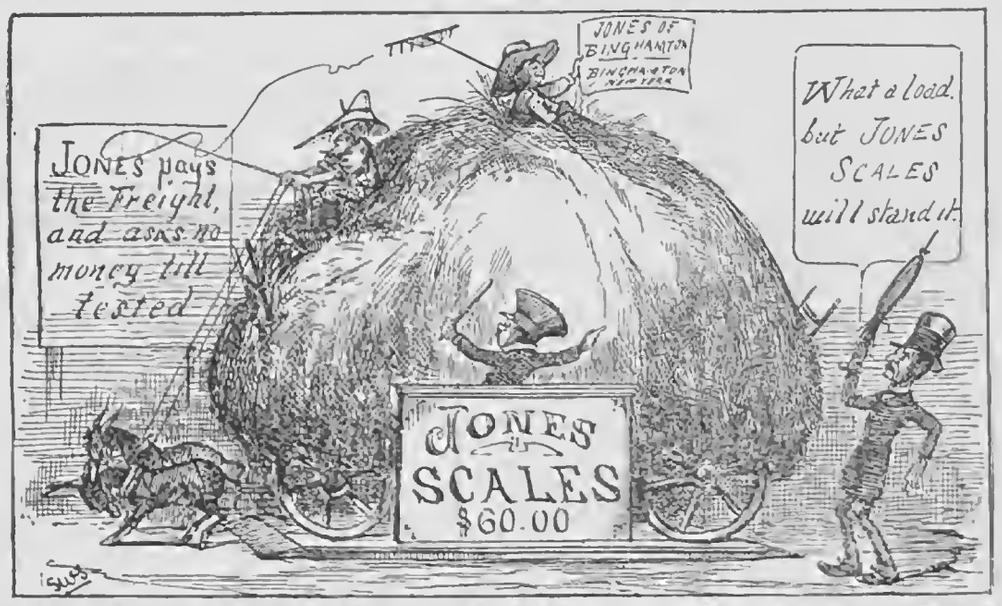
Gentlemen—I have forwarded eight different orders for Tea, and have received as premiums a tea set, a silver-plated caster, a dinner set, a glass set, a case of silver-plated knives and forks, a pair of French china fruit dishes, and *two ladies' gold watches*, and am now on my ninth order. Both Tea and premiums I am well pleased with, and have found perfect satisfaction with both. Yours truly,

MRS. MARIA C. LYNCH.

Orders, with P. O. Order, or money enclosed in registered letter can be sent at our risk. All checks or Post Office orders should be made payable to F. M. LINNELL.

We also send Teas by mail, Without premium, postage paid, at list prices, to those who wish for choice goods and are so situated they cannot obtain them at home. For full price and premium list, send us postal, with address PLAINLY WRITTEN.

GREAT LONDON TEA CO.
800 Washington St., Boston, Mass.



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Brass Beam, Iron Levers, Steel Bearings, Wearings, Knife Edges and Pivots. Every kind of Scale sold on trial, and no money asked till tested. For Free Book on Scales, address

JONES OF BINGHAMTON,
Binghamton, N. Y.

THE JOHNSTON HARVESTER COMPANY,
Brockport, N. Y.

MANUFACTURERS OF

REAPERS, MOWERS, COMBINED MACHINES

AND

Self-Binding Harvesters.

The Johnston Harvester Co.'s

GLEANER AND BINDER

Will bind after any Reaper. Simple in Construction, and easily operated Binds with twine. The gathering apparatus is quickly and easily adjusted

And adapted to all the varying conditions of Crop and Ground.

The great utility of this Machine can easily be seen. See RURAL NEW-YORKER of Jan. 22.

Reading for the Young.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

An Easter Letter.

SAN GABRIEL, April 18, 1881.

DEAR MOTHER:—This is the month of roses! I thought when I first came that they could not be more beautiful, but now they are much finer, and in addition to the ever blooming varieties all the June roses are out. Mrs. Erman has a yellow rose like the one in the front yard that always blooms so early. It seemed like a little bit of home when the first bud opened, for most of the roses are so different from ours.

A great many of the vines and climbers about the veranda have grown above the roof and are fastened to a stout wire extended on posts. This came down a few days ago and last Saturday Mr. Erman brought a ladder and went on the roof to fix it. Violet and I went up with him. Violet had been there several times, so she did not mind. But I never remember of having climbed a ladder before, and this one seemed so shaky that I almost screamed out several times before Mr. Erman landed me safely on the roof.

Such a lovely view as we had of the mountains and valley. I sat down and enjoyed it until Mr. Erman called for some assistance.

Oh, mother, I wish you could have seen the roses that lay heaped upon the roof (*In luxuriant profusion* may be more elegant, but *heaped* expresses the idea precisely.) There were roses of all sizes and colors but the most beautiful were the Lamarque and Gold of Ophir. These grew together on the north side of the house, one being budded into the other and they had made such rank, vigorous growth that the combined weight of the boughs and branches had broken down the wire. The Lamarque is trained to the top of the house and is covered with clusters of white buds and blossoms. But the Gold of Ophir, now in full glory, is so different from the roses you have known that you cannot comprehend its loveliness until you see it with your own eyes. Its color is pink and yellow so beautifully shaded together that you cannot tell where one ends and the other begins. Violet says that a gushing lady-reporter once described it as "peaches and cream in the form of a rose." There are hundreds, I might almost say thousands, of blossoms on it. Mr. Erman is going to have it photographed for the benefit of his Eastern friends; especially those who sympathize with the family for living in the backwoods so far from civilization."

We picked quantities of the roses, for it seemed a pity to let such beauties "waste their sweetness on the desert air." I filled every vase in the house, and Mrs. Erman sent a great many to the decorating committee at the church.

I scratched my hands dreadfully, but had a delightful time, and my happiness would have been "without alloy" if I had not been tormented all the time as to the manner of my descent; for that old ladder did not reach to the roof, and how I was to get down without breaking my neck I could not understand.

Violet went down first without any trouble. Then came my turn, and I approached the edge of the roof in fear and trembling.

"Now, Mr. Erman," I said, "if you let me fall my mother will have you hung for willful murder!"

I was sorry that I said it, for it made him laugh so hard that I really was afraid he would let me drop into the geraniums below. "With such a doom hanging over me I must be especially careful," he replied. "But there is no need for any fear. Violet, tell Daisy when her foot is near the first round." So I was lowered till my foot struck the ladder, and then crept slowly down.

Yesterday morning Bert, Violet and I went down to the Easter service at the old Mission Church. It was the first time I had been inside, though we have frequently driven by it on our way through the Mission. The church is just one hundred and ten years old. It is of a queer shape, long, narrow, and there are plants growing on the roof and the projections at the sides—growing in the dust of ages. There is a strange old bell-tower, which once had a chime of six bells that were brought from Spain; but there are only four left.

The streets of the Mission were thronged with Mexicans, dressed in their best, and the church was well filled; but Bert managed to secure seats for us. We were quite early, and I looked around with considerable curiosity, as I never had been in a Catholic church before. Formerly it had only a dirt floor, so Violet informed me, but now it has an ordinary floor with a sort of asphaltum pavement through the center. On either side there are six seats, or pews, having little doors; back of these are a few benches without backs (on one of which we were seated), and then a long, empty space where the people knelt or stood. The walls are roughly plastered, and are adorned with large oil pictures of the apostles, and smaller paintings having crosses on their frames. At the top it is open to the roof, showing the rafters.

In front, back of the altar, was a large figure of the Virgin, and two other images. I do not know what they were intended to represent. Then there were lighted candles—four very long ones, and a good many that were shorter—Bert said there were thirty-five in all. There were also a number of bouquets of natural and artificial flowers, but aside from this the church was not decorated.

I expected to find no one but Mexicans attending the services, but I saw a good many white people—some of them very well dressed. They were seated promiscously throughout the building. One old Mexican woman, before she took her seat, kneeled slowly down on the pavement, and touched it with her forehead. When the women came in late, if there were no vacant seats down they knelt on the floor. A good looking woman, wearing a nice black silk, knelt by us till a Mexican gave her his seat. The church was very damp and cold, and I do not see how those women and children endured staying on the floor so long. The men were not as humble; they seemed to prefer standing.

After awhile the priest came in with some boys dressed in red and white; and as soon as they appeared four Mexican women in a rude gallery at the back of the church began to sing. Of course we could not understand anything, but it was the queerest music I ever heard, for they all sang through their noses and *very* slowly. Bert said it strongly reminded him of a cat concert. I remember this strain came in very often.

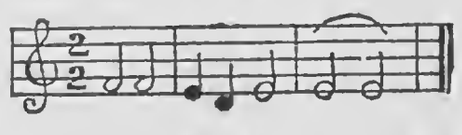

FIG. 289.

Ask Mary to sing these notes with a decided nasal *twang* and as slowly as possible, and you may get some idea of the *music* to which we listened. While the *choir* was singing, the priest came down the aisle with one of the boys and scattered something around—I suppose it was incense. Then he went back to the altar and commenced a sort of chant. First he sang and then the choir responded. When this was finished he went up into a queer little pulpit built out at the side of the church, and read from a book in Spanish, and then commenced to preach in the same language.

After he finished his sermon he read in English a long communication from the Bishop with reference to certain collections, and then made lengthy explanations for the benefit of the American part of his congregation. Then he took up the paper again and commenced reading it in Spanish. "Oh, fudge!" said Bert. "Do you girls want to stay and hear all that rigmarole over again?"

Neither of us cared to stay any longer, (for it was very tiresome sitting on that bench without any back,) so we walked out into the pleasant sunshine which seemed all the brighter on coming out of the gloomy, damp old church.

In the afternoon there were Easter services at the little Alhambra chapel. I cannot help thinking of the way our church at home is usually decorated for Easter. If the weather is mild a few living near take over some of their house-plants, and possibly borrow some from the green-houses, and everyone says, "How beautiful!"

I wish all the people in E—— could have seen this little church yesterday. I am certain that very few of them ever looked upon such a sight.

The windows and illuminated texts on the walls were festooned with long sprays of English Ivy. Back of the minister was a cross of callas over five feet high—(this refers to the cross, for callas five feet in hight would be a wonder even in California) and rising from a mound of roses of all colors. The altar rail was completely hidden in flowers, and in front of it was a perfect bed of the beauties—roses and many other kinds. There must have been *bushels* and *bushels* of flowers there. On the wall was a lovely anchor of Gold of Ophir roses, and there were bouquets in every available place: one vase of delicate wild flowers and ferns was especially beautiful.

There! Violet is calling me to go down in the *arroys* with her. You cannot complain that this letter is short, so write a good long one in reply to

Your loving daughter. DAISY HEBERDEN.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—My father has long taken the RURAL NEW-YORKER, until lately, when he let me take it. I am a Northern New York girl and live on a farm near the Rackett river. I am 14 years old, and have taken the first premium twice at the fair for yarn spun by a girl under 15, and have once more to try. I have just finished a quilt for our next fair which has nine hundred and seventy-eight different kinds of print in it. I am very fond of flowers and pets. The farmers around here have been busy this Spring making maple sugar. CARRIE M. CRANDALL.

Hanawa Falls, N. Y.

THE YOUNG QUERIST.

A. W., Peterboro, Canada, asks if we allow Canada boys and girls to join our Club.

ANS.—Certainly. We hope to enroll on our list many names from Canada. If you have applied for admission before, your letter has been miscarried, as we have not received it.

O. M., Cool Springs, Ga, sends flower for name.

ANS.—We are not able to name the flower you sent us. If you will send us a better specimen with stem, leaves and flowers, we will name it for you.

D. R., Solitude, Ark, wishes to know if violets make seed.

ANS.—Yes: you can obtain seed at almost any seed store.

W. P. D., Dover, N. Y., asks, 1, the name of the little black bug found on squash vines; 2, what will destroy it.

ANS.—1. This little bug is known as Coreus tristis or common Black Squash Bug. 2. The best way to get rid of these pests is by hand-picking. Examine the vines daily during the early part of their growth, both for the bugs and their eggs. Place pieces of boards near the vines, for the bugs will collect under them at night, and early in the morning they may be killed.

Fair skin, rosy cheeks, buoyant spirits and the sweetest breath in Hop Bitters.—*Adv.*

Miscellaneous.

A RICH EXPERIENCE.

What a Prominent and Well-Known New York Physician Told a Reporter.

His Revelation Upon a Subject of Vital Interest to All.

(*Detroit Free Press*)

The experience of any one of education and learning extending over a long period of time must necessarily be valuable, and while no two experiences in this world are alike, there is such a similarity between them as to render one which is rich in valuable facts of benefit to all. America's greatest orator declared that he knew of no way of judging the future but by the past; and past personal experience is of the same nature as that history which repeats itself.

A representative of this paper while lounging in the lobby of a prominent New York hotel, met a gentleman whom he had known years before in the city of Detroit, but whom he had not seen before for a number of years. When the knight of the quill had last seen this gentleman, he was giving his entire time and attention to an extensive medical practice, and was on the crest of the wave of popularity. From Detroit he removed to New York where he could find a more extensive field for his talents and experience. Although several years had passed, the doctor's physical condition had evidently very much improved, for he was looking much better than when the man of news had last seen him. After some general talk, the doctor fell into an easy train of conversation and uttered some truths so scientific and valuable, as to justify their reproduction in print.

"Yes," said the doctor, "I have improved in health since you last saw me and I hope also in many other ways. One thing however, I have succeeded in doing, and it is one of the hardest things for anyone, and especially a doctor, to do and that is I have overcome my prejudices. You know there are some people who prefer to remain in the wrong rather than acknowledge the manifest right. Such prejudice leads to bigotry of the worst order, and of precisely the same nature as characterized the sixteenth century when people were burned at the stake. Now I am a physician and of the 'old school" order, too; but I have after years of experience and observation, come to the conclusion that truth is the highest of all things, and that if prejudice or bigotry stand in the way of truth, so much the worse for them—they are certain to be crushed sooner or later. Why, when I knew you in Detroit, I would have no sooner thought of violating the code of ethics laid down by the profession, or of prescribing anything out of the regular order, than I would of amputating my hand. Now, however, I prescribe and advise those things which I believe to be adapted to cure, and which my experience has proven to be such."

"This is rather an unusual way for a physician to talk, is it not, doctor?"

"Certainly it is. It is way outside of our code of ethics but I have grown far beyond the code. I have all I can attend to, and am determined to be honest with my patients and mankind, whether my brother physicians are with me or not. Why, I prescribe medicines every day, some of them so-called patent medicines, which would render me liable to expulsion from the medical fraternity, but I am supremely indifferent to their laws."

"Are the medical fraternity of the country combined against proprietary medicines, doctor?"

"Invariably, and it is sufficient ground for expulsion from any medical society in the land to prescribe any patent medicine whatever, no matter if it is made from an exact formula, such as physicians are using every day. You see the code is established and sustained by old physicians like myself, who make the rules and insist upon their enforcement in order to keep the younger doctors from obtaining a foothold and encroaching upon the already established practice of the older ones. This is largely the reason why young physicians have such a hard time of it; they are fettered by the code, and have only their personal influence to depend upon in securing practice."

"How did you come to get such heretical ideas as those, doctor?"

"Oh, they are the result of my experience and observation. I obtained my first ideas upon the subject, however, from having been cured after all my care and the skill of my professional brethern had failed to relieve me. Why, I was so badly off with a complication of troubles, including dyspepsia, and consequently imperfect kidneys and liver, that I feared I should have to give up my practice. For more than a month I could not sit down or get up without the most intense agony, and I was suffering all the while. Some one advised me to go out of the regular channels and try a remedy that was becoming quite famous for the remarkable cures it was effecting; but my prejudice was altogether too strong for that. However, I did quietly begin trying the remedy, but I promise you I said nothing to my brother physicians, or even to my family about it. Well, sir, it was a revelation to me: for in all my medical experience I never saw anything operate so rapidly or so effectually as that did. I owe my health to-day; and for all I know, my life also—to the remedy know as Warner's Safe Kidney and Liver Cure. That was the starting point with me, and my prejudices faded very rapidly after that I can assure you. I went to reading extensively and analyzing more extensively, and I suppose I analyzed all the leading proprietary medicines that are made. Many of them I found perfectly useless, being compounded simply of water with a little flavoring. A vast majority of them all, however, I found made up of prescriptions used by physicians in their every day practice; but out of the entire number I found only two that contained absolutely harmful ingredients and then in very slight quantities. Indeed we are prescribing things constantly that have more deleterious matter in than they had. After discovering this, I said to myself: why should the medical fraternity be prejudiced against those prescriptions which they are writing every day, simply because they are put up by wholesale and are sold with a government stamp on the wrapper. I saw its manifest absurdity and I resolved that I would be bound by it no longer. Since that time, I have prescribed proprietary remedies nearly every day, in my practice, and I have no reason to regret having done so. Why, only a few days ago, I advised a lady who was suffering from a serious female difficulty and displacement to use this same Safe Kidney and Liver Cure which cured me. I saw her this morning and she is nearly well; the pain and inflammation are all gone and she is around as usual. We have no right in the medical fraternity to sit back and declare there is no such thing as improvement or advancement or that we have a monopoly of the remedies which nature has given to mankind. There are great changes going on in every department of life and there are great developments in medicine as well. Thousands of people die every year from supposed typhoid fever, rheumatism or other complaints, when in reality it is from trichina, and the result of eating poorly cooked and diseased pork. A vast majority of all diseases arise from imperfect kidneys or liver. The liver becomes clogged, and its work is thrown upon the kidneys; they become overworked and break down, and so the poison gets into the blood instead of being thrown from the system. No one with perfect kidneys or liver is ever troubled with malaria; and it is the poisonous particles which these diseased organs allow to get into the blood that clog the capillaries of the lungs and cause tubercles and consumption. Thousands of children are dying every year from dropsy as the sequel to scarlatina, when in reality it is diseased kidneys which have become weakened by the fever they have just had. Here is another strange thing: not one in ten people who have diseased kidneys notice any pain in the vicinity of the kidneys, for these organs lose their nervous sensibilities when they become diseased, and the symptoms are shown in hundreds of other ways."

"Well, doctor, you have got some new truths here, certainly, but they sound very reasonable to me."

"Well, whether they are reasonable or not, I have demonstrated to my own satisfaction that they are true, and I propose to stand by them, no matter how much opposition I may raise by doing so. Any man, be he politician, preacher or physician, who is so considerate of his pocket-book or of his own personal ends as to stultify himself by suppressing the manifest truth, is unworthy the name of man, and unworthy the confidence of the public whom he serves."

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PERSONAL ITEMS.

Moses Coit Tyler, of Michigan University, consents to succeed William C. Russel as Professor of History at Cornell.

General B. F. Butler having announced that he "feels like a boy again," the Boston Herald is wicked enough to suggest that he probably means the "old boy."

A prominent Conkling man says the Senator has received a guarantee from a large NewYork law firm of $50 000 annually, if he will become a member of the firm. Half that sum, it is said, represents more than Mr. Conkling's entire present fortune.

Roscoe Conkling gets a $100,000 retainer from parties interested in dissolving the Manhattan Elevated Railroad Company of this city. It is said. This company owns all the elevated lines in the city, the two original companies having been bought out by it on conditions which, it is said, it has been unable to fill.

[Sheboygan Falls, Sheboygan Co. News.

We never saw any one joyous when suffering from pain—neuralgia for instance. In relation to this malady, Mr. George Guyett, Prop. Guyett House, thus informed our representative: I have used St. Jacobs Oil for neuralgia, and can confidently recommend it to any one similarly affected.—*Adv.*

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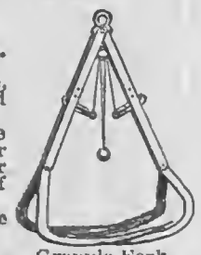

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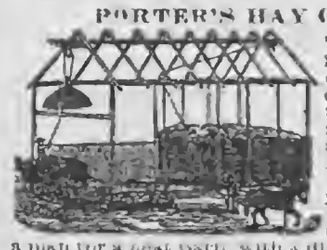

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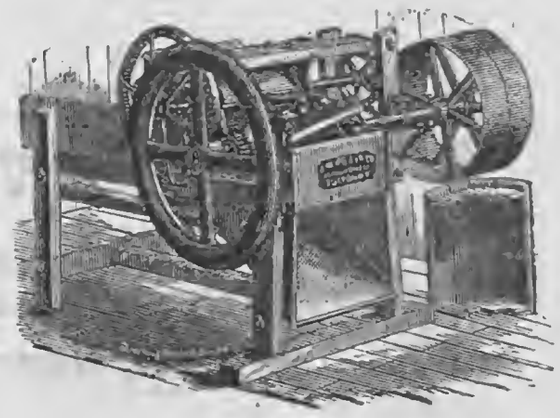

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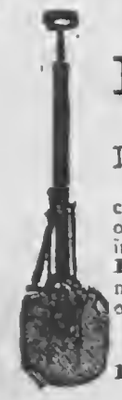

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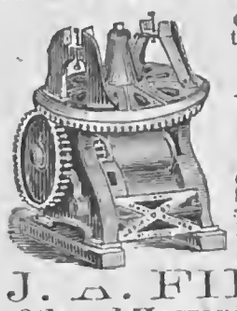

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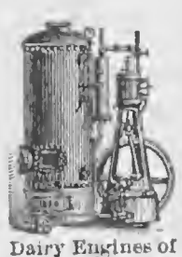

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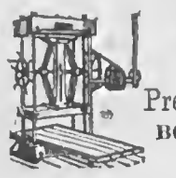

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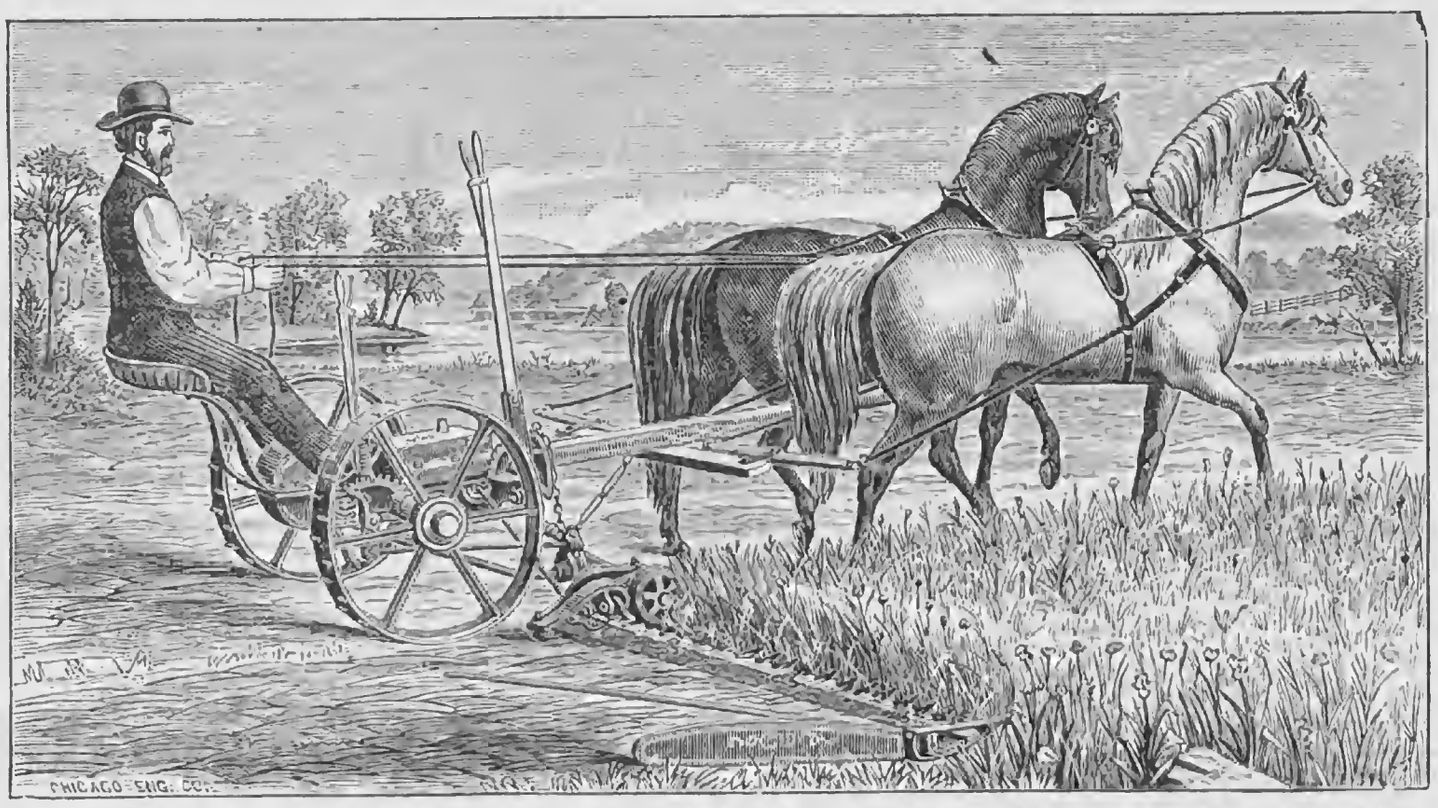

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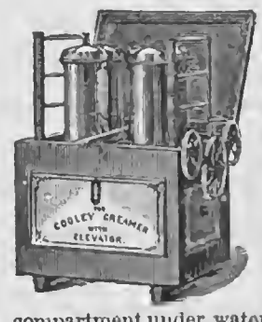

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XL.—No. 1637.} NEW YORK, JUNE 11, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

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HOLSTEIN COW, NETHERLAND QUEEN (414.)—From a Photograph.—See Page 382.—Fig. 290.

The Herdsman.

HOLSTEIN, OR DUTCH FRIESIAN CATTLE

PROFESSOR I. P. ROBERTS.

Holland, or more properly speaking, the kingdom of the Netherlands, the native country of these cattle, contains 13,000 square miles while New York contains 47,000 square miles. It is divided into 11 provinces and has a population of about 3,500,000. This country is the lowest in the world, the greater portion of it lying below the sea-level. The drainage of Haarlem Meer, a lake eighteen miles long, nine wide and fourteen feet deep, begun in 1840 and completed in 1853 at a cost of eight million florins, was one of the greatest feats of modern engineering skill. The reclaimed land sold for an average price of 1,434 florins per acre, and this Polder has at the present time a population of 7,249. There were many smaller lakes and numerous marshes, which have been reclaimed and are now known as Polders. The land is extremely fertile but quite moist, and is therefore not adapted to grain-raising, but is admirably fitted for producing grasses.

Immense and costly dykes prevent the encroachments of the sea, and a multitude of gigantic wind-mills pump the water from the lower levels to the higher, whence it finds its way through the large canals to the sea. Usually no fences are required, as large ditches define the boundaries of fields and farms. These being nearly full of water and very soft in the bottom, restrain the cattle most effectually. It is estimated—how accurately I cannot tell—that the land of the Netherlands has cost two and a half times as much to reclaim it as it would sell for in the market to-day.

With scarcely an exception, all the cattle of this breed imported into the United States have come from the two provinces of North Holland and Friesland; the lower lands furnishing by far the best specimens. The breed has been formed by surroundings and circumstances rather than by a few scientific breeders, like Colling, Bates and Booth. They are without doubt the most ancient of all modern breeds, since history gives no intimation of any other breed or sub-breed occupying the Low Countries prior to these variegated black-and-white Dutch cattle. In the last hundred years they have been improved in form and milking qualities, not by any admixture of blood, but by more careful selection and better care, food and stables. Within the last twenty years the best breeders have been breeding towards more uniform colors. The prevailing fancy in the United States just now is black and white not mixed, but with margins distinctly defined and the former color predominating. The dark color, when a jet black, adds somewhat to their beauty; but some claim that animals thus marked are not such good handlers as are those of a brownish-black tinge. Various circumstances combine to enable the Hollander to keep an immense number of cattle: his land is very productive and is all devoted to grass; the grass is fed to the cows and young cattle along with some purchased concentrated food. In fact, the number of animals in some districts is so great as to be almost beyond belief.

These cattle, without written pedigrees, without a single eminent scientific breeder, and in juxtaposition to other breeds, have not only preserved through long years their purity of blood, but have steadily improved in valuable qualities. This is owing to the fact of

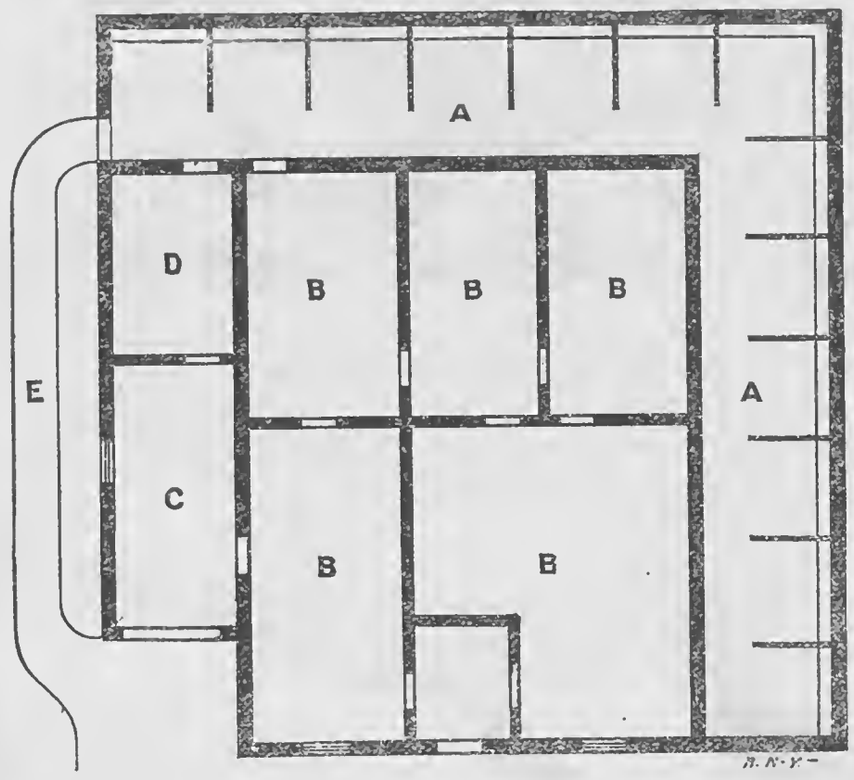
their development under peculiar circumstances. The climate is cold, raw and damp in Winter, necessitating the best of shelter and care; the grasses are abundant, nutritious and succulent; the soil moist and level. These circumstances aided in producing a large, thick and long-haired animal. In an early day, dairying naturally attracted great attention, as in those times the products of the cow could be transported more cheaply and more easily than her carcass. Therefore, selections were made by all with reference to milking qualities, while without special care or attention by the breeders the abundant and nutritious food gave size. As breeds were formed in adjacent countries, a few from time to time, of various strains, were brought into Holland and either bred separately or crossed with the native cattle. The result was always an animal inferior to the pure home-bred beast, consequently the foreign blood was discarded. Briefly stated, these are the causes that have led to the formation of this *par excellence* milk and beef breed combined, and have preserved it in its purity.

To get a better idea of the Hollander's methods, let us take for illustration a dairy of thirty first-class cows. They would produce thirty calves. The males, with possibly a single exception, are vealed and sold. From six to ten of the most promising calves are raised, their selection being largely governed by the milking qualities of their dams. This is done every year, and therefore each Spring there is a like number of two-year-olds to have their first calves. These heifers are bred to come in early in order that extra food and attention may be given them to develop their milking qualities to the highest extent. But this does not satisfy the close-figuring Dutchman. For while all, with scarcely an exception, will be good milkers, some will be better than others and thus the third time a careful selection is made. If mistakes have been made before, they can be corrected; for the cows are now put to that most perfect and rigorous of all tests—actual performance at the pail. Nothing but superior performance will do in that land of high rents, and it is not uncommon for one-quarter of these heifers to find their way to the butcher before Christmas. As these young animals are each year added to the dairy some of the older ones must be sold to make room for them; so, if at three years or at any subsequent age they do not maintain this high standard, they are sent to the block. Let them be ever so good, they seldom see their eighth year, as it would be bad policy to keep even a very good cow till she was a worn-out shell, not profitable for beef, when there are plenty of younger animals coming on equally good to fill her place. If fattened at a comparatively young age she will sell for $80 to $100.

The Holstein in the hands of the Dutchman never dies in debt. The veal, the two-year-old, whether she be superior or only a fair milker, or the more mature cow, always shows a balance on the credit side. It will be seen that the method practiced tends to maintain, not only the milking qualities, but to improve them. It will also be noticed that the sales are: first, veals; then butter and cheese, and, in the Fall, beef. The sales of meat frequently reach $800 a year in a dairy of 30 cows, veal and cow-beef bringing nearly twice as much with them as with us. The Lord might have made a better breed of dairy cows than the Holstein, and a more economical and close-figuring dairyman than the Hollander, but He never did.

The management of the cattle and the manner in which the Hollander lives are so closely connected that, to some extent, both must be described at the same time. Figure 291 represents the dwelling-house and the cow-stable, which are under the same roof. They are included in one large building from 60 to 80 feet square, divided into first floor and loft. The first story is built of small, hard-burned brick, and is scarcely raised above the level of the ground. The roof is very steep and high, without gables, and hipped up on all sides to the peak. The upper portion of the roof is thatched with straw or reedy grasses; the lower edge is often covered with earthen tiles, painted some bright color, and the thatching is cut in handsome scallops where it meets the upper edge of the tiles. The roof forms an immense dome, 40 to 60 feet high, in which hay—the only field product—is stored. The cut shows how one corner of the building is cut out in order to get an entrance of sufficient hight for the loads of hay, which are drawn with one horse hitched to a wagon having neither shafts nor tongue. The hay is supported by large, planed beams or joists, covered on their upper side with flooring. The under side of the floor and the beams which appear in the room below are thoroughly painted and varnished.

Figure 292 represents the ground-plan of house and stable. It will be seen that the cow stable consists of a row of stalls along two sides of the building. The cows are tied up in these stalls in the Fall and remain there until turned out to pasture in the Spring. They are usually arranged in pairs on the elevated platforms of the stalls, and there is a round window for each pair. Depending from the ceiling are cords to tie up their tails that they may not become soiled. The droppings are removed several times daily. The feed consists of hay with a very small amount of concentrated food, such as oil-cake, and the excrement is therefore not so offensive as that of more highly-fed animals. The stables are all perfectly sweet and clean; in fact, they are—



GROUND PLAN.—FIG. 291

without the least exaggeration—cleaner than many American kitchens.

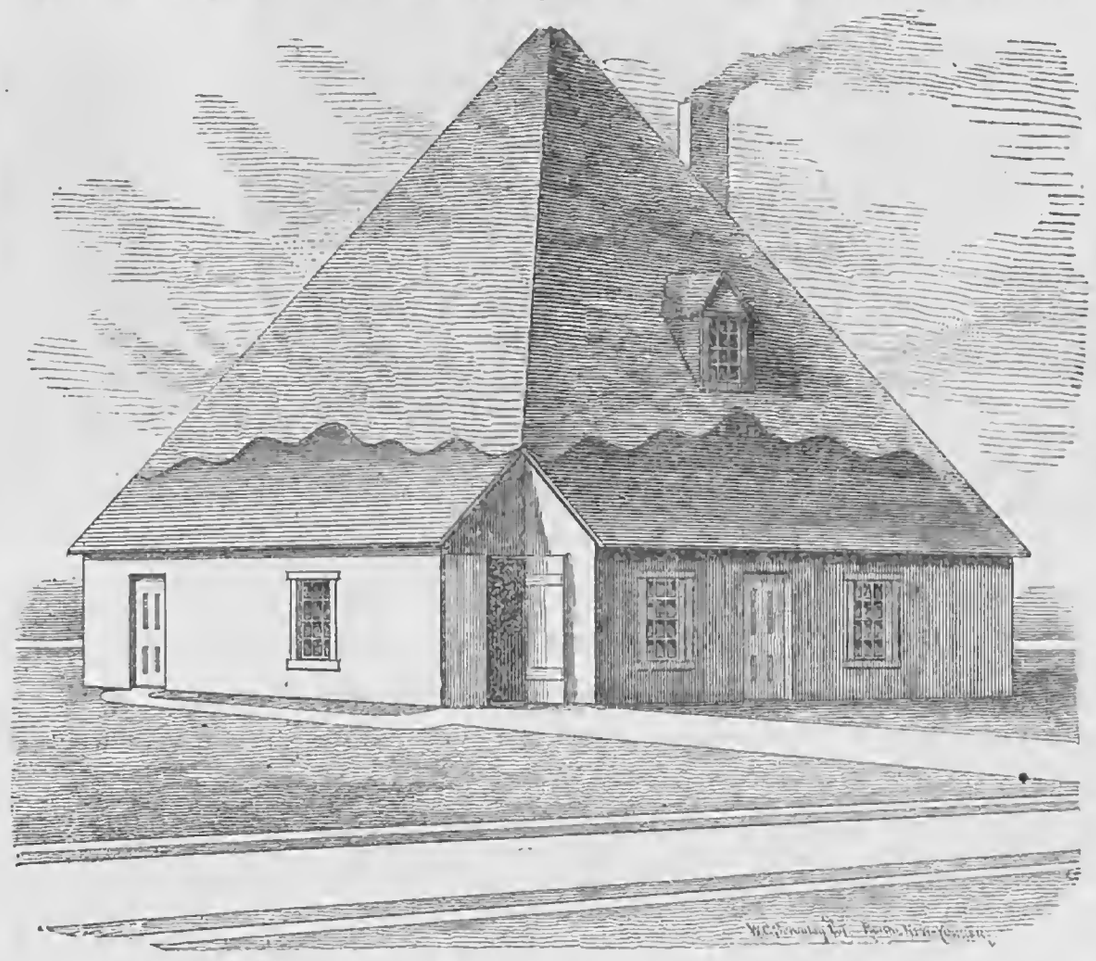
The Winter living-rooms of the family comprise the rest of the house on the first floor. After the cattle are turned out in the Spring the stalls are thoroughly cleaned, painted and varnished throughout; the walls of the stables are ornamented with pictures, family china, household utensils, etc., and frequently a portion of them is used for a Summer dining-room and kitchen. There are two doors beside the large one for the loads of hay, the cow-stable door and the front door. The last is furnished with an inside bolt only, and is sometimes called the "dead door," as it is never used except in case of a marriage or death in the family. All visitors, of whatever station, are expected to enter through the cow-stable door. Members of the family remove their shoes (sabots) outside the door and step into slippers which are always kept just inside. These people by kindness and attention and by anticipating every want of their cattle, have succeeded in breeding into them an unusually quiet and peaceable disposition which they transmit to their off-spring. I trust that the nervous American will not breed, frighten or starve this valuable quality out of them. These Holstein cattle so admirably adapted to the northern part of the Netherlands, are an extremely valuble addition to our other breeds, and there is room enough in our great country for them. But we must approximate to the same circumstances and surroundings which have produced them, or they will degenerate. He who places them on poor, hill pastures, starves them in August, lets them run dry three months in the year and both starves and freezes them in Winter, will become disgusted and conclude that acclimated natives are the best after all. So they are for such dairymen. Liberal food, kind and intelligent treatment will find their greatest reward when bestowed upon the somewhat artificial or improved breeds.

Holstein Cow, Netherland Queen (414).

Netherland Queen, Fig. 295 owned by Messrs. Smiths & Powell, Syracuse, N. Y., was selected in Holland by one of the firm, when coming one year old, as the finest representative of the breed to be found in that country. As a one-year-old she was awarded the first prize at the N. Y. State fair at Elmira in 1878. As a two-year-old she won the first prize at Utica, N. Y. As a three-year-old she was placed in the class of mature cows, and in a very superior class of older animals was awarded second prize at Albany. She dropped her first calf when just about two years old, and during the year made an unequaled two-year-old milk record of 58 pounds 12 ounces in one day, 1,670 pounds 9 ounces in one month, 18 574 pounds 3 ounces in a year, dropping her second calf two days less than a year from the date of the first. She is from the same herd in Holland and closely related to the heifer "Lady of the Lake" whose cut appeared in the RURAL some weeks since, and which has recently closed her two-year-old record of 12,200 pounds 4 ounces in a year, commencing her record at 22 months old. The milk record of 22 registered Holstein cows of the herd of the above firm for the year just closed, averaged, for mature cows, 14,164 pounds, 15 ounces; and for two-year-old heifers, 9,681 pounds 15 ounces.

HEREFORD CATTLE.

THESE cattle obtain their name from the county of Hereford, England, where, from the time "to which the memory of man runneth not back," they have been always extensively,



ELEVATION OF FRIESIAN FARM HOUSE AND STABLE COMBINED.—FIG. 292.

and sometimes almost exclusively, raised. Their origin, like that of all the other ancient breeds, is "wrapt in mystery;" but it is supposed by those who have made a special study of the matter that they trace back, in part, at least, to a race of white cattle with red ears described in the tenth century. Down to the present day pure Herefords of this color crop out, probably through atavism. It is related that Lord Scudmore, who died in 1671, introduced cows of a red-and-white breed from Flanders, and these are supposed to have been bred with the white race with red ears, and to have produced the colors of the Herefords of to-day. In any event, they are certainly a very ancient breed, and are generally thought to be allied to the Devons.

As long ago as 1766, Mr. Benjamin Tompkins began to breed Herefords carefully at Kings-Pyon, nine miles from the city of Hereford, and continued the business for about 50 years. He was to the improved Hereford what the Collings brothers were to the improved Short-horn. After his death his herd of 52 head, including calves, was sold at auction, in 1819, and brought an average of $450 each, a two-year-old bull making $2,940, one cow $1,365, and several others over $1 000. These prices show the high estimation in which this breed was then held. Even before that date, however, a Hereford ox bore away the first prize at the first meeting of the Smithfield Club, in 1799. This was a seven-year-old beast, eight feet eleven inches long, six feet seven inches high and ten feet four inches in girth—a goodly animal with which to begin the Hereford record, and worth its price—100 guineas—$525. The first known importations of Herefords into this country consisted of two cows, or heifers, and one bull, which arrived in Baltimore in May, 1817, for Henry Clay, of Kentucky. For some years there was in that State a close rivalry between Short-horns, Long-horns and Herefords; but finally, after 1830, the two latter were bred to Short-horn bulls and both the other pure breeds soon became extinct there. The next importation of any importance was made into this State by Messrs. W. H. Sotham and Erastus Corning, in 1840. During the seven years these gentlemen continued together in the business of breeding Herefords they sold a considerable number of cattle in New England and this State. In 1860 and 1861 two importations were made into Canada, consisting of two bulls and eleven cows and heifers. Since then numerous importations have been made chiefly to Maryland, Maine, Indiana, and Illinois. Lately the first volume of the American Hereford Record has been published, containing the pedigrees of 2 915 pure-bred Herefords in this country, and we understand about 1 000 other entries have already been contributed towards a second volume.

The old Herefords, according to Youatt, were brown or red-brown, with not a spot of white about them, but those of to-day are red with white faces, white on the top of the neck, along the throat, dewlap, brisket and fore-legs, belly and flanks; and white hind feet and tail tips are also now fashionable. The head is small in comparison with the rest of the body; the chest deep and full; the bosom sufficiently prominent; the shoulder blades thin, flat and sloping towards the chines, and well covered on the outside with mellow flesh; the chine and loin broad; hips long and moderately broad; legs straight and small; rump forming a straight line with the back; thighs full of flesh to the hocks; hide thick, yellow, and well covered with soft, glossy hair, having a tendency to curl. The horns belong to the "middle-horn" class. Their chief merits are a robust constitution, early maturity, great aptitude to fatten, freedom from disease, hardiness which enables them to withstand climatic extremes better than any other breed; ability to thrive on rough fare; great prolificness; excellent calving propensities, enabling them to drop their calves, even when in high condition, with little trouble or danger. They are also considered to be the best graziers in England, and, taken from grass, their flesh fetches the highest price in the London markets, except the small supply from the West Highlanders. The beef both of the male and female Hereford is highly prized for its excellent flavor and its beautiful marbled appearance due to its admixture of fat and lean.

It is claimed that Herefords will fatten on less food than Short-horns and mature as early; that their flesh is better and they are hardier and more active. They are purely a "beef" breed, as the cows give less milk than those of any other strain. This is due to the fact that for generations they have been required only to rear their own calves; hence their milking properties have been neglected, aptitude to fatten having been cultivated instead. The Hereford working ox is possessed of greater strength than the Devon, is quick, gentle and an excellent traveler. The hardiness and capability of taking care of themselves on rough and scanty pastures, together with their aptitude to fatten at an early age, and the excellent quality of their flesh, are fast making the Herefords favorites in New Zealand, Australia, Canada and our Western States and Territories. The recent establishment of our meat trade with Europe has greatly increased their popularity on the plains, where already the demand for bulls can hardly be supplied for the purpose of improving, by crossing, the quantity and quality of beef from "natives" and Texans. Wherever they have been introduced they have become readily acclimated and adapted themselves to new conditions, retaining all the while their character, form and quality.

NORFOLK AND SUFFOLK RED POLLED CATTLE.

G. F. FABER.

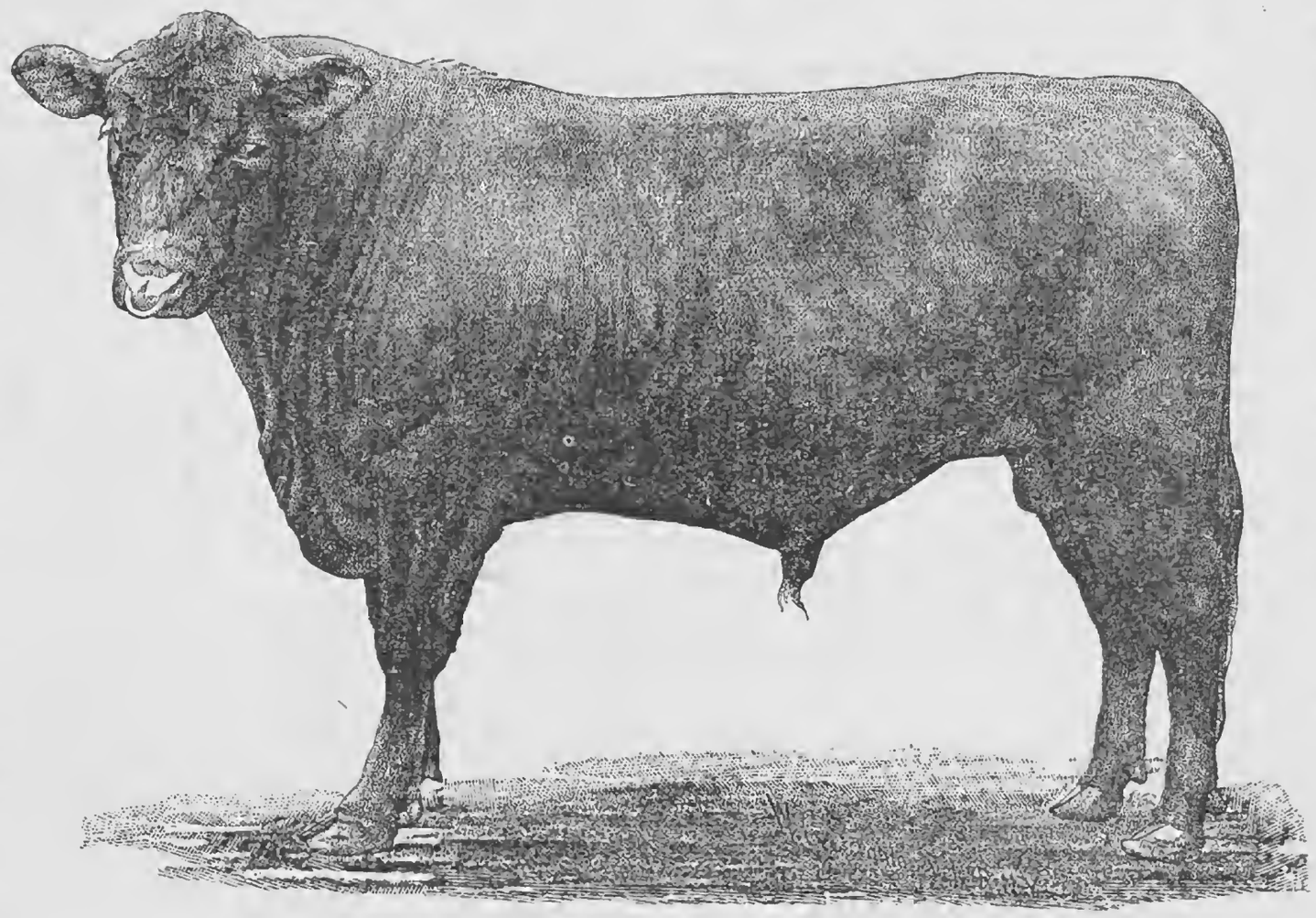
DURING the last quarter of a century much attention has been given to the breeding and improvement of the different strains or families of polled cattle, which for a long time previous, had been a favorite stock with the farmers of a few localities in England and Scotland. The breeders and admirers of the polled cattle in Great Britain now have the satisfaction of noting a rapidly growing demand for their stock at much larger prices than were ever before paid, notwithstanding the general depreciation in the value of other breeds of cattle there during the past few years. They also find their American Cousin, with all of his usual enterprise, promptly on hand, to take an interest in anything superior to that which he has in his own country, and it is with no small degree of satisfaction that they now see the opening of a market for their stock, which may be said to be almost unlimited in its extent, creating a demand that will soon advance prices.

My only wonder is that my own attention, as well as that of others, was not sooner called to the advantages of hornless over horned cattle. During the past five years much has been written and said by American breeders and writers for agricultural papers for and against polled cattle. On the part of some there is a prejudice against them, which may be readily accounted for where parties are interested in costly herds of horned cattle. I have yet to hear of one good reason for preferring horns on our domestic animals. There is no desire to have them on horses and sheep, why on cattle? There will be less of this prejudice when the introduction of hornless cattle shall have become more general, and I predict this at an early date, judging from the preparations now being made for large importations of the improved breeds of the Old Country.

There has of late been a great deal of inquiry with regard to the characteristics of these improved breeds. The great improvements made by the leading breeders of polled cattle in England and Scotland, would seem to have developed representatives of two distinct types or breeds of these animals, which are now known as the "Norfolk and Suffolk Red Polled Cattle," originating with the red or dun polled cow, common in Norfolk and Suffolk counties, England, so far back as the remembrance of the oldest inhabitants, and the improved "Polled Angus or Aberdeen" of Scotland, which probably originated with the Polled Galloway. The Angus are of the same color as the Galloway—black—but are larger and of so much better quality that they are now considered as a distinct breed.

In this article I shall treat only of the Norfolk and Suffolk Red Polled Cattle, which on account of their fine form and stylish, spirited appearance, their beautiful color and their adaptability to the production of either beef or milk and butter, I prefer to either of the other polled breeds. They vary much in size, the cows running from nine to fifteen hundred weight. For my own breeding I prefer a medium-sized cow of from ten to twelve hundred weight. I find that an increase of size, above this, is apt to be gained at the expense of milking qualities, and I prefer to keep two distinct strains; one of medium size, which for dairy purposes will compete with any breed in the country, giving a good mess of milk of excellent quality and holding out well; the other larger and more easily fattened making beef of the finest quality. All of these cattle are very hardy, and are not so much affected by sudden changes of climate as are some of the improved breeds of horned cattle with which I have had experience. The cows, almost without exception, have large teats, a great advantage in the drawing of the milk. Not a few experienced breeders have remarked, upon seeing certain cows of this breed, that, in their judgment, they were a perfect type of what a good dairy cow should be; that they would not know where to suggest an improvement. Mr. P. K Fowler, an English breeder of Short-horns, says, "I have seen the Norfolk for the first time, and I must say I am much struck with the remarkable usefulness and value of the cattle of this district. The cows have good, useful udders, so that they are likely to be capital cows for the dairy. Among the lot we scarcely found an animal but what was fit for the show yard. As a Short-horn breeder, I wish I could put some of the good points I found upon the Norfolk Polled Cattle on the animals I am breeding."

The points of a superior animal as accepted by breeders of these cattle are as follows: "Color: a deep red with udder of the same color, but the tip of the tail may be white; nose not dark or cloudy. Form: a neat head and throat; a full eye; a tuft or crest of hair should hang over the forehead. The frontal bones should begin to contract a little above the eyes and should terminate in a comparatively narrow prominence at the summit of the head. In all other particulars the commonly accepted points of a superior animal are to be taken as applying to the Norfolk and Suffolk Polled Cattle.



POLLED SUFFOLK BULL, "STOUT."—FROM A PHOTOGRAPH.—FIG. 293.

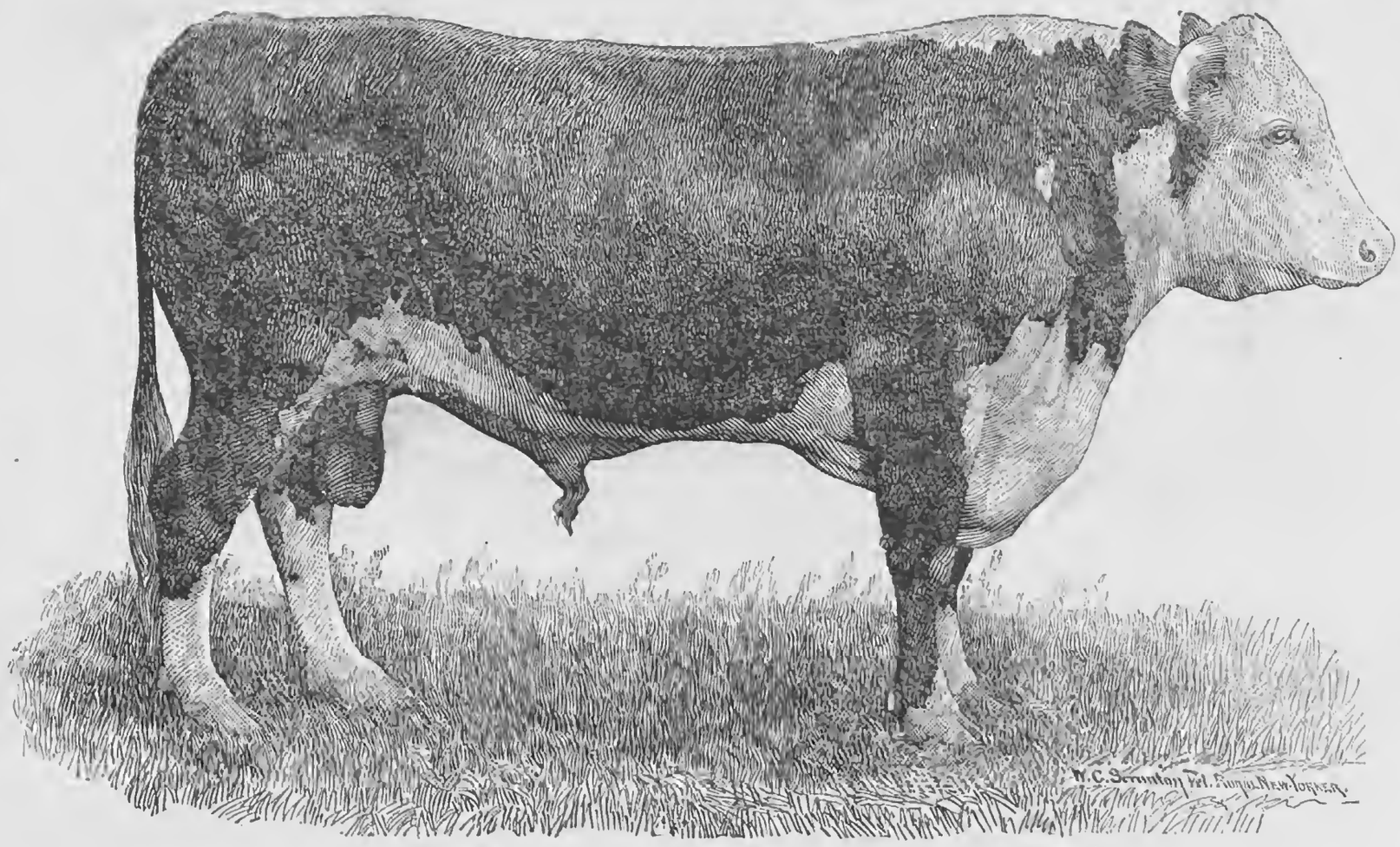
No farmer who has owned a herd of improved polled cattle, will ever again have cattle with horns. A dozen of the polled cattle will drink at the same time from a trough, which would accomodate but one animal having horns. The same number will crowd together, under a shed for shelter the whole space of which one horned animal would consider necessary for its comfort, driving its fellows out. With these polled cattle, the farmer and the shipper of stock need have no fear of damage resulting from the goring of horns. There is now a demand from all parts of the country for young bulls of this breed, the progeny from a cross of these on horned cows being for the most part hornless. The bulls are notably quiet and gentle and are led by a halter with entire safety. Having no weapons with which to fight, they have no temptation to do so. I am confident that the introduction of these cattle here is adding largely to the value of the live stock of the country and to the satisfaction and pleasure of farmers and breeders in handling them.

Putnam Co., N. Y.

Polled Suffolk Bull "Stout."

THE accompanying cut represents the two-year-old bull, Stout, bred by Mr. R. E. Lofft, Troston Hall, Suffolk, England, and imported into this country by G. F. Faber, Patterson, Putnam Co., N Y. He is from an excellent strain, known as the "Handsome" tribe, and he won a large number of prizes at shows in Great Britain.

HEREFORD BULL, PRINCE IMPERIAL 1,796, (6 117).—Bred by J. H. & G. S. Burleigh, of Mechanicsville, Iowa; dropped January 18, 1878, and bought, when about a year old, by G. S. Burleigh, of Vassalboro, Me. He then



HEREFORD BULL, "PRINCE IMPERIAL."—FROM A PHOTOGRAPH.—FIG. 294.

AYRSHIRE CATTLE.

HENRY STEWART.

THE Ayrshire race of cattle has an interesting history. It has grown up with its country in an especial manner, and furnishes a remarkable instance of the improvement which may be effected upon the agriculture of a country, the country itself, the people, and the general industries, by an improvement in the cattle of the country. A century ago the agriculture and the condition of the population of Ayrshire were both very miserable. There were no roads; the dwellings were mud cabins with a fire-place in the center, and the chimney a mere opening in the center of the roof for the escape of the smoke; the land was encumbered with rocks and weeds and undergrowth of bushes; there were no green meadows, no carts, no carriages, and no farm-yards, nor any saving of manure for the fields. Oats and Scotch kail were the principal crops, and the people subsisted on oat-meal and kail brose. The land was sown repeatedly in oats; so long as the seed was returned and sufficient grain for the subsistence of the tenant and the demands of the land-owner for his share, which was given as rent, both were satisfied.

The cattle of the country were as poor as their keepers. They roamed over the marshes and preyed upon the oat-fields when the pangs of hunger drove them to abandon their scanty pastures and defy the efforts of their four-footed guardian to keep them from trespassing. In the Winter they starved and often died of hunger, and when the Spring arrived it was usually necessary to lift them upon their feet that they might weakly stagger abroad to seek a little better subsistence than dried brakes and gorse, upon which they had been fed, but not nourished, through the Winter. These cattle were black-and-white, small, bony, and able only to support their calves and yield a little milk, which their owners ate with their oat-meal. They were very similar in character to the cattle of Bretagne (a French race now known as Breton), and some writers, especially Moll and Gazot, the French authors, have supposed that these cattle were the progenitors of the ancient Ayrshires, as communication by sea between France and Scotland was quite common for many years previously, when political associations between these countries were active and close.

The first improvement in the original Ayrshires was made through the introduction of Holstein cattle by the Earl of Marchmont at the latter part of the 18th century. These Holsteins were not of that race of Dutch cattle with which we are now familiar, and which are wrongly styled Holstein—a large black-and-white breed. They were the true Holsteins from the Duchies of Schleswig-Holstein—a red-and-white race—which were then imported freely for the improvement of the Teeswater or Durham stock. They were, in fact, the original Short-horns—large, well-formed animals and good milkers. There is also a tradition current in Ayrshire that about this time some Alderney cattle were brought into the district of Dunlop, in the county of Ayr, and became mixed with the imported Holsteins. In fact, if we were to consider what would be the effect of a union between these two races—the well-formed, large red-and-white Holstein, and the slender Alderney, with its fine head, its dished face and broad forehead, its long and slender neck, its wedge-like form, and its fawn-and-white colors—we should at once recognize in effect the modern Ayrshire, in which the characters of the two races are very evenly mixed and balanced. The large milking property of the Holstein and the rich butter production of the Alderney are precisely mixed in the present character of the Ayrshire, which,

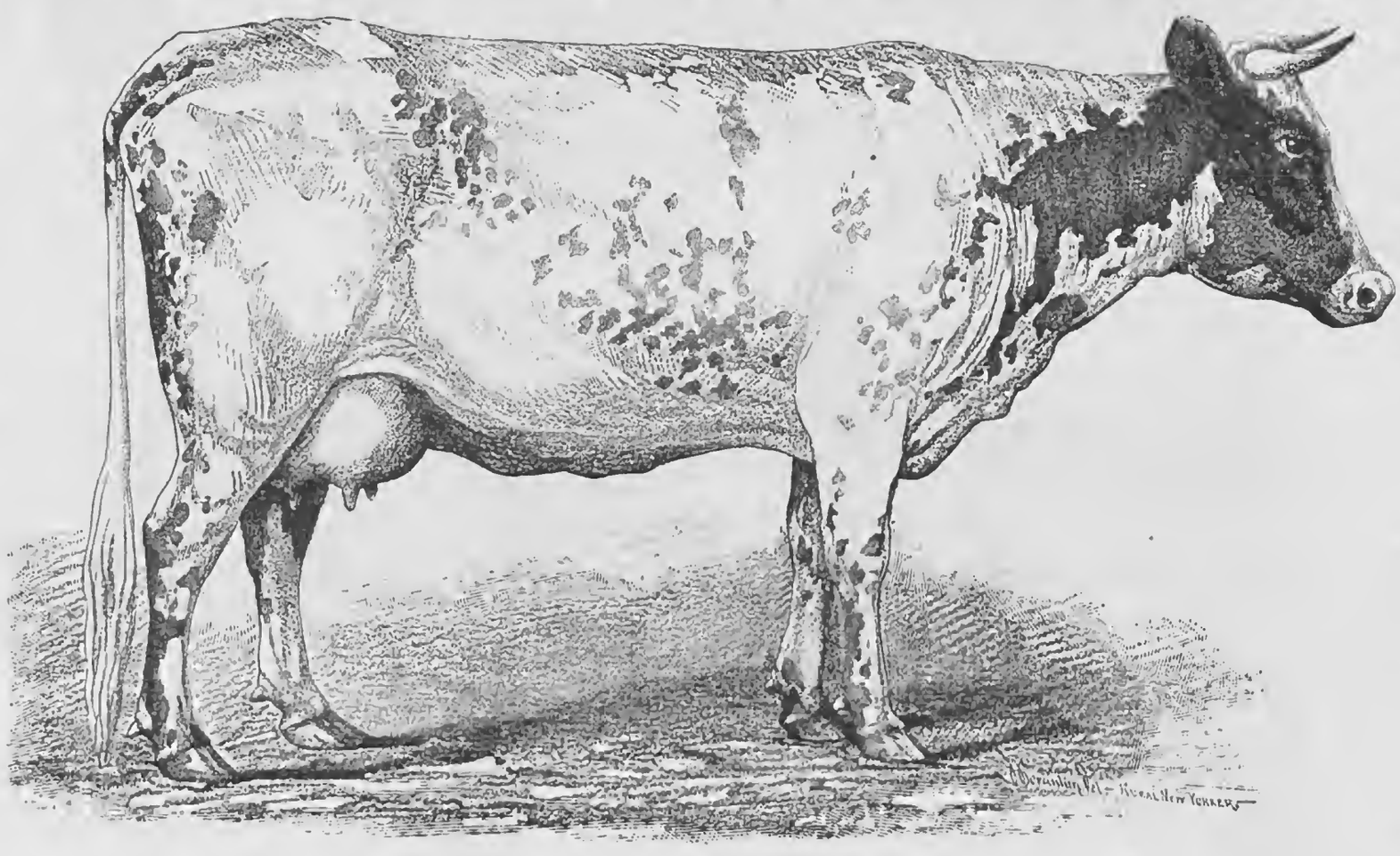
founded upon this mixture, and cultivated and improved by the rapid development of a better system of agriculture that was quickly adopted by the shrewd, industrious Scotchman, as soon as the way was pointed out by the more highly cultured and wealthy land-owners, soon became, in my opinion, the first dairy race of Great Britain, and of the whole world, in fact

The modern Ayrshire cow is a model dairy cow. Without depreciating any other breed of cows, she may easily take this position. She will not displace the Jersey in the fine butter dairy, nor the Dutch cow in the milk dairy; but she will fill the place of both of these in the cheese dairy, and while she will not compare with the latter in amount of milk product, she will greatly surpass the former. She is *the* farmer's cow. Her milk makes a superior cheese, and, being rich in cream, it can easily be turned to profitable butter production. Her average milk product will amount to at least 5,000 pounds a year, and some of the best cows will yield from 6 000 to 8 000 pounds between two calvings. She is easily kept; she is a good and hearty feeder: she is remarkably hardy; her coat is thick and close and warm enough to resist exposure to the most severe Winter storms, and it can sustain the great heats of even the West Indies without discomfort. One of her good points is that she holds on to her milk production evenly nearly up to the time of again calving, and although a cow may not be an excessively large milker in her first freshness, yet by a long-continued and well sustained product the total average is eminently satisfactory to the owner. An example of this may be given in the cow Bolivia—a portrait of which is here given as a fair specimen of an Ayrshire cow. The following figures, taken from the record of her milking with her first calf, dropped when the dam was less than two years of age, give the daily product for the first, the fifteenth and the last day of each month in a year, during which her whole product was a little more than 3 000 quarts:—

1879.	1st. lbs.	15th. lbs.	30th lbs.
March	33	31	30
April	31	34	33
May	29½	31½	30½
June	30½	30½	32½
July	31	29½	29½
August	29	28	26½
September	26	24	21
October	21	20½	19½
November	18	18	20½
December	21½	20	19½
1880.			
January	20	19	19
February	18	18½	17½

Her second calf was dropped in April, 1880, and it was necessary to feed dry hay only, in very limited quantity, to dry her off before she began to spring again. At the present time she is giving 22 pounds a day, from which a pound of butter is made. She has been milking a little over a year, and is due to calve again in August. If there is a fault about the Ayrshire it is the shortness of the teats and the possible coarseness of the head. The latter blemish, however, is only occasionally conspicuous, and is more apparent when Ayrshire and Jersey cows are kept in the same herd, and the fine head of the latter tends to disadvantageous contrast as regards that of the former. Ayrshire butter has a fine flavor, a good color, and is remarkably hard and solid, so that it may be packed well in hot weather. The milk of a good cow will have 15 per cent. of thick cream, and the best cows will surpass this.

Ayrshires have been crossed with the Shorthorn and the Jersey, and both crosses are excellent cows. The first cross is a large, handsome animal, and a deep milker; the second is smaller, finer and a better cow than the average pure Jersey. There are no better family cows possible than these cross-breds. Mr. Thomas Fitch, of New London, Conn., has been breeding this cross for many years with remarkable success, making a special business of rearing cows for family use and for fine butter dairies. Many of his cows produce from one pound to two pounds of butter daily, having the rich milk of the Jersey and the copiousness of the Ayrshire. Finally, the Ayrshire steer is the best of beef, and is quite equal in this respect to the Devon, while it is a docile and patient worker.



AYRSHIRE COW, "BOLIVIA"—FIG. 295

THE DEVON CATTLE.

THESE are acknowledged to be the most ancient of the various English breeds. It is claimed that they were found roaming their particular district of Devonshire at the time of the first invasion of England by the Romans under Julius Cæsar; they have continued to preserve the same characteristics as then, never undergoing any change or admixture, down to the present day. They are of medium size, and exquisitely fine in all their points; indeed, compared with other cattle they are like the Arabian compared with other horses.

The horns are cream-colored with black tips, long and slender, gracefully up-turned in the cows and oxen, but much shorter and lower curved from the head in the bulls. The eyes are like those of the gazelle, with a golden rim around each; the nose a pure orange shade; the skin a rich cream to yellow. The hair is silky in Summer, with an undergrowth of soft fur in Winter, and varies in color from a light to a bright deep red. The only exception to this is more or less white hairs in the switch of the tail, and an occasional white patch on the bag of the cow, particularly in those of the deep-milking families. They are almost as round in the body as a barrel; straight in the upper and lower lines: with deep chest, full brisket, crops, chine, and quarters well let down in the twist.

They are very hardy and thrifty, mature early, are sure breeders, and both large and rich milkers, when bred for this purpose; and at all times they make the best of beef. They are the most active and intelligent of any race of cattle; are easily broken to the yoke or harness; can be trained to walk four miles per hour, and trot six. The latter pace is as natural to them as to an ordinary horse. They make the quickest and best of workers and are the most powerful of all for their size.

Although so fine in bone, it is of such an excellent quality as to prove as strong as the larger and coarser bone of others. To this is joined superior muscle, with the toughest and most elastic cords and tendons. After working till seven to ten years old, they can be turned out to fatten, and make as excellent a quality of beef as when simply fed from birth for slaughter, and disposed of to the butchers when three to four years old. The usual live weight of well fattened, full-grown oxen, varies from 1,200 to 1,600 pounds—though some are still heavier—that of cows from 900 to 1 100 pounds. They are especially well calculated for grazing on light sandy and gravelly soils, and rough stony or hilly grounds. Being of a medium size, and so hardy and active, they thrive in such short pastures as could not support a larger and less alert breed.

The Devons were early introduced into the Eastern and some of the Southern States, where they have ever been found great favorites, and are particularly admired for their beautiful red color. They have also gradually spread to the Western States, and their produce growing up there on a richer soil, with more abundant pasture and grain, have increased somewhat in size, and mature perhaps a year or so earlier. They make admirable steers in that region, and their beef still retains its superior quality. Latterly they have been taken in some numbers to the borders of the Rocky Mountains, and are found especially well adapted to the broken hills and narrow valleys of that immense range of country.

OCEAN TRAFFIC IN NEAT CATTLE.

Importations of Breeding Cattle.

CONSIDERABLE numbers of breeding cattle are received every year from Europe, the kinds varying with the demand in this country. At present, and for some years past, the Jerseys and Guernseys, from the Channel Islands, and the Dutch cattle, from Friesland and North Holland, have greatly the pre-eminence in point of numbers. There is a notable demand for the Polled Angus at present, and though the country is well stocked with Short-horns, Ayrshires, Herefords and other valued breeds of Great Britain, every year witnesses the importation of more or less of them.

These animals are generally shipped upon freight steamers in separate stalls broad enough for them to lie down in and often padded to prevent bruising, and placed between decks or on covered portions of the main deck. They generally bear the trip with comparative comfort, being "off their feed" for a few hours at starting, but soon gaining their appetites and contentment, except in very heavy weather. Plenty of fresh air and good water is essential. The food provided is hay, bran and mangels. The majority of the cattle thus brought to this country are two-year-old in-calf heifers, though a considerable number of young cows and of calves and young bulls come also. Calves do not need separate stalls, but do best in small, loose boxes, with well cleated floors, where several may stand together.

Shipment of Beef Cattle.

About the year 1875 a trans-Atlantic trade in American beef sprung up and gradually increased, reaching a culmination, for the present, at least, in the enormous shipments of last year (1880). American beef, whether transported alive or dead, was regarded at first with suspicion, but rapidly won its way to favor, not a little to the alarm of British feeders, who were undersold in their own markets by beef of equal, or at least excellent, quality. The laws of trade are inflexible, and though it seems a great pity to subject good beef animals to the discomforts of a sea voyage of 10 to 14 days before killing them, during which time they shrink greatly in weight, and probably can never be brought back profitably to their original condition; yet so long as British dealers will pay more for them alive than for their dressed carcasses, transported in cold chambers with good ventilation and received in prime order, we shall be obliged to ship living beef rather than dead.

It is not worth while to discuss now the causes which produced a decline in the demand for American beef, except, perhaps, so far as we may find reasons that we can obviate. On the approach of Winter, and during a hard Winter, farmers market all the beef they can, and this operates to secure high prices in the Spring, and they are high here; but abroad there is little call for American beef, and the prejudice which has been created against it seems on the increase.

So long as the business of shipping live cattle remained in such hands as the Eastmans, the Toffeys and the Gillettes, and was conducted on business principles, everything went well, and we heard nothing of diseased beef from this country; but after the common herd of cattle dealers and speculators (many of them of the Hebrew persuasion) came in for their share, following what are known as "Jewish" ways of doing business—everything for immediate gain, a grand scramble for "the nimble sixpence"—then came complaints of "foot-and-mouth" disease, pleuro-pneumonia and Texas fever.

The fact that our cattle are so healthy as they are is a wonder. Without veterinary inspection, or care on the part of the Government whether they are sick or well at the time of their transportation from one end of the country to the other, it is too much to ask that the Government should provide inspectors to look after the health of cattle shipped abroad. And yet here is a source of enormous wealth slipping through our fingers, so to speak, in part, no doubt, because of this very thing. The facts remain, first, that we are able to raise beef cheaper in this country than in England; second, that we can ship it economically alive, and more economically dead; third, that with the improved cooling appliances it may be so transported as to be undistinguishable, except by experts, from English and Scotch beef of equal quality.

Working Bulls.

INSTEAD of letting my bulls be tied up idle in stables to their great discomfort and often to their injury for want of exercise; or allowing them to roam in pasture, liable at any time to break out into a vicious fit and attack persons or other animals, it has been my practice to work them regularly as oxen, except in the season of service to cows. It is better then to keep them in a stable with a yard attached in which they can exercise at pleasure. By this management they get hardier and more thrifty stock. If I happen to have a pair of fairly matched bulls, they are yoked together and worked the same as oxen. If in possession of only a single bull, I either procure a stag of equal strength to match him, or work him alone in a yoke and harness made expressly for this purpose. In lumbering, at times I have had a powerful bull as the leader of a half dozen or more yoke of cattle, and an admirable one he made and was as quiet and easily managed as any other animal of the team. In this way the bull earns his keep, or even more, and I get his service to my cows free of cost. "WESTERNER."

THE CATTLE OF GUERNSEY.

MASON C. WELD.

THE cattle of Guernsey, whatever their origin and however noticeable their kinship to those of the sister island of Jersey, are an entirely distinct breed, having such pronounced merits that a breeder, if he be inclined to breed for butter, may well question to which breed he should give the preference. The best specimens are decidedly above medium size, many of them approaching the Short-horns in magnitude. They are of good form, with deep, capacious barrels, not lacking in beef points, growing quickly and maturing early. The cows reach the hight of their flow of milk and greatest weight at about five to six years old. The oxen are of good size, willing and docile. As beef animals they fatten economically at any age above two years, and their beef is of excellent quality, the fat being laid on evenly and the meat well marbled. The calves are usually large when dropped, and make heavy veals when five weeks old, the Guernseys and their grades showing thus, both in respect to beef and veal production, a great superiority over the Jerseys.

It is, however, as a producer of milk and butter that the Guernsey cow has her special value. Like that of the Jersey, her milk is of extraordinary richness. It is doubtless fully as rich as that of average Jerseys, and in the matter of color, very much superior. The color of Guernsey butter is so intense a golden yellow in June and throughout the Summer as to be actually distasteful to many persons, so strong is the impression that the color is unnatural. This color, to a less degree, is seen both in the milk and cream, to which it imparts a rich look which is very agreeable. Guernsey butter pales somewhat during the Winter, being ordinarily at its lightest in March, if the cows are fed principally on hay. The majority of them carry the color of their butter well through the Winter, so that it is never necessary to use annatto or other dye to give Guernsey butter an agreeable tint. In this particular the butter of the Guernsey contrasts strongly with the lard-colored product of most cows, including many Jerseys. Among Guernseys, cows yielding 18 and 20 quarts of milk are not rare, and the yield of 14 to 18 pounds of butter per week has been repeatedly reported.

The Guerneseys and Jerseys cross well, and blend their good qualities admirably, the cross-bred animals exhibiting the fine stature of the Guernsey combined with the more elegant form of the Jersey; in fact, making the model milch cow in every particular. The butter of the cross-breds is usually of a character combining the firmness and waxiness of the Jersey with the richer color of the Guernsey. In fact, no better use can be made of unregistered Jersey cows than to cross them with Guerneseys, for in the cross we are almost sure to have the best qualities of the two breeds developed.

Grade Guerneseys possess the qualities of the Guernsey breed to an extraordinary degree, ordinarily exhibiting them in the color and quality of the skin and in their milking and feeding qualities. The quantity of milk and both the quantity and rich color of the Guernsey butter are observable also in the grade cows. The Guerneseys are, therefore, pre-eminently adapted to those regions where farmers make butter and where beef and veal are regarded as important farm products.

The earliest importations of Guerneseys into this country were probably made at a time when no distinction was made between the different breeds of the Channel Islands, and Jerseys and Guerneseys passed under the name of Alderneys. In 1840 Mr. Nicholas Biddle, of Philadelphia, imported Guerneseys under their proper name, and established a herd of rare excellence, which is still in existence in the hands of his son, the Hon. Craig Biddle. Other isolated herds in New England and in the State of New York fairly introduced the breed to American breeders, and it has steadily increased in popularity from the first. In 1878 the American Guernsey Cattle Club was formed, and the first volume of the Guernsey "Herd Register" was published, since which time the number of breeders and of pure-bred cattle has greatly increased. Within a few years a Herd Book has been established by the Island breeders, so that now the systematic improvement of the breed and the maintenance of its valuable characteristics may be expected to go on both in this country and in the Island of Guernsey upon well established principles.

Large numbers of Guernsey cattle—chiefly two-year-old, in-calf heifers—are annually exported from the island to England, where they have long been great favorites. The importations of Guerneseys to this country have never been so great as during the past year, and in point of excellence the recent importations compare most favorably with any that have ever been made. The Guernsey herds of the United States are located chiefly in New England, New York and Eastern Pennsylvania.

Jersey Cow, Martha of Roxbury. 5016.
(Illustrated below.)

Dropped Jan., 10 1872; color cream, fawn and white; Sire, Vanguard 845; dam, Fanny Stanard 5015. This cow has taken, alternately with her dam, first and second premiums at the Virginia State Fairs, as best Jersey cow over three years old, and also first premium as best dairy cow of any age or breed. She is of the noted strain of Jerseys of the late Wm. C. Wilson of Maryland, and is one of the foundation stock of the Jersey Herd of the Messrs Rowe's Co-operative Stock Farm, Fredericksburg, Virginia.

POLLED ANGUS COW, PRINCESS 8th (3,298)

(See Illustration on next page.)

BRED by Thomas Ferguson, Kinnochtry, Coupar Angus, Scotland; calved April 16th, 1878 Imported by F. B Redfield, Batavia, N. Y., October, 1879. By Shah (608); dam, Princess 2d (916) by Young Hugh (131); 2d dam, Princess of Kinnochtry (914), by President 31 (246); 3d dam, Prizie (586), by Black Jock (3); 4th dam, Young Favorite (61), by Grey-breasted Jock (2); 5th dam, Old Grannie (1)

Old Grannie (1), the head of the Princess and Baroness tribes, was bred by the late Hugh Watson, of Keillor, the first great improver of Angus cattle, and was calved in 1824 Although she is the first of her line recorded in the Polled Herd Book, and the earliest animal in point of time recorded, it is well known that she was descended from a maternal line which had been in the hands of Mr. Watson from the year 1808, when he received the stock from which her ancestors came from his father, who was breeding Angus cattle as early as 1768.

Mr. Watson for many years was unconquered in the show ring with his Angus cattle, and his victories began in 1829, when he won the first prize in the class for aged cows at the Highland Society Show with Old Grannie (1). From that time to the present, in the hands of both Mr. Watson and Mr. Ferguson, the Grannies—now known as the Princesses and the Baronesses—have in every generation produced prize-winners. Old Grannie was a very remarkable cow. She lived until very nearly 36 years old and produced 20 calves that were prize-winners. The cow next to her, Young Favorite (61), was a Highland Society first prize-winner. Prizie (586), Princess of Kinnochtry (914), and Princess 2d (916), also won important prizes against strong competition. In 1878 Princess 6th, a daughter of Princess 2d and a full sister to Princess 8th, was first in the yearling class at the Highland Society Show at Dumfries, and in 1880 Prince of the Realm, *sixteenth calf* of Princess of Kinnochtry (914), was first in the class for two-year-old bulls at the Highland Society Show, at Kelso, beating such good ones as Justice, Young Juryman and Bombastes. Kelso was the only place at which Mr. Ferguson made a show in 1880, and Prince of the Realm, whose likeness appeared in the RURAL of April 16, was the only animal he fitted for show purposes. The result as above was highly satisfactory, for he was placed first over three young bulls unbeaten in many show rings that year. Princess was only 19 months old when the likeness on page 386, was taken.

RURAL BRIEFLETS.

WHEN a group of animals possess certain characteristics which distinguish them from others of the same species and which have become so firmly established that they are uniformly transmitted from parent to offspring, they are properly recognized as a distinct breed. These special characteristics may include peculiarities of appearance, as the absence of horns in the polled breeds, and the red color of Devons; of function, as the quantity of milk of the Holstein and the quality of milk of the Jersey; of locomotion, as the trot and pace in the horse; of habit or instinct as exemplified in the setter or shepherd's dog—in fact, any standard that fancy may dictate may be assumed.....

HEREDITY is the principle in accordance with which the normal characters, the constitutional diseases and sometimes the acquired habits of the parents are transmitted to the offspring....

THE distinguishing peculiarities of the various breeds of cattle are the result of the inheritance of characters that adapted them to the conditions under which they orignated. In the "improved" breeds, certain desirable individual peculiarities that have appeared, spontaneously or accidentally, have been engrafted by heredity upon those of the original breed.....

IN breeding, the parent that seems to exercise the greatest influence upon the character of the offspring is said to be prepotent, and since in pure-bred animals the dominant characteristics of all the immediate ancestors are the same, their prepotency, or power of transmitting their characteristics, is greater than that of "native" animals. The more closely in-bred a family, the stronger, it is found, is the prepotency of its members, and in some cases in-and-in breeding has been limited to families set apart to produce breeding sires, for as the male is practically half the herd for breeding purposes, it is especially desirable that he should be able to transmit his excellencies in a pre-eminent manner.....

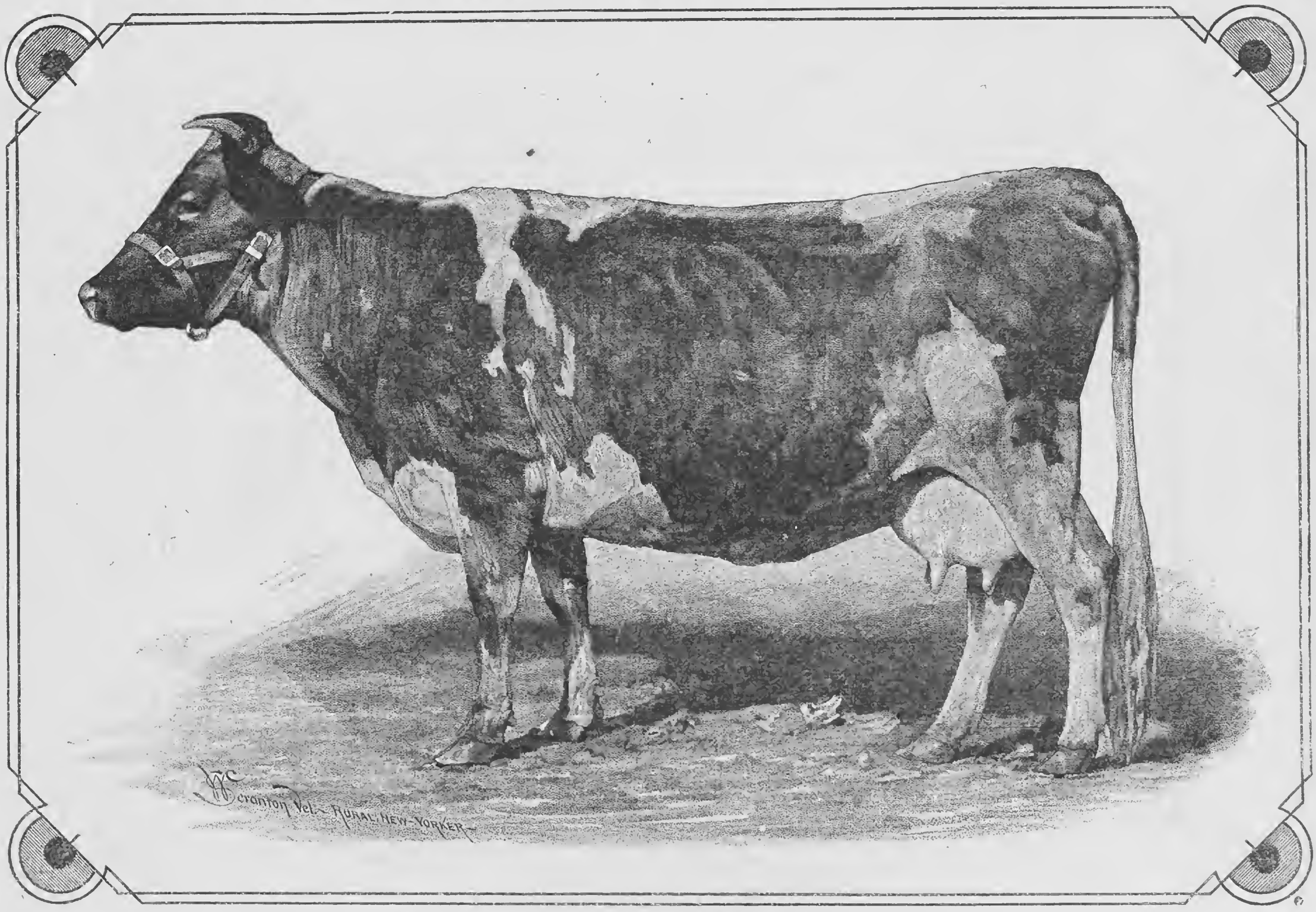
THE flesh of Short-horn or Hereford grades is often better than that of the pure-bred animals; chiefly because the fattening qualities of the latter have been so highly developed as to lead to an excess of fat coupled with a deficiency of lean, while in the flesh of the grade the proportion of lean and fat is more highly valued by the butcher.....

EXPERIENCE has shown that in breeding the influence of the first male parent is not limited to the immediate offspring, but generally extends also, through the female that has been impregnated, to her progeny by another male. It is therefore of special importance that a superior bull should serve a heifer for her first calf.....There is good reason to believe that, although this peculiar influence of the male is most intense in the first impregnation, yet subsequent impregnations by other males have modified permanent influence.....

AMONG the general public there is often a good deal of ignorance or misconception as to the meaning of terms in common use among breeders. Of these the most frequently met with are the following:—"Thoroughbred," strictly speaking, is a term that designates the English race-horse and his descendants in this and other lands, and in this sense it has been commonly used as the name of the breed, just as Clydesdale and Norman designate breeds of draft horses. In this country, however, the term is frequently applied to cattle, sheep, swine, and occasionally even to other breeds of horses in the sense of pure-bred.... "Pure-bred" and "full-blood," according to the definition of the American Association of Short-horn Breeders, indicate animals of a distinct, well-defined breed without any admixture of other blood. The same authority also adopted the following definitions, which coincide with the general signification of the terms, although writers in the public press not infrequently misapply the words. "Cross-bred" animals, strictly speaking, are those produced by breeding together distinct breeds, such as the Ayrshire and the Jersey; but the terms crossing, making a cross, out-breeding and cross-breeding are often used to indicate the mixture of the blood of different families of the same breed. "Grades" are the produce of a cross between a "pure-bred" and a "native," such as a Short-horn and a Texan, a Holstein and an ordinary cow or bull.....

"NATIVE" cattle are animals of mixed blood without any fixed character, constituting the vast majority of the herds throughout the country.....

"HIGH-GRADE" refers to an animal of mixed blood in which the blood of the pure



JERSEY COW, MARTHA OF ROXBURY, 5016.—FROM A PHOTOGRAPH.—FIG. 296.

breed largely predominates. Thus if the offspring of a grade Hereford is again crossed by a pure-bred Hereford, and the same practice is followed for a couple or more generations, the progeny will be "high-grades." CLOSE breeding is the coupling of animals that are closely related; while in-and-in breeding implies the closest possible relationship in the animals bred together.....

HIGH-BREEDING is sometimes used in the sense of close-breeding; but properly it means a careful selection of breeding stock with reference to a particular standard and within the limits of a particular family, regardless of relationship. Breeding-in-the-line means the selection of males from a particular family, without reference to the quality or uniformity of the selected animals.....

IN speaking of the parentage of animals the term "got by" or simply "by" refers to the sire and "out of" to the dam.....

WITH regard to the recorded pedigrees of the different breeds of cattle, in the Short-horn and English Hereford Herd Books the males alone have a number, while the females are designated by the name of their sire followed by the word "by." In the Devon, Jersey, Am. Hereford and Ayrshire Herd Books both the females and males have distinguishing numbers. Open numbers refer to the American Herd Book; those in parenthesis, ( ) to the English Herd Book, while the numbers of the Canadian Short-horn Herd Book are inclosed in brackets [ ] .....

To illustrate the above here is the pedigree of the progenitor of the American Dukes of Airdrie, known in Kentucky as the "Old Duke:"

9,798, DUKE OF AIRDRIE (12,730); red and white, bred by R. A. Alexander, Airdric, Scotland, and imported to his farm in Woodford Co., Ky.; calved Aug. 4, 1854, got by imp. Duke of Gloster, 2,763 (11,382), out of Duchess of Athol, by 2d Duke of Oxford (9 046),—Duchess 34th, by Cleveland Lad (3 408),—Duchess 49th, by Short Tail (1 423),—Duchess 20th, by 2d Earl (1,511),—Duchess 8th, by Marske (418), Duchess 2d, by Ketton 1st (709),—Duchess 1st, by Comet (.55),—by Favorite (252),—by Hubback (319) —the Stanwick Cow, by J Brown's red bull (97). This is from "The American Short-horn Herd Book," Vol. X, page 107, compiled by our contributor Lewis F. Allen. The dash — is used to indicate the "next dam," to economize space.....

MR BAKEWELL regarded live stock as machines for converting the vegetable products of the farm into animal products of greater value.....

AMONG cattle the best animal is that which converts the largest amount of food into beef or milk of the best quality, with the least possible waste of material.....

IT is a not uncommon error to imagine that animals that eat but little are the most profitable; so long as an animal is capable of digesting and assimilating it, the greater the amount of food it consumes the more profitable are the returns; for the *proportion* of the food that goes to supply the waste of tissue and run the animal machinery is less when a large than when a small amount is eaten.....

ANIMALS with excellent digestive and assimilative capacity are therefore the best; for an animal that can digest and assimilate only enough to keep the animal machine in running order, is worthless; for it is only from the food assimilated *in excess* of this amount that any profit can be obtained.....

THE great advantage of all the improved breeds of live-stock over the common or "scrub" sorts is that they convert a larger proportion of the food they consume into animal products and these usually of a better quality.....

IN every breed of live-stock there are favorite families prized as breeders for the persistence with which they stamp their peculiar excellencies on their offspring. In the first rank among this sort of cattle are the Bates and Booth families of Short-horns, the Dishley family of Long horns, the Ben. Tompkins sort of Herefords and, of late among us, the Alphea family of Jerseys.....

ATAVISM—from *atavus*, an ancestor—is that form of heredity in which any peculiarity of an ancestor, more or less remote, whether of form, color, habits, mental traits or predisposition to disease, makes its appearance in the offspring without having been observed in the parent. Darwin calls it "reversion," and the farming community have long known it by a variety of names, such as "throwing back," "harking back," "crying back," "breeding back," etc.....

IT is the tendency to "breed back" in this way that renders cross-bred animals as breeders of little value for the improvement of stock; for this tendency is found to be very strong, and generally towards inferior ancestral qualities, probably because the superior qualities of the better-bred parent are more artificial.....

THE small, hardy Kerry cattle of Ireland, owing to the scanty food got with much effort on their own native hills, develop so slowly that heifers, it is said, do not breed until six or seven years old. Animals of this breed well cared for in Massachusetts, grow larger, mature earlier, and the heifers breed when three years old—an instance of the effect of environment on development.....

WHEN twin calves are produced, one a male and the other a female, the latter is called a free-martin, and in nearly every case is barren; the reproductive organs being generally imperfect, partaking of the characteristics of both male and female organs. When grown the females frequently resemble steers. The bull, in such cases, is fertile. When both twins are females the reproductive powers are not impaired.....

ACCORDING to M. Thury's theory of sex, this "depends upon the degree of maturity of the egg at the moment of fecundation, that which has reached a certain degree of maturity producing a female, and, if fecundated when this point has been passed, producing a male," so that if females are served during the first half of the period of heat, female offsprings should largely predominate; but if they are served during the last half, males should be the more numerous. Experience, however, does not appear to support this theory.....

WHAT is called the Stuyvesant theory of breeding is that the sex of the offspring depends entirely on the female, and that every alternate egg or ovum presented for impregnation is female. Accordingly, after a cow has produced a heifer calf, Mr. S. does not allow her to be served when first she comes in season; but waits until the first part of the second heat. Should she not "catch," he again waits till heat number four, passing over number three, and so on until she does "catch." If she has produced a bull calf, however, she is served the first time she comes in season.....

"FANCY POINTS" are peculiarities of form or color that do not represent any valuable qualities. The solid color and black points of the Jerseys, the red and dark roan of the Short-horn, now so fashionable, are cases in point...."Solid colors" are uniform colors, in contradistinction to mixed or mottled.... The black points of a Jersey, are a black nose and switch, and black tips to the horns. Undue attention to the production of "fancy points" tends to retard improvement in breeds and lessen their value for practical purposes by encouraging the selection of breeding stock with a view to the production of these "points" rather than of qualities really useful. When a peculiarity, even if trivial in itself, is characteristic of the breed or of some family in it of extraordinary excellence, it cannot be considered a "fancy point," and is of real value as an indication of the inheritance of the qualities of the breed or family.....

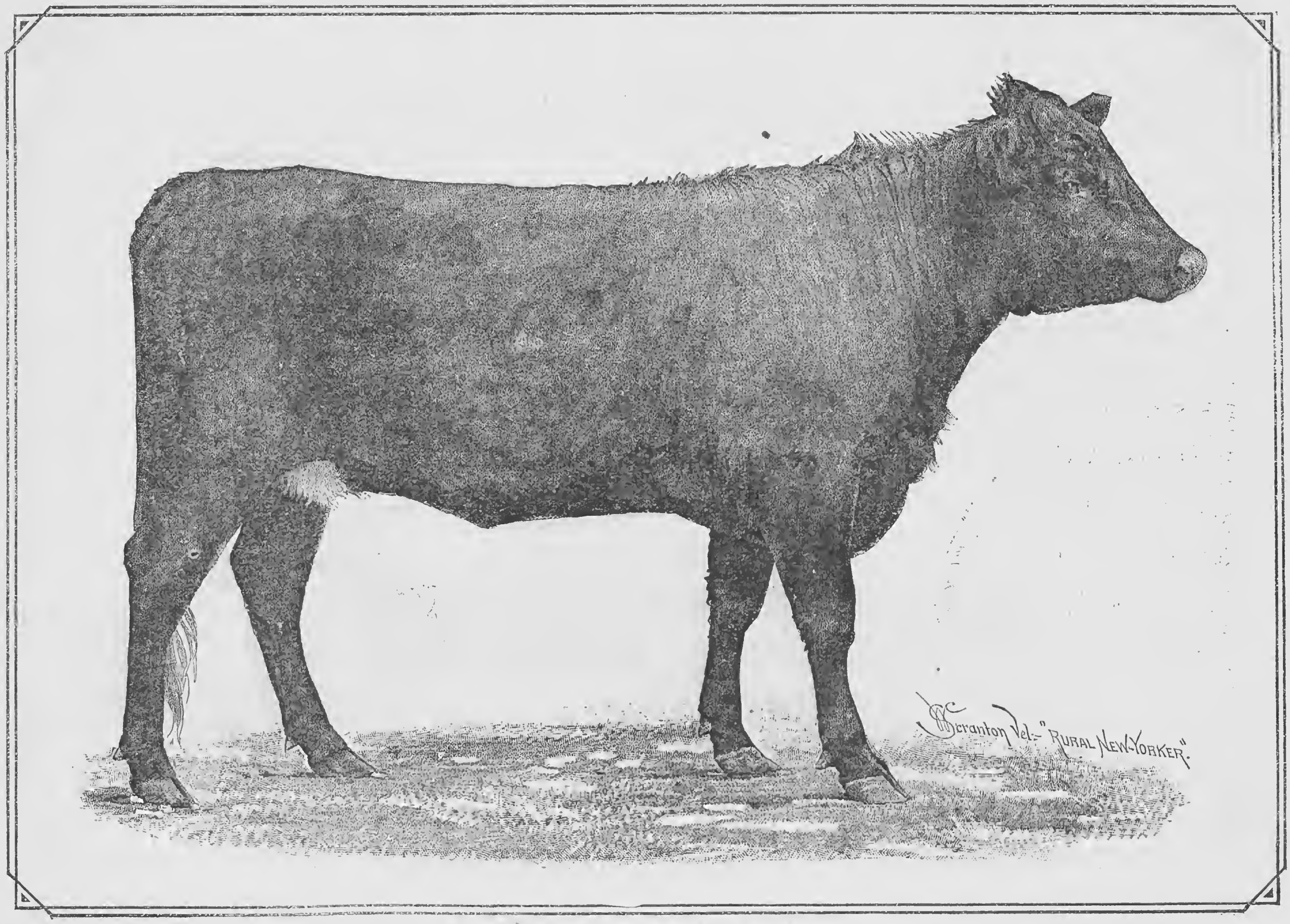
"FATTY DEGENERATION," a frequent cause of sterility, is the transformation of the substance of the generative organs into fatty tissue. Dr. Carpenter says this form of degeneration, which is common to nearly all tissues, consists in the conversion of their albuminous or gelatinous materials into fat. The reproductive organs of very fat animals are often affected with fatty degeneration to an extent that entirely destroys their functional activity.....

THE average period of gestation in a cow is 285 days, the extremes in 1,907 cases being 220 and 313 days; only a very small proportion, however, were under 260 or over 295.....

BEASTS with small chests do not fatten readily and are very susceptible to disease.

What Others Say.

VARRO compares tillage and the keeping of live stock to two different-sounding instruments in an orchestra, and he terms the grazier's trade the treble and the tiller's occupation the base, each aiding in the harmony as a whole. . . . . Fitzherbert puts the same idea.



POLLED ANGUS HEIFER, PRINCESS 8th.—FROM A PHOTOGRAPH.—FIG. 297.

that time a polled animal was born with all the characteristics of the original breed. On the other hand, horns occasionally appear on the Galloway, Norfolk and other polled breeds that have been bred pure for generations.

Herbert Spencer, in speaking of the transmission of characteristics from parents to offspring, says: "There must arise, not a homogenous mean between two parents, but a mixture of organs, some of which mainly follow one parent and some the other." The chief characteristics in some cases, however, are inherited from some remote ancestor on one side or the other, while the dominant characteristics of the parents may become latent in the progeny. . . . . The general experience seems to be that the secretion of large yields of milk is incompatible with the accumulation of abundant fat. It is not claimed that rapid-fattening qualities cannot be combined with good milking properties, but that it is easier to excel in one than to develop both. One of the advantages which Short-horn admirers claim for them over their rivals, the Herefords, is that they are better milkers, and this is undoubtedly true. Mr. Price, an extensive breeder of Herefords, however, says: "Experience has taught me that no animals possessing form and other requisites giving them a disposition to fatten, are calculated to give much milk; nor is it reasonable to suppose they should—it would be in direct opposition to the law of Nature. Had I willed it 20 years ago, I could by this have had 20 cows from my own herd, which could have given a sufficient quantity of milk for dairy purposes, and I am confident that, in the same time, I could have had a similar number that would not, at any time, have given 20 quarts of milk a day among them." And he is confident he could effect either of these objects much more easily than he could blend the two properties in the same animal. . . . . Professor Tanner, of the Agricultural College, Cirencester, Eng., one of the best authorities on the subject, says that when the rainfall is small and the herbage more than usually scant, much difficulty is found in getting ordinary farm stock to breed, a dry dietary being very unfavorable for breeding animals and very much retarding successful impregnation. On the other hand, rich, juicy and succulent vegetation is very favorable to breeding. . . . . In another place he remarks that the non-impregnation of the female may generally be traced to an excessive fatness in one or both of the animals and an absence of constitutional vigor. The breeding powers are most energetic when animals are in moderate condition, uninfluenced either by extreme fatness or leanness. . . . . He is also of opinion that the most prolific breeders are usually good milkers and produce the most healthy and vigorous offspring. . . . . Earl Spencer says that the worse bred the female is, the greater the influence of a well-bred male upon the offspring, and Prof. Miles says this accords with the experience of practical men generally. . . The latter adds that if a cross of two distinct breeds is effected by the selection of animals of equal power in the transmission of their peculiar characteristics, the tendency is to make dominant the original characteristics the herds had in common, and to obscure the special characters that constituted their distinguishing characteristics. In such cases he thinks the offspring would be likely to prove inferior from inheriting the defects of both parents, without retaining the most desirable qualities of either. . . . . In making such crosses it is insisted that the male should not only possess superior merit in general characteristics, but he must be specially prepotent in transmitting them. . . . . The benefits of cross-breeding, according to Mr. Spooner, are most evident in the first cross. . . . . Stonehenge says: "The purer or less mixed the breed, the more likely it is to be transmitted to the offspring. Hence whichever parent is of the purest blood will be generally more represented in the offspring; but, as the male is usually more carefully selected and of purer blood than the female, it generally follows that he exerts more influence than she does, the reverse being the case when she is of more unmixed blood than the sire." In other words, the best-bred parent has most influence on the offspring. . . . . Referring to the influence of the first male parent upon offspring by another male, Dr. Carpenter says: "Some of these cases appear referable to the strong mental impression left by the first male parent upon the female; but there are others which seem to render it more likely that the blood of the female has imbibed from the fœtus through the placental circulation, some of the attributes which the latter has derived from the male parent, and that the female may communicate these with those proper to herself to the subsequent offspring of a different male parentage. . . . . On this subject Agassiz says that the act of fecundation is not limited in its effects, but that it affects the whole system, the sexual system especially, and in this system the ovary to be impregnated afterwards, is so modified by the first act that later impregnations do not efface the first impression. . . . . Darwin, speaking of the pollenation of plants, confirms this theory.

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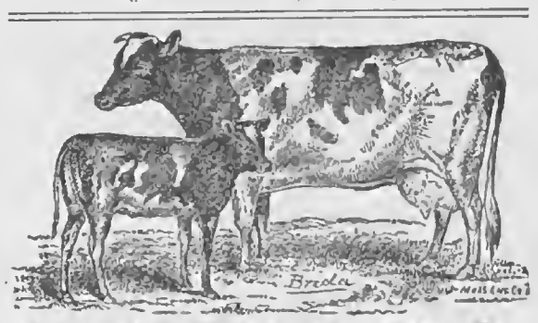

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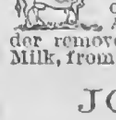

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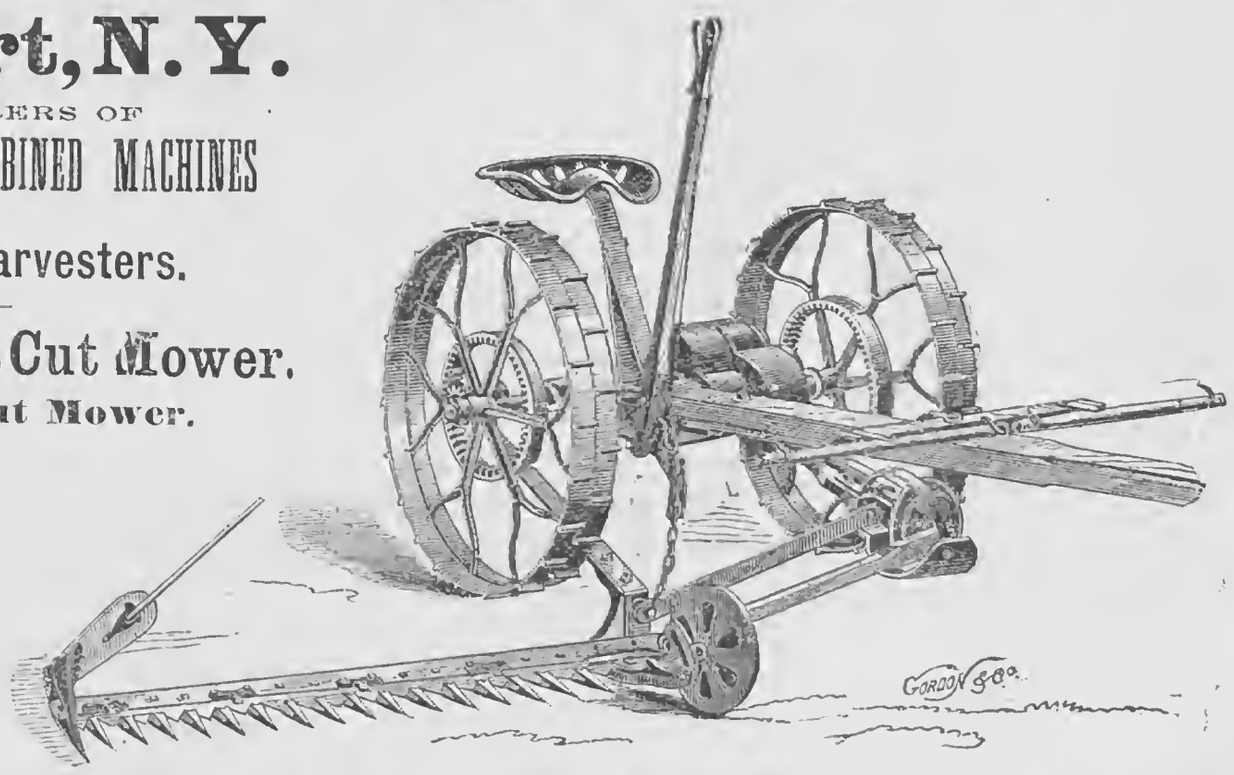

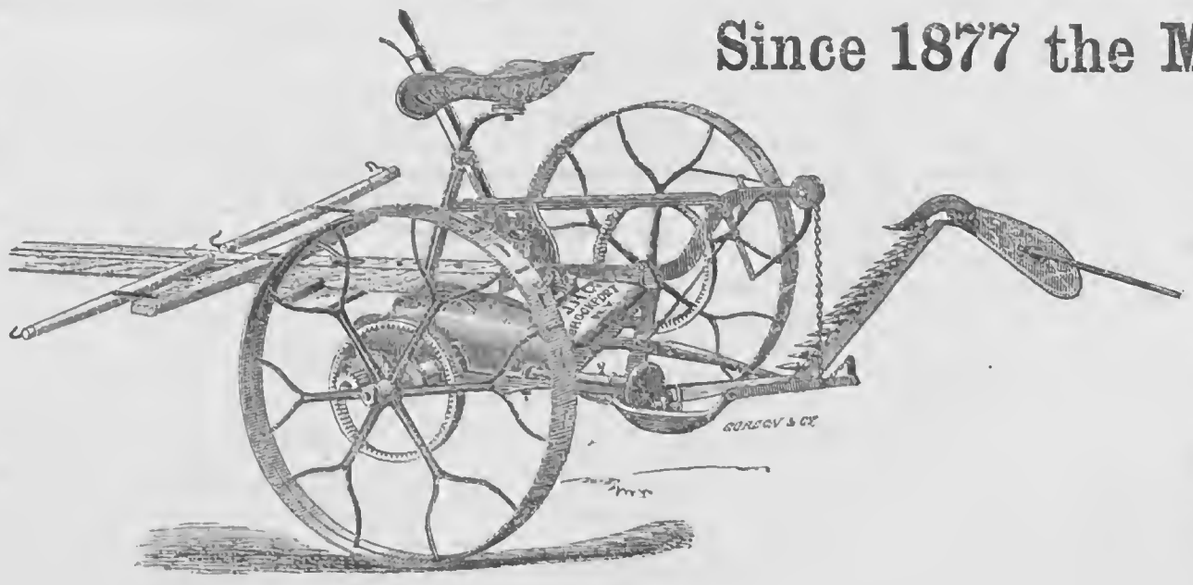

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SATURDAY, JUNE 11, 1881.

THE RURAL NEW-YORKER begs to offer in articles of its own selection, for the longest and heaviest five heads of wheat from the present crop, $50.00, to be divided into first, second, third, fourth and fifth premiums. The awards will be published in our Special Wheat Number, and drawings presented of the prize heads.

THOSE who, competing for our wheat premium, send us heads of wheat, must not neglect to write both name and address upon the boxes or parcels containing them. This is now permitted by the postal laws.

THE next Special RURAL NEW-YORKER will consider the crop prospects of the country. The next thereafter will be the Wheat Special. Our friends are solicited to send us any interesting facts regarding wheat—either as to varieties, yield or cultivation—that may have transpired in their experience.

THE most profitable method of rearing cattle is to give them all the food they can digest well from their birth up to the day of their slaughter, if reared for bullocks. But if for working oxen, bulls and cows for breeding, then feed no more than to keep them in prime working and breeding condition. An ox may be too fat or too poor for good work and so may a bull to get first-rate offspring, or a cow to do well in the dairy or as a breeder.

OUTLOOK FOR CROPS IN ENGLAND.—Yesterday's cablegrams from England speak discouragingly of the outlook for next harvest. The drought and cold east winds that have prevailed continuously since seeding time, have almost ruined most of the cereal crops, except wheat, and in most districts that is poor and thin. All growing crops are, as a rule, exceedingly backward, and the present prospect is that there will be a late and scanty harvest. Down to last Saturday, June 4, there had been but two showers since May 4, and fields generally were parched. Already hundreds of fine farms have been thrown on the landlords' hands; and it is estimated at least 70 per cent. of the tenants are in arrears. After the late era of agricultural depression, farmers have been trusting to a good harvest this year to enable them to pay off the arrears of rent and often other indebtedness, and it is to be feared the partial failure of crops now threatened will entirely discourage and ruin thousands of them.

ON seeing the high prices often paid for choice specimens of pure-bred stock, it often occurs to the ordinary reader that the value of the animals is vastly overrated and that by no possibility could they be worth "that" amount of money. There is no doubt that extravagant prices are sometimes paid for "fancy points," strains "on the beom" and speculative purposes; but in most cases, when high figures are given for breeding stock, there is a fair prospect that they will prove fully worth all that is paid for them. If, for instance, the use of a particular bull will enhance the selling price of the calves from a herd of 50 cows $50 above what they would bring if the progeny of an ordinary bull, $2,000 would certainly not be too high a price to pay for the superior animal which could be used for a number of years. Increase the number of cows served and the difference in price between the offspring of both sorts of sires, and the real value of the better beast is increased proportionately. The same rule, of course, applies to cows bought for the purpose of breeding high-priced bull and heifer calves.

NEVER FROM BETTER TO WORSE.—"And take hede where thou byeste any lean cattel or fat, and of whom, and where it was bred. For if thou bye out of a better grounde than thou haste thy selfe, that cattel will not lyke with the" So said Fitzherbert more than three centuries ago, and the caution is as applicable to our conditions to-day as to those of England under "Bluff King Hal." Accordingly before investing in any sort of stock with which he is unacquainted, the farmer should learn what he can about it, so as to be able to obtain the kind which will thrive best on his land and with the treatment he intends to give it. None of the improved breeds will maintain their full excellence under the neglectful treatment the "native" or "scrub" sorts frequently meet with. Their desirable characteristics are, in no small measure, the result of attentive care and feeding, and in the absence of these, they are sure to deteriorate, some breeds, however, falling off worse than others, according to the difference between their present conditions and those under which they originated and according as their characteristic "improvements" are more or less artificial, or due to extra care. It may be taken for granted that when cattle, whatever their quality, are taken from where they have had abundant feed and good care, to where they are allowed to shift for themselves often with scanty rations, they will be sure to disappoint the owner. For thrifty stock the rule should be, "from worse to better, never from better to worse."

THE BEST BREED?

WHICH is the best breed of cattle? Before this question can receive a proper reply, two others must be answered: For what purpose? and, Under what conditions? If for beef, the Short-horn, Hereford, Devon and Polled Angus are all excellent where feed is abundant and there is shelter in severe Winter weather. Where feed is not plentiful, the Devon can get along better than the two first because lighter and more active, and so can the Angus because more accustomed to "rough it." Its thick skin enables the Hereford to withstand the rigors of Winter pretty well, and the polled Scotch is more accustomed to severe weather than its more southern rivals. Grades of any of these breeds are hardier than the pure-breds and if moderately high grades, the flesh is of an excellent quality. If beef and milk are wanted, then the Holstein, Polled Norfolk and Suffolk and Short-horns of a milking tribe like the Princess, or of a milking herd, such as are raised in several parts of the Eastern States, are the best. Here again the progeny of pure-bred bulls on good native cows often give a great deal of satisfaction. If milk for market is wanted, the Holstein and Ayrshire are hard to beat; but the former requires considerably more feed and attention than the latter. If butter and cheese are needed, then the Ayrshire, milking Short-horn, and, perhaps, the Holstein are the most desirable; while the first and last are the best for cheese, and the Jersey, Guernsey, Ayrshire and crosses of the two first, or of the two first and the third, are best for butter. If a draft ox is needed, the Devon comes first for all ordinary purposes; but the Hereford, being stronger, is better fitted for heavy loads in a rough country. All these breeds, except the Jersey, fatten well when dried off; but in this respect the Short-horn and Holstein are ahead of the others.

CROSSING WHEATS.

FOR the past week, two of the RURAL staff have spent a considerable portion of the time in crossing wheats at the Rural Farm. Do wheats cross with each other or are they self-fertilized or close-fertilized? Mr. Darwin says they are. Most of our new varieties of wheat seem to have been first discovered in other wheat fields and have been selected and propagated by their owners. Thus Fultz was found by Mr. Abram Fultz of Pennsylvania, twenty years ago, his attention being attracted to it from the fact that a few stalks of this still remained upright, while the wheat about them was badly lodged. Are such wheats introduced from other countries where they may be well known; are they the result of crosses effected by insects or the wind, or are they variations due to causes of which we know nothing? Our own investigations thus far lead us to believe that the wheat ovule is in *every case* fertilized by its own pollen before the stamens appear outside of the sheaths or pales. In fact, in many cases, it will be found that the base of the kernel has begun to grow before the "wheat is in flower." We have not as yet found any pollen upon the stamens *after* they have appeared, which then seem shriveled and dead.

To effect crosses it is necessary to open the pales and remove the three anthers while yet they are green. Other and riper stamens may then be inserted or they may be inserted later as the operator prefers. In the latter case, however, the trouble of the operation is nearly doubled. After the pales have once been separated, if ever so carefully, they afterwards remain slightly separated so that the pollen dust from other flowers might easily find its way to the stigmas which are very ready to accept foreign pollen. It is therefore necessary in order to *insure* a cross to bind the spikelets together with worsted or other soft material. In one of our experiments we removed the stamens (while quite green) of each *outside* flower of a head, not applying any other pollen or inserting other anthers, and not binding the spikelets so as to hold them together. The ovaries were fertilized all the same and the grain is at present as far advanced as in others which were not operated upon. Some of our friends who seem to have met with success in crossing wheats have written us that they cut off the anthers as soon as they appear and then apply the pollen with which it is desired to make a cross to the stigmas. Our own observations would show that crosses have *never* been effected in that way.

"HANDLING."

IN speaking of the quality of stock, and especially of that of "beef" cattle, there is scarcely any expression that is used more frequently than "handling," or "touch," and there is none the signification of which it is harder to explain. By "handling" the butcher can tell, before purchasing, the quality of the flesh of a living beast; and by it the breeder can ascertain the aptitude to fatten, the constitutional vigor, and the quality and quantity of the flesh an animal can carry. It is the peculiar sensation of softness and elasticity under the pressure of the fingers on different parts of the body. The nature of this sensation depends on the degree of perfection of the capillary circulation of the system, by which the nutriment prepared by the digestive organs is freely conveyed to every part of the organization. If the capillary circulation is actively carried on in the skin, at the greatest distance from the large circulatory vessels, it can readily be inferred that the internal parts, which are more favorably situated, will be abundantly supplied with materials for the renovation and increase of their tissues.

In testing by "touch" the first thing to be observed is the hair. A fine, long, mossy coat indicates a good feeder, whose flesh will be fine-grained and marbled. A fine but short coat shows a tendency to the accumulation of too much internal fat, instead of a uniform distribution of it through the system. Harsh, coarse, wiry hair denotes poor feeding capacity and late maturity. A soft, mellow, elastic skin, moderately thick, that yields readily under pressure when the animal is in moderate condition, but grows firmer as the beast "ripens," indicates good health, early maturity, and a fine quality of flesh that can be rapidly laid on. A hard, harsh, unyielding skin denotes a slow feeder and inferior flesh; while a thin, flabby skin portends a feeble constitution, coarse, stringy flesh, and soft, oily fat. In all cases the skin should be elastic—springy; the indentations made by pressure should be effaced promptly, not sluggishly, as are those made by pressing the fingers on a dropsical limb. To discriminate correctly by this method requires a delicate sense of touch that can be acquired only by a great deal of practice, and where there are differences in the condition of the hair and skin frequent comparisons of different animals are needed to avoid mistakes. By examination of his own stock, however, any farmer could acquire a good deal of useful information with regard to the "handling" qualities of animals.

HAVE WE FOOT-AND-MOUTH DISEASE AMONG US?

ON June 2nd a Glasgow cablegram announced the discovery of foot-and-mouth disease among the cattle landed from the steamer Phœnician, from Boston on May 21. On April 28 it was also wired from Liverpool that the disease had been found among the cattle on the steamer Lake Manitoba, from Portland, Maine, to Birkenhead, England, but afterward this report was contradicted. The English papers likewise tell us that on two other occasions since the opening of the year the malady has appeared among American cattle on their arrival in England. Much as we desire to be able to do so, we can hardly consider all these reports as unfounded as that of April 28. But, conceding that the disease has actually appeared in its distinctive form among cattle from this side of the Atlantic after their arrival at the other side, is this conclusive of the existence of the disease in this country? We think not, despite the rash report of its existence here officially made by Prof. Lyman to the Government last January; for if it existed in any part of the land, there would certainly be such a panic among stock owners there as prevailed in some portions of New York and New England during 1870-'71. In 1870 the disease was imported, with a couple of Short-horn cows, into Canada, near Montreal, and thence it spread rapidly through some parts of New York, Connecticut and Massachusetts, whither infected animals had been transported. Fortunately the outbreak occurred in the Winter, when stock was generally confined at the homestead, and before it could spread further after they were set at liberty in Spring, it had spent itself for lack of fresh victims.

So easily does it spread, not only among cattle, but among all ruminating animals and pigs, by means of contact with affected animals or with any person or solid substance that has touched them, that if it existed in the East it must have rapidly invaded the West, while if it prevailed in the West, it would have been impossible for the East to escape, in view of the great number of cattle constantly passing from the prairie regions to the seaboard. The rapidity with which it spreads is well illustrated by the present outbreak in England, the evils of which are so graphically depicted elsewhere by Prof. Sheldon. On September 20th last, 30 badly diseased cattle were landed at Deptford from Havre. Within five days, although French cattle are slaughtered at the port of debarkation, the disease had appeared in the counties of Essex, Hampshire and Middlesex, and, despite the most stringent precautions, it has since traveled nearly all over the Kingdom. Yet, without any precaution here, or any perception of a cause for it, we do not expect an affirmative answer to the above question from any part of the country. It is therefore highly probable that the disease was contracted on board the ship, either from hogs, beeves or sheep carried as "ship stores," or from stalls contaminated by these or by infected stock previously imported into this country, or from infected fodder, or even at the "foreign animals' wharf" in Great Britain, where the disease would become manifest 24 to 48 hours after the reception of the virus.

BREVITIES.

DID the modern "rage" for ornamenting the walls of our houses with decorated china take its rise in the artistic cow stables of Friesland?

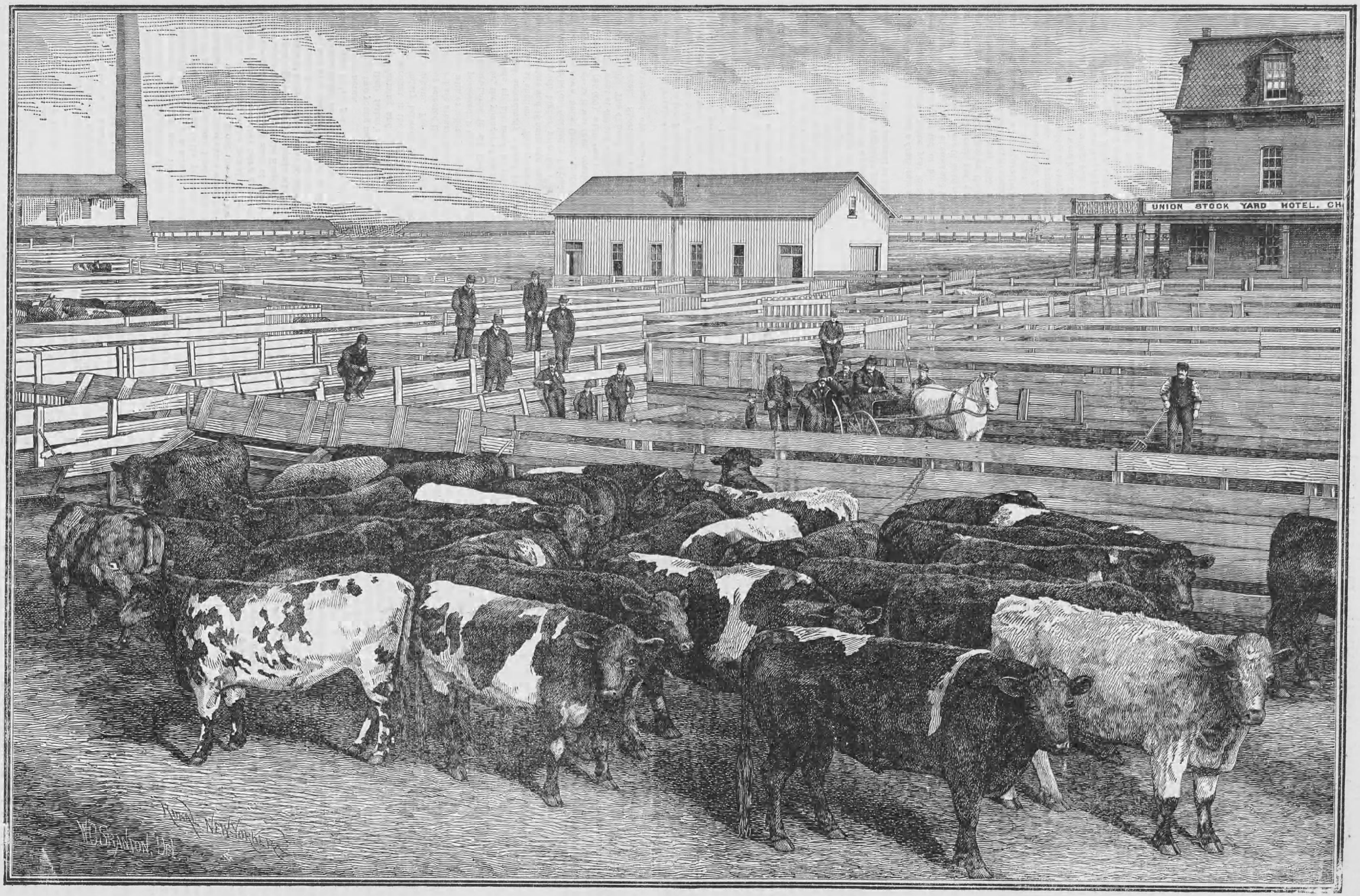
HAVING lately given to our readers several excellent likenesses of choice Short-horns, we have omitted to give one here for the sake of saving space.

EDS. RURAL: Your valuable gift—a Charter Oak Reversible Steel Plow—for three heaviest mangels raised by me, is received. You must have known what I needed. Please accept thanks. G. E. WARNER.
Jamesport, N. Y.

Now that more accurate information of the condition of cattle on the plains is afforded by the annual "round-ups," the losses from the severity of last Winter are reported to be considerably below the earlier estimates.

A WASHINGTON paper says General Le Duc's sorghum sugar cost the Government between $20 and $30 per pound and was sold by a local grocer at five cents per pound. Even if the statement were not grossly exaggerated, what useful discovery has ever been perfected without loss in preliminary experiments? Moreover, the machinery, buildings, etc., which consumed much of the outlay in this connection, remain for future use.

A CABLEGRAM from Liverpool on the 2nd inst. announces that Messrs. Gudgell & Simpson, of Missouri, have selected from the vast herds in England and Scotland 99 Hereford and 39 Polled Angus cattle, to be shipped on the 4th inst. by the Dominion Line steamer Mississippi, for Quebec. This is one of the largest shipments ever made from England, and it is to be hoped due precautions will be taken that the imported animals shall not introduce foot-and-mouth disease or any other contagious malady among our herds. To this end not only should a strict quarantine be enforced here, but the herds into which imported animals have been taken should be kept under surveillance for some time thereafter. The voyage from Great Britain to Australia is considerably longer than that to this country, yet Australia has established a strict quarantine of at least 90 days against English cattle, and, moreover, it has stipulated that such stock shall be guaranteed to have been free from all sources of infection for 60 days prior to shipment, and that they shall be removed from the farm to the vessel in horse-boxes and cattle-floats to prevent all risk of contagion in transit. Yet more, it is also provided that all animals taken on board as "ship stores" shall be carefully inspected and pronounced free from all disease. It would be well for our vast cattle interests if similar precautions were taken with regard to all stock imported from countries in which contagious diseases prevail.



POLLED "ANGUS-DURHAM" STEERS.

(Herdsman, continued from page 387.)

SHORT-HORN CATTLE.

LEWIS F. ALLEN.

It is not positively known whence the originals of this magnificent race came; but it is now pretty generally admitted that large, coarse animals, something like the Short-horns of the present day, were brought over from the opposite districts of the continent to England, by the Danes, after their conquest and settlement of that part of the island stretching from the counties of Lincoln and Yorkshire to Northumberland. Here, in a milder climate and richer pastures, added to the probable selection of the best specimens from the herds for breeding purposes, these cattle were gradually improved down to about the year 1700, chiefly, it is thought, by the monks at their monastic establishments, they being generally the most enlightened of any class of agriculturists and stock breeders in the Kingdom. At this period noblemen and gentlemen who were the owners of large estates, began to pay more attention than heretofore to agriculture as a science, and with this was included, as a matter of course, better care of their domestic animals, so that by the year 1780 many of them possessed fine herds.

At this time two young men by the name of Colling, left their father's establishment and commenced farming and stock-breeding on their own account in the fertile valley of the Tees, the boundary between the counties of York and Durham. For the foundation of their herds they selected the choicest animals they could purchase around them. These they bred together with excellent judgment, and by the year 1810 possessed, it is said, the two best herds of Short-horns in all England. Mr. Charles Colling, the younger of the two brothers, then made up his mind to retire from breeding, and accordingly offered his entire herd for sale at auction. This consisted of 29 cows and heifers and 18 bulls and calves. He obtained a much higher price for these than any cattle ever before fetched in England. One of the full-grown bulls, Comet, made the astounding price—as it was then considered—of 1,000 guineas ($5,000), while two cows, Countess and Lily, went at 400 and 410 guineas ($2,000 and $2,050). The 47 head realized an average of $700 each. Short-horn cattle before this scarcely averaged over one-third to one-half as much.

Reports of this sale were widely published throughout the United Kingdom, and consequently had the effect of attracting the attention of many cattle men to the merits of the Short-horns, who had previously known little or nothing about them. From this time forward they began to spread much more rapidly than ever before, not only in England, Scotland and Ireland, but in exports of them to the British colonies, to the continent of Europe, and to America. In all these countries they have bred well and numerously, taking precedence over every other race; not so much, however, from their more magnificent presence, fine, harmonious shape, and beautiful variety of color, as from their being found more generally useful for a combination of economy in rearing, and the production of a superior quality of beef and milk, and a greater quantity of these in proportion to the amount of food consumed.

Mr. Robert Colling had a draft sale at auction of his Short-horns in the year 1818, eight years after that above noted of his brother Charles. This consisted of 81 cows and heifers and 10 bulls and calves. These 91 head realized an average of about $620 each, not quite so much as the sale of Mr. Charles Colling in 1810. Between this and the year 1853, Short-horns fluctuated considerably in price wherever bred, sometimes selling at comparatively low figures, and again rising much higher. In the year 1853 they took a fresh start in England, and this reacted in America. The prices of all of superior quality rose rapidly in every quarter of the world where they were kept, till they finally reached their culminating point at the great public sale of Mr. Campbell, September, 1873, on his farm at York Mills, near Utica, N. Y. Here several bulls and cows of his herd, bred in the State of New York, out of importations from the famous Duchess tribe of the late Mr. Thomas Bates, of England, fetched the enormous sums of $5,000 to $30,000 each.

As near as I have been able to ascertain, a few Short-horn cattle were imported into the United States in the year 1785, followed sparsely by others down to 1817. From that time considerable importations have been continually made down to the present year. These have taken precedence over every other breed, and are now spread from Canada on the north, to Mexico on the south, and from the borders of the Atlantic Ocean on the east, to those of the Pacific on the west. The choicest of these cattle are recorded, with full-length pedigrees, in the American Short-horn Herd Book, the 20th volume of which has just been published. This brings the number of bulls up to 41,426, and that of cows to over 50,000. A large number of these animals have not been offered by their owners for record, which omission lessens their value considerably in public estimation. These may be equally well bred as those found in the Herd Book; but purchasers usually want something tangible to show that this is the fact, and they can only know it from the published record.

Short-horn cattle are the most beautiful and grand of all the bovine species. Although of the largest size, they are exceedingly fine and symmetrical in all their points; are hardy, thrifty, quick feeders, the best of handlers, and mature earlier than any other breed. Properly fed from birth, bullocks attain nearly to full growth at two and a-half to four years of age, and then weigh, when well fattened, from 1,800 to 2,200 pounds. The cows are proportionally large, and those bred from milking families excel in the dairy. When dried off and turned out to feed, they fatten rapidly. The quality of the beef of both is of high class. The colors of Short-horns are very handsome, varying from pure white to a light or full, rich roan, patched red-and-white, and a pure red. The skin is bright yellow; the nose orange or clear nut-brown. A golden rim encircles the eye, which is brilliant and usually somewhat prominent. The horns are quite short, and turn down or slightly up from the head. The hair is soft, with a thick coat of fine fur underlying it from October on to May, or even June.

Buffalo, N. Y.

ERRORS IN BREEDING.

D. E. SALMON, D. V. M.

Erroneous opinions are the greatest obstructions to progress in all callings; they are handed down from generation to generation and are accepted with an unquestioning and simple faith which it seems difficult to obtain for that which is really worthy of belief. It is an age of investigation, however, and intelligent people are rapidly freeing themselves from these shackles of the dead past. In agriculture, unfortunately, the masses have not had the benefit of that liberal education which is expected in the so-called learned professions, and which gives broader, more liberal and intelligent views; and, hence, the farmer is still weighted down with an incubus of false opinions that frequently prevent success where it might be easily attained.

It is particularly in the management of live stock, that the better class of the farmers of to-day are allured by false lights which should have been laid away with the past generation. Such men no longer wait for a certain phase of the moon before planting their crops or building their fences, as they did but a few years ago, but many of them still maintain that wheat and oats under certain conditions will change into an entirely different species of plant (chess); and when it comes to their stock, they will burn the mouth for lampas, knock out wolf teeth for blindness, and talk about hollow-horn and wolf-in-the-tail in a way that almost makes one imagine himself back somewhere towards the middle of the seventeenth century.

The subject of breeding is still under a cloud equal to that obscuring any other department, and, what is worse, the greater part of our public teachers seem to be rather more befogged than many of the practical breeders who read their articles; and thus all are deprived of the many advantages which follow from a thorough knowledge of the underlying principles—even the fearless innovator and bold experimenter, though occasionally reaching brilliant results, is more often discouraged by disastrous failures which he cannot foresee.

We have all heard that "like produces like," and most of us have given instant assent to it as though it were an axiom too plain to be disputed; but how few have imagined all that follows from this short statement of a great law of nature; how few realize that it is the sum and substance of the whole science of breeding; how few carry it with them in their practical work.

The first violation of this law is in the mating of unlike parents. Of course, there are cases where, the produce not being intended for breeding purposes, this is justifiable, as in the production of mules and beef cattle. But where animals of a high type are desired with a considerable degree of certainty, either running or trotting horses, milch cows, beef cattle, swine or sheep, above all when the intention is to establish a family or breed, the parents must be alike. If they are not alike, then the offspring cannot be uniform, since they may resemble either parent, occupy any position between the two or be totally different from either.

The parents, the grand-parents, the great-grand-parents, and so on, contribute each a part of the force which molds the forms and aptitudes of the new being. As a rule, the force derived from the parents is strongest and and prevails, but where these are unlike, there is an antagonism which frequently neutralizes both and allows the influence derived from a grand-parent or more remote ancestor to become predominant. This constitutes the so-called atavism or breeding back, in regard to which many have seen so much mystery, but which in reality is simply the law of heredity extended a few generations backwards by the counteracting tendencies of the direct parents.

The likeness referred to in the law of heredity is essentially one of forces and tendencies rather than of form and appearance: in other words, it is physiological, not anatomical. To be sure, animals which are alike in this sense nearly always resemble each other in form and color, but the reverse does not hold true; for many animals which have external resemblances are found to be antagonistic when bred together.

Before a new breed can be established, therefore, or an old one improved with any certainty, it is necessary to adopt a practice that will enable us to mate animals having harmonious tendencies, and which will consequently produce a uniform offspring. It is here that the majority of breeders have failed, for such harmonious animals can only be obtained from the same well-established and uniform breed, or from closely related individuals, and our agricultural literature is so filled with warnings against the disastrous result of *in-breeding* that only the few have had the courage to adopt it. And though the majority of these few have failed because of accidents which their ignorance of the principles of breeding did not allow them to foresee, a comparatively small number have succeeded by their wonderful powers of observation and an intuitive skill in management, and have given us the most valuable breeds that we have.

And, yet, after numerous examples of the most incestuous breeding carried on for 20, 30, or 40 years and followed by half a century or more of in-breeding, in which time the finest animals that ever lived were produced, and breeds hitherto unequaled have been formed, we must still listen to a chorus of croakers who insist that there is a mysterious influence about in-breeding which inevitably destroys form and size and renders the produce sterile and diseased. It is time for us to understand, however, that this is nonsense, that in-breeding of itself simply harmonizes the hereditary forces and enables the parents to transmit their characteristics unchanged to their offspring; and that crossing instead of adding to the size and vital forces of the produce by an equally mysterious power, only mates antagonistic parents and opens the door to variations for the reasons already given.

But, it is urged, the majority do fail in their attempts to improve animals by in-breeding. There is no doubt of it. The cause is not difficult to find, however—these men have a faith in a miraculous power connected with this method, which is to change the scrub into the thoroughbred as the philosopher's stone was to change the common metals into gold. There is as little foundation for a belief in a power that improves as there is for one in a power that destroys. In-breeding does neither. Its only effect is on the transmission of the characters of the parents—if these are healthy, well-formed and robust their offspring will be similar; if they are rough, lacking in vitality or diseased we may depend upon their transmitting these qualities with the same certainty as the more desirable ones. Parents transmit by inheritance that which they possess, and in-and-in breeding under no circumstances can enable them to do differently, either in respect to good qualities or bad ones, health or disease.

There seems to be a great law of nature that it is not good for the higher orders of plants or animals to remain for too many generations in exactly the same place, exposed to the climatic conditions, living upon the same character of soil, taking food from the same lands. Wheat under such conditions "runs out"—in other words, it loses in vitality, but its best qualities may be restored by taking it to a distance and growing it for for a few generations on a different soil. That is, it is not the so-called self-fertilization or in-breeding that is destroying it, but it is the sameness of the conditions of life.

This principle has been quite generally overlooked by breeders, but its effects have caused many of the failures that have been attributed to in-breeding, as well as most of the improvements credited to crossing. The success of Mr. Booth, who bred so closely and for so many years, is attributed to his breeding from bulls which had been for years a long distance from home on hire, and thus had the fullest benefit of changed conditions of life. Such animals are not "differentiated," as Mr. Darwin and others would have us believe—their forms and tendencies are what inheritance, food and exercise have given them, but they have an increase of vital force the value of which cannot be overestimated.

Another class of failures has been due to fatty degeneration of essential organs and particularly those concerned in generation, causing ill-health and, in the latter case, sterility. But this is not the direct result of in-breeding. If we take animals that already have the fattening propensity carried to such an extent that the muscles are invaded, as with our best beef cattle and hogs, and keep them with little exercise and highly fed, we should expect their fattening tendency to increase and the organs of procreation to be finally destroyed, for this is an inevitable result. Of course, this occurs in a less number of generations with in-breeding because the tendencies of the parents are more surely transmitted.

What I wish to insist upon, then, is that in-breeding and selection are methods by which we insure the transmission of the characters of one generation to that which follows—they originate nothing; improved or degenerated forms, health or disease, good or bad temperaments, fertility or sterility result from other conditions of life. And this is as true of one species of animals as of another; in-breeding the thoroughbred horse, when intelligently practiced, has reproduced the best animals with the same certainty as it has with thoroughbred cattle; and if the breeders of the American trotter expect to transmit with any certainty the improvements which the careful management of a generation of these animals originates, their hopes can only be realized by the adoption of this method. It is absurd to claim, as some are doing, that in-breeding is fatal to horse flesh because it diminishes the bone; it has no such effect, and as a method of breeding it is as valuable with horses as with any other species of animal. When the principles of inheritance and the effects of the conditions of life are clearly understood by the breeder, his greatest difficulties will be surmounted, and the disastrous effects supposed to be inevitable to in-breeding will be as readily averted.

WORKING CATTLE.

A. B ALLEN.

"With patient, unremitting toil,
We break the clod of every soil:
Our harness cheap, no grain we eat,
And want no shoes upon our feet."

Thus sings the poet, and it is literally true with oxen employed in the general work of the farm, as grass alone suffices for their support in Summer and hay in Winter. But if used for lumbering in the forest, or steady teaming on hard roads, they must then have a moderate allowance of grain, in addition to grass or hay, and be well shod.

The wise king of Israel tells us, that "much increase is by the strength of the ox." The farmers of our Northern and Eastern States seem to have fully adopted this opinion; for ever since the settlement of the country, they have employed oxen much more generally for plowing, carting, etc., than horses, and why those at the West have not done the same I am at a loss to imagine. The only reason I ever heard them give for using horses in tillage rather than oxen was, that the former were quicker in their movements than the latter. This depends, however, entirely on their breeding. The red grade Devon cattle of New England, have as fast a walk as a smart horse, and are easily trained to trot five to six miles within the hour; while those of a larger size and greater power, like the grade Short-horn and Hereford, are quite equal in pace to the ordinary draft horse.

Oxen may be preferred to horses for general farm work, for the following reasons:

First. It does not cost so much to breed and rear them.

Second. They can be put to work when two years old, which is not safely done with any except the largest and most powerful class of horses.

Third. Their harness being simply a wooden yoke and a couple of bows, it does not cost over one-fourth to one-fifth as much as that of a pair of horses.

Fourth. When a load is so heavy as to require a considerable number of animals to draw it, ox teams are especially requisite for this purpose. They can be started up gradually, and each pair will continue to pull steadily till all have put forth their strength, and the load then moves off. Not so with horses. Unless the dullest and slowest of their kind, the pairs start separately or at most two at a time. These, not being able to draw the load, stop pulling, fall back, and thus continue to balk each other, often rendering it impossible to get away with the thing to which they are attached, when they must be taken off, and oxen hitched on in their place to perform the task.

Fifth. If an accident happens to an ox which unfits him for further work, such as getting a foot crushed by a heavy log or rock rolling on it, or a leg broken by stepping into a hole, or something else which will occasionally happen, he can be immediately slaughtered and will bring a fair price for beef. Not so with the horse, he becomes a total loss, save his hide.

Sixth. Cattle are hardier than horses; do not require so much attention; have no vicious or destructive habits, and are not nearly so subject to diseases of various kinds.

Seventh. Flies and mosquitos are not so tormenting to them, and, except in places when such are extra troublesome, netting or sheeting is not necessary to protect their bodies from these pests.

Eighth. Cattle manure is much more valuable than that of horses for light lands. This keeps cool and moist in a drought, and continues to add nutriment to the growing crops, whereas that of the latter dries up, heats and burns the soil.

Ninth. The ox may be kept on steadily at work till seven to nine years old, or even later, and when turned out then to fatten for a few months, he makes an excellent carcass of beef, which sells for a good price. Horse meat is not in vogue quite yet among us, and the horse is consequently disposed of as worthless when done with as a worker.

The ox, both living and dead, is distinguished by the farmer from all other animals, for he alone combines the most useful labor with the best of meat. There is nothing more pleasing to the lover of domestic animals than the sight of well bred oxen, whether standing quietly in their stalls, browsing in a pasture, or yoked to the plow or cart. How patient and enduring in their toil, and how strong and grandly they move along, looking forth with placid, honest eyes, gently swaying their noble heads, crowned with broad-spreading, lofty horns! Tip these with bright brass knobs, and they add a finish and beauty to the team still more to be admired. The cost of these balls is trifling, and it takes but a few minutes to screw them to the horn—by all means then let them be thus adorned.

THE CATTLE INTEREST.

Feeding for Profit.

CONRAD WILSON.

There are probably but few of our farmers, and still fewer of other classes that realize the total aggregate value of the cattle interest of this country. A brief glance at a few leading facts can hardly fail to be of interest, and may tend to promote a truer appreciation of this immense industry. Taking the whole number that are now annually slaughtered for beef, at twelve millions, with an average weight of 800 pounds per head, it shows an aggregate of nearly ten thousand million pounds, worth from five to six hundred million dollars.

If we take the whole number of cows at thirteen millions, the yearly product, either in milk or butter, would be in money value over seven hundred million dollars; or by comparing the nutritive quality of the milk with that of boneless beef, the intrinsic food value would be nearly a thousand million dollars. But there is in the manure another value which is too often overlooked, and the annual amount of which (if it were carefully kept, and rightly used by all farmers), would amount to over three hundred million dollars for the steers, and an equal sum for the cows.

Now, it is true enough that this splendid heritage of manure is not all realized by our farmers. But that is the fault of the owners, and not of the cattle. This value, and even more, is all within their reach, and whatever they fail to secure is due to their own indifference and neglect. The following statement shows the footing up of this annual value.

Yearly value of slaughtered cattle	$800,000,000
" " dairy product	1,000,000,000
Total value of manure from both the above	600,000,000
	$2,100,000,000
Less for cost of labor and feed, say	900,000,000
Net annual income	$1,200,000,000

Cost of Feeding for Beef.

From some experiments recently cited in this journal, as reported by Prof. Sanborn, Prof. Cook, and Prof. E. W. Stewart, I showed that the cost of production for beef, in the cases cited, was less than four cents a pound, and the cost for butter not over six cents. These were, of course, exceptional cases, and better than the present average of actual results. Yet there is no good reason why ordinary farmers may not come very nearly up to this standard, nor any sufficient excuse, for their failing to make the effort. The following facts and figures may perhaps help to guide the earnest, progressive farmer in this direction.

In the journal of the Bath and west of England Agricultural Society, a table is given, in which it appears that 12 pounds of clover hay are equivalent in feeding to one pound of beef; also that eight pounds of beans or peas, or six pounds of barley, or oil-cake (either rape, linseed or cotton-seed), will give the same result; and, further, that four and a-half pounds of ground peas and linseed cake combined, will produce a pound of beef.

According to the late Alderman Mechi, seven pounds of grain (as an average for the leading cereals), will produce one pound of beef, net butchers' weight.

In an experiment of G. H. Chase, of Western New York, it was found that 28 quarts of ground barley per week gave an increase of 18 pounds of flesh.

The editor of the Rural Annual, commenting on some experiments of Dr. Lawes, concludes that one bushel of corn, with 100 pounds of good hay, will produce 10 pounds of beef in a week.

In another case Dr. Lawes cites from an experiment of Biddell, a feeding ration for beef—comprising oil meal, wheat meal, cotton seed, mangels and straw, costing about $7 for four weeks, and equivalent to 60 pounds gain of flesh, plus one ton of short dung.

In the Farmers' Gazette it is stated that a daily ration of 3½ pounds of bean meal and oil meal, in equal parts, added to cut straw will produce a pound of beef.

At the Willoughby Farmers' Club, in Ohio, Mr. Moore reported a result showing that steers fed with corn meal combined with cut stover and cut straw, gained two pounds a day at a cost of six cents for the beef.

Now it is not claimed that the feeding materials in these cases are all of them of peculiar value, nor that any of the rations, so far as they are defined, are specially remarkable, but the point intended here, is the instructive fact that in each case, if the manurial value is duly credited, the cost of the beef is less than four cents a pound, and in several cases less than three cents.

STOCK RAISING IN TEXAS.

PROFESSOR C. C GEORGESON.

Texas enjoys unrivaled facilities for stock raising, and she has long been famous among her sister States for this industry, more perhaps, for the quantity than for the quality of the live stock she produces. To fully comprehend the advantages which this State offers in that respect one must have some idea of its area and the character of the country. Texas contains 274,357 square miles, an area equal to all of the New England States, New York, Pennsylvania, Ohio, Indiana and the lower peninsula of Michigan. Although cattle are raised in all parts of the State, the stock country proper lies chiefly between the Colorado and Rio Grande Rivers, and extends from the Gulf northward to the Indian Territory, embracing more than 150,000 square miles. Nowhere else in the Union can a tract of this extent be found which is so peculiarly suited for grazing. It is usually estimated that one league, or 4,428 acres, will pasture a thousand head of cattle, and according to this estimate the region referred to will be more than sufficient to support fifteen million head. But room is not the only advantage the Texas ranchman enjoys. The mildness of the climate is such that the cattle can remain unsheltered on the prairies the year round, and while the grazier of the older settled parts of the northern territories must shelter his stock for a long period of the year and feed them at a heavy expense, or remove them altogether from the Summer pastures, the stockman of Texas need take no trouble with his. Even during the past severe Winter, which has been so disastrous to the herds of the Western plains, the cattle in Texas suffered but little, and stockmen here are now filling out the herds which in Nebraska, Colorado and elsewhere have been thinned by hunger and cold. The face of the country consists mostly of rolling prairies which in the northwest rise into several groups of sand-hills and low mountains. The rainfall is very small, but there is water enough for stock. Bordering the creeks are narrow strips of woodland. The principal fodder plant is a low-growing, nourishing grass commonly called the Mesquit, (See last week's Rural New-Yorker, p. 366) somewhat similar in appearance to Bermuda Grass. It is said to retain its nutritious qualities though it be parched brown by the sun. Such, briefly stated, are the extent and character of the stock country of Texas.

The Individual Wealth

of stock raisers is on a scale corresponding to the vast extent of territory. It is not uncommon for one man to own a range comprising 10 000 to 50 000 acres, and not a few ranges contain upwards of 100,000 acres. I am informed that Richard King, of Nueches County owns 250,000 acres, or over 390 square miles, in one tract of land, 200,000 acres of which are inclosed by a wire fence consisting of five wires and a board on top. Another gentleman, Capt. M. Kennedy, of Corpus Christi, has 150,000 acres under fence. This fence, with the buildings and improvements for herdsmen, is said to have cost $100,000. To Eastern landowners these figures will sound fabulous, but it must be remembered that no attempt whatever is made at the cultivation of crops. The annual increase of stock is generally put at 25 per cent. over and above all casualties. Stock raisers of this stamp frequently live in almost palatial dwellings and their children are educated in the best schools the nation can afford. There are others who own no land at all, but drive their herds from place to place over the wild prairies, wherever they find good pasturage and plenty of water, much as did the patriarchs of old. This is the case chiefly in the West where fencing has not yet been practiced. Still others rent pasturage at from one to three cents per acre annually. Land in the stock region can be purchased in tracts to suit the buyer at from 50 cents upwards per acre.

The Characteristics of Texas Cattle

are well known in cattle markets all over America. They are noted for their immense horns and rather small bodies, with a correspondingly small amount of beef. It is a hardy prolific and rather docile race, such as would naturally result from the conditions under which it has been bred. For beef cattle they are, however, too narrow through the quarters both in front and behind, the ribs are not sufficiently sprung, making the lack of width across the back very apparent, and they are very slow to mature. The wealthier stockmen are rapidly improving their herds by the introduction of thoroughbred males, mainly of the Short-horn and Devon breeds. For the production of milk the Jerseys have been introduced and they are at present in high repute. There can be no doubt of the wisdom of introducing these latter breeds. I venture the assertion that the value of a herd of natives for beef can be raised 50 to 60 per cent. in two crosses with thoroughbred Short-horn or Herefords. But the enterprise is connected with great risk and often severe losses when the animals are brought from districts where the cattle are susceptible of the disease commonly known as Texas cattle fever; for they will be almost certain to contract this disease and a very large percentage succumb to it. The surest way appears to be to introduce cows, recently got in calf, in the Fall. The disease will not break out in the cow till the following Summer, and the calf will, in the meantime, become so well acclimated, having been developed and born here, that it will either take the fever lightly or not at all.

The Modus-operand

of raising cattle in Texas is simple, and the expense in the business is next to nothing outside the hire of herders and the maintenance of fences, where these have been built. Every stock raiser adopts some brand, consisting generally of initial letters or a monogram, which is registered in the office of the county clerk, and with this every head in his herds is branded. To facilitate the branding, a strong inclosure, or pen, is built, called a corral. It may be circular or polygonal in shape, and it is often constructed of logs sunk into the ground close one to the other and reaching eight or ten feet in hight. It opens out to the prairie on one side, through a narrow passage called a "shoot," some five feet wide and of any desired length. The cattle to be branded are crowded into this "straight and narrow path," where, unable to turn or move, the heated irons are applied to their bodies. When all in the "shoot" are branded, the rails which close the passage in front are removed and the terrified creatures are again free on the prairie. On the unfenced ranches the cattle of a dozen or more stockmen may run together, the brand being the only evidence of ownership. In this case the ranchmen of a district meet together some time in the Spring before the calves are weaned, and brand all the the young stock, each calf being marked with the same brand as that on the cow it follows. This is called the annual "round-up." Sometimes they are driven into a corral, as above described, but they are as frequently lassoed as they run, thrown down and branded on the spot. The branding is a cruel operation, and the man who can invent a dye or paint which will be as irremovable as the brand, and as readily applied, will be a benefactor to the cattle of Texas. The tendency at the present, however, is to make the brand large and deep so that it can be distinguished at a distance.

The bulk of the cattle are sold in the Spring and early Summer. Prices for stock cattle are, on the ranch, $3 to $6 for yearlings; and $8 to $12 for two-year-olds; $12 to $15 for cows; and $14 to $18 for four-year-old steers. They are then either sold to drovers, or, when the owner has a large number, he may drive them to the market himself. Not more than 2,000 to 2,500 head can be conveniently driven in one body, and when on the trail it requires about one man for every 200 head to drive them. They are driven slowly and, of course, pick their living along the trail over which they pass. Arriving at the market in Kansas, Colorado or Nebraska, the herd is purchased by cattle buyers, who graze them from a few months to a couple of years, according to age and condition, and at the end of this period, they are shipped eastward to Chicago, Cincinnati, New York and other markets.

It sometimes happens that a whole drove gets frightened at night while on the trail, and a stampede ensues. This is the dread of the drover. An uncontrollable panic seizes the herd, and in wildest flight they run off in whatever direction they may happen to get started. Hardly anything short of a rampart can stand against them. The foremost are pressed on by those behind and if they fall they are trampled to death in an instant. The aim of the drovers in this emergency is gradually to turn the leaders of the stampede so as to make them move in a circle, when in due time they become exhausted.

Besides what are driven to Northern markets, thousands are annually slaughtered and packed in the several beef packeries here in the State, and large numbers are also exported to Havana and elsewhere from the seaports on the Gulf. The total number of cattle which yearly leave Texas for the support of the world is probably not much less than 300,000.

State Ag'l College, College Station, Texas.

POLLED CATTLE.

(See page 389 for Illustration.)

Of the several breeds that which we just now wish to consider is the Angus, or the Aberdeen, the peer of the Short-horn in the pasture and the stall and on the shambles. This breed, of which we give some excellent and interesting illustrations, originated in the Northeastern part of Scotland in a district of limited extent, extending from the Southern slopes of the Grampian hills to the rich lowlands of the Frith of Forth. It thus occupies a bold headland which projects out into the North Sea where the climate is harsh and rigorous. Consequently these Angus cattle are hardy and able to buffet the northeast storms and breezes which pour from the ocean over their exposed pastures. They are thus naturally suited to our Western pastures and better able than the more tender English races to resist the hardships of our rigorous Northern Winters. They are, nevertheless, excellent feeders, having been greatly improved for nearly a century by the most skillful and enthusiastic breeders, the first of whom—Mr. Hugh Watson, of Keillor—deserves the chief credit for their well deserved reputation. The bull Prince of the Realm aged 15 months, of which we recently gave a portrait, is a representative of a herd descended directly from Mr. Watson's cattle and bred by Mr. Ferguson of Kinnochtry in the county of Fife, which is the best part of the district above mentioned. As a proof of the merits of the Angus cattle, we may refer to the fact that at the last Exposition at Paris in 1877, these cattle took first premiums in competition with every other race of beeves, and that they have frequently taken the first place at the Smithfield fat cattle exhibitions in England. They have also been chosen by the most expert breeders for the purpose of crossing on the Short-horns. Several head of this cross, Angus-Durhams, were exhibited at Paris in 1877, when three four-year-olds weighed alive an average of 2,347 pounds, and dressed 1,633 pounds net.

It is an interesting fact that this same cross has been tried and made perfectly successful in Kansas. By the kindness of Mr. Thomas R Clark of Victoria, Ellis Co., Kansas, we are enabled to give a representation, copied from a photograph, of 36 head of Angus-Durham steers as they appeared in a pen at the Union Stock Yards at Chicago, a short time ago. These were bred by Mr. Clark at his ranch at Victoria, from pure Short-horn cows and a pure Angus bull. The Angus cattle at Victoria were imported a few years ago. They have thrived remarkably in their new home and have been used with great success in crossing upon the ungainly native Texan cows as well as on comely Short-horns. Mr. Clark's experiment, possibly made without a knowledge that it had been successfully carried out in Scotland many years ago, has terminated very favorably. He finds that the products of the cross are, with rare exceptions, all polled animals, and believes that the production of a native hornless cross breed, which will possess all the good points of both parents, can easily be founded. The lot of steers sold at Chicago were very favorably considered by the butchers. They were sold to a New York dealer who states that they made the best quality of beef and dressed equal to extra cattle, making 62 pounds dressed meat to the 100 pounds of live weight. The butchers, Messrs. Schwarzschild and Susberger, of New York, regarded the beef as very fine for the age and weight of the cattle, which were two years old and averaged 1,340 pounds live weight. This is an interesting result, and considering the desirable character of these polled cattle, it is to be hoped that Mr. Clark's example will be followed by others, and an effort made to popularize the hornless breeds. It should be noticed that these Angus-Durham steers bred by Mr. Clark, were grazed on the open prairies, which at Victoria, are the Eastern verge of the vast plains which stretch westward to the Rocky Mountains and northward to the Canadian boundary, and far beyond it, so that their growth and substance have not been produced by stall feeding or by means of rich food, or by the careful sheltering or luxurious pampering enjoyed by some of the cattle in the East. Besides, this locality is subject to the hardships and rigors of torrid Summer heats and severe Winter storms and colds, and these cattle necessarily have to go through all these equally with other stock that are kept on the plains. The experience of several years at Victoria has satisfactorily shown that the Polled Angus cattle thrive perfectly well in America and can take their share of the hard-

ships incident to Western ranching as well as the Texans which are "native and to the manner born."

This breed is becoming deservedly popular in America and several persons are importing herds at considerable prices. The Hon. H. M. Cochrane, of Hillhurst, Canada, has recently received five head from the herd of the Earl of Strathmore and five from that of Mr. Smith of Dundee, which cost from $500 to $800 per head. The model farm at Guelph, Ontario, is forming a herd; Mr. J. J. Rogers of Abingdon, Ill.; Mr. Campbell of Iowa; Messrs. Burleigh and Bodwill, of Fairfield Center, Maine; Hon. J. H. Pope, Minister of Agriculture, Canada; Mr. Redfield of Wigwam Farm, Batavia, N. Y., and some others, are also importing freely from the best herds in Scotland. A herd has been sent to the Sandwich Islands for a Scotch resident there. Mr. Clark is entitled to the credit of being the pioneer importer and breeder of these cattle in America, and the first to introduce them to the western country, as well as the first to cross them upon the Shorthorns and bring them to the test of the butchers' stall.

An inferior black polled race is known as the Galloway. This is named from a locality in Scotland and has come originally from the same stock But it is inferior to some extent, because it has not been subjected to the careful culture and training which the Angus cattle have had, and although it is a hardy race, yet it is coarse in form, rough-haired and by no means so profitable a feeder as the latter. In concluding these remarks, it might be suggested that a very promising venture is offered to some enterprising dairyman to cross some of the milking strains of these Angus cattle on our Jerseys, so as to produce a hornless dairy cow of the best quality, of graceful form and of perfect docility and harmlessness.

LIVE STOCK INTERESTS IN GREAT BRITAIN.

PROFESSOR J. P. SHELDON

The agricultural mind of this country is being a good deal exercised on the subject of contagious diseases of cattle. A long and disastrous period of depression has made our farmers unusually acute on the subject of losses which may be prevented, and of inconveniences which are gratuitous. It is, they think, enough in all conscience that fiscal depletion should come of causes which, in the present state of scientific remedies, are beyond control, without having also to bear losses the causes of which may be or might have been prevented. Knowing that we are ever liable to disease—scourges whose origin is in other countries, and which by proper regulations efficiently carried out may be kept there, increased vigilance is demanded and more drastic measures are proposed. The present condition of bovine interests in the country proves, indeed, ample reason for the feeling of insecurity, and its inevitable dissatisfaction. A "tight little island" like this, whose internal management is or ought to be well in hand, should be the last place on earth in which such a feeling should have any cause to gain ground, and it is clear that a joint is loose somewhere in the administrative harness. We have been thought hardly of in America from having ordered that the cattle she is good enough to send us at so cheap a rate shall be slaughtered at the port of landing, because she cannot present us with a clean bill of health among her live stock, and we have quietly let slip in the insidious disease of "foot-and-mouth" from a country which is comparatively within a stone's throw—from France, in fact.

This it is that is again promoting John Bull's proverbial love of grumbling, and it must be admitted that John Bull is quite in the right for once. It is true that we cannot produce enough for ourselves of the animal food on which the typical Englishman loves to dine, and that we are driven to import an annually increasing quantity of it from foreign countries and from our own dependencies, but it is clearly "a penny wise and pound foolish" policy to admit with that imported food certain diseases which, by diminishing our home production, makes us more than ever dependent on those outside countries. Our farmers do not clamor for anything in the shape of protection against the importation of foreign food of any kind, though they find a rapid increase of difficulty in meeting foreign competition with success; but they do most properly demand protection against the introduction of disease along with the food.

It has been estimated by competent authorities that we lose quite as much of our own stock through these imported diseases as the imported animal food amounts to, and that many millions sterling are sent out of the country to supply the deficiency of animal food which these very diseases have created Repeatedly and *ad nauseum* these diseases have invaded the country, working desolation and loss, ruining numbers of hard-working farmers and were it not that, as a class, our agriculturists, despite their grumbling tendencies, which probably have a climatic origin, are the most long-suffering people to be found, they would have risen up and demanded, once for all, in a manner admitting of no compromise, that their flocks and herds should be made safe against murderous epidemics from abroad. Repeatedly have we been compelled to stamp out these epidemics, and to adopt stringent regulations to confine them within a limited area, and patiently, even cheerfully, have our farmers submitted to the harrassing inconvenience and loss inseparable from such orders. All, as it appears, to no purpose, for again is the whole country declared to be infected; again are the markets closed; again is the movement of stock placed under strict supervision; again is bucolic commerce in a state of paralysis; again have values become a nebulous entity; again are our farmers reduced to the condition of a beleaguered city with an enemy at the gates.

These diseases mean ruin to the British farmer to an extent which is not well comprehended in other countries. Ordinary farm stock—cattle, sheep and pigs—are worth more in Britain than in any other country, and the farmer's capital is invested in them to a greater degree than we find elsewhere. He does not and cannot, as in America, for instance, own his farm and the stock upon it; land is too dear to admit of that; so that when diseases sweep away his stock nearly his all is gone. A farmer in England who is rich enough to own his farm as well as the necessary stock upon it, does not so easily "go to the wall" if he loses his stock, but the proportion of those who own their land is very small in comparison with those who rent it. From this it is evident that our farmers need to be guarded against the intrusion of diseases. Our authorities are well aware of this, hence the measures which are taken to prevent the introduction of foreign epidemics, and to stamp them out as well as to prevent the spread of them, if unluckily they do find their way in amongst us. Were our farmers land-owners, as American farmers are, it is possible that our Government would do no more than yours for the eradication of disease, but we cannot afford to be supine on the question. It does not appear to me that America had any right to complain when we ordered her live stock to be killed on landing here; and we should only have been reciprocal had we placed a heavy import duty on them as well. So soon as you have ridded your country of disease we shall again admit your live stock without restriction, but American farmers may depend upon it that America will remain scheduled until a clean bill of health can be presented.

But we have something amongst our live stock which is far worse than foot-and-mouth disease. Our sheep are dying in thousands from the parasitic disease of liver-rot. It is probable that we have lost four or five millions of them, either directly or indirectly, from this cause within the past 18 months. This is not an infectious disease in the ordinary meaning of the word, but it is none the less disastrous on that account. The sheep pick it up just as freely as if it were. The sequence of the wet seasons we have had is the cause of this frightful malady. Another of the series would be worse than any previous one, because the land is getting more and more impregnated with unsoundness. At the present time sheep are dying on land to which neither record nor tradition ascribes any previous liability to "rot." Land that never has required artificial draining, and has always been regarded as perfectly sound, is no longer regarded as perfectly safe. Even on the carboniferous limestone soils of Derbyshire, where liver-rot was never known before, there is probably not a perfectly sound flock to be found. The consequence is that while mutton is dear, store sheep are a drug in the market. Even on the dry soils of Leicestershire sheep are dying in thousands, though they withstood the disease until the past Winter. I hear of one man who has lost within a short period upwards of 60 per cent. of his ewes. In many heavy-land districts there are no sheep left. A man not far from me has lost two whole flocks; the first died off a year or two ago; he bought a second and that too is swept away. On the wettest land, in some parts, even cattle have become afflicted with rot. Sheep will be dearer than ever they were known to be, so soon as the malady has gone and confidence is restored. We want a couple of American Summers and Winters to purify the land—your clear, bright sky and your dry, pure air.

Meantime no one can pretend to have any certain knowledge of what live stock are worth at the present time in this country. The markets are closed *sine die*, and very little business is being done without them. A man cannot take his cows to drink on a public road without a permit from the police, even though they may have been drinking there for a century or two; nor can he move them from one part to another of his farm if he has to cross a road in so doing. If a man buys any cattle, sheep, or pigs, he must procure a special pass before he can move them away. All these things are very harrassing, but they are necessary to prevent the spread of the foot-and-mouth disease. In the Autumn of last year the trade in store stock showed a healthy revival, in comparison with the previous 12 or 18 months, but it has been checked by disease and its attendant restrictions. It is probable that better times were dawning on us but for this outbreak of foot-and-mouth and for the continued prevalence of rot among sheep. Meanwhile our horses and pigs remain healthy, but our people are beginning to imbibe a wholesome fear of *trichinosis*; our neighbors, the French, have started the crusade against American pork and bacon; it will be some time before confidence is restored.

Sheen, Ashhonrne, England.

GRADED ANIMALS AND THEIR ADVANTAGES.

COL F. D. CURTIS.

The merits of thoroughbred stock have been so often repeated that grades have necessarily stood in the background. There has been a sort of false pride in connection with them on account of their lower value when compared with animals with a full pedigree, which has lessened the interest in them. Breeders of the pure blood animals have helped to create this feeling and to keep it alive by vaunting the claims of the thoroughbreds and pushing them to the front rank, or the aristocratic line. This is right, perhaps, as this royal blood is certainly more costly and it is this which lays the foundation for the grades. By grades we mean the progeny of pure-bred stock crosses of the "natives." Herein the greatest benefits are to be derived from thoroughbreds. The latter command a price above the reach of ordinary farmers, and their owners justly demand more for them, on account of their cost to them and because they really are more valuable to produce stock. Few people realize how much real benefit may be derived from a judicious crossing of the pure-bred and the "native."

A mongrel sire of any kind of stock should never be used If a farmer is not able to purchase a thoroughbred alone, he should get others to unite with him and make a joint purchase, dividing purchase price and cost of keeping. When this is done no neighborhood need be without such a sire. The choice should be according to the wants of the community. If cheese-making is the leading dairy interest, then a breed of cattle should be selected which will furnish the largest yield of milk, and this selection should be governed by the circumstances of feed In most dairy districts the Ayrshires will be found to be best adapted to the purpose, on account of their smaller size and their ability to take care of themselves, and to furnish the largest yield of milk on shorter feed. Where the pastures are luxuriant and feed is abundant, the Holsteins will give satisfaction. These are the most valuable cheese-producing cattle. We know of crosses of the Ayrshires upon the natives which have demonstrated their value. These grades all made superior cows, and one of them so wonderfully combined the flow and quality of milk that she would make 18 pounds of butter a week. Where cows are kept for butter a selection of either the Jersey or Guernsey cross should be made.

Seventy years ago an "Alderney" bull produced a heifer calf, which was reared and all of her female progeny saved. At this day the descendants are kept in the family of the owner of the original heifer, and are still noted as extra-good cows, and the marks of the Alderney breed can be traced, as well as the superior merits. Nearly half a century has elapsed since Henry W. Dolatow imported from England two cows and a bull, "Durham" cattle. These cows were good milkers, and recently I saw two cows, descended from this importation, which showed the old Durham type in great perfection, although several generations removed by crosses upon natives, and they were remarkably good cows. Another farmer began with a half-bred Jersey cow, and by saving and retaining all his heifers for Jersey bulls he has established a herd of grade Jerseys which produce more butter than any other dairy of like number, and twice the amount he used to obtain when all of his stock were natives. Other farmers in the neighborhood have followed his example, and have secured thereby the same results. Grades are nearly, if not quite, as valuable as pure-breds for use in the dairy. They possess the hardiness and strong constitutional qualities of the natives, which keep them free from disease and give them the ability to eat and assimilate almost anything and turn it to the best account. This is proven by the fact that in experiments in feeding to attain great weights, grade Short-horns are usually selected. They combine the frames of the pure-breds and the strong stomachs of the natives.

Grade pigs are by far the most profitable for fattening, on this account. They possess the fineness of bone and flesh and aptitude to fatten of the thoroughbreds, and also the vigorous appetites and stamina of the natives. A thoroughbred sire will add, on this account alone, 25 per cent. to the value of the pigs on those got by a sire of mean or no blood. One South Down ram can double the mutton value of the progeny of more than 100 Merino sheep, and the offspring of these grades, if kept for breeders, may be made more desirable by another cross by a pure-bred sire. The income of the average dairy can be increased one-third by judicious crossing of the best native cows with pure-blood bulls. This statement resolves itself into a sort of mathematical problem by considering the average yield of the dairies of New York, for instance,—which is about 1,300 quarts—and that of a good Ayrshire herd—which will run up to 2,500 quarts. Grade Ayrshires or Holsteins will add to the native side of this proportion from 300 to 500 quarts of milk and grade Guerneseys or Jerseys would add an equal proportion to the average yield of butter. It should be added that the butter of grades is almost identical with that of the pure-breds in color and quality. In fact, the milk of a half-bred Jersey in Charlton, in several cases, has given a yellower color to the butter of the whole dairy. One cross will not often carry with it a close resemblance to the pure-bred ancestors, but three-quarters and seven-eighths—second and third crosses—will generally stamp the progeny with the same markings in color, form of body, the size being graduated by the size of the dam.

The instances we have cited where an original half-blood cross was made without any additions of blood other than native, and which have preserved the special qualities of the original blood so long, not only prove the value of pure blood, but establish the principle of pedigree, and also demonstrate that graded blood has an intrinsic value which may be perpetuated many years. It is poor economy, then, for farmers to shut their eyes to these facts and jeer at "fancy stock" when they should encourage breeders as real benefactors.

HOLDERNESS CATTLE.

The earliest accounts I have seen place these cattle in Holderness, a district of Yorkshire, England, from which they take their name. They were chiefly noted for their great milking qualities. Although coarse and ungainly in appearance, they possessed valuable characteristics in their high and broad carcasses, and contained within themselves the elements of refinement; which has been amply proven in the beef-producing Short-horn and the milk-producing Ayrshire, both of which owe their existence in a great measure to the Holderness.

It was not until the present century that they were introduced into the United States, where they have been greatly improved in their form and general appearance by careful breeding, until they stand unrivaled for beauty and excellence. They produce large quantities of milk of a very superior quality. They are now called American Holderness, as they are essentially an American breed. For the past 30 years their breeding and management have, in many respects, been similar to that of all the successful breeders of pure-bred cattle in England. They have been closely in-and-in bred and improved only by selections made from their own number, with a view of fixing and concentrating their good points still more strongly in the blood and constitution. Sire has been bred to his daughter, the sons and daughters with each other, sons to mothers, etc. This practice has proved eminently successful, producing stock of certain and positive qualities of excellence when bred among themselves, and when crossed upon stock of other families or tribes, stamping their own characteristics upon the progeny with a certainty and strength that could be reached by no kind of miscellaneous breeding whatever. Thus bred, they have become, in a measure, the natural outgrowth of the climate of the country, and their product of butter has been increased from 200 to more than 300 pounds per annum.

It is true that natural causes and conditions have contributed to this end, yet great care and vigilance have been exercised to counteract the smallest tendency to imperfection. The color has gradually deepened from light red and white to a rich brown or almost black, with white along the back and belly and encircling the legs at the body. The skin is so very yellow that it often gives the white the appearance of having been colored. The interior of the ears is like orange peel. The animals are of good size, deep-bodied, with large udders and teats, and with excellent escutcheons. They have a good temper and a kindly, docile disposition, and have a fearless confidence in those who care for them. They are held in high esteem by those who are fortunate enough to possess some of them.

Solsville, N Y. T A C.

JERSEY CATTLE.

Home-bred and Imported.

RICHARD GOODMAN, JR.

A GLAMOUR still surrounds the word "imported." At public sales in this country a cow brought from the Island of Jersey, concerning whose ancestors nothing, or but little, is known, frequently brings twice the price of an American-bred animal whose ancestors for 40 years back are known, and known to have been strong and healthy and to have included numerous large butter-makers. This is wrong. We Americans make a great mistake in considering that, because a thing is *imported*, therefore it is of necessity better than anything home-made or home-bred.

In the earlier days of our existence as a nation there were many things of importance which we could not produce in quality equal to that made in foreign countries, and hence we got into the habit of considering *everything* made abroad better than *anything* made at home. But the time has come for us to overcome this prejudice; to open our eyes to the fact that in many products we have surpassed the inhabitants of the Old World, and in nothing have we reached a higher position as compared with Europe than in the breeding of fine stock. It has taken a deal of hard work and not a few hard knocks to rouse our agricultural brethern to the realization of the fact that in the breeding of horned cattle we have in this country equaled and surpassed Englishmen in Short-horns, Dutchmen in Holsteins and Jerseymen in Jerseys. But the careful breeding and writing and investigating and testing of such men as Mr. Darling, Mr. Kellogg, Mr. Motley, Mr. Hoe, Mr. Waring, Mr. Ellms and others have at length opened the eyes of the world to the merits of American Jerseys, and the prices paid at recent public sales in New York city are proofs in point—American-bred Jersey bulls of from one to six years of age selling for from $500 to $4 500 each. Yet, as has been suggested, the eyes of the entire community are not fully opened to the merits of our own animals as compared with those fresh from the Island of Jersey. For example, at the sales just referred to, imported animals with no known pedigrees brought higher prices than some good home-bred cattle which had American pedigrees running back 30 years.

The following are some of the reasons why buyers and breeders of Jersey cattle should place a higher value upon those having long and good American pedigrees than on those of recent importation. In the first place, it should be remembered that the "foundation stock" of our American Jerseys was selected under the most favorable auspices. The efforts of the Jersey Agricultural Society had for a dozen years been making conspicuous, by selection and awards, the best animals and the best families in the Island when, in 1850, 1851 and 1852, our countrymen, Messrs. Talmor, Motley and others, began their importations. These gentlemen had the good sense to appreciate and the money and energy to promptly appropriate the best animals in the Island. These came to America bearing their first-premium ribbons on their horns and they were distributed in various parts of this country and many fell into hands of men of great wealth and intelligence. Thus we may be said to have had at least an "even start" 30 years ago with our fellow breeders in the Island of Jersey, and I think it cannot be denied that we had more than an even start—we had a "lead;" for though they had more cattle than we, many of their cattle were inferior, while ours were all, or nearly all, good. It is not until of late years that Jerseys of all grades have been poured upon our shore. In the early days intelligent breeders, who were also men of wealth, selected and imported for themselves. Hence is it surprising that most of the best cows in this country to-day trace back to these importations of "the fifties," and, as a rule, the best Jerseys in America to-day have the longest American pedigrees?

Thus it is that we find repeated again and again in the pedigrees of the majority of the best Jersey cows in this country to-day the names of such bulls as Splendid (2), Pilot (3), York (8), St. Clement (10), Prince of Jersey (66), and Colonel (76), and such cows as Lily (1), Pansy (8), Flora (113), and Rose (240). It is not meant to be implied that no good Jerseys have been imported since these early days; numerous animals, excellent themselves and the founders of distinguished families have been imported at intervals ever since 1850, as, for example, the bulls Jerry (15), Rob Roy (17), Saturn (94), and Rajah (340) and such cows as Rhea (166), Duchess (101) and Frankie (17); but most of these were brought to this country before 1865, and have usually been distinguished animals at home, the winners of first prizes at the Island shows, or out of the herds of some very eminent Jersey breeder, and they were certainly very different animals from the majority of those imported during the past dozen years, many of which are sold because of little value and most of which are nameless and numberless until the day of sale. It should not be forgotten that of the ten thousand Jersey cattle in the United States to-day *all* are registered and a careful record kept of their ages, markings, names, numbers, breeders and all ancestors on both sires' and dams' sides; while of the ten thousand in the Island of Jersey a vast majority are unnamed and unregistered and unpedigreed.

But as we began our breeding of Jerseys in this country with some of the best animals then living and also with a very small proportion of inferior animals as compared with our Island competitors, we insist not only that we were more fortunate than the inhabitants of the Island of Jersey in the start, but that our animals have escaped several injurious influences to which the cattle of the Island have been exposed during the past dozen or twenty years. Among these are the influence of the English preference for square outlines in the shape of cattle, and for uniformity of color in the hair. Two other circumstances should be mentioned—one, the use of young bulls, and, the other, the limited amount and quality and variety of fodder and the limited amount of exercise. The influence of English taste has naturally been felt more powerfully by the inhabitants of the Channel Islands than by Americans. Hence we have done much less injury to the butter-producing powers of our Jerseys by seeking to breed them into square Short-horn shapes or into "solid colors." No one familiar with the exhibitions in Jersey and in England during the past dozen years, will deny that many a good Jersey butter family has been seriously injured by the efforts of the breeder to produce animals which in shape and color should please the eye of the judges or rich fanciers at British shows.

As to the use of immature bulls, it is a notorious fact that bulls over two years of age are seldom seen in the Island, while in America bulls are usually kept in use until they are six years of age, and there is one bull now conspicuous before the American public, which is over thirteen years of age. It is unnecessary to go into an argument to prove the injury which must result to any race of cattle or men, which is kept alive exclusively by very youthful sires. And to this immature service should be added the excessive service so common in the Island of Jersey; Mr. Thornton, Secretary of the English Jersey Herd Book, says that it is no uncommon thing for yearling bulls on the Island to serve between two and three hundred cows in one season!

As to the amount of food and exercise the cattle of Jersey enjoy, it should be remembered that the whole Island is only eleven miles in length by four in width, and that the farms average but *four acres* in extent, and that much of this land is devoted to the production of potatoes and early vegetables for the English markets. The cattle are never at liberty to roam at will in search of food and shade and water, and thus to get incidentally healthful exercise.

And when compared with the variety and amount of grass and hay, roots and green fodder, not to speak of the corn and wheat and cotton-seed meal of the United States, we shall see that the cattle of our country have many advantages wholly denied to those of the Channel Islands. It may, in conclusion, be safely asserted that there are more good Jersey cattle in America to-day than in Jersey and England together; that American Jerseys with long American pedigrees possess to-day a higher interest and value to breeders than any which are or can be imported, and that if "fresh blood" is needed it should be "imported" from our sister States rather than from across the water.

Benefit of Feeding Two Quarts of Cotton-Seed Meal Per Day.

As I did not wish to be at the trouble of raising calves from my family cow, I have let her go farrow for several years past. Last November, after being taken up from pasture and put on dry feed in the stable, her butter yield almost immediately fell from six pounds per week to a little less than five pounds; but, what was worse, she lost flesh continually, and by the last of December became quite thin. In addition to her other feed I commenced giving one quart of cotton-seed meal in the morning, and the same quantity again at night. Within a week she began to amend both in flesh and butter. The last was increased to six pounds per week, and held to that on the average till she was turned out to pasture early in May; and since then there is a slight increase. But, what was still more gratifying, by the last of March, she had gained flesh enough to almost make her fit for beef. There is no doubt in my mind that the cotton-seed meal produced a three-fold benefit: first, an increase of butter; second, an increase of flesh; and third, it enabled the cow to digest her other food so much better, that she derived a greater amount of nourishment from it, than she could before receiving this small additional ration. From this and other experiments with cotton-seed meal fed to various domestic animals, think that from a single pint to four quarts per day, according to the kind and size of the animal, is the cheapest additional food that can be given them. "B,"

Literary Miscellany.

MAKING LIFE LOOK BRIGHTER.

Say not, "The world seems dark and drear,"
But strive yourself to light it;
Though ignorance rage, yet never fear,
'Tis manhood's work to fight it!
Strive on, and rust will drop its scales,
The earnest effort seldom fails,
And purpose over doubt prevails,
Thus making life look brighter.

Does virtue meet with small reward?
That thought is worldly-minded;
For vice herself is oft abhorred
By slaves whom she has blinded;
Though now the clouds be dark and dense,
When we shall walk by faith, not sense,
Virtue will have true recompense
The while the clouds grow lighter.

Then call not life a "vale of tears,"
Our lives are what we make them;
And we must weigh by "deeds, not years,"
If we would not mistake them.
Improve the years, and life is sweet;
We sow good seed to reap pure wheat;
Good thoughts and deeds make life complete,
And make the soul grow whiter.

MARJORIE DAW.

MARJORIE DAW was beautiful as the Spring, and as capricious.

Sometimes she was as gentle as the southwest wind blowing over a bank of violets, anon she was petulant as an April storm, tearful, sudden, violent, with the violence of a spoilt child. Then she would be cold, sharp, and shrewish as a northeast wind, sweeping past her friends, chilling those who loved her to their hearts by her cutting scornfulness, mocking all whom she knew, whether she liked them or not.

It fell out that a great many people disliked Marjorie Daw.

A few loved her deeply. One poor fellow worshipped her madly, as few women and—shall we say it, oh, lords of creation?—fewer men deserve to be loved.

Marjorie Daw made fun of everything and everybody, and went on her own way. Her father was a tolerably well-to-do, homely farmer; her home was a rambling farmhouse in a mountainous country.

Yarrow Farm stood half-way up a steep, shady lane; there were thickets of birch and alder at either side the way, and below, far down at the bottom of the slope, a broad stream went tumbling noisily over the stones, running rapidly towards the sea.

One bright May evening, when the sun was setting behind a black-browed mountain that faced the village of Wynn, Marjorie stood at the gate which led out of the Yarrow; she was drawing on a pair of dainty kid gloves. She wore a gray dress of silky texture, a little black lace scarf, and a white straw hat looped up with a gray feather.

"Her father is not wise to let her dress so!"

It was Mrs. Williams, the grocer's wife, who spoke thus to her daughter Jane, a buxom, rosy-faced lass, dressed stiffly as some doll at a country fair, a white shawl folded square and pinned tightly across her chest, a great black bonnet perched on the top of her head, a brown stuff dress, and large brown cotton gloves.

Jane had driven her mother; they had come to bring the week's groceries, and also to pay a visit of ceremony to the family at Yarrow.

The family consisted of Mr. Daw the farmer, his wife, his sister (a prim, kind old woman, in flat curls and spectacles), and the only child of the house, Marjorie.

"Good evening, Miss Marjorie," quoth Mrs. Williams.

Jane had leaped out of the cart; the good horse was browsing at the side of the road. Jane assisted her mother to alight, and then she opened the back of the cart, and with her strong young hands lifted out a basket of groceries.

Marjorie was all beaming with smiles of welcome; she, like her mother, was hospitality itself.

"You'll come in and have a good rest? Have you had tea?"

"Oh, yes; we've had our teas," said Jane; "but it was such a bonny evening, we thought we would come up and see you all."

Marjorie turned and drew a whistle from her girdle, this she blew loudly; a farm-boy came running to the spot, whom she directed to carry the basket into the house; then she ushered the visitors into the strange, quaint old dwelling, where she first saw the light.

There was a narrow stone passage, then there was a wide flagged kitchen, with a great oak dresser and a raftered roof, an enormous fireplace, where some logs of wood smouldered, and some clumsy chairs and tables of dark polished wood.

Marjorie led the way into another room, the glory and pride of the Yarrow, the parlor. Now, the floor of this department was covered with a smart tapestry carpet. The horsehair furniture was enlivened by cushions of silk embroidered by those shapely white hands of Marjorie's, and in one corner was a handsome rosewood piano

"Sit down," said Marjorie, "and I'll call mother."

Mrs. Daw, a handsome, buxom dame, soon appeared. Keziа, the tall bony woman-servant, brought in a great rich cake and a bottle of gooseberry-wine, and soon there was feasting and laughter in the low-ceiled room.

Marjorie stole out when her little, mild spectacled aunt came in. She went again to the gate, and looked once more at the black hill below which the red sun was sinking. The whole sky of the west was a blaze of glory. Golden clouds, like plumes from the wings of the cherubim, floated out into that clear lake of pale blue ether.

Marjorie looked up into the heavens and sighed. She was very beautiful, with dark, dreamy eyes, a skin like alabaster, and features cast in the grand mould of some nymph of ancient Greece. She had a longing after the refinements and elegances of life—a desire to see the world. She was ambitious, talented, with naturally fine tastes. Her soul was akin to poetry and the arts, though she herself was neither poetess nor artist, but only a "spoiled girl, educated beyond her station by her foolish parents," said her female friends of the village below. Marjorie was not content with the station in life wherein she found herself. She was tired of that stone kitchen, with the rattered roof and the oak dresser; tired of her own small neat chamber, with its new, bright Kidderminster carpet, its white muslin curtains its shelves loaded with the works of her favorite authors, Dickens, Tackeray, Tennyson, with a volume here and there of the modern female novelists—tired of the low ceiling and the casement window, with its diamond panes, though the said window commanded a view of the wooded slopes to the left, the village beyond and a whole chain of purple mountain-tops in the distance. Marjorie was tired of it all. There were times when her wayward, impatient heart grew hard and selfish, and then she felt that she was tired of her homely, adoring parents, their north country accents, their old-fashioned notions.

"'See-saw, Marjorie Daw,
Sold her bed and lay upon straw.'"

A little shrill, piping voice was chanting this refrain very loudly in the lane.

Marjorie turned, and perceived a curly-headed, hatless girl, wheeling a chubby, cross-faced child of two, in a perambulator, and singing to it to keep it amused.

The moment the girl ceased to sing the child began to cry; so the girl began again, close to Marjorie's gate:

"'See-saw Marjorie Daw,
Sold her bed and lay upon straw.'"

Majorie smiled faintly.

"Sometimes I feel that I should like to sell myself, if by that means I could become a lady and move in society, ah! and get away from these mountains—they chain me in. I feel in prison when I look out of the window. I hate the country! Oh, to hear those Williams women talk, and to see them eat cake!"

She stamped her foot impatiently. She knew that below in the wood, close by the side of the stream, a young man, ardent and impatient as herself, waited for her in a breathless eagerness; he worshipped the air she breathed; her lightest wishes were his laws, his fiery soul bowed down at her feet; he was talented—nay, he had genius—and his face was noble, but—his pockets were empty; his coat was shabby, "He was not a gentleman by Act of Parliament," as Mrs. Lynn Linton says so cleverly of one of her heroes.

"Do I love Rufus Gorse?" she asked herself. "What an uncouth name; if I were he, I would change it; and his face is fine—only once have I seen a profile like his—the lover in that 'Burial of Attila.'"

Then Marjorie Daw heard the sound of horses' hoofs in the lane, and her heart beat, and her cheeks crimsoned.

Clatter, clatter—trot, trot—is this the lover with the noble face, and the fiery soul, and the uncouth name, Rufus Gorse? She half turns away.

If she darted across the road now she would be able to dive down amid the trees quite unseen by the approaching horseman, and then she would arrive at the stream by the side of which Rufus Gorse paced impatiently—Rufus, tall, erect, stalwart, black-haired, eagle-eyed—Rufus in the very glory and strength of youth—for the horseman who was approaching was not the hero of Marjorie's fancy; and round a bend of the road he came into sight—a little old man with a wrinkled, yellow face, something like the rind of an orange, bestriding a sleek, brown pony.

When the little old man saw Marjorie Daw standing at the gate he raised his soft, low-crowned felt hat high off his head, and smiled, while the crimson flush on Marjorie's cheeks mounted to her white brow.

She hastened to open the gate. The old man dismounted; a second time she used her call whistle, and a lad came running from the farmyard in the rear of the house.

"Take care of Mr. Peter's horse, said Marjorie, softly.

"Well, Miss Marjorie," said Mr. Peter, as he walked side by side with Marjorie over the clean, flat, white stones that paved the path to the door of the house, "and how are the tulips looking?"

"Splendid," she answered. "I was so much obliged to you for those roots! Would you like to walk round and see them? There are some people from Barwell in the parlor."

The old man made a grimace

"I detest having to do the polite to people that don't interest me," he said. "Yes, come along, my dear Miss Marjorie, and let me see the tulips."

They passed through a wicket-gate into a little space that Marjorie called her flower garden; there was a smooth patch of turf, well watered and rolled. In the center was a fine pear tree, covered now with a wealth of lovely white bloom; there were four gravel paths forming a square, and flower-beds ran all round, backed by high hedges of lauristinus and arbutus.

The flower-beds were aflame with a gorgeous show of tulips of all colors, ranging between darkest crimson and faintest pink, deepest orange and palest gold.

"Well, they certainly do you credit, my dear," said wrinkled old Mr. Peter, adjusting his gold-rimmed spectacles on his rather ugly nose. "You will have to come to Beaucourt and see my gardener's show. I think"—wheeling about and looking at her fixedly—"I think I shall have to christen you *La Belle Jardiniere!*"—To be continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

GENTLE INFLUENCES.

VIOLET'S, in the leafiest shade,
By their odors are betrayed;
Soft winds, over flower fields blown,
By their fragrant breath are known;
Dew, by freshened leaves compressed,
Wets unseen Earth's slumbering breast;
Rills from out the bleak hill-side,
Swell to rivers deep and wide;
Rivers flowing fast and free,
Widen to the boundless sea.
All great things that move the Earth,
To gentle issues owe their birth;
And soft influence still is best,
Bringing comfort, love and rest;
Sweet domestic love is strong—
Leads to right and warns from wrong;
Kindly whispers mightier prove,
And to loftier actions move;
Than the fretful voice of scorn,
Of contempt and anger born.

—Chamber's Journal.

HINTS ON PIANOFORTE PRACTICE.

IT is not sufficiently understood by people in general that the basis of all excellence in piano playing is mechanical skill. This, however, consists not merely in flexibility but in power, and in the touch; firm, delicate, or sympathetic, as occasion may require.

Without it the simplest scale passage is indistinct, and the melody which should be smooth and flowing is only a succession of detached sounds. Without it the pianist can impart no soul to his playing. Spiritualists say that their medium must undergo certain training before they are capable of receiving and conveying communications from the spirit world; so it is only through the well-trained fingers that the pianist's emotions can be transmitted. For, while the most superb technique is a servant, it is, nevertheless, a servant bearing the closest relation to the master; the relation of flesh to spirit. Its services are invaluable, and not to be dispensed with.

A proper development of the hands is not, as some imagine, to be obtained by the practice of pieces only. The student who confines himself to pieces encounters numerous mechanical difficulties for which he has not been prepared by previous training. He is as unable to overcome them as the man without any gymnastic training is unable to perform difficult athletic feats; and in neither case are strength and agility gained by the attempts made.

Our piano student, discouraged when he perceives his most assiduous practice to be unavailing except to a limited extent, because his method is imperfect, falls into the habit of skipping difficult passages or of rushing through them in a slovenly manner. He "goes through" a great many more pieces in this superficial way than he would if he gave them thorough, conscientious study; and by so doing it is obvious that the eyes are trained while the fingers are not. Herein we find an answer to the question so often asked, "Why can I read music that I cannot play?"

Whatever may be the degree of mechanical skill desired, it can be obtained only by the careful and diligent practice of scale, five finger exercises, and other technical studies. These are neither more nor less than finger gymnastics, and are subject to the laws that govern all physical exercise. As swinging Indian clubs in a listless, aimless manner will never strengthen and develop the body, so finger gymnastics cannot be beneficial unless properly practised. A correct position is the first thing to be considered. Let the performer sit before the middle of the key-board, at such a distance from it that the arms may move freely in either direction. The elbows should be a trifle lower than the surface of the key-board, their tips being a little nearer the keys than the shoulders. The wrists must be on a level with the hands and arms, the hands quiet. The fingers must move from the knuckles, which are to be kept in a natural position on a level with the back of the hand. The fore part of the fingers should be gently rounded so that the fleshy tips strike the keys (the nails must be short). The thumb should also be moved by the joint connecting it with the hand, and it is by no means to be allowed to hang down or to rest upon the key-board; on the contrary, its tips must be kept slightly above the level of the black keys, from which position it should strike. A natural and easy position, both of the person and the hand, is essential to a good style of playing.

The finger gymnastics should be practiced first with each hand separately, very slowly and in strict time. The fingers must be raised as high as possible before striking each key, and brought down with energy. The thumb should strike with a little less, the third and fourth fingers with a little more force than the first and second fingers. Each finger, after striking, is to be lifted at the instant that the next succeeding finger strikes its key; so that the successive tones may not run into each other or be separated by the slightest gap.

Exercises for wrist-practice should be played by slightly raising the hands from the wrists. If exercises for the fingers are played from the wrists, and those for the wrists are played from the elbows, it is plain that they cannot strengthen and develop the parts for which they are intended.

Gymnastic exercises for the fingers and hands should be taken as judiciously as any other; undue practice of technical studies weakens the muscles they are designed to strengthen. After a correct position has been acquired, and considerable strength and flexibility have been gained, the slow practice of finger gymnastics may be varied, but not supplanted, by more rapid practice.

It is a mistaken idea that because a person has never performed such manual labor, or because hands are naturally well adapted to the piano, no special training is necessary. At the same time we admit that the amount of such training depends somewhat upon the formation of hands; breadth is more essential than length. But, under the most favorable conditions, one must, for two years, devote at least half an hour daily to finger gymnastics, in order to play with ease moderately difficult music.

By that time the student will realize the necessity of continuing such practice if he wishes to retain the skill he has acquired.

Once we heard some one playing five-finger exercises. Although they were of the simplest kind we knew that the pianist's touch was that of no mean performer. Upon inquiry we learned that the player was a lady who had studied music several years in Europe, and was a successful teacher; yet she had not practiced five-finger exercises, but was taking lessons on them from an eminent master.

On telling our teacher (who had taught in the Paris Conservatory of Music) that we still practiced "Plaidy's Technical Studies," the best arrangement of scales and five-finger exercises extant, and the one universally used in the European conservatories, he replied, "Ah, there is material for a lifetime in Plaidy." He used to hold up to us, as an example, a musician who daily played all of Cramer's eighty-four Etudes, which are both difficult and long. We give these few instances, out of many, to show the importance attached by well-trained musicians to the continuance of technical studies, even after great skill has been attained. Well trained musicians, however, are rather the exception than the rule. The performances of the average amateur pianist prove that in this day and generation technical studies for the piano are in no danger of receiving undue attention.

CORRESPONDENT.

ABOUT WOMEN.

QUEEN MARGHERITA is one of the most skillful sewing women in Italy.

IT is reported that Miss Emma Thursby, the American vocalist, will marry a German nobleman of great wealth.

MRS. MARGARET FOX KANE, one of the original spirit-rapping Fox girls of Rochester, N. Y., is still living, but is not a spiritualist.

MRS. JESSIE FREMONT has organized classes in history among the grown-up sons and daughters of poor settlers in Arizona.

MISS KIRKLAND, of Chicago, has finished a statuette of John McCullough as Virginius. She took advantage of rugged John's absence from the country.

MISS ROBERTA WALCOTT HUBBARD, the daughter of Mr. Gardiner G. Hubbard, of Washington, whose marriage to Mr. Charles James Bell, of Leeds, England, has been announced, is the third of the family who has married a foreigner.

ANDIE MYRTLE, a Racine, Wis., girl, jumped the rope 102 times, injuring her brain and other internal organs so that she suffered terribly, and on Thursday she died. Mary Faber, another Racine girl, is very sick from the same cause.

THE marriage of Miss Minnie Evarts to Mr. Tweed is announced to take place early in June, according to the arrangements made before the departure of ex-Secretary and Mrs. Evarts for Paris. The wedding will be a quiet one at the family home in Windsor, Vt., where a married sister of Miss Evarts lives. It is the intention of the bride and groom immediately after the wedding to sail for Europe, and join the parents and sisters of the former in Paris. Miss Evarts left Washington the third week of April.

CORRESPONDENT'S CORNER.

WILL you give me recipe for dying seal brown, also, directions for giving it a new appearance after dying? by so doing you will greatly oblige a warm advocate of your most valuable paper. I enclose a sample of goods I wish to dye.

A RURAL FRIEND.

P. S. Will you give recipe for silvering fluid for brass or tin?

ANS.—Leamon's Aniline Dye which can be obtained in many colors we think will answer your purpose entirely. For silvering, we quote the following:

"SILVERING POWDER.—1. Nitrate of silver, 30 grains; common salt, 30 grains; cream tartar, 200 grains. Mix. Moisten with water and rub on the article with wash leather. Gives a white silvery appearance to brass, copper, etc.

2 NOVARGENT OR PLATE RENOVATOR.—Add common salt to a solution of nitrate of silver until the silver has all been precipitated. Wash the White precipitate or chloride of silver and add a strong solution of hyposulphite of soda until the white chloride is dissolved. Mix the resulting clear liquid with pipe-clay which has been finely powdered and thoroughly washed.

3. 1 oz. of nitrate of silver divided in 1 quart of rain or distilled water. When thoroughly dissolved, add a few crystals of hyposulphite of soda, which will at first form a brown precipitate, but which redissolves if sufficient hyposulphite has been employed. The solution may be used by simply dipping a sponge in it, and rubbing it over the article to be coated. A solution of gold may be made and used in the same manner.

4. SILVERING AMALGAM.—A coating of silver, heavier than can be obtained by the above, may be given by the following process: Precipitate silver from its solution in nitric acid by means of copper. Take of this powder ½ oz.; common salt, 2 oz.; sal ammoniac, 2 oz; and corrosive sublimate, 1 drachm. Make into a paste with water. Having carefully cleaned the copper surface that is to be plated, boil it in a solution of tartar and alum, rub it with the above paste, heat red hot and then polish."

The only safe and sure cure for Gravel or Urinary troubles, is Hop Bitters. Prove it.—*Adv.*

Dairy Implements, Wind Mills, &c.

CHEESE AND BUTTER MAKERS' SUPPLIES AND COMPLETE MANUFACTURING OUTFITS

HANSEN'S DANISH LIQUID BUTTER COLOR

HANSEN'S LIQUID CHEESE COLOR, LIQUID EXTRACT OF RENNET. NO MANUFACTURER OR REPACKER OF BUTTER CAN AFFORD TO NEGLECT THESE DANISH PREPARATIONS.—GANG PRESSES, SELF BANDAGING CHEESE HOOPS, ANNATOINE, ANNATTO, RENNETS, SCALE-BOARDS, FAIRBANKS' SCALES, ETC., ETC., ETC.

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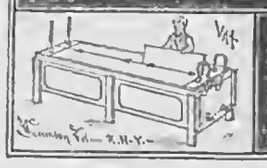
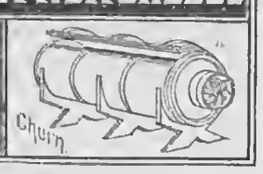


LAPHAM'S PATENT SEAMLESS BANDAGE SAVES MAKING BANDAGE, LESS EXPENSIVE, NO WASTE! THE BEST COOLERS AND VATS FOR RAISING CREAM GUARANTEED. ILLUSTRATED CIRCULARS SENT FREE. ADDRESS, WHITMAN & BUHRE, LITTLE FALLS, N.Y.



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Five sizes made for Family Dairies. Four Sizes for Factory use. They continue to be the Standard Churns of the Country. Send for a Churn or a Descriptive Circular to the Sole Manufacturers. PORTER BLANCHARD'S SONS, CONCORD, N. H.

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No inside fixtures and always reliable. Seven sizes of each kind made. Also, three sizes each of the Lever and Eureka Butter Worker, Curtis Improved Factory Churn. Mason's Power Butter Worker; will work 6,000 lbs. a day. All goods *warranted* exactly as represented. Agents wanted.

CORNISH & CURTIS, Ft. Atkinson, Wis.

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THE Surprise Churn,

which took the Special Prize of $50.00 at the International Dairy Fair held in N. Y., Dec., 1879. It always takes the Highest Awards when on exhibition Dairymen give this your attention. Manufactured and for sale by

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Deep-setting perfected. Gets all the Cream in less than ten hours with ordinary well water, or with less than one-fourth the ice called for by any other process. ONE TON OF ICE WILL GIVE MORE BUTTER THAN YOU CAN GET WITH FIVE TONS OF ICE in any other Creamery. *Special attention given to fitting up large Creameries.* Agents wanted. Send for circular.

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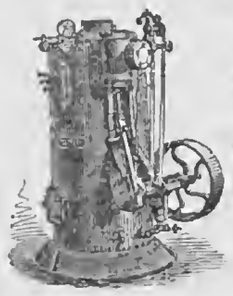

Compact, substantial, economical and easily managed.

Guaranteed to work well and give full power claimed.

Engine and boiler complete, including governor, feed pump, drive-pulley, etc., etc. at the low price of

3	Horse power....	$240
4½	"	280
6½	"	370
8½	"	440

JAS. LEFFEL & CO., Springfield, O.

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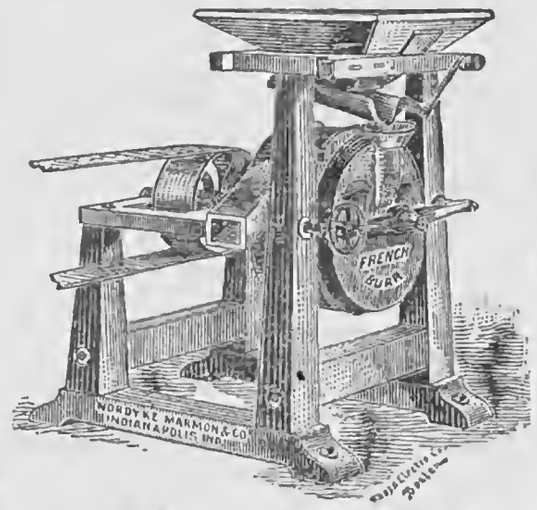
ESTABLISHED 1851



Grist Mills of French Burr Stone.

Portable Mills for Farmers, etc. 18 sizes and styles. Over 2,000 in use. $80 and upwards. Complete Mill and Sheller, $95. A boy can grind and keep in order. Adapted to any kind of suitable power. Complete Flouring and Corn Mills. ALL SIZES. Send for Circular No. 20.

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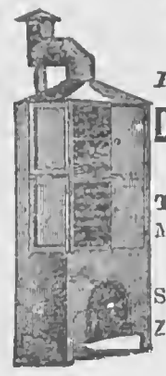

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THE OLD RELIABLE HALLADAY STANDARD WIND MILL

20 YEARS IN USE.

GUARANTEED

Superior to any other make.

17 Sizes-1 to 40 H. Power

Adopted by U.S. gov. at forts and garrisons and by all leading R. R. Cos. of this and other Countries.

Also, the Celebrated I X L Feed Mill, which is Cheap, Effective and Durable. Send for Catalogue "L" and Price List. Address,

U. S. Wind Eng. & Pump Co., Batavia, Ill.

ENTERPRISE WIND MILL,

Known and sold throughout the world and acknowledged The Best. Simple Durable, Strong. Few Joints. Frictionless Turn Table. Multiplying Ball Governor. All sizes for Rail Road, City and Farm Purposes Every Mill Warranted.

Enterprise Feed Mills New and startling. For Wind, Horse, Steam or Water Power. Climax Corn and Cotton Cultivators. Pumps, Tanks, &c. Send for *brown* Catalogue

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CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.

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Simple, Strong, Durable. Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

THE Watertown WINDMILL

the Best in Use.

Write for Descriptive Catalogue.

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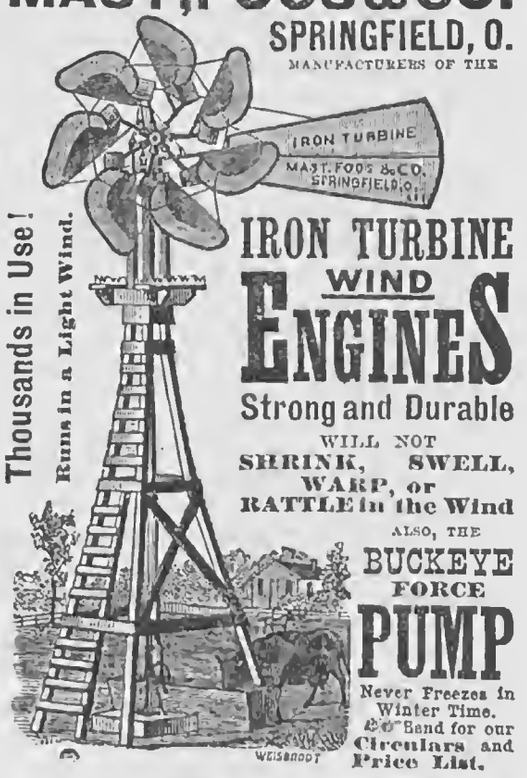

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WILL NOT SHRINK, SWELL, WARP, or RATTLE in the Wind

ALSO, THE BUCKEYE FORCE PUMP

Never Freezes in Winter Time.

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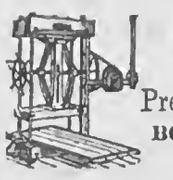

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Presses, Graters, Elevators, &c.

BOOMER & BOSCHERT PRESS CO., Syracuse, N. Y.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING HOUSE-HOLD HELPS.

In Two Papers.

MARY WAGER-FISHER.

A FEW years ago, an English family settled upon a worn-out Virginia estate, and one bright member of it has written a book which describes, in a most amusing and delightful way, the experiences they had among the "F. F. V's." Among their perplexities and difficulties was a continual trouble in getting efficient "help," and the author of this racy book confesses that when she was fairly worn out with hard work, she found some "comfort" in the fact that they had not settled "Out West" where the wives of farmers have such a hard time. She thought it enough to make one's heart ache, to read of the wretched slavery of the Western settlers' wives, and she quoted what one woman had written to an Eastern paper, the substance of which was that her husband owned 800 acres of land in Iowa; had reaper, mower, horse rake and various other more or less costly labor-saving farm implements. All harvest time nine men were employed. The woman who was wife, and the mother of five children, one a babe in arms, was expected to have breakfast on the table ready for this party of workmen before sunrise. At night she helped in the milking of nine cows—the baby often crying in her lap during the task. She had butter to make and only a refractory dog to help her with the churning. She had the sour milk to carry to the pigs; to make and mend; wash and starch and iron; wash, dress and feed the children; pick, can, dry or otherwise preserve fruit for Winter use; cook three full meals daily, with a luncheon to be sent to the field, constituted her regular work. The one thing that seemed to her most grievous, was lugging the sour milk from the cellar to the pig-pen. One day as she was dishing the dinner with one hand, baby being on the other arm, she asked one of the hands, who was resting in the porch, to fetch a bucket of water from the spring, and was reproved by her husband for so doing. That reproof was a final straw to break her heart, if not her back, and she found a doleful sort of relief in writing to an Eastern newspaper, detailing her trials, and asking what she ought to do.

Whether this case should be regarded as exceptional, the many Western readers of the RURAL can decide for themselves. But it is unquestionably true, that farmers' wives, as a rule, both East and West, have too heavy a burden to carry; that they break down under it, often die, and the "bereaved" farmers console themselves with wife number two.

That these worked-to-death women are so hedged in by circumstances as not to see how they can do otherwise than actually to work the breath out of their bodies, is easily enough understood by anyone who has had any experience in similar circumstances. There seems to be so much that will go to waste if the mother and wife does not look after everything and the children at all events, *must* be taken care of, so that there are a hundred duties pulling the strings from as many directions, and the faithful, conscientious helpmeet is used up in the turmoil of manual labor that has an altogether inadequate amount of rest and of compensation in it.

I know perfectly well the self-control and the strength of will required to let things go undone, and the one lesson that I have found above all lessons the hardest to learn, is to let every earthly thing go to destruction and waste rather than to allow myself to be wasted; that is, to regard my health and physical welfare of more importance than any amount of money, or anything that represents money, or that can be procured for money. I say this in order to convince such women as may read this, and whose lives seem to demand too much of them, that I fully understand and appreciate their circumstances, and that I know *talking* is one thing and *doing* is altogether another.

In the first place it is always possible to let some things go undone, the doing of which at first appears to be absolutely necessary. In another place, it is by no means essential that the "help" for the house should consist of the female gender. A smart young man to do housework is often worth two women, and there's not a thing connected with housework that a man can't do just as well as a woman, if he only will set himself about it. It is not an uncommon thing in European hotels for the entire service to consist of men. At first it seemed to me odd for a man to do my chamber work, but I very soon became accustomed to it, he did everything so quietly and deftly and without comment. According to the latest census, there are 888,298 more men in this country than women, and this predominence of the male sex exists in 30 States and Territories the excess of males being largest in the Western States, and in the State of Iowa, where the woman lived who had the hardihood to ask a hired man to bring a bucket of water, there are 100,000 males to 91,530 females. These are facts which no one can well dispute, and where there are so many more men than women, there ought to be no reason why women should be so overworked, providing this excess of men can be turned into "hired help."

Now, that Iowa woman undoubtedly was well-meaning, but for all that she was what might be called, without any exaggeration, a "Born Fool," and her husband was a monster of cruelty, who it is to be hoped has long ere this "passed to his reward." But in all probability he still lives, and is grinding the life out of that woman with his farm of 800 acres, nine cows and nine "hands" at harvest time. To protect such wives and to punish such husbands, there ought to be societies supported by the State, for the Prevention of Cruelty to Wives, as the wives themselves are not made of the stuff that is self-protecting. The duty of that woman was obvious enough, and it is not worth while to tell what or how she ought to have done.—To be continued.

ANOTHER WEEK FROM MRS. CLAY'S JOURNAL.

ANNIE L. JACK.

SABBATH.—What a blessing is a good *school* for the children in the morning or afternoon of this day of rest. It is of more value than we think, and better for the little ones than the long sermon they often have to sit through, with their legs dangling from the high seats, and not daring to kick. I remember, when Nora was a little mite of a girl, she was very anxious to go to church. Three Sundays in succession I yielded to her pleading voice, and, dressed in her prettiest frock, she sat with wonderful decorum beside me in the pew. Friends, on coming out, spoke kindly to her; one lady remarked that she was "the best-behaved child in church." One day, a little while after this, I asked her if she could tell me anything the minister said. She shook her curly head. Did she never hear him talk of Jesus, and the Bible? Shake No. 2. Then suddenly she spoke: "But I can tell you what he *does*," and suiting the action to the word, she shook her tiny fists and brought them down on a book with force, saying, "He pounds the big book, and stamps his feet as if he was mad, and makes great big eyes at me, and looks so cross he makes me frightened." It was but the opinion of a six-year-old child, but I have since wondered if a little Sunday-school talking at home would not have been better understood.

We make it a point to have as little cooking as possible on this day of rest. I think a piece of cold roast lamb, with a salad and potatoes and a dessert of fruit, fresh or canned, is very easy and simple to prepare. This is what we intend to have today. The potatoes were prepared at breakfast-time, and need only to be put on the fire to boil while the table is being set. In Summer an iced pudding of rice, corn-starch, or custard is a very nice addition to the fruit, by way of a change. But my stand-by is fruit in its season, and out of it as far as I can have it by canning. And by these simple economies of time and labor we try to work together for each other's good, and enjoy our Sabbath not only for its spiritual privileges, but as a blessed gift from Heaven—a day of *rest*.

THE FORENOON LUNCH.

IT was a hard day in Mrs. Morris's kitchen, and Bridget was cross and the work dragged, and Mrs. Morris herself felt wearied and faint by mid-forenoon. Now she might have scolded and hurried Bridget and fretted herself into a white heat by dinner-time, when the world would have looked dark enough to her. But she chose a better plan. She made a nice cup of tea in the bright little tea-pot, took out a saucer of fruit for herself and one for Bridget, added a slice of cake and set Bridget's out on the kitchen table.

"There, Bridget, when you get time, stop and pour yourself a cup of tea, as I have done, and take a little lunch. It will rest you, we both need it after an early breakfast."

"Thank you, ma'am," said Bridget smiling, "It's you knows how to make a good cup of tay." So she sat on the back porch step, in the pleasant Autumn sunshine, and sipped her tea and ate her fruit and cake, thinking to herself that it wasn't every woman who would have taken that trouble. Mrs. Morris sipped her tea by the sitting-room window looking out on the pleasant door-yard, with its bright clusters of Chrysanthemums, hardily blooming in spite of early frosts. It was only a little way side rest to both women; but it did them a deal of good. It strengthened them for the rest of the morning's work, made both more cheerful and more one in feeling with regard to the house and its labors. This friendliness between employer and employed is worth cultivating. No one is the better for being pampered; but little kindly attentions that show a really friendly heart, are dear indeed to "the stranger in a strange land."

This occasional lunch when it is needed will often help one wonderfully through the day's duties. If one is really hungry it is the right time to eat, and often if the meal is deferred for an hour or two the appetite is gone and a sense of overweariness and languor has taken its place. Nothing can disorder the digestion worse than picking and eating bits at all hours. Our digestive apparatus is got up on very different principles from the sparrow's. But a regular, light lunch in the middle of a hard-working forenoon is very useful to many. And while you are providing for yourself, it is a little kitchen courtesy to give "a cup that cheers but not inebriates," to Bridget also. It will work well I know, for I have tried it. Some little treat of that kind to look forward to, is often an incentive to quicker, better work, because done in a happier spirit. OLIVE GRAY.

THAT QUESTION.

I WAS in hopes that Mrs. Wager-Fisher would condescend to notice the reply of "E. M. W." which appeared in the RURAL NEW-YORKER; but, on reflection, it would be folly for her to do so, hence her silence. The common people are prone to ridicule etiquette and refinement, and persist in adhering to their inbred vulgarity. Mrs. Fisher's motive in opening the question was undoubtedly a good one. She desired to impress upon the parent the importance of a good example to the child. If parents are destitute of the ordinary usages of polite society, they will surely *mortify* their grown-up daughters, although they may be possessed of "good sense, natural affection, and true nobility of soul." R. M. L.

[Port Huron Commercial.]

Charles Nelson, Esq., Proprietor Nelson House, speaking to us recently, observed: I suffered so much with Rheumatism that my arm withered, and physicians could not help me. I was in despair of my life, when some one advised me to try St. Jacobs Oil. I did so, and as if by magic, I was instantly relieved, and, by the continued use o the Oil entirely cured. I thank heaven for having used this wonderful remedy, for it *saved my life*. It also cured my wife.—*Adv.*

Miscellaneous.

ST. JACOBS OIL

TRADE MARK.

THE GREAT

GERMAN REMEDY.

FOR

RHEUMATISM,

Neuralgia, Sciatica, Lumbago,

Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,

Baltimore, Md., U. S. A.

GOLD MEDAL, PARIS, 1878.

GERMAN

SWEET CHOCOLATE.

The most popular sweet Chocolate in the market. It is nutritious and palatable; a particular favorite with children, and a most excellent article for family use. *The genuine is stamped S. German, Dorchester, Mass. Beware of imitations.*

Sold by Grocers everywhere.

W. BAKER & CO.,

Dorchester, Mass.

The Literary

Revolution.

To keep in good humor the good people who delight in good books; to wake up the slow booksellers who are inclined to go to sleep in the summer, instead of, like a 'possum, in the winter; and to prevent our friends, the book publishers, from forgetting us, we have concluded to publish a few more cheap books. If we are to name him at all, we must, of course, head the list with the immortal Shakespeare, and will give you either his "Merchant of Venice" or "Hamlet," or any one of his fourteen other principal plays, in beautiful type, for 2 cents. At the same price you may have the great," former price $1.25, or Carlyle's "Robert Burns," or Lamartine's "Life of Mary Queen of Scots," or Thomas Hughes's "Manliness of Christ." Washington Irving's wonderful, delightful, heretofore inaccessible "Sketch Book," which contains the incomparable Rip Van Winkle, you can have for a dime. For the same price we will give you "Tom Brown at Rugby," the best boy's book ever written, except "Robinson Crusoe," which you can have also for 10 cents. To charm those who delight in fiction, we give also for 10 cents each, Cooper's "Last of the Mohicans," one of the most justly celebrated American novels, and Charles Kingsley's "Hypatia," which worthily ranks at the very front of famous historical fiction. These are only specimens of the cheap books we publish, are all in good type, neatly printed, and are not in the broad side or any other "slide" or "square" style, but handy pocket volumes, of course in paper binding. Our motto, however, has always been that a book worth reading is worth preserving, as well as worth owning, and our large list of standard books, to which we are making additions, with speed unprecedented in the history of publishing, are all elegantly and strongly bound, in cloth or better style, and so it at prices proportionately low with those in paper covers. We issue these few only in pamphlet form, as specimens of the quality of our good literature, and these special terms will not be long continued throughout the United States and Canada are prepared to either abundantly supply or liberally slander our publications. We give liberal terms to clubs where no bookseller acts as agent. Descriptive Catalogue, and illustrated pamphlet describing book-making and type-setting by steam, will be sent free, on request. AMERICAN BOOK EXCHANGE, 764 Broadway, New York. JOHN B. ALDEN, Manager.

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Miscellaneous.

CARPETS.

MOQUETTE CARPETS.—We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

WILTON CARPETS at $2.25, full five-frame, and equal in quality to anything offered in this market at $2.75 or $3 per yard.

AXMINSTER and MOQUETTE Carpets from $1.50 to $2.50.

Best BODY BRUSSELS Carpets, $1.25, $1.40, $1.50 and $1.60—the latter for the choicest patterns.

TAPESTRY CARPETS.—Having exhausted our first offering of 75 cent Tapestry Carpets, we have placed on sale for a few days, another lot of the SAME GOODS at the SAME LOW PRICE. These goods are equal to those sold elsewhere at 90 cents and $1. We have other goods varying in price up to $1.15.

We have also on exhibition a superior TAPESTRY CARPET, equal in Texture and Quality to anything made either here or in Europe.

INGRAINS—We have of the best Extra Superior Grade a very full line from 75 cts. to 90 cts. per yard. Also, a line a grade lower at 65 cts. to 75 cts. —all wool.

Persons in want of CARPETS will do well to call on us before purchasing. Every Carpet is warranted as represented. Full satisfaction guaranteed or the money refunded.

J. & J. DOBSON,

CARPET MANUFACTURERS,

40 and 42 WEST 14th ST., NEW YORK.

John Van Gaasbeek, Manager.

KNOW THYSELF.

GOLD MEDAL AWARDED the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25, sent by mail, illustrated sample, 6 cents; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, 4 Bulfinch St., Boston.

NASAL CATARRH and BRONCHITIS.

Childs Treatment for NASAL and BRONCHIAL CATARRH is the only one that can be relied upon for the Permanent and Positive CURE of this disease. Home Treatment. Physicians recommend it. For details of method and terms, address Rev. T. P. CHILDS, Troy, Ohio.

70 YOUR NAME In New Type on 70 Cards! 10c

New styles, by best artists: *Bouquets, Birds, Gold Chromos, Landscapes, Water Scenes, etc.*—no two alike. Agent's Complete Sample Book, 25c. Great variety *Advertising and Bevel-Edge Cards*. Lowest prices to dealers and printers. 100 *Samples Fancy Advertising Cards*, 50c. Address STEVENS BROS., Box 2, Northford, Ct.

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

50 All Gold, Chromo & Lit'g, Cards, (No 2 alike,) Name On, 10c Clinton Bros., Clintonville, Conn.

30 elegant cards, Snowflake, etc., 10c. *Agts. wanted.* 20 samples 3c. List free. C. VICK, Arbela, Mich.

Agents Wanted.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the Twombly Knitting Machine Co., 469 Washington Street, Boston, Mass.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Main

Real Estate.

WISCONSIN LANDS

500,000 Acres

ON THE LINE OF THE WISCONSIN CENTRAL R. R.

For full particulars which will be sent free, address CHAS. L. COLBY, Land Commissioner, Milwaukee, Wis

News of the Week.

HOME NEWS.

MONDAY, June 6, 1881.

The Senatorial contest at Albany has almost wholly superseded legislation. On Tuesday balloting for successors to Conkling and Platt, began. The Democrats put in nomination State Senator Jacobs and Ex-U. S. Senator Kernan. On the first ballot on Tuesday Conkling received 35 votes and Platt 29 and these figures did not vary much during the week. Messrs Cornell and Wheeler and Rogers of the Administration faction and Jacobs of the Democrats are Conkling's closest rivals, while Depew, Cornell, and Kernan (dem) are making Platt's chances for re-election less certain. Indeed, unless something new turns up, it is highly probable that no election will take place during this session of the legislature.

The Whittaker court martial convened on the 1st inst. to hear ex-Governor Chamberlain sum up the case for the defense. About 7,000 pages of testimony have been collected. Now for the grand *finale*.

The legislature of this State has passed a law that a tax of $1 shall be levied on each immigrant who arrives at Castle Garden.

Decoration Day was celebrated with unusual interest throughout the country. The parade in this city was one of the finest ever witnessed on such an occasion.

There was a meeting of the League of American Wheelmen in Boston on the 30th ult. There were about 800 bicycles in line. The riding was considered excellent, and no bruised heads were reported.

Jeremiah Hall, D. D., ex-President of Denison University, Granville, Ohio, died on the 30th ult., at Port Haven, Mich., aged 76.

Thirty-seven years ago the first telegraphic message was sent in this country. To-day there are 400,000 miles of telegraphic lines in the United States. Since July, 1866, the Western Union alone has expended, over and above dividends, surplus earnings, etc., the sum of $17,000,000 in constructing lines and purchasing other completed lines.

A hurricane visited Taylor, Texas, last week, lasting forty minutes. Houses and churches were blown from their foundations and several families injured. Nearly all the barns and outhouses were demolished, and scarcely a house in town escaped, while the fences and trees for miles were laid low.

A violent storm also swept over Dallas on the same day. Rain fell in torrents, with heavy hail. Fruit trees were injured, and the corn, cotton and wheat crops destroyed. There was also a fearful hail storm in the northern part of Bell county.

In their intense rivalry the Chicago newspapers are building "newspaper cars" to carry their Sunday morning papers to points within twenty-five miles or so of Chicago on the various railroads. The Tribune is the first in the field, its car having been completed and ready to deliver the papers on Sunday the 29th ult.

Prof. William D. Whitney, of Yale College Connecticut, has been decorated knight of the order of Pour Le Merite, for scientific attainments and ability as a Sanscrit scholar.

Thomas C. Platt has $9,000 a year as president of an express company, $1,500 a year as quarantine commissioner, and used to have $5,000 a year as United States senator.

New York and Brooklyn are the only cities on this continent in which the elevated railway system has been introduced.

The decoration of Confederate graves by Northerners is rapidly becoming an every-day occurrence. A touching incident of this kind was a visit of the Boston Commandery of Knight Templars of Boston to the Stonewall Jackson monument in Richmond, Va., the other day, and the placing of a wreath of rare flowers at its base.

President Garfield will attend the graduating exercises of the Naval Academy at Annapolis, June 10, and the commencement exercises at Williams College on July 4, 5 and 6.

The Iowa Greenbackers, in convention at Marshalltown on the 2d inst., nominated D. M. Clark, of Wayne County, for Governor, and Mrs. Mary E. Nash, of Des Moines, for Superintendent of Education.

The great event of the week in the Knight Templar circles of Pennsylvania was the annual parade held this year at Scranton, where 2,000 uniformed Knights were in line. Sir Geo. W. Kendrick, Jr., delivered an admirable address.

The faculty of the Northwestern University, at Evanston, Ill., have decided to tender the Presidency of the university to Rev. Dr. Cummings, who has filled the chair of moral philosophy at Middletown, Conn.

The second meeting to discuss the advisability of holding a World's Fair in Boston in 1885 was held in that city June 1st, and a committee of 27 was voted to consider the items of cost, probable income, site, time, etc. The meeting was enthusiastically favorable to the project.

There is talk of forming a German University at Milwaukee, Wis., and of raising $2,000,000 for the project.

Secretary Blaine and Mr. Thornton, the British Minister, have settled the vexed question about the Fortune Bay, N. F., fishing troubles, by an agreement that the British Government shall pay £15,000, and that the United States will give a receipt in full.

General Kilpatrick will sail for Chili in about one month to relieve Mr. Osborne as United States Minister there.

The brother of Pierre Lorillard, who is at Newport, R. I., is authority for the statement that the latter wins $2,000,000 on one bet made on the result of the Derby race, in which Lorillard's "Iroquois was the winner.

On the 2d inst. Charles H. Bell was elected Governor of New Hampshire by the State Legislature. The popular vote gave him 44,432 out of 86,164 votes cast. Frank Jones was a good second with 40,813.

"A Hundred Per Cent. Better."

A patient in Michigan, who reports a gain of thirteen and three quarter pounds in two weeks, says: "I cough about once where I did ten times before, and *do not raise one quarter the mucus from my lungs that I did*. My pulse has gone down from 120 to 85. My digestion is very much improved, and the stomach retains the food. In short, *I am one hundred per cent. better than I was three weeks ago*, and I give all the praise and credit to the use of Compound Oxygen. The expressions of my friends are, 'Wonderful!' 'Astonishing!' 'Almost miraculous!'" Our Treatise on Compound Oxygen, containing large reports of cases and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

A number of enterprising citizens of Louisville, Ky., have organized the "Louisville Fair Association," and will hold an exhibition during ten days of the coming Autumn in the avowed interest of the general trade of that city. A special exhibit will be made of fine Kentucky stock.....A South Carolina paper says that thousands and thousands of doves are infesting the rice-fields of West Wateree. In some places the rice has been replanted two and three times, and yet the stand is not good, owing to its destruction by the birds.... The locusts are making terrible havoc in some parts of North Carolina, eating up corn, cotton and destroying standing timber.....Pasteur states that, at a farm near Senlis, France, cattle which had died of carbuncular fever twelve years ago were buried at a certain spot within a walled garden. Some specimens of the soil were, after that lapse of time, lixiviated and concentrated, and some guinea pigs inoculated with the matter died soon afterward, developing all of the well-marked symptoms of carbuncle. Seven sheep were allowed to pass a few hours a day at the place where the diseased animals were interred, and the result of this experiment was that two of the sheep died of fever in about six weeks. The vitality of the germs of this disease is remarkable

At Minneapolis, Minn., on May 25, there occured the second annual sale of the Meadow Lawn and Browndale stock farm. Sixty head were sold and brought an aggregate of $7,930 an average of $132.17. The following are the names of the highest-priced animals and the buyers:—Fidget's Gwynne, 2 years, H. McCray, $385; Miss. Wiley of Edina, 7 years, O. A. Pray, $375; Wild Eyes of Browndale, 5 years, C. McReeve $310; Caroline of Meadow Lawn, 3 years, A. Kelly $230; Oxford Wild Eyes, 3 years, bull C. McReeve $210 Call, 2 years, W. Fowler $210; K. Mina, 4 years $190.....A strange and fatal disease has broken out among the hogs at the Agricultural College, Mich. On Friday week the animals were fed as usual, and partook of the food with an apparent relish. In a few hours after six of them died and at noon on Saturday 14 in all had died. Prof. Murray of Detroit, who visited the college dissected a few, but as yet has found no positive cause for the strange malady. As the animals were in good condition, the extremely warm weather may have caused them to be attacked with apoplexy .....The Indiana Short-horn breeders met at Indianapolis on May 21. The Association elected the following officers: President, Thomas Nelson, Parke County; Vice-President, J. W. Robe, Putman; Secretary, T. Sunmann; Treasurer, W. W. Thrasher. The Association then adjourned. One of the subjects to be discussed at the next meeting is the cause of Short-horn bulls becoming worthless at three or four years of age..... At Herkness' Bazar, Philadelphia, May 26, 33 head of Jerseys sold for $11,345, an average of $343.78 per head....At Nashville, Tenn., May 18, 33 head of the same kind of cattle sold for $11,955, an average of $362.97.....Fifty-three million forest trees are reported to have been planted in Nebraska.....On Saturday week Mr. Jewett M. Richmond of Buffalo added to his herd four imported Jerseys the aggregate cost of which amounted to $4,700. Among these are several prize winners, notably a two-year old heifer, "Camma 12020," which received first prize as a yearling, and whose sire "Young Prince 183," was awarded first prize in his class over all Jersey in 1870.....The Kansas City Indicator says: "All reports in regard to the growing wheat crop of Kansas are of an encouraging character, and unless present indications are sadly at fault the yield will be much larger than last year or in previous years. The reports from Western Missouri are also good in regard to the growing wheat." An average crop in Italy is: Wheat, 132,800,000 bushels; Maize; 85,600,000 bushels; oats, 19,440,000 bushels. The crop of 1880 according to official reports just published, was for wheat 17 per cent above an average; for Maize 9 per cent below and for oats three per cent below. With a good harvest the country requires 7,500,000 bushels from abroad.....

The Iowa Agricultural Department report for May is briefly as follows: For Winter wheat from 230 townships, the aggregate area is placed at 76,846 acres, and the average condition 68½ per cent. In 25 towns no Winter wheat is growing; in 28 it has very little attention; in 58 it wintered well; in 125 it was unequal or entirely Winter killed, and 208 report the seeding of Spring wheat. Wheat in hands in 57 counties, represented by 700 townships, 279,925 bushels.....Rye, 90 counties and 314 townships, report the acreage at 56,506 acres; 417 townships give the average condition at 93 per cent.....Barley, 10 counties and 10 townships, report the acreage at 1,010 acres, and the avorage condition 90 per cent.....Corn on hand and in cribs in 55 counties and 354 townships show an aggregate of 21,607,011 bushels; and 53 counties, from 122 townships, report an aggregate of corn consumed for fuel of 330,075 bushels, valued at $48,725.....

Last Saturday the steamer Saxon landed a large consignment of valuable breeding cattle at this port. They are of the Booth Short-horn blood and were purchased at the celebrated Warlaby farm on the Thames, England, by Mr. Charles Morgan, son of the senior member of the banking firm of Matthew Morgan & Sons. Among them are the heifers Georgia Regia and Rufa, for which Mr. Morgan paid $1,250 apiece; the cows Saxon Queen costing $2,000; Bright Rose and Moira, costing $500 each; Miriam, costing $3,000, and her calf, which was one day old when Mr. Morgan purchased it for $500, and one other cow, for which $1,250 were paid. The bull Royal George, costing $3,000 is among the lot, and also a number of cows and heifers for which less fancy prices were paid. The cost of the entire consignment in England was $14,500, which sum the insurance, duties and transportation charges swell to nearly $20,000. The cattle were shipped at Warlaby on the steamship Milanese. The steamer was wrecked on the Thames near Gravesend, and the cattle were, with much difficulty, transferred to the Saxon Monarch. On landing they were shipped by rail to the stock farm near Bordentown, N. J., which Mr. Morgan has prepared for breeding purposes and has christened New Warlaby. Mr. Morgan has recently come into possession of an inheritance, and, having a decided taste for stock raising, proposes to establish a model breeding farm.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JUNE 4.

H. S.—D. E. S.—F. H. S.—G. H.—F. W. S.—M. P. W.—P. B. M.—C. H. S.—F. F. G.—H. S—C. A. B.—G F. C.—J. H. S.—D. F. R.—S. L.—B. F. P.—E. C.—T. T. L.—Thomas W. Hill, very much obliged.—W. B.—E. A. T.—A. G. W.—A. W.—P. B. M.—M. E. M.—H. E—W. S McC.—A. M. P.—J. B.—T. D. W.—J. H.—L. B.—C. R.—C. A. G.—C. B. W.—S. W. P.—W. S. M.—C. B.—H. P. B.—A. S. S. M.—S. C.G.—G. H.P.—M. G. H.—C. S.—F. H.—M. H. S.—I. S., answer by mail.—S. W. J.—E. H. L.—G. B. M.—T. G B.—J. C.—C. L. H.—A. J. C.—W. I. R., always happy to receive practical suggestions—"B. B."—G. W. S.—J. G. L.—E. J. A—M. D. H.—J. B G.—F. K. P.—W. S. T.—P. S. D.—J. L.—Wm. Moore, would be glad to hear as to your carp—A. B. C.—S. M.—R. L. M.—E. J. B.—G. P. & S., would be glad to hear from you regarding the sheep of your section—A. G. B., thanks—G. H. F. C. E. T., thanks—J. R.—J. H. W.—R. L, oats received, thanks. It is too late to sow them here—C. D.—O. S. B.—C. B.

An Old Doctor's Advice.

It was this: "Trust in God and keep your bowels open." For this purpose take Kidney-Wort—for no other remedy so effectually overcomes this condition, and that without the distress and griping which other medicines cause. Try a box or bottle.—Telegraph.

With more than usual satisfaction we call attention to one of our oldest advertisers whose chief claim is "the best at a fair price." You having use for any size scales will do more than well by sending to Jones of Binghamton, Binghamton, N. Y., for his, *free* book on scales.

Women that have been bedridden for years have been entirely cured of female weakness by the use of Lydia E. Pinkham's Vegetable Compound. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

I have used Higgin's Eureka Salt for the last year and consider it superior to any other salt and I have tried them all. B. A. RINGER. Lisbon Creamery, Lisbon, Iowa, March 14, 1881.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

When worn down and ready to take your bed, Hop Bitters is what you need to relieve you.

The Peoples' World-Wide Verdict.

Burnett's Cocoaine has been sold in every civilized country, and the public have rendered the verdict that it is the *cheapest and best Hair Dressing in the world*.

Burnett's Flavoring Extracts are invariably acknowledged the purest and the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, June 4.

Chicago.—WHEAT unsettled; No. 2 red Winter, $.07@1 11; No 2 Chicago Spring, $1,09¼ cash; No. 3 do. 97c @$1.02; rejected, 84@80c. CORN moderately active at 43@43¼c. cash. OATS in good demand at 37@37¼c. cash. RYE steady at $1.10. BARLEY steady at 95c. PORK dull at $16 12½ cash; $16.05@16.10 June; $16.20 July; $16.32½ August. Lard easier at $10.57½ cash; $10 02½@10 65 July; $10 55@10.67½ August. BUTTER dull; fair to fancy creamery, 17@21c.; good to fine dairy, 14@17c. CHEESE quiet; new full creams, 8@9c. EGGS 13c. SEEDS—Timothy quiet at $2@2 40; clover firm at $3.70@4 20; flax, $1.14. HOGS—market closed weak, with some stock unsold; mixed packing, $5 40@5.70; light bacon, $5.60@5.75; light Yorkers, $5 10@5.30; choice heavy packing and shipping, $5.80@6.10. CATTLE—Demand fair; best grades strong; export, $5 90@6 10; good to choice shipping, $5 70@5.90; common to fair, $5@5 45; distillery, $5.20@5.60; wintered Texans, $4 50@5; grass Texans in very full supply, but slow; poor to choice, $3@4; butchers' steady at $2 50@4 75; inferior old cows and mixed neglected; stockers and feeders dull, weak and lower at $3.70@5 SHEEP—Market dull and weak, over supplied with poor stock; poor to choice shorn natives, $4.20@5.20.

Cincinnati.—WHEAT weak; No. 2 Red Winter, 1,13. CORN dull; heavy receipts have depressed the market; No. 2 Mixed, 46½c. OATS dull; No. 2 Mixed, 41c. RYE dull; No. 2, $1 16@1 20. BARLEY nominal; no offerings. PORK inactive at $16 50. LARD quiet at $10 50. BULK MEATS quiet but firm; Shoulders, $6 00; Clear Rib, $8 37½. BACON quiet and unchanged. BUTTER—The average quality is now probably as good as can be expected. This is the view which packers take of it, and they are buying quite freely for fruit-house storage, and this demand keeps stock from accumulating in receivers' hands and also keeps prices from breaking down to a still lower basis. The demand for creamery is larger than ever before in the history of the trade, but the groduction has increased in fully as large a ratio, and prices have further declined, in sympathy with New York. Fancy Creamery sells at 20@23c, choice Dairy at 16@18c, choice Western Reserve at 14@16c, prime to choice Central Ohio 12@14c, medium do 10@12c, and inferior 5@8c ₱ lb. CHEESE—The arrivals have been liberal, and as there is no immediate increase in the demand the market has been easy during the week and prices have declined fully 1c., closing dull at 7½@8½c, for good to prime factory. EGGS—The arrivals have been unusually light for this season of the year and prices have advanced to 14c. per dozen, closing strong. HOGS steady; common and light, $4 25@5 85; packing and butchers', $4 30@6 10.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 4, 1881

BEANS AND PEAS.—The bean seems to have sunk into its warm weather lull and prices are quoted to their full limits. Outside rates for medium only made for local wants. Exports of marrows not important. Red kidneys move fairly. The demand is perhaps more noted for them in Summer than at other times. Green peas are quiet at a range of $1.40@1.60 for Wis. bbls. Southern B. E. quiet and a shade off to sell. Last quotations for Canadian field 85@90c. in bond.

Marrow beans, prime, $2.52½@2.57½; other, $2.30@2.45; medium, prime, $2.45@2.50; other, $2.20@2.35; pea $2.25@2.50; white kidney, $2.30@2.50; red kidney, prime, $1.60@1.61½; fair to good, $1.40@1.50; black or turtle soup, $1.45@1.50.

Receipts for week, 1 200 bush.

Exports do. 1200 pkgs.

BUTTER.—The main effort of the week on the part of dealers in State has been to let prices down to a point at which shippers were somewhat committed to operate. Yesterday the market struck an open quotation of 30c. and there was some free purchasing for export. It is highly probable, however that just as easy rates have been made during the week. At the close the feeling on State is firmer as the drain upon fine table grades has been pretty severe. Still dealers do not intend to hold for rates that will tend to allow an accommodation. Western butter has ruled steady as to quality has made it attractive at the comparatively favorable prices. The price prospect abroad for butter this season has a cheap outlook and the market here will have to shape accordingly. One favorable point is the low price of ice, which will permit more cold storage than for last Summer should supplies crowd.

COMPARATIVE RECEIPTS AND EXPORTS.

			Receipts, pkgs.	Exports, firkins.
June 1, '80	to June 1, '81		1,491,900	270,100
" 1, '79,	" 1, '80		1,499,900	310,810
" 1, '78,	" 1, '79		1,530,550	313,110
" 1, '77,	" 1, '78		1 293,100	186,208

Creamery—Western, good to prime, 19@20c.; State and Penn. 19@21c.; poor, 18c.; sweet cream, 19@20c.; State pails and half tubs, choice, 20c.; fair to prime, 17½@19c.; Welsh tubs, 17@20c.; poor State, 12@17c.; firkins yellow, 21c.; Western imitation, 16@18c.; dairy, fine, 16@17c.; other, 13@15c.; factory or ladle-packed, best, 15@15½c.; other, 10@14c., very poor Western, 8@9c.

Receipts for week, 37,152 pkgs.; exports, 5,233 do.

CHEESE.—The market has lost in buoyancy of tone and feeling and at the close it was difficult to make the extreme figure of last week and impossible to do so in a large way. The 10c. quotation is named but with the prospect of a good deal of stock carrying over into next week, when receipts may again prove large; prices for all upper grades will be likely to further weaken.

COMPARATIVE RECEIPTS AND EXPORTS.

			Rec'ts. bxs.	Exp'ts, lbs.
June 1, '80.	to June 1, '81		2,8 9,780	133 427,630
" 1, '79.	" 1, '80		2,399,213	112,629 500
" 1, '78.	" 1, '79		3 130,900	142,243,750
" 1, '77.	" 1, '78		2,675,050	117,452,450

State factory, fine, 9½c., fair to prime, 8½@9½c; poor to fair, 7½@8½c.; Ohios, fine, 7@9c.; part skimmed, 4@5c.; full skims, 2@3c.; Wisconsin poor to fine 7½@9½c.

Receipts for week, 72,980 boxes.

Exports for week, 56,523 boxes.

Liverpool cable, 55s.

Steam to Liverpool, 20@25s.

COTTON.—A brighter aspect has attended cotton this week. There has been no very large dealing, but the unprecedented activity in cotton goods and a better trade response from Liverpool have encouraged spot and speculative operations.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas*
Ordinary	7 13-16	8 1-16	8 1-16
Strict ordinary	8 5-16	8 11-16	8 11-16
Good ordinary	9¼	9 9-16	9 9-16
Strict good do	9⅝	10 1-16	10 1-16
Low middling	10 7-16	10 13-16	10 13-16
Strict low middling	10 13-16	11⅜	11⅜
Middling	11 1-16	11 5-16	11 5-16
Good middling	11⅜	11⅜	11⅜
Strict good middling	11⅝	12⅛	12⅛
Middling Fair	12⅜	12⅜	12⅜
Fair	13⅝	13⅝	13⅝

STAINED.

Good ordinary	7 7-16	Low middling	9 1-16
Strict good ordinary	8 7-16	Middling	10⅜

The close of the market for futures was officially reported as follows: June, 10,96@10.98c.; July, 11.03@11.04c.; August, 11.11@11.12c.; September, 10.67@10.68c.; October, 10.26@10.24c.; November, 10.15@10.16c.; December, 10.2@10.17c.; January, 10.37@10.38c. February, 10.47@10.48c.; March, weak.

DRIED FRUITS.—The market for evaporated apples is quiet but supplies are under good control. Sun-dried are steady and supported by a continental export demand. Small fruits dull but not unseasonably so. Quotations are mainly repeated.

Apples evaporated choice 8¾@9c; fair to prime 7¾@8¾c. North Carolina sliced, common to best 4@5c. Va, do. 4@4¼c; Tenn in bbls. 4½@4¾c, do, bags 4@4½c. State fine cut 4@4¼c. quarters 4½@4⅝c, Western, 4½@4¼c; evaporated peaches peeled 27@30c., unpeeled 17@20c; very poor 10c; sun-dried peeled 5@5½c; unpeeled 3@3½c. Plums 12@12½c. Blackberries 8@8½c. Cherries 12@13½c. Raspberries 23@24c. Whortleberries 11½c.

Receipts for the week, all kinds, 1,0.0 pkgs.

Exports dried apples, 1,450 pkgs.

EGGS—Receipts for week, 11,900 bbls.; do. last week 15 300 do. Supplies have run light and with no troublesome surplus the market is in sellers' favor for all strictly prime stock. After this date eggs, to rate first class will be subjected to inspectors' average of losses.

Near points, 17c.; State and Pa., 16½c.; Western and Canada, 15½@16c.; Md. and W. Va. 15½@16c.; poor lots, 14@15c.; duck, 15@16c.; goose 20@22c.

FEATHERS.—Prime white geese, 55@60c.; mixed, 25@40c.

FURS AND SKINS.—The following are the ruling rates for prime No. 1 quality:—

	Nor. & East.	W. & S. W.
Fisher	7,00@10.00	6.00@9.00
Black Bear	7.00@14.00	5.00@9 00
Cubs and yearlings	3.00@ 5.00	2.00@4.00
Otter, each	8.00@10.00	6.00@8.00
Beaver, per lb	2.50@ 3.50	2.50@2.75
Mink, dark	1.00@ 1.25	60@ 75
Mink, pale	60@ 75	40@ 50
Red Fox	1.40@ 1.60	1.00@1.35
Grey Fox	80@ 90	50@ 70
Raccoon, each	70@ 80	45@ 60
Skunk, black	1.00@ 1.10	80@1.00
Skunk, half-striped	55@ 60	50@ 55
Skunk, striped	25@ 30	25@ 30
Skunk, white	10@ 15	10@ 15
Opossum (trash out)	....	11@ 14
Muskrat, spring	16@ 18	14@ 15
Muskrat, winter	12@ 15	10@ 12
Muskrat, fall	9@ 11	8@ 10

FLOUR.—The week notes the unusual event of stronger prices on high grades of flour with cheaper rates for export brands. The latter have shown a very free business.

No. 2 ₱ bbl. $3 05@3.50; State and Western superfine, $4.@4.70; city mills extra, $5@6 70; Spring wheat do. $4.60@5 00; Spring XX and XXX, $5.25 @6.0. patents, $6 50@8; Ohio round hoop shipping $4.80@5.25; trade brands, $5.40@6.25; Southern extra $5,00@5 40; do. double extra, $5.60@6.00; do. family, 6.25@7; Southern shipping, $5.25@5.85; do. XX and family, $6@6.75. Rye,

$5 50@6. Corn-meal, Brandywine, $3.35@3.40; Western, $2 90@3.20.

Receipts for week, 117,000 bbls.

Exports, do. 60,501 do.

FRESH FRUITS.—The larger portion of the supply of strawberries has sold low; the weather has been poor and trains have arrived late and the trade for Southern berries spoiled for several days. The last arrival of Norfolks proved a loss. New Jersey begins to send good Wilsons.

Southern N. J., quarts, 9@11c.; Upper N. J., quarts, 12@14c. do. pints, 6@7c.; M. and Del., 5@10c. A few Russet apples quoted at $2@2.50 ₱ bbl. Md and Del. gooseberries, best $1.75@2; do. cherries ₱ lb., 8@10c. Hot-house grapes, new uneven in quality; Black Hamburgs quoted at $1@2 per lb. Peanuts steady; Va. hand-picked, 4½@4¾c. per lb.; fancy, 4@4¼c; extra prime, 3½@4c. good to prime, 3¼@3½c.; shelled, 2½@3¼c.; pecans firm at late advances 7@10c.

GRAIN.—Varied crop reports have caused considerable confusion in wheat rates. This is one of the phases of the market at this part of the season, and, though there is nothing positively detrimental to be pointed at, the fitful fluctuations of the market have prevented exporters from operating in the volume of last week. Corn has shown disturbed and irregular figures consequent upon the large settlements of contracts for the close of the recent month. The market closes steady with the prospects of an early resumption of regular business. These rumors will also apply to oats. Rye is lower.

Wheat, Spring $1.12@1.21, red Winter No. 2 $1.25@1.25½; red Winter $1.14@1.18. white Western and State $1.12@1.25. Rye, $1.08@1.12. Oats, white No. 1 50@51c.; white No. 2, 47@47½c.. white No. 3 46½c; mixed No 1 45½c; do. No. 2 45¾@45¾; do. No. 3 43½@44½c. Corn, Western mixed 47@51c.; do. No. 2 54½@54¾c; do. yellow 57@58c; do. white 62@65½c: Southern 63@66c.; do. yellow 55@58c.

Receipts for week, wheat, bush., 883 400; corn, do. 1,135,050; oats do. 242,500; rye, do. 19,393; malt, do. 555,800; barley, do. 21,900, rice pkgs. 770.

Exports for week wheat, bush 1,424,300; corn, do. 1,013,760; oats do. 2..00; rice, pkgs. 2 035.

VISIBLE SUPPLY OF GRAIN IN THE UNITED STATES AND CANADA.

	Wheat. bu h.	Corn. bush.	Oats. bush	Barley. bush	Rye. bush.
May 28, '81...	14 509,321	2,8 2 828	4,589,239	5 3,093	347 327
May 21, '81...	6,561,830	11,233,039	3,721,218	737,502	2 ,567

HAY AND STRAW. With heavy receipts of hay the market has broken into low figures and can hardly recover, with quality running almost under grade.

Choice retailing timothy hay 95c. ₱ 100 lbs.; second quality, 85@8 c. do.; shipping 70@75 c. do.; clover mixed 75@80c. do. pure 70@75 c.; prairie hay, 65@70c. Long rye straw $1.0 @1.10 ₱ 100 lbs.; short do. 60@65c. do.; other grain, 45@60c. do.

Exports for week, 1,3.0 bales.

HOPS.—Brewers are in market but seem to want concessions. Exporters are no relief at the moment.

Crop 0 choice 21@22c good to prime 18@20c; fair to good 15@ 8c poor to fair 12½@15c; eastern 13@21c; 79's fair to prime 15@17c; 1878, 6c.

Exports for week, 429 bales.

Receipts for week 47 bales.

MAPLE SUGAR.—Has merely a chance call when carried into the Summer, and the remnant is freely off red at. sirup, in tin, per qt, of 10@11 lbs. 70c.@$1, with can; sugar, cakes, 7@10c ₱ lb.

MILK.—Low prices have attended the excessive supply. Arrivals are one-third above a liberal city call and up to Tuesday a good many commission cans little more than paid freight. The average was quoted at Harlem platform at 65c. ₱ can of 40 qts., the range showing 30@75c.

OIL CAKE.—Firm at $30 for Western bag.

POULTRY AND GAME.—The sale of Spring chickens is retarded by the unfavorable weather for near by watering points. Turkeys unsaleable if not really prime. A coming Jewish holiday stimulates prices for choice birds.

Dressed turkeys, choice 15@17c; coarse 13@14c; Phila. Spring chickens 30@65c; N. J. 30@40c; Phila. Winter 30@35c do. Fall 18@22c fowls, Phila. d.p. 16c; N. J. d.p. 14@15c. do. scalded 13@14c. State and Western 12@13c; do. d.p. 13@14c. Ducks, Spring, 30@35c.; old 12@15c., Squabs, white, $2,50@3 ₱doz.; do dark, $1.50@1.75.

Live poultry is abundant and fowls are dull and cheap. Spring chickens when four pounds or nearly sell better than any other regardless of the higher price.

Spring chickens prime ₱ pair $1; other 30@70c. Fowls, ₱ lb. 11@13c, the lower for Southern; roosters, 6@7c.; turkeys mixed 9@10c; ducks, ₱ pair 60@ 90c; geese, extra $1.50; other 87c@$1.37.

Game is scarce; a few lots of Mo. wild pigeons sold quickly at $1 50 ₱ doz.; w. squab $1; Eng. snipe and plover $2.25@2.50.

PROVISIONS.—Hog products generally are less a "sellers' market" than for a time past. Very heavy supplies of hogs at the West have made some of the stocks too heavy to carry with Summer here and with the new pressure to sell; bacon, hams and cutmeats are easier with lard sympathizing.

Pork extra prime $14 ₱ bbl.; Western mess new $16,50@16.75; old $15.50@15.75. Lard—Western steam $10.95@11 per 100 lbs.; prime city $10. 5. Hams smoked city 11@11½c. pickled Western 10@10½c; shoulders smoked city 8½@8½c; picked 7¾c. Bacon long clear 8¾@9c. Beef W plain mess $9 00@10; extra mess, $11@11.50; family $12@13; extra India tcs; $22@24. beef hams $20@23.

Receipts for week, beef, bbls and tcs, 700 pork, bbls. 2,800; cut-meats, pkgs. 15.430; lard do. 11.230.

Exports for week, beef, bbls and tcs., 1,868. pork do. 3,309. cut-meats, lbs. 1,2:4,487; lard, do. 6,595,500.

TOBACCO.—No new changes since our last.

VEGETABLES.—Potatoes are in good demand with new selling well As new Southern or other appear the market for old is restricted to fine perfect stock.

Bermuda potatoes new $7@8 ₱ bbl.; Ch'n and Sav. $4@6 cnils $2@2.50 best old Rose in double heads $3 do. Peachblow and Snowflake $2,50; other styles $1.62@1.87.

There is an easy feeling in green stuff as the season is advancing; green peas, cabbage and asparagus have the steadiest sale; the latter begins to advance.

Green peas, N. J. per bbl $2.50@5; Md. $2.50@3 Norfolk per ½ bbl. 50@75c; marrow fat $1; Southern stringbeans $2,50@3 ₱ crate; Sav. cucumbers $4.50@5; Fla. $1@2; do tomatoes, $1 50@2; Bermuda ₱ 5-qt. box 50@60c.; squash Fla. per bu crate 50@$1; cabbages, Norfolk $75c@$1.25 beets, do. 100 bchs. $3@4; do. L. I. $5@8; Bermuda onions, $1@1.12 ₱ crate; lettuce, 50c@$1; asparagus, Oyster Bay, $1.75@2 per doz.; other $1.25@1.50 radishes, per 100 bchs 50@$1; rhubarb do. $1@1.50; white turnips do. $3@4.

WOOL.—The demand is more animated and with the better movement for raw material the declining tendency, lately marked, has been in some degree arrested. About previous prices are given with more tone.

Ohio, Penn, and W. Va. XXX and picklock, 43@44c.; X to XX. 38@41c.; No. 2 to No. 1, 35@41c. coarse, 33@36c. combing 39@45.

State and Western X and XX, 38@39c.; No, 2 to No. 1 36@43c.; coarse 30@35c.; combing, 38@44c.; combing unwashed 25@30c.

Va., W. Va. and Md. unwashed medium 26@29c.; Ga. and Lake unwashed medium 26@28c.; coarse 22@24c burry and slightly burry 14@19c; Cal. Spring northern, free, 29@33c.; middle counties, free, 26@28c.; low grade and burry, 18@21c.; Fall, choice, 23@25c.; low grade and burry 15@20c. Texas choice, free, 25@28c.; fair to good 22@24c.; low grade and burry 15@20c. Pulled super 38@42c.; extra 35@38c; No. 1, 20@23c: combing 38@43c. lambs 38@42c. Tub washed, fair to choice 35@42c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, June 4 1881.

BEEVES.—Receipts for the week 11.876 head: do. last week 12,855 do. Sellers have tried hard all the week to get matter running their way, and after the two tough markets of Monday and Wednesday last have succeeded. The market yesterday showed an advance of fully ½c. and butchers were anxious buyers. This little improvement does not of course cover late losses, but it is something to have the yards cleared with a firm closing after an advance. Low railroad freights have permitted a good many outside shipments, but these have a limit and regular operators are now encouraged. The first Texan cattle arrived on Monday selling at 8¼@8½c. dress 55@56 lbs. We quote this week a range of 10¼ to 11¾c. dress 56@57 lb a car load of fancy sold at 12c. Nothing of decent grade sold below 10¾c.

MILCH COWS.—The past has been one of the dull weeks of cow trade and dullness in this branch of live stock means a decline. Compared with last week prices are $5 per head lower for good styles; most sales have been at $40@55 per head, the latter very extreme.

VEAL CALVES ive are lower and close without prospective improvement.

Prime N. J. fed, 6@6¼c.; do. state, 5¾@6c.; poor to good yard lots, 4½@5¾c.; Mt. Holleys 6@7c.; buttermilks, 4c; up-river dressed, 7¼@10c Our quotations include Washington Market stock.

SHEEP AND LAMBS.—Receipts for the week 22,778 head; do. last week 29,130 do. Sheep have sold well; several sales closing at 5@5¾c. for ordinary to good. Lambs have been scarce and high prices are rather forced. Va. and Ky. have sold at 9@10c.; Penn. 8¾@10c., and N. J. 10@11¾c. Dressed lambs have made 8@12c

SWINE.—Receipts for the week 30.311 head; do. last week, 27,583 do. The market is very weak with liberal supplies in sight and no special activity on change; best price for corn-fed $5 80@6 ₱ 100 lbs. City dressed State, 8@8½c.; do. Western, 7½c.

All good articles are imitated and Higgin's English Salt is no exception Several brands of so-called sifted salt are now offered, but grinding up pancake and then sifting it with the salt is not the Higgins Process by a great deal.

E. & O. WARD, PRODUCE Commission Merchants.
(ESTABLISHED 1845.)
Send for Circular of Great Value, giving full instructions for shipping
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Ref., *Irving National Bank*, New York City.

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Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.
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Rumford Chemical Works, Providence, R. I.

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CALVES & COWS
Prevented Sucking each other—also
SELF-SUCKING,
by Rice's Patent Weaner, USED *by all* STOCK-RAISERS. Prices by mail, *post-paid:* For Calves till 6 m's old, 30c.; till 1 year, 50c.; till 2 yrs., 75c.: older $1. *Circulars free. Agents wanted.*
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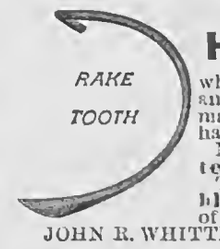
Easthampton, Mass.



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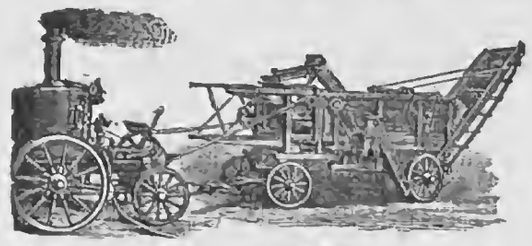
The best **Champion Vegetable Cutter** made. Cuts a bushel of potatoes in 23 seconds.
JOHN R. WHITTEMORE, Chicopee Falls, Mass.

THE WESTINGHOUSE



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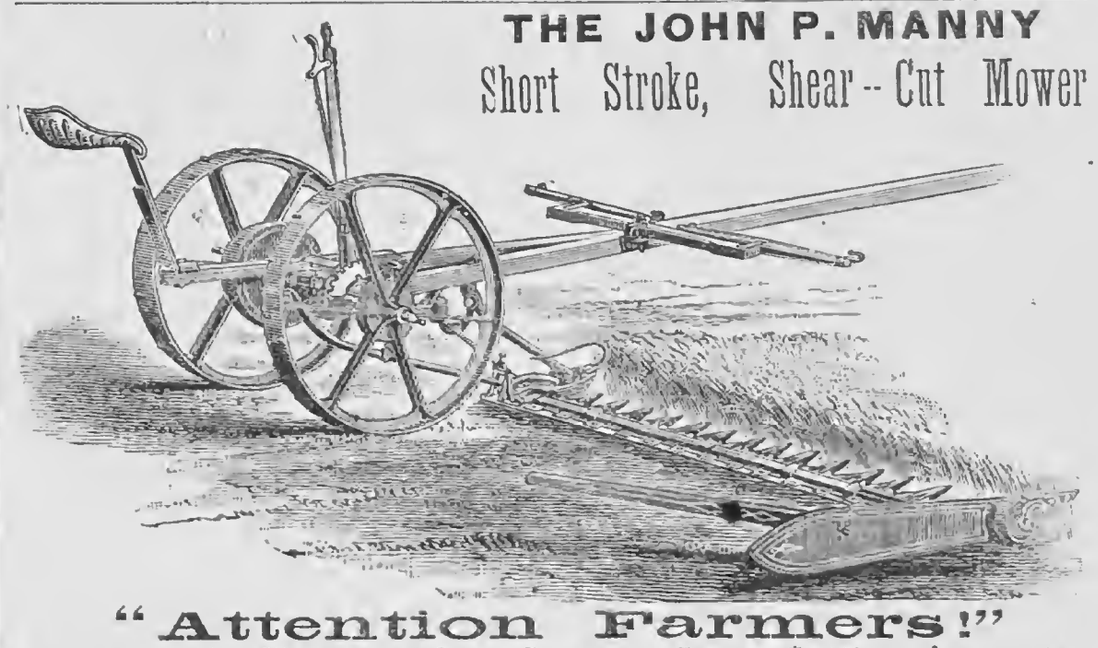

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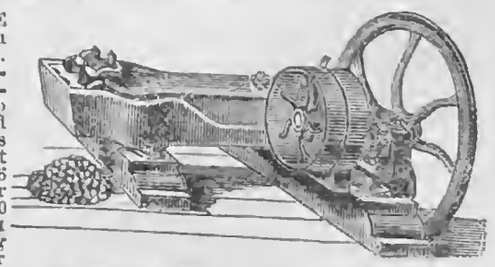

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Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 24.

HENRY STEWART.

The Digestion of Food.

THE alimentary canal is of great length. In the sheep it is 28 times as long as the body; in the cow it is 22 times as long; in the pig it is 13 times as long; in the horse 10 times, in mankind nearly seven times as long. This extreme length is required to give effect to the slow process of digestion of the food and to retain it in the intestines long enough to extract all the nutriment from it. The whole process of digestion is as follows: The ood taken into the mouth is broken up and ground between the teeth. There are three kinds of teeth; the front or cutting teeth, sometimes called nippers; the canine teeth or tushes, and the molars or grinding teeth. A horse has 40 teeth; a man has 32; a mare has but 36, the 4 canine teeth being wanting in mares; an ox or cow has 32, but has no cutting teeth or nippers on the upper jaw; a sheep has 32 teeth arranged as in the ox, and a

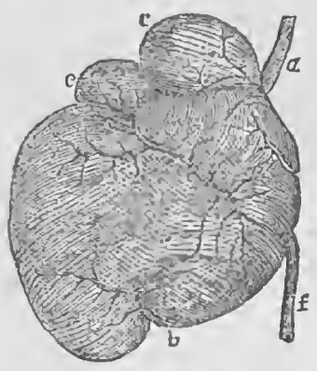

FIG. 298.

pig has 44. The functions of the teeth are important, as the complete mastication of the food is absolutely necessary to perfect digestion. As the food is ground between the teeth, it is mixed with a fluid called saliva, secreted from glands in the mouth, known as the salivary glands. This food possesses some solvent or digestible qualities and partly dissolves the food and assists the stomach in its fuller solution.

After the food is masticated and mixed with saliva, it passes down the gullet into the stomach The stomach is lined with a membrane which is furnished with a vast number of very small tubes, from each of which is conveyed a fluid known as the gastric juice which dissolves the food. When the food enters the stomach, these tubes begin to pour out this fluid, which is mixed with the food by an alternate muscular contraction and expansion of the stomach. At the bottom of each tube is a gland, which is called the peptic gland; this gland is the actual source of the gastric juice.

The cow, sheep, goat, deer and some others are known as ruminating animals, or animals which

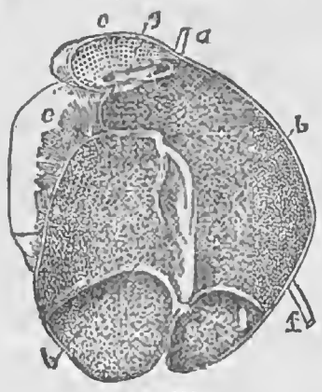

FIG. 299.

chew the cud. The stomach of the ruminating animal consists of four divisions, as shown at Figs. 298 and 299. The former engraving represents the outward appearance of the stomach of a ruminant; the latter, the appearance of the inside; at *a* is the end of the gullet, and at Fig. 299 is seen the opening by which the food passes into the first division of the stomach, *b b*, and also into the second division *c*. The food eaten by a cow or sheep is forced in small portions at a time by a contraction of the stomach *b*, into the small pouch *g*, between the first and second stomachs, as these are called. It is here molded into a long ball, or cud which the animal brings up into the mouth, where it is slowly chewed over again. It is then brought into a thin pulp or paste and when it is again swallowed, it passes through this passage and enters the third stomach which lies directly behind the second one, so that it cannot be here shown. This third stomach is provided with a number of leaves or folds something like the leaves of a book; and the food being caught between these is rubbed and ground until it is reduced to a condition of extreme fineness, when it passes on to a fourth or real digestive stomach, *e*. Here it is mixed with the gastric juice and is slowly digested. This four-fold stomach performs no more work in the end than the single stomach of a horse or a pig; nor can we define its purpose or explain why an ox or a sheep should require so peculiar an apparatus to perform the work which the simpler stomach of a horse performs equally well. But in investigating the works of nature we find many things which we cannot explain, but nothing which is not extremely well adapted for its special purpose and which does not evince a remarkable wisdom of design, or wonderful fitness and effectiveness. A further study of the digestive process of an animal and of the intricate machinery and material which are provided for this purpose, will be found a most instructive and entertaining pursuit and one that will be of the greatest interest and value to every young farmer.

THE YOUNG QUERIST.

J. W., Felicity, Ohio, asks what we think of glass flower-pots.

ANS.—We don't think they are as good as earthen ware. They lack porosity, the plant-roots contained are liable to injury through the action of the sun and they are more costly than earthen pots.

W. N., Selina, Ohio, wishes to know whether potatoes are roots or tubers.

ANS.—"Irish" potatoes, so called, are tubers, but sweet potatoes are simply roots. A tuber is an underground branch or thickened root-stock. The eyes of potatoes are in reality buds.

E. A. H., Chagrin Falls, Ohio, wishes to know how to propagate Winter-blooming carnations.

ANS.—From seed sown in early Spring The best strains, so introduced, may be maintained by cuttings the same as the geranium or coleus. The cuttings are placed in boxes of sand kept moist and warm.

C. W., Akron, Ohio, wishes to know the botanical names of the common daisy and China Aster.

ANS.—The former is called Bell's perennis; the latter Callistephus Chinensis.

F. M. A. B., Madison, Wis., wishes the address of "Hawai Nei."

ANS.—Honolulu, Sandwich Islands.

That invalid wife, mother, sister or child can be made the picture of health with Hop Bitters.—*Adv.*

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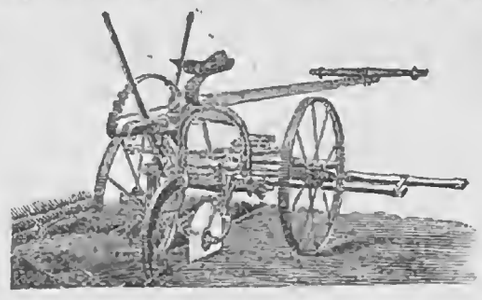

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THE GARDENERS' CHRONICLE

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PERSONAL ITEMS.

Ex-Governor Horatio Seymour has gone into the Adirondacks for his health. He is not strong, and was too tired to respond to a serenade at Lowville the other evening.

General Ignatieff, the present head of the Czar's Government, is described as very clever, but not too honest. He sprang from the lesser nobility, who are as numerous as sand grains on the seashore, and has had a "lucky" career throughout. The French speak of such a fortunate person as "a man born with his hair dressed."

The Hon. George B. Loring, the new Commissioner of Agriculture, is the son of a clergyman. The story goes that his father was famous for keeping very fat pigs, a couple of which he "once upon a time" sent to a neighboring fair in charge of George and his brother, both lank, hungry-looking youngsters. The pigs attracted a good deal of admiration, much to the delight and pride of the boys until an old farmer remarked in their hearing, "Yes, indeed, parson Loring do keep mighty fine pigs; but seems to me he ought'er give ess to eat to his pigs and more to his boys."

[Fort Wayne, (Ind.) Sentinel.]

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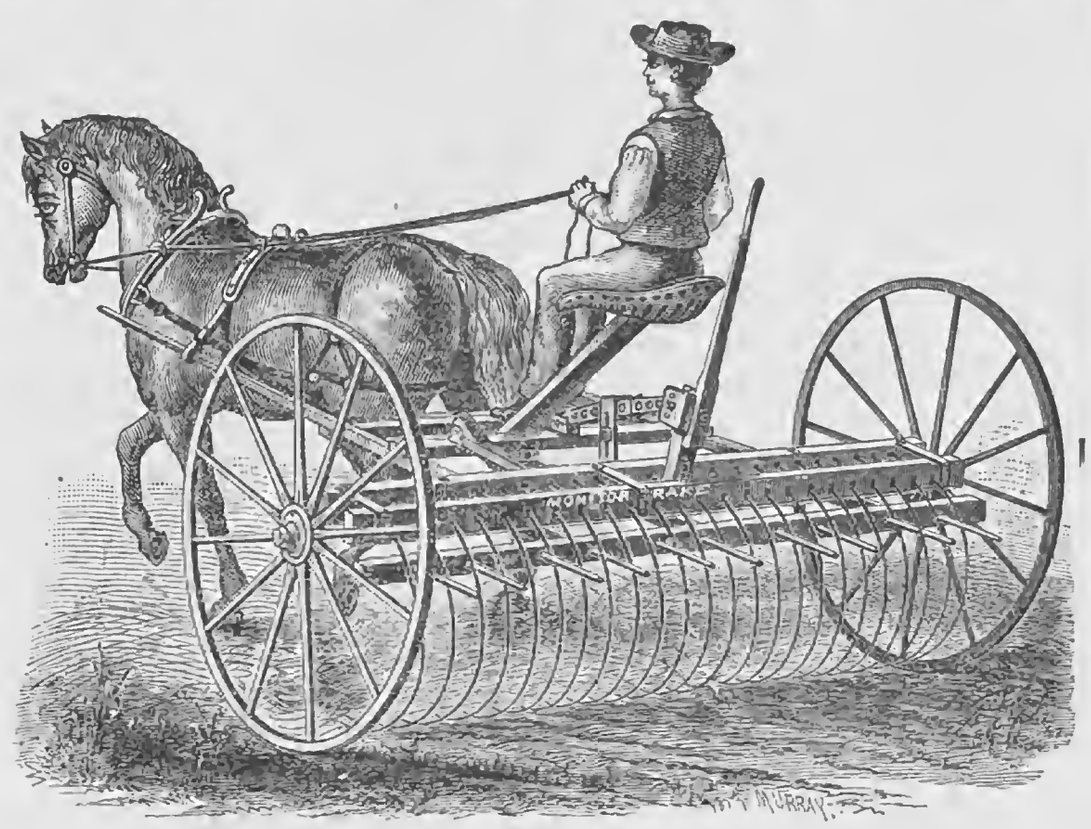

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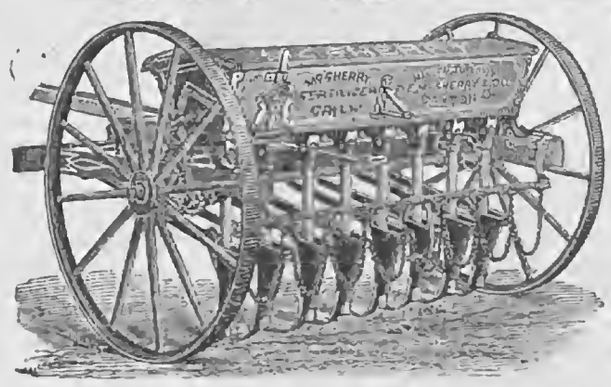

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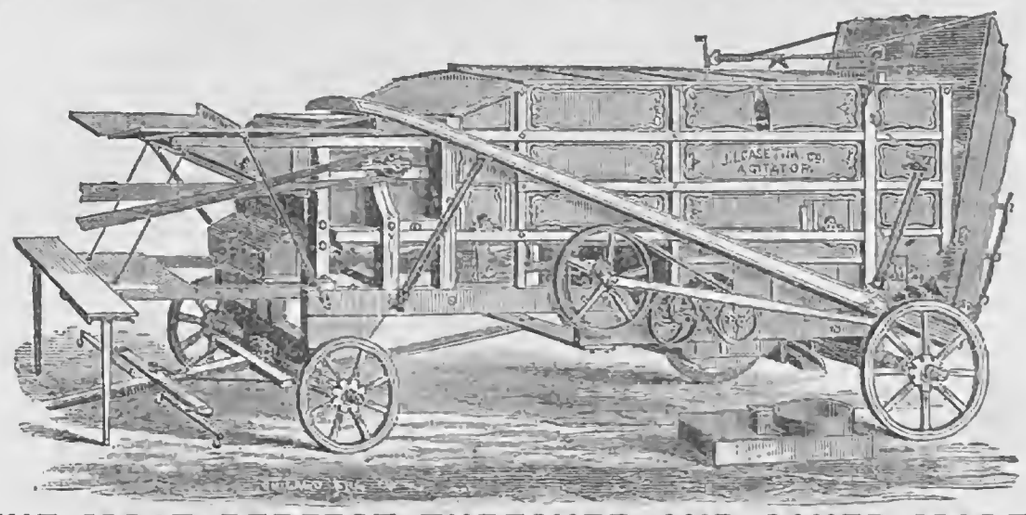

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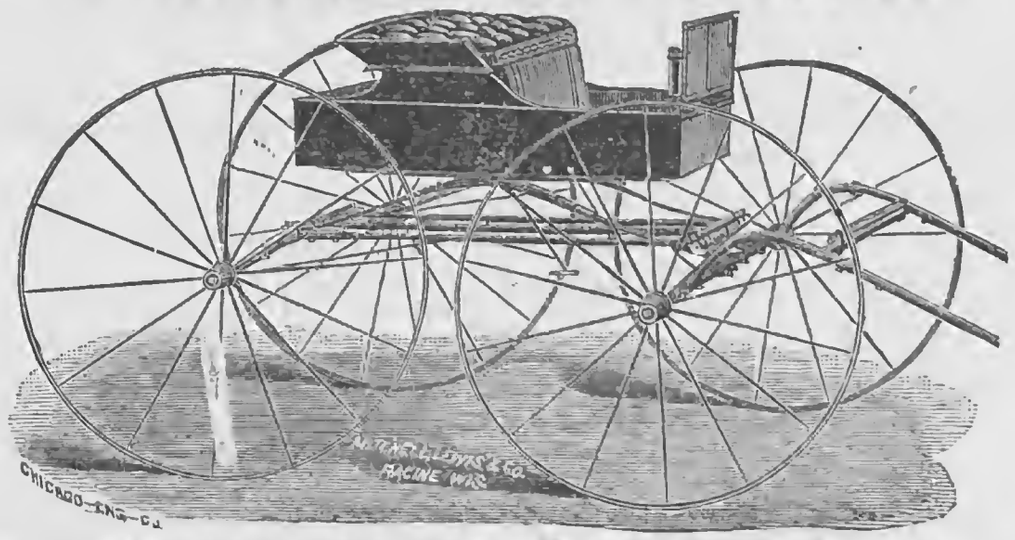

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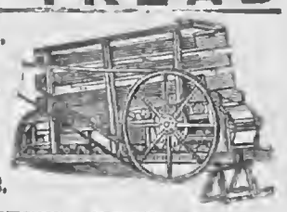

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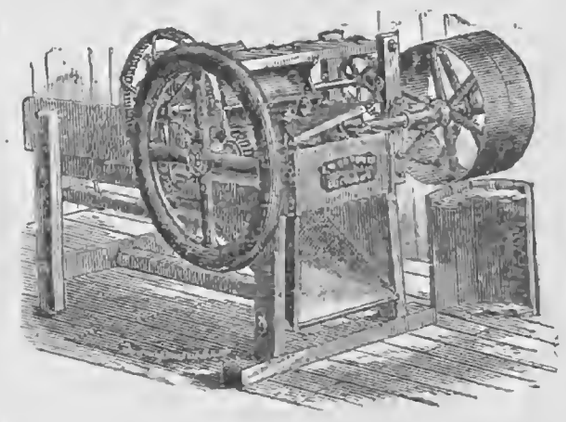

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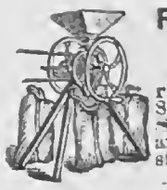

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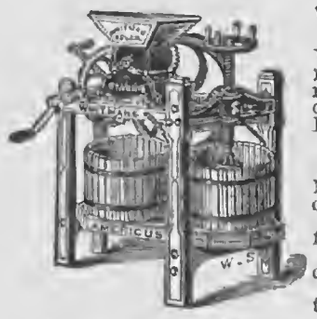

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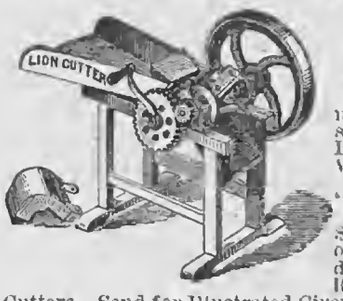

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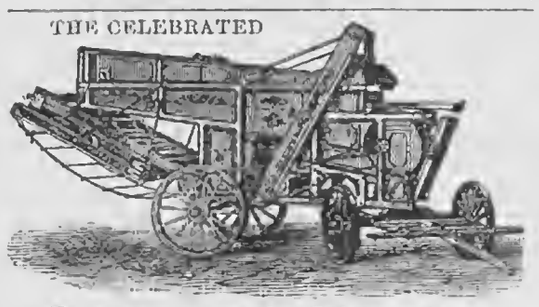

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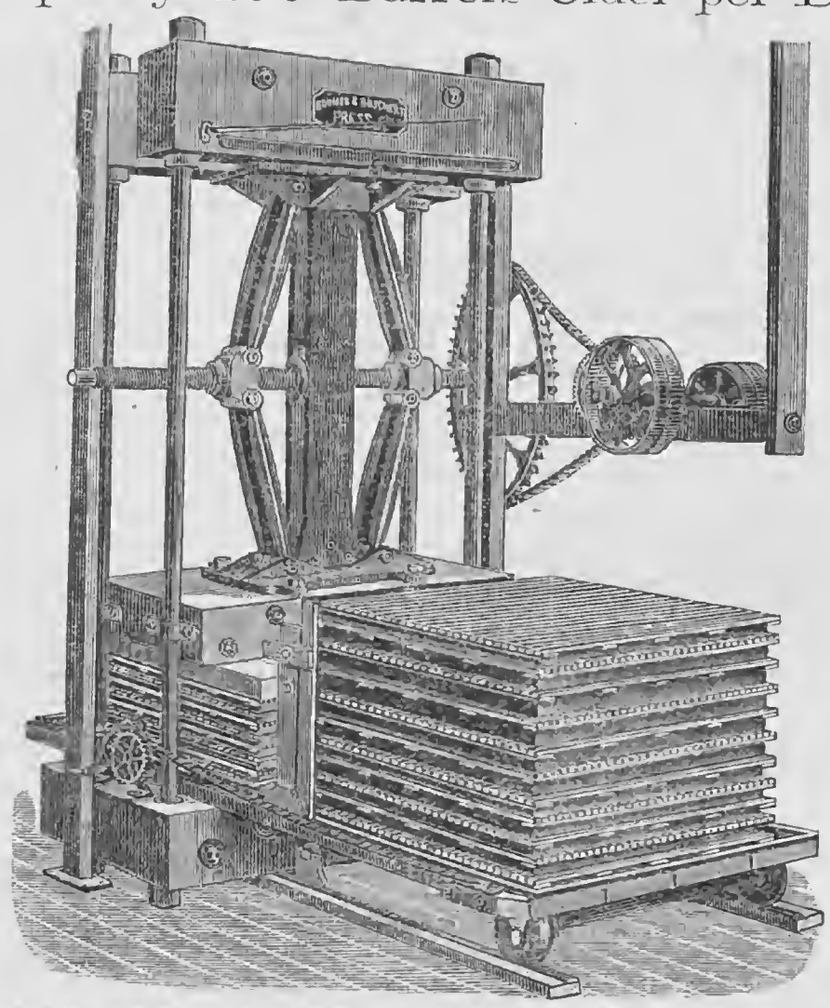

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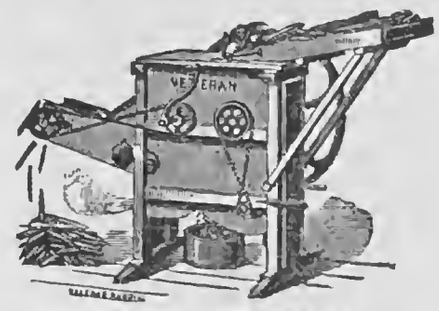

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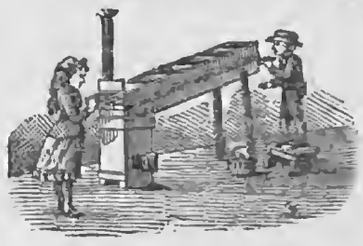

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VOL. XL.—No. 1638.} NEW YORK, JUNE 18, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Biographical.

GEORGE B. LORING.

BY PRESIDENT LEVI STOCKBRIDGE, OF AMHERST, MASS.

HON. GEO. B. LORING, the new Commissioner of Agriculture, is a native of, and has always resided in, Essex County, Mass. He graduated at Harvard College, studied the medical profession and received his M. D. Soon after commencing the practice of his profession, a change of circumstances made him the proprietor of a farm of about 300 acres two miles from the city of Salem, on which for nearly 30 years he has made his home. Abandoning medical practice for which he possessed every qualification of success, he devoted his time, energies and education to the cultivation and improvement of his farm and made it in every respect one of the best in that region. For many years he has been a leader in all enterprizes for the advancement of the agriculture of his native State, and on his own farm he has illustrated what may be accomplished in renovating soils, improving stock and crops, by high culture and a knowledge of the true elements of success in farming. In 1858 the members of the Essex County Agricultural Society elected him as their delegate to the Massachusetts Board of Agriculture for three years, and he was subsequently re-elected for six consecutive terms, giving him 21 years of continued service on the board. During all these years he took an active and leading interest in all its deliberations and operations. He was especially influential in securing the acceptance of the national grant for agricultural colleges, and in all the preliminary measures for the establishment and successful opening of such a college in his State.

As delegate from the Board of Agriculture he visited and addressed every agricultural society in his own and most of the New England and Middle States, making himself perfectly familiar with their agricultural condition, and offering suggestions for its improvement. In the service of the board he prepared papers on a wide range of agricultural topics, which were published in the annual State reports, and which rank among the best of our agricultural literature. He has been an active, influential citizen as well as farmer, and interested in all the public movements of the day. He has served repeatedly in both branches of the State Legislature, been President of the Massachusetts Senate two years, and represented his fellow-citizens two terms in Congress. It is undoubtedly the fact, that we have never had a Commissioner who possessed such varied talents and acquirements, such a complete knowledge of, and interest in, the cause he is called upon to serve as Geo. B. Loring, and much may be expected from his administration of the affairs of the Department.

[The portrait presented has been drawn and engraved from a photograph kindly sent to us by Dr. Loring at our request.—EDS.]

Farm Economy.

THE APPLICATION OF FARM-YARD DUNG.

J. B. LAWES, L. L. D., F. R. S.

THE economic application of farm-yard dung must, to a certain extent, be based upon its composition, and there are two processes by which this may be ascertained, first by direct analysis, and second by calculation.

Many years ago I published a series of calculations based upon the food consumed upon a farm of 400 acres, the quantity of straw used as litter and the loss by respiration. The farm was estimated to have 100 acres in turnips or mangels, 100 in hay, and 200 in wheat and barley. The amount of dung produced was equal to 957 tons (of 2,000 pounds), or about 2½ tons for each acre. The composition per ton was as follows:

	Pounds.
Water	1,400
Dry matter	600
Minerals	55¾
Phosphoric acid as phosphate of lime	10
Potash	10¾
Nitrogen	13

This estimate agrees very well with the analyses made by Bonssingault, Voelcker and ourselves, and may be said to represent the composition of good unfermented farm-yard manure. We are indebted to Dr. Voelcker for several analyses of the dung in different stages of decomposition, and he shows that only a very small proportion, probably not more than two pounds of the 13 pounds of nitrogen contained in each ton, is in the form of ammonia. Considerably more than 90 per cent. of the whole of the dung consists therefore of water and wood. A large proportion of the manure constituents of the dung exists in combination with the straw or the solid excrements of the animals, substances which decompose very slowly in the soil, and for this reason it takes a larger amount of dung to produce much effect on vegetation.

GEORGE B. LORING, Commissioner of Agriculture.
From a Photograph.—Fig. 300.

Our experiments lead us to the conclusion that the influence of one dressing of dung may not be entirely at an end for 20 or 30 years, or perhaps even a longer period.

With the composition of dung before me, and the known composition and condition of the various ingredients it contains, the question has often occurred to me as to whether it will be possible to do anything by way of improving its fertilizing powers. Ought we to fix the ammonia, or ought we to try and manipulate it in some way to hasten its action? If we can get the full effect of an artificial manure in one year, why must we wait a life-time to see the end of one application of dung? Time is money; the old-fashioned idea that a manure is valuable for its *lasting* properties will not bear argument, as, if true, it would then be better to leave bones and phosphate rock unground.

With all this scientific prelude, I am bound to confess that I am just as helpless in regard to the management or improvement of dung as the most old-fashioned farmer. It is of no use fixing ammonia where there is hardly any to fix. It costs nothing to look at your dung with the idea of doing something to it; but you certainly cannot touch it without going to some considerable expense. I, for my part, therefore am content to let it alone. As I grow a good many mangels, I apply the greater part of the dung to this crop, my practice being to open out the furrows and apply about 20 tons per acre, then, after earthing up the furrows, I proceed to drill the seed upon the top.

If I did not grow roots, I should apply the dung in Autumn to the clover or grass; this, of course, would involve exposure to the atmosphere, but I should not fear much loss on this account, or at all events I do not think that there would be more by this process than by any other.

To give some idea of our attempt to estimate the loss of the ingredients contained in dung, I may say that we applied it to grass land between 1856 and 1863, and, having taken a crop of hay every year since, at the end of 20 years we had only got back 14 per cent. of the nitrogen supplied in the manure, less than one-half of the potash, and not much more than one-third of the phosphoric acid. The effect of the dung last applied 18 years ago is still quite distinct, and when it will come to an end no one can predict. On the whole, as regards the question of economy, I am therefore inclined to advise that the dung should be carted from the yards to the field, and left there in a heap until required for application, or that it should be applied direct from the yards. All labor expended upon dung adds certainly to the cost, but does not add with the same certainty to its value.

THE WEIGHT OF COW DUNG.

I AM not in the habit of publishing statements which I have not fully proven before they are made public. I have had much occasion to know something of the weight and other properties of cow dung, and I know, as I stated, that normal cow dung always sooner or latter sinks in water. There undoubtedly are cases where a diseased or otherwise unnatnrally conditioned animal may drop dung which will for a time swim in the water, but not on it. I was recently looking at a very fine young animal when it made a very great effort to dung, and finally dropped a small amount of hard, dry matter. I caught the dung and carefully placed it upon water when it for a moment or two floated. But it gradually sank into the water as the air in its pores gave place to the water, and in less than three minutes after it left the animal it was at the bottom of the water. Every boy in the country and every man who was ever a boy among boys, has heard the expression, "How we hoss-dungs swim," when somebody thought some fellow was putting on airs. The plural is always used, and the expression derives its origin and significance from the fact that the separate lumps or balls of horse dung are more inflated than the rest of the mass and are supposed to feel above their fellows. I have a horse that is entitled to and receives some indulgences, among them the free range of a stable large enough for several common box stalls. In one corner of it a water-pail is kept. Sometimes he backs up into the corner and drops his dung into the pail, but I have never found any of it floating the next morning. My observation is, that horse dung always sinks just as fast as the water forces the gases out of the pores of the dung. Sometimes a few bits of undigested hay float, but the mass goes to the bottom as surely as lead.

The ungracious allusion to what the writer terms my "fights" over the specific gravity of cream is wholly irrelevant. In the first place I never had any fights over it. It is true that a writer, much in the same spirit as shown in this case, at one time undertook to disprove one of my positions by citing certain authorities in proof of a different standard of specific gravity from what it was falsely stated I had set up. Fortunately I was able to show that I had wholly disclaimed the figures quoted or any other as a "standard" and also to show that in every one of the cases cited against me the samples of cream had been of a wholly exceptional quality and in no case taken from the whole cream of whole milk. I never undertook to say that cow dung or horse dung might not be found that would float for a time, or to disprove that iron under certain circumstances will swim. I only spoke of the substances in their normal condition. Quibbling is not becoming in men who write for the information of the public. O. S. BLISS.

Georgia, Vt.

PULVERIZED TOP SOIL AS A MULCH.—In regard to cultivated soil acting as a mulch, my opinion of the matter is this—that plants during a dry time depend more upon moisture from below the surface than from above, and that the moisture is brought up by the capillary action of the soil, and that if the soil be cultivated—broken—near the surface, the capillary action is largely destroyed to the depth of several inches, and that this broken soil quickly dries out in the same manner that a leaf withers, that is broken from the parent stem. The capillary tubes below the surface, nearer to the roots of the plant, continue to act, however, and consequently the plant receives more moisture and shows less effect from dry

weather; and now this dry soil near the surface, in my opinion, acts as a mulch in that it prevents moisture from passing off from below; but admits it freely from above. As proof of the correctness of this theory, let any one dig down a foot in well cultivated soil and see if it is not more moist than at the same depth in soil which has been allowed to become hard and baked A. W.

Horticultural.

THE building in which the American Pomological Society had its birth has just been razed to the ground, and its dust was covering the tables and desks of the RURAL'S office when I was last there. It stood at the corner of Nassau and Beekman Streets, New York, and years ago was known as Clinton Hall. I was Chairman of the Committee of Arrangement and Reception, and I remember remaining in the hall more than half the night unpacking fruit and getting things ready for the morrow, for the fruit was more than was ever before or since seen on exhibition in New York, and continued to arrive all the next morning. I remember, too, what efficient aid I received from Mr. Samuel Allen, the father of your correspondent, Mr. A. B. Allen. He was a most amiable and estimable gentleman, full of good works, and was then, I think, nearly 90 years old; but, notwithstanding his great age, no other member of the committee for weeks gave me anything like the help he did. I was then but a young man, and felt that we ought to change places on the committee; but that would only have increased his labors. I have always cherished his memory kindly as one of the real fathers of the Society, not only assisting at the birth, but in the preparations for it. It has always been thought meet and proper to preserve the memory of the spot where great men were born and died; then why not so with the spot where a great society was born? As to its death, I hope it may so live that its death can only be recorded by some one in that remote future of which no one now living can have any conception. Let me add, too, my kindly wishes for my old friend, its venerable and respected President. May his latter days be as peaceful as his long life has been useful.

DURING a brief visit at the beautiful country seat of Mr. H. W. Collender I had an opportunity of becoming acquainted with a novel and quite original method of growing strawberries in pots. Mr. Collender last Fall ordered from a traveling agent (Goldie by name), claiming to represent a Rochester firm, quite a large number of pot-grown strawberry plants; but, for some reason, they were not delivered till this Spring. It was evident, on examination by Mr. C. and his gardener, that the plants had not been grown in pots, and investigation developed the fact that the plants, just before being delivered, had been *molded* in pots with wet earth. This, however, had been so imperfectly done as to betray the trick by the falling away of the earth, and exposing the doubled-up roots. Moreover, there are parties who claim to have seen the thing done. It is not to be supposed that any respectable house in Rochester was a party to such a transaction. Mr. Collender, then, paid the additional price for pot-grown plants (and that, too, in the Spring) without reaping any of the benefits to be derived from them. He will hereafter do as I have before advised the readers of the RURAL to do—buy his pot-grown plants directly of responsible firms, and let traveling agents severely alone.

I AM more than ever surprised this Spring to see how few understand the usual directions for sowing seed. When it is directed to "sow in drills half an inch deep," the drill is made half an inch deep, and the seed, when covered, is scarcely even a quarter of an inch deep. The phrase is taken in its literal sense, and it is a pity that any one should be led astray for thus giving a phrase its legitimate meaning. By usage among seedsmen and others, however, and a sort of uncouth antiphrasis, the sentence is intended to mean that the seed should be sown half an inch deep in drills. To accomplish this, the drills should be nearly or quite an inch deep, as they are commonly made, as the hoe throws the earth up at least half an inch above the level of the soil, and sometimes more. Complaints of bad seeding are very common, but a very large percentage of failures in the growth of seed may be imputed to bad sowing rather than to bad seed. Being too near the surface, in a loose bed of earth, the sun burns off the germ on its first appearance; and this is especially the case in dry weather when no pains are taken to bring the seed and the soil in contact with each other. The pea will bear, and even needs in our climate, deeper covering than almost any other seed; and yet the covering in some cases is so shallow that many of the seed are pushed out of the ground in the act of germination, of which I have just seen a marked instance in the garden of a new subscriber to the RURAL. People who seed the pea in this way seldom or never get much of a late crop; it is neither peas for themselves nor peace for the seedsman. My observation has taught me that too shallow sowing, with neglect of pressing the earth to the seed in dry weather, is a much too common cause of failure in the germination of seed. Shallow sowing will do very well when the soil is sufficiently moist; but it is better not to trust too much to this.

How are the potato beetles this Spring at the Rural Farm? [Never more flourishing.—EDS.] Did anybody ever before know these pests to begin their destructive work so early in the season? I have been down along the Delaware River, and there the beetles were sitting in the fields in companies, waiting for the potatoes to come up, and a shoot was pounced upon the moment it appeared above ground. The beetles seem to be more numerous than ever.

[WE beg to make a remark. Everybody has said, "Destroy the old beetles as fast as they appear in the Spring. Hand-pick them. If the old ones are destroyed, there will be no young ones," etc. Last year we went over our potatoes almost daily and destroyed the old beetles. The leaves were also carefully examined and all eggs destroyed. We wanted to make our work thorough—to test the utility of this destruction of the parent beetles. Nevertheless the grubs appeared in quantities never before so great. These were destroyed by London-purple. This year there are more old beetles—two to one—than ever before. They ate the shoots when, and as, they *first* appeared. But in a few days they began to mate, and then ceased to eat. At this writing our vines are "alive" with old beetles, and the orange clusters of eggs appear on many leaves. We shall wait a few days until the eggs are mostly hatched and then shower the vines with Paris-green or London-purple. We believe that this is the easiest and most effectual method of dealing with the potato beetle. The theory of destroying the parent beetles seems quite reasonable. The RURAL has given the same advice for years. The fact is, however, they cannot be destroyed by poison because they eat so little, and hand-picking, if ever so thorough, seems scarcely to lessen their numbers, while it takes an amount of time which farmers cannot afford.—EDS.]

IN a recent ride on the Central Railroad of New Jersey to Trenton Junction I was surprised to find, between Elizabeth and that place, not more than half a dozen apple orchards in sight from the cars. The peach seems to be considered more profitable. Of corn there is no end. Potatoes are also largely grown, and in every field I saw boys and girls engaged in picking beetles in tin pails. This is better, if not cheaper, than Paris-green, London-purple or any other dangerous poison. The boys and girls are paid so much a quart for the season, and, I was told, do the work thoroughly. Wheat is more common than rye along the road, and looks well, except some fields on low ground, which looked patchy from winter-killing. I saw very few oats. Dairy farming and the breeding of choice cattle seem to be greatly on the increase. Mr. Farley has recently purchased a fine farm near Trenton, in addition to his farm at Cresskill, and has just added some choice animals to his fine herd of Jerseys. I find this to be the favorite breed of cattle in this part of the country.

MUCH has been said, and justly, in praise of the superb roses grown at Madison, N. J.; but even the Madison roses have not surpassed, except in quantity, the splendid roses grown at Baronald, Orange Mountain, the beautiful residence of Mrs. William Barr. The Niphetos and Perle des Jardins were simply the finest I have yet seen. The Maréchal Niel blooms, too, were very large and as pretty as pictures, and fine ones at that; besides, they were grown on *old* plants, and that is the point I wish to bring out. Complaints of the fickleness of the Maréchal come literally from all parts of the world, and have for years. It surprises me, however, that it fails so soon in our Southern States, rarely surviving a few years. The cause I do not propose to discuss just now. I will state my belief, however, that our Southwestern friends will never succeed with it as an outdoor plant.

I wish to state briefly the manner in which the Niel is grown at Mrs. Barr's, which may be useful to rose-growers generally. Having two old plants of Lamarque, they were budded near the stock with Maréchal Niel. The buds took kindly, and the growth was everything that could be wished for, without being rampant. The growth has remained healthy and the flowers have been abundant, large and perfect. I counted 142 expanded buds the last time I saw the plant, and a basketful had been cut the day before. The house is not large, but it has a natural earth floor, with an abundance of moisture, and a temperature somewhat above that of the average greenhouse. The pitch of the roof is low, and the plant is trained about 20 inches from the glass. On a leading shoot of one of the Lamarque plants buds of the Niphetos were put in about 20 inches apart, took well, and produce splendid flowers of that fine rose in the greatest abundance. Further along on the same shoot buds of the Perle des Jardins were more recently put in, and have done even better than the Niphetos. As I looked at the flowers produced from these buds I thought the Perle one of the most beautiful roses I ever saw. Here, then, are two roses commonly thought to be intractable (the Niel and the Niphetos) growing in a most acceptable manner grafted on the Lamarque, the Niel being quite free from the ordinary slow decay which often overtakes it while still young, and the Niphetos blooming in quite an off-hand manner. It is no new thing, of course, to bud roses in this way; but the experiment of the Niel on an old but healthy Lamarque, with abundant moisture from the natural soil, and something more than the common greenhouse temperature, is worth a trial by all lovers of that splendid rose.

THE Styrax Japonica, I am very sorry to say, was killed to the snow line last Winter. It is so really handsome in all respects that I had hoped it would prove to be hardy during our coldest Winters; but 19 degrees below zero seems to be a little too much for it. Below the snow line it was not injured in the least. I should like to hear from others in regard to the hardiness of this fine shrub, for I am very loath to give it up.

I HAVE seen no shrub this season more beautiful than Exochorda grandiflora (Spiræa grandiflora of some catalogues). It is not only beautiful, but stately and picturesque. It should be better known than it is. I find but few who have ever heard of it. Why will not nurserymen try to overcome the difficulties of its propagation, and put the price down to a reasonable figure? I know it can be grown from the green wood; but the rule is now too common to grow only those things which can be propagated easily, and this may be because people are unwilling to pay for a little extra trouble.

AT Newburgh the Cercis Japonica, I find, is not quite hardy in a Winter like that just past. C. Siliquastrum was unharmed. C. Japonica, with me, had an inch or two of the last growth killed, but in other respects was uninjured, and flowered as grandly as ever. It is a little beauty.

I HAVE at present about 150 varieties of strawberries, and of these the Garden will be the first to ripen, Burr's New Pine the second, and Erebus the third. I have at this time (June 6) berries on each of them nearly ripe. The Duchess, about eight feet off, has not yet begun to color. The Bidwell, right beside it, looks as if it might ripen first. The Bidwell, by the way, is showing an immense crop. But wait a few days.

THE Cuthbert and the Montclair have now (June 6) only a few flowers ont. The Caroline, near by, is nearly done blooming, has berries as large as Marrowfat Peas, and is a mass of fruit from the ground to a hight of nearly eight feet. The New Rochelle is not much behind it.

I WROTE "delicious Teltow Turnip," not *yellow* turnip. The Teltow is not that kind.

HORTICOLA.

GARDEN HINTS.

I FIND eternal vigilance is the price of success in gardening. The turnip fly has done more damage to my cabbage plants this year than ever before, and I have to keep them well dusted with wood ashes. I raise cabbage plants to sell, and furnish most of the farmers in this vicinity. For varieties, I sowed this year one ounce of Early Winningstadt, two ounces of Filder's Kraut, four ounces of Fotler Drumhead, four ounces of Premium Flat Dutch. This I consider a very good list of varieties. Cabbage plants are greatly improved by being transplanted into other beds, three or four inches apart. After being so treated they may be taken to the field and set out almost as well in dry as in moist weather.

I have just finished brushing peas, and I am not sorry. I have what would make a continuous row 240 rods long, all thoroughly brushed. It was quite a job to brush them, but it will pay in the picking alone. For varieties, I planted 24 quarts of Laxton's Alpha, 12 quarts of Champion, and 6 quarts of Yorkshire Hero. By the way, these last are a very fine pea. They grow about three feet high, with very strong vines, and require but very little brush, and for quality they are unsurpassed. For brush I use mostly beech, as this is usually fan-shaped. I set the brush on each side of single rows. I have not found double rows desirable, as in that case the peas are not usually planted deep enough. Peas should be planted at least five inches deep, and the soil left light upon the seed—not pressed down as in case of shallow planting; and if from heavy rains the soil becomes crusted before the peas are up, a rake may be drawn lengthwise of the rows with benefit. ADELBERT WAKEFIELD.

Oneida Co., N. Y.

[Several years ago we tried the experiment of planting peas at various depths from one to six inches. Those planted at a depth of three inches were most productive.—EDS]

Field Crops.

ABOUT POTATOES.

E. WILLIAMS.

Top, or Eye Ends, versus Butt, or Stem Ends.

SOME people assert that there is no difference in the yield of either end; others are equally positive to the contrary; others, again, go so far as to reject the butt ends as useless, regarding the eye or top end only as fit for planting. I have tested the matter several times during the last dozen years, chiefly with Early Rose and Ohio, and the results have always been in favor of the butt ends, yet I should not discard either end as unfit to use.

Seeing a statement last Spring by some would-be authority to the effect that there was no difference, or, if any, it was in favor of the top ends, induced me to try once more to prove the correctness of my position. I used Early Ohio and Beauty of Hebron with the following results, as my notes show:

The butt ends were ahead in strength and vigor the season through. The difference was so apparent that any one could see it at a glance. On the first trial of the Ohios the butt row gave the best yield. Again, July 28, during "Horticola's" visit, further trial was made for his inspection, with the same result. On August 4th a part of the butt end row gave 51¼ pounds, while the same length of the top end row alongside gave 41 pounds—a further confirmation of all previous trials, so that I am willing to regard the fact as established respecting this variety at least, and I am not ready to except the Early Rose until an equal number of trials result differently.

Now comes the Beauty of Hebron which seems to take the negative side of the question. On August 24 the same length of rows as of Ohio were dug alongside the latter, the butt row giving 74 pounds and the top row 81¾ pounds. Again, on September 13th an equal length of Beauty of Hebron rows was dug with the following results: butts, 63¾ pounds; tops, 65 pounds, the excess in each case being in small potatoes. With this variety the difference is slightly in favor of the tops and if further trials should result similarly it would seem that varieties vary in this respect and this may account for the different opinions entertained in this matter. The facts are valuable as *facts*, even if unimportant in other respects.

I have grown the Early Ohio ever since its introduction, even before it was christened (it was first sent out as Early Reese or Reese's Early), and I have yet to find a better early potato or an earlier one. It lacks productiveness with me, but there are comparatively no small ones. Some have claimed that it is as productive as the Early Rose or more so, but I do not find it so. The Beauty of Hebron is nearly or quite as good, not quite as early but more productive and a valuable acquisition. Thanks to the RURAL for doing so much towards disseminating it. I hope the White Elephant will prove as valuable, but "Jerusalem!" what a name for a potato; it is a load to carry of itself. I suppose thousands of RURAL readers are in a fair way to realize what it is to have an elephant on their hands. Potato bugs are unusually numerous. Fight them *early* and *often*; to destroy the first crop of beetles is the *most important* step, as they are the advance guard and main army combined.

Montclair, N. J.

CORN FERTILIZATION.

A NOTE on page 341 of the RURAL attracts my attention somewhat. It is with reference to the pollenation of corn. It is very difficult to show how so many varieties intermix. It can be clearly and easily shown how three or four standard (fixed) kinds may mix and how the tassel of a single stalk will produce no grain unless fertilized by the pollen of another.

Corn is monœcious—having the staminate (male) and pistillate (female) in different flowers on the same plant. If one kernel each of a standard white dent, yellow dent, sweet and pop corn be planted close together and all

tassel and silk at the same time, I venture the assertion that there will not be a grain found in their progeny exactly like either of the four grains planted. I further assert that the tassel of no single stalk will fertilize its own silk, or, in other words, no corn can be produced with less than two individual stalks.

I have made almost every conceivable experiment on corn and have proved the truth of such assertion beyond a doubt. By covering one ear with muslin until the silk is fully developed and then putting the pollen of its own stalk upon it, it has in eight different experiments produced no grain at all upon the cob. On the other hand, by putting upon selected ears a liberal supply of pollen from other stalks, ears of the finest type are invariably developed. Often it is for the want of pollen that the lower ears of the stalk do not fully develop. PROF. A. E. BLOUNT.

WOOD REED-GRASS (Cinna arundinacea).—This is a large perennial growing in moist woods and shaded places, attaining a hight of four to seven feet. The panicle is six to fifteen inches long, and is well shown in the drawing. I removed a small quantity of the roots to dry, sandy land which is moderately fertile. The grass there grows about three feet high and looks rather harsh and of poor quality, somewhat like most of our species of bromus. It has not been tested to determine its nutritive qualities; but, judging from the way the grass is allowed to grow where cattle have access to it, I should not place a high estimate on it.

PROF. W. J. BEAL.

Farm Topics.

A MISTAKEN IDEA.

A GOODLY number of people get an idea either from reading descriptions of farming out West or from a too hasty personal inspection, that farming can be made a success far more easily here than in older and thicklier settled States. This may be true in some respects but in others it is not nearly as true as one would suppose. As a rule, Western farmers practice mixed farming, except in the Far West where stock raising and feeding are followed exclusively. This is as a general thing a necessity, made so by the lack of facilities and opportunities for disposing of a large stock of any one sort of grain; and a disposition on the part of the farmer to raise on the farm as much as he can of the food of all kinds used in the household. With this idea he keeps sheep for their wool out of which his wife and daughters spin yarn and in many cases weave the cloth for the coat and pants he wears and which are made at home. He keeps cows for milk and butter; geese for feathers; hogs for meat to eat; wheat for flour; corn for stock and for meal; for very few Western farmers will consent to eat many meals without corn bread. Oats and hay he raises for stock horses to ride and cultivate his land, while he invariably tries to raise sufficient garden truck, such as potatoes, beans, turnips and the like for his own use. He has but little money because he needs but little. He raises all he eats and wears, and he needs very little money for any other purpose. A great deal of what he purchases from the store is paid for in what surplus stuff he has over and above what will feed and clothe his family.

A man unaccustomed to this way of living, who has always been in the habit of selling the products of his farm for cash and then buying from stores what articles are necessary to his comfort, whose wife knows nothing of spinning or weaving, thinks the average Western farmer has learned nothing and imagines he can come out West and farm just the same as he did at home and make it a success. He imagines he is going to show Western men how to farm, and knowing nothing of the relation of supply and demand and of the difference in market prices caused by being close to a good market and being obliged to haul fifteen or twenty miles to market, he fails to make money as fast as he expected; gets discouraged; is ready to sell out and go away to some other promised Eden. I do not by any means claim that in all things Western farmers are perfect; but our experience proves to us that what will do in one section of country will not do in another, and the man who comes West must expect to find some things different from what he left behind. And, most of all, he must not expect to farm successfully without hard work both physical and mental.

There is no doubt that to some extent money can be made more easily here where land is cheap and rich than where land is high owing to competition for it, and poor, owing to long-continued cultivation without due regard to returning to the soil at least a part of the fertility taken away in the crops. Still more, however, could be made if the same pains were taken here to farm closely as are taken in the older States. Simply because a man can make a little money by farming in the careless, slipshod manner that too many Western farmers practice, that is no reason why the farmers should not make more, and considerably more, by following in many respects the experiences of farmers in the older States.

Miller Co., Mo. N. J. SHEPHERD.

MELILOTUS AS A GREEN-MANURING PLANT.

C. E. THORNE.

FOR several years I have noticed that some thrifty plants of Melilotus alba were the sole occupants of a plot of clay subsoil as hard as the floor of a brick-yard, from which the surface had been washed away, but the peculiar significance of this habitat was not impressed upon me until during a recent drive over a newly made road, I saw this same plant growing upon the bare clay of the road-side, whence the soil had been scraped in making the road-bed, and where even White Clover was making but a scant living although the melilot was already twice as tall as the Red Clover on the fertile soil of the neighboring field.

This plant—otherwise known as Bokhara or Sweet-scented Clover—has become naturalized here at a comparatively recent date, but has long been known as a forage plant both for cattle and bees, being well adapted to soiling, as it makes a growth of four to six feet during the season and is said to bear two or three cuttings; while its sweet-scented blossoms afford a favorite pasture ground for the honey gatherers. The German analyses give to its hay a feeding value of $15 per ton, against $16 28 for "very good" Red Clover hay, while its habit of growth is such that I should expect it to yield a much heavier crop than Red Clover.

WOOD REED-GRASS—CINNA ARUNDINACEA. —FIG. 301.

But without discussing the value of the melilot as a forage plant, the observations I have noted indicate that we may possibly find in it a counterpart of the Southern cow-pea as a recuperator of exhausted soils, and at the same time find it better adapted to our climate and circumstances than the cow-pea. As it grows much more rapidly than Red Clover, whether from the seed or from the root, and seems to thrive so well on sterile soils, apparently growing by preference in such places, it would seem well worthy of trial as a green-manuring crop.

A further reason for a more general examination of the merits of the melilot than has yet been made in this country, is the probable failure of the Red Clover from the depredations of the European clover beetle, which, according to the statements of Professor Barnard, in the report of the Cornell University Experiment Station, is already threatening the total destruction of that crop in some sections of New York.

Ohio State University.

The Herdsman.

FEEDING YOUNG CATTLE.

PROFESSOR J. M. SANBORN.

IN the East soil feeding is a positive prerequisite to successful farming. We have open to us two grand sources of materials for soil fattening—the animal and the chemical. Growing experience and extended inquiry lead me to rank very high the influence that chemicals exert in developing the prosperous era in Eastern farming that is on the eve of being ushered in, to stay; yet of these two sources, that furnished by our domestic animals is the greater; that is, the better and the cheaper source. Both must be used, but the better the more freely. I would advocate more feeding and better management because in the older-settled States cheap crops rest upon cheap manure, cheap manure upon cheap beef, and cheap beef upon skill. The grand essentials in stock breeding for meat products are, the right animal, warm quarters, early maturity, a daily sufficiency, and no excess, of each constituent of animal growth, and feeding rich manure-making foods.

Feeding the Calf.

A look into the chemistry of the calf reveals the fact of rapid development of muscle and bone in the young beast. The foods commonly fed by the better class of farmers to the young calf are well calculated to supply all its wants. Early, but gradually changed from new milk to skim-milk, supplemented by easily digested mixed meals in small quantities, it makes a cheap growth, and may even be thus fed till it has attained a weight of from 300 to 400 pounds and kept fat and fit for the market. In the mid-winter of 1879, I grew two calves in this way on skim-milk and grain after they were three weeks old, and in 87 days they had attained a weight of 355 pounds at a cost of three cents and one-fiftieth of a cent per pound, while they were salable at four cents per pound for veal. I call attention to this because to raise calves in this way is more profitable than to keep them on new milk till four weeks old and then sell them for veal. It is not my purpose to discuss here the best methods of feeding the young calf, but I wish to insist that for the best profit the Spring calf must come to the barn with a minimum weight of not less than 400 to 500 pounds. In order to do this, the calf must be kept near the house in a special lot where it may receive either skim-milk or grain, not corn-meal, however. It is generally after passing out of early calfhood and into older age, and as one-year-olds and two-year-olds, that the better class of farmers (those most likely to read a paper devoted specially to agriculture) make the mistakes that interest me now in writing this article. I constantly meet good farmers interested in feeding problems, that feed grain according to the weight of the animal; that is, I find many who are trying to make straw, swale hay and corn fodder equivalent to good hay by adding food rich in flesh-makers, and in doing so they would give to a two-year-old nearly twice as much as to a year-old, and feed an ox at rest in the stable upon a little better hay than that given to those growing and a little more grass. This practice is all wrong. From a table compiled by Wolff and given in Prof. Armsby's Manual of Cattle Feeding, facts are stated as follows:

	Steer.	Calf.
Fat	26.3	13.1
Proteine	13.7	15.3
Ash	3.9	4.5
Water	44.6	60.1
Contents of intestines and stomach	12.0	7.8

Theorizing, one would say from this table that the younger the animal the larger the ration of albuminoids, or flesh-formers, required in the food. Theories invite, but facts force belief. German feeding trials find for the calf a ratio of one of albuminoids to five of carbhydrates, varying from this standard according to weight. As the age and size increase, the ratio required widens until one to twelve is found to answer for a mature ox at rest. The translators of Wolff's tables report a requirement of one and one-quarter pound of digestible albuminoids daily for a 500-pound steer; 1 4 pound for a 700-pound steer; 1.36 pound for an 850-pound steer, and seven pounds for a 1 000-pound steer at rest. I have before me an analysis, by Prof. Collier, of corn fodder that I am feeding to animals varying in weight from 500 to 1,000 pounds each. The 500 pound animal, I find, will actualy consume from 10 to 12 pounds daily of this corn fodder, that will furnish .36 pound of the digestible albuminoids actually needed. I am feeding, as a complementary food, cotton-seed meal whose analysis I know, and to furnish the theoretic amount of albuminoids still needed will require, in addition, 26 pounds of this meal daily. My 700-pound steer will consume 15 pounds of corn fodder, giving .46 pound of digestible albuminoids. To make up the theoretic amount he will want three pounds daily of the meal. The 850-pound steer consumes 18 pounds daily, giving .55 pound of digestible albuminoids. To complete the amount required will call for only 2 6 pounds of cotton-seed meal, while if we were to consider the 1 000-pound steer to represent an ox at rest, such as many farmers practically have in the Winter, the corn fodder would alone very nearly supply the muscular waste going on; or, if he was growing, he would still require only substantially the same amount as the growing calf or one-year-old.

Practically, in feeding, animals of different ages and weights require substantially the same amounts of concentrated food for growth. The saving of the better hay from older stock and feeding it to one-year-olds or two-year-olds is the reverse of the correct process. The older animals require a relatively large amount of carbhydrates, as seen by analysis and practical feeding trials, and the poorer classes of food, like straw, swale hay and corn fodder, are relatively rich in these materials. Our chief concern in feeding young animals when these poorer foods are given is to furnish rich flesh-formers within the ration given. I have decidedly come to the opinion—but it is hardly more than an opinion—from what facts I have gathered in experience, that the ratios for this country, with its cold Winters, need hardly be so narrow as those found necessary in Germany. If it should prove so, then it would give more emphasis to the points to which I call attention. If environment affects animal growth, then we have a cold climate, and our natural fodder, the grasses, analyze very much wider ratios than do German grasses, as though nature was anticipating cold Winters, and pro-

viding a heat-supporting food. Be that as it may, our better grasses analyze only approximately one of albuminoids to ten of carbhydrates. This for our warmer barns is certainly not the best ration for a growing young animal. So that for the best results, even with good hay, additional grain is needed. This grain must be nitrogenous, not corn-meal, always so tempting to use, for even if fed wholly it would furnish a narrower ratio than is required for the younger animals; hence it could not afford the best theoretic ration, nor the best practical ration either. This I have demonstrated by the careful feeding of sets of steers with weighed hay and grain for two Winters.

The question of profitable feeding does not hang so heavily upon the hay supply as formerly supposed, as it is rather a question of so much albuminoids, carbhydrates, fats and ash. We are left free to get these materials from such sources as we may find cheapest. I have tried, by the scales, many combinations cheaper than hay, made up from cotton-seed meal, blood, meat, fish, bran, clover hay, or rich nitrogenous foods with straw, corn fodder and swale hay. Thus I have just ended an experiment with four heifers, weighing, in round numbers, 600 pounds each, for a period of 66 days. They have gained 97½ pounds each, only a fair gain, but it required a ration of corn fodder and straw, of which 12½ pounds each were eaten, two to three pounds being left for bedding, and three pounds mixed cotton-seed and corn-meal (had the corn-meal, and the common weakness to use it), ratio, one to eight; cost of corn fodder, $7½ per ton (say for 14 pounds, charging for one-half of fodder left for bedding), and meal at $25 per ton, making a total of 8 3 cents per day. For a growth of 66 pounds in 66 days, 15 pounds of hay per day would have been required, at $15 per ton, 11¼ cents, or if the comparative value of the straw or corn fodder by the side of hay is sought, these fodders would bring over $11 per ton and make better growth. I can give from my record of experiments abundance of similar results.

I will add that in several experiments clover and straw have given as good results as good hay. The best of clover hay is nearly twice as rich in flesh-makers as Timothy hay, and I find when I mix three parts of clover hay to two of oat-straw, that the mixture is as efficacious as all clover hay or all good hay. This fact alone, when properly used, should make very much difference in the case of steer growth. Both foods are home-grown and within the reach of all. So valuable have these coarse foods proved with me, that I am entirely changing my system of farm management and introducing a broader system of tillage crops, and can commend it to Eastern farmers; for large results only come of large operations.

Recurring to hay rations, or hay and corn-meal rations, for the purpose of a suggestion, I note that careful inquiry will reveal the fact that for the growing steer neither much of our hay alone nor hay and corn-meal will furnish phosphoric acid available in sufficient quantities for a rapid-growing animal. Under such circumstances the best results cannot be expected. Almost any other grain or meal with the hay would furnish enough of phosphoric acid for bone construction. I am confident of the statement—but for the present I must rest on assertion—that beef can be grown in the East and pay market rates for foods, except round the centers of high prices, and that the farm animal is our cheapest source of plant food.

College Farm, Hanover, N. H.

Management of Working Cattle in the Spring.

Do not turn them out to grass till all the heaviest part of the Spring and early Summer labor is finished, as it is more necessary to keep working oxen strong and in good condition at this season than at any other throughout the year. The only way to do this is to keep the cattle in a stable or in a dry yard with good shed shelter, and feed them, as during Winter, on hay and meal. There is little nutriment in grass at this season. It is so succulent it scours cattle and otherwise weakens them, rendering them unfit to do a fair day's work, even if their ration of meal is continued to them.

After the heaviest labor is over, and the grass has become more nutritious, cattle may be turned on to it by degrees, say a half hour or so the first three or four days, then gradually increase the time daily till they can remain entirely at pasture. It is advisable to also continue the meal with a gradual daily diminution or not, according to the work required. In the course of a few weeks, if the labor is light, cattle will do well enough on pasture alone, provided there is plenty of it and of a good quality.

THE PREAKNESS FARM THOROUGHBRED SALE.—The annual sale of yearlings at Preakness Farm, owned by M. H. Sanford, near Lexington, Ky., on May 26, resulted in the sale of 38 head of the get of Virgil, Glenelg, Monarchist, Ten Broeck and other good sires. Eighteen colts sold for $17,050, the average price per head being $947. Of these 18, there were seven by Glenelg, and they brought $9,240; five by Monarchist sold for $2 600; two by Virgil went for $4 200; two representing the great Ten Broeck went under the hammer aggregating only $810, and lastly a Baywood and a King Lear declined to $100 each. The average on fillies was a fraction over $400, the full amount for 20 of these disposed of being $8 025. It appears that three out of the 20 in question were by Glenelg, and they sold for $995; the seven by Virgil sold for $3 550, and the ten by Monarchist for $3,470. The amount received for the 38 head disposed of was $25,075. Most of the purchases by Col. Bruce were for James R. Keene.

THAT ANTI-SELF SUCKING DEVICE referred to in the RURAL of May 21, is an old contrivance. In a late issue our esteemed contemporary, the Country Gentleman, says that it was described in its Illustrated Annual Register ten years ago, and very naturally objects to our crediting its origin to Professor Sheldon's Dairy Farming, where it was described as a device employed in the neighborhood of the writer.

We have just received a note from T. B. Garoutte, of Fannin Co., Texas, who says: "That device for a nose-piece is not at all recent: I have used it for 50 years and my father used it in New Jersey long before."

RELIEF FOR CHOKING CATTLE.—Apropos of several ways of relieving choking cattle, mentioned in a late RURAL, our friend, C. A. R., writes us from Perrysburg, N. Y., that a safer and better way than any there alluded to, is to pour from half a gill to a gill of oil—sweet oil, castor oil or linseed oil—down the throat of the afflicted animal, having first turned its head up to facilitate the operation. As soon as it reaches the obstruction, relief is instantaneous, as the apple, potato or whatever it may be, can be easily swallowed or ejected along the oiled passage.

Dairy Husbandry.

THE DAIRY COW. NO. 34.

HENRY STEWART.

Care of Pregnant Cows.

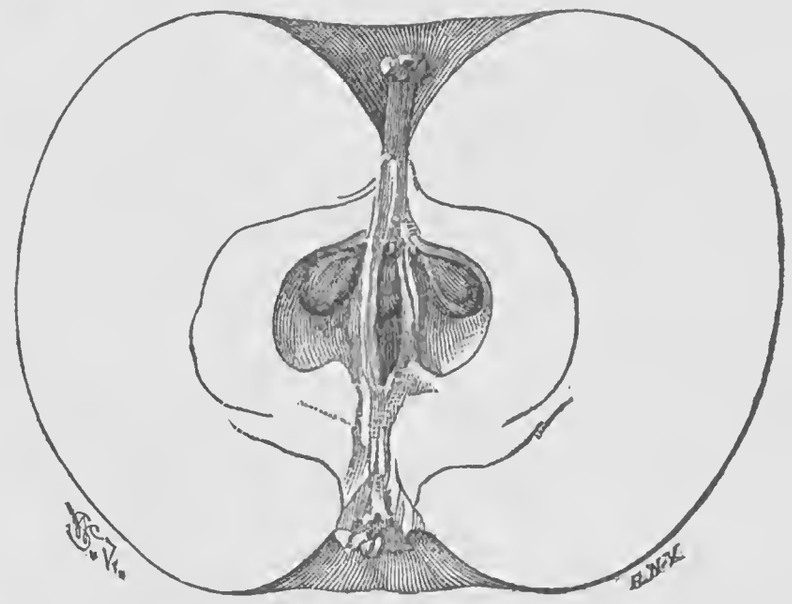
(IN the preceding article by some oversight some errors were made which should be corrected. In the second column, 4th line from the top, page 367, the word bull was intended to be male. A few lines further down, in the summing up of the results of breeding in the second flock mentioned, the aggregate should be 54 (not 55) males, and 31 (not three) females. How the one should have displaced itself and played such tricks with the matter is a wonder beyond explanation. As regards the diagram of the bull yard, the following references were omitted. The bull yard is at A with the stable connected, having a feed trough and partition five and half feet high and a feed passage opening from without; so that the bull may be fed and watered without the attendant being obliged to enter the stable or yard. The cow stable is at B; the cow yard at C, the water trough at D; this smaller yard is separated from the larger one by a gate; *g, g, g*, are gates for driving in or out of the yard.)

The greatest and most frequent troubles in dairy herds are with the in-calf cows; and special care and management are required to carry the cows through this period. Soon after a cow has become pregnant the milk yield generally begins to fall off, and it has been supposed by some persons that the escutcheon has something to do with this habit; or the habit has something to do with the escutcheon; which is which, however, has not been made very clear. The dairyman has to deal with matters of fact and not of fancy, and the whole business regarding the escutcheon in this connection may be discarded as not of practical value to him.

Feeding has much more to do with the milk yield than the direction which the hair upon a cow's hind legs may be apt to take, and it is beyond reasonable doubt that much of the decreased milk yield is due to a neglect to increase the cow's ration of food in proportion to the new demands upon her productive powers, or the new direction which they are made to take. How much food the condition of pregnancy exacts is not by any means certain and varies very much in different cows; but I am inclined to believe that it is very considerable and more than would be needed if only physical requirements were to be met. But nervous force consumes a much larger proportion of food than mere vital or muscular force, and as the nervous condition of a cow is greatly modified by her state of pregnancy, the more food will be required to maintain the flow of milk while in this condition. Recent careful experiments with two cows have convinced me that the continuance of the full milk yield in pregnant cows is greatly a matter of feeding. Two cows whose records were strictly kept last year and the present, and which gradually fell off in their milk yield last year from their becoming in calf, have this year not yet fallen off at all and one has considerably increased under more liberal feeding. The increased consumption of food is from 25 to 50 per cent and the latter increase has enlarged the milk product a little more than one-fifth. The cow which gave 26 pounds of milk daily very steadily for three months after calving, has increased to 32 pounds after having been a month in calf, with an increase of three pounds of meal and 15 pounds of grass. Some of the increase may be supposed to be due to the better condition of the grass, but the increase of butter is still larger in proportion, and the effect of the grass seems to have been exerted chiefly in the production of cream. Another cow six months in calf still gives more milk than immediately before service at which time she had been nearly six months milking. Her extra allowance of feed is also three pounds of meal and 15 pounds of grass: when on dry feed the extra hay given was five pounds, an addition of 50 per cent on the previous quantity, which was but 10 pounds daily, with eight pounds of meal. As this cow progresses in her pregnancy her eagerness for food is quite remarkable, and although before a very quiet cow she is now very noisy until her feeding is attended to. These cows are fed in the barn wholly and their food is accurately measured to them.

It seems to be reasonable that a pregnant cow should require more sustenance than in her previous condition; and while from want of sufficient experience in this direction, having but recently given close attention to this matter, I cannot as yet determine with any precision what the amount demanded may be, yet I feel confident that dairymen will find it to their interest to study this subject with some degree of carefulness, as it is of much pecuniary importance to them. The family cow especially should be studied in this respect, because a steady flow of milk is very desirable where but one cow is kept.

The general management of a pregnant cow should be such as to keep her free from excitement; safe from violent accident; to give her ample exercise when not at pasture and in such cases to provide a yard in which she may spend a portion of her time. The greatest risks of danger are from falls, from sudden attacks by dogs, from exposure to infection from aborting cows; from congested and inflamed udder caused by chills from exposure to sudden rain storms after severe heats, and from exposure to the sun's intense heat without the protection of some shade. The great bugbear of the dairyman is abortion, which is becoming seriously prevalent, and which may be produced by any of the causes above mentioned. One more source of danger may be referred to, and that is the use of stanchions. A cow confined in stanchions can rise only with a great effort in which severe strain is thrown upon the muscles of the loins and abdomen. If a cow thus confined, is watched as she struggles to rise when hampered and held down by the stanchion, the dangerous character of the muscular strains will be readily seen. It will be a safe and profitable arrangement in every dairy to provide a few separate pens for the accommodation of cows about to calve, to which they may be removed as soon as they are no longer milking; and to either provide a separate yard attached to these pens or to let these cows into the general yard only when it is vacated by the others.



THE GARDEN APPLE.—FROM LIFE.—FIG. 302.

Pomological.

THE GARDEN APPLE OF WESTCHESTER CO., NEW YORK.

PETER B MEAD.

SIZE, medium to large. Form, oblate-conical. Color, pale yellow when ripe, occasionally with a pale pink cheek in the sun, and small red dots at intervals over the surface. As apples are usually described, the skin would be said to be a little clouded; but as this clouding is usually done by flies, it is just as well to omit it. Calyx closed, in a moderately small, slightly wrinkled or corrugated basin. Stem very short and stout, inserted in a small cavity, which occasionally shows a distinctly formed nipple. Flesh, yellowish white, exceedingly tender, nearly sweet, with a peculiarly agreeable flavor, which is rather spicy than otherwise at the beginning of the season. Quality nearly or quite best. Season from October to the beginning of March.

This is a valuable addition to a small class of apples which are too much overlooked, and of which the Primate is an excellent example. I allude to those apples which, besides being agreeable to the palate, are also tender-fleshed and easy of digestion, and might very well be designated *food* apples. They are peculiarly acceptable to those whose mastication and digestion have become more or less impaired by age, and who find it difficult to eat or digest such high-flavored but tough-fleshed apples as the Newtown Pippin or the Spitzenberg. By-and-by we shall come more and more to regard the apple and other fruits from the stand-point of food, and a greater and juster value will then be put upon tenderness and digestibility.

The Garden Apple is not only excellent as a dessert fruit, but is one of the best for baking and other domestic uses. I know of no apple of its season that I prefer, and I seldom eat any other when I can get it; and its local reputation is such that very little of it finds its way to the open market. The tree is a vigorous grower, of an upright rather than a spreading habit; but the growth being rather slender, the branches become somewhat pendulous from the weight of the fruit.

There are two or three apples known by the name of the Garden Apple, but they are quite distinct from the one under consideration, which thus far is a local apple, now for the first time described. It is a native of Westchester Co., N. Y., and its origin goes back more than a hundred years. It is an apple well worthy of cultivation.

The Kieffer Hybrid Seedling Pear.

I was very much surprised by the statement in a late RURAL to the effect that the last severe Winter had not harmed the peach blossoms in the least at the Rural Farm, and that "the Kieffer Hybrid Pear was killed to the ground." This is just contrary to to my experience. Here and almost over the whole peach region of the United States the peach buds were frozen in the Winter except only on elevated ground or hills. With me not a peach or an apricot flower was seen, yet my Kieffer pear tree was not injured in the least. I have had the Chinese Sand Pear, or "Sha Lea," off and on for about 48 years, having lost it three times by cold Winters, but as I had given grafts to several friends who live on high ground, I have each time been able to recover it. Thus I now have the original "Sha Lea," and six crosses of it; not one of them was injured further than having their flower buds killed, and all are now growing vigorously. My Kieffer Hybrid is only a graft of last Spring, and so is the "Le Conte," the "Japan" and the "Cincinci," but the Japan variety even had some flower buds uninjured and now has a few pears. J. B. G.

KIEFFER HYBRID SEEDLING PEAR, obtained from Mr. Parry, Cinnaminson, N. J., was planted here a year ago, and is doing well. No pears on the premises look better. J. C.

Matapan, Mass.

BEST TIME TO PRUNE FRUIT TREES.—Various opinions exist as to the proper time for this work, but I wish to give RURAL readers the result of my experience and observation. A few years since I began pruning a large orchard of young trees in February, and got through with about one-fourth of the orchard during that month. Owing to a pressure of other work the remainder of the orchard was neglected until a year from the next June, when I finished the whole. Now at the end of two years from the latter time, the trees which were pruned in June are more nearly healed over where limbs of from three-fourths of an inch to two inches in diameter were taken off, than those trimmed in February, more than a year earlier, and I have noticed similar conditions at other times, proving conclusively to me that June pruning is preferable.

Croton, N. Y. E. J. BROWNEL.

Veterinary.

INTERNAL PARASITES OF THE BOVINE SPECIES.

It may perhaps be a surprise to those persons who affect a dislike to pork on account of the numerous disagreeable parasites and the many diseases the pig is heir to, to learn that the ox is as subject to these troubles and ailments as the pig. The ox, in fact, becomes the host to numerous internal parasites, some of which are exceedingly injurious to the health of mankind, and others are destructive

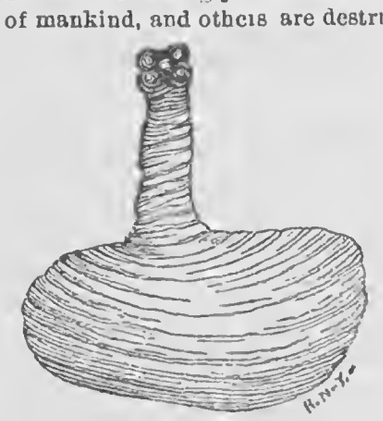


FIG. 303.

to its own existence, while it has its share of external parasites which annoy it and cause trouble to its keepers. Of these parasites some are vegetable but the most serious of them are animal. To describe all of these would occupy more space than could be here spared, but an enumeration of the most important of them and a description of some of them may be useful and interesting.

To begin with the most minute of these, we may mention the microscopic parasitic organisms which have been called "cattle-plague bodies," and which, infesting and disorganizing the blood, produce those specific febrile diseases which devastate our herds. Each of these diseases seems to be caused by a distinct organism, but all of them have a generic likeness. They belong to the class of unicellular vegetation which has the power of a most wonderfully rapid increase by the bisection—

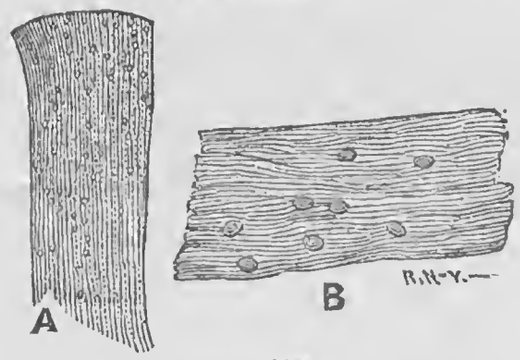


FIG. 304.

so to speak—of the cell and the production from it of two separate cells, which, in their turn, bisect and again separate *ad infinitum*. Anthrax fever, the well known Texan or splenic fever, rinderpest or the popularly know "dry murrain," the cattle plague of Europe as well as of our own plains, apthus fever, the frequent foot-and-mouth disease, happily very little, if at all, known here, and not indigenous in its virulent form; contagious pleuro-pneumonia; cow-pox; malignant anthrax, the too common "black leg," "black quarter," or carbuncular erysipelas which destroys so many calves and young cattle; tuberculosis or scrofula, and, lastly, epizootic abortion; all these are the effects of these minute but disastrous germs which are almost indestructible by time or chemical agents, and whose germs float in the air and are carried on the wings of every wind, washed to the earth by every shower, floated on every stream, and are even carried through the very earth itself by the waters of the springs. Ever-present, they are a constant threatening and danger to our cattle, and at times, when circumstances favor their development, they become enormously destructive, slaying hundreds of thousands of cattle, and ruining thousands of persons at one fell swoop.

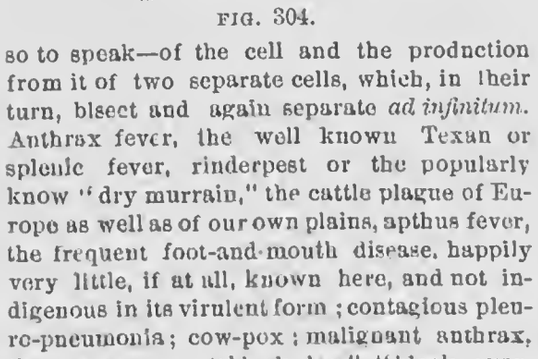


FIG. 305.

No less destructive if unchecked, but more amenable to treatment, are the animal parasites which infest the lungs and air-passages, the kidneys, the heart, the liver, and the flesh of the ox. The so-called thread-worm—*Strongylus micrurus*—or small-tailed strongle, is chiefly destructive to calves, causing the disease known as husk, hoose or "worms in the throat and lungs." This worm is prevalent in all parts of the country, and causes much loss among calves and yearlings. The mature female measures three inches in length, and the male half as much. Both sexes infest the bronchial tubes of young cattle and cause death by blocking up the air-passages, as they gather in knots and masses surrounded with frothy mucus. Various unsuccessful remedies have been proposed for this pest, but the only truly effective one seems to be the inhalation of chlorine gas made by dissolving salt in sulphuric acid in a close room.

Four other species of strongle infest the ox. S. ventricosus occupies the small intestines; S. inflatus is found in the large intestine; S. radiatus infests the gall ducts; and S. gigas is found in the kidneys. These parasites are also found in other animals, notably in the sheep, deer, rabbit, mink and pig; and are therefore plentifully distributed through the eggs which are scattered over the pastures or are washed into the waters and thence find their way into the stomach.

The lungs, the heart and the flesh are occasionally infested with the immature forms of several tape-worms, as well as with the well known spiral flesh worm, Trichina spiralis. The tape-worm larvæ appear in the so-called measle which has been found in the flesh of the calf as well as in that of the ox, and which is very similar to the pork measle. A beef measle is shown at Fig. 303 magnified to nine diameters, and the appearance of the flesh of an infested calf and of infested beef is shown at Fig. 304, A B. These parasites enter through the stomach, being taken up with the herbage in pasturing, or in the water, in the form of eggs or sections of the mature worm. The mature

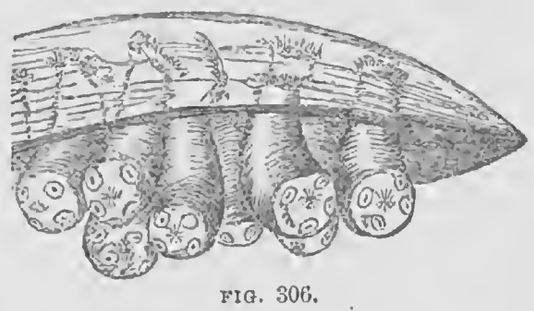


FIG. 306.

worms, of which several species are concerned, inhabit the intestines of mankind, the sheep, the dog, cat, rabbit and several other animals. Four species are known to infest cattle, the flesh measle, Fig. 303, Cysticercus bovis; the bladder worm found in the lungs, Echinococcus veterinorum; another found in the lungs Figs. 305, 307, Cysticercus tenui-collis, and one found in the brain Fig. 306, Cœnurus cerebralis, the same which causes the gid or sturdy in sheep, a disease marked by a conspicuous sympton, viz, that of a peculiar rotary motion, staggering, and a sidewise stiffening of the neck. The lung bladder worm, shown at Fig. 307, usually has the head and neck drawn within the bladder and then appears as in Fig. 305. The brain bladder worms congregate in the bladder, as shown at Fig. 306, which represents a portion of the bladder with several of the larvæ attached to the membrane, highly magnified. The fluke infests the gall bladder and ducts and the substance of the liver. A mature fluke, Distoma hepatica, is shown at Fig. 308 its natural size. This pest is very common among sheep, and is found in the deer, antelope and rabbit as well as in the ox.

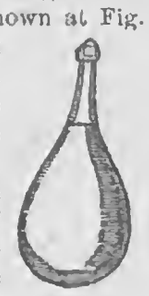


FIG. 307.

FIG. 308.

Unfortunately the remedies against these pests are ineffective; prevention alone avails anything. The top-dressing of pastures with sheep and hog manure is the chief source of the evil, which fortunately is not nearly so prevalent in our country as in Europe and more especially in India where few cattle are exempt from one or several of them. It is well to be forewarned, however, for we have these parasites in too great plenty already, and it needs only a more common manuring of pasture and a more intensive system of cattle feeding to encourage the spread of them from our flocks to our herds. The effects of these parasites are two-fold. They are injurious to, and frequently destroy, cattle in an unsuspected manner; and the bladder worms and measle infect the flesh and convey themselves to the human stomach and intestines in which they mature as tape-worms. This result, however, is avoided by the thorough cooking of the meat and abandoning the prevalent habit of eating it "rare" or half cooked. Fortunately we as a people are not given to eating raw flesh, and so long as we avoid passing these disagreeable creatures through our own systems they cannot make much trouble in our cattle. Smoked beef, sometimes eaten raw, is dangerous and should be as well and thoroughly cooked as fresh meat.

Scientific and Useful.

CORRECTION.—In Bulletin No. 60 the Nitrogen in E. Frank Coe's Superphosphate, No. 586, should be 2 34 per cent., and the valuation $35 12. Cost, $36.

In the same Bulletin, the Reverted Phosphoric Acid in Rafferty & Williams' Ammoniated Superphosphate, No. 590, should be 1.23 per cent. instead of 7 23 per cent.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 59, MAY 5, 1881.

Fertilizer Analyses.

POTASH SALTS.

571. German potash salts. Imported by Rafferty & Williams, New York, sold by F. Ellsworth, Hartford.

595. Muriate of Potash, imported and sold by Mapes F. and P. G. Co., Hartford.

	571	595.
Potash	12 51	51.21
Chlorine	27 23	
Equiv. sulphate potash	23.20	
Equiv. muriate potash		81.11
Selling price	$2 per 200 lbs.	$42 per ton.
Cost 100 lbs. potash	$8.00	$4.10

The "potash salts" contain a good deal of sulphate of magnesia and common salt and may, now and then, have a fertilizing value beyond supplying potash. This grade of potash salts wholesales now at $7.25 per ton.

BONE.

582. Bone, No. 1.

583. Bone, No. 2. Manufactured and sent by G. H. Harris & Son, Eagleville, Ct.

584. Strictly Pure Ground Bone, made by G. B. Forrester, 188 Pearl St., New York, sold by S. B. Wakeman, Saugatuck.

585. Peter Cooper's Pure Bone, sold by Simon Banks, Southport, Ct.

The last two samples were taken and sent to Station by G. P. Jennings, Greens Farms, Ct.

Mechanical Analysis.

		582	583	584	585
Fine,	smaller 1-50 in	2	3	16	51
Fine medium,	" 1-25 in	2	8	14	15
Medium,	" 1-12 in	8	17	36	13
Coarse-medium,	" 1-6 in	34	27	34	15
Coarse,	larger 1-6 in	54	45	0	6
		100	100	100	100

Chemical Analysis and Valuation.

	582	583	584	585
Nitrogen	4.05	3.66	4.18	1.40
Phosphoric acid	21.83	7.74	21.80	9.93
Cost in market, ton	28.00	28.00	34.50	35.00*
Estimated value	$28.33	$24.68	$33.04	$26.48

* In Southport on trial, $33 in New York.

Sample 583 was rather moist (12 per cent. water) which reduces its value somewhat.

585 has had a good share of the gelatine extracted, hence is poorer in nitrogen and richer in phosphoric acid than raw bone.

COTTON AND CASTOR SEED.

579. Cotton Seed Meal, made by B. G. Stanton, New London, sold by Coles & Weeks, Middletown. Sampled and sent by J. M. Hubbard.

580. Castor Pomace, sold by Wilson & Burr, Middletown. Sampled by J. M. Hubbard.

Analyses.

	579	580
Nitrogen	3.56	6.01
Phos. Acid	1.70	1.70
Potash	1.57	1.20
Selling price	$30.00	$21.00
Estimated value	$14.84	$22 35

579 is evidently cotton seed ground with the almost worthless *hulls*. Decorticated cotton seed meal contains nearly twice as much nitrogen, etc., and is worth about twice as much.

SUPERPHOSPHATES.

557. "Bone Phosphate," made and sent to Station by David Dickinson, Middle Haddam.

577. The same. Sent by H. L. Stewart, Middle Haddam.

558. "Ammoniated Bone Phosphate," made and sent to Station by David Dickinson, Middle Haddam.

576. The same. Sent by H. L. Stewart, Middle Haddam.

581. "Phosphate made and sent to Station by Geo. H. Harris & Son, Eagleville.

578. "English Phosphate," imported by H. J. Baker & Bro., New York, and sold by Wilson & Burr, Middletown, Ct. Sent to Station by J. M. Hubbard, Middletown.

Analyses.

	557	577	558
Nitrogen	3.23	3.38	3.54
Soluble phos. acid	7.87	4.57	3.90
Reverted " "	7.92	8 88	9.90
Insoluble " "	3.11	4.73	2.18
Potash	0.15		0.52
Chlorine			
Estimated value per ton	$50.71	$46.61	$44.92
Cost per ton	$40.00	$40.00	$40.00

	576	581	578
Nitrogen	3.24	2.93	
Soluble phos. acid	1.68	4.88	13.18
Reverted " "	9.66	7.07	1.30
Insoluble " "	2.54	2.72	0.90
Potash			
Chlorine			
Estimated value per ton	$37.59	$39.91	$36.87
Cost per ton	$40.00	$36.00	$33.00

SOAP BOILER'S REFUSE.

573. Scraps from rendering vat.

575. Liquid from rendering vat.

574. Lye from condenser.

The above sent to Station by A. A. Hills, Greenville.

Analyses.

	573	575	574
Nitrogen	2.25	1.07	
Phos. acid	0.51	0.23	
Potash			2.40
Estimated value per ton	$7.81	$4.83	$2.16

The ton of 575 and 574 equals about 230 gallons or 7 1-3 barrels.

S. W. JOHNSON, Director.

The above Bulletin should have appeared last week but the manuscript was lost in the mail.

BULLETIN NO 61, MAY 26, 1881.

Special Manures and Superphosphates.

594. Mapes complete manure (for light soil).

596. Mapes corn manure.

597. Mapes potato manure.

The above made and sold by the Mapes F. & P. G. Co.

605. Stockbridge potato manure.

606. Stockbridge grain manure.

Both the above made by H. Bowker & Co., Boston, New York and Rochester, and sold by R. B. Bradley & Co., New Haven.

603. Pine Island guano. Made by Quinnipiac Fertilizer Co., New London, and sold by R. B Bradley & Co., New Haven.

Analyses.

	594	596	597
Nitrogen as nitrates	1 27	0 62	1 32
" " ammonia	2 99	2 21	1 50
" " organic matter	1 10	0 80	0 59
Soluble phos. acid	1 44	2 30	4 62
Reverted " "	4 38	7 14	5 64
Insoluble " "	2 01	3 60	1 23
Potash	6 68	5 67	5 00
Chlorine	7 54	6 14	4 72
Estimated value per ton	$44 36	$43 19	$43 63
Cost per ton	$53 00	$50 00	$50 00

	605	606	603
Nitrogen as ammonia	0 29	0 28	....
" " organic matter	2 73	2 92	4 58
Soluble phos acid	6 28	6 04	3 04
Reverted " "	0 54	1 43	3 31
Insoluble " "	0 43	0 13	1 07
Potash	4 93	5 89	2 83
Chlorine	5 60	6 33	0 96
Estimated value per ton	$33 76	$36 06	$37 41
Cost per ton	$50 00	$50 00	$45 00

600. Dry ground fish. Made by Quinnipiac Fertilizer Co., New London, and sold by R. B. Bradley & Co., New Haven.

607. Celebrated ground bone. Made by Lister Bros., Newark, N. J., and sold by R. B. Bradley & Co., New Haven, Conn.

Mechanical Analysis of 607.

		Per cent.
Fine	smaller than 1-50 in.	31
Fine medium	" " 1-25 in.	19
Medium	" " 1-12 in.	14
Coarse medium	" " 1-6 in.	17
Coarse	larger " 1-6 in.	19
		100

Chemical Analysis.

	600	607
Nitrogen	6 17	3 02
Phos. acid	5 52	9 54
Matters soluble in cold water (salt cake, etc.)		24 02
Estimated value per ton	$31 06	$17 80
Cost per ton	$45 00	$30 00

Owing to present advanced prices the Station valuations are, in most cases, too low, as respects nitrogen and potash, by about the difference between the wholesale cost of raw materials and a fair retail price for manufactured fertilizers. S. W. JOHNSON, Director.

Miscellaneous.

BOOKS, CATALOGUES, ETC.,

THE TWENTY-EIGHTH AGRICULTURAL REPORT OF THE MASSACHUSETTS STATE BOARD OF AGRICULTURE makes a book of 400 pages. The Secretary briefly reviews the agricultural profit and progress of the last year, and says the farmers' institutes have increased greatly in number and value. The value of the hay and fodder interest makes ensilage a highly important issue, and the Secretary is evidently almost persuaded. He says: "The evidence of the persons using the ensilage is strongly in its favor. The success so far has met no check, and if half that is claimed for the system is realized in practice, there will be a great change in our methods of farming. It is proved that silos can be easily and cheaply constructed; that any green crop can be preserved by a simple process; that cattle readily eat it and large quantities may be fed without injurious effect; that cattle so fed require but a small quantity of water." He adds, however, that corn meal or cotton-seed meal must be fed with ensilage, and it is an important question how much value should be attributed to the former and how much to the latter. More time also is necessary to show the effect of such food on the health of cattle and the vigor of the race. The dairy product of Massachusetts is second only to hay in value and of great importance. An increase in the number of cows goes along with an improvement of the breeds. Co-operation is desirable between consumers and producers of milk at Boston and other cities to secure good milk from well-fed stock at the lowest price. The daily consumption of milk at Boston is now less than half a gill per inhabitant. No doubt that a consumption of a pint each would vastly improve the general health, as well as profit the dairy interest. In corn, the next most important interest, the report says that 40 years ago it cost $18 to cultivate an acre of corn, the equivalent in labor of $30 now, but the introduction of the horse-hoe

has reduced the cost of the labor outlay upon the corn which takes the premiums in our societies, to less than $7 50 per acre; the horse-hoe is not only more rapid, but by pruning the corn roots actually increases the yield of grain and reduces the amount of stock or stover The report laments the decline in sheep culture, but reports a great increase in poultry. Among the valuable discussions and papers of the report are one had by John Robinson of Salem on ornamental trees; on setting milk for cream by Edward Burnett of Southboro, one of the famous farmers of Deerfoot Farm; the growing of corn by Dr. E Lewis Sturtevant of South Framingham; farm architecture by E. C. Gardner of Springfield, who says a good word for the old style farm-house, because the designer knew what he wanted and stopped when he got it; silos by Prof. Goessmann and others. There are also judicious selections from the society reports.

A Practical Treatise on the cultivation and manufacture of sugar cane—soil, seed, planting and cultivation, harvesting; mills, evaporators, skimmers, furnace; making sirup, defecation and clarifying, etc. Published and furnished free by J. A. Field & Co., 1622 North Eighth St., St. Louis, Mo. Also, by the same firm a catalogue and price list of Big Giant and Improved Big Giant Feed Mills, sugar cane and fanning mills.

Dr. Ryder's American Fruit Drier or Pneumatic Evaporator by the American Fruit Drier Manufacturing Co., of Chambersburg, Pa. An illustrated pamphlet of 35 pages setting forth the progress made in evaporating fruit—correct and erroneous principles; evaporating fruit as a business, directions, statements, testimonials, etc. Sent free to our readers upon application to the above concern.

J. E. Hayner & Co's Testimonial Circular of Walter A. Wood's Twine Self-binding Harvester. Letters from those who used the machine last harvest—36 large pages. Apply to J E Hayner & Co., 945 and 947 N. Second St., St. Louis, Mo.

The Boomer & Boschert Cider and Wine Press. Syracuse N. Y. A finely illustrated catalogue of 37 pages showing the different power presses with detailed cuts and explanations. Sent without charge to applicants.

RURAL BRIEFLETS.

And now let us drop the long-accepted view that certain leguminous plants obtain their nitrogen from the atmosphere. Dr. Lawes published in the R. N-Y of Feb. 19, p. 120, the following:

"I am disposed to hold the same opinion as yourself, that the bone has little to do with the immense yields. At the same time the food must come from somewhere. All our experiments are tending more and more to draw the line between the food which plants obtain from the atmosphere and that which they obtain from the soil. When once this is done; when we cease looking up to the air for the fertility which is all the while lying under our feet, we shall then see plainly very much which is at present obscure."

In his concluding article on "Fertility" in the London Agricultural Gazette, Dr. Lawes says:

"While I do not deny that plants may take up some carbon from the soil; and that they, or the soils in which they grow, obtain some combined nitrogen from atmospheric sources, still, the results of the Rothamsted experiments, relating to the chemical statistics of agricultural production, *clearly show* that the atmosphere is the *main*, if not the *exclusive* source of the *carbon of our crops* and that the *soil* is the *main*, if not the *exclusive source of their nitrogen*." The italics are ours. . . . . .

Mr. Waldo F. Brown of Ohio, a well-known agricultural writer, made the statement a month or more ago that Blount's White Prolific and the Peabody Branching Corn were the same. We submitted the statement to Prof. Blount whose reply appeared in this journal of two weeks ago. He denies that there is any further relationship than that existing between the many varieties of Indian corn. Lately we were talking with a New York firm that first offered the Peabody for sale years ago. The firm had tried both kinds and assert very positively that Prof. B's statement is correct.....

Among new hybrid perpetual roses, we notice "Mrs. Jowitt." It is introduced by the Cranston Nursery and Seed Company of England. It is described as of a brilliant glowing crimson, shaded with lake, while the flowers are very large and globular—bold, well-built, of grand form and substance. The habit is robust—the flowers fragrant. It is said to be one of the best English roses ever raised.....

Mr. Wyson, our accomplished Virginia contributor, writes as follows in a letter to one of the editors:—

I have examined the flowers of peaches, pears, and apples. In the case of peaches, I have pretty well satisfied myself that fertilization in nearly all cases takes place before the flowers expand. With pears, I found two trees in which it occurred after the flowers expanded, and one in which it did so before. I noted that the tree which was fertilized before the flowers expanded set fully twice as much fruit as the other two. The same remark applies to apples as to pears.....

What Others Say

Onions for Chicken Cholera.—We have frequently called the attention of our readers to the fact that there was no better food or medicine for fowls than raw onions, and now a correspondent of a Canadian paper, according to the Sun, asserts that this strong-scented bulb is a sure preventive, if not a specific, for chicken cholera. He says that while his neighbors for several miles around lost nearly all of their chickens by the so-called chicken cholera, his were entirely exempt from this disease after a first attack, which was cured by feeding raw onions mixed with other food once a day for several days in succession, and afterward only once a week. A little ground ginger was also added occasionally, with plenty of green food, such as celery tops, turnips, &c. The remedy is certainly worth a trial.

Hogs versus Babies.—The Scientific American thinks it a pity that babies have not a market value, like hogs. A death-rate among the pigs less than one-third the death-rate among children in our large cities moves the government to costly investigations of the cause, and to diplomatic correspondence with foreign nations, while Produce Exchanges get excited on the subject, and all the newspapers join in the discussion. The babies die by the thousand in New York and other overcrowded cities, and scarcely any notice is taken of the fact.

Improvement in Peeling Peaches.—The work of peeling peaches in peach-drying establishments has been simplified by the following process, says the Journal of Chemistry. A crate filled with fruit is dropped into a vat containing hot lye, and there shaken. It is then removed to a tank of pure cold water, and the lye is washed away. The skins of the fruits by this process become so separated from the pulp that they are drawn off with one movement of the hand. This saves much time, labor and expense. The new process causes the fruit to dry more readily, and a very little loss in weight ensues.

Percheron-Norman Horses.—The following is from the N. Y. Sun: Mons. Lavalard, who has the general care of the stables of the Paris General Omnibus Company, tells us through Wallace's Monthly that the animals which are now and have been for some years past imported into this country as Percherons are merely overgrown beasts picked up in various parts of France, and are really not Percherons or a distinct breed at all. He calls them "Mastodons," and in this at least he is correct, for they are ungainly creatures at best. Mr. Wallace says: "There is no use in attempting to controvert the assertions of a man of Mons. Lavalard's knowledge and position;" and if this is true, the so-called Percherons so much talked of, and largely introduced into Illinois of late, are frauds, at least in the way of pure blood. It looks as though somebody had been badly sold, and there is a good chance for a little newspaper controversy over the elephantine specimens of horse-flesh imported from France during the past ten years."

[We should much like to know if M. Lavalard's statement has a foundation in truth.—Eds.]

We see an account of one tract of over 9,000 and another of 2 500 acres of flax in Iowa, says the Farmers' Review.....A Western editor, who started a newspaper, called it "The Small-Pox," so that everybody would take it when they got where it was.....The Cleveland Leader thinks that America has not enough navy to back'er.....Says the Inter-Ocean, two ten cent drinks will supply a family with flour—that is, if the drinks are not taken and the money is invested in flour.....They were looking at the new carpet, and he said, "But what are those plants in the center:" "I don't know, my dear, unless they are Brussels sprouts."".....Dio Lewis presents some strong authorities as opposed to the practice of checking horses. He says: "When you compel a horse to contract the muscles just under the top of the collar, in order to sustain the head a foot, more or less, above its natural place, and then hold them thus contracted, the strain on these muscles soon produces great harm. If you don't believe it, watch the animal; look at his eyes and ears! I am sure you cannot misunderstand that face. See him carry his head around on one side, and then away around on the other side. Now, in a moment you will see him throw his nose up in front as high as he can, three or four times. That struggle for relief he continues all day long. When you take off the check, he will hang down his head low, and show in his face a sense of relief which I am sure you cannot misunderstand. The long strain wastes the muscles and produces that ugly hollow which is now so common under the collar."..... Some of the Boston papers predict that the mails will be carried between that city and New York in pneumatic tubes within three years. O! wait until 1885 and "shoot" reports of that world's fair to us.

Everywhere.

RURAL SPECIAL REPORTS.

California.

Santa Rosa, Sonoma Co., May 30.—We have had an unusually fine Spring—nearly a month earlier than usual. No drying north winds. Haying is now well under way. The fruit crop promises to be abundant, the late frost not having done as much damage as was supposed. The season for the wild flowers is passing, and the dry ridges on the hills and mountains are changing from the red, yellow, blue, white and green with which they have so lately been clothed to the dry brown of a California Summer. L. B.

Florida.

Starke, Bradford Co., May 28.—We are having delightful weather: during the day there is a fresh, cool breeze, and the nights are so cool it brings a suspicion of frost in more northern latitudes. Orange trees are now making the second growth, and they look nearly as well as before the freeze last Winter. All vegetation is looking remarkably fine. Our corn has just been plowed for the last time. We have one acre fertilized with Stockbridge manure, which is very fine. We have some of the finest Irish potatoes I have ever seen in this country, also fertilized with Stockbridge. There is great complaint of potatoes rotting this season; ours do not at all; they are large, smooth and not worm-eaten. We now have for vegetables peas, cucumbers, spinach, tomatoes, sweet corn, cabbage, carrots and turnips. We still have plenty of strawberries from the same bed we have been picking from since the middle of February We had a bed of Charles Downing which was full of nearly ripe berries when the December freeze came; the plants were so badly hurt we feared they would all die; they are now growing fast, and are full of large, ripe berries. The bed has had nothing done to it; it has not been even watered during the dry weather. I do not understand why they bear so long here, on this light, dry soil, when on your rich, heavy soil the season is so short. I supposed at first it was because they only ripened a few at a time, but I find if we make the ground rich they fruit quite as heavily as they do North. I. S.

Kansas.

Manhattan, Riley Co., May 30.—We are just finishing the shortest, latest, wettest, hottest and generally the most favorable Spring season of the eight that I have passed in this State. It has rained, on an average, three nights every week for the past month, with two or three all-day rains thrown in for full measure. However, if we have to die this is the disease we wish to perish by. Wheat is recovering rapidly from the great injury it sustained last Winter by freezing. At the present time it looks as though the crop would be from two-thirds to three-fourths of an average, taking the whole State. A very large area of corn is being planted, much of it the second time, for the complaint of a failure of seed is very general. Listing (?) is all the rage this season and bids fair, upon our bottom lands at least, to supersede all the old methods of corn culture. By this method a man and three horses will alone tend 100 acres of corn. A. B C.

Parsons, Labette Co., May 28.—Weather showery. Weeds gaining on the corn, though both growing apace. Wheat damaged one-fourth by insects. Harvest in ten days. Away West, the wheat is most promising and there are the Kansas wheat fields. From Arkansas complaints come of grass and weeds crowding corn and cotton. Wheat at Waco in Texas is cut. Crop good but acreage a quarter short. Corn in Texas promising. J B

Salina, Saline Co., May 30.—Our wheat is now filling and is very fine in this neighborhood, although I hear there are many poor pieces of wheat in the county, in which I see by a local paper that there are 100 000 acres under the crop. A. G W.

South Haven Sumner Co., May 26.—Plowing here commenced in earnest about the 25th of February, after the coldest Winter ever known in this country: since that time but few days have been lost from the plow up to last week. Considerable corn was planted in March, and it was about all in by the 25th of April. Now about one half is plowed over the second time. We have a splendid stand all over. Some wheat was hurt by the Winter, but the present stand and prospect are sufficient to warrant 15 to 20 bushels per acre. It is all in head at this time except some late pieces. Oats afford a fine prospect at this writing. Prairie grass is tall enough to make a good swath. Peaches will be plentiful over a large portion of the county. Of apples but a few trees are in bearing; prospect good where there are any trees. Small fruit prospect good. Onions, peas, radishes, etc, have been in use for some time. Potatoes will be plenty in a week or ten days. Rural seeds all planted, all came up well. The White Elephant Potato has advanced one-third ahead of other sorts planted by its side some days before it. The Rural Branching Sorghum came up pretty well, and is doing better than I expected from what was stated regarding its slow growth in the early stage. Its growth almost equals that of other sorghums. A. G. B

Maryland.

Chesapeake City, Cecil Co., May 23.—From the White Elephant Potato the Rural sent me, I planted 16 eyes on April 20, 15 of which sent up vines which are now six inches high. I can't think they are an old variety, as some of your readers do. The vine is a very hearty-looking one and so far I am much pleased with it. G O. M.

[The columns of the R N-Y. are ever open to our friends for a free expression of their opinions. Those who have supposed the White Elephant Potato to be an old variety will soon find out their mistake.—Eds.

Missouri.

Caldwell, May 28.—Prospects for wheat fair; some chinch bugs. Potatoes fine; weather seasonable. R W. E.

Nebraska.

Brownville, Nemaha Co., June 3.—The "great flood" in the West, drowned us all out, especially along the Missouri River Valley. We Western people are wonderfully recuperative, however, and another season will leave no traces of the disaster. R. W. F.

New York.

Eddytown, Yates Co., May 23.—Spring has been backward and, until the past week, severely dry. We had a few hot days, the thermometer registering 90 degrees and over in the shade. On account of the dry weather much of the Spring seeding was delayed The few pieces that were sowed early in good condition are just "booming," and all are coming on finely. Some corn is planted, though not very much, I think. Wheat has suffered severely from the hard Winter, and more from the dry, cold Spring, except now and then a piece where all conditions were right, such as thorough cultivation, soil in high condition of fertility, and early sowing. The prospect for a crop of hay is not encouraging at present, though the late rains may change the outlook. Apples are now in full bloom, or just passing out of that condition; but this is the "off" year with most orchards in this vicinity. Peaches on Keuka Lake, the principal section for that fruit, promise well, and so do cherries and plums. Strawberries, the few that are grown, are looking fine, and are in very abundant bloom. Grapes are getting rapidly to be the staple production of the lake regions of this county, as well as of Steuben and Schuyler; they have come through the Winter in good order, and are coming forward rapidly, quite as much so as is desirable. A great addition has been made to the acreage by the planting of new vineyards this Spring. Judging by the number of vines that have been sold, probably in the neighborhood of 200 acres will be set out, and I think this estimate is quite a low one. There has been some little talk among farmers about sorghum planting, but whether it will amount to anything I cannot at present say. W H. O.

North Carolina.

Seaboard, Northampton Co., May 27;—We have had in this vicinity lately two very severe hail and wind storms, and several of our farmers have been compelled from their effects to plow up and replant their cotton crops. Except for these disasters, crops of all kinds are looking well and promising; these storms however, were confined to a small portion of the country. The fruit crop is short; almost a failure in some localities, but in others the crop of peaches, apples and berries of all kinds will be abundant. E. N P.

Texas.

Honey Grove, Fannin Co., May 30.—The wheat prospect is fair and the crop will be cut in a few days. Oats give promise of more than a usual yield. Corn is looking fine, though a little late. Cotton is doing well, but the weather is a little too wet for it just now. New peas and potatoes are in abundance. Strawberries were excellent, though those planted in hills were winter-killed. I have only two kinds, Wilson and Peabody. Grapes were lessened in quantity by frost, but they are better than usual in quality and size. I have the Concord, Clinton, Isabella and Delaware, and a fine lot of California raisin grapes not bearing this year. Large fruits were killed by the late frosts. The White Elephant sent by the Rural produced a plant from each eye. Asparagus is up and doing finely. The Rural Branching Sorghum grew well but is much injured by insects. T. B. G.

The Querist.

ANSWERS TO CORRESPONDENTS.

The Jumping Sumach Beetle, etc.

J. L. P., Worcester, Mass., sends specimens of "bugs" which are severely injuring the Smoke or Fringe Tree in his neighborhood, and asks an account of them; 2, a pastnre adjoining his own is being destroyed by what he calls "wire-worms," and he asks whether an application of salt would be likely to arrest their progress.

ANS.—1. The bugs are the Jumping Sumach Beetles (Blepharida Rhois) and not only do they attack the Fringe or Smoke Tree (Rhus Cotinus), but several of our native species of sumach. Prof. Riley, in his 6th Missouri Report, gives, in substance, the following description of their habits:—As soon as vegetation starts in the Spring the beetles, which have passed the Winter, as such, in sheltered situations, may be seen upon their food plants, sometimes in great numbers. Very soon after the appearance of the beetles, the stems and branches of the plants named, if carefully examined, will be found more or less covered with little elongated pellets of excrement, dark when fresh, but becoming paler and grayish-brown when dry. If more carefully examined, they will each be found to contain five or six pale, yellow eggs. These eggs give birth, in a very few days, to little dark-yellow worms with conspicuous black heads. This worm no sooner begins feeding than it besmears its back with its own excrement, the object of this filthy habit, no doubt, being the moistening and protection of the soft body from the sun's hot rays. When it has attained its growth it descends into the ground where in due time it changes to a pupa, the beetle emerging in a little more than two weeks, after which the second brood of worms soon make their appearance. It often happens that the first brood have not all disappeared before some of the second brood hatch. The second brood disappear about the 1st of July, and there are none to be seen during the hot Summer months. In September another brood appears, the beetles from which pass the Winter in some sheltered retreat. The beetles may be jarred from the trees on a sheet or on paper, and killed, though it is probable there will be nothing so effectual for both beetles and worms as Paris-green or London-purple, in the proportion of a tablespoonful to a bucket of water, stirred well and the tree sprinkled with the mixture. 2. We suspect the cut-worms spoken of as destroying the pasture are Army-worms. It is impossible to say positively that they are Army-worms without seeing them, but we know that they have a cut-worm habit as well as a migratory, the first being the more usual habit when they are not very numerous. They have probably gone into the ground to pupate ere this. There may be a Fall brood, though it will not probably be numerous. If they prove to be Army-worms and travel, the usual remedies can be resorted to. Salt will be of little service. If the pasture were very smooth rolling would kill many.

Treatment of Currant Bushes.

W. S. T., Upper Red Hook, N. Y., has an acre of Cherry Currants in their third year. They have been thoroughly cultivated and are making a rapid growth, and he inquires, 1, whether it is not well to keep the strong outside sprouts pinched back well to make them more stocky, after they have grown a foot or so; and, 2, whether some of the long, spindling shoots from the inside of the base should not also be pinched out to admit light and air; 3, is it well to allow a strong bush of the above age to ripen a full crop of fruit.

ANS.—1. Our own way is to cut out the old wood each Fall or Winter as occasion permits. We do not approve of pruning the currant very severely, as some direct. The object is to have a maximum of large fruit, and this is best gained by so pruning each year that the bushes maintain a symmetrical form, free of old, black wood. 2. We should not pinch back the young shoots. If too many shoots start, rub them off entirely when they first appear. So treated, we should allow the bushes, when three years old, to ripen all the fruit they will. In this connection let us remark there is nothing better for the currant than *mulching*. Mulch before the dry weather sets in with manure, grass, hay, straw, corn-stalks, or anything of the kind. But the very best mulch is cow manure. 3. Yes.

Remedy for Wire-Worms.

M. W., Cohocton, N. Y., asks how to destroy wire-worms.

ANS.—The most thorough method of ridding land of wire-worms on a large scale, where they have been destroying field crops, is to starve them by summer-fallowing the land, plowing it often enough to keep the weeds in check, as otherwise the worms could feed upon their roots. When the expense of letting the land lie idle is too great, it will be found profitable to raise a crop of buckwheat—a crop which the worms are said not to touch—but the thoroughness of this is impaired by the fact that weeds will grow among the buckwheat and furnish food for the worms. Upon a small scale—in flower beds and vegetable patches—the worms can be profitably trapped in slices of potato which may be either placed upon the surface of the ground or beneath boards. The potatoes should be examined every day and the worms destroyed.

Miscellaneous.

A. G. W., Salina, Kan., asks, 1, whether soil can be made too rich for strawberries; 2, are there two sexes among strawberry plants.

ANS.—1. Many kinds of strawberries require rich soil to do well, as for instance, the Great American, President Wilder, etc., others will thrive in a comparatively poor soil, as the Wilson. All are benefited by a rich soil, some are rendered unprolific by too much manure, the plants growing to leaves at the expense of the fruit. 2. Yes, there are two sexes in every strawberry flower. In many, however, the stamens become sterile and the pistils must receive their pollen from other plants. Thus Hovey's Seedling, the old Scotch Runner, Crescent Seedling, Golden Defiance, etc. are *pistillates*, having imperfect stamens. Such plants must be grown near other kinds having perfect flowers—like the Wilson, Charles Downing, etc. Insects or the wind carry the pollen from the one to the other.

E. J. A., Centre, N. C., asks the cause of the black heads in wheat, and the remedy for them.

ANS.—They are due to a fungus commonly known as smut, scientifically as Uredo caries, which attacks the grains of wheat and causes an abnormal enlargement and forms a black fungoid mass. To prevent this growth the seed wheat should be steeped in a strong brine or in a solution of sulphate of copper. This may be done as follows:—Dissolve a pound of the sulphate in a couple of gallons of hot water, pour the solution into a tub and add three or four gallons more of water. Then place a basket in the liquid and turn the wheat slowly into it. Let it soak 20 minutes, then take out and spread the seeds on the floor. Sift plaster on the seed to dry it, and sow at once.

C. L. H., Mendon, Mich., asks how to get rid of moles which are very troublesome.

ANS.—In our own experience we have found that while moles are abundant one season, they often disappear the next. We have been exceedingly annoyed with them at the Rural Grounds and have tried at various times every means of killing or driving them away, that we could hear of. The result has been that we take them as they come. Moles prefer animal food such as worms and insects. We have confined them in pens and have found that they refused corn, potatoes and the like until driven to eat them by hunger. It is therefore impracticable to poison them. Coal or gas tar placed in their runs will drive them off for the time. There are several kinds of traps now made which will catch and kill them. But where they abound, these traps will be found a very slow and unsatisfactory method of exterminating the moles.

G. B. M., Charlemont, Va., asks, 1, what soil is best suited to the tea-plant; 2, how is it cultivated; 3, will it live out-of-doors through the Winter.

ANS.—1, Almost any good arable soil, free from stagnant moisture, is well adapted to this plant. Frequent rain-falls are advantageous. It is said that the tea plant will flourish wherever the currant and blackberry will. 2. The seeds are gathered in November, but are not properly ripe until the next Autumn. They are then kept in sand until the following Spring when they are sown, commonly in seed beds, but sometimes in rows where the plants are to grow. In the former case the seedlings are planted out, when a year old, in rows from three to five feet apart. When the plants are about 18 inches high, they should be pinched back. They yield a little the third year. 3, The varieties thus far tried have not proven hardy in Washington.

S. M., Nunda, N. Y., asks what is a good proportion for the ingredients in a wash of aloes, carbolic acid, etc., to prevent the depredations of the borer in the orchard, and how should the wash be applied.

ANS.—To a gallon of water, add a teaspoonful of aloes (powdered), a tablespoonful of flour of sulphur. We usually cut up half a cake (¼ lb.) of carbolic soap. But it may be just as good without it. Add tobacco water, a little salt, or even hellebore (tablespoonful); or Paris-green (teaspoonful) may be used. The object is to make the wash offensive to the insect. A quantity of lime sufficient to make the liquid of the consistency of thin whitewash should be added. We wash our trees in May and June and again in the Fall.

C. S., Dayton, Wash. Ter., sends some specimens of insects that are injuring his apple orchard, and asks their name and character. To get rid of them he has stripped the trees of their leaves.

ANS.—After your pains we are sorry we cannot serve you. The box was received in order, but its contents were one black, decayed mass in which we could not distinguish any insects. We should presume that the insect is likely to be the louse or aphis which of late years is taking possession of all sorts of fruit trees. A syringing with Paris-green water or with whale-oil or tobacco water would in that case have been preferable to stripping the leaves, which must, of course, impair the health of the tree.

B. T., Stevensville, Mont. Ter., asks, 1, where can cranberry cuttings be obtained; 2, the name of a good work on cranberry culture.

ANS.—1. Joseph J. White, Juliustown, Burlington Co., N. J., can supply cranberry vines. They may be planted up to June. There are three different varieties, the Bell, the Bugle and the Cherry Cranberries, each distinguished by its shape, from which the name is derived. They differ only in shape, and are about equal in quality. They have all been brought into cultivation from wild beds. Perhaps the Cherry—a round fruit—is most commonly grown. 2. White's Cranberry Culture is the only book published on the subject. It is a good and practical work.

J. A. W., Sulphur Springs., Tex, asks which is the best sulky cultivator.

ANS.—There are a great many excellent cultivators and what one man would call the best, another wouldn't. In most of them the points of difference are very small. We can recommend the Buckeye made by P. P. Mast & Co., Springfield, Ohio; and the Thompson, made by Edmiston & Waddell, 281 Greenwich St., this city. The Buckeye is made in several different styles to suit different parts of the country. It has wooden standards while those of the Thomson are iron; there is also some difference in the style of shovels. Both parties will send descriptive circulars on application.

A. J. C., Salt Lake City, Utah, desires to know, 1, how old Sugar Maples must be before yielding sap for sirup or sugar; 2, where he could get huckleberry bushes to plant; 3, would the RURAL recommend fastigiate maples for wind-breaks.

ANS.—We have seen trees of a foot or less in diameter that yielded a fair flow of sap. The age we cannot state. 2, We know of no better way than to apply to nurserymen. They do usually offer them for sale, but might procure them for you. 3, Almost any of the maples would be useful for this purpose. Most of them assume a roundish, fastigiate shape. The Silver Maple is the most rapid grower.

G. W. S., Patchogue L. I., asks whether the Angers Quince is worth cultivating for its fruit; he also sends some corn with a request that we would plant it and fertilize it with Chester Co., Mammoth and send him some kernels of the cross.

ANS.—The Angers is used chiefly as a stock to dwarf the pear. It is rather late. The fruit is quite like that of the apple quince, but harder. We thank you for the corn and would gladly comply with your request except we fear it might mix with other varieties with which we are experimenting.

F. H., Tilton, N. H., sends for name an apple which, as we did not recognize it, we sent to Mr. Charles Downing, who replies:

"I do not recognize it as any variety that I am acquainted with, that is, if it is a representative specimen. It appears like a long keeper, but the quality is not more than second-rate, yet being late and handsome it might be valuable for market."

L. J. B., Highland Station, Mich., asks whether London-purple will kill potato vines if used too liberally.

ANS.—Yes.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JUNE 11.

G. P.—T. W. S.—N. T. A.—H. L. F.—E. S.—C. C. W.—C. McM.—I. A. F.—S. T. D.—E. P.—W. S. M.—H. W. H.—J. P. C.—G. L. T—T. B. H.—O. P. G.—S. A. R.—C. E. E.—D. C. N.—J. G—J. J. N.—G. F. F.—W. P L.—J. W.—G. Q. D.—J. A. W.—C. A. F.—E. P. B.—J. W. J.—E. A.—W. A. D—H. H. H.—J. McG.—A. S. M.—J. H. C.—F. F. W.—A. G. B.—G. P. L.—H. M. D—L. T.—C. W.—N. D—O. N.—W. W. T.—A. B. B.—T. F. E—E. A.—W. C. W.—J. J. V.—I. O. S.—E. P. H.—J. H.—H. W. R.—T F. D.—W. H. K.—E. B. E.—W. L. D.—J. S.—J. T. L.—I. C. B.—O. J. C.—J. C. A.—W. B. S.—W. W. T.—D. C. W.—W. M. H.—L. L. W.—S. D. S—E. D.—T. J. H.—G. S.—W. B. S.—C. P.—A. C.—D. J. W—J. B.—H. T. G.—H. S.—J. B.—W. B.—C. O. H.—W. A. D.—J. M. P.—G. Bros—M. Y. H.—J. M. R.—W. W. J.—D. D.—A. S. M.—T. H.—S. H. G.—E C.—E. H. C.—J. P.—A. P. C.—J. B.—J. J. Y.—T. J. Z.—F. B. B.—A. M.—T. B. L.—W. C. R—W. H. H.—B. F. G.—F. L D.—E. L. B—J. C.—G. T. P.—G. J.—L. R.—"Clinton."—H. R.—R. N. P.—B. F. T.—E. B.—J. P. C.—J. B. N.—A. B. A.—J. C. Dyson. We fear we cannot name these wheats with any certainty. Wheats so differ in different soils and climates and there are so many varieties closely resembling each other, that it is a difficult matter.—H. & M. D.—J. E. T.—J. B. K.—C. E. P.—C. A. G.—C. E. P.—G. C. C.—F. S. L.

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4.	**Singing.** By Randegger.	2.00
5.	**Musical Forms.** By Pauer.	1.00
6.	**Harmony.** By Stainer.	1.00
7.	**Instrumentation.** By Prout.	1.00
8.	**Violin.** By Tours.	1.00
9.	**Musical Terms.** By Stainer.	.50
10.	**Composition.** By Stainer.	1.00

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THE
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OF all the raspberries at the Rural Grounds, Caroline, strange to say, bids fair to yield the most fruit. We are glad indeed to have commended this variety so warmly to our readers. It will be remembered that this is a yellow berry of excellent quality.

WE are this season experimenting with a number of grasses new to the Rural farm. Among them are Meadow Fescue (Festuca pratensis); Orchard Grass (Dactylis glomerata); Alfalfa (Medicago sativa); Italian Rye Grass (Lolium Italicum); Tall Oat Grass (Arrhenatherum avenaceum). Most of them are sown with oats.

WE have three specimens of the Dwarf Catalpa. All were killed nearly to the ground by the past Winter. Near one of these grows the golden Catalpa, a variety of the Common Catalpa, C. bignonioides. This was not injured in the least; while not far off the species was cut back several feet. Near this last is a specimen of the Catalpa speciosa; which, like the Golden Catalpa, was not harmed in the least.

A BEAUTIFUL shrub—quite neglected in our special shrub and tree number—is the Lilac Josikœa. The leaves do not resemble the common lilac at all, being longer, more pointed, less heart-shaped and glossy. They quite resemble the leaves of the Fringe Tree—Chionanthus Virginica. It bears its flowers not until the other lilacs have passed away—being now, as we write (June 10), in full bloom. The shrub is quite shapely in growth and extremely hardy.

WE present a fine portrait of Geo. B. Loring and a sketch of his life by Levi Stockbridge, president of Massachusetts Agricultural College. The RURAL has no personal acquaintance with Dr. Loring and can therefore have as little to say in his praise as against him. We do but express the fervent hope that he will not disappoint the just demands of our farmers and that he will fully appreciate the great good which a faithful administration of his office may confer upon the first interest of our country.

DR. LAWES tells us in another column that his experiments at Rothamsted (England) lead him to the conclusion that the influence of one dressing of dung may not be entirely at an end for 20 or 30 years or perhaps even a longer period. Again he says: "On the whole, as regards the question of economy, I am therefore inclined to advise that the dung should be carted from the yards to the field, and there be left in a heap until required for application; or that it should be applied direct from the yards. All labor expended upon dung adds certainly to the cost, but does not add with the same certainty to its value."

THE only use that has heretofore been made of the hulls of cotton seed, as they come from the oil presses, is as fertilizers. Experiment, however, shows that they may be substituted for cotton waste in packing journal boxes, especially of railroad cars, with great advantage, not only making a great saving to the company in the cost of the material, but also it is claimed, in the oil necessary, as well as rendering the heating of boxes impossible. We understand the officers of many of the principal roads in the country are giving the hulls experimental trials with a view, if satisfactory, to their general adoption.

THE NATIONAL DEBT.—The financial affairs of our Government are in good condition, and no particular noise is made about it either. Last month the national debt was reduced $11,150,721 and a further reduction this month of $10,750,000—which will probably be made—will make the total decrease for the fiscal year ending June 30th a round hundred million. It is a satisfaction to know that, amid all the hurly-burly of politics, there is a wholesome work going on in the financial department of the the Government, and the splendid record which the United States is making in reducing the public debt so largely is something of which we may well be proud. Add to this the fact that in three months over $745,000 have been saved to the Government by discontinuing unnecessary mail routes, and we get some idea of what may be done by thorough-going officials. If we mistake not, there is still much to do in this work of reform, if we can judge from what has already happened.

THE INSECT PLAGUE.—Insects are on the march again sweeping all before them. This year the locust reappeared, and from the South comes the cry; "The woods are full of 'em." In North Carolina, Alabama and Georgia they come in clouds and swarms, making so loud a noise as to drown an ordinary conversational tone. In Central Illinois the Chinch bug and Hessian fly are doing much damage to Winter wheat, and the farmers are plowing thousands of acres of it under, and planting with corn. The market gardens of New Jersey and various parts of N. Y. State are suffering from the ravages of the Army-worm. Indeed in the vicinity of Watertown several fields of grain have been destroyed and hundreds of acres of pasture have been stripped of everything green. The Colorado beetle also is doing even more than usual damage in many sections of the country. We hope to have no discouraging reports from the Northwest at any rate. They have had their share of trouble from snow and floods.

THE OUTLOOK FOR HONEY.—The past Winter has been an exceedingly severe one on bees, large losses having been suffered in nearly every part of the country. Nothwithstanding this fact, the outlook for a good honey-crop, as far as can now be ascertained, is quite favorable. Colonies have built up rapidly since warm weather came on, and those apiarists who have been fortunate enough to carry their colonies through with little loss, may look for good yields and remunerative prices. In the Northern, Central and Northwestern States a heavy Summer harvest may be expected if nothing unfavorable arises later, but in California the prospect is not as good, some of the best honey-yielding blossoms being a failure in many localities. In Los Angeles County it is thought that little or no surplus honey will be produced. Foreign reports say that Europe will produce scarcely honey enough this year for local consumption, so we may find a market for much of our surplus over there.

ABSTEMIOUS CATTLE.--One of the American officers in the Egyptian Service, Major Prout, reports that the nomadic Bedouin tribe known as Bagarra, who roam over an arid district in Kordofan, have large herds of cattle which have developed a remarkable capacity to live with little water. It is said that they require drink only every second or third day. As Major Prout puts it, the grazing area around each drinking place is consequently limited by the distance which cattle, grazing, can go in a day and a half. This power of withstanding thirst is a fact of no small interest from the physiological point of view, and it may possibly come to have in the future a practical bearing upon the question of the utilization of some parts of our "Great American Desert." The Bagarra cattle are of the humped variety and are reported to be both docile and beautiful, though, naturally enough, the cows give but little milk. The bulls are commonly trained as saddle or pack animals.

BEST SEASON OF THE YEAR FOR COWS TO CALVE.

WITH cows for the ordinary purposes of the farmer, March into May, according to the climate, is the best season to calve. For the dairyman who wishes to make Winter butter, September and October are the proper months. With the high-priced improved breeds, there is a difference of opinion as to the best time for them to drop their calves. Some prefer Spring, as the young then have six months before them of warm weather in which they grow more rapidly than in cold; and as the Winter approaches they get sufficient size and strength to enable them to go through its rigors without check, and come out lusty yearlings. Others, however, prefer Autumn, as they contend the calf gets a finer, thicker coat of hair, and turns out a hardier animal, for having its first few months of growth in cold weather. These maintain that if they provide warm shelter and good, dry bedding for the calf, and feed it properly, the Winter will not check its growth, and at three years old it will get as large a size as if dropped in the Spring. But then, we may ask, with all this warm cosseting, how can it acquire extra hardiness more in Winter than in Summer?

Another argument in favor of Winter rearing, is that the calves are not tormented with flies as in the Summer, which pests often check their growth. To this we answer, that during the day in those months when insects are most annoying, we shut up our calves in roomy, well aired, darkened stables, where flies do not enter, and let them out into a grass pasture for feeding and exercise during the night. In this way we keep them from being tormented and insure a rapid, steady growth.

PRICES OF IMPROVED CATTLE.

IF rather an extraordinary price is paid at any time for a superior bull or cow, a great hue and cry is set up against it on the part of many, and a person thus investing his money is stigmatized as foolishly extravagant, although in so doing, he may not only benefit himself, but, what is much more important, greatly enrich his country by the subsequent highly valuable produce of these animals being disseminated over it. At the same time these people who so sharply criticise such investments, turn round and pay perhaps much more extravagant prices for jewelry, pictures, statuary, bric-a-brac, luxurious furniture, and many other things which are of no real utility, and which, instead of adding to the wealth of the country, tend rather to impoverish it.

For a century past or more, the most intelligent and enterprising breeders of domestic animals in Great Britain, have been in the habit of paying five to ten times as much for superior stock as the breeder of other European countries. Now see the wealth derived from so doing. The whole intelligent stock-breeding world is their customer. Consider the United States, and what high prices our intelligent breeders have paid abroad in the first instance for superior animals, and the large profits they are now deriving from the rearing of their produce.

We began upwards of a century ago with the importation of blood horses; next came Merino sheep; then followed Short-horn and other choice breeds of cattle, together with mutton sheep and improved swine. Now look at our enormous exports of fine carriage and roadster horses; improved cattle, sheep and swine, together with their fresh and salted meats. Had we not first imported the originals of these, although obliged in many instances to pay exorbitant prices for them, and since bred and reared with intelligence and care, we could at this moment be exporting scarcely a dollar's worth, instead of the many million dollars' worth we now send abroad; nor could we be able to feed and clothe our people as comfortably and well as it is done at the present time.

BREVITIES.

ATTENTION is called to the communication of C. E. Thorne of the Ohio State University, as possibly of great importance to our farmers in the near future.

THE veteran editor, Mr. A. B. Allen, says, "The Cattle Number is superb, and makes the RURAL worthy of distinguished and honorable mention the country over."

THE Russian White Oats so extensively advertised the past season are behind any of the other ten kinds growing at the Rural Farm. They may, however, yield better.

OUR specimen of the new Magnolia hypoleuca five feet high was killed back three feet. Soulange's Magnolia, growing within 30 feet, was not harmed in the wood, though all of the flower buds were killed.

IN the ground plan of the Friesian farm house and cow stable in last issue, the following explanation should have been inserted:—A. A, cow stables; B, B, B, B, B, living-rooms; C, wagon house; D, horse stable; E, brick sidewalk.

THE Black Polled Angus is not the only polled breed that "nicks" well with the Short-horn; at the last fat-stock show in London the Prince of Wales took the cup for cross-bred steers with the produce of a Short-horn bull and a Red Polled Norfolk cow.

ATTENTION is called to the fact, as stated in the Notes from the Rural Grounds, that of all the kinds of grapes growing there, Victoria, a Concord seedling of the late Mr. T. B. Miner, was the only kind not harmed by the past trying Winter.

THE Rural Farm is looking for an almost complete failure in its Indian corn crop this season Incessant rains or cloudy skies and cool weather prevent any growth. The plants are small, tender and yellow. Many are dying from rot—or what florists might call "damping off."

MANDRAKE is recommended by the Mark Lane Express of London, for the destruction of the liver fluke in sheep. This Mandrake is botanically Podophyllum peltatum found almost everywhere in rich woods. It is sold by all druggists and from ten to twenty grains, mixed with meal, are recommended for a dose.

THAT adversity has its uses for nations as well as individuals is shown by statistics referring to the expenditure for intoxicating drinks in Great Britain. During the year 1880, the expenditure was 122,270 272 pounds sterling, which is less by 5,864,555 pounds than in the previous year, when the country was more prosperous, and the history of Great Britain in this respect, has for many years shown that the amount expended for intoxicating drinks has invariably been in proportion to the national prosperity. It is a fine method of displaying gratitude.

SALT FOR CATTLE is absolutely necessary for their health, and if they do not get it pretty regularly they are liable to disease. The very best kind of salt for cattle is the Liverpool rock. It comes in large lumps and can be broken up to any convenient size for use. When in stable always keep a lump of this in the feed box for each animal to lick at pleasure, and when the cattle are turned out to pasture put a large block of salt into an open box for their use. Rain does not dissolve it. If fine, common salt is put into a trough for them, rain dissolves it and the cattle are apt to take too much at a time; but of the rock salt they lick just as much as is necessary for them and as required for their health.

WE have now, for the purpose of testing it, 600 feet of barbed wire fence—three wires—making 1,800 feet of wire. The posts are set 11 feet apart. The cost for wire and labor was $14.00. The fence runs along a little creek in which the cows love to stand in hot weather. On the other side of the fence is a wheat field. The first day after completion, a young Jersey cow made her way between the wires into the wheat field, causing several wounds upon her back, which, though they bled freely, did not prove very serious. We do not presume that she will do so any more; but it is to be hoped that farm animals in general may learn the efficacy of barb-wire with less liability to serious accidents. That the cow escaped with injuries so slight is a mystery to us. Her hair was found on five different barb-points.

WHAT the "Derby" race is in England the "Grand Prix" is in France. Each is the great race of the year in its own country. To win the "Derby" is the highest ambition of every British lover of horse-flesh, commoner, lord or prince, and next to winning the "Derby," to win the "Grand Prix" is the highest ambition of every French horse lover. Within a fortnight the honor of winning both these races has fallen to Americans, Mr. Lorillard's Iroquois having, the other day, borne off the "blue ribbon" of the English turf, and Mr. Keene's Foxhall having yesterday carried off the "blue ribbon" of the French turf. Already America had beaten "creation" in breeding choice cattle, and now it seems it has done the same in breeding the highest equine type—the thoroughbred. As a nation of producers seeking markets everywhere, whatever serves to advertise American enterprise and skill is of advantage to us, and these two victories, following each other closely, cannot fail to force the admiration of foreigners for the products and producers of this country.

A FINANCIAL and agricultural society has just been formed in Paris with the professed object of seeking in this country compensation for the losses French agriculture has suffered by competition with our breadstuffs and meat. The prospectus of the company tells some wonderful "yarns" as an inducement to the gullible to take shares—yarns almost as marvelous as those in some of the prospectuses of mines in the Far West. The company has purchased 100,000 acres of land in Texas for the modest price of $25 an acre, from which it expects a yearly return of $40 per acre. It seems that there are two seasons in the Lone Star State. "From November to May is the season for wheat, and from May to November is the season for corn. The country is of surprising fecundity and is traversed by the great railroad of San Francisco." Texas is yet in its infancy, the projectors say, but this is just the "psychological hour" for investing money profitably there; first, because the profit on wheat is to amount to $21 per acre while the corn fields are to return $20.75 per acre!!! The French consuls in Texas or the French Minister at Washington should investigate this agricultural El Dorado, which, the prospectus says, is situated in "Parker and Palo Pinto" counties. The map places these counties away in northwestern Texas, a region that is subject to "vexation" from Indian incursions. Unimproved land in these two counties should be worth from 25c. to $2 50 an acre.

IN no place on the globe is such nicely discriminating attention given to the quality of meats as in the London market. Accordingly the prices paid there for the beef of different breeds of cattle form a fair criterion of its excellence. The cattle brought to the Smithfield market are of two kinds, according to the season—grass and stall-fed. In the first class are included a small supply of West Highlanders, slow to mature, but affording such choice joints that they generally make prices above the ordinary top figures. These have never been introduced into this country, but in view of their extreme hardiness and the gamey excellence of their flesh, they ought to "pay" in bleak mountainous sections where they would have to work hard for a living, as they do in their native home. Next comes the Hereford bullock, which comes to market only as grass beef in late Summer and Autumn. The superior quality of grass-fed Hereford beef, and the top prices for it in the London market are doubtless not the least among reasons for the growing popularity of this breed on the Western plains, where grass is the only, or almost the only, feed and, whence a great deal of the best beef goes to the English market. Devons, Short-horns off grass, Welsh cattle and those from the Netherlands and the Spanish Peninsula follow in order. From Christmas to June the supply is of stall-fed beasts, and of these the first cross between the Polled Angus and the Short-horn—long a favorite sort in the Smithfield market—brings the highest price, followed by the Polled Scot, the Devon, Short-horn and imported stall-fed cattle.

For Women.

CONDUCTED BY MISS RAY CLARK.

A DIME'S WORTH OF SPRING POETRY.

In the Spring the merry house-wife ties a rug around her head,
In the Spring she breaks the furniture and dislocates the bed;
In the Spring she has the carpet beaten till the welkin rings,
In the Spring she swaps her husband's clothes for china dogs and things.

In the Spring what's called "house-cleaning" occupies the female mind,
In the Spring your wife some "bargains" gayly starts her out to find,
In the Spring she pays two dollars for a tub that has no hoops,
In the Spring she buys flat-irons, and arranges them in groups.

In the Spring the prudent husband buys himself a book of prayer,
In the Spring he soon discovers that he's better off elsewhere,
In the Spring he lets the women turn things over till they're tired,
In the Spring he finds it healthy to be more or less retired.

DECRIPTION OF CUT.

EMBROIDERED DRAPE FOR BRACKET.

FIG. 312.—The drape is of maroon velvet; the centre flower is of pale blue velvet, with calyx of moss-green velvet appliqued to the foundation with gold-colored silk. For the stalks and leaves, which branch out to the sides, and which are worked in chain-stitch, shades of bronze-green silk are used. The flower in herringbone is worked with rose-colored silk; the other flowers are worked with blue silk in long stitch. The knot-stitches are worked with gold-colored silk It should be lined with maroon silk, and be finished with gold and maroon fringe.

THIMBLE-CASE AND EMERY-CUSHION.

FIG. 314.—A small pill-box is used for the foundation of the case; it is padded inside and covered

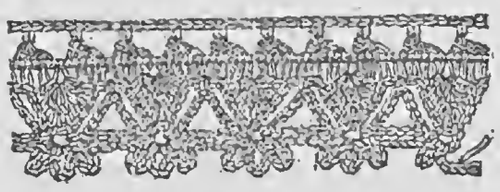

FIG. 310.

with velvet, leaving just sufficient space in the center to admit the thimble; the bottom of the box must be sewn to a larger circle of cardboard covered with velvet; a round cushion filled with emery powder and covered with velvet is placed on the top of the lid, the sides of which are ornamented with a band of embroidered perforated card.

FIG. 311.—EDGING, CROCHET AND POINT BRAID.

1st Row of heading: Fold the braid as shown in the design, work six singles into the folded part, six chain, fold the braid again, and repeat.

2nd Row: One treble into a stitch of last row two chain, pass over two stitches, and repeat.

1st Row of edge: One single into the corner of a fold of braid, six chain, one single into the next corner, ten chain. Repeat from the beginning of the row.

2nd Row: One treble into the second of ten chain, one chain, pass over one stitch, one treble into the next, one chain, pass over one stitch, one treble into the next, three chain, one treble into the same stitch, one chain, pass over one stitch, one treble into the next, one chain, pass over one stitch, one treble into the next, pass over two stitches, one double into each of five next successive stitches. Repeat from the beginning of the row.

3rd Row: One double into one chain of last row, three chain, pass over one stitch, repeat as for 3d row, five times more, one double into each of five next successive stitches, three again. Repeat.

FIG. 313—STRAWBERRY PANEL.

This design for decorative work can be utilized to advantage at this particular time when the natural subjects for reproduction are to be obtained.

FIG. 315—Design for border embroidery.
FIG. 310—Design for crochet trimming.

A GERMAN MAY-DAY.

BERTHA A. WINKLER.

QUITE a merry bustle prevailed in the village on the eve before the first of May.

The young folks especially seemed in their most frolicsome mood. Those black, and blue, and

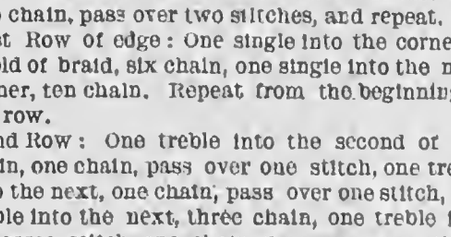

FIG. 311.

brown eyes, how merrily they danced in the little heads, and how those little bare brown feet skipped over the dusty road in restless, joyous anticipation of the next day's festival, though they were still put to work in the twilight, sweeping the road in front of their respective houses; others pounding sand between two great stones for strewing the floor, and still others busy in cleaning an array of boots and shoes. Within, the busy housewives were taking the last cake out of the oven, or looking over the garments and linen of their household for missing buttons. The men-folks were in the stable currying the cows and oxen and cutting an extra supply of fodder, all in preparation for "May Day."

With the first gray streaks of dawn the young folks started in bands to the forest for the wild flowers which grow in luxurious profusion on its borders. Their gay voices and laughter, echoing through the forest, awoke the feathered songsters far and near. Then there was music—gay, thrilling, joyous carols from lark and finch, with the deep notes of the cuckoo, and the cooing of the wild dove in the background, filling the air and welcoming the brightening dawn like the mingling of praise and prayer; as though 'twas an invisible communion of the Creator with creation, so thrillingly joyous and withal so solemnly grand was this sudden awakening of life in the forest.

The young villagers did not seem so much impressed by it, for they continued their chattering with each other as they crouched among the bushes for flowers. But then, it was nothing new to them, being treated to this early Spring chorus every morning on their way to the fields Well supplied with bouquets and wreaths, they at length started for the nearest town, about six miles distant, to celebrate the festival with all the neighboring villagers, who there congregated.

The grounds on which this festival is held here is a sort of park, several squares long and only one square wide, bounded on both sides by deep, rushing streams. The park is named "Malla," from the romantic legend of a beautiful *fraulein* of that name, who is said to have leaped into the stream from the spot on which her lover expired in a duel he fought for her sake. And, indeed, when one sits there under those shady chestnuts and broad-leaved poplars, listening to the soft rustling of the young foliage overhead, the murmurs of the stream, the distant hum of water wheels, then sees the numerous rustic bridges which span the stream, with here and there a solitary figure gracefully balancing primitive stone jugs on their heads, one feels at once transported to the Middle Ages, when lovely maidens and noble cavaliers were promenading in the moonlight on these banks—when the clink of the cavalier's sword was heard in the early morning wiping out insults and defending honor—in blood.

From these dreams of a chivalric warring past, one awakens to find the reality of the present no less interesting. Early in the morning the city regiments come here to drill and parade; the school-children, in a body, headed by their teacher occasionally promenade on the broad avenue in the afternoon; and in the evening everybody comes to witness the gymnastic exercises of the *Turners*, whose wonderful feats of bodily strength and agility create intense excitement and admiration.

Now, in close proximity to this scaffolding of the *Turners*, were erected the swings, May-poles, flying coaches and booths for the festival. The small bridges bent and creaked discontentedly under the weight of humanity that tramped over them filled with exuberant joy. Strains of music from the dancing grounds announced the

FIG. 312.

opening of the festivities and the gay, motley crowd began to separate into family groups and lover's corners. The old folks drank beer and discussed business prospects; juniors made their way to the girls and dancing-floors. Boys climbed their May-poles to be laughed at or applauded as they fail or succeed in securing the huge golden-colored cake which is fastened in the top for the best climber who then presents it to some favorite girl. The young girls enjoyed the swinging; little ones were lifted in flying-coaches by fond mothers; while the organ-grinder's free concert and the juggler's open exhibition attracted the strolling multitudes.

Towards noon the booth-restaurants were crowded with hungry, noisy customers. Sausages, cheese, bretzels, beer, wine, cider, everything palatable was called for and the *kellner* was flying to and fro most frantically. The quiet hard-working peasants had suddenly changed into jolly jokers, whose foaming glasses clinked together with a hearty "*prosit nachbar*," and sentimental lovers who quoted Schiller and ate cheese; while the boisterous little world was crowding as much pleasure as possible into the only too short day.

When the merry multitudes had departed for their homes and the bright moonlight threw the shadows of some remaining couples upon the rippling waters, we again contrasted the past with the present. Then, the splendid equipages, the dashing horsemen, the glittering swords, and the waving plumes. Now, the simple peasant, the plain artisan, the loud colors and the boisterous mirth. But, though we sigh for the splendor, the romance, and the chivalries of the past, we rejoice in the sunken power of Feudalism, the broken fetters of vassalage and the progress of a humane civilitzaion which has opened these pleasure-gardens of the mighty few to the humble many. The actors have changed, but the stage, the scenery and the grand old drama "Love," still retain their wonted charm. Still the old sweet word is whis-

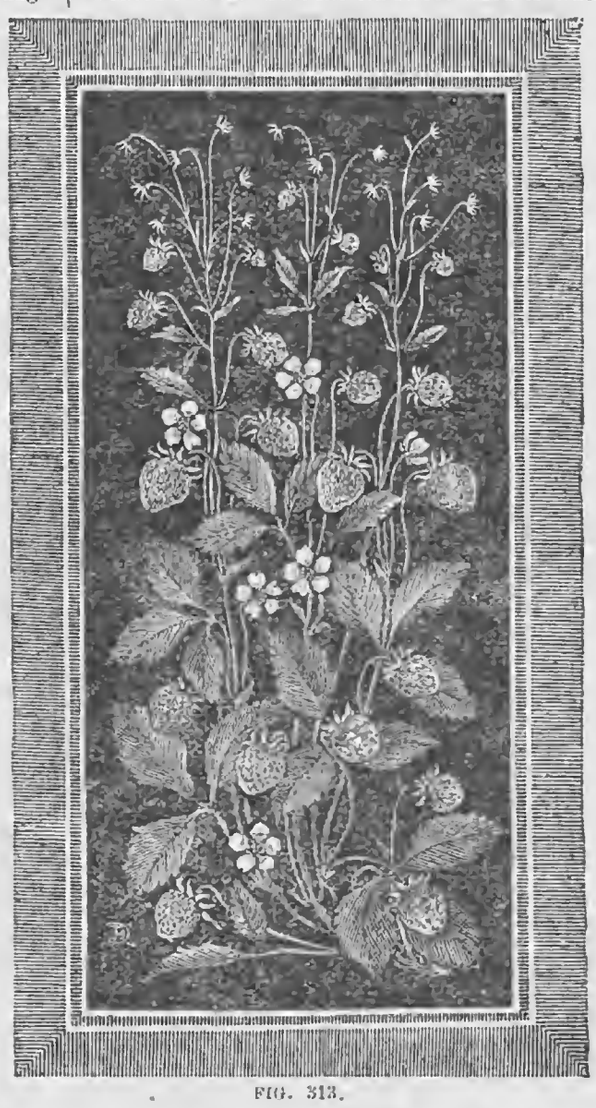

FIG. 313.

pered on May Day eve beside its rippling stream.

"Shine out, stars! let night assemble
Round us every festal ray;
Lights that move not; lights that tremble
To adorn this eve of May."

PLEASANT HOMES.

A LITTLE time and labor, at this time of the year will make the grounds about the house look tidy, neat and inviting. There is no use in having the yards all covered with sticks, chips and last year's burdock stocks, to stick their hateful burs into clothes and stockings. A garden rake, and a wheelbarrow; with a pair of strong hands, will clean up all the refuse stuff, and if there are dry leaves drifting around so much the better, it will all make a good absorbent for the manure shed or piggery. No matter if the house is old, or brown, or moss grown with age, if it is cleaned up neatly, it will look as if it were comfortable and give a favorable impression of the inhabitants, and a few flower roots set out and trimmed up nicely, will make the homliest place look pleasant. A few vines, running up the sides of the house so as to shade the windows and doors are as much of an ornament to an old house, as they are to a fine mansion. A pretty porch can be made over the door, by setting long poles each side of the steps and passing strings over the top backwards and forwards. If hop vines can be obtained set out some roots close by the poles and train the vines up the poles and string across the top. If you cannot get hop vines, plant beans, morning glories, or sweet peas; and train them to run up, and you will have something that will give pleasure all the long Summer days. Boys will enjoy helping, if you only show them how to do it, and it will be a life-long pleasure to them to know how to make things look pretty.

Do not think it will take too much time for what is time for, only to make one happy and good. Children can be taught early in life to make themselves useful, and there is no child but that likes to see a pleasant home, and if they know how to do it, will take hold and help make it pleasant.

We all of us form an idea of a person's character, when we pass his dwelling. If we see the yards all in a litter and pigs, calves and chickens, hopping over logs and chips; we are immediately impressed with the belief, that shiftless people live there. A row of sunflowers, or a clump of hollyhocks are an improvement to any place; and look far better, than rank pig weeds, or mayweed, growing everywhere. There is no excuse for the surroundings of a farm house to be filthy and cluttered up, with every thing; only just sheer laziness, and *don't-careitiveness*. I guess that is a new word, but it is as expressive a one as I know. If I cannot find one to make my ideas plain I make one that will fit the case and express my thoughts. GRANDMOTHER.

FASHIONS.

IT will perhaps be useful at this time of the year to give a few hints upon the various details of Summer fashions. To wear in fine weather, even out of doors, fashion favors semi-high shoes, laced or buttoned over the instep. To be in good taste, however, such shoes should not exhibit the various fancies which are adopted for those meant to wear at home; they should be of plain kid, at most stitched with white silk. It is the same with hose. There are colors which one should never wear to walk on foot in the streets. Need we say that among these are red, pink, or ciel-blue stockings? We think not. We will add only, that iron-gray stockings, or those of any shade of gray or beige, can alone be used for walking about in the streets. On the other hand, colored under-skirts are completely out of fashion it may be black—cashmere or silk—to wear under a black or dark-colored dress; but with all light-colored dresses, such as are generally worn in Summer, it is required to be white, and white only. The under white petticoat is made quite plain, with perhaps a border of Bretonne or fine Torchon lace round the edge; the upper one, that which is worn next to the dress, has one flounce round the bottom, much fuller behind than in front, and trimmed with a deep border of white embroidery, or else with some thread lace. Two gathered flounces are added at the back only, high enough to support the fournure of the dress, and strings are added to tie back the skirt. This is an underskirt to wear with short costumes; to suit trained shaped toilets a train is added, completely flounced from top to bottom, and trimmed at pleasure with embroidery or lace. For walking all dresses are made with short round skirts. In fashions for dresses the greatest variety continues to reign—separate bodices as well as princess robes, and even the polonaise, on condition of submitting to certain rules and modifications. Thus the polonaise, in order to be in accordance with present fashions must be of the same color as the skirt, and draped at the back. The similarity of material is, however, far less indispensable than that of color.

Thus, one sees polonaises of a different material from the skirt, but with their draped back widths of the same fabric as the skirt. This is, indeed, the only case in which it is admitted to use for the polonaise a different material. But, in such a case, the polonaise is reduced to a bodice and two lappets composing the fronts. All the rest of the toilette is of the same tissue as the skirt. In a word, the polonaise all of a piece, all of one material which could be worn with any skirt, no longer exists.

The question how to trim Summer costumes of fancy woolen material is often asked. The fact is the style of trimming remains the same, being of silk of some sort—surah, satin, or brocaded silk—but the arrangement is different. It depends so much, indeed, upon personal taste and fancy that it is difficult to lay down strict rules on the subject; and all we can do is to suggest a few hints. Indian cashmere, Indian veiling, and muslin-delaine look pretty matched with new surahs; and while many are best pleased with bright plaid and Bayadere striped surahs, others prefer the more sober style of plain surah matched to the woolen fabric.

The following is a pretty way of making up a Summer costume of any light woolen tissue, and trimming it with surah, which may be either plain, plaided, striped, or figured.

FIG. 314.

The skirt has two deep pleatings in front, each edged with a band of surah; above this a scarf drapery is pleated upwards across the hips. At the back, the skirt falls from below the basque-edge in soft limp puffs down to a few inches from the bottom, where it is trimmed with three tiny flutings of cashmere; a bow of the surah is placed on the left side, at the junction of the front and back of the skirt, below the hip. The bodice is a basque-waist, round in front, the back pieces, with five seams, prolonged and gathered up into a small puff, with a bow of surah; the basque is trimmed round with a band of surah, the neck with a fine fluting and torsade of the same, which both come down on each side of the bodice, the center being occupied by a row of olive-shaped satin buttons. The sleeves have plain revers and fine flutings of surah; they are, as well as the neck, filled in with crepe lisse flutings.

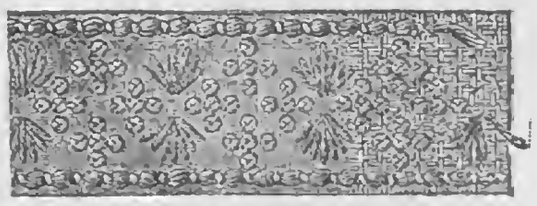

FIG. 315.

As for Summer manties, the visite shape, long or short, and more or less fitted to the waist, is decidedly the favorite; it has no rival but the small mantelet, which will come in for the very warm weather.

CORRESPONDENT'S CORNER.

DEAR MISS CLARK.—Please ask your readers, through the columns of the RURAL, if any one will kindly send me specimens of Pixie (Pyxidanthera barbulata;) Mountain Pike (Phlox subulata;) Dutchman's Breeches (Dielytra cieullaria;) Yellow Corydalus (Corydalus flavula;) March Marigold (Caltha palustris;) Staggerbush, (Andromeda Mariana.) I had all these, but unfortunately have lost them, so cannot complete my herbarium. If possible and desirable, I will exchange for them other, later specimens, from the neighborhood of Philadelphia. Those who wish to favor me, please enclose the pressed flowers in envelopes, send to my address, (Ardmore, Pa.,) and receive my hearty thanks Let them state also what flower they wish, if any. MARGARET B. HARVEY.

In answering "M. E. H.," in issue of June 4, the recipe for making rosemary tea was omitted. We now give it: Take one ounce of rosemary and steep in one quart of boiling water. Let it cool before using. B. & C.

Literary Miscellany.

MARJORIE DAW.

(Continued from page 393.)

"No," said Marjorie, laughing. "I have seen that beautiful Madonna of Raphael's, and you must know she is quite fair. I am a black woman compared with her!"

"Black!" echoed he. "With a throat and brow like alabaster! Oh, Marjorie! my dear, you are far too beautiful to be caught up and married to a village clown!"

Miss Marjorie Daw tossed her head.

"I think I should have to be consulted before I became the wife of a clown."

Old Mr. Peter bent his head and looked admiringly at Marjorie's beautiful averted face.

"You, with your black hair, and dark eyes, and fair skin, are far more lovely than Raphael's 'Belle Jardiniere,' my dear!" said the old man; "and I say that you ought not, you must not, be sacrificed!"

His queer old rough face was crimson from emotion. He was sixty-five years old, a tough, strong old man, whose boast it was that he had never had an ache or a pain in his life. Colds were unknown to him; rheumatism and gout were mere shadows, like the bogies which unprincipled nursemaids conjure up to frighten children. He had never had a headache nor a fit of indigestion in his life. His appetite was excellent. He could sleep on a deal board. He could walk for a whole day, and scarcely feel fatigued. His familiar name in polite circles was the "Rhinoceros," and he knew it, and rejoiced in the title.

He had been a childless widower for thirty years. He had been supposed impervious to the shafts of love during that space of time. His morals were unimpeachable. He had traveled much, but with all this he was a miser—one who ground the last guinea out of his tenants, and refused on principle to do anything to improve the condition of their farms. Add to all this that he was the richest of land-owners, this "great little, poor old rich man"—thus the wicked Marjorie called him behind his back—had fallen desperately in love with the daughter of his tenant Thomas Daw.

CHAPTER II.

Marjorie tossed her head again. She guessed what was coming, and her heart beat fast—oh, so fast! She knew who was waiting for her by the side of the stream—a young man with flashing dark eyes and a stalwart form. How impatient he must be by this time!

"Ah! if the positions were only changed," said Marjorie to herself.

But alas! in this world it sometimes seems to us that people are not in their right places.

"Marjorie, my dear," said old Mr. Peter, and his voice shook, "will you become my wife? Many a high born girl, my dear, would jump for joy if I asked her that question. I will settle all the lands on you, my dear, except the entail; that must pass to my second cousin, of course; unless"—

He did not finish the sentence, but Marjorie understood what great possibilities were offered to her and her children after her.

"We would go away to London in May—to Italy in the Winter—to the Swiss lakes or to the Scotch Highlands in the hot Summers. Oh! what a life! What lovely things he would buy me! How I would dress! I would cut out Mrs. Langtry in the London season! The world at my feet—the world!"

Then she looked at him, and she said to herself

"The world? But the heart empty and hungry? Ah! what a pity one has a heart!—it is in the way of one's happiness!"

And all this while Mr. Peter stood there in his shabby brown coat, waiting for an answer. The red light was fading fast in the pale sky, the shadows were creeping over the woods; the moon was getting up behind the old barn in the rear of the Yarrow Farm.

"He has gone home now!" said Marjorie to herself, thinking of the handsome youth by the side of the stream who was waiting for her. "After all, what has Rufus Gorse to offer me? Not even a humble home! True, there have been times when I have felt that I could be happy with him even in a garret: but that was when we thought he was dying with fever last autumn. I know I should hate a garret, even with *him!*" And Marjorie was right. "Still, I must talk to Rufus first," she said to herself; then aloud:

"Mr. Peter, your offer has made me giddy with surprise; it is too much honor, sir, for me."

"Is that to be my answer, Miss Daw?" said he, in a hard, haughty tone; if so, it does you honor; it is cutting, and yet courteous enough to have been spoken by some beauty in Mayfair."

"I meant no more than I said," Marjorie answered, simply; "really I can hardly believe that I had such an offer."

Old Mr. Peter chuckled; he was pleased again.

"My dear," he said, "it is the truth, and you need not think it such an honor. Your beauty should almost buy you a throne, and my happiness is wrapped up in you. Speak, Marjorie; will you be my wife?"

"Dear Mr. Peter, let me sleep on this; let me think all to-morrow, and then in the evening at this time, I will make up my mind."

"Then am I to come for my answer, Miss Marjorie?"

"No; I will write it this time to-morrow night, and run down to the village and post it; you will have the answer by the day after to-morrow."

"No," said Mr. Peter, "I can't wait my dear; I hate suspense. If you refuse me I shall go away and stay for a couple of years."

Mr. Peter had an odd trick of blinking his eyes when he was agitated; he did so now most furiously even in that faint light; the fact was evident to Marjorie. She had a horrible inclination to laugh—a nervous laugh, half triumph, half fear, half regret.

"Oh, Mr. Peter," she said, "I will tell you to-morrow; I am sorry I can't speak now, but——"

"No, don't—no, don't, my dear!" he interrupted. "Take your time; I can wait until to-morrow night, but not a minute longer, so now I'll go. You can just tell your people that I was passing, and that I came in to see the flowers. One word more, Marjorie: if you refuse me will you keep this a secret? It's a great deal to ask a girl to hide the fact of such an offer, but I think you are generous, my dear, and I do ask you."

But a spirit of coquetry arose in Marjorie.

"I have not refused you yet," she said. "Wait until I do."

So the old Baronet was compelled to be contented with that; he went away after saying good night, and holding Marjorie Daw's hand for a minute within his own.

Marjorie stood at the gate, and watched the figure of the old man, seated on his little sturdy beast, move slowly down the steep lane. Man and horse seemed cut out against the pale, Spring heaven. At last they dipped down out of sight, but Marjorie could still hear the pattering of the pony's feet in the lower road.

She leaned on the gate and listened. The choice of two lines was offered her—splendor without love, or penury made brilliant by the fires of passion. She was proud, capricious, ambitious but her blood ran sometimes like liquid fire in her veins; she was a spoiled girl, but she had a heart. She at this time only guessed at half its depth, its capacity for affection, its yearning for love.

"I suppose," she said to herself, softly, "that I shall become Mrs. Peter; yes, yes, I suppose so. I could do a great deal then for my friends; father's farm should be improved, and he should only pay half the rent he pays now. Some day the lands would be mine! then Rufus—I can help him—give him a thousand pounds, and send him to Italy to study music there, and then he might marry a lady of rank when he became famous. No, no, no, I could not bear that. Poor Mr. Peter is old though so strong. When one is sixty-five one can't expect to keep on living always."

"Ah," said a musical voice, tinged, though only pleasantly, "ah, faithless one! I have waited for you, Marjorie, until my heart felt heavy as lead. Why did you not come, then, as you promised?"

The young lover stood in the moonlight, a very different figure from old Mr. Peter, a tall, erect fellow, with a certain manly grace of attitude. His face was beautiful, Marjorie thought as some exquisite cameo. The lines of level brow and curved nostril and finely-moulded upper lip were so pure. Certainly Rufus Gorse, Village schoolmaster, and organist of the tiny parish church, was handsome enough to attract the attention of the fine visitors in the squire's pew on Sundays. He had such deep-set flashing gray eyes, with so many lights and shadows in them, and the whole expression of the face was at once so manly and so sweet.

"What kept you away, my Marjorie?" asked Rufus again.

"Not your Marjorie yet," she said sadly; and then she added, impulsively, "Oh! Rufus, I wish that you were rich, or that I were rich, that would do as well!"

"My darling," he answered, simply, in a voice that shook with passionate joy, for were not the girl's words a confession of love? He came up to the gate and laid his hand—his firm, warm, strong hand—upon her shoulder, "Will you promise to be my wife, Marjorie?"

"Oh, Rufus, you have asked me that before. You know that my father has only about five hundred pounds to give me, and the old furniture at the Yarrow, when he and mother die, and you have nothing."

He took his hand from her shoulder, stood back a little way, and folded his arms.

"I have nothing, Miss Daw, that is true, only my love and my life to lay at your feet. But, Marjorie,"—drawing a little nearer to her—"if you will give me time, I will make money—a fortune even—in time."

"Yes, when we are both old," said Marjorie, sulkily. "Who wants to wear satin and diamonds for the first time when one is wrinkled and gray?"

He laughed softly, for he loved Marjorie. He was accustomed to her caprices, and he believed that she loved him in her heart.

"My darling, I will promise to give you a handsome home, long—long before your hair is gray; but must you wear diamonds, Marjorie?"

"I should love to wear diamonds!" she answered, sulkily.

She had a little piece of sharpened stick in her hand, and she was scraping the gate with it and looking down at it pettingly, just as a child might who is out of temper when refused some treat.

"Diamonds!" he said, looking up into the sky and smiling. "I did not know you had set your mind on royal gems so strongly. Well, Marjorie, I will buy you a diamond ring of betrothal before this day twelvemonth—will that do?"

But Marjorie, still scraping away with her bit of wood, was thinking of the splendid family jewels up at Beaucourt, and the single diamond ring, for which she must wait a whole year, looked paltry in her eyes.

"No, Rufus; if I can't have everything to match I don't want one diamond ring!"

"My darling Marjorie, I can never hope to make all your daily life ablaze with diamonds; I am not a prince."

"No," said Marjorie, to herself; but Mr. Peter has five thousand a year!"

"Then, Marjorie, do you refuse me?"

"Not quite; I like you—you know that."

"Then you accept me?"

He came up to the gate and laid his hand again upon her shoulder.

"Not quite," said Marjorie, without looking up.

"Marjorie, why do you so delight in torturing me? it is not noble."

"I don't profess nobility," she said.

In her heart she was terribly perplexed.

This Rufus Gorse she respected more than any human being under the sun, but she was not sure if she loved him quite passionately enough to accept penury for his sake. At the same time, she knew that she could not confess to him that she was inclined to sell herself to old Mr. Peter for the sake of position, without feeling a deep sense of shame. She knew the lofty contempt in which Rufus held such barters of soul and body.

"Then you won't give me your answer to-night, Marjorie?" he said sadly.

All the same, he was daring enough to stoop and imprint a light kiss on her white brow.

She thrilled at the caress; It was almost the first he had ever bestowed on her, though he had been talking of his love for her for the last year.

She looked up now and extended her hand.

"Good night, Rufus," she said; "in a day or two I will give you my answer. Leave me now to think."

He clasped her hand and walked away without another word.

"She has some new, strange notion in her head," he said; "somebody, perhaps, has been setting her against me."

For when one is very much in love, even if one is naturally wise and calm, one is apt to take all sorts of foolish notions into one's head.

CHAPTER III.

Rufus Gorse was only the son of a very poor farmer in the neighboring county; he had a crowd of young brothers and sisters; but from his childhood he had manifested a love for books and a talent for music.

He only went at first to the village school, but after that interest was found and he was sent to a training-college, and there developed so great a musical genius, that he was instructed in the piano and organ free of cost.

Afterwards the humble appointment of schoolmaster and organist in the village of Barwell fell to his lot, and there he fell madly in love with Marjorie Daw—madly, for he would have sacrificed himself in any way to win her; and though he was ambitious, and had his grand dream of one day making his mark in the world in the shape of an oratorio or an opera, he still felt that the brightest crown that earth could offer him would be but as a paltry wreath of paper flowers unless Marjorie were by his side.

As for Marjorie, she went into the house presently, bright, bustling, as if nothing had happened. The Williamses were to stay to supper, so she helped her aunt to lay it in the great kitchen. Her father, a warm-hearted, simple-minded man, came in cheerful and hungry.

She was chaffed about her interview with the landlord, who had only gone with her into the garden to see her tulips.

"Since thee is such a favorite with the old man, lass," said Thomas Daw, "I wish thee would ask him to put a new roof on to the barn."

Marjorie smiled.

"So I will," she said.—[To be continued.

NEW PUBLICATIONS.

A Nameless Nobleman.—Boston. James R. Osgood & Co., Publishers. Price $1.00.

This is the title of the first volume of the "Round-Robin" Series of anonymous novels, which is to contain works of prominent American writers. The nameless author of "A Nameless Nobleman," while outlining the characters of the story with delicate precision and consummate art, has given them free life and movement in a most ingenious and complicated plot, equally removed from sensationalism and from dullness. The scenes are laid in Paris and Provence, Quebec and New England, and the actors are French nobles and Puritan rustics, moving in the most quaint and picturesque years of the colonial era. The interest will not be diminished when it is known that the plot is founded on the actual traditions of an honorable family in the Old Colony or Massachusetts,—a region where ancestral legends are handed down for centuries, with religious care.

The Beacon Light.—A collection of Hymns and Tunes for Sunday Schools. By J. H. Tenney and E. A. Hoffman. New York: Oliver Ditson & Co., Publishers. Price 30 cents.

One more new collection of Sunday School songs. Although there are many, the demand is large, and new ones are not objectionable, provided they are up to a high standard. The compilers announce that out of a large pile of manuscript, only about one in five songs were chosen, as first-class ones for the book and its contents may therefore be considered as choice. It will be noticed that very many of the songs are in unison with the pretty title page and its motto:

"I am the Light, the true Light, which lighteth every man that cometh in the world."

How Persons Afflicted with Bright's Disease ought to Live. By Joseph F. Edwards, M. D., Philadelphia; Presley Blakiston, Publisher.

Nothing would seem to be of much more value in a physiological point of view than a work on the subject of kidney disease. There has been so great an increase or (probably more properly speaking) development of this complaint that an intelligent consideration of the necessary precautions of those afflicted should meet with universal approbation. Explanation of symptoms and clear, common sense revelation of the proper mode of living is the object of this treatise, and the author has succeeded well in the transmission of knowledge.

We have received a roll of attractive music from O. Ditson & Co., and notice in it, first, a song for Decoration Day, entitled "Lay the Flowers Lovingly;" a powerful ballad by Edward Oxenford, called "The King's Champion;" and one of Stephen Adam's inimitable sea songs, by the name of "Ben Lee." There is also a Waltz for Piano, from the new and popular opera, "The Mascot;" a rustic dance, "Les Paysans;" and one of Smallwood's pretty lesson pieces, "Jenny of the Mill." With the music we also receive a copy of Ditson & Co's. Musical Record, which is a standard in the way of musical news, and costs $2 per year.

Stories of the Arabian Nights—Edited by Samuel Eliot. Boston: Lee & Shepard, Publishers.

The stories are authorized for use in the Boston public schools. In the words of the preface: "These tales are perhaps Arabian, perhaps Persian, or Indian, in their origin. At all events, they come from a different world than ours, and have the charm that belongs to highly imaginative literature. Their appeal to the imagination of our children is the reason for introducing a few of the best among them into the schools."

Theological Unrest.—Discussions in Science and Religion. New York: A. S. Barnes & Co., Publishers. Price, 25 cents.

This is one of the Atlas Series of Essays. Its contents are: Science and Theology—Ancient and Modern; Parts I., II. and III., by James Anthony Froude; Conflict of Religion and Science. By Rev. E. A. Washburn, D. D. This one, with others of the series, is certainly of great interest, and no doubt will be appreciated by the thinking minds.

Short Studies of American Authors.—By Thomas W. Higginson. New York: Lee & Shepard, Publishers, Price 75c.

This little book is a revision of brief papers published in "The Literary World." Hawthorne; Poe; Thoreau; Howells; Helen Jackson and Henry James, Jr., are the writers considered. This is particularly interesting.

Country Love and City Life.—By Charles Henry St. John, Boston: A. Williams & Co., Publishers.

The above is a title of a selection of poems originally designed for public recitation, but later clothed in book form. We trust the contents may be appreciated as much in the new relation.

MAGAZINES FOR JUNE.

The American Naturalist.—Contents: Archæology of Vermont; Larval Habits of Beetles; Late Explorations in the Gaboon; Pueblo Pottery; Recent Literature; General Notes; Botany; Zoology; Entomology; Anthropology; Geology and Paleontology; Geography and Travels; Microscopy; Scientific News; Proceedings of Scientific Societies; Selected Articles in Scientific Serials.

Ancient Works in New York.—There are within ten miles of Watertown, N. Y., many ancient fortified village sites, not to speak of those obliterated by the plow. We cannot use the term mound as applicable to this locality, for there are no artificially constructed mounds found here. One of the most marked features is that all these sites were fortified or defended with ditches. They are nearly all located upon the sandy moraines of extinct Adirondac glaciers, or sand-strewn hills. A few fishing stations along the shores of Lake Ontario and Black River Bay are the exceptions, and even these are upon sandy slopes. There seems to be no uniformity in the shape or construction of the lines of defence; one at Black River Bay had the ditches in the form of circles, one within the other, and a lunette towards the water, with a protected roadway to the shore. One in Rutland, on the farm of Mr. Gragg, has the trench cut across the base of a peninsula, between two forks of Sandy Creek, a steep hill serving as embankment for the rest of the inclosure, and usually the lines run along the edges of an escarpment. I am informed by several of our elderly inhabitants that these lines of entrenchments near our cemetery were a mile and a half long, and some of the trenches five feet deep. Pottery of the usual forms, and nearly always broken into small pieces, is a constant accompaniment of these fortified sites, and and it is generally blackened on the inside with charred food, showing that the owners cooked with heated stones thrown into the vessels. The jar or pot, the most perfect specimens I have met with, was dug up in the town of Rutland many years since, and is owned by Mr. J. A. Lawyer of this city. Arrow-heads, stone axes, scrapers, knives, bone awls, charred corn, etc., found West and South, are dug up from the graves of these people, or strew the sites of their homes.—David S. Marvin in Am. Naturalist.

Scribner's Magazine. Contents:—The Remedy: The Farragut Monument; An August Morning with Farragut; Sketch of the late Earl of Beaconsfield; Joan of Arc listening to the Voices; The Westminster Play; Some New Berries; Practical Floriculture; A Fearful Responsibility; A Rainy Day with Uncle Remus; Madame Delphine; Fritz; Along the North Shore of Long Island; Lobster-fishing and Lobster Canning; The Largest Extinct Volcano; Poems; Sic Semper Liberatoribus: Farragut; Latitude Unknown; Poems from a Scrap-book.

How New York should dispose of its Refuse Matter.—The first idea that suggests itself to all who consider such questions is that, in the interest of the people, the immense amount of fertilizing matter contained in the offscourings of such a population as that of New York should be turned to profitable account. Experiments in this direction have been made and are being made at London, Berlin, Paris, Danzic and elsewhere. Thus far, all that has been proven in its favor is that it offers a good means for the purification of the effluent. The hope of profit, or, indeed, of any important return for the cost of the work, has apparently been abandoned. Possibly at some future time a change of the agricultural conditions of the country may enable us to realize this theoretical profit. At present the only aim that can be pursued with the hope of success is the purification or the inoffensive disposal of the effluent matters. Their discharge into the deep water of the Atlantic Ocean at a point off some unoccupied portion of the south shore of Long Island, were this possible, would be entirely satisfactory. Their disposal in wide surface irrigation on the sandy land of the Long Island coast would secure such

purification that the effluent might flow off from the shore without offense or danger. The area required for this purpose would be large, and the operation would be costly; but some form of disposal which shall secure the purification of the harbor is sure to become in time, if indeed it is not now, a commanding necessity. Whatever the system adopted, and whatever the means of purification, it is already manifest, that the proper disposal of the entire sewerage, not only of New York but equally of Brooklyn, cannot be too early taken into serious consideration.—Colonel Waring, in Scribner for July.

HARPER'S.—CONTENTS:—The White Mountains; The Dead Child and the Mocking-Bird; The Mad Maydes Songe; Our Ruby-Throat; A Neglected Corner of Europe, I. Lisbon; Ballads and Ballad Music Illustrating Shakspeare; Edwin Booth, William Winter; Anne, A Novel; Benedetto Civiletti; The First Settler's Story; The Trial of Jeanne Darc; Mrs. Millington and her Librarian; Kentucky Farms; A Laodicean; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

WARS OF THE HUMMING BIRDS.—Whenever it happens that two of the species meet among my flowers, they signal the encounter with a shrill war-cry, and dash at each other in fierce antagonism. The spirit of Bellona inflames their souls. For an instant they close together, then give each other chase, and with the speed of meteors are lost to my view. Shortly after, the return of one alone announces that the victory has been quick and decisive. Diminutive as are these puny sprites, they are heavily charged with combativeness. The entire race are pugnacious and quarrelsome to an extraordinary degree, impudently assaulting each other, and birds of much greater size which venture into their neighborhood or occasion them a fancied annoyance. Even the hawk is not safe from their attacks, and has been seen worried and whipped by them. Mr. Bates remarks, in delineating their truculent disposition, and the perpetual battles occurring in every flowery nook in the tropics where they congregate, "One will knock another off its perch, and the two will go fighting and screaming away at a pace hardly to be followed by the eye."—MRS. SARA A. HUBBARD, in Harper's Magazine for June.

ST. NICHOLAS.—Contents: Frontispiece; The A. Steeles; What the Birds Say; The Lost Stoppor; How Shocking! verses; The Mastiff and his Master: Enchantment, verses; Ostrich Farming; "Candy is Not Good for Children," picture; Phaeton Rogers; The Fountain in the Park; Butterflies, poem; "The Children's Artist;" Pease-Porridge Cold; A Quiet Time for All Concerned, picture; The Frog's Tea-party, verses; In Nature's Wonderland, Chapter VIII.; Was Kitty Cured? "Strawberries! Ripe Strawberries!" The Month of Roses, picture; The Treasure-box of English Literature; Saltillo Boys, Chapters IV., V. and VI.; An Italian Fisher Boy Mending his Nets; The Giant Picture Book; For Very Little Folk; Jack in-the-Pulpit; The Letter-box; The Riddle-box

"STRAWBERRIES, RIPE STRAWBERRIES!"

"Strawberries! Ripe strawberries!"
Shouted big Johnny Strong:
And he sold his baskets readily
To folks who came along.

But soon a tiny voice piped forth,
"Me, too!" Nell could not shout
As John did. Yet she too must sell
The fruit she bore about.

"Ho, straw-berr-e-e-s!" roared lusty John.
"Me, too!" piped Nell, so sad.
And Johnny made good sales that day,
But Nell sold all she had.
—St. Nicholas for June, 1881.

PHRENOLOGICAL JOURNAL.—Contents: William Windom; Responsibilities of Genius; Studies in Comparative Phrenology; Does Death End All? Sir Josiah Mason; Plant Organization; Some Thoughts on the Problem of Poverty; A Puritan Child; The Young Folks of Cherry Avenue; What is a Cold? Hygiene of Railway Travel; Bread-mold in the Microscope; Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; Personal—Wisdom and Mirth—Library—Publisher's Department.

Physicians of all Schools use and recommend Hop Bitters; take their advice.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING HOUSEHOLD HELPS—CONCLUSION.

MARY WAGER-FISHER.

THE greatest difficulty lies with women who have kind husbands, but whose circumstances are such that it seems impractical or extravagant to hire help even when it can be had, and the strength of the wife is overtaxed to meet the deficiencies of income. She is ambitious and economical, and desirous of "getting on" in the world, and still intelligent enough to see that she *is* overworking, but obliged, as she *thinks*, to keep on overtaxing herself, and all the time hoping for more ease in the future.

For such women there is nothing to do but to stop at once, and let things go, just the same as if they were sick or unable to get about. When I I was a young girl I was extremely fond of needlework, and often applied myself so closely to it as to produce a "pain in my shoulder." My father, upon learning of it, commanded me, with great severity, to drop my work of any and all kinds the moment I felt the pain; and the discipline was one that I commend to others, and especially to all women who are mothers. In the family the life and health of the mother is the highest of all considerations. It is better for children to grow up in poverty than to be deprived of their mother, and the mother should make it a rule of her life to save herself at all cost. To wear one's-self out in cooking, cleaning, sewing and mending that is not absolutely essential is rank folly, and I am convinced that the majority of women who overwork themselves do so in the performance of work that is *not* absolutely necessary. Some mothers, for the sake of keeping the children in school *every* day, will never keep one at home on the busiest day to take steps for her that she well knows should be taken. The "last straw" of others is in scrubbing and scouring, in running the sewing machine, in making a rag carpet, in spraining the back at house-cleaning time by lifting heavy things, or in getting up an elaborate dinner. A physician said to me not long ago, "The curse of American women is having a pain in the back; it means being TOO MUCH ON THE FEET." And undoubtedly the greatest and most important reform, fraught with the highest benefits to the American nation, would consist in inducing American women, at all hazard, to take better care of their health. The first and chief thing in the rearing of a daughter is to make her a fine animal, and to so thoroughly permeate her mind with the idea that she must take such intelligent care of herself that her health will always be robust and perfect, as to make it the great fact of her existence, and that if it be the chief end of man to glorify God and enjoy Him forever, in the language of the catechism, it is the chief end of woman to have good health. A healthy woman in her very existence of sweetness and beauty glorifies her Creator, and she certainly enjoys Him and His creations infinitely more than can a woman who has no health in her.

With many women Sunday is no more a day of rest than Monday. To such let me commend the way of a lady whom I know, and who is a very rare lady, indeed, in the best sense of the word. It is a law in her household that on Sunday no work but what is purely essential shall be done. If the floors get dirty, or things get out of order, they remain so. There is no sweeping, or "brushing up," or ordering of things. Her idea is that in the week there shall be *one* day of almost total abstinence from work, and she makes that day Sunday. It would be well if all women would oblige themselves to observe certain hours *every* day for sitting down—*come what will*. I believe it is the only safe way.

Another very safe way for farmerines is to sit out-of-doors. Many country women live more indoors than city women do. After the work of the house is over, instead of sitting in the open air, they drop into a rocking-chair in the house for their rest. When there is a cool, shady porch or tree near the door, it will be found refreshing to do as much work as is possible there, away from the heat of the kitchen. Vegetables can be prepared, fruit picked over, and all the sewing and repairing during Summer can be pleasantly accomplished in the open air. It saves, too, a great deal of litter and dirt in the house. In order to restfully enjoy a porch it needs furniture, such as comfortable chairs, a table, and if one has an old lounge or settee for it, it will be found that the "men folks" will "take to it," and thereby save much sweeping, dusting and cleaning in the house. Hang a rack or pocket for newspapers there, too.

There are some things that seem to result in precisely the opposite way to what they should. One would suppose that farmers' wives, for example, living in the country, and commanding pure and nutritious food, would be rosy-cheeked, plump and fresh-looking, while the fact is, they lose their youth and fine color sooner than any other class of women. They have a faded, thin, dragged out appearance by the time they are forty, that no woman ought ever to have at any age. I think it is better to wear out, than to rust out. But I know of nothing that earth can give that equals in value good health, or is a compensation for a broken-down body. And when women work beyond all reason, do they ask themselves, "for what good?" If a woman loves her husband who loves her, and loves her children, in what better way can she express her affection for them than by taking the best possible care of herself, so that her life may long be spared to comfort and counsel them? We all are apt to make one common mistake, and that is, to act upon the idea that what we *do* for our loved ones, is worth more to them than what we *are* to them. This is all wrong. A mother who is a complete invalid, may be worth more to her family than any twelve women who can work. To put the whole matter in a nut shell, any woman who works beyond her strength, unless in an extraordinary case of life and death, is, without question, foolish beyond excuse. Nobody in her family loves her better for it. She gains nothing by it in the long run, and loses in the end. If I could put what I feel in regard to this weakness of women, into words, I am sure that every mother who reads this would take better care of her health than ever before. My own mother was one of those delicate, ambitious women sacrificing herself without stint to her family, and she broke down at the early age of thirty-eight, and her children were left motherless. I never think of her untimely death, of her unnecessarily laborious life, of her ambition for her children gratified at such a terrible cost, without a feeling of indignation that so valuable a life as hers was sacrificed for such paltry considerations. And there are thousands of mothers such as she was. May they be warned of their folly before it be too late.

There is a vast difference in men. Occasionally there is a man who protects his wife against herself, but as a rule, if a woman is inclined to be careless, indifferent, or stupid in regard to overtaxing herself, her husband will not be a stumbling block in the way of her shortening her life, so that if a woman does not look out for herself, she will be poorly looked after. And so long as she has common sense she ought to look after her own welfare. That is what she was given brains for, and she should not expect others to do for her what she should do for herself. The instinct of self preservation is probably the strongest instinct our Creator has placed within us, and we ought to remember always that in order to preserve our bodies, we must use our strength with due moderation. There is nothing more delightful and enjoyable, than to be able to work with enjoyment, to feel strong and full of vigor, and to maintain this ability to the very end of a long life, is to use life to the very best advantage, so far as happiness is concerned. So, remember that *life* is *more* than meat, and the *body* more than raiment.

As for "busy seasons" on the farm, do not allow yourselves to be overtaxed then. If men can be hired for the farm, have one detailed a part of each day, or so much as is necessary, to help in the house. Such help should be as much a part of seed time and harvest in-doors as out-of-doors. And *insist* upon having the help, for it is better that grain go ungathered than that you make yourself ill by overwork.

Here in the East, we hear much of the efficiency and cheapness of Chinese "help" in the house in the West. If any RURAL-reading woman has such help, I for one will be glad to have her give her opinion thereupon.

DRINKS FOR HOT DAYS.

Lemon Sirup.

SQUEEZE the juice from 12 good-sized lemons, grate the rind of half into it and let it stand over night. In the morning strain, squeezing as much oil from the grated rind as suits your taste, add to it six pounds of white sugar and boil until it becomes thick. Bottle and cork. A tablespoonful of this sirup in a glass of cold water makes a very refreshing drink.

Raspberry Vinegar.

Fill a stone jar with raspberries, red or black, cover with pure, strong vinegar and let stand a week. Then strain, pressing out all of the juice from the berries. To each pint of this liquid add a pound and a half of lump or granulated sugar and let boil until the sugar dissolves, removing scum that may arise. Let cool, bottle and cork tightly. Two tablespoonfuls of this in a glass of ice water make a delicious drink.

Cream Nectar.

Two pounds of lump or granulated sugar, two ounces of tartaric acid, juice of one lemon, half a cup of flour mixed smooth in a little water, and three pints of water. Boil five minutes. When cold stir in the whites of three eggs beaten to a stiff froth and a half ounce of wintergreen or any other flavoring one may fancy. Bottle and keep in a cool place. When wanted put a fourth teaspoonful of soda into a glass of ice water and then add two tablespoonfuls of this sirup.

DOMESTIC RECIPES.

Cabbage Salad.

A SMALL, firm head of cabbage sliced fine, a cup of good vinegar, a tablespoonful of butter, two beaten eggs, a tablespoonful of sugar, pepper and salt, and a cup of rich, new milk or thin cream. Put the vinegar on to boil, add the butter, sugar, salt and pepper. When almost boiling stir in the chopped cabbage. Scald but do not let boil. Have the milk or cream heating in another vessel; when it boils thicken with the beaten eggs. Turn the scalded cabbage into a deep dish, pour over the thickened milk, toss up the mixture, cover and place where it will cool at once. Serve cold and garnish, if you like, with cold boiled eggs.

Snow Cakes.

One scant cup of butter, two cups of white sugar, a small cup of milk, whites of five eggs, three cups—rounding full—of sifted flour, two teaspoonfuls of baking powder sifted with flour, vanilla or lemon flavoring. Bake in small round tins.

Chocolate Caramels.

Into a saucepan put one cup of thick sweet cream, two cups of brown sugar, a tablespoonful of corn starch stirred smooth in a little of the cream, a tablespoonful of butter, and a bit of soda, size of a pea. Boil slowly half an hour, stirring to prevent burning. Mix smooth with a little cream or milk seven tablespoonfuls of grated or scraped chocolate. Draw the saucepan to the side of the range and add the chocolate. Put over the fire and boil ten minutes longer, stirring constantly. When it makes a firm, glossy coat on the spoon it is done. Flavor with vanilla just as you take from the fire. Pour into buttered, shallow tins. When firm enough check with a knife into squares. Milk may be substituted for the cream, but add another spoonful of butter.

Ripe Currant Pie.

One coffee-cupful of crushed currants, one of sugar, a tablespoonful of flour mixed smooth in one of water, yelks of two eggs. Bake with an under-crust only. Beat the whites stiff, sift in two spoonfuls of powdered sugar, spread over the top of pie and slightly brown in oven. MARY B.

Bread-making.

The following is an improvement in bread-making: At noon throw the scalding hot potato water on a pint of flour, stirring in two or three mashed potatoes. When tepid add a small cup of yeast and set it away until evening. Then make corn mush, one part to three of flour, mixing in hot weather with cold water, and in cold weather with warm water. In the morning it is ready to make into loaves and by the time the oven is hot they will be light enough to bake. In this way the housewife can get her baking all out of the way by eight o'clock in the morning. P.

A Cheap and Good Paint.

Make of unslaked lime, two gallons of white wash, add to it two and a half pounds of brown sugar and three ounces of salt. This, when applied, becomes perfectly hard and glossy. By mixing lampblack a beautiful lead color can be obtained; for yellow, yellow ochre; for red, venetian red. This is a strong and durable paint. RUTH.

Don't physic, for it weakens and destroys, but use Hop Bitters, that builds up, up!—*Adv.*

Miscellaneous.

ST. JACOBS OIL
TRADE MARK.

THE GREAT
GERMAN REMEDY.
FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

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$5 to $20 per day at home. Samples worth $5 free. Address Stinson & Co., Portland, Maine

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For full particulars which will be sent free, address CHAS. L. COLBY, Land Commissioner, Milwaukee, Wis

News of the Week.

HOME NEWS.

MONDAY, June 13, 1881.

There was a little excitement at Albany on the 9th inst., when Assemblyman Bradley informed the House that he had received $2,000 to vote for Depew. The money was handed him on the evening of the 8th, and Bradley, considering it a bribe, handed the money over at once to Speaker Sharpe. When the voting took place on Thursday Mr. Bradley said that he had received the amount mentioned and had handed it to the Speaker, which statement the Speaker verified. Mr. Bradley called for the appointment of a committee to investigate the charges of attempted bribery. The committee consisted of seven and its jurisdiction was extended to comprise in its investigations any other cases of bribery which may be discovered. At the first meeting of the committee the testimony of Mr. Bradley was heard but nothing definite was accomplished. The charges of bribery were laid upon Senator Sessions, who appeared before the committee and denied them *in toto*, but did not deny that he had tried to persuade Mr. Bradley to vote for Depew. "Much excitement" is predicted for this week and it is thought that some of the leaders of both factions will have a chance to tell what they know about the bribery case. The voting for Senators has not changed materially during the past week.

THE New York State Press Association held its annual meeting this year at Utica. Geo. Wm. Curtis delivered the oration. Ellis Roberts of the Utica Herald gave a reception to the members on the evening of the 9th. On the 10th inst. the party took a trip to the Thousand Islands. The next convention will be held at Jamestown, Chautauqua County.

On Tuesday the 1st, the Whittaker trial was brought to an end by Major Gardner's summing up for the Government. The Court met again in secret session on Friday, but the public will not know the result of its deliberations until the President announces his approval or disapproval of the decision of the Court. It is said that the total cost, to all parties, of this trial and the Court of Inquiry at West Point is $37,500.

The graduating exercises at West Point Military Academy and at the Annapolis Naval Academy took place on the 9th inst. There were 52 graduates at West Point, of whom John Mills of Michigan stood first. At the naval academy John S. Schock of Pennsylvania ranked first in a class of 67.

A terrible conflagration destroyed nearly a fifth portion of Quebec, Canada, on the 9th inst. It is said that 1,500 families are made homeless, and the total loss it is thought will reach $2,000,000. The fire originated in a stable, and the alarm not being given promptly, it soon became impossible for the firemen to control the flames. Complaint of a lack of water is made. The magnificent edifice known as St. John's church, worth $100,000, was reduced to ruins.

The recent heavy rains have caused a great destruction of property in the Alleghany region in Pennsylvania. Travel has been entirely obstructed on some railways by wash-outs and land slides, the loss in lumber washed down stream is great, and dwelling houses in Alleghany City were submerged. At Oil City railroads were abandoned and hundreds of acres of land were under water.

The position of Commissioner of Deeds, to which Fred Douglass has been appointed, is worth $7,000 a year. Sheridan, who was displaced by Douglass, says he liked the position and told the President he wanted to keep it, although he was overworked. His office hours were from half past 12 to quarter of 1 every other Wednesday. Well, $18 a minute for actual office work isn't bad.

East St. Louis has been lighted by the tower electric lamp system, the water tower on the river, a building over 200 feet high, being utilized for this purpose. On this a light of 32,000 candle power was fixed. The experiment was a success, lighting up the town and river for over a mile at a cost of $5 a night.

They have discovered a receipt for the sale of waste paper by Pitney, of the Treasury Department for $2,000. The cash book was examined and no entry of the item was discovered anywhere. Pitney can't explain. That's the way the money goes.

Mrs. James Vick, Sr., mother of the Rochester florist, died last week. She was a remarkably kind-hearted and self-sacrificing woman.

A terrible hail and rain storm passed over Deadwood, D. T., lately, doing great damage. Hailstones of the size of hen's eggs fell for over two hours. One stone measured over 22 inches in circumference. The whirlwind struck in Deadwood gulch, near the confluence of Whitewood and Deadwood gulches, completely destroying four houses, killing one woman, and seriously injuring three other persons. Hundreds of trees on the hillside were uprooted and hurled, in some instances, a distance of 500 feet. Telegraph poles were torn up for a distance of nearly a mile.

St. Louis has begun the war with the inevitable. A number of her wealthy citizens have signed a vigorous protest regarding the charter of an elevated railway, at present under contemplation. The protest would be more formidable were it not for the fact that equally wealthy and influential citizens urge the establishment of such a road.

A memorial Hall erected at Brown University, Providence, R. I, by the Hon. William F. Sayles, as a monument to the memory of his son, has just been presented to the Corporation of the College.

Mrs Garfield who has been sick for several weeks with malarial fever is recovering, and the Presidental family will soon leave the malarial atmosphere of the White House for the more wholesome air of the Soldier's Home.

Had Slept Little for Forty-Eight Hours.

A gentleman writes: "I had an acute attack of *Bronchitis and Asthma* when the Compound Oxygen Treatment arrived, and had slept but little for forty-eight hours. Took Treatment for two days. My Bronchitis and Asthma about gone." Treatise on "Compound Oxygen sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia Pa.—*Adv.*

AGRICULTURAL NEWS.

Gov. Cornell of this State, has vetoed as unconstitutional the Sheldon anti-oleomargarine bill which provided that wherever the stuff was used in hotels, restaurants and boarding-houses, notices should be conspicuously put up to the effect that "imitation butter" was used there. The same unhappy fate for the same reason has befallen the Fenner anti-oleomargarine bill which was gotten up as the result of the visit to this city of that nincompoop investigating committee. Long ago we expressed our fear that these bills would never become law, and although Fenner's bill was amended somewhat in accordance with our suggestions, the amendments were not radical enough. It is to be hoped that by next session of the Legislature a bill will be framed wisely enough to escape the dangers which have killed these abortions. .....The freight on wheat from N. Y. to Liverpool is 4s. 6d. per ton; the railway rate from Liverpool to Birmingham is 12s. 6d.....News comes from Algiers that in the departments of Oran and Constantine cereals, fruits and vegetables are all lost. The French settlers are selling their beasts of burden and the natives their flocks for a mere nothing, as it is impossible to find feed for them.

In Boyle County, Ky., the fly has almost destroyed the wheat crop.....Locusts are splitting the limbs of fruit trees in Oconee County, S. C., so that they die..... About two-thirds of the apples in Ohio have blighted and fallen off the trees... ....Wheat birds have totally destroyed large fields of the growing grain of McLennan County, Texas.....In Fannin County, Texas, grasshoppers are found in millions, and farmers are in a great state of alarm..... Nevada is completely overrun with grasshoppers. They consume a crop, leaving nothing green behind them. .....The farmers around Kirksville, Mo., report the country alive with chinch bugs that are doing great damage to the crops.....Grasshoppers are on the march on the Truckee, Cal., meadows. They ate up forty acres of prime wheat for one farmer.....The corn in much of the State of Indiana has been so thoroughly damaged by wire worms and grubs that replanting has become necessary.....The North Carolina locusts are doing great damage to young apple orchards. They split the fruit-bearing twigs, which soon wither and fall to the ground.....Grubs or frost have made very many missing hills among the hop fields of Oneida, N. Y. Many new fields are being set out, but the crop will be short for a year..... Reports from Strausstown, Pa., say that the army-worm is destroying the corn as fast as it makes its appearance above the ground. It ruins a tobacco field in a single night.....A parasite has appeared in the orange groves of the West Indies, Florida and California that has ruined vast numbers of trees, and threatens to seriously interfere with orange culture..... Kitchen gardens in Bergen County, N. J., are many of them ruined through the cut-worm and rose bug. Tomatoes are now in blossom and melons in their their third leaf, but the worm turns the former upside down by cutting it off just under the ground, while the bugs will eat up every vestige of the latter in a few hours..... The Charlotte, (N. C.) Observer announces the appearance of the seventeen-year locusts in that vicinity by millions, and they are eating up everything. It says: "They cover the landscape over with their yellowish-brown damask wings like Summer dusters on parlor furniture. They come, millions upon millions, they come. From every direction they call to each other, 'Come over here and help us eat them up.' The woods are filled with them; the ground is alive with them."..... ....The chestnut trees around Echo Lake, in Passaic County, N. J., look as if scorched by fire. A pink-headed worm three-quarters of an inch long is found rolled up in the leaves. The pests have so thoroughly sapped the trees that it is thought they will die.....At Carrolton, Ill., since May 20 locusts have been coming out of the ground until now the woods and orchards are resonant with their music.....At Vandalia, Ill., the woods are full of them, and persons riding on railway trains in passing through woodlands can distinctly hear the din of the locusts above the rattle of the cars... ....At Belleville, Ill., their numbers are beyond computation.....At Eldorado, Ill., a woman died after eating some mulberries which were supposed to have been impregnated with locust eggs.....At Paducah, Ky., the locusts are swarming in myriads, and the noise made by them is a matter of complaint to those who live in suburban places,.....At Little Rock, Fort Smith and Hot Springs, Ark., they appeared recently in large quantities but have disappeared.....At Mobile they are making deafening noises in the woods. The locusts are not generally destructive, but they frequently injure young orchards and occasionally sting a human being, sometimes fatally.....It is stated that the Canada Pacific Railway Company has sold to a group of French agriculturists 200,000 acres of land at $1.25 per acre, and that the buyers intend to colonize the land and promote Canadian competition with the United States.

Mr. Gladstone has become a life member of the Edinburgh Agricultural Society.....The island of Cyprus is overrun with locusts, which are making fearful ravages among the wheat crop.....

The Kansas Supreme Court has decided in a recent case that if a farmer stacks his hay "near" the railroad track (in this instance it was 150 yards away), he is bound to take notice of the increased danger and guard against fire. If he does not, he is guilty of contributory negligence.....Whole fields of promising strawberries have been ruined in Long Island by a minute wire-worm that attacks the roots.....A dispatch to the Chicago Evening Journal from Des Moines says that the losses to Iowa farmers this year from poor seed will amount to $2,000,000... ....The Short-horn breeders of Canada have formed an association, the principal object of which is to establish a Canadian herd-book with a higher standard than that which obtains in the herd-book now published by the Agricultural and Arts Association The latter publication will now cease..... ...The London Mark Lane Express of the 6th inst. says:—"Wheat made a strong and healthy growth under last week's brilliant Summer weather. All other crops are retarded by the same cause, except where there have been occasional thunder showers. A steady rain Sunday and throughout the night will greatly help all crops."

Entries for the fifth volume of the Holstein Herd Book will close July 1st, 1881. Blank forms for application for record and transfer of animals, also for milk record, will be furnished by the Secretary, T. B. Wales, Jr., So. Farmingham, Mass. Owners of Holstein cattle desiring to have records of butter published in the Herd Book, may forward the same to Mr. Gerrit S. Miller, Peterboro, N. Y. .....The following from upper Silesia three month ago throws light upon the enormous arrivals at Castle Garden: "No grain, no potatoes, no food for cattle, no seed for sowing. Snow and cold without, hunger and sickness within," Soup houses and public kitchens have been started in seventeen villages.

Reports were received in this city yesterday to the effect that the recent rain storms would injure the crops in Western States. It was stated that in the southern part of Illinois thousands of acres of farming land were covered with water. The potato crops in some of the Southern States were injured. The fruit crop has been damaged in many places, and it is thought that if a season of extremely hot weather follows the crop will be entirely destroyed. No news of any accident to vessels was received at the ship news office yesterday.....The following telegram was received here on Saturday. Nashville, Tenn., June 10.—"Full advices from the peanut region of Tennessee confirm the reports of a comparative failure of the present crop. Many farmers have plowed up their land, and it is said that many others will be satisfied with a fifth of a crop." The day before this telegram was published the peanut dealers and brokers in this city received the following notice signed by a large peanut firm in Nashville: "We can state to you that the coming peanut crop will be a complete failure this season." These notices come, there's little doubt, from a syndicate who wish to make a fortune by "cornering" peanuts, the Tennessee crop having been bought by a few speculators who have it stored in Cincinnati.

Tell the Sick.

Thousands of lives are destroyed by diseases of the kidneys and liver. Kidney-Wort would save them. Tell the sick of it, and that it is for sale by all druggists in either dry or liquid form.—London Times.

I have used Higgin's English Salt and consider it superior to Ashton's. I ordered Higgin's Salt, but the Ashton's was sent me and I returned the Ashton's. O. M. RICHARDS.

Elmo, Wis., March. 9, 1881.

Women that have been pronounced incurable by the best physicians in the country, have been completely cured of female weakness, by the use of Lydia E. Pinkham's Vegetable Compound. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

When the brain is wearied, the nerves unstrung, the muscles weak, use Hop Bitters.

BURNETT'S COCOAINE

Has Received Universal Endorsement.

No other preparation possesses such remarkable properties for embellishing and strengthening the hair and rendering it dark and glossy. It cures baldness and eradicates dandruff.

Burnett's Flavoring Extracts are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, June 11.

Chicago.—WHEAT unsettled and irregular, but active; No. 2 red Winter, $1.04@1.12; No 2 Chicago Spring, $1.08¾ cash; No. 3 do. 95@99¾c.; rejected, 73@76c. CORN strong at 43¾@43¾c. cash; sales at 42¾@44c., July; rejected, 36c OATS active and firm at 37¾c. cash.; rejected, 31¾c. RYE dull at $1.02. BARLEY strong at $1.08. PORK quiet but firm at $16.10 cash; $16.12½@16.15, July; $16.25, August. LARD quiet but firm at $10.70 cash; $10.72½@10 75 July; $10.75@10.77½ August. BULK MEATS steady and unchanged. CHEESE in fair demand; new full creams, 8@9c. CLOVER SEED steady and unchanged at $3.75@4.15; flax firm at $1.20. BUTTER—Only a small local inquiry for choice creamery and fine dairy, and market quiet and rather weak. Offerings liberal; creamery at 19@20c. for choice to fancy; good do., 17@18c.; dairy at 13@16c. for fair to choice and fancy in a small way at 17c.; white and streaked, 8@9c.; grease stock, 6@7c. per pound; fresh-made, ladle-packed, 12@13. HOGS—Demand good; market active but steady; poor to good mixed packing, $5 55@5 85; light, $5 80@9 95; choice heavy, $5 90@6.20; culls and light Yorkers, $4 50@5.50. CATTLE—Market active and very strong; exports, $6@6.30; good to choice shipping, $5.75@5.90; common to fair, $5.25@5.65; distillery-fed, $5.50@6.10; far West corn-fed, $5.60@6; Northern wintered Texans, $4.50@5 50; through grass Texans, 3 25@4 40; native butchers active but steady at $2.50@5; stockers and feeders strong, with a fair demand at $3.50@5. SHEEP—Market very weak; all sold; Texas shearlings, $3 65; common to medium, $4@4.50; choice, $4.60@4 80; lambs, ₩ head, $2@2.60.

Cincinnati.—WHEAT firm; No. 2 red Winter at $1.12@1.16. CORN strong; No. 2 mixed 46¼@47½c. OATS quiet but firm; No. 2 mixed 40c. RYE dull; No. 2 at $1.05 asked, $1.03¼ bid. PORK quiet at $16 26@16 50. Lard nominally unchanged. Bulk-meats firm; Bacon—shoulders $6 50; clear rib, $8 95; clear sides $9.35. HOGS steady; common and light, $4 25@5 85; packing and butchers', $5 30@6.15. BUTTER—Fancy creamery sells at 21@22c.; prime do. at 20c.; choice dairy at 15@16c; prime to choice Western Reserve at 14@15c.; prime to choice Central Ohio at 12@14c., and common do. at 10@11c. ₩ lb. CHEESE.—The receipts have been light, but the market has ruled somewhat easier, for good to prime factory at 7@8c. ₩ lb. At the close there is a light supply of prime stock and a firmer tone prevails, but inferior is dull and sells at 5@6c. EGGS.—The market has been stronger and prices have rapidly advanced under light receipts, with sales at 16@17c ₩ doz., but at the close the advance seems to have culminated and a decline is anticipated. NEW POTATOES.—The receipts are more liberal, but they consist largely of small size and stock in bad condition. Prime to choice sell at $4 50@5.50 ₩ bbl., but prices range down to $1 for inferior

St. Louis.—WHEAT No 2 Red Fall, $1 11½@1 11¾ cash and June; $1 10½@1 11½, July; $1 09¾@1 09¾ August; $1 09½@1 09 ⅞ September; $1 08⅝@1 08⅞ all the year; No 3 do, at $1 05¾; No 4 do $1 00½ bid. CORN 45c@45½c, cash; OATS 36c@36½c cash and June; Pork quiet; jobbing, $16 75. Lard firm at $10 55 asked. Bulk-meats in good demand and firm; Shoulders, $5 65; Clear Rib, $8 40; Clear Sides, $8 60; large sales of Winter Clear Rib for smoking on private terms. BUTTER.—Creamery 20@23c; dairy 16@18c—selections slightly more; prime 12@14c, common 7½@8c; Dear-by make (in pails) ranges from 7c for low to 10c for sweet yellow. HEMP.—Common undressed dull at $80@90; prime to choice in light supply—at $95 to $100; dressed $145@155; shorts $115 to $125; hackled tow $50 to 55. FLAXSEED scarce and wanted at $1 05 here and $1 06 in East St. Louis, pure test. Castor Beans prime in car lots ready sale at $1 40. Hemp Seed quiet at 95c@$1 for clean. Hogs fairly active; Yorkers, $5 60@5 65; mixed packing, $5 30@5 75; choice to fancy, $5 80@6; Cattle market active and firm; prices 10c@15c. higher on some; exporters, $5 65@6 10; heavy shipping Steers, $5@5 60; light do., $4 50@5; butchers' Steers $4 20@4 90 feeding Steers $4 80@5 15; stockers' Cows and Heifers, $3 25@4 25; grass Texans, $3 20@4 25. Sheep market firm; demand exceeds supply; fair to choice $3 25@4 50.

There are more cures made with Hop Bitters than all other medicines.—*Adv.*

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 11, 1881.

BEANS AND PEAS.—There has been no wholesale demand for beans and quotations are all the market will bear, even for moderate use. Fancy beans are almost nominal. Green peas dull at $1.50@1 55 for Wis. Southern B. E. peas in light call at $3.25 per 2-bush bag.

Marrow beans, prime, $2.47@2.50; other, $2.30@2.40; medium, prime, $2.42½@2.47½; other, $2.20@2.35; pea, $2.25@2.50, white kidney, $2.30@2.50; red kidney, prime, $1.57½@1.62½; fair to good, $1.40@1.45; black or turtle soup, $1.40@1.45.

Receipts for week, 2,413 bush.

Exports do. 269 pkgs.

About 4,000 bush. California beans are on the way.

BUTTER.—Prices have held their own during the week and at the close there is a good steady tone for prime table qualities. Western arrives freely but State still leads the trade especially in creamery goods. All butter now shows good pasture color and any white or fodder-fed remnants that have not been worked off will have to be marked cheaply. In this way common Western will suffer the most. The loyal butter dealers are much displeased with the governor's veto of the oleomargarine bills. If the fears of good students of this subject of pure butter and substitutes should be realized it certainly looks as if interior business will be seriously disturbed on the price point. Even Western dealers who now have the swing of the low priced trade fear the competition of imitations.

Creamery—Western, good to prime, 20@21c.; State and Penn. 20@22c.; poor, 18@19c.; sweet cream, 19@20c.; State pails and half tubs, choice, 20@21c.; fair to prime, 18@19c.; Welsh tubs, 18@19½c; poor State, 14@17c.; firkins yellow, 19@22c; Western imitation, 16@18c.; dairy, fine, 16@18c.; other, 14@15c.; factory or ladle-packed, best, 15@16c.; other, 10@14c.; very poor Western, 9c.

Receipts for week, 24,800 pkgs.; exports, 8 895 do.

CHEESE.—Easy prices have ruled the entire week and shippers have cleared the market of most of the upper grades of State. The pretty large remnant of low grades is hard to move. Buyers would rather take best at highest present price than risk the slow sale of inferior goods. Export business for the month ending June 1st compares well with last year. Western cheese is not of attractive quality and few make the extremes.

State factory, fine, 9¼c., fair to prime, 8@9c; poor to fair, 7@8c.; Ohios, fine, 8¼@8¾c.; other 7½@8c; part skimmed, 3½@4½c.; full skims, 2@3c.; Wisconsin poor to fine factory 7@8½c.

Receipts for week, 3 814 boxes.

Exports for week, 77,993 boxes.

Liverpool cable, 50s.

Steam to Liverpool, 20@25s.

COTTON.—The market has indicated considerable vigor without any very notable heavy dealings.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7 13-16	8 1-16	8 1-16
Strict ordinary	8 5-16	8 11-16	8 11-16
Good ordinary	9¾	9 9-16	9 9-16
Strict good do	9¾	10 1-16	10 1-16
Low middling	10 7-16	10 13-16	10 13-16
Strict low middling	10 13-16	11¾	11¾
Middling	11 1-16	11 5-16	11 5-16
Good middling	11⅜	11⅝	11⅝
Strict good middling	11⅝	12⅛	12⅛
Middling Fair	12⅛	12⅜	12⅜
Fair	13⅜	13⅝	13⅜

STAINED.

Good ordinary	7 7-16	Low middling	9 1-16
Strict good ordinary	8 7-16	Middling	10⅜

The close of the market for futures was officially reported as follows: June, 11.07@11.09c.; July, 11.10@11.11c.; August, 11.18@11.19c.; September, 10.74@10.75c.; October, 10.32@10.33c.; November, 10.20c.; December, 10.20c.; January, 10.32@10.33c.; February, 10 44@10.45c.; March, 10 57@10.59c.

Receipts for the week 13,158 bales.

Exports do. 11,416 do.

DRIED FRUITS.—There is more disposition to sell apples than before. Quotations for evaporated are extreme and other process are weak, with a few foreign shippers bidding a fraction under last week. Peaches are quiet and we see very few of any sort offering. There has been some trade in cherries, though not at the closing prices. Blackberries firmer. Other sorts have a fair trade for the season.

Apples evaporated choice 8¾@9c; fair to prime 7¾@8¼c; North Carolina sliced, common to best 4@5c. Va, do. 3¾@4¼c; Tenn in bbls. 4@4½c. do. bags 3¾@4c; State fine cut 4@4½c., quarters 4¾@4¾c; Western, 4@4¼c; evaporated peaches peeled 27@30c.; unpeeled 13@14c; sun-dried peeled 17@22c; unpeeled 5@5¾c. Plums 11@12c. Blackberries 8c. Cherries 13@14c. Raspberries 23@24c. Whortleberries 11½c.

Receipts for the week, all kinds, 2,245 pkgs.

Exports dried apples, 400 pkgs.

EGGS.—Receipts for week, 10 850 bbls.; do. last week 11,900 do. Prices have ruled steady and in buyer's favor during the week under moderate receipts. At the close the feeling is weaker as a good many cold storage parcels are appearing. These sell ½c. under fresh. Sales are mainly at average loss.

Near points, 21c.: State and Pa., 19½@20c.; Western

and Canada, 19@19½c.; Md. and W. Va. 19c.; poor lots, 18@18½c.

FLOUR—Has sympathized with a strong wheat movement and has been good, drawing freely upon the upper brands, both for export and home use. The latter call is unusually steady, as prices are down to a point that admits very free consumption.

No. 2 ₱ bbl., $3.00@3.50; State and Western superfine, $4.@4.50; city mills extra, $6@6.25; Spring wheat do. $4.60@5.00; Spring XX and XXX, $5.25@6.10; patents, $6.50@8; Ohio extra hoop shipping $4.75@5.25; trade brands $5.25@6.25; Southern, home extra, $4.85@5.25; do. double extra, $5.50@6.00; do. family, $6.25@7; Southern shipping $5.25@5.85; do. XX and family, $6@7.00. Rye, $5.40@5.85. Corn-meal, Brandywine, $3.25@3.40; Western, $2.90@3.20.

Receipts of flour for week, 29,300 bbls.; do. corn-meal, 1,173 bbls.

Exports of flour, 57,171 bbls.; do. corn-meal, 3,150 bbls.

FRESH FRUITS.—It has been a rough week for berries. Quotations of yesterday were the first that had any paying round for the whole week. At one time the market was so poor here that large lots were sent direct to Boston and other Eastern points. Southern berries have not paid picking and freight.

Up river prime, ₱ quart, 10@12c.; do. thirds, 3@4c.; upper N. J., ₱ quart, 8@10c.; do. ₱ pint, 3½@5c.; Southern N. J. ₱ qt. 4@8c.; Md. and Del., 4@8c.; small hulled baskets, ₱ 100, $2@2.50. Gooseberries, $1.50; cherries, 10@12c.; prime other, 3@7c. It is feared the rain has hurt a great many near-by early trees. Some splendid Georgia peaches are in; quoted at $2.50@3 ₱ 8 bush box. Hot-house grapes, Black Hamburgs, $1@1.50 per lb. Peanuts dull with unfavorable weather; Va. hand-picked, 4½@4¾c. ₱ lb.; fancy, 4@4¼c; extra prime, 3¾@3¾c.; good to prime, 3@3½c.; shelled, 2¾@3c.; pecan nuts, 10c.

GRAIN.—Crop reports of wheat have been unfavorable and prices have ruled higher. There seems to be, however, some good solid foreign wants, and exporters have dealt freely, notwithstanding the enhanced values of some parts of the week.

Corn has sold well speculatively, and the exportation for the week is remarkably close to wheat.

Oats have had an unsettled week, but close with a steadier feeling.

Rye quoted in small sales.

Canadian peas 81½@85c to arrive.

Wheat, Spring $1.05@1.25; do No. 2 $1.18@1.20; do. No. 3, $1.12@1.14; red Winter No. 2, $1.05@1.25; red Winter $1.16@1.31; white Western and State $1.17@1.26. Rye, $1.03@1.11. Oats, white No. 1, 52½@53c.; white No. 2 48½@49½c.; white No. 3 47@47½c; mixed No 1 48c; do, No. 2 47½c.; do No. 3 46@47c. Corn, Western mixed 47@55c.; do. No. 2 55@56½c.; do. white 60@64c; Southern do, 63@65c.

Receipts for week, wheat, bush., 1,499,300; corn, do. 1,046,675; oats do. 199,350; rye, do. 3,223; malt, do. 96 250; rice pkgs. 700.

Exports for week, wheat, bush 922,975; corn, do. 770,327; oats, do. 3 500; rice, pkgs., 35.

HAY AND STRAW.—Exports of hay and straw for week 1,625 bales. Prices for hay show no recovery and are not likely to until better quality shows. There is quite an accumulation of low grades. Straw unchanged.

Choice retailing timothy hay 90@95c. ₱ 100 lbs.; second quality, 70@8 c. do.; shipping 65@65c. do.; clover mixed 50@75c.; do. pure 65@70c.; prairie hay, 65@70c. Long rye straw $1.0.@1.10 ₱ 100 lbs.; short do. 60@65c. do.; other grain, 45@50c. do.

HOPS.—Demand small for brewing or export. Supply under good control especially of fine brands of new.

N. Y. State crop of '80 good to prime 20@23c; fair to good 18@20c; low grade 13@15c; crop of '79 good to choice 16c; low to fair 12@15c; N. Y. State olds 12@17c; eastern crop of '80 low to choice 15@20c; Wisconsin do. 15@22c; Cal. do, good to choice 18@22c.

Exports for week, 429 bales.

Receipts for week, 47 bales.

MILK.—Cool weather has continued to check sales and considerable milk was returned to the country. The average for sales which occurred up to Tuesday was 88½c. ₱ can of 40 quarts. Prices paid to farmers for the month of May was 1½@3c ₱ quart.

POULTRY AND GAME.—As with many other things the dressed poultry market has been so nearly deserted during the week that a small supply proved a heavy one and prices are actually lower. City killers are operating quite steadily and that takes off some trade from other packed.

Dressed turkeys, choice ₱ lb 14@16c.; coarse 12@13c; scalded, 11@12c.; Phila. Spring chickens 35@45c; N. J. 30@35c; Phila. Winter 30c; fowls, Phila. d.-p. 15@; N. J. d.p. 13@14c.; do. scalded 12@13c. State and Western 10@12½c; do. d.p. 13@13½c. Ducks, Spring, 25@30c.; old 12@14c.; Squabs, white, ₱ doz. $2.50@2.75; do. dark, $1.25@1.50.

Live poultry—The market is dull; remote Southern poultry arrives in too thin a condition to sell well. Turkeys are a decided drug. It is thought the late severe rains will hurt the young broods of turkeys. Ducks are lower. Fine geese in demand.

Spring chickens prime ₱ lb 28@33c.; other 20@25c. Fowls, ₱ lb, 11@12c.; roosters, 5@6c.; turkeys, 9@11c.; ducks, ₱ pair 50@75c.; geese, extra $1.50; other 75c@$1.25 tame pigeons, 25@30c.

There is no market offering of wild pigeons; they would sell as other game is scarce. Wild pigeons, ₱ doz., $1.00@1 75; do squab, 75c.@$1; Eng. snipe, $2.25@2.50 plover, $3.25@2.37; sand snipe, 50c.; frog's hind legs, ₱ lb, 25@30c.

PROVISIONS.—The market for hog products has wavered several times during the week, but dealers in no item have exhibited a discouraged feeling, as the impression is that ultimate recoveries will compensate for recent declines.

Pork extra prime $14 ₱ bbl.; Western mess new $16.60@16.85; old $15 50@15.85. Lard—Western steam $11@11.05 per 100 lbs.; prime city $11.00. Hams smoked city 11½@11¾c; pickled Western 10½@10¾c; shoulders, smoked city 8¾@8¾c; pickled 7¾@7¾c. Bacon long clear 8¾c. Beef W. plain mess $9.50@10 extra mess, $11.50@13; family $12.50@13; India tes, $22@24; beef hams $23.50@24.50.

Receipts for week, beef, bbls. and tcs, 3 420 pork., bbls. 830; cut-meats, pkgs, 12,700; lard; do. 18,700.

Exports for week, beef, bbls. and tcs., 1,800. pork do. 1,900; cut-meats, lbs. 3,017,632; lard, do. 2,777,300.

TOBACCO.—There is trade enough to support former prices; most dealers call the market firm.

Incessant rains have restricted a good deal of trade, while they have also very unprofitably damaged large quantities of tender produce. Strawberries in this way have lost a valuable week of the season. Had it not been for the liberal Eastern trade the week might almost be counted a blank one for owners and growers.

VEGETABLES.—There is a fair useful demand for old potatoes but prices are not strong as the Summer is here and new crop will soon be a feature. New have declined; Norfolks run to small for ready sale.

Bermuda potatoes new, $7; Chas. and Sav., $4@5; Norfolk, $3.50@4.50; do. cults, $1@2; best old rose in double head, $2@2.50; do. peachblow and snowflake, $1.62@2.37; other sorts, $1.50@1.75. Few Southern items of garden truck have a steady sale, as N. J. and L. I. have begun to ship desirable sorts. Green peas, N. J. per bbl $2@2.25; Md., $1.50@2 Norfolk marrow fats 75c@$1; L. I. stand bag $1.50@1.75; N. C. string beans, ½ bbl $1.50@2.50; Southern cucumbers, $1@1.25; do. tomatoes, $1@1.25; Bermuda ₱ 6-qt. box, 50@60c.; cabbages, Norfolk, ₱ bbl. 75c.@$1; do. L. I. ₱ 100, $4; beets, do. 100 bchs. $3@4; Bermuda onions, ₱ crate, $1@1.12; lettuce, ₱ bbl 50c@$1; squash, N. C. ₱ crate, 75c.@$1; asparagus, Oyster Bay, per doz. $2@2.25; do. other $1.00@2; radishes, per 100 bchs 50c@$1; rhubarb do. $1; white turnips do. $1.50@3; cauliflower ₱ doz. $1@2.

WOOL—Supplies are going into active distribution and prices favor sellers. The Producers' Price Current says:—The chief interest in the market centers in the new Ohio wools, now about to be offered for sale. It is feared that the speculative excitement recently manifested in California and Texas may be repeated in Ohio and carry prices above a safe basis; the opinion is generally expressed that at 33@35c. the Ohio fleeces can be safely handled at a fair profit, but at higher rates business would be very hazardous.

LIVE STOCK MARKETS.

NEW YORK, Saturday, June 11 1881.

BEEVES.—Receipts for the week 13,461 head; do. last week 11,376 do. The week has realized the prospect warranted for it by last week's brisk trade, and the yards at both 60th Street and Jersey City are clear of stock. During the week nothing decent has gone under 9c.

MILCH COWS.—The offering is moderate, but the demand is limited; the range is unimproved; $30@55 per head for poor to prime quality.

VEAL CALVES.—Fair prices have ruled in a brisk market.

Prime N. J. fed, 6¼@7c.; do. state, 6@6½c.; poor to good yard lots, 5@5½c.; Mt. Holleys 6@7c.; buttermilks, 4¼@4½c; up-river dressed, 7½@10c. Our quotations include West Washington Market stock.

SHEEP AND LAMBS.—Receipts for the week 29,304 head; do. last week 22,778 do. Good sheep have had a quick sale, but poor bunches have dragged. A few very poor Texas quoted at $4.75 per 100 lbs.; but most of the sales were at 5@5¼c, medium to prime. Lambs, common Va. 6¾c; Western 8¾c; N. J. 9¾@10¾c.

SWINE.—Receipts for last week, 30,811 head. Choice corn-fed quoted 6c. forextreme; City dressed State, 7¾@8½c.; do. Western, 7¾c.

Steel Barb Wire.

GALVANIZED or PAINTED.

15 FEET TO THE POUND.

The use of Barbed Wire for Fencing is no longer an experiment, but an acknowledged necessity, as over *one hundred thousand miles* of it were put up last year, and we confidently expect twice the quantity will be used this year, there being no other material anywhere near as cheap, lasting, and effective.

CIRCULARS and SAMPLES by MAIL to any part of the World.

CANNOT BE INJURED BY FIRE, WIND, OR WATER,

IT DOES NOT INJURE CATTLE.

Estimating Wire at 12c. a lb. and Wood Posts at 10c. each, a Fence of Four Lines of Wire can be made for 60c. a Rod, or with Galvanized Iron Posts, a Perfect and Everlasting Fence for One Dollar a Rod.

Also Twisted Galvanized Wire without Barbs, 18 Feet to the Pound; Patent Iron Posts for Wire Fence, strong, light, and cheap; Wire Netting for Poultry Yards, Lawns, etc.; Wire Stretchers and Cutters.

Eureka Post Hole Digger.

AS SEEN IN THE ENGRAVING.

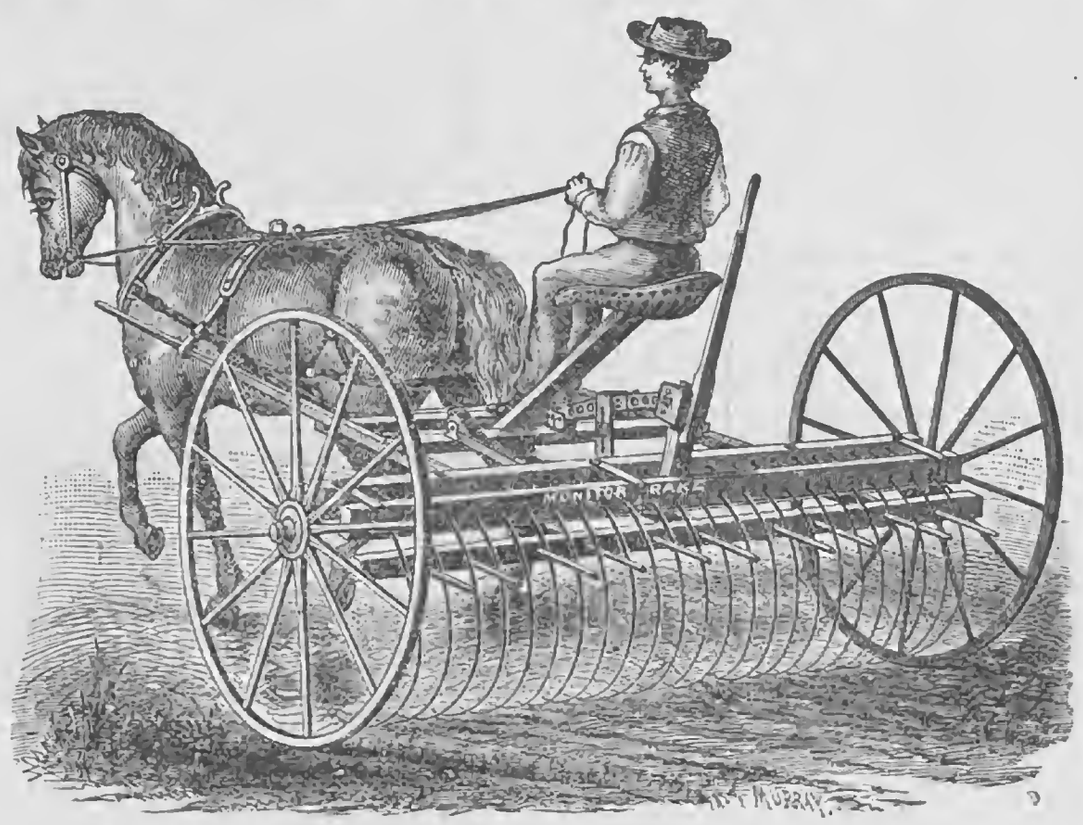
Work done five times Quicker and Easier than by the old way. No Clogging. No Knee Work. No Back Ache.

New Patent Door-Yard Fence,

made of "Round Steel Pickets," with Steel Posts and Frame. Light, handsome, and cheap. Shipped in pieces in boxes. Any one can put it up. Cheaper than wood, and half the price of other iron fences. Send for Illustrated Circulars to

GRANVILLE NICHOLSON, 71 John St., N.Y.

The Monitor Self-Dump Rake.



Of all the Rakes that I ever saw rake, I never saw a Rake rake as this Rake rakes! That is what they all say.

Send for Circular.

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Trade **LONDON PURPLE.** Mark.

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Professor C. V. Riley says: "It can be more effectually sprinkled or sprayed on to the plant than Paris green by virtue of its greater fineness."

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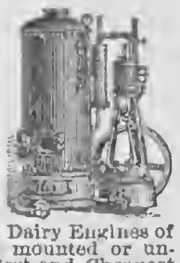

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Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.

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TEA & COFFEE.

We have made a specialty during the past four years of GIVING AWAY as PREMIUMS, to those who get up CLUBS for our Teas, DINNER SETS, GOLD BAND TEA SETS, SILVER-PLATED WARE, and other articles both useful and ornamental.

We import and buy direct from manufacturers all the goods we handle, and own them at the *lowest possible price* cash will purchase. During the past four years we have sent from our store over 12,000 of these orders, and they have gone into almost every State in the Union.

We keep in stock *every variety* of Tea known, and at all prices.

Oolong, Japan, Mixed, English Breakfast, Old and Young Hyson, Imperial, 50c., 75c., very finest $1. Gunpowder, Black Japan, Foochow 75c., $1. Orange Pekoe and Assam, 85c and $1.

Below are a *few* of the many Premiums offered:

With a $5 order we send a *Silver-Plated Caster.*

With a $10 order we send an *English China Tea Set of 45 pieces.*

With a $15 order we send a *Silver-Plated Caster, Pickle Dish and Butter Dish* or an *English China Decorated Tea Set of 44 pieces.*

With a $20 order we send a *French China Gold Band Tea Set of 44 pieces*, or an *English China Dinner Set of 106 pieces.*

We have *hundreds* of letters like the following:

LIME ROCK, Conn., April 30th, 1881.

Gentlemen—Please accept thanks for the beautiful Tea Set, which is much nicer than I expected, and indeed it is surprising to every one how you can do so much for so little. All are so well satisfied with the Tea that I think you will receive another order soon.

Yours truly, MRS. A. THORPE.

TAUNTON, Mass., March 8, 1881.

Gentlemen—I have forwarded eight different orders for Tea, and have received as premiums a tea set, a silver-plated caster, a dinner set, a glass set, a case of silver-plated knives and forks, a pair of French china fruit dishes, and *two ladies' gold watches*, and am now on my ninth order. Both Tea and premiums I am well pleased with, and have found perfect satisfaction with both. Yours truly,

MRS. MARIA C. LYNCH.

Orders, with P. O. Order, or money enclosed in regis tered letter can be sent at our risk. All checks or Post Office orders should be made payable to F. M. LINNELL.

We also send Teas by mail, without premium, postage paid, at list prices, to those who wish for choice goods and are so situated they cannot obtain them at home. For full price and premium list, send us postal, with address PLAINLY WRITTEN.

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Is the **only** machine that received an award on both Horse-power and Thresher and Cleaner, at the Centennial Exhibition; was awarded the two Last **Gold Medals** given by the New York State Agricultural Society on Horse-powers and Threshers; and is the **only** Thresher selected from the vast number built in the United States, for illustration and description in "Appleton's Cyclopedia of Applied Mechanics," recently published, thus adopting it as the **standard** machine of this country. Catalogue sent free. Address

MINARD HARDER, Cobleskill, Schoharie Co., N.Y.

UNEQUALED

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 25.

HENRY STEWART.

Nutrition of Animals.

WHEN the food has been completely digested in the stomach and the upper portion of the bowels, it passes into the smaller intestines, where a part of it is taken up into the system and is converted into blood. The food, which has become a liquid substance, something like cream, is absorbed by a quantity of small, short tubes, much like short pieces of thread, hanging in the intestines These are known as *villi*. They convey the food into a system of veins or vessels called *lacteals*, which lead it through numerous small glands, where it is further changed, and finally convey it to a large vein, from which it pours into a large blood vessel in the chest and goes to the heart; the heart, by its pulsations, forces the newly-made blood to all portions of the body, where it is used to form flesh, bone, fat, and all the tissues of the body. A part of the food does not take this course, but enters the veins of the intestines through their walls, and mixes directly with the blood and goes with it to the liver. What happens to this part of the blood in the liver we do not fully know; doubtless part of it is changed into bile, which is formed in the liver and which is poured from it into the intestines to assist in the digestion of the food. The liver is the most important organ of the whole system of nutrition; it is very easily disturbed if anything is wrong with the food, and when it is out of order very serious diseases affect the animal.

The process of nutrition not only provides new blood, but it must convey into the system those substances which the blood requires for its formation, and neither less of these than the blood requires nor any more; otherwise in the one case the blood is not able to support life, and in the other it is made impure, and the animal becomes sick and diseased. Thus if an animal's food has too much of any one substance in it, the health suffers very soon. There are fifteen single substances which are needed to maintain an animal in good health. These are, oxygen, hydrogen, carbon, nitrogen, chlorine, sulphur, phosphorus, silicon, potassium, sodium, calcium (lime), magnesium, iron and manganese. Oxygen and hydrogen form water of which three-fourths of the body are composed; carbon forms one-half of the mass of dried flesh; nitrogen exists in the flesh, bones and hair; chlorine with sodium, in the form of common salt, is found in all the secretions; sulphur exists in the hair, wool, flesh, the saliva and the bile; phosphorus combined with lime forms nearly half the substance of the bones; it is also found in the brain and the nervous system; silicon exists in small quantity in the bones; potassium is contained in the blood, flesh and milk; magnesium is found in the bones and the blood; iron forms a necessary part of the blood and gives to it its color, and manganese is found in hair.

Now if any one of these substances is wanting in the food the whole system of nutrition fails; just as if we should take a link from a chain, or a stone from an arch these would fall. Every one is of absolute importance and this is a point to be considered in choosing the food of an animal; another point to be considered is that the food must be chosen so that there should not be too large a quantity of any of these substances in the food. For if there should be, food is wasted or the system is disordered and disease results. If an animal is fed on oil or sugar or corn there is too much carbon given; if on peas or beans, there is too much nitrogen: an excess of sulphur, phosphorus salt or potassium kills by poisoning; but in general if but a small excess is given of any of these substances it is carried off from the system with the undigested part of the food in the dung or urine, or is thrown off in the breath, or by the perspiration, or is stored up in the tissues in the form of fat or other products. This fact is turned to good account by farmers in feeding animals for making meat, or butter, or milk; or for making a supply of richer manure to fertilize the fields The whole subject of animal nutrition is one of the most wonderful with which we can make ourselves acquainted and well deserves a careful study, not only for its surpassing interest, but because much of the farmer's profit is closely connected with it.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK AND COUSINS.—I wish to join your Horticultural Club. Papa takes the RURAL NEW-YORKER and I am much interested in the Cousin's department. I was born, and lived in the city of Clinton, Ia., until last year, when Papa bought this farm and moved on it. We call it Fern Hill Farm. Papa has given me a small plot of ground and says I may plant what I please in it. I am ten years old, and go one mile to a school, which my sister teaches. I am as ever your niece. GRACE BLICK.

Prescott, Adams Co., Iowa.

DEAR UNCLE MARK:—I wrote you last Summer of the loss of our little boy, Wight (I suppose you did not receive the letter). He was thrown from a running horse, struck his head against a rock, causing concussion of the brain. He always read the Cousins' letters with great interest, and was very proud of being a member of your club. The seed you sent this Spring we have planted and will take great care of for his sake, and feel thankful to you for remembering him. Yours,

MRS. BINGHAM.

Miscellaneous.

A GREAT AMERICAN MANUFACTURE.

FOUR years ago an English guest at a gentleman's residence in Newton, Mass., could not forget his hobby-horse. He pined in health for its exercise; he pined in spirit for its diversion and for its complete conveyance. He sought out one skilled in wheel-craft, and got a wheel made at a cost of $313. This English guest became his host's preceptor in August, 1877, and really founded the manufacture of the modern bicycle in the United States. He interested his host, Col. Albert A. Pope, not only in the machine but in the use of it and construction of it, and gave him such accounts of the then ten-year-old manufacture of it in England, that he conceived the idea of becoming the pioneer of a new industry. In 1878 Col. Pope visited England, and personally observed the styles and methods of manufacture and the development of the use of bicycles, and satisfied himself that the enterprise was one which might be ventured upon in America. Upon his return to America he formed the Pope Manufacturing Co., and induced the Weed Sewing Machine Co., of Hartford, Conn., to join the enterprise. A portion of their works was set apart for this business, and the constantly increased demand and sales of the bicycles soon induced them to enlarge their works, and to-day the Pope Manufacturing Co. stands second to no other manufactury in this country.

The "Columbia," a cut of which is here shown, was brought out in 1880, and has already become one of the most popular bicycles in use.

As before stated, the manufactory is located at Hartford, Conn., but their principal offices are in Boston, Mass., where they occupy an elegant building at 597 and 599 Washington Street, two entire stories being fitted up expressly for their use

The company have local agencies in over 200 cities and towns of this country, and during the past three years they have made and sold thousands of bicycles to the different classes of professional and business men. Doctors, merchants, students, professors, and in fact all who have used them seem to agree in pronouncing them one of the most effectual and exhilarating means of exercise now in use. G. B. B.

"STANDARD COLUMAIA" BICYCLE.—FIG. 309.

Miscellaneous.

[New York Spirit of the Times.]

Equine Inquiries.

A WORD FOR THE HORSE.

The "Cracks" of the Queen City.

[Cincinnati Correspondence.]

Our sporting fraternity throughout the whole country, as all know, have their semi-annual meetings on the turf. Whether they meet along the rock-bound coast of New England, and tread a track so close beside the snowy beach that the music of the hoof-tread commingles with the music of the surf, or whether they transport themselves to Kentucky's pleasant hills and valleys, 'tis the same. The horse will be their theme. And "the horse" will be at all times and places a fitting subject to discuss. The man who loves his horse loves his friend, and *vice versa*.

Whenever we meet with a man who will bestow proper kindness, food and care upon his horse, there we have found a man who, in time of need, will be true to his fellow-man, and consequently a true man. The laws of association, strong in man, are likewise strong in the horse. And the latter full well knows the hand that smites it harshly or the one that strokes it lightly, and tends to its sores and bruises. A curious instance of sagacity in the horse occurred recently in the stables of Mr. A. Toughman, situated on North Elm Street. Mr. T. has for a long time been in the habit of using St. Jacobs Oil, the Great German Remedy, in his extensive stables. Among Mr. T.'s many horses is a great, powerful Canadian draught horse. This animal in course of time got so that he knew the St. Jacobs Oil bottle very well. So well, in fact, that one day recently, on Mr. T.'s return from business, upon entering the stable he caught him licking the sore shoulder of a beast who stood beside him; the animal, giving a wise survey to his licking work, turned his head, caught up in his teeth from the box used as its receptacle a bottle of St. Jacobs Oil. He threw the bottle on the floor with violence enough to break it, and then deliberately licked up the St. Jacobs Oil and applied it to the cut. Readers, we have seen the laws of association belied by beings with less sense than Toughman's horse. The word has passed among us, and when we see a man who won't try the Oil we say, "He's worse than Toughman's horse."

How many thousands there are beside Mr. T. and his horse who do use St. Jacobs Oil! There is, for instance, B. Meartz, in Cincinnati, on Plum Street, just opposite the City Buildings, who always keeps a supply of the best horses and—St. Jacobs Oil in case of necessity. That gentleman says it is the best remedy ever used in a stable. He told us this in a conversational way recently, and the gentleman's word is away above doubt.

In Cincinnati, living at No. 16 Woodward Street, may be found Mr. Michael Kelly, boss drayman. This gentleman, in reply to our inquiry as to whether he used St. Jacobs Oil, said:

"I would not try to do without St. Jacobs Oil. I could not do it. Draught horses, like livery horses, receive so many bruises, cuts, sores, &c., that, in my opinion, no sensible man will try to do without St. Jacobs Oil. Say for me that I have used it a great many times, and have always found it the very best remedy in use for horses. By the way I have used the Oil in my family on several occasions, and had I the time to-day, I would like to tell you of its effects. You know my train-time is up; but be sure and call on me again some day."

Telling that courteous gentleman that in future we would be pleased to call on him we bade him good-day and turned our own horses—which by the way, know the good of St. Jacobs Oil—toward the Reading road, thence to Montgomery pike, to the palatial home and stables of Capt. George K. Howell. After a friendly chat, a sumptuous dinner and a fine drive, the Captain laid himself out for horse-talk. Said the Captain:

"Little Elk, the four-year-old mare which you saw in my stall, is my favorite. I regard her as a wonderful resurrection. About a year ago, and just after my mare had made her 2.19¾ record, she took a very aggravated case of rheumatism, either coming down the Sound or going up the Hudson river. She had more red flannel around her legs than would have made shirts for all the colored boys handling her. I had given up all hopes. I never expected to see her on the turf again. One day a celebrated Irish trainer and driver looked at my mare. 'Cap,' said he, 'why do you not cure your mare? She has got the rheumatism.' 'Can you cure her?' I asked. 'I will cure her in a week if you will let me have my way,' he replied. I told him to take her in hand, I knew she could not be worse; I never expected to see her better." The Captain paused a long while, and the changed expression on his countenance would make St. Jacob smile, as, rising to his feet, the Captain said: "Why, hang me if my mare was not driven in three days, and all through St. Jacobs Oil, the Great German Remedy. St. Jacobs Oil, my friend, brought about a resurrection." "Then, Captain," said I, "truthfully and fairly, St. Jacobs Oil is the wonder, is it not?" "You are right," said the Captain

Being in the neighborhood of Chester Park, Cincinnati's beautiful driving grounds, upon which have appeared most, if not all of the great horses of the day, it occurred to me, knowing that preparations were being made for the coming Spring trot, to enter. We did so; and were soon in conversation with the justly celebrated William W. Bair, the best known horseman in the United States, a gentleman who brought out "Maud S," owned by William H. Vanderbilt; "Katie Middleton," owned by R. C. Pate; "St. Julian," and several more of the very best horses in the country. Said we to Mr. Bair: "In the management of horses, Mr. Bair, must not a trainer possess veterinary knowledge, and know what to prescribe for their ailments?" Mr. Bair replied: "The horse has had in the past as varied forms of treatment as man. Now, when the horse is afflicted with such ailments as stiffness, bruises, cuts, etc., there is but *one* article that should be used, and that is St. Jacob's Oil, the Great German Remedy. I know all about horses, have applied several remedies, and can say without fear of contradiction, that St. Jacobs Oil is the *only* remedy to be relied on." Mr. Bair being very busy, the scribe bade that courteous gentleman adieu, and drove away.

Having regained the city we drove up Court Street, and reined up at the well-known fruit store of Mr. William Carroll, a gentleman who handles great quantities of imported and domestic fruits of all kinds, and of the best quality; stopping to make some purchases from Mr. Carroll's tempting stock, that gentleman, throwing the eye of a connoisseur on the horses, immediately fell to "talking horse." After praising our team, which we flatter ourselves is a pretty good one, thanks to St. Jacob, he, with the honest pride of proprietorship, invited us back to inspect his stables. Of course we could not refuse, and indeed it was a treat to enter so neatly kept and commodious a *hotel du cheval*. Mr. Carroll, in a manner which showed that gentleman's familiarity with the subject, showed us "the points" of his stock. "Mr. Carroll," asked the writer, "have you ever had occasion to doctor horses?" Said that gentleman: "My dear sir, although you now see before you some fine horses, from the horse which is driven in my delivery wagon to the stud driven by my son, and which by the way is a 2:30 roadster, yet I have had an immense amount of trouble with them; what from rheumatism to the simplest form of cut or bruise, there is not an ailment which I believe they have not had—ringbone, spavin; why, in fact, I really believe, everything they could have. I spent hundreds of dollars in veterinary surgeons' bills, which was money thrown away. There is a remedy, though, upon which I hit by mere chance, but upon which I will wager forever.

It is St. Jacobs Oil, the Great German Remedy—the greatest remedy in the world. It cured my horses every time it was applied. "Here," said the gentleman, "is where I keep St. Jacob; you see I guard him jealously." Mr. Carroll hereupon opened for my inspection a closet, and arranged along the shelf the writer saw several bottles of St. Jacobs Oil. Said we, examining one of the bottles: "Do you find it an expensive remedy, Mr. Carroll?" "Expensive?" exclaimed he. "Why, had I known of it two years ago, it would have saved me hundreds of dollars; it costs a mere nothing—fifty cents per bottle; and each bottle will do more good than $50 worth of their so-called surgery." With this we left the stable, and bidding Mr. Carroll good evening, we departed. Driving up Court street to John, we turned southward on John to our own stables. Just as we reached the corner of John and Eighth streets, we perceived our amiable and learned friend, Dr. P. F. Maley, about to seat himself behind his magnificent gray to take his usual evening drive. After exchanging the usual compliments with this distinguished physician, politician and scholar, we said:

"Doctor, that is a rather fine horse you drive."

"Oh, yes," replied that gentleman, "he is indeed fine. But he is just out of a severe attack of rheumatism now, and I must curb him for awhile. I, as a physician, ought scarcely to praise a proprietary medicine, and would not probably recommend their use among my patients; but I must say for that best known of all medicines, St. Jacobs Oil, the Great German Remedy, that it cured my horse, and consequently I must praise it." Here the Doctor laughed heartily, and, with a pleasant "Good evening," we parted.

We wish to say to those of our readers who do not know the Doctor—should there be any such, a fact which we very much doubt—that he is the Ex-Coroner of Hamilton county, which every Cincinnatian knows, and that he is a scholarly physician, which fact everybody should know Politically, the Doctor's reputation extends, we believe, as far as St. Jacobs Oil is known, and that is from Maine to California, from the Lakes to the Gulf.

After leaving the Doctor we had not far to go to reach our own stables, and putting away our horses, we asked ourselves, as we watched the groom handle them, whether we had derived the more pleasure from the ride or from the information. We unhesitatingly answered in favor of the information and good news we heard concerning St. Jacobs Oil.

CARPETS.

MOQUETTE CARPETS.—We have just placed on sale 300 pieces American Moquette Carpets at the low price of $1.40 per yard—the cheapest carpets ever offered. They cannot be had elsewhere in the city.

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PERSONAL ITEMS.

Mr. Fred D. Grant has arrived in Houston, Texas, and has begun work on his railroad.

Mrs. Garfield will spend the next few weeks at the Soldiers' Home, the President and her three oldest sons being with her.

Senator Ferry, of Michigan, is recovering from his sudden attack of illness, and it is believed that a few days' rest is all that is now needed for his complete restoration.

Nicholini, on whose account Adelina Patti left her husband, asks $2,000,000 for a singing tour through this country by himself and the *diva*, and on its refusal he threatens to undertake the venture on his own account.

General Francis A. Walker, Superintendent to the United States Census, has been chosen President of the Massachusetts Institute of Technology and will enter upon the performance of his duties in October.

Ex-Gov. Reid, of Rockingham, N. C., 68 years of age, is recovering from an attack of paralysis. He has been a member of Congress four years, Governor of the State four years, and Senator in Congress four years, besides having held other posts of trust and honor.

The Duke of Cambridge, British Commander-in-Chief, has a round mellow voice. He has fine limbs and very small feet, and dresses well. He eats only two meals a day. He rises early and works hard before breakfast, which he takes at noon. When once he sees a man he never forgets him. His life is methodical, and he is even tempered.

[Muscatine (Iowa,) Daily Journal.]

Messrs. J. R. Bennett & Co., Muskegon, Mich., thus speaks: St. Jacobs Oil is the best liniment around here. We sell more of it than of any other proprietary medicine we have in our store. Our customers are continually praising it effective qualities; and we think, that it is the best remedy for rheumatism, neuralgia, etc., we have ever had in stock.—*Adv.*

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THE CYCLOPÆDIA WAR.

The month of July, 1881, witnesses the completion of the larges and most important literary work this country and the century have seen. It is the Library of Universal Knowledge, large type edition, in 15 large octavo volumes, containg 10 per cent. more matter than Appleton's Cyclopædia, at less than one fifth its cost, and 20 per cent. more than Johnson's Cyclopædia, at a little more than one fourth its cost.

Chambers's Encyclopædia, which forms the basis of the Library of Universal Knowledge (the last London edition of 1880 being reprinted verbatim as a portion of its contents), is the laborious product of the ripest British and European scholarship. It has developed through a century of Cyclopædia making, its various editions having been many times revised, in successive years, till it has come to be universally recognized, by those competent to judge, as standing at the very front of great aggregations of knowledge, and better adapted than any other Cyclopædia for popular use. It contains such full and important information as the ordinary reader, or the careful student, is likely to seek, upon about 2,500 subjects, in every department of human knowledge. Chambers's Encyclopædia, however, is a foreign production, edited and published for a foreign market, and could not be expected to give as much prominence to American topics as American readers might desire. To supply these and other deficiencies a large corps of American editors and writers have added important articles upon about 15,000 topics, covering the entire field of human knowledge, bringing the whole number of titles under one alphabetical arrangement to about 40,000. Thus the work is thoroughly Americanized, and the Library of Universal Knowledge becomes at once the latest and most complete Encyclopædia in the field, at a mere fraction of the cost of any similar work which has preceded it.

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Of course the old and wealthy publishers who have grown rich (it is said that the Appletons have made a profit of nearly two million dollars on their Cyclopædia) from the sale of their high-priced publications are not pleased that their monopolies are broken and their power overthrown. Of course the book agents and booksellers who have been used to getting from 40 to 60 per cent. commission for selling these high priced books are not so well pleased to sell the Library of Universal Knowledge on 15 per cent. commission, though those who are not short-sighted discover that their own interests, after all, are identical with the interests of *the people*, and their real profits, in the end, are increased, by the immense sales which result from meeting the people's wants. The majority of booksellers, however, are better pleased to *slander* than to *sell* this and our numerous other standard and incomparably low-priced publications. But the Literary Revolution has always looked to *the people*, in whose interest it is, for its patronage, and it has never looked in vain, as our more than one million volumes printed last year (this year being increased to probably more than two millions) abundantly prove. You can order the Cyclopædias directly from us, and by uniting with your neighbors and friends you can secure club rates as follows:

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The names of the subscribers must in every case be forwarded to us. The first $5,000 named will be distributed as specified as rapidly as the orders are received, and the remaining $5,000 will be distributed promptly on Sept. 1st. The names of the persons receiving these rewards will be printed, with the amounts received by each, and the list sent to all the club agents entering into competition for them. Subscribers must be *actual purchasers for individual use*, to entitle the club agent to the rewards under this offer, and not booksellers or agents who buy to sell again.

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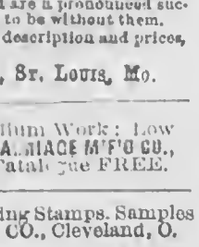

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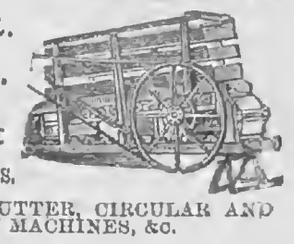

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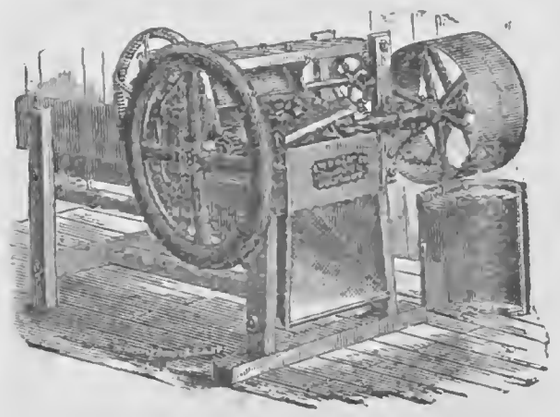

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[Troy, (N. Y.,) Press.]

Editorial Approval.

Mr. W. J. Melvin, Editor Warren, Mass. Herald, was cured of severe Neuralgia by the use of St. Jacobs Oil.—*Adv.*

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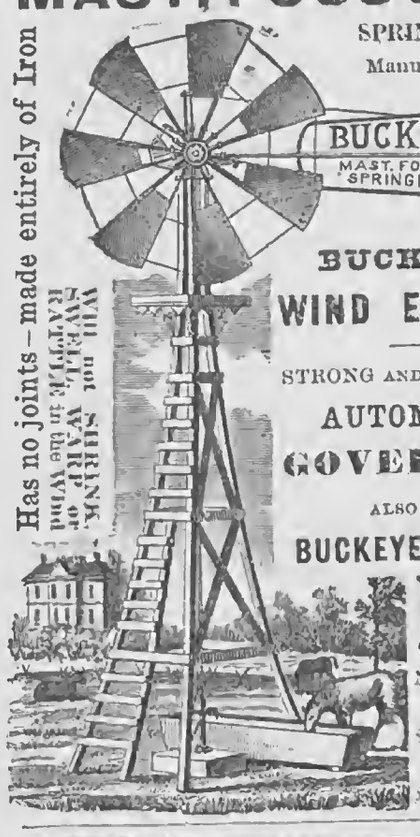

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Grandmother.—"Then you ought to have mended it at once. When I was a girl we used to say, 'A stitch in time saves nine.' Do you understand what I mean?"

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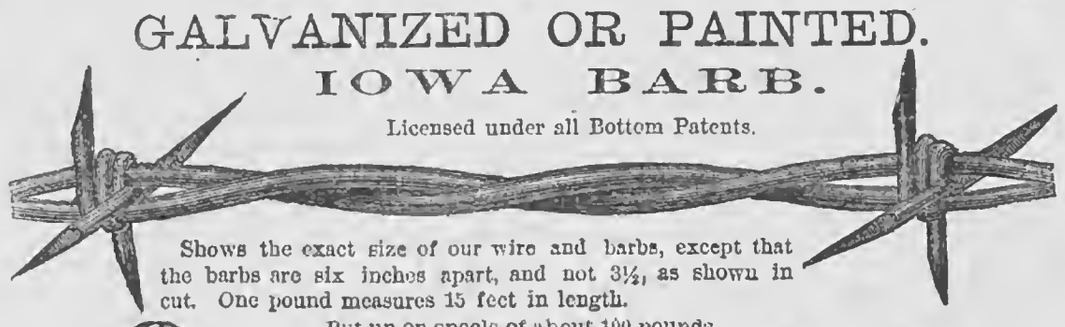

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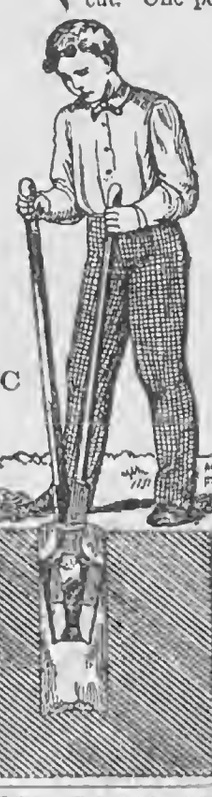

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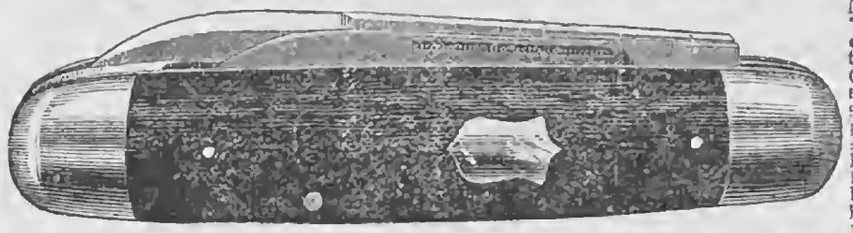

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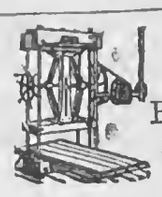

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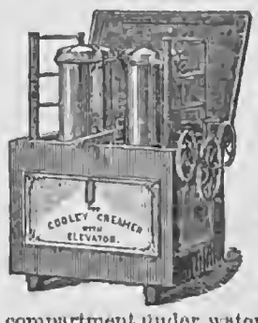

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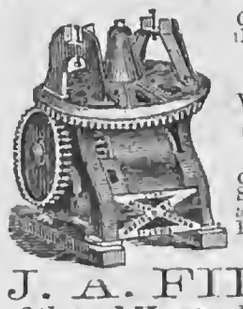

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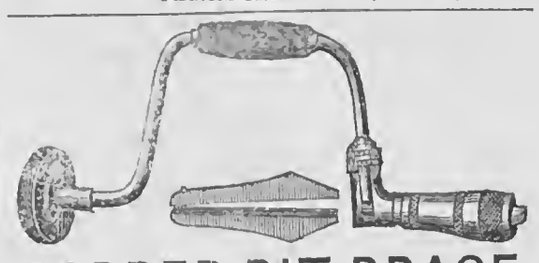

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL.—No. 1639.} NEW YORK, JUNE 25, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

The Harvest Prospects.

WHEAT.

A smaller acreage than last year, and a much less favorable outlook. A probable decrease of at least 20 per cent., or about 100,000,000 bushels. Causes of decrease — Early Winter, Late Spring, May Drought, Excessive June rains, and Insect pests.

Heaviest Decrease in Winter Wheat.

Michigan, Indiana and Illinois the greatest sufferers. Fultz the leading American Wheat.

OATS.

Increase of acreage. Probably the largest aggregate oat crop yet produced.

RYE AND BARLEY.

About the usual acreage. Fair crops.

CORN.

An increased acreage, but a much poorer stand. Seed generally damaged everywhere. Much replanting. A probable decrease of 15 per cent., or about 229,000,000 bushels from last year's crop.

POTATOES.

An average crop in stand and acreage. Beetles never more numerous.

GRASS.

An abundant crop in the North, and a Fair Crop elsewhere.

COTTON.

Two per cent. increase in acreage. A good stand. Labor satisfactory, except in Texas and Arkansas.

TOBACCO.

Acreage increased, as usual. Fair stand—Growing better.

Apples a fair crop for the "off" year. **Pears** a good crop. **Peaches** a comparative failure. Small crops in Delaware, Maryland and the Michigan Peach Belt. Small Fruits abudant.

All Crops from two to three weeks Late.

EASTERN STATES.

Maine.

CANAAN, Somerset Co.—The acreage of and outlook for wheat is about 10 per cent. better than last year—Lost Nation. Oats, barley and rye look fully up to the average, with the usual acreage—barley two-rowed. Orchards and small fruits never blossomed fuller than this season; but a severe frost on night of June 6, killed the buds and leaves on the grape-vines. The usual acreage of corn was planted, but the frost cut it off, and killed the bean, cucumber and squash vines. Grass is looking well and promises an early and large hay crop. Not so many potatoes planted as usual through fear of the beetle. S. H. G.

CUMBERLAND CENTER, Cumberland Co.—Owing to late rains, farmers in this section have not finished planting. Early-sown wheat is looking fine, mostly Lost Nation. Acreage about the same as last year. Oats and barley look well; not much rye sown; corn just planted; acreage about the same as last year; much sweet corn is planted for canning. Apple trees give promise of more fruit than we expected after the abundant yield of last year. The prospect for small fruits is fair. Grass is looking fine. A late frost killed early tomatoes, beans, squashes, etc. F. B. H.

SO. MOLUNCUS, Aroostook Co.—Acreage of wheat and oats larger than usual. But little corn and barley raised here. Hay splendid—a large crop. Orchards and small fruits look well. Heavy frosts lately, but no damage done. Lost Nation wheat is sown altogether. Potato bugs plentiful. M. J.

STARK, Somerset Co.—Wheat below average acreage and yield on account of late Spring, common red and Lost Nation; a few are trying the White Russian and like it much. Oats fully an average area and looking well. Not much barley or rye sown in this section. The corn crop is about two weeks late, but more is being planted than usual and farmers are taking more interest in getting large yields—102 bushels of shelled corn have been raised per acre. Apple and pear trees blossomed very full and the prospect is that the crop will exceed any for several years. Currants and small fruits in abundance. W. J. D.

Warren, Knox Co.—The acreage of wheat is less than last year, owing in part to the poor crop of 1880, but more to the wet Spring we had, which rendered much land unfit to work until late, and this is now sown to barley. The principal variety of wheat generally sown is the Lost Nation. Another kind called the Upham wheat, which originated in the adjoining town of Camden, has been in good demand for seed. It is a bearded variety, yields well and makes a superior quality of flour. Wheat came up better than last year and is looking fully as well. Oats are looking well, about the usual amount having been sown. A frost on the night of the 6th did much damage to corn, potatoes, beans, grape-vines, etc. The apple crop last year was large, but the crop this year must greatly exceed that of last. Pear trees seem to be full of young fruit. Grass, our main crop, is looking fine and promises a large hay crop. M. W.

New Hampshire.

DEERFIELD CENTER, Rockingham Co.—Farmers sow only a few acres each of small grains; but more seems to have been sown this year than last, especially of wheat. The outlook is medium. The corn stand is very good, except that it is a little low owing to cold weather. About one-seventh more was planted than last year. All orchard fruit, except apples, will be full crops. Apples set badly. Small fruits abundant. O. J. C.

EAST BARRINGTON, Strafford Co.—Wheat and oats are looking well. Barley, rye, etc., are but little raised. White Russian is the principal wheat. Corn is backward; acreage about the same as last year. This is the "odd" year for apples; but we shall have a fair crop. Raspberries and blackberries were not harmed last Winter. I am afraid small fruit will not be worth picking. Grass looks fine. W. B. S.

HANOVER, Grafton Co.—The acreage and outlook for small grain are very slightly above the average of several years. Lost Nation wheat, two-rowed barley and Excelsior oats are the leading kinds after some nameless common sorts. Corn has an average outlook this year, and an increasing acreage every year. Orchard and small fruits promise well, particularly apples for an "off" year. T. W. S.

NORTH EPPING, Rockingham Co.—There is very little grain sown in my neighborhood; what there is, is looking fine. More of oats and barley than of any other sort. Grain does not pay here, and it is sowed only to get a good catch of grass. About the same quantity of corn is planted as last year, and it is looking well. The weather is almost too cold for it, but it is good for grass. Good prospect for large yield of hay. About one-fourth of apple trees will bear fruit; more fancy varieties than shippers. There will be large crops of peaches, plums, strawberries, etc. G. Q. D.

REED'S FERRY, Hillsboro Co.—There is not enough wheat raised in this section to report. Not much barley. The acreage of rye is not more than one-fourth of an average. The corn crop is larger every year; two weeks late this year. Apples and pears are promising. No peaches. Small fruits are looking well. F. F. W.

Vermont.

BRANDON, Rutland Co.—Only a few acre fields of wheat for home consumption in this section. Owing to an unfavorable climate or soil it cannot be profitably raised here, although a liberal premium and extra care produced, in an exceptionally favorable locality, a yield of 42 bushels per acre—Clawson. Oats and corn are the principal cereals grown and a larger acreage of these has been planted than last year. Oats look splendid; White Swede is the favorite sort. Corn was slightly nipped by frost, but is recovering; flint varieties are exclusively planted. Potatoes are our principal export crop, of which a large quantity has been planted. Early Rose and Snowflake are the leading varieties, although all the kinds known to fame and seedsmen's catalogues find a place. Bugs are plentiful. The leaves of the earlier planted were turned by the frost, but as hoeing is being vigorously pushed they will doubtless regain their former luxuriance in a few days. The meadows do not promise as good a hay crop as we could wish; the grass started nicely in the Spring, but lately large patches have made their appearance which are entirely destitute of vegetation: the grass and even the weeds have died. In other patches varying in size from an ant-hill to one or two acres, the vegetation is short and of a pale, sickly look—quite undecided whether to live or die apparently. Various reasons are given; but no remedy has been discovered; the result must materially lessen the crop. SUBSCRIBER.

CORNWALL, Addison Co.—Had a dry Spring. Acreage of wheat is larger than usual, and the crop one-third better than last year—chiefly Clawson. Acreage of oats one-fourth more than usual and crop looks well. Not much barley or rye. Twice as much corn as usual, but it is badly injured by grubs. Many farmers have plowed it up and seeded the land to barley. Orchards blossomed well. Prospect good for an average yield. Small fruits good except cherries. The hay crop will be badly injured by grubs or worms at the roots. W. M. E.

FACTORY POINT, Bennington Co.—The acreage of wheat is small; we cannot raise it here. Oats are the principal crop sown. Barley and rye have a small acreage. Corn looks good; but it is about ten days late. The acreage is about the same as in 1880. Last year was our fruit year, but apple trees blossomed out well. Pear and plum trees will bear fair crops. Small fruits are not grown here to any extent. G. M. T.

SHELBURNE, Chittenden Co.—Acreage of grain of all kinds in this section is larger than usual. Outlook is good. Prospect for corn is good, though the acreage is smaller than last year. Outlook for orchard fruits is very good, but the small apples drop off considerably. Small fruits are but little grown. W. H. R.

VERNON, Windham Co.—But little wheat or barley sown in this section. A full average acreage of oats has been sown, and they look well. Rye very fair. The cold, wet weather in May delayed the planting of corn; some farmers have just finished, while others are hoeing the first time; the acreage, I think, is about the same as last year's. The show of apple blossoms was very good for the "off" year. The prospect for small fruits is good. The constant rains give us plenty of feed, and insure a good crop of hay. Farmers are happy, or ought to be. J. E. A.

Massachusetts.

BARRE, Worcester Co.—Very little wheat sown in this vicinity. Oats are grown chiefly for fodder. Rye and barley are raised only to a limited extent. Grain looks well when sown early, but continued rains have prevented many from sowing. Two-rowed barley mostly sown. The acreage of corn has been on the increase for several years. The wet season has prevented many from planting. Corn planted before the great rains looks good. Grass is our principal crop. J. H. G.

BELCHERTON, Hampshire Co.—But little wheat and less barley is raised in this section. Rye is very forward and fine. Corn looks well, with about the same acreage as last year. Potatoes look well, and as for potato bugs they are more abundant than ever before and apparently healthier. We have learned to handle them by means of Paris-green. Grass is more forward than for many years and a large hay crop is prophesied. For an "off" year apple trees blossomed remarkably full, and give promise of at least enough fruit for home use. Pears will be a heavy crop. A. B. H.

BLACKSTONE, Worcester Co.—No wheat in this section of the country. Oats are mostly raised to be cut green for fodder and ensilage. No barley. Rye is sown mostly. The prospect for corn is not very good, the season has been so rainy and cold that the field corn was not all planted by the first of June. The acreage is about the same as last year. Most of the farmers plant enough to carry them through the Winter with their stock and for home use. Apple trees blossomed full, but we don't expect much fruit as this is the "off" year. Raspberries and Blackberries were winter-killed. Some pears look well. Black knot or wart has about killed the cherries. O.

FRAMINGHAM, Middlesex Co.—Not much oats or barley sown in this country. Rye looks well. Corn is small, but a good stand; more planted than usual. Fruit trees look well; but this is the "odd" year for apples. Not much small fruit grown here. H. W. H.

PALMER, Hampden Co.—Little or no wheat is grown here. Rye is looking well. Corn oats and potatoes are quite backward owing to cold and wet weather. The acreage of each is nearly the same as last year. Grass never looked better. There is no prospect of any apples or peaches of any amount, it being the "off" year for the first; and a very severe Winter killed many of the last. H. D. F.

West Newton, Middlesex Co.—About the same acreage is devoted to the cereals as last year. Corn is uncommonly backward for the season; the cold weather and the unusual amount of rain are the causes. The hay crop is assured and must be large. The small fruits are unusually promising. N. T. A.

Rhode Island.

ASHAWAY, Washington Co.—No wheat; little barley or rye. Oat and corn area the same as last year—white oats; white flint corn. Prospect for both is good. Apples are all right; peaches are killed on low ground; on high they are unharmed. Blackberries and Black-cap raspberries are killed, Cuthberts are not. Strawberries are good. T. W. B.

PROVIDENCE ISLAND, Narragansett Bay.—Oats and barley are second-class crops hereabouts, generally consumed at home, and hardly merchantable on account of rust and wild radish seed—charlock we call it. Wheat is grown only experimentally—Lost Nation and Bliss's Defiance. Rye is a good crop and sells well; but the hand thrashing is an objection. Corn is our staple and surest crop—Rhode Island White Cap the popular variety. About 200 acres are grown annually on this island, which contains 3,600 acres. Planting has been much delayed; but we have no fear of frost for any planting made this month. Pears hang thick in many places; peaches unharmed. Many apple trees are dense masses of bloom. E. F.

Connecticut.

BRIDGEPORT, Fairfield Co.—Wheat and barley are not raised here to any extent. Oats are looking well, although put in late. Rye, where well put in, is very promising; some pieces on poor or badly tilled ground are indifferent—about the usual acreage of oats, rye and corn. Corn on wet land has not sprouted well, otherwise it is good for the season, although planted late. Very few apples and peaches. Pears are set plentifully. Grapes blossom freely. Strawberries a fair crop of good size. H. L. F.

CORNWALL, Litchfield Co.—An increased acreage of wheat of the Clawson variety. A smaller acreage of rye, oats, and barley. Rye and oats look well. A smaller acreage of corn which is very backward and looking sickly. An increased acreage of tobacco will be set; planting late. Grass never looked better. A heavy frost on the 7th inst. on low ground killed corn and potatoes. Prospect of abundance of small fruits. An average crop of pears. Less than an average crop of apples. Peach trees all winter-killed J. M. K.

DANBURY Fairfield Co.—Not much wheat or barley raised in this section; rather more rye than usual—looks well. Outlook for oats extra-good; but there may be too much straw. Usual acreage of corn; backward. Not a large crop of apples; trees healthy, however, and no worms, so that we have a good outlook for fruit. All small fruits will be abundant. J. O.

LITCHFIELD, Litchfield Co.—The general outlook for crops this year is quite favorable. The Winter was very cold and severe with a heavy fall of snow, making the Spring very backward and cold. The early part of May was dry and warm, later wet and cold Rye is looking well, having stood the cold Winter well; acreage about the same one year with another. No wheat is raised in this section Oats and grass a fair average. None but Winter rye sown here, the common white rye. Corn and potatoes are looking nice; acreage about the same as last year. Of apples the crop will probably be much smaller than last year. Small fruits are promising. E. P. B.

MINORTOWN, Litchfield Co.—Rye, oats and wheat are looking well. Barley is not much sown in this section. The grain crops are mostly corn and rye; next, wheat and buckwheat. The Fultz and Clawson varieties of wheat. Corn is looking well; acreage about the same as last year. Apples are not as abundant as last year. Strawberries look well; other small fruits not much raised here among the farmers. Pears and plums bid fair for good crops. C. A. F.

NORTH LYME, New London Co.—No wheat or barley to speak of grown here. Rye and oats are fully an average crop in quantity and appearance. Prospect for corn fair, but the weather is rather too cold for it; quantity about the same as last year. Grass looks fine. More apples than usual for an "off" year. Few small fruits raised. L. L. W.

WOODMONT, New Haven Co.—Wheat and barley are not raised to any extent about here. Oats are looking fair. Rye is looking fine, with a much larger acreage than for years past. By June 9, farmers had but just got through planting corn on account of the cold, wet weather. About the usual amount has been planted. Potatoes are looking well except on low or moist ground, but there they did not come up well on account of the wet weather; but there is more than the usual amount planted and with a fair season we shall have a full average crop. Potato beetles plentiful. The prospect for apples, cherries and strawberries is good. Peaches are a failure on account of late frosts. Pears blossomed and set well, but there is complaint of their being injured by insects. The grass crop is good on new meadows; but old meadows are light on account of drought last season; but there will be more tons of hay than last year. E. B.

MIDDLE STATES.

New York.

AFTON, Chenango Co.—Corn planting very late; acreage a quarter more than usual. Much less wheat sown than last year; it looks well; so do oats on an average acreage. Grass is excellent, and a superior hay crop is assured. The usual acreage of potatoes; a fair growth, but a vast superabundance of beetles. G. E. N.

ALBION, Orleans Co.—The acreage of wheat is about the same as for the last three years, and the outlook is good. Oats have the usual acreage, and the outlook is good. Barley acreage below the average, and outlook not very good. There is an average acreage of corn; the outlook is bad. Most of the crop has had to be replanted. The outlook for orchard and small fruit is good. C. O. H.

ALFRED, Allegany Co.—The prospect for wheat is decidedly poor; acreage about the same as last year—Clawson and Gold Medal mostly. Oats and barley pretty good—Probsteier oats and six-rowed barley. Corn now looks bad. Much has been planted over on account of poor seed and cut-worms. Apple, pear, plum and cherry trees loaded. Small fruits abundant; strawberries ripening. F. M. B.

BESEMER'S DEPOT, Tompkins Co.—Outlook for crops good, corn excepted. More wheat sown than usual; looks fine, but lodged considerably—mostly Clawson and Fultz. Oats look well. Very little rye or barley, but what there is looks well. Common white oats and two-rowed barley chiefly sown. Prospect for corn is slim; did not come on well. Many have planted over. A good many potatoes are raised; more planted this Spring than usual. Orchard and small fruits almost a failure. Grass heavy. B. G.

BURDETT, Schuyler Co.—The outlook for wheat is poor compared with that of last year—Clawson, Fultz and Mediterranean. Little rye raised in this county; Spring grain is looking well; there will be a good crop of straw. The prospect of corn is poor so far, owing to late planting, too much wet and cold weather—White Flint and Golden Drop Dent. Fruit of all kinds will be an average crop. Grass is fine, and hay will be an abundant crop. C. M.

CANAAN, Columbia Co.—The prospect for a large crop of hay is very encouraging. The oat crop looks fine; acreage about a fair average. Rye is a very large growth; many pieces are badly down; I fear it will not fill well owing to so much wet weather; the straw is thin and weak; quite one-third more is sown than last year. Corn is small and yellow—too wet and cold for it; about the usual acreage planted. Potatoes are having a hard time; bugs are taking them as soon as they are up. Apples will be scarce. The prospect for small fruit is fair. D. D.

COVENTRYVILLE, Chenango Co.—The outlook for wheat is fair—mostly Clawson. Oats, decidedly good. No barley; very little rye. Recent heavy rains and one severe frost have made the outlook for corn not encouraging; acreage larger than last year's. Apples have not blossomed as full as usual. M N. H.

EDDYTOWN, Yates Co.—Spring-sown oats and barley very good. Corn backward; much to be replanted. Grass fine; a good hay crop sure. Wheat considerably short of a full crop. Small fruits, first-rate. Potatoes quite largely planted. Apples in some orchards almost a failure; blossoms almost all blasted. W. H. O.

FRANKLINVILLE, Cattaraugus Co.—Wheat, oats and barley were never better. Corn has a poor outlook, however. Grass excellent, with promises of the heaviest hay crop we have ever had—a great advantage for this section whose chief business is the production and sale of butter and cheese. R. W. D.

GREENPORT, Suffolk Co.—This farm contains about 100 acres, 50 of which are now in grass, 20 in rye, 10 in oats, seven in corn, three in potatoes and 10 in pasture land. The larger farms containing several hundred acres will probably average in proportion about the same as the one I have given in detail. The grass crop in this county covers the greatest number of acres, and looks remarkably well at present. Rye comes next in importance; the straw has become a valuable commodity, being worth nearly as much as the grain; hence the upland and most of the arable land is usually sown in rye, which is more profitable than growing wheat, the latter is seldom seen. The outlook for oats, barley, rye, etc., is favorable—for rye and oats better than last year. Corn does not look well—too much wet and cold. Fully as much was planted as last year. Apples and peaches will be scarce, also small fruits, with the exception of field strawberries. R M. L.

GHENT, Columbia Co.—But little wheat sown in this county, and that is not doing very well. A third more than usual, and a promise of a large crop of straw. No barley. A larger acreage of oats than last year, promising a full crop. On account of the potato bug less potatoes have been planted, and more corn. Strawberries, cherries and small fruits are good; apples a light crop. Pears very large; plums medium. Peaches promise well. An unusual season for growth of all vegetation. Quite a large quantity of millet sown this Spring. G. T. P.

KILL BUCK, Cattaraugus Co.—Very little wheat or rye is ever sown here and no barley. The same area of oats as last year; it looks well. Almost all the corn has had to be replanted, and much of it is not up yet. Grass is fine—much better than last year. L. T.

LE ROY, Genesee Co.—About the usual quantity of wheat was sown last Fall and it promises to be an average crop—principally Clawson. Oats and barley fine. About the average acreage of corn; very backward and a poor stand; much of it required replanting. Apple crop light; berry crop good. Very few cherries and plums. W. L. B.

LEWISBOROUGH, Westchester Co.—The acreage of wheat is a little more than usual, but owing to the severe Winter the crop will be far less than an average. Clawson is mostly grown with some Treadwell. Rye and oats are looking well—about the usual area sown. The corn has the ordinary acreage and is mostly up and looking well; some has been once cultivated. Potatoes, the growing of which seems to be to a great extent superseded by that of onions, are looking well. The apple trees are nearly all enjoying a season of rest, this being the "off" year. Pear trees are well loaded with sets. J. A. W.

NUNDA, Livingston Co.—Spring work commenced late. Corn prospect poor. Wheat looks well except that on hard clay soil. Acreage about the same as last year. Clawson predominates, though White Michigan and Wicks are also sown. No rye Oats look well; more sown than last year. Not much barley sown, but what there is looks fair. Apple and pear orchards promise well. Few cherries and no peaches. Raspberries wintered well. Strawberries a small crop. Plums none. D. L. B.

STUYVESANT, Columbia Co.—Not much wheat or barley in this section. Our principal crops are rye and oats. The outlook for these is better than for some years past. The acreage of rye is larger than last year; that of oats about the same. Late rains have made the corn crop backward, yet the acreage will be larger than last year. Our apple crop will not be very large, but we shall have abundance of pears, plums and cherries. Grapes are good. E. A.

TOWNER'S, Putnam Co.—Farming commenced late this Spring, but oats are looking well. Winter wheat is only raised by a few—perhaps by one farmer in ten. It is not looking as well as last year. No Spring wheat is raised. Rye is looking well; acreage small: about the same as last year. No barley. Corn is backward. Apples are good for this "off" year; pears and plums are looking well; peaches not very well. Tobacco setting is later than last year. I think the acreage will be increased. Our farmers are principally in the dairy business; so they do not raise much grain: scarcely half enough for their home use. Meadows are looking better than they have done in three years. D, C. N.

WEST TOWN, Orange Co.—This is more of a dairy than grain-raising section. Farmers seldom put in more than two or three acres of small grain; but what is in looks well and promises a good average yield—Mediterranean wheat. Corn is backward; and much has to be replanted. No apples; plenty of pears; no plums; an abundance of small fruits. J. J. V.

New Jersey.

BRIDGETON, Cumberland Co.—About the usual acreage of wheat; some injured by the extreme cold. Promise of fair crops of wheat and oats. But little barley and rye raised. Red wheat of some variety generally sown. Where the corn has started it looks well; some have had to replant. It is said that, owing to the extreme cold of Winter when the corn was gathered not fully ripe and not well cared for, the germ was frozen, hence the failure to sprout; acreage is up to that of 1880. Orchard grass and small fruits do not promise full crops. C. E. E.

LOCKTOWN, Hunterdon Co.—The acreage under small grains is as large as, perhaps a little larger than, we have ever had. The outlook for wheat and rye is medium; for oats better than for several years past—Mediterranean wheat. The prospect for corn yield, as compared with last year, is fully equal; the acreage fully as large. The outlook for small fruits is very good. Orchard fruits will be from one-half to three-quarters of last year's crop. E. M H.

ORANGE, Essex Co.—The acreage of wheat, oats, rye and corn is about the same as in 1880. Wheat is not as good as last year; but rye and oats look well. Much of the corn planted before May 20, had to be replanted. Orchards are looking fair; more pears than last year; small fruits about the same. J. W. J.

TURKEY, Monmouth Co.—Of our arable land one-fifth is in wheat; one-eighth in rye and one-tenth in oats. Silver Straw, Fultz and Mediterranean are the sorts of wheat generally sown, and black and white oats and rye. The prospect is good for average crops. The prospect for corn is good, excepting where the seed was winter-killed and did not come up, which will make the last planting late. At least 10 per cent. increase of acreage over last year. Apples about half a crop; pears about two-thirds of a crop; peaches an entire failure, as the buds were all winter-killed. A great many of the trees, too, were killed to the ground. Blackberries nearly a failure; strawberries will be a very large crop; whortleberries will also be plentiful. Cherries about half a crop. Grapes look promising. The grass crop will be good though the acreage will be somewhat smaller than last year. J. H. C.

WEST END, Hunterdon Co.—Wheat looks bad; will probably make half a crop—winter-killed. Oats are looking fine; acreage larger than last year. Rye an average crop in appearance and acreage. Corn is backward, but it stands well. Fruits of all kinds are doing finely except peaches which are an entire failure. C. O. N.

WHIPPANY, Morris Co.—Acreage of wheat and rye larger than last year; outlook for both good—Mediterranean wheat. Of oats less was sown than last year, but the yield promises to be better. No barley. A large area under corn; outlook good. Small fruits abundant. Pears and cherries full crops; apples and peaches, less than last year. W. O. F.

YARDVILLE, Mercer Co.—Wheat—Amber, Clawson and Fultz—and rye and oats, all promise fine yields. Grass is splendid; but the hay crop will be light, meadows having been injured by drought last year. Vegetables plentiful. Peas, potatoes, sugar corn never better. Field corn just up is attacked by insect pests. Still all things agricultural are 25 per cent. better than last year. S. T. D.

Pennsylvania.

AIRVILLE, York Co.—Owing to the long and severe Winter the prospect for wheat is not as good as last year; moreover a hail storm on May 31 injured or destroyed many acres—chiefly Longberry and Fultz. Oats look well. No barley and but little rye. Wheat and corn are the principal grain crops. Corn is backward. Acreage of it and of wheat about the same as last year. Outlook for orchards tolerable; for small fruits, good. E. S.

ANNVILLE, Lebanon Co.—Wheat, full acreage and prospects of a full crop. Fultz, Red Chaff, bearded; Amber, smooth. Oats, full acreage and promise of a full crop. Rye very good, but not much seeded. Barley, none raised in this county. Corn a good stand; usual acreage. Apples, pears, plums, cherries and small fruits medium yields. No peaches. W. B. S.

CATASAUQUA, Lehigh Co.—Last year the proportion of arable land under wheat in this section was from 25 to 30 per cent.; this year it will be more than 30—Early Russian, Clawson and old Mediterranean, the last a favorite for 20 or 30 years. The rye stand is fine; but heavy rains of late have prostrated most of it. Little barley. It is feared an excess of rain will hurt the corn; the first down-pour washed out acres of it, which had to be replanted. Orchards are not so good as last year, especially apples. Hardly any peaches. C M'I.

EVERETT, Bedford Co.—The acreage of wheat is about as usual and the prospect about an average provided it fills well. The blades on parts of many fields are nearly or quite dead from rust, yet the straw does not appear to be affected. Oats are also about medium with smaller amount seeded. The rye raised is much less than formerly; it is looking well. The prospect for corn is poor: much of it was planted late, and a large part of it replanted, some the second time (or third planting) and some are now waiting for an opportunity to make a second or third planting. Apples are doing well. Peaches very scarce. Pears, few raised in this vicinity, a good stand at this time. Cherries somewhat scarce. Plums, but few cultivated. Strawberries more abundant and larger than usual. Grapes just in bloom; prospect good. The prospect now is that hay and pasture will be abundant. A. W.

KIDDER, Carbon Co.—About the usual acreage of rye and oats. Rye damaged to some extent, but will be about an average crop. Oats never looked finer at this season. Of wheat not enough is sown to deserve mention. No barley. Corn is rather backward on account of cool weather and frequent rains; acreage about the same as last year. The apple crop is very light, as this is the "off" year. No other fruits grown here to any extent. T. A. R.

MIFFLINBURG, Union Co.—Wheat acreage about the same as last year, and the yield promises to be at least one-fourth more—prospects for a good crop never having been better. The only danger now is that it may grow so rank as to lodge. Fultz is the principal sort sown. A number of our farmers have also sown Shumaker, which variety did well last year. Lancaster has also been sown to some extent. Clawson has been sown to a limited extent, but our millers do not like it. Oats look well as we had a good soaking rain last week. No barley or rye in this county, except only in small quantities. Some of the corn-fields look well, but owing to miserable seed a number of our farmers had to replant. The acreage is about the same as last year. Not many apples, this being the "off" year. Not nearly so many peaches as last year. On the whole, the farmer here has cause for thankfulness for the present prosperous outlook. The prospects for a full crop of wheat and oats are better now than for the last seven years. J. P. C.

NORTHEAST, Erie Co.—Wheat is looking fine where it was not winter-killed or smothered under deep snow. Acreage about as last year, but a great deal of it was killed. Some of our farmers plowed up every acre and sowed the land to barley—there will not be more than two-thirds as much wheat in this county as last year. The prevailing kind is the Fultz; but there is some Jennings and some Clawson. We think the Fultz for our Lake Shore soil is ahead of any. Oats and barley are now looking splendid. Of rye we do not raise much; Winter rye is good; it stood the Winter better than wheat. The prospect for apples is good—I think never better. Peaches none—all killed, and young trees killed to the ground. Grapes only a partial crop; a great many of the new canes were killed to the ground. Corn now looks hard. Almost every farmer had to plow up his first planting, refit and plant again. Acres and acres not yet replanted. Seed did not germinate. Some sent to Illinois for seed and others to Ohio. The hay crop not so

good as last year. A dry May hurt the clover. H. R. P.

PICKWICK, Clarion Co. — Wheat acreage about the usual average—Fultz, Clawson, Lancaster, etc. Oats late, about the usual acreage. Corn, the outlook very discouraging on account of poor seed, as nearly all had to be replanted. Acreage about the usual average, but some fields will be sown with buckwheat; Apples about half a crop; very few peaches; small fruits about half a crop—perhaps a little better. D. M. D.

SINNAMAHONING, Cameron Co.—Acreage of wheat and the outlook are a full average—oats the same. Fultz wheat. Corn acreage above average; condition average. Apples promise a full crop. Peach trees mostly killed with hard freezing. Grape-vines somewhat killed. Grass crop is promising. Potato bugs more numerous than ever; acreage of potatoes large. J. B.

VOSBURG, Wyoming Co.—The acreage of wheat is unusually large, and the prospect good. Oats extra-good. Rye better than an average. Corn was planted late, but it promises well; acreage about as last year. The crop of apples, cherries, etc., very short. Potoes well started; about an average acreage; bugs more numerous than ever before. Grass unusually promising. I. O. S.

WAYMART, Wayne Co.—No wheat or barley grown hereabouts. Acreage of oats about the same as last year; outlook good. Prospect for corn good; acreage a slight percentage over last year. This is an "off" year for orchard fruits; small fruits but little cultivated, but that little in excellent condition. C. M'N.

WHITE HOUSE, Cumberland Co.—Wheat in Cumberland Valley is looking well; continued rains prostrated many fields, but it has recovered, and with good weather we will have an abundant harvest. We have never had better prospects for oats. Corn has been very hard to get started, much of the seed having been damaged; one-fourth of all our corn has been replanted, but now it is up and doing very well. J. G.

Delaware.

CAMDEN, Kent Co.—Wheat acreage about the same as last year—chiefly Shumaker, Fultz and Mediterranean. Oats and rye are raised only to a small extent. There is a larger area planted to corn than last year, and it is looking well. Peaches are all winter-killed. The prospect for apples is better than for years. Cherries and plums are scarce; so are pears. Grapes are loaded and growing finely. Strawberries are in abundance—more and better than for several years. Blackberries and raspberries are badly winter-killed, but there will doubtless be a fair crop. H. M. D.

HARRINGTON, Kent Co.—About one-fourth more wheat sown hereabouts last Fall than in any previous season. Some early-sown fields are looking quite well; late-sown are light. Wheat will not average to the acre more than two-thirds as much as it did last year—Fultz principally. We have sown Clawson, Mediterranean and some other varieties, but we think Fultz does best. Rye, oats and grass will be average crops. The usual number of acres have been planted to corn. The prospect at present is not very flattering for a good crop. A great deal of seed failed to come up, and moles and worms took a great deal of what did. Many fields had to be replanted. The prospect is that the crop will be light. Peaches almost a total failure. A few orchards near large bodies of water will bear small crops. The prospect for pears and grapes is good for average crops. The apple crop will be the largest we have had for several years. Small fruits will be about an average crop. W. B.

SMYRNA, Kent Co.—The acreage of wheat is rather above last year's with the prospect of a full average crop—Mediterranean and Fultz, mostly the former. Oats do not yield well here, therefore there are not many sown—none for shipment. No barley or rye. The hay crop will be under the average; grass seed took very badly last year owing to the dry weather. Acreage of corn about the same as last year; standing not good, cut-worms have been very busy and the weather unfavorable. Peaches were all killed—the trees did not even blossom. Apple and pear trees were well loaded, but are shedding a good deal. Strawberries are a full crop; raspberries will be about half and blackberries one-quarter of a crop; they were badly frozen. "HUSBANDMAN."

Maryland.

CAMBRIDGE, Dorchester Co.—Wheat acreage about the same as last year; early-sown on fallow will be a good crop; that on corn ground generally poor, very light; the average will be a little less than last year—chiefly Fultz. Oats next to nothing; barley and rye none. Corn acreage same as last year; prospect better than at this time then. Apples a fair crop; peaches a very light crop—in many orchards next to nothing. Small fruits good. G. J.

CHURCH HILL, Queen Anne's Co.—Wheat promises well. The sowing here is generally late and last Fall it was not finished till Nov. 10, having been begun Oct. 10. The first-sown tillered better than that sown later, but was somewhat injured last Fall by the Hessian fly. Owing to the Winter having closed in too early and the Spring having opened out too late, wheat generally is thin from insufficient tillering, but the heads are unusually large and many farmers expect a full average yield. This country doesn't appear suited for oats, and very little indeed is raised here. They come light—not more than 18 pounds to the bushel. Rye thrives fairly well and will be a good crop. Barley is not known here. Corn looks well, though backward. Usually we plant it from March 10 to April 1, but this year scarcely a grain was planted before May 1, owing to the lateness of the Spring. The peach crop—our best crop, our money crop—is a total failure, except in a few small patches of country especially favored. Here we haven't enough for home use; indeed, thousands of people in this peach region haven't seen a peach blossom this year. Other orchard fruits are doing well; pears have bloomed heavily; apples are abundant, though they never mature properly. J. G.

COCKEYSVILLE, Baltimore Co.—The acreage of wheat is about the same as last year with a small decrease in oats and rye. The outlook is somewhat worse than in 1880, if there is any difference. Fultz is generally sown, having been found hardier and more productive than red or amber varieties. Prospect for corn, poor, only an extraordinary season can produce even an average crop. Owing to the seed rotting in ground several replantings have been necessary and the ravages of cut-worms have been extensive. Orchard promises very small. I. I. N.

DENTON, Caroline Co.—The acreage of wheat is larger than ever before; it looks moderately well, but it is two weeks later than usual. Fultz is chiefly sown. Acreage of corn about the same as last year; a poor stand, but fully two weeks late. No peaches in this immediate section; but there will be a partial crop in salt water situations less exposed than this region. J. W.

LINKWOOD, Dorchester Co.—An unusually large acreage of wheat was sown last Fall. Drilled wheat looks much the best, but will not be more than an average crop—chiefly Fultz. Oats are looking well. Corn looks fine and about the usual amount was planted. Apples, pears, and cherries and small fruits are giving promise of full crops. Peaches near salt water all right; away from water, killed. E. R.

MOLINE, Rock Island Co.—Little or no wheat sown—principally Odessa; looks well but has suffered from drought. Ditto rye. Oat prospect very poor. No barley. Grass a very short crop. Corn has about the same acreage as last year which was one-quarter larger than usual. Much yet to plant and replant. That planted will not average more than three-fourths of a stand. But few apples and no other large fruit; strawberries a failure—drought. Raspberries good. Snyder Blackberries all winter-killed. Rye crop short. W. C. W.

RUSSUM P. O., Wicomico Co.—Acreage of corn and wheat larger than usual. Corn late; wheat much winter-killed. Wheat — Fultz and Blue Stem; white mostly. Oats and rye good. Outlook for small fruits good. Apples and pears plenty. Peaches very few—in this section not one. Spring late; all crops ditto. Common potatoes good. We are setting out sweet potatoes and tobacco. Have had a fine strawberry crop; good prices. W. C. M.

WESTOVER, Somerset Co.—The following is the average acreage and probable yield of our crops as compared with a fair average:—

	Acreage.	Yield.
Wheat	110	80
Rye	100	100
Oats	100	90
Potatoes	120	90
Apples	100	100
Peaches	100	25
Strawberries	100	120
Hay	100	110

Of wheat we raise chiefly Fultz and Amber; of potatoes, the Early Rose and Beauty of Hebron. A. C.

WILNA, Hartford Co.—Prospect for wheat good for an average crop; some few fields winter-killed—mostly Fultz and Amber; acreage an average. Oats look well. More attention is given to tomatoes for canning. Over 100 factories will be in operation this season. Corn is much damaged by cut-worms; about the usual acreage planted. A large crop of apples and pears. T. H.

SOUTHERN STATES.

Virginia.

ABINGDON, Washington Co.—Acreage of wheat and oats about as usual. No rain at all during the month of May. Oats made no growth, but the rains now will bring them out. Wheat is generally heading very low and short; farmers think it will yield but very little more than half a crop. Where fertilizers were used and wheat was drilled, it looks fine and promises an average crop—mostly Fultz and Lancaster (red), some Tappahannock. The acreage under corn is as large as last year; but the prospect *now* is the worst for years. The crop was mostly planted in the first and second weeks of May; not more than one-fourth to one-third came up. The land was replanted, some furrowing out and planting again (so hard the stand), and it is just now coming up since the rains of the last week. Will not get a good stand now. The prospect is certainly bad. Peaches, a good crop; no apples of any consequence. A large crop of tobacco will be planted—setting now. Prices low. Currants, a good crop. W. B. K.

ANNANDALE, Fairfax Co.—The acreage of wheat is about the same as last year, and if it sustains no injury from the present moist weather the crop will be a full average—Fultz and Lancaster. Rye the same. Barley and oats not raised to any extent. Grass good. Corn has not come up well in consequence of drought, but the present copious showers will bring up that replanted and give a good stand. Strawberries very abundant. Peaches generally killed by the Winter. Apples an average crop. M. S.

BUFORDVILLE, Bedford Co. — Acreage of wheat about the same as last year; prospect bad. On all land inclined to be wet, and on light soils, it was badly winter-killed. Many crops stand thin on the ground. May was very dry. The blades on many fields are drying up with rust, and the quality of the wheat will be injured. Harvest will be later this year than usual. Fultz and Lancaster are the principal varieties. Oats, owing to the dry May and late sowing, must necessarily be a sorry crop, and much of the grass sown on oats and wheat has perished. The acreage of corn is about the same as last year. The crop has come up badly, and all the farmers complain of having had more replanting than they ever had. The dry weather was the principal cause of the corn not coming up well. Clover and meadow grass will be a light crop. Our apple and peach crops bid fair to be abundant. Strawberries dried up on the vines and were worthless. About the 1st of June we had rain—a good tobacco season, and planters made good use of it; there will be a large tobacco crop planted in this section. E. P. L.

HERNDON, Fairfax Co.—About the usual acreage of wheat and the prospect for a good crop was never better unless the continued wet weather injures it. Fultz and Lancaster are the favorite sorts; but some experimental sowings of Amber have turned out well. No barley. Rye looks very well—not much sown. Oats are sown by most farmers in small quantities; they are a very uncertain crop; the drought in May hurt them, but the rain we are having since June came in is helping them very much. Corn came up badly, the continued wet weather has prevented replanting or working and the cut-worms are working on it very injuriously. The outlook for a good or average crop is very uncertain. Acreage about the same as usual. Peaches are killed. Apples, pears and cherries will be very light crops. Currants, gooseberries, raspberries, blackberries and strawberries are above average crops, especially strawberries. Grass is doing well and the prospect for good crops of hay is very flattering. S. E.

LEXINGTON, Rockbridge Co.—Wheat is *now* unusually promising; the acreage is larger than last year, with a prospect of a better yield and a better quality—Fultz and Lancaster. The oat crop will be cut short on account of the unusual drought in May. Rye and barley are not sown in this section, except to a limited extent; prospect good. The outlook for corn is not good. Drought and the cut-worm destroyed the first planting; many farmers furrowed out and planted the second time. Acreage about the same as last year. Peaches to a large extent are winter-killed; only a few in favorable localities. Apples and pears promise average crops. Strawberries abundant and of excellent quality. Raspberries injured by drought, but give promise of an average crop since the June rains. I. C. B.

NOKESVILLE, Prince William Co.—The outlook for wheat is at present favorable for an average crop, especially in grain, but short in straw, owing to the dry Spring; acreage an increase of about ten per cent.—chiefly Fultz, with some fields of Clawson, Lancaster and White Amber. Oats, none sown. Barley and rye only in small patches hardly worth reporting; but favorable, what is sown. The prospect for corn is not very prosperous at present. Owing to the dry season and insects, the first planting was all destroyed. The replanted corn is coming up nicely; acreage about the same as last year. The outlook is good for apples for the trees are full of young fruit. Peaches are all winter-killed. Farmers have cut down their entire orchards and are trying to get a new stand of trees. We will have full crops of gooseberries and currants, raspberries and blackberries. Amber cane is a good stand; so are garden vegetables; we have a fine set of cabbages, sweet potatoes, beets, radishes, &c. Grapes are somewhat injured by the severe Winter, but not to a great extent. L. Y. A.

NORWOOD, Nelson Co.—Wheat acreage not large, but about as last year. Outlook for wheat and oats poor. A third, probably, less of wheat than last year—chiefly Fultz. Oats injured by dry weather; rains of last few days may much improve the crop. A good deal of Winter oats. The corn crop promises to be large; acreage about as last year. Farmers now plowing corn. Apples, with present prospect, will be abundant. In many places peaches were killed; in others a fair crop. Fine outlook for tobacco; plenty of plants and excellent season for planting. Potatoes look promising. A good crop of grass on lowlands; thin on uplands; not much attention paid to grass, though it pays better than any other crop on James River low grounds. W. H. K.

PENOLA, Caroline Co.—The acreage of wheat is an average one. Condition not more than 50 or 60 per cent. No barley. Very little rye. Acreage of oats, on account of late Spring, less than 50 per cent. Crop fair. Fultz, Tappahannock and Maryland White are the varieties of wheat sown. Of corn the acreage is 75 or 80 per cent. of last year's area. Growth small, and it is not in good condition. Apples, a full crop. Few pears. No peaches. Small fruits only for home use. T. B. H.

WINCHESTER, Frederick Co.—Outlook for wheat good—Lancaster, Amber and Fultz. Corn did not come up well. Orchards and small fruits good. W. S. M.

WOODSTOCK, Shenandoah Co.—Wheat acreage the same as last year. Much of it sown too late, hence short and thin. Three-fourths of last year's crop; but much may be made up in the filling; season thus far has been favorable to that end. Fultz, Lancaster, Mediterranean, Key's Prolific and Silver Chaff were sown. Acreage in oats and rye always small; both promise a good yield. No barley. The prospect for corn is not as good as last year; acreage the same. Outlook for apples good; no peaches; few pears; small fruits abundant. A. M.

WORSHAM, Prince Edward Co.—The acreage of wheat is about an average one and the prospect fair for about two-thirds of an average crop, say about eight bushels per acre—Fultz, with an occasional field of Wicks, Clawson and other varieties. Of oats we shall not make more than half a crop, if so much. No barley and very little rye. About the same acreage of corn as last year, but it has come up badly, though there is yet time for improvement. Of orchard and small fruits a full crop, with the exception of peaches, which were badly winter-killed in all low and unprotected situations. G. A. B.

West Virginia.

ACADEMY, Pocahontas Co.—Acreage of wheat and oats about the same as last year. Wheat promises only half a crop—Fultz almost exclusively. Oats promise hardly as well—Probsteier and black oats. Corn acreage about the same as last year; outlook poor until lately when splendid weather brightens the prospect. Owing to bad seed, much replanting has been necessary. Perhaps half a crop of apples; few peaches, or cherries; all small fruits were badly injured by drought which lasted 30 days at the critical period. F. A. R.

NEW CUMBERLAND, Hancock Co.—The acreage of wheat, oats and rye is larger than last year and the outlook is good. Fully half of the corn had to be replanted; the first stand is doing well. More put in than last year. Meadows and pastures excellent. Orchard fruits half a crop; small fruits abundant. J. L. S.

North Carolina.

ELIZABETH CITY, Pasquotank Co.—The acreage of wheat is very small this year—not one-half what was sown last year; stand very bad; frozen out; what there is is looking well: Fultz and Red Russian. Corn is looking very well; the acreage is about an average one; it is late on account of a backward Spring. Fruits have been cut off by early freezes; prospects poor. H. T. G.

GREENSBORO, Guilford Co.—Of wheat there is less than an average acreage; early-sown is good on fair land; the straw is short from lack of rain; the heads are over the average length and well filled, and are now beginning to put on the golden colors for the sickle, and the next ten days will finish up the wheat harvest. Late-sown does not promise a bountiful harvest; the straw is shorter than that of the early-sown, as are also the heads, and they are not so well filled. Quite a number of kinds are sown: Kivett, Purple Straw, Moten, Fultz, etc. The first has taken the lead for eight or ten years. Oats, fall-sown, on good land are fine; spring-sown will be a failure for want of water. Barley and rye are little sown in this section. The prospect for corn is the poorest I ever saw at this season. It is very small and a poor stand, after having been replanted two or three times. There is not an average acreage, as the land got so dry that farmers could not finish breaking—not enough rain for five or six weeks to break land. Peaches are al-

most an entire failure except on very high land. On low and level lands there will be no peaches, and in many places the trees are badly damaged by the severe Winter. Apples were very full of bloom; but in this section half or more dropped, and what are left are poor, knotty, wormy things that never can amount to much. Small fruits are not grown much; they do not succeed well here. Grapes do well and promise a fair crop; pears half a crop; plums not grown much, except the Wild Goose, which is always fine. G. L. A.

HALIFAX, Halifax Co.—Very little wheat sown. Oats not good on account of dry weather in May; no barley; very little rye; what rye was sown is very good. Twenty per cent. more cotton planted this year than last. Prospect very good. Less corn planted than usual. Fruit crops very good in most sections. B F. G.

LOWELL, Gaston Co.—Small grains—wheat oats, rye only—outlook very good. Acreage about one-eighth more than last year—fair for the county. Corn outlook good. Acreage 10 per cent. more than usual. Very little Spring oats. Peaches, none; small fruits awfully short. All fruits hurt by frost except grapes and apples; these abundant. An increase of 25 per cent. under cotton; it looks well. Weather dry. N. D.

South Carolina.

AIKEN, Aiken Co.—Acreage in wheat small, but quality good. Large acreage of oats; comparative failure of crop from the very dry Spring. Rye only in small quantities. Barley, none. Almost exclusively the small red rust-proof oats and small red wheat. Prospect of growing corn crop very good so far; acreage at least 25 per cent. less than last year. Outlook for fruit, fair. Peaches injured by late frosts, but enough left for a fair crop. Strawberries abundant; season over. Promise of grapes good. H. W. R.

Georgia.

ATLANTA, Fulton Co.—The acreage of wheat is somewhat below that of last year; but the outlook is good—no rust or blight—principally Dallas wheat (rust-proof.) Area under oats about nine per cent less than last year. Fall-sown grain, where not winter-killed, is very fine. Spring-sown grain cut off considerably by drought—Red, or Mexican Rust-proof, and Burt's Extra Early Rust-proof almost exclusively sown. Of barley and rye only a piece here and there for pasture. The acreage of corn is 102 to 100 last year. Bad weather caused late planting. Prospect ordinary; stand not very good. Pears short; peaches not over a quarter of a crop; apples an average one; grapes, fine; blackberries, abundant. M. J.

WASHINGTON, Wilkes Co.—Wheat acreage one-half as much as usual. Barley about an average. Oat acreage about as large as in the past year, but the crop is injured by dry weather in May. Rust-proof wheat and oats sown almost entirely; not known by other names. Prospect for corn is fair; about the usual acreage Apple crop abundant; peaches about half a crop; strawberries were cut off one-half by the dry May; raspberries a full crop; wild blackberries a heavy crop. J. C. D.

Alabama.

SELMA, Dallas Co.—Corn, I think, will be an average crop, though many complain that the dry weather is cutting it short. Last year's crop was a failure here. I have about five acres of the Blount Prolific, all from the seed I got from the RURAL a year ago. It looks well, considering the dry weather we have had. Cotton is looking well, and if it is not set back we shall have a full average crop. I think as a rule the prospect for all crops, except oats, is better this year than last. Irish potatoes are not much raised here; they are nearly a failure this season, the gardens being nearly burned up. Peaches are a total failure. Apples will possibly be a half crop. Strawberries were a short crop. J. M.

TUSCALOOSA, Tuscaloosa Co.—Very little wheat, rye or barley. Prospect for oats is poor—mostly red rust-proof. Prospect for corn is a shade better than last year. No peaches and very few apples or pears. W. C. R.

WOODSTOCK, Bibb Co.—Acreage of wheat smaller but prospects for good crop better than last year. Oat acreage much larger than last year and a splendid prospect. Corn acreage much larger and outlook very good. No barley and little rye. Cotton acreage about the same as last year, but outlook much better. M. Y. H.

Mississippi.

BROOKHAVEN, Lincoln Co.—No wheat, barley, or rye raised. Some oats which are doing tolerably well—are short and about ready for the cradle. Corn looks well in some places. The stand is poor owing to worms—acreage about the same as last year. No peaches; a few apples; cotton doing well. H. F. T.

LAWRENCE, Newton Co. Oat acreage far below an average on account of unfavorable weather for sowing; one-half a crop. Red rust-proof sort. Rye, barley and wheat, none. Corn looks very well and the acreage is about the same as last year. Some apples and plums. No other orchard fruit. Berry crop tolerably good. F. B. N.

OKOLONA, Chickasaw Co.—The acreage under wheat here is very small—mostly Blue Stem, Early and Late May and Golden Chaff. Of oats the acreage is large, and the prospects are for a good average. Of rye and barley there is none. Early-planted corn is not good; late-planted is a fair average—acreage less than last year. Fruit of all sorts will be very short. T.

SCOOBA, Kemper Co.—But little wheat and oats and no barley or rye, the sowing season having been so bad. The prospect for corn is good and the acreage will exceed that of last year. There is scarcely any fruit of any kind—all killed by cold weather. The orchard and small fruit business does not get much attention here; people are satisfied if they can get a little for home consumption. J. A. M.

Louisiana.

GREENSBURG, St. Helena.—No wheat, barley or rye is raised in this section. Most farmers sow oats (red rust-proof) and the outlook for it is fair. The outlook for corn is fine; the acreage an average one. There is an increase in the area of cotton. More attention is given to orchard and small fruits. J. S. D.

Texas.

College Station, Brazos Co.—No small grain of any account is raised in this section. Corn prospects are good; acreage probably somewhat smaller than last year by reason of the late Spring. Cotton is doing well. The fruit crop was injured by late frost, especially peaches. Apples but little grown. Pears and grapes good. C. C. G.

NEW PHILADELPHIA, Wharton Co.—Corn and cotton are the principal crops grown here. Corn will be an average crop, although in places a little irregular; the blackbirds destroyed it when it came up and many people have had to plant two or three times. Cotton is rather late on account of the first planting having been destroyed by the frost; but it will make a fair average crop. We want rain very badly; all kinds of vegetation are dried up, the thermometer for the last three weeks has ranged from 90 to 95 deg. in the shade. Potatoes are not more than half a crop; the country is infested with millions of potato bugs, which have nearly destroyed the crop, and now the dry weather has finished it. Peaches are a good crop; and we have been using ripe pumpkins and watermelons (Gipsey and Peerless) for more than a week. The Rural Branching Sorghum is looking splendid; plenty of roots with ten and twelve branches; it is far ahead of other sorghums planted side by side with it. R. B.

Arkansas.

Hot Springs, Garland Co.—Very little wheat sown—only two picayune grist mills in the county. Oat acreage small, but the crop looks well; 25 to 50 bushels is the usual yield per acre. Rye is sown only for Winter pasture. Of tamegrasses we have scarcely any, but they do well. Corn is looking fine, but it is terribly in the grass; acreage increased, but not enough raised to supply this market, there being as yet but a small portion of the land in this immediate vicinity in cultivation, and a large part of that is devoted to trucking and dairying. There are a good many orchards, and there will be about one-third of a crop of apples and peaches; plums, a full crop of the Chickasaws; peaches, some; pears, none. Strawberries, the finest crop ever grown; grapes, blackberries, raspberries are good crops. F. J. B.

Kentucky.

ELKTON, Todd Co.—Wheat acreage about 70 per cent. of an average; prospect 70 per cent.—Boughton and White May. Oats an average crop. Corn acreage 100 per cent.; prospect good, but later than usual. Outlook for small fruits and peaches good. Apples scarce. E. B. E.

HENDERSON, Henderson Co.—The outlook for wheat is promising; acreage 10 per cent. increase, and the prospect for yield and quality fully 20 per cent. better than last year. The crop promises to be the best one raised in the county. Our stiff river bottom lands, which have been cultivated for years in corn, are now proved to be the best wheat lands in the country, the yield being 30 to 35 bushels, and sometimes more of grain over the standard weight. Oats a failure and barley not worth mentioning. The varieties chiefly sown are Fultz 50 to 60 per cent. and the remainder White Winter and Mediterranean about equally divided. The latter is considered the best of all, being hardier and the yield much greater. The prospect for corn is decidedly bad. The acreage is as large as last year or larger; but it has come up very badly owing to the fact that in nine-tenths of the crop last year the germ was frozen and killed and unfit for seed, which fact was not known to the farmers until after trial. The crop is very late and many are still planting, and unless the season is unusually favorable the indications now are that the yield will be from 20 to 25 per cent. short. The outlook for orchards is not good. Peaches generally killed, except seedlings or in very favorable localities. The apple crop is generally a failure and the pear little better. Blackberries and raspberries are killed, but the strawberries were never better. The varieties succeeding best are Sharpless, Chas. Downing, Longfellow and Warren. The Crescent Seedling is enormously productive when fertilized. Grapes are badly damaged, except iron-clad varieties, such as Elvira, Warden, etc. Even the Concord is seriously injured. Other small fruits will give a fair crop. J. C. A.

Tennessee.

ADAIR'S CREEK, Knox Co.—The acreage for wheat is 20 per cent. more and the yield per acre will be 30 per cent. less than last year—bearded, locally called Swamp-Bearded, Fultz and Boughton. Corn backward but looking well; about ten per cent more than usual planted. Oats will be very short. But little rye and no barley is raised. Orchard fruits good; small fruits very poor. T. B.

MORRISTOWN, Hamblen Co.—The outlook for all wheat is not promising. The yield per acre will probably not exceed half that of last year's crop and the acreage is 25 per cent. less. Fultz, Silver Chaff and Quaker. Rye, barley and oats are mongrel, but little pains having been taken about seed; prospect fair for half crop. Early planted corn looks well; late planted has, owing to the late drought, failed to come up well and looks very unpromising. Acreage about same as last year. There will be an average crop of apples and peaches. Small fruits are mostly a failure. W. G. T.

VICTORIA, Marion Co.—Outlook for wheat fine, acreage average—Mediterranean, Fultz, Harris. Corn outlook good; rather more put in than last year. Orchard and small fruits prospect about as usual. W. W. F.

WESTERN STATES.

Ohio.

ATWATER, Portage Co.—The acreage of wheat and oats is about the same as last year, with a fair prospect of a large yield. Wheat is beginning to lodge, which may prevent its filling well—Fultz, Wicks Early White and Blue Stem: a little of the Silver Chaff sown here last Fall. Corn has come up and is generally standing well, with an acreage about the same as last year, There is a fair prospect for apples, but not as many as last year. Grapes and other small fruits are looking well where the vines were not killed by the Winter. Potato beetles plentiful. O. M.

BELLEVUE, Huron Co.—Wheat is our principal crop, and that which was sowed early is good, but the late-sown amounts to nothing. The acreage is about the same as last year, but it will fall a little short of an average crop. Owing to the late Spring but little barley was sown. Oats are short, and corn small. Our fruit crop will be almost a failure. S. D. S.

BENNINGTON, Morrow Co.—Wheat acreage the same as last year; yield, three-quarters as much—Fultz and Lancaster. Oats three-fourths of last year's area; prospect of yield per acre, quite as good. Acreage of corn the same as last year; outlook poor owing to bad seed and unfavorable weather. Grass very good. Orchards injured by hard winter—about one-fourth of a crop. Blackberry bushes killed; grapes badly winter-killed. All insect pests abundant and active. T. W.

BLOOMINGTON, Clinton Co.—Acreage of wheat in this section about three-fourths of last year's average; stands thin and straw is very short. Mediterranean, Egyptian, Fultz and some Clawson. Small acreage of oats and prospect very poor owing to three weeks of drought in May. No barley or rye. The acreage for corn and the outlook are about the same as last year, only it is a little later. It is our principal crop. Meadows will be very light owing to drought in May—the month that makes the hay crop. Wool is selling for from 33 to 35 cents per pound washed. The crop of apples will only be fair—not an average. Peaches will be an average yield. Hardly any pears. A fair prospect for cherries. The raspberry vines were badly winter-killed; yield will be light. The outlook for early potatoes is not good on account of potato beetles, which are very troublesome. Live hogs are worth $5 50 per 100 pounds; cattle about $5; mutton about $3.50. F. C. D.

BOWLING GREEN, Wood Co.—No rain this Spring till June 1; since then plenty and to spare. This county is mostly very flat, black, sandy and gravelly soil underlaid with limestone. The drainage has been quite thorough in some parts of the county and elsewhere tiling is being pressed forward, and the land is as productive as can be found anywhere. The acreage under wheat is greater than last year. It is very short and thin, however, but it has been improving rapidly since rain began to fall. We shall probably have about 75 per cent. of a crop. Oats are improving finely. No barley or rye to speak of. Fultz is the only variety sown here, except a few pieces of Clawson. Corn came up badly on account of the drought. It has improved somewhat since rain fell; but little cultivation has been done yet. A decrease of acreage. Poor prospect for all kinds of fruit; not enough for home consumption. J. B.

BRIGHTON, Lorain Co.—The prospect for wheat is about the same as last year, with a small increase in acreage—Lancaster, Fultz and Red. Oat prospect and acreage about the same as last year; a fair crop. The prospect for corn is poor; much second planting has had to be done, and it all looks backward; acreage about the same as last year. The outlook for orchards is about half a crop. There will be a good crop of small fruits. E. A. F.

BUCYRUS, Crawford Co.—Wheat acreage 10 per cent. above last year's; probable yield, 75 per cent. of last year's—Fultz, Mediterranean, Todd and a little Clawson. Oat acreage three-quarters of last year's; sown late and kept back by dry weather. Corn acreage less than last year's; it is very backward. A. A.

CAMDEN, Preble Co.—Late rains are helping, but there's a good deal of wheat beyond redemption, owing to drought and the fly. Oats, flax and meadows may recover somewhat, but at best they will be injured considerably. Corn that wasn't planted till the dry weather set in didn't come up well, and many are planting a second time. Bad seed, dry weather and cut-worms have been the causes of failure in the first attempt. W. M.

KINGSTON, Ross Co.—The acreage of wheat is one-fourth greater than last year; but the yield per acre will not be more than one-half what it was in 1880. Very few fields are sufficiently high to be cut with machines, and a great deal is not more than one foot high and it is now heading. Our chief varieties are, Gipsey and Fultz, with some Clawson and Michigan Amber and a nameless sort called "white bearded." Oats, barley and rye are little sown in Central Ohio. What little barley there is looks well. Prospects for corn are not flattering owing to a late Spring, bad seed and dry weather. Acreage about one-fourth less than last year. Plenty of fruit for home use with some to spare. O. P. G.

HUDSON, Summit Co.—The acreage of wheat is larger than last year, and all early-sown wheat looks as well as it did a year ago; late-sown looks poorly. The crop of this county will be about 85 per cent. We are getting some fine showers, and cool weather now and wheat and oats are doing splendidly. Not as much oats were sown here this Spring as last, and they were looking very poor until the showers of the last three days started them. No barley, and only a little rye; but that looks well. Not as much corn as a year ago. In fact, some farmers sowed so much wheat that they have very little room for other crops. Corn is looking well. The apple crop will be very small; so will the cherry and pear. The hay crop will be short unless we get plenty of rain the rest of June. E. A. S.

MECCA, Trumbull Co.—The acreage of wheat and oats is about the same as last year; they look first-rate. Barley and rye are not raised here. Varieties of oats, White Russian, Probsteier, Surprise; and of wheat, Clawson, Fultz, Democrat. The last variety takes the lead here. Millers will pay 15 cents a bushel more for it than for the others. The acreage of corn is less than last year; it looks poorly. Orchards are medium; not as good as last year. Peaches, none; grapes and other small fruits about half a crop. H. L.

MENDON, Mercer Co.—Wheat acreage of this year equal to that of last and the present prospect is that we will have a good average crop; on bottom lands it is heavier than last year; on uplands it is shorter and thinner but heavier in the head—mostly Fultz. The prospect for corn is fair if the Fall is favorable for maturing. The acreage is fully equal to that of last year. Orchards are badly injured by the Winter—fully one-third both old and young. Blackberries are killed to the ground. Black-cap raspberries not killed; full of fruit. T. F. E.

MENTOR, Lake Co.—The acreage of wheat is about the same as last year; the drought has hurt it very much, but rain has come just in time and I think we shall have an average crop—mostly Clawson and Fultz. Oats look very well and there is about the same acreage as last year. Corn is very backward, most of it is only just up; about the same acreage as last year. There will be some peaches; berries are plentiful. H. D. G.

NEW LISBON, Columbiana Co.—The acreage of wheat is 25 per cent. less than last year, and the probable yield fully 33 per cent less. Fultz, Clawson, Old Blue Stem. Oats in acreage fully up to last year and in outlook 50 per cent better; from present appearances they will lodge badly. Corn looks pretty well;

worms working pretty busily; but an average in acreage and outlook. The grass crop made a poor start on account of drought; but late rains insure a heavy yield. E. C. L.

NEW PHILADELPHIA, Tuscarawas Co.—The acreage of wheat is about the same as last year, but the yield will be fully one-third less. The valley will yield nearly a full crop; the hills not over half a crop. Fultz, Lancaster, Blue Stem, Clawson and French Mediterranean are chiefly sown. Oats look fair. Owing to the lateness of the season only half the acreage of last year has been sown. What little rye and barley there is looks well. The prospect for corn is fair although much had to be replanted as the seed did not germinate, having been injured by the cold Winter. The acreage is about the same as last year. There will be about half a crop of apples and a large crop of peaches on the hills, but none in the valleys. All the small fruits promise well, except the grape, which has been badly winter-killed, the Concord even being greatly injured. There will not be one-fourth of a crop. There will be a better crop of hay than for several years. G. L. T.

NEWVILLE, Richland Co.—Wheat acreage less than last year's; prospect not as good—Fultz and Amber. Barley good; not much sown. Oat acreage small; prospect good. Rye poor; little sown. Corn prospects poor—cut-worms and poor seed; acreage less than last year. Light crop of orchard fruit; "off" year for apples. The small fruit prospect is good. I. F.

PLEASANT CORNERS, Franklin Co.—Wheat will be about three-quarters of last year's crop. Corn is small and backward; not a good stand, but we are having good rains which will help it out. No rye, oats or barley. Will have some fruit. W. M. F.

PULASKI, Williams Co. — Wheat acreage about average; outlook for about one-half crop, chiefly Fultz and Clawson. Oats very backward and not looking well.—about two-thirds of an average crop. Rye, three-quarters crop. The corn prospect is pretty fair, but the crop is very backward. No apples, pears and peaches; and about half a crop of small fruits. I. P. R.

POMEROY, Meigs Co.—A poor prospect for wheat in this county; some ground will not yield the seed sown. None will average over five or six bushels per acre. This year I will not harvest more than six or eight bushels per acre; my usual average is 28 to 30 bushels of Tappahannock. The varieties chiefly sown are Tappahannock, Red Lake and Mediterranean. Oats are short and some will not be worth cutting; barley ditto. Rye is not much sown; what there is looks well. Grass has a fair outlook and a prospect of a fair crop. Corn is very backward on account of poor seed, a late Spring and drought. A number of fields have been replowed, and the rest is mostly a poor stand, averaging about one stalk to the hill. The late rain will give some relief, but the outlook is poorer than last year. Apples and small fruits, average crops. Pears and cherries will fall quite short. J. M. T.

TONTOGANY, Wood Co.—It is but a few years since there was scarcely enough wheat raised here for home consumption; corn was the principal crop, but now farmers are raising more wheat and less corn. Up to the 1st of April wheat looked very well, but from that time until the 1st inst., we had no rain of any account and many pieces are nearly ruined, the late-sown suffering most. Oats not so much sown as usual, and crop short; but they may yet make a fair crop. Barley and rye not grown here to any extent. Corn is far behind what it was at this time last year; it has come up very unevenly; a great deal of the seed swelled and dried up or rotted, there not being moisture enough in the ground to make it grow. I have a piece of soil that has been planted four weeks, and three-quarters of the seed is just sprouting. Lots of replanting, some fields being planted over entirely. Acreage not as large as last year, as wheat seems to be growing in favor. Fultz, Clawson, Mediterranean and Gipsy are the principal varieties, with Fultz ahead. There will be some apples but no peaches, and many of the trees were winter-killed. Cherries abundant; currants, ditto, if worms do not destroy them, of which there is a fine prospect at present. Strawberries, a short crop on account of drought. Colorado bugs by the bushel. G. S. K.

Indiana.

BARNARD, Putnam Co.—The acreage of wheat is hardly so large as last year—mostly Fultz which has proved the most hardy and prolific. Of oats and other small grains but little is grown. The prospect is fair for a good corn crop. The acreage is up to or above last year's. Orchard products a failure. I. S. H.

BOURBON, Marshall Co.—The acreage for wheat is quite large; but owing to the extremely dry weather the yield will be somewhat smaller than last year—perhaps not above 12 bushels per acre throughout Northern Indiana.—Fultz and Gipsey. Oats will be very short; on account of drought but little is sown throughout this part of the State. Corn looks tolerably well: about the same amount planted as last year. Orchard fruits will be less than last year; so will small fruits. Peach trees are badly winter-killed, S. B. T.

CROWN POINT, Lake Co.—The outlook for all the different crops is unusually encouraging. Both Winter and Spring wheats do poorly here, consequently very little is raised; only an occasional farmer has the temerity to attempt it. Now and then a field was sown last Fall, but the severe Winter, together with the dry Spring weather, has about finished it. Oats promise an abundant harvest. The severe drought in May shortened the stalks and the late rains give the fields a vigorous, healthy look. The acreage is about the same as last year. Old-fashioned black oats, the chief variety. The prospect for corn has not for 20 years been better than it now is. The acreage is something larger than last year. This is not a fruit region, and what fruit trees we have were more or less injured by the severe Winter. H. C. C.

DECATUR, Adams Co.—Wheat acreage about equal to that of 1880; outlook not as favorable by at least 30 per cent.; owing to dry weather in May straw will be very short. Fultz and Mediterranean; no Spring wheat sown. Oats owing to dry weather look bad, recent rains may bring them out somewhat. Rye looks well; but little, however, is sown. Corn on stubble ground is good; on sod it is damaged by cut-worms; a great many have planted the third time; acreage equal to last year's. Orchard and small fruits not over one-third of a crop. D. C. W.

ELKHART, Elkhart Co.—Oats are doing pretty well; if the weather is favorable we shall have our average crop—40 bushels per acre. W. B.

HALL'S CORNERS, Allen Co.—Wheat acreage 10 per cent. less than last year's; outlook not so good—Lancaster, Tappahannock, Clawson, Todd, Mediterranean. Area under oats 25 per cent. less; outlook fair. Corn acreage about the same as last year; prospect very poor. A dry May and poor seed caused much replanting and a poor stand. Good outlook for apples, cherries and small fruits. No peaches. Currants and gooseberries nearly all destroyed by insect pests. W. H. H.

HARRISBURG, Fayette Co.—The acreage under wheat is an average one; but the yield will not be over eight to ten bushels per acre—the stand is short and thin. Oats are not a good crop. About the usual area of corn has been planted, and with a favorable season henceforth there will be an average crop. Apples in fair supply; many trees killed: no peaches; trees nearly all killed. Small fruits plentiful. Our present opportune rains will better the chances for all crops. W. W. T.

LAGRANGE, Lagrange Co.—Wheat acreage large; yield, less than one-half a crop—mostly Fultz and Clawson. Oats fair. Of barley and rye very little sown. Corn acreage large; outlook excellent. Apples a light crop; peaches none; cherries plentiful; grapes an average crop; blackberries badly winter-killed; raspberries, abundant; also, strawberries. Potatoes look well, but are very buggy. N. S.

LA PAZ, Marshall Co.—Spring warm and dry until this week; raining every day now. Wheat will be half a crop—Fultz, Lancaster and Diehl. Oats and corn look well. Small fruits plentiful; but the currant worm is stripping the currants and gooseberries. Strawberries are fine. Apples, pears and cherries promise full crops. Peaches all winter-killed. Stock is doing finely. Wheat, $1. Corn, 45c.; oats, 35c.; butter, 10c.; eggs, 10c. E. E.

LA PORTE, La Porte Co.—Wheat acreage larger than last year; outlook gloomy; not much over a quarter of an average yield per acre—principally Lancaster, Fultz and Gipsey. Prospect for oats fair—mostly Surprise. Corn acreage larger than last year; outlook good. Apples one-tenth of a crop; no peaches or plums; half a crop of small fruits. J. S.

MOORFIELD, Switzerland Co.—Weather very dry; no rain for four weeks till 7th inst. About the usual acreage of wheat; badly winter-killed; will not make over half to two-thirds of a crop. Oats short growth; about the usual acreage. Barley and rye not much cultivated here. Corn backward; planted very late. Small fruits scarce. Apples and peaches fair crops. Grass short; will not make over half a crop of hay. J. C.

PITTSBURG, Carroll Co.—Acreage of wheat about the same as last year; the yield will be only about one-third of a crop, with the fly working upon this third to a considerable extent in some localities—mostly Fultz. The outlook for oats and Spring barley was not flattering up to first of the month owing to the drought; but since then there has been plenty of rain. Winter barley a complete failure. The corn prospect is splendid, although in some few fields the grub-worm has done considerable mischief. The acreage is at least 25 per cent. more than last year. Apples and all other orchard fruits are failures, except pears; the latter promise a bountiful crop. J. T. S.

PLAINFIELD, Hendricks Co.—Fully an average acreage of wheat was sown; but the prospect is poor for an average crop. Of corn there is an average acreage; but much of it was injured by cut-worms, moles, poultry and dry weather; a good deal of replanting. Fultz wheat; white oats and dent corn. Fruit prospects poor: apple buds killed and wood injured. A small area of oats was put in and the outlook for that is poor owing to the late Spring and dry weather. Very little barley or rye is raised. E. H. C.

SANDBORN, Knox Co.—The acreage of wheat was large, but part has been plowed up and put in corn—will be from one-third to one-half a crop; shortage due to the fly and freeze this Spring. Corn not all planted yet; wet Spring and bad seed the cause; much replanting to be done; a great many cut-worms. This is a wheat and corn country, with some grass and stock. Little oats; no rye. Fruit enough for home use. Prospects gloomy for the year. J. H.

TERRE HAUTE, Vigo Co.—Wheat acreage as large as, or larger than, in 1880. Farmers report it won't exceed half the crop of 1880 but late rains may increase this—Fultz and Amber. Oats not much sown; prospect poor. Corn acreage about as last year; very backward; bad seed; replanting will have to be done. Apples promise nearly an average crop; no peaches; pears very short. A drought has cut off strawberries more than half; recent rains will help late ones. J. A. F.

WILLIAMSBURG, Wayne Co.—Acreage of wheat about the same as last year: prospect for not over half a crop per acre on an average—Fultz mostly. Oats half as much as usual sown; prospect very poor. Barley and rye are not raised in this section to any amount. Meadows will be very short and thin owing to dry weather. Of corn the usual amount has been planted; but it came up poor and is badly injured by worms. Prospect not so good as last year. Fruits almost a failure. Apple orchards badly winter-killed. Grape-vines, blackberries and raspberries are so badly injured as to cause a failure. W. M. H.

ZIONSVILLE, Boone Co.—Wheat stands thin on the ground; there will not be more than half a crop, although the acreage is larger than usual. Oats look well. The acreage of corn is much larger than ever before, and it looks enconraging. Potatoes promise a good crop—a large acreage. Apples and small fruits are scarce—many apple trees as well as small fruits were killed by last Winter. N. M.

Illinois.

ASHKUM, Iroquois Co.—Little wheat is raised here but that looks very well. Oats look well; rye good; barley but little sown. The acreage of corn is about the same as last year, but the prospects are good for much finer crop. As a rule the prospects for crops are much better than last year. J. F. V.

BAILEYVILLE, Ogle Co.—Winter wheat almost all failed—was injured by dry, hard freezing last December, and again by freezing and thawing in March and April. The ground was reseeded to Spring wheat and oats. Considerable Fultz wheat was sown last Fall. Mammoth and Fife are the chief varieties of Spring wheat. Rye will be thin. Oats and barley about average crops. Corn—acreage somewhat increased; fair prospect if the weather proves favorable. Scarcely any apples or cherries. About average of Chickasaw and common wild plums. W. B. D.

CHICAGO, Cook Co.—Very little wheat is grown within a circuit of 30 miles of this city. Corn and oats are the principal grain crops, with some barley. About the usual acreage planted with fair prospects—Surprise Oats and four-rowed barley leading kinds. The country around Chicago is greatly devoted to dairying, butter and milk always bringing good prices in this market. Have had quite a dry spell, but the bounteous rains of the past two days, providing we have warm weather, will make the crops fairly jump. Apples, pears and cherries will be scarce. Although many of the trees were fairly filled with blossoms they set very little fruit. Currants and gooseberries will be fair crops, but raspberries are killed back to 12 to 18 inches from the ground. G. P. W.

CUSTER, Will Co.—But little wheat or barley is raised here. Oats and rye are looking well. The large white rye is mostly sown. At least ten per cent more oats this year than usual. The prospect for corn is very good except on low ground, which was injured by recent heavy rains. The acreage is somewhat smaller than last year's. Apples, plums and cherries are almost a failure. The prospect is good for small fruits. T. W. W. B.

FARMER CITY, De Witt Co.—The acreage of wheat was larger than usual, but the prospect is wretched. The area of rye was cut short by hail storms at sowing time; the yield, too, will be light. The acreage of oats is very large and the outlook good. The area under corn is much larger than last year and the outlook is fine. Orchard fruit will be scarce; small fruits pretty abundant. W. L. D.

LANE, Dewitt Co.—The acreage of wheat exceeds that of last year; prospect gloomy. Oats, rye and barley have a small acreage; prospects not flattering; the chinch bug has made its appearance. Corn prospect good; about the same acreage as last year. The outlook for orchards and small fruits, with few exceptions, is very discouraging. J. S.

LA PLACE, Piatt Co.—Crops are looking well, considering the late Spring and dry hot weather for three or four weeks up to this week when we have had two nice rains which have done a good deal of good. Corn is all planted and up and is looking well, some having been plowed twice. Winter wheat was partially killed. Rye and oats good. Pastures excellent. Cattle and hogs fat and healthy. E. L. B.

LODA, Iroquois Co.—But little wheat is sown here and that is badly winter-killed. Of oats more is sown than last year, and the outlook is good. Barley we can't raise here. Rye is a sure crop, but the price it brings won't pay—40 to 60 cents per bushel, so we raise but little. The prospect for corn is good; not so much is planted as last year. Peaches, none; apples, only a few; cherries still fewer; all other small fruit, plentiful. A. P.

MINONK, Woodford Co.—Very little wheat raised here, owing to much that was planted having been winter-killed. The usual acreage of oats; prospect good. Corn acreage about the same as last year; prospect good. Outlook for orchard fruits very poor; ditto for cherries. Other small fruits moderately good. R. D.

NAPLES, Scott Co.—The acreage of wheat sown last Fall was the largest ever put in here; but owing to the severity of the Winter fully one-half of it was plowed for other crops. What was left is thin on the ground, but the heads are large. This county will produce only about 20 per cent. of last year's crop—chiefly Fultz and Gold Drop. Oats will be almost a failure. Rye will be up to the average and the acreage about the same as last year. The prospect for corn at this time is good, never a better stand and all of it is clear of weeds; the acreage is more than double last year's. Apple trees were loaded with bloom, but owing to a protracted drought, the fruit has fallen badly. Peach buds were all killed, and so were some of the trees. Pears and cherries will be light; strawberries almost a failure; raspberries scarce. The Gregg appears to have gone through the Winter the best of all and will make a fair crop. E. M.

ROCKTON, Winnebago Co.—Winter wheat almost all winter-killed; Spring wheat looking well. Oats fine. Rye just middling. Corn is very late; acreage about the same as last year. Pastures and meadows fine. Very few small fruits raised here. J. B.

RUTLAND, La Salle Co.—Winter wheat about all killed out. Spring wheat none sown. Oats more sown than usual; they look well. Rye looks well; not very much sown. Oats is the only small grain grown here to any extent. The prospect for corn is good, if the weather is favorable. It is somewhat late owing to the backward Spring, but the ground is in a better condition than it has been for a number of years, cleaner and looser. Acreage about the same as last year. For orchard and small fruits the outlook is very slim. Potatoes are growing nicely—mainly Early Rose and Peachblow. J. W. P.

SALEM, Marion Co.—The average outlook for farm products in this county is as follows: Wheat, 20 per cent. of an average crop; corn, 100; oats, 100; hay, 50; apples, 80; raspberries, 100; blackberries, 100; strawberries, 75; gooseberries, 100; currants, 100. Insects have injured the wheat to the above extent and are now threatening corn and oats. No damage yet from the Army worm. L. M'C.

SENECA, Lasalle Co.—There is no wheat sown about here this year. Oats have a larger acreage than last year and look well. No barley and very little rye. There is about 10 per cent. more corn planted than last year, and it is clean and in good condition, but we have had very heavy rains during the last few days, which will delay cultivation nearly a week, even if we have fair weather. Very few apples and pears; no cherries; strawberries a good crop; currants and gooseberries about an average; raspberries winter-killed—below an average. The Snyder Blackberry is all right. Grapes are not more than one-fourth of a crop. D. L. C.

STONE CHURCH, Washington Co.—Wheat generally is thin and full of chinch bugs and Hessian fly. Fultz and Red Sea are the favorite sorts, the former seeming a little more prolific than the latter. It also appears to be improving in quality rapidly; three years ago millers would pay from five to seven cents more for Red Sea; two years ago they would make no difference; last year, they gave from three to five cents more per bushel for Fultz than for Red Sea. Corn is splendid: but the

cut-worm is working fast among it. No peaches; some pears and plums; apples a fair crop. A. S.

TURNER'S JUNCTION, Du Page Co.—The outlook for wheat is poor; for rye, fair; for oats, good. This being a dairy county, corn and oats are the main crops. The prospect for corn just now is not very exhilarating owing to cool weather; acreage the same as last year. Orchard and small fruits complete failures. A. F. R.

VOLO, Lake Co.—The acreage of Spring wheat is about one-third of last year's; it was a month later before the land could be worked. Winter wheat was killed and plowed up and the land put to Spring wheat or corn. Winter rye (no Spring rye) badly hurt. Oats about three-quarters of last year's acreage. Spring wheat mostly White Colorado and Lost Nation, which are taking the place of the old varieties. The acreage of corn will probably be one-third more than ever before, the Spring having been so late. A great many farmers are putting most of their arable land into corn. Some have got through planting; some will plant until the middle of this month. Apples a light crop—about enough for home use. Cherries a small crop; peaches none; other small fruits promise well. Potatoes, early (planted fore part of May), look fine. No beetles. Grass is as forward as last year. We raise more stock than grain here. Most of the butter and cheese factories here run all Winter, so that between cows, horses, hogs and sheep, we use up a large quantity of the grain we raise. T. D.

Michigan.

BATTLE CREEK, Calhoun Co.—Wheat not over one-fourth of an average crop—mostly Clawson. Oats look fine. Most of the corn had to be replanted owing to bad seed; acreage about the same as last year. Grass fine. Fruits of all sorts short. S. C. B.

BLISSFIELD, Lenawee Co.—Wheat acreage is increased about 10 per cent.; outlook poor, from a cold Winter and dry May—Fultz, Clawson and Lancaster. Oat acreage an average one; prospect good. Barley little grown. Rye acreage decreased; outlook poor. Corn acreage slightly increased; some complaints of defective seed: prospect fair; stand good. Apples and pears look fair; peaches and small fruits poor, with the single exception of grapes, which have a fine outlook. T. S.

CLARENDON, Calhoun Co.—The wheat crop will be not more than from one-half to two-thirds of an average; while east, west, north and south of us it will not be over from a quarter to half a crop. Oats are dried up. Corn we have had to replant, but it is now thriving. Potatoes look well. J. P.

HUDSON, Lenawee Co.—Wheat will not be more than half a crop; many fields have been plowed up; acreage about the same as last year. Lancaster wheat we found the most hardy of all. Oats two-thirds of a crop. Of corn, if the rest of the season is favorable, we may get a fair crop. It was often slow to come up, but late rains are pushing it. O. R.

JEFFERSON, Hillsdale Co.—Wheat got a small start last Fall, froze up with snow and was winter-killed. We had no rain since the frost went out till the first of June and it was again damaged by drought and frost and in the adjoining county there will not be over a quarter crop. The acreage is about the same as last year—chiefly Clawson, Lancaster and Fultz. Oats are backward; acreage light. Corn backward and a poor stand; acreage about an average crop. No peaches. Small fruits scarce. I. D. L.

LEONI, Jackson Co.—This township raised last year 3,814 acres of wheat, which averaged about 20 bushels per acre. There is now on the ground about the same number of acres with a prospect of from six to eight bushels per acre. Clawson and Diehl are the leading varieties; quite an amount of the Fultz wheat was sown last Fall, but it is generally a failure. Corn in 1880, 1,676 acres; 113,000 bushels. In 1881, about the same number of acres have been planted but it is very backward. As corn did not generally come up and we had to replant, our prospects of a crop are much injured. Oats in 1880, 456 acres, yielding 14,790 bushels; about the same acreage, but it, too, is very backward, the Spring having been cold and dry. Very little barley or rye is raised in this town. Fruit of all kinds will be a very small crop. Hay will also be light, the cold, dry Spring having injured grass. Many fields will hardly pay for running the machine over them. J. C.

MOORE PARK, St. Joseph Co.—Since June began we have had plenty of rain, and corn and potatoes look well; the acreage of each is nearly double that of last year. The acreage of wheat was one-fourth more, yet it is said by good judges that there will not be more than seed and bread in this county; and adjoining counties are not much better. Chief varieties Clawson and Fultz. A good deal of wheat has been plowed up and sown to oats and rye, and some to beans. These promise to be fair crops. Hay very light. Young clover all killed. Peppermint nearly all killed, and roots so scarce that but little was planted. There is one-third more corn planted than last year and it promises well. Cherries, peaches and plums will be scarce here, and this being the "off" year for apples, they will not be a drug. Small fruits a medium crop. R. C. B.

MORENCI, Lenawee Co.—The acreage of wheat is not quite as large as last year; and there will not be more than one-quarter of a crop—Clawson and Fultz mostly. About the usual acreage of oats, but they are very much hurt by the drought. About an average acreage of corn, but it is very backward; a good deal of complaint about its not coming up. There will be a fair crop of apples and small fruits. Peaches few. C. C. W.

MUIR, Ionia Co.—The acreage of wheat is about the same as last year. The outlook is poor—has not been so poor in twenty years. Much has been plowed up and the land planted to corn or oats. Oats, acreage 20 per cent. more than last year, and looking well. Of barley there is but little raised and of rye none. Of wheat the Clawson is mostly sown. The prospect for corn is good and the acreage 15 per cent. larger than last season. Very many fields have been planted the second time, but the weather has been favorable the past few weeks and it is now coming on finely. The severe Winter has done a good deal of damage to the orchards. Apples will be about half a crop. Peaches very few, and small fruits about an average crop. Grapes are all or nearly all dead. Hay will be a large crop—the best I think for years. W. F. H.

OSHTEMO, Kalamazoo Co.—Wheat acreage a little less than last year; condition three-fourths less favorable—Clawson, Fultz and Lancaster, in the order named. Oats less acreage; condition one-half less. Corn prospect fair where planted from 6th to 12th of May, before the intense drought prevented germination of seed; not so good as last year; acreage about the same. Of apples—Greenings, Peck's Pleasant and Sweet Bough—there will be a fair crop, and but few of any other kind. Peaches, none; pears half a crop; strawberries a quarter of a crop; raspberries probably a full crop. T. P. D.

OSSEO, Hillsdale Co.—The acreage under wheat and oats in this country is about the same as last year; but the yield will be only about half an average—Diehl, Clawson, Fultz, Egyptian and Lancaster wheats. The area under corn is about the same as last year; much of it is not up yet. Apples, one-third of a crop; no peaches; few pears; ditto plums; a good outlook for small fruits. No rain to speak of for two months; so that timothy meadows dried up; wheat stopped growing; clover did ditto. Twenty-four hours ago rain began to fall and vegetation seems to have advanced more in the last 18 hours than in the previous 60 days. A. E.

ROCKFORD, Kent Co.—The acreage of wheat is about the average of the last three years; but the prospect of a crop is quite poor. A friend who has been traveling in this section says it will not average one-third of a crop—chiefly Clawson, with some Fultz, Lancaster and Gold Medal. Oats are quite small yet, but are looking better since the rain. The prospect for corn is not encouraging; it did not come up very well owing to the vitality of the seed having been injured; acreage about an average of the last three years. Small fruits are quite scarce with the exception of strawberries. The early varieties of apples blossomed full; but the fruit seems to be blasting and falling off; the late varieties did not blossom much. Last year there was a very heavy crop. J. D.

SOMERSET, Hillsdale Co.—The acreage of wheat in this section is about the same as last year. The outlook in the first part of Spring was favorable for two-thirds of a crop; but owing to extremely dry weather during the greater part of April and May we hardly expect over one-third of an average. Clawson and Fultz are the favorites. Oats and barley about average crops. The acreage of corn will be about the same as last year; the prospect is not as favorable, owing to dry weather more than half of the seeding had to be repeated. We are now having an over-abundance of rain, and should it continue, it will be as disastrous to our second planting as the dry weather was to the first. This is the "off" year for bearing orchards in this section, so we do not anticipate over one-half a crop of apples; no peaches, but an average of small fruits. W. F. N.

TITTABAWASSEE, Saginaw Co.—There were in May this year 2,425 acres of wheat in this township against 2,114 acres last year, with an average of 21.59 bushels per acre; but the outlook for wheat this year is very poor, much of it being plowed up leaving perhaps not over 2,000 acres. At the best estimate it cannot yield more than eight or ten bushels per acre. Most of it is Clawson. Oats look good; last year there were 1,085 acres in this township; this year there will be more. Of rye none is sown and but very little barley. The prospect for corn is poor; much of it had to be replanted and we have had very cool weather for the last week and light frosts at night. The number of acres last year was 782 with a slight increase this year. Grass very light: old meadows mostly killed out. The outlook for apples is quite good. I have not noticed any trees hurt by the severe cold last Winter. Grapes and cherries good. H B.

Iowa.

Bentonsport, Van Buren Co.—Winter wheat badly killed; acreage about the same as last year; no Spring wheat sown; Fultz and rust-proof varieties of Winter wheat chiefly grown. Oats are looking *very* well; acreage larger than last year. No barley. Rye very thin; did not stool out as it should have done. Prospect for corn good; acreage about the same as last year. Apples very few; peaches, none; pears pretty scarce; cherries, none; gooseberries, currants, raspberries, blackberries and grapes abundant. S. P. D.

BUSTI, Howard Co.—The acreage of wheat, barley and rye is from one-third to one-half less than last year; that of oats one-third more. Lost Nation, Sea Island and several bearded sorts of wheat are sown. All grain crops look well, but there are millions of chinch bugs. Three times as much flax has been sown as last year. Corn looks fine on double last year's acreage. Few apples raised; small fruits abundant. "H."

DOWS, Wright Co.—Acreage of wheat and oats about the same as last year; barley and rye are not grown in this neighborhood. On account of the lateness of the seeding, crops seem backward, but in other respects look well. Of wheat the Fife and Lost Nation are the favorite sorts, but Sea Island is being tried by a good many farmers. Corn is very backward and the prospect for it is not flattering, acreage perhaps 10 per cent. less than last year. There are but very few orchards in bearing in this vicinity, and these showed but few blossoms in the Spring. Currants and gooseberries abundant. F. S.

SPRINGVILLE, Linn Co.—No wheat is raised here. Oats good; barley little sown; rye an average crop. Early corn looks well; late looks bad; average poor; can't possibly be over two-thirds of last year's crop. Apples a light crop; currants and other small fruits good. C. P.

WINTHROP, Buchanan Co.—Wheat for the last three years having been an entire failure, partly on account of the chinch-bug, none has been sown. The oat crop looks well; acreage about the same as last year. But very little barley and rye sown, and the rye has been partly winter-killed. For corn the prospect is very poor at present, the Spring being so backward. Most of it was planted late in May. Acreage about the same as last year. Currants and raspberries quite plentiful. Apples scarce. G. E.

Wisconsin.

ARGYLE, La Fayette Co.—Winter wheat badly winter-killed; Spring wheat looks good. Mostly "Tullabary." Prospects for corn good—very late. Small fruits a heavy crop, but the apple crop will be light. T. H. D.

CLINTON, Rock Co.—Scarcely any wheat is sown by itself hereabouts. We usually sow wheat and oats mixed, under the name of sucitash (succotash?). It looks well. What Winter wheat was sown was all killed out. Oats and barley have an average acreage and look well. What little rye is sown looks well. Only a little more corn than usual is planted on account of the late Spring. It is all up, but it is too early to prophesy about it. The fruit crop will be very light; the trees bore heavily last year, and there were scarcely any blossoms this year. Currant worms busy among the currants and gooseberries. J. C. B.

DE PERE, Brown Co.—There is less wheat sown than usual—Fife and White Russian Spring; chinch bugs are hurting it quite badly. Of barley more has been sown than usual, but the prospect is poor. Oats about as many as usual, but the prospect first-rate. Fruit is not much raised here, and it is the "off" year. Grass is the best for years. H. P. C.

FREEDOM, Outagamie Co.—The acreage in wheat is less than last year; the outlook for Winter wheat, bad; for Spring wheat, good. Oats, an increased acreage; outlook good. Barley increased acreage; outlook extra good. Rye, acreage small; outlook poor. Fife wheat and White oats. Corn has an increased acreage; prospect as good as usual at this time; some are planting over on account of poor seed. Fruit prospect bad. Many trees which bore heavily last year are dead. The early apples, as Duchess of Oldenberg, Red Astrachan, Sops of Wine, St. Lawrence, are all well set with fruit and promise a fair crop, and so do the crab apples. There will be but very little Winter fruit. Strawberries came through the Winter all right and promise well. The Black-cap and Philadelphia Raspberries came out all right and promise a full crop as usual. We shall have a good crop of hay. All kinds of stock are looking well; and prices are satisfactory to sellers—cows from $30 to $45. Farmers are going out of wheat and into stock. E. N.

GARDEN VALLEY, Jackson Co.—The wheat area is one-quarter less than last year; that of oats is greater. Of rye not much is raised. Of corn one-third more has been planted than last year. The prospect for crops is good so far. Fruit will be half a crop—trees badly frozen last Winter; one-quarter killed by the cold weather. G. S.

Montello, Marquette Co.—Good outlook for a better yield of wheat and rye than last year; Winter wheat badly injured; Fife and Rio Grande are the varieties chiefly sown. Corn promises a full average crop. Orchard and small fruits, except, perhaps, strawberries, will be much below an average. C S. K.

REEDSBURG, Sauk Co.—Winter wheat looks well; not much Spring wheat sown this season. Oats and barley promise fairly. Corn and potatoes are just being planted. Hops are not looking very well; most yards were injured in the Fall. In '78 Reedsburg was the hop center of Sauk Co., every farmer having from five to forty acres devoted to hop culture; now Sauk makes no pretensions, and many men have quitted the business altogether. Much attention is being paid to dairying and the raising of cattle, sheep and swine, which does not involve the same risks. G. P. S.

WINDSOR, Dane Co.—Oats look fine; acreage about the same as last year. Barley looks well; acreage larger. Rye winter-killed mostly. Wheat acreage very small. Corn looks well but a great deal of it was planted very late; acreage about the same as last year. Fruit prospect very poor. S. D. B, M.

Minnesota.

HAWLEY, Clay Co.—The acreage of wheat is about one-third more than last year; a good stand, but late—mostly Scotch Fife and Norwegian. Oats grown only for home consumption. Barley not much grown, but yields well. Very little corn is raised here. The country is too new to know what can be done with orchard and small fruits. C. S. D.

MYRNA, Blue Earth Co.—Wheat is king here, occupying most of the arable land, with about one-tenth of it to oats and one-fifth to corn, and a small percentage to barley. The prospect for corn is not good on account of poor seed. About twice as much ground was planted to corn as last year; but very little of it came up, and the ground was sown to flax. What corn is up looks splendid. Orchard and small fruits scarce. J. W. H.

PINE ISLAND, Goodhue Co.—The acreage of wheat is 25 per cent less than last year; that of oats, 10 per cent more. Small grains are looking bad on account of chinch bugs and the May drought. Some are sowing salt on wheat at the rate of 150 pounds per acre as a preventive of bugs. Scotch Fife and White Russian are the chief varieties; Fife being ahead. Corn is getting to be the staple grain crop here; the acreage has been increased 20 per cent this year; it looks fine. Although, owing to the late Spring, it was not generally planted until between May 10 and 15, it has made an excellent growth. "A SUBSCRIBER"

PLAINVIEW, Wabasha Co.—Area of wheat much less than last year; that of barley somewhat larger. No change in acreage of oats. The prolonged drought in May injured all these crops. Fife, White Russian and Brook's are the chief varieties of wheat. There's a large increase in the acreage of corn, and it looks well. Many apple trees were winter-killed. No cherries or tame plums will live here. Small fruits good, except raspberries. B. C.

RICE'S, Benton Co.—Wheat acreage 30 per cent. larger than last year. Prospect for all kinds of small grains, never better. Principal variety of wheat sown hard Scotch Fife and some White Fife. No corn or small fruit raised. H. O.

Missouri.

BUTLER, Bates Co.—Acreage of wheat and oats large and prospect average; late wheat injured by chinch bugs—Fultz and Mediterranean. The present prospect for corn is excellent; acreage one-third above last year's. Apples a fair crop; peaches mostly killed—a light crop; blackberries, none; raspberries and strawberries abundant. E. P. H.

JEFFERSON CITY, Cole Co.—Wheat increased acreage 25 per cent; prospect for yield only 75 per cent., owing to chinch bugs, Hessian fly and dry weather. Varieties, Clawson, Fultz, Red Chaff, Tappahannock. Oats average acreage and prospect. Rye has half last year's acreage and an average yield per acre. The prospect for corn is fair, the acreage 80 per cent. of last year's area. Potatoes, prospect good. Apples, one-quarter of a crop; pears, three-fourths; peaches, none but seedlings; small fruits abundant. A month ago there was

a prospect of 50 per cent. increase in the hay crop; now the outlook scarcely promises an average crop. L. V. D.

Kingston Furnace, Washington Co.—Wheat acreage about the same as last year; outlook mixed—some fields plowed under; some good, but many badly affected by cold Winter and and Spring drought—mostly Fultz, Red Zimmerman, Early May and Tappahannock. Oat acreage small; outlook good. No barley or rye. Corn spotty; some good, but a bad stand in many cases and late planting; acreage somewhat increased. No peaches; some apples and cherries. Strawberries a good crop; prospect good for dewberries, black and blueberries. N. W. B.

PLEASANT MOUNT, Miller Co.—Chinch bugs have damaged wheat so that in most places there will hardly be half a crop. Some fields have escaped entirely, but these cases are very rare. A good many pieces will not pay for cutting. Corn, too, is likely to suffer severely from these pests. Oats are damaged by dry weather, the days being very warm so that they make no growth at all; in fact, unless the weather is unusually favorable they will not grow high enough to be cut with a reaper and bound up, but will have to be mowed. Corn is looking very well. Farmers were as a rule very late in getting in their corn, many not having got through until the first of June, and some then quitting because it was so late. Quite a large acreage was planted. Wheat is headed out and harvest will begin about June 17. N. J. S.

SEDALIA, Pettis Co.—The acreage of wheat is from 10 to 20 per cent. more than last year, but the outlook is that it will not make more than half a crop—Fultz, May and Red Winter. Only a small area of oats sown; but it looks well. An increase of 15 per cent. of acreage under corn, which looks fine. Apples promise an average crop. Not many small fruits. J. J. Y.

TORONTO, Camden Co.—The outlook for crops is bad. Acreage for wheat is larger than last year. Oats, two-thirds crop. Rye good. Corn poor. Prospect for orchard fruit good. Small fruits a total failure. W. T. T.

VANDALIA, Audrain Co.—The acreage to wheat in this section last Fall was unusually large; but, owing to late Spring freezing, dry weather, and chinch bugs, the crop promises to be nearly (if not quite) a total failure. About the usual acreage of oats last Spring, but for reasons given above the crop will be short. Very little rye raised in this section and no barley. The varieties of wheat chiefly sown here are Fultz, New York Premium and Democrat. Fultz was sown more extensively last Fall than any other sort. More acres to corn here this season than last. Cutworms have done much damage in some localities; but the crop generally is coming on finely and the prospect is favorable. Orchard products and small fruit crops will be light. R. R. B.

Kansas.

MANHATTAN, Riley Co.—Acreage of wheat is small, owing to a large amount being plowed up in the Spring; that standing is looking much better than last year at this time. Oats about the same amount sown as last year and never looked better. Rye—none sown of any account. Corn looks well; acreage somewhat larger than last year, the increase being caused chiefly by the wheat being plowed up. Orchards promise better than the average, except peaches. Small fruits abundant. J. G.

NEWTON, Harvey Co.—The acreage under wheat is larger than last year and the yield will be double as much—Turkey, Fultz and Early May. Early-planted corn looks well; but a good deal of it was planted late owing to wet weather. Abundant rains are now helping all growing crops. Not much barley or oats is raised here. Potatoes look better than at this time during the past ten years. Apples, peaches, gooseberries and strawberries are plentiful. S. C. G.

SOLOMON RAPIDS, Mitchell Co.—All kinds of grain, potatoes and garden truck look first-rate; about the usual number of acres sown and planted. Corn looks well, with at least one-third more acreage. It has had all the rain needed, and though it is rather weedy the prospect is good for a large crop. Y. D.

WALNUT, Crawford Co.—The acreage of wheat somewhat larger than last year. Some fields that were sown early and thick are looking very nice and will probably yield from 16 to 20 bushels the acre; while many others that were sown late stand thin on the ground and will be failures. Some fields have been plowed up and sown to flax or planted with corn. The hard Winter and chinch bugs are the chief trouble here with the wheat, although the Hessian fly is doing some damage. Fultz, Clawson and Mediterranean are the chief varieties. Wheat will not average more than half a crop. The acreage of corn is about the same as last year; but on account of the early and severe Winter, but few farmers had their corn hucked in time for early planting this Spring. Through the month of May we had such an excessive amount of rain that the corn fields looked like a meadow, and an implement to the use of which the farmers of this section are constitutionally opposed (the hoe) was from necessity brought into use. Since June 1st the weather has been warm and dry, the ground is in good condition to work and the two-horse cultivator is clearing the fields of weeds and crab grass, the latter a more persistent foe than the former. At present the outlook is good for a large yield of corn. The prospects are much better now for apples, peaches, cherries, etc. than they were four weeks ago. In some localities the blackberry and raspberry canes were killed to the ground; while those that were protected are all right. Grapes are now doing well. We shall probably have large and small fruits enough for home consumption, but none to spare. B. G.

WASHINGTON, Washington Co.—Winter wheat mostly winter-killed except Soule; all much damaged; acreage sown 75 per cent. of last year's area; outlook poor. Rye sown only for pasture and for seed; looks well. No barley. Oats in good condition; 100 per cent. more sown than for the past few years. Spring wheat in good condition; acreage 90 per cent. of last year's area; outlook good for a fine crop. Cherokee or Grass wheat the principal Spring variety. Corn, acreage 50 per cent. larger than last year; prospect excellent, although some failed to get a good stand at first planting on account of wet weather; this was replanted. Weather very favorable now; everything growing and about up with the usual season, although we had a late, wet Spring. Fruit outlook excellent except for peaches. Small fruits never better. P. L. L.

WASHINGTON, Washington Co.—The wheat acreage is about the same as last year; outlook good. Oats not quite so good. Barley acreage less; prospect an average one. Rye 50 per cent. increase in acreage; crop very good. For wheat we sow Red Chaff and White Michigan for Fall; for Spring, White Russian and Cherokee or Grass. Prospect for corn not quite so good as last year, owing to late planting; acreage one-third more owing to wheat killing out, but if the season remains good we shall have more corn than last year. For orchard fruit, except peaches, the outlook is extra-good; the same for small fruits. C. W.

Nebraska.

FREMONT, Dodge Co.—Wheat, oats and rye look *very* good; acreage of each about the same as last year. Very little barley grown; all Spring wheat and Winter rye. The prospect for corn is very good, although a little late, and the acreage will not be more than two-thirds of that of last year, because so much of the low land on river bottoms has been overflowed, so that it could not be planted. Our orchards are young and few, and both orchard and small fruits will be light, being killed by hot, steamy weather while in blossom. T. R. G.

WEST POINT, Cuming Co.—Wheat acreage the same as last year's; looks a little better, but is a little later—mostly Mediterranean and Pearl; very little Lost Nation. Oats, seed not good; acreage about same as last year's; looks good. Barley not much sown; looks good, what there is of it. Rye good; well headed out. Corn planted very late; seed very poor; most farmers have had to replant, and it is not a first-rate stand now; prospect not flattering; two-year-old corn made the best seed; acreage a little less than last year's, because land could not be made ready in time. Orchards hurt by hail; otherwise prospects very good; young trees have plenty of fruit. Small and wild fruits good. A. R.

Canada.

ONT., Perth Co.—Fall wheat will not be over half a crop, being badly killed out by dry weather in Spring. Spring crops look well. Meadows look better than usual, although a sharp frost in the beginning of June, has, it is feared, injured the clover. Apples will be only a moderate crop; last year was the bearing year. Cherry and plum trees suffered much from the severe Winter, and both will be short crops; but strawberries, raspberries, gooseberries, and currants promise to be abundant. The potato bug is more abundant than ever; still there has been quite an average breadth planted. A. J. C.

MILTON, Ont.—Fall wheat about an average acreage: some fields very good, but we shall have only a little over an average crop. Clawson and Fultz; very little Spring wheat raised. Barley and oats look well; they are likely to be above an average. Corn is not raised here to any extent. Soil not adapted to it. Apples will be an average crop, although not so plentiful by one-half as last year. Strawberries good; large amounts are raised along the lake shore for shipment. Peaches are not raised here for shipping, nor any other small fruits. Hay will be rather below an average as injured last Summer. E. D.

LATEST CROP REPORTS.

EASTERN STATES.

Maine.

CHESTERVILLE, Franklin Co.—More wheat than usual sown—Lost Nation almost entirely. More corn and fewer potatoes have been planted; both are in fair condition. Apples promising. Grass excellent; a fine hay crop nearly certain. P. N.

Topsham, Sagadahoc Co.—The acreage of oats, barley and rye is about as usual; that of wheat is less, but the outlook for all is a fair average. The prospect for corn is poor; the acreage small. The outlook for orchard and small fruit is good. T. J. W.

New Hampshire.

THORNTON'S FERRY, Hillsborough Co.—Wheat and barley are not raised in this section to any amount. Of oats there has been a larger area sown than last year, and rye (which is mostly Winter rye) is looking very fine, and has probably about the same acreage as last year. Owing to the cold, wet weather, corn was not planted till a week later than usual, and it is now quite small; but if the remainder of the season should be favorable there may be a fine crop, as a much larger acreage has been planted than usual. A large area of potatoes has been planted as much or more than last year. Apples and pears bloomed very full. Peaches are very much injured by the severe weather of last Winter. Small fruits will probably be quite plentiful. I never saw grass look better, and we shall probably have a larger crop of hay than we have had for years. A. M'C. W.

Vermont.

So. Wallingford, Rutland Co.—The outlook for small grains is favorable, of these oats are our chief crop. Corn is not as large as last year; but it looks fine and thrifty "for its size." There will most likely be plenty of apples and small fruits, though not as much as last year. C. S.

STRAFFORD, Orange Co.—Farmers in this section will average about one and a half acre of wheat and one of oats. No other kind of small grain is sown to speak of. Wheat, White Russian and Lost Nation. The prospect for corn is good; the acreage is the same as last year. The outlook for orchard and small fruits is good. L. P. H.

WEST CHARLESTON, Orleans Co.—The acreage of wheat, oats and barley is about the same as last year, and all look well. Lost Nation wheat takes the lead, though some White Russian and the old varieties are also sown. A large acreage of potatoes—Early Rose, Burbank's Prolific, Snowflakes and Sunrise, besides some other varieties, are raised. Corn area less than usual. A heavy frost on June 6 killed corn and potatoes to the ground. Fruit prospect good. C. F. W.

WEST RUTLAND, Rutland Co.—But little wheat, barley or rye is raised in this section; what there is looks well. Oats are raised by nearly every farmer, and they look better than usual. The acreage in corn is about the same as last year; it is rather small, and frosts have damaged some pieces. The prospect for orchard and small fruits is about medium. W. C.

WHITING, Addison Co.—The farmers in this valley of Otter Creek are beginning to complain of our present cold and dry weather; still, with the exception of grass, crops are looking fine, especially small grains. There was a larger breadth of oats sown this Spring than usual. Wheat is not very extensively raised—the Snowflake and Lost Nation are the most promising varieties. Very little rye or barley. A larger acreage of corn than usual. Owing to the late cold weather it looks rather sickly. Judging from the small yellow spots on our potato leaves Paris-green will soon be in demand. The outlook for orchard and small fruits is favorable for a large crop. C. W. K.

Massachusetts.

Amherst, Hampshire Co.—Oats and rye never looked better at this season. A better hay crop in prospect than for several years. Acreage of corn is about the same as last year, but it is backward; same may be said of potatoes; beetles very abundant. Apples promise an unusually good crop. Prospect for pears is good. Peaches promise a fair crop. Grapes will be a very heavy crop. Strawberries just beginning to ripen and will probably be a large crop. Prospect for other small fruits good. L. W. G.

CHICOPEE FALLS, Hampden Co.—No wheat or barley raised here. Very little oats are grown for grain; but some are raised for fodder; appearance good, considering the cold and wet we've had. Rye looks first rate—better than last year on an increased acreage. Corn planting has been delayed till the middle of June by wet and cold weather—the usual acreage, however, will probably be put in. Peaches a failure; apples scarce in this our "odd" year; pears and plums good crops; not many cherries; but berries will be abundant. E. W. C.

GREENFIELD, Franklin Co,—But little rye; looks fine. No wheat or barley is grown here. Oats on land that had been planted twice look well; those on last year's sod are "worked" by worms—mostly Probstetar and Surprise; from one to three acres are raised by each farmer. Corn backward on account of rain, cold and frost; as much planted as last year. Potatoes are looking well; bugs plentiful. Small fruits blossomed freely; so did apples, peaches, pears, etc. The hay crop promises to be large; worth now $15 per ton. A. W. H.

SUNBORN, Middlesex Co.—No wheat; oats raised chiefly for fodder; looking well. Small acreage of barley and rye: say 25 acres of barley and 50 acres of rye to 1,000 people; outlook favorable. A larger acreage of corn than has been planted for three years past: looking poorly and yellow on account of continued rains. "Off" year for apples in this section. Bearing year for pears which are looking well. Strawberries and raspberries good; blackberries only fair. A. H. B.

Connecticut.

CANTERBURY, Windham Co.—No wheat or barley. Oats and rye looking well. Prospect for corn is promising; acreage about the same as in former years. For orchard and small fruits the prospect has never been so good. C. W. G.

Clinton, Middlesex Co.—The area of rye in this section, comprising four towns, is not far from 800 acres. Very few oats raised. No barley. Rye promises well. About the same quantity of corn planted as last year. Apples bloomed very full for the "off" year; a large yield of small fruits is probable. W. A. D.

Groton, New London Co.—No wheat. Rye looks well and will yield about 12 to 14 bushels to the acre. Oats are looking fine—never better, and will yield from 25 to 50 bushels pear acre. Rye will be 15 per cent. better than last year. Corn is backward. Potatoes are looking very fine. The hay crop will be heavy—about 25 per cent. better than last year. Orchard prospects are very good, especially for pears. Blackberries were badly winter-killed; raspberries are looking well. E. A. H.

MIDDLETOWN, Middlesex Co.—We are having plenty of rain here now and crops of all kinds are looking well. Wheat and rye are splendid. Oats ditto. Barley is not much grown. The prospect of a fine hay crop never was better. Potatoes are looking fine. Corn is rather backward, owing to the late Spring and wet weather. There will be a larger acreage of tobacco this year than ever before. Apples a fair crop; small fruits abundant. S. W. P.

WEST REDDING, Fairfield Co.—No wheat in this section. Oats are looking exceedingly well. Rye is very heavy and promises an unusually large yield. Tobacco is the main crop with farmers here. Corn is late and rather small for the season; the acreage is about the same as last year. Grass very heavy. Orchards are well set with fruit. Small fruit injured by wet. S. G.

MIDDLE STATES.

New York.

ALBANY, Albany Co.—Not more than half as many acres under wheat as there were last year; prospect middling. Of rye there is probably one-third more, and it is looking good. No barley. Corn about the same as usual in area and outlook. But few apples. Potatoes promise a good average yield. L. J. G.

ALDEN, Erie Co.—Fall wheat acreage up to average; present prospect equal to last year's—mostly Fultz and Clawson. Oats and barley were sown late; acreage under that of last year; varieties: barley, mainly four-rowed; oats, everything known in the market. Indications for above-mentioned crops, favorable. Corn planted late; acreage an average; growth small. Fruits of all kinds promise well. J. M. C.

Arcade, Wyoming Co.—Wheat an average crop—Clawson. Oats, rye and barley, usual acreage; never better—White Russian Oats. Corn acreage same as last year; stand poor—too wet. Orchard and small fruit outlook very favorable. This is a dairy section. Corn doing finely; grass never better; meadows above the average. No insect pests to amount to anything. Season ten days *earlier* than usual. P. H. P.

Auburn, Cayuga Co.—Winter wheat will be a fair crop, if insects do not take it; acreage as large as in 1879—Clawson, Treadwell and ordinary red and white. Oats and barley have a middling outlook and an acreage as large as in 1880. Corn area as large as last year's; it hasn't come up well and is backward. C. E. H.

BUSTI, Chautauqua Co.—Acreage of oats is a little above the average; they are looking well. Barley and rye not sown to any extent. Corn is not coming up well; acreage about an average. Winter wheat looks well and more was sown than usual. No Spring wheat. Prospect for fruit of all kinds good, except for peaches. J. D. F.

CAYUTA, Schuyler Co.—Wheat and oats acreage about the same as last year; both are looking about medium. Very little barley or rye sown. The prospect for corn is not very good; much has rotted in the ground; about the same acreage as last year. Orchards promise an abundant crop. All small fruits promise well. The Cuthbert raspberry bushes you sent us last year are growing splendidly with some fruit on. W. J. R.

CLIFTON PARK, Saratoga Co.—The acreage of wheat hereabouts is about a quarter less than last year, and the outlook poorer for a good yield per acre—Clawson mostly. About last year's area of oats; prospect good. A quarter more rye; and a ten-per-cent. better prospect. Corn is small but well started; acreage the same as last year. Apples will be a light crop; small fruits an average one; berries abundant. P. J. S.

Clymer, Chautauqua Co.—Not over one-half of the farmers sow any wheat, the rest would probably average about two acres per farm—Clawson; prospect good for an average crop. Oats probably about six acres per farm—White Shoshone; prospect good for a very fine crop. No barley or rye enough to speak of. Corn rather backward; about the usual acreage. Small fruit prospect good. This being the bearing year with us, we expect a large crop of apples and there is every prospect of it. J. M. G.

Coxsackie Greene Co.—We have had a heavy fall of rain and all crops are looking good; acreage of wheat small; White Winter looks good. Oats, medium quantity sown. Rye acreage large; appearance good. Corn acreage larger than usual; small—too wet and cold. Apples short. No peaches. Pears, plums and small fruits plentiful. S. S.

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THE
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We are now preparing our Special Wheat Number, and we again solicit our readers to contribute any items in their observations or experience, which may seem of general interest.

Sowing Timothy in the Spring.—Our farmers seem to be more in favor of sowing Timothy as well as clover in the Spring on wheat, instead of with wheat in the Fall. By this change wheat acquires a stronger growth in the Fall and is in better shape to stand the Winter. Wheat is often injured on our farm by Timothy sown in the Fall. We are confident of it, for the experiment of Timothy and no Timothy upon the same field has been tried. Timothy is to wheat a weed as much as dock, radish or sorrel, and robs it of needed nutriment in the same way. When Timothy is sown in the Spring, the Timothy is crowded and its growth retarded, while the wheat is benefited proportionately.

When Indian corn comes up yellow and feeble—when many plants, as in the present season, die owing to cold, cloudy, rainy weather, does it ever fully recover? That is, does it yield as much under subsequent favorable conditions as it would have, had it come up green and vigorous? We do not know. We have been told by farmers older and more experienced than ourselves that it makes no difference—in other words, that it may wholly recover from its feebleness in its early age. Dr. Hexamer suggested to us a few days ago that we plow up a part of our main field and plant again. In any case the experiment would have proven instructive. We could not act upon the suggestion, however, for the reason that our seed had all been planted and we care not to cross our corn with other seed that has been less carefully selected.

Excepting only one year, the present has been the most favorable for the hay crop of any we have ever known at the Rural Farm. A good hay season is always a good oat season and a bad one for corn. Many corn plants have perished for want of sun and heat so that the stand is twenty-five per cent. less than last year, while the second planting has not proven to be worth the cost of making it. Add to this that our main crop, planted upon poor land without manure, is of late kinds, which require a long and favorable season to ripen, and it will appear that the Rural Farm corn crop promises to bear a striking contrast with that of last year. But our wheat is looking better than ever before and we look for a heavy yield. What we have said as to the Rural Farm may also be said as to Long Island in general. An immense hay, wheat, oats, and we may add, potato crop and a small crop of Indian corn.

Tidiness About the Homestead.—There is an old story to the effect that once upon a time there was a man in search of a housekeeper, and as applicants for the position arrived he arranged matters so that each one, as she entered, found a broom lying on the floor in her way. All the women but one stepped *over* the broom and passed serenely on. The one woman who stooped and picked it up secured the place of housekeeper solely from that fact. It was her only recommendation; but her employer argued from that, that the woman was observant and orderly—two qualifications that he highly appreciated. Whenever you walk over sticks and brush and rubbish in your yard, that disfigure its tidy appearance, instead of picking them up, remember that you are "stepping *over* the broom," and somebody will pass judgment upon you, by what you may be pleased to call very insignificant indices. But the judgment in most cases will be quite correct. If every man, woman and child about the premises were trained to pick up and remove from view all rubbish and litter that he or she comes upon in walking about a yard or lawn, there would always be an appearance of neatness and tidiness preserved at little cost or trouble.

Boston's Enterprise.—Enterprise in any just cause is worthy of honor, especially if it involves national interests, so we say "Success to the Boston Exhibition." But two things are necessary to complete success in the World's Fair business, first, the city in which it is to be located should be all enthusiasm for the project, and, second, the public at large should realize that such an undertaking will be a good thing, for the industrial interests of the country, especially. It won't do for the masses to become impressed with the idea that the exhibition is being run in the interests of any corporation or union of corporations. It must be cosmopolitan. Philadelphia did nobly for the Centennial—that foretold success; the country responded enthusiastically—that insured success. The lately deceased "proposed" World's Fair of this city illustrated the other side of the question. The city failed to do its duty—failure was probable; the country "would no more of it"—failure was certain. Now Boston has the "fever"! Every citizen of the "Hub" must catch it! Their enthusiasm must inspire the great public at large to render assistance; then we may safely invite our foreign friends to come and see us, but not till then.

WORK

And now comes the preparation for harvest. Happy is he who has all needed implements in good order; for he not only enjoys the satisfaction of swift and thorough work, but the profit resulting from making the most of time and labor. It is better to cut grass and clover a little too early than a little too late, especially where, as about the Rural Farm, they are in many fields badly lodged.

Beans, cucumbers, sweet corn and peas may still be planted for succession, though the last-named rarely do well when planted so late. Celery for early use may now be planted out. Spinach may now be sown for early Fall use. Beets and mangels may be planted for stock up to July 10, as well as beets for late Winter. Winter cabbages should soon be planted.

THE N. Y. HORTICULTURAL SOCIETY.

The above-named society, which meets monthly in this city, is doing a commendable work in promoting the interests of horticulture. Florists and horticulturists, both professional and amateur, vie with each other in the exhibition of fruits and flowers, and the natural result is an elegant display of rich and rare varieties for the mutual enjoyment and profit of those who attend. The orchids and rhododendrons at the recent June exhibition were most attractive, though the display in elegant table designs, in cut flowers in vases, and in baskets and bouquets of almost endless variety was highly commendable. The exhibition of strawberries was, perhaps, the chief attraction owing to the great variety and extraordinary size of the fruit. The new variety called the Bidwell received much attention from those interested in the "coming strawberry," and it appears worthy of all the commendation it is receiving. While we have no word of criticism to offer, we shall, with our friends of the society, hail the day when the size of the exhibition hall may be somewhat commensurate with the needs of the thousands of florists and amateurs who in and about this great city should interest themselves in its progress.

CHARLOCK AND WILD RADISH.

Of all the weeds which infest the Rural Farm, Charlock (Brassica sinapistrum) and Wild Radish (Raphanus raphanistrum) are by far the worst. We have trustworthy evidence that land seeded with these pests will produce them for twenty years though every plant that blooms may be pulled up before it forms seeds. We have known farmers to have them cut with the scythe while in blossom, ignorant of the fact that every plant so topped would send out laterals from every joint left, each one of which would bear as many flowers as the entire plant if left to itself. For this reason it should be borne in mind that in pulling up the plants the work should not be intrusted to careless hands who are indifferent whether they break off the stems or pull them up by the roots. Such labor is not only thrown away, but, as we have said, the cut plants will bloom many times more profusely than before. Field Mustard and Wild Radish have so taken possession of many farms on Long Island that oats are never sown. It seems to us quite inexplicable that after lying dormant in the soil for years through grass and corn, the seeds germinate so freely when oats are sown, to disappear again oftentimes when wheat is sown, and not again to appear until the next seeding to oats. It seems that the only way to rid one's land of these weeds is by persistent hand pulling—the work of a lifetime, when once the land becomes foul. Both plants are annuals so that they are spread only by seed from year to year.

OUTLOOK FOR CROPS.

The value of agricultural reports depends mainly upon their candor, trustworthiness and completeness. No one can read the large number of reports in this issue without being strongly impressed by their excellence in these respects. They are taken from about 2,000 reports, all of which our limits will not permit us to print. In making the selection our only guide has been the desire to represent fairly all sections of the country. All, however, have been carefully analyzed and in coming to the conclusions herein stated all have had due weight. Nor have a very large number of other sources of information been disregarded; but these have held merely a secondary place in our estimation, as our own reports are at once the latest, the most widespread and the most detailed. They all come from intelligent farmers well acquainted with the agricultural prospects and conditions of their respective sections; and to these our sincere thanks are hereby returned for the painstaking attention which they have given to their reports.

Although corn is by far the most important crop we raise, yet, like cotton at the South, wheat throughout the North attracts most attention as the great money crop. Judging from the present multitude of reports, as well as from those that have been published every week in our columns, and from a discriminating selection and careful study of a large number of other reports made either by the Agricultural Department, State Boards of Agriculture or enterprising journals, we cannot avoid the conclusion that the wheat crop of 1881 will be at least 20 per cent. below that of 1880. The latter has been estimated by the Agricultural Department at 480,849,723 bushels, so that, on this basis, this year's aggregate crop can hardly be far from the neighborhood of 380,000,000 bushels. For reasons heretofore given, however, we are strongly impressed with the opinion that the Department's estimate was at least fifteen or twenty millions of bushels too high; and should this opinion prove correct, a corresponding reduction should be made from the above estimate of this year's total yield.

Winter wheat has suffered far more severely than Spring, and of the vast territory in which this sort is raised, Michigan, Indiana, Illinois, and, probably, Kentucky, with parts of northern Missouri and southern Iowa and Wisconsin, have been the heaviest losers. Spring wheat appears to be as thrifty as last year, but, owing to the lateness of the season and the floods on bottom lands in the Spring wheat region, the acreage is somewhat less than last year's, except in Northern Minnesota and the Red River country, in which a greatly enlarged acreage has been put in, with highly promising results. The harvesting of Winter grain has already advanced as far north as southern Kansas, Missouri, Illinois, Indiana and Ohio, so that the recent rains will have come too late to benefit the fall-sown grain. Farther north, however, they will doubtless be of considerable advantage. The total acreage under wheat this year is probably somewhat less than last year, as the increase in the newly-settled States and Territories is more than counterbalanced by the decrease in the older States. Our reports from the Pacific Coast have not yet reached us, but, according to local papers, the acreage under wheat is considerably smaller than last year, especially in the middle and northern districts, and the yield per acre is likely to be less. The character of the reports, however, seems to depend not a little on the quantity of grain still in the hands of the farmers in various places, the gloomiest forebodings coming from localities where most of last year's crop is still on hand. The Oregon wheat crop, it is reported, will turn out a fair average.

Oats are reported to be an unusually fine crop in all parts of the country, and with hay will probably be cheap next Winter. Two years ago the total crop was 407,970,712—about 50,000,000 bushels less than the aggregate wheat crop. This year the crop of oats will, most likely, exceed that of wheat. Of the 44,149,479 bushels of barley produced in 1879, the census returns assign 12,578,486 bushels to California, 2,480,400 to Iowa and very nearly 7,788,749 to New York. The remainder of the crop was grown then, as it is this year, in small quantities in the various States and Territories. The same remark is equally applicable to rye, of which an aggregate of only 19,863,630 bushels was raised in '79, a quantity to which Pennsylvania contributed 3,683,621, Illinois, 3,121,689, and New York, 2,634,390 bushels, leaving only a mere trifle to each of the other States and Territories. Both crops appear to have a full average acreage this year and to promise an average yield.

Corn, which far transcends in importance and aggregate yield all other cereals together, will be a comparatively poor crop this year, unless favorable weather until harvest shall belie present indications. While the acreage is larger than last year, on account of the settlement of fresh districts on the border, and because not a little of the plowed-up Winter wheat land was planted with corn, the stand is in most places reported poorer and the crop is nearly everywhere very backward. According to the Department of Agriculture, the total yield last year was 1,537,535,000 bushels, from which a deduction of fifteen per cent. would leave 1,308,535,000 bushels as the aggregate of this year's crop. Inasmuch as the corn crop is generally made in July and August, however, there is still time for a great deal of improvement.

Potatoes are generally reported a fair crop on a slightly increased acreage; but as the Colorado pests are extraordinarily numerous, the late sorts have still a perilous time before them. Grass, the king of all crops, is flourishing right royally this year. Cotton, the deposed monarch, has extended his territory about two per cent. according to the latest and most reliable accounts. The stand is a good average generally, and enough labor is easily obtainable except in Texas and Southern Arkansas where the extraordinary amount of railroad construction affords more remunerative employment. Tobacco culture has nearly doubled in the decade between the census of '80 and that of '70 and the increase is continued the present year. The average yield per acre varies wonderfully, Massachusetts averaging 1,692 pounds per acre; Connecticut, 1,635; Kentucky, 755; Virginia, 536; Mississippi, 282, and Georgia, 219. Plenty of room for growing larger crops in most places where the weed is grown! The prospect before the lovers of fruit is of moderate cheer. Apples will be fairly abundant for an "off" year. Of pears there will be about enough to make their cultivation pleasantly profitable. Peach lovers will have to pay pretty high for their favorites which have met with almost universal disaster, or content themselves with grapes and small fruits, cheap from their abundance.

BREVITIES.

How is your type-writer working now-a-days, Oh! J?

When a man who has spent a heartless, money-grabbing, self-absorbed life once gets a push down hill, it is no easy matter to stop. And those who know him will smile at his vain struggles.

The continued wet weather seems to be destroying the eggs of the Colorado potato beetle at the Rural Farm.

Cultivate the corn. Do not wait for weeds to appear. The stirring and change, so to speak, of soil is as important as the destruction of weeds.

We are pleased to learn that the Japan Maples in the garden of Mr. James Hogg (Yorkville) have not been injured by the past Winter. We should like to hear how they have stood in Flushing and other places.

One of our temporary hands who was born and bred just opposite to the Rural Farm said to us a few days since, referring to our main corn field: "That field is as poor as a beach. Did you expect to get a good yield of corn without manure?"

Christmas trees, or dead evergreens of most sorts, of medium size, particularly cedars, make sightly and excellent trellises for vines, useful or ornamental. Trim off the branches to within a foot or so of the body, and plant the "tree" deep enough to receive complete firmness and solidity.

Two more of our successful mangel raisers write us as follows concerning the gifts we sent them:

Eds. Rural:—
Accept thanks for the Aquapult received to-day per American Express. May your shadow never grow less! Yours truly,
Mt. Pleasant, Ont. James Grace.

Eds. Rural:—
Accept many thanks for the Keystone Washer. My wife tried it to-day and says it works first-rate. She had tried several others and pronounced them failures, but the Keystone does the washing well and easily.
Very truly, yours, Wm. Moore.
Camden, O.

LATEST CROP REPORTS.

Continued from page 423.

DUNDEE, Yates Co.—Wheat is not much more than half a crop; dry weather in April hurt it—Clawson. More rye has been sown than in a good many years; it looks well. Barley and oats never looked better; two-rowed barley and Probsteier and "Summer Sult" oats. About the same acreage of corn as last year; it is small. Grass fine—what there is of it. Apple crop light. Peach trees are loaded with fruit. Of berries there will be an abundance. M. S.

FISHER'S, Ontario Co.—Wheat acreage 20 per cent. of the farms, or about the usual amount; probably less than half a crop—Clawson and red. Oat and barley acreage 10 per cent. of farms; prospect 100 per cent. Rye is a fair average, though but little is sown. Corn and potatoes, the usual amount planted—about 10 per cent. of the farms to each—but it is too early to report on them. Apple prospect very poor; many orchards are ruined by the Army worm. But little is done in small fruits. P. A. W.

Norton Hill, Greene Co.—Crops hereabouts look well, except corn which the constant rains have kept backward and without cultivation besides preventing a larger seeding. Winter wheat is badly lodged; but oats look splendid. Grass is a fine crop and new seeding is excellent. Orchard fruits will be almost a failure; what was set has generally dropped off on account of the rapid growth of the trees. W. H. I.

OPEN MEADOWS, Chautauqua Co.—Winter wheat was very badly winter-killed; it will not be over from one-half to two-thirds of a crop—Clawson and Treadwell and a little Log Cabin. Oats and barley are very fine. Grass never was better. Corn looks very bad. Much of it had to be replanted on account of the seed not germinating. Apples and small fruits abundant. No peaches. R. N. D.

PALERMO, Oswego Co.—We live in a dairy section. Very little wheat is raised; not over 50 acres of Winter wheat in our town, and that rather light. Owing to the early Winter there was not as much rye sown as usual; a fair crop is expected. Oats are looking very fine. The prospect for corn is very fair; more planted this season than last. Apples will be a light crop. Small fruits an average one. W. S. L.

New Jersey.

PATTENBURG, Hunterdon Co.—Acreage of wheat about same as last year; outlook not so good; but the prospects are good for rye and oats. Good prospect for corn, with about the same acreage as last year. Small fruit crops good. Apples, pears and other orchard crops light. A. S. M.

Pennsylvania.

Belle Vernon, Fayette Co.—Wheat is a good crop; acreage larger than usual—Fultz mostly. Outlook for oats good; acreage smaller than usual. No barley, and very little rye. Outlook for corn not very encouraging; an overabundance of rain, and fears are entertained that the corn on all low ground will be drowned out; more than that, the corn did not come up well; acreage smaller than usual. Apple prospect not very encouraging—falling off badly. Cherries very scarce. Good prospect for raspberries and strawberries. Good prospect for a heavy hay crop. M. M. W.

Brookfield, Tioga Co.—The acreage of wheat, both Winter and Spring, is about on an average with previous years; outlook for Winter wheat 40 per cent. better than last year; for Spring wheat about 30 per cent. better. Oat acreage 10 per cent. less than average; prospect 40 per cent. above last year's. Winter wheat—Clawson, White Diehl; Spring wheat—Bearded and Mammoth. Oats good—White English and Probsteier. Barley, acreage 20 per cent. above average; prospect 30 per cent. better than last year. Scarcely any rye is raised. Corn acreage below last year's; prospect not good. Apples and pears promising. Peach buds killed in Winter. Small fruits little raised; what there is looks promising. Grass crop will be nearly double that of last year. E. H.

COLUMBIA, Lancaster Co.—Wheat and rye look well, the late rains having brought them forward wonderfully. Corn is rather short and irregular, but it is improving fast. Potatoes look well—never better. Grass is good and growing better. F. B.

DALTON, Lackawanna Co.—We have had a very favorable Spring although a little too wet of late. Crops are generally very good for this time of the year. Grass is above an average. Wheat has an increased acreage; mostly Clawson and Fultz; it is looking well. Corn is backward on account of the wet weather, but it came up well; acreage about the same as last year. Potatoes have an average acreage; they are looking well with a prospect that they will outgrow the bugs. Oats are looking very fine. Rye better than for several years; some fields lodging badly. Apples a fair crop but not as large as last year. Pears and cherries full crops. Strawberries a large crop; other small fruits not cultivated to any great extent. W. A. D.

FARMINGTON, Fayette Co.—The acreage under small grains is about the same hereabouts as last year except wheat, of which a somewhat smaller amount was sown—mostly Clawson, though a sort called "White Irish" is becoming quite popular. The prospect for all small grains is fair. The outlook for corn is poor on account of unfavorable season and bad seed. Grass, our main crop, is fine and promises an abundance of hay. Apples enough for home consumption; peaches a failure. C. P.

Delaware.

MILFORD, Kent Co.—Wheat and corn are the principal crops; the acreage of both is equal to that of last year. The yield of wheat is supposed to be short one-third; many fields are badly winter-killed—Fultz and Amber principally. Corn is looking well. Peaches a total failure. Pears a small crop. Old apple orchards are full; young bearing orchards have a scanty crop. Strawberries an over crop; raspberries a fine crop. H. R. K

Maryland.

Cambridge, Dorchester Co.—Acreage of wheat about the same as last year, but the outlook is not so good. Not much oats, rye or barley. Wheat and corn are the principal crops. The acreage of corn is about the same as last year; it is not as far advanced as usual; but it is looking well. Peach trees along the river are full, but away from the river there are none. Plenty of apples, and also of small fruits. S. D. A.

EASTON, Talbot Co.—Acreage of wheat about the same as last year. Probable yield about 95 per cent. of last crop. Longberry and Fultz, the chief varieties. Oats, barley, rye, etc., do not rank as crops here. Corn looks well; acreage about as usual. Peaches will be a light crop. Some trees winter-killed. Apples promise a fair yield; small fruits will average as usual. H. S.

MARLBORO, Calvert Co.—About the usual acreage of wheat and rye; both badly winter-killed. Fultz is the most popular variety of wheat. No barley. Oats are looking first-rate. About one-half of the arable land we plant to corn—nearly all the rest to tobacco. Tobacco is followed by wheat or rye with clover or, by oats. Corn is growing finely. Apple and pear trees are heavily laden. No peaches and few cherries. Other small fruits abundant. W. M. C.

SOUTHERN STATES.

Virginia.

CHARLEMONT, Bedford Co.—Wheat acreage about half as large as last year; crop poor—mostly Fultz and Lancaster. Oats good; area, an average one; rye, ditto. Prospects for corn good; a larger acreage than last year. Grass not much over half a crop. Tobacco acreage very large—all planted. Orchard and small fruit prospects excellent. G. B. M.

DALEVILLE, Botetourt Co.—Acreage of wheat about an average; some good fields; some sorry ones; seems to be filling well, but can hardly be a full crop—Lancaster, Fultz and Light-chaff Amber. Oats very poor on account of seven weeks' drought. Corn an average acreage; very late. No peaches except in a few favored localities. Apples and small fruits short. T. C. D.

FANCY HILL, Rockbridge Co.—The quantity of grain sown in this section is about a usual average; prospect for wheat, medium; oats, barley and hay, very short. Great trouble in getting a stand of corn; prospect for a good crop not good. Acreage of all crops about as usual. Lancaster, Fultz and Amber wheat chiefly; Lancaster preferred. Orchard and small fruits good. W. G. W.

Genito, Powhatan Co.—Some fine wheat, but much has been damaged by the fly; not an average crop. Fultz is the principal variety. Oat crop much retarded by cool, dry weather; has improved since late rains. Outlook tolerably good for an average crop. No barley; very little rye. Apple and cherry crops are quite abundant. Peaches scarce. No small fruits cultivated for market. Small decrease in the acreage of corn, but considerable increase in tobacco. F. L. D.

MOORE'S STORE, Shenandoah Co.—The outlook for wheat has never been so good; acreage larger than last year—principally Key's Prolific. Oats good. Rye ditto. Barley very little sown. Prospect for corn very favorable; acreage larger than last year. Orchard and small fruits almost entire failures. Grass very fine. "The rain it raineth every day," and everything looks very promising. D. S. A.

NORFOLK, Norfolk Co.—Corn fair for a late Spring. Oats short from dry weather. Apples a medium crop. Peaches plentiful. Pears short. Chickasaw plums abundant. Strawberries the largest crop ever grown. J. B.

Oakley, Mecklenburg Co.—The acreage of wheat is about the same as last year; but the outlook is about 25 per cent. worse for a good yield. Nine-tenths of our seed is Lancaster and Fultz and of this three-fourths are Lancaster. Of rye and barley little is sown, and the outlook for both is poor. The prospect for corn is bad owing to the late season and the use of poor seed; acreage a little less than last year. The prospect for orchard fruit is extremely bad. T. B. L.

West Virginia.

CEREDO, Wayne Co.—Acreage of wheat about two-thirds of last year's; prospects poor. Oats about one-quarter of the acreage of last year; an entire failure. Prospects very poor for corn; many fields have been replanted two or three times. Acreage about the same as last year. Orchards do not promise much. Grass almost a failure. In the middle of June we are in our sixth week without rain enough to wet the ground half an inch deep. P. H.

Farmington, Marion Co.—The wheat crop of this section is about 10 to 15 per cent. short of last year's, but the acreage is increased about 10 or 15 per cent. Oats are looking extra-fine on last year's acreage. Ennobled Oats and White Elephant Potatoes are doing very finely; potatoes generally are booming. Farmers had generally their corn to plant twice, on account of bad seed, but they have a good stand now, and it is growing rapidly; the acreage is slightly increased over last year's. Apples and pears have a fair prospect. No peaches—only a few trees in this section. Strawberries, a good crop, and a fair prospect for all small fruits. A. M. T.

PHILIPPI, Barbour Co.—Wheat is looking well on new land; on worn-out land it is of little account. About the same acreage as last year; but the total yield will be from 10 to 20 per cent less than then. Fultz is principally sown. Not many oats sown this year; what there is look well but they are late. Corn is looking bad; it came up looking weakly and much did not come at all; the season is two weeks late. Some farmers at the middle of the month were still planting new land and some replanting their old land. Cut-worms worse than for years. About the same acreage planted as last year. Plenty of apples and cherries. R. M. T.

North Carolina.

BROOKSTON, Warren Co.—As compared to last year, wheat is 50 per cent. less in acreage and 25 per cent less in condition—Fultz and "Little Red." Oats about the same as last year. Barley and rye but little grown. Corn promises well; acreage about 10 per cent. less than last year. We have promise of a wonderfully abundant crop of grapes. Fine growing weather; all crops doing well. M. B. P.

FAYETTEVILLE, Cumberland Co.—Wheat acreage about the same as last year; an average outlook. The apple crop bids fair to turn out well. Very few peaches—too much cold weather. J. K.

Georgia.

GRIFFIN, Spalding Co.—Acreage of wheat much smaller than last year; yield will be good. Oats very short in consequence of drought; not over half crop. Barley and rye but little sown. Purple Straw red wheat and red rust-proof oats chiefly grown. Corn very small but healthy; the long drought damaged it. Acreage 20 per cent. larger than last year. But little fruit aside from apples which will be abundant. Cotton very backward—30 per cent not up. H. W. MC. W.

Florida.

JACKSONVILLE, Duval Co.—No wheat, barley or rye. Some rust-proof oats. Very little corn raised here—mostly imported. For the principal "orchard" crop, oranges, the prospects are favorable. Peaches good. Wild plums good; ripe now. Grapes well set, but have begun to rot. Scuppernong promises well. G. W. D.

SANTE FE, Bradford Co.—No wheat grown here. Oats are an average crop. Corn is a good crop. No apples are grown here. Peaches, plums, quinces are good; small fruits splendid, and our orange crop now is good. J. W. D.

TALLAHASSEE, Leon Co.—No wheat or barley raised here. Oats failed last year owing to rust; few sown this year; these about all harvested; yield light through drought. Rye same as oats. Rather more corn planted than last year. Owing to late cold in April, followed by eight weeks of drought, the crop looks bad. The late rains will improve it. Orange trees were either killed by frost last Winter or so badly damaged that there will be no crop. Very few apples or pears grown here; peaches promise well; Le Conte pears are now being planted quite extensively. Strawberries about done bearing. Crop short on account of drought. J. P. A.

Alabama.

SAND SPRING, Limestone Co.—The acreage of wheat oats and rye is somewhat larger than in former years, for the cotton growers of this county are beginning to see the necessity of raising their own bread and stock feed. One planter in my neighborhood who has been putting out nothing but cotton and corn each year for the past 30 or 40 (except during the war), has this Spring taken a new departure, and sown 80 acres of oats and the same to Red Clover. The oats are now fine and the clover a good stand, and a great many others are doing likewise. Wheat is better than it has been in the past three years; no rust or fly to hurt; but it is rather thin on the ground; we are now in the midst of June and of the wheat harvest. The varieties chiefly sown are Bowden, some Fultz, and some Mediterranean. The prospect for corn is better than usual; acreage about the same as last year. Apples and peaches are about half a crop. Plums, strawberries, raspberries and blackberries are abundant. W. M.

Mississippi.

OKOLANA, Chickasaw Co.—Very little wheat, barley or rye has been sown through this section. Oats are sown to a considerable extent and generally look promising, especially the Rust-proof Red Oat. Acreage of corn about the same as last year, but the plant is not so promising. Peaches are our principal orchard fruit, and they are all lost through frost in Spring. Apples, grapes, plums, etc., look well. T. S. B.

Texas.

UVALDE, Uvalde Co.—In this county there are about 400 acres of wheat—mostly Mediterranean—that will average 20 bushels per acre; 200 acres of red oats, averaging 45 bushels per acre. The corn crop is good and will be fully 70 per cent. greater than last year's. No orchard or small fruits except wild ones. This is almost exclusively a stock country. H. N. D.

Kentucky.

JERICHO, Henry Co.—Wheat not much over half a crop. Oats good. Rye and barley only a little more than half crops. Outlook for corn good on an increased acreage. Tobacco almost all set; a large increase of acreage; fine appearance and outlook. Orchard grass is one of the staple crops of this country and there is a splendid stand. T. M. S.

Paducah, McCracken Co.—From the best information I can gather, only from a third to a half the usual acreage was sown to wheat last Fall in this district, including seven counties, and the yield will hardly be over half a crop per acre—chiefly Mediterranean and Fultz. Oats look very well though they are not a large crop. The corn prosprospect is very poor: more than half the farmers had to plow up their first planting and replant, on account of poor seed; acreage a little larger than last year's. Only half a crop of apples. Peaches a pretty full crop. Tobacco, one of our chief crops, is suffering severely from drought now—only two small showers since May 2 till mid-June, and the hottest sort of weather; only half the usual acreage is yet set out, and that has had a poor start. G. W. H.

PINE GROVE, Clark Co.—Acreage to wheat 50 per cent. above average: will be ready for harvesting by June 20; developing very badly: the fly is ruining some fields that promised a large yield; nearly all look sickly. Fultz succeeded well till last year; still it is the only wheat worth mentioning that we have had for years. Undoubtedly the parasites have the best of the wheat crop, and we should "go slow" on wheat until further developments. With a good acreage and promise of large yield barley will be harvested before this is read. Small amount of rye sown; a fair prospect as to yield. Oats little raised, but considerable used in feeding Short-horns and racers. This is the section that produces $10,000 cows; Maud S; Longfellow; and it furnished the blood for the Derby winner. We had a very backward Spring for plowing, causing corn planting to be late; it came up poorly, many fields having to be planted over the second time: acreage a good average. Tobacco promises well the State over. A great deal of hemp is raised here; prospect fair. Not as much attention is paid to orchards and small fruits as should be. Good prospect for all kinds. G. G. T.

TRENTON, Todd Co.—Wheat is in a critical condition on account of rust; so far it is mostly confined to the blade. A few who have the earliest varieties are harvesting in the dough state: but the bulk of the crop is yet too green. Acreage five to ten per cent short; all winter wheat—Fultz, Odessa, New York, Amber and Boughton. Oats and hay short on account of drought. Prospect for corn good; acreage the same as last year. We have an abundant crop of peaches; very few apples. We give but little attention to small fruits. Tobacco is our staple and main-stay. The outlook for it at the present time is gloomy. T. D. W.

Tennessee.

BELL'S DEPOT, Crockett Co.—Acreage of wheat small; prospects gloomy—Bearded Wheat and Red Chaff. Corn spotted; acreage about the same as last year. Outlook good for orchard and small fruit. S. J. W.

Dresden, Weakly Co.—Wheat outlook not very favorable on account of drought; acreage unusually small—Fultz and Red Chaff. Oats a better crop than usual. Rye a medium crop. Prospect for corn medium. Harvest prospects poor. Apple crop very light, and other orchard fruits correspondingly so. M. M. H.

Erwin, Unicoi Co.—Wheat looks well; better than last year. Acreage about the same as then—chiefly Fultz and Lancaster. Winter oats, good; spring-sown, light. No barley. Rye light. The prospect for corn better than usual; acreage larger. Apples scarce. Peaches abundant. Small fruits good. Harvest will commence about the 1st of July. J. B.

LINCOLN, Lincoln Co.—Wheat acreage about the same as last year; prospect at least 30 per cent better—Fultz and Swamp; no Spring wheat. Oat acreage 10 per cent. larger; prospect 20 per cent. better. Corn prospect generally very good; acreage larger than last year. Sorghum acreage much larger than last year; prospect mostly good. Apples 60 per cent. less than last year. Peaches a third of a crop. Grapes a very full crop set. W. S.

ROBERSON FORK, Gilo Co.—Acreage of wheat 30 per cent. less than last year—Boughton and Missouri; yield good. Oat acreage somewhat larger; crop looks fine. The acreage of corn is 20 per cent. more than last year; looks well where cultivated well. A good crop of peaches. Apples almost a failure with all early varieties; a moderate crop of late sorts. This is a cotton country; acreage 10 to 15 per cent. over last year; looks well. D. H. T.

WESTERN STATES.

Ohio.

BELLEFONTAINE, Logan Co.—The prospect for wheat is good; acreage about the same as last year—mostly Scotch Fife and Fultz. The outlook for corn is not so good as last season, so many planted poor seed. Outlook fair for orchard and small fruits. J. E.

DOYLESTOWN, Wayne Co.—Wheat acreage as large as last year, if not larger; the crop is looking very well—as well as last year—mostly Fultz; scarcely any Spring wheat. A smaller acreage of oats than usual, on account of the late Spring. The prospect for a good crop of corn is pretty fair, although a good bit of it had to be replanted; the acreage is about the same as last year. There will be but few apples, this being the "off" year. Peaches will be a fair crop. Small fruits of all kinds will be plentiful, excepting blackberries, which were badly frozen out. F. K.

Fredericktown, Knox Co.—Wheat acreage large—fully up to last year's; prospective yield one-fourth to one-third less—chiefly Fultz, with some Mediterranean, Clawson, Blue Stem and Gipsey. Oats look fine; acreage small. Corn generally small owing to wet weather; a large percentage had to be replanted; acreage fully up to last year's. Few apples; no peaches; some cherries; no plums; no blackberries; few raspberries, currants and gooseberries; strawberries unsurpassed in quantity and quality. L. D. W.

Hartford, Trumbull Co.—The acreage of wheat is larger than last year, and the outlook is favorable for a large yield. Oats are coming forward rapidly since the late rains. Fultz wheat is the leading variety, although a considerable area of Democrat, Lancaster and other varieties is sown. A great deal of corn has had to be re-planted, and cut-worms are badly injuring some pieces; acreage fully as great as last year's. Fruit, except pears and cherries, is not plentiful. Strawberries a pretty good crop. There are a few peaches and plums. Grapes are setting full. G. M. N.

Neptune, Mercer Co.—Wheat acreage 25 per cent. less than last year; looking well—mostly Sea Island, which yields about 40 per cent. more than Fife or any other sort. Oats about the same as last season; looking fine. Very little barley is sown here; what there is is doing well. Of corn the acreage will be reduced perhaps 30 or 40 per cent. on account of lateness of season. Potatoes a larger acreage and looking well. No fruit of any account grown here. A. S.

TIFFIN, Seneca Co.—Wheat acreage larger than ever before; outlook very good; yet it was hurt much by the May drought—Fultz is the best yielder, but we also raise Lancaster, Amber, Gipsey, etc. Barley is so little raised that if we wanted to sow some, we would have to send off for seed. Rye ditto—a little raised for the straw only, used for tying corn fodder. Oats are an average. Our prospect for corn is very poor; the acreage is about the same as last year, but owing to the drought in May and poor seed much of it is not up yet—June 20. We shall have a fair crop of hay. Apples scarce. Peach trees full. A good prospect for pears and cherries. Gooseberries and currants are leafless—stripped by the worms. Blackberries mostly killed. Raspberries are good. J. S.

TWENTY MILE STAND, Warren Co. Wheat acreage two-thirds of last year's; the outlook portends a falling off of one-third in yield also. Some wheat fields were plowed up and sown to rye which crop, though small, looks well. Some corn fields are looking fine, but some were still unplanted at the middle of June—fully half the crop had to be planted over once or twice. Oats look tolerably well, but are very short in leaf. Barley will be a quarter of a crop; two-thirds of the average acreage was sown. During the hot, dry May meadows were nearly burnt up; now we are having an excess of rain which prevents corn cultivation. J. D.

Indiana.

BUTLER, DeKalb Co.—Acreage of wheat, corn and oats about the same as last year; outlook of wheat about one-third of a crop—Fultz and Lancaster mostly. Oats a full crop. Corn ditto; late on account of the drought; farmers had to replant. Hay half a crop. Apples a full crop. Peaches, none—trees killed by the hard Winter. Small fruits one-fourth of a crop. W. C. R.

FRANCESVILLE, Pulaski Co.—An increase of wheat; one-fourth winter-killed; the remaining three-fourths will mature about 10 bushels per acre if it fills right—Fultz and Lancaster; the latter does best. Oats good—common white and Norway; the latter by far the best. No barley. Rye very good. The prospect for corn is good, fully 40 per cent. better than last year. Orchard products a failure; so are strawberries; other small fruits an average crop. W. M.

Franklin, Johnson Co.—An average acreage of wheat and oats: but a poor prospect for a good yield. We shall probably have an average crop of corn. Orchard and small fruits scarce. J. M. P.

Kingsbury, La Porte Co.—Wheat outlook bad; notwithstanding earlier reports. Winter wheat will not average over three bushels per acre in this county. Not much rye. Oats and barley are poor now owing to late severe drought. Prospect for corn not flattering. Grub-worms and cut-worms are doing their best and much of the crop will amount to but little. The acreage will be larger than usual owing to the winter-killing of wheat. Apples will not be very plentiful. Pears not grown to any extent. No peaches. Small fruits will be abundant. W. E. H.

LAFAYETTE, Tippecanoe Co.—Wheat a full acreage, though the yield will not exceed 25 per cent. of last year's—Fultz. Oats a large acreage; outlook very good. Rye a small acreage; outlook good. The prospect for corn was never better. Orchard and small fruits, a poor prospect. L. K.

LEBANON, Boone Co.—Wheat will fall a quarter short of last year's crop. Corn good on an acreage larger than heretofore. Oats poor. J. R. C.

NAPPANEE, Elkhart Co.—Acreage of wheat 50 per cent. below last year's—a fair stand. Area of oats 70 per cent. less—a good average outlook. Acreage of corn about 70 per cent. of last year's—a good prospect. Potatoes an average acreage and outlook. Early apples a good crop; late, a middling one. Small fruits a moderate crop. C. E. C.

Plymouth, Marshall Co.—Acreage of wheat about the same as last year; outlook poor—it can't possibly make more than half a crop—mostly Fultz. Oats middling. Rye is below an average in area and condition. A tolerable outlook for barley. The acreage of corn is about the same as last year; but it is very backward, and the prospect is less encouraging. The outlook for orchard and small fruits is below the average. A. A. L.

WESTVILLE, La Porte Co.—Wheat acreage much enlarged, but it is almost a total failure; will not raise our seed—Egyptian and Fultz. Oats look bad. No barley and very little rye. Poor prospect for corn, though more has been planted than last year. Outlook for orchard and small fruits gloomy. C. W. C.

Illinois.

ALEXIS, Warren Co.—The acreage of Fall wheat is about the same as usual; but the yield will not be half an average one. The ordinary amount of Spring wheat was not sown on account of the lateness of the season; what there is looks well. More than an average acreage of oats which look well. Corn is late and its appearance is not very promising. Not over a third of a crop of apples and half a crop of small fruits. C. D. T.

ASHKUM, Iroquois Co.—Corn, oats and flax are our principal crops; a large acreage of all, and a far better outlook than at this time last year. Grain of all kinds is "booming" just now. Prices, good; farmers in fine spirits. M. R. M.

Du Quoin, Perry Co.—Wheat half a crop—mostly Fultz; acreage about the same as last year. Rye same as wheat; not much sown. Oats promising. Barley, none. Corn looks well. Late fruits are poor. J. B.

HILLSBORO, Montgomery Co.—Wheat not over one-fourth of a crop; this county was the second in the State last year. We sow seven-eighths Fultz and one-eighth Mediterranean. Prospects for corn good; one-half more than last year. Apples good. Peaches none. "G."

Kankakee, Kankakee Co.—An average acreage of Winter wheat; it was injured by the severe Winter and the drought in May, so there will not be more than a half crop. Rye came through the Winter in good condition, but owing to the drought it will not be more than half a crop. Oats and grass light, owing to the same cause. Corn promises well on an average acreage. Apples a light crop; strawberries fair; currants and raspberries about half a crop; blackberries, none; grapes a very light crop. J. M.

Mazon, Grundy Co.—Wheat and barley are not raised in this section. The acreage of oats and rye is, I judge, 110; the outlook for them, owing to an early drought and recent rains, is not over 90. The prospect for corn, except where the land is too low and wet, is very good; the acreage, compared with last year, 90. The farmers are converting this into a dairy country; hence they plant less corn and seed down more each year. We have a good crop of strawberries, but the prospect for other small fruits is poor, and for orchard fruits very poor. The trees blossomed well, but for some cause the fruit failed to set. D. W. F.

Metamora, Woodford Co.—Oats, barley and rye are looking well. Not much Spring wheat sown. Winter wheat looks well, but not so heavy as last year: chiefly Mediterranean. Prospect for corn good; the early planting is splendid: the late planting not so good on account of dry weather and cut-worms, but the rains of the last week are going to make the late corn all right; acreage fully as large as last year. Orchard fruits scarce; cherries, ditto; berries a fair crop. J. P.

Normal, McLean Co.—Very little wheat sown, and that badly winter-killed; will not make more than a quarter to half a crop. Corn mostly late planted; acreage fully up to last year's; doing splendidly, but will need a late Fall to ripen. Oats, rye, grass and potatoes all very promising. Pears, apples and cherries nearly a failure. Strawberries a fair crop. Blackberry canes injured on some plantations by frost, but where sound they are very full. A. D. F.

PLANO, Kendall Co.—Little or no wheat, either Winter or Spring, and very little rye or barley. The acreage of oats is about the same as last year, and the outlook is fair. Though corn is our main crop the acreage is not as large as last year on account of the lateness of the Spring. Orchards and small fruits a failure. W. H. H.

STONE CHURCH P. O., Washington Co.—Wheat acreage large, but oulook very poor. Timber land the best for wheat; several pieces plowed up—Fultz and Red Sea. Chinch bugs and Hessian fly abundant. Oats looked well, but are drying up. No barley and rye, except the latter here and there for early feeding. Corn is suffering for rain; much injured by cut-worm; acreage about the same as last year. Apples, three-quarters of a crop. Peaches, none. Small fruit, ditto. A. M.

WATERMAN, DeKalb Co.—No wheat. Oat acreage one-eighth more than last year; outlook good. Very little barley; looks well. Rye, one-twentieth more than usual; looks well. Oats are our general grain crop. Corn acreage about the same as last year; prospect very good until recently. Season very late. We are having a regular June freshet. Apples five per cent. of a crop. Cherries 10 per cent. Strawberries will be a fair crop. Raspberries, half a crop. Currants and gooseberries, 80 per cent. of a crop. Blackberries, none. J. F.

Michigan.

ADRIAN, Lenawee Co.—The horrible May has virtually destroyed our wheat crop and made corn very backward. About June 12, the weather became favorable and all vegetation jumped. D. R. A.

ALAMO, Kalamazoo Co.—Wheat acreage about the same as last year; yield will hardly be over 50 per cent. of that in 1880—Fultz, Clawson and Lancaster. Corn prospect good; acreage the same as last year. Barley and oats short on account of drought. E. E. J.

ALLEGAN, Allegan Co.—Acreage of wheat and oats about the same as last year. Wheat badly injured; will yield about 60 per cent. of a full crop, chiefly Clawson. Oats look well on account of recent rains. Meadows were somewhat injured by the drought in May, but now promise to give an average yield. Acreage of corn about the same as last year; crop very backward on account of the late Spring; still we anticipate a full crop. The apple crop will be below an average while the peach crop is nearly destroyed by the cold Winter, except in what is known as the "Beach Belt" adjacent to Lake Michigan, which will yield about one-third of an average crop. R. F.

BATTLE CREEK, Calhoun Co.—We have had a backward Spring. We shall have about one-third of a crop of wheat; acreage about the same as last year—Clawson, chiefly. Corn and other grains are looking quite well. Some have plowed up Winter wheat ground; more Spring crops than usual have been put in. Prospects good for a fair crop of cherries. A good many pears. Some varieties of apples are full while others, such as harvest apples, did not bloom at all. O. B. G.

Dowagiac, Cass Co.—Wheat acreage about as last year—Fultz and Clawson: about half a crop. Corn looks very well: many had to replant owing to poor seed. Oats small but growing finely. Very little rye or barley. Prospect for apples, pears and small fruits good. Cuthbert Raspberry wintered finely. R. O.

EVART, Osceola Co.—Wheat acreage about the same as last year; outlook poor. Dry weather has injured wheat and grass badly—wheat, Diehl, Gold Medal and Clawson. The prospect for corn is very poor; acreage below last year's. The outlook for orchards is fair; but small fruits were very much injured by the cold Winter and dry Summer so far. E. O. T.

Gagetown, Tuscola Co.—The acreage of wheat is much larger this year than ever before; the outlook, however, is poor, as the crop was badly winter-killed and the drought too, has hurt it—mostly Clawson, Diehl and Fultz. Barley and rye very little sown. Oats and peas look bad on account of the dry weather and cold. The acreage of corn is larger than last year, but the prospect is not very flattering. As for apples, this is the "off" year and very few are expected. Small fruits are not going to be plentiful. Gardens and vegetables of all kinds have been hurt by dry weather and severe frosts. J. C.

LANSING, Ingham Co.—Acreage of wheat somewhat greater than last year, but the prospect is poor for over eight bushels per acre. The usual amount of oats have been sown, and though rather late, they are looking well. Barley and rye are not raised to any extent. Clawson and Fultz are the leading varieties of wheat, and the white and black oats. Owing to poor seed, corn did not come up well, but with favorable weather we shall have a fair stand. The acreage will not vary much from other years. A fair crop of apples is expected; no peaches; an average crop of cherries, currants, etc., and an abundant crop of berries. G. S. W.

MARSHALL, Calhoun Co.—There may be in this county 70,000 bushels of wheat, and the best informed farmers estimate the crop at only five bushels per acre—Clawson and Fultz. The outlook for corn is good, and the acreage about the same as last year. Fruit prospects are not very promising. E. T. C.

MARSHALL, Calhoun Co.—Wheat in this county, owing to winter-killing, is not over one-third of a crop—mostly Clawson. Corn looks well, but is a poor stand; acreage not so large as last year. Apples and cherries poor. H. F. D.

Ross, Kent Co.—The acreage of wheat is about the same as last year's; from the present outlook we shall have half a crop—mostly Clawson. Oats will be light, but as good as last year. Barley and rye are grown only by a few farmers. Meadows fine. The prospect for corn is good, with the exception of its being about two weeks late; the acreage about the same as last year's; yellow dent generally grown. The outlook for the orchard and small fruits is good. D. V. G.

Shelby, Oceana Co.—Wheat a creage about one-fourth more than last year; prospect for about a third of a crop—Gipsey and Clawson. Corn about an average amount; very backward, chiefly on account of poor seed. Oat area the same as usual; looks fine. What barley is in presents a fine appearance. Little rye; poor outlook. An average area of potatoes, which look well. Apples and peaches one-third of a crop; small fruits two-thirds of a crop; cherries scarce. J. S. P.

WARREN, Macomb Co.—The prospect for wheat is unfavorable; some farmers have plowed it under and sown the fields to oats or planted them to corn; much that is standing now is hardly worth harvesting; Clawson is chiefly sown. Prospect for corn and oats good. Barley and rye not much sown. Light crops of apples and small fruits. N. S

Iowa.

ATLANTIC, Cass Co.—Wheat acreage 10 per cent. larger than last year; appearance excellent for a large crop. Odessa, Rio Grande, Australian and White Russian take three-fourths of the ground sown to wheat. Corn is small and not over three-quarters of a stand; acreage 10 per cent. smaller than usual. Corn and hops are our main crops, and as the former is likely to be poorer than for several years, it is not improbable that we shall be in a worse plight than we have experienced in that time, so far as crops are concerned. W. C. W.

Corydon, Wayne Co.—Not much wheat grown hereabouts; not as good a wheat county as farther north, and chinch bugs of late years have made it an uncertain and unprofitable crop. Oats do well and are grown extensively. The Spring sowing gives promise of a fine crop—yield, with fair tillage, 50 bushels per acre; acreage about one-eight of improved ground. Barley does well but is not grown to any great extent—probably not more than one-tenth as much acreage as of oats. The same may be said of rye, only that there is probably twice as many acres raised as of barley. Corn prospect fair, though owing to the late Spring and the ravages by the cut-worm and wire-worm, it is not as good as last year at this time; acreage about the same as then—probably about one fifth of the land under improvement. This is not as good a corn country as farther west and northwest in the State; but better for grass; grazing and stock-raising are on the increase. The raising of timothy seed for shipment is also an enterprise that is yearly commanding more attention among farmers. Orchard outlook fair to good, though not equal to last year's. Small fruits better than ever before. J. W.

CRESCO, Howard Co.—Not one-fourth the usual amount of wheat was sown and it looks poorly—chiefly Lost Nation and Sea Island. Oats have about double the usual acreage and look well. Barley, with about double the usual acreage, is looking very poorly. The prospect for corn is good and the acreage one-third more than last year. Prospect for fruit very unfavorable. C S. M.

Dubuque, Dubuque Co.—Wheat nearly all winter-killed and the land replanted with oats and corn; consequently there is a much larger area of these two crops than usual, and they are looking fine. Wheat, Odessa, Clawson, White Russian, etc. Some Russian White oats have been sown and are very promising. Corn—Blount, Chester County dent, etc. Rye medium; barley, ditto. Apples (this is the "off" year) a light crop; strawberries and raspberries not half a crop. Grapes look well. E. R. S.

LOST NATION, Clinton Co.—Very little of either Winter or Spring wheat—not enough for home consumption. What little winter wheat was sown was nearly all frozen out last Winter. Spring wheat does not look well. The varieties mostly grown here are for Winter, Fultz, Grass, Odessa, and White Pola—the last named my father introduced in this part of the country two years ago, it is the hardiest winter wheat I ever saw. For Spring, the White Russian, Odessa and Grass are mostly sown. Rye looks well and always yields well, but there is not much sown. The prospect for oats is good. We are always sure of a good crop of oats here; acreage about the same as last year. The outlook for corn is not very good. It was all planted very late. Potatoes are doing well. Acreage a little larger than last year. Corn is our main crop. Grass looks very well. The prospects for fruit of all kinds are very poor; all small fruits not covered with snow or otherwise protected last Winter, were frozen to the ground. Just as soon as apple trees are old enough to bear they commence to die. J. S. B.

NORAWAY, Benton Co.—Acreage of wheat about one-tenth less than last year; outlook poor. The yield of corn per acre will not, most likely, be over half as much as usual, and the acreage is one-fifth less. Orchard and small fruits won't give more than a quarter of a crop. C. O. V.

RUSSELL, Lucas Co.—But little wheat is sown here—less this year than usual; prospect not very good. Oats have an average acreage, and outlook fine. Hardly an average breadth of rye; it is light. Corn, our main crop, has an average acreage, but the outlook for a yield is not encouraging. It is late and much of it had to be replanted. Flax is being sown more extensively than heretofore. O. W. R.

STANTON, Montgomery Co.—Wheat is late and has only a small acreage—Odessa and Grass. More oats than usual were sown, and the outlook is good. The little amount of rye sown looks well. Corn area the same as last year; but the planting has been very late. Fruits of all kinds will be more plentiful than usual, except cherries and plums, which will not turn out well. J. F.

VILLISCA, Montgomery Co.—The acreage of small grains is a fair average, but, owing to a very late and wet Spring, with some very hot, dry weather, the ground is in bad condition and the outlook below an average. Spring wheat is yellow with rust, and we don't raise any of the Winter sort. Rye looks fair. Of corn, our main crop, there is not much over half a stand, after most of it has been planted two or three times—damaged seed the chief drawback. All through this section no crops will be raised on low lands. G. Z.

WELLMAN, Washington Co.—Only about one-half the farmers have sown any wheat this year—Odessa and Mammoth Tea. More oats sown than ever known. Very little barley and rye—large yields where sown. Prospect fair for all the above. Prospect for corn is very good—not all planted yet in nearly mid-June; acreage very large. About half a crop of orchard fruits. Good prospect for all small fruits except cherries. E. B. S.

Wisconsin.

Arcadia, Trempealeau Co.—An average acreage of wheat, which is damaged by chinch bugs. For Winter wheat we sow Spring Red Chaff in the Fall, and it does remarkably well; for Spring our chief sorts are Fife, Club, Red Chaff, White Russian. Oats are a large acreage and No. 1 in condition. A large area is under barley, but it is being damaged by insects. Corn acreage much larger than usual, and the stand looks splendid. Grass never looked better; haying begins June 20. Few orchards here; but small fruits will be abundant. F. A. R.

Beaver Dam, Dodge Co.—Outlook for wheat good; almost all Winter; Spring wheat sown where the Winter was killed out. Varieties, Fultz and Clawson. Oats and barley a large acreage; both look well. A large acreage of corn—more than last year; middling outlook. No orchard fruits. A large crop of strawberries and raspberries. Our currant bushes were almost all killed by worms last year; those that survived have a good crop. W. E. B.

CASCADE, Sheboygan Co.—Acreage of Winter wheat more than double that of last year; about one-third of it has been plowed up, and fully one-third more is almost worthless; the other third is fair, but very late, and in danger from rust and insects. Owing to the failure of Spring wheat for two years scarcely any was sown the past Spring. White Russian is commonly sown in the Fall and Fife in the Spring. Acreage of rye three times larger than last year; yield about half as much per acre. Area under barley double that of 1880; prospect good. Oats ditto, ditto. An average acreage under corn; owing to cold weather and bad seed some had to be planted three times, and then plowed up and sowed to buckwheat. Grass, old seeding good; new, scarcely half a crop. Apples rather scarce; cherries plentiful. Small fruits abundant, except raspberries, which were badly winter-killed. G. L.

Deansville, Dane Co.—Winter wheat looks very poor, much of it having been winter-killed; Spring grain is thin on account of the late season and dry weather; but with the recent rains the prospect is fair for a medium crop. Corn is late, but looks well and bids fair for a good crop; acreage probably a third larger than usual. Very few apples. Small fruits, with the exception of blackberries, promise well. J. E. P.

Mequon, Ozaukee Co.—Only the usual number of acres were sown to wheat hereabouts this Spring—Fife and Russian; it looks well; Winter wheat has been "played out" here for the last 20 or 25 years, with very few exceptions. Barley, 50 per cent. or upward more than last year; looks well. Oats (white and yellow kinds), 50 per cent. more than usual; promise well. Rye seven-eighths winter-killed; but in the best years we raise hardly enough for home use. Hay better

than last year. This is not the best part of the U. S. for corn; the main sort planted here is a yellow flint, eight to sixteen-rowed; a few farmers plant the white and some the dent kind. The crop does not look good; not as many acres this year as generally. Our orchards and small fruits never did better than last year, and never looked worse than this year. C. R.

MONROE, Green Co.—Acreage of wheat, oats and barley about the same as last year; all are promising well, except Winter wheat, which will be about one-half crop. Corn prospects fair at present; with good weather and long season, good; acreage about same as in 1880. Orchard fruits not very promising. S. B. M.

TUNNEL CITY, Monroe Co.—Winter wheat looks well; but very little sown; Spring wheat was put in late; acreage light; prospect fair. Fultz for Winter; White Russian for Spring. Rye is thin, but only a little is sown. Oats promise well; acreage large. Barley is backward; but little sown. No apples. W. R. F.

Minnesota.

BELLE PLAINE, Scott Co.—Wheat looks very well; about three-fourths of the tilled land is sown to it every year. Fife is the only variety sown. Corn is very poor, owing to wet weather and poor seed. Apples look very well. No small fruit is raised here. J. B.

Hart, Winona Co.—Wheat, oats and barley look well; acreage not so large as last year. Wheat, Fife, Brooks's, Lost Nation and Black Sea. The prospect for corn is good, with a larger acreage than ever. Potatoes look well; no bugs. The fruit outlook in Spring was good; not so good now. A large number of trees are dying; the bark is loose. J. B.

KASSON, Dodge Co.—About 20 per cent. less wheat than last year; outlook as good as then. Oats about an average amount; prospect very good. About 15 per cent. more barley than last year; looks thin and sickly. Corn prospects are good; acreage 20 per cent. larger than ever before. J. R.

DULUTH, St. Louis Co.—This is not yet an agricultural country; but a timber region with a few small clearings here and there. Grass, potatoes and oats are raised more than any other crops, and these are fairish. No corn or orchards as yet. Small fruits are raised in gardens about the towns; prospect good. W. G. W.

LAKE CITY, Wabasha Co.—Acreage of wheat oats and barley about the same as last year; outlook not quite so good. Corn acreage the same as last year; prospect good. Small fruits look pretty well; orchard fruits rather poor. W. B.

Wykoff, Fillmore Co.—Acreage of wheat not more than 50 per cent. of last year's; appearance fair; but there is great alarm in regard to chinch bugs—chiefly Russian Fife. Acreage of barley 100 per cent. more than heretofore. Corn was got in a little late, but looks well, and from 100 to 125 per cent. more has been planted than last year. This increase is owing to a failure in the wheat crop for the last three years. Many varieties of apples were either badly injured or killed last Winter; Those that survived without injury are fruiting finely. Small fruits are abundant. No peaches here. W. H. P.

Missouri.

GAYNOR CITY, Nodaway Co.—Wheat acreage small; crop almost a total failure; average yield 10 to 15 bushels per acre. Oats a large acreage; very promising; average yield 50 bushels per acre. Barley and rye but little sown. The corn crop is not very promising owing to late Spring, bad seed and cut-worms; a large acreage; crop likely to be two-thirds of an average one, which is from 45 to 50 bushels per acre. The acreage grows larger every year, as a great many new farms are opening up. No orchard fruits of any account. Grapes, currants, gooseberries, strawberries, etc., are plentiful. W. F. G.

HARDIN, Ray Co.—Wheat acreage an average one; outlook portends almost an entire failure; half was winter-killed, the rest badly damaged by the Hessian fly, chinch bugs and rust. There will be none for shipment. Blue Stem, Fultz and Graham the favorite sorts. Rye and oats are good. No barley. Corn looks very well though planted later than usual; acreage decreasing yearly, being superseded by tame grasses and clover which are in fine condition. Outlook for orchards very poor. Peaches almost a failure. T. N. C.

SPRINGFIELD, Greene Co.—Wheat acreage equal to that of last year; outlook poor; cannot exceed 50 per cent. of last year's yield—Walker, Mediterranean and Egyptian chiefly—all Winter wheat. Oat acreage about as last year; outlook good. Corn is largely planted; gave much trouble to get it to "come up;" many planted some land two to three times; it is late, but promises well. Fruit outlook poor. The foot-prints of last Winter are more apparent as the Summer advances in all orchards on low lands or southern exposure. The more fortunate situations are but little damaged and will give some apples. The apple crop of this section can't exceed 10 per cent. of that of last year. The same may be said of pears cherries and plums. No peaches excepting a few in the hills along White River. Grapes and small fruits generally destroyed by the unprecedented frost of last Winter—exceptional grounds well protected give some grapes, raspberries and gooseberries. No blackberries. JOT.

TABERVILLE, St. Clair Co.—Wheat is a failure, and most farmers have plowed it up and replanted the land with corn—Mediterranean, Walker and May. Corn is king and its prospect very flattering and should Messrs. Chinch Bug & Co. not make their appearance, this section will witness one of the largest yields ever known. Oats look well and will be a good average crop. Small fruits in abundance; also late apples; peaches and early apples not so plentiful. C. P. G.

Kansas.

ALTOONA, Wilson Co.—Chinch bugs have destroyed about one-half the wheat on the upland; on the river bottom it looks well—Mediterranean or Red Sea, Fultz and Walker. No barley. Very little rye and oats, but both in good condition. Corn that has received proper attention looks well; one-tenth more planted than last year. Apple trees are not set so full as last year. A few peach orchards will be full, but the crop on most of the trees will hardly feed the worms. Gooseberries have been full. Blackberry and raspberry canes badly winter-killed J. H. G

Agricola, Coffey Co.—Wheat in the counties of Coffey, Lyon, Osage, Franklin and Anderson is scant half a crop—Fultz, Clawson and May; May stands best. The acreage of corn is one-fourth larger than ever before, and the prospect is one-fourth better than last year at this time. Oats three-fourths of a crop. Apples and peaches half a crop; small fruits splendid. Potatoes look fine. T. W. T.

COLUMBUS, Cherokee Co.—The acreage of wheat is about 10 per cent. greater than last year; but the prospect is very poor owing to rust and bugs; all varieties seem to fare alike—Mediterranean, Walker, Michigan White, Clawson and Fultz. Oats acreage 10 per cent. increase; outlook good. Flax area a trifle larger; prospect fine. Corn acreage about the same as last year; prospect poor; late and thin on the ground—too much rain. No apples, pears, peaches, cherries or plums. Berries look very promising. The wheat harvest began here on June 7; weather favorable for the work. H. A. H.

Cottonwood Falls, Chase Co.—The acreage of wheat in this county is above an average—Big and Little May and Grass. The outlook for oats and wheat is splendid—above an average. No barley and not much rye. Corn prospect first-rate; the acreage exceeds last year's. The out-look for orchard and small fruits is poor; not much interest taken here in fruit raising. Stock is the mainstay. J. S. B.

EVERETT, Woodson Co.—Wheat acreage is smaller than last year's, and the outlook poor owing to chinch bugs. This is not a wheat county and there is not much small grain of any kind. Prospect for corn good; acreage larger than usual. Peaches about one-quarter crop. All other fruits good. J. J. W.

HILL CITY, Graham Co.—But very little wheat; it will be but half a crop—Early May mostly. Corn acreage will be more than last year's; looking uncommonly well. Fruit trees of all kinds are doing well, but are too young to bear. S. S.

OGALLAH, Trego Co.—Wheat good; will make from 15 to 40 bushels per acre—mostly Red May. Oats, barley and rye very little sown. The prospect for corn is good; large acreage planted. Some planted late on account of wet weather all through May. The county is too new for fruit. A great many fruit and forest trees planted this Spring. Plenty of grass; cattle are looking very fine. J. P. M.

Continued on page 428.

ANNOUNCEMENT.

THE decree for this issue is "Sacrifice the literary departments to the crop reports." When our editor-in-chief graciously made this announcement, the first thought in view of the interest felt for those appreciating these particular columns, was to subject *some one* to the necessity of recording the *loss* of one *crop*—second thought, however, succumbed to better judgment, and dignity and amiability found an influential mission. Our practical neighbors mean well. RAY CLARK.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE KITCHEN CLUB IN COUNSEL.

ANNIE L. JACK.

IN Miss McGregor's cosy kitchen we all assembled one pleasant day in June. The subject was "Summer Recreations," and, by way of killing two birds with one stone, we were to arrange the way and manner of a church picnic to be held on a coming holiday. It is very noticeable even in a small community that nearly every family has some specialty in the culinary art that is convenient in getting up any public entertainment, and which, if studied, renders it much more easily managed. But for awhile we talked of Summer recreations, and how necessary it was that the steady strain of a season's work should be now and then broken by a day of enjoyment. Living on the banks of a river abounding in good fish, it is a great source of pleasure to take a few hours in angling, and wonderful how soon even young children become expert in this amusement, even little four-year-old bringing a fine bass now and then from the water. The games of lawn tennis and croquet are still delightful to young people, and should be indulged in for recreation, while a day's visit now and then to the city is calculated to do us good and also to make us more than ever contented with the pure air of our country homes. Another recreation seldom indulged in is riding, and I think every household should possess its saddles and riding habits for the daughters who can accompany their brothers in this healthful exercise. Pleasant little picnics to the woods (with agreeable company), are of value if the eyes are kept open for new specimens, botanical and entomological. In this locality there is one annual gathering at the close of the grain harvest. It is called the farmers' picnic, and is a pleasant reunion among neighbors who would not otherwise meet in a social manner. While Mrs. Thompson did not know whether she would take cake or pie, and Mrs. Ellerton gave us the latest recipe for crullers, Miss McGregor remarked that, though the children liked sweets and must be provided for, she observed that grown people enjoyed something a little more savory. So we decided to take plenty of sandwiches, and, as we were to light a fire, we could boil eggs and cook any of the fish the followers of the gentle Isaac might be fortunate enough to catch, and as one promised cold fowl, and another and another added their share, we felt that there was likely to be a full supply of good things on the coming holiday, and all agreed that too little attention is paid to these things among hard-working farmers and their families, whose lives are too often one unceasing round of toil, and who would be brighter and happier if they indulged in simple Summer recreations.

DOMESTIC RECIPES.

Gooseberry Catsup.

Three pounds of ripe fruit, four pounds of white sugar, a pint of good vinegar, two ounces each of cloves and cinnamon. Boil all together for three hours, careful not to burn. Bottle.

Very Fine Currant Jelly.

An equal quantity of white and red currants free from stems, leaves and dirt. Put into a *white* porcelain kettle with a very little water, just enough to keep the fruit from burning at first. Boil 20 minutes. Do not crush the fruit. Pour into a clean jelly-bag. Hang where the juice can run through, but do not touch or squeeze the bag. To each pint of this clear liquor add a pound of loaf sugar and boil in the cleansed porcelain kettle 25 minutes. Pass through another jelly-bag and pour into glasses. The bags can be well pressed out afterward and the juice therefrom made into an inferior jell. LONG ISLAND.

Peach Batter Pudding.

Pare some ripe and soft peaches, leaving whole. Arrange closely together in the bottom of a buttered baking dish. Make a batter of a quart of milk, six eggs beaten very light, 10 tablespoonfuls of sifted flour, a tablespoonful of melted butter, a little salt and two teaspoonfuls of baking powder sifted with the flour. Bake in a quick oven and eat hot with cream and sugar or a hard or liquid sauce. Strawberries, cherries, raspberries, or blackberries may be substituted for the peaches. MARY B.

Mrs. Jack's Chow-Chow.

Half a bushel of green tomatoes, one dozen medium-sized onions, one dozen green peppers, all chopped fine. Sprinkle over a pint of salt. Let stand all night, then drain off the brine, cover with good vinegar and cook one hour slowly. Drain again and pack in a jar. Then place in your preserve kettle two pounds of brown sugar, two tablespoonfuls of cinnamon, one of allspice, one each of cloves and pepper, half a cup of ground mustard and a pint of grated horseradish, with vinegar enough to mix them thoroughly. Boil for half an hour and pour at once over the mixture in the jar. Cover tight and it is ready for use, but will keep over a year if you are not tempted to use it before that time. It is a good deal of work to chop fine enough with knife and bowl, but I suppose many of my readers have thoughtful husbands who provide them with a mincing machine, in which case the chopping becomes easy work that small children can perform, and which they do in our household without finding it any hardship.

Kitchen Aprons.

IN RURAL of May 14, under the head of "Helps" in the article on Kitchen Aprons, the idea is conveyed of only one breadth being used, while from the waist down there are two. Have it rounded out, to come to about the bottom of the waist, then measure from the waist down, a second breadth, which split, sewing raw edge, etc. M. J. M.

Mother's Composition Cake.

Two cups of butter, three coffee-cups of sugar, one coffee-cup of milk, one coffee-cup of molasses, six coffee-cups of flour, six eggs, two pounds of raisins, one teaspoonful saleratus, spices as in other fruit cake. This will make two loaves. A very nice cake. S. A. Y.

Headache.

I noticed under the head of Domestic Recipes some one advises for headache or sour stomach taking one-fourth of one teaspoonful of soda at intervals of one hour. I wish to say for the benefit of those readers who may be disposed to test the efficacy of the above, to stop and consider that you are taking a powerful alkali into your stomach, which, if indulged in very frequently, will soon convince you that you have taken a remarkable leap toward confirmed dyspepsia. W. M.

Crystallizing Grasses.

Dissolve in a quart of soft water *all* the alum you can by heating and stirring—it may be a pound, it may be 20 ounces. Have the grasses divided into small bunches and tied. When the solution begins to cool dip in the grasses holding them there five minutes, three minutes, two minutes or one minute, according to size of crystals you wish. The cooler the solution the quicker the crystals form. When too cold reheat. I have used a glass jar to dissolve the alum in, heating it in a kettle of water with an old plate at bottom to prevent the jar breaking. One can see through glass the crystals forming and so know when to take the grass out. Do not let the grass touch the sides of the jar. AUNT FLORA.

Hard Soap Question.

Will the "Farmer's Wife" who sent the recipe for hard soap in "Domestic Recipes" of the RURAL of June 4th, please state the weight of the balls of resin, and where they may be bought, and oblige another FARMER'S WIFE.

[Cambridgport, (Mass.) American Protestant.]

A lady friend of ours called the other day and stated that her husband had seen St. Jacobs Oil advertised in our paper; he used it for rheumatism and was convinced of its merits.—*Adv.*

Miscellaneous.

ST. JACOBS OIL

TRADE MARK.

THE GREAT GERMAN REMEDY.

FOR

RHEUMATISM,

Neuralgia, Sciatica, Lumbago,

Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,

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200 Car Loads Hard Wood Leached Ashes

FOR SALE, delivered in Buffalo in car-load, of 13 tons (about 420 bushels) at $4.00 per ton; Buffalo and intermediate stations to Rochester and Caledonia, $4.50; from Rochester and all stations to Syracuse and Auburn, Schenectady, Cohoes, Troy, Albany, and at stations on H. R. R. to N. Y., Hunters Point, L. I., Phila., Pa., Baltimore, Md., $5 per ton; Newburgh, Elmira, N. Y., Trenton, Paterson, Passaic, Piermont, Ridgeway, Newark, Jersey City, N. J., $5.50. Ashes in good shipping order. Orders promptly filled.

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Stock and Poultry.

POWELL BRO'S,

Springboro, Crawford County, Pa.

THE MOST EXTENSIVE IMPORTERS OF

CLYDESDALES

IN AMERICA.

Two importations for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow.

Largest and Finest Collection ever seen on the American Continent.

ALSO,

HAMBLETONIANS,

And other strains of trotting Stock.

HOLSTEIN & DEVON CATTLE.

Catalogues sent free. Address as above, and mention the RURAL.

BERKSHIRES

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Small YORKSHIRES

THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to

Bagg's Hotel Farm,

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Echo Farm Jerseys.

FIRST ANNUAL SALE—CHARTER OAK PARK, HARTFORD, CT., JUNE 23 and 24, 1881.

Peter C. Kellogg & Co., New York, Auctioneers. Bulls "Litchfield," "John Rex," and over 70 other choice selections from this herd. Catalogues on application. Address F. RATCHFORD STARR, Litchfield, Ct.

The New Sheep Dip.

Little's Chemical Fluid.

(*Pat'd in U. S. 3d July, 1877.*)

Non poisonous, non corrosive, mixes perfectly with cold water; 1 gallon to 100 of water. Price $1.50 per gallon, or at $1.40 for ten gallons and upwards. Send 3 cent stamp for U. S. Testimonials to

T. W. LAWFORD, Gen'l Agent,

P. O. Box 504, Baltimore, Md.

CROP REPORTS.

(Continued from page 427.)

Nebraska.

CLARKSVILLE, Merrick Co.—Wheat acreage one-third less than last year; outlook good on upland. Many farmers would like to plant twice the amount of corn they raised last year, but the ground is too wet to work; outlook poor. Orchards are too young to bear. Wild plums and grapes are plentiful. J. M.

BENNETT STA., Lancaster Co.—Winter wheat is almost a total failure; a few fields are fair, but most of it has been plowed and resown to Spring wheat; acreage rather more than last year—almost wholly Grass Wheat (a Winter or Spring sort); White Russian variety a failure here, but occasionally a fair crop. Oats a full crop; looking fine; a little more sown than last year. Little rye and less barley. Rye is sown in Fall, and is looking well. Corn prospect good; but much of it will be late; much to be planted yet. Early corn knee-high; acreage larger than last year. There are but few bearing orchards; almost all are young. Apples and cherries will be good. Peach trees almost all killed to the ground; climate is too uncertain for peaches. Plums always bear. Raspberries and strawberries fine crops. Blackberries partly killed. S. G. B.

Sarpy Center, Sarpy Co.—The prospects for small grains are good for an average yield; acreage about the same as last year. Chief among many sorts of Spring wheat are Big China, Golden Drop, Minnesota Spring and Grass. The prospect for corn is very unfavorable, some farmers have not finished planting now in the middle of June; a great deal had to be replanted and much of it was put in with listers, and the season was unfavorable for that way of planting, so that under the most favorable circumstances we won't have more than half a crop. The acreage will be less than last year. Orchard fruit is, in great, part a failure. Small fruits (with the exception of cherries and plums) are plentiful. J. G. B.

GREENWOOD, Cass Co.—Wheat acreage fully as large as last year; outlook for wheat and other small grains better than it has been for years. Corn acreage larger than ever before and outlook fully as good as last year for a large yield per acre. Prospect for orchard and small fruits good. H. C.

Dakota.

YANKTON, Yankton Co.—Owing to our terrible floods and occasional rains the acreage of all small grains is scarcely half what it was last year. This is also true of corn, which is very late. All small grains look better than I've ever seen here. We shall have more fruit this year than ever before, because new orchards are coming into bearing and the crop is good. All small fruits will be full crops. J. P. A.

Jamestown, Stutsman Co.—The area of wheat in this county is about 15,000 acres—nearly double that of last year; prospects never so favorable—Scotch Fife entirely. Oats and barley are fine. No rye; no fruit. E. P. W.

Watertown, Codington Co.—The present crop of wheat is the third ever raised in this county, which has been settled only three years; the acreage, as compared with last year, is ten to one; the outlook is good for wheat, oats and barley. Very little rye—somewhat winter-killed. We sow chiefly Scotch Fife and Lost Nation wheat. Spring being very late, little corn was planted; it is small, but looks well, and is of a good color. We are experimenting with fruit trees; they have wintered well. Small fruits that are old enough to bear are heavily loaded. S. S.

CENSUS AGRICULTURAL STATISTICS.

THE agricultural statistics collected by the late census are by far the most correct of all. The statistics of the Agricultural Department are necessarily to a great extent guess-work, and those of the State Boards of Agriculture and newspapers are in the same category. Those of the decennial census are, however, from the very nature of the mode in which they are collected, as nearly accurate as it is possible to make them. They have accordingly a peculiar interest for farmers, and therefore having just received from the Census Office those already tabulated, we hasten to place them before our readers.

	1880. Wheat.	1880. Corn.
New England.		
Maine	665,714	960,633
New Hampshire	169,316	1,358,625
Vermont	337,257	2,072,015
Massachusetts	15,818	1,805 295
Rhode Island	290	372,967
Connecticut	38,742	1,924,794
	1,227,137	8,444,329
Middle States.		
New York	11,586,754	26,716,913
New Jersey	1,901,739	11,247,402
Pennsylvania	19,462,405	47,970,987
Delaware	1,185,182	3,892,464
Maryland	8,004,484	16,202,521
District of Columbia	6,402	29,750
	42,126,966	106,059,037
Southern States.		
Virginia	7,822,354	29,102,721
West Virginia	4,002,017	14,223,799
North Carolina	3,385,670	27,959,894
South Carolina	952,330	11,764,349
Georgia	3,158,335	23,190,472
Florida	518	3,174,284
Alabama	1,529,683	25,446,418
Mississippi	218,890	21,340,800
Louisiana	5,044	9,878,024
Texas	2,555,652	28,846,073
Arkansas	1,252,181	33,666,057
Kentucky	11,355,340	73,977,829
Tennessee	7,331,480	62,833,017
	43,579,489	355,413,652
Western States.		
Ohio	46,014,869	112,681,046
Indiana	47,288,989	117,121,915
Illinois	51,136,455	327,796,895
Michigan	35,537,097	38,844,229
Iowa	31'177,225	276,093,295
Wisconsin	24,884,689	35,991,484
Minnesota	34,625,657	14,979,744
Missouri	24,971,727	203,464,620
Kansas	17,324,141	106,791,482
Nebraska	13,846,742	65,785,573
	336,807,591	1,297,550,262
Pacific States and Territories.		
Colorado	1,475,559	455,883
California	28,787,132	2,050,007
Oregon	7,486,492	127,675
Nevada	70,404	12,891
Dakota	3,018,354	2,078 089
Montana	469,688	5,794
Wyoming	4,762	65
Idaho	540,564	16,408
Utah	1,167,268	164,244
New Mexico	708,788	650,954
Arizona	189,527	36,24[illegible]
Washington	1,921,382	39,306
	45,839,920	5,638,267
Total for United States	459,591,105	1,773,106,576

WHEAT, RYE, OATS, CORN, BUCKWHEAT AND BARLEY,

	1860. Bushels.	1870. Bushels.	1880. Bushels.
Maine	5,933,800	4,879,601	4,543,376
New Hampshire	3,322,172	2,871,116	2,752,589
Vermont	6,036,612	6,862,790	6,797,530
Massachusetts	4,103,099	2,660,446	2,823,368
Rhode Island	779,906	524,968	564,640
Connecticut	4,553,076	3,186,7 8	3,493,888
New England States,	24,755,665	20,485,694	20,950,386
New York	78,017,168	77,751,688	90,763,511
New Jersey	18,307,484	15,985,688	18,279,083
Pennsylvania	80,203,659	97,492,934	108,996,156
Delaware	5,899,398	4,473,625	5,458,501
Maryland	14,256,289	21,090,234	26,434,073
Dist. of Columbia	130,684	44,853	47,331
Middle States	196,874,672	216,838,202	249,579,255
Virginia	63,128,962	33,540,244	42,736,876
West Virginia	....	13,506,182	20,052,931
North Carolina	38,080,355	24,909,900	35,511,187
South Carolina	17,389,394	9,052,639	15,486,818
Georgia	34,685,260	21,766,068	32,016,562
Florida	2,913,778	2,839,817	3,646,413
Alabama	35,215,844	18,828,177	30,051,675
Mississippi	29,909,890	16,346,825	25,528,519
Louisiana	17,011,779	7,626,788	10,116,379
Texas	19,145,707	21,805,229	36,874,946
Arkansas	19,338,216	14,682,450	27,133,648
Kentucky	77,400,344	63,790,675	91,094,353
Tennessee	60,114,323	52,431,685	75,110,803
Southern States	414,333,846	299,617,277	443,360,199
Ohio	108,789,675	123,473,804	189,737,034
Indiana	94,997,746	88,326,130	180,794,067
Illinois	156,543,505	207,936,419	444,626,602
Michigan	26,169,907	40,722,293	92,484,962
Iowa	57,613,564	121,951,917	163,689,336
Wisconsin	35,868,256	64,199,668	101,428 295
Minnesota	7,664,078	35,450,001	76,209,175
Missouri	81,604,669	97,793,338	249,826,673
Kansas	6,483,349	23,726,086	123,034,104
Nebraska	1,720,278	8,572,842	88,593,777
Ten W. States	577,255,687	812,151,975	1,920,218,085
Colorado	....	863,871	2,700,110
California	12,026,637	28,487,124	44,977,935
Oregon	1,820,278	4,659,054	12,951,909
Nevada	6,868	591,189	783 868
Dakota	24,569	422,436	7,774,067
Montana	....	418,756	1,417,284
Wyoming	....	100	27,548
Idaho	....	255,591	1,298,349
Utah	549,383	770,287	1,976,152
New Mexico	1,158,264	1,065,233	1,569,708
Arizona	....	114,195	465,618
Washington Ter'y	230,737	554,549	4,122,358
Pac. States & Ter.	15,816,736	38,202,375	80,064,846
Aggregate U. S.	1,229,039,616	1,387,295,523	2,714,602,681

TOBACCO.

States and Territories.	Acreage, 1880.	Pounds, 1880.	Pounds, 1870.
Alabama	2,198	452,556	152,742
Arizona	1	600	100
Arkansas	2,064	970,220	594,886
California	84	73,317	63,809
Colorado	....	....	890
Connecticut	8,666	14,164,652	8,328,798
Dakota	7	2,107	....
Delaware	5	1,353	250
District of Columbia	2	1,400	....
Florida	102	22,197	157,405
Georgia	1,057	231,198	288,596
Idaho	2	400	....
Illinois	5,625	3,936,700	5,249,274
Indiana	11,955	8,872,842	9,325,392
Iowa	694	420,722	71,892
Kansas	324	191,749	33,241
Kentucky	285,049	170,246,309	105,305,869
Louisiana	264	56,564	15,541
Maine	3	350	15
Maryland	38,174	26,032,147	15,785,339
Massachusetts	3,350	5,669,536	7,312,885
Michigan	173	84,333	5,385
Minnesota	167	70,289	8,247
Mississippi	1,475	415,248	61,012
Missouri	15,511	11,994,077	12,320,483
Montana	....	....	600
Nebraska	106	58,589	5,988
Nevada	2	1,500	25
New Hampshire	88	170,843	155,334
New Jersey	154	171,405	40,871
New Mexico	10	1,249	8 587
New York	4,938	6,553,351	2 349,798
North Carolina	57,215	26,986,448	11,150,087
Ohio	34,650	34,923,905	18,741,973
Oregon	46	17,860	3,847
Pennsylvania	27,432	36,842,968	3,467,539
Rhode Island	3	825	796
South Carolina	183	46,144	34,805
Tennessee	41,592	29,365,432	21,465,452
Texas	702	222,898	59,706
Utah	....	....	....
Vermont	107	132,402	72,167
Virginia	199,423	80,099,838	37,086,364
Washington Territory	9	7,072	1,682
West Virginia	4,071	2,296,146	2,046,452
Wisconsin	8,811	10,897,663	960,813
Wyoming	....	....	....
Total	646,504	472,757,164	262,735,341

AGRICULTURAL NEWS.

The fruit trees of Hartford, Conn., are so scourged by caterpillars that they are as brown as if swept by fire. Apples appear to be the favorite. ....Worms are playing havoc with corn in Bainbridge, Ga., and a sorry crop is inevitable; but watermelons are doing well and there will be a big crop........Gatesville, Texas, is overrun with wolves that are making havoc in sheep folds. In some parts of the country they kill the sheep in the daytime........At least one-third of the corn crop is entirely destroyed in Chancery, Ga., caused by a small white worm which bores into the young stalk just above the root........In Arkansas a species of cut-worm has completely destroyed the stands of cotton on a great many large plantations. Many portions of the State are overrun with locusts........Reports from Oglethorpe, Ga., give more worms and bugs, with greater appetites than ever known before, and the cut-worm has gone over to tobacco chewing in South River, Md. ....Even Texas complains of a rainy season that is ruining crop prospects, and Alabama cries out in sorrow over bud worms, and cold nights that are demoralizing farmers in Greene County. ....The entire Chowan section of North Carolina is suffering incalculable injury through the locust plague. Whole forests of valuable timber have been destroyed by the pests stripping the bark and depositing their eggs............Farmers about Joliet, Ill. report fruit ruined, hay less than half a crop, while farmers from Lake City to Bidwell, Cal., say that all crops are looking well and the yield will be the largest ever known in the valley........The grasshoppers, locusts and cotton worms have become such a burden that some Texas farmers will try the experiment of importing the Lubbock beetles from Russia that are very voracious and live on these pests.

Rose bugs are making sad havoc among the apple and blackberry blossoms all along the line of the Camden and Atlantic Railroad. Growers say that their work has been so thorough that the crop will hardly be worth the picking........Wire worms are destroying the wheat fields of the Willamette Valley, California; a peculiar caterpillar is stripping the ash trees of the Butte Creek region of their foliage, and chintz bugs are working on the barley fields in Spring Valley, Minn....... Ashes are said to be sure death to the Army worm, and have been tried with great success at Potsdam, N. Y., by Lorenzo Norton. He sowed the ashes on a strip of land when the dew was on, and at night the ground was literally covered with the worms..... ....In Jefferson Township, Pa., the Army worms devoured completely seventeen acres of grass and two acres of corn belonging to Franklin Groff, and as they were about to enter another field of his he plowed a ditch into which they fell, when he burned them. Joseph Kalbach, of the same place, lost eleven acres of grass....... A simple remedy for all insects that annoy farmers is given by a Wenona, Ill., agriculturist. He says: "Gather all the old straw and hay into long rows around orchards, potato and cabbage patches, and set fire to one end to burn against the wind all night, and they will burn up millions and millions every night of the male insects that fly, and bugs of all kinds and descriptions, such as destroy the trees and potatoes, and all the cabbage, and the canker worms on the apple trees. They will fly right into the blaze and burn their wings off, and drop into the fire. I told a man to do that who said the ground in his potato patch was crawling alive with potato bugs. He plowed a ditch around and filled it with straw, and burned them all up in one night, and he raised a big crop of potatoes. The prairie fires in former years used to burn them all up. Do this and you will soon be rid of the whole miller tribe of insects."

The annual meeting of the Dutch-Friesian Breeders' Association was held at Bagg's Hotel Utica N. Y., June 18 and the following officers were elected for the ensuing year. Pres. G. R. Payne, Hamilton, N. Y., Vice-Presidents.—Dr. A. R. Gebble, Lowville N. Y., Prof. W. J. Beal, Lansing Mich., H. F. Slade, Oneonta, N. Y., Secretary S. Hoxie, Whitestone, N. Y. Treasury, A. F. Cole. Pine Woods N. Y., Executive Committee, S. Burchard, Hamilton, N. Y., Robert Burch, Schuyler N. Y., Irwin Langworthy, So. Brookfield N. Y.

In Missouri the thirteen year locust may be expected this year in the following counties: Audrain, Bollinger, Benton, Clarke, Chariton, Callaway, Cooper, Cole, Franklin, Gasconade, Iron, Jefferson, Knox, Lewis, Marion, Macon, Morgan, Moniteau, Pike, Phelps, Pulaski, Polk, Pettis, Schuyler, St Charles, St. Louis, St. Francois, St. Clair, Warren and Washington. In Illinois, in the following counties: Adams (south part, back of Quincy), Bond, Clinton (northwest corner, adjacent to Madison), Champaign, Coles, Crawford, Cumberland, Clay, Clark, Edwards, Edgar (especially in the eastern part), Franklin, Gallatin, Hardin, Hamilton, Johnson, Jasper, Jersey, Jefferson, Lawrence, McLean (east end), Macon, Madison, Marion, Massac, Monroe, Pike, Perry, Platt, Pope, Richland, Randolph, Sangamon, Saline, St. Clair, Union, Washington, Wayne, Wabash, Williamson and White. In Kentucky, in the northwest corner. In Arkansas, the northern counties. In Alabama, Russell and the counties east of the Black Warrior river. In Tennessee, Davidson, Montgomery, Bedford, Williamson and Rutherford counties. In North Carolina, Mecklenburgh county. In South Carolina, the Chester district and the county adjacent to the Georgia line. In Georgia, Cherokee county. In Louisiana, Morehouse, Caddo and Washington parishes.

This year the thirteen year brood will cover the greatest area in the Southern States and in the Mississippi Valley. The entomologists say that the two broods of thirteen years and seventeen years have not appeared simultaneously before since 1660. Agriculturists may be content with the prediction that they will not again appear in the same year until 2102. This "harvest fly," or periodical locust, is a large black insect, with red eyes and four transparent wings. The insects are harmless, although it is said that the females sometimes, while carrying food to their young, may inflict a painful sting if interfered with. The only injury which they may cause is in boring holes in the trees in young orchards for the deposit of eggs.

"Why so much delay in selecting the Agriculturalal Experiment Station?" is a question often asked. It seems the Comptroller hesitated to grant the funds for the farm under the notion that the bill granting the appropriation was unconstitutional. His doubts having been removed, the money is ready and the Station will probably be soon located. So say some; others say there will still be a world of delay.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JUNE 18.

T. & Co.—A. B. A. H.—M. E.—W. H. R.—J. C. D.—C. M.—G. M.—W. J. D.—W. J. T.—L. McC.—D. M. D.—R' D.—T. S.—J. B.—J. G.—A. F. K.—E. C. L.—W. B. D.—T. B.—W. H, O.—C. C, G.—J. A. M,—D. W. & Co.—E. A. F. —T. W.—T. R. G.—D. L. C.—H. P. C.—E. M. A.—A. A.—J. J. R,—H. C. D.—Wm. L.—S. B, T.—P. L. L.—N. W. B. —W. T. T.—Y. B.—J. S. D.—J. O.—W. C. M.—P. K.—S. P. D.—T. W. B.—J. F. V.—F. A. R.—J. S.—I. B. N.—R. W. D.—J. D. S.—T. H. D.—J. B.—H. B.—H. L.—J. J. P. G. S.—W. F. H.—J. R.—A. W.—W. B. K.—J. C. R.—J. W. P.—W. H. S.—W. A. A.—W. B.—R. C. B.—J. C. A.—R. C. B.—J. C, A.—R. R. B.—G. L. A.—T. R. N.—J. M.—H. R. P.—A. C.—R. M. L.—T. D.—I. C.—H. D. F.—A. A. S.—W. M.—M. P. M.—F. S.—E. M.—J. H. G.—A subscriber—T. N. C.—L. J. G.—A. W. H.—O. S.—D. H. J.—W. S.—I. R.—I. M.—F. J. R.—S. D. B. M.—W. N. H.—W. L. R.—J. A. W.—L. P. H.—T. J. W.—A. McC. W.—J. K.—M. W. J. E. P. B.—P. N.—C. F. W.—C. W. G.—W. B.—O. E. J—R. C.—J. E.—S B M—H L D—D T—L L B—W J R—M B P—J P A—W G W—D R—H A H—P J S—G S W—C W K—J P M—L K—C B C—O W K—O S M—R L—E O T—C G P—W R F—J P—P H—J M S—C S—W C R—P J B—C W C—C P—S S—U S G—J H U—W A—T J W—T D W—E B S—J S B—A M—J E—J D—W H H—G Z—J P A—S G B—O B—A J H—J B S—R M—J R L—R M T—J S B—S S—W S L—W C—W G W—G M N—E H—M S—S W P—A M T—A H B—J W D—T C D—G B M—D J A—F B—S D A—"Jot"—F W C—H C—W C W—C P G—J R C—H N D—D W F—C D T—W H J—E E J—E F C—J B—T W T—J S—G O T—J B—W H P—J B—F A R—J W R—R M T—W H C—J A C—M B—M S A—J F—W O F—M J—H F J—H O—S O G—J W A—A R B—J F—B G—D L B—F M B—J D F—L W G—N B—G W D—H W McW—J B—W M C—S K—G A B—J S H—J M T—J C B—E A S—E E—H C C—E P E T—G S K—O R—G E—B G S—A B H—S B P—A L J—T H H—M M (Memphis) thanks for Bermuda spikes—R W F—J B—W F M—W G W, Sr. Yes; thanks—C A G—S A V—O W T—N J S—J T S—C McL—W F M—W P G—S H G—N S—A S—A P I.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 18, 1881.

ALCOHOL—Held higher; 35½@37c.

BEANS AND PEAS.—Beans have sold sparingly for home or export use. The latter buyers say they have no margin in the West Indies the main outside point for marrows. Sellers regard the stock of white as a safe one and feel that they have plenty of time for the market to keep a regular course, and that no great sacrifices need be made for fine marks at present. Colored beans are in over-stock and dull.

Marrow beans, prime, $2.47½@2.50; other, $2.30@2.40; medium, prime, $2.40@2.45; other, $2.20@2.35; pea, $2.25@2.50 white kidney, $2.30@2.10; red kidney, prime, $1.57@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.40@1.45. Peas generally quiet at $1.50@1.55 ₩ bush for green Wis. and $1.62½ ₩ bush, bag Southern B E.

Receipts for week, 6 300 bush.

Exports do. 855 pkgs.

BEESWAX—Jobbing at 23½@25c., the latter for choice Southern.

BUTTER.—A steady active trade in fine State. Prices are stronger for parcels suitable for best local use. Exporters bought liberally while choice creamery was obtainable at 21c., but after they got well to work upon such lines sellers made what may prove to be a bad mistake by withholding a full choice of quality from wholesale buyers. The stronger feeling is in creamery alone, and sellers seem to feel warranted in the position they have taken by falling off in the quality of half tubs. Many producing sections of the latter are packing for June; it would perhaps have been better for exporters to have had longer liberty as the general receipts are heavy, and a surplus will be apt to depress and weaken the market. Western goods are doing well, but dealers are not striving for much advance upon last week as higher prices might only hold a temporary rule. The exports for June are less than one-third taken this date last year.

Creamery—Western, good to prime, 20@22c.; State and Penn. 21½@23c.; poor, 19@20c.; sweet cream. 20@22c.; State pails and h'f tubs, choice, 21@22c.; fair to prime, 19@21c.; Welsh tubs, 19@21c.; poor State, 14@18c.; firkins yellow, 20@23c; Western imitation creamery, 16@20c.; dairy fine, 17@19c.; other, 14@16c.; factory or ladle-packed, best, 15@16c.; other, 10@13c.; very poor Western, 9@10c.

Receipts for week, 36,879 pkgs.; exports, 8 034 do.

CHEESE.—A good animated market has been noted during the week and prices have advanced on the merits of stock this is always a wholesome feature. The weather, too, has been favorable for quality and the even condition of goods has materially helped sales. The exports include a good many Ohio cheese. Market closes strong and fairly cleared of stock.

State factory, fine, 9¾@10c., fair to prime, 8¾@9¼c; poor to fair, 8@8¾c., Ohios, flat, fine 8¾@8¾c; other 7@8¾c; part skimmed, 4½@5½c.; full skims, 2@3c.; Wisconsin factory poor to fine 8@9¼c.

Receipts for week, 96,700 boxes.

Exports for week, 107 500 boxes.

Liverpool cable, 53s.6d.

Steam to Liverpool, 20@25s.

COTTON.—There is a general expression of depression here and abroad, and the market for spot or futures has ruled easy, but closes with a steadier tone.

Quotations for spot cotton are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	7 13-16	8 1-16	8 1-16
Strict ordinary	8 5-16	8 11-16	8 11-16
Good ordinary	9¼	9 9-16	9 9-16
Strict good do	9¾	10 1-16	10 1-16
Low middling	10 7-16	10 13-16	10 13-16
Strict low middling	10 13-16	11⅛	11⅛
Middling	11 1-16	11 5-16	11 5-16
Good middling	11⅜	11⅝	11⅝
Strict good middling	11¾	12⅛	12⅛
Middling Fair	12⅜	12⅝	12⅝
Fair	13⅜	13⅝	13⅝

STAINED.

Good ordinary	7 7-16	Low middling	9 1-16
Strict good ordinary	8 7-16	Middling	10⅛

The close of the market for futures was officially reported as follows: June, 10.81@10.86c.; July, 10.85c.; August, 10.91c.; September, 10.62@10.63c.; October, 10.14@10.15c.; November, 10.01@10.03c.; December, 10.02@10.03c.; January, 10.13@10.15c.; February, 10.26@10.27c.; March 10.39@10.41c.

Receipts for the week 9,698 bales.

Exports do. 7,573 do.

DRIED FRUITS.—There is some movement in evaporated apples; shippers take some when they can obtain a shade off from current rates. The local trade is steady now that fresh apples are gone. Peaches scarce; too high for a brisk trade with Summer fruits abundant and easy. Small fruits steady when prime. It is thought the cherry crop will be shortened owing to the recent rains.

Apples evaporated choice 8¾@9c; fair to prime 7¾@8¼c. North Carolina sliced, common to best 4@5c. Va. do. 3¾@4c; Tenn in bbls. 4c. do bags 3¾@4c; State fine cut 3¾@4c., quarters 4¼@4¾c; Western, 3¾@4¼c; evaporated peaches peeled 27@30c.; unpeeled 13@14c; sun-dried peeled 10@22c; unpeeled 5@5¾c. Plums 12@12½c. Blackberries 8c. Cherries 13@14c. Raspberries 23@24c. Whortleberries 11¼c.

Receipts for the week, all kinds, 1,475 pkgs.

Exports dried apples, 2,033 pkgs.

EGGS—Receipts for week, 12.083 bbls.; do. last week 11,900 do. Prices have held up well, regardless of the free receipts and rather inactive Summer. A great point in dealers' favor is the cool, good keeping weather. A Summer month has been seldom noted with such light losses in Western stock.

Near points, 20@21c.; State and Pa., 18½@19c; Western and Canada, 1?@18¼c.; upper Southern, 18@18¾c.; poor or ice-house, 17@17¼c.

In answer to inquiries as to the method of putting up eggs for shipment, we give a standard form:—Use plenty of clean, dry, fine-cut straw with eggs. Mark plainly with paint—a stencil-plate is best—and note contents on the box or barrel. Send a letter at the same time, stating what is sent, the route, time, etc. An invoice or list should also be inclosed in the barrel or box. Always state the number of packages. Secure for yourself a trustworthy reputation for fine stock, put in best shape, so that your mark may be sought for

FLOUR.—The market has shown remarkable activity, especially as the bulk of the demand has been for home use. Exporters would perhaps operate to a larger extent, but prices at the moment are too much in sellers' favor. Fairly strong wheat helps to prop rates for flour.

No. 2. ₩ bbl. $3.00@3 75; State and Western superfine, $4.00@4.75; city mills extra, $6. 5@6 60; Spring wheat do. $4.70@5.00; Spring XX and XXX, $5.25@6.50; patents, $6.10@8; Ohio round hoop shipping, $4.80@5.25; trade brands $5.80@6.60; St. Louis extra, $4.95@6 25 do double extra, $5.50@6 00; do. family $6.25@7; Southern shipping, $5.35@6. do. XX and family, $6.75@7.50. Rye, $5.45@5.90. Corn-meal, Brandywine, $3.20@3.40; Western, $2.75@3.30.

Receipts of flour for week, 94,300 bbls.

Exports of flour, 58,850 bbls.

FRESH FRUITS.—For a day or two strawberries have sold with some satisfaction for owners: but there have been some discouraging returns for so fine an installment of the crop as has offered during the past fortnight. Large fancy berries were never such a wholesale feature as they are this season. The veriest sidewalk retailer has been able to obtain lines of extras that equalled the display of the Broadway stores.

Up river choice, ₱ quart, 11@13c.; do. Wilson prime 10@12c; do. poor to fair 6@8c.; do. thirds, qt. 2@4c.; N. J. Wilsons ₱ quart, choice 8@10c.; do. fair 5@7c; do. ₱ pint, 3@5c. bulled plots 5c; small Hackensacks ₱ 100 $2@3.50. Gooseberries dull at $1 ₱ bush: cherries are in demand but the picking of the week have turned out poorly owing to the late severe rains. Choice quoted 12c; fair to good 8@10c; other 4@6c. Peaches opened well in quality but have already begun to fall off. South Carolina ₱ bush. $3@3.50. Georgia 3d ₱ bush $1@1.50 in good order. Hot-house Black Hamburg grapes, $1@1.50 per ℔. Southern plums $2@2.50 3d ₱ bush. crate. Fla. watermelons are showing but sales are slow, quoted $10@50 ₱ 100. A few green apples have appeared but not good enough for sales. Old apples quite out of market. Peanuts dull: Va. hand-picked, 4½@4¾c. ₱ ℔.; fancy, 4@4½c; extra prime, 3½@3¾c.; good to prime, 3@3½c.; shelled, 2½@3c.; pecan nuts, 7@10c.

GRAIN.—Crop reports are watched with interest and prices have shown the usual fluctuations incident to this part of the year. There has been only a fair demand for export, but prices for wheat close firm. Corn is active after recovering from lower figures. Oats are lower and pressed for sale. Rye has a good selling interest; some sales have been made for export.

Wheat, Spring 92c.@$1.21; do. No. 2, $1.20@1.21; do. No. 3, $1.13@1.11; red Winter No. 2, $1.26@1.27½; red Winter $1.15@1.31; white Western and State $1.18@1.27. Rye, $1.04@1.10. Oats, white No. 1, 51c.; white No. 2, 45½@46c.. white No. 3 44@44½c; mixed No. 1, 45½c; do, No. 2 45½c.; do. No. 3 45½c.; Corn, Western mixed 48@57½c.; do. No. 2 56@57c.; do. white 58@62c; Southern do. 59@61c.; do. yellow, 57@60c.

Receipts for week, wheat, bush., 1,509,320; corn, do 931,900; oats do. 280,350; rye, do. 12,315; malt, do. 3,600; rice pkgs. 923.

Exports for week, wheat, bush 947,250; corn, do. 953,675; oats, do. 4,619; rice, pkgs., 3,625.

HAY AND STRAW.—A little selected hay may be quoted at $1 ₱ 100, but the bulk of the arrivals is unattractive and slow of sale at the easy figures of the list. Straw has declined. Clover not quotable and prairie has ceased to arrive.

Choice retailing timothy hay 90c. ₱ 100 lbs.; second quality, 85@87½c. do.; shipping 50@60c. do.; Long rye straw 90c.@$1.05 ₱ 100 lbs.; short do. 60@65c.; do. other grain, 45@50c. do.

Exports for week, 556 bales.

HOPS.—There is very little new business. Exporters own considerable stock and parcels going abroad represent back purchases. The home demand is under a cloud; brewery men have been engaged in a stubborn strike, and the unusually cool weather has materially decreased the consumption of beer. Prices at the close are almost nominal.

Crop of '80 choice, 21@23c; good to prime 15@20c; fair to good, 15@18c poor to fair, 12½@15c; Eastern, 18@21c.; '79's, 15@17c.; '78's, 5@8c.

MAPLE SUGAR.—The remainder of sugar quoted 7@10c.; syrup, 75c.@$1 ₱ gal., with can. Syrup should weigh 10@11 lbs. to gal.

MILK.—The week has been cool and unfavorable for large use. The average for the week ending Tuesday was only 88½c ₱ can of 40 qts. Many lots of commission milk have made no return to farmers as freight was all that could be realized.

OIL CAKE.—Western quoted $29.50@30.

OIL PEPPERMINT—In tin, $2.35@2.40; in bottles, $2.60@3.60 for H. & P., and $3.75@3.80 for H. G. & H.

POULTRY AND GAME.—Prices are generally easier for dressed and not likely soon to advance. City killers manage to supply any deficiency that may occur.

Dressed turkeys, choice ₱ ℔ 13@14c.; coarse 12@13c; scalded, 11@12c.; Phila. Spring chickens 24@30c; New Jersey, 23@25c; fowls, Phila. d.-p. 13@14c.; N. J. d.p. 13@14c.; do. scalded 12@13c. State and Western 12@12½c; do. d.p. 12½@13c.; coarse 10½@11c.; Ducks, Spring, 18@24c.; old 12@13c.; Squabs, white, ₱ doz. $2.25@2.50 do. dark, $1.25@1.50

Live fowls in fair demand. Chickens lower with a heavy supply. Turkeys too low in quality to sell. Ducks continue cheap.

Spring chickens prime ₱ ℔ 20@22c.; other 16@18c. Fowls, ₱ ℔. 11@12½c; roosters, 5@6c.; turkeys, 9@10c.; ducks, ₱ pair 60@70c.; geese, extra $1.50; other 75c@$1.37 pigeons, 25@40c.

Eng. snipe and plover ₱ doz. $2.25@2.50. Wild pigeons scarce. A good many pigeons are expected from the shooting match next week. About 1,600 birds were all that could be obtained.

PROVISIONS.—The entire list is devoid of interest this week; sales for use have been small and exports have been very moderate. The only strength imparted to prices is through the speculative combinations.

Pork extra prime $14.50 ₱ bbl.; Western mess new $17.00; old $16.50. Lard—Western steam $11.22½ per 100 lbs.; prime city $10.95. Hams smoked city 11½@11¾c.; pickled Western 10¾@11c; shoulders, smoked city 8¼c; pickled 7¾c. Bacon long clear 8¾c. Beef family ₱ bbl. $13.50@14; India tes, $22@25, beef hams $ 3@23.50.

Receipts for week, beef, bbls. and tcs. 8 0. pork,, bbls. 1,359; cut-meats, pkgs, 11 8.8; lard: do. 26,200.

Exports for week, beef, bbls. and tcs., 1,900; pork do. 4,300; cut-meats, lbs. 3,085,293: lard, do. 2,494,248.

TOBACCO.—A fair business is reported.

WESTERN LEAF.

	Light.	Heavy
Common lugs ₱ ℔	4½@ 5½	5 @ 6
Good lugs	5½@ 6½	16 @ 7½
Common leaf	6 @ 6½	6½@ 7½
Medium leaf	7 @ 8	7½@ 9½
Good leaf	8 @10	9½@12
Fine leaf	9 @11	11 @12½
Selections	12 @15	12½@15

SEEDLEAF, CROP OF 1879.

New England Havana seed	18 @25
Wrappers, common	13 @15
Medium	16 @20
Fine	25 @35
Selections	37½@45
Seconds	10½@13
Fillers	6 @ 7½
Penn. assorted, low	11 @13
Assorted, fair	14 @18
Assorted, fine	21 @25
Wrappers	18 @45
Fillers	6 @ 7½
N. Y. assorted, common to medium	9 @11
Assorted, good	12½@16
Ohio assorted	7 @10
Wrappers	12 @18
Wisconsin assorted	6 @ 9
Havana seed	14 @18
Wrappers	10 @15

VEGETABLES.—New potatoes are tending downwards under liberal prospective supplies, especially from Norfolk. Old steady for very choice. Very little of Southern find a steady place now that a few Northern points are shipping.

Bermuda potatoes new, $5.50 Chas. and Sav., $2@3; Norfolk, $2@3.50; do. culls, 75c.@$1; best old rose in double heads, $2@2.50; do. peachblow and snowflake, $2.25@2.50, other sorts, $1 50@2. Green peas, L. I., ₱ box, $1.50; N. J. per bbl. $2; wax beans, Norfolk, ₱ crate, 75c @$1; string beans do. 75c@$1; squash do., 75c.@$1; do. N. C. 50@62c.; cucumbers, Chas. and Sav. 25@50c.; cabbages, L. I., ₱ 100, $3@3.50; do. Norfolk, Norfolk 50c.@$1; beets, ₱ 100 bchs., $2@3; carrots do., $1.50; radishes do., 50@75c; rhubarb do, $1; white turnips do., $1.50@2, onions, ₱ crate, $1@1.10; lettuce ₱ bbl., 50c.; asparagus, ₱ doz., $.@2; cauliflower, ₱ doz., $1@1.50,

WOOL.—There is a strong but somewhat excited feeling in wool. Prices are again higher, with known large Western clips nearly due. The feeling in the country is also strong. California and Texas wool has had a liberal sale.

Ohio, Penn, and W. Va. XXX and picklock, 43@45c.; X to XX, 40@42c.; No. 2 to No. 1, 40@45c. coarse, 34@ 38c.; combing 40@45.

State and Western X and XX, 38@40c.; No. 2 to No. 1 38@44c.; coarse 32@36c.; comoing, 40@41c.; combing unwashed 28@33c.

Va., W. Va. and Md. unwashed medium 27@30c.; Ga. and Lake unwashed medium 27@30c.; coarse 23@26c; burry and slightly burry 16@22c; Cal, Spring northern, free, 30@34c.; middle counties, free, 27@30c.; southern, 23@27c.; low grade and burry, 18@23c.; Fall, choice, 24@25c.; low grade and burry 18@20c. Texas choice, free, 28@32c.; fair to good, 24@26c.; low grade and burry 17@20c. Pulled super 39@43c.; extra 36@40c; No. 1, 20@23c; combing, 38@41c.; lambs, 38@43c. Tub washed, fair to choice, 35@44c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, June 18, 1881.

BEEVES.—Receipts for the week 12,542 head; do. last week 13,461 do. Supplies for the close of the week were very heavy and the market proved weak under a slack trade. The sales included a car-load of light through Cherokee cattle at 8½c., to dress 51 ℔; 10 car-loads of very fine corn-fed Texans at 10¾@11¼c., to dress 56 ℔; 37 cars of Colorado and native distillery-fed cattle at 9¾@11¼c., to dress 56@57 ℔; and the range for very poor to choice corn-fed was from 8½c., to dress 51 ℔, to 12c, to dress 57 ℔.

MILCH COWS.—Very few good cows have arrived. The bulk of the sales have been at $30@45 per head. Good have been asked for at $55@60 per head.

VEAL CALVES.—Have sold briskly all the week helped by cool weather. Prices at the moment are strong, but a few warm days would weaken quotations.

Prime N.J. fed, 7¾@7¾c do. State, 7¾@7¼c.; poor to good yard lots, 5¾@7c.; Mt. Hollys, 7@8c.; buttermilks, 4½@5c; up-river dressed, 10@12c. Our quotations include West Washington Market stock.

SHEEP AND LAMBS.—Receipts for the week 34,824 head; do. last week 29,304 do. There was only a light trade in sheep at 4¾@5¾c; Va., Ky., and State lambs 6¾@7¾c; N. J. 9@9½c.

SWINE.—Receipts for the week 26,773 head do. last week, 30,382. Market very quiet; the nominal price for corn fed $5.90@6.10 per 100. City dressed State, 7¾@8½c.; do. Western, 7½c.

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14 Pieces of Choice Sheet Music, Four Handsome Engravings, Ten Perforated Card Board Mottoes, and a 16-Page Illustrated Family Paper Six Months—all for 27 cents! For the purpose of extending our subscription list, we make the following unparalleled offer: Upon receipt of 27 cents in postage stamps we will send The People's Home Journal for Six Months, and to every subscriber we will send Free, all the following valuable premiums: Fourteen New and Popular Ballads, with words and music all complete; the entire fourteen pieces are bound in a neat book with handsome cover, and form one of the most valuable collections of choice music ever published. Four Large and Elegant Engravings, entitled respectively "Under the Lindens," "Cupid and Psyche," "The Three Friends," and "Origin of the Harp"—all beautiful subjects; the engravings are reproductions from steel plates, handsomely printed upon heavy paper, and are far superior to chromos or other cheap pictures. Ten Handsome Perforated Card Board Mottoes, very pretty and useful for working with worsted or silk into book-marks and other souvenirs; they make very desirable presents for friends or relatives. Remember, we send all the above, together with THE PEOPLE'S HOME JOURNAL six months, for only 27 cents. THE PEOPLE'S HOME JOURNAL is a 16-page, 48-column illustrated literary and family paper, filled with charming Stories, Sketches, Poems, Useful Knowledge, Wit and Humor, Household Recipes, etc. All will be delighted with the paper and premiums, and we guarantee fully three times the value of money sent. This great offer is good only till October 1st; therefore, send at once and get the benefit of it. It is the most liberal offer ever made by a reliable house. All orders filled by return mail. Money refunded to all who are not perfectly satisfied. For 2 subscribers and 54 cents we will give a splendid Harmonica or a large Box of Paints; for 3 subscribers and 81 cents we will give an elegant Silver-Plated Butter Knife or Fruit Knife; for 4 subscribers and $1.08 we will give a valuable 2-blade, bone-handle Pocket Knife, or a handsome Gold-Plated Pencil, or a set of elegant Gold-Plated Sleeve Buttons. Your own subscription can count as one towards the club, and each subscriber will get the paper six months and all the premiums. Show this advertisement among your friends, and get a small club, and so win one or more of these extra premiums. Address, F. M. LUPTON, 27 Park Place, New York.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the Twombly Knitting Machine Co., 409 Washington Street, Boston, Mass.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

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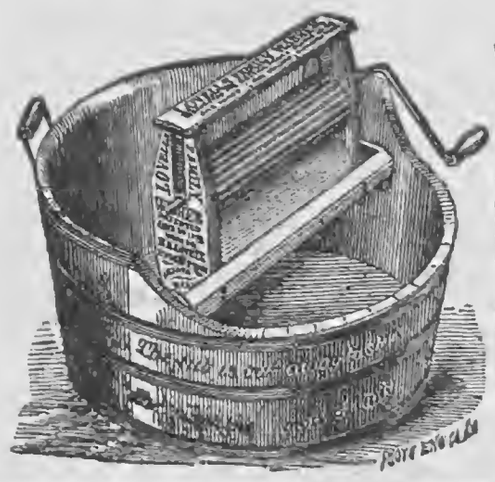

We will guarantee the "LOVELL" WASHER to do better work and do it easier and in less time than any other machine in the world. Warranted for five years, and if it don't wash the clothes clean without rubbing, we will refund the money.

AGENTS WANTED in every county. We can show proof that Agents are making from $75 to $150 per month. Farmers make $200 to $500 during the winter. Ladies have great success selling this Washer. Retail price only $5. Sample to those desiring an agency $2. Also the Celebrated KEYSTONE WRINGERS at manufacturers' lowest price. We invite the strictest investigation. Send us your address on a postal card for further particulars. LOVELL WASHER CO., Erie, Pa.

News of the Week.

ANNOUNCEMENT.

I HOPE the young folks will bear with composure, the omission of the Youth's Department this week. Our crop reports demand all available space, forcing the "News" upon our page. Next week the usual order will be resumed. U. M.

HOME NEWS.

There are no particularly new developments at Albany as yet in the Senatorial contest. No election has taken place, and there are not many signs of such an event. The investigating committee are engaged in seeking out the guilty party in the bribery case, but have not yet "found the man."

A young Choctaw from Indian Territory took the first prize in oratory at Roanoke College, Va., at the last commencement.

The village of Ludington, situated on Lake Michigan at the terminus of the Flint and Pere Marquette Railway has been nearly destroyed by fire.

Cyclones have been in order in the West during the past week. In Northwestern Missouri no less than three "twisters" dealt death and destruction in as many paths. Near King City 50 persons were killed, besides hundreds of cattle, sheep etc. One man lost 80 cattle, another 60 sheep, another seven horses. At Topeka, Kansas, similar losses are reported. The Western country has had its share of snow-drifts, floods and cyclones for the last few months.

At a meeting of the corporation of Brown University Providence, R. I., Professor W. H. Russel acting President of Cornell University, was appointed acting professor of History and Political Economy in place of Prof. Diman recently deceased. W. W. Bailey was made professor of botany.

The Hon. J. A. Bentley, Commissioner of Pensions, tendered his resignation at the President's request on the 16th inst., and W. W. Dudley was at once appointed in his stead.

Boston and suburban towns celebrated the anniversary of the battle of Bunker Hill on the 17th inst. Hon. Robt. C. Winthrop delivered the oration, and at one point in his address, displayed the sword worn by Col. Prescott at the battle.

The grand jury which will pass upon the papers in the Star route cases was drawn at Washington, D. C., last week. It is believed to be a jury which will consider honestly and fairly all the evidence. It is not known exactly when the evidence will be laid before the jury. The Attorney-General keeps his purposes entirely secret. The Star route people realize that Mr. MacVeagh is in earnest, and there is little hope that his hand will be stayed. It is believed that evidence has been obtained to justify immediate action by the grand jury in the cases of some of the thieves. It is also said that some of them are expected to offer to give evidence in order to save themselves.

In the Southern States, which have 138 electoral votes, nearly 45 per cent. of the voters cannot read and write. In South Carolina 64 per cent. of the voters are illiterate. These figures speak loudly in favor of some more general system of education for the South.

Governor St. John of Kansas claims that the prohibitory law of that State is wonderfully successful. Topeka, with a population of 20,000, has not a single saloon, and has had only one case of drunkenness since the law went into effect. An inebriate took an overdose of patent bitters, and the man who sold the "medicine" was fined $100. There are no open saloons outside of Leavenworth and Atchison, and these are under prosecution. The Governor's letter was written before the recent judicial decision shaking the constitutionality of the law was rendered.

The house of Washington Irving, two miles south of Tarrytown, N. Y., is greatly out of repair, but it is said the library is exactly as he left it. Even his pen is on the table where he laid it down for the last time, and his papers as he had arranged them on his desk; they have never been disturbed.

An intermarriage between a Chinaman named Lee Chin, and a white woman, Mrs. Eva H. Lee, has attracted much attention at Cheyenne, Wy. The statutes of Wyoming forbid such intermarriage, and the couple had the ceremony performed in Denver, Col. Mr. and Mrs. Lee Chin have been indicted for miscegenation. The Chinese consul at Denver, under direction of the Chinese Ambassador at Washington, contested the case in the courts. The court held, that the marriage being legal in Colorado, it was also legal in Wyoming. The defendants were finally discharged.

The steamer Dessoug, in which Commander Gorringe brought the obelisk from Egypt to America, has been purchased from Mr. William H. Vanderbilt by the Southern Transportation Company for $58,000. It is now being altered and rebuilt and is intended for the New York and Savannah cotton trade. The vessel was built in England, and was for many years used as a trader before the Khedive of Egypt bought and converted it into a private yacht.

Nevada has enacted a law designed to prevent opium smoking, which makes the possession of opium or of an opium pipe a misdemeanor, punishable by fine or imprisonment. This statute is very obnoxious to the Chinese Six Companies of San Francisco, and interferes with their profits; and they have retained three leading lawyers, two of California and one of Nevada, to test the validity of the law, and, if necessary, to carry the question to the United States Supreme Court.

The State of Missouri asked for bids for a loan the other day. On opening them it was discovered that more money had been offered at three per cent than was needed. The credit of the Union ought to be as good as that of Missouri.

Wealthy citizens of Chicago have organized a Chicago Musical Festival Association, on the plan of a similar body in the City of New York. N. K. Fairbank was elected President and Theodore Thomas Musical Director. Biennial festivals are to be given, beginning in June, 1882.

A Blessing to Humanity.

A lady residing in Georgia, whose son was threatened with consumption, wrote to one of our old patients, Mrs. M. T. Piersol, of No. 1636 Wallace Street, Philadelphia, asking if a testimonial in favor of Compound Oxygen, to which she saw her name attached, was genuine, and received the following reply: "Yours just received. It is my privilege to say in reply to your inquiry about the Compound Oxygen Treatment, that it is all that it claims to be, and in some cases has exceeded its promise. My testimonial is genuine, and I am always glad of the opportunity to give my voice in favor of so *great a blessing to humanity*. As to your son's case, I would say, persevere by all means. I think he has everything to expect; of course I cannot judge intelligently for him; but he can rely with all confidence upon Dr. Starkey's word. *I have known him for years. He is an intelligent and faithful physician* and a true man. I would advise you to keep him posted, and follow his directions strictly." Our Treatise on Compound Oxygen, containing large reports of cases and full information, sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

The London Wool and Textile Fabrics, of May 28, states that reports on the progress of the European silk crops contain little of decided character. No complaints are heard in France. A few isolated cases of dissatisfaction are reported in Italy, but so far no serious damage has been done. It is now regarded as assured that the crop in Spain will be slightly larger than last year. In the Levant, prospects are good. The reports from China are rather contradictory, but it is now thought that the yield will equal last year's. In Japan the development of the worms has been retarded. Meanwhile, the continental markets continued quiet and easy, prices being about two to three per cent lower than at the beginning of April..... On the 2d inst., the opening of the International Woolen Exhibtion, at Crystal Palace, London, was announced. This enterprise is one of a series intended to be devoted to special classes of important manufacturing industries calculated to promote British trade, commerce and manufactures, and also advance the interests of technical education. It is stated that there were to be more than two hundred separate woolen exhibits, and that large spaces had been reserved for the colonies of South Australia, New Zealand, Victoria and New South Wales. Fine samples were to be shown also from Uruguay, Buenos Ayres, Iceland, and the Falkland Islands. Every kind of fabric into which wool enters was to be represented, together with carpets from Cashmere, Smyrna, Morocco and other well known seats of the industry, beside dye stuffs, oils, soaps and other chemical substances used in woolen factories. Of about sixty foreign exhibitors entered, thirty-four were from Germany and eight from Holland, the rest being from Russia, Austria, France, Belgium, Denmark and the Argentine Republic.....

Russian immigrants in Minnesota escaped the trouble of coal famine by burning prairie hay in their air-tight, Old Country, brick-lined stoves..... Whatever doubts may exist as to the practical value to this country of the visits of M. Leon Chotteau, the French commercial agent, there will be a general and hearty appreciation of his sensible address before the St. Louis Merchants' Exchange on Wednesday last, in which he declared that the decree forbidding the importation of American pork into France was utterly without reason and an act of injustice to both countries. M. Chotteau quoted figures to prove that the loss to the United States since the decree was issued on February 18, had been about $2,400,000 and that the injury to the laboring classes of France, who are the principal consumers of this exported food, has been correspondingly serious. In conclusion, he expressed the hope that Secretary Blaine would soon succeed in getting the French Government to listen to sound reason. The Merchants' Exchange will forward M. Chotteau's manuscript to the State Department as a valuable defence of American pork and a forcible exposition of the whole question....

A FINE HAIR DRESSING.

Cocoaine dresses the hair perfectly, and is also a preparation unequalled for the eradication of dandruff.

THE superiority of **Burnett's Flavoring Extracts** consists in their purity and great strength.

Women that have been pronounced incurable by the best physicians in the country, have been completely cured of female weakness, by the use of Lydia E. Pinkham's Vegetable Compound. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 50 cents per box.

There is scarcely a person to be found who will not be greatly benefitted by a thorough course of Kidney-Wort every Spring. If you cannot prepare the dry buy the liquid. It has the same effect.—Palladium.

Miscellaneous.

THE CYCLOPÆDIA WAR.

The month of July, 1881, witnesses the completion of the larges and most important literary work this country and the century have seen. It is the Library of Universal Knowledge, large type edition in 15 large octavo volumes, containg 10 per cent. more matter than Appleton's Cyclopædia, at less than one-fifth its cost, and 20 per cent. more than Johnson's Cyclopædia, at a little more than one-fourth its cost.

Chambers's Encyclopædia, which forms the basis of the Library of Universal Knowledge (the last London edition of 1880 being reprinted verbatim as a portion of its contents), is the laborious product of the ripest British and European scholarship. It has developed through a century of Cyclopædia making, its various editions having been many times revised, in successive years, till it has come to be universally recognized, by those competent to judge, as standing at the very front of great aggregations of knowledge, and better adapted than any other Cyclopædia for popular use. It contains such full and important information as the ordinary reader, or the careful student, is likely to seek, upon about 2,500 subjects, in every department of human knowledge. Chambers's Encyclopædia, however, is a foreign production, edited and published for a foreign market, and could not be expected to give as much prominence to American topics as American readers might desire. To supply these and other deficiencies a large corps of American editors and writers have added important articles upon about 15,000 topics, covering the entire field of human knowledge, bringing the whole number of titles under one alphabetical arrangement to about 40,000. Thus the work is thoroughly Americanized, and the Library of Universal Knowledge becomes at once the latest and most complete Encyclopædia in the field, at a mere fraction of the cost of any similar work which has preceded it.

Victory **For The** **Revolution**

Price of the 15 volumes, complete, in extra cloth binding, $15.00. In half Russia, sprinkled edges, $20 00. In half Russia, gilt top, $22 50. In full library sheep, marbled edges, $25.00.

The superlative value and importance of this great Encyclopædia lies especially in the fact that is is brought within the reach of every one who aspires after knowledge and culture. It is *really* a library of universal knowledge. It brings a liberal education easily within the reach even of every plowboy of the country and apprentice boy of the city. Every farmer and every mechanic in the land owes it to himself and to his children that such a Cyclopædia shall henceforward form a part of the outfit of his home. To the professional man, and every person of intelligence in every walk of life, a Cyclopædia is *a necessity*.

Of course the old and wealthy publishers who have grown rich (it is said that the Appletons have made a profit of nearly two million dollars on their Cyclopædia) from the sale of their high-priced publications are not pleased that their monopolies are broken and their power overthrown. Of course the book agents and booksellers who have been used to getting from 40 to 60 per cent. commission for selling these high-priced books are not so well pleased to sell the Library of Universal Knowledge on 15 per cent. commission, though those who are not short-sighted discover that their own interests, after all, are identical with the interests of *the people*, and their real profits, in the end, are increased, by the immense sales which result from meeting the people's wants. The majority of booksellers, however, are better pleased to *slander* than to *sell* this and our numerous other standard and incomparably low-priced publications. But the Literary Revolution has always looked to *the people*, in whose interest it is, for its patronage, and it has never looked in vain, as our more than one million volumes printed last year (this year being increased to probably more than two millions) abundantly prove. You can order the Cyclopædias directly from us, and by uniting with your neighbors and friends you can secure club rates as follows:

$10,000 Reward **To Club Agents.**

A discount of 10 per cent will be allowed to any one ordering at one time three or more sets of the Cyclopædia; and a discount of 15 per cent. will be allowed to any one ordering five or more sets at one time.

As a special inducement to our friends and patrons to go to work *promptly* and *vigorously*, each doing what he can for the dissemination of universal knowledge, we propose to distribute $10,000 in special premiums as follows, in addition to the regular discount to clubs:

$5,000 Reward to be distributed equally among the first 500 club agents who send us clubs of not less than five subscribers, after June 15th and before September 1st,
$5,000 Reward in addition to the first $5,000 to be distributed among the 100 club agents who, during the same time, send to us the *largest number of subscribers*, not less than twenty in number the amount to be distributed proportionately to the whole number of subscribers which each of the 100 club agents may send us.

The names of the subscribers must in every case be forwarded to us. The first $5,000 named will be distributed as specified as rapidly as the orders are received, and the remaining $5,000 will be distributed promptly on Sept. 1st. The names of the persons receiving these rewards will be printed, with the amounts received by each, and the list sent to all the club agents entering into competition for them. Subscribers must be *actual purchasers for individual use*, to entitle the club agent to the rewards under this offer, and not booksellers or agents who buy to sell again.

Persons desiring to raise clubs may send to us at once for sample volumes, if they desire, in the various styles of binding, paying us 75 cents for the volume in cloth, $1.00 for the volume in half Russia, sprinkled edges, and $1.25 for the volume in library sheep. Orders for the full sets will be filled by us with the utmost promptness, within our ability to manufacture, beginning not later than July 10th, orders being filled in the order of their receipt by us.

Specimen pages of the "Library of Universal Knowledge" will be sent free upon request. Descriptive catalogue of our large list of standard publications, with terms to clubs, and illustrated pamphlet describing book-making and type setting by steam, will be sent upon application. Remit by bank draft, money order, registered letter, or by express. Fractions of $1.00 may be sent in postage-stamps.

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70 YOUR NAME In New Type on 70 Cards 10c.
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30 elegant cards, Snowflake, etc., 10c. *Agts. wanted.* 20 samples 3c. List free. C. VICK, Arbela, Mich.

PERSONAL ITEMS.

General Beauregard is writing a history of the war.

Senator Fair is going to erect a $1,000,000 building in San Francisco.

Delegate Pettigrew, of Dakota, has a scheme to cut that big Territory up into two States.

"The United States is a this, not a these," said President Moss, of the Indiana University.

Ex-Senator William Pinkney Whyte has decided to accept the Democratic Mayoralty nomination of Baltimore.

General Robert Toombs, speaking of the Bible revision, said: "They have killed the devil and knocked the bottom out of hell."

Ex-Governor Hubbard, of Texas, says that 200,000 immigrants will locate and 2,000 miles of railtrack be laid in that State this year.

Prince Bismarck's indisposition compels him to continue restricting his labors to a minimum and to perform them in a recumbent position.

Secretary Hunt doesn't like being considered as "junketing" at government expense, and so he pays his personal expenses when on trips in the government service.

The Centennial of the birth of George Stephenson, the originator of railway locomotion, was celebrated the other day in various parts of England, the chief observance being at Newcastle-on-Tyne. The occasion was also celebrated among railway employes in various parts of the continent.

President Barnard, of Columbia College, in his address to the graduating class the other day, made a strong appeal to the young men who are just entering on life to use their best efforts for the extirpation of the abuse known as the "spoils system," which he said was eating out the vitals of the Republic.

[Wilmington, (Del.) Daily Republican.]

Mrs. Adam Grubb, 231 Walnut street, has been a great sufferer for a number of years from extreme pain in the feet, something like rheumatism. She was also very much troubled with corns and bunions. It was with great difficulty that she could walk, and sometimes when she would visit her husband's shoe store or any of her children, she could not get home again without assistance, and often when she was walking along the streets she would be seized with such acute pain that she was compelled to stop in at the neighbors on the way until she got better. Some two weeks ago she heard of the wonderful cures St. Jacobs Oil was effecting, and she at once commenced to use it and experienced great relief immediately. The pains have left her feet and ankles and the inflamation has left her corns and bunions. She is now tripping up to her husband's shoe store and out to see her children without experiencing any pain.—*Adv.*

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Fort Collins, Colorado.

Miscellaneous.

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For the Cure and Prevention of Garget in Cattle.

Teats Partially destroyed, Restored to their Natural Condition. Kernels in Teats or Udder removed Speedily and Surely. All Stringy Substances or Bunches in Udder removed by 1 to 2 bottles. Blood or Sediment in Milk, from 1 dose to 1 bottle.
SOLE PROPRIETOR,
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☞ Price 75 cts. per Bottle, or 3 for $2.

NASAL CATARRH and BRONCHITIS.
Childs Treatment for NASAL and BRONCHIAL CATARRH is the only one that can be relied upon for the **Permanent and Positive CURE** of this disease. **Home Treatment.** Physicians recommend it. For details of method and terms, address
Rev. T. P. CHILDS, Troy, Ohio.

KNOW THYSELF.
GOLD MEDAL AWARDED the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25, sent by mail; illustrated sample, 6 cents; send now. Address Peabody Medical Institute or **Dr. W. H. PARKER,**
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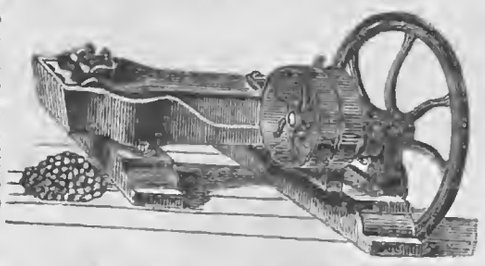

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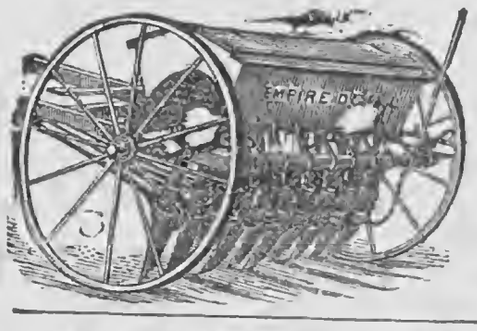

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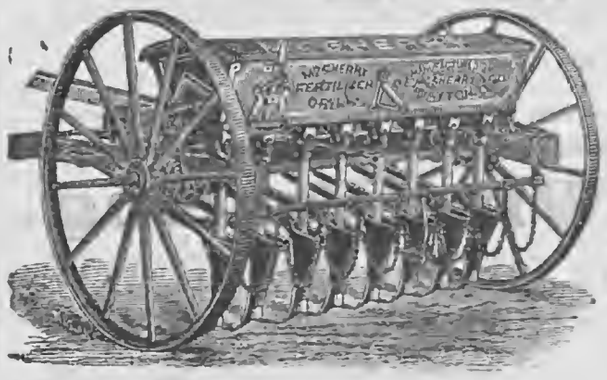

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It is strictly first-class in workmanship and construction. Works to the entire satisfaction of every body who knows what a grain and fertilizer drill ought to do. Its sterling qualities have gained it a world wide reputation, and all who appreciate excellence and accuracy, prefer the McSHERRY. Send for pamphlet. ☞ Mention this paper.
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IMPROVED FOR 1881.
CAN BE ATTACHED TO ANY PLOW
The **New Buckeye Plow Sulky** has many improvements not found in any other. It is simple in construction, is strong and durable, and easily operated by man or boy. It is easily attached to any common Plow with wood or iron beam. It has a convenient adjusting lever with which the plow is made to run level on uneven ground. The Lifting Lever is easily operated, and the depth can be regulated or the Plow raised entirely out of the ground without stopping the team.
It is arranged for either two or three horses, and will turn a square corner without raising the Plow. It is the best Plow Sulky in the market, and contains advantages not found in any other.
☞ Descriptive circular sent free
P. P. MAST & CO., Springfield, O.
Also Manufacturers of Buckeye Force Feed Drill Buckeye 11-foot sower, Buckeye Force Feed Broadcast Seeder, Buckeye Riding Cultivator, Buckeye Walking Cultivator, Buckeye Cider Mill.

EVAPORATING FRUIT.
SENT FREE | Treatise on improved methods. Tables yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa

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(3 and 5 hoed,)

For Sowing Wheat, Rye, Barley, in fallow Ground or in standing corn.
Force feed, simply constructed. The five hoed is adjustable for different widths, and is just what every small farmer ought to have, saving the price of a Two-Horse Drill.
Manufactured only by EWALD OVER,
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TAYLOR 1, 2, AND 4-HORSE POWER.

Runs Feed Mills, Feed Cutters, Shellers, Elevators, Churns, Saws, Pumps, Etc. Overhead, out of dirt and snow. Simplest, cheapest, best. Dealers in Machines of all kinds. Send for circulars to TAYLOR HORSE POWER COMPANY,
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Over 25,000 Now in Use.
Every Machine is fully Warranted. Price of Mills, $15 to $55 Shellers, $5. Don't buy a Mill or Sheller until you have seen our terms and Illustrated Circular. Address, with stamp, LIVINGSTON & CO.,
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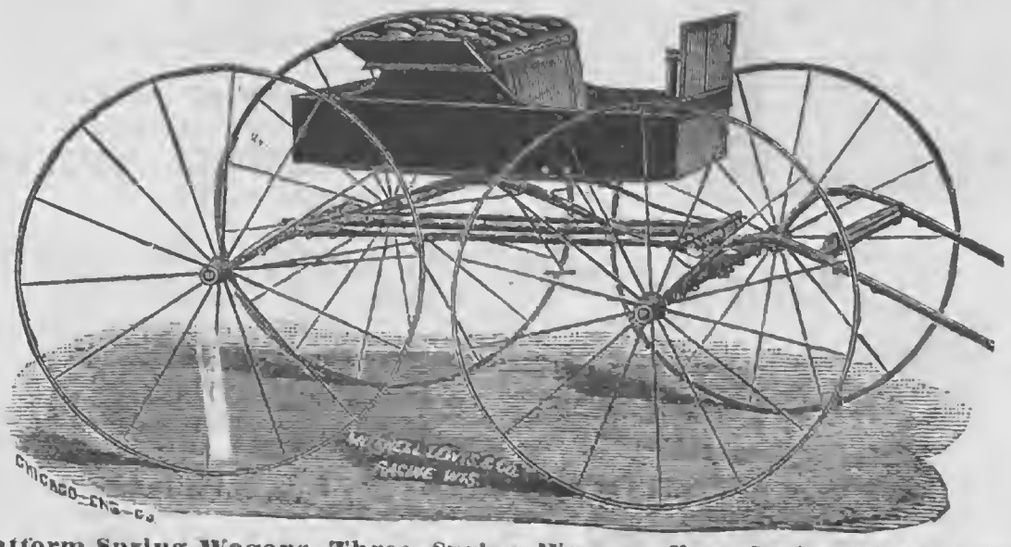

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WITH
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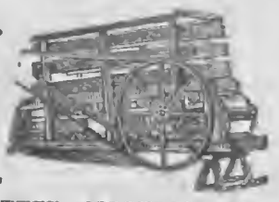

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VICTOR Double Huller Clover Machine that beat the Birdsells, Monitor, Jr., and the Ashland Clover Hullers in a scientific test at the Toledo, O., Fair, Sept. 15th and 16th, 1880, in the presence of 80,000 Farmers and Threshermen of the West.
Committee's Report mailed free. 284 Victors sold last year.
HAGERSTOWN AGRICULTURAL IMPLEMENT MFG. CO.
State where you saw advertisement. Hagerstown, Md.

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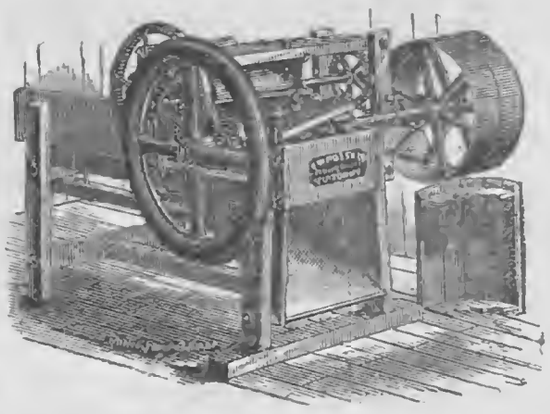

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FOR ENSILAGE AND LARGE STOCK RAISERS
Of immense
Size, Weight, Strength & Capacity
Guaranteed the best Cutter for the business. Send for Circulars to
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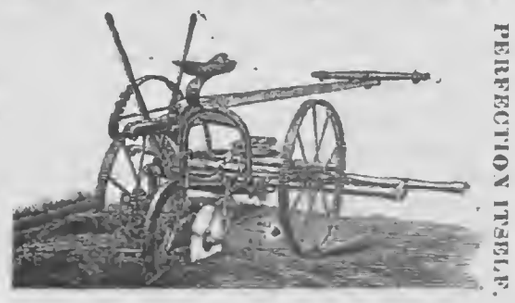
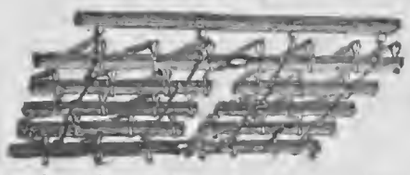


THE MODEL PLOW. PERFECTION ITSELF.
A PLOW OF GREAT STRENGTH.
Simplicity, Durability and Ease of Operation. Adapted for use everywhere. Circulars giving full information free. Address J. LANE REED & CO.,
(Sole Manufacturers,) DAYTON, OHIO.

THE VIBRATOR HARROW.



Best Harrow made. Cuts every Inch of ground, & adapted to all kinds of soil. Peculiar shape of tooth makes it easy of draft and leaves the ground light and mellow. Relieves itself of all obstructions. Bundled very compact for shipment. 3 sizes cut 6, 8, and 10 ft. Agents wanted. Write for Circulars to
PHELPS & BIGELOW WIND MILL Co.,
Kalamazoo, Michigan.

Hull Vapor Cook Stove

The only Vapor Cook Stove that has stood the test of years, and given entire and perfect satisfaction.
50,000
Now in use, and growing in favor wherever used.
For Summer Use they are Indispensable.
Our "Patent Automatic Safety Can" renders the use of our stoves "perfectly safe" in the hands of the most careless or inexperienced.
Send for full descriptive circular and price list. Special inducements to agents in unoccupied territory.
Address HULL VAPOR STOVE CO.,
CLEVELAND, OHIO.

$72 a week, $13 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

PARENTAL APPROBATION.

Mr. Bow-Wow.—"Very good; very good, indeed! Go on with chickens a few days longer, and then I think I may put you on rats."

Humorous.

MEN are geese, women are ducks, and birds of a feather flock together.

WE have seen Spring bonnets with sixteen full-blown poppies on them. The young ladies poppies have to pay dearly for them.

SCENE at the college—VIS. (to servant at the door): "Miss——?" Servant: "She's engaged:" VIS. "I know it; I'm what she's engaged to."—[College Journal.

"I THINK the goose has the advantage of you," said a landlady to an expert boarder, who was carving. "Guess it has, mum, in age," was the withering retort.

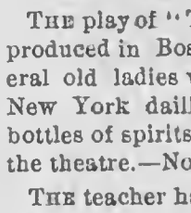
A GOOD many of the new stars and comets read about in the newspapers are discovered by men who come home late and meet the clothes-line across the bridge of their nose.

THE play of "The Streets of New York" was produced in Boston the other night, and several old ladies who are close readers of the New York dailies, supplied themselves with bottles of spirits of ammonia before going to the theatre.—Norristown Herald.

THE teacher had grown eloquent in picturing to his pupils the beauties of heaven, and he finally asked: "What kind of little boys go to heaven?" A lively four-year-old boy, with kicking boots, flourished his fist. "Well, you may answer," said the teacher. "Dead ones!" the little fellow shouted, at the extent of his lungs.

A WELL-KNOWN citizen of Chicago, last Sunday, went to church, carrying over his arm what he supposed was his new Spring overcoat, but was horrified when he got there to find that he was conspicuously transporting his new pair of Spring pantaloons. The package came home from the tailor late Saturday night, and the garment was hung over the balusters in the front hall.

COLUMBIA BICYCLE.



Bicycle riding is an accomplishment easily acquired, and is rapidly becoming the most popular of out-door sports; as a health restorative it is invaluable, bringing into action every muscle of the body, strengthening the lungs, and invigorating the wearied brain. The practicability of the machine is generally conceded throughout the country, and the thousands of bicycles in daily use are constantly increasing in number. Send 3c. stamp for catalogue, with price list and full information. THE POPE M'F'G CO.
595 Washington Street, Boston, Mass.

READY JUNE 15.

5 Million

CELERY,

CABBAGE & CAULIFLOWER

PLANTS

All of our own raising, in splendid condition, and at very low rates. Price List, including *Instructions for Culture*, and list of *Seasonable Seeds*, sent free.

PETER HENDERSON & CO.

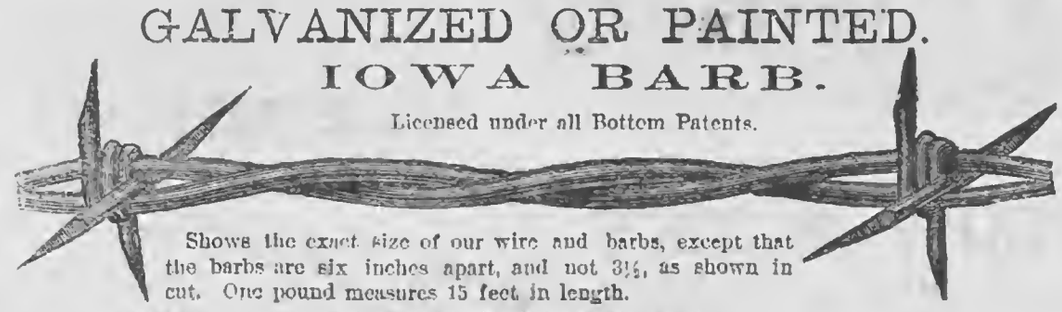
35 Cortlandt St., New York.

Steel Barb Wire Fencing.

GALVANIZED OR PAINTED.

IOWA BARB.

Licensed under all Bottom Patents.



Shows the exact size of our wire and barbs, except that the barbs are six inches apart, and not 3½, as shown in cut. One pound measures 15 feet in length.

Put up on spools of about 100 pounds.

The use of Barbed Wire for Fencing is no longer an experiment, but an acknowleged necessity, as over *one hundred thousand miles* of it were put up last year, and we confidently expect twice the quantity will be used this year, there being no other material anywhere near as cheap, lasting, or effective.

CANNOT BE INJURED BY FIRE, WIND OR WATER, AND WILL LAST A CENTURY.

IT DOES NOT INJURE CATTLE.

Estimating Wire at 12c. a lb. and Wood Posts at 10c. each, a Fence of Four Lines of Wire can be made for 60c. a rod, or with Galvanized Iron Posts, a Perfect and Everlasting Fence for One Dollar a Rod. Ask your Merchant for our Wire, or write to us direct.

We also manufacture STAPLES, POST-HOLE DIGGERS, WIRE STRETCHERS and CUTTERS, IRON POSTS, etc.

Circulars and Samples by Mail to any Part of the World.

THE CELEBRATED

EUREKA POST HOLE DIGGER.

Work done five times Quicker and Easier than by the old way. No Clogging. No Knee Work. No Back Ache. Price $3 50, delivered to any part of the United States.

Buy direct from the Manufacturers.

Sole Manufacturers East of Mississippi River.

IOWA BARB WIRE COMPANY

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EXCELSIOR Lawn Mower,

For Hand and Horse.

CROQUET MOWERS, $11.00.

Hand Mowers, 3 Patterns, 10 to 20 inch cut. Horse Mowers, 25 to 40 inch cut.

Our MOWERS are LIGHT, SIMPLE and DURABLE

All our Mowers are Guaranteed.

We Make no Second-Quality Mowers.

SEND FOR ILLUSTRATED CATALOGUE AND PRICE LIST.

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LANDRETHS' GARDEN SEEDS

It is manifest that from GOOD SEEDS ONLY can Good Vegetables be obtained.

The character of LANDRETHS' SEEDS has been substantiated *beyond all question.*

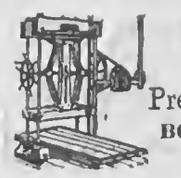
They are the STANDARD for Quality.

Over 1500 acres in Garden Seed Crops under our own cultivation.

Ask your Storekeeper for them *in original sealed packages*, or drop us a postal card for prices and Catalogue.

Wholesale trade prices to dealers on application.

Founded 1784. **DAVID LANDRETH & SONS, 21 and 23 S. Sixth St., Philadelphia.**



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Presses, Graters, Elevators, &c.

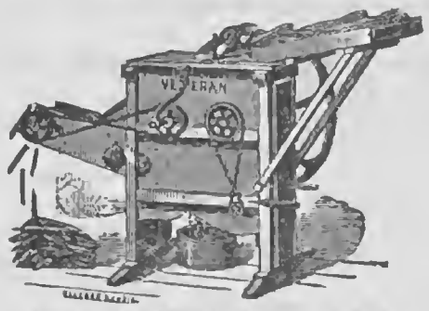
BOOMER & BOSCHERT PRESS CO., Syracuse, N. Y.

H. W. MARSELLUS,

164 & 166 West Main St., Rochester, N. Y. General Agency and Headquarters for all the best Agricultural Implements needed by farmers. Send for Circulars.

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & CO., Nassau, N. Y.

Veteran Corn Sheller



FOR HAND OR POWER.

Just the thing for Mill, Farm and Plantation.

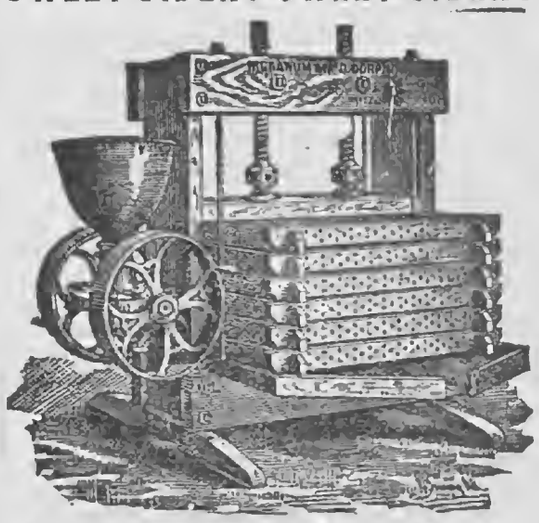
Power and Hand Corn Shellers of all sizes and to suit all wants.

HORSE POWERS, JACKS, Etc.

Write for Descriptive Circulars and prices. Address **SANDWICH MANUF'G CO.,** Sandwich, Illinois.

Here You Have It!

SWEET CIDER! SWEET CIDER!



A mill that will grind fifty to sixty bushels of Appies per hour, combined with a press that will press Seventy-five gallons at a pressing. Do not fail to send for our New Illustrated Catalogue of Cider Machinery, manufactured by the

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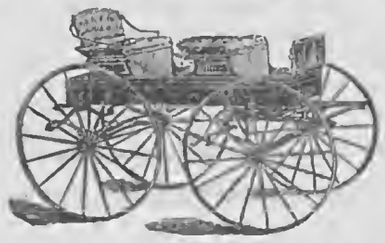
Manufacturers of Agricultural Implements of every description.

WATERTOWN



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EVERY WAGON IS FULLY WARRANTED.

These are the handsomest, lightest and strongest wagons of their kind in the market. Every Farmer and Dairyman should have one. Correspondence solicited. Send for Illustrated Catalogue. Address

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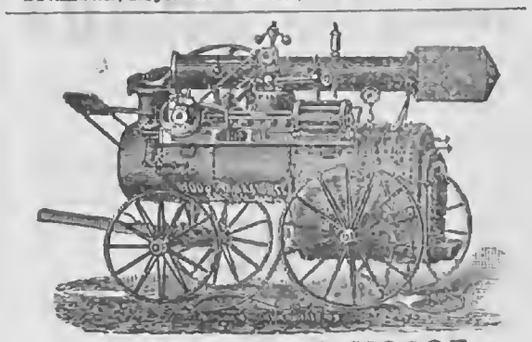

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MANUFACTURERS OF
PORTABLE AND AGRICULTURAL
Steam Engines

Of the HIGHEST STANDARD, in every respect of materials, and workmanship. Were pioneers in the manufacture of

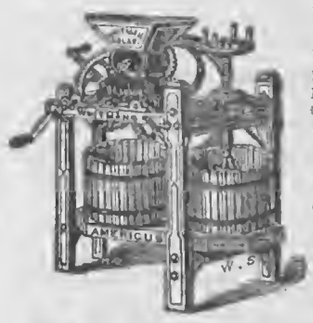
Practically Portable Steam Engines,

And with determined policy to build only the BEST MACHINERY from the BEST MATERIALS, and in the BEST MANNER OF CONSTRUCTION, and with continued improvements, have attained the HIGHEST STANDARD in excellence of workmanship, simplicity of design and capacity of power. For a quarter of a century have maintained their manufacture, the

Standard Portable and Agricultural Engines

of the world. Descriptive Circulars sent on application. Mention this paper.

AMERICUS CIDER MILL.



Whitman's Patent

The Best Cider and Wine Mill made. It will make Twenty per cent more Cider than any other.

Perfectly Adjustable.

Three Sizes.

Geared outside. Large Mills made for two cranks.

Price as low as any first-class mills.

Circulars giving full description sent free.

Address the manufacturers.

Whitman Agricultural Co.,
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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL.—No. 1640.} NEW YORK, JULY 2, 1881. {PRICE FIVE CENTS $2,00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

THE PENDULOUS TREFOIL—(Desmodium Pendulæflorum.

S. PARSONS, JR.

ONE of the prettiest genera of the many hardy leguminous ornamental plants is that of the Desmodiums. Their fine, rich green foliage, waving habit and delicately tinted flowers are all more or less attractive. All the Desmodiums die down to some extent in Winter in the Middle and Eastern States of America, but the roots are seldom, if ever, killed, and as the flowers are borne late in Summer and therefore on wood produced the same year, this suffruticose peculiarity does not injure the value of the shrub for lawn-planting.

The Desmodium is one of the few plants that bloom in late Summer and Fall, and it has also a most gracefully pendent character peculiar to its refined and delicate foliage which is embroidered and tasseled with rosy-purple flowers resembling those of the sweet pea. On many accounts the Pendulous Trefoil finds its most appropriate position in the mixed border of hardy herbaceous plants and hardy shrubs. Its habit of weeping to the ground gives it peculiar value for the outskirts of shrub groups where erect-growing shrubs or even trees need a certain amount of masking to secure their most artistic effect. If this plant, however, had no other qualities of value than its beautiful and abundant August flowers, which last until frost, I should unquestionably predict for it a future of popularity; but endowed as it is with interesting foliage as well, it must certainly make its way into extended employment on the lawn.

THE PENDULOUS TREFOIL.—The specimen of the Pendulous Trefoil of which the portrait of a branch is here presented, was sent to us several years ago by Mr. John Saul among many novelties to be tested in the Rural Grounds. We find the roots entirely hardy, having withstood unharmed the past terrible Winter.

It comes, we believe, from Northern Asia, and at the Rural Grounds it attains a hight of about three feet, its slender branches, half covered with pea-shaped blossoms of extremely delicate shades of rose and violet, bending over gracefully on every side. It is a free grower, is suited in almost any soil or situation, and is readily propagated by cuttings.

PENDULOUS TREFOIL—From Life—Fig. 316.

HARDY SHRUBS AND PLANTS.

IN the RURAL NEW-YORKER for May 21, '81, page 340, I notice a few remarks concerning the injury done to plants and shrubs by the past Winter. As it was remarkably severe it afforded me an opportunity for testing the hardiness of many plants, and after many years' experience I find that a considerable number that are usually described and sold as hardy, are, when put to the test, found wanting in that desirable quality. A hardy plant, as I understand the term, is one that will stand our Winters without protection and sustain no injury, while one that requires protection and receives injury so as to damage its ornamental appearance or to destroy its flowering qualities, has no right to be called hardy—it is only half-hardy in the strict sense of the word, and should be described and sold as such.

I regret very much to hear of the damage done to the beautiful Japanese Maples, but I must say that I was always of the opinion that they would prove too tender for our severe climate. They may stand in some favored localities, but for general cultivation they will undoubtedly prove to be half-hardy plants.

I am sorry to have to report that the Lawton Blackberry is killed to the ground, and that the Kittatinny is so severely injured that it will only produce half a crop. The Cuthbert Raspberry has stood well, not a cane being injured. Hydrangea hortensis is, as usual, killed to the ground, and so is H. Otaksa; while H. Tho's. Hogg is dead—roots and all. As might have been expected, the Japanese Persimmon is killed to the ground, and so is that neat climber Akebia quinata. Euonymus Japonica and all its varieties are dead—roots and all; and so is the dwarf E. radicans variegata, and in my collection of Hybrid Perpetual Roses are to be found many vacancies. The Irish Juniper (Juniperus Hibernica) is badly injured, and in low places some plants are killed to the ground, while large specimens of the Irish Yew (Taxus fastigiata) over ten feet high, are killed half way down, and even the box—Buxus sempervirens—is severely injured, some specimens being dead over half way down. This has stood here many years without protection, and until the past Winter without injury, and, strange to say, small plants of the Thujopsis dolobrata variegata, or Japan Arborvitæ, are uninjured. A large specimen of the Cedrus Atlantica—Mt. Atlas Cedar—

over 25 feet high, is injured far beyond recovery, and the Rocky Mountain Silver Spruce is almost in the same condition.

I notice in some catalogues that Azalea amœna is described as hardy. It may be so in some localities, but not here. After repeated trials I have never been successful in obtaining one single plant that could survive our Winters. Weigela nana variegata is a shrub that deserves a prominent place in all collections, however small. It is of dwarf, spreading, but compact, growth, and is perfectly hardy and free from the attacks of all insects. In June it is a mass of rose-colored flowers. Added to this, its leaves possess a clearly defined bright golden variegation which is retained throughout the entire Summer. It stands our Summer sun well, and is the very best deciduous shrub with variegated foliage.

Queens Co., L. I. C. E PARNELL.

NOTES FROM THE RURAL GROUNDS.

Grapes.

THE damage sustained by grape-vines during the past Winter is now more apparent than when, a few weeks ago, we first alluded to the subject. Of Mr. Ricketts's seedlings, Lady Washington, as before stated, was killed nearly to the ground. From one bud a vigorous shoot is growing bearing two bunches of fruit buds. Highland was killed to the ground—Eldorado within a few inches of the ground. That marked 240 A, and not as yet, we believe, offered for sale, was killed back a joint or so, though the plant is but two years old and was slightly protected. Newburgh was killed to the ground. Jefferson, like the last mentioned, was protected somewhat and not seriously harmed. Highland is dead above the present shoots which start just above the roots. The same may be said of Imperial and Quassaic. The now well-known grape, Lady, originating with Mr. Campbell, shows injury on a few of last year's canes. Cottage, a two-year-old vine, was killed to the ground. Of Rogers's seedlings, Goethe (No. 1) was killed to the ground, one shoot from the neck alone appearing. Wilder was less harmed than any of the Rogers's. All the young wood of Salem was killed. It will surprise many of our readers to know that of all our grapes—and we have no less than 50 different kinds—the Victoria, one of the late Mr. Miner's seedlings, is the *only one which escaped injury entirely*. It is growing from every bud, while the many bunches of blossoms it bears give promise of a good crop of grapes, though it bore well last year. This is a white grape, a seedling of the Concord, which the RURAL has kept before its readers for a number of years. Mr. Miner's Carlotta, Rockingham and Augusta, also harmed very little, are all in blossom. Lexington was injured. All of these, as often before stated, are pure Concord seedlings. Our Kittatinny blackberries were every one injured; many killed to the ground. Of all our blackberries Snyder is the only variety not hurt.

The Japan Maples.

After all the praise that the RURAL has given these little gems for the past five years, it was an ungracious task to be obliged to tell our readers how sadly the past Winter has robbed them of their claims to being considered hardy. We find that Acer palmatum or polymorphum which we said was killed to the ground, is killed outright—roots and all. This seems to us inexplicable for the reason that this is the stock upon which the many varieties of the Japan Maples are worked. Perhaps the death of the A. palmatum is due to some other cause besides the severity of the Winter. In fact, either this must be accepted as the case or it must be supposed that it is rendered hardier by the varieties worked upon it, since the latter, though badly injured, are in no case killed.

The Cut-leaved Maple (Acer dissectum), a variety of the Norway, is really one of the finest of maples for ornamental grounds. Its leaves are deeply and peculiarly cut; of a dark green when mature, while the young leaves are as purple as those of the Schwerdler's maple.

Wistaria as a Standard.

Years ago we commenced to train a Chinese Wistaria into a standard. Year after year until last year it was laid down and covered. It had become a beautiful little tree four feet high with a stem six inches in circumference. It was not thought necessary to lay it down again for last Winter, especially as the stem had become so thick that we feared it might be broken or warped. This little tree to which we had given so much time and care, is now killed to the roots,

Among other plants we note with regret that the Plicate-leaved Viburnum, the handsomest of the viburnums, is killed to within a few inches of the ground. The Japan Akebia (quinata), which has been reported as not hardy in milder climates, is not harmed in the least here.

Strawberry Notes taken June 10.

The wet weather and the cloudy skies have insured a bountiful strawberry crop, though the fruit is not so sweet and is more perishable.

Among about 100 different varieties we make the following notes:—

DUCHESS has again been the first to bloom and to ripen berries. It is of poor quality, medium size, but quite productive.

WARREN is now ripening. It is of good quality and size—the plants vigorous, but not productive.

HERVEY DAVIS is prolific; of good quality, firm and promising.

GRACE—Not prolific.

FINCH'S SEEDLING (not French's) is prolific and vigorous. Firm—medium quality; ripening.

CAROLINE—Small berries and unproductive.

PRES. LINCOLN for some reason fails with us this year. It appears old beds of this variety never do well.

SHARPLESS.—Again we have to report most favorably upon this variety. Other kinds are more productive, perhaps, but we have no other kind which so well combines vigor, size of berry, quality and productiveness.

ENWOOD'S GLOBE is small, good flavor, not very vigorous.

IOWA PROLIFIC is full of fruit, which begins to ripen later. The vines are vigorous. Soft and sour.

EMMA'S FAVORITE has long, erect leaf-stalks. Many berries have set. It is a late kind. Mr. J. H. Hale says it is Kentucky. So says Mr. E. P. Roe.

GARDEN is of a brilliant red color, good quality, quite firm. Plant not very vigorous.

HELLEN is prolific. The berries are medium in size, soft and of low quality. Foliage burns in hot weather.

AMERICA bears small berries, which rest upon the ground. The plants are strong-growing.

ROMEYN'S SEEDLING is of fair quality—not productive. Mr. Roe thinks it is Triumphe de Gand.

FRANKLIN (it was labeled Franklyn) is full of green berries. We counted 300 on a single plant.

MILLER'S No. 5.—Very prolific—large size. Is ripening now. Soft.

KISSANY bears shapely, bright-red berries. It promises to be prolific. The vines are vigorous.

No. 1 (Roe).—Very prolific—often cockscombed. Vigorous vines. None ripening yet.

MILLER'S No. 7.—Dark red when ripe. Good quality, prolific, vigorous.

ENDICOTT'S SEEDLING.—Large berries, prolific—not yet ripe. Mr. Roe believes this to be Seth Boyden.

MEMPHIS LATE.—Tall-growing, vigorous, rather small leaves. Bids fair to be the latest of all our varieties. Firm, high flavor.

EREBUS.—Fine quality, not very fruitful—dark red, oval shape. Feeble.

SUCKER STATE.—Firm, good, vigorous and productive. On other grounds we learn it is not worth a cent.

COWING'S SEEDLING.—Poor in quality. Quite productive—vigorous.

LONG JOHN.—Promises to be highly prolific.

QUEEN OF THE WEST.—Vigorous, quite prolific—medium in size and quality.

WINDSOR CHIEF (Champion).—Large size this season—prolific, vigorous—sour when red, but of high quality when fully ripe, when it is of a dark color.

GLENDALE.—More productive than last year. The vines are strong and healthy. This is a late berry, firm, light red, and of fair quality.

RURALISMS

I WAS at Manchester on Thursday the 9th, in the midst of the rain and Mr. Battey's seedling strawberry. I had a wet time and a good one. There was a large party of strawberry growers present, Mr. Roe coming from Newburgh, N. Y., Mr. Parry from Cinnaminson, N. J., Mr. Hale, from Hartford, Conn., Mr. Lovett and others from places nearer by, and each one seemed to be glad he came. Mr. Battey's seedling is a remarkable strawberry in some respects. His farm is composed chiefly of sea sand with a small admixture of vegetable matter; and right on this sand the seedling strawberry was growing, a stranger to cultivation for a year at least, I should judge; yet there was an abundance of large, handsome scarlet berries, of a broadly conical form, red-fleshed, firm and juicy and of a decidedly rich and spicy flavor. In form the berry resembles the old Hovey's Seedling. As some evidence of how it was liked, the whole party remained in the field eating for a long time in the drizzle, until, finally, they were fairly driven out by the increasing rain, but only to go to the house for a strawberry lunch. A meeting was organized, the merits of the berry discussed, a list of points made out, and these altered and amended till all could agree to them. At last we all trudged to the cars through a pouring rain, each man carrying a large (inner) basket of strawberries with him. I couldn't carry all mine that way, so I put about a quart in my valise, and after tumbling about in that for a couple of days, they were in good condition on Saturday night, and pronounced to be excellent by a small party of ladies who ate them. That, certainly, speaks well for the market qualities of the fruit. I am much of the opinion that this seedling will become a popular favorite in time. If it produces such fine results in nearly pure sand, what may it not do when removed to a more generous soil?

THERE is a very prevalent opinion that the foreign grape (Vitis vinifera) is too tender to be grown in the open air. I have for many years known that this is not so. To convince some of my friends, I left out-of-doors last Winter four pot grown vines, one year old, with canes from five to seven feet long. They were left without any protection, even to the pots. The pots, of course, were badly damaged; but the extreme ends of these vines I left at the RURAL office this Spring, and the editor can say how much they were killed. [They were not injured, EDS.] The vines were the Black Hamburgh and the Muscat of Alexandria. I will state that I took some pains to grow these canes, and to have them well ripened to the end. I have done the same thing before. The thermometer reached 19° below zero.

It may interest the readers of the RURAL if I state, in this connection, some facts within my personal knowledge. When I was a boy Water Street, near the Battery, contained the residences of some of the best families in New York, and among others the Timpsons and the Van Antwerps, names still well known. In the yard of Mr. Rowland H. Timpson, who married into the Van Antwerp family, was a vine of the Muscat of Alexandria, which for upwards of forty years produced fine crops of fruit, which I can well remember eating more than once. The only trouble was occasional mildew, which was very much lessened by the protected position of the vine. It was finally destroyed by the first large Pearl Street fire. Mr. Camille Marié, a highly respected New York merchant still living, and a thorough amateur horticulturist, for many years grew the Black Hamburgh in the open air at Inwood. It was hardy enough, but in a year or two mildewed badly, and in consequence yielded little or no fruit. Some of the vines were still growing in a half wild state at my last visit. The Croton Point vineyards are among the oldest and best known in the country. Mr. William Underhill, who originally started them and always owned the larger part of them (though his brother, the doctor, got the credit for it), told me that he began with the foreign vine, but had to abandon it, not for want of hardiness, but because of mildew. The Rev. William P. Page, to whom we are chiefly indebted for the Farmers' and the School District Libraries, also started a vineyard of foreign vines on Long Island soon after the Croton Point enterprise. He told me he was finally compelled to give it up because the vines mildewed so badly. The experiment cost him upwards of twenty thousand dollars. Mr. Roswell L. Colt, of Paterson, N. J. (now deceased) many years ago grew the foreign vine in the open air on a smaller scale. Being a man of great wealth, he spared no pains in giving protection, fighting mildew, etc., and succeeded for years in raising Black Hamburgh grapes, that on one occasion at least competed successfully with those grown under glass. I know it because I was one of the judges, and also saw the vines in the open air. Archie Henderson, one of the best gardeners we ever had among us, used to winter his young foreign vines in the open air. In several places in and around New York there are foreign vines in the open air in favorable situations, which produce fair crops of fruit; some of these vines are quite old. It is not necessary, however, to multiply cases. The fact seems to be that foreign vines, in regard to hardiness, are very much like our native vines, some being hardy and others not. Notwithstanding, the conclusion must be accepted, that, with some exceptions, such as California and portions of our Southern States, the foreign vine is not adapted to open-air culture with us. The changes and vicissitudes of our climate are too great. Mildew attacks the leaf, then the fruit, and next the wood, when the disease becomes constitutional, and that is the end. HORTICOLA.

MICHIGAN STATE HORTICULTURAL SOCIETY.

Summer Meeting.

[Rural Special Report.]

THE Summer meeting of this Society was an occasion of more than usual interest, from the fact that it occurred at Benton Harbor, at the month of the St. Joseph River, and opposite the village of St. Joseph. It was here that the climatic advantages of the easterly shore of Lake Michigan first attracted the attention of fruit growers; and here, under the stimulating demands of the Chicago market, occurred the rapid and wonderful development of commercial fruit culture that, a few years since, attracted public attention so strongly to what has come to be known as the "Lake Michigan Fruit Belt."

After a welcome and response at the first session, on Tuesday evening, the subject of Birds vs. Fruit was freely discussed, developing the usual difference of opinion as to the actual preponderance of benefit or injury.

Answers to the question, whether or not frozen apples can be saved or utilized, were to the effect, that it would be far better and safer not to allow them to be frozen, though care in thawing may perhaps save them.

Experience was called for respecting the best method of destroying the Rose Chaffer, which has within the past few years developed here a tendency to attack and injure fruits before maturity. The suggestion to apply Paris-green or London-purple to the foliage and young fruit by means of water and a force pump, was met by the statement that such applications had failed to produce the desired effect. The only effective measure proposed, was the slow and laborious one of hand-picking.

"Of what varieties and in what proportions does the strawberry crop of this region consist," was then discussed. In response, it was stated that fully nineteen-twentieths of the crop of this region are Wilson's Albany; although a few Jucundas and Captain Jacks are said to be grown about South Haven. The question, "How to prevent mice from girdling trees," received, from several persons, the responses, "keep the ground clean"—"wrap with tarred paper," and "throw up a mound of earth about their trunks." Heavy rain on Wednesday morning diminished the attendance.

The subject of tree planting along highways was ably discussed by H. G. Reynold's and Judge Ramsdell of Grand Traverse County, followed by a paper, read by the secretary, from S. B Peck, of Muskegon. The most profitable varieties of fruits for the markets of Chicago, were considered from the dealer's stand-point, by Mr. Mason and Mr. Colby, both of that city, showing that the Wilson is, and as far as they may be concerned, is to be the "Summum bonum." By far the most earnest discussion, during the meeting arose on the subject of determining the capacity of fruit packages. An attempt to induce the last Winter's Legislature to enact a law, requiring all packages to be marked with their real capacity, had developed a wide divergence of opinion on the subject.

After the question had been thoroughly discussed, the following resolutions were offered and passed:

Resolved, First, that the using of the various sizes of fruit packages is detrimental to both shipper and consumer.

Second, that this society recommend a few standard sizes to be used, with their actual capacity marked on the outside.

Third, that we recommend the full-size quart box and the 12, 15 and 20 pound basket.

Fourth that we recommend the full-size three-bushel flour barrel for all commodities usually bought or sold in barrels.

Fifth, that we invite the co-operation of all fruit and vegetable growers and dealers in all the States to make our system universal.

Sixth, that we recommend that this system be adopted by the Legislatures of the various States, and that the small snide baskets be done away with.

A committee was appointed to lay the matter before the public through the press, and thus bring about a reform.

A discussion upon the subject of "yellows" resulted in the conclusion that the prompt and complete destruction of diseased trees is, with the present knowledge of the subject, the most effectual mode of arresting or restraining the progress of the disease. The meeting adjourned on the evening of Thursday, (9th), and is regarded as a very interesting and profitable one. T. T. LYON.

Fruits on the Hudson River.

WE have had an abundance of rain this season and the fruits promise a large crop, except apples, which are almost a failure. We are, however, afflicted with rose beetles, which are very destructive to grapes and peaches, eating the young fruit. A young orchard, bearing now for the first time, is almost completely ruined by them. The only remedy, to my knowledge, is hand-picking, which is very tedious where they are so numerous. Strawberries began ripening quite early, though the Spring was late. I picked the first ripe Capt. Jack on May 30th, and Primo on June 20th, and these were both grown on a steep hillside facing southeast. Grapes are looking fine; all varieties have set a full crop and are now most of them setting their berries. Some young Jefferson vines are setting many bunches of larger size than I have ever seen before. Pears are a large crop and unusually fine.

Fishkill, N. Y. J. G. BURROW.

Field Crops.

THE CULTURE OF CORN.

J. B. LAWES, LL. D., F. R. S.

* The eighth annual report of the New Jersey State Board of Agriculture contains a paper by Mr. Henry Stewart upon a subject which has occupied my attention for a great number of years, and which is now coming to the front as a great question of economy in commercial agriculture. It may be described briefly as "Freight versus Artificial Fertility."

Mr. Stewart says:—"It has been the fashion to believe, or at least to say, that the farms in the eastern parts of the country are exhausted; that agriculture here is in danger of ruinous competition from the newer lands of the West, and that it is cheaper to buy Western corn than to grow it in the East." And he goes on to "show the fallacy of such an idea as this" by the following figures:—

Freight on a bushel of corn from Chicago to New York..... 30 cents
Cost of fertilizer to produce a bushel of corn.. 09 cents.

The question here raised is not only one of importance with reference to the East and West of the United States, but also as regards the United States and Great Britain; for though it is true that we do not grow corn, it is also true that our wheat is gradually being displaced by the cheaper-grown wheat of the States.

Mr. Stewart goes on to say, "Recent investigation and past experience have shown that while wheat requires from one-half to full quantity of all the nitrogen to be supplied in a fertilizer, depending upon condition of the soil, corn, on the contrary, requires, even on comparatively poor soils, only about one-fourth the nitrogen to be supplied as compared to what the crop contains."

It would be very joyful news to our farmers in Great Britain if I could assure them that wheat requires only "from one-half to full quantity of all the nitrogen" contained in the crop to be applied in manure; or, in other words, that by the application, at the most, of one pound of nitrogen in manure, a pound could be recovered in the produce. So far, however, from my being able to accept this statement, I feel no hesitation in saying that whatever may be the nature of the recent "experiments and past experience" to which Mr. Stewart refers, if they assert, as a general agricultural fact, that the application of half a pound to a pound of nitrogen in manure will produce one pound of nitrogen in a crop of wheat, or that a quarter of a pound of nitrogen in manure will produce one pound of it in corn, they are based upon error. The only manner in which such a result might possibly be arrived at would be by the continuous growth of wheat or corn by means (1) of a mineral manure alone, and (2) by the same manure combined with salts of ammonia, if this were done with very great care, and for a sufficiently long period; although I should even then expect more than a pound of nitrogen would be required to produce one pound of that substance in increased growth, and that more nitrogen would be recovered by the corn than by the wheat.

Mr. Stewart says, further, that Charles V. Mapes is opposed to my idea that corn should be placed in the list of grain crops which require to be supplied with a surplus of nitrogen, but has insisted that it should be classed with clover and the leguminous crops which yield larger quantities of nitrogen in their product, but require a very inconsiderable supply.

The statement that corn yields large quantities of nitrogen, like the leguminous crops, is somewhat inconsistent with the table given by Mr. Stewart on the previous page (46) of the report, which shows that corn contains not only less nitrogen than the leguminous crops, but even less nitrogen than wheat. My object, however, is, not to find fault with Mr. Stewart's statements, but to endeavor to correct what I consider to be erroneous in them.

First, then, with regard to corn: That it is a gramlnaceous plant and possesses all the properties of that order, I have not a shadow of doubt; all the plants containing large quantities of silica in the ash possess properties in common, one of which is that, when liberally supplied with nitrogen, they are capable of outgrowing and overpowering all other species of plants. It is quite true that corn is less dependent upon an artificial supply of nitrogen than wheat, oats or barley, and the reason for this fact I have frequently pointed out, viz., that after the other crops are ripe, corn continues its growth during the exact period when the liberation of nitric acid in the soil is most active, and it is this circumstance that enables the United States farmer to sell corn so much cheaper than wheat.

At Rothamsted we have abundant evidence to show how large is the quantity of nitric acid liberated during the Summer months. For example, the water collected from the drains of our experimental wheat-field in July contained no nitric acid, while the soil of the adjoining field, where no crop was grown, contained in September as much nitric acid as would have supplied the nitrogen contained in 50 bushels of corn.

The United States farmers are now embarking largely in the use of artificial manures, and therefore possibly may be glad to hear the views of one who has been studying their properties for more than 40 years.

First, they will find a very great difference between the amount of ingredients which is supplied in a manure and that obtained in the produce; then two of the ingredients generally supplied in manure, viz., phosphoric acid and potash, enter into very fixed compounds with the soil, and are only recovered over long periods of time. In confirmation of this fact I may say that at Rothamsted we are at the present moment taking up in our wheat crop phosphoric acid and potash which were applied 30 years ago; some considerable addition, therefore, in the shape of interest, must be charged on the cost price of these substances by the farmer who employs them as a manure. With regard to nitrogen the case is different. It appears probable that nitrogen, applied either as ammonia or nitric acid, does not permanently enter into any fixed combination in the soil, unless it has become a part of living vegetation; and it may be considered an established fact that wherever nitrogen is used as a manure there will be a considerable loss of the amount applied, although the amount of such loss will vary with the seasons and other causes at present unknown.

In consequence of the severe competition to which the British farmer is now exposed, the question of artificial fertility has been recently occupying my attention, and I have come to the conclusion that, as artificial manures can be purchased quite as cheaply in this country as in the States, the crops grown by their aid cannot be produced more cheaply in one country than in the other. What we are suffering from in Great Britain is the competition of crops grown by means of natural fertility, which is cheaper than the fertility that can be supplied in any other form.

The views of Mr. George Ville with regard to the sources of nitrogen, and the properties possessed by the various crops for gathering it from the atmosphere, appear to have found much favor in some parts of the United States. We have not thought it necessary to bring forward any formal evidence to disprove these views; but I may say that, as expressed by Mr. Ville, they are entirely opposed to the facts that have been established by the result of the experiments at Rothamsted.

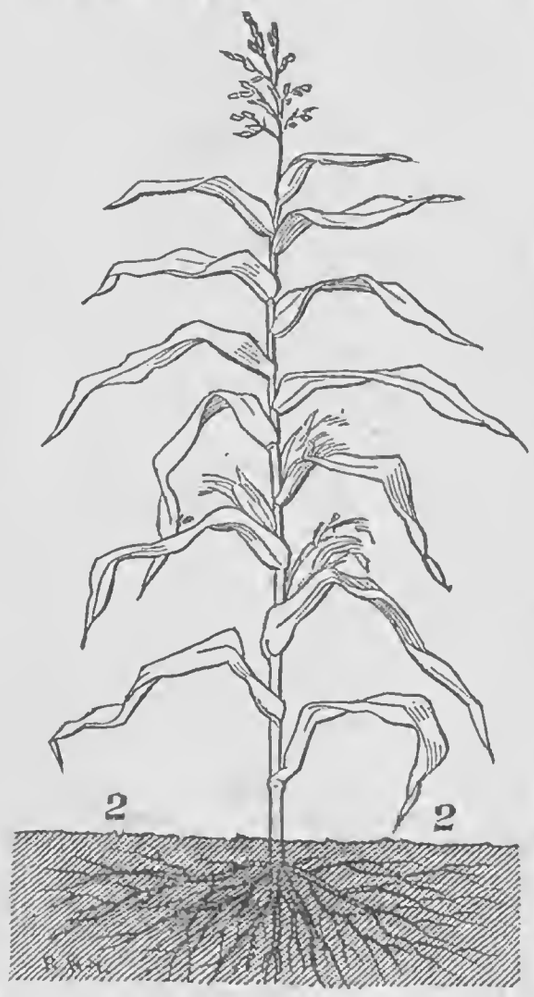
* We are much indebted to Mr. P. T. Quinn, Secretary of the New Jersey State Board of Agriculture, for the above article, which has not until now been published.

NOTES FROM THE RURAL FARM.

What is the advantage of hilling up corn? We should much like to know. Until two years ago we, in common with the farmers about us, planted our corn in checks and

HILLING SYSTEM.—FIG. 317.

hilled up. Two years of experience with level cultivation have well-nigh convinced us that drilling in the seed in rows and level cultivation are to be preferred for the generality of seasons, for light lands at least. There is a belief among farmers that hilling up helps to support the corn plant and consequently prevents lodging by high winds. Our experience does not confirm this belief. The Chester Co. Mammoth and Blount's Corn are both tall-growing kinds—taller than any of the varieties which were last year cultivated by our neighbors. And yet, though we had high winds while the corn was in bloom, and again when the grain was glazing, our corn stood fully as well as theirs. *Does* hilling up give support to the stalk. Before answering this question, one should consider what part the lateral roots take in supporting the plant, as it is from about these that the soil is taken to heap about the stem. If these lateral roots are severed by plowing, hilling up may be advantageous—but when shallower cultivation alone is followed the stalks receive all of the support which a full, natural root system can give; and hence it is, we believe, that our plants ten feet high stood as well as our neighbors' which were not so tall by a foot or so.



FLAT CULTURE.—FIG. 318.

Great crops of Indian corn have been produced by plow cultivation and hilling up. But possibly, had the cultivation been shallow and level, those crops would have been greater. It may be admitted that land is sometimes so rich that root-pruning (plowing) serves to repress stalk and leaf growth and to favor the formation and development of grain. We do not know, never having had a field so rich. But if it were otherwise we should, with our present experience, still pursue the drill-row system and the flat cultivation, though careful to plant our seeds and to mark our drills further apart. We have full faith that the sun and air and thorough shallow culture would effect all that any interference with the roots would effect.

In drill-row cultivation, of course, neither the cultivator nor plow can be run but one way. The narrow belt on which the plants grow *must* be hoed or the weeds suffered to grow. But it may be considered that if the rows are straight the cultivator may be run so near to the plants that very little hoeing is really necessary. This narrow belt which demands hand labor is the only objection to drill-rows that we have yet discovered. It is plain on the other hand that corn plants one foot apart in the drill will thrive better than when three or four plants are crowded together as in the check system. Very likely on hillsides level cultivation would prove impracticable, and as our experience has been only in the cultivation of ground level or nearly so, it is of this alone we speak. Our illustrations are intended as a help towards placing before the thoughtful reader more forcibly the question as to the advantages or disadvantages of hilling up or level cultivation; plowing or cultivating near the surface only—leaving the entire root system of the plant as nature intended it to grow. At 1–1, Fig. 317 the roots, though in an exaggerated way, are shown to be severed by the plow and more exposed to the action of the sun's rays. It would seem, therefore, that the plant as shown at 2—2 in Fig. 318 should have a greater power to resist drought, since it has a more widely extended root system which is more evenly watered by rain.

CUTTING AND CURING CLOVER.

It is generally understood among farmers that clover should be cut a short time before full blossom in order to preserve its juiciness and flavor. Though there may be an increase thereafter in weight and bulk, the addition is not in nutritive elements but in woody fiber which for feeding purposes is of no great value. Early cutting also gives the second growth, or aftermath, a better chance, so that if desirable, it may be mown again. In curing clover, I believe the proper course to be to put it up in cocks on the afternoon of the day on which it is cut, if the weather permits, and not to haul it to the barn at once. Clover put up in good shape in this way will cure during the time it is in the cock nearly as much as it would if exposed to the sun, so that on opening in the morning the sun will soon dry out the "sweat," and the clover after a light shaking, will be fit for the mow. It is better when cured in this way for the reason that it is brighter in appearance and the clover leaves are left intact. This, experience has shown, is not the case when the clover is cured altogether in the hot sun, or when it is left standing until out of blossom, and until the stalk is void of juice. An incidental advantage accruing from putting up hay, especially clover, in this way, is, that, in case of a rain during the night, it is in good shape to withstand it, and is much better out-of-doors than in the mow half-cured, to mold and heat.

J. W. D.

NAME OF CORN.

In the Rural of June 4, Professor Blount says: "For the benefit of Waldo Brown and others who think they have discovered a great secret," etc. I think the Professor refers to a statement that I found the Peabody Corn and Blount's Prolific to be identical. I would not on any account do the Professor injustice, and write now asking that I may be set right, if wrong. The first I ever saw of this corn was in Wayne Co., Ohio, in September 1879, and I was at once much interested in it. A stalk having seven perfect ears on it, was exhibited at a local fair, and I also saw a half acre of it growing. I bought five bushels of the seed, and sent out 1000 small packages free, under the name of Peabody Corn, which was what the man called it who furnished me the seed. In the Spring of 1880, a subscriber to the Rural sent me a few ounces of the Blount's Prolific Corn, which he had grown from seed sent out by you, and I planted it at one end of my acre of Peabody Corn. I could see no difference in the two, whatever, and so naturally concluded they were identical. I believe that to Professor Blount belongs the honor of having originated this corn, and had I known what I now do, I should have advertised it in his name, and given him all due credit, for I believe that we owe a debt of gratitude to the men who by careful experiment are improving our grains and vegetables. I hope the Professor will accept this apology.

Waldo F. Brown.

Farm Topics.

THE WEIGHT OF COW DUNG.

Mr. Bliss in his remarks made week before last, on page 402, replies to our statement in regard to the weight of cow dung, but he by no means disproves it. Instead of explaining his view of this rather insignificant question, he insinuates that our reply to his objections was quibbling. We gave some facts which may be repeated in a succinct manner as follows, to show that the weight of authority is against Mr. Bliss's position and supports our first statement as regards the weight of cow manure, and to utterly disprove Mr. B's charge of quibbling.

1. There is nothing that enters into the composition of cow dung that has a higher specific gravity than water.

2. An analysis of cow dung given in a work on calico printing shows that the specific gravity of the component parts of the dung is actually somewhat less than that of water.

3. Geo. E. Waring, a thoroughly competent authority, gives the weight of cow manure to be 7,080 pounds to the cord; or 920 pounds less than an equal bulk of water.

4. We gave, on the authority of Joseph Harris, taken from his "Talks on Manures," the weight of well trodden horse manure at 4,800 to 5,000 pounds to the cord.

5. We stated that on a trial with freshly dropped cow manure we found it to float, and not to sink, as Mr. Bliss very confidently stated it would *always* do.

Now in addition to all this, the writer has had weighed a load of 64 cubic feet of solid cow manure free from litter, which has been lying in the bottom of a barn cellar for six months, and is very solid, and which was thoroughly well trampled in the wagon box, and the weight is 3,428 pounds, making the cord to weigh 6,856 pounds. There might have been some little water added to this manure, but not much, to completely saturate it, as all the liquid from the cows pours from the gutter and the trap-doors above on to the manure in the cellar.

It is rather annoying to be compelled to go to all this trouble to discuss such an unimportant question as this and to gather all these facts to support our first statement in reply to an inquiring friend, for no other purpose than to show that Mr. Bliss's objection to our statement is not based on any other authority than his own

observation (which we do not for a moment doubt), but which is unsupported by any other but Dr. Dana's which is clearly wrong, and then to be met with a charge of quibbling! All the quibbling, in point of fact, is on Mr. Bliss's side. We think this remark is justified by the fact that on page 336 he says "*Cow dung always sinks in water like a stone;*" and on page 420 he says "I never undertook to say that cow dung might not be found that would float for a time; or to disprove that iron under certain circumstances will swim." For this is the veriest quibbling, if "always sinks in the water like a stone," has any meaning. We have nothing more to say on this subject than has been said, which we think is sufficient to satisfy any reasonable man.

The Herdsman.

IMPROVING STOCK.

JONATHAN TALCOTT.

AMONG cattle breeders, and especially among the breeders of the different pure breeds, I have lately noticed a growing disposition to find fault with or depreciate all or most other breeds in comparison with what they are engaged in breeding. This disposition is usually most plainly shown with regard to other breeds that come more or less closely into competition with their own. To me this seems a short-sighted policy; for the general public, seeing this general depreciation of other breeds, coupled with high encominms on the special breeds in which the writers may happen to be interested, is apt either to conceive a general distrust of the praise as well as of the blame so lavishly meted out, or else falsely to imagine that the alleged merits of the different breeds are a matter of puffery rather than of reality, and that the despised "natives" if they got as much care and obtained advocates as earnest, might gain as high a place in public opinion as any of the pure breeds. Surely all this defamation of competing breeds is as unwise as it is generally untrue. There is plenty of room for every breeder to select some particular breed and then to try to improve it by careful selection of breeding animals, and judicious feeding in order to obtain the special object desired, whether it be beef or milk for sale, or butter or cheese.

It is a fact well known to all breeders who have studied the subject, that to be successful a standard must be set up much higher than the ordinary level, and then measures must be taken to reach that standard, otherwise no permanent good can be accomplished in breeding. It is also well known that the suitability of the different breeds to various localities depends mainly upon the care and feed given them there—the Short-horn and Hereford that make such fine carcasses of beef in some places where they are properly fed, would starve to death in other situations where the West Highlander or some other hardy race of mountain cattle would grow and thrive; so, too, would the thoroughbred horse or even the trotter be worthless where the Shetland pony or the Texan mustang would luxuriate. Like many others in times past, many breeders do not breed for the pleasure of the knowledge thus obtainable or with any desire to become eminent in the art of breeding, but merely either as a present pastime, or to make money by adopting some breed which they think is the best adapted for that purpose. All such breeders of live stock will not be as useful to the country as those who engage in breeding with the view of learning the art, or science, of breeding and to improve the breed in some particular, whether it be for milk or beef. Those who engage in breeding for the latter object will not be likely to change with every passing occurrence, but will hold steadily onward in their views and methods, to best accomplish the desired result. That there are on our farms too many poor animals that are, in fact, comparatively worthless, is a fact known to most farmers, but to most farmers the breeding of better ones is considered a slow and toilsome process which they can never spare time enough to accomplish. If all such would, each in his own sphere, select some breed and endeavor by breeding and feeding so to improve it as to make the majority of the animals valuable to their owners, what an immense amount of good might thus be accomplished, and what a fund of knowledge would thus be obtained, that would be of great benefit not only to those persons who should adopt such a course, but to others who would occupy the places of lookers-on, who might be induced by their neighbors' successes to go and improve their own flocks and herds in like manner. How much better for a community where a few such men are engaged in improving their farm stock than where no such persons are thus engaged and no progress marks the passing years.

A Sterile Bull.

IN further answer to A. S. C., Anamosa, Ia., in the Querist Department of the RURAL for June 4, I would inform him that feeding any animal, male or female, highly for the purpose of making a fine show, is very injurious. This not only renders them liable to barrenness, but weakens their constitution and otherwise injures them. For an animal to breed well, it should be kept only in good moderate condition from birth up. Males, however, when they have considerable covering to do should have a moderate increase of oats. To this some add three to six eggs daily and as many quarts of milk. A yard at least 20 feet square should be given for exercise, but a grass plot or a whole acre would be still better. In the absence of these a bull ought to be walked out one-fourth to one-half a mile or more and back mornings and evenings. A stallion requires twice or thrice as much exercise. In some a single leap is not sufficient. I have found it occasionally necessary to have this twice or even thrice repeated. "B."

NOTES BY A STOCKMAN.

EARLY LAMBS may be very profitable where they are raised for a city market, to be sold when three months old; and the owner may find a consolation for the labor and worry of staying up nights and coddling the ewes and fussing with stupid lambs to get them to suck and to put them on their feet, in the very fair price he may receive for them. Twenty-five cents a pound for a 40-pound lamb may cover up a multitude of worries; but the sheep-owner who produces only wool and mutton had better avoid this business of having the lambs dropped early. There is less loss of lambs, less bother with the ewes; the lambs grow faster and are heavier, and one has more contentment and comfort every way when lambs are dropped on the grass after the weather has become warm. May lambs will make better sheep than February or March lambs, and will give much less trouble in the rearing.

THE past season has been very unfortunate for the owners of flocks in the West. The cold weather and the late season have caused a loss of a third of the lambs, and the remaining two-thirds have been saved only at the expense of a great deal of care and trouble. A Western friend writes me that out of 2,500 ewes he has but 600 lambs. The same result has happened with small flocks, and every experienced owner has suffered unusual losses. In Ohio the loss in the flocks of the best shepherds is said to be more than 15 per cent. Illinois shepherds have suffered to the extent of 30 per cent. Some habitually careless owners have not reared a single lamb out of flocks of 30 to 50 head.

IT is a question if the cold Spring is altogether at fault, and if it is not, rather, the extremely severe Winter, that has produced the weakness of both ewes and lambs. And, further, I would hazard the suggestion if there has not been some neglect even in the best-managed flocks. Unusual circumstances require unusual provisions. What provisions have been made to avoid the evil effects of the long, severe Winter? How many sheep have gone without water and have been compelled to lick snow to quench their thirst? This is very injurious to ewes in lamb; it chills the fœtus and weakens the ewe, and is productive of the most serious losses which happen in the exposed mountain pastures of the Scotch shepherds, as well as on our own Western plains. The mischief is done before the warm weather of Spring arrives, and genial days and grass are unable to save the lambs, which are either dropped dead or with too little strength to get up. The ewes, being weak and helpless, are not in a condition to give much attention to their lambs, and many of them have not milk, however motherly they may be inclined.

THE feeding of turnips that have been exposed in the Winter, although they may not have been actually frozen, has frequently caused abortion in ewes from the chilling effect on the lamb *in utero*. The drinking of ice-cold water, or of melted snow, or the eating of snow, at a temperature of zero, perhaps, cannot fail to be disastrous. And there is little doubt that the large loss of lambs is due to some cause of this nature operating through the Winter, and not to the coldness of the Spring alone.

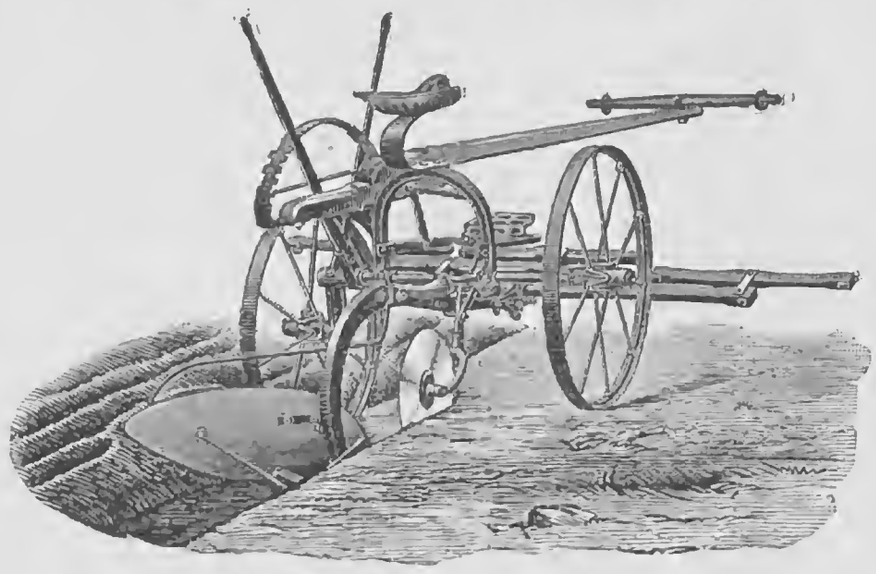
WHAT does it profit a man if he saves a few dollars in the lodging and provision of his flock and loses his crop of lambs? It has come to be a question of dollars and cents, and not of humanity or the avoidance of long-continued cruelty to animals. "Man's inhumanity makes countless thousands mourn" applies with great strictness to the poor brutes which he uses as instruments for making money, and if a few cents per head can be saved in the caring for them, they are mercilessly exposed to the intolerable rigors of the hardest Winter. And the owners complain, with great bitterness, that one-third of the lambs have been lost, and consider it a great hardship, as if they themselves were not to blame for it all.

NOT many years ago it was the fashion to have prayers and fastings and set days for imploring deliverance from epidemics, such as cholera, yellow fever, etc. Men did not then realize that their own nastiness caused these inflictions and that a "mysterious Providence" was not the author of the misery and death which slew thousands in a day, at times. And yet we do not even now realize that all the diseases, "unknown" and known, which destroy millions of live stock every year, are caused wholly by the fault of the owners. It may be ignorance, as it was years ago in regard to human epidemics, but there is no excuse for ignorance now-a-days. *Ignorantia legis neminem excusat* (Ignorance of the law excuses no one) is a well-known legal maxim. No man is let off because he does not know the law. He learns by sad experience and is apt to remember the next time. But owners of stock won't learn; year after year they suffer (or rather their poor animals suffer) and they grumble; but still they don't mend their ways. And all because they think it is cheaper to let their stock die than to take proper care of it.

IT may be so with some. But there is a great outcry made by some persons that the law should be evoked; that some one in authority, the Commissioner of Agriculture, or some other hapless official, should put his shoulder to their wheel, while they stand around and make a fuss. This is a great mistake. Let every man take care of his own cattle and if he will not, let him be made amenable to the law relating to cruelty to animals.

THERE is law enough for this case, if only it could be put in force.

MONEY is made in stock keeping by exercising the greatest skill and good management. Here is an example. It relates to poultry which, considering that it is live stock and of great importance to our interests, may perhaps be made the subject of note here. A Maryland farmer recently sent 145 capons to market, the total weight of which was 1,625 pounds, average over 11 pounds; the heaviest pair weighed 20½ pounds and the sum realized by the sale was $520. This certainly puts the cap on the business of stock raising. What other kind of flesh would sell for $520 for the weight of a moderate steer?—barring Alphea Jerseys, of course. But these capons actually brought for their value as meat as much as is given for a Jersey cow with her valuable pedigree included, and her black switch and escutcheon to boot.



THE CHAMPION SULKY PLOW.—FIG. 319.

Why should poultry alone of all our live stock be so rarely improved by emasculation? These capons, as "roosters," would have brought in the market perhaps five or six cents a pound, or less than a hundred dollars. The difference in value goes to pay this Marylander for his enterprise. That is the sum of it.

THE RURAL NEW-YORKER recently mentioned with admiration the Illinois dairyman who kept but one cow and yet sold over 40 pounds of butter weekly. This record surpasses that of the wonderful Jersey cows, but this more wonderful cow has not yet been introduced into high cow society. But the story is well matched by that of a Kentucky ewe which has produced at a single birth 79 (seventy nine) lambs; all of which lived but a short time. There was not life enough to go around so many. This is told seriously by a local Kentucky paper and is vouched for by "several reliable citizens." Somebody must be passing around some Jersey breeder's hat.

Arboricultural.

A RUSSIAN MULBERRY FOR THE WESTERN PLAINS.

ON the bare Western plains—so different from the forest-burdened East—an interest is felt in every tree and sort of tree that can be made to live and grow. Even of the contemned poplar and willow sorts that are a little more enduring or available than the genus in general, have been hailed with hopeful delight as giving promise of the needed shelter and material so badly wanted. Mr. G. F. Clark, of Beatrice, Nebraska, sends an interesting account of the promise of serviceableness afforded by a sort of mulberry brought by the Mennonite immigrants from similar arid plains in Russia—the steppes of the Volga, in latitude about 49 deg. There this mulberry is the best source of wood for farm supply, and so valuable and indispensable that the new settlers brought along seeds which grow well and, like other sorts of mulberry, very rapidly when young. The full hight of the species is claimed to be about 40 feet. As in other mulberries, too, the leaves of the seedlings vary in being more or less lobed: some of these are cut as much as those of any oak, and these varieties are propagated as trees for ornament as well as use. They will, no doubt, make pretty lawn trees, for the foliage and figure of all sorts of mulberry trees in unbroken health are pleasing. The fruit is said to be edible and good, but the pale mulberries are generally inferior both in size and flavor to choice specimens of the dark sorts.

Mr. Clark thinks this Russian mulberry is not of the alba species. Loudon describes a mulberry native on the steppes as Morus Tartarica, but thinks it only a geographical variety of alba, having variously scalloped leaves and reddish fruit of no very good flavor.

Mulberry wood is very durable, although apparently open-grained and soft. Botanically it is cousin to the Maclura, or Osage Orange, also a very durable wood, and also having fleshy, yellow roots, soft but tough. Undecayed mulberry wood was found by Mr. Layard in the ruins of Nineveh, and mummy cases of the same wood are seen in the museums, still sound and fresh to the very chips. This durability renders the trees, even though small, very useful to farmers for stakes and posts, and the rising interest in silk-worm feeding gives additional interest to them, especially to varieties of M. alba, the leaves of which are thinner and finer than those of other species, while the trees can generally be grown—like select sorts of these Russian varieties—quite easily from cuttings, set out in Spring like cuttings of currant or willow.

THE REASON WHY.—The RURAL, in its admirable Shrub and Tree Special, says: "We are at a loss to know why the Laurel-leafed Willow is not selected as a stock for the Kilmarnock" The reason is the same as is given by Mr. Parsons on p. 107, in regard to maples. The Kilmarnock belongs to the class of willows with lobed leaves, called Goat Willows (*S. caprea*), and as it is a reluctant sort about growing even by cuttings (although a willow), it is found necessary to accommodate it with a stock of its own kin. W. G. WARING, SR.

Industrial Implements.

THE CHAMPION SULKY PLOW.

THIS plow is made by Messrs. J. Lane Reed & Co., Dayton, Ohio, and has gained an excellent reputation wherever it has been used. Wrought and malleable iron has been used almost entirely in its construction, and it is free from all complications of braces, springs and triggers, which are apt to get out of order frequently and to need replacement. The wheels are of iron, with wrought-iron spokes well staggered and wrough-iron tires. The hub-boxing consists simply of an iron sleeve fitting tightly inside the hub and revolving with the wheel. When worn, the boxing can be readily renewed at a trifling cost. The spindles are of wrought iron and are protected from wear by sand caps, and whenever they become worn they, too, can be easily and cheaply replaced. There are two levers both on the same side. That nearer the operator

gauges the depth, and throws the plow in or out of the ground: that further off adjusts the furrow wheel and "wings" the share. The plow is constantly under control of the plowman, runs level at any depth, and being locked in the ground cannot be thrown out. The weight of it and of the earth upon it is carried by the wheels, and it can be used in all conditions of the soil and on ground foul with weeds and trash. The plow is very easily handled and of unusually light draft, and is warranted to be constructed of good material and in a thoroughly workmanlike manner. We have had excellent reports of it from several who used it last year, and all speak of it in praiseworthy terms.

Miscellaneous.

What Others Say

ICE FOR SUMMER.—Mr. Henry Stewart reminds the readers of the New York Times that if they would have ice next Summer, they must prepare for it now or in the Fall. Where a farmer has a stream bordered by a muck swamp, he is well provided. He may dig out the muck during the leisure days of Summer and Fall and make a pond which will supply the ice. A large pond is not required. A cubic foot of ice weighs 55 pounds; 50 cubic feet in round numbers make a ton. If six inches thick, a ton of ice may be taken from a surface of eight by 10 feet, or 80 square feet. A pond 80 feet wide and 100 feet long would furnish 100 tons, which would supply eight persons with 200 pounds a day each for four months. This would be sufficient for the use of eight dairies of 100 cows each, or for the cooling of eight times 2,000 pounds of milk daily for the season of four months.

TO AVOID SUNSTROKE, says Dr. Mann, in excessively hot weather, exercise should be very moderate; the clothing should be thin and loose, and an abundance of cold water should be drank. Workmen should understand that as soon as they cease to perspire, while working or marching in the hot sun, they are in danger of sunstroke, and they should immediately drink water freely and copiously to afford matter for cutaneous transpiration, and also keep the skin and clothing wet with water. Impending sunstroke may often be warded off by these simple measures. Straw hats should be worn, ventilated at the top, and the crown of the hat filled with green leaves or wet sponge. It is better to wear thin flannel shirts, in order not to check perspiration.

R. N. HANDY says in Green's Fruit Grower, that an apple tree should under no circumstances be trimmed when frozen. Cut two limbs from the same tree, of equal size, one in February, when the tree is frozen, and the other the following June, and the one cut in June will heal more and better during the season than the one cut in February. The best time to trim apples is from June to August.

MR. GREEN hesitates before advising any man to borrow money, but if he must choose between borrowing to pay for the labor to do work when pressing, and leaving the work undone until the proper season has passed, he says borrow!—And so say we.

THE Vermont Watchman says:—"After fifteen years of patient labor in testing varieties of fruit suitable to the colder parts of New England, these tree peddlers come into our own immediate neighborhood and sell worthless varieties at a dollar a tree when we have to burn up hundreds, and some years thousands, of far better trees that we offer in vain at twenty-five cents apiece."

THE WEALTHY APPLE AS A KEEPER.—Dr. Hoskins of Vermont, says that on May 20th he ate the last specimen of the Wealthy from his cellar, and found it still juicy and of good flavor, though the skin was slightly shriveled. These apples were kept on a shelf near a window, which is by no means so good a way as to pack in barrels or boxes in a dark place. No Baldwin apples from Massachusetts within his knowledge had kept better the past Winter than the Wealthy. Probably the latter, if grown alongside of the Baldwin, would not prove so good a keeper; but grown in northern Vermont, even after so late and warm a Fall as the last, there is no difficulty in keeping the Wealthy until April. For use after that date he prefers Scott's Winter, which was still firm and fresh, and at its very best in flavor as a dessert apple. Magog Red Streak is intermediate in keeping between the two. These three are our best Winter apples, the trees of which are perfectly hardy in the coldest parts of Vermont.

FARROW MILKERS.—The Editor of the Rural Home, who has been visiting among the farmers near Rochester, N.Y., says that Messrs. Olmstead & Son, have one practice that would hardly be approved by all dairymen. They buy new-milch cows and continue to milk them right along, without calving, for three or four years, until they are palpably shrinking in milk, when they beef them and buy fresh ones. The Editor inquired whether they had kept accurate records of the annual product of butter of cows two, three, and four years from calving, as compared with those calving every year, and was answered that they had not. He thinks a cow might produce as much for two years, with one calf as with two, and possibly more, but he questions whether she would the third or fourth year. It is an important question for dairymen, and one warranting the most thorough investigation.

ERADICATING THISTLES WITHOUT LOSING A CROP.— Mr. J. S. Woodward in the N. Y. Tribune says that he has found the following way successful in entirely ridding three farms of thistles without losing the use of the land, but getting a crop every season: Have the land rich if possible, at least get it well seeded to clover, and by plastering get an early growth, so as to mow it for hay just as the thistles begin to show bloom. After mowing apply a little plaster so as to quickly start the clover, and when about one foot high, say from July 20 to August 5, carefully plow the land with some plow that will turn all the soil; roll down and harrow thoroughly so as to cover every thistle, leaf and branch; a few thistles will show themselves after this, but when they do begin to come up again, hoe thoroughly with a cultivator having broad sharp teeth that will cut off all the thistles under the ground; in two days go over, and with a sharp hand-hoe cut off any stray ones that may have escaped the cultivator; you will find them growing fewer and paler each time, but follow this up as often as they appear until freezing up, not letting a single thistle get a full leaf, and, you will never see a thistle again on that plat until it comes from the seed, and you will have a field in the very finest condition for any Spring crop.

PROF. BUDD, speaking of the Ostheim Cherry, in the Iowa Homestead, says he has had several letters from Europe, saying it had proven one of the hardiest and most profitable varieties grown on the steppes. Not knowing that it was to be found in this country, he had already ordered trees from the nursery of Dr. Regel at St. Petersburg, Russia, when he incidentally learned that E. Meyer, of St. Peter, Minnesota, had brought this variety with him from his home in north Germany, and had fruited it for a number of years in the most trying portion of Minnesota, where he had become discouraged in growing the apple. Prof. Budd received, this Spring, a few small trees of the Osthelm from Mr. Meyer, the blossom buds upon which were in perfect condition after enduring the past severe Winter in their northern position. The hardiness of the tree and of the fruit buds seem beyond question. The next point of consideration is the size and quality of the fruit. Charles Downing says: "Fruit large; roundish-oblate; skin red, dark at maturity; stalk long; flesh, liver-colored; tender, juicy, almost sweet sub-acid; very good. Season, middle of July."

A NEW CLEMATIS.—The London Agricultural Gazette says that Mr. Charles Noble, of Bagshot, a famous raiser of new clematises, had eclipsed all previous efforts in this direction, by lately exhibiting the largest and most perfect flower of its size that had yet been seen. It was an eight-petaled flower, nine inches in diameter, and mauve in color, shaded with lilac. It is a great beauty, and has been named in honor of Mr. Gladstone.

CHINESE PEA-CAKE, probably made from a species of Dolichos bean Soja hispida—which is cultivated in China and Japan, is shown by analysis to possess about the same nutritive value as decorticated cotton-cake. It is very rich in nitrogenous matters, says the Mark Lane Express, the percentage of nitrogen being 6 28; there are also nearly 30 per cent of carbohydrates, or heat-givers, and about 7 per cent. of ready-formed oil. This bean is being tested at the Rural Farm this season.

HAWKS AND OWLS prey upon rats, mice and other small animals, thereby keeping them in check: while the crow prefers grubs, cutworms and carrion to any other kind of food, and while they may occasionally rob a bird's nest or pull up a little corn, they do a thousand acts of kindness to the farmer for every one that is injurious. So says the Sun, and there is a good deal of truth in it.

WASH FOR OUTBUILDINGS.—Professor Kedzie, of the Agricultural College of Michigan, an expert chemist, recently said that a paint or wash made of skim-milk, thoroughly skimmed, and water brine will render wood nninflammabic, and he proved it by experiment. He said this paint, or whitewash, is durable, very cheap, impervious to water, of agreeable color, and, as it will prevent wood from taking fire, urged its use, particularly on roofs, outbuildings, barns, etc. This comes to us through the N. Y. Herald.

C. J. REYNOLDS remarked to the Elmira Club, as the Husbandman reports, that some time ago he saw in Ohio a new kind of milk vessel. Dairymen there use glazed earthen-ware instead of tin pans, and they say the change is an improvement. The dishes are made of fire-clay, burned hard and finished to a smooth surface, which is glazed, so there is no impurity in it to impart odor or taste to the milk. W. A. Ward said very likely glazed earthenware may be better than tin. One advantage readily seen is in the thicker substance, less susceptible to changes through atmospheric influences. Then the glazing may be cleaned more readily than tin with seams and joints. Mr. Reynolds bought some of the earthen pans for trial and they gave satisfaction. They are easily cleaned and easy to handle. Each holds about six quarts. Around the top there is a rim projecting about half an inch—a flange which serves to catch on the churn or any other vessel into which the milk is to be emptied. Altogether these pans have proved satisfactory so far as his observation extends, and he thinks they are worthy of further trial.

BARBED WIRE FENCE.—There is nothing more surprising, says B. F. J. in the Albany Cultivator, than the extent to which barbed wire is coming into use for fencing, unless it be the way in which the theoretical objections to it are overthrown by use and experience. The best form of barbed wire is now found to be two strands of No. 12 steel wire, galvanized and twisted, with barbs four or five inches apart, weighing from 16 to 17 ounces to the rod, and costing 10 cents per pound in large lots, 10½ cents for moderate quantities, and 11 cents for a few pounds. A complete fence is now considered to be one of five wires, divided to suit the builder, fastened to white cedar posts standing four feet ont of the ground and one rod apart, and can be made by the mile at less than 75 cents per rod.

THE Bee-Keepers' Magazine says: "When putting bees into new hives, be sure there is no corner or crevice where a moth can hide and a bee cannot follow. We have seen movable comb-hives with the frames touching the side, so that worms may hatch in many places undisturbed by the bees. Such hives are perfect nurseries for the moth."

THE Colorado Inter-Ocean says it is a question whether Colorado will ever again be seriously inconvenienced by the grasshoppers. Irrigation and the black spider are doing the work of destruction so effectively that the "hopper" of the future will have to seek some more sequestered vale if she wishes to deposit her eggs in peace.

LOVE is said to re semble the butter on bread Without butter the bread is dry and hard to swallow. So it is with love and life. . . . . Some one tells us that if you said no yesterday and have repented, you can say yes-ter-day and heal the wound. . . . . A box of Isabella grapes was sent to the Elmira Club, (as stated in the Husbandman) May 20th with the following note:

TANSVILLE, N. Y., May 19, 1881.

I send the Club, by express, a specimen of Isabella grapes, kept until now by simply placing them in packing boxes with alternate layers of paper. We have grapes preserved in this way to use during the Winter as freely as apples.

The above seems to us a very valuable item. . . . . "Talk of the safety of a hornless bull! A bull whose entire head had been bred off would be still dangerous if his disposition prompted him to rush upon his owner with hostile intent, says Mr. Gilbert in the N. Y. Tribune. . . . . Be brief, says a writer in the Boston Transcript in his rules to correspondents. Why? Because people don't read long stories. The number of readers which any two articles have is inversely proportional to the square of their respective length. That is: a half-column article is read by four times as many people as one of double that length. . . . . L'Estrange says: So long as we stand boggling at imaginary evils let us never blame a horse for starting at a shadow." . . . . . A man must reap as he sows. In a broken natural law there is, as Shakespeare suggests, "no more mercy than there is milk in a male tiger." . . . . . Some of us, says the N. Y. Times, will live long enough to find out that our fathers knew something, too. One of the vices of the age is the habit of thinking that nothing is worth knowing that is more than two or three years old. And an old idea, or method, or thing is considered worthless unless some one patents it as a new device; then it takes wonderfully But this is all wrong. . . . . No one can live between brick walls and teach those in God's open country how to grow fruit, says Green's Fruit Recorder—or to farm successfully either, we might add. . . . . "A man with a small head is like a pin without any—very apt to get into things beyond his depth."

"Willie, you can't eat another dish of strawberries." "Yes, I can, ma; one more dish will just fill your Bill." . . . . . Mr. Chas. A. Green says that a Connecticut farmer, who set out an elaborate scarecrow in his strawberry patch, was disgusted to find that a pair of robins had built their nest and were raising their young under its hat. . . . . "Four things to cultivate: sympathy, cheerfulness, contentment and strawberries." . . . . . "What do colored people do at their funerals?" "They go blackberrying." . . . . . "Kissing your sweetheart," says a trifling young man, "is like eating strawberries from your neighbor's garden after dark—it takes a long time to get enough. . . . . Is a mushroom city builded with toads' tools?

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

POTEAU, Scott Co.—As a whole the outlook for crops is not as good as last year—too much rain. The acreage of corn is about the same as that of cotton—larger. No wheat, rye or barley. The acreage of oats is about the same as last year, and it bids fair for a good crop. The fruit crop is light and many trees are dying from the Winter's severity. J. C. B.

ROCKY COMFORT, Little River Co,—Wheat acreage very small and outlook not very good—say 10 to 15 bushels per acre. Oats a large acreage and fine yield—20 to 35 bushels per acre. Barley and rye none here to amount to anything. The prospect for corn is not so good as last year; acreage about the same. Orchard fruits are very nearly a failure owing to the late frost killing the young fruit. J. D. L.

WALNUT RIDGE, Lawrence Co.—No small grain raised in this part of the State. Corn is looking well although some of it will be late, as planting is going on now in mid-June. Cotton is not very promising; the weather has been too wet and cold although some patches are looking well—fully an average acreage. Very little small fruits. Plums are abundant; peaches a fair crop; apples a light one. T. W.

California.

BISHOP'S CREEK, Mono Co.—Grain acreage much more than ever before, and the outlook for wheat, barley and oats is more than usually flattering—wheat mostly Sonora. Our corn is farther advanced by two or three weeks than at the same date last year, with one-third more acreage. The country is new, with but few bearing orchards, but these are in fine condition and give promise of a good yield. The grass grown here is Alfalfa, yielding three crops in many instances. Our Winters are very favorable for stock raising, there not having been at any one time last Winter more than one inch of snow. Our mining interests never looked more favorable, furnishing a market at home for all we can produce. I. H. S.

DENTON, Denton Co.—Wheat, 75 per cent. of last year's acreage; yield per acre from 25 to 75 per cent.—Little Red May, Walker, Mediterranean and Boughton. Fultz promised splendidly, but proved late. Barley will yield only from seven to twenty bushels per acre; while a few fields of wheat will yield from 30 to 40 bushels. Rye will average about 15 bushels per acre. Oats are splendid, but the acreage is small as we had only poor crops for the last few years. The acreage under corn is about 25 per cent less than last year, and the yield per acre will vary from 70 to 20 per cent. less. Where well cultivated it promises a good crop; but two-thirds of it have received no attention and this will yield a poor crop. Small fruits, grapes excepted, are not successfully grown here; and fruit trees, peaches and plums excepted, do poorly. Ten days ago plums retailed at the stores here for twenty cents per quart. Now they are worth ten. Apricots, nectarines and the most early varieties of peaches are now ripe and ripening, and retail at 35 cents per dozen. Crop short. Cotton, our main crop, is overwhelmingly in the grass and lots of it irretrievably lost for lack of cultivation—cause, wet weather and scarcity of labor. Acreage 25 per cent. more than heretofore; but there will hardly be over 40 per cent. of a good crop. Millet—two varieties of German and one of Hungarian—is our best and only hay crop—acreage 50 per cent. more than usual; prospects 75 per cent. of a good yield. Early, good; late, a failure. J. H. J.

MT. EDEN, Alameda Co.—Chevalier and common barley looks very promising in this section. Some Chevalier will go as high as 40 centals per acre. Wheat showed rust, consequently it is mostly cut for hay. There are probably only about 300 acres planted to corn in the whole county, the largest area having been sown to Chevalier and common barley. The fruit crop is medium, for cherries, apricots, and apples. An abundant crop of pears, plums, peaches and nectarines, though reports from other places show some damage by night frosts. Small fruit, currants, raspberries, and blackberries are loaded. J. C. M.

SANDERS, Fresno Co.—I can see 12 000 acres of wheat from my farm; last year there were only 10,000 acres of wheat on the same area; 400 acres of barley—the same as last year. No

oats or rye raised. There are 500 acres of Doura, against 800 last year; 20 acres of Indian corn, against 12 acres last year. Yield will be 10 per cent. less than last year on dry land, irrigated land will equal last year's yield. Wheat on dry land will average 12 bushels per acre; on irrigated lands 50 bushels. Barley will yield 15 bushels on dry land and 50 bushels on irrigated lands. Indian corn, 15 or 20 bushels. Sanders is in the exact geographical center of our State. 'Tis 183 feet above the ocean level, in the "Great Valley" of California. We had 13 76 inches of rain last Winter. Have had no rain for two months now—nor will we have any more till November. The harvesting is about half done. I can see from the window by which I'm writing 13 headers at work. Each is run by from 12 to 16 horses (including teams hauling the grain) and cuts from 20 to 35 acres per day. Grain is already being thrashed and put upon the market. Wheat—Propo, Chili, Sonora (Red Mexican) Club and Australian; barley, common six-rowed; Doura, branching white; Indian corn, white and yellow dent. Doura will yield about the same as last year—from 25 to 100 bushels per acre. The crop of raisin grapes will be immense. Apricots are less than a half crop owing to late frosts. Peaches about two-thirds of a crop. Apples do.—for same reason. Peaches a full heavy crop. Nectarines a heavy crop—they always are; never fail. Too hot for currants or gooseberries. Strawberries, blackberries, and raspberries full heavy crops. W. A. S.

WATSONVILLE, Pajaro Valley, Santa Cruz Co.—The acreage of wheat in the counties of Santa Cruz, Monterey, San Luis and Santa Barbara is less this year than last, owing to wet weather at seeding time. The yield will be about one-half what it was last year and I think that is about the way it will average all over the State. The kinds we raise are Sonora, White Australia, Propo, Snowflake, Club and Odessa. The acreage of barley is larger than last year and is looking and yielding well. The oat crop is light but good. Corn about the same as last year, looking well. The apple crop is very light; in San Jose, one of our main apple sections, the crop is almost a failure—too many scale bugs. Cherries a large crop; peaches a good one. Apricots and plums fair. Small fruits big crops. J. A. B.

Canada.

INGERSOLL, Ontario Co.—Wheat acreage larger than last year; but under an average—Clawson and Fultz. Oats, peas and barley average crops. Corn poor; acreage double last year's. Hay a light crop. Apples under an average; small fruit prospect good. G. C.

MAITLAND, Ont.—Crops are looking grand. Fall-sown wheat is extra-fine. Hay, too is splendid. E. K.

Colorado.

DEER VALLEY, Arapahoe Co.—I am living at an altitude of 600 feet. The days are warm but the nights cool. The Winters are less severe than in the valley. I am located about 50 miles southwest of Denver, and about 60 miles east of Leadville. There are but few farms hereabouts; and while oats, wheat, rye, barley and peas all do well, they are raised mostly for feed. The mountains are more adapted for stock than for farming, and a large proportion of the grain is cut before it matures, to be used as fodder during the snow storms in Winter, and yet not one-half of the stock ever gets a mouthful of either hay or grain. Corn is not raised in the mountains, as the nights are too cool. It grows well in the valley in the vicinity of Denver. There are no orchards here yet. Some are trying small fruits with success. I have some which are looking very well. Potatoes are one of our best crops; I have raised them for several years; nothing seems to disturb them except grasshoppers and they will only eat potatoes when everything else is gone. The Colorado beetle I have never seen. All of the more hardy vegetables do well, such as beets, parsnips, turnips. The acreage under crops is hardly greater than it was last year, as the farmers are limited in land which is suitable for cultivation, and it is all sown every year. C. M. T.

FLORENCE, Fremont Co.—The area of wheat in this section is estimated at about five hundred acres; the average yield per acre is about 45 bushel; of oats about the same; no barley or rye. The prospects for corn are good, and the yield will be from ten to fifteen bushels per acre more than last year. The outlook for orchards and small fruit is also good, although not much of either is grown here, but a great many orchards were planted this Spring. J. C.

GOLDEN, Jefferson Co.—At least one-third more wheat was sown this year than last, and the prospect is good for a fair crop—White Siberian. A quarter more oats—black or mixed; outlook fair; very little rye; middling. Corn, ditto, ditto. S. B.

Dakota.

ALEXANDRIA, Hanson Co.—The acreage of wheat, barley and flax in this county is about ten per cent. greater this year than last, and that of oats about five per cent. The outlook for all is good for a full average yield per acre. The acreage of corn is about the same, but the prospect is better, because this year we planted on old ground and last year on sod, and the season being very dry the crop was not a good one. Vegetables grow very rapidly and luxuriantly. The country is still too newly settled for orchard or small fruits, but in the course of a few years I've no doubt there will be plenty of fruit grown here. H. B. H.

HILL CITY, Pennington Co.—This is not properly an agricultural section of the Black Hills. There are only about a dozen ranches within twelve miles of my place. I am situated in the heart of the best mining district in the southern hills. What crops are planted are looking splendid. But a small amount of wheat is sown. Oats, barley and potatoes are the chief productions, of which the increase is about double the amount put in last year—say 300 or 400 acres. No corn; this place is at too high an altitude. No orchards and no small fruits except wild raspberries and strawberries. Our ranches are situated on creeks, and are of a rich alluvial soil. Oats yield from 50 to 100 bushels per acre; barley from 30 to 60 bushels; potatoes from 200 to 400 bushels. Peas and almost all kinds of garden truck (except tomatoes, beans, cucumbers and melons) grow as well as in any part of the United States. C. H. W.

Florida.

LONGWOOD, Orange Co.—No wheat, barley or rye. In Winter some oats are sown for fodder, but very seldom for the seed. They would hardly pay cultivation. Generally rice is sown on low lands, and yields from 15 to 20 bushels per acre. Some corn is raised for home use, and it pays well on hummock lands. The average yield is from 45 to 50 bushels on hummocks and 10 to 15 bushels on pine lands. The acreage is one-third more than last year's. Market gardening was a success this year; the season was three weeks later than usual, but prices were high; the acreage was double that of last year. The prospects for the orange crop are very good; but we shall have few guavas, the frost having killed many bushes to the ground. Pomegranates, figs and grapes will pay very well. The White Elephant did well on my pine land. K. T.

TAMPA, Hillsborough Co.—Wheat, oats, barley, rye, etc., are not raised to any extent in our section. Experiments have thus far proved our soil ill adapted to their successful growth. Owing to a very unfavorable season the corn crop this year will be a failure; acreage increases with the yearly increase of settlement. Northern orchard and small fruits are not grown to any great extent with us. Of late years orchard fruits have been introduced, but as yet with no satisfactory results. Strawberries will do well in favored locations, but want of transportation will prevent their being cultivated for market for some time to come. J. A. J.

Kansas.

BAXTER SPRINGS, Cherokee Co.—An increased acreage was given to wheat last Fall, but a considerable part of it was winter-killed and the chinch bug has materially injured most fields—Black Sea or Mediterranean and Walker. Oat acreage small and outlook poor. Corn outlook is good; acreage somewhat above last year's, as many farmers plowed under fields of winter-killed wheat and planted corn. Apples a medium crop; peaches none; strawberries good; raspberries fair; blackberries mostly winter-killed; flax acreage pretty large and outlook good. L. T. S

VINE CREEK, Ottawa Co.—Not as much wheat sown as last year. As usual, most of what was sown is killed out. Of oats, barley and rye none is sown in this section. The prospect for corn is good; there is about 100 per cent. more planted than there was last year. There will be some small fruit; orchards are too young yet to bear. J. C. D.

Kentucky.

LONG RUN, Jefferson Co.—Acreage of wheat and oats greater than last year; wheat quite poor; oats, prospect good. Barley acreage greater; prospect fine. Rye acreage less, and prospect bad. Corn acreage about an average, and looking backward, owing to late Spring and bad seed; a great many had to plant a second or third time. Wheat principally Mediterranean and Fultz. The prospect for fruits is very good. J. L. G.

Michigan.

MANTON, Wexford Co.—Crops are looking very well except grass which will not be half a crop. Clover from new seeding, however, will be about two-thirds of a crop. Wheat well headed; rather short and thin; not as good as last year; acreage nearly double as much—mostly Clawson with a little Diehl. Oats look well; about one-third more sown than last year. Barley and rye but very little sown in this country. Prospect for corn is good; acreage about the same as last year. Orchard and small fruits are good, what there is. Ten years ago this was almost an unbroken wilderness, and as the G. R. and J. R. R. Co. owns every second section it keeps the country from settling up as fast as it otherwise would, but it is settling up very fast, nevertheless. D. C. C.

Mississippi.

BELMONT, Tishomingo Co.—Not one farmer in thirty sows any wheat. Oats are on the increase, 10 per cent. more having been sown this year than last; no rust as yet. Barley doesn't do well here. Only as much rye as wheat, because farmers do not know how to put it to use. The prospect for corn is exceedingly good—an increase of acreage over last year of about 30 per cent. The outlook for orchards is greatly on the increase. A great many orders were sent last Spring to the Nashville nurseries. Small fruits are altogether neglected. Corn and cotton are the main crops, though cotton of late is yielding to corn; farmers are getting tired of buying their meat and bread from the great Northwest. A. J. B.

Missouri.

CHILLICOTHE, Livingston Co.—Wheat badly winter-killed; corn, our main crop, like oats, grass and potatoes, is doing well. No barley and but little rye. Apples and small fruit not very promising. S. C.

Nebraska.

BEAVER CITY, Furnas Co.—A fair idea of our average crops in this whole section could not be given by comparing this year's with those of last, as all crops were then a failure on account of the drought, and half the settlers on that account left the country. Indeed none remained except those dwelling along the streams. Wheat now promises a large crop. Grass Wheat for both Winter and Spring with some Early May. Oats barley and rye are good, but little is grown from want of seed. The prospect for corn is good. Every farmer has planted from 10 to 100 acres where there was none at all last year. No fruit is to be found here yet, except the wild sorts of which there is plenty of currants, grapes and plums. C. E. S.

NEMAHA Co.—In this county Fall wheat is almost a failure. Spring wheat looks fair; the acreage will compare favorably with former years—White Missouri and Grass. Oats, rye and barley good; but not much sown. Corn looks well, but it is late, owing to heavy Spring rains; acreage 10 per cent. above any former year. Apples a light crop; peaches a failure; small fruits, fair. G. C.

OAKDALE, Antelope Co.—The acreage under small grains must be at least one-third more than last year's; outlook is good for wheat oats, barley and rye. Wheat, Grass; oats, common white, Norway and Surprise. The prospect for corn is very good; the acreage compared with last year's, is about twice as large. The prospect for orchard and small fruits is very good. All kinds of trees are growing very fast. J. B.

Texas.

BOSQUEVILLE, McLennan Co.—This section of Texas possesses the advantages of a good, healthful climate, productive lands, both timbered and prairie, abundance of fine water, and splendid mountain scenery. Railroads are penetrating the country from almost every direction. The acreage for wheat, oats and other small grains is the same as last year's. Harvesting finished and grain in fine condition; the yield, however, will be less than an average. The varieties of wheat generally sown are the Red May and Mediterranean and a little Tappahannock. The prospect for corn is very good; acreage about the same as last year's. This is a new country, and but little attention is given to the culture of fruits; apples and pears have usually failed; peaches, plums and grapes have given general satisfaction. A. Q. P.

PINE HILL, Rusk Co.—The acreage of corn compared with last year is about 102 to 105; crop well worked and doing finely; good stand; about as early as last year. Roasting ears will be beautiful by the Fourth of July. Oats about as last year in quality and quantity, harvesting commenced; wheat gets so little attention that it is not worth describing; but little grown. Barley sown only to graze stock. Rye about the same, though all but wheat do well here. Very few peaches in this county. A tolerable crop of apples—not good. Small fruits injured by frost. G. E. L.

Utah.

ST. GEORGE, Washington Co.—Strictly speaking, Southern Utah is not a grain-growing district, it is more suitable for fruits, hay, cotton, sorghum and garden truck. In fruits, we grow to great perfection *all* that are at home in the temperate zone, besides figs, almonds, pomegranates, and nearly all of the varieties of exotic grapes. Wheat, oats, barley and rye grow in perfection, and the area of wheat is usually large, and yields about an average of 25 bushels to the acre. The grain is of fine quality, but not enough is grown to supply home demand, and scarcely enough of oats and barley, as large quantities are required for feed in working the silver, copper, coal and iron mines—all the varieties best able to stand drought, and dry hot weather are chiefly used, such as "Club Head," "Taos" (Touse), etc. The prospects for a corn crop are good; the quick-ripening varieties are usually planted. Two crops a year are usually grown, unless it is planted after the wheat crop. The acreage of corn and small grains is much larger than last year, and the prospects of crops are far better, there having been a greater rainfall during the present season than during the last. The outlook for orchards and vineyards was never better than at this season. Berries and small fruits, however, are not grown to a great extent on account of scarcity of water and lack of humidity in the atmosphere. The chief products here are wine, Alfalfa (or Lucerne) hay, fruits, sorghum and honey, which are marketed in the mining regions, and cotton for the home factory. The dried peaches, prunes and grapes of Southern Utah are superior to those of most other regions and our pears are unexcelled. J. E. J.

Virginia.

RICHMOND, Henrico Co.—Wheat is a big crop; acreage larger than last year's. Winter oats is a poor crop; Spring oats is short but well filled; rye is good. The prospect for corn is good and the acreage is larger than last year's. Apples and small fruits plentiful; cherries ripe; apples getting ripe; currants and berries, ditto. Potatoes, both sweet and Irish, look well. Hay is a good crop here and is all cut, and so are wheat and oats. F. C.

Wisconsin.

GREEN BAY, Brown Co.—Growing crops look exceedingly well, and inspire the farmer with hopes of a bountiful harvest. In consequence of the failure of last year's wheat crop, on account of the ravages of the chinch bug and other insect pests, and the unfavorable weather, a less quantity of wheat was sown for this season. Winter wheat suffered considerably on account of the extremely cold weather in the fore part of Winter, without the protection of snow—White Russian, Silver Chaff and Clawson; Scottish Fife is almost exclusively used for Spring sowing. The acreage of rye and barley has been largely increased; outlook good. Corn also has an increased acreage, although it has never been a staple crop hereabouts. Grass looks well and promises a heavy hay crop. I have my first cut of Lucerne well cured and dry in barn. G. E. T. K.

The Querist.

ANSWERS TO CORRESPONDENTS.

Cotton Seed for Cows.

J. R., Lawrence, Texas, sends us a specimen of cotton seed and asks how much of it a day should be fed to each cow, and whether it could be considered cheap feed at seven cents per bushel of 32 pounds.

ANS.—The utilization of cotton seed is of the highest importance in all the cotton-growing States. This immense product very largely goes to waste, though, if well husbanded, it would do more to keep up the fertility of these States than all the commercial fertilizers purchased. Cotton-seed in its natural State, like the specimen sent, has two drawbacks—the short adhering cotton lint and the tough husk, rendering it less digestible, and yet it has a large value as a feeding stuff. If it is to be fed with its fiber and husk, it would be best ground with other grain—corn, oats, barley, rye or even wheat bran. It contains so much oil (30 per cent.) that it cannot be ground in an ordinary mill with a less proportion than four of corn or other grain to one of cotton seed. The proportion of oil is too great to be fed largely as a single food. If fed largely to milch cows, it would give a disagreeable flavor to the milk and butter. Not more than four pounds per day could properly be fed to a cow in milk. Decorticated cotton seed (seed with husk and lint taken off) is excellent food in moderate quantity, for cows in milk; and the decorticated cake, after the oil is expressed, is largely used by dairymen in some of the Eastern States—about four pounds per cow per day. Cotton seed is a highly nitrogenous food (in the raw State, 23 per cent., and in decorticated cake, 38 per cent. of albuminoids) and is thus well adapted to produce the caseine or nitrogenous part in milk. The raw seed has a much greater value for Winter feeding than our correspondent mentions (seven cents for 32 pounds); as a part of the food it is worth more than corn per weight. Its oil and muscle-forming matter render it very appropriate additional food to hay or corn fodder or even straw. It has sometimes been boiled to render the husk more digestible. When the seed, boiled or raw, is fed to cattle, it is well to mix it with cut hay or straw or other coarse fodder; but where straw-cutters are not used, spread a thin layer of hay or straw in the bottom of the manger, and then spread the seed upon this, and the animals will eat more or less hay with the seed, which renders the food more bulky in the stomach and therefore more digestible. At the price our correspondent mentions ($4 37 per ton) cotton seed would be a cheap application as a manure; 2,000 pounds of it contain

32 pounds of potash, 45 pounds of phosphoric acid, and 60 pounds of nitrogen. These are worth, at the lowest price sold in commercial fertilizers, $15. The manure made from a ton of it, after being fed to cattle, is worth much more than the seed costs at the above rate. This plain statement shows the need of reform in Southern husbandry to prevent great waste with this article.

Giant Powder as a Stump Extractor.

T. D. W., Little Welf, Wis., and several others elsewhere, ask a number of questions about the use of giant powder for blowing up stumps, etc., all of which are here answered.

ANS.—Giant powder and dynamite are two names for the same thing, a sort of silicious earth saturated with about three times its weight of glycerine, and resembling damp Graham flour. There is some danger attending its use, of course, but it is generally considered the safest of violent explosives. There are two kinds of powder, known as No. 1 and No. 2. The first is the more powerful, and is therefore used for heavy work; it costs $1 a pound. The second is the less powerful, but quite strong enough for blowing up stumps or blasting rocks on a farm; it sells for 50 cents a pound. The powder is furnished, either loose or put up in cartridges, in boxes of 25 or 50 pounds each. In appearance a cartridge is much like a candle. It is eight inches long and of any required thickness. All who wish to use the explosive, unless they are experts, should employ the cartridges only. They are made by one firm exclusively—so far as we know—the Atlantic Giant Powder Co., Varney & Doe, agents, 59 Park Place, this city. These agents do not supply private parties, mainly on account of the objections to transport it to a distance in smaller quantities than those mentioned. Should any one apply to them, however, they will send him the name of the nearest agent through whom a supply can be obtained. Full instructions for using it are furnished with each amount sold. The cartridges are exploded by caps made for the purpose, and these are ignited by means of a fuse. The caps cost $2 per box of 100; the fuse costs 75 cents per 100 feet. A pair of nippers—price 50 cents—are also handy. Whenever a considerable number of stumps or rocks are to be got rid of in any neighborhood, it would "pay" those who intend to blast them with giant powder to unite in hiring an expert to do the work.

Ducks.

M. G. H., Millerton, N. Y., asks, 1, the best way to raise ducks; the best for home use and market; what is the distinctive value of pure white ducks.

ANS.—We have found that to keep ducklings warm and dry till they are feathered is the best way to rear them safely. Then they will do well if they have access to water wherever this is convenient. To decide which breed is the best for the above purpose is no easy matter, for some people prefer one sort, and some another, and each prominent breed has its enthusiastic advocates. Some raisers of ducks are loud in their preference for the Rouen for table; others like the Aylesbury better. In our experience it has been impossible to tell one sort from the other when cooked where there was no foreknowledge about the matter. Probably no one could distinguish any difference in taste between them, if both were fattened and served up alike. The Aylesbury, Call and Pekin ducks are white. White ducks are preferred by many on account of their plumage, white feathers being preferred to those of other colors. Pekin ducks are very excellent layers, besides being very good table fowls.

The Seventeen-Year Locusts.

J. W. H., Paducah, Ky., says there are millions upon millions of the seventeen-year locusts thereabouts, and he asks how they are generated—do they produce eggs, and if so, after that, what.

ANS.—The seventeen-year locust (Cicada septendecim) lays its eggs in the bark of trees. They are about one-twelfth of an inch in length and of a pearl-white color. They hatch in about six weeks. The young cicada is very active and soon casts itself to the ground, in which it burrows down, and subsists on the exudations of rootlets. It has been found to the depth of 10 and 12 feet. According to Harris, it remains there until 17 years have elapsed, when it ascends to the surface. It then prepares to cast off its "old clothes," and by repeated exertions makes a longitudinal rent in its skin on the back, and the cicada becomes a winged insect. In about a fortnight after its final transformation it begins to lay eggs, and in about six weeks the generation ceases to exist.

A Curious Case.

G. H. P., Brooklyn, N. Y., says:—"I have a field in which I raised good millet when manured with phosphate; then I used barn-yard manure and got a good crop of wheat, but the grass seed did not "catch"—on account of dry weather, I suppose. Last Fall there was on it a good stand of rye, but grass seed "took" no better. In Spring clover was sown on it, and the field is now covered with sorrel. What is the difficulty, and what the remedy? Soil granite gravel."

ANS.—Such a case has never occurred in our experience. We have submitted the question to several excellent farmers, who agree essentially with Mr. Talcott, who writes as follows: "I submitted this case to the Central New York Farmers' Club at their last meeting. The Club decided that Mr. P.'s description was not full enough to give a definite answer; but they suggested that lime, ashes and salt be used as a corrector of the acidity in the soil; also that a dressing of clay (if to be had) would be beneficial in such a case."

Treatment of Bloated Steer.

W. H., Galt, Mich. has a three-year-old steer that bloats badly, especially on the left side. It has been wintered poorly; it is a good feeder and our friend asks how to treat it.

ANS.—Cows and oxen always bloat most on the left side as the paunch lies there. Bloating is caused by indigestion and indigestion may be caused by poor feeding or over-feeding. To remove the trouble give the steer a pint of linseed oil and repeat if necessary to clear out the bowels. Then give every day a tablespoonful of salt, with half as much carbonate of soda and a teaspoonful of ginger mixed together. After a few days, the mixture may be given twice a week and after some time longer, give it every week, or as long as the steer shows any symptons of indigestion.

Corn Bran for Feed.

J. M. Selma, Ala., asks how much corn bran should be fed daily to milch cows together with other feed. He is now feeding about four-quarters of corn bran, a pint and a half of cotton-seed meal, and one quart of corn meal to each cow every day in two meals, but they are getting rather too fat for milch cows.

ANS.—Four quarts of corn bran and one pint and a half of cotton seed meal will be ample daily feeding for a cow, without any corn meal. The corn bran contains the oily part of the grain, with most of the nitrogen, and when fed with cotton-seed meal it makes a very fattening food, as well as a very healthful one. To reduce its fattening tendency a quart of wheat bran might be substituted for one quart of the corn bran.

Quack Seed Wanted.

J. G. Livingstone, Lewis, N. Y., says: "I have just seen an article in the RURAL about Quack Grass (Triticum repens). I want two sacks or bags of the seed. I want it for sandy land because its roots are so tenacious and wide-spreading that it will not let our strong winds blow the soil away. I do not know whether any seed store keeps, or whether any one ever saves the seed for sale. If any man will send me two bags of it I will send him the money by return mail, at the price of Timothy seed."

How Can Irish Potatoes be Kept in the South?

"*Buckle*," *Stormville, Miss.*, asks the above conundrum, and some of our Southern readers would oblige us by answering it through our columns.

Miscellaneous.

C. D., Mt. Cisco, N. Y., asks, 1, whether the Agricultural Reports are furnished gratis; 2, how to obtain information about the fitness for farming of the eastern slope of the Blue Ridge, N. C.; 3, what is a reliable work on dairying and dairy cows.

ANS.—1. We suppose the Reports of the U. S. Department of Agriculture are referred to: these are furnished *gratis* through members of the United States Senate or House, to whom application should be made, each applicant addressing either the Senator of his State or the representative of his district. 2, Write to the Secretary of the State Board of Agriculture, Raleigh, N. C. The best work on dairying and dairy cows is Dairy Farming by Prof. J. P. Sheldon, now being published in monthly numbers—price 40c. each—by Cassell, Petter, Galpin & Co., 596 Broadway, this city. The 19th number of this splendid work has already been issued, and it will probably be completed in about half a dozen more. Willard's Practical Dairy Husbandry, $3, is also a good work—to be had through the American News Co., this city.

R. M. T., Philippi, W. Va., 1, having found some wild strawberry vines that produce berries an inch in diameter, asks when should he transplant them to the garden with a view of cultivating them so as possibly to obtain a valuable new variety. 2, He has some specimens of the Yucca filamentosa planted in April 1880, and now five feet high and still growing, and he asks whether it is a common thing for the plant to grow so tall.

ANS.—The wild plants which bear berries an inch in diameter should be transplanted to the garden, say in August or next Spring. They may prove worthy of cultivation. 2. Unless you have reference to the flower stalk, no; otherwise yes, and taller. In previous seed distributions the RURAL sent out seeds of this fine plant.

B. F. T. & Co., Humboldt, Miss., have a clover field which was plowed under last August with the intention of planting it to corn last Spring; but there was then so fine a stand of young clover that it was thought best not to put in the corn. Weeds, however, came up nearly as vigorously as the clover, and as they, if not cut, would be in the way of next year's crop and damage the hay, they will be mowed down to prevent this and give the hay a better chance, and right here comes in the question which is referred to us:—Junior says, "Rake them up and take them off;" Senior says, "Let them lie as a mulch to protect the clover, should a drought come."

ANS.—Cut before maturing seeds, we should by all means let the weeds remain.

E B, Austinburg, O, has a three-quarter-inch lead pipe from a spring to a trough 12 rods away. In Summer the water often stops running, but when once it is started in the Fall it keeps on running right along all through Winter, though the water in the Spring is the same hight all the time, and we are asked for the cause of the Summer stoppage, and whether an inch pipe would be likely to prove more regularly accommodating.

ANS.—It may be that the Summer vegetation—leaves, flowers, stems, etc. that collect upon the surface water of the Spring—obstructs the pipe. When cleared in the Fall this possible cause no longer exists. A one-inch pipe would be less liable to be obstructed.

R. S M, West Spring Creek, Pa., incloses two thread-like worms which he found when plowing greensward, and wishes to know what they are.

ANS.—They are the so-called hair-snakes or hair-worms. These entozoans are all parasites upon insects in one form or another. Some species are first parasitic upon aquatic larvæ; then live in the stomachs of fishes and, later, in some unexplained way, make their way into land insects. They leave their hosts to lay their eggs, and in this free state are often found. It is probable that some species undergo their entire transformation on land.

S W. P. Madrid, N. Y. says: "I send by mail specimens of a worm which is making great havoc in pastures. It somewhat resembles the Army worm. The roots of the grass are not injured, but the grass is cut off close to the ground. Can you tell me what it is?"

ANS.—The specimens did not arrive; but from the description we should pronounce it the Bronzy Cut-worm, the larva of Nephelodes violans. The worm is striped and of a bronze color when full-grown. It will probably not prove as injurious as the Army-worm.

E. H L, Homer, N. Y., asks, which is the colder—the arctic or antarctic region.

ANS.—Appleton's Cyclopædia—a good authority—under the heading Polar Seas, and subheading, Antarctic Ocean, in speaking of the antarctic region, says: "With regard to the climate, observations, deficient as they are, still point conclusively to the fact that the Winters are milder and the Summers cooler than in the North polar regions, thus indicating a more maratime climate caused by a less amount of land." We see no reason for disagreeing with Appleton's.

W. B. K, Abingdon, Va, sends a couple of samples of minerals to find out whether they are valuable.

ANS.—The larger greenish sample is chlorite—of no value. The small light-colored sample, wrapped in newspaper, contains considerable *gold* and would indicate the proximity of rich deposits. We would advise our correspondent to have an assay made of this mineral, for which a sample weighing three or four ounces would be needed. A. R. Ledoux & Co., chemists and assayers, 17 Cedar Street, this city, are a trustworthy firm who do that sort of business.

F. C. W., Orion, Ill, wishes to know if the Persian Insect Powder is poisonous to animals; 2, how shall he apply it.

ANS.—1, It is not. Therein it has an advantage over Paris-green or London-purple. When breathed it is no more disagreeable than any vegetable dust. 2. Mix with flour in the proportion of one part of the pyrethrum to 20 parts of flour or a tablespoonful of the powder in one gallon of water will prove effective. The point is to bring the poison in contact with the insect when a very little of it will do the work.

A Subscriber, Blackstone, Mass., asks what makes his half-grown cherries drop off the trees; there is no visible worm; the trees appear healthy, and made 18 inches of new wood this Spring.

ANS.—We have observed that after a full-bearing year cherries may bloom and set well the next year, but the fruit falls off before maturity. Too much rain or too much dry weather may cause the trouble.

G. C., Blandford, Mass., asks whether, under favorable conditions, the Rural Branching Sorghum will ripen seed in that latitude—about 43 deg.

ANS.—Probably not. This is not material, however, so few seeds suffice for an acre that, as seeds mature abundantly in many parts of the country, the price of enough of them for ordinary purposes is a mere trifle not worth considering.

F S L., Smithfield, Va., asks, 1, where can the Beauty of Hebron Potato be had, 2, when to sow Bermuda Grass.

ANS.—1, The Beauty of Hebron was introduced by the RURAL NEW-YORKER and is for sale by all seedsmen. 2 Bermuda Grass does not seed in this country. Cuttings of the roots are usually made in Spring, spread over the ground and dug or harrowed in.

J. S, Greenville, Pa., asks, 1, for directions for training a shepherd dog to drive cows; what set of words should be used; 2, are kidney pads of any benefit.

ANS.—We could not give such instructions very well. One set of words is just as good as another. It is quite conventional. We know nothing about the kidney pads.

H. B, Jonesville, Mich., asks where the Westcott's Return Butter Pail is made.

ANS.—It used to be made by Silsby and Karns, Belmont, N Y, but it seems to have been too high-priced; for after conducting the business several years, they abandoned it as unprofitable. We do not know whether it is or is not manufactured anywhere now.

G B, Adamsville, R I, asks how to cross two varieties of corn.

ANS.—As good a way as any is merely to cut out the tassels of one kind so soon as they appear. Then the silk (pistils) will receive the tassel dust (pollen) from the other kind. Of course, the two kinds must bloom simultaneously.

G W S, Patchogue, L I., asks how to get rid of the apple tree aphis and the pear tree slug.

ANS.—A syringing with tobacco water, whale-oil soap or Paris-green will kill the aphis. For slugs, add a little plaster to very fine coal ashes, and when there is no wind throw this *up* into the tree so that it will settle upon both the under and upper sides of the leaves. It *must* be dry.

J P. C., Union Co., Pa. asks the best way to kill Canada thistles.

ANS.—If the patch is small one can afford to give the time necessary to their complete extermination. Wait until they are in bloom. Then cut them down and dig up the roots thoroughly. Some plants will again appear; dig these up at once.

"*Sub*", *Cave Spring, Ga.*, asks what to do for the blight that has befallen his roses, owing doubtless to the severity of last Winter—abundant blooms but none perfect.

ANS.—We should rather attribute this to too much wood or rather to an impoverished soil than to the cold of the past Winter.

J. W. B, Barre, Mass., having his pastures injured by a curled fern, locally called "Pod," asks how to kill the pest which has a strong hold on life.

ANS.—It is the common Polypod—Polypodium vulgare—we presume. Plowing and cultivating will subdue it.

R. W. E., Riley Center, Kan, sends for name a head of grass which he takes for June Grass.

ANS.—No, it is Orchard Grass—Dactylis glomerata—one of the most valuable and widely known of all the pasture grasses.

G M. T., Factory Point, Vt, asks whether the R. B. Sorghum should be cut before it seeds.

ANS.—It will not seed in Vermont at all. It is best to cut it when four or five feet high and let it continue to grow.

L R. McA, Lynn, N. C., sends a specimen of grass and asks "What is it?"

ANS.—It is the common Canary Grass—Phalaris canariensis. It is cultivated for the seed for canary birds.

H. N. P, Walton, N. Y., asks how to apply land plaster to corn.

ANS.—We should sow the plaster the same as any concentrated fertilizer—then cultivate.

G. W. H. North Sanford. N. Y., asks where can he get parts of the Clipper Mower.

ANS.—From the Clipper Mower Co., Keene, N. H.

W. E. W., Cornwall, Vt., wants a remedy for grubs that are injuring grass at the roots.

ANS.—We do not know of any, unless to plow it up.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JUNE 25.

B. F. C.—J. W. M.—W. H. R.—F. M.—T. R.—A. M. P.—M. J. W.—M. M. McK.—J. D K.—F. B.—J. W. E.—S. V. R. G.—E. O. T.—J. S. G;—J. B.—S. S. D.—H. F.—J D. D.—H. A.—E. R. W.—H. B. H.—J. G.—C. E. P.—R. W. F.—R. L. M.—E. B. D.—D. B C.—S. B.—L.—B.—D. M. L.—G. P.—C. V.—C. E. R.—E. C.—S. R.—D. W.—W. B.—R.—B.—J. P. H.—C. C. B.—H. B.—R. M. L.—W. Y. M.—W. P. D.—Coe Brothers.—D. S. M., thanks.—W. W. Clason, thanks for Buffalo Peas.—P. M. A.—M. C. W.—P. B. M.—R. W. F.—W. B. H.—"Edgerton."

There are also about 1,200 other contributions to our crop reports, the receipt of which is hereby thankfully acknowledged.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, JULY 2, 1881.

THE most profitable method of rearing cattle is to give them all the food they can digest well from their birth up to the day of their slaughter, if reared for bullocks. But if for making oxen and bulls and cows for breeding, then feed no more than to keep them in prime working and breeding condition. An ox may be too fat or too poor for good work, and so may a bull to get first-rate offspring or a cow to do well in the dairy or as a breeder.

THERE is one promise we made to our subscribers in connection with the seed distribution that we did not keep. It was to send off the seeds in the order in which the applications were received. For this we apologize to our readers, many of whom have justly complained of neglect. Those who first come should be first served, and we shall endeavor to make the promise good in our next distribution at least, which, beyond asking forgiveness, is the best we can do. The kinds for our next Distribution are already nearly settled upon, and we have reason to hope will please our friends better than any of our previous efforts in this direction. Most of the kinds are now growing at the Rural Farm, so that there will be less chance of delay and disappointment.

TO REGULATE THE BEARING OF APPLE TREES.—This is a perennial subject of discussion, but no suggestion in regard to it has ever been made practical except the one which dictates careful attendance and the moderate annual pruning of the trees, with high fertilization of the soil. All the famously productive apple trees on record have stood in a rich soil, moist, but not wet. Careful pruning, manuring and mulching will, as nearly as possible, secure good annual crops from apple trees of any variety worthy of cultivation. Under this system a small orchard of William's Favorite near Boston is the chief support of a family. Thirty-eight trees of Fameuse in a city lot of about half an acre in Montreal, produced, in 1879, fruit that sold for $800, and the crop is rarely much less. These facts point to the remedy for the shy or intermittent bearing when the variety is naturally productive.

THE GOOSE FISH.—The ichthyophagists (short for fish-eaters) reveled in luxuries of razor clams, horse-shoe crabs, water-snakes and other delicious tidbits at Starin's Glen Island on the 26th. An especial feature of this ichthyophagous lunch was the goose-fish, one of the ugliest living things ever modeled by nature, yet a delicacy in which the ichthyophagists especially delight. It is a large fish, some four or five feet in length and weighs sometimes 75 pounds, but it is none too large for the name it bears. Cuvier called it *Pectorales pediculati*, an acanthopterous fish of the lophoid family, but "common folks" call it simply goose-fish, sea-devil or wide-gab. The latter name is most applicable if we consider that entire sea-fowls, such as gulls and ducks, have been found within its "bosom." We hope the "thing" can be appreciated by some one—we prefer *shad*.

CROPS.—From the great number of "crop reports" received from our kind friends during the past week, we present elsewhere to our readers a few specimens mainly from those parts of the country that were unrepresented in our regular Crop Number of last week. Neither these nor the many others we have since read, however, make any material difference in our expressed estimate of the approaching harvest; for in it we made considerable allowance for the beneficial effects of the late rains. From all reports the advantages from these have been very great to the growing grain and grass crops, especially in the Spring wheat region of the Northwest, whence glowing accounts of the outlook for harvest are now promising a yield per acre even larger than that of last year, but it is not denied that the aggregate acreage is less. The outlook for corn, however, has decidedly improved.

PRESSURE FOR ENSILAGE IN SILOS.—One matter of inconvenience in ensilage is the loading down of the ensilage with heavy stones or other weights which necessitate a great amount of hard labor. It has seemed to us that some device for giving the required pressure might be originated which would do away with the stone weight system, and we understand that Mr. George T. Powell, of Ghent, N. Y., is about to make the trial with screw-power. In the long walls of the silo eight one-and-a-half-inch iron screws have been built, each having a thread four feet in length and furnished with a suitable nut. The ensilage will be first covered with planks, across which, and parallel to the long walls, two or more timbers will be placed, and at right angles with these, timbers with holes near the ends, for receiving the iron rods mentioned, will be screwed down far enough to furnish the required amount of pressure. How the device will succeed remains to be seen; at any rate we do not predict failure.

WATERING HORSES.—One thing in the treatment of work-horses in hot weather we are disposed to deprecate, viz.: the custom of watering them three times a day and no more. It is simply cruelty on the part of man towards his beast, to compel the team to plow or mow from early morning until noon, or from noon until night without allowing it the privilege of a refreshing draught. It *is* inconvenient, many times, to water the team during the forenoon or afternoon, and we are apt to think the time thus taken, lost, but when the farmers' millennium comes, there will probably be drinking troughs in every field, supplied from some elevated spring or from a running stream. In the meanwhile, time "lost" in doing good, even though it be in behalf of the dumb animals, is well "lost"—it may be regained. Could they speak it might be to say that they would like to be treated, in the matter of *times* for food and drink, somewhat as we—their wise masters—are accustomed to treat ourselves.

IMPROVED BUCKWHEAT.

IT is said, in Christy's New Commercial Plants, that the Tartarian Wheat (Polygonum Tartaricum) ripens more quickly, has a hardier habit, and is less liable to suffer from the inclemency of cold summers, or of mountainous exposed districts, than the common buckwheat (Polygonum Fagopyrum), and when grown as forage, is also more productive and more nutritious. It also flourishes on poor, or badly prepared, or light, sandy soils. It produces more foliage, larger seeds, and agrees better with animals fed on it, than the ordinary kind. It can also be sown both earlier and later in the season than the common buckwheat. It largely increases the flow, and adds to the richness of cows' milk; while it fattens pigs and poultry of all kinds rapidly, and imparts to the latter when served up on the table, a delicious flavor. When fattened on this, mixed, half and half, with some other grain, a few days previous to killing, poultry always brings an extra price.

We wish our seedsmen would import some of this Tartarian Buckwheat, and disseminate it over the country, as it would be particularly valuable to cultivate on the poor, sandy soils of our seacoast, in mountainous districts, and the more northern latitudes of America, where the seasons are short and precarious.

FRANCE AND ITALY.

THE present diplomatic relations between France and Italy are greatly strained; and should war not immediately result from the hostile feeling it will be mainly due to the consciousness of Italian statesmen that unaided Italy cannot hope for success in a struggle with her formidable neighbor. The latter's occupation of Tunis, despite the machinations and protests of the former, has bitterly exasperated the public sentiment of the entire Peninsula, and already the government has had to take measures for suppressing turbulent public manifestations of hostility. Although both belong to what is called the "Latin" race, it is doubtful whether there are any other two countries now in Europe, or indeed on the globe, whose sentiments are so mutually inimical as those of these two rivals on the Mediterranean. Frenchmen may hate the Germans as heartily, but this hate is tempered with a dash of fear or respect, whereas their hatred of Italy, which owes its existence as a nation to French arms and which ungratefully went against France in the hour of her distress, is embittered with contempt. Italians, too, may hate Austria, their old-time oppressor, as fiercely, but from Austria they have nothing at present to deprecate or dread, whereas France has just humbled their pride and is still threatening their influence by the virtual annexation of Tunis. In Great Britain and Germany where public sentiment is moderate in its expression, war is the result of government deliberation and decision; but in ardent Italy there seems considerable danger that the popular exasperation may force the government into hostile action. In any event, the danger of a European conflagration has shifted from Turkey to Italy.

THE RURAL'S EXPERIMENT CORN CROP.

QUITE a number of our good readers and friends condole with us that our main field of corn (that of which a diagram was given in a late number) is likely to prove a comparative failure. But we are scarcely entitled to any sympathy. If the results of experiments were known before they were tried, there would be little use in trying them. Experiments which are far removed from ordinary methods imply risk, and we look for failure oftener than for success, though as we have before shown, success is sometimes met with when least expected. We knew that the soil of that field was very poor; that the "sod" to be plowed under was hardly entitled to the name; we knew, in short, that we had to depend in the main upon superior cultivation for our crop of corn. It is unfortunate that the season has been so exceptionally unfavorable, for many will be unwilling to concede to thorough cultivation the half of what it is richly entitled to.

Our manured plots of corn elsewhere on the farm are looking well for the season, though in them the stand is bad and we have no expectation of anything like the yields of last year.

The plots (one-twentieth of an acre each) in the unmanured field, upon which were used different kinds of concentrated fertilizers, show a marked difference in the size and color of the plants. One of the experiments in this field to which we look with interest is, whether the acre manured with 600 lbs. of special fertilizers will yield enough more grain than the rest of the field to pay for its extra cost. The stand is, in this acre, no better than in other parts of the field, so that the use of chemical fertilizers sown broadcast and harrowed in, has little effect to insure a better stand. Had it been *drilled* in, possibly it might have been otherwise. Our implement manufacturers should devise a machine that would drop a kernel of corn every three inches and sow concentrated fertilizers at the same time.

CROPS IN EUROPE.

WHOEVER has watched the late European cablegrams concerning the condition of the crops must be convinced that the greater part of them embody mere rumors circulated by speculators, principally on this side of water, to raise or depress prices in the interest of their own schemes. The only way to determine the degree of credit that should be accorded these announcements is to compare them with the regular weekly crop reports published in European agricultural papers. True, these usually reach this side of the Atlantic from ten to fourteen days later than the cablegrams, but as it is highly improbable that any very material injury or benefit should occur to crops generally in that interval, when any great difference is reported, it is safer to trust the agricultural papers, which are nearly always honest, than the cablegrams, which are often "meant to deceive." From a careful study of all attainable reliable sources of late information, we have come to the conclusion that Europe this year will be more nearly self-supporting than it has been at any time since the recent enormous increase in the production and exportation of American cereals. Although the production of breadstuffs in the United Kingdom will not be as great as it was before the present era of agricultural depression, yet it seems now certain that the harvest there will be at least moderately good. The latest reports, both by mail and cable, while still speaking despondently of the agricultural condition as a whole, give strong assurance of a condition of crops less unsatisfactory than at the corresponding season within the last five years.

The present condition of the growing wheat in France, according to the latest received issue of the *Semaine Agricole*, is admirable and still later cablegrams confirm the statement. For the first time since America began to supply the deficiency of French crops, there is a fair prospect that France will produce more than enough of wheat to supply domestic consumption, and all other crops, too, seem to be doing fairly.

In Germany the wheat and rye crops are likely to turn out an average, and the latest advices, both telegraphic and mail, from Austria-Hungary, the Spanish Peninsula, Italy, Switzerland, Bulgaria and Roumania, all speak in enthusiastic or hopeful terms of the outlook for the harvest. Of all European countries, however, the prospect in Russia seems the most favorable. Reports from Odessa, Taganrog, Sebastopol, Nicalaieff and Carkow, all unite in prophesying a better wheat crop in Southern Russia this year than in the last twenty. Some time must yet elapse before the European harvest, however splendid, can come into market, and the needs of the various countries must until then, be supplied mainly from this country. It is therefore not improbable that the coming harvest has assumed a brighter hue both from contrast with the late gloomy ones and from a not unnatural desire to lower the prices of the breadstuffs that may be wanted from abroad before the days of plenty, by showing how slight will be the demand for any foreign surplus when once the home harvest has been gathered. After having made all reasonable deductions, however, on the score of exaggeration, it seems highly probable that almost the only European market for our surplus breadstuffs next Fall and Winter, will be in the United Kingdom, and while the need of foreign supplies will be somewhat less there than last year, the competition between foreign surpluses from Russia, Egypt, India, Australia, New Zealand, South America, the United States and Canada, will be keener than ever before.

BREVITIES.

IN Osceola, Mich., a frost occurred on the 21st and 22d ult. It did little damage our correspondent informs us.

AND yet again:

DEAR RURAL: I received the Charter Oak Plow you sent us as a mangel premium, all right. Please accept my sincere thanks for the same. Yours, truly.

Maitland, Ontario. EDWIN KEELER.

THE wheat crop of the United States for 1879, according to the report of the Department of Agriculture, was 448,756,630 bushels grown on 32,545,950 acres, whereas, according to the late census, it was 459,591,093 bushels, grown on 35,487,065 acres—an increase of 10,834,463 bushels and 2,941,115 acres.

MANY extremely interesting reports have been received from our readers in various parts of the country for which we shall be unable to find space. We thank them all the same; beg their indulgence and ask them to favor us occasionally in the future. We would say also to our regular contributors that it is beyond our control that the Special RURAL NEW-YORKERS should interfere with the timely presentation of their articles.

RUBBING the muzzle with Barbadoes tar has proved an effectual preventive against foot-and-month disease in cattle in every instance reported on lately in England. This is a very cheap and simple remedy, and we hope whenever cattle may be thus affected in our own country it will be tried. We know that common tar applied to the nostrils of sheep keeps off the destructive gad fly (Œstris ovis); it is also beneficial for various ailments, applied alone or mixed with sulphur.

MR. LANGSTER died the other day—Mr. Langster, originator of Langster's No. 1 Pea, better known as Daniel O'Rourke. It is now 29 years ago since he entered the pea for trial at Chiswick, in 1852. That year the celebrated race-horse Daniel O'Rourke won the Derby, and in commemoration of the event Mr. Langster gave the name of the winning horse to Langster's No. 1. Since then this excellent pea and its dark green, vigorous vine have become highly prized on both sides of the Atlantic, while few have known even the name of its originator.

A GREAT PROFIT IN THE PURCHASE OF A HIGH-PRICED SHORT-HORN BULL.—At a luncheon preceding the Siddington sale of Short-horn cattle in England, Lord Fitzhardinge, who presided, alluding to his purchase a few years ago of a Short-horn bull for 4,500 guineas ($22,500), said people thought he was a fool for doing so; but he was happy to add that up to last year in sales and services the animal had earned him 7,000 guineas ($35,000), besides getting him stock which the exhibits from Berkley Cattle Farm (his residence) showed had never been beaten.

REDUCTION OF LETTER POSTAGE.—The Postmaster-General is doing a commendable work, and the country is to be congratulated on having so efficient an officer in that place; but if he wants to strike the chord that "makes the whole world kin" he will use his best energies to secure a two-cent or even one-cent letter postage. If a postal card can be delivered for one cent, a letter can be for two, and that, too, to any part of the United States. There is a growing public demand for such a change, and we predict that it will come to pass in the no distant future. If the Postmaster-General succeeds in reducing the cost of the postal service a million of dollars by July 1st, as he expects to do, it will be a long step toward other needed reforms, among which the reduction of postage may be reckoned.

Miscellaneous.

RURAL BRIEFLETS.

THE following comes to us from a friend near Memphis, Tenn. We have examined the flower spikes but do not find any seed: "Inclosed please find some Bermuda grass seed plucked in my yard. I see the matter discussed in your paper, whether or not it bears seed. Cattle like it better for pasture than anything else—they will even quit the clover field and go to the Bermuda. There is no way of killing it except to plow it up in Winter. It will destroy anything in the way of crops, as it runs over anything, and I have seen it destroy small shrubs or rose bushes when it was permitted to grow near them."....

MR. CHARLES DOWNING says of the Bidwell that it is the most productive of all—he was examining Mr. Roe's 100 varieties—of very fine flavor, very uniform in shape, averaging large to the last, of a bright glossy crimson color often with a glazed neck, and in shape much like an inverted bell-shaped pear; as early as the Duchess; flesh solid and meaty. This is high praise from a high source.....

MR. ROE kindly sent us a fine plant of the Bidwell strawberry in a pot. The whole number of berries on this plant was 110. Twelve were fully ripe, seven turning and 91 green. Five were large, seven an average size, and the rest smaller,.....

ROSE bugs are best exterminated by hand-picking. It is a good plan to carry in one hand a can of water and kerosene and throw the pests into it as fast as picked; or the can may be held under the Rose bugs where the branches admit of it, and a slight tap will cause them to fall. Our grape blossoms usually escape the ravage of this insect for the reason that there are so many plants blooming at about the same time, which they much prefer—Spiræas sorbifolia and opulifolia, and also some of the herbaceous spiræas.....

A FRIEND writing from Stormville, Mississippi, says; "The seeds distributed by you last Spring—the Elephant Potato, Rural Branching Sorghum, etc.—I have taken personal care of, and they are all in fine growing condition; but I cannot report on anything except the Sorghum, which is up to your representations and as pretty as a picture, three feet high and averaging about ten stalks to the seed. I had only about a dozen seeds to come up. The potatoes seem to be doing splendidly. I am unable to say whether they are making well or not, not having tried them."....

THE general opinion is that in breeding, especially in the case of horses, the male gives the locomotive system and the female the vital one.....

IN 1770 a hornless bull was produced spontaneously in Paraguay, South America, and this has become the progenitor of a polled breed that has multiplied extensively in that country.....

IN cattle small bones indicate good feeding qualities, early maturity and fine-grained flesh; while coarse, large bones, with prominent joints and angular projections, indicate poor feeding quality, late maturity, and coarse flesh, together with a large proportion of offal and cheap pieces in the carcass. An excessive refinement of bones, however, indicates a delicacy and over-refinement of the whole system. The parts of the body not deeply covered with flesh, such as the head, legs, tail, horns, and hoofs, furnish the best indications of the size, texture and proportions of the bones on the rest of the body.....

THE tendency to lay on fat rapidly and to mature early is inherited not only in a general way by such breeds as the Short-horn, Hereford, Polled Angus and Devon, but also in a special way by certain families in each of these breeds; and the predisposition to obesity is observed to be so strong in some cases as to be developed under privation and hard labor.....

BOOKS, CATALOGUES, ETC.,

PROSPECTUS OF AMHERST COLLEGE SUMMER SCHOOL OF LANGUAGES.—The next session begins July 12 and ends August 19, and is in charge of Professor Sauver. The so-called National method of teaching the languages consists in teaching wholly through the medium of the language itself. Though this may seem impossible with beginners it is a practical fact and worthy of the attention of all who teach the modern languages. In order to afford an opportunity to study by this method. Amherst College allows Professor Sauver the free use of its buildings for the Summer session of this school. Last Summer there were 200 students in attendance, representing 21 different States.

SEEDLESS FRUITS. By E. Lewis Sturtevant, M. D., South Framingham, Mass. From the Transactions of the Mass. Hort. Society, part 1, 1880.

The object of this essay—29 pages—seems to be to show that the cultivation of plants tends towards seedlessness. It reminds us much of Mr. Darwin's style of accumulating facts and deducing conclusions therefrom.

Entomological.

THE MELON WORM.

THE Melon Worm (Phakellura hyalinatalis) is about an inch and a quarter in length when mature, of a light yellowish-green color, and nearly translucent. The moth is remarkable for its beauty, its wings being pearly-white bordered with a narrow band of black, its legs and body white and the abdomen terminated with a feather-like tuft tipped with white and black. In the accompanying illustration, Fig. 320, the chrysalis, worm and moth are shown. This worm belongs to the same genus as the Pickle Worm (Phakellura nitidalis), the moth of the latter differing from that of the former in having the ground-work of the wings a bronze-yellow and the black border a little broader.

FIG. 320.

The Melon Worm is proving to be, in many parts of the country, a most destructive enemy to melons, cucumbers, pumpkins and other cucurbitaceous plants. It goes to work in an exceedingly business-like way, making skeletons of the plant leaves or excavating numerous cavities in the fruit when it appears. Sometimes it forces its way into the melon until out of sight, though more frequently it makes a shallow cavity an eighth of an inch or more in depth, and in this pursues its work.

Efficient remedies for this pest are still wanting. Paris-green and London-purple would probably prove effective, but it is not safe to use these on account of their liability to poison those who eat the fruit. Pyrethrum, or Persian Insect Powder, might prove as effective in ridding the plants of the worms, and it has the advantage of being entirely harmless to human beings. Whatever poison is used, it should be applied to both foliage and fruit, inasmuch as the destruction of the former will prevent the latter from coming to maturity. Early planting, so that the fruit may be picked early, or before the most destructive brood appears, is a preventive, and if the worms be destroyed on their first appearance on the foliage before the fruit begins to form, there will be much less danger to the fruit crop.

Fighting Army Worms.

These pests, so destructive to crops, are very hard to destroy. I have tried two plans which, with a little care, can be used with safety to the crops anywhere. The first and best is to dig a ditch six or eight inches deep, taking care that the "straight" side is next to the field to be protected, and, if possible, making it incline a little over the ditch, so that the pests will not be able to climb it. When the worms get into this ditch, which should be the length of the field, or, if necessary, all around it, I turn in my hogs which quickly destroy them, preferring them to the growing crop. The other plan is to throw a ridge of dirt together; this can be easily done with a plow; then with a rake make it as fine as possible. The worms find great difficulty in getting over this if the soil is very finely pulverized. A little care in going over the outer rows of corn and killing the few that may have succeeded in getting up the wall of the ditch or over the ridge, will soon rid the field of the pest. I have tried both plans and prefer—where it is practicable—to dig the ditch as being the safest and surest. N. J. SHEPHERD.

Miller Co., Mo.

A REMEDY FOR THE "STRIPED BUG."—W. L. R. writes us from Upperville, Va., that he has found an excellent plan for ridding his cucumber and melon vines of the striped bug. It is simply the free use of the hoe around the hills and among the vines. As soon as the pests are discovered the earth should be finely pulverized and drawn up close around the vines, the leaves of which should be sprinkled with the fresh fine dirt. A couple of workings in this way will drive off all the little nuisances, and their return can be prevented by frequently stirring up the soil. He has found this plan entirely effective for several years.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 62, JUNE 3, 1881.

598. Mapes Complete Manure for heavy soils, manufactured and sold by The Mapes F. & P. G. Co., New York and Hartford, sent by C. E. Bunce, South Manchester, Ct.

601 Superphosphate, made by the Quinnipiac Fertilizer Co., New London.

602. Fish and Potash, made by the Quinnipiac Fertilizer Co.

604. Peruvian Guano, imported by Hobson, Furtado & Co., New York.

Nos. 601, 602 and 604 were taken by the Station from the stock of R. B. Bradley & Co., New Haven.

616. Muriate of Potash, imported and sold by the Mapes F. & P. G. Co., sent by T. N. Bishop, Plainville, Ct.

	598	601	602
Nitrogen of organic matters	1.62	2.88	3.56
" " Ammonia salts	3.95		
Phos. acid, soluble	2.27	1.22	0.19
" reverted	5.68	7.80	3.52
" insoluble	3.08	3.35	3.16
Potash	2.80	1.72	3.20
Chlorine	3.02	1.70	4.40
Equiv. muriate potash			
Cost of potash per 100 lbs.			
Estimated value per ton	$46.37	32.98	27.73
Cost per ton	$52.00	40.00	36.00

	604	616
Nitrogen of organic matter	6.28	
" " Ammonia salts		
Phos. acid, soluble	3.32	
" reverted	7.13	
" insoluble	11.44	
Potash	2.77	53.25
Chlorine	3.04	
Equiv. Muriate of Potash		84.34
Cost of potash per 100 lbs		$3.94
Estimated value per ton	$62.29	
Cost per ton	60.00	

The estimated values are low, as explained in former Bulletins.

BULLETIN NO. 63, JUNE 9, 1881.

611. Darling's Animal Fertilizer, made by L. B. Darling & Co., Pawtucket, R. I., sold by J. A. Lewis, Willimantic, Ct., sent by William H. Barrows, Willimantic, Ct.

615. Superphosphate. [Export Brand] made and sold by the Mapes F. & P. G. Co., New York and Hartford, sent by T. N. Bishop, Plainville, Ct.

619. Matfield Fertilizer, No. 2, made and sold by the Matfield Fertilizer Co., Boston, Mass., sent by T. S. Gold, West Cornwall, Ct.

618. Potato Fertilizer, made by the Matfield Fertilizer Co., and sent by T. S. Gold.

621. Castor Pomace, made and sent by H. J. Baker & Bro., New York City.

629. Cotton Seed Meal, sold by William F. Fuller, Suffield, Ct., sent by H. H. Austin, Suffield, Ct.

	611	615	619
Nitrogen in Nitrates			
" Ammonia salts	46		
" Organic matter	3.63		1.57
Phos. acid soluble		13.51	
" reverted		1.66	
" insoluble	13 61	82	52
Potash	6.47		3.70
Chlorine	3.33		4.69
Estimated value per ton	$38.74*	37.75	10.23
Cost per ton	$42.00*	34.00	25.00*

	618	621	629
Nitrogen in Nitrates	66		
" Ammonia salts			
" Organic matter	1.55	4.43	6.80
Phos acid soluble	2.63		
" reverted	38		
" insoluble	13	1.40	3.27
Potash	6.53	1.07	2.00
Chlorine	14.14		
Estimated value per ton	$23.93	16.82	27.48
Cost per ton	$45.00*		30.00

—*At retail.

S. W. JOHNSON, Director.

AN ELECTRIC THEORY OF THE ELABORATION OF SAP IN PLANTS.—W. K. Bridgman argues in the Journal of Horticulture, that it is not any special organization or elaboration of the sap within the leaves, or any downward flow from them, which determines its conversion into the solid fibers and tissues of the plant's structure, but that a process of electro-chemical deposition, like that of the plating of metals, alone explains the mystery. In the case of the plant it is carbon that is rendered soluble by combination with oxygen, and it is deposited when the oxygen is withdrawn just as the metal was. But the metal has a mold which gives it its form; and it is not easy to see what "deflexion of force" guides the liquid sap so exactly everywhere into such endless varieties of form with neither scaffold to build from nor mold to give figure. Yet there is, no doubt, some sort of a connection between the electric formation of the crystal and the structure of the plant. W. L. W.

Literary Miscellany.

THIS FARM FOR SALE(?)

EDGERTON.

"I'm sick and tired o' farming, Jane
Since everything goes wrong,
And if I had a chance to-day
I'd sell out for a song:
We work and toil from day to day,
As hard as we can drive,
But somehow every thing 's a wry
And nothing seems to thrive.

"The chinch bug 's taking all the wheat,
I noticed it this morn,
The oats is struck with rust to-day,
The green-squirrel 's in the corn.
The beetle's in the tater patch
A mowing down the vines—
It does seem Jane, that we are held
By hard and cruel lines.

"Our neighbor's crops are doing well
So far as I can see,
I can't see why this adverse luck
Should fall alone on me;
It must be luck, it can't be else,
Although I've often said
That luck is only what we make it,
Whether good or bad.

"I labor just as faithfully
And do my work as well
As any man in all these parts,
And yet, 'tis strange to tell,
That I alone, of all the rest,
Am singled out to bear
This blight upon the growing crop,
As, witness everywhere.

"I've treated no man yet amiss,
Have kept my conscience free,
And done to others as I'd wish
That they should do to me;
It must be luck, it can't be else,
Or why should all the rest
Have crops as fine, and prospects fair,
As ever man was blessed.

"Yes, Jane, we'll sell the farm
And move ourselves to town,
Since fortune never smiles on us
But only seems to frown;
I'll stick a notice up out here,
'This farm for sale or to let!'
And should it bring a customer
We'll take what we can get."

"Why David, man, how you do talk!
What could you do at town?
Buy property, and then turn round
And have it all burn down;
How would you feel all hemmed in there
And crowded up by men,
With barely ground enough on which
To fix a sitting hen?

You're growling now for elbow-room
On our mile square of land,
While there, the houses stand jammed in
As thick as they can stand;
You'll never want for company,
You'll have it all the while—
Good Lord deliver me from neighbors
Nearer than a mile!

"To town, indeed! that would be fine!
We'd cut a figure there,
With all our stock turned in the streets
And scattered everywhere!
Why surely man, you're going daft,
What can you think about?
Take my advice and go right off
And buy old Tanner out.

"They say he's got too smart to work
And wants to sell his farm—
It's not for me to prophecy
Or wish the old fool harm.
But when men get too awful smart
Their duties to discharge,
It's ten to one they come to naught
And die a county charge.

"As for that song about the crops,
We hear it every year,
We'll raise enough to bread us all,
Of that you need not fear;
And when you want to sell the farm
We'll draw a little line,
You sell your half and go to town
And I'll stay here on mine."

"This farm for sale!" was not put up,
Nor did the crops all fail,
But David bought the Tanner place
Next year at "Sheriff's Sale."
Jane says that when you know you're hurt
It's time enough to cry,
And David thinks that his ill luck
Was *mostly in his eye.*

MARJORIE DAW.

Continued from page 410.

The clock struck ten; the Williams women arose in a bustle; their horse and cart came round, and they drove off in the moonlight.

But a great black cloud was creeping over the heavens; the day had been still and sultry for May; and presently the sudden storm was up. Thunder crashed amid the surrounding mountains; lightning flashed like an army of rebellious angels athwart the heavens, and then the rain fell in a deluge.

"Leave the house-door open, lass," said Mrs. Daw to Marjorie. "I am so afraid of the lightning."

And Marjorie left the door open as she was bid.

Farmer Daw was not afraid of the lightning, and he went to bed.

Aunt Matilda, the mild little woman in flat curls and spectacles, sat by the fire knitting.

"I can't sleep while the storm rages so," said Aunt Matilda. I keep thinking of the chimneys falling, so I'll sit up and get on with this quilt."

"I will sit here with you, aunt," said Marjorie.

The rest of the household were asleep or in their rooms; but Marjorie and aunt Matilda sat before the bright wood-fire. The front door was wide open, and they could hear the rain splashing on the flags outside. There was a large screen pasted

all over with colored prints on a black ground placed between the aunt and niece and the door, to keep out the draught.

"Aunt Matilda, I have something to tell you," said Marjorie. "It is a great secret, and I half promised not to tell, but oh! I can't keep it any longer!"

"Good gracious, my love!" said aunt Matilda, dropping her knitting, "I do hope that you have not promised to marry that poor fellow, the schoolmaster! Oh, your father will be so vexed. He may be good, no doubt, and clever, and all that, but, dear me! book-learning is no good where money is wanted. You ain't a bit fit for a poor man's wife."

Now, just as aunt Matilda uttered this most true and sensible remark, a tall male figure, dripping wet, entered the outer passage through the open door. Rufus Gorse, restless and perturbed, felt his fiery soul akin that night to the stormy elements. Not being able to rest in his little cottage he had come out of it, locked it up, and walked forth boldly into the tempest. Love guided his feet towards the Yarrow Farm. He had expected to find the doors closed and the lights extinguished; but the bright light in the kitchen window induced him to come up to the door, and when he found that open, he walked in. Then he heard the women's voices, and he still walked on, and stood behind the screen a minute.

The storm made such a noise that neither Marjorie nor her aunt heard his steps.

"Rufus Gorse is not good enough to be your husband," said aunt Matilda

"He is so dreadfully poor!" cried Marjorie, bitterly.

Rufus, hearing her words, felt as if she had stabbed him to the heart If he could have seen the tears in her beautiful eyes, he would have read there a story which would have filled him with joy and hope; but he only heard those cold and selfish words—"he is so dreadfully poor!"

"Then you have not promised to marry him?"

"Promised *him*?" echoed Marjorie. "That would be nothing to boast about! No. But what do you think? Mr. Peter has asked me to become his wife."

The girl's voice shook with emotion.

"Think, aunt, I shall wear the family diamonds."

Rufus Gorse felt stunned now, as if somebody had dealt him a murderous blow on the head. To his thinking, the girl's young voice vibrated with a cruel triumph. The screen hid her lovely face, or he might have read another story. He would have seen such a bitter smile on the red lips, tears in the dark eyes; but he only heard the cruel words meant to veil her hearts secret from aunt Matilda—"Promised him! That would be nothing to boast about!"

"Let her wear diamonds, let her become Mrs. Peter but she shall never look upon my face again!"

And he walked out into the storm. Ah! had he but waited another ten minutes!"

"I know that if I marry old Mr. Peter I shall feel like a bird in a gilded cage soon. I shall perhaps hate Beaucourt and the family diamonds. Fancy sitting down day after day with him, and being expected to love him with all my heart! I should go mad!"

"My dear, you would be mad to refuse such an offer. Love in a cottage, Marjorie, often means the workhouse in the end—that is, if there is a long family and sickness. That young Gorse only gets sixty guineas a year."

"I think I should like a workhouse better with him than a palace with Mr. Peter."

"You don't know what you are talking about, my dear," said aunt Matilda.

Meanwhile, Rufus Gorse was walking over the mountain road. He did not even re-enter his house to take away his clothes.

"She shall think me dead!" he said, bitterly, to his raging heart

The next day the strange, weird tale spread all through the district. Mr. Rufus Gorse, the school master had returned to the little cottage, where he lodged with a good couple, who let him a tiny sitting-room and bedroom. At about nine o'clock he had eaten some bread and cheese drunk a glass of claret, and gone whistling gaily up to his room; the storm came on, they heard him go out, and he had never returned He had left behind him his clothes, his books, his gold watch—a gift from his fellow students at the training college—his desk with a few shillings in it, the musical score of a sketch for an opera—in short, all his belongings. He must have fallen into the river where it was deep, near the village said public-opinion, and so have been drowned and carried out to sea.

When they told Marjorie this, she sank fainting on the floor. Mr. Peter came to see her when he heard she was ill, and found her lying on the sofa in the parlor, pale, and with the shadow of a great dread in her eyes; he asked her, in the presence of her parents, to become his wife.

She turned her face away and moaned.

Mr. Peter knelt by her side.

"My dear," he said, "forget it all; you will be happier up at Beaucourt."

"I think I should," she said, sadly: "it might help me to forget, and it would please my father; but, Mr. Peter, I can never love you as I loved dead Rufus, only I never knew that I did love him until I lost him for ever and ever!"

And a few weeks after, without any pomp or ceremony, Marjorie became Mrs. Peter, for she was married in the village church.

* * * * * * *

Time rolled on, Summer followed Spring, Autumn followed Summer; Winter came white and hoar and ice-crowned. The mountains stood wrapped in white. Marjorie had married the odd old man, whose estates north and south brought him in five thousand a year. She was indeed like a wild bird pining in a golden cage.

Mr Peter was a jealous husband and a terrible miser, considering his vast wealth and high position. He only took his bride once to London and then they sojourned at a third-rate hotel.

She had hard work to induce him to buy her a new dress once a year. He did not allow her to visit; he gave no parties. She had enough to eat and drink, and fires to warm her in the cold weather; and in the Summer she enjoyed the flowers and fruits in the gardens of Beaucourt for old Mr. Peter grudged nothing to his flower beds and his fruit trees; also there was a fine library, and there were pictures, and china and statues and bronzes enough at Beaucourt to satisfy a prince; but Marjorie's heart was heavy, her life was dull, she pined for the society of the young.

Mr. Peter was a tyrant; he did not allow her to go near her humble parents. She read, and she played on one or other of the fine pianos that stood in the fine old rooms. She sang, but her heart was empty and hungry for love. Her husband treated her like a willful child.

One golden afternoon in September she was pacing listlessly up and down a path bordered with laurels, when she saw a servant man approaching her with a white, scared face. He was the bearer of awful tidings. Mr. Peter had been thrown from his horse, and was taken up dead! Some days of bustle and confusion followed.

She took advantage of her freedom, and sent for her parents at once. Then came the distant cousin, and afterwards there was the funeral, and then the will was read;

"All the lands and the country seat of Beaucourt to Marjorie, my dear wife; but she shall forfeit every shilling if she marries again. The whole shall then revert at once and forever to my cousin Henric Peter and his heirs forever."

Beautiful Marjorie smiled sweetly.

"I don't wish to marry again, she said."

In due time, when a decent period allotted to mourning had expired, Marjorie went up to town, opened and refurnished the grand family mansion that had been closed for years, and sailed away on the high seas of pleasure. This had once been her dream. She was in the very glory of her beauty and she quickly became the rage.

"But she must never marry, or she will become a beggar!" whispered the gossips.

"See-saw, Marjorie Daw,"

She was driving in the country; she felt thirsty, and sent her footman into the inn of the village to ask for a glass of water. Then she saw the village children playing see-saw on a broad plank balanced over a great trunk of a tree in a builder's yard.

"'See-saw Marjorie Daw,
Sold her bed and lay upon straw.'"

sang the little ones in chorus. Up and down, up and down, went the tiny, rosy girl with curly hair and ragged white bonnet, and laughing face.

"See-saw," said Marjorie to herself. "Yes, mine has been that kind of life ever since that night when Mr. Peter and Rufus both asked my hand in marriage."

At that moment a gentleman—yes, a gentleman—walked out of the Hens and Chickens, and came towards Mrs. Peter, carrying a glass of water, clear as crystal.

Marjorie's large eyes dilated. Was this a ghost! or was it Rufus Gorse, changed, yet the same, after four years—handsomer, sterner, with more thought and more power on his brow than of yore?

She was white as death; she stood up; she tried to speak.

Rufus came to her and placed her again amid her soft cushions.

"Drink this," he said tenderly.

In his eyes were lights bright and strange; his heart stirred wildly; his love for Marjorie was still part of himself.

She drank the water, then she pointed to a place by her side.

"Come with me," she said, sweetly, "and we will drive on farther, and you shall tell me all."

* * * * * * *

They have been driving for hours, and the shadows of twilight are creeping over the land when their horses' heads are turned towards London; and more, Rufus has told Marjorie of the mad despair that filled him when he heard her speak slightly of his poverty, and of the offer made her by Mr. Peter.

She has told him that if he had waited five minutes more he would have heard her confess that she loved him.

Rufus says that he wished her to think him dead. He had a few pounds in his pocket; he went to Germany and studied music; he got on well, won honors, became in two years musical professor at a German college at a fair salary. Then he wrote an opera, an opera of which the world had talked for the last year; it was called "Donato," and it had already filled his pockets with money; it was, commercially, as valuable to him still as a landed estate. He was rich. A year ago he went home suddenly to his parents, who had believed him dead, and who, amid their poverty, their numerous children and their numerous cares had almost forgotten him. He gave them some hundreds of pounds, and then his mother showed him a letter which had been sent on to her as having been addressed to her son after his supposed death.

Rufus drew the little soiled letter from his breast-pocket and kissed it passionately.

"If I had not had that I never would have come near you," said he.

"Ah," Marjorie cried, "that very night of the storm I wrote you a little letter in my own room by the dim light of a small lamp. I can repeat it now.

"'DEAR RUFUS: I find that life without you would mean emptiness and hunger of the heart all my days. Yes, I will wait for you ten years, or share an attic with you as soon as you choose to call me wife. MARJORIE DAW.'"

"Oh, Marjorie, if I had only waited! When I had that letter you were a widow; but I said to myself she is now a fashionable woman of the world—her love has changed. Still I determined to throw myself in your way, to hear you speak, to look in your face once more."

Marjorie was silent, then she said:

"And do you love me as well as that night when you stood by the gate in the lane?"

"More, for now I know that your heart was noble always."

"But if I marry you I become a beggar."

"But I, in my way, am rich, and the world of music is at my feet."

Three months afterwards the worldly-wise were wondering, with all their minds and souls, at the folly of which Marjorie had been guilty in not allowing the dead hand of old Mr. Peter still to crush the happiness out of her life. She had lost Beaucourt and five thousand a year; but her husband makes nearly that sum every year. She is a happy wife and mother.

Marjorie, when we heard of her last, was as happily placed as any one can well be in this see-saw world, where ups and downs, good and evil, balance each other so evenly, and yet it seems to us so capriciously.—The end.

NORTHWESTERN IOWA.

REPRESENTATIVES OF THE RURAL IN PALO ALTO CO.

MESSRS. HOLMES AND SWEETLAND.

"Westward the course of empire takes its way,
The four first acts already past;
The fifth shall close the drama with the day,
Time's noblest offspring is the last."
BISHOP BERKELEY.

Why Eastern farmers can better their condition in the West may not have been heretofore lucidly and tersely placed before them. We will mention a few of the most important reasons and then notice the peculiar advantages of this county for those who desire to purchase and manage farms and draw from their dormant wealth the reward assured to honest toil.

The native soil is conceded by agriculturists to be superior to many portions of the East, large crops being the general result even of the first season's work. Pasturage is almost unlimited and the finest in the world, costing little, the grass growing in abundance of the succulent varieties necessary for rapid growth and even fattening of stock. The same amount of money invested in the West will procure from three to eight times as much land as it would in the East. Every acre purchased will yield from 20 to 50 per cent. more than its Eastern prototype with the same care. Railway facilities are ample and education and religion are as well represented (except on the frontier) as in the East. Hence many who can are seeking these advantages, and the questions asked us are "Where shall we go?" "How shall we get there?" and "What are the most lucrative branches of agriculture in localities named?" The West presents every requisite in the aggregate for diversified husbandry, and even many counties combine the entire range of desirable features.

Such is Palo Alto County, situated on the 43rd north parallel of latitude and 94 deg. 30 min. longitude; the fourth east of Dakota Territory and second south of Minnesota. It is gently undulating prairie, with deep, dark, fertile soil, adapted to the cultivation of cereals and peculiarly to stock raising and dairy products, and in this direction lies much of the present prosperity and future wealth of the country. The rich grazing, abundance of pure water, and salubrious and invigorating climate promote the growth and maturity of stock, and secure for Palo Alto beef the highest market quotations in Chicago. We were told that from one farm there were shipped in one week 172 head of three-year-old steers, averaging in weight 1,800 pounds, some weighing as high as 2,200 pounds. This affords a valuable hint of the best way to clear 200 per cent. or over upon corn that yields from 60 to 80 bushels per acre upon land worth from $10 to $20 per acre, improved. The same land unimproved can now be purchased at from $5 to $10. From Hon. E. J. Hartshorn (State Senator from this district and agent at Emmetsburg for the lands belonging to the C. M. & St. P. Ry.), we learn that the railroad company are not only selling their lands cheap and upon easy terms, but allowing a rebate upon all breaking done the first year nearly equal to the cost of the same. A valuable auxiliary to the rapid and substantial development of this country is the

Scottish American Land Co.,

incorporated under the laws of Iowa and Great Britain, with a capital of $500,000, selling lands to actual settlers only on favorable terms, at an average of $6 per acre, advancing money to aid in building at six per cent. interest—equal to half or three-fourths of the cost of improvements. Every purchaser of 160 acres is furnished with 10 head of two and three-year-old heifers and a thoroughbred Durham bull, for four years, after which time the original stock and one-half the increase are to be returned as the only compensation to the company. They are also renting farms when desired, either for "cash rent" or "on shares." Alex. Peddle, Esq., the attorney, and Land Commissioner of the company, their only representative in America, located at Emmetsburg, told us that if parties desired he would furnish the land, pay them $2 per acre cash for breaking, provide the necessary flax seed for sowing to secure a crop the same year, would pay half the thrashing bill, and divide the crop with the tenant. Upon these terms we have personally known of instances where the profits of one year would actually purchase the farm. The company own large bodies of land in this and adjoining counties

Palo Alto is crossed by the Des Moines River, and, besides numerous small streams, has six handsome lakes abounding in fish of the varieties usual in fresh water, to which the State Fish Commissioners have added salmon and lake trout. There are many handsome artificial groves and some growth of natural timber along the banks of the streams. There are over sixty public schools in the county under good tuition, while the religious and social privileges make one feel as much at home here as in older and more populous localities.

As a route of travel to reach this county from the East the most direct and the one requiring the fewest and most convenient changes, would be via. the Pennsylvania R. R. to Pittsburgh, the P., Ft. W. and C. R'y to Chicago and the C., M. and St. P. R'y without change to Emmetsburg, the county seat, a pleasantly situated town of about 1,000 inhabitants, almost in the center of the county, crowning a sightly elevation and affording a fine view of the surrounding country. It is platted around the south end of Medium Lake (which is five miles long and about three-fourths of a mile wide) which, by the way, could be beautified at a very small expense and made a popular resort. It is now a favorite starting point for sportsmen who desire to visit the beautiful lakes of the vicinity. They can leave their heavy baggage at the Grand Central or either of the two other hotels and make a tour of the best hunting grounds of the Northwest. A fine new court-house has been erected during the past year at a cost of $18,000. and from it may be seen a vista of beautiful farming lands. There are four churches; a good graded school, well attended, well disciplined and well taught; a goodly number of business houses of the various branches; ample facilities for handling grain, and a large trade. Two efficient local papers are published here and various benevolent societies organized. One of the most enterprising railroads of Iowa, the Burlington, Cedar Rapids and Northern will extend their line from their present terminus, Clarion, to this place this season—a valuable competitive advantage for Palo Alto County. Not only is this little city a mart for grain but also for cattle, hogs and sheep—a natural consequence of the grazing privileges.

The Silver Lake Creamery was established here in 1879 by Messrs. Hovey and Ammon. It has a capacity for making 1,000 to 2,000 pounds of butter a day, and is built on strictly scientific principles. It has also every facility for making cheese. The work here is done on the cream-gathering plan using the Davis and Fairlamb Creamery can, of which it is said that "none better are made." H. & A. are keeping about 30 cows. These gentlemen are quite old, and inform us that it is their intention to dispose of the entire interest if a good reliable purchaser is found.

If this creamery interest which is so important to farmers, was supplemented by a steam mill, a flax fiber factory, or wagon manufactory it would add materially to the wealth of the county. For information and assistance extended us by Alex. Peddle, Esq., Hon. E. J. Hartshorn and Messrs. Ormsby Bros. (bankers and dealers in real estate), we hereby tender grateful acknowledgments and any of the gentlemen will answer any inquiries regarding the county.

A short ride of fourteen miles west brought us to the village of Ruthven, a brisk little town of 150 population having a good school. There are several business interests but need is felt for a good wagon maker, harness-maker and physician. Elbow Lake two miles long by one-quarter mile wide is north of the town. Lots here range from $10 to $50, and the elements of prosperity present themselves for the future rapid growth of the place. Any inquiries addressed to C. W. Hastings (a dealer in general merchandise here), or A Ruthven, we are told will be promptly answered.

BOOKS RECEIVED.

First German Book. By JAMES H. WORMAN, A. M., New York; A. S. Barnes & Co.

This book in primer form is designed to instruct persons in the spoken language of Germany. It is not a grammar consequently does not pretend to any but a limited exposition of rules although sufficient knowledge is imparted to make it of much practical use. The illustrations greatly increase its value.

Advanced Readings and Recitations. By A. B. FLETCHER. Boston: Lee & Shepard.

This book of selections meets a demand which is constantly increasing. The compiler has aimed to present only such pieces as will be of value to seekers of elocutionary improvement. Popularity unless balanced by merit has been avoided. Introductory rules instructively blended with exercise form one of the commendable features.

Rosecroft. By WM. F. ROUND. Boston: Lee & Shepard. Price $1.

Amusement and suggestions for serious thought are combined qualities of this book. New characters and ideas are brought out which distinguish it from similar novels. The scene is laid in New England, and a genuine Yankee man figures extensively, disseminating much good in his quaint way.

Aim, Fire-Bug-Stories. By JULIA M. BERCHER. Boston: Lee & Shepard.

This is one of the many entertaining books written for juvenile minds. Its naturalness is one of its chief recommendations, as children are better pleased with what may be readily understood. Good, wholesome reading, not trash, is given.

A FAMOUS lawyer, having been so for more than a quarter of a century, was accosted by a man, who said: "I have a boy whom I want you to take and make a lawyer of." "How old is he?" said Mr. —. "He's 18 years old, stout and rugged; he's got a pair of lungs like a bellows," replied the father. "Has he any other qualifications?" "Yes, sir, he's got the one great qualification of all," said the father; "he's the confoundest liar in our town. I thought when I heard you in the court-room just now that it wouldn't take very long for Sam to come pretty nigh up to you."

"DOCTOR," said a lady patient, "I suffer a great deal with my eyes." The old gentleman adjusted his spectacles, and with a Socratic air replied, "I do not doubt it, my friend; but then you ought not to forget you would suffer a great deal more without them."

For Women.

CONDUCTED BY MISS RAY CLARK.

APPLE BLOSSOMS.

Apple blossoms! apple blossoms!
Dainty sweet, and dainty fair.
What on earth to me so lovely?
What on earth to me so rare?

In the Springtime, in the Springtime,
In the childhood of the year;
When the birds come back to forests
Now no longer dark and drear.

Then the modest little violet,
And the snow-drop pure and white,
Ope their eyes and hail the Spring-time
Smiling in its happy light.

Then I hail ye, apple-blossoms,
Then I watch ye bud and bloom;
And I give you gladdest welcome
As I breathe your sweet perfume.

For a happy recollection
Comes to me of long ago—
Of words spoken in the Spring-time,
Of words spoken sweet and low.

And to me they are far sweeter,
Better, dearer every way;
For I sat beneath their branches
On that glad and happy day.

Branches bending loving o'er me,
Waving gently in the air,
Ringing sweet congratulations,
Crowning me with blossoms fair.

Do you wonder that I love them!
That to me they still are dear?
That I call them my "good angels?"
Sweetest blossoms of the year?

Apple blossoms! apple blossoms!
Dainty pink, and dainty white,
Blessings shower down upon me,
Strew my path with flowers bright.

In the Spring-time, in the Spring-time,
Come ye back to me each year,
Bringing with your fairy presence
Mem'ries bright old age to cheer.

CONCERNING CORRESPONDENT'S QUESTIONS.

MARY WAGER-FISHER.

"Improvement," asked in Rural of April 8, what is necessary in order to possess a well cultivated voice, and what books are to be read for mental cultivation to a mind not well stored. I think that any voice can be greatly improved without the aid of elocutionary training, by diligently and persistently toning it down to what are called "chest tones." Most Americans speak in head tones and nasal tones at that. A well modulated voice with distinct enunciation, is almost invariably, an agreeable one to listen to, and these qualities can be acquired by any one who has the earnest wish to do so. A young lady who was visiting me a few months ago whose voice and conversation were extremely charming, said one day after I had alluded to the quality of her voice: "I am glad you think so; but my mother is constantly saying to me, 'Bertha, you *must* key your voice to a lower pitch,' and I'm all the time trying to get my voice *down, down*." My teacher says the great thing to do in order to acquire richness, fullness and roundness of tone, is to constantly try to get the voice *down*; to make it deep and round in tone." This girl never spoke in a voice of high pitch, and yet everything she said was of perfect distinctness. From early childhood she had been trained by her mother to speak and to talk, beautifully—to express herself in the best and simplest words the English language affords, and always to appreciate the fact that her voice in conversation should be as finely and sweetly attuned, as in singing.

I think all parents who think at all, realize the immense power of habit—of early training. It is almost as difficult to convert a vulgarly bred young person into an elegant man or woman, as it would be to change the spots of the leopard's skin. Repeatedly, have I seen men and women who have risen to social eminence by the force of character and talent, and who have "taken on" much of the polish of society, betray at times in their manner, and in their conversation, their choice and pronunciation of words, their low bred origin. They were perfectly conscious of these defects, but found themselves utterly unable to root out of their being the vulgarities that had been implanted in them in childhood, and which had taken such deep hold. Of course, all sensible people respect and admire such persons none the less for their misfortunes; but they themselves suffer keenly from it, and bear the sense of its humiliation to the end of life. I have often heard young people who have been well educated in schools, exclaim, "What would I not give, if I had only been accustomed to hearing the English language well spoken in my childhood!" for no amount of grammatical study will ever atone for illiterate habits of speech formed in youth.

Fathers and mothers may think it silly and foolish and "hi-fa-lu-tin," may be, to talk in the best English they can, it may be so to themselves, but if they have children they have no moral right to talk or to behave in but the very best way they know. It matters little whether they have money to leave their children, but it *does* matter *much* that they accustom them to exercise good manners, so that to be well mannered will be to them an every day garment, Burke said "Manners are of more importance than Law," and many of lesser importance than the great English statesman, have recognized the fact that a fine manner is more than money, beauty or apparel. There is something hideous in a pretty girl who is ill mannered, while there is a great charm about a plain girl who is sweet, gentle and polite in her demeanor. Truth, sincerity, gentleness, unselfishness and love for others lie at the bottom of all true politeness.

While on this topic, I am reminded of the criticisms my comments on the way many people eat, have called forth. "A Farmer" asks "what is a saucer for?" and yet he probably knows as well as anybody that it is to set the cup in—a very necessary use, too. I never think it worth while to find fault with the ways of very old people, and if such find comfort in drinking tea from a saucer and putting food in the mouth with a knife (providing they don't cut themselves) it would be absurd to criticise their habit or try to change it. But when younger men and women can form better and more modern habits, why should they not? And should not the children have the benefit of the best examples? In no place does young or old person's manners receive such signal illustrations, as, at the table, and I have seen persons at finely served tables sit in mortal fear because they felt that they didn't know how to behave.

As to books, I would recommend to "Improvement" the following, as a few that I myself have found to be of special value in the line she suggests. Motley's Rise of the Dutch Republic; Plutarch's Lives; Vicar of Wakefield; Emerson's Essays; Higginson's Young Folk's History of the United States; Arnold's "Light of Asia;" Hawthorn's and George Eliot's Novels; Schiller's Plays; Secky's Intellectual and Moral Histories of Europe; Biographies, especially of eminent Americans, as Marshall's Life of Washington, and The Life of Farragut by his son. The American Book Exchange—often advertised in the Rural—furnishes some excellent works at a trifling cost. Macauly's Life of Frederick the Great; Carlyle's Life of Robert Burns, Lamartine's Life of Mary Queen of Scotts, cost each, but *three* cents, post paid, while The Light of Asia (the finest poem of the century, to my mind,) the Vicar of Wakefield, and Baron Munchausen cost but *five* cents each. Bunyan's Pilgrim's Progress costs but six cents These works alone, if *thoroughly* read and re-read until one knows them "by heart" will give to any mind a cultivation of no mean sort, and the entire cost of them all is *thirty* cents! What a wonderful age we live in! As for a study, there's nothing equal to Botany for making one *see* what there is in the world—in the works of the Creator.

To all persons interested in silk worm culture And things pertaining thereto, you will get more information than I can give you in two columns of this paper, by writing for circulars to the president of the Silk Culture Association. Mrs. Lucas, 1328 Chestnut Street, Philadelphia, Pa., send with your application a postage stamp. The circulars which contain all you want to know, probably, in regard to the matter of silk culture are gratuitous, and the Association is a purely benevolent one. The women at the head of it are very patriotic, earnest and intelligent, and fully charged with the belief that in the cultivation of silk, lies a great and profitable industry to the women of the United States.

HINTS.

Use of Lemons.—For all people, in sickness or in health, lemonade is a safe drink. It corrects biliousness. It is a specific against worms and skin complaints. The pippins, crushed, may also be mixed with water and sugar, and used as a drink. Lemon juice is the best anti-scorbutic remedy known. It not only cures the disease, but prevents it. Sailors make a daily use of it for this purpose. A physician suggests rubbing the gums with it daily to keep them in health. The hands and nails are also kept clean, white, soft and supple by the daily use of lemon instead of soap. It also prevents chilblains. Lemon is used in intermittent fevers mixed with strong, hot black tea or coffee without sugar. Neuralgia may be cured by rubbing the affected part with a lemon. It is valuable also, to cure warts, and to destroy dandruff on the head, by rubbing the roots of the hair with it.

Ammonia.—Ammonia will remove finger marks from paint, where there would otherwise have to be a good deal of scrubbing with soap, which takes the paint off too. Ammonia is useful to wash all the brushes that are used in a household. Nothing will cleanse greasy sinks, pans or scrubbing brushes so well. A teaspoonful in a basin of warm water will make hair brushes beautifully white. Take care not to let the backs of the brushes dip below the surface; rinse them with clear warm water and put them in a sunny window to dry. A small bottle of ammonia is also useful for the wardrobe. Keep a little sponge with it, and, when woolen dresses are stained or soiled, they are easily cleaned by passing a little diluted ammonia over the spots. Fold a towel and place it under the spotted or soiled portion while you are cleaning the dress.

Hanging Pictures.—The majority of people hang pictures too high on the wall. Whatever the hight of a room, the pictures in it should be hung on a level with the eye of an adult when standing, an adult of average hight. Pictures are hung upon the wall, supposably to be seen with both ease and pleasure; but when they are perched up nearly to the ceiling they can be viewed neither with the one feeling or the other. When you have occasion to buy picture cord, buy instead, wire, for hanging frames. Cord wears out, becomes moth-eaten, and some day down comes your pictures with a crash. Hang your pictures so as to be nearly, if not quite, flat against the wall. People who understand the art of hanging pictures well, no longer hang them so that the top leans out from the wall.

Bureaus, &c.—It may not have occurred to some housekeepers that bureaus and other pieces of heavy furniture having drawers in them near the floor may have the dust thoroughly removed from under them by taking out the drawers and using a wisp broom to remove the dust. This is a great deal easier than moving the entire piece of furniture, which, with women who are not strong, is often impossible.

ABOUT WOMEN.

Lucia Zarate, the smallest woman in the world, was born in Mexico.

Mrs Garfield sits up easily for about two hours at a time, and is rapidly convalescing.

Mrs. Strohm of Gosper county, Nebraska planted over 2,600 fruit and forest trees on Arbor day.

Zare Thalberg, the daughter of the pianist, is to retire from the stage, and marry an Italian marquis.

Miss. M. M. Gillette, has been appointed by President Garfield a notary public for the district of Columbia.

Mrs. Nellie Grant-Sartoris will probably spend a part of this Summer with her parents at Long Branch.

Margaret Fuller's birthday was celebrated in Chicago on June 13th with music and recitations of prose and poetry by the "Margaret Fuller Society." She was seventy-one.

Miss Louisa M. Alcott has written an introduction for Roberts Brothers' new edition of Theodore Parker's "Prayers," in which she gives reminiscences of the famous writer.

Mrs. Harriet Lane-Johnson, niece of President Buchanan, is now at Wheatlands nursing the only child left to her—a bright boy of eleven, of whose return to health there is little hope. Mrs. Johnson's eldest son died last Winter.

Miss Marianne North, who has just arrived in New York, has been traveling alone all over the world for the last ten or fifteen years, painting trees and flowers, with a bit of landscape to show their habitat. She has climbed wild mountains, been driven through savage places in camel-wagons guarded by natives, and has floated down strange rivers upon inflated skins. She has made more than six hundred studies of trees and plants, some of them unknown to botanists before, and has presented them to the Kew Gardens, where she has built a gallery for them.—Woman's Journal.

A Father's Advice to a Bride.—Said a young husband, whose business speculations were unsuccessful, "My wife's silver tea set, the bridal gift of a rich uncle, doomed me to financial ruin. It involved a hundred unexpected expenses, which in trying to meet have made the bankrupt that I am." His is the experience of many others, who. tess wise, do not know what is the goblin of the house, working its destruction. A sagacious father of great wealth exceedingly mortified his daughter by ordering it to be printed on her wedding cards, "No presents except those adapted to an income of £200." Said he, "you must not expect to begin life in the style I am able by many years to indulge, and I know of nothing which will tempt you to try more than the well-intentioned but pernicious gifts of rich friends. Such advice is timely. If other parents would follow the same plan many young men would be spared years of incessant toil and anxiety; they would not find themselves on the downward road because their wives had worn all their salary or expended it on the appointments of the house. The fate of the poor man who found a linch-pin and felt obliged to make a carriage to fit it is the fate of the husband who finds his bride in possession of gold and silver valuables and no large income to support the owner's gold and silver style.

CORRESPONDENT'S CORNER.

Miss Margaret B. Harvey wishes to add to her list of flowers requested in 18th issue: Fumaria officinalis (Fumitory); a leaf of Aplectrum hyemale (putty root); Oxalis violacea (Violet sorrel).

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

MRS. O'FLANY'S MARBLE CAKE.

MARGUERITE.

A young mother living near us was lying low with consumption. I prepared for her a pitcher of iced lemonade, and wrapping an additional piece of ice in flannel, took them to her. She wanted drinks almost continually, and she thanked me again and again, saying, "it tastes so good!" The thought of the additional ice to use later comforted her, for she had been looking forward with dread to the evening thirst.

I started home, and as I was passing Mrs. O'Flany's door I concluded to "step in." She was standing by the table, with eggs, sugar and flour upon it.

"Och, heaven bless you! You are just the lady I'm wantin' to see," she exclaimed. "I'm glad I stopped thee," I said. "I went over to the store mesilf and bought some baking powder, and they inclosed the directions for baking with it; so I thought to mesilf that I would make a *marble* cake for the fayther to carry for his dinner." "That will be nice," I said, knowing the poor man seldom got a bite for his dinner in that line. "Which part shall I help you to prepare, the light or dark part?" I asked.

She looked at me, and as she did not reply I repeated the question. "Why, one cake is in the oven, ma'am," she answered. I opened the oven door and looked in. There, sure enough, was the light part, nearly baked and looking good enough to eat. "But, Mrs. O'Flany," I asked, "how are you going to get a marble cake out of it?" She looked more mystified than before, and finally exclaimed, "Och, now, sure have I gone and done it wrong afther all!"

I told her the reason it was called "marble" was because a spoonful of the light and dark dough were put in alternately to imitate the stone after which it was named; but her cakes were not spoiled, as she now had two instead of one.

She laughed heartily over her blunder, and I joined her; but still I felt sorry she had not been more successful, for it was a real task, as well as an expense, for her to bake cake. First, she had to meet the milkman quite a distance, as he could not drive near the house, then away to the store for butter and eggs, with a child, perhaps, in her arms, or to go running alone, scarcely knowing what might befall them ere her return, as the cars passed her door almost continually.

"I would not have tried only I wanted something extra for the fayther," this day," she said, half regretfully.

"It will be very good as it is, Mrs. O'Flany," I said; "but I will write you off a recipe for sponge cake which you will not need to have milk or butter for at all." So I wrote as follows:—Four eggs, one cup of sugar, one of flour, and two teaspoonfuls of baking powder. Beat the yelks and sugar together; whip the whites stiff, and sift the flour and sugar together. Stir in first a spoonful of flour and then one of the beaten whites until mixed. Bake in a moderately hot oven.

"Heaven bless you! I'll pray for you when I use it," she exclaimed, as she thanked me for my kindness.

COOKING SMALL NEW POTATOES.

Select the *very smallest*, scrape and drop into cold water. Have ready a sauce-pan of hot lard or drippings. Drain the potatoes, dry them on a towel and drop into the hot fat. Cook until easily pierced with a fork. The fat should not be too hot or the potatoes will be too deeply browned before cooked through. Drain, sprinkle with pepper and salt and serve at once.

Another good way of using the smallest potatoes is to scrape and boil them until almost tender and then to put them into a frying-pan having a few spoonfuls of hot drippings or butter. Sprinkle with pepper and salt and cook until nicely browned. Only enough fat is required to keep them from burning. Or, boil until tender, drain, and cover with a white sauce made of a pint of new milk, a large spoonful of butter, pepper and salt and thickened with a spoonful of flour, rubbed smooth in a little milk. This quantity of sauce answers for a quart of potatoes. The sauce should be first made, the potatoes added, and then leave on the back of the range 10 minutes before serving. Simply boiled, drained and dried with a few spoonfuls of melted butter poured over them, they will be found very palatable and altogether too good to throw away; as is often the case from a lack of patience in preparing. B. K. L.

HINTS.

A little powdered borax and tallow are as good as anything to add to starch to prevent its sticking.

Sweet spirits of nitre is recommended for ivy poisoning.

When a mustard plaster is not wanted to blister, mix the mustard with the white of an egg.

A thin coat of white varnish applied to a worn straw matting makes it look better as well as adds to its durability.

Kerosene is excellent for cleaning unvarnished furniture, either walnut or oak.

DOMESTIC RECIPES.

Cherry Fritters.

Make a batter of a pint of milk, four beaten eggs, a pinch of salt, two even teaspoonfuls of baking-powder and enough flour to make a little stiffer than pan-cake batter. Beat thoroughly, then stir in a pint of stoned cherries and drop by the spoonful into hot fat. As you take from the fat, drain on an old but clean napkin, dust with powdered sugar and serve with liquid sauce.

To Cook Turnips.

Pare and slice and boil in as little water as possible. When almost done and almost dry, add an even tablespoonful of sugar to each quart of turnips, and salt to make palatable. When dry and tender mash, add two or three spoonfuls of thick sweet cream, and serve hot. Very nice. Cook.

Pie Crust Shortened with Beans.

Boil white beans until soft, rub through a sieve, and mix as much into flour as can be done and preserve sufficient tenacity in the dough. Add a little salt. This crust is used at "Water Cures" and makes a far better pie crust than one would, suppose who had never eaten it.

Blackberry Mush.

Two quarts of ripe berries, a quart of boiling water, two cups of white sugar and a little salt. Boil slowly five minutes, then thicken with Graham flour and cook a few minutes longer. Put into a greased mold to cool. Serve with cream.

Mrs. D. J.

Apples and Rice.

Boil a cup of rice in three pints of milk until tender. If you have no custard kettle, put the rice in a tin pail, cover and place in a kettle of boiling water. Pare and core with apple corer eight harvest apples, put into a buttered baking dish and fill the cavities with sugar. Put the rice around the apples but do not cover the tops. Bake half an hour, cover with the beaten whites of three eggs, sift over a little sugar and brown in oven To be eaten with sweetened cream or milk.

Mrs. J G.

That low, nervous fever, want of steep and weakness calls for Hop Bitters.—*Adv.*

News of the Week.

HOME NEWS.

On the 21st ult, Mr. Conkling made a speech at the Delevan House in a conference of stalwarts. He opposed any combination with the object of electing a stalwart and half-breed. He thinks the stalwarts should stand by their colors until Dec. 31 if necessary. His speech was over an hour long. But the sensation of the week was the withdrawal of Senator Jacobs' name from the candidacy for U. S Senator. Mr. Fowler in withdrawing Jacob's name said it had been stated that a quorum voting for other candidates might give to one candidate a majority of their votes in which case the votes for Jacobs (dem) would be ignored, and on these grounds he withdrew Jacobs' name. This caused much excitement and the Jacobites voted somewhat at random. Wm. A. Wheeler's vote jumped from 40 to 50. The democrats made Clarkson N. Potter their caucus candidate. The voting during the week has changed but little, excepting the transfer of the democrats' votes from Jacobs to Potter. The report has been circulated that Depew's name will be withdrawn and Frank Hiscock's substituted but it is probably untrue. Dr. Mary Walker is out with an address to the legislature asking to be made its choice for Senator. Anything for variety!

Another appropriation of $500,000 has been made for the Capitol at Albany. The cost of the building was originally limited to $4,000,000, but nearly $13,000,000 have already been expended and good judges say that $7,000,000 more will be required to finish it. The people won't mind the money if the building don't fall down before the workmen leave it!

That bribery investigating committee has closed its labors and no definite conclusion as to who is the guilty party has been reached. It has proved a very interesting "side-show" to the larger "circus" going on in the Capitol.

Mr. Brady, of Star-route fame, has arisen in wrath and demanded an investigation, by the Grand Jury, of the evidence against him. Knowing that the Grand Jury of the District of Columbia cannot sit beyond July 5th, and that every moment of the time intervening will be occupied he is anxious for vindication. Wait till the proper time, then B-rady!

Thomas Garfield, an uncle of the President, was killed by the cars near Cleveland, Ohio, on the 22d inst. A Mrs. Arnold who was with him had her skull fractured but will probably recover.

The American Association for the Advancement of Science will meet at Cincinnati, August 17, and will continue in session several days.

The Regents of the University of Michigan are considering the feasibility of establishing a school of political science in connection with that institution, the design being to give instruction in political economy, international law, constitutional law, and the history of political institutions, the general Constitution and history of the United States and England, the history and principles of finance, and sanitary law.

A check for $14,949,052 20 was recently given by the Pennsylvania Railroad Company to a committee representing 2,700 shareholders of the Philadelphia, Wilmington and Baltimore road, who reside mainly in New England. Nearly $2,000,000 more will be disbursed among stockholders in Philadelphia. The Wilmington road passed into the hands of the Pennsylvania on July 1.

John G. Saxe, the poet, in consequence of his troubles by death in his family, and a railroad accident six years ago, has become a victim of melancholy. He will remove from Brooklyn to Albany, where he will live hereafter.

Three colored men have taken $1,100 worth of stock in a new cotton factory bein; organized at Augusta, Ga. A colored man, a slave up to the end of the rebellion, is, with two or three exceptions, the largest cotton planter in Mississippi. The assessors' returns show that the colored people are increasing their ownership of property with most satisfactory progress in all the Southern States.

And now the Canadians are dropping down from the uncongenial North into the more fertile lap of the United States. Last month about 11,000 of them came to stay, and more are getting ready to come.

The colored Republicans of North Carolina complain to the President that they are not given offices enough. But this is not new. This complaint is chronic among all classes all over the country.

The reduction of interest on the Government bonds has been so successfully conducted that Secretary Windom thinks it will not be necessary to ask Congress for any legislation on the subject when it assembles in December.

Alexander Swift, brother-in-law of the Cary sisters, Alice and Phœbe, has bought the old Leary homestead, near Cincinnati known as Clovernook, and intends to repair the building and to make of the grounds a memorial park in honor of the departed and venerated early occupants of the place.

J. H. Wade has given the city of Cleveland a tract of land valued at $500,000 which has been converted into a park. It will be known as Wade Park.

Hamilton Desson, a prominent manufacturer of Philadelphia, has bought 4,000,000 acres of land from the state of Florida. This is said to be the largest purchase ever made by a single person in the world. The tract of land is nearly as large as the state of New Jersey. The price paid is unknown. Mr. Desson intends to settle a large number of immigrants on the land.

Dr. Joseph Cummings of the Wesleyan University Middletown, Conn., was recently elected President of the Northwestern University, Evanston, Ill.

Rev. Howard Crosby D. D. has resigned the Presidency of the University of New York.

Attorney General Johnston of Kansas decides that the drinking of wine in church communion is not a violation of the new liquor law, but that a druggist or other person selling wine for the purpose would be liable to penalty.

Mr. John K. Buchtel, of Akron, O., was given $75,000 more to the Buchtel College, of Akron, making his gift nearly $200,000.

George S. Merrill, recently elected Commander-in-Chief of the Grand Army of the Rupublic, says the headquarters will be established at Boston. Comrade William M. Oliver is appointed Adjutant General.

The boy evangelist, Rev. Thomas Harrison, after 11 weeks of earnest labor at Indianapolis, is credited with 2,200 conversions. Sixteen churches of that city are now open for revival work, and the use of the theaters for Sunday services has been tendered.

More than one-tenth of the inhabitants of the United States live in ten cities—New York, Philadelphia, Brooklyn, Chicago, Boston, St. Louis, Baltimore, San Francisco, New Orleans and Cleveland. Nine States have one-half of the population of the country, and less than one-fourth of the United States Senators.

Whittaker's friends are determined not to let his case rest with the adverse finding of the military court, if such it shall be. They claim that the evidence taken does not justify a verdict of guilty, and they propose to make argument to this effect before the Judge Advocate General. Then, if the Judge Advocate General approves the finding of the court, Whittaker's friends intend to go before the President and ask him to disapprove it. They make no point on the color question, and will not. In spite of their efforts it is likely the finding of the court will be approved.

Brockton, Mass., now manufactures more sewing-machine needles than all Europe combined. They are turned out by the million and shipped all over the world. The needle made of the best of steel, passes through thirty different hands in its manufacture before leaving the factory; it is of various sizes and shapes, curved, straight, two-eyed (twin holes,) and the cheapest costs three-quarters of a cent.

Advices from Fort Smith indicate that affairs in the Chickasaw and Choctaw Nations have reached a crisis. The United States cavalry at Fort Sill were ordered to report for duty to United States Agent Tuffts at Muskakee on June 24, to cooperate with the Choctaw militia, under Gov. McCurtain, in removing white intruders and their stock from the Nation.

The personal effects of the late Vice-President Henry Wilson, including his library, correspondence with prominent men, and household goods, are soon to be sold at auction, at Natick, Mass. Mrs. Howe, Mr. Wilson's wife's mother, who is now 94 years old, will continue to live at the old homestead, and the estate will probably be rented to some person who will care for her.

According to Secretary Blaine, there are more than 1,000,000 applications for office on file in the various departments at Washington.

Griscom, the Chicago faster, has now been without food for 30 days and is looking bright and cheerful. He walked 12 miles on Thursday and Friday which is pretty good for a man who takes no food.

Mr. Justice Matthews, of the U. S. Supreme Court, has accepted the invitation of the New York State Bar Association to deliver the annual address before that body at their next meeting in New York.

Among other bequests in the will of the late Eli Bates of Chicago, is one of $40,000 for the erection of a monument to President Lincoln at the entrance to Lincoln Park, in Chicago, and $25,000 donated to the Industrial School.

One of the great sights to be seen at Pierre, Dakota, on the Fourth will be the great Indian grass dance, which will be participated in by a large party of Sioux Indians. After the dance a feast in the way of a whole roasted ox will be given them.

The Natural Bridge tract in Virginia has recently been purchased as a part of a general scheme, which is not yet fully developed, but which contemplates the laying of an extensive park and possibly the establishment of forestry.

It is said that eight more mills are to be built at Fall River, Mass., this year.

A Physician's Report.

Many physicians are using Compound Oxygen in their practice, and with remarkable success. One of them writes: "My patient has now been under treatment about four weeks. His condition at the *time of beginning the Treatment was very unfavorable indeed;* he was very feeble, severe cough, expectorating pus in considerable quantity; he suffered with night sweats; all of his friends considered his case as hopeless. *Every symptom has improved; his cough is very much better; his strength and general appearance has improved a hundred per cent.: in fact he has the appearance of a new man.*" Our Treatise on Compound Oxygen containing large reports of cases and full information, *sent free.* Drs. Starkey & Palen, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

FOREIGN NEWS.

Across the Atlantic, Ireland is still disturbed by the Land League agitation. Hundreds of the prominent leaders of the movement have been imprisoned under the Coercion Act, but others promptly take the place of those arrested. It is said that each person imprisoned costs the League three pounds, or fifteen dollars, a week for board, as the League supports all its "persecuted" members, being unwilling that they should have to suffer from the ordinary prison fare. Ten dollars a week are also, it is said, doled out to the families of poor prisoners. Arrests have been unusually numerous of late in order, it is supposed, to bankrupt the League by forcing it to support a large number of prisoners. Parnell and some other leaders are coming to this country, however, to raise funds for carrying on the work. In England the land bill is still before Parliament with no immediate prospect of its passage even by the House of Commons; should it pass this ordeal, however, it is very likely to be rejected by the House of Lords, in which case Parliament will probably be dissolved and an appeal be made to the country by a new election.

On the continent the chief matter of interest just now is the condition of hostile public sentiment between France and Italy, growing out of the Tunisian "affair." After a few unimportant skirmishes between the French and the wild mountain tribes in Tunis, one division of the French army approached close to the city of Tunis whereupon the Bey submitted and the country was virtually annexed to the French African dependencies. This greatly exasperated the Italians who had a covetous eye on the place for themselves, and on the return of some of the French troops to Marseilles the other day a quarrel took place between the populace and a lot of resident Italians, in which several persons were killed and a good many others wounded more or less severely. In the city there are always a great many Italians chiefly workingmen, and the popular agitation at once turned against these. A great many of them left right away, returning home; several factories in which others worked were burned down, causing a loss of about 6,000,000 francs or $1,000,000. So soon as the news reached Italy counter demonstrations took place at Milan, Rome, Naples and other large cities, and the popular excitement demanded war with France. The authorities, however, saw the necessity of promptly suppressing such dangerous manifestations and things are "cooling down" a little. There is still a world of "bad blood" on both sides of the Alps, however, and could Italy feel sure of help, if hard pressed, she would probably go to war with her powerful neighbor.

[Milwaukee Evening Wisconsin.]

The spirit of mortal may not be very proud, but we notice it waxes overly profane in some cases where rheumatism is the moving cause. We use St. Jacobs Oil for ours and are happy.—*Adv.*

AGRICULTURAL NEWS.

The following is an itemized account of the expenses of the Department of Agriculture for the fiscal year just closing.

General salary account	$69,200
Contingent expenses	10,000
Collecting agricultural statistics	10,000
Purchase and distribution of valuable seeds	80,000
Experimental garden	7,600
Museum and herbarium	1,000
Furniture, cases and repairs	5,000
Library	1,000
Laboratory	4,000
Investigating history of insects	5,000
Investigating diseases of swine	10,000
Experiment in sugar	7,500
Data respecting arid region	5,000
Examination of wools, etc	4,000
Reclamation of arid lands	20,000
Report on forestry	5,000
Postage	4,000
Total	$248,300

The importation of American lard is prohibited in Hungary. American pork and bacon have been proscribed for some time........It is proposed to hold an agricultural and mineralogical exhibition at Madrid, Spain, in 1882......A statement was published at Winnipeg, Manitoba, last Wednesday, by authority of the traffic manager of the Canadian Pacific Railway, which gives an account of the crops at the different stations on the line of the road. It shows a very large area of grain sown, amounting to nearly double that of last year. The crops are said to be growing splendidly, and an abundant yield of cereals and other products is predicted. The pasturage from frequent showers is good, and the live stock are in an excellent condition. The outlook for dairy products is encouraging and highly satisfactory.. ....Mr. Beecher has petitioned to have the suit brought against him by the Agricultural and Mechanical Society of Western Maryland removed from the Superior Court of Baltimore City to the United States Circuit Court.

Census Agricultural Statistics.

Tables showing the area and product of cereals of the United States and Territories.

OATS.

States and Territories.	Acreage, 1880.	Bushels, 1880.	Bushels, 1870.
Alabama	324,581	3,039,274	770,866
Arizona	33	624	22
Arkansas	161,208	2,187,208	528,777
California	49,917	1,855,871	1,758,507
Colorado	23,015	640,100	332,940
Connecticut	36,691	1,009,706	1,114,595
Dakota	89,792	2,331,330	114,337
Delaware	17,157	378,508	554,388
District of Columbia	267	7,440	8,500
Florida	47,964	468,132	114,204
Georgia	612,350	5,544,161	1,904,601
Idaho	18,197	462,236	100,119
Illinois	1,959,853	63,206,250	42,780,851
Indiana	623,600	15,906,721	8,590,409
Iowa	1,507,490	50,612,141	21,005,142
Kansas	435,853	8,180,385	4,097,925
Kentucky	403,444	4,582,968	6,620,103
Louisiana	26,863	229,850	17,782
Maine	78,936	2,265,575	2,351,354
Maryland	101,127	1,794,872	3,221,643
Massachusetts	30,660	646,169	797,664
Michigan	536,167	18,190,493	8,954,460
Minnesota	617,427	24,372,752	10,678,261
Mississippi	192,497	1,959,620	414,586
Missouri	968,473	20,673,458	16,578,313
Montana	21,691	900,915	149,367
Nebraska	250,899	6,555,565	1,477,563
Nevada	5,937	186,860	55,916
New Hampshire	29,434	1,018,006	1,146,451
New Jersey	137,426	3,710,808	4,009,830
New Mexico	9,298	157,437	67,660
New York	1,261,171	37,575,506	38,293,625
North Carolina	499,412	8,830,522	3,220,105
Ohio	910,388	28,664,505	25,347,549
Oregon	151,368	4,898,593	2,029,909
Pennsylvania	1,237,593	33,847,439	36,478,585
Rhode Island	5,575	159,349	157,010
South Carolina	261,438	2,715,445	613,593
Tennessee	468,638	4,723,938	4,513,315
Texas	236,795	4,868,916	762,663
Utah	19,514	417,938	65,650
Vermont	99,548	3,742,282	3,602,430
Virginia	563,423	5,333,081	5,857,555
Washington Territory	37,946	1,581,951	255,169
West Virginia	126,931	1,908,505	2,413,749
Wisconsin	955,276	32,911,246	20,180,016
Wyoming	822	22,512	100
Total	16,150,611	407,970,712	283,107,157

BARLEY.

States and Territories.	Acreage, 1880.	Bushels, 1880.	Bushles, 1870.
Alabama	643	6,420	5,174
Arizona	12,404	239,061	55,077
Arkansas	191	2,342	1,921
California	586,046	12,578,486	8,783,490
Colorado	4,129	107,241	35,141
Connecticut	575	12,286	26,458
Dakota	23,902	307,166	4,118
Delaware	20	537	1,799
District of Columbia	....	....	....
Florida	21	210	12
Georgia	1,501	19,396	5,640
Idaho	8,291	274,750	72,316
Illinois	55,278	1,229,693	2,480,400
Indiana	16,427	383,929	356,262
Iowa	198,885	4,021,478	1,960,779
Kansas	24,015	300,313	98,405
Kentucky	20,124	487,037	238,486
Louisiana	8	50	1,226
Maine	11,106	242,185	658,816
Maryland	239	6,312	11,315
Massachusetts	3,178	80,158	133,071
Michigan	54,509	1,204,523	834,558
Minnesota	116,024	2,973,061	1,032,024
Mississippi	236	3,127	3,793
Missouri	6,510	123,476	269,240
Montana	1,323	39,970	85,756
Nebraska	115,988	1,744,711	216,481
Nevada	19,401	513,630	295,452
New Hampshire	3,460	77,877	105,822
New Jersey	246	4,216	8,283
New Mexico	2,625	47,248	3,876
New York	356,566	7,788,749	7,434,621
North Carolina	477	4,799	3,186
Ohio	57,485	1,707,164	1,715,221
Oregon	29,811	920,877	210,736
Pennsylvania	28,609	488,376	529,562
Rhode Island	715	17,783	33,559
South Carolina	1,236	16,645	4,752
Tennessee	2,624	30,150	75,068
Texas	5,724	75,842	44,351
Utah	11,247	216,535	49,117
Vermont	10,518	267,635	117,333
Virginia	895	14,560	7,259
Washington Territory	14,684	566,612	55,787
West Virginia	457	10,131	50,363
Wisconsin	204,323	5,043,202	1,645,019
Wyoming	6	131	....
Total	2,005,466	44,149,979	29,761,305

RYE.

States and Territories.	1880. Acreage.	1880. Bushels.	1870. Bushels.
Alabama	5,849	28,495	18,977
Arizona	....	....	....
Arkansas	3,221	22,030	27,645
California	20,393	184,068	26,275
Colorado	1,356	20,937	5,235
Connecticut	29,794	370,732	289,057
Dakota	3,674	35,972	....
Delaware	773	5,953	10,222
District of Columbia	301	3,704	3,724
Florida	619	3,070	645
Georgia	25,859	101,659	82,549
Idaho	373	4,391	1,756
Illinois	192,138	3,121,682	2,456,578
Indiana	25,400	303,221	457,468
Iowa	102,580	1,518,307	505,807
Kansas	34,628	413,181	85,207
Kentucky	89,579	676,245	1,108,933
Louisiana	213	1,106	984
Maine	2,178	26,568	34,115
Maryland	32,430	288,371	307,089
Massachusetts	21,670	214,031	239,227
Michigan	22,834	295,440	144,508
Minnesota	13,637	215,716	78,088
Mississippi	840	5,288	14,852
Missouri	46,488	535,458	559,532
Montana	15	430	1,411
Nebraska	34,872	424,693	13,532
Nevada	6	159	310
New Hampshire	3,217	34,638	47,420
New Jersey	106,029	949,104	566,775
New Mexico	19	290	42
New York	244,894	2,634,390	2,478,125
North Carolina	61,936	284,993	352,006
Ohio	29,499	389,221	846,890
Oregon	970	16,550	3,890
Pennsylvania	398,465	3,683,621	3,577,641
Rhode Island	1,270	12,967	20,214
South Carolina	7,141	26,987	36,165
Tennessee	32,496	156,446	223,335
Texas	3,348	29,758	28,521
Utah	1,167	9,719	1,312
Vermont	6,319	71,733	73,346
Virginia	48,761	324,567	581,264
Washington Territory	597	9,816	4,453
West Virginia	17,279	112,181	277,746
Wisconsin	169,698	2,298,544	1,325,294
Wyoming	6	78	....
Total	1,844,321	15,863,632	16,918,795

The Illinois Legislature has passed a law for the appointment of a competent veterinarian, to be known as the State Veterinarian or Veterinary Inspector, whose services are to be paid for out of the State Treasury. He is authorized to order the slaughter of diseased animals, which are to be appraised, and are to be paid for by the State. The Governor is empowered to order the quarantine of infected localities, and prohibit the importation of live stock from certain localities, unless the same come provided with certificates of health from the Veterinary Inspector. Heavy fines and imprisonment are imposed upon any person in the State who shall not report pleuro-pneumonia among their cattle, or shall in any way hinder said Veterinary Inspector in the discharge of his duties..........Mr. Vennor has now begun "predicting" for July, and under date of June 17 writes:—"I regret to have to warn you of a hot and stormy July, with frequent disastrous storms of wind, hail and rain throughout those sections in which the June storms have been so severely felt. The month will resemble that of 1880 rather than 1879."........A Hail Protective Association has been formed at Greeley, Colorado. It is on the mutual plan........An attempt is being made to a number of fine healthy birds to a friend who is set- introduce English pheasants among the Rocky Mountains, and Lord Morley has lately despatched tled in that region. It is now suggested that American turkeys could be introduced into England........The prairie bird might also be acclimatized there with advantage........The threatened extermination of the famous Alpine flower, Edelweiss, has led the authorities of various Swiss cantons to prohibit the exportation of the plant and to allow the gathering of the full-blown flower only.

The Executive Committee of Delaware State Grange recently caused an analysis of a commercial fertilizer to be made, and finding it to fall short of phosphoric acid (available), gave notice to the sellers of large quantities of it to Patrons, that they should make up the deficiency in fertilizers, and an equal amount additional, or that the Grange, being an incorporated body, would bring suit to secure damages. The demand was complied with, putting the equivalent of a good round sum in the pockets of Patrons.....The first car-load of new wheat reached Chicago on June 22, and was graded "rejected Winter."........A wealthy Californian named Brennan has received a government grant of 84 leagues of excellent land in Sonora, from the Mexican government on condition that within five years he will have a colony of 500 families on it. Until the terms are complied with the title to one-half the grant will be withheld. The colonists will be allowed to import all goods for their own use free of duty.............

Owing to the severe competition between transportation by rail and by water *via* the lakes and the Erie Canal, freight rates from Chicago to this city are being cut down to an unusually low point. It is reported that contracts have been made to transport thousands of car-loads of grain from Chicago to this city for 12 cents per bushel, the "pool" rate being 17 cents. Contracts have also, it is said, been made for the transportation of large quantities of meat at 20c per 100 pounds.

All over the West, but just now especially in Iowa, a strong agitation is under way against the barbed-wire fence monopoly created by a late decision in a patent case. Farmers are everywhere combining, or talking of doing so, against the high prices charged by the monopolists. The Grange, too, is taking a hand in the fight, and the validity of the patent must soon once more come up for judicial decision..... Preparations for the great cotton exhibition at Atlanta, Ga., are being vigorously pushed, and applications for space are rapidly pouring in from intending exhibitors all over the country.

"Mother has Recovered,"

says an Illinois girl to her Eastern relatives. "She took bitters for a long time but without any good. So when she heard of the virtues of Kidney-Wort she got a box and it has completely cured her Liver complaint."—Health and Home.

Speaking of the merits of Gates' Garget Cure, one of our exchanges says: "Every cattle owner and dealer will appreciate hearing of a sure cure for that troublesome and much prevailing disease of the udder called garget: and such a cure Mr. John B. Gates of Worcester, Mass., claims his preparation, "Gates's Garget Cure," to be. As every man is liable to blow his own trumpet too well, and considering how the country is overloaded with all kinds of would-be cures, Mr. Gates forbears to ask for the public's confidence on the strength of his own assurance, and therefore refers simply to the many recommendations at hand, whose authorship cannot be questioned, most of the names being well known throughout Worcester county. The latest testimony received is from Mr. James F. Leach, the proprietor of the celebrated Swiss herd. On account of the letter's length, we cannot repeat it here, but its gist is a statement as to the infallible effect of the "Garget Cure," advising every farmer to keep it constantly on hand. Of the many names to whom Mr. Gates is permitted to refer are the following: D. G. Aldrich, Worcester, Mass.; J. C. Ray, Sup. of State Farm School, Manchester, N. H.; John O. Fox, Putnam, Conn.; J. Patch Stockwell, Sutton, Mass.; Thos. H. Sakell, Berkley, Mass.; John G. Oxer, Campbellstown, Ohio. The "Garget Cure" is kept by first-class medicine dealers."

Women that have been given up by their dearest friends as beyond help, have been permanently cured by the use of Lydia E. Pinkham's Vegetable Compound. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

When life is a drug, and you have lost all hope, then trust in Hop Bitters.

BURNETT'S COCOAINE,

The Best of all Hair Dressings.

It allays irritation, removes all tendency to dandruff, and invigorates the action to the capillaries in the highest degree, thus promoting a vigorous and healthy growth of the hair. Its effect upon the glossiness and richness of the hair is such as cannot be surpassed.

Burnett's Flavoring Extracts are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, June 25.

Chicago.—WHEAT unsettled; No. 2 Red Winter $1.15@1.18; No. 2 Chicago Spring $1.13@1.13¼, cash $1.13¾@1.13⅞ July; $1.14¼ August; $1.11¾ September; No. 3 do., $1.02@1.07. Corn in fair demand but lower and very weak at 46¼c. cash; 45¾c. July; 46c. August; 46½c. September; rejected 42¼c. OATS unsettled at 38⅛c. cash; 37¼c. July; 28½@28¾c. August; 27¼c. September; rejected 31@31½c. PORK firm at $16.25 cash; $16.20 June and July; $16.30 August; $16.37½ bid, September. Lard steady and firm at $11 cash and bid, July; $11 August; $10.87½. September. Bulk-meats irregular; shoulders $5.95; short rib $8.45; short clear $8.85. FREIGHTS—Corn to Buffalo higher at 3¼c.; wheat do. 3½@3¾c. BUTTER steady; fair to fancy creamery 18@21c.; good to fine dairy 14@17c. CHEESE easier; full creams 8¾@9c. EGGS lower at 14c. Timothy seed firm at $2@2.45; flax seed $1.23, clover seed firm at $3.80@4.25. HOGS—Demand fair and 5@10c. lower; mixed packing $5.50@4.85; light $5.65@5 90; choice heavy $5.90@6.15; culls and light Yorkers $5@5.50. Cattle active and strong; export nominal at $6@6.30; good to choice shipping $5.60@6; poor to fair $5@5.50; all sold; market closing strong; butchers' active at $1.87½@4.75; through grass Texans $3.35; stockers and feeders $3,20@4.90; good clearing. Sheep—market fairly active and steady; common to good $3.05@5.

St. Louis.—WHEAT dull No. 2 Red Fall. $1 18@1 18¾. cash; $1 16¾@1 16¾ July; $1 14¾ August; $1 14¾@1 15 September; $1 13⅞@1 14¼ all the year; No 3 do., $1 12¼@1 13, an advance; No. 4 do. $1 06¾. Corn dull at 45½c.@45¾c. cash; 45¾c@45¾c. June; 45¾c.@45⅞c. July; 45⅝c., August; 46c.@46¼c., September; 41¾c.@41¾c., all the year. Oats dull 35¾c. bid. cash; 34c@34¼c. July. Hogs steady; Yorkers, $5 80@5 90; packing, $5 75@5 95; choice to fancy $6@6 15. Cattle—very light supply was quickly taken at strong previous prices; light to heavy shipping Steers, $4 80@5.80; grass Texans, $3 25@4 25. Sheep stock scarce and only moderate demand at $3@4 25.

Cincinnati.—WHEAT steady; No. 2 red Winter $22; receipts 4,400 bush.; shipments 3,300 bush. CORN unsettled; No. 2 mixed 43c.; No. 2 white 50¾c. OATS quiet; No 2 mixed 40c. RYE in fair demand; No. 2, $1; August, 80c. BARLEY scarce; extra No. 3 Fall, $1.08. PORK quiet at $16.25@16 50. Lard quiet at $10 80. Bulk-meats steady; shoulders, 6½c.; clear rib, $8.55. Bacon firm and unchanged. Hogs active and firm; common and light, $4.40@6 10; packing and butchers', $5 50@6.30.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, June 25, 1881.

ALCOHOL—Quoted 3⁷½c. for export.

BEANS AND PEAS.—Beans are selling only in a moderate way and prices are barely sustained. A fall is expected at this season. Green peas nominal at $1,50@1,55 for Wisconsin. Southern B. E. $3.25 ₱ 2-bush. bag.

Marrow beans, prime, $2.45@2.50; other, $2.30@2.40; medium, prime, $2.40@2.45; other, $2.20@2.35; pea, $2.25@2.50 white kidney, $2.30@2.40; red kidney, prime, $1.55@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.40@1.45.

Receipts for week, 6 356 bush.

Exports do. 913 pkgs.

BEESWAX—Demand light; small lots quoted 23@23½c.; shipping parcels 23@25c.

BUTTER.—The market is firm, its surroundings considered. Prices are resting mainly upon a speculative foundation, and if this should soften under heavy offerings—and there is a good deal of high grade being held—there is a possibility of a lower scale for actual business. It may be as well to mention that some of the leading dealers who usually go in on wise speculative chances are not securing a package above their current wants. Shippers are operating, but not in a voluntary way. A number of fine State marks have obtained a reputation abroad during the previous cheap and heavy crops, and a few orders are cabled. The storage of creamery has been quite liberal, and the belief that Summer packing will be heavy enough to give held stock a place has a good line of votaries. Deliveries from the West will have much to do with the realization of that and the "increased population" theory. The week exhibits a good business, the early efforts of exporters having kept down an immediate surplus.

Creamery—Western, good to prime, 21@22c.; State and Penn. 21½@23c.; poor, 19½@20c.; sweet cream, 20@22c.; State pails and h'f tubs, choice, 21c.; fair to prime, 18@20c.; Welsh tubs, 19@21c.; poor State, 14@18c., firkins yellow, 20@22c; Western imitation creamery, 18@20c.; dairy, 18@19c.; other, 14@17c.; factory or ladle-packed, best, 15@16½c.; other, 10@15c.; very poor Western, 10@11c.

Receipts for week, 43,700 pkgs.

Exports for week, 12,836 do.

CHEESE.—The market has exhibited remarkable vitality in holding up to 10c. in the face of the large supply of the week. On Thursday over 61,000 boxes arrived but tone of trade did not perceptibly waver. The fact that we are short of last year's export to date has been a good leverage for sellers. Supplies have been well cleared up from station and store, and the outlook is for some recovery for next week. Western cheese is not running high in quality. Home trade using best Ohio.

State factory, fine, 9¾@10c., fair to prime, 8½@9¾c; poor to fair, 8@8¾c., Ohios, flat, fine 8¾@9c; other 7½@8¼c: part skimmed, 4¾@6c.; full skims, 2@3c.; Wisconsin poor to fine 7½@9½c.

Receipts for week, 136,117 boxes.

Exports for week, 132,000 boxes.

Liverpool cable, 54s.

Steam to Liverpool, 20@25s.

COTTON.—Stocks seem to be under better control, and the demand for consumption, here and abroad, has imparted a tone of more regular steadiness to positive or spot sales.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7 15-16	8 1-16	8 1-16
Strict ordinary	8 5-16	8 11-16	8 11-16
Good ordinary	9¾	9 9-16	9 9-16
Strict good do	9¾	10 1-16	10 1-16
Low middling	10 7-16	10 13-16	10 13-16
Strict low middling	10 13-16	11⅛	11⅛
Middling	11 1-16	11 5-16	11 5-16
Good middling	11⅜	11⅝	11⅝
Strict good middling	11⅜	12⅛	12⅛
Middling Fair	12⅜	12⅝	12⅝
Fair	13⅜	13⅝	13⅝

STAINED.

Good ordinary	7 7-16	Low middling	9 1-16
Strict good ordinary	8 7-16	Middling	10⅜

The close at the market for futures was officially reported as follows: June, 11.01@11.02c.; July, 10.99@11c.; August, 11.03@11.04c.; September, 10.63@10.64c.; October, 10.22@10.23c.; November, 10.09@10.10c.; December, 10.10c.; January, 10, 22@10.23c.; February, 10.30@10.35c.; March, 10.46@10.48c.

DRIED FRUITS.—A steady trade has held evaporated apples where they were and full prices are expected for the rest of the finer marks. Sun-dried apples quiet A few have been taken for France. Concessions have been offered German shippers without leading to trade. Peaches quiet, but firmly held under short drop reports and no heavy supply here. Sundried peeled are quoted at 19@18c. Small fruits not a feature at this season.

Apples evaporated choice 8¾@9c; fair to prime 7¾@8¾c. North Carolina sliced, common to best 4¾@5c. Va, do. 4@4½c; Tenn. in bbls. 4c. do. bags 3¾@4c; State fine cut 3¾@4c., quarters 4¼c Western. 3¾@4¾c; evaporated peaches peeled 27@30c.; unpeeled 13@14c; sun-dried peeled 17@22c; unpeeled halves 5@5½c. Plums 12@12½c. Blackberries 8c. Cherries 12@14c. Raspberries 23@24c. Whortleberries 11¼c.

Receipts for the week, all kinds, 412 pkgs.

Exports dried apples, 2,426 pkgs.

EGGS.—Receipts for week, 11,329 bbls.; do. last week 12,088 do. Early in the week a break in prices was threatened, but with moderate receipts prices have held quite steady. For general use Canadian eggs sell best. Few near points now reach the market.

L. I. & N. J, 18½@19c.; State and Pa., 18c.; Canadian, 17@17½c.; Western, Md. and W. Va. 17c; off quality, 16@16½c.

FLOUR.—A buoyant market has followed unfavorable impressions of the wheat crop and a large business is reported at better prices.

No. 2, ₱ bbl., $3.10@3 80. State and Western superfine, $4.15@4.75; city mills extra, $6.25@6.50; Spring wheat do. $4.85@5.25. Spring XX and XXX, $5.35@7.00; patents, $6.25@8; Minnesota bag and hoop shipping, $5.10@5.35; trade brands, $5.50@6.50; St. Louis extra, $5.10@5.60; do. double extra, $5.75@6 25; do. family, $6.40@7; Southern shipping, $5.40@6; do. XX and family, $6.25@7.50. Rye, $5.40@5.80. Corn-meal, Brandywine, $3.25@3.40; Western, $2.75@3.25.

Receipts of flour for week, 102,150 bbls.

Exports of flour, 64 450 bbls.

FRESH FRUITS.—Quite a variety of fruits now embellish the market. Strawberries begin to moderate in supply, but there has been a long surfeit of them and buyers will not pay very high prices. About the best berries now come from Oswego. The Chas. Downing has become very popular as a market berry and it will be likely to rule where the Wilson used to.

Oswego quarts, 9@11c.; other Western, 7@8c.; up-river Downing, 8@12c.; Wilson, 6@7c.; Connecticut, 10@12c; a few N. J. range at 6@8c. Norfolk apples, $1@2 ₱ bbl.; whortleberries, $2@2.50 ₱ ¾ bush; raspberries 7@8c. ₱ ¾ qt.; black caps 8@10c ₱ qt., gooseberries, English, $4 ₱ bush.; common, $1., currants 4@6c, ₱ lb. Cherries have had a bad season; no attractive parcels now arrive; they range from 3 to 4c. ₱ lb. Peaches scarce; nominal rates, N. C., $2 50@3.50 ₱ bush; S. C., $2@2.50; Ga., $2.50@3 ₱ ½ bush. prime; hot-house, $2 50@3.50 ₱ doz The Delaware crop is an acknowledged failure. Watermelons dull at $35@45 ₱ 100 for Fla. A few Cal. Summer pears and apricots are offered at $5 ₱ box. Black Hamburg grapes $1@1.50 ₱ lb. Peanuts active and higher; Va. hand-picked, 5¼@5c. ₱ lb.; fancy, 4¾@4¾c.; extra prime, 4½@4¾c.; good to prime, 3¾@4c.; shelled, 3¾@3c.; pecans, 7@10c.

GRAIN.—Wheat has advanced, and at the improved prices trading has been very liberal for export, both Spring and Winter grades receiving attention. Speculators have been encouraged by the strong backbone of regular sales; but the market is up to a point that for a time at least will limit "paper" transactions. Corn has partaken of the strong movement in grain on 'change, and is quoted at the close as higher and active and not lacking in speculative interest. Oats have declined, not an unusual event in Summer trade; a good business is noted at the easy figures. New Southern wheat, Va., begins to arrive at Baltimore: 100 bags of Texas have come to New York.

Wheat, Spring $1.12@1.27; do, No. 2, $1.24@1.26; do. No. 3, $1.16@1.17; red Winter No. 2, $1.29½@1.30¾; red Winter $1.15@1.31; white Western and State $1.18@1.30. Rye, $1.05@1.09. Oats, white No. 1, 43c.; white No. 2, 43½@44c.; white No. 3 43c; mixed No. 1, 44c; do, No. 2 41¾c; do. No. 3 43@43c.; Corn, Western mixed 59@59½c.; do. No. 2 57¾@59c.; do. do. yellow 58@61c; Southern do. 57@60c.; do. white 61c.

Receipts for week, wheat, bush., 994 800; corn, do. 1,345,300; oats do. 812,200; rye, do. 3,647; malt, do. 63,700; rice pkgs. 831.

Exports for week, wheat, bush 1,057,850; corn, do. 1,006,000; oats, do. 8,708; rice, pkgs., 96.

HAY AND STRAW.—Exports for week 2,249 bales. The market for hay continues weak with very liberal supplies. Under grades are again lower. The new prices have induced considerable exportation. Clover not wanted. Straw tending downwards.

Choice retailing timothy hay 85@90c. ₱ 100 lbs.; second quality, 70@75c. do.; shipping 50@55c.do.; Long rye straw 85@90c. ₱ 100 lbs.; short do. 50@60c.; do. other grain, 45@50c. do.

HOPS.—Buyers are few and they act cautiously. Choice hops are hardly quotable, being nearly out of stock at the moment. Low grade hops are easier to sell.

Crop of '80 choice, 20@22c; good to prime 16@19c; fair to good, 13@16c; poor to fair, 11@13c; Eastern, 11@18c.; '79's, fair to prime, 12@15c.; '78's, 5@8c.

Receipts for week, 733 bales.

Exports for week, 155 bales.

MILK.—The season thus far has been a slow one for the use of milk in quantities. Farmers seem to have become disgusted with the low rates of the past few weeks and have diminished shipments. There is plenty for all present wants and the market for commission milk has ruled slow at an average of 3½c. per can of 40 quarts; it has seldom exceeded $1.

OIL CAKE.—Firm at $29.50@30 for Western.

POULTRY AND GAME.—Prolonged cold weather has helped the sale of turkeys. Chickens chiefly sell at the under rates. Fowls in good demand and firm, following stronger rates in live. Ducks quiet. Squab, in the absence of a game supply, are in good demand.

Dressed turkeys, choice ₱ lb 14@16c.; coarse 13@14c; scalded, 12@13c.; Phila. Spring chickens 22@27c; New Jersey, 20@24c; fowls, Phila. d.-p. 16@17c.; N. J. d.p. 15@16c.; do. scalded 14@15c. State and Western 14@15c; do. d.-p. 15@15½c.; coarse 12@13c.; Ducks, Spring, 18@20c.; old 12@14c.; Squabs, white, ₱ doz. $2.75, do. dark, $1.75@2

Prime live fowls and nice four-pound chickens have sold well; small chicks hard to sell Turkeys have a good call for Summer. Ducks and geese not running very extra in quality.

Spring chickens prime ₱ lb 22@23c.; other 18@21c. Fowls, ₱ lb. 13@14c; roosters, 7@8c.; turkeys, 11@12c.; ducks, ₱ pair 60@75.; geese, extra $1.50; other 75c@$1.37. pigeons, 25@30c

A good supply of wild pigeons has been obtained for the shooting match at Coney Island. They have sold readily at $2@1.12 ₱ doz. Egg, snipe, $2.25@2.50. Plover, $2@2.25.

PROVISIONS.—Home speculation gives the market for hog products some energy, but it is not responded to by a wholesome export demand.

Pork, extra prime, $14.25@14.50 ₱ bbl.; Western mess, new, $17.00; old $16.50@16 75; Lard—Western steam, $11.25 per 100 lbs.; prime city, $11.00 Hams—smoked city, 11½@12c.; pickled Western, 10¾@11c.; shoulders, smoked city, 8@8¼c; pickled, 7¾c. Bacon, long clear, 8¾@8¾c. Beef, Western mess, ₱ bbl. $10@13; India tes, $23@24; beef hams $23@23.50

Receipts for week, beef, bbls. and tcs, 660, pork,, bbls. 900; cut-meats, pkgs, 15,000; lard; do. 16,350.

Exports for week, beef, bbls. and tcs., 1,900; pork do. 3,350; cut-meats, lbs. 5,332,062; lard, do. 3 675,900.

SUGAR.—The following list shows the latest rates for refined.

Hard sugars—crushed ₱ lb 10¾c; do. powdered 10¾@10¾c, do granulated 10¾c; do. cut loaf 10¾@10¾c; confectioners' "A" 9¾c; coffee "A" standard 9¾c, do. off "A" 9¾@9¾c, white extra "C" 9@9¼c; extra "C" 8¾@8¾c; "C" 8@8¾c; yellow 7¾@7¾c,

TOBACCO.—Continental and other European contracts are well filled and with a good domestic call last prices are fully maintained.

VEGETABLES.—New potatoes are abundant and very cheap. Bermuda down to $3@3.50. All Southern $2@2.50 for prime and 75c@$1.50 for culls to fair. Old potatoes dull and weak; bulk prices $1.25@2 per bbl. for double heads and 2sc. Long Island peas plenty. A good demand prevails for prime green stuff. Southern items begin to be neglected.

Green peas, L. I., ₱ bag, 75c; wax beans, Norfolk, ₱ crate, 30@50c.; string beans do. 30@50c. Tomatoes Bermuda per 5 qt. box 20@40c; Southern per crate 50@$1; cabbages, L. I., ₱ 100, $3@4 do. Norfolk 75c.@$1; beets, L. I. ₱ 100 bchs., $1.50@2; carrots, do., $.@1.50; turnips do., $2@2.50; rhubarb do, 75c.@$1; radishes do., 50@75c; asparagus, Oyster Bay ₱ doz., $.75@2; other $1@1.75; lettuce ₱ bbl., 30@40c.; onions, Bermuda ₱ crate, 40c.@$1; Md. ₱ bbl. $3; cauliflower, ₱ doz., 50c@1.50.

WOOL.—There is considerable competition for the new clip and trade is brisk at all points with a strong upward market.

Ohio, Penn. and W. Va. XXX and picklock, 43@45c.; X to XX, 40@42c.; No. 2 to No. 1, 40@45c. coarse, 34@38c.; combing 40@45.

State and Western X and XX, 38@40c.; No. 2 to No. 1 38@41c.; coarse 32@36c.; combing, 40@41c., combing unwashed 28@32c.

Va., W. Va. and Md. unwashed medium 27@30c.; Ga. and Lake unwashed medium 27@30c.; coarse 23@26c. burry and slightly burry 16@22c; Cal, Spring northern, free, 30@34c.; middle counties, free, 27@30c.; southern, 23@27c.; low grade and burry, 18@23c.; Fall, choice, 24@25c.; low grade and burry 16@20c. Texas choice, free, 28@32c.; fair to good, 24@26c.; low grade and burry 17@20c. Pulled super 38@42c.; extra 35@38c; No. 1, 20@23c; combing, 35@40c.; lambs, 38@40c. Tub washed, fair to choice, 35@44c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, June 25, 1881.

BEEVES.—Receipts for the week 12,905 head; do. last week 13,512 do. The comparatively free arrivals sold well and prices were in sellers' favor. Some of the better grades of steers showed an advance of $1 per head, and medium stock, as the supply thinned out, were fully ¼c. higher than similar grades on Wednesday. Colorado stillers sold at 10¾@11¾c.; native stillers, 9¾c., to dress 55 lbs., and 11c. to dress 86 lbs.; medium to fair corn steers, 10@11c.; dr. 56c.; good to choice, 11¾@12c., to dress 56@57 lbs. Fat bulls 4½@5c., live weight.

VEAL CALVES.—Good weather has favored a market demand, and prices have ruled steady. A few extra fat calves have made 8c.

Prime N. J. fed, 7¾c; do, state, 7@7¼c.; poor to good yard lots, 5¾@6¾c.; Mt. Hollys, 7@7¾c.; buttermilk, 4¾@4¾c.; up-river, dressed, 10@11¾c. Our quotations include West Washington market stock.

SHEEP AND LAMBS.—Receipts for the week 32,948 head; do. last week 34,824 do. A steady but not active market is reported; good sheep selling rather quicker than lambs. Sheep quoted $4.25@5 40 ₱ 100 lbs. Lambs—Southern and Western, 5¾@6¾c.; a few N. J., 9c.

MILCH COWS.—Arrivals are fair but contain few desirable animals; in fact $45 is the highest figure noted for the style of stock here. Common have a nominal range of $25@35. There is no special demand and shipments of prime are not invited.

SWINE.—Receipts for the week 25,371 head do. last week, 26,773 There is a firm feeling in live hogs following the advance on 'change for city dressed. Live corn hogs quoted $6@6.20 per 100 lbs; none left over. City dressed State, 7¾@8¾c.; do. Western 8c.

I have used Higgin's English Salt and consider it superior to Ashton's. I ordered Higgin's Salt but the Ashton's was sent me and I returned the Ashton's. O. M. RICHARDS.

Elmo, Wis., March 9, 1881.

TERMS FOR 1881.

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We keep in stock *every variety* of Tea known, and at all prices.

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Below are a *few* of the many Premiums offered:

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With a **$10** order we send an *English China Tea Set of 45 pieces.*

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With a **$20** order we send a *French China Gold Band Tea Set of 44 pieces*, or an *English China Dinner Set of 106 pieces.*

We have *hundreds* of letters like the following:

LIME ROCK, CONN., April 20th, 1881.

Gentlemen—Please accept thanks for the beautiful Tea Set, which is much nicer than I expected, and indeed it is surprising to every one how you can do so much for so little. All are so well satisfied with the Tea that I think you will receive another order soon.

Yours truly, MRS. A. THORPE.

TAUNTON, Mass., March 8, 1881.

Gentlemen—I have forwarded eight different orders for Tea, and have received as premiums a tea set, a silver-plated caster, a dinner set, a glass set, a case of silver-plated knives and forks, a pair of French china fruit dishes, and *two ladies' gold watches*, and am now on my ninth order. Both Tea and premiums I am well pleased with, and have found perfect satisfaction with both. Yours truly,

MRS. MARIA C. LYNCH.

Orders, with P. O. Order, or money enclosed in registered letter can be sent at our risk. All checks or Post Office orders should be made payable to F. M. LINNELL.

We also send Teas by mail, without premium, postage paid, at list prices, to those who wish for choice goods and are so situated they cannot obtain them at home. For full price and premium list, send us postal, with address PLAINLY WRITTEN.

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$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine

70 YOUR NAME In New Type on 70 Cards **10c**
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20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

$5 to $20 per day at home. Samples worth $5 free Address Stinson & Co., Portland, Maine

Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 26.

HENRY STEWART.

Cattle Food.

When in a state of nature, animals lived in plenty on grass in the Summer time and half-starved on dry herbage or small branches of trees in the Winter. By such feeding they were able to rear their young and maintain their existence. But in keeping cattle for profit more than this mere increase in number is required. The farmer must make more from his cattle, sheep and pigs than this, or he cannot live. He must not only rear his young stock, but the mature animals must be quickly brought to as great a weight and as fine a condition as possible, so that they can be sold for much more than the mere value of the food. It is very clear that this can only be done by the use of food richer than grass or hay alone, and the food must be given in as large a quantity as the animals can digest and assimilate. Every ounce of food less than this causes the animal to be all the longer in reaching a profitable condition for sale, and all beyond it is waste. It is then necessary to learn how much food our animals require and to supply this to them with the greatest regularity.

But foods differ in quality and value. We may give a cow or an ox dry straw in great abundance and the beast will become poorer instead of making flesh or gaining fat. If in place of straw we give good hay, the animal will thrive better, but will not get fat very fast, if at all. It will simply keep in fair order. If we feed some bran it will do better; if some corn-meal is given it will do better still, and if corn is given until the animal can eat no more it will fatten very fast. It is the same with a cow that is giving milk; with poor feed the milk is poor and there is little of it, but by giving richer food and plenty of it, the milk is greatly increased and is made much richer in cream and butter. But while some foods have a greater effect in this way than others, it is necessary to consider their cost and market value; because there are times when a farmer may sell hay at a good price and feed straw with bran and corn-meal, or oil-cake meal, at a much less cost, and thus save money.

This is a part of the business of farming; for a farmer must be a good business man to succeed as well as he may. It is a mistake to think that one must leave the farm and go into a town or city, and work in a store, to learn business. As much may be done on a farm in this way as in a store and as profitably, if the farmer knows how to make the best of his advantages. And there is a great scope for a young man or a young woman to become expert in business in farm work. The rearing and feeding of cows and beeves, pigs and poultry, the production of milk, and the making of butter and cheese, are all business operations that pay all the better the more skillfully they are managed. A boy may have a few sheep and for want of feeding them well in the Winter he may find the wool is very light and poor and the lambs are very weak in the Spring, and the increase of the flock may not be enough to pay for the hay the sheep have eaten. A girl may have a flock of hens and for want of the right kind of food, there may be no eggs in the Winter when eggs are high in price; and no early chickens, which are worth twice as much as late ones. While in either case the fat lambs that sell in the market for six, eight or ten dollars in May, and the fresh eggs which sell for forty or fifty cents a dozen in the Winter, are sold by those persons who know best how to feed; what foods to use, and the best manner of preparing the food for use.

The farmer may make more by feeding his crops well than by growing them. He may often make more profit by buying some extra food which can be had cheap and feeding it to some extra animals with his straw and hay. Some farmers make large profits by growing corn fodder and buying corn and bran to feed to cows, instead of growing corn for them, and some make money by growing wheat and barley for sale, and roots for feeding, and buying corn-meal to feed with the straw and roots, and buying sheep or cattle in the Fall to eat these. Because wheat and barley are worth more than corn to sell, and corn is worth more to feed than to sell. But the farmers that do this have learned the truth, that the business part of farming—which is feeding stock—may be made much more profitable, very often, than growing crops and selling them for others to use in feeding.

A USEFUL HOUSEHOLD ARTICLE.

(Prize Drawing.)

I have noticed that in many instances there is no place in which to keep the family spices except loose paper bags, or dilapidated tin cans; and the case is much the same with the table knives which are usually kept in a box or basket, or loose on a shelf, in either case, they are liable to become rusty, or covered with dust. The article, which is here described meets both of these wants. It may be made of ordinary, soft, clear wood, well-seasoned, and painted, with the trimming of a darker shade, or stained entirely black-walnut and varnished, or it may be constructed of hard wood, with walnut trimmings, and varnished. Its dimensions, exclusive of projections, should be about twelve inches high, twelve inches long and nine inches wide, with a thickness of three-eighths or one half an inch.

Fig. 322. is a drawing of the article, and Fig. 321, is a side-elevation of the same. At A, Fig. 323, is represented one of the receptacles which are not intended to extend back more than five inches, leaving space in the rear for a pair of drawers on either side, which will be found very convenient. The front edges of all these drawers overlap the surface of the case slightly, so that a close joint is made when they are shut. The handles used are brass-headed screws with rings inserted in their heads. The bottoms of the receptacles are set in grooves, as shown on the lower edge of I, and the joints are glued, besides being fastened with brads. If so desired, the smaller boxes may be fitted with covers having a thumb notch in each, as at B, and sliding from the rear in grooves in the sides and front. F represents the knife case, with its partition, G, in the center, and it may be lined with some soft substance, or a better way is to make racks, shown at K, fitting the case pretty closely, and having notches across the top, lined with a strip of leather running down into each. C represents the feet, which are put on over-lapping the lower edge of the chest, and their moulding, M, is applied to finish off. L is a section of moulding which may be placed on the front and sides, in the corner, under the projecting edge of the top, which should be rounded off along the edges, as well as at the front of every drawer. D and E are sections of pieces upon which the receptacles slide, and one of which they should have at each corner to hold them in place; the strip, D, is for the top, bottom and interior of the case; the other, E, is for the sides

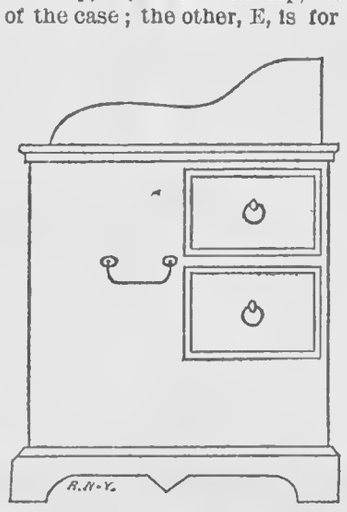

FIG. 321.

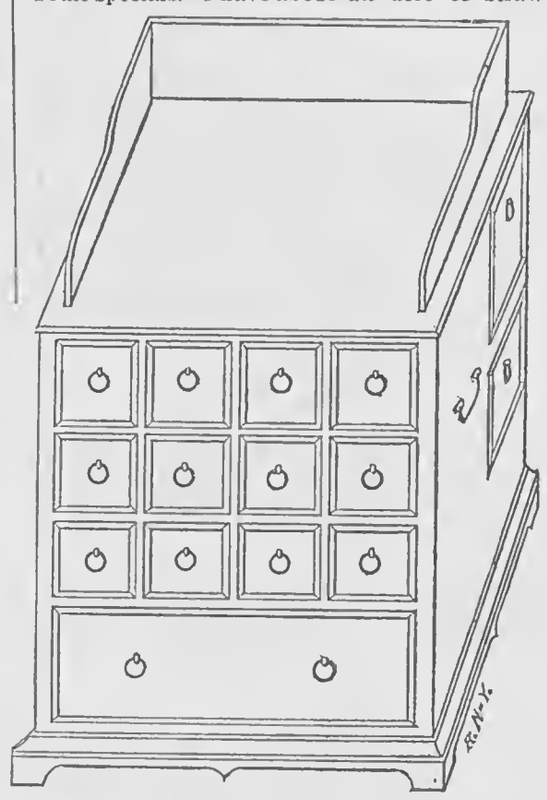

FIG. 322.

and corners. H shows the construction of the front, and J the manner of joining the pieces which form the front. N represents a variety of center moulding, which may be applied to the front of every drawer, as in A, but it is not necessary. A guard set in grooves on the top will be found very convenient, and some small handles may be placed, one on each side, as in Fig. 321. The smaller boxes should be lettered or marked in some way to show what each contains, and the whole makes as useful and ornamental an article as one is likely to meet anywhere.

Chelsea, Mass. C. A. Butterworth.

THE PRIZE DRAWINGS.

This week I have the pleasure of announcing the name of the successful competitor for the book of poems offered in the Rural of Feb. 19, for the best drawing of a useful or ornamental article combining originality and accuracy. It is C. A. Butterworth of Chelsea, Mass. There were only five competitors out of our large circle of cousins, but the five did well, and so well that I shall forward to the four second best, if I may so say, four engravings suitable for framing. I was especially pleased with one who stated that his drawing was the seventh one he had made in trying to attain perfection. I wish to encourage all who entered the contest to persevere in their work as the five drawings submitted were all highly creditable. The successful drawings accompanied with description appear on this page over the author's name and to him I shall send "Songs, Legends and Ballads" by James Boyle O'Reilly. U. M.

THE YOUNG QUERIST.

C. M. T., Deer Valley, Col., asks, 1, if cut-worms increase every year or do they come occasionally; 2, are Green Globe artichokes hardy, or do they freeze easily; 3, what are the names of the flowers which he sent to us?

Ans.—1. Yes, they reproduce annually. 2, Very hardy; 3, Specimen *a* is a clematis, or Virgin's Bower, *b* is a Delphinium or Larkspur, *c* is a Sisyrinchium or Blue Eyed Grass, and *d* is an Helichrysum or Everlasting Flower.

W. P. D., Mossing Ford, Va., 1, sends, for name, some beetles such as infest his seed turnips, and asks the remedy for them. 2, is there a more convenient method for removing worms from chickens' throats than by means of a feather.

Ans.—The turnip flea-beetle of the *Halticadæ* family. 2, We know of none which at the same time is as efficacious. Some recommend shutting the chickens in a box, with some shavings dipped in spirits of turpentine, when the vapor arising from the turpentine is said to produce a cure. Creosote may be used in the same manner.

W. B., Cherry Valley, N. Y., asks if Paris Green, London Purple, and Pyrethrum are poisonous to human beings; 2, where can Pyrethrum be obtained.

Ans.—1, Pyrethrum is not, the other two are; 2, Pyrethrum can be obtained at nearly every drug-store in the city or country.

LETTERS FROM THE COUSINS.

Dear Uncle Mark.—I intended to write and join the Club before the "Free Seed Distribution," so that I might have a share, but as my brothers are subscribers for the Rural and have received their seeds, I shall try to be contented with the Dianthus this year. I am very much interested in the culture of small fruits, flowers, etc., and fully appreciated the Hardy Shrub and Tree and Small Fruit specials. I have about an acre of strawberries and if they equal my expectations this season and far surpass those of E. P. Roe (of whom I obtained my plants) in size and quality, Uncle Mark may look for a pressing telegraphic invitation to a "tea" composed entirely of strawberries, while I shall expect in return a request to fill a large order for "choice strawberry plants." I sold a few hundred last Fall and, with more and later varieties, shall expect to do a thriving business this Spring and Summer. "Experience."

Hornellsville, N. Y.

Dear Uncle Mark:—I am only eight years old, but I have only one brother and one sister alive. My brother is mate on a ship that runs from New York to Liverpool, and my sister is a governess in Liverpool, in a large family. She went to England with my brother on his last trip. Then I had one brother who is now dead. He was a great landscape painter in the city of London. I don't know what I will be. I might be a civil engineer or a member of the British Parliament, or a "land leaguer," but I hope not. We have had very cold weather here this Winter—30 deg. below zero. As I write the wind is blowing hard and the sand has drifted in the weeds in some places four feet deep.

Canada West. G. M. R.

Dear Uncle Mark:—Although we live in town we are studying agriculture. We expect to go West with mamma and papa, and then we will want to know how to grow everything pertaining to farming. We had a garden of our own last season and expect to have a nicer one this season. We got our plans laid while it snowed. We like the Rural New-Yorker very much, and especially the pictures and your corner.

Rantoul, Ill. Archie and Fred Estep.

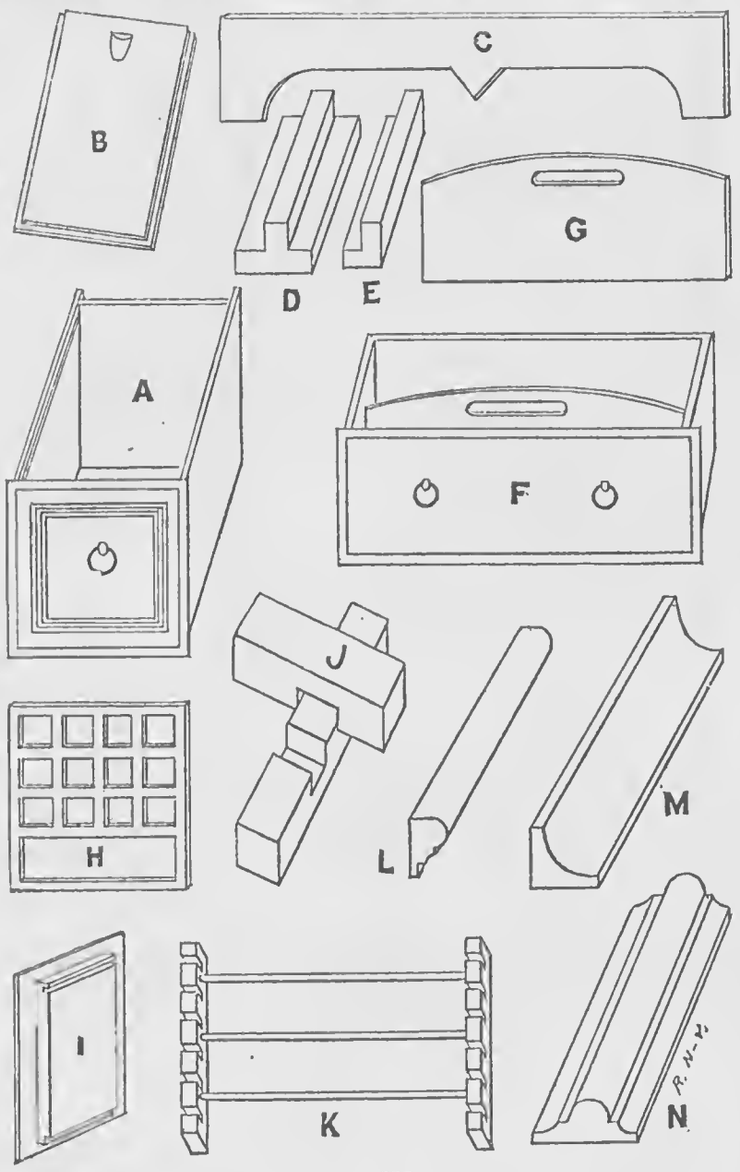

FIG. 323.

Sour stomach, bad breath, indigestion and head ache easily cured by Hop Bitters.—*Adv.*

Sabbath Reading.

COMFORTABLE WORDS.

There is no human heart but hath desired
Something at times beyond life's petty quest,
Beyond its daily round; we are so tired,
So hungering for comfort and for rest;
We see with envious eyes the children pressed
In ready arms that soothe their childish woe;
Oh! that we, too, upon a mother's breast
Such all-sufficient love again might know.

But what if, while these hidden longings haunt
Earth's restless denizens from age to age,
Filled with self pity at a fancied want
They spurn a greater love than they can guage,
Nor pause to gather from the sacred page
The comfortable words for their relief,
The tidings meant all trials to assuage,
The covenants that are as balm to grief?

'Tis strange, 'tis passing strange, we can repine,
And slight the voice which would our craving feed;
We learn to scorn the man that hath a mine
Of wealth untouched, if poverty he plead;
Yet—righteous Judges—do the like, who heed
So little what Himself, our Maker, saith,
With gracious words waiting upon our need,
"I, even I, am He that comforteth."

OUR LIVES.

Our Saviour tells us that the result of the maintenance of our position will be a marked fruitfulness, whereby God will be glorified. "He that abideth in Me, and I in him, the same bringeth forth much fruit." Let us endeavor to interpret this statement. Now we are not to understand, of course, that the man who is "out" of Christ, who has no personal connection with the Saviour, and who, it may be, openly disavows all allegiance to His name, is thereby rendered incompetent to perform actions which might, very properly and legitimately, be denominated "good." We believe most fully that the life of such a person may be characterized, and characterized in a marked degree, by integrity and uprightness, by freedom from gross sin, by liberality and open-handedness by a kindliness of disposition which shall serve to endear him to a wide circle of admiring acquaintances. We would give honor where honor is due; but at the same time we are anxious to distinguish. What the Lord speaks of in this passage are spiritual actions—and those only are spiritual actions which flow from the impulse and inspiration of the indwelling Holy Ghost, and which have God as their ultimate object and end. And what our Lord speaks of is "fruit whereby His Father is glorified;" and God can hardly be glorified in the conduct of those who repudiate His authority and turn their backs upon the offers of salvation made to them in the name of His incarnate Son. It stands to reason, does it not? that if a man pours scorn and contempt upon God practically by the rejection of Jesus Christ, God cannot be honored, but can only be dishonored by the life that the man leads?

THE WORKS OF GOD.

Science teaches us that we know not a millionth part of the marvels and wonders of this beautiful world. In fact, it is science which reveals to us that which a little thought prepares us to expect, a whole universe of invisible things and powers, "things not seen;" we are compelled to believe in what we cannot see; we can only see effects, we cannot see causes or things.

It has been truly said that the world of sight in which we live is a sort of central point or table-land, half way between the telescope and the microscope. But a very large portion of what we call the material world is invisible, composed of "things not seen." Heat and steam are invisible; we can *feel* a ray, and we can *see* vapor, that is, an invisible thing rendered visible by contact with cold air; but who ever saw the mighty giant at home in the boiler, the great moving power of the world? The force which drives a vessel of three thousand tons against wind and tide across the Atlantic, or hammers a twenty-ton weight of iron into shape as easily as you would mould a pellet of bread between your fingers? that five hundred or thousand horse-power nobody has ever beheld, only the vehicle through which it acts. Thus, everywhere a light shines guiding the mind to a principle of Divine order and proportion, all things turn into windows through which we may look out upon an infinite presence beyond; and so, to the thoughtful mind, the universe becomes another universe, and the world another world; it is all as if mysteriously haunted by a presence of Divine unity.

A BIBLE OLD AND RARE.

It is not generally known that in the Congressional Library, at Washington, there is an old Bible which is well worth a walk to the Capitol to examine. It is of Italian origin, and is supposed to have been written in the thirteenth or fourteenth century, but the actual date is unknown. It is written in Latin, upon vellum, in clear, bold characters, and extremely uniform. The writing is in two columns, about three inches wide, with a margin of two inches. It is embellished with 146 miniature paintings and upward of 1,200 smaller illuminations, which are beautifully executed, and are as brilliant to-day as the day they were done. The initials of books and prologues are two and a half inches in hight, and those of the chapters are one inch in hight. It is contained in two large volumes, and cost the government $2,200 in gold when gold was at a high premium, and was purchased at a sale of the library of Henry Perkins, Hanworth Park, near London, in June, 1873. The skins in the first volume have all been repaired, except five; in the second volume they are nearly all perfect.—Methodist.

Study Hop Bitters Book, use the medicine, and you will be wise, healthy and happy.—*Adv.*

PERSONAL ITEMS.

Lord Beaconsfield's late London residence, with its furniture, is advertised for sale by auction.

Lord Bute's new house in Scotland will cost $1,000,000. The great central hall will be 130x60; the great drawing room 60x23. Three hundred men are employed on the work.

A celebrated Lyons physician, M. Montain, says that smoking tobacco colors the bones. There is in France a society which has been formed to carry on a crusade against the use of the weed.

A young lady, who has an objection to the revision of the New Testament, writes to the London Truth to say that the phrase "purple and fine linen" conveys no idea of luxury to her mind, and she suggests, as an improvement, "sealskin and black velvet."

Vasily Tchmoomak, aged 96 years, has just died in the hospital of the Odessa prison, with the reputation of having in the course of his existence committed, alone or in conjunction with others, 80 murders, and also of having escaped no fewer than five times from Siberia.

President Waite of the First National Bank of Brattleboro has gone to prison for six years. His crime was that of using the bank's money in outside speculation, and, while concealing the actual condition of affairs from the directors and depositors, letting the concern go to ruin.

Miss Gordon-Cumming says that a venerable cannibal in New Zealand whom she visited, in company with an obese divine, stroked down and gently prodded the reverend gentleman in a manner painfully suggestive of Sydney Smith's joke about "cold curate on the seaboard."

As the Princess Louise has managed not only to tide over the date last fixed for her departure, but to make the question of her return to Canada as remote and uncertain as it well could be, it is exceedingly probable, says the London Truth, that she will now await the return of Lord Lorne to England, which is almost sure to take place in the Autumn.

Queen Victoria is quite as observant of trifles as ever George III. was, and overlooks nothing, and if the members of the royal family reside more than a certain number of days at Buckingham Palace they are obliged to "do for" themselves at the end of the specified term. A son-in-law of her Majesty, who was limited to three days at a time, evaded the regulation by going every third night and returning to begin a fresh stay the next morning.

[Springfield, (Mass.) Daily Union.]

His Answer.

They tell it on one of our citizens who was ambling toward his place of business, that he was approached by a lady acquaintance of the family, who said: "Mr. ——, I hear you are suffering from rheumatism, is it so?" "Rumor 'tis m'm," said our citizen of few words, as he proceeded on his way. Over in Chicopee our neighbors and friends have been having quite a time with rheumatism; but according to reports received by our representative the flurry is over, as the sure antidote has been used and thus commented upon: Mr. C. N. Manchester, Cutler street, says relative to his experience: I have used St. Jacobs Oil, and esteem it the best remedy for rheumatism I have ever tried. It acts like magic, and I cannot over estimate its value, when I pronounce it the greatest rheumatic remedy of the age.—*Adv.*

Miscellaneous.

The Literary Revolution.

To keep in good humor the good people who delight in good books; to wake up the slow booksellers who are inclined to go to sleep in the summer, instead of, like a 'possum, in the winter; and to prevent our friends, the book publishers, from forgetting us, we have concluded to publish a few more cheap books. If we are to name him at all, we must, of course, head the list with the Immortal Shakespeare, and will give you either his "Merchant of Venice" or "Hamlet," or any one of his fourteen other principal plays, in beautiful type, for 2 cents. At the same price you may have Macaulay's "Life of Frederick the Great," former price $1.25, or Carlyle's "Robert Burns," or Lamartine's "Life of Mary Queen of Scots," or Thomas Hughes's "Manliness of Christ." Washington Irving's wonderful, delightful, heretofore inaccessible "Sketch Book," which contains the incomparable Rip Van Winkle, you can have for a dime. For the same price we will give you "Tom Brown at Rugby," the best boy's book ever written, except "Robinson Crusoe," which you can have also for 10 cents. To charm those who delight in fiction, we give also for 10 cents each, Cooper's "Last of the Mohicans," one of the most justly celebrated American novels, and Charles Kingsley's "Hypatia," which worthily ranks at the very front of famous historical fiction. These are only specimens of the cheap books we publish, are all in good type, neatly printed, and are not in the broad side or any other "slim" or "square" style, but handy pocket volumes, of course in paper binding. Our motto, however, has always been that a book worth reading is worth preserving, as well as worth owning, and our large list of standard books, to which we are making additions, with speed unprecedented in the history of publishing, are all elegantly and strongly bound, in cloth or better style, and sold at prices proportionately low with those in paper covers. We issue these few only in pamphlet form, as specimens of the quality of our good literature, and these special terms will not be long continued. 5,000 Booksellers throughout the United States and Canada are prepared to either abundantly supply or liberally slander our publications. We give liberal terms to clubs where no bookseller acts as agent. Descriptive Catalogue, and illustrated pamphlet describing book-making and type-setting by steam, will be sent free, on request. AMERICAN BOOK EXCHANGE, 764 Broadway, New York.
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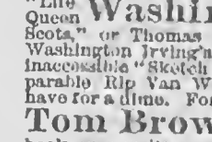

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Miscellaneous.

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IN EITHER LIQUID OR DRY FORM
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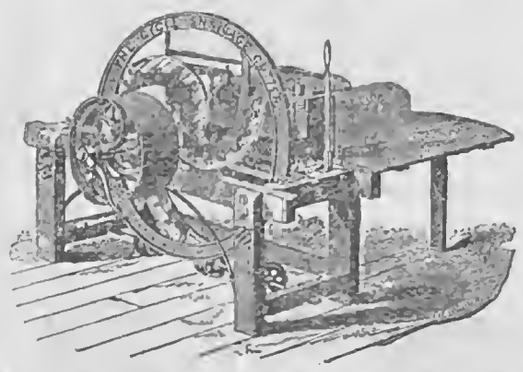

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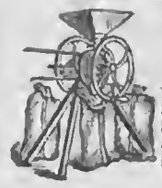

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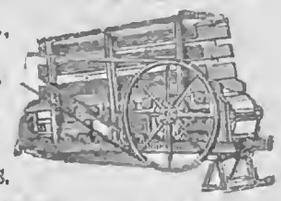

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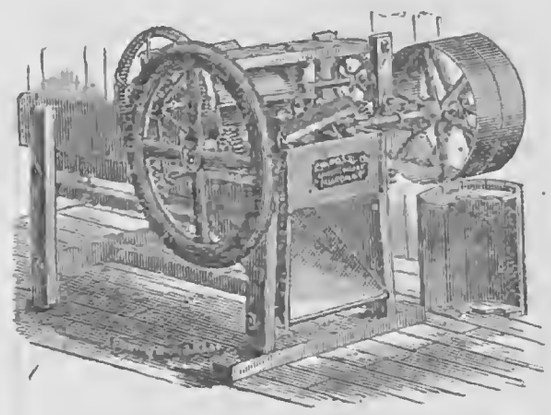

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MARRYING by telegraph and telephone has become very popular. It prevents the preacher from kissing the bride.

"WHY, are you alive yet, my old friend? I heard you were dead" "Nice friend you are. You didn't even come to my funeral."

ONE of the greatest trials of a young lady's life is when she tries to get a half gallon foot into a quart shoe.—Kit Carson's Adam's Argo.

A COMMERCIAL paper informs us that "eggs are going down." This is a ridiculous statement, for are not eggs always going down?—Philadelphia Sun.

"FAREWELL" is the title of a poem sent in from Ohio yesterday. It is a good thing that the gifted authoress said good-bye to the little gem, because she will never she it again.—Chicago Tribune.

PROFESSOR to child (angry at inattention)—"Another minute, mees, and I shall go and speak to your mamma." Pupil—"Well, take care pa don't catch you at it, that's all! He's awfully jealous!"

MEAN folks in this world? There are! A south end father asked his son if he felt too tired or lame to go to Barnum's circus and bring up a hod of coal. And the boy couldn't say he wasn't able.—Boston Post.

A LITTLE boy, hearing his father say that "there was a time for all things," climbed up behind his mother's chair and, whispering in her ear, asked: "When is the proper time for hooking sugar out of the sugar basin?"

"WHAT do you eat those horrid mushrooms for, Matilda?" asked the dainty Augustus. "I don't see how you can bear them. They're nothing but a nasty fungus, anyway," "That's just it," replied the fair Matilda, balancing a bit of the libeled food on the end of her fork, "I eat them for fun, Gus.

A STORY is told of a gentleman who always took notes of his minister's sermons, and on one occasion read them to the minister himself. "Stop! stop!" said he, at the occurrence of a certain sentence, "I didn't say that." "I know you didn't," was the reply "I put that in myself to make sense."

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Dr. WALLER, Chemist of New York Board of Health, in a report on the purity of food recommends the use of Baking Powders made by Prof. Horsford's process.

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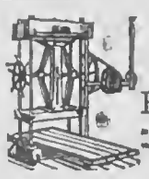

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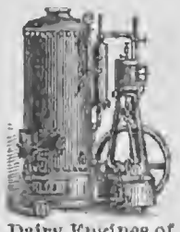

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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The Horseman.

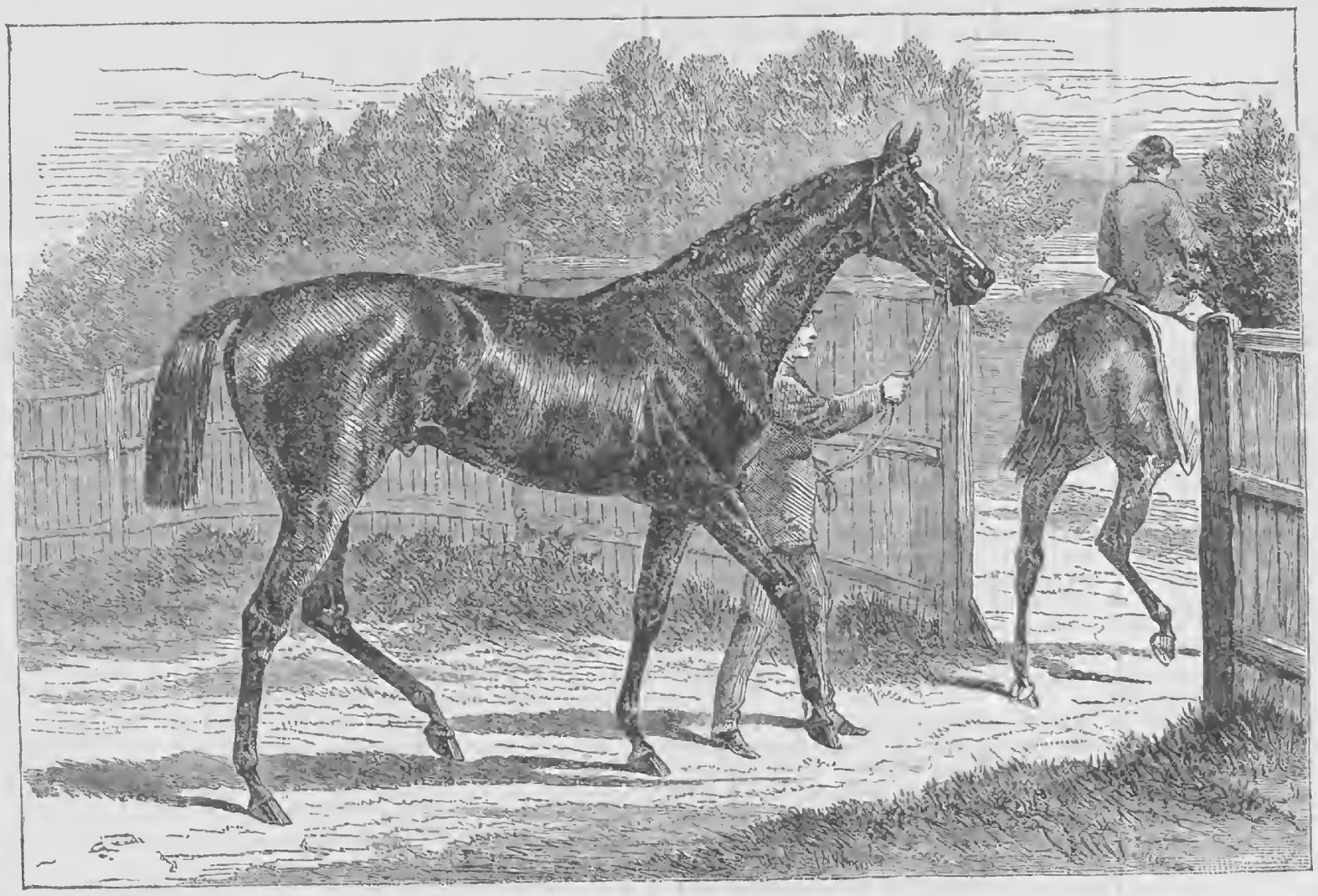
THE DERBY WINNER.

AMONG all the world's annual horse races the Derby is easily first. It was founded as long ago as 1780 by the Earl of Derby, and is run by three-year-old horses, on the Wednesday preceding Whitsuntide, upon the downs near Epsom, a small town a dozen miles southwest from London, rendered famous by this and other races, the foremost of which is the Oaks, for three-year-old fillies, and also by the manufacture there of the medicinal salts which bear the place's name. Situated within such a short distance of the most populous city on the globe, a city with a population of about four millions, the attendance at this great race always numbers from a hundred thousand to a quarter of a million people. On the Derby Day London holds a holiday, and even both houses of Parliament adjourn to enable the members to attend the race. On that day all the roads from the mighty metropolis to the race-course are thronged with all sorts of vehicles, from the coster-mongers's donkey cart to the prince's four-in-hand drag, while morning and evening and far into the night the side-walks are densely packed with curious spectators of the going and returning crowd. It is the only day the whole year round in which sober England witnesses a specimen of the gay excitement of the continental carnival.

It is hardly possible, outside of Great Britain, to form a just idea of the prestige and fame attached to the winner of the "Blue Ribbon of the Turf," a phrase aptly applied by the late Disraeli to the winning of the Derby, in reference to the blue ribbon which forms the special badge of the Order of the Garter, enrollment among whose members is the highest honor an English sovereign can confer. Every winner of this race since its establishment has by his victory won a name and a standing in equine history such as could be derived from no other single achievement. Just as in the Olympic Games of old, victory brought honor to the town, aye, even to the State, in which the conqueror dwelt, so a Derby triumph reflects renown on the owner of the winner and even of late, since the affair has become an international one, upon the country which may have produced him. It is this consideration that justifies the elation which has been caused in this country by the late victory of an American, the first ever achieved since the foundation of the race a few years after the achievement of our independence.

Iroquois, the American horse that on June 1 wrested victory for the Derby Stakes from the best three-year-olds the world could produce, is by Leamington out of Maggie B. B,, and was bred at Chestnut Hill, near Philadelphia, by Mr. A. Welch, who sold him, when a yearling, to his present owner, Mr. Pierre Lorillard, who soon afterwards sent him to England to compete for the prizes of money and renown to be won on the British turf. There his two-year-old career was of a somewhat chequered description. Out of twelve races in which he ran he carried the American colors to victory in only four. He came out with a great reputation at the Newmarket Second Spring Meeting where he won the Two-Year Old Plate very easily. In his next three essays, however, he was only once successful, and on that occasion, at the Epsom Summer Meeting, he had only a single opponent, and that a second-rate one, although the odds were three to one against him. Shortly afterwards, at the July Meeting at Newmarket, he fairly astonished everyone by running the famous racer, Bal Gal, to a head in the July Stakes, and cantering away with the Chesterfield Stakes the next day, defeating nine speedy competitors. His next winning appearance was at Goodwood where he carried off the Levant Stakes; but he was defeated in his last four contests last year. As a two year-old his total winnings amounted to $13,210. Before his late crowning triumph he had been out only three times this year, running second to Peregrine for the Two Thousand Guineas, cutting down Lennoxlove for the Newmarket Stakes and "walking over" for the Burwell Stakes.

As seen by the accompanying likeness, Iriquois is a handsome animal though a trifle light and small, standing a shade under fourteen hands three inches. He is a brown colt with a narrow blaze on the face and a little white on the near fore heel. He has a good head, and though his neck is just a trifle light, it is well set on. Probably his strongest point is his shoulders, which are unusually deep and well set. He is light in the flanks, however, and his quarters though muscular are certainly not massive. His feet could hardly be better and his legs, splendidly shaped, are sound, free from blemish and as hard as iron. The soundest of legs, wind and frame could alone speed him like a flash over the mile and a half course, under 122 pounds, and give him the proud position of being a Derby winner.



IROQUOIS, WINNER OF THE DERBY—Fig, 324.

Dairy Husbandry.

THE DAIRY COW.

HENRY STEWART.

Management of a Calving Cow.

IT may be good fortune that in the course of more than 25 years of keeping cows, I have never had any sort of accident with a calving cow; never lost a calf; or had a cow with a more serious attack of garget than could be overcome by the simplest remedy in the course of a few hours. But I do not believe in fortune or luck so-called excepting so far as that it is the result of timely cautions, and careful prevision of, and provision for, any possible danger. It is safe to avoid risks and to begin to avoid them in time. The man who never goes into a boat will never fall overboard; and the dairyman who is ever on the watch for risks and dangers, and contracts a habit of cautiously avoiding them, will be insured against accidents. But to avoid dangers, it is requisite to know what they are and how they come; and with regard to incoming cows it may be well to refer to the most common sources of mischief, and consider how they should be averted.

The most frequent trouble is with the udder. This either becomes congested and hard, or seriously inflamed. The most serious trouble is puerperal or milk fever. Both of these are easily prevented, but not so easily cured. A few days before calving the udder becomes enlarged and full and the more so with cows that have been highly fed or are large milkers. Precautions are necessary some time before this happens. As soon as the cow has become dry, or if she is a persistent milker, at least four weeks before the calf is due, the food should be reduced and a cooling medicine should be given. No meal whatever is to be given; a bran mash may be useful occasionally if the bowels appear to be costive, but this is to be avoided unless in this medicinal way, and then it should be accompanied by a dose of two ounces of Epsom salts mixed with it. From two to four ounces of salts may be given with great benefit once a week until the cow calves. Costiveness is to be avoided with the greatest care and the bowels should be kept free and loose under all circumstances. The food in Winter should be hay; and two quarts of chopped potatoes twice daily will be useful. It is a great mistake to try to induce a large development of udder in the hope to procure a large milk yield afterwards. The milk should come after calving and not before. If it appears before the calf, and the udder is found to be full, the milk should be drawn in the usual way, but this is only advisable in case of an emergency, because the milking will only help to further stimulate the production of milk. It would be better to give a cow in this condition an ounce of saltpeter, which will act as a diuretic and have a cooling effect on the blood and thus relieve the udder greatly. If the cow is in good condition, this course of treatment is all the more necessary to avoid any danger.

The cow should be kept quiet and free from disturbance. In the Winter the drinking water should be slightly warmed and never given cold for ten days previous to calving, and the cow should be kept from exposure to cold. The separate pens previously mentioned will be found of great use. When the calf is expected it is well to visit the cow frequently, but not in such a way as to disturb her. At such a time will be found the advantage of the previous training of the cow to habits of gentleness by kindly treatment. If the presentation of the calf is right, there is no necessity for disturbing the cow in any way until the calf is dropped; when the cow is better tied up in the usual manner. It is a natural instinct for the cow to devour the placenta; and some persons think it right to defer to this instinctive desire; for what reasons it is difficult to comprehend. The whole management and training of the dairy cow is a strife against her natural proclivities and in this respect it is better to adhere to our artificial training than to permit her to follow her instinct. For this reason it is better to tie up the cow, leaving the calf at her head.

There is a difference of opinion as to the propriety of permitting the calf to suck the cow. I believe it is better to prevent it, and therefore always take away the calf as soon as the cow has cleaned it and before it has sucked. It should be removed to a distant pen, provided especially for the calves, where it can be kept in quiet, and warm and comfortable, with plenty of room to gambol when it feels inclined. The cow may be milked in six hours after calving, and by that time will have become oblivious of the calf, if it is out of hearing. Many a cow has been so nervous by the worry of having her calf near her or with her that an attack of milk fever has been brought on by it. This disease is especially a nervous one and quiet will prevent it, if there has been a judicious management previously. In an hour after calving a pailful of bran slop with

four ounces of Epsom salts and a handful of salt dissolved in it, will allay any feverish symptoms that may appear. But previous care will usually have avoided any risk of such trouble. If the cow has been kept in good order, she will come to her milk without difficulty. If the milk does not flow freely, she should be milked three times a day and the calf be fed immediately. If the udder becomes hard it may be rubbed gently with the hand and Veterinary Cosmoline (a most valuable preparation of crude petroleum) be applied and rubbed in liberally. I have never found this application fail to cure a case of garget, and when it has been applied at once, one application has usually restored the udder to its healthy condition. The cow will never withhold her milk for the calf, if the calf is removed from her. One of my cows which has had three calves, and which has never been sucked and never sucked when a calf herself, takes no notice whatever of the removal of her calf and comes to her milk without the least trouble. This is a matter of training, of course, and it may not answer so well with old cows not "to the manner born." But in a dairy where the calves are raised and the cows are reared at home, very much depends upon a regular method of training. This, however will be more fully considered in its proper place hereafter.

When an attack of garget becomes serious, immediate and active remedies should be applied, otherwise the cow may be spoiled for the whole season of milking. In addition to the use of the Cosmoline, or even sweet oil, or fresh butter from the churn, without salt, and gentle and long-continued rubbing and kneading of the udder, a brisk dose of 12 to 16 ounces of Epsom salts should be given. In six hours after this one ounce of saltpeter may be given. Two quarts of sliced Poke Root, *Phytolacca decandra*, commonly called garget root—a tall plant with bunches of dark purple berries in the Fall—has been given with the best effect. The food should be suddenly reduced, or even wholly withheld, for 24 or 36 hours; and only water with a handful of bran stirred in it be given. If milk fever should occur by an unforseen accident, the same course of treatment will be proper, but copious bleeding, at the first attack, from the vein in the neck, will be advisable. The legs should be bathed and rubbed in hot water with mustard stirred into it and the body be wrapped in a blanket. A rug dipped in hot mustard water may be laid along the spine and covered with the blanket. Fuller directions for treating the diseases incident to this condition of the cow will be given hereafter. Here it is sufficient to emphasize the fact that care to prevent it, at the right time, is more effective than treatment when the trouble has arrived.

Field Crops.

CORN ON THE RURAL FARM.

I REGRET to hear of the discouraging appearance of this up to the present time, and hope we may soon have warm, dry weather to improve it rapidly. But, thinking over this in contrast with my own, perhaps a few observations on the subject may be of advantage to some of the RURAL's readers. My soil, as I am informed, is much like that of the Rural Farm. It is about the same distance from the ocean, but one degree farther south.

The first corn planted was the Minnesota and Crosby Early Sweet for the table and for soiling stock. This was in the latter part of April. It came up early in May, and, notwithstanding about half the weather since then has been unusually cold and rainy, it has kept a deep green color and grown well. Much of this half time the wind has been a strong, raw northeaster, the thermometer ranging from 42 to 46 degrees at night and not over 52 to 58 degrees during the day. One-fourth of this whole weather was cloudy and misty, the other fourth sunny, several days being quite hot. This brings it to the 15th of June, at the time of my writing, when the corn leaves are generally from two and a-half to three feet long, and it will probably tassel within a fortnight. It must be recollected that these two sorts of corn are dwarfs. Tall field corn was not planted so early and is not yet so high, but will soon surpass the dwarfs.

The soil here is a light, gravelly, yellowish loam and was treated in the following manner: Last November it was coated with coarse stable manure at the rate of about 10 two-horse loads per acre, which lay on top of the ground all Winter. Just before the corn was planted this was plowed in, half a shovelful of compost was put in each hill, two or three inches of soil were drawn over it, the corn was then dropped, covered well and spatted down. After the first hoeing, the crop being then five to six inches high, a tablespoonful, moderately heaped, of guaranteed Peruvian guano was dug in an inch deep or so around each hill, about three inches from the corn. The raw, cold, rainy weather has certainly been greatly against the corn, and I am surprised to see it of so deep and bright a green and growing so rapidly.

A. B. ALLEN.

REMARKS.—Mr. Allen should bear in mind that though all of our corn is backward, we have chiefly alluded to that of the unmanured field. Now the soil of this field is, without doubt, extremely poor, and the old, miserable sod turned under is the most the plants have to live upon. We had proposed to cultivate this field *well* in order to show what cultivation could be made to do for Indian corn. The system with most of our farmers is to manure well and to neglect cultivation. It is plain to our mind that better cultivation and less manure would prove more profitable. Our readers are asked to bear in mind that *one* acre of the main corn-field *is* manured with 600 pounds of concentrated corn fertilizer, while plots are manured with different constituents and combinations of concentrated fertilizers with a view to determine which is, for our soil, the most serviceable. Again, as the present corn-field is much the same as last year's "Chester" field, which gave the immense yield, we were anxious to determine, if possible, how much was due to the commercial fertilizer used upon it, viz., 350 pounds to the acre. We would state that our bad stand of corn in the main corn-field is due in a great measure to the persistent depredations of black-birds, which have troubled us more than ever before.—EDS.

THE FERTILIZATION OF WHEAT AND CORN.

PROFESSOR A. E. BLOUNT.

WHEATS will not mix in the grain however closely they are planted. I do not say it is an impossibility for them to be crossed sometimes. Insects may—when very small—carry the pollen of one kind into the glumes of another variety, and a cross may in this way be produced. Such cases are rare. Wheat, rye, barley and many of the grasses are hermaphrodite, or bisexual, having both stamens and pistils in the same flower. The fertilization is accomplished before the anthers appear on the outside of the glumes, hence the pollen in every perfect specimen is never found outside on the anther in any but the dry (dead) state. I have never seen any sign or effect in wheat growing and wheat fertilization, that would lead me in any way whatever to declare that wheats of, and in, themselves will mix in the grain. They cannot cross. If new varieties are made they must be made, not naturally, but by insects or mechanical processes.

No cross can be effected after the anthers appear outside. Extracting the three anthers between the palets before they (the anthers) are ruptured, will produce an abortive head. The stamens are ruptured quite early while pushing against the inside glume-covers (palets), and, of course, to make a half-and-half perfect cross they must be removed quite early—before the pollen in, or on, them is loosened.

Corn mixes naturally and easily. It crosses by gravity and is crossed by insects and winds. The wind will effect a cross half a mile away; insects (bees in particular) will carry the pollen of one to the silk of another variety five miles off. *In no case whatever will the tassel of a given stalk fertilize its own silk.* This is a bold assertion; but I shall stand by it until my own experiments prove the contrary. For four successive years have I covered given ears—in embryo—and prevented all but their own pollen from falling upon the silk—result, not a grain of corn in any case. The tassel and silk do not always ripen—do not come into "season" for fertilizing—simultaneously; hence the reason for so few ears on the stalks. I have many times gathered pollen and put it upon silks of lower ears when "in season," and found in almost every case a perfect ear from the operation.

Colorado State College, Ft. Collins, Col.

EXPERIENCE WITH RURAL SEEDS.

The White Elephant Potato which the RURAL kindly sent me weighed nearly 2½ ounces, contained 11 eyes and was cut into 11 plants about the 15th of March, and planted in 11 pots in my green-house. I propagated from these until I obtained 26 nice plants, and I transplanted them into my garden about May 15. They are looking splendid and some of them have commenced to bloom. The package of Washington Oats contained 1,115 grains. They were sown about the middle of April in 12 rows, each row about 17 feet in length, by the side of the same number of grains of the White Russian, but the latter have 14 rows instead of 12, though all the rows are of the same length. They are all looking fine; are more than a foot high and about cover the ground; 1,014 grains of the Russian were equal in weight to the 1,115 grains of the Washington. [We wish more of our readers would take pains to test the relative values of new seeds. Eds.]

The two kinds of asparagus were sown in my onion bed. The seed was dropped about six inches apart, making a row of about eight rods in length; the plants are looking fine. A box, two feet wide, three feet long and six inches deep, was filled half full with inverted sods, the surface made even and fine, and the seeds of the Rural Branching Sorghum were planted about one inch apart in the row, with the rows two inches apart. Fine rich mold was sifted over the seed, and then a sash was placed over the box, and the soil kept moistened with water when becoming dry. The seed was sown early in May; about one-fifth of it grew. On May 28 I transplanted to open ground with a piece of sod to each plant; this was done to economize seed and plants, and also to plant out in freshly prepared soil. Since transplanting the weather has been remarkably cool, and one night we had a slight frost, so that the sorghum has not made much of a start, but nearly every plant is living, and seems to be waiting for warm weather to go ahead. I have a nice bed of pinks from the RURAL seed; some of them will soon be in bloom. I sowed the carnations in eight-inch pots; I have only five carnations, the rest of the plants appear to be the common pinks, but I am much pleased with them.

With one exception I have the best piece of corn in this section. I drilled in about 225 pounds of phosphate to the acre with a common grain drill, then marked off and planted on May 6, but most of the corn around here was planted late, and the cool, rainy weather has checked the growth of the corn and started the weeds, so that some corn fields are looking very bad. Wheat and Spring grains are looking well in this neighborhood, but the Hessian fly is doing considerable damage in some places. A neighbor sowed about 400 pounds of the Mapes phosphate to the acre with his wheat in 1879, and last Summer he harvested a little over 46 bushels of nice wheat to the acre. [What variety please? Eds.] A. P.

Scipioville, Cayuga Co. N. Y., June 17.

[We are much obliged to our friend for the pains he has taken with the RURAL seed. Eds.]

WHEAT IN VERMONT.

ALLOW me to congratulate the RURAL on its harvest reports. Newspaper men agree that they are more reliable than those of the Department of Agriculture. To think of private enterprise beating Uncle Sam! But poor Uncle S. is sick. The politicians are killing him, or will unless the people squelch the politicians. This, though, is not what I took up my pencil to say. Your Brandon, Vt., report says that owing to an unfavorable climate or soil, wheat cannot be raised there profitably. I think this is a mistake. Some eight years ago I had, while on a visit to Brandon, a conversation with one of the oldest citizens, now deceased (the late Judge June), who informed me that in his youth Brandon was a great wheat town, and that crops of 50 bushels to the acre were not uncommon. The climate has not changed since then more than in New York and other localities not far from Brandon, which still raise wheat successfully. The soil is changed from a new one to one more or less injured by bad farming. A farmer may know how to grow wheat "on a burn," or for a few years after clearing on strong soil, and yet be entirely ignorant of the method of growing that crop on old land. That he does not succeed on the latter is no proof that success is impossible. It is the "know how" that is lacking. The present generation of farmers in New York grow wheat as well as the first settlers. There was a time between the first generation of farmers there and the present when it was thought that wheat was a crop of the past. Then farmers of energy, or European training, showed the way to fit land for wheat, when and how to sow it to avoid insects and disease, and the wheat crop again became a staple. The glorious St. John Valley in Maine and New Brunswick (which is Central New York over again, only a little farther north,) is now going through the early experience of the Ontario and the Champlain Valleys. Wheat "grows spontaneous" in Aroostook, and crops of 40 bushels to the acre are common, while potatoes average 300 bushels, all without manure. In 20 years or less the "bonanza" will seem to fail; but then, skill and science being applied, a new generation of farmers will again see the old productiveness renewed. Doubtless it is to be so also in the Champlain Valley, which, being once the "garden," is now the most backward part of our State in agricultural skill. Too rich an inheritance has spoiled the farming in many places, so that the once best is now apparently the poorest. But it can all be restored. The "know how" and the will are all that are needed.

Orleans Co., Vt. T. H. HOSKINS, M. D.

Farm Topics.

EXPERIENCE WITH ENSILAGE.

OUR experience with ensilage is, briefly, as follows:—Late in the season last year we concluded to give this method of preserving fodder a trial, and therefore, between July 1st and 17th, plowed about 12 acres of land from which the hay and wheat had been taken, and sowed it with corn, in drills 28 inches apart, using three pecks per acre. We sowed it with a wheat drill and cultivated once that portion sown after wheat. The other received no cultivation. We built two silos each 33x14 feet and 16 feet high, costing $500, and having a capacity of about 300 tons. In September we cut the corn with a reaper and got enough to about half fill the silos. Before the corn, we put in about 20 tons of freshly-cut rowen.

From this we fed all our cows and sheep, averaging say 12 of the former and 175 of the latter, from the time they were put in the barn until March 24th, besides about 100 lambs which came in January. We fed the cows four pounds each of cotton-seed or corn-meal per day and cotton-seed to the sheep that had lambs. The cows were more thrifty than they have ever been when fed upon hay and grain, and the butter was as yellow as summer-made. The sheep did well.

The net results in dollars and cents were about as follows:—We estimate the 150 tons of ensilage to have cost us $150, and the extra cost of feeding it was about $50. The hay crop being short we would have been obliged to buy, say, $300 worth of hay: we sold $400 worth, so we have $500 clear to pay for the silos which we expect to *fill* this year and to feed nothing but ensilage. Having thus put the money in our pocket, we do not trouble ourselves about theories—whether there are more albuminoids in ensilage than in the same corn dried and cured as fodder, or whether chemical analysis shows much virtue in the material. So long as eminent chemical authorities admit that their analytical process will show little, if any, difference between the nutritive values of grass freshly cut, and the same as hay, well cured, or the same as hay cured after exposure to the dews and rains for a week, and while a cow fed upon the first will make yellow butter, upon the second white butter and a less quantity, and upon the third scarcely any butter, we prefer the practical test and leave theorizing to others.

COE BROTHERS.

Horticultural.

THERE has for some time been a difference of opinion as to whether Cereus MacDonaldii and C. Regelii are distinct plants. In view of the great difference in the price asked for the two plants, there ought to be a marked difference between them. But the plants are precisely alike in form and growth; the most critical examination of the plants, grown side by side for several years, has failed to discover any difference whatever. Two plants of the same age flowered with me at the same time, (June 10th.) I watched the buds and their opening from beginning to end; compared all the different parts of the flower in the minutest manner, as well as the size (about fourteen inches in diameter), and failed to find any difference. It may be said that my plant is not true. In answer to this I have only to say that my plant is from a cutting from the plant sent to Dr. Siedhof by Dr. Regel some years ago, and from which, so far as I can learn, all the plants of the so-called Regelii now in the country have been propagated. Some two or three years ago, in company with Dr. Kunzé (who is well posted in the Cactus family), I examined the plants at Mr. Such's, and we both came to the conclusion that they were identical. Shortly after this Dr. Kunzé, while traveling in the West, was asked eighteen dollars for a moderate-sized plant of Regelii. It may interest Western readers, therefore, to know that when they get MacDonaldii they get Regelii at the same time. It must be understood that Dr. Regel does not make this claim to distinctness; the name has become attached to the plant simply because it was received from him, and I have thought it just as well that this should be known. I will add that Cereus MacDonaldii is altogether a more magnificent flower than C. grandiflorus, the old Night-blooming Cereus, and is worthy of a place in any collection.

I AM surprised and grieved to learn from the editor that the Japan Maples are not hardy at the Rural Grounds. I venture to hope that his experience with them may prove to be somewhat exceptional. Will not the readers of the RURAL give us their experience with them, and be particular as to locality, exposure, etc? Even if they should prove to have been generally winter-killed at the North, their dwarf habit and beautiful foliage will still

command for them a prominent place as pot plants. I am always grieved at a disappointment of this nature. [There was but one killed outright—singularly enough the species (palmatum) upon which the others are grafted. Eds.]

In the Spring I had a talk with a member of the RURAL family about corn, and he decided to try to equal, if not surpass, the great yield obtained at the Rural Farm last year. He accordingly prepared about an acre of ground in the most careful manner, and put in the corn in drills. It came up quite evenly, and, as I saw it, looked very promising. The occupants of some shanties down in a hollow not far off, keep large flocks of geese, which run at large. These geese got in the lot when the corn was about three inches high, and destroyed nearly all of it. Did you ever see a man in a downright hearty, honest rage? Talk about the wrath of Achilles and the slaughter he made among the Trojans! It was slow, methodical work compared with the quick, headlong havoc Mr. B. made among those geese. I can scarcely conceive of anything more provocative of sudden and uncontrollable wrath; still I cannot help thinking that my friend should have punished the geese less and the owners more.

It will be well for those who grow mangolds to bear in mind that they may be transplanted about as easily as a cabbage. The thinnings, therefore, should be used to fill up vacancies, not only in the rows of mangolds, but elsewhere as well. They should be transplanted when the ground is moist, and preferably near the close of the day. I used to sow a bed of them to be used all over the place, wherever a vacancy could be found for them. You cannot have too many of them if you keep cattle.

Who is making preparations to do something to make his county or his State Fair more instructive and interesting than heretofore? If things were not judged as they are, I would say, take that which gives the best representation of your average results and best illustrates your method of farming; but as things go, you must devote extra time and attention to produce something that will be so good as to attract public attention, and show what *may* be done. After all, this method is not without its usefulness. "Excelsior" is a good motto for the farmer, only his products must not be made to cost more than they are worth. Anyhow, do something for your fair, and encourage the boys and girls to do so too.

The New York Horticultural Society, at its Spring exhibition, had a grand show of strawberries; the strawberries, in fact, overshadowed every thing else. Mr. Roe, Mr. Lovett, Mr. Henderson, and, in short, all the principal strawberry growers within reach of New York, were represented by excellent examples of fruit. The long-continued rains gave size to the berries, but washed out some of the characteristic goodness, or perhaps I should say the absence of the sun failed to develop it. I have no room in this column for a general notice, but I may say briefly that the exhibition was a good one, all its material being excellent. The rooms used seemed to keep plants in better condition than the concert hall. At all events, the plants were in much better condition than usual on the second day.

HORTICOLA.

NOTES ON STRAWBERRIES.

The strawberry is year by year claiming more and more attention as a fruit no longer for the epicure, but for the toiling millions as well. The great importance this fruit is assuming calls for a few suggestions.

First, the land should be well enriched with good, well-rotted compost (never with crude, unrotted manure), or with some special manure. The Matfield, Stockbridge, Mapes, or Forester Strawberry Manure furnishes the needful plant food in its best form for immediate effect. An acre with the requisite conditions all right will yield astonishing results. But the question of varieties is the main one I was about to touch upon.

Varieties.

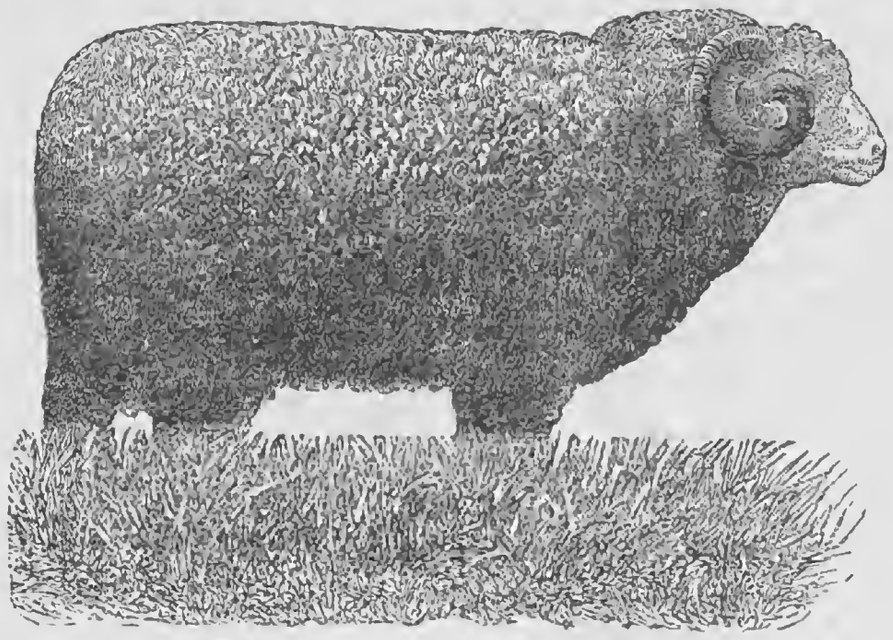
The CRYSTAL CITY, which has been called the earliest berry, is behind the Crescent and Duncan on my grounds this season. The Crescent Seedling has given some good and early fruit. No berry, perhaps, has varied more in productiveness, size and quality. At its best, it is enormously productive, early and fairly good; but it demands good treatment as much as any variety I know of, and it should always have some variety, like the Duncan, that blooms with it, to fertilize it.

The DUNCAN is the best early berry that I have. In hill culture it makes enormous stools, is early, productive, moderately firm, of good size and excellent quality.

DUCHESS is also an early berry, well adapted to hill culture—good and productive.

CHARLES DOWNING is a variety which is very popular in Connecticut. It is reasonably productive, of good size and great beauty, and it holds out well for the season. In the markets it is much sought for, and sells well.

SHARPLESS, which was good last year, was also excellent this year. In productiveness and quality it is holding its reputation well.



FIRST PRIZE RAM AT MAGDEBURG—FIG. 325.

PHOTO, or MARTHA, I have fruited three years, and wonder that it has not made more noise. It is certainly a modest variety from a modest man—Mr. Crawford. I say all praise to the Photo, and place it well up towards the head.

CHAMPION and WINDSOR CHIEF are both producing well, resemble each other closely, and if they were better in quality they should be largely planted.

COL. CHENEY has always been a large yielder, but is not firm enough for long shipment—pistillate.

PRESIDENT WILDER, as to quality, is one of the very best; but it is not hardy, vigorous or productive enough for common field culture.

WARREN is a most beautiful berry, but I fear it is not going to be productive enough for field culture.

RED JACKET promises well as to growth, productiveness and high quality.

MONARCH is a good berry, but not productive enough.

MINER'S PROLIFIC promises to fill the bill in many, if not most, respects.

GREAT AMERICAN is an enigma. When it does its best it is good enough and productive enough to satisfy the most exacting. I saw, last year, on exhibition, 50 berries of this variety weighing 56 ounces, and whole fields of it in Essex County, N. J., that defied comparison. There are some patches in Connecticut that look surprisingly well. When it gets a strong, heavy soil and single hill culture it does well enough.

SENECA QUEEN is yet destined to make a stir in the strawberry world. It is one of the strongest, most beautiful and productive varieties I have. It stood the Winter remarkably well; it is of a strong growth; the fruit is large, attractive and of good quality. When we can get anything better than the Seneca Queen we shall have the best.

SHIRTS, from appearances, I think I shall like, but I must wait for further experience.

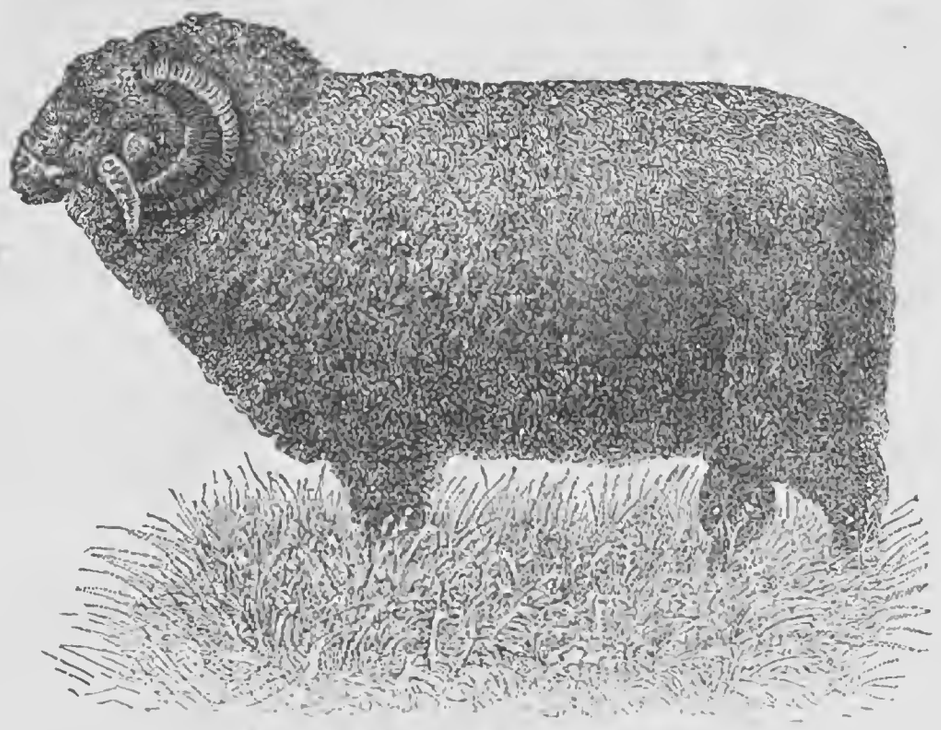
BIDWELL, ditto. Michigan men say this has a white tip, like the Monarch—time will tell. [We have seen several quarts of Bidwell this season and we did not notice a white tip on any.—EDS.]

ELM CITY is a new variety of handsome appearance and fine quality; but, as with a large batch of new seedlings, time must be taken to test it thoroughly before introducing it to the public.

DURAND'S GIPSEY I am expecting to see coming to the front as a valuable market berry.

KENTUCKY is a very valuable late strawberry. With me it has been excellent in years past.

GLENDALE is also valuable as a late berry.



FIRST PRIZE RAM AT MELUN—FIG. 326.

GOLDEN DEFIANCE is another valuable late berry.

Just as with grapes we want the hardiness and productiveness of the Concord with the good quality of the Iona, which we have not yet got, so with strawberries we want the good market qualities of the Wilson, the good table qualities of the President Wilder. The place is not yet filled; the goal has not yet been reached — there is opportunity to *try, try again*.

P. M. AUGUR.

Middlefield, Ct.

THE DEPTH AT WHICH TO PLANT PEAS.—The RURAL is right in regard to planting peas in ordinary soil three inches deep; but in deep garden soil that has been trenched to the depth of 15 inches they will bear longer and yield heavier crops if put in five inches deep. The ground, however, must be kept well cultivated, and one reason why I like deep planting is that it allows deep cultivation, and consequently a larger feeding ground for the roots. A. W.

GROUP OF PRIZE MERINOS FROM MELUN—FIG. 327.

A Prolific Marechal Niel Rose.

In the RURAL NEW-YORKER for June 18th, page 402, I notice a few remarks on the Marechal Niel Rose. I have a large plant of the Niel from which I cut 3,568 buds this past Spring. The greatest number cut at one time was 262 on April 13th. On April 3nd 179 were cut; on April 6th, 199; on April 9th, 195. The remainder were cut from March 28 to May 1st. My plant is nine years old and is budded on Malmaison. It is grown in a cool greenhouse with orange trees, camellias, etc., and receives no special care or attention. The Niel budded on a strong and healthy stock, is a truly superb rose.

C. E. P.

Sheep Husbandry.

FRENCH MERINO SHEEP.

If we Americans have surpassed all other nations in so improving the Merino, as to make it grow, in comparison to its size, the heaviest fleece of a good and almost perfectly even quality of wool, the French have certainly succeeded in producing such as are best in form. As an illustration of this, we have re-engraved from the English Live Stock Journal the three accompanying cuts, comprising several portraits of Merino sheep, the finest of which are bred in Soisonnais. It will be seen from these that they are as perfect in all their points as the handsomely formed English South Down! Like the latter they have no wrinkles in the skin, and we wish we could add that they were as free from the odious and useless excrescence of horns. They would indeed then be the most commendable of sheep.

What could induce any one in the first place to allow wrinkles we cannot imagine, for they are a decided nuisance, and of no earthly use whatever. It takes from three to five times as long to shear a wrinkled as it does a smooth sheep, and none but the most skillful workmen can do it without frequently and severely cutting the skin. The wool that grows on these wrinkles is of a short and inferior quality in comparison with the rest of the fleece, and they often produce long coarse white hairs, technically called *kemp*, which considerably lessen the value of the fleece. The only apology we have ever heard for allowing wrinkles to be bred in the skin was, that being thus enlarged, it grew more wool. But when more wool is wanted, it would surely be much better to increase the number of smooth sheep to obtain it, rather than ugly, wrinkled skins.

The size of full-grown Soissonnais sheep is not given, but we presume it is larger than that of South Down, because in an exhibition of a lot of seven-months lambs, the average weight of each was 123 pounds. This is quite as great as the usual weight of Oxford Downs. They mature a year sooner than common Merinos, which is a decided advantage in their breeding, as it enables the flock-master to turn his capital this length of time the sooner, and it lessens the risk incurred in their rearing. We should think it an object to import and breed some of these sheep at the West, for the probability is on the rich lands there, they may easily keep up the size without extra feed or care. We should judge also from their form, that they would make mutton superior to that of the ordinary Merino; and, if so, there would be the double advantage of having animals which not only produce a large fleece of fine wool but at the same time yield a choice carcass of meat.

SHEEP RAISING.

The profits of sheep depend to a great extent on the way they are managed and treated. Some persons will not succeed in any kind of business through neglect, or lack of knowledge of that particular kind of business. The fault is, not with the business, but with the person so engaged. Some think that a flock of sheep should yield a nice profit without care on their part; many persons who engage in sheep raising seem to think that their animals can take care of themselves. This is an erroneous idea, and very fatal in its practical workings. In fact, there is no stock that requires closer watching or care than sheep, and when they have that, there is no branch of business that will pay better on the money invested than growing sheep either for mutton or wool; but a knowledge of the business is requisite to success. Suitable land should be the first object of those who intend engaging in the business; sheep will not flourish on wet soils, but the most suitable are those naturally drained, with a gravelly soil. Low undrained land on a sheep farm may cause disease to a whole flock. It will not pay to raise sheep on all land worth $50 per acre, unless it is adapted to their growth and development; but it is said that it will pay to raise sheep on land worth $100 per acre, and then the gross yield will be two hundred per cent. upon the original cost, within one year. There is an increasing demand for the supply of wool, and the demand for mutton is also on the increase.

Many persons here are using less pork, and more mutton; and, taking all things into account, it seems that there is no business which promises quicker and larger profits than the production of wool and mutton. In Putnam County, Ind., the number of sheep returned to the assessors is 30,608 head, and the amount of wool, 138,738 pounds. T. C. G.

Greencastle, Ind.

SHEEP IN INDIANA.—There are quite a good many sheep raised in my county, principally Cotswolds and their grades. They are raised for wool and mutton, yielding an average of about nine or ten pounds of wool to the sheep. Lambs are shipped in the last half of June and July. They are dropped in March and April. Buck lambs are shipped to market for mutton, ewe lambs are kept for breeding. Sheep have to be fed on dry feed from four to five months in the year, owing to inclement weather. When there is no snow they will live on the Blue Grass. Wool is marketed here in the county where it is consumed. It is worth 25 cents per pound at present. S. E. Q.

Floricultural.

THE IVY.

THIS is a foreigner of great distinction and high repute among us, but alas! too fastidious to serve as many ends in this country as it does in its native lands. The sort with which we are most familiar is known as the English Ivy. It grows wild in the deciduous woods of England; also in temperate Europe generally. The Irish Ivy is but a vigorous and large-leaved form of the English Ivy—not a native of Ireland at all, but of the Canary Islands. Ivies are found wild in Europe, Asia and Africa, but none in America. Besides these two kinds, there are many beautiful garden varieties of them. Some have large entire leaves; others small and deeply-cut or lobed foliage; the leaves of some are margined with white or yellow, and others are blotched and clouded with the same. In some cases the silvery variegation assumes a reddish or bronzy tinge towards the Fall; but in most instances the variegation lessens, as is the case with the variegated forms of Day Lilies and Meadow Sweet, as the season advances.

The ivy is generally used to cover north-facing or shaded walls, also rocks, blocks or pillars in cool, moist, shady places, stems of naked trees and sometimes fences, likewise to form carpets under trees and belts upon the lawns. At one time it was popular for cemetery work, to cover the base of monuments, make a bed-mat over graves, and form a narrow belt around the lots; but since some years it has been less used, the Japanese Ivy having usurped its place as a "vine," and the periwinkle, or "myrtle," as it is often called, as a ground mat. But the ivy is not reliably hardy in the Northern States; we sometimes see it for years in thrift and vigor, even keeping pace with European luxuriance; then comes an exceptional Winter like the last, and the ivy is either killed or badly injured. That which spreads upon the ground may be saved in Winter by being covered over with spruce boughs, straw or tree leaves.

But it is as a house plant that the ivy is esteemed. Grown in a pot, tin can or wooden box, in open, rich soil, it will thrive in the darkest window, where most other plants would perish; we train it up the window sides, along the ceiling, around the picture frames or elsewhere at our pleasure, and still the leaves will keep their deep and glossy green, and shoots will break out and grow. Or we can snugly keep it as a "specimen," and train the shoots around a trellis or on some stakes in pyramidal, fan or cushion fashion; or we may let it grow at pleasure and shorten back the growths to render them more numerous, and in this way depend in folds over the vase's side, or like a mantle from the box that sitteth on the window sill. It is an excellent city plant; the darkness of the streets or smoky atmosphere affects it little. It may be safely lodged in shed or cellar in the Winter, providing that the temperature be moderately low, the atmosphere not parchingly dry—as near a furnace—and that the soil it grows in is never quite dry. But it will bear a deal of heat, as well as cold, providing the atmosphere is moist and the roots are watered well.

It is propagated by means of cuttings or slips at any time, grafting the rarer sorts upon the common, and by seeds. Cuttings yield *facsimiles* of the parents; seedlings usually incline to the species more than the variety, and grafting is an evil rather than a good, except in such cases as when we wish to invigorate the weak. Some folks strike their ivies, as they do their oleanders, in bottles of water. Of course the plants root readily, but the roots lack substance, and are not likely to be transferred from the water to the soil with safety. This method of "water-cuttings" is a miserable practice.

A great many kinds of plain-and variegated-leaved ivies are advertised by our nurserymen and florists at 25 to 50 cents apiece. The subject of the accompanying illustration, namely, Hedera Helix Madeiriensis variegata, or, in other words, the Variegated Madeira Ivy—be sure you do not confound this ivy with the Madeira Vine so common in our gardens, and which is not an ivy at all—is a new sort raised in England, where it was exhibited for the first time last year. The Gardeners' Chronicle, from which our picture is re-engraved, says:—

"It is a very handsome, large-leaved, silvery variegated plant, perfectly hardy in constitution and very free-growing, and has, moreover, the quality, often wanted in variegated ivies, of retaining its variegation throughout the season."

Miscellaneous.

RURAL BRIEFLETS.

WHERE the grasses of meadows are of mixed kinds it is better to cut when the earliest is in bloom, than to wait until the latest is in bloom, unless the last constitutes a large per-

VARIEGATED MADEIRA IVY.—FIG. 328.

centage of the entire field. If any rule could be given, clover should be cut when one-half the heads are in bloom or before any seed begins to form. Many farmers seem indifferent to the very important fact that seed-forming may exhaust the roots of perennial plants more than the growth of stem and leaf. It is well known that some annuals, if the flower-buds be cut off, may be changed into biennials. If, however, the seeds are permitted to form, the office of the plant is performed and it dies.....

A LITTLE liquid manure is excellent for young cabbage plants, tomatoes, if the soil is poor, celery, etc. A few shovelfuls fresh from the stable may be placed in a barrel—the barrel filled with water and this used as needed.....

FOR cabbages the land should be well plowed, harrowed, rolled and harrowed until mellow. For garden culture we make the rows three feet apart and set the plants two feet apart. A dibble or round stick, pointed at the end, an inch in diameter is used to make the hole. If the weather is dry the holes should be filled with water several times, the plants then set and the earth pressed firmly about the roots up to the first leaves.....

TREATED in this way, if the plants are freshly taken from the seed-bed and not exposed to the sun and air, the leaves never wilt in the least.....

FOR the cabbage worm it is best to go over the plants occasionally with a sharp-pointed pair of scissors in hand and cut the worms in two. This is a more agreeable and effectual way of killing them than hand-picking. Later, when the plants head, pyrethrum powder may be used. But this at present is rather costly. Hot water is effectual, but if it is not hot enough the worms escape—and if too hot the plants are injured.....

IT will be observed that in the axil of every grape-vine leaf—that is, between the foot of the leaf stalk and the stem from which it grows—a bud may be seen which at a very early age in the growth of the stem begins its development into a secondary branch or "lateral." If we desire to confine our vines to a single stem, as in the case of young plants, these laterals should be pinched out. In older vines several stems may be permitted to grow—the number depending upon the vigor of the variety and the quantity of fruit which it may safely bear. But each main stem whether one or a dozen should be treated in the same way. The axillary buds should be pinched out as soon as they appear. When the stems have reached the top of the arbor or support, the growing ends should be pinched and the lateral buds may then be permitted to grow near the top in their stead. When the vines are pruned in the Fall all the laterals are cut away, of course, with a part of the main stems, which are left to bear the next season's fruit.....

ONE of our friends in Texas, Wharton Co., says that the "Rural Branching Sorghum is looking splendid; plenty of roots with ten and twelve branches. It is far ahead of other sorghums planted side by side with it."

We do hope the Rural Sorghum may not disappoint the expectations our statements regarding it have raised.....

SPEAKING of the hardiness of the beautiful Japan Maples, we find a note in the London Garden from which we make the following paragraph:

"Some consider them tender, but in the Southern half of this country and all Ireland they have withstood our late severe Winters unhurt, and if a shrub can withstand such cold as that we have of late experienced, it surely ought to be ranked as hardy."

The request we made in the RURAL has brought us a number of responses and the upshot of them all is that they cannot, in this country, be considered hardy enough to endure our exceptional Winters.....

SEVERAL fine heads of Clawson Wheat received from M. B. McLouth, of Lenawee Co., Michigan, show that there can be scarcely any difference between the blooming of this variety there and at the Rural Farm.....

WE would again remark to our friends that those sending heads of wheat to the RURAL NEW-YORKER in competition for the prizes offered should be careful to write their full address on the box, which is now permitted by the postal laws. Otherwise we cannot always place the wheat sent with the letter of the person who sends it.....

PROF. BLOUNT of Colorado says that some of his wheats already show 80 good heads from one kernel.....

HERE seems to be a new if not an excellent idea sent to the RURAL by Mr. D. S. Marvin:

"If Hanson Lettuce be sown with clover early in the Spring it grows far more tender than if sown by itself; the shade afforded by the clover keeps it from heading, or forces it to remain fresh and succulent for a long time after that grown in the full sun exposure is unfit for the table. This hint came out of an accident.....

MR. MARVIN also says:

"The prospect for a grape crop in Jefferson Co., N. Y. never was better. I am now busy hybridizing and crossing more carefully than ever before. The Eumelan is a grand mother. I use it as one of the factors in most of my experiments and I never use foreign pollen; if I cannot get as good grapes from our natives as from Vitis vinifera I am greatly deceived. I am sorry to see your corn prospects are so poor; I am glad to see you are crossing our wheats.

.....

AGAIN, Mr. Marvin offers a problem for paper-bag manufacturers to solve:

"It is fairly proven that paper bags made of good manilla paper to cover the clusters of grapes while ripening, afford an excellent protection against mildew, birds and insects. Personal observation and experience have demonstrated their usefulness against human marauders or fruit thieves, *provided green bags* of the same tint as the foliage of the grape are used. But I find difficulty in getting good bags; the hot sunshine and rain fade out all the ordinary shades of green that I have been able to procure. I have applied to several manufacturers to have them made, but have failed so far to obtain a permanent green. I would therefore call the attention of our manufacturers to this want and feel sure that such an article would find ready sale."

PROF. BUDD, of the Iowa State College, writes us that he is engaged in a special work, viz., that of trying to adapt—by selection and importation—fruits, shrubs and trees to the peculiar climate of the prairie States. In some respects the climate of Iowa is more trying than that referred to by Hoskins and Chas. Gibb in the RURAL, as the "Cold North." The dry air and intense heat of the Iowa Summers they know nothing of. Iowa Winters are not only cold, but the west and northwest winds are dry. The steppes of Northern Europe and Asia have what is wanted and the Iowa State College has many of their fruits, shrubs and trees under trial .....

KILLING POTATO BEETLES.—The RURAL is usually very correct in giving information, but on page 402 in answer to the question, "How are the potato beetles, etc.," I find it making the assertion that the old ones cannot be killed by poison. Now "the fact is" they can and have been killed in vast numbers by London-purple and Paris-green. If the poison had been applied at the time the pests were eating the young shoots the result would have been satisfactory. I always watch for the time when they are eating and dose them at once, and never fail to kill a great many. This season they were unusually numerous and we killed so many that three days afterwards they would not average a bug to ten hills. No amount of hand-picking would have been so effectual. The young are just beginning to appear on the vines, the cold weather having kept them back. A. E.

Cambridge, N. Y.

REMARK.—Our friend misunderstood us. The old beetles were so numerous this year that they eat the sprouts as soon as they appeared, so that there was nothing to apply the poison to.—EDS.

Mr. T. J. Bull, of Hot Springs, Ark., informs A. J. C., of Salt Lake, that upon the receipt of stamps for postage he will, in the Fall, send whortleberry plants.

What Others Say.

A STRIKING illustration of the value of work as an educator has been recently furnished by Rev. Washington Gladden, of Springfield, says Prof. Northrup. He sent a circular to 100 of the most prominent men of that place, asking, "Was your home during the first 15 years of your life on the farm or in the city, and were you then accustomed to work when not in school?" Of the 88 who replied, five only "had nothing particular to do," while 94 per cent. were farmers' sons, or hard-working boys. So everywhere, as he clearly shows, the prizes of life are carried off by the men who learned to work.

SPEAKING of cabbages, Mr. Joseph Harris says:—Fotler's Drumhead, Stone Mason and Premium Flat Dutch are all excellent varieties. The Drumhead Savoy is a delicious cabbage with wrinkled or curled leaves, and should have a place in every garden. The Winningstadt is not as large as the others I have named, but is sure to head. If your land is not rich or not in the best condition, and if you are late in planting, the Winningstadt offers the best chance for success. It often gives good solid heads where the larger and later kinds fail. It is, moreover, a delicious cabbage. Many growers, especially on light, sandy soil, prefer it to the later and larger varieties, as it can be planted thicker, and you get more cabbage per acre.

THIS year Mr. Harris sets out his own crop in rows two and a-half feet each way. This gives 6,969 plants on an acre. Some prefer to make the rows two and a-half feet one way and two feet the other way. This gives 8,712 plants per acre.

THE difference of price between early-cut and well-cured hay, and the late and poorly cured, is fully 25 per cent., and this is no more than the actual difference in value for feeding stock. Now, to lose one-quarter of the value of a crop through some error of judgment, or carelessness in gathering, is far more than any

farmer can afford, and we appeal to those who have suffered from such losses if it is not time that they were stopped.

WHEN TO CUT GRASS.—The Sun remarks that grass left standing until the seeds are fully developed may contain as much nutriment as when in a greener and more succulent stage, but the nutritive qualities are not available, and a large portion must pass the animal as indigestible matter, and this is why our best and most thorough farmers claim that grass when cut in full bloom makes sweeter and better hay than if left until the flowers have fallen. This is, no doubt, correct, for at the stage named grass contains all the valuable properties required in hay that it will ever have, and nothing is gained by allowing it to stand longer. The maturing and ripening of seed is what may be considered an exhausting process, and the roots of grasses are weakened more by the ripening of one crop of seed than of two crops of hay cut while the plants are in bloom.

IN this country, says the London Live Stock Journal, the Herefords have long been considered the best beef-makers, but their reputation for milk is not yet established. It is claimed that they fatten quicker, and that their flesh is better than is the case with Short-horns, but the Short-horns have a superior reputation for milk. The English farmer looks for the highest practical combination of flesh and milk in his dairy cattle, and few will doubt that the Short-horns supply this condition more satisfactorily than any other breed.

ACCORDING to Le Parlement, the people of Paris have been eating "new" potatoes for some time past. The manufacture is achieved in the simplest possible manner. A selection is made of small old tubers, which are subjected to a good scrubbing in water, till the outer skin is completely rubbed off and the second skin exposed. This skin is clear and shining, and gives the tubers the appearance of new potatoes freshly dug.

BEFORE starting for a long day's fishing, rub a little soap on the ferules of your rod.—Exchange. Be sure to put $2 in your pocket—for fish.—Detroit Free Press. . . . . The house-fly can only see a distance of thirty-eight feet, but that never bothers him any. He always manages to keep within thirty-seven feet of everything.—Detroit Free Press. . . . . The man who knows you well may forget all about you when you are sick. . . . . Sometimes a noble failure serves the world as faithfully as a distinguished success.—Dryden. Did he refer to our next corn crop? . . . . The person who eats oleomargarine is sure to get fat—of course. . . . . Anybody who aids in driving from our markets the Wilson strawberry, that acid and deluding product of commerce which for so many years has been an affront to the popular palate, is a public benefactor.—Tribune. The man who can produce a berry as hardy and prolific as the Wilson, and differing from it in having the flavor of a strawberry and not of a crab apple will make his everlasting fortune. . . . . The farmers of Illinois are very much excited about the depredations of the Hessian fly, and want to know something of its origin. If we mistake not, it was General Washington who first made the Hessian fly in this country.—Yonker's Gazette. . . . . The chief aim of the industries of life, whether agricultural, manufacturing or commercial, and the great end for which government itself is worthy to be maintained, says B. G. Northrup, is that men may live in happy homes. "The hope of America is the homes of America." . . . . . And the following is from Puck. One should live at the Rural Farm and have wheats to cross in order to fully appreciate the last lines:

Now come the pleasant days
When in the woodland ways
The happy zephyr plays
With the rose,
And on the starry nights
The "skeeter," full of bites,
With keenest rapture lights
On your nose.

There is more eloquence in the gift of a dollar to a starving family than in the most charming sermon that was ever preached on the subject of charity. . . . . The man who can sit alone for half an hour with his own conscience and feel that he has been in respectable company is fit to join any church in the land.

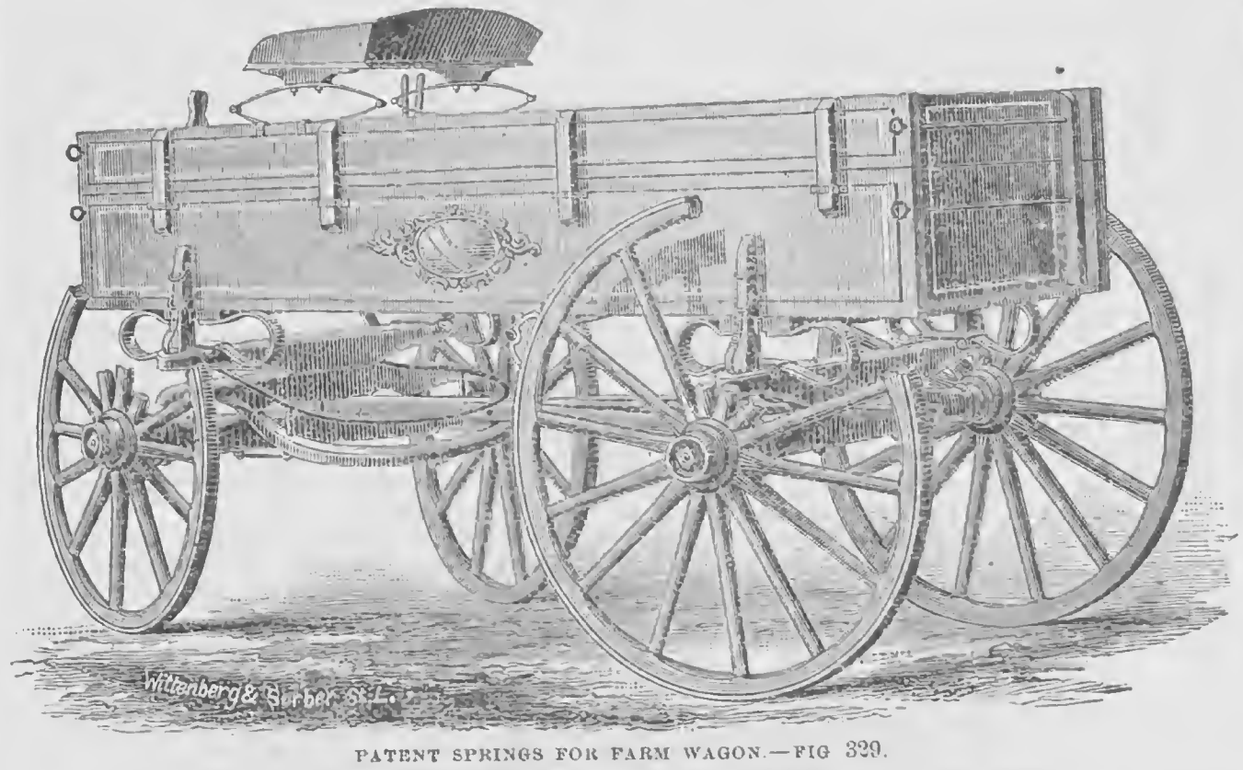
Industrial Implements.

STAR CANE MILL.

Special attention is called to the Star Cane Mill, manufactured by J. A. Field & Co., of St. Louis, Mo. Among the many points of excellence of these mills, we notice the novel feature by means of which, by the removing of one screw the scraper, or feed guide that guides the cane in the center of the mill, can be removed and repaired without taking the mill apart. The journal boxes can also be removed without taking the mill apart, simply by unscrewing one nut. These features are new as combined in a mill. The advantage derived from these improvements will be appreciated in case of the breakage or the wearing of the boxes. They also afford a quick and speedy remedy in case the mill becomes clogged between the rollers. The great advantage claimed is in overcoming the difficulty caused by broken particles of cane stock lodging on the inside of the mill. These particles while they may not cause any difficulty in the operation of the mill, if left over-night will sour and spoil the first lot of next day's grinding. By removing the scraper or feed guide, the mill can be washed, all these particles removed and the mill kept clean and sweet. One of the best evidences of their real merit is their rapidly growing popularity and the increasing demand for them from every State in the Union and from foreign countries. This firm also make evaporators and a full line of sugar makers' supplies. They publish a treatise on the planting, cultivating and manufacture of sugar cane, which they furnish free. K.

PULLIAM'S PATENT BOLSTER SPRINGS FOR FARM WAGONS.

THE wagon springs under Pulliam's patent are made by the well and favorably known Semple & Birge M'f'g Co., of St. Louis, Mo. The saddle or yoke of the spring is made of the best malleable iron, and every leaf of the spring, before leaving the shop, is tested under steam pressure by bringing the two points of the leaf together six times, and if the steel remains bent or shows the least flaw it is thrown into the scrap pile. The great point gained by the excellent construction of these springs is that they carry the load with an easy springing motion, thus saving largely in the wear and tear of every part of the wagon by relieving it from sudden shocks caused by uneven roads. With their use the draft is found to be lighter than with ordinary wagons, and while the team is saved a good deal from being galled by the harness, the latter is saved not a little by freedom from sudden jerks and irregular strains. These springs convert a common lumber wagon into a spring wagon, and are admirably adapted for farm wagons in that they prevent or greatly lessen injury to eggs, butter, honey, milk, cheese, dressed poultry, fruits and vegetables, by shaking and jolting. The saving by the use of these springs in hauling a couple of loads of farm products to market often doubtless might pay for a full set. Four different kinds of springs are made varying in strength in accordance with the weight of the load they are to bear, and ranging in price from $12 to $15 for sets of four. Full directions for the manner of using the springs are furnished by the manufacturers. G. B. B.



PATENT SPRINGS FOR FARM WAGON.—FIG 329.

Scientific and Useful.

FERTILIZER ANALYSES.

The following analyses have been made for the New York State Agricultural Society, by W. M. Habirshaw, F. C. S., chemist to the Society:

1 Dissolved bones, manufactured by Bradley & Co., Boston, Mass.; sold April 16 1881, to Thomas Fisher, Skaneateles, N Y.; by P. J. Cogswell, Rochester, N. Y.; $33 per ton; sampled May 5; analyzed May 31.

2 Superphosphate, manufactured by L. L. Crocker, Buffalo, N. Y; sold by N. M. Curtis, Ogdensburgh, to T. L. Harison, Morley, N. Y.; $40 per ton; sampled May 19; analyzed May 31.

3. Americus fertilizer, manufactured by Clark & Co., New York; sold May 12, 1881 by J, E. Phelps, East Hampton, Mass., to S. B. Fanning, Franklinville, N. Y.; $48 per ton; analyzed June 14

4. Stockbridge potato fertilizer, sold April 6, 1881, by Gildersleeve & Bro., Mattituck, N. Y., to —— Wells; $50 per ton; analyzed June 14.

5 Potato fertilizer, manufactured by G. W. Ralston. 158 Front St, New York; sold by Isaac Reeve, Franklinville, N. Y., to C. W. Ferry, May 17, 1881; analyzed June 14.

6 Potato fertilizer, manufactured by the Mapes Formula Co., New York; sold May 1881 by A. Burt, agent to A. Young, Franklinville, N. Y; $51 per ton; analyzed June 14.

7. Slade's fertilizer; sold by J. B. Slade, Riverhead, May 7 1881, to John Ferry, Franklinville, N. Y.; $35 per ton: analyzed June 14.

8. German potash salt; sold May 9, 1881, by J. E Phelps, East Hampton, Mass., to S. B. Fanning, Franklinville, N. P.; $14 per ton; analyzed June 14.

9 German potash salt; sold March 28, 1881, by the Mapes Formula Co., New York, to Charles Reeve, Mattituck, N. Y.; $14 per ton; analyzed June 14

	1	2	3	4	5	6	7	8	8
Water at 100 C.	11.53	13.37	12.59	12.73	13 63	12.24	26.98	....	....
*Nitrogen	0.92	3.05	3.02	4.06	2 23	3.13	1.93	....	....
Equivalent to ammonia	1.15	3 67	3.67	4.93	2.83	3.81	2.35	....	....
Phosphoric acid, soluble	10.22	4.01	4.76	6.03	6.66	0.11	trace	....	....
" reverted	5.06	4 08	1.25	1.44	1 16	6.90	0.85	....	....
" insoluble	0.66	1.77	2.21	2.15	2 35	2.65	0.40	....	....
Potash	....	1.73	11.85	4.38	1.59	7.21	3.50	11.74	12.76
Chlorine	....	....	....	....	....	....	....	28.99	27.39

*Nitrates not estimated. The ammonia in sample 6 mostly sulphate, and that sample in superior mechanical condition.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 64, JUNE 17, 1881.

610. Superphosphate, made by Lombard & Matthewson, Warrenville. Ct., sold by Buck & Durkee, Willimantic, Ct., sent by N. P. Perkins.

620 Matfield Corn Fertilizer, made and sold by the Matfield Fertilizer Co., Boston, Mass., sent by T. S. Gold, West Cornwall, Ct.

622. Pure Dissolved Bone, made by H. J. Baker & Bro., New York City.

623. Superphosphate of Lime, made by Geo. B Forrester, New York City.

625 Dried Blood and Tankage, made and sold by S. E. Merwin & Son, New Haven, Ct.

626. Dried Blood and Tankage, made and sold by Strong, Barnes, Hart & Co., New Haven, Ct.

Nos. 622, 623, 625 and 626 were sampled and sent by J. J. Webb, Hamden, Ct.

627. Superphosphate, made and sent by David Dickinson, Middle Haddam, Ct.

	610	620	622	623
Nitrogen	2.91	4.82		
Phos. acid, soluble	2.27	1.33	13.66	12.25
" reverted	7.42	1.63	0.99	0.70
" insoluble	5.70	.63	1.14	0.85
Potash		5.28		
Chlorine		5.52		
Estimated value per ton	$37 51	$31.62	$37.30	$32 91
Cost per ton	40.60	45.00	30.00	38.50

	625	626	627
Nitrogen	6.81	7.03	3.97
Phos acid soluble			5.04
" reverted			9.13
" insoluble	9.58	6.16	3.96
Potash			0.47
Chlorine			0.32
Estimated value per ton	$38.74	35.51	50.07
Cost per ton	$30.00	35.00	

	624	628
Potash	54.26	
Equiv. Muriate of Potash	86.04	
Sulphuric acid		44.67
Equiv. hydrated sulphate of lime		96.04
Insoluble in acids		2.95
Cost of potash per 100 lbs	$4.05	
Cost per ton	44.00	

624. Muriate of Potash, 83 per cent., imported by H. J. Baker & Bro., New York City, sent by J. J. Webb, Hamden.

628. Plaster, sent by Peck Bros., Northfield, Ct. S. W. JOHNSON, Director.

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

PALESTINE, St. Francis Co., June 24.—Small grains are scarcely known here as crops, with the exception of oats; very little of that sown. Corn will be about an average crop, probably rather less than usual. Scarcely any attention at all is paid to small fruits, and there are but few orchards deserving the name. G. B. B.

California.

CEDARVILLE, Modoc Co., June 23. — Our Winter was very mild—very little snow, but a great deal of rain. Winter barley and Volunteer wheat are looking splendid. Crops of all kinds are in a flourishing condition; there will be a much larger yield than for many years. The acreage, too, is much larger than in any previous year. Wheat, barley and hay are our principal crops. Corn is a failure in this section; we plant but very little; frost kills it before it is ripe. Orchards are looking well and small fruits are abundant. C. B.

LAKE COUNTY.—Many places on the Pacific Shore derive their names from their relation to, or connection with, surrounding circumstances. Thus, Nevada means snowy; Petaluma, means duck hills; Lake County derives its name from Clear Lake, a translucent body of water 80 miles in length and 16 miles in width. So far as the raising of wheat, oats, barley and rye is concerned, the valley lands of California are generally good, at least in the northern part of the State. Some sections far exceed this in the quantity of yield, but none exceeds it in the quality. Wheat, barley and oats are our chief small grain crops. Chilli, Club and Propo wheats are the favorite sorts in the valleys. In my immediate section there are probably about 5,000 acres sown to small grains. Corn does not do well here, though the amount cultivated from year to year is continually on the increase. Orchards and small fruits do very well in almost every section of the State. The vintage of the State has taken a new impetus within the past two years—the natural consequence of a partial failure of the grapes in some of the old countries. This county has attracted the attention of viticulturists from the Old World, and I can safely say that nearly 500,000 cuttings have been set here during the past season. Should this branch of business succeed as well as some predict a new life will doubtless be manifest in this part of the State. W. R. C.

Colorado.

LONGMONT, Boulder Co.—The acreage of wheat is much larger this year than heretofore, and the outlook for a large crop at this time is good. Some pieces are burnt a little, owing to a scarcity of water for irrigation during the past week, but the ditches are full again and the danger is past. Oats, barley and corn look as well as wheat. For every 100 acres of wheat there are 15 of corn, 10 to 15 of barley and three to five of oats. Winter wheat, Early May; Spring wheat, White Siberian, White Sonora, Oregon Club, Chillian and Blue Stem. The two-rowed barley takes the lead. Oats, black and white. Corn, yellow dent and White Mexican. Our corn crop is gradually increasing year by year. Fruit trees were badly killed during last Winter. Small fruits appear to be doing well. We are only beginning to set out fruit. Ten years ago there was not one man in a hundred who thought that fruit could be raised here. Now there is hardly a man who has not more or less fruit started. Eight years ago the country where I now live was a barren waste. A. M. P.

Dakota.

ASHTON, Pink Co.—About 3,000 acres of wheat were sown in this county, and the outlook is promising—Scotch Fife and Lost Nation. Oats a fair average in acreage and outlook. Very little rye, and a good deal of flax; a good prospect for both. The outlook for corn is poor—season too late; a much larger acreage than ever before. This county is too new yet to have much orchard or small fruits. C. W. A.

SIOUX FALLS, Minnehaha Co., June 22.—The cultivated acreage is about the same this year as last. Wheat, oats, flax and barley are chiefly sown. The prospects for corn are poor, owing to so much rain in Spring. No orchard or small fruits of any account are raised here. E. E. S.

Kansas.

NEWTON, Harvy Co.—Outlook for wheat somewhat better than last year; acreage about

five per cent. larger—chiefly Turkey, Fultz, Red May, and Alabama May. Oats are good; fifty per cent. better than last year; acreage not so large. Prospect for corn first-rate and acreage larger than last year's. If the season continues as at present we shall have an immense crop. Orchards, though young, are doing extra well; we shall have some apples, some pears and a good crop of peaches. Strawberries and gooseberries are plentiful and good; blackberries and raspberries mostly winter-killed. Potatoes are doing finely; in fact, Early Rose are already in use. Garden vegetables are late but doing very well. J. S. G.

PARSONS, Labette Co, June 23.—Harvest secured. Wheat averages five bushels of No. 4 Winter. Oats better than usual. Corn has been growing first-rate under a hot drought. Till last night all districts in the corn belt have had rain enough, and didn't we get it last night! Another rain like this in the middle of July, and Kansas promises, as in 1869, to beat the world of corn. J. B.

URBANA, Neosho Co., June 24.—Ten per cent. more wheat was sown than last year; but it will not be half a crop—Lima, Fultz and a nameless bearded sort. Oats a fair crop; rye good, but only a little sown. Corn prospect good. Apples and pears scarce. Small fruits plentiful. J. M. A.

Louisiana.

LOGTOWN, Ouachita Parish, June 24.—No small grains, except oats, are sown in this parish, and these only in small patches for the purpose of feeding green to our work-stock in cultivating our staples, corn and cotton. The planters usually sow what are called rust-proof oats, and generally find that our heavy dews, followed by hot suns, impair the reputation implied by this name. Our lands in the river bottoms are altogether too rich for small grains, producing large straw and no seed. Fully as great an acreage of corn (if not greater) has been planted as last year, and yet the present prospect is that we shall not harvest nearly as much. This Spring was very backward and unfavorable for pitching our crops. The 1st to the 10th of March usually finds the bulk of the corn planted. This year it was not finished by the corresponding dates in April. Cotton planting was, therefore, necessarily quite late, made so in part by continued rains, and planters have "been rushed" to get their cotton in and cleaned and brought to a stand, even to the neglect, to some extent, of the working of the corn crop. In fact, we are *greatly in the grass*, and shall be for some days. To add to our troubles, the seventeen-year locusts, as they are called, have destroyed much of the cotton already chopped out, by depositing their eggs in the stalk, which necessitates extensive replanting in this section, and I am unable to state to what extent the damage has been done throughout the parish, but I suppose that their ravages are general. The frost of the night of April 1st last was disastrous to our entire fruit crop, including apples, pears, plums, quinces, pomegranates, figs and peaches. The last mentioned were generally killed, with now and then an exception in a sheltered situation; but even the fruit which has matured is faulty and without flavor. This remark applies to the hardier as well as to the more tender kinds. Of late years our people have paid much attention to the cultivation of all kinds of fruit, both small fruits, so-called, and those cultivated in your latitude, with the exception of cherries, currants and gooseberries, to which the climate is not adapted. The loss makes a fearful deduction from the sum total of home comforts. Our section is particularly favorable to the cultivation of strawberries, raspberries, blackberries, grapes and and peaches. Our strawberry season commences generally about the middle of March and continue, to the middle of May or first of June. With a judicious selection of varieties with reference to succession and the power of the later varieties to resist the effects of heat, it is quite possible that two or three months more might be added to the Southern strawberry season. Suppose some of your Northern nurserymen and cultivators should attempt the solution of the problem. F. A. H.

Maine.

PORTLAND, Cumberland Co., June 24.—We have had a very backward season, but wheat, oats, barley, rye, etc., are looking well; acreage about the same as last year. The variety of wheat chiefly sown is Lost Nation. The prospect for corn is not very good owing to the cold weather we have been having. The acreage is very much larger than last year. The prospect for orchard fruits is very promising for the "off" year. There are not many of the small fruits grown in this section except strawberries which promise well, although the grub worms are more numerous than they have ever been, and are destroying many plants. J. W. A.

Maryland.

EASTON, Talbot Co.—The usual acreages of wheat and oats. No barley, or rye of any amount. Wheat, mostly Fultz and Mediterranean The prospect for corn is only medium, with the usual acreage planted; will compare favorably with last year. The peach and apple crops are only about one-third of what they were last year, some large peach orchards, off the water courses, having no fruit at all. Berries a fair crop. A. B. B.

Michigan.

HART, Oceana Co., June 24.—From May 14 to June 13th we had no rain. It became very dry and everything suffered. During the past week we have had several good rains and vegetation is beginning to look better. The grass is very poor and pastures were much withered. Fodder for next Winter promises to be scarce and farmers are selling off their young stock. Two-year-olds bring from $20 to $25. Those who mulched their strawberry beds or have had a chance to irrigate them, will have a good yield of this fruit. It is surprising how much water this berry will take while growing. Having a brook that I could turn on to my bed, I have had a chance to see its wonderful capacity for moisture. Both the foliage and fruit show the benefit derived and no signs of the dry weather. This Spring, some of our farmers had again to learn the lesson, "never to hold on to a crop when you can get a good paying price for it." Potatoes were at 80c. to 90c and dropped suddenly to 50c and then lower. One man, after drawing a full load to town, refused 80c., for he felt sure of a dollar in a few days, and so stored them in a cellar. He has since sold them to the same man for 15c. per bushel. Some have began cutting clover. From the looks of most fields one would judge our farmers have yet to learn when to begin haying. Too much is lost by delays. A. H. B.

PETOSKEY, Emmet Co.—Ours is a new country; six years since it was covered by an unbroken wilderness at which time it was first thrown open to settlement and although the land has all been taken, much yet remains uncultivated, their being yet but from ten to one hundred acres cleared on each quarter section; soil, deep sandy loam. The acreage sown and planted is increasing from year to year. Wheat, with few exceptions, promises a good yield, as do oats and peas. Winter wheat, Fultz, Clawson and Diehl; Spring wheat, White Russian. Rye but little grown; what I have seen looks poorly. As much corn as usual was planted and it promises well. Small fruits in abundance.; I have never seen any section produce them more plentifully. Our young orchards of apples, pears, cherries and plums look well; but are not bearing much yet. Most of our peach trees were killed by the unusual cold of the past Winter. Hay will be a good crop. J. R.

Minnesota.

ZUMBROTA, Goodhue Co.—There is an increased acreage from last year of barley and corn. Oats about the same, and a consequent decrease in wheat. All look well except barley, which is very unpromising. Wheat, Scotch Fife and Rio Grande principally; oats, Surprise, Norway and White Dutch. Acreage of corn increased about one-half; looks well, but weather is rather too cold. Fruit prospects good; strawberries in abundance; currants not very good; bushes filled, but dropped off badly. T. M.

Mississippi.

TYRO, Tate Co., June 24.—Wheat acreage not more than one-fourth of an average owing to a wet Fall and Winter—Red May. Oats an average acreage; yield good. Schey's Red Rust-proof. German millet acreage double; yield, early, very large; late looks well. Corn acreage one-twentieth less than usual, with less than an average yield per acre. Cotton acreage increased 30 per cent.; rather late and low, but better formed and in better condition than last year. Orchards are generally young and not bearing. Small fruits almost an entire failure. M. M. M. T.

Missouri.

DE WITT, Carroll Co., June 26. — Wheat will be about half a crop. A great deal of it was winter-killed. I think one-third of it was plowed up and put in corn; there was a larger acreage sown last Fall than usual. No Spring wheat. The early-sown wheat stood the Winter best, and is ready for harvest now; the late-sown the chinch bug is damaging. Fultz is the leading variety and some Clawson, May, and Gennessee, and some Odessa. The prospect for oats is better than it has been for years: about the same acreage as last year. No barley; very little rye—good. The prospect of corn is good; about the same acreage as last year. Some of it is late, but all looks well. Apples half a crop; peaches all killed; small fruit, good. My Cuthbert Raspberry from the RURAL NEW-YORKER is full of fruit. C. R.

CHAMBERSVILLE, Dade Co., June 25.—Wheat acreage 10 per cent greater than last year's; average, 50 to 75 per cent. of last year's yield. Mediterranean, Egyptian, Walker, Fultz, in the order named. Corn generally a poor stand; much replanting; chinch bugs and a web-worm—similar in its operations to the army worm—are taking whole fields. Small fruits hardly any but gooseberries. No peaches to speak of, and not more than apples enough to supply the home demand. J. H. H.

GUNN CITY, Cass Co.—Wheat very fine—more than average crop. Flax and corn growing nicely. Apples, peaches and cherries average crops. T. J. Z.

RICH HILL, Bates Co.—The acreage of wheat is 50 per cent. more than last year; still the yield will not be more than half an average crop—Fultz and Mediterrancan mostly. Not much oats sown—very short. The outlook for corn is good and the acreage 25 per cent. more than last year's. Fruits of all kinds are very short crops except gooseberries which will be a full crop. G. R. S.

Nebraska.

BRAINARD, Butler Co., June 25 —Wheat on old ground, weedy; prospect for crop not so good as earlier but it is improving in appearance from the last week. Rye but little grown; looking well. Oats not much grown, weedy. Corn, late, and weedy, but with the present favorable weather it is improving. Farmers are busy working it and with a favorable season a good crop may be expected. All crops are late on account of continued wet weather and the cold Spring. About the usual acreage of crops. H. J. A.

MISSION CREEK, Pawnee Co. June 24 –Acreage for wheat, rye and oats larger than usual; and rye prospect very good: wheat moderate. Grass and Tea wheats mostly. Prospects for corn good; acreage larger than last year. Outlook for small fruit very good—orchard fruit only moderate. M. M.

ORLEANS, Harlan Co.—A quarter more wheat than last year; looks well; prospect good for a fine crop—Grass Wheat principally. Rye good; but little sown. Of barley none was sown through lack of seed. Corn prospect good; 25 per cent. more planted than last year. Wild grass plentiful; no bearing fruit trees in this neighborhood. D. W.

OXFORD, Furnas Co.—Wheat acreage in advance of any previous year and the prospect for cereals of all kinds good. Odessa and Lancaster wheats. The prospect for corn is good and the acreage is in excess of last year's. What orchards there are, are young, but looking well. Small fruits are doing well. N. A. P.

North Carolina.

COLFAX, Guilford Co.—Wheat is about an average crop here; some smut in places; heads filling well; straw short; acreage a little more than last year. Oats, acreage less than usual; Fall oats winter-killed; about two-thirds of a crop; Spring oats very short on account of drought; prospect for half a crop. No barley; but little rye—average crop. Corn is backward on account of late Spring; acreage about the same as last year. Orchard fruits killed by late freezes; will be from one-fifth to one-fourth of a crop. Small fruits are neglected hereabouts; what there are grown do well. Average crop. R. C. R.

ENFIELD, Halifax Co., June 24.—Oats and wheat are not extensively cultivated in my section, but the yield is not an average, which is about 10 bushels per acre. Corn is looking well but small; average 12 bushels per acre for high land and 50 for low grounds. Cotton, which is a chief product, is small and the stand bad. W. F. D.

Ohio.

GREENFIELD, Mahoning Co.—A report in the RURAL of June 13, says that apples in Ohio are falling off prematurely. Here in the Eastern part of the State, however, the outlook is good for a fine crop. For the past three years we have had plenty and to spare and the promises this year are equally good. Peaches will be plentiful and so will other sorts of fruit. Field crops also promise well. Though wheat is not quite equal to last year's crop, still it is good, though rusting somewhat. Many farmers cannot "work" their corn properly owing to too much wet. Oats and hay will be heavy crops. Wool is changing hands at 25c. to 40c. Fat sheep bring 4c. to 4½. No fat cattle here; butchers are buying at Chicago. D. B. C.

JOHNSTOWN, Licking Co.—For wheat, oats and rye, prospect is fair; acreage a little short of last year's—Fultz, Gipsey and Mediterranean. Corn prospect good; acreage equal to last year's; irregular on account of bad seeds. Prospect for orchard fruit is poor; for small fruits good. Currant worms are doing much injury to currants and gooseberries. A. P. C.

Virginia.

CLEEK'S MILL, Bath Co., June 25. — The acreage for wheat is over an average. The drought in May damaged the crop badly. We may have an average crop if the remainder of the season is favorable. Oats look well. No barley is raised in this section and not much rye. Corn came up badly; some of that replanted has been destroyed by birds and squirrels. The wet weather has not been favorable for working it thoroughly. Some apples: very few peaches. Will have an average of small fruits. W. R G.

Pennsylvania.

ALLENTOWN, Lehigh Co., June 27.—Wheat is medium; rye very good—a few farms excepted. Corn and oats look very promising—still some farmers had considerable trouble with the cutworm in their corn fields, some fields having been totally destroyed, which of course had to be replanted. Grass is medium. We shall have a fair crop of apples and pears; few cherries; no peaches; berries plentiful. J. J. B.

Washington Territory.

VANCOUVER, Clarke Co., June 22.—Only a small portion of this county is under cultivation, it being yet in its "infancy." Probably more oats than wheat is sown, and there is an increase in the percentage of both of at least 10 per cent. this year over last. No large quantities of rye are grown here. The outlook for crops is very good—better than the average. We have had an unusually fine and growing Spring. White Winter wheat. Corn is not counted among regular crops here, and only small lots are planted, and those few and far between. The nights, as a rule, are too cool for corn to do well, except as a garden crop. Small fruits are very abundant. We had a little too much rain during the first ten days of this month to allow the strawberries to ripen to perfection. Many of mine rotted on the plants. The crops of currants, gooseberries, raspberries, blackberries, etc., is very large and fine. A smaller crop of cherries than usual. Plums, prunes, pears, apples, peaches and quinces are all average crops. All the fruits above named, except quinces, grow remarkably well here. Our cherries, plums and pears cannot be beaten anywhere. Peaches do not do very well here. The contract prices for fuel, forage and straw at the military post here for the year commencing July 1, 1881, are as as follows:—Timothy hay—500,000 lbs.—$11.70 per ton; oats—375,000 lbs.—$1.23 per 100 lbs.; straw—200 000 lbs.—$7 per ton; hard wood—2,300 cords—$4 25 per cord; charcoal—1,500 bushels—9½c. per bushel. Soft wood here, $2 50 per cord. The prices are lower than they were last year, considerably. J. J. B.

Wisconsin.

AVOCA, Iowa Co.—What little wheat lived through the Winter, suffered from two or three weeks of dry weather in May. The crop will be light. Barley is not raised in this vicinity and but little rye. Oats look fairly well. Corn looks about as well as last year at this time, about as much is planted also. Apples will be scarce on account of there being such an abundance last year. Currants, gooseberries, raspberries, etc., will be plentiful. E. A. L.

CHIPPEWA, Chippewa Co., June 24 —The acreage of wheat is about the same as last year. Oats a little more. Barley and rye very little sown. White Russian wheat and white oats. All small grains are looking very well; if no mishap befalls them the yield will be good. The acreage of corn is greater than last year, and it is looking well. Plums, currants and strawberries look well. Apple trees were badly killed last Winter. The prospects for the farmer are encouraging. H. M. T.

DELAVAN, Walworth Co.—Winter wheat almost all winter-killed; Spring wheat—but a little of it sown—looking well and promising a good crop; we raise chiefly the Lost Nation and Grant wheats. Barley is extensively raised; but is rather thin on the ground on account of the dry weather shortly after it was sown. Oats are our principal crop of small grain; early-sown are a big crop; late-sown not so good, but doing nicely since the rain. Corn is king, and is, as a general thing, looking well; rather more than usual planted. It has yielded very heavy crops for the past three years; but I do not look for so heavy a crop this year. Apples will be a small crop; currants, plentiful; strawberries half a crop. R. R. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

"Working" a Small Farm.

J. H. W., New Holland (one of five in the Union), sends the accompanying diagram of his 14-acre farm, and asks how to fence it to the best advantage, and the best way to work it.

ANS.—This is a difficult question to answer, because the method of fencing a farm depends upon so many circumstances. If no stock is kept no interior fences at all are required, and when stock is kept the fences are arranged so as to suit special circumstances. Upon a small farm of 14 acres, as here described, with seven acres of timber, the timber land would provide all the pasture that is required, and no more fence would be needed than one to separate the woodland from the cleared land, with a small paddock near the buildings in which to keep the cows when at home. The manner of working such a small farm is another question that depends upon circumstances. Perhaps to keep 10 or 12 cows upon it, which may be possible under a system of high cultivation and soiling, would be most profitable. One man can very easily farm 14 acres and care for a dozen cows without hiring any labor. By

making butter, $75 a year can be made from each cow, which will perhaps be as great an

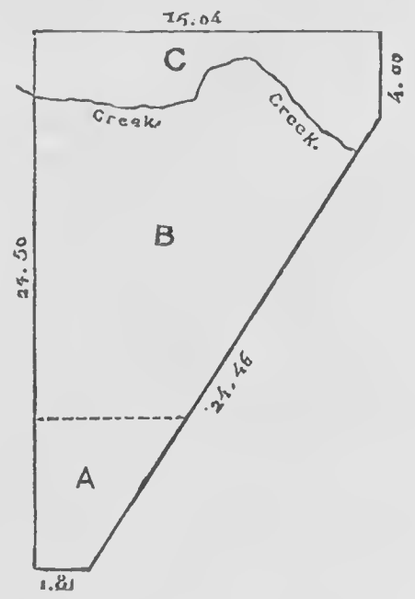


FIG. 330.

income as can possibly be produced from any other method of farming a small tract, with the same amount of labor.

Yellow or Orange Rust on Raspberries and Blackberries.

A. S. M., New York City, sends some specimens of diseased leaves. The malady has destroyed a great deal of his blackberry and raspberry vines, and some of his neighbors have lost all of theirs, and he asks for the cause and a remedy.

ANS.—The leaf inclosed was very badly affected with fungi, commonly known as the yellow or orange rust, which frequently attacks Black Cap Raspberries as well as blackberries. Mr. E. Williams submitted specimens of this fungus, last year, to Mr. J. B. Ellis, of Newfield, N. J., (who is reputed to be an authority on these matters) and he named it "Cæoma (Æcidium) luminatum (Schw. Syn. Am. Bor. No. 2,887), the Uredo luminatum of Curtis's catalogue. It is not properly an Æcidium." The only remedy we know of is cremation. Every infected plant should be dug out and burned as soon as observed. If allowed to ripen, the dust, or spores, will be carried by the air to other plants, thus increasing the trouble. In some sections blackberry culture has had to be abandoned on account of this disease. If some of our Experiment Stations were to employ competent fungologists to make a special study of the fungi that infest our strawberry, raspberry and blackberry plants with a view to find a remedy for these troubles, and if they found it, they would confer a great benefit on the fruit-growing interests of the whole country. Unless science comes to our aid with its close and careful investigation, we shall remain as now, at the mercy of these insidious and destructive diseases.

How to "Soil" Sheep.

W. H. C., Wayandotte, Kansas, intending to "soil" his cows, asks whether a small flock of sheep can also be kept in the same way.

ANS.—The method of soiling sheep is frequently practiced in England and sometimes in this country. It consists in growing such crops as oats, rape, millet, grass, clover, mus-

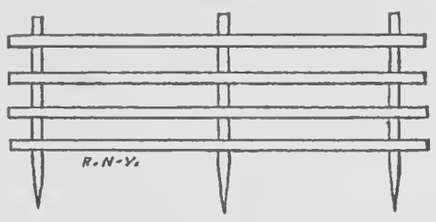


FIG. 331.

tard and corn, and either feeding these from the ground or in racks in small folds or paddocks fenced in by hurdles or movable fences. The fences are made of light panels put together with wrought nails, clinched, and fastened to stakes, which are driven in the ground, as shown at Fig. 331. The ends of the hurdles may overlap and be tied with a piece of tarred twine or fence wire; or the panels may be tied to separate stakes, which are driven into the ground at each end, the ends of two panels being tied to each stake. In laying the fence the plot is divided first by fencing one corner as shown at *a*, Fig. 332. When this plot is eaten off, the cross fence *a* is moved to the line *b*, and when the second quarter is eaten down, the fence is moved to *c*, which serves to confine the sheep on both the other quarters. The fence may then be moved to another paddock, which is fed off while the first is either growing up again or is planted to another crop.

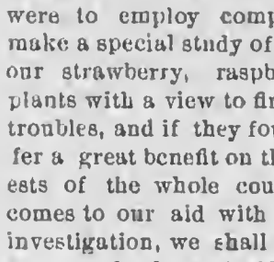


FIG. 332.

Apparatus for Raising Cream in a Cheese Factory.

W. L. L., Palermo, N. Y., asks what apparatus is best for a cheese factory for raising the cream on the milk to make butter.

ANS.—The forms for raising cream in cheese factories and elsewhere which are good and efficient, are numerous, but they differ somewhat in cost and convenience. The plan which is as cheap and convenient and efficient as anything in use consists of two plain tin vats so narrow as to allow the milk to cool through pretty readily—say 10 to 14 inches wide, with the ordinary depth and length of vats for cheese making—set side by side a few inches apart in a wooden vat resembling the wooden envelope for a common make-vat. By filling the wooden vat with water the two tin vats containing the milk will be surrounded with water, and, being narrow, will soon cool through. With these vats refrigeration is generally further aided by passing water through a tin tube placed in the milk just under the cream line. Where vats thus constructed can be elevated enough to allow of spouting the milk from them to the make-vat, they work most satisfactorily. When the milk in them has become reduced to the temperature of the surrounding air they should be covered as nearly air-tight as possible to prevent fouling the cream by condensations from the air on its colder surface. Such an arrangement is very convenient on account of the small space it takes up, and on account of washing, filling, etc., and nothing raises the cream any better.

Starting a Greenhouse.

J. C. M., Mt. Eden, Cal., asks, 1, what would be the probable cost of glazing a greenhouse 10x10 feet; 2, the size, number and probable cost per 100 of the pots required for such a house; 3, would a house of this size be too large for an amateur wishing to grow camellias, azaleas, calceolarias, ferns, etc,

ANS.—1. The cost of glazing here is from one to three cents a light, according to style and quality of work, size of glass, etc. This is for the glazing exclusive of the glass. The price varies a little with the extent of the job. The glass should be bedded. You can thus form an estimate of the cost from the price of labor, glass, etc., at Mt. Eden, which we do not know. You, of course, understand that the glazing is only a single item in the cost of a greenhouse, which many seem to forget. 2 You will need pots varying in size from two to twelve inches in diameter, which will cost from 50 cents to $50 dollars or more a hundred at the East. A hundred each of two, four and six, and fifty each of eight, ten and twelve inches in diameter, will leave you a margin for breakage. You should send to your nearest potter for a catalogue of prices. 3 The size of your house is not too large for an amateur: on the contrary, in a few years you will find it quite too small. It is better, however, to begin in a small way, till you have "learned." All the plants you name are well adapted for a low temperature, except the etc.'s, which may or may not be so.

Miscellaneous.

R. M. D., Holt's Corners, Ill, says that his farm, which he bought a couple of years ago, is, like many others in that neighborhood, so run down by constant wheat cropping for a number of successive years, that now it does not yield more than from 50 to 100 per cent. of what it should yield if fairly rich; and he wishes to know what fertilizer would be likely to return the highest profit for the outlay. A neighboring salt-making establishment is selling the refuse salt for agricultural purposes for a low figure, calling it gypsum, and he asks, 1, whether gypsum is not a species of rock; and, 2, whether this refuse salt would be good for wheat; 3, if so, what is its relative value for wheat as compared with bone dust or land plaster; 4, how much gypsum or salt should be used per acre; 5, if neither is desirable what would be good for the next crop.

ANS.—1. Gypsum is sulphate of lime—salt is chloride of sodium. 2. It might prove of some mechanical benefit. Salt as a manure does not amount to anything; but it aids in rendering the plant food in the soil available. Probably yes. Salt, where needed, strengthens and brightens the straw and increases the yield. 3. We should not advise plaster except experimentally. The three cannot be compared. It should be sown before the land is seeded the same as fertilizers. 4. Six bushels of salt per acre may be sown. 5. It may be that bone flour would suffice. It may be that potash alone would produce a good crop. The safest way would be, in the absence of experiments to test what special fertilizer is needed, supposing you have no farm manure, to purchase "wheat fertilizers" or those specially prepared for wheat by commercial fertilizer establishments. These should be sown in the Fall when the land is prepared for wheat at the rate of from 300 to 700 pounds per acre. If it is desired to seed down, more would be necessary.

W. H. P., Mt. Eaton, Ohio, says: "Last Spring I sent to a New York seedsman for a bushel of Russian White Spring Wheat, which came in due time. I was surprised at the quality, as I expected (according to the circular) to see a nice quality of wheat; but, instead, a poor, shriveled-up, small-grained sort that would not make decent screenings came to hand. I sowed it on good, strong ground, and it came up nicely and looked well until of late, when it stopped growing, and now it looks as though it would never head. I would like you to tell me what is the cause—if it is the climate or the poor quality of seed. 2. What is the best method of selecting and keeping seed corn."

ANS.—1. We have sown shriveled grain on several occasions. We find that the grain from such seed is smaller than the natural size of the variety; but that the heads are longer We should hardly account for the behavior of your wheat as owing to poor or shriveled seed. 2. We are very careful to cure our seed corn thoroughly and to preserve it in a dry room.

W. Y. M., Richmond, Va., asks, 1, whether rye can be sown in corn at the last working—say about July 15—for late Fall pasturing after the corn is harvested, and then to be turned under next Spring—would it be too late. 2. He sends a specimen of a daisy that infests 40 acres of white-oak grove land whose soil is in fair heart, and which has been pastured since the war, when it was fertilized by having been used as a cavalry encampment, and he asks whether Orchard Grass would be likely to overcome the daisies; and, if not, what grass suitable for a permanent pasture would do better; 3, which would be the better means of getting rid of the pest, plowing the land, or thoroughly scarifying the surface without plowing.

ANS.—1. It would not be too early, we should say—we have no great faith in the plan. 2. We should hardly think Orchard Grass would prevail over the Ox-eye Daisy (Leucanthemum vulgare) of which you send a specimen. The Couch or Quitch Grass—sometimes called Rye Grass and Creeping Triticum (Triticum repens), would best answer your purpose, though many object to introducing it upon their farms. It is, however, in dry seasons, easily exterminated by cultivation. The field upon which our 134 bushels of Blount's Corn were raised last year was filled with this grass. There is none in the field now, except along the fences. 3. Decidedly plowing. If this daisy is plowed under when nearly in full bloom, during a hot, dry spell, that is the last of it.

C. A. F., Norwich, N. Y., wishing to get some poultry in which beauty and usefulness are combined, asks which breed would we recommend, and at what price would we furnish a setting of eggs.

ANS.—For your general purpose we recommend the Plymouth Rock. We do not sell anything, and must refer to those who do. The price is from $1.50 to $3 for 13 eggs.

L. E. L., Lee Center, Ill., asks how to manufacture "plug" and "smoking" tobacco without the aid of machinery.

ANS.—A good quality of "plug" tobacco cannot be made from the leaf without the aid of costly machinery, as an immense pressure is required in its manufacture. In order to make salable "smoking" tobacco one should study the process practically in a factory.

No name, Hoosick Falls, N. Y., asks, 1, several questions about cauliflowers, and, 2 what is the best tomato for early forcing.

ANS.—1. We cannot give any information as to this question. 2. Conqueror, Hathaway's Excelsior, Canada Victor are among the best early.

H. B, White Co., Ark., sends diseased leaves and asks the cause of the disease.

ANS.—They are punctured by many small insects, but we cannot ascertain what they are.

P. M., Bridgeport Center, Mich., sends a sample of grass for name.

ANS.—Dactylis glomerata—Orchard Grass—one of the best of grasses.

W. P. D., Mossing Ford, Va, sends two specimens of grass for name.

ANS—Both are Blue Grass—Poa pratensis.

ADDRESS WANTED.—Will A. B. T., whose plan for a house appeared in the RURAL of May 21, please send us his address, as a subscriber wishes to consult with him concerning the house and plan?

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JULY 2.

R. C.—W. H. B.—P. F.—G. F. D.—J. J. B.—J. W. A.—C. B.—W. R. G.—J. N. W.—C. M. S.—W. M. C.—W. M. R.—W. F. J., we don't much care for poetry.—J. I. D.—E. A.—H. P., Archer Fla. Thanks for the seed. We fear it is too late for this season.—K. D. T., thanks.—P. B. M.—S. B.—A. I. B.—S. P.—I. J. B.—G. A. G.—A. J. B.—A. P.—G. W.—(Rock Falls. Ill.) Thanks.—J. M.—A. B. A.—W. H. P.—I. H.—G. S. H.—T. C. G.—W. F.—C. A. F.—G. R. Q.—A. W.—K. D. T.—E. M. S.—A. E.—W. H. R.—A. W.—C. E. P.—J. W. S.—A. A. B.—A. L. C.—J. K.—L. E. M.—N. R.—R. Lamb., thanks for seed.—Mrs. J. M. M.—E. N. P., thanks or corn—it is now too late for us.—L. M. S.—H. T

Stock and Poultry.

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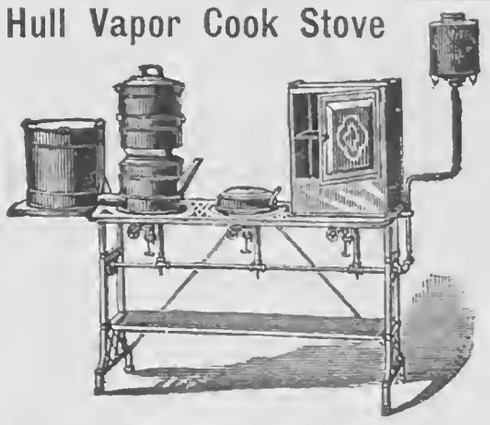

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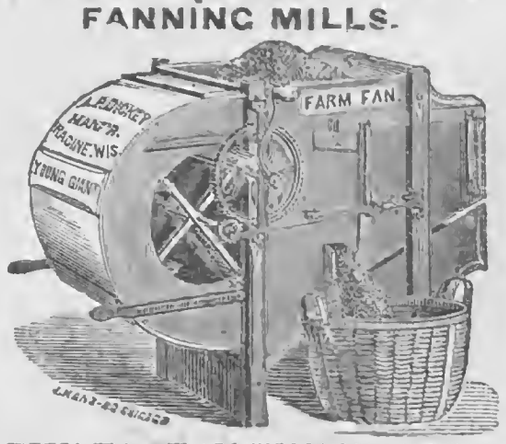

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No. 34 PARK ROW, NEW YORK.

SATURDAY, JULY 9 1881.

A SECOND NATIONAL HORROR.

JUST as the Nation is preparing on this bright gladsome Saturday to celebrate with wonted joy and thankfulness the signing of the Declaration of its Independence, a horror strikes the national heart and conscience such as thrilled the country only once before in its history, when the lightning flashed all over our broad land the news of the horrible tragedy that closed the late conflict. The assassination of President Lincoln it was hoped would be, like the strife that led to it, the solitary horror of its kind in the history of the Union; but alas! the cable has just flashed hither the news of President Garfield's foul assassination. With only the meagerest news of the dreadful fact as we go to press, we can only express our utter abhorrence of the dastardly crime, our regret at such a mournful close of a bright career, and our heartfelt sympathy with the widow and children so sadly and awfully bereaved.

LET US again express the hope that those of the RURAL CLUB to whom the pyrethum seed was sent will tend their plants carefully and save all the seed.

NOTICE TO THOSE SENDING US SPECIMENS OF WHEAT.—Those competing for our wheat premiums will please send the five heads as soon as ripe. Write the address and name of sender upon the parcel or box in order to avoid mistakes.

THE value of feeding substances is a subject of the greatest importance to farmers, but it is by no means studied as it should be. In the article on "Farming for Boys and Girls," (page 462) will be found a list of comparative values of food substances, to which we call the attention of older farmers and those correspondents who so frequently write for special information upon this subject. In the table given will be found all those waste products of which heretofore very little information has been given, but which are of general importance in agriculture.

A WORD OF CAUTION.—It is no uncommon thing in the country to hear of the injurious effects of cold-water drinking in extremely hot weather. Sometimes ice-water is taken to the harvest field which, when drank excessively, as is apt to be the case, is injurious, and even the cold water from the "north side of the well" is harmful. It is better by far to drink moderately cool water frequently, than to take a large quantity when one is very thirsty. Sometimes some such beverage as Ginger Beer or Root Beer satisfies thirst quite as well. Almost every family has its favorite recipe for making "Summer drinks," and we advise them to make use of such during the hot weather.

STACKS of oats if carelessly put together are often destroyed by exposure. Every farmer may know that the heads of bundles—of *every* bundle—should be kept higher than the butts or straw end. But indifferent hands often place the heads lower, or at least on a level with the butts, thus inviting mildew and decay. If oats are to be saved for seed, it is best to wait until they fully ripen before cutting. If the straw and leaves are to be used for food, it is best to cut while the oats are in the dough state and while the leaves and stems are still green. Oat straw so harvested is thought to be very much more nutritious than corn fodder, and nearly equal to Timothy. Many, indeed, cut and house oats the same as hay, and believe it to be fully as valuable.

THE INTERNATIONAL COTTON EXPOSITION.—A telegram from Atlanta Ga., dated June 28, says an important change has been made in the policy of the International Cotton and Industrial Exposition to be held there next October. Director-General Kimball had just returned bringing heavy subscriptions to the Exposition stock from Chicago, Louisville, St. Louis and other cities. These with those already obtained assure the financial safety of the enterprise. Accordingly the Executive Committee voted unanimously to admit desirable exhibits of every kind of industry from all parts of the world without any charge for floor room, the financial outlook justifying this new and important change of programme. The Treasury Department, at Washington, has just issued a circular to Collectors of Cutoms and others in regard to the importation of merchandise to be shown at the Exposition. All exhibits of machinery and other goods from abroad arriving at the ports of Boston, New York, Philadelphia or Beaufort, S. C., will be kept in a part of the Exposition building specially reserved for them, in charge of a custom-house officer. Should the owners or their agents sell any of the foreign goods so bonded, permission for their withdrawal will be given on payment of the assessed import duties, and license to re-export goods not sold will be granted after the close of the Exposition.

THE COMET.

THE appearance of a wandering visitor in the northern heavens is causing much excitement among the "common people" who are anxious to know what good or evil, if either, it portends, and among the astronomers who wish to know when, if ever, it was here last; and when, if ever, it will visit the solar system again. Comets have always caused wonder and excitement and there are a few people still living who are superstitious enough to think that some dreadful event will accompany the comet of 1881. What if it touches the earth? Perhaps we can answer more correctly after such an event takes place, but we don't imagine it will interfere with our terrestrial affairs in the least—since it is now moving away from the Earth's orbit—and if it did, we are quite confident it would get the worst of it. The comet of 1770 got tangled up in the satellites of Jupiter, but they were not affected by it, and after a social visit of four months it bade them adieu.

The point which is perplexing the astronomers now, is to find whether it is a new comet or an old one. This fact will be settled when the nature of the orbit of the comet is ascertained; then if that corresponds with any one of the 300 comet-orbits on record, it may be confidently asserted to be an old one, since no two comets ever travel in exactly the same orbit. The latest conclusions arrived at concerning the orbit of the present comet are that it is quite similar to that of the comet of 1807, though it varies from it a little. The difference however, may be due to some miscalculation, but it is generally considered by astronomers to be a new one. At this writing the comet is computed to be about 43,000,000 miles distant from the Earth. On the whole, its coming was a noteworthy event, as it is probably no ordinary celestial tramp, but gives evidence of belonging to a first-class family of comets, and it will receive as much attention as Donati's of 1858.

THE NEW YORK EX. STATION MIX-UP: HOW IT STANDS.

AT a meeting of the officers of the N. Y. Ex. Station in March, it was decided at once to buy a suitable farm. A committee was appointed to examine and report. It was soon whispered that the Comptroller had better be seen and on calling upon him it was learned that he had doubts of the constitutionality of the appropriation, and that he would submit the question to the Attorney-General. After waiting two months for an answer, a committee called upon him again and found that he had not yet obtained the desired opinion, but he then further said, before a committee of four persons, that he would abide by the opinion when given. Mr. Swan, the president of the Board, then called upon Judge Folger and submitted the law to him, and after careful consideration he said that, although the phraseology of the bill was a little peculiar, he had no doubt of its constitutionality. In a few days the Attorney-General gave an opinion agreeing with Judge Folger's. Gen. Curtis then called upon Comptroller Wadsworth and was told that the opinion had been rendered and it was in favor of the Station. Mr. Curtis at once called a meeting of the board on June 15th. Again an intimation was given to the Board that they had better see the Comptroller, and on calling upon him they were again told that, although these opinions had been rendered, he had consulted his own private lawyer who, had given him an opinion adverse to the bill, and that he should act on his advice and refuse to pay over the money.

A meeting was then held at which the conclusion was arrived at that it was better to try and get an amendment to the law through the Legislature than to try to compel the Comptroller to pay the appropriation by legal means, and accordingly a bill was brought before the Legislature and seems to be in a fair way to pass. These are the facts, but we can't resist the conviction that the politicians have something to do with this action. It seems that they do not mean to let this money be used so as to be of benefit to the farmers unless by some means they themselves can have the *first sucking of the orange.*

We may be wrong in this, but there are many things that force such convictions upon us. Let us hope a law may be passed helping the matter out of its dilemma, but it may be feared when this trouble is settled we may still find something else in the way, for an unwilling mind is usually fruitful in objections.

CROPS AND THE WEATHER.

THE timely rains in late May and early June followed by favorable weather in most parts of the country, have benefited growing crops almost everywhere to an extent that could hardly have been anticipated by the most sanguine, two or three weeks ago. Winter wheat in the northern parts of the region in which it is grown, and Spring wheat everywhere have thriven exceptionally well under those kindly influences. The harvest of Winter wheat is now in full tide in Kansas, Missouri, Kentucky, Virginina, the southern parts of Illinois, Indiana, Ohio, and Maryland, and although the change of weather came too late to greatly help the crop in this belt and south of it, the lastest reports speak considerably better of the outcome than earlier reports did of the outlook. Through most of this region not much over half a crop was anticipated, but the probability now is that there will be nearly 75 per cent. of a full average crop where least was expected, while in Missouri and Kansas the aggregate yield will most likely be over last year's. From most parts of the Northern Spring Wheat region and in nearly all parts of the Winter wheat area reports have wonderfully brightened with the brightening prospect.

Where the crop was most backward and where it suffered most from drought up to the beginning of June and from excessive rains for a short time thereafter, the late improvement is most conspicuous. It must not be supposed, however, that there are no gloomy reports, for there are still very many of them, and from large sections, too, but the general outlook in every State where the wheat has not been harvested, is much—very much—better than it was even three weeks ago. The widespread storms of the past week, while doing much local injury, are not likely greatly to affect the total outcome. It is only a short time since the wheat crop of Ohio was estimated by the observant Secretary of the State Board of Agriculture, at eighteen per cent less than last year's total yield, whereas by the latest report he now puts it at 6,000,000 bushels more. Even in Michigan, Illinois and Northern Indiana where the wheat prospect was the most cheerless, late bright weather has dispersed much of the gloom. Oats, rye, barley, potatoes, corn and all growing crops have also been correspondingly helped by the influences that have done so much for wheat. Great as the improvement has undoubtedly been, however, the most exultant reports come, not from the farms of the country, but from the newspaper offices of the cities.

HOPS AND SKUNKS.

THIS is an age of so-called rehabilitation. It was only the other day Mr. Froude showed the falsity of the general opinion that Henry VIII. was a tyrant and a rather bad husband; another historian proved—conclusively to himself—that Nero was as excellent a man as he was a fiddler; while an essayist demonstrated what a simple-minded, loving, faithful soul was Judas Iscariot. Modern literary research and ingenuity are doing a good deal to pull down the honored and loved characters of olden times and to lift up the despised and abhorred. It has been noticed by sociologists that certain characteristics broadly distinguish all classes of the community in certain ages—the impulse to them is in the air and affects alike the learned and the unlearned, the city-man and the countryman, each manifesting the special peculiarities of his era in reference to his surroundings. Thus the impulse that led the essayist the other day to find virtues in Iscariot, led one of our legislators last week to find merits in the skunk. The genius so deeply imbued with the spirit of his age is Mr. J. Stanley Browne, of Schenevus, Otsego County, New York. So strongly was he convinced of the admirable qualities of the animal that, on June 27, he introduced a bill into the Legislature of this State making it a misdemeanor, punishable by a fine of $10 for each offence, for any person at any time to kill any—well—polecat, or to sell, offer for sale or have in his possession the pelt of such an animal. Afterwards he amended the bill by exempting all the counties in the State, except those interested in hop-growing; for, according to him, every s——k that visits a hop-yard is worth $50 to the owner. A large grub to which the polecat is a destructive enemy, is doing a world of damage to the hop-growing industry of this State. Quitting their holes at night, the skunks visit the hop-yards in search of this pest which they devour "by the millions." The introduction of the bill was met with a storm of ridicule and disapprobation, probably on account of the appositeness of the malodorous subject to the recent conduct of the Legislature. The friend of the skunk, however, persisted, and the bill was referred to the Committee on Agriculture, who reported it favorably. It is to be hoped our legislative Solons will suspend their wrangling long enough to pass this measure for the benefit of the growers of hops and the drinkers of beer, and that others equally imbued with the same spirit of the age will be equally successful in finding virtues in their particular "skunks" as Mr. J. Stanley Browne has been in finding virtues in his.

BREVITIES.

HARVEST over, it will pay us to give good attention to cucumber and other pickles, Lima beans, late sweet corn, tomatoes, turnips, cabbages, watermelons and muskmelons.

WE have just received the following note from a traveling agent who visits all the chief manufacturers of agricultural implements throughout the country: "Your crop reports must have been very accurate, as all the implement men say they correspond with the reports from their agents, and that wherever you report the wheat crop bad, they have had to call in their reapers, etc., and send them to those places where the crops were reported good in the RURAL."

DR. G. B. LORING, our new Commissioner of Agriculture, says he will discontinue ex-Commissioner Le Duc's experiments in tea culture and most of the seed distribution, and devote the main effort of the Department to examination of the agricultural value of government land in the West; to the study of insects pests and of climatic changes; to the collection of careful statistics about agriculture in this and other lands, and especially to forestry which has hitherto been greviously neglected.

OF last year's total wheat crop, amounting to 481,000 000 bushels, it was estimated that 400,000,000 bushels were Winter wheat, and only 81,000,000 bushels, Spring. The Winter wheat crop this year is acknowledged by almost all to be short in acreage and yield; the area of the Spring wheat crop is certainly not larger this year than last, and however excellent the stand may be now, any increase of total yield will hardly counterbalance the decrease in the aggregate of Winter wheat—the vaticinations of many market reporters notwithstanding.

OUR present "Old Probabilities" had better resign! He can't see 24 hours into the future with a double, back-action telescope! One day last week we feared to commence cutting Timothy and clover, on account of the threatening aspect of the clouds. But on arriving at the office we found that the weather report declared "fair and warmer to-day." and "to-morrow the same conditions will prevail," so we telegraphed to the Rural Farm, "Cut." It began raining within an hour! We were "victims of misplaced confidence," and wanted much to sue the "old man" for damages.

THE crop reports from across the Atlantic are still as favorable as last week except those from Great Britain, where the weather has been less propitious. In estimating the probable effect of the European harvest upon prices of American cereals, however, it must be borne in mind that Europe is now living, to a great extent, from hand to mouth, the stock of breadstuffs being unusually low owing to the short crops of last year and the disinclination to pay our prices for our products except under the stress of necessity. This scarcity seems to be greater just now on the Continent than in the United Kingdom, as shipments to the former, contrary to custom, are fully as heavy as those to the latter, and most of the cargoes consigned to "ports of call"—ports to which orders are sent by cable or steamer to await the arrival of sailing vessels—have lately been diverted to Continental ports. Buyers of breadstuffs for the Continent, too, are not limited to such low figures here as are those who purchased for the British markets—John Bull seems to have laid in a fair supply.

Literary Miscellany.

LOST, A BOY.

He went from the old home hearthstone
Just twenty years ago,
A laughing, rollicking fellow,
It would do you good to know;
Since then we have not seen him,
And we say, with a nameless pain,
The boy that we knew and loved so
We shall never see again.

One bearing the name we gave him
Comes home to us to-day.
But this is not the dear fellow
We kissed and sent away.
Tall as the man he calls father,
With a man's look in his face,
Is he who takes by the hearthstone
The lost boy's olden place.

We miss the laugh that made music
Wherever the lost boy went;
This man has a smile most winsome,
His eyes have a grave intent.
We know he is thinking and planning
His way in the world of men,
And we cannot help but love him,
But we long for our boy again

We are proud of this manly fellow
Who comes to take his place,
With hints of the vanished boyhood
In his earnest, thoughtful face;
And yet comes back the longing
For the boy we must henceforth miss,
Whom we sent away from the hearthstone
Forever with a kiss.

MY EXPERIENCE.

CHAPTER I.

"Are you quite comfortable, Gracie?"

"Quite, thank you."

"Shall I close the other window?"

"No, thank you; I prefer having it down."

"Here is your book, little one; I hope it may prove interesting."

So saying my *fiance* hands me a volume he has purchased for me at the book-stall of the station we have just left, and relapses into his own corner, silence and the Times; while I—Grace Armitage, at your service, gentle reader—open "The Story of Elizabeth," and begin to read, turning over the leaves with an appearance of interest I am far from feeling.

It is not that Miss Thackeray's charming novelette fails to attract me. Under ordinary circumstances I should revel in it; but the present are not ordinary circumstances, they are very extraordinary ones, for within the last week I have risen to the dignity of an engaged young lady, and I am not used to it yet. I can scarcely realize even now, when the train is gliding away from Granville Station towards the fair southern country whither we are going, that I am returning home, escorted by my betrothed lover, who is to be introduced to my dear ones at home. When I lift my eyes for a moment from my novel, and glance towards the opposite corner of the railway compartment, which we have all to ourselves (a tete-a-tete we owe to the guard's discrimination), there is a very tangible and substantial proof of the reality of the situation, a proof standing six-feet-two, with dark proud, grave eyes, and a thick, curling, chestnut beard—a proof rejoicing in the very euphonious appellation of Cyril Vernon; a name which I am inclined to think the very prettiest I ever heard.

How Cyril Vernon and Grace Armitage became engaged I am not at all clear about even yet.

About a month—no, it is six weeks—ago I went on a visit to a school friend at Granville, leaving home full of eager anticipation of the pleasure I should have—anticipation which was fully realized. Janie Dutton and I rode and drove, and sang and danced, and were altogether happy for a fortnight, at the end of which time Mr. Vernon came to Granville on a visit.

At first, both Janie and myself were a little afraid of the grave, stately bearded stranger: but soon the fear had faded before his gentle kindness; and when, at the end of three weeks, he took my hands in his and asked me if I could love him well enough to be happy as his wife, I never dreamed of refusing, while my father's consent was easily obtained—Mr. Dutton's warm praise of his son's friend being a most satisfactory recommendation. Thus it happens that I am going home with Cyril, in order that my *fiance* should become known to papa and the family.

We have been engaged a week, although, at my own request, the engagement has been kept secret from all but the Duttons. I have a diamond, solitaire-ring on the fourth finger of my left hand.

Cyril is somewhat grave and reserved in his manner; to me he is gentleness itself, but he never speaks of his affection or seems to look forward to the life we are to spend together; but, then, he is much older than I am, and with him actions speak louder than words.

I am very happy. As the train glides swiftly onward, I say to myself again and again that I am very happy, trying to ignore the undoubted fact that there is in one corner of my heart a little pain which I cannot or will not account for. It is too absurd, when I am the most fortunate girl in all the world, more especially as it is only since we started homewards that this curious little ache has made its appearance. How delightful it will be to see them all at home once more; to tell Mabel and my dear mother how happy I am; to show them all my pretty presents and my handsome, stately lover! I wonder if she will have told anyone of my engagement. I wonder if she has spoken of it to Fannie Edmonds—I wonder if Fannie will have told Jack, her brother—I wonder—and the curious little pain deepens, and I try to dismiss the thoughts of home and bring my mind back to the railway carriage and Cyril.

There he sits, grave, silent, and absorbed in his newspaper. How handsome he is; how grand-looking—much handsomer than John Dampier I say to myself, going back to Miss Thackeray's hero; but then I don't think John Dampier, if he had been traveling alone with Elly Gilmore, would have read the Times. I wonder if Jack Edmonds would read—what nonsense, where are my thoughts wandering to?

I look out of the window: it is a bright, sunshiny, summer day, with a soft breeze stirring among the full-leaved trees, and the birds flying to and fro, chirping merrily and musically. How pretty the old home will look with the roses mingling with clematis over the porch, and the old-fashioned garden in a glory of June blossoms! The children will probably be playing lawn-tennis when we arrive, and Mabel will have tea ready for us in the shady old drawing-room; and after tea I will take Cyril round and introduce him to Miss Baines and Trot the old pony, and show him the swing in the meadow, where Jack Edmonds and I used to have such fun in the old childish days which seem so long ago now.

"Gracie, what are you looking dismal about?" says a deep, rich voice at this juncture; and I turn with a start, to find Cyril watching me over the outstretched sheet of the Times.

"Am I looking dismal?" I ask, trying to laugh.

"I do not feel so."

"And you sighed—such a heavy, sad sigh, little one! What were you sighing for?"

"Did I sigh?" I ask, coloring hotly, and vexed with myself for doing so. "It must have been unconsciously then, for I am quite unaware of having done so."

What is Gracie wishing for that she has not got?"

"Nothing," I answer, steadily.

"Nothing! You are sure, Gracie?"

He looks over at me questioningly and gravely, and I feel that the color flickers in my cheek, and that my eyes fall beneath his.

"You are sure?" he says, gently; and he leans forward, and puts his hand over mine.

"I am quite sure," I answer, steadily.

At this moment I feel that I am indeed a very fortunate girl.

"Then what were you thinking of, dear?" he pursues, smiling.

"I was thinking of Mabel."

He takes his hand off mine, and leans back in his corner.

"About Mabel? You are very fond of Mabel?" he says, quietly.

"Yes, we all love Mabel."

"Do you think Mabel will approve of me?" he says, with a laugh.

I look at him shyly. I have not much fear of Mabel's criticism; and I suppose my eyes say so, for he smiles.

"I hope she will," he says, gaily. "Miss Armitage must be a very formidable personage."

I laugh a little.

"I am Miss Armitage!" I say, saucily.

"You are Miss Armitage!" he repeats, in some surprise. "Why, I thought your sister was much older than you."

"So she is."

"Then how comes it that she is not Miss Armitage?" he asks, curiously.

"Can't you guess?"

He considers for a moment.

"Oh! because she is married, of course," he says, in a tone of relief, as if he has solved a difficult problem.

"She is not married," I announce, triumphantly. "If she had a husband, how could she live with us?"

"He might be abroad, in some unhealthy climate," he suggests, smiling.

"If Mabel had a husband, she would be where he was, unhealthy or not," I answer. "She is much too true and sweet and brave to let him go into danger without her."

"Is she? I am getting curious about Mabel," he rejoins, smiling still, as if my enthusiasm amuses him. "Is she a widow, then?"

"A widow!—oh, no; she has never been married.

"Then why is she not Miss Armitage?" he asks. "I can't guess, Gracie."

"Can't you? Try."

"I give it up," he replies, shaking his head.

"And yet it is very simple. Mabel is mamma's daughter by her first husband," I explain: "and her name is Ord."

"Ord," he repeats; "Mabel Ord."

"Yes; it is a pretty name, is it not?"

He makes no answer, but his lips move as if he were repeating the name.

"Yes," he says presently, "it is a pretty name."

He has taken up the Times, and is completely concealed by its voluminous sheets, nor does he emerge from behind them until we reach home, and I start up announcing that we have arrived at our destination. Cyril puts away his paper and rises; he collects my belongings, and when the train stops, lifts me out in silence on the platform. I see two familiar faces—my brother Bob's and Mabel's beautiful pale face, as she stands, tall, and straight, and slim, in her soft gray draperies. She looks very pale as I hasten towards her, and I think, with a little pang, that I have been very selfish in stopping away so long, and leaving her with all her cares of housekeeping, the parish and the children on her shoulders.

"Welcome home, dear," she says, as she puts her arms round me, while the touch of her lips seem to scorch me, they are so dry and burning.

"Mabel, oh, Mabel!" I say, clinging to her for a moment, but we have no time to say more, for Cyril comes up and stands waiting. I make the introduction shyly enough. Cyril bows gravely. Mabel holds out her hand with a few words of welcome, spoken in low, sweet tones; but apparently he does not see her gesture, for he does not take it or perhaps he has no hand to spare, encumbered as he is with my wraps, etc.

"The pony carriage is waiting," Mabel says, as she turns to leave the station. "Bob will see to the luggage, Mr. Vernon."

We find the pony carriage outside, and Mabel assumes the driving seat; but we have not gone many yards when she puts the reins into my hands.

"You drive, dear," she says, tremulously, and I see that her hands are unsteady and that she is white as death. Cyril is looking at her curiously or anxiously, and I dare say wondering at the strange pallor.

"Mabel, are you ill? What is the matter?" I ask, anxiously.

"There is nothing the matter," she says, almost sharply. "The heat makes me feel a little faint. Is this your first visit to Devonshire, Mr. Vernon?" she adds, looking across at Cyril, who looks somewhat out of place in, and too big for, our little vehicle.

"Yes; it is a lovely county," he answers, and from the cold tone of his voice, I fancy that he has taken some sudden aversion to Mabel.

"We are very proud of it," she answers, in her frank, cordial manner—she seems to have quite thrown off the momentary faintness—"Gracie must take you some long walks and show you our favorite places. There are the most beautiful views to be seen from the hills."

"Have you been here long?" he asks.

"Six years. I dare say Gracie has spoken to you about Easton."

"No; she has not spoken to me about her home"

"I wanted it all to be new to you," I say, as I give the ponies a sharp cut of the whip, thus venting on the poor animals my intense annoyance at the apparent want of sympathy between my lover and Mabel. "I dare say it will look very small to you after New Zealand"

He laughs slightly, and we drive on until we reach our pretty home at the gate of which stands the owner and Jack Edmonds. Papa turns with a start as we pull up, and looks at us in his absent short-sighted way, as if he were not quite sure of our identity; I don't think he is, by the way. Jack evidently recognizes us at once. He raises his straw hat, but does not come forward to meet us; and it is only after papa and Cyril have greeted each other, that I go towards him, offering my hand.

"Is Fannie well?" I ask awkwardly. "And Mrs. Edmonds?"

"They are very well, thank you," he answers, with at least equal awkwardness as he drops my hand, and we stand looking at each other for a moment in silence.

"Come in and have some tea, Edmonds," papa says hospitably.

"Thank you, sir, not this afternoon. My mother will be expecting me."

He lifts his hat again, turns away, and strides off up the hill, and I follow Mabel into the house with that strange pain deepening at my heart.

We reach the drawing-room first, for my father detains Cyril in the garden to show him his favorite Marechal Niel rose, so that Mabel and I have two or three minutes to ourselves before they arrive. As soon as we reach the room, Mabel throws aside her hat, as if the weight oppressed her; then she turns to me, puts both her arms around me, and holds me from her, looking down into my face with such eager, shining eyes!

"You are happy, Gracie?" she says tremulously "You love him?"

"I am very happy," I answer, somewhat untruthfully, and my eyes sink under hers.

"Make him happy, my darling," she says, softly. "His happiness will make yours."

She puts her lips down and kisses me with a feverish, impassioned tenderness; then releases me suddenly, as the door opens to admit papa and Cyril. The next moment her strange agitation has all disappeared, and she is pouring out tea with her usual quiet grace; while Cyril stands, tall, grave, and absent by the window, watching Mabel with anxious intentness, and answering papa in such an abstracted manner, that I am afraid he will not have much opinion of his intelligence; and it is no small relief to me when the dressing-bell disperses us, and sends us off to prepare dinner.—To be continued.

BEAUTIFUL IOWA.

Counties of Sioux, Lyon and Osceola, in the Northwestern Corner of the State.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

STANDING here upon the boundaries of the State, with Minnesota to the north and Dakota Territory to the west we can gaze toward the horizon of the setting sun and truthfully exclaim: "Behold the star of empire is still far beyond, toward the Rockies," for speeding by daily are west-bound trains laden with emigrants, who are seeking government lands and a pioneer's life, while hundreds from our Eastern States are stopping here and settling for a future home. And why not? For we find ourselves surrounded with good society, churches, schools, railroads and thrift. The topography is elevated and undulating, as beautiful as the eye of man e'er rested upon; soil rich, dark and deep, with just enough sand to promote vegetation rapidly and secure good drainage; and thousands of broad acres in these counties, which have been purchased at from $5 to $8 per acre, have this season rolled their rich sod to the sunlight and received a seeding of flax that, with an ordinary yield this Fall, will give a net profit equal to one-quarter the cost of the land. The crop of 1880 for these three counties—80,000 bushels—averaged $1.03 per bushel, while the seeding of 1881 indicates at least 250,000 bushels this season. Lands, wild, according to information from Pierce & Lewis, Orange City, Ia.—who, by the way, publish a neat map of Sioux County for free distribution to their correspondents—are now sold at from $4 to $10 per acre, averaging about $6. They seem to be enterprising and reliable men. Improved farms can be purchased ranging from $8 to $20 per acre, according to location and improvements, which will discount many farms east of the Alleghanies that cannot be bought for less than $75 per acre, in quantity and quality of product. The breaking of this season yields its crop of flax next Fall, and can then be cross-plowed or, if desired, let it lie until Spring before cross-plowing, and it is ready for wheat, oats, corn, rye, barley, flax, root crops, or anything the farmer desires to cultivate.

Lyon and Sioux Counties are bordered on the west by the Big Sioux River, and have four smaller streams coursing through them from north to south, and Osceola County has three streams, all of them abounding in fish. Natural timber skirts most of the streams, and in all these counties there are numerous groves of artificial timber, some of which can yield fuel for fireside use. Wells of excellent water are found at a depth of 15 to 35 feet; and the climate is invigorating and healthful.

Tobacco has been successfully raised here by some enterprising farmers, who brought their industrial habits with them from the land of "wooden nutmegs" and they even ventured to tell us they thought it better "Connecticut Seed Leaf" than they raised "back East." Let the reader look at his map and trace the lines of latitude east, and he will be prepared to believe that this section is adapted by its climate to any produce raised in the Western, Middle and Eastern States. More attention should be given here to setting orchards of choice hardy fruit; and doubtless this will be done in the early future.

We have traveled extensively in these counties, and do not believe there are 160 acres of waste land in the entire area of the three counties, and the variety of surface enhances its value for diversified agriculture, and renders stock-raising and dairying extremely profitable. The natural grasses are as rich and nutritious as they are abundant, and combined with the advantages of pure air, good water, and healthful climate, it is easily understood why the creamery butter of Iowa takes a first rank, and why Iowa beef is at a premium in the grazing season, as well as in the feeding, when the yield of 50 to 60 bushels of corn per acre is turned into beef for domestic and export trade. Not only is it estimated that the stock interest of these counties is increasing fully 50 per cent. in quantity per annum, but effort is continually made to raise the grade and improve the the quality. Short-horns are the favorite breed in cattle; Poland-China and Berkshire hogs; and Cotswold and other coarser grades of wool sheep. Of the latter there are probably 7,000 in these counties, and from D. L. McCausland we were assured that the clip of wool from the same grade of sheep, is fully two pounds more per head here than in the States further east—equal to 33 to 50 per cent. more.

New Life has been instilled

into the settlement of these counties by English colonization and enterprise, under the management of Messrs. Close Brothers & Co., Lemars, Iowa, and Close, Benson & Co., 38 Cornhill, London. As representatives of English capital they have this Spring purchased about 40,000 acres, sold about 20,000 and are still purchasing for parties abroad. In Lyon County they are managing over 20,000 acres, one-half of which was broken and seeded the past Spring, divided into 100 or more farms; over 100 houses and barns were built and these farms rented to American tenants. The exact opposite of the Dalrymple plan is that pursued by these gentlemen, as with them those who till their soil have an interest in the proceeds. In Sioux County they are managing two whole townships (a township is six miles square) equal to 46,080 acres, of which probably 7,000 have been brought under cultivation this year and divided into about 60 farms; and in Osceola County the breaking will amount to nearly 10,000 acres, and the houses built number 100. Parties renting and remaining a few years will have become familiarized with the county, crops, markets and prices and can buy. They pay $2 25 cash per acre for breaking and when desired furnish flax for seeding on the sod. The herd law is the poor man's friend and helps many a one to get a start in this county, who could not afford to fence the land. This firm also controls the sale of over 100,000 acres of railroad lands in these and adjoining counties. Many Englishmen are settling in Northwestern Iowa through this agency, purchasing and improving homesteads, in size and manner according to their tastes and means. We did not meet these gentlemen during our stay in these counties, but were informed by those who know, that they had been the means of bringing over $600,000 of money into this part of the State within the past two years, and were developing large stock farms, as individual investments, in Plymouth and Woodbury Counties. Their average price is $6 per acre. Taxes are doubtless higher here than East, literally stated, but in fact they are much lower, when you estimate the difference in valuations—upon which, of course, the taxes are levied.

SIBLEY.—The county seat of Osceola is a prettily located prairie town on the Chicago, St. Paul, Minneapolis and Omaha R. R., passing through the west half of the county diagonally northeast and southwest. It has a population of about 400, three church organizations, (with two buildings), a good public school, with two teachers; a wide-awake newspaper, a home-like and well-kept hotel, two banks, a dozen stores, more or less, two lumber yards and a grain elevator. It commands a large radius of trade and is destined to become a commercial town of some importance. They need a good steam flouring mill, and other industries which a visit here would suggest. For assistance extended us in this county by C. Bull, banker, Barclay and Bull, real estate dealers; Capt. E. Huff, real estate and D. L. McCausland, real estate and stock raiser and dealer, we return thanks, and feel confident that any correspondence addressed

to any of them, will receive courteous and prompt attentions.

ST. GILMAN is eight miles south of Sibley, on the same railroad. It has 100 population, one store, (Farnsworth &Wyatt), a lumber yard, grain dealer, shops, etc.; its surroundings are rich and productive.

ROCK RAPIDS is the county seat of Lyon County, on the western bank of Rock River, and on another Division of the C. St. P. M. and O. R. R. It has nearly 600 population; ample church privileges, and educational advantages, a good local paper, two flouring mills, fully $50,000 banking capital, good stores, well-stocked hotels, shops and energetic, enterprising inhabitants. They need a tow mill, and from the increased quantity of flax, we should think an oil mill would also pay. Here we received valuable aid from J. Shade County Treasurer, and real estate dealer, M. W. Dickinson, his deputy, the Bank of Rock Rapids, and the Lyon County Bank, both dealing in real estate, and from J. F. Eccleston, attorney and real estate dealer, to all of whom we extend a hearty "thank you."—Continued next week.

BRIC-A-BRAC.

THE LIVELY MOSQUITO.

A well-known member of the "art preservative," rythmical ebullitions from whose pen occasionally appear in the Bee, has been having a little severe experience with that lively bird, the mosquito, and this is how he gets even with him:

The pesky creature comes at night,
As soon as I blow out my light.
Anon he lights upon my face,
And, picking out a tender place,
Inserts his bill beneath the skin,
Then sucks the liquid freely in.
Down goes my hand with a "kerslap,"
As he begins my blood to lap;
But he escapes upon the wing,
And in the air I hear him sing.
Ere long I get into a doze,
But soon I feel him on my nose—
Then quietly I set a trap,
With the fond hope his head to "tap."
Of my intent full well he knows
(While sitting there in calm repose),
And quick up to the ceiling goes,
Surcharg'd with blood drawn from my nose.
Another charge he makes with "vim,"
And I essay to capture him;
But, with all my hearty slapping,
Cannot catch the creature "napping!"
It's no use! try as I will,
I cannot rid me of his bill!
So on my pillow keep quite still,
While of my blood he takes his fill!
In my dreams I see him lipping
The sanguine meal he'd been sipping;
And, while much pleased he seemed to be,
He laughs a laugh of fiendish glee;
And sitting there upon the wall,
With bloody bill and red eye-ball,
He makes my heart with horror swell,
As he gives forth his fiendish yell!

NO SECRETS FROM SCIENCE.

The doctor arrives at the hospital to make his daily visit of inspection, and receives the ticket of a new patient, "X, musician in German band; pulmonary consumption."

He proceeds to the patient's bedside, surrounded by his admiring class.

"Well, my good fellow, you spit blood, don't you?"

"Yes, doctor, I—"

"That'll do; we know all about it. And you have cold sweats at night, eh?"

"Yes, sir, and—"

"I fancy now that by occupation you are a musician?"

"Yes, I play—"

"Be silent. You belong to a brass band, and you have exerted yourself—have fairly blown your lungs away puffing into your instrument. Gentleman, you perceive that sickness has no secrets from science. What instrument do you play upon, my good man?"

"The cymbals, sir."

Consternation on the doctor's part, and amusement of the students.

MOTHER'S CLOCK.

A YOUTH sat on a sofa wide,
Within a parlor dim;
The maid who lingered by his side
Was all the world to him.

What brought the glad light to his eye—
That cadence to his tone?
Why burns the lamp of love so high,
Though midnight's hour hath flown?

The clock above the glowing grate
Has stopped at half-past ten;
And, long as that young man may wait,
It will not strike again.

The artful maiden knows full well
What makes the clock act so,
And why no earthly power can tell
The time for him to go.

—Springfield Republican.

A YOUNG lady was married in Louisville the other day, and a newspaper account of the event was headed, "Mated in May." The New York Graphic supposes that "Joined in June," and "Attached in August" will be the fate of those who come later in the season. It is to be hoped that "Separated in September" will be needed in no case.

HOW THEY SWEAR.

The river says, I'll be dammed.
The stocking says, I'll be darned.
The furnace says, I'll be blasted.
The doctor says, Plague take it.
The teacher says, Well, that's cool.
The scholar says, I'll be switched.
The preacher says, Mercy on us.
The farmer says, Land sakes.
The lawyer says, hold up your right hand.
The merchant says, By the prophets.
The newspaper man never swears—that is.

"ONLY IN FUN."

He knelt at the feet of his charmer
And clasped her soft hand in his own;
He talked in a way to alarm her,
Of love but her heart was of stone.

Her "nay" to his suit was surprising,
For he had considered her won.
"Ah well," he exclaimed, quickly rising,
"You know I was only in fun."

And shortly he left, when she, sighing,
Said slowly, "Ah! what have I done—
Come back, oh, my love, I am dying—
'Twas I, not thyself, was in fun."

—Norristown Herald.

A DISAPPOINTED HUSBAND.

Thirty days after a Michigan man got a divorce from his wife to marry one with a handsomer face, the woman fell heir to $287,000. You bet that ex-husband feels like a man with a jumping toothache.

AMERICAN COURTSHIP.

Who am I? I'm Miss Midget's beau;
Age, twenty; name, T. Tompkyns Snow.
Dress, nobby; travel on my check,
And earn six dollars in a week.

Who is Miss Midget? She's a blonde;
Of cream and candies she is fond;
Likewise of me, is sweet sixteen;
Can play a piano, is a queen.

Do I intend to marry? Why
Of course I do, that is when I
Get rich, and yet, 'most any day,
My fate and I may run away.

What would we live on? Well, my plan
Would be to board with her old man.
He couldn't see us starve and I
Would be his partner, too, Bye-bye!

—H. C. DODGE.

For Women.

CONDUCTED BY MISS RAY CLARK.

ORCHARD WEDDING.

[From Mary Mapes Dodge's new Book of Poems.]

THERE'S a wedding in the orchard, dear,
I know it by the flowers;
They're wreathed on every bough and branch
Or falling down in showers.

The air is in a mist, I think,
And scarce knows which to be—
Whether all fragrance clinging close,
Of bird-song, wild and free.

And countless wedding jewels shine,
And golden gifts of grace;
I never saw such wealth of sun
In any shady place.

It seemed I heard the fluttering robes
Of maidens clad in white,
The clasping of a thousand hands;
In tenderest delight.

While whispers ran among the boughs
Of promise and praise;
And playful loving messages
Sped through the leaf-lit ways.

Then were there swayings to and fro;
The weeds a-tiptoe rose,
And sang the breeze a sudden song
That sank in sudden close.

And just beyond the wreathed aisles
That end against the blue,
The ralment of the wedding choir
And priest came shining through.

And though I saw no wedding guest,
Nor groom, nor gentle bride;
I knew that holy things were asked,
And holy love replied.

THE INFLUENCE OF GOOD BOOKS.

MAY MAPLE.

JUST how many times my mother had given me lessons upon making beds I know not; but often and often had she told me that the right side of the sheets must face each other, and that the under sheet must cover the top and sides of the bed and be nicely tucked down all around; in this way the bedding would be kept clean much longer than if the sheets were put on in a careless, hap-hazard manner. The blankets were to be spread on smooth and square, with only the drapery of the counterpane and pillows visible when the work was completed. But in my childish haste the sheets were not unfrequently put inside out, the broad hem ornamenting the foot of the bed, the quilts hung one below another, shingle fashion, while the corners draped the floor in anything but a graceful and tidy manner.

It mattered not how often I was told of my failings, or how many times I was made to do my work over again, the lessons were all unheeded in less than a week and must be repeated. When I was nearly, or quite, twelve years old, my mother gave me a small book which she had received as a gift when a child. I had long desired to know the contents of this book, which I knew was one of her treasured keepsakes, but when I had asked to read it she had always put me off with, "When you are old enough to appreciate its lessons, you shall have it for your own." It was a happy day to me when she considered me "old enough." I took the book from her hands and hastened away to my favorite "reading room," which was in the top of an old plum tree in the garden, where birds and breezes were welcome companions. Very soon I was deeply engaged in the story of "Anna and Lizzie," which, as I remember it now, so many long years after, consisted of two characteristic little girls who lived with an aunt. Of course, one of them belonged to the "goody-goody" class, and kept everything about her room and person in the most perfect order. Her bed was always made as if in a mold, without a wrinkle in sheet or quilt, and the sheets "faced together" as my mother had so long and patiently tried to teach me to spread mine; her clothes were always kept in repair by her own tiny hands; her ribbons were neatly rolled and kept in a box; she never failed to find her gloves or her handkerchief in their proper place; in fact, the author had portrayed Anna as a paragon. Of course, everybody loved her and praised her for her fine qualities.

Lizzie was more like myself, a little hoyden, careless to an extreme, with only occasional streaks of neatness. And no amount of precepts, gentle or otherwise, had any lasting effect. Finally, their aunt proposed to make a party for the little girls at a given time. During the week that intervened each should have the entire control of her own room and wearing apparel, and no censure or praise would be given to either till the day of the party, when each child should receive the reward of her doings. For two or thee weeks Lizzie's room with all its appurtenances looked as well as Anna's. But after that she began to fail in her duties, particularly about the bed, which was too often spread up hastily, the quilts lying in folds from corner to corner, the sheets peering out at the foot of the bed, the pillows tossed carelessly as near the center of the bed as they were to the polished headboard, also showing marks of dust gathered from the floor where they had been thrown while the bedding was left to air.

At last the day of the party arrived and the girls were called to their aunt's room to don the new party dresses, which they now beheld for the first time. Anna's was of pure white muslin with beautiful lace trimmings and blue ribbons. While careless Lizzie was the possessor of a dark calico dress ruffled at the neck and sleeves with the same. But during the afternoon she seemed to forget her mortification of the morning, for she had a sunny nature and could laugh and play as well in her homely calico as could her cousin Anna in her more costly India mull. But when the little girls and their guests were called to tea, Lizzie was given a table by herself with soiled napery and wooden dishes that held some brown bread, butter and apple sauce, while Anna and the visitor were directed to seats at the large table, that was covered with the finest white linen cloth and set with china and glass dishes, well filled with white bread and golden butter, frosted cakes and rich preserves, oranges, nuts and candies. This was a little too much for Lizzie, and when auntie explained to all why she had made such a contrast, Lizzie burst into tears and at once left the table and the room. Of course, according to the author, this treatment effected an immediate cure with the little hoyden, and she was ever after as orderly as her cousin Anna.

I really do not have much faith in such sudden cures of long established maladies; but the little story made a marked impression on my mind, and I began to gradually mend my ways. About this time I read "Miss Ophelia's Lesson to Topsy," on making beds, and the two stories added to my mother's patient teaching taught me at last how to make a bed properly. And though many years have passed since then, I seldom do this work without thinking of careless Lizzie, Topsy and mother. So I say, give the little folks books that are likely to make the best impressions, and that they will have occasion to rejoice over all the days of their lives for the good lessons taught therein.

ETIQUETTE.

WHILE not pretending to any extensive knowledge on the subject of etiquette, I am tempted to reply to "Rural Sister."

In the strictly fashionable world there is often much stress laid on very small points, and only they who make a study of social etiquette can be armed for every detail.

Politeness is the same the world over; etiquette varies greatly in different localities. A courteous, well-bred young lady will always appear with propriety, or if she violates any rule of local etiquette, the deed will not be very shocking. A consideration for the feelings of those around her will always suggest the proper thing to do, or at any rate will lead her to do what she does with a naturalness and genuineness that will make the act or words *her own*, and the effect what she intended it to be, independent of any arbitrary rules.

It is impossible to write out a code of laws perfectly applicable to every occasion, and general rules must always be modified by common sense to suit the various times and conditions.

In announcing or introducing a guest, if the company is seated around the room in a row, silent and awestruck with anticipation, or fearful of making some *faux pas*, or immovable and unspeakable for some unknown reason, it is very well to take the stranger around and give an introduction to each one, although it seems to me—to an easily embarrassed person—a uselessly trying experience, and I always prefer being introduced here and there during the evening, when and where I can have an opportunity of saying something more than the stereotyped introductory phrases. If the company is sensible and group about conversing with some degree of animation, it is easy for the hostess to introduce the stranger with ease both to herself and guests.

Rural Sister asks, "Is it strictly improper for a lady to thank a gentleman for his company; is it proper for a lady to thank a gentleman for his attentions?" I do not understand her distinction of the difference between "company" and "attentions." I am also too old-fashioned to believe that every act of politeness from a gentleman is to be taken as a matter of course by the recipient, nor do I like the attitude which I have known many young ladies to take, which asserts complacently that their society sufficiently repays any trouble which a friend may take for them. Let common sense be the basis of all rules and the young woman will not take it for granted that every gentleman she meets is ready to sacrifice himself at any cost for her sake. Let her accept a kind offer to see her home from a party some cold night, and when he has taken the long walk to leave her safe on her own doorstep, be he young or old, I cannot see why it is not better to take it as a friendly service and acknowledge it in a graceful manner, rather than by a lack of thanks of any sort to assume that she is so charming and he so charmed that anything more is superfluous. Undoubtedly there are many times when direct thanks would be out of place, but the true woman will seldom be at a loss to express her appreciation of kindness, her enjoyment of the drive or evening's pleasure, while the fact of her not taking it as something due, or expected, would make it easier and safer for the friend, or prompt more marked attention if he wished to be considered more than friend.

It is impossible to lay down rules suitable for all persons. In this age of forward youth it would hardly be safe to propound as a law what would be perfectly right for the well-meaning, well-bred womanly girl. It is better to be too backward than too forward, and it depends greatly on her, what she is and with what propriety she conducts herself, whether she should "invite a gentleman to call." If she can entertain him with sensible conversation, and be free from all manner of silliness, she may invite her friend to call, and when he comes let the family enjoy the pleasure of his society also.

If there is one object at which nobody ever fails to laugh, it is at the woman who courts attention, who is constantly "throwing herself at some one." She invariably loses what she covets by overdoing the matter, for modesty and true womanliness gain more real admiration than boldness and forwardness, which may seem to carry the day.

As for the last question, I never think of refusing to acknowledge the salutations of my friends who daily pass by my windows, because some panes of glass are between me and them!

I am not, as I have said, one of the "wise" ones, but I have ventured to give my opinions.

She must be very judicious and discreet who never commits even a slight error in matters which must be left often to one's own judgment, but she who is guarded by self-respect and true womanly reserve will not make mistakes which cannot be readily forgiven and overlooked. R. B.

OUR TRAVELS.

VALENA.

ARRIVING at New York upon the eve of election day, we saw numberless bonfires in the streets, upon the outskirts of the city. These fires, though of no great magnitude, were emblematic of the patriotic love for our country burning in the hearts of her boys. Leaving the cars we proceeded to the house Stewart built "For Women." It is a large iron structure, painted dark; it has an elegantly furnished parlor and a well filled library; but failing to be profitable for the purpose for which it was built, it has been turned into a hotel. We could not but think it a monument turned into an Exchange for making money.

Business calling the Professor to another part of the city, the following morning, we concluded to go to the house in which Sam Slick stopped forty years ago. Saw here the window "with a stun cut wreath," through which, Sam said "he looked out of to view the metropolis." We looked for B. Bobbet and Josiah Allen's wife, knowing this was the hotel where they "put up," and in this building where "Josiah's wife offered to help Mrs. Astor wash the dishes." But a little way from this building is the grave of Charlotte Temple, the story of whose life we read and cried over when a child.

The "Society of Mechanical Engineers" having their meeting at this time, it was our good fortune to meet many eminent mechanical men and listen to several very valuable papers on mechanical subjects. In machinery there is a fascination that but few can resist, even though they may not understand its principles. We all, like Toddy, "want to see the wheels go round." We went to the Fair of the American Institute, visited several Art Galleries, the Decorative Art Rooms, "The Rural New-Yorker" and some other popular periodical offices. We became very much interested in some pen sketches, and have tried our hand at such work with gratifying results. Sometimes, by bringing to notice such little things an inspiration is caught which works itself into a name. It is my belief that genius often lies dormant until some circumstance lights the fire. Therefore it should be our pleasure to exhibit and explain whatsoever handiwork we can, whenever an opportunity offers. Although not caring to copy the thing seen, it may awaken suggestions which, if wrought out, may possess merit and ingenuity.

We are learners and the more knowledge we have with ability to make good use of it, the more valuable we are to our family, our neighbors and all with whom we may associate. People say "he is gifted," when they mean he has seen and learned a great deal, and has the ability to do as well as talk.

Prizes are offered in decorative designs and wood engraving. These prizes are won by those whose fertile brain and skillful hands have wrought the most original and artistic work. Generally they are the inquiring minds whose observations have been quickened in childhood and guided into channels where brain-work and hand-work are combined harmoniously. One who has the opportunity to travel, has an opportunity to see much that is valuable. He can compare the work of many good workers and become, to quite an extent, a proper judge of artistic work. If he is a reader, he can easily learn to whom to look for standard work, and thus lay up a store of much that is valuable. Our tastes are improved by comparison; we see an ordinary piece of work and if we have never seen better, to us it is good. We view a fair painting, and if our eye has not been cultivated by seeing those superior to it, to us it is exquisite, although the coloring is crude.

But it takes a well-balanced mind to know

more than your neighbors, and not give offense and such is the case with those who are well-informed. This, however, is digressing from "Our Travels." To resume, we left the city containing the obelisk, though still in its traveling robes, and set our faces toward Washington, of which we will write in our next letter.

[NOTE.—The above letter has been in our possession some weeks awaiting insertion. We would more freely ask forbearance of the writer, for the unavoidable delay, did we not consider the article of sufficient interest to be timely.]

HOW TO BE HANDSOME.

To be beautiful in person we must not only conform to the laws of physical health, and by gymnastic arts and artificial appliances develop the elements of physical being in symmetry and completeness, but we must do more—we must cultivate the mind and develop the affections to the highest possible degree.

To be beautiful we must feed the spark of intellectual fire by reading and meditation until it burns in steady flame, irradiating the face by its brilliancy, and suffusing the countenance with a calm and holy light; also, we must fill the brain with sublime thought, and live surrounded, as it were, by an atmosphere of ideas.

To be beautiful we must put a great organizing and ennobling purpose into the will, and concentrate our thoughts and affections upon the accomplishment of it, until enthusiasm wells up in the heart, suffusing the countenance and rebuilding the body on its own divine plan.

To be beautiful we must cherish every kind impulse and generous disposition, making love the ruling affection of the heart—the ordering principle and inspiring motive of life: the more kindness, the more beauty; the more love, the more loveliness.

And this is the beauty that is abiding. Mere physical good looks fade with the years, bleach out with sickness, and yield to the slow decay of mortality. But the beauty that has its origin in kind dispositions and noble purposes and great thoughts, outlasts youth and maturity, increases with years, and like the luscious peach which comes to us in autumn ripeness, covered with a delicate flush of purple and crimson, is never so beautiful as when waiting to be plucked by the gatherer's hand, silently witnessing to the full the rich perfections time works out.

PEDESTRIANISM.

YESTERDAY I called on an invalid friend, and while we were discussing the remarkable Winter and Spring of 1881, I told her that on the 6th of April, I had walked a mile one morning across the fields over the frozen snow, and the whole distance the drifts were as high as the top of an ordinary board fence and I walked over the tops of several fences where the posts were buried out of sight in snow. It was such an unusual thing for the time of year in our locality (Southern Wisconsin) that I made a note of it for future reference.

To my great amusement, my friend replied with a smile. "The most extraordinary part of that performance was that a woman of your family should be able to walk that distance.

It seems that the school teachers who learned to walk when boarding around was necessary, do not forget in after years, but always keep the accomplishment." It had never struck me so forcibly before that my habit of walking when I had an opportunity was something to be thankful for. I remembered how much I had enjoyed that walk over the crisp snow, stopping here and there to notice how different the beautiful rolling prairie looked so covered with snow to what it did when covered with the verdure of June. So I would like to advise all young and married ladies, if they have not acquired the art of pedestrianism to learn and practice it. I know many hard-working women who would not, if they could walk a quarter of a mile from their homes. Aside from the healthful practice of walking it gives one an independent feeling to be able to make a trip on foot; it is often very convenient too. B. C. D.

FASHIONS.

Polka-dotted neckerchiefs trimmed with Breton laces are worn with morning or traveling costumes.

For an evening a pretty way is to have all the hair waved over the head, with a few loops and curls at the back.

Pretty suits for croquet or lawn tennis may be made of unbleached cotton cloth, trimmed with bands of Turkey red or other bright-hued calico.

Corsage bouquets are now very fashionable, the field daisies being among the favorites. When saucers, rather than dinner plates, are the proportionate size, they add greatly to the dress.

Lace ruches and bows are a fashionable finish to Summer toilets. Fancy brooches or lace-pins are worn with them, in all sorts of odd devices, Lady-birds, choral shrimps, gold cockatoos' heads, owls' faces, Shetland dogs' heads are among the most popular for fastening lace bows or bonnet strings.

Velvet is worn on the cooler days in the manteiets and casaquin jacket to wear with any skirt. The latter, indeed, will prove very acceptable at the seaside; and velvet is not, after all, any warmer than brocaded silk or satin, neither of which have been by any means given up throughout the Summer.

The greater number of dresses intended for wear at watering places this season are short; indeed, only grand toilets are made with trains. When the same dress is intended to do double duty, for afternoon wear and also for evening, it is made short and elaborately trimmed, an adjustable train being added, which may either be worn or not, at the owners pleasure.

The materials chosen this season for traveling dresses are cloth and bunting, cheviot and Summer camel's hair. They are made up plain, the skirts generally having wide kilt plaits, with a scarf drapery caught against these plaits. The back is more or less bunched, and has a suitable finish in pending breadths, left single or united, as may be preferred. Basques are not abandoned but the preference is given to jackets which fit the figure loosely. The latter are most stylish when they have an easy appearance.

For the warm weather a great many little mantles are made of the same material as the dress. Small manteiets pinched in front for silk costumes; casaquin jackets crossed in front, fastened with very large and handsome buttons, and made of striped tissue when the dress is partly striped and partly self-colored. Sleeves are made very narrow, and never come within two inches of the wrist, for gloves are worn longer and longer, either with at least four buttons, or without any buttons at all, and creased in ripples over the arm.

Brocaded fabrics were the distinctive trait of last year's fashions; shaded materials are that of the present season's. Everything is shaded—silks, satins and cashmeres, ribbons, flowers and feathers, every item of a lady's dress, from her hose to her head-gear, is graduated from the darkest to the lightest shades. It is, however, more especially in ribbons that this disposition appears, and almost all the new bonnets are trimmed with it. Flowers are also very beautifully shaded; poppies, carnations, hollyhocks and the larger kinds of roses are among favorite blossoms, and are intermixed with light sprays of forget-me-nots and mignonette, stephanotis and heather. Dresses of shaded material require great taste and skill in their cutting out and making up, so that the different shades, so beautifully blended in the piece should not be too harshly contrasted in the making of the dress. Anything so straight and regular as pleats or fluting should not be attempted with such dresses, but loose draperies can be made to look very effective and the Jersey bodice with seam under the arms only, should be adopted as making fewer breaks in the pattern.

"THE CYCLOPÆDIA WAR."

The Cyclopædia War and the Literary Revolution are working wonderful and happy results for the readers of books, and searchers after knowledge. The great "Library of Universal Knowledge," is announced to be completed, ready for delivery to purchasers, the early part of July. It is probably the largest and most important literary work this country and the century have seen. It is based upon Chambers's Encyclopædia, the last London edition of which is reprinted entire as a portion of its contents, a large corps of American editors and writers adding thereto, a vast amount of information about 15,000 subjects in every department of human knowledge. Chambers's Encyclopædia, whose distinguished merit is universally known, is the laborious product of the ripest British and European scholarship, but being a work of foreign production it has been naturally deficient in its adaptation to the wants of American readers. In this new form it is most thoroughly Americanized, and becomes at once the largest and most complete encyclopædia in the field, at a mere fraction of the cost of any similar works which have preceded it, containing about 10 per cent. more matter than Appleton's Encyclopædia at a little more than one-fourth its cost.

The superlative value and importance of this great Encyclopædia, however, lies especially in the fact that it is brought within the reach of every one who aspires after knowledge and culture. It is *really* a library of universal knowledge. It brings a liberal education easily within the reach of every plow-boy. Every farmer and every mechanic owes it to himself and to his children that such a cyclopædia shall henceforward form a part of the outfit of his home. To the intelligent man in every walk of life a cyclopædia is indispensable. It is issued in various styles, in 15 large beautiful octavo volumes, varying in price from $15 for the edition in cloth, to $25 for the edition in full library sheep binding. Liberal discounts even from these extraordinary prices are allowed to clubs, and the publishers, besides, propose during the next two months to distribute $10,000 cash in special rewards to forward clubs of five, ten or more subscribers. The American Book Exchange, 764 Broadway, New York, are the publishers, who will send sample pages and full particulars free on request.

Hop Bitters does not exhaust and destroy, but restores, cures, and makes new.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

SOAP BARK FOR CLEANING BLACK GOODS.

FOR removing spots and dust from black goods of all kinds, a decoction of soap bark has given the best satisfaction of anything we have tried. In fact, we would not be without it. Buy a few cents worth—to be had of any druggist—break into bits, steep a while in a little more than water enough to cover, strain, and it is ready for use. Brush the goods free from dust, dip a piece of black cloth into the decoction, squeeze out and rub the soiled parts. If a thorough renovation of an article is desired, rip apart, brush from it every particle of dust, and with a cloth dipped into the decoction wipe off each piece, folding it up as you proceed. Then with moderately heated irons, smooth and press the goods upon the *wrong* side until dry. As for *silk*, we prefer to fold it and place under a heavy weight until dry, instead of ironing. Of course, the goods should be but dampened with the liquid.

WEAK FISH.

Know that they are freshly caught, then remove scales, split from head to tail, wash, salt and pepper and hang where they can smoke for an hour before cooking. If you have no smoke-house, knock the bottom out of an old barrel, drive in a few nails through the staves near the top, hang the fish on them, build a *little* fire on the ground, place the barrel over it, cover the top and you have improvised a very good smoke-house for smoking fish, eels, etc. To our taste all fish are improved by smoking. Broil or fry in butter or drippings.

IN-GROWING TOE-NAILS.

THIS very painful disease of the nails is caused by the improper manner of cutting the nails and then wearing a shoe too tight for the foot. Apply to the tender part a small quantity of perchloride of iron. You can buy it either in the fluid or the powder form. The patient will at once feel considerable pain, but in a few minutes the tender surface is felt to be mummified, so to speak, and it ceases to be painful. Permit the dried flesh to remain two or three weeks, when it can be removed by soaking the foot in warm water. A new and healthy flesh will have formed beneath. If the nails thereafter are not cut around the corners or sides, but cut square across the top, with a small notch in the center, they will be found to grow only forward, and all further trouble avoided.

MRS. J. BRADY.

APRONS—DISH-CLOTH.

IF Mrs. J. M. M. would make her kitchen aprons of thin oil-cloth instead of cheviot, her weekly wash would be greatly diminished. But oil-cloth is somewhat heavier than cheviot, and would need to be banded at the waist or pinned to the bosom of the dress. Mine is of wood-color, and looks neat and pretty. I also make aprons of oil-cloth for my children, who are learning to eat at table. Make them to fit close around the neck, and long enough to cover the little boots as they sit in the high chairs. Our afternoon aprons should be made of something that is easily laundried, as we are often obliged to turn from the sewing machine and take little two-year-old when his boots are "just horrid." Fine, soft, unbleached cotton is the best for this purpose, as it washes easily, is durable, cheap and pretty, and will admit of a variety of trimming. I am in favor of making this "badge of servitude" as pretty and becoming as possible.

I am possessed of an article which I think deserves to be spoken of in the Domestic column—a steel dish-cloth for cleaning saucepans, etc. It is about five inches square, one-half inch thick, and made of steel rings linked together.

MRS. M. B. H.

DOMESTIC RECIPES.

Huckleberry Pie.

OUR friends will find this pie much improved, by adding a couple of sliced harvest apples to each pie. Place the slices, over the top of the berries and cover with a crust.

Vanity Puffs.

Beat the whites of six eggs to a stiff froth sift in a pound of powdered sugar, and flavor with lemons. Drop by small spoonfuls upon buttered paper and dry in a cool oven two hours.

To Restore Window-glass.

When glass becomes smoky and opaque looking, rub with a dilute muriatic acid and then clean with moistened whiting.

Cherry Catsup.

One pint of cherry juice, three-fourths pound of sugar a teaspoonful each of ground cloves and cinnamon with a dash of cayenne pepper. Boil until a thick sirup then bottle and seal.

To Dry Sweet Corn.

Cut off only the outer part of the kernels and scrape the rest from the cob. Cook 10 minutes, spread upon earthen plates and dry in the oven. Careful not to burn.

To Prepare Mustard.

Let a pint of good vinegar come to a boil, stir in a quarter of a pound of mustard two tablespoonfuls of sugar, a tablespoonful of salt and a small spoonful of white pepper. Let the mixture boil five minutes. MARY. B.

Stuffed Steak.

This makes an excellent substitute for the expensive roast. Select a good round steak, pound, season with pepper and salt, cover with a nice dressing of bread crumbs, roll up and tie tightly with twine. Pour a little hot water into the dripping-pan, add a spoonful of butter, put in the steak and bake, basting frequently. F. S.

QUESTIONS ANSWERED.

Infants' Powder.

Is there a *harmless* infants' powder? There is so much said now-a-days about cosmetics that I am afraid to use any upon my child, although of course I stand in need of something.

ANS.—Perfumed corn-starch makes an excellent powder, and when used in moderation is, according to our thinking, harmless. Take any suitable paper box having a tight-fitting top cover the bottom to the depth of half an inch with corn-starch; over this place a piece of writing paper saturated with any extract—we use patchouly, thinking it imparts to anything a "cleanly" odor—and cover with starch to the depth of another half inch. Repeat until you have in a sufficient quantity of starch. Cover and tie up in paper a few days before using. Always keep the box covered.

[Harrisburg, (Pa.) Independent.]

For five years, says Mr. J. Echter, this city, I have been afflicted with rheumatism, and for two years have had a sore on my leg the size of a silver dollar, which nothing would heal. St. Jacobs Oil cured the rheumatism and healed the sore.—*Adv.*

Miscellaneous.

ST. JACOBS OIL

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THE GREAT GERMAN REMEDY.

FOR

RHEUMATISM,

Neuralgia, Sciatica, Lumbago, Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains, Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

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PROFESSOR HORSFORD'S PHOSPHATIC BAKING POWDER

Made from Professor Horsford's Acid Phosphate.

Recommended by leading physicians.

Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.

In cans. Sold at a reasonable price.

The Horsford Almanac and Cook Book sent free.

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NASAL CATARRH and BRONCHITIS.

Childs Treatment for NASAL and BRONCHIAL CATARRH is the only one that can be relied upon for the **Permanent and Positive CURE** of this disease. **Home Treatment.** Physicians recommend it. For details of method and terms, address **Rev. T. P. CHILDS, Troy, Ohio.**

GOLD MEDAL, PARIS, 1878.

BAKER'S

Vanilla Chocolate,

Like all our chocolates, is prepared with the greatest care, and consists of a superior quality of cocoa and sugar, flavored with pure vanilla bean. Served as a drink or eaten dry as confectionery, it is a delicious article, and is highly recommended by tourists.

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W. BAKER & CO.,

Dorchester, Mass.

News of the Week.

HOME NEWS.

As we go to press the following dispatches are received:—

FIRST DISPATCH—10:20 A. M.—President Garfield is shot.

SECOND DISPATCH—10:30 A. M.—The President is reported mortally wounded and dying.

THIRD DISPATCH—10:40 A. M.—The excitement is so great that it is impossible to state anything definite as to the President's condition. The assassin is captured.

FOURTH DISPATCH—11:15 A. M.—The assassin's name is Charles Gitteau.

FIFTH DISPATCH—11:25 A. M.—There is a rumor that the shooting was done by the ex-Consul to Marseilles, who was removed from office.

SIXTH DISPATCH.—12 M.—The physicians have held a consultation and say the wounds are not necessarily fatal.

LATEST, 3:50 P.M.—The President is dying.

VERY LATEST, 4 P.M.—The President is dead.

The President was just leaving Washington for the Williams College commencement, and was to meet his wife at Long Branch on Saturday. On Monday he was going to Williamston, Mass., and on Thursday to St. Albans, Vt.

THERE are 18 sensible men at Albany anyway. Nine Stalwarts against nine Democrats played a game of base ball Wednesday for the benefit of the families of the men killed on the new Capitol. The game lasted three hours and resulted in a score of 58 to 26 in favor of the Democrats; $110 were received at the gate.

President Garfield, in accordance with the instructions of Congress, has invited the descendants of Lafayette and Rochambeau to be the guests of the nation, at the time of the celebration of the centennial of the battle of Yorktown. President Grevy has acknowledged the compliment by detaching several persons high in official position to represent the French republic on that occasion. Rhode Island is the first State to invite the distinguished strangers to be the guests of its people, but the matter has been mentioned in Massachusetts, New York and Pennsylvania.

Washington firms have secured the contract for supplying Brussels carpet for the public buildings under control of the Treasury Department. About 15,000 yards will be required for the next fiscal year. The contract price is $1.19 per yard.

At the annual meeting of the Wisconsin State Bar Association, held at Madison, a largely-signed petition from the prominent lawyers of the state was presented, asking that a suitable monument be erected to the memory of the late Senator Matt. H. Carpenter. It is proposed to raise the necessary funds by a popular subscription of the people of the State at large.

Secretary Kirkwood has appointed Francis La Flesche to a clerkship in the Indian Office. The appointee is an Indian, a brother of "Bright Eyes." This new departure in selecting an Indian to help manage the Indians may lead to important results if it is honestly persevered in.

A most remarkable instance of wholesale poisoning came to light on the 28th inst., at Wilkesbarre, Pa. Thirteen Hungarian miners at Hazleton, Pa., were poisoned by eating bologna sausages, and five are reported to have since died.

At 12 o'clock on Tuesday night Sanderson's stage from Lake City to Alamosa, Col., was robbed by two masked men ten miles west of Alamosa. There were five men and one woman in the coach, and the robbers secured between $800 and $900 from them. It is not known how much they secured from the mail and treasure box of the coach. There is no clue to the robbers.

The finding of the Whittaker court-martial was forwarded to Washington from this city on the 29th, together with the record of the proceedings, which comprises 7,600 foolscap pages.

Heat, hail, gales, thunder-storms, and terrible tornadoes have made havoc North, South, East and West during the past three days. Superstitious people, who connect the appearance of a comet with physical disasters, must have been confirmed in their error when they saw trees uprooted and houses leveled by these cyclones, churches lifted from their foundations and shattered into splinters, barns set blazing, and cattle killed by the terrific and incessant lightning, hail scourging whole villages and laying waste the harvests for miles, and reservoirs bursting under the sudden deluge of rain.

The directors of the Great Eastern steamship Company have decided to offer the Great Eastern steamer at public auction on the first of next October unless she is previously disposed of at private sale.

Most of the immigrants from Stuttgart, Germany, literally come by chance. The members of a society in that city contribute a certain amount every month, and the fund thus raised is used in helping people to come across the ocean. The names of all applicants are put into a lottery wheel, and the winners receive passage money, which they bind themselves to pay back as soon as they are able.

Tuesday, a storm leveled the telegraph wires in Chicago. At Alexandria, Mo., a row of business places was struck by lightning and burned; loss, $32,000. At Franklin, N. H., a hail storm tornado did great damage. Half of the houses in the town had their windows shattered. The Methodist church was damaged by floods of hail and the rain which poured through the shattered windows. The Catholic church was moved six inches on its foundation and was twisted and badly damaged. Several buildings were totally wrecked. Freight cars at the depot of the Northern railroad were blown off the track.

Mrs. Abraham Lincoln continues dangerously ill. Senator David Davis, who is executor of her late husband's estate, has been summoned to her bedside.

There arrived at Castle Garden in the month of June 59,416 immigrants, making the total for the first six months of the year 241,498. This is 64,513 more than arrived in the first half of 1880, in which the arrivals were more numerous than ever before.

The quarter of a million dollars raised by subscription for ex-President Grant has been invested in United States four per cents, and is to be presented to him privately.

Ninety clerks will be removed from the Pension Office in a few days.

More than 1,400 new Post Offices have been established in the past year.

Resistance to the new prohibitory laws of Kansas has gone so far that while juries in the cities refuse to convict liquor sellers, even upon the clearest evidence, in Atchinson the Common Council, with the cooperation of its presiding officer, the Mayor, has adopted an ordinance providing for the granting of licences to taverns and saloons. This action was taken in express ridicule and defiance of the prohibitory constitutional amendment and the laws based upon it. The temperance men have since then had a mass meeting, and called upon the Mayor to resign, while Gov. St. John threatened to call out the militia and put the laws into execution by force of arms. All this because the population of the cities is not willing to be deprived of its beer by the rural population's temperance predilections.

President Garfield and General Grant have shaken hands and made some observations about the weather. The safety of the Republic is now assured.

A powder house in Tucson, Arizona, blew up Monday evening, breaking nearly every window in the town. It is reported that the county hospital was nearly demolished.

Secretary Lincoln has very properly ordered the removal of the saloons and dance-houses recently put up by white robbers on the Ute reservation in Colorado. That is a good piece of reform, for the Indian.

A thunder storm of unprecedented fury swept over Washington, D. C., on the 27th ult., commencing at 8 o'clock and lasting about an hour. While it continued it was a roar of wind and rain accompanied by blinding torrents of rain with occasional tempests of hail stones. Ford's Opera House, the City Hall building and a large number of residences were unroofed. Shade trees were prostrated and considerable damage done to the fire alarm and other telegraph wires in the city. Many cellars in the southern portion of the city were flooded. The extent of the damage done to property in the city and Georgetown is variously estimated at from $75,000 to $200,000.

A man drawing his wife in a wagon, trudged into St. Johnsbury, Vt., having played horse from Waterbury, 57 miles away, on a bet that he could do it in three days; he won by half a day.

In order to save about one hundred miles between Cincinnati and the northwest, the Cincinnati, Indianapolis, St. Louis and Chicago road is constructing a branch from its track at Kankakee to Seneca, on the Rock Island road, to be finished by September.

The largest blue stone ever shipped in this State will be sent this week by canal to W. H. Vanderbilt, to be laid in front of his residence in Fifth Avenue, New York. It measures 15 by 25 feet, is seven inches thick, and weighs twenty tons.

Professor Harkness, of the Naval Observatory at Washington, says that it is quite probable the earth passed through the tail of the comet on the 20th of June. This view tallies somewhat with that of the Kentucky astronomer Klein, and will go far to strengthen his view that the recent remarkable storms are due to this passage through the nebulous something which we call the tail.

The failures in the United States for the first six months in 1881 number 2,628, compared with 2,497 the first half of 1880. The liabilities for the first half were $40,000,000 compared with $32,000,000 in the same period in 1880.

At Po'keepsie, Thursday, on the Hudson River road, the axle of a freight car attached to the Canada Southern emigrant train bound north, broke and six loaded freight cars were dislodged and one went into the river. The emigrants were in the cars in the rear of the train none of which were dislodged.

Dr. W. H. Russell, the English journalist, says that the Yosemite is equal to the Alps and combines the attractions of half a dozen famous European places.

Fighting, begun between cattle men and renegade Indians in Colorado, has resulted in the murder of several officers and soldiers of the regular army. No very complete or intelligible account has yet been received.

New Hampshire now has a law taxing church property, the same as other property, when it exceeds $10,000 in value. A Congregational church in Manchester resisted payment, on the ground that the law was unconstitutional; but the highest court decides that it *is* constitutional. The New Hampshire example is like to prove contagious.

Silas Cutler, of Burlington, Mass., next to the oldest Postmaster in the United States, has resigned. He was appointed in 1832, and never received more than $40 a year. In his letter he states that, getting old and feeble, he desires to be relieved of the care of the office. As no one can be found willing to take the office for the same compensation, it has been discontinued

For the fifty-three cadets who graduated the other day at West Point, there are only forty vacancies, and the thirteen supernumeraries will be attached to the army as extra second lieutenants. If no regular appointment can be given them at the end of a year, however, they will be returned to private life.

Abraham Lincoln's mother is buried at Lincoln City, Ind., where her grave was visited the other day by a large party of citizens from Evansville. Several speeches were made beside the grave, many of Mr. Lincoln's old friends and neighbors giving personal reminiscences of the good man whom they called "Abe."

At the Chicago Sængerfest Ohio is represented by 16 societies, nine from Cincinnati, four from Cleveland, two from Columbus, and one from Dayton. Illinois sends 20, and all other states 17. The first concert of the Chicago Sængerfest took place on Wednesday evening. It was a marked success. Over 7,000 people were present.

During the past week Senator Sessions, A. D. Barber, E. R. Phelps and C. E. Edwards, the three last known in Albany as lobbyists, have been indicted on charge of bribery. Senator Sessions gave bail for $30,000, the others for $3,000 each. The event of the week, however, was the withdrawal of Platt from the contest and the consequent scattering of the Stalwart vote. This is believed to be the breaking of the deadlock and we may now look for an election before another week passes. The 32d ballot resulted, as concerns the most prominent candidates, as follows: Conkling, 28; Wheeler, 38; Potter (Dem.), 48, and Depew, 49; Crowley, 20; Cornell, 15; Kernan (Dem.), 48.

The past week has been a notable one for boat-racing. On the 28th ult. the Harvards beat Columbia, on the Thames river at New London, on the 30th the Harvard freshmen got away with Columbia's freshmen crew by three lengths and on July 1st the battle was fought again by Harvard and Yale, at New London, Yale winning by one and a half lengths. The Cornell crew has been doing some good work in boat racing on the London Thames, though they were defeated, by a foul of the Londons. The Thames crew won the first heat in the race for the Stewards' Cup, Londons second, Cornell, third. Cornell rows with the Hertford College crew, of Oxford, to-day.

"Thank God for Compound Oxygen."

This is a grateful utterance of the wife of a clergyman. Her letter, dated New City, Rockland County, New York, June 14th, 1880, thus states the condition of her husband when he began the Oxygen Treatment: "Rev. A. J. Conklin, Pastor New City and Centennial Churches, Newark Conference, was run down with overwork; voice injured, memory impaired, eyes very badly impaired, so that he could scarcely follow up general reading, much less study; throat affected, and the whole system in a bad state. He would have had to stop preaching had he not found help. I asked him this morning what I should say in reporting progress to you for him. 'Oh,' he says, '*tell them I am well. Never felt better in my life!*' This, on the minister's 'blue Monday,' *after preaching three times on a very hot day, administering the sacrament and baptismal service, and walking three miles afterward!* And now he is at work in his garden. *Thank God for Compound Oxygen!*" Our Treatise on Compound Oxygen, which gives full information about this remarkable remedy for Chronic Diseases, is sent free. Address Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

Eastern furniture manufacturers are seriously troubled at the scarcity of walnut lumber. Before the value of this wood as an article of commerce was understood, great quantities of it were needlessly destroyed, or used by farmers for the commonest purposes. Whole acres were burned for the purpose of clearing land, and it was turned into fence rails and hog troughs. They know better now, but there are few places where much of the wood is to be found. Indiana and Canada West, that were formerly the principal sources of supply, are almost denuded. There are, however, some promising tracts in the Southwestern States.

.....A few days ago the fine mare belonging to Senator Conkling, which he has driven about Washington for a year or two past, got caught in a barbed wire fence while she was out to pasture, and was very badly lacerated. In trying to extricate herself the mare pulled part of the fence down and twisted sections of the sharp wire around her body and received not less than twenty ugly cuts, extending from her head to her hind quarters on her right side. Some of the wounds were nearly two inches deep and will leave permanent scars.....It is officially announced that two million sheep were sheared in Michigan this year, yielding 10,974,163 pounds of wool, or about 5½ pounds each.....Com. Loring will deliver an address at the Wisconsin State Fair in September.

.....A telegram from Minnesota on June 30 puts the wheat area of that State last year at 3,000,000 acres, with a falling off, this year, of about 250,000 acres; but the aggregate yield is put at 45,000,000 bushels—an increase of 3,000,000 bushels over last year's crop... ....The twenty million cinchona trees planted in Ceylon in 1880 are expected to yield in six years ten million pounds each year, but it is believed that the demand will fully keep up with the supply, so that prices will not decline.

The Cuban sugar crop for the present year is estimated at 464,000 tons.....The Mark Lane Express of June 27, in its review of the British grain trade the past week, says: "A few white frosts have unfavorably influenced wheat blossom which is now general. There are no prospects of an abundant harvest. Whether an average yield is possible is now a question upon which grave doubts are entertained".....The latest mail European advices have the following crop reports.

Turkey—The recent rains have done much good to the cereal crops in general, which may be considered from now to be safe in Thessaly, as well as in Macedon and Eastern Roumelia. It is anticipated that the market of Salonica and adjacent ports will have large quantities of grain for export this year.

South Russia.—Stocks have been almost exhausted by local requirements as well as by the export trade. At present all are looking forward to the coming harvest for which the outlook is exceptionally good.

Levant.—The weather continues to be wet, which is quite unusual at this season of the year, and it naturally acts more or less prejudicial on harvesting operations. The quality of the new barley brought to market is fine, but it was damaged by rain. The samples received are heavy in weight, and it is very important that the weather should clear up.

Roumania.—Weather on the Danube is now hot, which is good for the country and the crops are well reported of.

CENSUS TABLE OF BUCKWHEAT.

States and Territories.	1880. Acreage.	1880. Bushels.	1870. Bushels.
Alabama	176	1,390	144
Arizona	2	70	....
Arkansas	402	3,261	226
California	1,036	22,371	21,928
Colorado	20	285	178
Connecticut	11,232	137,623	148,155
Dakota	468	3,256	179
Delaware	397	5,857	1,349
District of Columbia	3	85	7
Florida	32	264	....
Georgia	339	2,439	402
Idaho	....	....	....
Illinois	16,464	178,964	168,863
Indiana	8,864	89,893	80,231
Iowa	16,318	165,895	109,452
Kansas	2,493	24,602	27,826
Kentucky	1,396	14,940	3,443
Louisiana	75	1,305	260
Maine	20,135	382,701	466,635
Maryland	10,324	137,513	77,867
Massachusetts	5,234	67,894	58,049
Michigan	33,955	413,180	426,755
Minnesota	3,693	42,245	52,438
Mississippi	81	794	1,619
Missouri	5,502	57,924	38,252
Montana	34	437	988
Nebraska	1,683	17,786	3,471
Nevada	1	25	985
New Hampshire	4,533	94,127	100,034
New Jersey	35,373	466,414	353,983
New Mexico	320	5,001	10
New York	291,228	4,461,200	3,904,030
North Carolina	5,867	45,209	20,109
Ohio	23,130	280,229	180,341
Oregon	402	6,712	1,045
Pennsylvania	246,198	3,593,328	2,533,173
Rhode Island	106	1,264	1,444
South Carolina	121	1,082	312
Tennessee	5,039	36,772	77,437
Texas	304	2,704	44
Utah	28	448	178
Vermont	17,630	356,615	415,696
Virginia	16,708	139,603	45,075
Washington Territory	114	2,661	316
West Virginia	30,334	285,298	82,916
Wisconsin	34,119	299,150	408,897
Wyoming	....	....	....
Total	851,304	11,251,738	9,521,721

Special reports to the Cincinnati Price Current show the number of hogs packed from March 1 to date and latest mail dates at the undermentioned places, with comparisons, as follows:—

To June 29—	1881	1880.
Chicago	1,225,000	1,580,000
Cincinnati	52,000	55,000
St. Louis	165,000	184,000
Milwaukee	52,833	48,198
Kansas City	188,000	124,235
Cedar Rapids	89,909	129,108
Cleveland	90,000	168,000
Ottumwa, Iowa	29,478	25,797
Detroit	12,415	16,260
Des Moines, Iowa	33,500	33,500
Indianapolis	48,000	195,000
Atchison	.....	130,632

The following comparisons of foreign exports of breadstuffs from leading customs districts of the United States for the month of May is compiled from a detailed statement furnished by the Chief of the Bureau of Statistics:—

	May, 1881.	May, 1880.
Wheat, bushels	8,958,253	9,732,376
Corn, bushels	7,286,263	9,930,836
Oats, bushels	22,186	72,871
Rye, bushels	45,489	188,698
Barley, bushels	14,471	23,775
Wheat flour, barrels	639,429	534,438
Corn-meal, barrels	39,666	37,168
Total value, above items	$13,804,575	$20,032,441

The general tenor of reports received by the Department of Agriculture as to the condition of live stock during May and up to June 27, is more encouraging than the reports for the month of April. At the same time the reports are not as encouraging by any means as they were at the same time last year. The severe Winter is the cause of the drawback this year. The worst reports are from the sheep. They show at this season a much poorer condition than for several years past. There is, however, a decided improvement since the April report. As to horses, there is no change worth noting over last year. From swine the reports are generally favorable. These reports are not, however, sufficiently full, as yet, to base a comparison on from the same time last year. The condition of cattle is good, with the usual run of diseases among them. Horses are in fair condition.....At a well-attended meeting of the Hereford cattle breeders, held at Chicago on June 27, the "American Hereford Cattle-Breeders' Association" was formed. Any breeder of Hereford cattle in good standing can become a member on application to the Secretary, and by paying a membership fee of $10, either for an individual or for a firm. The Association is to meet annually. The following officers were elected for the ensuing year: President—C. M. Culbertson. Vice-Presidents—A. H. Swan, W. H. Todd, W. Hamilton, R. W. Sample, G. S. Burleigh, B. Hershey, J. M. Studebaker, W. H. Sotham, A. H. Seabury, A. D. Raub, N. Abbe, M. Lee. Secretary—T. E. Miller. Treasurer—A. Earl. Auditing Committee—W. Powell, T. L. Miller, T. Clark. Directors—H. Norris, J. R. Price, C. Gudgell, J. Frank, G. F. Morgan, W. S. Van Netta, T. Clark, W. E. Campbell, T. L. Miller.....The complaint is general that but few eggs hatch the present season. Eggs are bringing more in the country than they have at any time during the summer for twelve years.

The parlor cattle cars from Cincinnati are a great success. It takes about eight minutes to put the cattle on board, and while on the trip the animals are fed twice a day and watered three times, a vast improvement on the old cruel system. Twenty fat oxen, for instance, weighing 1,500 pounds each, can go into a car thirty-four feet long, so that they can lie down comfortably. The car has been in operation for some months in Cincinnati, and it was found that in traveling a distance of nine hundred miles the cattle lost but 2¼ per cent. of flesh, while formerly they lost from 11 to 13 per cent.....A company in Tennessee are about establishing a pork-house, which will probably be the largest in the South. Grounds have been purchased near the western portion of Nashville, but the trustees of the Fiske University are opposing the enterprise, thinking it will be a nuisance.....

Great need of rain, both for pasturage and to fit

the ground for sowing grain crops, was felt in South Australia at date of last advices. Stock of all sorts were in fine, healthy condition, however.....In Buenos Ayres, S. A., sheep and cattle command very high prices, owing to the constant purchases for new estancias. Lands that were purchased from the Government three years ago at $10,000 a league are now being stocked by the owners, which has proved a surprise for that market, inasmuch as when these lands were subscribed for it was thought they would remain idle for at least 20 years; but the growth of the country is as rapid as in the United States, and, at the rate they are going on, all these Rio Negro lands will be stocked and settled on in less than 20 years. .....The Italian revenue increases steadily in spite of the late abolition of the grist tax..... Below is shown the acreage of wheat planted, the the total product in bushels of the harvest of 1879, and the average number of bushels per acre produced in nine States that produce seven-tenths of the wheat crop of the country. It is summarized from the census corrected to latest date:—

States	Acres.	Bushels.	Bushels per acre.
Illinois	3,218,963	51,135,455	15 9
Indiana	2,619,307	47,288,869	18 1
Ohio	2,656,134	46,014,869	18.0
Michigan	1,822,753	25,537,097	19.5
Minnesota	3,046,821	34,623,057	11 3
Iowa	3,049,347	31,177,225	10 2
California	1,837,322	28,837,132	15.7
Missouri	2,074,314	24,971,727	12.1
Wisconsin	1,918,036	24 884,659	12 8
Total	23,172,996	324,423,840	14.7

The second annual banquet of the Short-horn breeders of America will be held at Winchester, Ky., on the 26th inst. Mr. A. L. Hamilton, Winchester, manager.....A couple of men named McCall and Rice are swindling Missouri farmers on the sale of sickle grinders.....On the 22d inst. a a fire swept over 7,250 acres of wheat and other grain in Merced County, Cal., destroying everything in its course, including many farm houses and much farm machinery. The amount of the loss is not known.....It is now probable that France, Spain, Great Britain, Denmark, Sweden and Norway will continue to import wheat freely during July and August, taking from two and a-half to three million bushels per week from our Atlantic ports.

It Acts Sure and Safe:

The celebrated remedy Kidney-Wort can now be obtained in the usual dry vegetable form, or in liquid form. It is put up in the latter way for the especial convenience of those who cannot readily prepare it. It will be found very concentrated and will act with equal efficiency in either case.

Women that have been given up by their dearest friends as beyond help, have been permanently cured by the use of Lydia E. Pinkham's Vegetable Compound. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, billousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Inaction of the Kidneys and Urinary organs cause the worst of diseases which Hop Bitters cures.

BURNETT'S COCOAINE.

Will Save the Hair

And keep it in a strong and healthy condition, because it will stimulate the roots of the hair, and restore the natural action upon which its growth depends.

Burnett's Flavoring Extracts are absolutely pure.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, July 2.

Chicago.—WHEAT unsettled; No. 2 Red Winter $1 12; No. 2 Chicago Spring, $1 10⅞, cash; $1 12⅞@$1 12⅝, August; $1 10⅞@1 10⅝, September; No. 3 do., 89c.@$1 04; Rejected, 77@86c. CORN active at 46c., cash; 45⅞@46c., July; 46⅛@46⅜c., August; 46⅞@47c., September; Rejected, 42½. OATS heavy for cash; 37⅛c., cash and July; 28⅜c., August; 27⅛c., September. RYE firm at 97c. PORK steady with a fair demand at $16 25, cash; $16 42½, August; $16 57½@16 60, September. Lard active, firm, and higher at $11 05, July; $11 85, August; $11 05, September. Bulkmeats fairly active and a shade higher; Shoulders, $6; Short Rib, $8 57½; Short Clear, $8 85. BUTTER firm; fair to fancy Creamery, 18@22½c.; fair to prime Dairy, 14@18c. CHEESE easy; full creams, 8@8¼c. EGGS dull at 13½@14c. Flax-seed firm at $1 22. HOGS—good quality active and 5c. higher than yesterday, mixed packing, $5 90@6; light, $5 90@6 20, mostly at $6 15@6 20; culls and light Yorkers, $5@5 50. CATTLE—Market active; all desirable grades stronger; no choice exports here, and quoted nominally $6 20@6 30; very fat Steers, $6 15; good to choice shipping, $5 75@6 10; common to fair, $5@$5 50; far West corn fed, $5 60@5 85; distillery fed, $5 40@5 65; native butchers' steady, but lower grades weak at $2 50@4 65; through grass Texans active and steady at $3 40@4 50; stockers and feeders steady at $3 20@5. SHEEP good, demand and market firm; common to medium, $3 75@4 50; choice to extra, $4 75@5 25.

Cincinnati.—WHEAT—No. 2 Red Winter, $1 20. CORN—No. 2 Mixed, 48½c. OATS dull; No. 2 Mixed, 39½c. RYE dull; No. 2, 98c. PORK firm at $16 50. Lard firm at $11 05@11 10. Bulk-meats firmer; Shoulders, $6 25; Clear Rib, $8 70. Bacon in fair demand and firm; Shoulders, $7; Clear Rib, $9 50; Clear Sides, $9 90. BUTTER in fair demand and firm; fancy Creamery, 23@24c.; choice Western Reserve, 16c.; choice Central Ohio, 14c. SUGAR quiet and unchanged. SHEEP—The receipts have been considerably smaller than last week, but the market was not very brisk, and prices have not changed essentially. Common to fair sheep sell at $2 40@3 50, good to choice at $3 75@4 25 ₱ 100 pounds, and a few extras at $4 50. The supply of Spring lambs has been much reduced, and prices of the better grades are higher; common to prime sell at $4@5 50 and extra $6@6 25. Receipts for the week 15,947, shipments 16 021. HOGS dull; common and light, $4 25@5 90, packing and butchers', $5 35@$6 15.

HEMP.—There is not much doing, but prices are well sustained. Rough Kentucky is held at $120@$125 per ton from store. Single dressed sell at 8c. and double do at 10c. per lb., from store. POTATOES—The arrivals are less liberal, and the market is firmer at full prices. Prime to choice Early Rose sell at $2 75@3 00 per bbl on track, and $3 10@3 25 from store. SEED.—There is only a moderate demand at previous prices. Clover is jobbing at 8c. per lb. Timothy at $2 85, and Hungarian Grass at $1 05@1 10 per bushel. ONIONS are in light supply and steady at $1 50@1 65 per bushel crate, and $8 50 per bbl.

St. Louis.—WHEAT No. 2 Red Fall, $1 17@1 18, cash; $1 14⅛@1 14⅞ July; $1 12@1.13⅛ August; $1 12⅛@1 13⅛ September; $1 13⅝@1 13⅞, October; $1.11⅛@1.12⅛ all the year; No 3 do., $1 09⅝; No. 4 do. $1 05⅛ bid. CORN 44⅜@45c. cash; 45c. July; 45⅛@46c., August; 46⅜@46⅝c., September; 46⅛@46⅝c., October; 41⅛@42c., all the year. OATS dull at 34⅜c. cash; 34c., July; 27c. August; 26⅝c., all the year. RYE dull at 85c. bid. PORK steady; jobbing at $16.75. Lard quiet at 11⅛c. Bulk-meats higher; shoulders $6 20; clear rib $8.60; clear sides $8.85. Bacon strong; shoulders 7c.; clear rib 9⅛c.; clear side 9⅜c. Cattle—native slow and weak; no urgency in the demand; grass cattle fally active for good grades; exporters $5.70@6.50; heavy shipping Steers, $5 40@5.75; light do. $4 80@5.40; native butchers' steers $4.25@5; good to choice grass Texans, $3 75@4 25; feeding steers $4.80@5.15; stockers $3.75@4.25. SHEEP scarce and wanted; fair to fancy range at $3@4.25 HOGS higher; Yorkers $5.80@5.90; packing $5.70@6; choice to fancy $6@6.25.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 2, 1881

The celebration of the Fourth interrupts the regular channel of commerce and for a few days, many lines of property will drift into merely nominal importance. The various exchanges were deserted today; many of them decided to adjourn for several days, and wholesale trading may be said to have ceased last evening. Perishable commodities are apt to suffer when holidays are prolonged and largely participated in. Here and there certain caterers require their full supplies, as the places of absentees are filled by visitors: but the hotel and restaurant wants are the main ones to be filled in this way. A favorable point to be noted since the Summer holiday has become extended of late years is the interior recognition of our reduced requirements, and receipts have been judiciously limited.

ALCOHOL—Nominal 3⅞c. for export.

BEANS AND PEAS.—There is no change in the bean trade. Current prices are marked off slightly, but it is possible that extra choice marks of white sorts are withheld for the time being. Green peas quiet at $1.10@1.55. Southern B. E. peas easier; $3.10 3.15 ₱ 2-bush. bag.

Marrow beans, prime, $2.40@2.45; other, $2.25@2.35; medium, prime, $2.40@2.42½; other, $2.20@2.35; pea, $2.25@2.50 white kidney, $2.40@2.45; red kidney, prime, $1.55@1.60; fair to good, $1.43@1.50; black or turtle soup $1.40@1.45.

Receipts for week, 6 351 bush.
Exports do. 913 pkgs.

BEESWAX—In export collections 23@24c.

BUTTER.—A repetition of last week's remarks on butter would quite explain what the situation has been this week. The speculative prices that rule are met very good-naturedly on the part of buyers and sellers of course are proportionately amiable. Prices are hardly as sharp as they were for upper grades but with the pause in regular trade occasioned by the holiday sellers generally quote as before.

Creamery—Western, good to prime, 21@22c.; State and Penn. 21½@23c.; poor to prime, 19½@20c.; sweet cream, 20@22c.; State pails and h'f tubs, choice, 21c.; fair to prime, 19@20c.; Welsh tubs, 19@21c.; poor State, 14@18c.; firkins yellow, 20@22c; Western imitation creamery, 16@20c.; dairy, 18@19c.; other, 14@17c.; factory or ladle-packed, best, 16@16½c.; other, 10@15c.; very poor Western, 10@11c.

Receipts for week, 48,700 pkgs.
Exports for week, 12,856 do.

CHEESE.—Exports have almost equaled receipts and the market closes with a good tone, though a shade off from last report. Shippers have only slightly reduced their bids on account of an easier cable, which is now quoted at 50s. Western stock is running low in quality and is freely offered at the prices. Skims have again started into use and they are fairly firm.

State factory, fine, colored, 9¾@10c. do. white, 9¾@9¾c; fair to prime, 8¾@9¾c; poor to fair, 7@8c.; Ohio, fine, 8½c; other 7@8c; Wisconsin poor to fine 7¾@9¾c; part skimmed, 4@6c.; full skims, 2@3c.

Receipts for week, 136,117 boxes.
Exports for week, 132,000 boxes.
Liverpool cable, 50s.
Steam to Liverpool, 15@25s.
Steam to London, 23s, 9d.@27s, 6d.

COTTON—The week has been featureless and, trade will not remove until the holiday is over. The Cotton Exchange adjourned until July 6th.

DRIED FRUITS.—Confidence is shown in evaporated apples by the fact that dealers prefer to colstore them instead of dropping prices to a point that would tend to increase trade. Sun-dried are quiet; a few cheap sales have been made for workmen's stores where railroads are being laid. Peaches are hardly in commercial quantity; almost any sound parcel is regarded as fancy stock. Small fruits quiet. We are too near new crops for much activity.

Apples evaporated choice 8¼@9c; fair to prime 7¾@8¼c. North Carolina sliced, common to best 4½@5c. Va, do. 4@4½c; Tenn in bbls. 4c, do bags 3¾@4c; State fine cut 3¾@4c., quarters 4¼c. Western, 3¾@4¼c; evaporated peaches peeled 27@30c.; unpeeled 13@14c; sun-dried peeled 17@22c; unpeeled halves 5@5½c. Plums 12@12½c. Blackberries 8c. Cherries 13@14c. Raspberries 23@24c. Whortleberries 11½c.

Receipts for the week, all kinds, 412 pkgs.
Exports dried apples, 2,426 pkgs.

EGGS—Receipts for week, ... bbls.; do. last week 1,329 do. Just as soon as hot weather set in sellers lost no time in following the lower views of buyers, and if receipts were in any way unwieldy the drop in prices would be more marked. Fourth of July brings out some trade and dealers will use it to keep down stock

Near points, 16½@17c.; State and Pa., 15½@16½c.; Western, choice, 15c.; Canadian, 15@15½c.; second quality, 13@14¼c.

FLOUR.—The marked tendency to lower prices in wheat has had a positive effect upon flour and prices rule weak at the close.

No. 2, ₱ bbl., $3.00@3 60; State and Western superfine, $4 00@4 50. city mills extra, $6.25@6 50; Spring wheat do. $4.75@5.10; Spring XX and XXX, $5.25@7.00; patents, $6.00@8; Ohio round hoop shipping, $4.80@5.20; trade brands, $5.40@6.25; St. Louis extra, $4.90@5.50, do. double extra, $5.75@6 25; do. family, $6.40@7.25; South'n shipping, $5.30@5.60; do. XX and family, $6.25@7.50. Rye, $5.30@5.70. Corn-meal, Brandywine, $3.35@3.40; Western, $2 90@3.35.

Receipts of flour for week, 103,140 bbls.
Exports of flour, 64 450 bbls.

FRESH FRUITS.—Strawberries are not much of a feature: most of them arrive too soft to be attractive. Principal supply from Oswego quoted 6@9c. ₱ qt.; river Downings, 6@10c.; seedlings, 3@8c. Raspberries begin to arrive freely and will sell well when prices become popular. Antwerp caps 6@7c.; natives 3@4c.; Brandywines, 4@5c.; black Caps, 6@7c. ₱ qt. Whortleberries, $3@4 ₱ bush. Blackberries, Wilson, 14@16c.; wild, 5@6c. Cherries in good supply, but have to be sold quickly, as the weather is warm: fancy, 10@12c.; good to prime, 6@8c.; other, 3@5c.; a few Rochesters bring 6@8c. Currants dull: small, 4@5c.; Cherry, 7@8c. Peaches scarce and salable when at all in good order; Ga. ½-peck crates 50@75c.; do. ½-bush. do. $1.25@1.50; South Carolina, $3@4 ₱ bush. Ga. Wild Goose plums $2 ₱ ½ bush. Gooseberries, small, $1. Md. apples 50@75c. Fla., Ga. and Texas watermelons $35@40 ₱ 100. Peanuts active; Va. hand-picked, 4½@5c. ₱ lb.; fancy, 4¼@4½c; extra prime, 4¼@4¼c.; good to prime, 3½@4c.; shelled, 2½@3c.; pecans, 7@10c.

GRAIN.—With large crop estimates wheat has been declining most of the week. Deliveries have been large and large spot and other business have been settled for the end of the month at the new prices. Corn has held a good export situation: at the close prices favor buyers. Oats, as before, show the usual easy rates of Summer. Rye dull. Barley and malt quiet.

Wheat, Spring $1.05@1.24; do. No. 2 $1.21@1.23; do No. 3, $1.12@1 14; red Winter No. 2, $1.27½@1.28; red Winter $1.15@1.32 white Western and State $1.18@1.27. Rye, $1.01@1.08. Oats, white No. 1, 47c.; white No. 2, 44½@44½c.; white No. 3 43½@43c; mixed No. 1, 44½c; do, No. 2 44@44½c; do. No. 3 41@43c. Corn, West'n mixed 48@48½c.; do. No. 3 55@56c.; do. do. yellow 56@57c; do, do. white 57@60c; Southern yellow 57@59c.; do. white 57@62c.

Receipts for week, wheat, bush., 944 800; corn, do. 1,345,200; oats do. 312,200; rye, do. 3,647; malt, do. 63,700; rice pkgs. 831.

Exports for week, wheat, bush 1,167,850; corn, do. 1,000,000; oats, do. 3,703; rice, pkgs. 96.

HAY AND STRAW.—The market is slow and prices are low. Few buyers operate heavily or freely while the risk of Fourth of July combustibles exists. Quality continues to rule poor and good new crop will be hailed with satisfaction when it appears.

Choice retailing timothy hay 85@90c. ₱ 100 lbs.; second quality, 60@65c. do.; shipping 45@55c. do.; clover 40@50c; Long rye straw 80@90c. ₱ 100 lbs.; short do. 60@70c.; do. other grain, 45@50c. do.

HOPS.—The movement for all uses is very light, and there is no encouraging outlook at the moment. Few choice hops here. Cal. hops quoted 18@22c.; Wis. 15@22c.; State as follows:—

Crop of '80 choice,—@—c; good to prime 20@23c; fair to good, 18@20c, poor to fair, 13@16c; Eastern, 15@20c.; '79's, fair to prime, 12@15c.; olds, 4@12c.

Receipts for week, 733 bales.
Exports for week, 155 bales.

LEATHER.—The market is well sustained, showing no important change, and demand moderately active. The quotations are for

HEMLOCK SOLE.

	Buenos Ayres.	California.	Com, hide.
Light	23 @24	23 @24	22 @23
Middle	23½@27	24¼@26	23 @25
Heavy	24 @26	24½@25½	23 @25
Good damaged	22 @24	22 @23	21 @22
Poor damaged, all kinds			18 @21
Export and jobbing leather			25 @27

UNION TANNED.

Slaughter.			
Light backs	37@39	Middle crop	34@35
Middle backs	38@40	Heavy crop	35@ 6
Light crop	33@34	Bellies	16@17½
Calcutta Buffalo—			
Light			20½@21
Middle			20½@21
Heavy			20 @—
Damaged			15 @19

MILK.—June has been a ruinous month for wholesale dealers and farmers or shippers have also suffered severe losses owing to the heavy supplies and light use. The average price at Harlem R. R. platform for commission milk $1.14 per can of 40 quarts with a range of $1@1.50.

POULTRY AND GAME—The weather has improved for the sale of chickens and prices are low enough to open a steady trade. Many will be wanted if the weather holds for steamboat and near-by watering ing place supplies. Turkeys have a fair sale. Choice Spring ducks have a good call and prime fowls sell well; in fact a scanty game market helps the trade in fine poultry to a marked degree.

Turkeys, choice ₱ lb 14@16c. coarse 12@13c; scalded, 12@13c.; Phila. Spring chickens 25@30c; New Jersey, 23@27c; fowls, Phila. d.-p. 16c.; N. J. d.-p. 13@14c.; do. scalded 14c. State and Western 13@14c; do. d.-p. 14@15c.; coarse 12@12½c.; roosters 8@9c; Ducks, Spring, 14@20c.; old 10@13c.; Squabs, white, ₱ doz. $2.50@2.75, do. dark, $1.50@2.

Supplies of live have exceeded wants and prices are easy.

Spring chickens prime ₱ lb 22@23c.; other 16@20c. Fowls, ₱ lb, 12@13c; roosters, 5@6c.; turkeys, 11@12c.; ducks, ₱ pair 40@50; geese, extra $1.75; other $1@$1.50 pigeons, 25@45c

Game is of no quantity account. The wild pigeon trade has been fairly supplied by the shooting matches, birds bringing $1.35@1.50; a few selected $2@2.25 ₱ doz. Eng. snipe, $2@2.50; Plover, $1.75@2 sand snipe 50c; frogs' legs 15@20c.

PROVISIONS.—Stocks are unimportant trading mainly of a speculative or "cornering" character, especially in lard. A fair export demand may be noted for pork.

RICE. Domestic quoted at 5 to 7¾c. common to choice.

SUGAR—

Hard sugars—crushed ₱ lb 10¼c; do. powdered 10¼c.; do granulated 10¼c; do. cut loaf 10¾c; confectioners' "A" 9¾c; coffee "A" standard 9¾@9¾c; do. off "A" 9¾@9.41c white extra "C" 9@9¾c; extra "C" 8¾@8¾c; "C" 8@8¾c; yellow 7¾@7¾c.

VEGETABLES.—Potatoes lower. Bermuda down to $2.50@3. All South-ern $1.50@2.50; for prime and 50@75c. for culls to fair. Old potatoes dull and weak bulk prices $1@1.20 per bbl. for double heads add 2 c. Long Island peas plenty. Garden truck sells well; quality now in buyers favor.

String beans L. I. ₱ bag $1.75@2; N'k.r'd ₱ ½ bbl cr. 75c, flat do 50c.; wax $1. Green peas, L. I., ₱ bag, 75c.@$1; cucumbers Norfolk, ₱ ½ bbl. crate, $2.25@2.50 Chas. $1@1.75; asparagus, Oyster Bay ₱ doz., $1.50@2. Shrewsbury $1.50@1.75; onions, Md. ₱ bbl. $2.75@3; Bermuda ₱ crate, 25@75c. Tomatoes Sav. fancy $2@2.50. Chas & Sav. ₱ crate 50@$1; Fla. ₱ bushel crate $1@1.25; squash Norfolk ₱ crate 50@$1; radishes L. I. 50@75c; cabbages, Norfolk ₱ bbl. 75c.@$1; do. L. I., ₱ 100, $2.50@4 beets, L. I. ₱100 bchs., $1@1 50 turnips Rus-ia ₱ bbl. 75c.@$1; white turnips L. I. ₱ 100 bchs $2@3 rhubarb do, 50@75c; spinach L. I. ₱ bbl. 75c@$1; cauliflower, ₱ doz., 50c@$2.

WOOL.—The contest is warm in the endeavor to secure stock and with prices relatively higher in the country than here; quotations keep their recent upward movement.

LIVE STOCK MARKETS.

NEW YORK, Saturday July 2, 1881

BEEVES.—Receipts for the week 12 530 head; do last week 13,905 do. The jubilant feeling that pervades most business circles on the eve of a holiday extends to the cattle yards. Butchers, who are proverbially a patriotic class, seemed determined that their "Fourth" should not be broken into by a visit to the yards on Monday next, and good-naturedly cleared out the stock early yesterday without haggling over the advanced prices. Receipts have been light and the fact favored the stronger views of sellers. The transactions included a car-load of pure Texans at 8¾c. to dress 55 lbs.; 18 car-loads, Ky., O. and Ill stillers 9¾@11¾c., to dress 56 lbs.; 3 cars Col. do. 10¾c., 50c. added. Poor to choice native steers 9¾@12c., to dress 56@57 lbs. Small bulls 3½@4c. live weight; 4½@5c. for a better grade.

VEAL CALVES.—Market dull; stock larger than wanted.

Live N. J. prime to choice, 7¾@7¾c; do, State, 7¾@7¾c.; poor to good 5½@7¼c.; Mt. Hollys, 6¾@7¾c.; buttermilk, 3¾@3¾c.; up-river, dressed, 10@11¾c

MILCH COWS.—With small receipts a better range is ruling: $30@55 per head has been easily quoted the market closing strong.

SHEEP AND LAMBS.—Receipts for the week 26,237 head do. last week, 32,928 do. With light receipts the market has run well at good prices. Common to prime sheep 4½@5c; Va. and Ky. lambs 6¾@8¾, ₱ lb; Penn, 9.30@9 50 ₱ 100 lbs.; N. J. 9¾@9¾c. ₱ lb.

SWINE.—Receipts for the week 23 253 head; do. last week 25,371 do. Live nominal at $5 30@6 30 per 100 lbs. City dressed State, 8@8½c.; do. Western 8@8¼c.

We have handled several brands of salt and have finally settled upon the Higgin's Eureka Salt as the best. We use it in all our creameries and sell it to our trade. J. H. BROWN.

Wellsville, N. Y., March 2, 1881.

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FARMING FOR BOYS AND GIRLS—NO. 27.

HENRY STEWART.

Value of Different Foods.

MARKET prices are based on real values in a great measure. If a ton of straw sells for five dollars and a ton of hay for ten, it is because the hay is twice as good for feeding as the straw. But if a dollar's worth of corn-meal be added to a ton of straw and the two are fed in place of a ton of hay, and the hay is sold, there is a clear profit of four dollars. This is an example of the whole business of selecting and using foods for cattle. A great number of experiments have been made to discover the real value of different kinds of cattle food and many years of study have been given to this subject by chemists, so that we have in a small compass the results of all these years of labor. In the following table are given the money values of the different substances named as compared with good hay at one dollar per 100 pounds. That is, hay is worth one dollar per 100 pounds, or one cent a pound, or twenty dollars a ton, to feed, when each of the other substances is worth the sum set against it in the column:—

Table of the Values of Feeding Substances.

Kind of fodder.	Value.
GREEN FODDER.	
Corn-stalks	$0 20
Oats	23
Red Clover	26
Peas in blossom	27
Rye	31
Hungarian Grass	31
Mixed grass	34
Timothy Grass	42
DRY FODDER.	
Poor hay	74
Good hay	1 00
Hungarian hay	1 04
Rye fodder	1 15
Peas cut in bloom	1 21
Best clover hay	1 39
STRAW.	
Rye	55
Wheat	57
Corn-stalks	61
Oat	69
Pea	69
ROOTS.	
Turnips	16
Beets	22
Carrots	24
Ruta-bagas	24
Parsnips	28
Sugar beets	30
Potatoes	46
GRAINS.	
Buckwheat	1 19
Oats	1 63
Rye	1 68
Corn	1 73
Peas	2 25
Beans	2 36
Cotton seed	3 24
Linseed	3 85
MANUFACTURED PRODUCTS.	
Whey	18
Corn-starch waste	24
Buttermilk	35
Skim milk	36
Brewers' grains	47
Corn bran	1 42
Wheat bran	1 63
Rye bran	1 73
Whole cotton-seed cake	1 75
Buckwheat bran	1 79
Rice meal	1 80
Linseed cake meal	2 51
Hulled cotton-seed cake	3 22

This long list is worth studying, and is very useful. From it we can learn the actual value to us of any one of the substances mentioned, and by choosing those which have a higher value in this list and a lower value in the market, money can be saved. And money saved is twice earned, because we earn it without working for it, and have it, while we have the profit from our labor at the same time. Let us suppose a case in which we can turn this list to a useful purpose. A farmer's boy is told to pour out a quantity of buttermilk where it will be wasted and lost. He dislikes to do this, and, looking over the list, he sees it is worth 35 cents per 100 pounds, or three-quarters of a cent a quart. He therefore invests $2 in buying a small pig, and instead of wasting the milk in the future he puts it into a barrel for his pig. He looks over the list again for something to mix with this milk and sees wheat bran is worth $1 63 per 100 pounds. He can buy 100 pounds for a dollar, and he gets a bag of it and feeds it to his pig with the waste milk; 100 quarts of buttermilk and 50 pounds of bran will feed his pig for a month, and in that time it will gain 30 or 40 pounds in weight. The food is worth $1.20 and the pig is worth $2. If he buys the food he has made a profit of 80 cents for his labor, and has a quantity of manure that is worth 10 or 20 cents besides. Here is the benefit of knowing something about the value of feeding substances, and it is a knowledge upon which the business of farming depends more than farmers are apt to believe.

THE SPINED SOLDIER BUG.
(Arma Spinosa.)

As destructive as most of the insects are to vegetation, there are some, such as the Soldier Bug, the Fiery Ground Beetle (Calosama calidum), the Camel Cricket (Mantis Carolina), the Lace-wing Fly (Chrysopa) and the Ladybird (Hippodamia maculata), which are the horticulturists' friends and should receive their protection. My young friends have probably often seen the Soldier Bug, shown at Fig. 333. It is a dull olive, marked with yellow and is frequently mistaken for the squash bug from which it may be distinguished by the opaque, brown streak at the tip of its wing cases. Now, boys, don't kill the little fellow the next time you see him! Let him alone! He is said to have saved thousands of dollars to the country by stabbing with his little "sword" countless hosts of our great enemy, the Potato Beetle. Its sting or beak lies close under its body when not in use, but when it attacks its prey it pierces the body, sucks out the juices and throws away the empty skin. We can afford to put up with its somewhat unpleasant odor when we consider its services in destroying our insect enemies. We have all read of the wonderful strength of the lion but here we have an illustration of a little insect whose muscular power is, proportionate to its size, much greater than that of the lion. The Soldier Bug can run nimbly along bearing on its outstretched

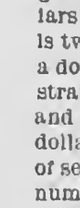

FIG. 333.

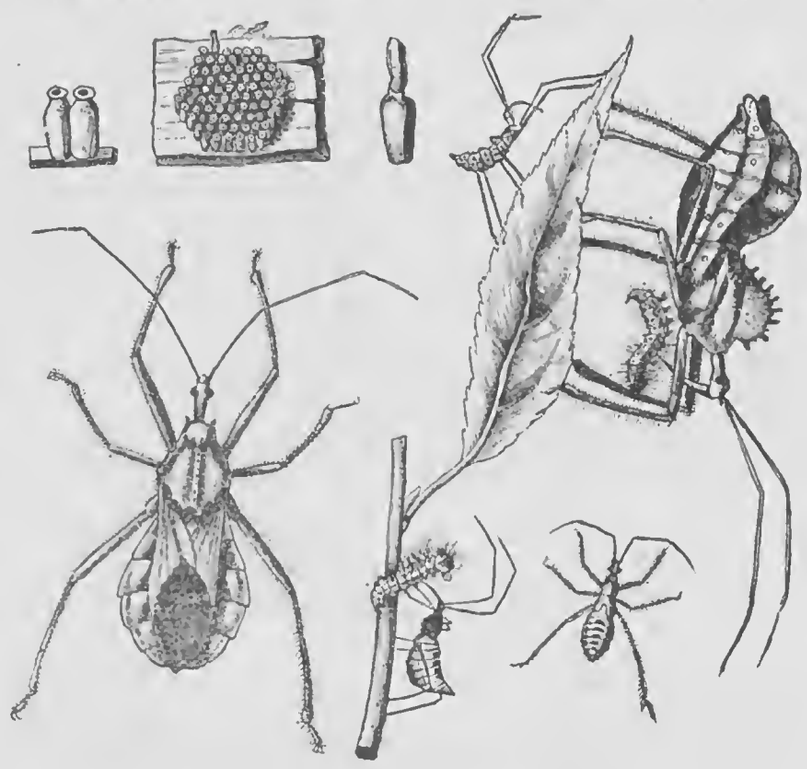

FIG. 334.

beak the larva of a potato beetle four times its own size.

THE DEVIL'S HORSE (Prionotus cristatus) Fig. 334 is another beneficial insect, though its name would lead us to think differently. In the cut at the left this insect is represented, just above it is a cluster of the eggs, which are deposited on the bark of trees, on fence rails, etc., each when separated, presenting the appearance of a little flask as shown at the left hand, upper corner, while on the right the insect is represented in the act of stinging a cotton worm. They destroy large numbers of plant lice, caterpillars and, in fact, any other insects they can overpower. They insert their proboscis or sting into the insect and then inject into the wound a powerful poisonous fluid. The victim dies, they suck the juice out and drop the empty skin. It is said that a dozen or so of these insects placed near the nests of caterpillars which infest our fruit trees will destroy almost every caterpillar in a short time. They do not object to stinging persons also, and the adults need to be "handled with care." Their sting is much more powerful than that of the wasp or hornet. The adult insect is of a gray color and on the crest of the thorax are nine cog-like protuberances or teeth which have given it the name—nine-pronged wheel-bug (Reduvius novenarius).

So we see that some of the little insects which we are apt to tread upon heedlessly, have been created for a good purpose and that, too, to assist the farmer and gardener in their work.

UNCLE MARK.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—Since you published my letter about our big chimney I have been receiving letters from different persons asking me to tell them more about it, and one wanted us to lend him the old history that I wrote about, and wanted us to send it to him in Kentucky so that he may read the particulars about Captain John Smith, who was one of his ancestors; but we cannot spare the book, as it is quite torn now, and is only valuable on account of its giving a more particular account of this place (Werewocomica) and about Captain Smith sending masons to build a chimney for Powhattan. I do not think our friend could gain any more information about Captain Smith from that than he could from any History of the United States. If our friends, who seem interested, will come on to Yorktown next October to the Centennial Celebration, they can take a sail across the river from there to this place, and not only see the chimney, but they may have the pleasure of eating some of the oysters from the ancient Werewocomica Bay that may be cooked in the fire-place of that same old chimney. We will be pleased to see all of our RURAL friends here at that time. I expect brother Bernard and myself will be large enough by that time to wait on you all while you are eating.

Hayes' Store, Va. CLAUDE JEVIN.

UNCLE MARK:—I received the seeds which you sent and thank you for them. I did not expect any this Spring, as I had neglected to give any report of my last year's garden. My seeds all came up and did nicely. I had some of my China Pink Seed left and planted them in the hot-bed this Spring; some of them have come up. We have two callas, two varieties of geraniums, two of double petunias, oxalis, Chinese Primroses, pink and white, striped carnation, and othonna in bloom and others budded. My calla has not done very well this Winter; we think it is in too large a jar. We have six windows occupied with flowers. I have a little brother five years old and a little sister two years and a half old. They both like flowers. Willie says he is going to have a garden this year.

EDITH A. HUNT.

Chagrin Falls, Ohio.

Ague, biliousness, drowsiness, jaundice and rheumatism, Hop Bitters removes easily.—*Adv.*

The Puzzler.

HIDDEN FLOWERS.

1. In the car Butus took ill.
2. See in our old bachelor's button-hole a moss-rose-bud.
3. Bob, oxen are very strong.
4. I can eat apple butter cup after cup.
5. How does ipecac act usually.
6. Is a camel liable to balk.
7. For fun, spell "troches" trojas; mine own.
8. In the ear nationality showed itself.
9. Bub rambled off.
10. I saw Grace land in England.
11. The porch is on fire.
12. Call Alf I, lying down, could not.
13. Poor Clem! a tissue grew over of his eye.
14. Cori and Erni are both sick.
15. Perci pressed her to heart.
16. The dog bit the cow's lip
17. Dan, Dello never said so.
18. Huldah, "Hason" is obsolete.
19. We must forget men—Otho said.
20. How prim Rosella has become.
21. You've had a frolic, Henry.
22. Open the wood bin, Essie.
23. Into this port Lilac came with his ship.

☞ Answer in two weeks. L. O.

CROSS-WORD ENIGMA.

Composed of five letters.

My first is in flames, but not in smoke;
My second is in pine, but not in oak;
My third is in play, but not in joke;
My fourth is in fly, but not in bug;
My fifth is in bottle, but not in jug.
My whole is a fruit, but is never dug.

☞ Answer in two weeks.

DIAMOND PUZZLE.

1, A letter; 2, to entangle; 3, associates; 4, substance; 5, a small singing bird; 6, to trespass; 7, letter. "GUS."

☞ Answer in two weeks.

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Miscellaneous.

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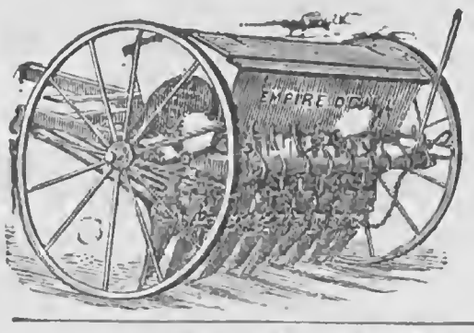

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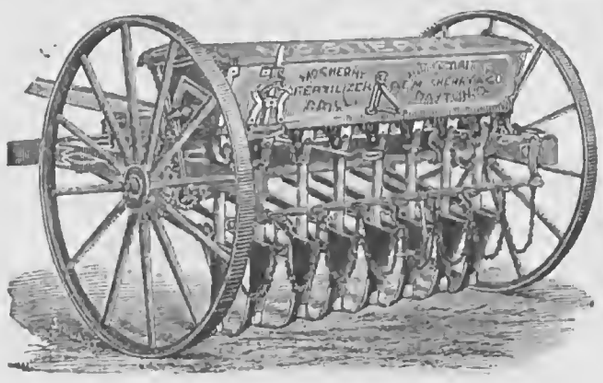

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D. E. McSHERRY & CO., Dayton, Ohio, U. S. A.

PERSONAL ITEMS.

Hon. J. C. Pope, Canadian Minister of Marine and Fisheries, is reported to be so seriously ill that his recovery is not expected.

Ex-Gov. Bishop, of Ohio, brought suit against the Gazette, of Cincinnati, for libel, in accusing him of sharp practice in the manipulation of several State Commissions in the interest of his party. The jury reduces the amount claimed by the ex-Governor from $60,000 to $500.

Mr. Henry G. Vennor, the weather prophet, has a handsome mustache; he parts his hair in the middle, and he is forty-one years old. His early life in Canada was spent in poverty. In the University of Montreal he is a professor, and he is the author of a book called "Our Birds of Prey."

Prince Alessandro Torlonia of Rome believes in practical charity. He keeps two doctors especially to attend to poor families who have a horror of hospitals; he entirely provides for 300 children, and educates 350 more; and he has established an asylum for old people and a hospital for the blind. Every day he gives 120 dishes of soup, with bread and meat. It is said that no one has ever applied to him in vain.

[Nashville Daily News.]

Terrible.

Such is the term Mr. C. W. Purcell, of the National Stock Yards, Chicago, Ill., applies to his sufferings. He says: "I, for one, wish to speak a word of praise for St. Jacobs Oil. I suffered with a pain in my shoulder and arm for some six months and at times it was terrible. One bottle of St. Jacobs Oil, however, cured me thoroughly." —*Adv.*

Miscellaneous.

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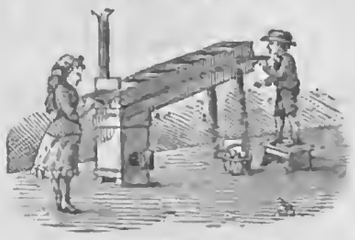

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New Publications.

THE CYCLOPÆDIA WAR.

The month of July, 1881, witnesses the completion of the larges and most important literary work this country and the century have seen. It is the Library of Universal Knowledge, large type edition in 15 large octavo volumes, containg 10 per cent. more matter than Appleton's Cyclopædia, at less than one-fifth its cost, and 20 per cent. more than Johnson's Cyclopædia, at a little more than one-fourth its cost.

Chambers's Encyclopædia, which forms the basis of the Library of Universal Knowledge (the last London edition of 1880 being reprinted verbatim as a portion of its contents), is the laborious product of the ripest British and European scholarship. It has developed through a century of Cyclopædia making, its various editions having been many times revised, in successive years, till it has come to be universally recognized, by those competent to judge, as standing at the very front of great aggregations of knowledge, and better adapted than any other Cyclopædia for popular use. It contains such full and important information as the ordinary reader, or the careful student, is likely to seek, upon about 2,500 subjects, in every department of human knowledge. Chambers's Encyclopædia, however, is a foreign production, edited and published for a foreign market, and could not be expected to give as much prominence to American topics as American readers might desire. To supply these and other deficiencies a large corps of American editors and writers have added important articles upon about 15,000 topics, covering the entire field of human knowledge, bringing the whole number of titles under one alphabetical arrangement to about 40,000. Thus the work is thoroughly Americanized, and the Library of Universal Knowledge becomes at once the latest and most complete Encyclopædia in the field, at a mere fraction of the cost of any similar work which has preceded it.

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Price of the 15 volumes, complete, in extra cloth binding, $15.00. In half Russia, sprinkled edges, $20.00. In half Russia, gilt top, $22 50. In full library sheep, marbled edges, $25.00.

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The names of the subscribers must in every case be forwarded to us. The first $5,000 named will be distributed as specified as rapidly as the orders are received, and the remaining $5,000 will be distributed promptly on Sept. 1st. The names of the persons receiving these rewards will be printed, with the amounts received by each, and the list sent to all the club agents entering into competition for them. Subscribers must be *actual purchasers for individual use*, to entitle the club agent to the rewards under this offer, and not booksellers or agents who buy to sell again.

Persons desiring to raise clubs may send to us at once for sample volumes, if they desire, in the various styles of binding, paying us 75 cents for the volume in cloth, $1.00 for the volume in half Russia, sprinkled edges, and $1.25 for the volume in library sheep. Orders for the full sets will be filled by us with the utmost promptness, within our ability to manufacture, beginning not later than July 10th, orders being filled in the order of their receipt by us.

Specimen pages of the "Library of Universal Knowledge" will be sent free upon request. Descriptive catalogue of our large list of standard publications, with terms to clubs, and illustrated pamphlet describing book-making and type-setting by steam, will be sent upon application. Remit by bank draft, money order, registered letter, or by express. Fractions of $1.00 may be sent in postage-stamps.

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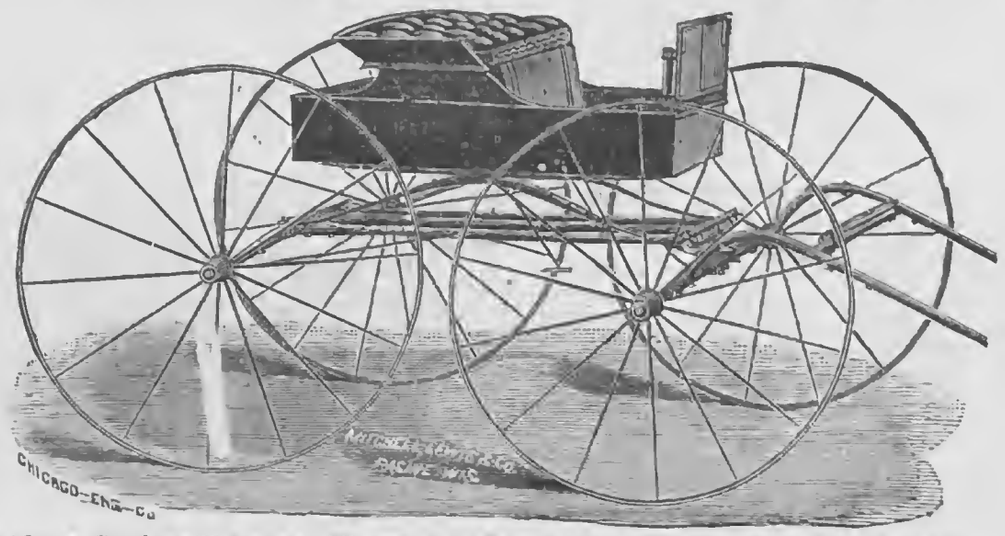

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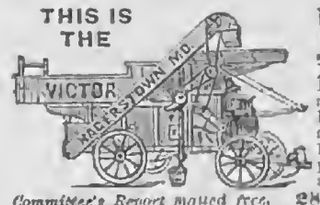

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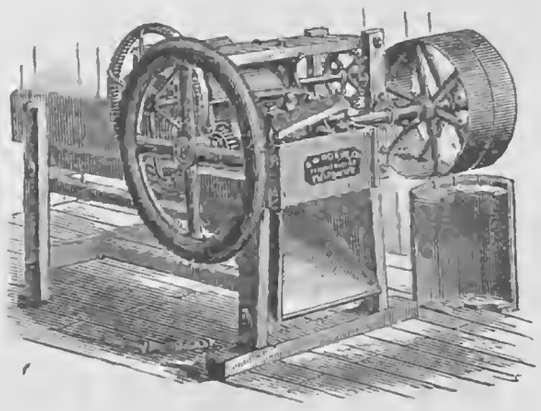

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It is arranged for either two or three horses, and will turn a square corner without raising the Plow. It is the best Plow Sulky in the market, and contains advantages not found in any other.

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FOR SOWING WHEAT, RYE, BARLEY, in fallow Ground or in standing corn.

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Humorous.

A THREE YEAR old discovered the neighbor's hens in her yard scratching. In a most indignant tone she reported to her mother that Mr. Smith's hens were "wiping their feet on our grass."—Newport News.

"WHAT is the meaning of the word tantalizing?" asked the teacher. "Please, marm," spoke up little Johnny Holcomb. "it means a circus procession passing the school house and the scholars not allowed to look out."

"THE milk is pretty blue, landlord." "Don't understand it, sir; my cow is well fed, I milk her myself, and I don't put water in the milk." "Well, the weather has been quite wet, and I reckon the cow needs shingling; that's about it."

LAST Summer she was eating green corn by gnawing it from a cob, when her teeth became entangled with a corn silk. "Oh dear!" said she impatiently, "I wish when they get the corn made they would pull out the basting-threads."—Live Stock Record.

A GENTLEMAN in New York met a rather "uncertain" acquaintance the other day, when the latter said: "I'm a little short, and would like to ask you a conundrum in mental arithmetic." "Proceed," observed the gentleman. "Well," said the "short" man, "suppose you had ten dollars in your pocket, and I should ask you for five dollars, how much would remain?" "Ten dollars," was the prompt answer.

Boils, pimples, freckles, rough skin, eruptions, impure blood, Hop Bitters cure.—*Adv.*

THE FORCE OF EXAMPLE.

SCENE—Nurse bringing in a small boy (crying) to his mother.
Nurse—"Please 'm isn't master Tommy to go to bed now?"
Tommy—"No, ma, I don't want to! We're all playing at Congress in the nursery, and we've arranged to have an all night sitting, and I'm in charge of the bill. Boohoo!"

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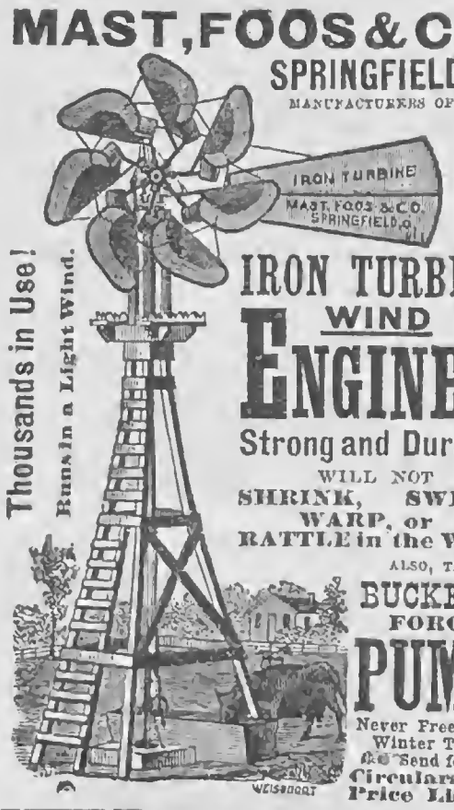

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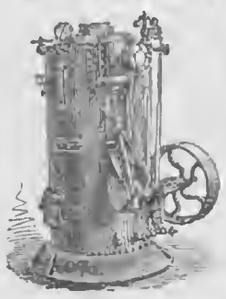

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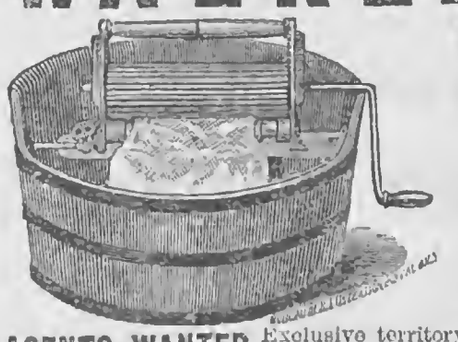

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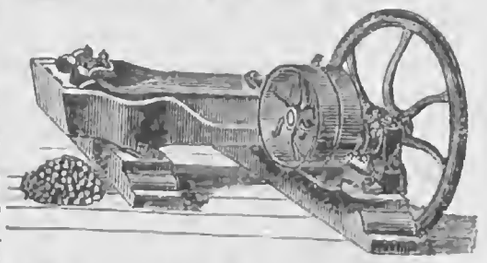

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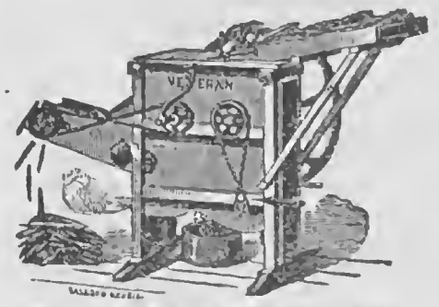

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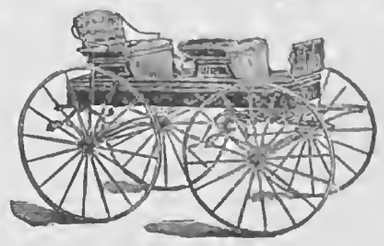

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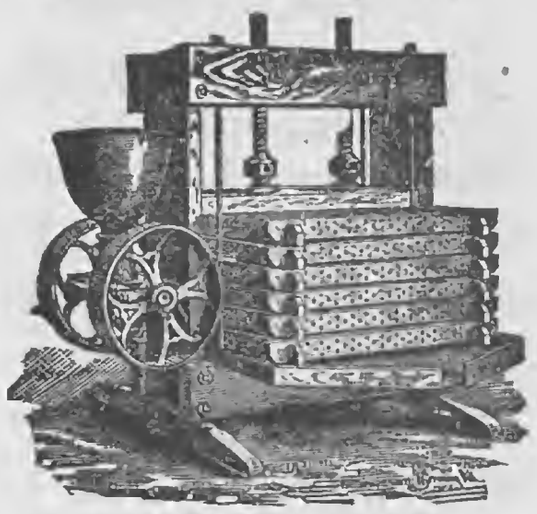

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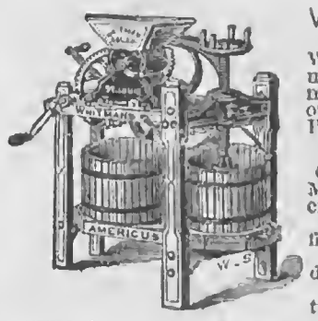

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL.—No. 1642.} NEW YORK, JULY 16, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

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Pomological.

A HYBRID BETWEEN A PEAR AND AN APPLE. (?)

A considerable time ago we received a letter from Mr. Hubbard accompanying a box of queer-looking apples, which he explained were, as he believed, hybrids between a pear and an apple. Mr. Hubbard's letter lead to a further correspondence. With this note of explanation the following reply explains itself:

MASON CO., MICH.

"I can do no better in reply to your questions, than by stating what I know respecting the origin of the fruit. My note book runs thus, 'May 20, 1864, one Swaar blossomed; anthers carefully removed; replaced with indigenous crab (*Pyrus coronaria*) [prophetic note—*sure failure.*]. Oct. 17, 1864, picked one apple from experimental tree having "plump seeds." Of these—all of which were placed in the ground—one germinated and survived, from which, as soon as was practicable, a bud was taken and inserted in the bough of a bearing tree. In the Spring of 1879, a few bunches of fruit buds were observed upon this, and on their opening, their anthers were soon removed and those of a pear which was labeled Des Nonnes, were substituted. The bough thus treated matured several apples having nearly the form and the flavor of the Swaar, though slightly acid and astringent, and of a dull, greenish color. Some of this fruit contained plump seeds, which were planted and the resulting seedlings are now in the Hubbard orchard, and some of them have borne fruit, the little stranger which I now send you being from one of them.

And now friend, Editor, I shall not censure your readers for criticising this report, and even insinuating that the fruit is the common apple grown in ingeniously contrived molds—some nutmeg invention designed to deceive. I shall not respond cynically if they pronounce the whole thing a myth and deny the existence of such a cross or form of fruit. Were our positions reversed I might do the same thing. You will observe in some of these apples a rudimentary neck, also a deflection in the stem, as if the supporting juices had discovered their unnatural mission and sought by revulsive energy to change their ultimate destiny. JOSEPH HUBBARD.

In another letter Mr. Hubbard writes us that the tree is upright, spreading and a strong grower. The leaves are long, narrow, pendulous, finely serrate, of a light green color, with long, slender petioles. The fruit, as will be seen, is roundish-ovate, having neither basin nor cavity. The stem is long and rather slender, usually with a projection as if, in part, two stems were joined together. The color is a bright straw, splashed or blotched with a brilliant red. The flesh is white, fine-grained, with a rich flavor, somewhat like that of the Swaar and an aroma more powerful than that of any other apple we have seen. One apple perfumes a room in five minutes. The skin is hard, tough, and thick.

Horticultural.

THE SMALL-FRUIT NUMBER.

T. T. LYON.

RE-READING my remark respecting Crescent Seedling and Wilson Strawberries, that "neither can ever become popular with the best growers," and considering it in the light of Dr. Hoskins's remarks upon these varieties in the same number, it occurs to me that I may have said too little to convey just the idea intended; which is that the most thoroughly effective culture and handling, resulting in offering the product in the best markets and in the best condition, can never with either the Wilson or the Crescent yield as desirable and profitable results as may, with similar treatment, be realized from the use of some other varieties.

The introducers of novelties seem too often to entertain the notion that it is necessary to attach the word seedling to the names of their productions, as though they could, by possibility, be any thing else than seedlings. I take occasion to protest against the practice as always cumbrous and unnecessary, and to urge that we be vouchsafed the warrant of the horticultural authorities of the world for lopping it off whenever and wherever we shall find it attached to the name of plant, tree or fruit. Instead of doing this haltingly and in partial defiance of *law*, we need the highest authority for transmuting Wilson's Albany Seedling and Parmelee's Crescent Seedling, into simple Wilson and Crescent; and even the *command of such authority* that it be done.

Gen. Wm. H. Noble remarks, "No man should market fruit who does not make it a business." In such case what would become of the small town and village markets, the capacity of which would fail to afford to any one a "business"? What, too, would become of the notably New England idea of mixed farming, with its "several strings for the bow," and its desirable facilities for the production of manures and the easier renewal of the fertility of the orchard or garden soils? I fancy, also, that the General will find it a bootless task, trying to persuade those of us who can grow Concord, Delaware, Salem, Wilder and even Rebeccas and Ionas, to train our palates to a liking for Clintons.

Is it not about time to look the question of the hardiness of the various berry plants fairly in the face? Truly the Cuthbert may be said to be more hardy than the Herstine and the Brinckle's Orange; but why not lay down the inflexible law of nature that no raspberry, black-cap or blackberry yet produced, *or ever likely to be*, is strictly hardy; that they are *brambles* growing naturally in sheltered localities, and that even our hardiest natives will fail when subjected to the unchecked influence of sun and wind in a severe Winter. Better think less of hardiness and more of nature's requirement—shelter.

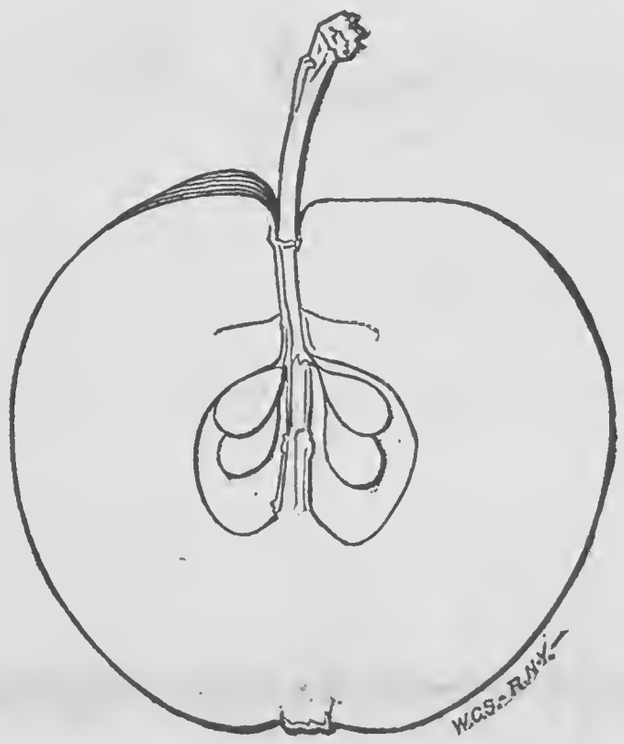
"What's in a name!" The person who christened his novelty Lost Rubies, should at once secure a patent on his discovery. So suggestive a name is pretty sure to attract attention aside from the quality of the fruit. I only hope we may not be disappointed in its quality and appearance.

It is refreshing to see the name of the honored and aged president of the American Pomological Society as a contributor to the horticultural lore of the day. I wish he might yet live a hundred years to contribute to the advancement of the great work in the development of which he has long been so important a factor.

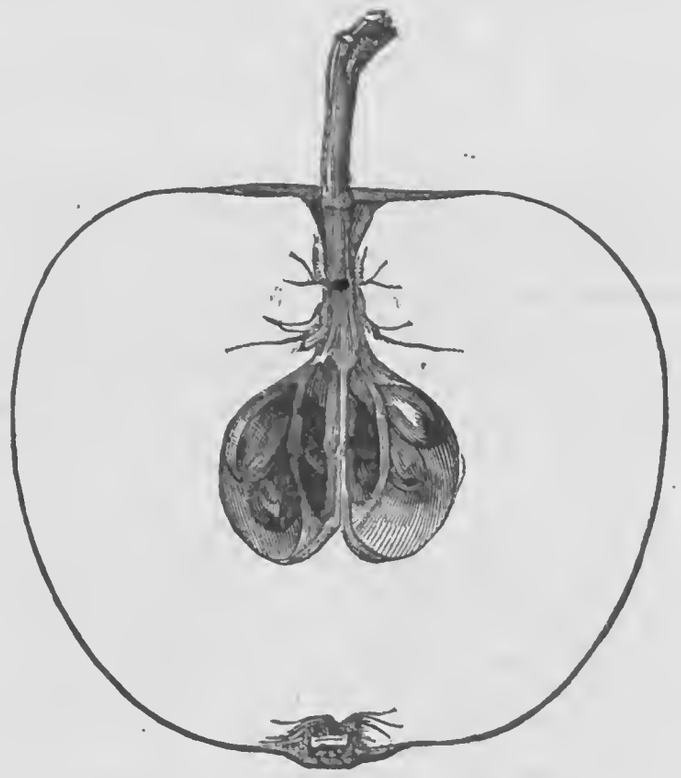
Neither the figures of Bidwell nor Shirts strawberries compare well with specimens as grown here, and as shown at our Michigan exhibitions; and I think I may be warranted in stating the same respecting the Marvin also. I am quite at a loss to understand this, when I consider that the Bidwell, especially, is found to be so highly successful with Eastern growers.

I was greatly surprised (as I fancy were many RURAL readers) at the apparent productiveness of Fay's Prolific Currant, as illustrated in the RURAL some months since. I would have hardly thought it credible but for the fact that the editor seemed to make himself responsible for its truthfulness. We are assured by the person who controls it that no plants have been disseminated, and yet I hear of its existence (or at least something under that name and claiming identity) in two or more distinct localities. It would perhaps be surprising that so pretentious a variety should have remained utterly unknown and in the hands of a single person for from 15 to 30 years.

[As to Fay's Prolific Currant, we make ourselves responsible only to the extent of producing accurately a portrait of one of the branches of fruit sent to us by Mr. Josselyn.—EDS.]



A HYBRID (?) BETWEEN AN APPLE AND PEAR—From Life—FIG. 335.



SHOWING VARIATONS IN FORM.—FIG. 336.

RURALISMS

THE crop of blackberries, in this vicinity at least, will not equal the great early promise, though there will still be plenty. The heavy rains just at the time the fruit was setting prevented perfect fertilization, and in some cases seem to have prevented it altogether. I find, on examination, that where the flowers were protected from the rain by leaves immediately above them the fruit is abundant and well formed; but where, on the contrary, the flowers were fully exposed many of them are either entirely blasted or have set very imperfect fruit. I should like to know if others have observed the same thing, as some interesting deductions may be drawn from it.

I HAVE seen a number of disk cultivators in use this season in corn and potatoes. I have not used one myself. It seems to me, however, that such a form of cultivator may be a very good thing among young plants, but I should suppose its use, especially among corn after it has attained to some size, would be very likely to destroy the roots, and so prove to be, in a measure, injurious rather than beneficial. I shall have occasion to see it many times during the season, and shall watch it with interest. An expression of opinion by such of the readers of the RURAL as have used it would be useful.

[We, for our part, should not use it in this way. Editors.]

IN the Spring I recommended the use of a lime and soot puddle for cabbage plants to protect them from the attacks of a certain maggot. In going about I have seen cases where it has been tried by some of the RURAL family, and the results were such as to leave

no donbt of its vaine. I kept my peace, and enjoyed a quiet satisfaction.

THE Lincoln Strawberry, on the gronnds of Mr. Peter Henderson, bore a splendid crop of large berries this season. When suited in soil and season, the Lincoln is probably the best of all the very large berries. It is the largest berry I have ever grown.

SPEAKING of large strawberries, the Shirts must take its place among them. It is not only a large, but a good berry. It is only just now, however, (June 25th,) ripening with me, and I will speak of it again. I may say, in this connection, that another new berry was proposed to be called Crinoline, bnt the name, I believe, has very properly been dropped. Shirts is the name of the gentleman who raised the berry so namcd, and, therefore, is all well enough, though sadly provocative to the punning propensity.

I AM glad to find that the editor of the London Garden is of my opinion, that Exochorda grandiflora is one of the very finest white flowering shrubs in cultivation. He calls it the Pearl Bnsh, and it certainly is a pearl among bushes. It seems to be rare also in England, and from the same cause that obtains here, the difficulty of propagating it, which difficulty, as I have before said, nurserymen onght to overcome. The plant is worth having at almost any price.

IN my allnsion to Mr. Samuel Allen, I said he was nearly ninety years of age; but I would have been nearer the truth if I had said nearly eighty. After mnch thinking I can remember what misled me, which was nothing less than one of the many humorous jokes of the late Mayor Harper. I might have passed the matter over as a typographical blunder, bnt the poor priuter has enough to bear; besides, it is my habit always to acknowledge an error when I make one.

IN putting out celery plants it is a very common practice in the garden to shade them with boards or otherwise. My practice for many years has been either to pnddle them before planting, or to give them a thorongh soaking immediately after it, and I have always found the plants to do better than when shaded. If planted dnring or just after a good rain, the plants will take care of themselves. Where it can be done as well as not, especially during dry weather, it is a good plan to pnt the plants out in the afternoon rather than in the morning. The night affords them time to recover in a great measnre from the shock of removal.

HORTICOLA.

Floricultural.

THE ROSE-COLORED WEIGELA.

TO THE late Mr. Robert Fortnne we are indebted for very many of onr ornamental flowering shrubs, and among the finest of them, and one that should be found well grown by all who admire the beantiful, is the Rose-colored Weigela—Weigela rosea. A large specimen, eight feet high and fifteen feet in circnmference, is just now (June 9th) in full bloom, and is a "blaze of beanty," if I may be permitted to nse such a term. As the RURAL NEW-YORKER is a journal for the suburban home as well as for the farm, I think a few words respecting this charming shrub would not be out of place and might, perhaps, be of interest to some of its numerous readers. I would not wish to describe, or to ask any one of my readers to plant a tree or shrnb that would not prove perfectly satisfactory in all respects, but I do know that this is a shrub that fully deserves all that can be said in its praise. It is too often seen in a half-dead or half-starved condition, and in this state no idea can be formed of its superb beauty.

The Weigela, or Diervilla, rosea is a deciduous shrnb growing about five feet high, of erect, compact growth with opposite, elliptical, ovate leaves, producing its large rose-colored, funnel-shaped flowers in large and graceful clusters from the axils of the leaves and the ends of the branches, in color varying from a pale rose to a deep pink. It belongs to the Natural Order, Caprifollaceæ, and was introduced from China by Mr. Fortune, who found it growing in a mandarin's garden on the Island of Chusan. Mr. Fortune also said that it was unknown in the southern provinces of China, and is not met with in the Chinese hills in a wild state. It is therefore just possible that it may have been originally introduced into China from Japan. This, however, is only conjecture. It first flowered in England in April, 1849.

Although it is a shrub of the easiest cultivation, it requires some attention to grow it to perfection, and this attention should be given to enable it to prodnce satisfactory results. To grow it to perfection it should be given a deep, rich soil. A yearly dressing of well rotted leaf mold, or manure will answer if the mold cannot be obtained, and if the manure can be forked nnder so much the better.

It shonld not be cut severely back so as to resemble a bundle of sticks, bnt several strong shoots shonld be chosen for leaders. These will also throw out other shoots from different places, and when the plant comes into bloom, will bend to the ground from the weight of the large clusters of beautiful flowers. As before said, the soil mnst be deep and rich, and if not so naturally, it mnst be made so. This is a most essential point in the culture of this plant. After the flowering season is over, cut out all weak shoots and at the same time cut the plants back into shape. If the leaders have a tendency to grow too rank, pinch them back so as to keep the plants in proper shape, but do not cut the plants back again until the flowering season is over.

The Weigela can also be grown as a standard shrub by selecting one of the strongest shoots, fastening it to a stout stake so as to keep it erect and also to prevent it from being broken off while young. As soon as it reaches the desired hight, pinch back the shoot and remove all the other shoots excepting those at the top. As soon as those top shoots are five inches long, cut them back to three inches and continue this process for one season. After the second season the shoots will require to be pinched back occasionally during the season of growth so as to keep the plants in good shape. Care must also be taken to remove all suckers as soon as they are noticed; thus grown the Weigela will prove to be peculiarly attractive and it will also admit of the grass underneath being cut by the mower. Propagation is effected by division of the plants, also by cuttings of the half-ripened wood, the latter method producing the strongest and best plants; but strong and healthy plants can be cheaply procured from any nurseryman or florist.

CHAS. E. PARNELL.

Queens Co., L. I., N. Y.

The Rough-Leaved Deutzia.

I desire to call the attention of the readers of the RURAL NEW-YORKER to the great value of the Rough-leaved Deutzia (Deutzia scabra) as a desirable flowering ornamental shrub, and as I do not think it is as extensively cultivated as its merits entitle it to be, a few remarks on its culture, etc., may prove of interest. During the last weeks of June we have not a very extensive variety of flowering shrubs to choose from, so that all shrubs flowering about that time should be known to all lovers of the beautiful. The Deutzia scabra is a native of Japan whence it was introduced in 1833. When properly grown it forms an erect, bushy shrub, growing from seven to twelve feet high with ovate, acute, serrate, rough, opposite, dark-green leaves, its beautiful white flowers in dense clusters from the wood of the previous season's growth. It is a shrub of very easy culture, thriving in ordinary garden soil with but little care and attention; but to grow it to perfection it is necessary that the soil should be both rich and deep. A yearly dressing of well rotted manure or leaf mold should be given it. After the flowering season is over, cut out all weak and straggling shoots, also pinch back all those shoots that show a tendency to grow out of place. This is all the pruning that is required. If the plant becomes too large it can be cut severely back during the Winter season, or after it is through flowering; but I would not advise any one to adopt this plan unless it is absolutely necessary. Propagation is effected by cuttings.

Queens Co., L. I. C. E. P.

Farm Economy.

CLOVER AS A PREPARATION FOR WHEAT.

PROFESSOR G. C. CALDWELL.

IT IS universally acknowledged that clover before wheat leaves the soil in a better condition for wheat than wheat before wheat; but it is also true that wheat requires much assimilable nitrogen in the soil for a paying crop, while in a crop of clover a much larger quantity of nitrogen is carried from the field than in a crop of wheat. This looks very much like eating our cake and having it too, which we have been taught from childhood up to be an impossibility. Can the curious fact be explained, or do apparently impossible things happen in the ordinary course of nature?

It is customary to account for this relation of the two crops by supposing that clover gets its nitrogen largely from the air, through its abundant foliage, and in its large quantity of stubble and roots transfers the necessary supply of nitrogen to the soil for the wheat crop. Nearly all who adopt this explanation go no further than to suppose that only chemically combined nitrogen of the atmosphere, which exists there as ammonia or nitric acid, is thus carried to the soil. Ville, who is well known as a writer on agricultural chemistry, his work on chemical manures having been translated from the French, and who is accepted as authority too often simply because what he has to say is well presented, and the reader has no opportunity to verify his conclusions, goes much further and affirms that the plant can assimilate or feed upon *free* or uncombined nitrogen. As this nitrogen makes up 79 parts in 100 of the atmosphere, while of the combined nitrogen there are but a few parts in a thousand million, the question is an important one, and it would seem that it might be easily answered; but thousands on thousands of opinions and observations of farmers themselves cannot settle it; it can be solved only by careful experiments in which plants are forced to grow without any other nitrogen than that in their seeds, and this free nitrogen. Three such series of experiments have been made—one by that veteran agricultural chemist, Boussingault, another by Ville and the third by Lawes, Gilbert and Pugh. The plain meaning of the results of the first and last series is that agricultural plants cannot thrive at all or make any normal amount of growth, if confined to these two sources of supply, while Ville draws the opposite conclusion from his results. No one who knows the whole history of these investigations is willing to adopt Ville's conclusions. Although the last and most elaborate series of experiments was performed after his own, by men of acknowledged reputation for scrupulous care and accuracy, and with results that tend most directly to cast doubt on the reliability of his investigations, he has never repeated his work, nor explained the discrepancy. That he still abides by his first conclusion is shown in the recent translation above mentioned, where he affirms that free nitrogen is the most suitable form for leguminous plants.

Now, if this is not true, and we insist that according to the best evidence it is not, the farmer who puts in clover to get a good wheat crop thereafter, is really only making some changes in the disposition of the nitrogen of his own soil, and drawing upon his stock of that substance *both* for the clover and the wheat, and is not adding anything of consequence to his available supply of plant nutrients; it is delusive teaching, for he who believes in it and grows clover much without manure is robbing his soil instead of enriching it. Those who have given the most careful study to the comparative growth of clover and wheat find no evidence that the former has any notably greater power to live even on the combined nitrogen of the atmosphere than the wheat possesses. Mr. Lawes found, as the result of his long-continued experiments, that "in soils poor in available or accumulated nitrogen both the growth and the after effect of clover were less than in soils richer in available nitrogen"—"that clover can be grown less frequently than cereals on the same soil without manure," and that it can be grown continuously only where the soil is more than commonly rich in available nitrogen as well as other plant food; at the same time he has proved by chemical analysis that clover stubble leaves the surface soil richer than before in nitrogen.

These observations point plainly to the conclusion that clover, like other plants, looks to the soil for everything except its carbon; and in benefiting a subsequent crop by supplying it with a larger quantity of available nitrogen, it only moves this nitrogen from one part of the soil to another where the cereal can get it more easily; it may possess a greater power of transforming unavailable soil-nitrogen into available nitrogen. Moreover, the cereal makes its most rapid and almost its entire growth in the early part of the season, while clover occupies the whole vegetative season. Many experiments indicate that nitrates or compounds of nitric acid contain the nitrogen in its most efficient form as plant food; nitrates are produced in the soil throughout the season by the oxidation of nitrogen in other forms, and are most abundant in late Summer and early Autumn, when clover is still growing, while the cereal is either off the ground, or, in the youngest stages of the new crop, is making comparatively little growth. Clover sends its roots to a greater depth and gets food from a larger volume of soil than the cereal, which is a shallow feeder. Thus though the crop carried off is large, the clover may yet leave in its stubble and roots a large quantity of the nitrogen that it has accumulated and in the surface soil where the shallow feeder can find it.

Thus it is evident that the relation of clover to the cereals can be accounted for without assuming what is contrary to the results of the most careful investigations—that it feeds on free nitrogen, or even that it feeds directly on atmospheric nitrogen at all, either free or combined. It is entirely possible to explain this peculiar effect of clover on the succeeding cereal, by referring it simply to the different manner of growth of the two crops.

Cornell University, Ithaca, N. Y.

Field Crops.

BLUE GRASS (Poa pratensis) IN THE SOUTH-WEST—BERMUDA GRASS.

W. B. HILLGARD.

THIS grass is, by almost universal consent, conceded to be the grazing grass, *par excellence*, of this continent. Kentucky has managed to make a special reputation for it, and it has unspeakably redounded to her material prospects and advantages. Almost the entire civilized world has come to concede the palm of superiority to the "Blue Grass region" of Kentucky for stock raising. Some mysterious virtue has been imputed to that soil, of which it is supposed to be the exclusive possessor, and which it seems to be thought is unattainable elsewhere.

There is nothing wonderful in this. Was there not a time when "Goshen butter" had its day and when many thought that it could not be equaled elsewhere? Did not New Jersey, 30 years ago, arrogate to herself to be about the only place where good peaches could be raised? Later, did not Delaware "follow suit," and with more grounds for the claim? All these claims are of the past. Kentucky raises fine Blue Grass. Her stock is the admiration of the world. Her people—particularly in the Blue Grass region—beggar panegyric; but she has not a *monopoly of Blue Grass*. I have ridden for days over the very choicest Blue Grass farms in the Blue Grass region, and know whereof I speak, having made two trips in different years for the especial purpose of inspection. I have carefully noted Blue Grass everywhere I travel, and I travel at the North and West much during the Summer, taking notes in every case in sections I have never before visited.

I do not know any grass that seems to "take" over so wide an area as Blue Grass. I see it growing here in the sandy land, and, only yesterday I saw a vigorous growth in a seam of the Custom House steps, in Mobile, and have seen it growing on the bare sandstone on the southern shore of Lake Superior in Northern Wisconsin. It can be seen along the moving sands in Michigan, along the eastern border of the lake of that name. In Central Delaware, even in the sandy lands, the commonest grass of the way-side is Blue Grass. In Southern Michigan, in the sandy lands there, it is considered next to a nuisance—because of its interference with wheat—under the name of June Grass. Along the road-beds and in the fields in Illinois and Wisconsin and in Missouri, superb sods are to be seen. Even in Eastern Kansas it is occasionally seen. Indiana claims (and with justice) to be a fine Blue Grass State. Need I mention more? [We have at the Rural Farm as much Blue Grass as any other.—EDS.] In fact, given sufficient rainfall and Blue Grass will do well anywhere. In this I do not disparage Kentucky; I only do justice to other States and to the facts.

Nor have I lost sight of a very important element, viz., the quality of the grass. I cheerfully admit that the ingredients of the soil in Kentucky are contributary to the quality of the grass and that the former explain the fine frames of the Kentucky stock. The lime in the soil of that State explains the quality of the grass. The lime rock is rich in phosphates and in some localities it is rather easily disintegrated. Rainfall and soil are the requirements for Blue Grass. Another important requisite is length of season or climate. As an illustration of this, Blue Grass meets with little consideration in Southern Michigan. It is there called "June Grass," for the reason that its season is mainly through June after which it dries up. It then comes on a little in late Fall. In the choicest district in the Blue Grass region of Kentucky it is often the case that the Blue Grass is burned up by droughts. I have seen tens of thousands of acres with absolutely no pasture at all in July. It was so the year before last. Let us take these requirements of rainfall, climate, limestone soil and see how they prevail in Eastern Mississippi and Western Alabama.

In these areas the rainfall is between 50 and 60 inches a year, and it is pretty evenly distributed throughout the twelvemonth. Except along the immediate Gulf Coast and the Western Pacific Coast, no country in the United States enjoys such a rainfall. Here is one absolute essential for the grass at its best. The absence of it explains the prohibition nature has put upon the cultivated grasses in large areas of the Western plains. Again, take the soil in Eastern Mississippi and Western Alabama, in the prairie belt; it is a deep, black soil, very stiff and aluminous, resting upon a greenish-yellow, greasy clay, which latter rests upon rotten limestone. It is surpassingly full of lime, so much so that in new soils it will take the hair off the feet of stock. It is very stiff and close, so much so that if it were not so full of lime it would, when plowed well, pack and bake so hard as to be almost like iron.

Yet, so full of lime is it, that, if plowed very wet in the proper season, it will crumble or slake like lime. Here is another great element in the mechanical character and constituents of the soil. Probably no country contains so much lime in the proper condition for plant-food as Eastern Mississippi and Western Alabama. The limestone rock is itself a fertilizer, and Professor Kedzie, of the Agricultural and Mechanical College of Mississippi, is applying it to the very poor lands of the college to enrich them. This rock goes to pieces very soon and becomes incorporated with the soil. Fine crops of one grass and another will grow on almost the bare rock, and good crops of oats are raised under the same conditions. Moreover, this black prairie soil is very fertile and deep and wonderfully retentive of moisture.

Consider, now, the subject of climate. The mildness of the climate makes almost always a growing season for Blue Grass from eight to nine months in the year, and, in some years, the whole year. Properly speaking, July, August and September should not be accounted the season for Blue Grass; although in July I have seen, in Eastern Mississippi, the rankest kind of Blue Grass, when at the same time in Kentucky, in the Blue Grass region, and elsewhere in the West, it was burned up by drought. In the above mentioned months (and for a much earlier and later season), Japan Clover—Lespedeza striata—and Bermuda Grass—Cynodon dactylon—may be the reliance for pasture.

Bermuda and Blue Grass admirably supplement each other, making, with White Clover, the ideal pasture, the former furnishing unfailing and most nutritious pasture from May until late October, and the latter from late October until July. They may be said to overlap each other, thus furnishing a variety of food and giving (by means of Bermuda) a "foot" for stock in Winter. They both grow well together and will flourish indefinitely upon the same sod, not impairing each other's merits, each having the ascendency in its season, the Bermuda Grass in its season seeming, to the uninformed, to have extirpated the Blue Grass, and generally Blue Grass in a few years exterminating clover on a Bermuda sod, while clover and Bermuda will continue indefinitely. Blue Grass makes a surprising growth in Eastern Mississippi, on the prairie soil, in Winter. I measured some that was 22 inches long several weeks ago, that could not have been sowed earlier than about the middle of last December and probably not until February. This was in a mellow piece of ground prepared for testing seed.

Last Winter was an uncommonly rigorous one, yet Blue Grass was seeding in early April on the prairies of East Mississippi. It has been said by pretty eminent authority in Mississippi, that Blue Grass sown at any time of the year will succeed. This I know from my own experience as well as from that of others is not the fact. I have known it to be sown in Spring and to be overtaken by dry weather and die. Last Winter I sowed 40 acres in late February and early March and have hardly a sprig. I sowed it on Bermuda without any preparation or after work. The same seed, sown on a heavier Bermuda sod earlier in December and January, gave a very good stand. I have never known Blue Grass sown in early October to fail.

Preparation of soil and proper seeding are best; but upon a Bermuda sod these are next to impossible; so the seed may be sown upon the Bermuda sod and left to be washed in and to take care of itself. The black prairie soil suits it best. Upon what is know as "post-oak" land Blue Grass does not do so well. The best sod of Blue Grass I have ever seen was on the prairies of Eastern Mississippi. Beyond all doubt that area is destined to become one of the most eligible stock-raising districts on this continent. Green fields are to be found the year round. Cattle can be fed on cheap lands with next to no feed, and fattened before the fields are green at the West and North. The markets of Chicago, St. Louis, Louisville, Cincinnati and (better still) New Orleans, are near. The country is pierced by a great trunk line between the South and West—the Mobile & Ohio Railroad. The sea is at its very doors (at Mobile) for shipment to Europe. I have sown one bushel of Blue Grass for over 150 miles on the line of the Mobile & Ohio Railroad, spinning the seed through my fingers out of the car windows, as we sped along. Notwithstanding the destruction of track, repairs, the rooting of hogs, grazing of cattle and other mischances, plenty of pretty "catches" are to be seen. Scores of people are sowing Blue Grass. One gentleman has over 200 acres and the area is constantly increasing. You cannot get off at any station on the Mobile & Ohio Railroad where you do not find spots of it. In a few years thousands of acres of it will be seen, as the people gradually work into stock-raising, as they are doing. There is such persistent insistance upon the part of some of the agricultural press that we can't raise Blue Grass in the Southwest, that I have thought it well worth this long letter to contribute something to the refutation of the pernicious notion.

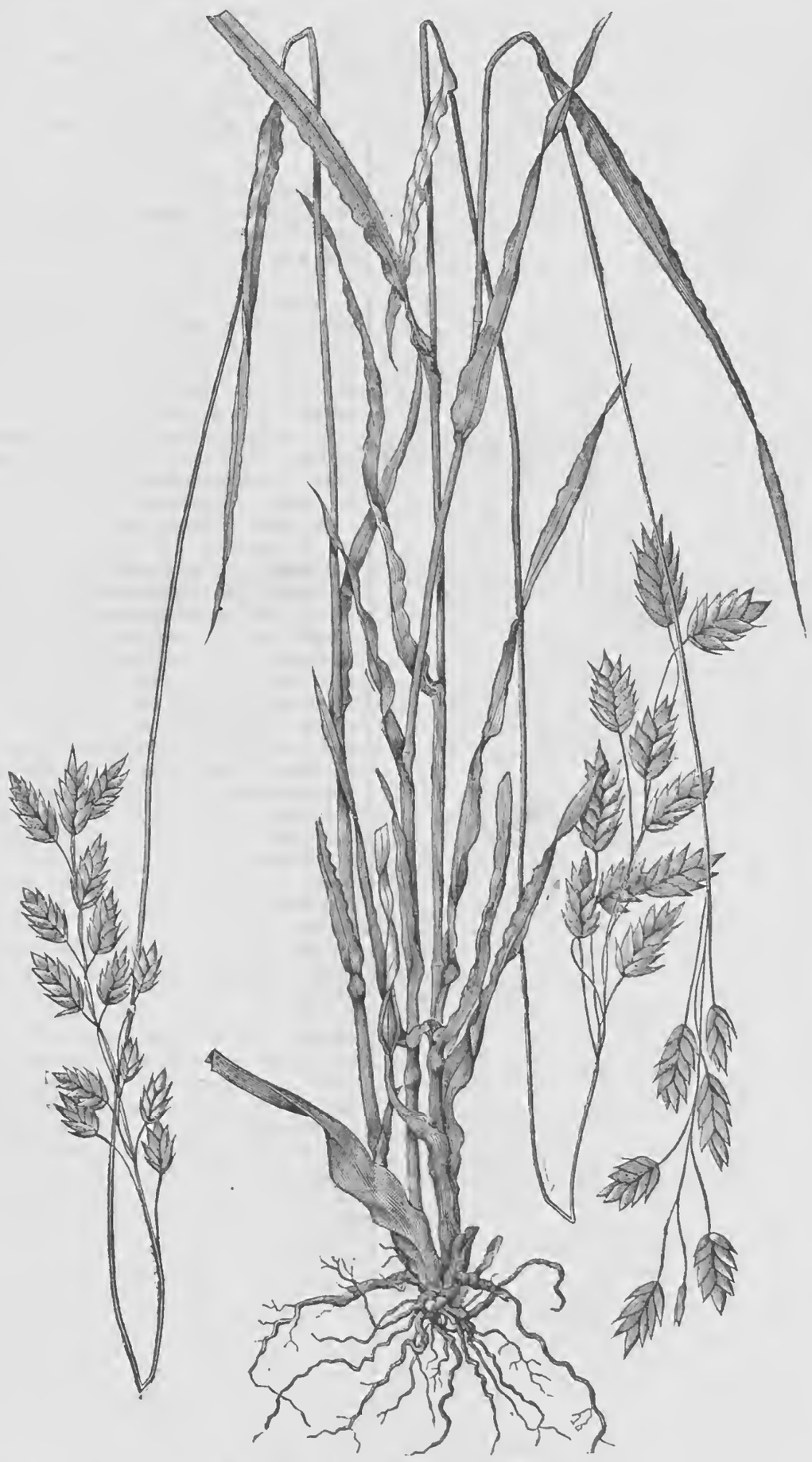
Mobile Co., Ala., June 10, '81.

BROMUS SECALINUS.

This is a weed in wheat fields known as cheat or chess. The name is derived from the Greek *bromos* meaning food. It is an annual or biennial weed, introduced with several

FIG. 337.

other species of the genus from Europe, and it was actually, at one time, commended for cultivation. It is, however, worthless or nearly so. All the bromes are of graceful habit and may be employed as ornaments in vases. It is sometimes called Willard's Bromus from the individual who introduced it into this country. The stems, as the grass grows at the Rural Farm, are often three feet in hight bearing four or five leaves with striated sheaths. It bloomed this year July 1st. Chess is objectionable in wheat fields chiefly because of the difficulty in separating the seed from wheat, as also because cattle prefer almost any other grass. Many farmers, we find, still believe that when wheat is injured by being tramped upon or by frost or other causes, it turns, or may turn, to chess, and the question is still occasionally discussed in agricultural journals. It is just as sensible to suppose that Indian corn, under the same conditions, might turn to chess or that barley might change to wheat. This plant is an annual, flowering in June and July, but when it is cut sooner or otherwise fails to mature seeds, it survives and matures seeds the second year. It belongs to the natural order Gramineæ, or Grasses, and the tribe Festuceæ—Fescue Grass, etc.



BROMUS SECALINUS—CHEAT OR CHESS.—FIG. 338.

Dairy Husbandry.

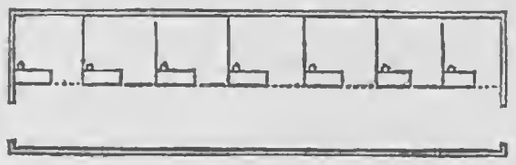
THE DAIRY COW.

HENRY STEWART.

The Care and Training of a Calf.

The rearing and training of the calf deserve the serious consideration of the dairyman and the owner of a choice cow, the calf of which is thought to be worth special care. It is to be regretted that so many promising calves are sacrificed to the butcher, and were it not that some wide-awake farmers are on the watch to rescue the best of them from the slaughter, the loss would be still greater than it is. The manner of rearing the calf affects not only the future cow, but also the value of the dam as a producer of milk. If a calf is permitted to suck the cow, the almost certain result is a loss of milk, unless care is taken to drain the cow dry as soon as the calf is satisfied. But there is a certain loss of cream, because the calf is in no way benefited by the feeding with the whole milk and is probably injured by it if its future purpose is the dairy. After the milk of the newly-calved cow has become of the usual quality, which is the fifth day, the calf may be fed upon warmed skimmed milk, perfectly sweet, however, mixed with about one-half new milk fresh from the cow. The proportion of new milk may be reduced gradually, until all skimmed milk is given. As previously stated, it is better to prevent the calf from sucking and to teach it to drink from the first. This may be done in three or four days by patient and gentle efforts. In thus weaning a calf it should be considered what a complete subjection of its natural instincts this is, and due allowance should be made for the reluctance or perversity of the young animal. Kindness and patience should therefore be exercised in this first lesson of its training.

There are some provisions to be made that will greatly help in this training and that will compel the calf to fall in with its owner's wishes. These may be noticed *seriatim*. First, the calf should be kept in a convenient pen in which it may be under complete control. If the cow has herself been trained in the same manner there will be no necessity to remove the calf out of sight or hearing, but generally it will be found most convenient to provide a special pen with a small yard attached for the accommodation of the calves. This may consist of a series of stalls six feet square, each provided with a small feed trough and a ring to which the calf may be tied. A roomy passage in front of the pens gives admission to each through a small door (see Fig. 339). A leather strap with a ring attached should be fastened around the neck, and as soon as the calf will



PEN FOR CALVES.—FIG. 339.

drink from the pail it should be tied up with a rope-halter giving it about 18 inches of loose rope. Until it has learned to drink it is best to have the calf loose in the pen. It is taught to drink as follows:—Holding the pail with the milk in the left hand (a 10-quart tin pail kept for the purpose is the best), the calf is taken by the head, with the nose in the palm of the hand, and the two middle fingers previously dipped in the milk, in the mouth. The calf will begin to suck the fingers and is then backed up into a corner of the pen and its head is pushed down to the milk so that it can suck it up between the two fingers, kept a little apart. Several trials may be required before the calf discovers what is meant, but with a little perseverance the calf will take to the milk as soon as it succeeds in getting a little of it. Care must be taken not to cover the nostrils so as to prevent breathing, and it may be necessary to dip the fingers in the milk once or twice until the calf can be induced to suck them. When it begins to suck the fingers the trouble is nearly over. The main difficulty is then to teach it to drink without the fingers, and this is done by gradually withdrawing them but still leaving the hand on the nose. By-and-by this may be gradually discontinued and the calf left to drink. In this way from three days' to a week's training will break in the most stupid calf and an extra-bad case may be broken in by leaving it without a meal until it is hungry enough to act reasonably. This is generally successful.

As soon as the calf drinks there is no more trouble. It should have its meal three times a day: in the first week two quarts at a meal are sufficient; the next week, three quarts may be given night and morning, with two at noon. After four weeks, nine or ten quarts a day will be taken and a little fine clover hay may be hung in a small bundle in the pen for the calf to nibble at. Some calves will begin to eat hay at a week old and all will try it at three or four weeks. At this age the calf may be taught to lick a little ground oats and corn or to eat a spoonful or two of oats. When it will take these a small ration should be given daily, at the same time that the cows are fed. In the Summer a handful of the sweetest grass or clover may be cut for the calf and given to it in its trough. It should be kept clean by brushing and the pen be well littered. If this manner of feeding is continued up to three months, gradually increasing the solid food, keeping up the supply of warm skimmed milk twice a day, and giving a little fresh water at noon, the calf will be as large at that age as one fed in the usual haphazard manner would be at six to twelve months. In fact, this period is the making of the future cow. The milk so long continued, and the oats, give a grand development of bone, muscle, stout limbs, deep body, broad loins and hips and an elegant and graceful contour. The hind-quarters and abdomen are developed and become large, the udder and teats become well formed while the head and neck remain fine and delicate.

After having raised many calves into excellent cows I find no other food so useful in forming the animal as warmed, skimmed milk with a daily ration of oats, beginning at a month with a handful and reaching at four months to a quart. Corn meal is objectionable as it fails to develop the bone and muscle and a desirable and graceful cow form; and produces an animal more inclined to beefiness with coarser points than should be sought for. It may be objected that form does not make the good cow. But this is altogether a mistake, at least so far as this, that the form and the good cow always go together, the good form being an indispensable attribute of the good cow. If this is so, it seems to follow, in a measure at least, and subject only to exceptions, that if we secure the good form we get the good cow. And in rearing and training a calf we surely lay the foundation for a good cow when we develop a capacity for eating, digesting and assimilating food; when we gain a large frame, well proportioned, broad hips, deep ribs, large pelvis, large udder and good teats and when we lay the foundation for a robust and stout constitution.

We secure a good temper, kindly dispo-

sition, absence of any vice or bad habit, by kindness, fairness, regularity of attention, frequent handling, tying in the stall, leading by the halter, and the use of the separate pen. Troublesome tricks are not learned; the calves cannot suck one another; will not learn to suck or chew harness, rags, etc., etc.; will not learn afterwards to suck themselves and will always be easy to handle and lead. After they have reached the age of six months, they will know more than many cows and when turned out to pasture will go to the business of feeding in a business-like and successful manner. For training a calf to lead, a small head-stall with a ring for a halter should be worn, as the neck strap does not give one sufficient control over the young animal.

The above remarks refer in greater part to calves dropped in the Winter, but Summer calves may be better raised in a similar manner in every respect, than in any other way, excepting perhaps that they may be turned into a paddock or small pasture in the day time; but this should not be held to make the feeding mentioned unnecessary; that is requisite in addition to whatever pasture or hay or grass may be consumed. When the calf reaches the age of 10 to 12 months under this treatment it becomes sufficiently matured to enter the class of breeding heifers. In the case of a bull calf precisely the same treatment should be adopted, adding to it perhaps a little stricter discipline.

The Herdsman.

"THE TOUCH" OR "HANDLING" QUALITY OF CATTLE.

In judging of cattle with reference to their quality as beef animals, ocular inspection is useful to a limited extent, but, certain it is, that a blind butcher or other expert will make a better selection of cattle either for immediate slaughter or for feeding than one judging solely by the eye. The hand is deftly placed upon ribs and rumps and passed along the loins and the loose flanks. A gentle pressure is given by the tips of all five fingers in a way to ascertain the softness, pliability, elasticity and mobility of the hide. This is accomplished both by the pressure and by a slight thrust given to the fingers, and ascertained by a "sense of knowledge" which is begotten by experience. The hand also grasps the hide over the ribs, taking up a handful by which its thickness is perceived, and the other points of quality confirmed.

No one with a modicum of experience can thus handle a few "beef critters" without observing notable differences in their skins, the unctuousness of the coats of different animals, the softness, thickness, and pliability of their hides, and the amount of fat which underlies the skin. He will perceive also a difference in the coarseness, softness, harshness and wooliness or furriness of the hair, and this is a disturbing factor in forming a correct judgment as to the quality of the beef, until one learns to allow for it.

Health is indicated by the skin being in a condition to perform its important function, hence it should be soft, flexible and elastic and there should be enough of that oily or soapy secretion which gives unctuousness to the coat. It should also be free from lumps or ridges, and uniform over the fleshy parts of the body

A WORD FOR POLLED CATTLE.—One thing seems certain—if we had never seen cattle with horns we would not desire to have them any more than we would wish to have horns upon our horses. The desire for horns is only a matter of habit. Horns are only necessary under wild and savage conditions of life, they are wholly unnecessary under our conditions and civilization. They cause beef to cost 20 per cent. more delivered in Liverpool than it should. Carrying deadly weapons is no more necessary for our cattle than it is for ourselves. It leads to as bad passions and injurious habits among cattle as among men.

D. S. MARVIN.

Sheep Husbandry.

SUCCESS WITH SHEEP.

I HAVE had pretty good success with lambs. I use cows' milk when there are twins, and lambs will grow just as well upon this as when sucking the ewe, and much better if they do not get enough from the latter. I think the whole trouble with fed lambs is that too much is given them at a time, and that they are not fed often enough. I have invariably found that hand-raised lambs will die if not fed as late as nine o'clock at night, and as early as five in the morning for the first week, and they should be fed every three hours through the day until three weeks old; after that age they will pretty much take care of themselves, if feed is plenty. In case of twins, it is much the best plan to feed them extra milk, if they do not have enough from the ewe, or if one is weak. Twin lambs are just about as good as single, but they take a little longer to get ready for market. I sometimes hand-raise a lamb for a few days, and then if a ewe loses her lamb, I give her the hand raised one. I have 75 lambs out of 82 dropped. Of the seven lost, one was aborted; one so deformed that we had to kill it; one was killed by setting the feed trough on it; one by getting hurt in the bars; one by drinking coal oil that was left where the lamb got to it; one by castration; and another from the latter cause or general debility. I have lost one old sheep by disease, one by getting its leg broken in the pen, and one was killed by dogs. This is the loss for one year on 75 head of sheep and lambs summered and wintered, and 82 lambs about ready for market, a loss of five lambs too many.

Mercer Co., N. J. I. J. BLACKWELL.

SHEEP HUSBANDRY IN INDIANA.—Sheep husbandry has been greatly stimulated in the last few years; causes fewer dogs, better markets for the products and the introduction of better breeds. The long-wool mutton breeds are most numerous. W. H RAGAN.

Clayton, Ind.

The Poultry Yard.

NUMBER OF CHICKS TO THE PEN.

L. S. HARDIN.

In raising chicks with brooders and in pens the number to be put together is of more importance than at first thought would appear. This is some of the knowledge one acquires at considerable cost when he first goes into the business. I remember a farmer who once allowed his hogs to sleep in the hollow of an immense sycamore tree. The area was limited to accommodate about half a dozen hogs, but there was practically no top to the pen, and one very cold night the hogs climbed on top of each other until the next morning when they were found six or eight layers deep with all but the top rows dead from suffocation. This same danger is always to be apprehended with chicks in a pen, if allowed to get too cold. While young chicks show a decidedly gregarious instinct, they have, even when in the greatest numbers, no disposition to crowd one another. When but a few hours old, if put in a warm brooder, each one lies by itself, and if the brooder is full of them, they spread out like an immense pan-cake, looking the very picture of comfort and contentment; but let the temperature in the brooder begin to fall, and they move up closer and closer to one another and begin a peculiarly anxious chirping, as if each one was crying with the cold. The little ones crawl under and lift up the larger ones, and they finally get matted together in an amazingly solid mass. It is under these conditions that the weaker ones are certain to be squeezed to death, and even the stronger ones, when unfavorably located, often succumb.

For this reason all brooders should be not too large, holding never over fifty chicks, and they should be artificially heated. If more than fifty chicks are in a pen together the heat of the brooder is not always utilized by them. On the contrary, if the room is a little chilly the chicks are sure to gather in a mass outside the brooder, and some of them will be crushed. It is very difficult and generally impracticable to keep a room constantly heated above sixty degrees, and a temperature lower than this is sure to bring the little ones together in dangerous masses if allowed to run in large flocks.

The best plan is to have the brooders about two feet square, with one or two sides protected only by a loose carpet hung along them so that the chicks can enter or come out at pleasure. A small lamp, properly protected, is as cheap as anything to heat it. If the weather turns warm at night or during one's absence, the chicks come out if the brooder proves too warm. If they are shut in they suffer greatly, if not fatally, from excess of heat. If the brooder is not kept warmed all day it should be heated before dark, so that the chicks will be comfortable and quiet when they first enter. Eight by ten feet is room enough for flocks of chicks from thirty to fifty, the right number depending upon their size—the larger they are the smaller the number to the pen. While I find the large and small chicks agree perfectly, they look better when grouped according to size. Knowing the fighting proclivities, especially when feeding, of old fowls, I have been amused to see the good-nature with which a large chick will allow a small one to come up and carry off its tid-bits.

Chicks seem to harbor no malice or ill-will towards each other. This may, in a great measure, be owing to the presence of an abundance of food. The larger chicks are also willing to allow the little ones to nestle under them, often to the extent of being lifted off their feet and tumbled upside-down.

Boxes with a bag of feathers hanging from the top are sufficiently warm without other heat for the larger chicks in a room where the stove holds fire all night; but with chicks under three weeks of age, the cold makes them restless and uneasy all night, so that they do not thrive and they hurt each other crowding together.

Chicks raised by hand are very gentle, so that a fence two feet high will keep them in, especially if they are well fed, so that there is no disposition to trespass upon the neighboring pens. Then if they do fly over the little fences, they do no harm and can be easily caught and put back where they belong. One great trouble I have had in heating brooders is to utilize all the heat from the kerosene lamps and at the same time to prevent them from smoking so badly as to suffocate the chicks. At the end of twelve hours a lamp seems to get out of humor, and shows its ill-nature by beginning to smoke, when the heat from the chimney is allowed to pass outside, there is no danger from this smoke but then a large proportion of the heat is lost. We want to save all the heat and get none of the smoke. My plan is to let all the heat into the brooder; take every precaution I can to prevent the lamp from smoking by keeping the brass works very clean, and then provide means for the chicks to escape under the carpet front if they do get caught in the smoke. This they are not very bright at doing, so I take the precaution to refill the lamps and trim the wicks twice a day, and examine everything at least once during the night. In trimming lamps I find it better, even with the wicks of the oil stove, to pinch the charred wick off rather than to use shears, as then the flame burns much more evenly.

SUCCESS WITH POULTRY WITHOUT CAPITAL.

THERE is probably no delusion so universal among suburban people as the idea that any one can make a fortune, or at least a fine living, with poultry, if he only has sufficient capital to start the enterprise. Many of them have unlimited ideas as to the extent to which a poultry farm can be stretched. It is so easy to figure out a profit on paper; the chickens are so numerous that if one returns a profit, of course, the others will, which will soon pile up an immense aggregate.

This delusion has often taken possession of men of means, who, following the advice of some enthusiast or even of the books on poultry-raising, have expended many thousands in land, houses and hens, often collecting the latter by car-loads and having everything start off with a rush and ending with equal celerity and with much dearly bought experience of how to fail in poultry raising. If I contemplated going into the chicken business on a large scale, this is just the way I would *not* do it—capital or no capital. In this business a little experience is worth more than any amount of money, so far as making a pecuniary success of the enterprise is concerned. Chickens thrive just as well in a log hut or a clapboard shanty as they do in houses glazed and shingled, celled and wainscoted from top to bottom. There is decidedly nothing esthetic in the taste of a hen. The sole point on which failure or success in this business depends is the adaptability of the man to the occupation, and where this is lacking no amount of the conveniences that money can furnish will supply the want. Experience is of paramount importance, but like most kinds of effective medicine, the bitter part of it should be taken in small doses—too much of this sort at one time is apt to irritate the complaint it was intended to cure. Many a man has become heart-sick and abandoned the business on account of the troubles or failures that crowded upon him when he was too fresh in the business to know how to meet them on so large a scale, when, had he started in a modest way and gathered experience as he went along, the result would have been quite different.

My advice would invariably be to start on a small scale and let the business grow only as its legitimate demands may require. A few hens and an old shed will do for a start. If one is willing to stick to them, feed them and coddle them, watch their every movement until one becomes familiar with their peculiarities, their wants, their likes and their dislikes, their good habits and their bad ones, he will then be sufficiently posted to take command of a larger battalion. If then he sickens and tires—as he probably will—of the eternal worry of these restless creatures, when he gives them up the loss will not be so great nor the mortification of failure so conspicuous. By all means stick to a few until the hen-fever part of the passion for fowls is over. Not only should one confine his efforts to a few, but these should be common native fowls, for the simple reason that one knows not at first what branch of the business, if any, he may ultimately decide to follow. It is next to impossible to follow them all; no place is adapted to all on a large scale. We raise chickens for eggs, capons, fat fowls and broilers. Any one of these branches properly followed, will occupy the whole time of any one man. Which branch his taste will ultimately settle upon no one can tell until he tries. Therefore do I repeat—start with a few; have patience to work up by degrees, for without this virtue success need not be hoped for.

Then the habit of buying whatever you may think you need is a great mistake. No matter how much you may think you need a thing, the chances are a dozen to one that, if you will only wait, you will find you can get along without it, or some device will suggest itself to your mind by which the same end may be compassed without the outlay of money. Learn to trade for what you want, be that fowls or furniture. If glass is needed, get second-hand sash from hot-bed or window—that from either will last a life-time. Do not be in a hurry to buy feed at wholesale rates. There is always greater waste when feeding from a large supply than from a small one, probably enough to make up the difference between the rate of cost of each lot of feed. Husband your resources and try to make the profits grow out of your investment. Above all, keep strict accounts and have as little estimating about the business as possible. In my opinion the chicken business will pay; but only in the hands of the man who is not ashamed or afraid to build it up from a small beginning.

B. F. H.

CHICKEN CHOLERA.

IT is highly probable that cholera in fowls originates by contagion and is introduced into flocks either by newly acquired infected fowls, by infected manure or feathers, or sometimes by the bodies of dead birds brought into, or near the poultry yard by dogs or other animals. In most cases the disease can be traced to the first-mentioned source. As the virus remains in a fixed form it is not probable that the disease germs are taken up by the air but that they are taken into the body with food and other matter which has been contaminated.

Preventive measures, in this disease as, indeed, in most others when the causes and mode of propagation are known, are the safest resort. Where a flock of fowls is already infected, the first and most reliable symptom is the coloration of the kidney excretion which is voided by fowls with the offal. This, in health, is readily distinguished by its white appearance, but when the fowl is attacked by cholera this kidney excrement changes its color from white to pale, and then to deep yellow, and in extreme cases it becomes green. At about this stage an obstinate diarrhœa sets in. This symptom being discovered, the infected fowls should be at once killed, care being taken that no blood is left where the other fowls may get at it, and the bodies should be buried. The healthy birds should be removed to a clean piece of ground which is known to be free from the contagion, and the excrement of these fowls should be inspected daily to ascertain their condition, and to detect the sick birds. If the fowls can be separated into pens of three or four such detection will be hastened. Before placing the birds in new quarters it is well to fumigate them with sulphur, as the feathers are apt to convey the disease.

In case fowls are introduced from other localities where the disease has been raging, it is good policy to "quarantine" them, so to speak, for three weeks or so until they are known to be free from the disease. Any eggs brought from other places for hatching should be cleaned of any excrement which may be attached to them, and manure from infected yards should not be thrown upon land to which healthy fowls have access. By observing these precautions the disease may be excluded or exterminated. Cures have been effected by feeding cooked meal, red pepper, gunpowder and turpentine mixed together; also by placing water in which bi-sulphate of soda, in proportion of an ounce to a gallon, has been dissolved, where the fowls can drink it.

The Apiarian.

MARKETING HONEY.

IT is discouraging, to say the least, for a bee keeper to find that for some reason or other *his* honey does not bring as much in market as some one else's. After the great care he has exercised in wintering his bees, in separating and hiving them, or in removing them, perhaps, to the vicinity of groves of flowering trees so that he may reap the profits which his faithful workers will surely enable him to do, other things being favorable, he is liable to complain if the profits are not realized. But has he used care in marketing his honey crop? Sometimes a negative reply to this question will throw some light on his failure. Anything brought to a city market, be it fruit, flower or vegetable, will command a better price when neatly

put up or arranged than when the converse is the fact, and this is especially true of honey. The total amount of honey marketed in the United States is very large, and a difference of a cent or two on a pound from the price it might have brought if neatly put up, would amount to thousands of dollars annually.

Comb honey should be marketed in single comb sections and the glass be neatly cleaned from all propolis or wax. While accidents on the way to market cannot always be avoided, the honey should, at least, leave the apiary in good condition. Extracted honey in large quantities can be shipped quite as well in barrels as any way, while small quantities can be put up in tin pails or cans, or in common fruit jars. The crates to contain the boxes shou'd be made to hold not more than a dozen of them, as they can then be conveniently handled. J. W. D.

The Vineyard.

THE NIAGARA GRAPE.

"MR. GREEN, what is your opinion of the Niagara Grape, and the method adopted for its introduction. A circular was sent me offering 100 vines for $150, all the growth of wood for eight years to be returned to the company who send it out. Can you estimate how many cuttings a vine will make in eight years and what it will cost to cut and pack them for shipment? Suel Foster, Muscatine, Iowa."

I have never heard of any grapes being grown from the Niagara other than those on the grounds of the originator, and am of the opinion that it has not fruited elsewhere. The usual custom of sending to prominent pomologists vines or plants of new fruits, so that their adaptability to different sections of the county may be made manifest and weak points be discovered (and I never saw the variety of fruit that did not have some defect), has not been followed by the Niagara people, so far as I am aware. For this reason no one can give an opinion of much weight as to how the grape will succeed over the country at large. There are indications in the character of the vine and fruit that would lead one to presume that it was well adapted to various sections, but I should not care to risk largely on such predictions. The natural inclination of seedlings is to succeed better where they originate than elsewhere. In parts of this country where fruits from other localities fail, local seedlings thrive famously. The Niagara is a great success at the place where it originated as regards vigor, health and productiveness, and in quality it is good enough for the present demands of the market, but critical men, like Charles Downing, would not enjoy it. Nevertheless, I think the quality will not generally be objectionable.

Assuming that it will cost five cents per vine each year to cut the wood and pack it, we must add 40 cents to the original price, which makes it $1.90; then estimating the wood for eight years to be worth $1.10 per vine (it would not be complimentary to put it at any less), this brings the price of the vines up to $3 each. For myself, I should prefer to pay $3 for vines of a valuable new variety and enjoy the privilege of propagating them, than half that price and be restricted. When informed, some years ago, of the method proposed for the introduction of the Niagara, I said to myself "It will not be successful;' but events have proved that I underestimated the enthusiasm of the American people.

The Niagara Grape overshadows all other new white grapes as completely as the great Falls, bearing the same name, overshadows other like natural scenery. This is, in part, owing to its great merits as displayed at its home, and in part to the fact that other formidable rivals have not been very shrewdly placed before the public. There are three new white grapes offered, possessing remarkable characteristics—Niagara, Lady Washington and Pocklington. No person knowing these varieties equally well, would hastily pronounce on any one as possessing more points of merit than the others, yet all have their weak points. There are many other new white grapes of great promise, of which I have not seen enough to enable me to report on their merits; but I believe the day is not far distant when white grapes will be as plentiful and grown as cheaply as those of any other color. CHAS. A. GREEN.

Monroe Co., N. Y.

Miscellaneous.

What Others Say

WE have been much interested while reading the address of Mr. J. B. Olcott, delivered before the State Board of Agriculture of Connecticut. It is quite out of the line of the hushed up, dressed-up generalities so frequently prepared for such occasions. The subject was "The Agricultural Press," and we copy the following briefs:

"Now, modern science, religion and morals, let us hope, working hand in hand, are teaching us that culture for onselves and culture for our gardens are interdependent and inseparable; joined together by eternal goodness and not to be sundered with safety by anybody. To rob the earth leads, like all wrong, to barbarism, as the care and culture of the earth, keeping it holy everywhere, as God pronounced it good, is the highest evidence and natural accompaniment of the truest civilization.

The newspaper of to-day, like the vegetation of to-day, grows in the ashes of a thousand aspirations and a thousand failures. . . . . . . The great question with our agricultural journals is, whether it is to be a narrow, class affair, or whether it will comprehend and understand the entire world of legitimate and illegitimate industry it is called to support? Is our coming agriculture to know—to use the rough but expressive speech of Carlyle—who and what is it that is dancing jigs upon its belly? It is a very curious circumstance that our wisest politicians, our greatest theologians, our most eminent men of science, our acutest financiers, business men and politest society, do not succeed in keeping the nation from scrapes and pinches that nothing but a draft on the farm, in some shape, will help it out of.

By your books and newspapers shall we know you, and know how your money goes when you get any.

Let the farmer be well informed upon every subject. It is a disgrace to his newspaper that he should be continually cheated by traveling quacks of a bogus scientific, religious, medical or financial character.

Pure agriculture, like pure pork and molasses, may be a little too rich for some digestions, while a mixture, a seasoning like, might be quite acceptable.

I once knew a hen that had a trick of cackling when she hadn't laid any egg. All her force went to cackle and she set all the rest of the fowls at it. We didn't continue the experiment long enough to determine the results with absolute scientific accuracy. We couldn't afford to. Farmers never can afford to let any blamed foolishness go on—they always lose by it in the end. Our hen-yard, in cackling-time, became such a theater and circus of make-believe action, with running around and crowing, and flapping of wings, so out of all proportion to the business done there, that we sent the old hen to pot.

Publishers sometimes aver that farmers in general are as close to deal with as the bark of a tree, which is not uncomplimentary or unnatural, considering how they get what they have from the ground as slowly as the roots and bark of trees and plants do, and how many stones they have to turn, sometimes, to find a dollar, and how their risks are always long risks with nothing like what a trader would consider the chance of an adequate profit at the end

In the warm spell following a cold snap in Winter (to conclude our quotations from Mr. Olcott's address), farm cattle will kick up their heels most innocently, and shrewd managers will provide suitable occasions for the recreation. So the masses of our people—leaders and all—in the joy of prosperity after hard times, may be led into extravagances, unless a better judgment provides a reasonable vent or restraint, in view of the harder times and colder weather possibly in store for us.

EXPERIMENTS IN PIG FEEDING.—From the advance sheets of the Second Biennial Report of the Kansas State Board of Agriculture 1879–80, we are permitted, through the kindness of our contributor, Prof. E. M. Shelton of the Kansas State Ag'r'l. College, to make extracts from the report on his very interesting experiments in pig feeding. The Western plan of feeding has often been condemned on sentimental grounds, so, to arrive at some facts bearing on this question, the following experiment in feeding was undertaken. In this experiment ten pigs were employed, all pure-bred Berkshires of good pedigree. The experiment was begun November 1, 1880, and ended January 16, 1881—a period of eleven weeks. The ages of the pigs employed were:

Pen No. 1	Farrowed April 12, 1879	
Pen No. 5	"	" "
Pen No. 7	"	" "
Pen No. 2	"	July 4, "
Pen No. 3	"	" "
Pen No. 4	"	" "
Pen No. 6	"	" "
Pen No. 8	"	" "
Pen No. 9	"	" "
Pen No. 10	"	March 20

The three dates represent three different litters.

During the Summer preceding, and up to the time the experiment began, all the pigs were kept in a large pasture field—mostly prairie grass, but containing a small proportion of Orchard Grass and Alfalfa—receiving an ear of corn, per pig, each day. The pigs, as will be seen by the tables of weights given below, were a remarkably uniform lot, and of very excellent quality.

The pens numbering 1 to 5, inclusive, were arranged in the basement of a warm stone barn, and pens 6 to 10, inclusive, in an open yard on the south side of a close board fence, five feet high, but without other protection, except straw "nests," which were furnished both sets as needed. A single pig occupied each pen, an arrangement necessary to the proper apportionment of feed, and distribution of the results of the experiment.

In pens 1, 2, 5, 6, 7 and 10 shelled corn exclusively was fed; in pens 3, 4, 8 and 9 a ration of bran, in addition to the corn, was fed, the amount varying but little from two pounds per day. In all of the pens all the corn that the animals would eat was fed, great care being taken that none was left over in the troughs and wasted, or, on the other hand, that the animals were insufficiently supplied. The pigs were fed twice daily, at 8 A. M. and at 4 P. M., the feed being weighed out accurately to each pig at every feeding. If at the time of feeding the previous feed had not been consumed, the surplus was removed, and a proportionate reduction made in the amount of the next feed. All of the pigs received whatever water they required.

The bran was fed dry or mixed with water, to suit the tastes of the different pigs. At first this was eaten with apparent relish, but as the pigs increased in ripeness they seemed to care less for the bran, finally refusing it altogether, when, about the eighth and ninth weeks, the bran ration was discontinued.

All the pigs were weighed at the close of each week, a little before the time of the first feeding of the week following. In the table below is shown in pounds and decimals of a pound the weight of each pig at the beginning of the experiment, the total gain, the total gain per cwt., and the average gain per cwt.

TABLE NO 1,

Showing the weight of each pig at the beginning of the experiment, and at the close of each week, the total gain, the total gain per cwt. of each pig, and of the two sets.

Week of Experiment	Pigs kept in pens in the barn: Pen 1..	Pen 2..	Pen 3..	Pen 4..	Pen 5..	Pigs kept in open pens in yard: Pen 6..	Pen 7..	Pen 8..	Pen 9..	Pen 10
Beginning of experiment	272	240	258	275	226	244	229	249	252	285
First	281	257	267	294	238	253	229	260	259	292
Second	296	276	285	309	251	268	245	269	278	312
Third	313	282	297	325	273	287	259	292	293	330
Fourth	331	304	319	338	289	304	275	310	308	352
Fifth	349	328	336	357	305	323	288	317	320	362
Sixth	365	339	356	376	321	347	304	331	333	387
Seventh	380	359	378	396	340	356	321	339	346	392
Eighth	400	371	390	409	351	373	336	348	355	403
Ninth	413	381	399	422	359	382	346	357	358	398
Tenth	424	394	410	429	374	384	357	366	356	407
Eleventh	435	404	424	439	382	401	366	372	369	409
Total gain	163	164	166	164	156	157	137	123	117	124
Total gain per cwt.	59 90	68 30	64 30	59 90	69 60	64 30	59 80	49 30	46 40	43 50
Average gain per cwt.	63 90					52 20				

The remarkable uniformity of this lot is strikingly shown by the "total gain" in both sets, in the table, but particularly in the case of the five pens in the barn, the difference between the greatest and least gain being only ten pounds. The following table shows the total increase in weight, the total amount of corn and bran consumed and also the amount for each 100 pounds live weight.

TABLE NO. 2.

		Total increase	Total corn consumed	Total bran consumed	Corn consumed for each 100 lbs. live wt.	Bran consumed for each 100 lbs. live wt.	Corn consumed for each 1 lb. of increase	Bran consumed for each 1 lb. of increase
Feed, corn	Pens, 1, 2 and 5 in the barn	483 00	2,487 50	———	22 03	———	5 15	———
	Pens, 6, 7, and 10 in open yard	418 00	2,291 00	———	21 64	———	5 48	———
Feed, corn and bran	Pens, 3 and 4 in the barn	330 00	1,589 00	232 00	21 09	4 13	4 81	0 70
	Pens 8 and 9 in open yard	240 00	1,386 50	200 00	19 82	4 14	5 77	0 83

It will be observed that the pigs fed "outside," besides giving much smaller returns for feed consumed, in all cases gave less "total gains," and much less "gain per cwt.," as shown in table No. 1, and consumed much less feed than those fed in the barn.

The total loss from feeding in the open yards was quite marked throughout, and the variation in individual cases was considerable. It was noticeable that the quietest animals, the best feeders of those fed "outside," endured the severe weather the best, and gave the largest returns for food consumed.

The importance of a ration of bran or other coarse feed in connection with corn, for fattening pigs, is frequently urged by writers, on theoretical grounds. It was chiefly to test this question that bran was used with corn in proportion as before detailed, in two of the pens of each of the two series. The value of bran fed in this experiment may be shown in a brief summary and comparison of the results obtained. In pens 1, 2, 5, 6, 7 and 10, in which corn exclusively was fed, 901½ pounds of increase cost 4 778 5 pounds of corn, and in pens 3, 4, 8 and 9, in which corn and bran were fed, 570 pounds of increase cost 2,975 pounds of corn and 432 pounds of bran. That is, 100 pounds of increase, in pens 1, 2 5, 6 7 and 10, cost 530.35 pounds of corn: 100 pounds of increase, in pens 3, 4, 8 and 9, cost 521 93 pounds of corn, and 75 78 pounds of bran. Or 8.42 pounds of corn had, in this experiment, a feeding value equal to that of 75 78 pounds of bran—a fact which seems to show that corn alone can be more profitably used for fattening hogs than a mixed feed consisting of corn and bran.

MR. PETER HENDERSON favors us with a printed copy of his essay read before the annual Meeting of the American Association of nurserymen, florists, and seedsmen, held at Dayton, Ohio, in June last. From it we make the following selections:

Mr. HENDERSON is inclined to believe that, whatever kind of horticultural product is grown, whether fruit, flowers, or vegetables, he that is nearest the market, other things being equal, has a decided advantage; so much so that, in most cases, a man had better pay $50 or even $100 per acre rent, if within one or two miles from the market of a large city, than to get land ten or twelve miles away for nothing.

THE past season Mr. Henderson's firm raised nearly half a million of cabbage and lettuce plants, which they sold at $5 per 1 000. They sowed the seed the first week in February, on one of their greenhouse benches, so thick that they stood twenty plants to the square inch; these they began to thin out, to prick in hot-beds, just as the first rough leaf appeared, placing 1 000 plants in a 3x6 sash. The handling of that quantity was a big job, but Mr. Henderson doubts if one plant in a thousand failed, owing, he thinks, to a plan used, in preparing the bed on the greenhouse bench for the seeds—a plan that is well worthy of imitation in preparing a bed for seeds that have to be transplanted, of any kind, whether outside or under glass. He used only two inches in depth of the "soil" for the seed-bed which was made up as follows: the first layer, of about an inch, was a good friable loam, run through a half-inch sieve. This was patted down with a spade and made perfectly level and moderately firm. On this was spread about one-fourth of an inch of sphagnum (moss from the swamps), which had been dried and run through a sieve nearly as fine as mosquito wire, so that it was of the condition of fine sawdust. On the top of the moss the ordinary soil was again strewn to a depth of about three-fourths of an inch. This being leveled, the seed was sown very thickly, and then pressed into the soil with a smooth board. On this the fine moss was again sifted, thick enough to cover the seed only. The bed was then freely watered with a fine rose, and in a week every seed, that had life in it, was a plant. When the seed of most plants germinate, where they are quickly sown, the stem strikes down into the soil, the roots forming a tap-root with few fibers, unless arrested by something. Here comes the value of the one-fourth of an inch of sifted moss, placed three-quarters of an inch from the top. As soon as the rootlets touch the moss, they ramify in all directions, so that when a bunch of seedlings is lifted up and pulled apart, there is a mass of rootlets, to which the moss more or less adheres, attached to each. To the practical gardener, the advantage of this is obvious: the tiny seedling has at once a mass of rootlets ready to work, which strike into the soil at once. The advantage of the moss covering of the seed is not so apparent in the matter of a free germinating seed, such as cabbage, as in many others, but in many families of plants it is of the greatest value. For example, Mr. Henderson last November, took two lots of 10,000 seeds of Centaurea candida (one of the Dusty Miller plants so much used for ribbon lines); both were sown on the same day, and exactly in the same manner, in boxes of soil two inches deep; but the one lot was covered with the sifted moss and the other with fine soil. From the moss-covered lot were got over 9,000 fine plants, while from that covered

by soil there were only about 3,000. The same results were shown in a large lot of seeds, of the now famous climbing plant, Ampelopsis, Veitchii, and in the finer varieties of clematis. The reason is plain: the thin layer of sifted moss never bakes or hardens, holding just the right degree of moisture, and has less tendency to generate damp or fungus than any other known substance.

Among beets, Mr. Henderson remarks we have the Egyptian, which matures at least five days before any other variety, except the Old Bassano, which was too light in color to suit; in cabbages, the Early Summer; and in cauliflower the Snowball; in celery the Golden Dwarf; and the next season is likely to develop a great improvement in the New White Walnut Celery, a stout, solid kind, having a rich walnut-like flavor, and graceful feather-like foliage. In lettuce, the Black-seeded Simpson and the White Summer Cabbage Lettuce now lead all the out-door varieties; in muskmelons, the Hackensack, of which many thousands of acres are grown for New York market, is almost exclusively planted. In peas, a great improvement is developed in the dwarf variety known as American Wonder, though for a general early crop the Improved Daniel O'Rourke is best. Potatoes vary so much in different localities that it is difficult to say which of the new sorts are most valued. We are very glad to see that Mr. Henderson finds that in the general trade more of Beauty of Hebron is planted than of any other of the new sorts. In radishes, the New Round Dark Red is now the main favorite, while next in order comes the "White-tipped Turnip." In spinach, the Savoy and the New Thick-leaved, are the best for general crop; though the Savoy should not be sown in Spring as it runs too quickly to seed. Though every year brings out new claimants for favor in tomatoes, it is Mr. H's conviction that we have not advanced one day in earliness (unless in such varieties as Key's Prolific and Little Gem, which are of poor quality,) in 25 years, although we have now many varieties somewhat improved in quality. Quite a number of our market gardeners are now getting to grow strawberries in conjunction with their vegetable crops, by following the pot layering system, by which a crop is obtained in less than a year from the time of planting. Mr. Henderson has grown for the past six or seven years, upwards of an acre of strawberries in this manner, alternating them with the vegetables.

The process may be described as follows: Just as soon as the fruit is gathered, the beds are well forked up, and the runners begin to grow rapidly, so that, in the vicinity of New York strong pot layers may be obtained by the 10th to the 15th of July. These, if then planted out, never fail (if properly cultivated and the runners kept pinched off,) to give a full crop by June of next year; not only a full crop, but finer fruit than is usually obtained by the other methods. The pots, which should not exceed 2½ inches in diameter, are filled with the soil in which the strawberries are growing, and "plunged" or sunk to the level of the surface; the strawberry layer is then laid on the pot, being held in its place with a small stone; the stone not only serves to keep the plant in its place so that its roots will strike into the soil of the pot, but it also serves to mark where the pot is; for, being sunk to the level of the surface, rains wash the soil around the pots, so that they could not well be seen unless marked by the stone. Any good workman, after a little experience, will layer 2,000 per day. In 10 or 12 days after the strawberry layers have been put down, the pots will be filled with roots; they are then cut from the parent plant, taken up, and placed close together, and shaded and watered for a few days before being planted out. If so treated, not one plant in a thousand need fail.

In Mr. Henderson's market gardening and greenhouse operations he cultivates largely nearly every known family of plants, and in his long experience he has yet to see a fruit, flower or vegetable crop, that was not benefited, and nearly in the same degree, by a judicious application of pure bone dust.

Profits of a Black Walnut Grove.—We find the following in the Chicago Tribune. The profits of the grove are greatly exaggerated, as will appear to the reader. Still we advise the planting of the Black-walnut.

San Antonio, Tex., June 3.—The smartest Texan, and in fact the smartest farmer, I have ever met, is old Sim Graves, who lives on a 1,000-acre farm west of Waxahatchie, in Central Texas. After Mr. Graves had shown me his cattle and cotton, he took me over to see his woods.

"Well, what of it?" I said, as he pointed to a ten-acre forest.

"What of it?" Why, them's Black-walnuts, sir. Ten acres of 'em. Planted 'em myself ten years ago. See, they're nine inches through. Good trees, eh?"

And sure enough there were ten acres of hand-planted black-walnut trees. They stood about twelve feet apart, 200 to the acre,—in all 2,000 trees.

"Well, how do you get your money back?" I asked.

"Black-walnuts are worth $2.50 a bushel, 'aint they? I'll get 400 bushels this year. That's $1,000. A hundred dollars an acre is good rent for land worth $15 an acre, ain't it?"

"Well, what else?" I inquired, growing interested.

"The trees" continued Mr. Graves, "are growing an inch a year. When they are twenty years old they will be nineteen inches through. A black-walnut tree nineteen inches through is worth $25. My 2,000 trees ten years from now will be worth $50,000. If I don't want to cut them all, I can cut half of them, and then raise a bushel of walnuts to the tree,—that is, get $2,500 a year for the crop. Two hundred and fifty dollars an acre is a fair rent for $15 land, ain't it?"

The more I examine into the possibilities and probabilities of ten acres of black-walnut trees, the more astounded I become. There is no crop on earth that will come within fifty miles of it. Calculate it any way you may, ten acres of black-walnut trees will pay $250 annually an acre for the first forty years. Ten acres of black-walnut trees fifty years old would be worth $100,000. There is no fruit that will pay $2.50 a bushel, the market price of black-walnuts. Ten acres of black-walnut trees, at any age, would always find a a market, like a marble quarry or cool wine. It could always be sold. Mr. Graves says he has never seen a time since his black-walnut forest was two years old when he couldn't have sold it for more than as many crops of wheat.

Now, any farmer who has ten acres of overflow land on the Illinois bottom can do just what this smart Texan has done. He can make it worth more than ten acres in the suburbs of Chicago inside of ten years. Any Chicago man can buy fifty acres of low, black prairie within fifty miles of Chicago at $25 an acre, plant it to Black-walnut, and make it pay him $15,000 a year. (!!)

The cheapest, best, easiest put up and strongest lightning conductor is copper wire, says a writer in the N. Y. Tribune. Get at a metal store a coil of the length required, and as large as, or larger than, common telegraph wire. Fasten one end over your chimney-top, run along the ridge and down the end of your house, fastening with common blind-staples driven into the wood. Be sure to have the lower end terminate in permanently moist earth or in a well, not a cemented cistern. Use no glass insulators, patent tips or other humbug nonsense, and you will have the cheapest and most perfect lightning conductor that can be made.

Female Farmers.—We see the following in the Vermont Watchman: France has agricultural schools for girls. One of the chief is near Rouen, which is said to have been begun with a capital of one franc by a sister of charity and two little discharged prisoner girls, and to be now worth $160,000. This establishment has three hundred girls from six to eighteen. The farm, entirely cultivated by them, is over four hundred acres in extent. Twenty-five sisters form the staff of teachers. More than one medal of the French Agricultural Society has been awarded to this establishment at Darnetel, and the pupils are in great demand all over Normandy on account of their skill. They go out as stewards, gradeners, farm managers, dairy women and laundresses. Each girl has, on leaving, an outfit and a small sum of money, earned in spare hours. If they want a home they can always return to Darnetel, which they are taught to regard as home.

Sweet simplicity sometimes contains the sharpest sarcasm. A lawyer said to his client, an honest farmer, "Did you go to your opponent and try to settle with him?" "I did, Your Honor," was the reply. "And what did he say?" "Why, sir, he told me to go to the devil." "And what did you do then, sir?" "Then I came straight to you."—N. Y. Herald. . . . . Men are naturally charitable, but they have a bad habit of feeling everywhere for the poor except in their pocket-books. . . . . The Chicago Tribune says a broad-tire wagon draws 25 per cent. lighter than a narrow one. . . . . Dr. Felix L. Oswald, writing against meat-eating, especially in hot weather, makes the eminently sensible suggestion that "hot-headed boys can be more effectually cured with cows' milk than with a cowhide."—N. Y. Tribune. . . . . An esteemed contemporary asks the following question: Is it true, as rumor asserts, that Messrs. Whitman and Burrell's cows were found by several visitors during last Winter "very poor, weak, and sore-footed;" and if so, to what extent was their feed of ensilage responsible? . . . . How are the cows of Winning Billerica Bailey? . . . . . Mr. Harris Lewis of the Central N. Y. Farmers' Club, says that the Rhode Island people who beat the world in johnnycake prefer white corn. Others prefer the yellow. . . . . Level culture, we are rather surprised to see was preferred by all. One member preferred hoeing away from rather than towards the drills or even hills.

Everywhere.

NOTES FROM SOUTHEASTERN MARYLAND.

We have often wondered whether any news from our little colony would be interesting to the general public; but during a year's stay here we have learned to like this portion of the South so well that we are anxious to give a pen picture of the place and its prospects to the readers of The Rural. First, as to its location: 60 miles south of Lewes in Delaware you stop at our station on the railroad, called, Girdle Tree Hill. "Hill," you infer, means an elevation, but in this country it is no distinguishing term, for there are no hills. Col. Mapes, one of the directors who personally superintended the building of the road, told us that in 30 miles there was a decline of only two and a-half feet. Snow Hill, eight miles North of us, is the county seat; Pocomoke, seven miles southwest, is a pleasant, lively town, connected by both river and rail with the shipping centers of the South. So you see, this is a very good location for Northern farmers who, like ourselves, are disposed to emigrate to other and newer parts of the country.

Then we raise here wheat, oats, corn, sweet and Irish potatoes, all sorts of vegetables for market, cane sufficient to furnish molasses for home consumption, and an unlimited quantity of fruit. Little, if any, rye is sown. The only crop we have seen or heard of, is a field of 16 acres sown by us last Fall, and this is very excellent, the stalks being six feet high and heavily headed. The wheat crop will scarcely average as well as that of last year, but oats are doing better. Last year we lost 16 acres on account of the drought, but this present crop promises well. Corn, however, is the principal product of this section. It is a common estimate of a farmer that he "makes" a certain amount of corn, and there is an exact number of hills that furnish what is called "a horse till." So far this season this crop promises well. The weather—one day moist, the next warm and bright—is just adapted to its growth, as it is to that of sorghum of which every farmer in our section has sufficient planted for home use. Whether buckwheat will prove a successful crop is still a matter of trial. Last year the heavy rains prevented us from sowing any, but this we trust will prove better, and we can try then for buckwheat cakes for the winter—a luxury which we were forced to dispense with last Winter, very little being for sale in the stores, and that at $4 per cwt.

But nature makes up to us for the loss of many Northern products in the lavish manner in which she throws fruit of all kinds into our mouths. Of course, everyone knows this is a great peach country; but no one who is not accustomed to it can fail to notice what quantities of smaller fruit grow wild here. We have bought all our strawberries for five cents a quart at first, and three cents for later berries. Now they are about over, and fine large Ox-heart cherries are plentiful at 90 cents a bushel. You will find gooseberries in all the farm gardens, and they are a full crop; but we see very few currants, and do not think them generally cultivated.

Raspberries do not grow wild here as at the North, but they take very kindly to our gardens. The running blackberry is everywhere. You could scarcely see any ditch banks in the time of its blossoming, and in a short time you can pick a bushel in "no time." There will be a large crop of whortleberries and they sell here readily at $1 a bushel. This is not "apple year" with us, yet we have a dozen trees well filled; last year there were so many dried, that you could buy them at retail all Winter for four cents per pound. This *is* the "peach year" with us, but in this climate wherever the thermometer remains for 24 hours below zero, it kills the buds. And if your memory is not at fault, it will need no reminder of the fact that last Winter that indicator did not stop at zero, but went down the very last stairs into the cellar. Within a circle of ten miles I know of only two orchards that will bear fruit. They stood in so sheltered a position that the fierce cold did not affect them. And then they are old orchards or rather the trees are the "old-fashioned seedlings" and they claim here that these "old-time" peaches are more hardy than the varieties we buy of the nurserymen at the present day. So much for a bit of news from our quiet settlement. All of this has been practical description of our surroundings; but there are many things beside these matter-of-fact ones, of which, had I space, I should like to write you—of the roads, without a hill or a stone, lying among woods fragrant with magnolia and honeysuckle, bright with sunshine and laurel, and musical with song of robin and mocking-bird; of the little hamlets into which they lead you, each with its little church and white-washed fences and out-buildings, its immense fields of corn or wheat smiling to the sun; of the bay on one side of us and old ocean on the other, vying each with the other as to the purity of their breezes which come as God's blessing, unseen but thankfully accepted in long Summer afternoons. Our twilights are shorter than at the North, but when the night settles down "starry and still," it is so full of beauty that you have not missed the "blind man's holiday" of your childhood hours. K. D. T.

Klej Grange Colony, Worcester Co., Md.

RURAL SPECIAL REPORTS.

Alabama.

Anniston, Calhoun Co., June 28.—Acreage in wheat 50 per cent. less than usual; yield very good. Oats 10 per cent. more than last year; will make three-fourths of crop. Very little rye and no barley. Wheat, Blue Straw. Oats, rust-proof and blue. We have had an excellent season so far for corn; about the same area was planted as last year, but it has been badly neglected for "King Cotton." There are many fields that have not as yet been touched, and the best part of the season is passed. More land has been planted in cotton than ever before, and where it has been properly worked it looks better than I have before seen it at this time of year. No peaches or blackberries. Raspberries and strawberries good. Fair crop apples. C. A. S.

Arizona.

San Pedro, Pima Co., June 23.—This section of Arizona has only been settled four or five years, and only small quantities of grain are raised. Wheat, oats and barley do well, but every crop is raised by irrigation. This is not considered to be a good corn country; very little is raised. Orchards are all young. My father has about 2,000 trees of all kinds; they were small yearlings and were set out two years last Spring. Peaches and plum trees are twelve feet high; other trees do well. We have some peaches this year. Grapes and strawberries do finely, but other small fruits are failures. F. L.

California.

Sacramento City, Sacramento Co., July 4.—Wheat and barley are the chief staples of this and Lassen counties, and of these there will be about half a crop as compared with last year's total yield, as the acreage is less. Very little rye or oats is grown here, and corn is raised only along the river bottoms. Small and orchard fruits are fully up to the average. S. S. H.

Canada.

Burford, Northfield Center, Ont., July 5.—Wheat yields about 14 bushels per acre, some pieces are good but others are quite thin. The usual average for years has been about 25 bushels—Clawson, Fultz and a little Scot. Barley and oat prospects good; rye very little sown. Peas are good. Corn outlook very poor; large quantities have been planted over, and even then have not grown. Last year's crop was not very good and it was not well cured on account of the rain, much of it failed to mature well and therefore the seed must have been poor. The supply of fruit will be small; a number of trees are dying, I think from the hard Winter. Greenings are suffering most with me. Peaches not much grown. Small fruits have also suffered. Black-cap raspberries and black currants will be scarce. Strawberries are not so plentiful as they have been some seasons, but are a fair sample. Grapes have also been much injured by the Winter, especially the more tender varieties. Cherries in all varieties are very scarce; hardly enough for the birds. The hay crop will be good. Clover not having been injured by the Winter, has more than a usually good outlook. Potatoes look very well; the Beauty of Hebron is making a large growth. The bugs are not quite so numerous, but there will be enough of them by the time for the late varieties. D. S.

Colorado.

Sedalia, Douglas Co., July 2.—An increased acreage of wheat; but the outlook now is discouraging—so dry. The same can be said of oats and rye; but little barley is grown. Corn looks well, but not much is grown in Colorado—nights too cold. All the orchards in this State can be counted on the fingers of one hand. All the apples raised in Colorado cost a dollar each. Small fruits are on the increase and promise well at present. Colorado is not a farming State. Mining and stock raising are the main industries. U. T. S.

Dakota Territory.

Utica, Yankton Co., June 28.—Our Winter here was the severest that I have ever experienced in my life and a greater depth of snow fell and stayed on the ground very late, causing the ground to be very wet when it went off. We usually get our small grains sowed by the first of April; this year we commenced sowing the last of that month, and then were hindered by a very wet May, consequently, our

crops of all kinds are late and backward, and our acreage is a good deal less than usual. A large area of the Missouri River Valley was badly flooded and is covered with sand deposits, mud and stagnant water yet, and will remain unseeded this year; while a good deal of our up-lands, owing to the melted snow and excessive rainfall, are covered with water and too muddy for cultivation. Wheat was sown late on account of failure for the past two years, not more than a third of the usual acreage was put in, flax being substituted for it. While here and there under peculiarly favorable circumstances there may be a good piece, the general average is poor—will not make over one-half or one-third of a crop. Corn was planted late in May and, on account of the wet weather, most of it rotted and the ground either remains without a crop or was replanted to corn in June, which will make it a matter of difficulty for the late-planted to get ripe. An unusually small acreage was planted. Oats were sowed late; about the usual acreage; a fair outlook for a good crop. Potatoes look tolerably well. We have the usual number of bugs. A large acreage of flax has been sowed, but it is very late—farmers have just quit sowing; looks very well so far; but it is almost too soon to tell what it will do. Hay is a good crop on the up-lands. Gardens are pretty good where properly tended. So far we are free from insect pests, with the exception of potato bugs. On account of the failure of our two principal crops, wheat and corn, and the small amount sown, our prospects are not particularly promising. G. W.

FLANDRAU, Moody Co., July 1.—We estimate the area under cultivation in this county at about 75,000 acres, of which 65 per cent. is in wheat; 15 per cent. in oats; 10 per cent., in barley and 10 per cent. in corn, flax, truck, etc. The principal varieties of wheat are Lost Nation and Fife; a larger proportion of Lost Nation was sown this year, as it yields from five to seven bushels more per acre. Only sufficient corn is raised for home consumption. Very little rye is raised but it does well. As the country has only been settled three years there are not many orchards. Small fruits on my place are doing nicely—so well that I am encouraged to plant largely. We have had a great deal of wet weather, but our rolling prairie resists drought and wet equally well. Crops are looking splendid and the prospects are better than in any season since I have been here. W. R.

Florida.

MANATEE, Manatee Co., July 3—The weather is delightful, very warm; the thermometer registering from 80 to 96 degrees, in the shade at noon; but at the same time we have a refreshing breeze. The nights are very comfortable. It has been very dry with only an occasional shower. No wheat, oats, rye or barley raised hereabouts. Corn is raised to some extent—just enough for home use; it is not considered a paying crop. Vegetable raising seems to be the coming industry. Farmers commenced shipping in January. Fruit is looking well, as there was no frost in this section last Winter. Strawberries have been in bearing since February. Grapes are doing well, the Hartford Prolific is now ripe. Our great need is quick transportation. B. F. C.

Idaho.

MOUNTAIN HOME, Altura Co., June 24.—There are not more than 500 acres of grain in this whole county; and oats and barley take up the most of this area. Wheat grows well but none is sown. Corn is a failure—none planted. The acreage under grain has been about the same for the last few years. Most kinds of fruit thrive here, but very few trees have been planted. Idaho as a farming State is a failure—not one acre in fifty thousand is suitable for cultivation. G. B. R.

Illinois.

ROCK FALLS, Whiteside Co., July 1.—Here field crops are poor, except potatoes. The drought in May was very disastrous to wheat, oats and barley, and rye was badly winter-killed. The frost and snow prevented sowing the usual amount of Spring grain in season; consequently there was a large acreage of corn planted on all farms which were not too low and wet. But there is great complaint of poor seed, and the incessant rains keep the low ground under water, and prevent replanting and working the rest. Where the land was in good condition and there is a good stand, the corn looks as well as is usual for the season. Orchards were injured by the severe Winter, and many apple trees have been killed and very few varieties have any fruit. There are no cherries; very few pears, but plums promise well. I think there will be a fair crop of Concord grapes, although many vines were killed and all greatly injured by the severe Winter. Raspberries look as well as usual; both black and red. Blackberries are a total failure where they were not protected. Snyder and Taylor Prolific were equally injured on my grounds and will only have a few scattering berries. Strawberries produced enormous crops. Each variety seemed to surpass the others in productiveness. Wilson and Monarch were the poorest growers and it is almost impossible to get the ground covered and they are easily injured by drought, weeds, grubs, etc., which other vines withstand. Chas. Downing, Downer's Prolific, Miner's Prolific and Glendale will be largely planted in this vicinity for market, but the Crescent, when fully developed, is with us the finest table berry and the greatest producer. G. W.

QUINCY, Adams Co., July 2.—Wheat where protected by timber and by snow during Winter is good, but on the north and west sides of bluff land, where the snow was blown off, the roots were winter-killed. Crop will not be more than a half—Clawson and Fultz. Oats promise well; an increased acreage owing to failure of wheat. Corn, so far, promises well; much will depend on the weather at earing time; acreage will be more than last year, also owing to failure in wheat. Hay will be a good crop; straw a short one. No peaches. Apples about one-fourth of a crop. This is the "off" year and, owing to the trees bearing heavily and not having been thinned last year, they seem affected by the hard Winter and the fruit is dropping off badly. Cherries very light—scarcely any. Currants and gooseberries rather light. Raspberries a good crop, Blackberries, Snyder, a large crop; other kinds were winter-killed. Grapes will be about half a crop. A. G.

Iowa.

LEROY, Bremer Co., June 24.—Wheat and barley but little sown; look well now, but chinch bugs will probably take much of the wheat before harvest—Lost Nation, Scotch Fife and some Tea Wheat. Oats and corn are the principal crops; acreage larger than last year, and a better prospect for good crops. Considerable flax has been put in this Spring. Apples not as many as last year. The Ben Davis trees look sick; the Duchess of Oldenburg are all right, and promise a good crop; so does the Wealthy. Grapes not as plentiful as last year—vines injured by the cold. Small fruits promise good crops. Grass extra-good. Butter, hogs and cattle are our principal products. E. E. F.

Kansas.

RENO, Leavenworth Co., June 31.—The most terrible and disastrous rain and hail storm ever known here swept over this county at two o'clock on the morning of June 25. Almost half of the wheat crop was harvested. What was not cut now lies flat on the ground and never can be cut. Corn, sorghum, potatoes, fruit, and all gardens were utterly destroyed. An immense amount of glass was broken and ruin is now visible on all sides. The rainfall was tremendous—probably five to six inches on the level. J. W. MC C.

Mississippi.

COOPWOOD, Winston Co., Miss.—No wheat was sown in my neighborhood this year. It rusts so badly there has been but very little sown for eight or ten years. The oat crop was very good, better than last year. The red rust-proof are preferred by everybody here; they make more to the acre and never rust. No barley or rye is raised, though rye does well. Corn does not look well; the acreage is smaller than last year. Apples and pears do well; so do peaches in some localities. Plums do finely, and some grapes exceedingly well; others rot. Raspberries and strawberries do excellently. Blackberries are on almost every hill, and always between them. No fruit is raised here for market. We are expecting a railroad to run through our county soon, and I hope it may change the condition of things—we are far in the back-ground here. J. E. W.

Montana Territory.

MILK RANCH, Missoula Co., June 29.—This is a way station on the Mullan road, and very little grain is raised in this section owing to the fact of its being too far from a market. Settlers are at present from four to twelve miles apart, and there is plenty of unsettled land. Oats are the principal grain raised here and fed to stock. No corn has yet been tried, but doubtless it would do well in some places. Fruits are also strangers. J. V.

New York.

HIMRODS, Yates Co., July 5.—We are having some very hot weather at present and are in need of some rain. Wheat is growing very slowly and will fall short of a full crop. Haying will be quickly done, as it is light and scarce. Some meadows are very good a few miles away from here. Oats and barley look good. Corn had a bad start; we cannot expect more than one-half to two-thirds of a crop—crows, cut-worms and wet, cold weather damaged it. Some had to plant three times; others plowed it up and have used the ground for a late crop. G. A. B.

Ohio.

CAMDEN, Preble Co., July 2.—Wheat about all cut, and I think it fully one-fourth short of an average crop. Oats very short, but will be long enough to bind. Meadows light. Corn looking well, but very small for the first of July. There will be a light crop of apples; no peaches; no blackberries; a few cherries and raspberries. My German carp are doing first-rate. My Rural Branching Sorghum—you ought to see it spreading itself. The White Elephant is doing well; so is the asparagus. Blount's Corn is as high as my head—five feet, ten inches. W. M.

Oregon.

JUNCTION CITY, Lane Co., June 20.—The crop in this valley is almost entirely wheat; that is the only crop that will bear shipping to foreign markets. We can raise good oats, rye, or barley; but if we had more than we need for home use, it would be slow sale. As for corn, it does not do well in this part of Oregon; the climate is not warm enough; it ears well, but remains green until the frosts of Winter kill it. I have not seen any ripe corn since I came to Oregon seven years ago. If we want corn meal we are obliged to kiln-dry our corn before grinding. The outlook for wheat is perhaps a little above an average, but the acreage is not as large as last year. The rust of two years ago, and the low price of wheat this year, caused many farmers to summer-fallow portions of their lands, expecting larger crops and better prices by next year. A number of varieties of wheat are sown here; Chili Club and Big Club are the kinds mostly sown in this part of the valley; they are both white wheats. The fruit crop in this locality will not be an average. Apples will be a fair crop; pears below an average, and plums about half a crop. No peaches; this is not a peach country. Smaller fruits are very light crops—too warm and dry in early Spring. W. J. D.

Washington Territory.

VANCOUVER, Clarke Co.—The climate is temperate; the Winters are not extremely cold and the Summers not very hot. During the hottest season of the year the nights are always cool enough to make a blanket desirable. The rains last five or six months in each year, but are not continual and always are gentle and the settlers learn to look upon them as a "god-send." The average "Webfoot" has a distaste for drought. In 11 years' residence I have not seen any seriously droughty weather yet—sometimes two or three months without any rain during the dry season. Wood, water and game are in abundance. In opening up land in this section much labor is involved in clearing off the timber. All cereals grow well except corn, which is not a success. Apples, plums, cherries, pears, etc., are finer than I ever saw anywhere else. Peaches cannot be grown successfully except in a few sheltered and favorable spots. Land here sells from $5 to $50 per acre, according to location and improvements. A pretty good farm of 160 acres, half in timber and half under cultivation, can be bought for about $2,000. J. J. B.

WALLA WALLA, Walla Walla Co., June 29.—Eastern Oregon and Western Washington Territory will ship this year 150,000 bushels of wheat down the Columbia River. The wheat crop now looks in first-rate condition. Oats, barley and rye are grown only for home use, and amount to only about one-third of the wheat acreage. Very little corn is raised, as the climate is not adapted to it. All kinds of orchard and small fruits as well as vegetables are in abundance. J. F. W.

CEDAR CREEK, Whitman Co., July 2.—The area under grain in this neighborhood is about 6,000 acres, and this is one-fourth more than last year. The outlook for wheat is good—China Club, Little Club, White Winter, Velvet Chaff and Red Chaff. Oats, too, are fine—Cayuga, Surprise and white and black. A splendid prospect for small fruits; but the country has not been settled long enough for the growth of orchards to bearing condition. All young orchards, however, are vigorous and thrifty. J. L. D.

STEAMING WITH HOSE.—FIG. 340

The Querist.

ANSWERS TO CORRESPONDENTS.

Nasal Catarrh.

J. O. B. Afton, N. Y., has a cow which has much trouble in breathing through the nostrils which are swollen or partly closed, and somewhat sore and inflamed, and from which there is a yellowish discharge of a mucous nature. The animal eats well and is otherwise in good condition apparently.

ANS.—The trouble is due to nasal catarrh, which is chiefly caused by sudden alterations

STEAMING WITH NOSE BAG.—FIG. 341.

of temperature, bad ventilation, deficient drainage and exposure to cold in unsheltered situations. The earliest symptoms are a dryness and a redness of the membranes of the eyes and nose; but these soon become moist and discharge a thin, watery secretion, which later on becomes dense, opaque and copious. Sneezing, cough and a feverish condition follow, and diarrhœa, also, sometimes occurs. If the disease continues and the causes are not removed the outcome may be nasal gleet, malignant catarrh, or sporadic pleuro-pneumonia. If diarrhœa is present, administer the following:—Infusion of quassia, one pint; tincture of opium, one ounce; aromatic spirits of ammonia, one ounce—mix. When the bowels are constipated administer the following gentle laxative:—Epsom salts, 12 to 16 ounces; ginger and gentian, powdered, of each one ounce—mix, and give in a quart of ale. The feed should consist of bran mashes, roots and green food. Steaming is of great benefit in this disease and may be readily performed in either way, here illustrated. In one case a hot, steaming, bran mash, to which a quantity of turpentine or vinegar may be added, is put into a nose bag which is fastened as shown at Fig. 341. In the other case an India-rubber tube is attached to the spout of a tea-kettle placed over a fire, and through it the steam generated is conveyed to the nostrils—see Fig. 340. Both of these methods should be continued several hours. Where the steam jet is used, care must, of course, be taken to avoid too much heat which would scald the parts.

A. M. Stone Church, Ill., asks whether locusts will hurt apples and if it is safe to eat the apples on which they have been.

ANS.—Assuming that the 17-year locusts are meant, they have never been reported as injuring fruit. They take but little nourishment in the adult state, and that little they derive from twigs which they pierce with their beaks and from which they suck the sap. The principal damage for which they are responsible is the injury to the twigs in which their eggs are layed.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JULY 9.

H. W. R.—W. F.—P. B. M.—A. R. C.—S. R. M.—H. & S.—C. E. P.—T.—J. M. S., We are always glad to get such items of experience.—G. A. G., Jr.,—J. C. T., thanks.—L. F.—W. H.—W. M.—C. A. B.—W. J. D.—W. F.—A. J. P., we cannot determine what the bearded kinds are.—A. E. B.—R. M. L.—H. A. C.—W. F. K.—E. P.—Sheep Grower—W. A. B.—H. A.—A. D.—A Subscriber, Huntington, Pa.—W. E. Y., thanks.—G. W. H.—A. S. G.—A. S. G.—C. E.—J. A.—T. B. H.—H. A. W.—J. R.—O. J. C.—J. S. P.—J. H. N.—J. F. C.—A. J. P.—G. B. B. J. C.—E. B.—A. B.—D. R. B.—D. F. J.—A. E. G.—J. L. F.—E. E.—G. A. G., Jr.—O. H. S.—W. W.—B. G. C.—C. T. F.—W. H. R.—W. G. R.—A. H. B.—A. L. W.—G. H.—W. H. S. D.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, JULY 16 1881.

OUR picture of Iroqnois published last week was re-engraved from the original which appeared in a late number of the Illnstrated London News.

THE RURAL is not a Republican—neither is it a Democrat. It takes no part in politics and politicians. But we do sincerely rejoice that hopes may be entertained of President Garfield's recovery.

FRIENDS OF THE RURAL, we give timely notice. Reserve one-twentieth of an acre at least of your best land for our next Free Seed and Plant Distribution. Besides the interest which attaches to testing novelties presumably good, we are in hopes to render our next Distribntion peculiarly attractive. Hence the above notice.

As we go to press a specimen of a new variety of oats is brought us from the RURAL FARM, which is, as yet, unnamed. It consists of one root and five stems; the stems, or stalks, averaging five feet and five inches in hight, and fully one-fourth of an inch in diameter np to three feet in hight. The leaves average three-fourths of an inch in width. There are 90 spikelets on a stem, or in one panicle.

THOSE COMPETING for the Rural Wheat Prizes for the largest and heaviest heads will please send five heads of each variety. It is best to pack them in suitable paper boxes of any kind and send by mail. The postage is but one cent per ounce, if the box is not *sealed*. Our friends will not forget to write on each box their full name and address, otherwise we cannot place the wheat sent with the name of the sender.

SUCH NOTES as the following are very gratifying to the RURAL.

PRUDENCE ISLAND, R. I., July 8, '81.
Please accept my thanks for the gift of a root-cutter, received this day. What with choice seeds, big mangels, the gift of a machine to cut them with, and, above all, good advice, I cannot but regard my subscription to the RURAL as my best investment. Respectfully,
E. FARNHAM.

HERE IS A CHANCE for the thousand and one tramps who complain that they can find nothing to do! The Denver and Rio Grande Railroad Company has advertised in Great Britain for ten thousand laborers, to whom a two years' contract is offered on their presenting themselves at the Company's office. It is a pity that workmen cannot be found in this country, especially in these days when hordes of able-bodied men with nothing to do are arriving daily at our ports. One week's accession of immigrants could be disposed of to good advantage out there where labor is in snch great demand, and a few car-loads of country tramps would serve quite as good a purpose there as they do here in the East. lying under fences or begging from door to door.

THE TELEPHONE PEA.—This, as our older readers will remember, was dissemina ted by the RURAL NEW-YORKER in its distribution of 1879. As grown at the Rural Farm the present season, it is the most valuable pea we have ever raised. The stems are so strong that although they grow to the hight of four feet, little support is necessary. The vines are marvels of productiveness and luxuriance the pods very large and well-filled,—peas of the first quality. Sown at the same time with McLean's Advancer and Extra Early Alpha, they are ready to pick nearly at the same time, being but two or three days later. Except where extreme earliness is an important item, we commend the Telephone to our readers as among the very best peas in cultivation.

THE COMET, of which we spoke editorially last week, seems determined that the events of the terrestial sphere shall not attract unto themselves all the attention, so last Wednesday night it blew up, it was said by prominent astronomers, and two distinct comets were formed. But it had a precedent for so doing. It wasn't at all original. People say there's nothing original nowadays, but original sin. Biela's comet did the same thing in 1845, when two distinct bodies with coma, nucleus and tail were formed, and side by side, in brotherly companionship they traveled, with singular interchange of luster, and in 1852 they were again both visible in the same field of view. Now the astronomers will have the pleasure of determining the nature of new orbits, for the parts separated with such swiftness that their motion was visible 35,000,000 miles away. We hope this beautiful theory will not be overthrown by the discovery of a spider's web across the object glass of some sleepy astronomer's telescope.

THE RURAL BRANCHING SORGHUM.

WE find that not over 15 per cent. of the Rural Branching Sorghum seed has germinated. This is, no doubt, owing to its inferior quality. Our friends will not reproach us, however, since our entire crop in South Carolina very nearly proved a failure, and we deem ourselves fortunate in having procured enough seed, though indeed of poor qnality, to supply all applications. This will at least enable all to try it and test its value. The claim has been made by several of our California readers that they have this Branching Sorghum and they have sent us fair, plump seed, thrice the size of that we sent out, to try. We have sown the several samples which germinated freely and the plants are now far in advance of those from our own seeds. While we have doubts that they may prove the same, it is to be hoped they will, for an abundant supply of seeds of the best quality would thus be fully assured.

A GREAT DELIVERANCE.

As we went to press last week, this city was saddened by the intelligence that the wretch Guiteau had accomplished his nefarious object, the President having just died. The news agitated the crowds that all the day long congregated before the bulletin boards of the newspaper offices, and spread sorrow through the city as the yelling young hawkers of "extras" of the evening papers bore it far and wide. Ont of a heart full of grief and indignation we spoke a few fitting words in announcing the calamity to our readers. Providence, however, has been merciful to the country and to the family of the sufferer in preserving the former from the horror and shame of a second presidential assassination, and the latter from the loss of its honored head. The President still lives and has been improving steadily in health ever since the favorable turn of the crisis a few hours after the news of his death had been wired from Washington. All present indications point to his assured recovery, and althongh his doctors still hesitate officially to proclaim him out of danger, it is evident from the tone of this morning's telegrams that a sense of the grave responsibility of an official declaration of the fact alone witholds them, for a brief space, from gladdening the nation with the announcement.

Political assassination has always been the resort of heavily oppressed nationalities debarred from an outspoken expression of their grievances. It has never been characteristic of any part of the Anglo-Saxon race, and, least of all, of that branch of it which has flourished so vigorously and freely on this continent. The first crime of the kind among us was the work of a madman with a hereditary taint of insanity; the late attempt was the outcome of a low grovelling, semi-insane, vain, vagabond life on the part of the would-be assassin. The crime was utterly un-American.

CROPS AND MARKETS.

ACCORDING to yesterday's cablegrams the Italian Minister of Agriculture had just reported that the weather throughout the country had been very favorable to all growing crops, except that some local damage had lately been done by hail-storms. In the central and northern provinces the harvest is expected to be abnndant; that in the Southern provinces less so. Recent rains had greatly benefited maize which is in excellent condition. Vines and olives are heavily laden, forage promising; but fruits and hemp leave much to be desired. In France crops are reported fine in the central provinces—the great wheat-growing region, while this season's vintage will be the best for the last fifteen years. From Spain crop reports are contradictory; favorable reports, however, considerably predominate. In the United Kingdom the recent favorable weather has improved the outlook, bnt there is still mnch donbt of snch crops as were common before the late era of agricultural disaster. Even with an average yield per acre, however, the aggregate yield must be less than formerly owing to the smaller area nnder wheat. Cablegrams from St. Petersburg announce that the crops will be good throughout the Empire, and extra good in the southern provinces. In Germany crops are fair on the whole; but reports yet are more meager from that broad country than from any of the other prominent prodncing nations.

With regard to the wheat crop of this country we see no reason to make any noteworthy alteration in our estimate of the aggregate yield as abont 20 per cent. or 97,000,000 bushels less than last year's total crop. True, nearly all the chief newspapers East and West still persist in maintaining that the crop of 1881 will fall little, if at all, behind that of '80, but all trustworthy reports in other agricultural papers, as well as those by various State Boards of Agriculture favor our opinion. Secretary Chamberlain, of Ohio, correcting an error in our last issue, into which we were led by a contemporary, usually very reliable, estimates the yield in Ohio at 77 per cent. of last year's, and says that, according to official and private sources of information, the prospects for the crop in Michigan, Indiana, Illinois and Iowa promise only 50 per cent. of last year's totals. The demand for wheat in Europe is certain to be considerably less this year than last; but our exportable surplus is also sure to be considerably less, and the prospect is that, after harvest, prices will probably be as good as last year, and that it will be highly unwise for those who can afford to hold their wheat, to rush the new crop to market, unless they obtain satisfactorily remunerative prices for it.

COTTON SEED PRODUCTS.

Of all the agricultural products of the South, it is doubtful whether any has been so much wasted or misused as cotton seed until of late, and even now, taking the whole country, probably more of it is used to little effect than to the best advantage. At the late Cotton Crushers' Convention at Cincinnati, a Louisiana planter stated that he had found cotton-seed meal scarcely inferior to guano as a fertilizer, while an Alabama planter claimed that by its use he had increased the production of a given area of poor land from 18 to 145 bales of cotton, and a Connecticut farmer declared that it was the best fertilizer he had ever nsed for tobacco lands, tripling their productive capacity in three years. As a cattle food its merits received the strongest sort of indorsement and are yearly growing in pnblic appreciation at home; abroad it has long been held in high estimation in Great Britain, Sweden, Norway and several other European conntries. The European demand for cotton-seed oil, too, is growing rapidly. Until of late years, this oil had entered into our trade with Europe only in small qnantities, and was used chiefly in the manufacture of coarse soaps. About half a dozen years ago, however, manufacturers sncceed in so improving the quality of the article that even experts could hardly distinguish it from olive oil, with which it seems to have so close an affinity that when both are mixed the adulteration can with difficulty be detected by the most skillful. At once the exportation of this snperior oil increased so rapidly, especially to Italy, that it excited no small surprise until it was discovered that it was largely used for the purpose of adulterating the much higher-priced olive oil produced in the Italian and Spanish Peninsnlas, but particnlarly in the former. So difficult did detection of the adulteration prove there that, to assure their customers, some of the largest houses in the oil trade had to guarantee the purity of their brands on the ground that they bought directly from the peasants. The government inspectors indorsed their statements, yet it was afterwards proved that these very oils have been adulterated by the peasants who had themselves bought cotton-seed oil to mix with them before selling them to the wholesale dealers. Instead of attempting the difficult task of punishing the guilty, the government lately increased the duty on imported cotton-seed oil from $1.15 to $3.86 per quintal and placed a tax of $1.70 per quintal on that made in the country. For a time this excessive import duty will doubtless somewhat injure our trade in this product; but hitherto the high price of olive oil has almost entirely debarred the lower classes from its use—a severe deprivation throughout Southern Europe where oil is an important article of food—and now that they know that cotton-seed oil is as healthful and resembles the more expensive sort so closely in all respects, they are sure to use it extensively should the governments of Italy, France and Spain not place a prohibitive import duty on it. Already Consul Gonld of Marseilles reports that most of the cotton seed oil imported into that city is used by the population in its pure state with the full knowledge of the consumers, who prefer to nse it at a reasonable price than to pay a mnch higher figure for olive oil which they cannot distingnish from it.

BREVITIES.

THE Bidwell Strawberry, this year, has continued in fruit thirty-one days, beginning the first of June.

NOT an Army-worm has been seen at the Rural Farm this Summer. This is in accord with the RURAL'S prediction that sections last year infested would not again be infested this year.

A BRANCH of the Highland Beauty apple, ten inches long, sent to us by Mr. E P. Roe, bears 100 apples. In their present green condition they measure from one to one-and-a-quarter inch in diameter.

THE RURAL requests that any of its readers who have a head of the so-called "Golden Grains," will send it to the Editor by mail. We believe this to be the Black-bearded Centennial and have so expressed ourselves in these columns more than once. But the RURAL does not tolerate injustice and desires to confirm its opinion or retract it.

THE Atlanta Cotton Exposition is to open on October 5, and close on December 31. Director General H. I. Kimball says that, as no charge will be made, to exhibitors, for floor-room, every merchant, mechanic or manufacturer in the civilized world can now enter his wares for exhibition by sending a formal application and a check for the entrance fee—$25.

GEN. HARDING, speaking for Tennessee, considered Hungarian Grass to be the best forerunner of Timothy. He recommends that this be sown in Summer and harvested in August or early September, and that Timothy be sown upon the stubble and harrowed in. The Hungarian Grass, he thinks, destroys all weeds and gives a certain compactness to the soil, necessary to secure a good stand of Timothy.

IT would appear that this season's crop of strawberries has been the greatest ever raised in this country. And yet, as a rule, they have sold for good prices. Large berries of a bright color have always readily sold at from 25 to 30 cents per quart basket. At the fancy fruit stores of Broadway extra sized berries brought from 40 to 60 cents, and, strange to say, most of them were Great American. There is no doubt that this variety, however it may fail here, there and almost everywhere, succeeds admirably in *some* places.

THERE have been on exhibition at the rooms of the Decorative Art Society, in this city, some pieces of needle-work, which, when suspended against the wall, resemble water-color paintings, and one viewing them at a distance might pronounce them as such. Our lady friends can, doubtless, appreciate the wonderful skill displayed in selecting, blending and working the various hues of the material used in order to produce such interesting effects. What the artist does with the brush has been well imitated by Mrs. O. W. Holmes, Jr., who has some twenty pieces of needle painting on exhibition, representing various Winter and Summer scenes. This is, indeed, the sublimation of embroidery, and something which our good grandmothers of forty years ago would have classed with the things impossible.

THE Cincinnati Price Current, June 30, stated that the Secretary of the Ohio State Board of Agriculture estimated the wheat crop of this year for that State at 6,000,000 more than last year's total crop. From a condensation of the official report made on July 7, given in our Agricultural News Department, it appears that this statement was erroneous, inasmuch as the aggregate wheat yield this year is estimated at 12,000,000 bushels less than last year's yield, instead of 6,000,000 bushels more. This estimate approximates correctness all the more closely in that it has been made after nearly the entire crop had been secured in good order. Our estimate of the wheat crop of the country put it twenty per cent. less than last year's crop; Ohio's appears to be twenty-three per cent. less by the present estimate. Some other large wheat-producing State, however, will doubtless make up for this slight difference.

AMONG the crop reports lately received was one from Pennsylvania of which the following is an extract:—"Wheat acreage about a quarter less than usual owing to the early setting in of Winter which prevented Fall sowing. Fully half the crop was entirely winter-killed, plowed up, and the ground devoted to other crops, mostly corn. More than a tenth was destroyed by the drought in May and about a fifth by several very severe storms that have visited this section. The chinch bugs and other insect pests have taken a good deal of it—probably an eighth, and even with favorable weather till harvest there cannot be one half an average crop." A little figuring will show that, according to the above account, one-fifth more of the crop was destroyed, in one way or another, than grew, on an average, so that it is hard to see how it could produce even half an average crop, after a deficiency of one-fourth of the area of an average crop, and the destruction of thirty-seven fortieths of the yield on the remainder in various ways.

Miscellaneous.

RURAL BRIEFLETS.

Cut Hungarian Grass as soon as it is fairly headed out.....

Sow buckwheat—generally three bushels to the acre.....

Garden ground may be cleared of early peas, spinach and potatoes, and swedes be sown. Sow in drills three feet apart.....

Plant beans for pickles. Some of the stringless Golden Wax Beans are excellent for pickles, though Refugee is generally planted for that purpose.....

The Green Flageolet, a new variety, we should think would prove valuable for pickles since even after cooking or when quite ripe they retain the green color.....

We have this season for the first tried Swiss Chard for greens and find them in tenderness better than other beets sown for this purpose.....

The last planting of sweet corn may now be made. Such early kinds as Early Minnesota, Moore's Early Concord or Early Narragansett should be selected for this climate.....

As soon as the gladiolus shows the flowering stalk it is best to provide light supports. Very thin, light sticks suffice. When the bulbs or corms are planted deep, support is scarcely needed except in case of high winds.....

The Japan lilies should also be supported before they bloom.....

Move the vines of sweet potatoes frequently.....

Sift upon the young squash, melon and cucumber vines fine (sifted) coal ashes mixed with a little hellebore, aloes or snuff.....

Train and tie to the poles Lima beans when necessary. Pinch the ends when the vines are four or five feet high.....

Attend to the cions of grafted trees. When growing too freely, support them by tying to other branches.....

Pinch out the growing shoots of raspberries and blackberries.....

See that the cattle and farm stock in general have fresh water and plenty of it. Trite advice? But hundreds of farmers do not heed it.....

Remove all garbage from the dwelling. Whenever a disagreeable odor is perceived, ascertain whence it comes. Pure air is one of the safest guards against sickness, as foul air is one of the most prolific causes of disease.....

Arbor-vitæ hedges may now be cut back.....

If confined in yards, give the poultry plenty of fresh grass and clover. Give them pounded shells, bone flour or slaked lime. Whitewash the houses and remove the droppings *frequently*. Kerosene the roosts—and, "don't you forget it."....

The aphis, or green fly, seems to be growing more and more abundant upon fruit trees from year to year. Cherry, pear and apple trees—young ones especially—have been so infested with them of late years that in many instances the leaves are entirely killed. The production of a new set weakens the tree, of course, and the young wood so made is generally killed by the following Winter. It is a troublesome insect to deal with and the only effectual remedies—tobacco water, snuff or whale-oil soap—require so long in their application as to render them impracticable. We have of late tried London-purple in water, applied with an old whisk broom, but although the twigs, stems and leaves were well sprinkled, the aphides were not appreciably lessened in number.....

Mr. J. B. Alcott says that, like a woman or man, the agricultural journal needs to be loved to do its best—which is very true. If we were not impressed that the Rural New-Yorker were all the while gaining in the affections of its readers, we should not care to continue its publication. We might continue it as a matter of business or profit—but not as a work of love.....

KINDLY WORDS APPRECIATIVE OF THE RURAL NEW-YORKER.

I find the Rural an excellent medium for advertising and a most excellent paper to have in the family. G. S. Wales.

Rochester, N. Y.

This makes three new subscribers I have sent you this year with no effort further than showing a single number of the Rural in each case. Had I not been pleased with it, I would not have done even this little. Every man who loves a cabbage, or a rose, or a glass of good milk, whether farmer, merchant, manufacturer, banker or laborer, ought to read the Rural on account of its high moral tone in its every department. C. J. Spaulding.

Jefferson Co., O.

What we like best about the Rural is the purity of its contents and its valuable information; but we would like it better if its bright, piquant face would appear daily. The Beauty of Hebron is worth the subscription price, so we get the best agricultural paper *free*. D. H.

Primrose, O.

The Rural improves, I had nearly said, with every number, and it must be considered the model agricultural journal. Its influence for good I know is very great.

Prof. E. M. Shelton.

Kansas State Ag. Coll.

Right worthily is the Rural leading all its contemporaries in enterprise. May it continue long to bless our farmers and others with its ennobling advice and instruction.

Nelson Slater.

Congratulations on your success. I am always glad to know of deserved success.

Cornwall-on-Hudson, N. Y. E. P. Roe.

I must say my advertisement of the Wooster Creamery in the Rural New-Yorker for the past year has been money well invested. I would recommend the Rural to all advertisers. M. D. Chapin.

Poultney, Vt.

I am much pleased with the Rural. I think with it as a guide, we farmers need not be humbugged by worthless fruits and vegetables.

Fayette Co., Ia. J. A. Rice.

Allow me to add a note of appreciation of the Rural. Some have spoken of the seed distribution as a premium. While the seed distribution is of great value, the Rural needs no "premium;" it is a "premium" of itself, the money paid for it is but a trifle compared with the value of its columns. Long may it "wave!" M. G.

Sim's Store, Ky.

I am very much pleased with the Rural. Cannot possibly imagine how it could in any way be improved. Horace C. French.

Chemung Co., N. Y.

We enjoy the Rural very much. 'Tis a welcome visitor. The Specials are *good*.

Ottawa Co., Mich. N. W. Bacon.

I am pleased more and more with the Rural; it teaches me in many ways.

Williamson Co., Tenn. W. H. Chappell.

An Appreciative Criticism. — We were very much pleased with, and interested in, the Rural's Cattle Number, and think it must have been equally interesting to all of your readers who are concerned with such matters. The frontispiece, "Netherland Queen, from a photograph," was particularly fine—the finest, we think, we have ever seen from a photograph. You are entitled to great credit and congratulations for the attractive and interesting manner in which you have presented this important subject to the public. Permit us to add ours to the many which you will undoubtedly receive. Smiths & Powell.

Syracuse, N. Y.

BOOKS, CATALOGUES, ETC.

Gardner B. Weeks, Syracuse, N. Y. Illustrated and descriptive price list of Grappling Hay-forks and Railway Hay Conveyors.

Premiums and Regulations for the 32d Annual Fair of the Ohio State Board of Agriculture, to be held at Columbus, August 30th—September 2d next.

Fourteenth Annual Report of the Secretary of the Connecticut Board of Agriculture. A very valuable work of 500 pages. T. S. Gold, Secretary, West Cornwall, Conn.

Garden Annual, Almanac and Address Book, published under the direction of W. Robinson, F. L. S., the "Garden" office, 37 Southampton Street, Covent Garden, London, W. C., England.

The Lincoln Patent Can Creamery. Sixteen sizes for all classes of dairies. An illustrated pamphlet of 12 pages. Address for copies William E. Lincoln, Warren, Mass., mentioning the Rural New-Yorker.

Transactions of the Indiana Horticultural Society, for 1880, being the Proceedings of the Twentieth Annual Session, together with reports from local societies, essays, papers, etc. W. H. Regan, Secretary, Clayton, Ind.

Commercial Relations of the United States. No. 7. May, 1881. This pamphlet of 161 pages contains reports from the United States consuls on the commerce and manufactures of their respective consular districts, and forms part of a series now being issued.

Illinois Crop Reports, being the consolidation of reports returned to the State Department of Agriculture to June 1st, 1881, a condensed summary of which has already appeared in the Agricultural News of the Rural New-Yorker. S. D. Fisher, Sec., Springfield, Ill.

Silver & Deming Manufacturing Co., Salem, Ohio. A beautiful catalogue of 115 pages of pumps, hydraulic machinery, carriage-makers' tools, butchers' tools, feed cutters, &c., manufactured by them. Finely illustrated with 200 or more wood engravings. For copies apply to the above firm.

Agriculture of Pennsylvania, containing Reports of the State Board of Agriculture, 296 pages; the State Agricultural Society, 198 pages; the State Dairymen's Association, 64 pages; the State Fruit Growers' Association, 74 pages; and the State College, 20 pages, for 1880. Thos. J. Edge, Sec., Chester, Pa.

Twenty-fourth Annual Catalogue of the Officers and Students of the State Agricultural College of Michigan, for 1880–1881. From this we learn that this model agricultural college had 221 students during the season just closed, including 33 seniors, 33 juniors, 53 sophomores, 90 freshmen and 12 specials.

The Shepherds' National Journal.—This is the first issue of a proposed quarterly paper on sheep industry, edited and owned by E. J. Hiatt, and published at Chester Hill, Ohio, price $2 per annum. It contains 32 pages of matter copied almost entirely from other papers and publications. In addition to the regular quarterly issue, a weekly supplement is promised during the wool-selling season, containing the wool markets and movements, prices of mutton sheep, etc. We wish this new venture all the success it may deserve.

Transactions of the Iowa Hort. Society for 1880. This handsome volume of 616 pages contains the proceedings of the Fifteenth Annual Meeting of the State Society, together with those of the Eastern Iowa Horticultural Society, as well as those of the Western Iowa Hort. Society and of other local societies for 1880; embracing essays and discussions in all departments of scientific and practical horticulture, with lists of trees and plants adapted to the several fruit districts. The work is well edited by Prof. J. L. Budd, of Ames, Iowa, Secretary of the Society.

American Pork.—This pamphlet of 49 pages is the result of an investigation made under the authority of the Department of State, into the subjects of hog cholera, trichinæ, and the manner of raising and disposing of swine in the United States. The investigation was instituted in consequence of the highly unfriendly action of France in peremptorily forbidding the importation of American hog products on February 18, last, and it clearly demonstrates that there was no valid ground for this hasty action. The pamphlet is published by the Department of State, Government Printing Office, Washington, D. C.

BEAUTIFUL IOWA.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the Rural New-Yorker.]

Beloit is in the extreme southwestern corner of Lyon Co., on the Big Sioux River, and on the Sioux City and Dakota division of the Chicago, Milwaukee and St. Paul Railway. It has a population of about 250, four church societies; (two edifices), a public school, a Lutheran Theological College, just removed here from Wisconsin, having for a faculty, a president and three professors a local newspaper, and the usual quota of business for such a town is well represented. The town was named by Hon. E. E. Carpenter, who removed here from Beloit, Wis., in 1873, and is now doing enough business almost to justify running him by steam power; a flouring mill, woolen mill, grain elevator, store, and dealing in real estate requiring his daily attention. He will answer all letters addressed to him about either his town or county. Light manufactories are needed here to utilize the water power of the Big Sioux, which can be obtained on favorable terms.

At Orange City, the county seat of Sioux Co. we had the pleasure of meeting Hon. Henry Hospers, one of the early residents, who has been the mainspring of *Holland* immigration from Holland. From him we gleaned these facts: The Holland colony was established in 1869, and then contained some 60 families which have since been increased to 600; there are 22 free schools, all English and three churches, Protestant-Reform. The attention of this class of population is turned to stock-raising and agriculture, their industrious and honest habits rendering them a valuable accession to a new country. "*De Volksvriend*," a Holland paper, is published by Mr. H. This, the shire town, is the largest in the country, (some 400 population) two and one-half miles from the C. St. P. M. & O. Ry. It has the court-house, a generous supply of stores, business and professional men and a very desirable location. The Sioux Co. Herald is a very creditable paper published here. We desire to thank Messrs. Pierce and Lewis (real estate), Bill and Lecocq (same), and C. W. Carter (same), for their very courteous treatment and commend Eastern readers to their care. From here we dropped down to

East Orange, a brisk little town of 200 people, which has grown up around the station. There we found two very neat churches—Reform and Catholic—a good school, and various business interests. It is an excellent shipping point. From Beach Bros., who handle a large portion of the grain, we learn the shipments of last season's crop exceeded 110,000 bushels. D. Gleysteen (the senior of one of their large stores) is in Holland now, looking up among other interests the immigration of that nationality. A ride of 24 miles across the rich country we have spoken of, brought us to the southwest corner of the county, and we found

Calliope with its 125 population—allegorically spreading its wings for an ascent. It is on the Sioux Falls Branch of the C. M. & St. P. Railway, nestling by the Sioux River, which will be bridged here this summer. There is a fall of six feet to the temporary dam, and a mill would be a god-send to them. There are also opportunities for drugs, a blacksmith, harness and other business interests incident to a growing town. With a good newspaper and good school, there is no lack of the instructive element. We learn that W. P. Cutler, of Marietta, Ohio, owns one-half the town-site; and from him or of A. W. Heald, further information can be obtained Taking the branch we next made Rock Valley at its junction with the main line and I. and D. division C. M. & St. P. Besides being a junction this "healthy infant" (about 100 population, 3 stores and 2 hotels) is nearly in the center of this beautiful agricultural region, pouring its ever increasing wealth into its coffers for shipment. It has a splendid water power, and a good mill will soon be built. There is a school and two religious societies will soon be organized. For this point we commend a correspondence with James E. Douglass (real estate), Burnell Bros. (general stock) Richard L. Rowe (same, a new store) or Dr. E. O. Plumbe.

Pattersonville, nine miles east, on C. M. and St. P., is the largest railroad town in Sioux Co., being about 400 population. There is a good Methodist church, Catholic soon to be built, Congregationalist expected this Summer, a pithy local paper, a set of business men who have the go-ahead and push to make their town a good one. A bank will be started ere this article appears, the second in the county. Civic societies are in flourishing shape; schools, well attended and ample for the population, and this standing for a town of only two-and-a-half years of age. It is a marvel to the steady-going farmer of the East, truly. Beach Bros., of East Orange, have also a large business here. To these and the other gentlemen who tendered us their aid in eliciting truths for our correspondence, we say many thanks.

THE INSECT WORLD.

Where do these Pests Come From, and Where do they go to?

In Ontario County, N. Y., about the year 1856, I saw some currant bushes nearly denuded of their leaves by a loop, span, or measuring worm which showed itself in great abundance in all its various attitudes. I have never seen a specimen of it since, or heard tidings of it till a few days since when I found my half dozen gooseberry bushes plentifully infested by the same worm. I showered the pests and dosed them with ashes which simply disturbed them. Caring little for the gooseberries, which are more plague than profit, and fearing for the currants near-by for which I have a profound respect, I placed paper under the former and set it on fire, pitching all I could see into the blaze. In a day or two I found them on the currants sure. By careful hand-picking we have greatly reduced their number, hoping to save some fruit thereby, which we would not have dared to eat had we used poison. I find the same insect on my other garden half a mile off and one-fourth of a mile from any other currants or gooseberries, and I learned that this same worm appeared in the neighborhood last season.

Learning from the American Entomologist (Vol. 2, page 14) that this worm breeds but once in a season and that the moth leaves its eggs on the twigs and branches in July or August, to be hatched the next June, I conclude to wait till the eggs are deposited and, so far as the gooseberries are concerned, to cut them up and burn them. As the gooseberry seems to be its preference, I hope by this and other means to save some currants next season. This is claimed to be a native American. As to this other green gooseberry and currant worm not a looper, claimed to be an importation and producing two generations in a season, I encountered them, or they me, about 15 years ago, and learning that their mother, the sawfly, remained in the pupa state in the ground under the bushes during Winter, I plugged them up there with a plaster of lime mortar of 20 or 24 inches diameter early in the Spring, and they have never troubled me since.

The pear slug that has infested the pear, cherry, quince and mountain ash for the past few years, I have not yet seen this season. Neither have I found the green lice on the currant, apple or plum trees, nor the small black lice on the cherry tips, or on the grapes which they occasionally infest. Are they yet coming? is a serious question. The thrips, too—Tettigonia vitis—that were here in destructive abundance the two past years, are at least thus far delayed, though the Clinton, their special favorite, has blossomed five days earlier than last year. If these tiny thrips do not appear at all, I shall not regret the preparation I have made for them and which was successful last year where thoroughly applied, to wit, ten pounds of quick-lime and four pounds of sulphur slaked together and put in 30 gallons of water and applied on the upper and under sides of the leaves with a whisk or garden pump. Try it, you who are pestered with these little nuisances—I can conquer them with nothing else.

The past has been a hard Winter on this Lake Shore, and the lessons it has taught us are that it is unreasonable for us to expect but occasional success, even in this reputed peach belt, with any of the tender fruits except in well chosen aspects. I have just visited a twenty-acre Concord grapery with great masses of winter-killed wood with swarms of suckers and little evidence of fruit in prospect, and another piece of one and a half acre including the same variety, half a mile distant, where there were 35 varieties and all except three in fine condition with scarcely any dead wood. The soil was the same in both pieces, the difference in the present appearance having been caused partially by the Fall or Winter pruning, but mainly by the difference in aspect, the former being on a dead level and the latter on a slight inclination. I might tell the same story of peach orchards in the same neighborhood, the difference there, too, being caused by the same good and ill-chosen or shaped grounds. All tree fruits bore in excess last year, and most of the trees showed blossom this Spring, but many failed to set fruit.

Muskegon, Mich. S. B. Peck.

For Women.

CONDUCTED BY MISS RAY CLARK.

IF ONLY MOTHERS KNEW.

If only mothers knew, she said,
How hungry children are for love,
Above each virgin little bed
A mother's lips would prove
How sweet are kisses that are given
Between a rosy mouth and heaven.

If only my mamma would kneel,
As your dear mother, every night,
Beside her little girl, to feel
If all the wraps are folded tight.
And hold my hands, her elbow fair
Between my cheeks and her soft hair.

And looking in my dreaming eyes
As if she saw some lovely thing,
And smiling in such fond surprise
On all my hopes of life that spring
Like flowers beneath her tender gaze,
I could not stray in evil ways.

I would not wound the gentle breast
That held me warm within its fold;
My mother's love would still be best,
However sad, or plain, or old:
And, even though the world forsake,
I'd love her for her love's dear sake.

DESCRIPTION OF CUTS.

FIG 342.—THE OLYMPE HAT, of Black Chip Straw, embroidered with beads. Boullion velvet edge. Two velvet draperies go round the crown. Bunch of buttercups at the left side.

FIG. 343.—DRESS FOR LITTLE GIRL FROM FIVE TO SEVEN YEARS OF AGE.

The dress is of pink checked cambric with trimmings of the same.

FIG. 344.—HOME DRESS.

The dress is of sorrel-green velling. The drapery of the polonaise is bound with striped satin of two shades of green.

FIG. 346.—HOME DRESS.

The dress is of sand-colored beige. The skirt

FIG. 342.

is trimmed with alternate kiltings of beige and mahogany-colored surah; the tunic and jacket are trimmed with a cross-fold of surah.

FIG. 347.—DRESS FOR YOUNG LADY.

The dress is of beige, trimmed with guagings of the same.

FIG. 345.—NETTED NIGHT-NET.

This night-net is particularly recommended to persons who suffer from headache, as it keeps the hair closely together without any pressure on the head.

Materials required—Crochet cotton No. 4, netting-needle, and mesh about quarter inch wide.

Commence with twenty-two stitches, and net backwards and forwards fifteen rows, and then take out the foundation thread, draw it through

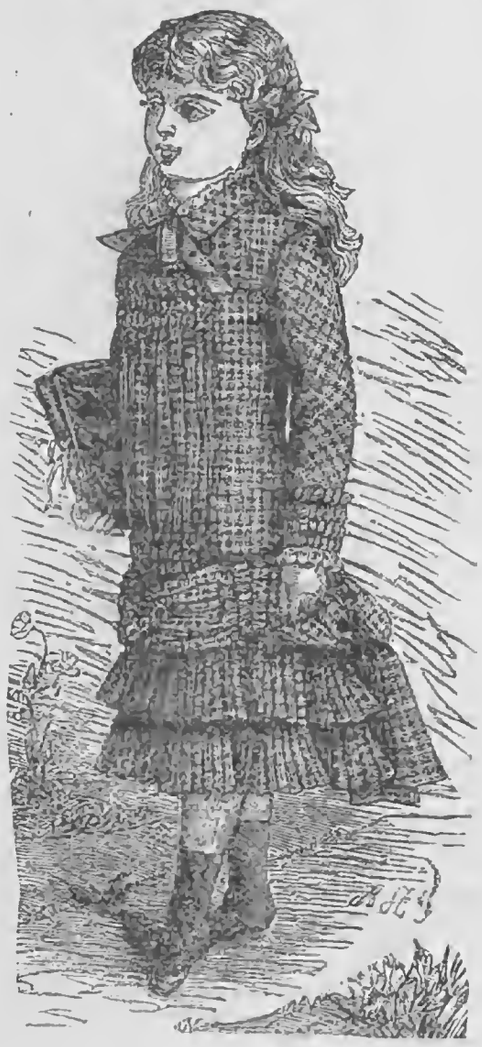


FIG. 343.

the middle of the oblong. Now work round and make one knot in each stitch of the preceding row; there must be eighteen rows netted round, or more if not large enough; then follows the broad row for the ribbon to pass through; for this take a half-inch mesh, or put the cotton twice round the small mesh at every stitch. After this broad row work two rows over the first mesh, then follows the narrow lace for the outer edge; for this net one row over the broad mesh, making always five knots in one stitch, passing over the

FIG. 344.

next stitch. Now take again the small mesh, and pass over again in each row the same stitches that were passed over in the first row, whilst in the rest one stitch must be made in each stitch of preceding row until there is only one stitch to work, and the next to pass over alternately.

This ends the lace.

Draw a ribbon through the broad row of netting, and tie it at the back (see design), and sew on the bow at the top.

FIG. 348.—The hat is of Tuscan straw; the brim bound with cardinal satin, over which is placed a fancy Tuscan gimp; it is trimmed with satin, shaded feathers and gold comb ornaments.

HUMANIZING LESSONS.

Two of the most frequently quoted lines of Ovid are those in which he says that to have faithfully

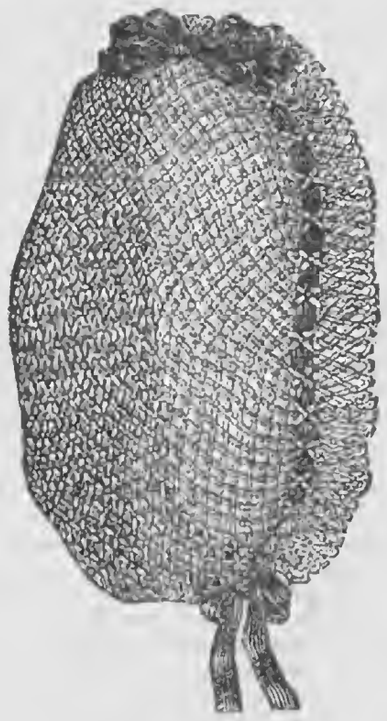


FIG. 345.

learned the arts of reading and writing softens the manners and makes ferocious savagery impossible. Modern experience proves that although these "*humaniores artes*" are essential towards the forming of a gentle and good disposition, they are not the real key to the question, which has after all a very simple solution. Mr. Grigorieff gives a hint of it in a paper lately read at a meeting of the St. Petersburg Society of Gardening. He says, that the Japanese are all taught gardening in schools, and all have their little plots of ground at home. The children are not only instructed in practical horticulture but in the artistic arrangements of flowers, and the culinary uses of vegetables and fruits. Nowhere else are gardens so universal or so skillfully kept. There is a passionate love of the occupation everywhere, from the palace to the cottage. The dwarf oaks and other trees which they take such pride in, become living heir-looms; one specimen often having the successive culture and care of three generations.

Now Miss Bird tells us in her Unbeaten Tracks in Japan that the most notable and beautiful feature of Japanese life is the universal kindness, gentleness and happiness seen in the manners of the children, and in the intercourse between them and their parents. It seems as if long generations of courtesy and complaisance, had almost extinguished the passions of anger, envy, spitefulness, and contrariness which break out so soon and rage so inflammatorily among the children of the West. For Miss B. declares that she saw nothing but quiet and good-will among Japanese children, no scolding, no snubbing, no petulance or pouting; no disobedience of a younger to an older child, or to parents or teachers; no case of quarreling, or any apparent need of correction. She saw no beating of a child in all her journeying, nor anything to provoke or deserve it.

Putting M. Grigorieff's and Miss Bird's testimony together, do they allow us to believe that human nature is every where the same fundamentally or do they prove that the Japanese children, who behave in everyway like ours, excepting in proneness to ill-temper, are yet of a radically different moral constitution? If we adhere to the first of these two views—the one generally held—must we not conclude that our school methods are defective; that we do too much violence to the child's nature and to Nature itself, in fastening the little beginners to desks and books; confining them, at the outset, to the hardest, most unreasonable and bewildering work of all their school life, that of mastering English spelling and reading; a task which adults fail in, but which we regardlessly force little children through by endless practice of repetition, backed by time and threats and irresistible power.

We give them at this critical stage the poorest instead of the best of teachers, and instead of first exciting a desire to learn a word—which makes its learning easy and its acquisition permanent—we poll-parrot it with a string of others, into the dinned ears and brain, no matter whether it is understood and meets with a sympathetic chord of sense in the chambers of the mind or not. Let us study nature and facts, as well as books and

FIG. 346.

take, ourselves, some lessons from the kindergarten of Froebel, and from the genial methods of the Japanese.

MRS. GARFIELD IN THE WHITE HOUSE.

MRS. HAYES never had a sick day in her four years' stay at the White House, though the old house which she loved had all the defects then which it is declared have overpowered Mrs. Garfield in two months. There was nothing more remarkable about Mrs. Hayes than the never exhausted stories of her vitality and the splendor of her health. If Mrs. Garfield has erred it has been in attempting to do all that Mrs. Hayes did. What was pleasure to Mrs. Hayes to the same extent could only be a burden to Mrs. Garfield, solely through unequal strength. Mrs. Garfield is a woman of strong mentality, deep sweetness of nature, and the most fine and delicate fibre. The burden of crowds of "shows," of pomp and circumstance should never be laid heavily upon her. Mrs. Garfield is not Mrs. Hayes. She should be judged by her own standards and cared for for her own sake. She should never be compared to Mrs. Hayes nor to anybody else, but taken for herself. For who that truly knows her can fail to say that a woman ever stepped higher in worldly honor who more innately deserved it? Unassuming, gentle, "most womanly," in that old-fashioned sense, ever dear to the world's heart, our prayer to God is that she may be speedily restored to her husband and children, and to so much of the proud world as she can take without abusing herself.

—Mary Clemmer in the Independent.

[The above was selected before the occurrence of the terrible blow to Mrs. Garfield, and the country. Considering it still appropriate we insert with extended sympathy. Were she possessed of perfect health her situation would warrant the most heartfelt consideration, but under existing circumstances the fever of condolence should be allowed, if possible, to reach still greater high[t

FASHIONS.

Bonnets are pretty, and all the more becoming, because each lady seems to study her own style of face and figure in choosing one. On the whole, ladies seem to cling more than ever to the small capote. This is now worn very far on the back of the hair, showing the hair, which is braided,

FIG. 347.

smooth, or waved in graceful ripples low over the brow. The fringe is quite gone out of fashion, but waved bandeaux are in great favor, though low over the eyes they are brushed off the ear, and a low chignon of coils and plaits is fastened at the back.

Fans are now shaded. They are made of well selected feathers, so beautifully arranged that half the fan is of the dark shade and the other half of the light, and sometimes the edges are dark and the feathers shaded upwards to light colors in the center.

Shirred waists, with shirred yokes and belted in fullness at the waist line, appear among late novelties.

Ombre or shaded Surah is in demand for collars, cuffs and revers of suits of sober or neutral tints.

Many small tucks, much shirring and fine embroidery are the adornments of mull muslin toilets.

THE SECRET OF BEAUTY.—The secret of beauty is health. Those who desire to be beautiful should do all they can to restore their health if they have lost it, or to keep it if they have it still. No one can lay down specific rules for other people in these matters. The work which one may do, the rest he must take, his baths, his diet, his exercise, are matters for individual consideration, but they must be carefully thought of and never neglected. As a rule, when a person feels well he looks well, and when he feels ill he looks ill. There are times when one can guess, without looking into the glass, that his eyes are dull and the skin is mot-

FIG. 348.

tled. This is not a case for something in a pretty bottle from the perfumer's, or for a lotion that advertisements praise so highly. To have a fresh complexion and bright eyes, even to have white hands and a graceful figure, you must be well. Health and the happiness which comes with it are the true secrets of beauty.

Literary Miscellany.

"UNCLE DAN."

EDGERTON.

SADLY and slow went "Uncle Dan,"
Trudging through the farm,
His butter-firkin stowed with rolls,
Was banging on his arm,
And in his other hand he held
A basket filled with eggs—
A goodly load for his stiff back
And tired, plodding legs.

Each Saturday, for many years,
He'd trugged off thus before,
To get his mail, and barter truck,
For nick-nacks, at the store.
He once had bragged his bank had been,
His cows and "Plymouth Rocks,"
Whose solvency could not be swayed
By rise and fall in stocks.

Alas! poor Dan! he sees it now,
His wisdom counts for naught,
For even banks as sound as his
With dangers may be fraught,
And though they really may not break,
Nor actually suspend,
He must confess that it amounts
To just that in the end.

The price of butter does not pay
For time and labor spent,
Since greasing bread with "Oleo,"
Gives pleasure and content;
And chickens are so numerous, since
They hatch them out in pens,
That laying eggs will hardly pay
The worry of the hens.

His butter last week, only brought
A fip'any bit a pound
While eggs—well eggs no market had—
Were loosely kicking round;
His ten-cow dairy, once supplied
His family's every need,
While now, it scarcely would suffice
To keep him in "the weed."

"Just what the world is coming to,"
Said Dan, "I cannot tell
But that it's rough on farmer folks,
This much I know right well;
I can't tell, for the life of me,
Why things don't take a change,
We surely ought to regulate
These matters through the Grange."

MY EXPERIENCE.

Continued from page 458.

CHAPTER II.

"MABEL, don't you like Cyril?"

Mabel looks up with a start from her writing as I propound the above question one morning about a week after my return home. We are alone in the breakfast-room; a pretty little apartment with French windows opening into the garden, through which the sun is streaming gaily. Built out from one of them is a little conservatory—my especial care—for it contains all my favorite plants and blossoms; while through the other window by which I am standing I can see the garden with its profusion of summer flowers. Cyril is sauntering up and down the path. I am ready in my shady hat and cool print dress for a saunter through the lanes with him, but I am in no hurry to be off, having something to say to Mabel before I go.

My sister is busy with her account books, and looks pale and weary—the heat seems to try her more than usual this Summer; but I am not unselfish enough to leave her in peace until she sets my mind at rest about something which is troubling me greatly just now.

"Mabel, don't you like Cyril?" I repeat, more earnestly, when I meet the swift, questioning glance of her beautiful, velvety brown eyes—eyes which have such sadness and yet tenderness in their depths.

"I like him very much, Gracie," she answers, in a somewhat troubled voice. "I think him worthy of all respect and esteem."

"Respect and esteem," I repeat, contemptuously.

"I don't want you to respect and esteem him. I want you to like him as a brother."

She smiles a little sadly, and bends her head again over her work.

"You see, Mabel, if you don't like him, you will never care to come and see us; and I could not be happy without you."

"Not happy—with Mr. Vernon!"

"Mr. Vernon! There, I see you don't like him. Even the children call him Cyril—and you call him Mr. Vernon."

"He calls me Miss Ord."

"That is because you are so stiff and cold to him. Mabel, won't you try to like him?

"Gracie, I have told you that I do like him," she answers very gently.

"Then why are you not cordial to him?"

"I am cordial, dear—at least, I try to be."

"You are not—you don't try!" I reply, impatiently. "I am sure Cyril has noticed your manner."

"I am sorry if my manner displeases him," she answers, rather haughtily. "but I am afraid that I am too old now to alter it. I have told you," she adds more gently, "that I esteem Mr. Vernon highly, and that I think you are a very fortunate girl to be loved by him.

But it is not essential either to your happiness or his that he should like your old-maid sister, so you need not let his want of appreciation of her manifold charms trouble you."

"But, Mabel, I am sure he likes you."

"And I like him. Therefore, put your heart at rest, my child. You have kept him waiting quite long enough for one morning, and he won't like me any the better for detaining you. So be off."

She pushes me playfully out of the room and goes back to her writing-table, while I join Cyril in the garden, and we start together on our walk. At the end of the lane we meet Fannie and Jack Edmonds and Cyril proposes that they should join us, for which I am not sorry, for my *fiance* is in a silent mood, and not very companionable this morning; nor does it lessen my pleasure, in the sweet Summer freshness and the blue sky overhead when he suddenly recollects an important letter which must be written in time for the mid-day post; and without hesitation I let him return alone to the house.

It seems almost like old times to be alone with Fannie and her brother—like the dear, merry old times, before there were any such things as lovers and engagements and diamond rings. We chatter and talk nonsense and laugh at the nonsense as if it were the most brilliant wit; and it seems to me that the sunshine is less brilliant when they leave me at the gate. I go slowly up the path, up and down which Cyril had paced two hours ago, and recollecting that I had not yet filled the vases in the drawing-room with flowers, I open the door of my little conservatory and take a pair of scissors from the shelf. The door leading from the conservatory into the morning-room is open, and through the shading lace curtains I can see Cyril seated at the table writing; but I do not make my presence known to him, while my movements are noiseless enough to escape detection. He is alone; but I have not been a minute in the conservatory when the door of the morning room is opened, and Mabel comes in. She is reading a letter, and does not perceive Cyril until she has entered the room and closed the door after her; then she sees him, and stands still, growing as white as the dress she wears.

There is a moment's dead silence. Mabel turns towards the door and Cyril rises hastily.

"Do not let me frighten you away," he says, formally, but with a curious hesitation in his deep voice.

"It does not matter," Mabel answers, in a confused tone, and still keeping her hand on the door-handle. "I will not disturb you."

"I have finished my letter," he says, hurriedly; "and—and I want to speak to you."

She comes slowly back into the centre of the room, and stands by the table, looking so pale that I am afraid she is going to faint. There is another silence. Cyril is standing also, but his back is turned towards me, and I cannot see the expression of his face. I feel a little excited and curious, and my humiliating position of eavesdropper does not strike me; so I stand still, wondering what will come next.

Cyril breaks the silence first.

"You have avoided me so persistently during the week I have spent under your father's roof," he says, calmly, "that I have no opportunity of giving you an explanation, which you have a right to expect. When I asked Gracie to be my wife, I did not know she was your sister. When I started with her I did not know we were coming to your house.

"I do not need any explanation," she answers, in a faint, tremulous tone, very unlike her usual calm, rich voice; "and I am sorry that my presence here——"

Her voice fails her, and she stops short. Cyril makes a step towards her, but restrains himself by a strong effort.

"So many years have passed since we met," he says, in the same calm tone of voice, "that we can fairly meet as strangers; but I think your sister feels that——Mabel," he breaks off suddenly, and speaks with a sudden passion, "why did you treat me so?"

She lifts her eyes to his with one swift, surprised glance.

"I do not understand!" she says, faintly. "What do you mean?"

"Why did you leave my letters unanswered?"

"I received no letters from you," she answers.

"No letters! Ah! Mabel, be frank with me. Have you forgotten the letters—there were three—I wrote you after I left you.

"I received no letters from you," Mabel repeats, very quietly, and she rests her hand upon the table as if she needs some support.

Cyril utters an exclamation of intense pain, and makes two or three strides up and down the little room. As he turns, I can see his face. It is as pale as my sister's, and he is evidently deeply agitated. Presently he turns to Mabel.

"What do you think of me? he says, huskily, and the stony calm of Mabel's face is broken for a moment, but she makes no answer. "You will let me explain?" he says, entreatingly; "I owe it to you and myself to do so. When I was obliged to leave you so suddenly I left a letter on the hall table, explaining the reasons for such a sudden departure, and begging you not to judge me severely. I was then under a promise to my uncle not to make any engagement without his consent, and when I left I went direct to Vernon to win him over. I had told you that I loved you," he added, unsteadily. "I had not been able to refuse myself the pleasure of making my confession, and of hearing from your own lips that I was not quite indifferent to you; but hardly had I done so than I recognized how wrong I had been. I wrote to you, explaining as well as I could my obligations towards my uncle and my position with regard to him. When I had been a week at Vernon I wrote again. I told you in that second letter that as yet I had been unable to obtain my uncle's consent to our engagement; he had other views for me; and I prayed you to trust me a little longer and to send me one word of encouragement."

He pauses for a moment. Mabel has not moved, but stands pale and tremulous, leaning heavily against the table. I, in my place of concealment, listen with eager interest, forgetting completely how much I am concerned, and feeling like a person at the play feels when deeply interested in the performance and eager for the *denouement*.

"The second letter, like the first, remained unanswered," resumes Cyril, "and I wrote again, entreating a reply; and in this third letter I said that I would accept silence as a proof that you had been mistaken in your feelings towards me—that you did not love me. That is ten years ago, Mabel, but I can remember even now the agony of expectation with which I awaited your answer—an answer which never came. I remember still the despair and misery I felt then. I loved you so wildly, so madly, that it broke my heart to think that you had been trifling with me; that you had not meant the words when you said, "I love you, Cyril. I will be your wife."

Mabel raises her hand for a moment with a quick gesture, which seems to entreat silence; but Cyril is too much in earnest to heed her movement; he goes on rapidly in the same husky, unsteady voice, and I can see that he is as deeply agitated as Mabel herself.

"I think it almost killed me," he continues. "When I was able I went abroad; my uncle, who pitied my wretchedness, gave me the superintendence of his sheep-station, and I remained in New Zealand until last March, coming back with a strong yearning for a home and near ties. My uncle died six years ago."

"You know now that I received no letters from you," Mabel says, forcing herself to speak calmly, but failing miserably. "They never reached me and it is too late now to think of discovering how they were lost. I am sorry—ah! sorry is hardly the word—that you should have suffered. I, also, have not been happy sometimes, but, as you say, it is a long time ago, and time is the best comforter, and you are happy now."

"Happy now!" he repeats with a bitter laugh. Happy, when I see the happiness which I lost through treachery! Do you think that I do not understand now who betrayed me—who detained those letters? Charles S—— loved you, and ——"

"Hush," Mabel interrupts softly. "It is ten years ago."

"Ten years of loneliness and misery—ten years of wretchedness which might have been ten years of joy! You have not been happy—I can read that. My darling, my darling, if I could forgive him the ten years of suffering I have known, could I forgive him if he has given you even ten days' pain!"

He has both her hands in his, now, and is looking down at her with a passion of love in his dark eyes—ah! such a different expression from the kindly gentleness with which he looks at me.

Mabel struggles faintly to release her hands.

"Gracie," she says faintly, in a voice so low that I seem to know what word she has uttered more by the movement of her lips than by the sound.

He drops her hands with a swift, sudden movement, and draws back from her. My name has recalled him to the present and his engagement, and he is loyal and honorable, no matter at what cost to himself.

"I had forgotten," he says brokenly, and there is a silence which seems to me interminable—a silence which Mabel breaks at last—

"I am glad to have heard your explanation," she says, faintly. "Glad for my sister's sake. When you wrote to my father, it almost seemed that it would be my duty to tell him of that episode in my life which had seemed to prove unworthy of such sacred trust as our darling's happiness; but from the first I did not think that you had meant to deceive me. And I am glad—ah, believe me—truly glad that you are happy now—and I wish you both every joy and blessing."

"That I am happy now! Ah! Mabel, can you think that I am happy—I, who was drawn to Gracie by her likeness to you—I, who love you. Heaven help me! with a passionate, unutterable affection—an affection which not even the thought of your unworthiness could dispel Mabel, if you had received my letters, what would your answers have been?"

"You have no right to ask that question now," she answers, faintly. "Have you forgotten that you have won Gracie's love, and that her happiness is at stake?"

"I have not won her love," he says, bitterly. "How was it possible that a bright, happy child like Gracie should love a reserved, disappointed man like myself? It was a selfish expedient on my part—a vain endeavor to infuse some brightness into my lonely life! What right had I to sacrifice Gracie? She cares far more for that lad with whom I left her a short time since. And yet, Mabel, I would have tried to make her happy—I would have spared no trouble."

To be continued.

MAGAZINES FOR JULY.

Ehrich's Fashion Quarterly, for Summer 1881; Phrenological Journal; Domestic Monthly; Lippincott's Magazine; Harper's Magazine; American Naturalist; Musical Herald; Godey's Lady's Book; Scribner's Monthly; Young Scientist; Our Little Folks; Atlantic Monthly; Appletons' Journal; St. Nicholas.

Space being limited we merely note receipt of above periodicals, recommending the contents from the popularity of former issues.

More health, sunshine and joy in Hop Bitters, than in all other remedies.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CHIPS.

CHERRY juice will not jelly without gelatine.

Compotes are fresh fruits, boiled as needed, with but little sugar added.

Mixed greens are far better than all of one kind.

Don't borrow—that is, don't make a practice of doing so.

Stone, and sift granulated or powdered sugar over cherries and let stand several hours before eating. It adds to their richness and flavor.

For mosquito bites, bathe with a solution of carbolic acid and glycerine—60 drops of the acid to an ounce of glycerine.

To wash delicate-colored muslins, boil two quarts of wheat bran in soft water for half an hour and use it instead of soap-suds. It removes dirt the same as soap and does not fade the goods. The water should be quite cold.

DRAPING LACE OR MUSLIN CURTAINS.

A FAVORITE method of arranging airy curtains is for the right hand side to cross the left one a little more than half way up the window. A large satin bow of ribbon to harmonize with the room, is fastened on the curtains where they cross each other. Each curtain is then fastened back to the window by a somewhat smaller bow.

TO CAN GREEN PEAS.

PROVIDE strong, new tin cans with the necessary conveniences for soldering. Pick the peas from the vines, shell and cook at once. They should be boiled 15 minutes in water sufficient to cover. Fill the cans with peas within half an inch of the top, pour in liquor to fill to the brim. Wipe the groove dry, put on the cap and solder air-tight. Make a puncture with an awl in center of the cap, place the cans in a boiler of hot water to boil for an hour. The water should not cover the cans. It is best to have the bottom of the boiler covered with old crockery, wooden slats, or in fact anything to keep the cans off from the bottom. With a needle open the puncture to allow of the escape of gas and steam. Seal up with a drop of solder, and return to the water to boil two hours longer.

COOK.

DOMESTIC RECIPES.

Lemon Snaps.

One large cup of sugar, two-thirds cup of butter, two beaten eggs, two tablespoonfuls of hot water, half a teaspoonful of soda, flavor with lemon and flour to mix. Roll very thin. Bake in a quick oven.

Corn Soup.

Cut only the top of the kernels from the cob scraping off all that remains. To a quart of this corn add two quarts of hot water. Boil for an hour, then pass through a colander. Into a stew-pan put two spoonfuls of butter, when it melts stir in a large spoonful of flour. Stir in the corn add a pint of hot milk and a cupful of cream. When it comes to a boil season with salt and pepper.

Candied Fruits.

Boil peaches, pears, plums, cherries, citron or quinces in a thick sirup—a teacupful of water to a pound of white sugar—until tender. Take from the fire and let remain in the sirup two days. Take out, drain, sprinkle sugar over each piece and dry in a cool oven. MRS. E. B.

Spiced Chicken.

Boil three chickens until the meat will fall from the bones, free the meat from fat and skin and chop fine; season with cloves, allspice, pepper and salt; pour over a pint or more of the liquor in which they were boiled; turn into an earthen dish, place a plate with a weight on top and let stand several hours in a cool place before slicing. A. B.

Currant Jelly.

Crush the fruit and strain the juice. Weigh the juice and put over the fire in a porcelain kettle. Let come to a boil, then stir in pound for pound of granulated sugar. As soon as it boils again remove from the fire and turn into tumblers, as it jells very quickly. Place the glasses on a wet cloth before filling with the hot liquid. Jelly should not be cooked. E. P.

QUESTIONS ANSWERED.

Otto of Roses.

PLEASE give directions for making the above and oblige R. M. LUDLOW.

ANS.—Fill a large glazed earthen jar with rose leaves carefully separated from the cups: pour over them spring water just sufficient to cover them, and set the jar with its contents in the sun for two or three days, taking care to put it under cover at night. At the end of the third day, or so, small particles of yellow oil will be seen floating on the surface of the water, and these in the course of a week will have increased to a thin scum. This scum is the otto of roses. Take it up with a little cotton tied to a stick and squeeze it into a phial.

Angel's Cake.

Please give recipe for the above and oblige a CAKE MAKER.

ANS.—Four ounces and a heaping tablespoonful of flour, twelve ounces of powdered sugar, the whites of eleven eggs beaten to a very stiff froth, (flavor with rose before beating) a teaspoonful of cream-of-tartar and a little salt. Mix the sugar, flour, salt and cream-of-tartar together and sift through a very fine seive six times. Then stir in lightly the beaten whites. Bake in a *new* pan, without greasing, for 40 minutes. After taking from the oven, invert the pan and place upon cups or tumblers until the cake is cold, then remove and cover with a thin icing. No soda is used. A pan with a tin tube in center is preferable for baking.

NOTE.—Please give my thanks to Mary Wager-Fisher for her article in the RURAL of June 18. It is exactly the help I desired to induce my wife to consider her health before anything else. The advice is priceless to those who heed it, and the more we have like it the better. SUBSCRIBER.

Suffer on, Groan on, Sicken on, Die on, if you will not use Hop Bitters and be cured.—*Adv.*

News of the Week.

HOME NEWS.

MONDAY, July 11, 1881.

Owing to an erroneous telegraphic dispatch which was received just at the moment of going to press last week, we reported the death of the President, but his rapid decline at that time was simply a relapse from which he recovered. At this writing he is still improving, though the ball has not been extracted. It lies in the vicinity of the liver so that recovery will be little less than miraculous. The ball passed between the tenth and eleventh ribs fracturing the upper edge of the eleventh rib, then probably passing into and through the liver and the abdominal cavity. It is feared that the spinal column has been injured. Mr. Garfield's wonderful powers of endurance, and his strong constitution have enabled him to battle with his wounds more successfully than a delicately constituted man could have done.

The assassin—whether a fool or a lunatic, it is hard to say—takes things remarkably coolly. He is vain, egotistical, jealous, revengeful, in fact, almost any disparaging epithet is applicable to him, and his previous history shows that there is a weak spot in his head somewhere. Two or three other persons have been arrested for threatening the life of Secretary Blaine and Vice-President Arthur. All parts of the country and nearly, if not quite, all of the foreign nations have been in almost constant communication with Washington to learn of the President's condition. The crowned heads of Europe, and especially the Queen of England, have expressed the deepest sympathy for the stricken family and nation. The latest reports this morning announce continued improvement.

Should the wound inflicted on the President terminate fatally, Guiteau would be tried for murder; but, should the President recover, his assailant could only be tried for having committed an assault with intent to kill, the penalty for which is prescribed in the following section of the District of Columbia code:—

SEC. 1160. Every person convicted of manslaughter, or of any assault with intent to kill shall be sentenced to suffer imprisonment and labor, for the first offence for a period not less than two nor more than eight years, and for the second offence for a period of not less than six nor more than fifteen years.

On ascertaining this legal provision, a general expression favors an amendment to the Federal Constitution, making an assault upon the President or Vice-President of the United States, treason and punishable by death.

Mr. Garfield has throughout borne his suffering and the consciousness of peril with great fortitude, and even with cheerfulness. The country will fully value the manliness of his bearing in this period of supreme trial. Should he escape, as now seems probable, the gratitude of the nation will be increased by this exhibition of courage and self-control. And we may add that general sympathy will be felt for the tenderness and consideration which the President has manifested toward his unfortunate wife, for whom his apprehension has constantly been greater than for himself.

At a meeting of the Chamber of Commerce in this city on the 7th inst., it was resolved to raise a fund to be kept invested in Government Bonds, and the income thereof to be paid to Mrs. Garfield during her life and at her death the principal is to be divided among the surviving children of James A. Garfield. The sum of $46,500 was subscribed on the spot, and it is expected to make the fund $250,000. At present about $130,000 have been subscribed.

There is some hopes of an end to the senatorial struggle which has been prolonged *ad nauseam*, at Albany. A caucus was held on the 8th inst. more than a majority of the Republican members of the Legislature being present. Mr. Depew, who has been one of the most prominent candidates for Senatorial honors, sent in his resignation to the caucus, which was accepted. This action on the part of Mr. Depew was quite unexpected but he withdrew in the interests of harmony. The caucus proceeded to select two candidates for the vacancies made by Conkling and Platt, and Elbridge G. Lapham was chosen as the caucus candidate for the former's place and Warner Miller for the latter's.

A dispatch from Warrenburg, Mo., says a whole boat-load of picnickers, 600 in all, partook of lemonade that had been poisoned with acid. Eight have died, and a hundred are in a critical condition. The vender was arrested and will be prosecuted. Public indignation is excited, and the community is in mourning.

The net earnings of the Lake Shore and Michigan Southern railway for the year ending June 1, were $3,490,000, against $4,053 616 the year before.

The excitement among visitors in the country, on the Sunday following the President's attempted assassination, who desired to obtain the New York papers, was intense. On the line of the Erie in New Jersey the rush at the stations was extraordinary. The first cry was: "How's the President?" and as the papers were delivered nobody waited for change. A gentleman reached Paterson with three papers in his hand, and as he stepped from the train was asked if they were for sale. He jokingly replied, "Yes, for 75 cents." Before he finished the sentence they were snatched from his hand and a dollar was left in their place, while the buyer hurried away. At one station a newsboy received $7 for 13 papers, and at another $9 for seven papers. Some people offered $3 and $5 apiece for papers.

The Fourth of July jubilee under the auspices of the Bi-centennial Association of Pennsylvania came off on the 4th at the main centennial building. The event was to inaugurate the two hundredth anniversary of the landing of William Penn and the founding of the commonwealth. The exercises consisted of singing and speeches, appropriate allusion to the President being made.

Secretary Hunt has appointed a board of officers which includes Rear Admiral John Rodgers and Commodore W. G. Temple, who will consider the following subjects: The number of vessels that should now be built, their class, size and displacement; the nature and form of their construction; the nature and size of the engines and machinery; the ordnance and armament necessary for each; the appropriate equipment and rigging for each; the internal arrangements of each, and such other details as may seem necessary and proper and the probable cost of the whole of each vessel when completed and ready for service. This looks as if our alleged navy is to be reinforced.

On Monday the citizens of Bloomington, Ill., celebrated the fiftieth anniversary of the incorporation of the city. Senator David Davis presided.

It is said that the special train with Mrs. Garfield on board on her way to Washington, had a very narrow escape from destruction. While en route to Washington the parallel rod on the side of the engine broke and tore the side ties to pieces for two miles before the train could be stopped. Had the engine left the track the car would have been dashed to pieces. Another engine was secured, and Mrs Garfield arrived safely at a late hour.

The public debt was reduced $101,573,483 during the fiscal year ended June 30. The debt is now $1,840,528,811 or $451,432,023 less than it was ten years ago. Since 1875 nearly one-third of the debt has been paid.

The statue erected over the grave of General McPherson, at Clyde, Ohio, will be unveiled on July 22. It is expected that members of the Cabinet, Generals Grant, Sherman and Sheridan, Governor Foster and many of the officers and soldiers who served with General McPherson will be present. Ex-President Hayes will preside over the ceremonies, which will consist of a military and civic parade, a formal address and several shorter speeches.

Sir Edward Thornton, British Minister to the United States, accompanied by Mr. Blaine, presented his letters of recall to President Garfield on the 9th. Mutual assurances of distinguished consideration were given.

Is the American played out? At the examinations at Yale College last week all the honors were carried off by foreigners. A Jew had the best college record, a Dutchman was second, while a Chinaman, Mr. Chung, won the prize in declamation.

Mr. Walker Blaine, son of Secretary Blaine, entered upon his duties as Third Assistant Secretary of State on Thursday.

The number of failures during the first six months of 1881 was 2,497, involving $40,000,000, or $7,000,000 more than in the corresponding period last year.

Three presidents of the United States have died in office, Harrison and Taylor died natural deaths. Lincoln was assassinated. Three vice presidents have become presidents by the deaths of the presidents with whom they were elected. These were John Tyler, elected with William H. Harrison in 1840; Millard Fillmore, elected with Zachary Taylor in 1848; and Andrew Johnson, elected with Abraham Lincoln in 1864.

Chicago is to have an Inter-State Industrial Exposition, commencing September 7th and holding until October 22.

The household goods and personal effects of the late Vice-President Wilson, were sold at Natick, Mass., last Friday. There was a good attendance, but poor bidding. The highest price brought by any one article was $29 for a $100 carriage-robe. Grant's picture sold for fifteen cents; Horace Mann's pocket-knife, $1.50; the manuscript of Wilson's lecture on slavery, $3, and an autograph letter, with the signatures of more than two hundred famous people, $4.50.

A new fiscal year having begun the Treasury officers are casting up their accounts. One of the most significant facts is that although the ordinary expenses of the Government last year were $8,000,000 more than the preceding year, the expenditures show a reduction of $3,000,000 in favor of the closing year, owing to a saving of $11,000,000 in the annual interest charge.

Fire has made great ravages in the forests of the county Lathbintere, Quebec, the last few days. At Narcisse several buildings were burned. At Stagapit five houses and barns were burnt; three at St. Sylvester. The fire destroyed some standing grain.

At Washington, it is suggested that in case the President recovers there should be a national celebration to give expression to the popular feeling.

H. E. Wilson, assistant to Prof. Stone at the Cincinnati Observatory, while observing the comet saw its nucleus separate and form two separate nuclei. Prof. Stone says the two parts are 1,200 miles apart.

"Victory!"

Under this caption, a gentleman in Iowa, who had procured the Compound Oxygen Treatment for his wife, writes: *I am surprised at finding her so much improved in health.* When she began using the Oxygen she could not sit up more than four hours at a time. Could not walk a quarter of a mile. Improved from the first inhalation, and now, having used the treatment for six weeks, does considerable work around the house, and *can walk two miles and not be tired.* Raises no more bloody matter. No cough. Sleeps and eats well. All that I can say is, 'Thank God and Drs. Starkey & Palen.'" Our Treatise on Compound Oxygen, its Nature, Action, and Results, *sent free.* DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

France imported of beeves, cows and calves, 54,000 in 1879; 56,000 in 1880; and 31,000 hitherto in 1881.....The maker of an artificial rose in London deceived a number of practical rose culturists..... ....A Parliamentary return, entitled "Evictions (Ireland)," shows that during the quarter ended March 31, there were 1,732 persons evicted of whom 181 were readmitted as tenants, and 737 as care-takers.....Official returns show how vast are the flocks of sheep owned in the Australian colonies: The New Zealand and Australian Land Company owns 300,000 sheep; Mr. Robert Campbell, 386,000; Mr. George Henry Moore, 90,000; Messrs. Daigetty & Co., 208,000; Sir Dillon Bell, 82,000; the Hon. William Robinson, 68,000; Sir Cracroft Wilson, 40,000; Mr. Kitchen, 80,000, and Mr. Allan McDean, 500,000.....In a communication to the Montreal Witness, Mr. Henry G. Vennor, on the 4th inst., gave some more of his weather predictions, as follows: "While here we are upon the verge of excessive heat and storms of wind, hail and lightning—England and Ireland are likely to be swept by heavy rain storms and general electrical disturbances. After the 25th day I expect, on this side, a cool to cold wave with further storms, and in sections Fall-like weather."....The Ohio State Board of Agriculture, under date of July 7th, furnishes the following, based on reports from over 1,000 correspondents, relative to the percentages of the condition and prospects of crops compared with July 1, 1880: Wheat, 77; rye, 86; oats, 94; corn, 76; timothy, 92; clover hay, 101; red-top, etc. 87; Hungarian, 92; potatoes, 86; tobacco, 87; apples, 39; pears, 62; peaches, 43; plums, 55; grapes, 72. The wheat prospects on May 1 were reported at 85. The loss is due to the May drought and to the Hessian fly. Much of the wheat is thin on the ground, but has long heads and plump berries. Nearly the entire crop of wheat for Ohio has been secured in good weather and is in good condition. Seventy-seven per cent. of last year's crop of 52,000,000 bushels as estimated, would be 40,000,000 bushels.....The Mark Lane Express, (England), under date of July 4, in its review of the grain trade of the past week says:—"The weather has been uninterruptedly fine. Wheat has passed through the critical blossoming period favorably. The general condition of the crop appears to be healthier, although the plant is thin on the ground and stunted in growth. Barley—appearances indicate a good crop on the best land, and variable elsewhere. Oats—prospects bad and this crop appears to be the worst..... A cablegram from St. Petersburg on July 4, says the harvest is expected to be very good throughout the Empire..... New Zealand rejoices on the safe arrival of two fertile humble-bee queens out of eighteen shipped from Scotland. They were caught and sent on ice in a torpid state, and this is the first successful one out of many attempts to import them. Hitherto red clover could not thrive there, as it could not be fertilized, but the long probosces of the humble-bees will effect this object..... ....In 1878 the hay crop of Maine was valued at $12,348,000, while the total value of the crops of corn, wheat, rye, oats, barley, buckwheat, and potatoes was only $6,598,167, or about one-half what the hay crop was worth. In Massachusetts the hay crop was valued at $11,497,850, while the total value of the crops of corn, wheat, rye, oats, barley, buckwheat, potatoes, and tobacco was only $8,695,838, or less than one-third the value of the hay crop. The other New England States show about the same relation as regards the value of the hay crop compared with that of the other farm crops.....Chili has taken possession of the Lobos guano islands, and has already sold 50,000 tons of guano at $35 a ton to English capitalists.....Maud S. trotted near Detroit last Monday, making the mile in 2:13¾, beating St. Julien's time of 2:16¼ ..... One of the largest grain elevators in the world has just been completed across the East River, near South Ferry, Brooklyn. It has a storage capacity of 2,500,000 bushels, and superior transfer facilities and dockage for half-a-dozen vessels, all of which can be loaded at one time. It took over a year to build it, and it cost nearly $2,000,000.....According to a statement just issued by Ex-Commissioner Le Duc, the record of matter printed by him is as follows:—Printed pages, including bound volumes, special issues, and miscellaneous circulars, 858,381,675; packages of seeds distributed by him 4,432,828; valuable plants, 673,822; botanical specimens, 17,500.....France prohibits the importation of tobacco, raw or manufactured. England will not allow her own farmers to grow it..... The most profitable English crop recorded this year is reported in Land (London) to have been harvested on a sandy farm of sixty acres in the Eastern Counties. The crop has already been sold for £2,000—$10,000. It consisted of pheasant's eggs, which sell at from 1s. to 1s. 6d. each—24c to 32c. ....New South Wales has 35,000,000 sheep, and a population of 750,000, according to the census just taken. Fat cattle were selling low there at date of last advices—April 23—and store cattle were unsalable. Late rains had broken up a severe drought and all were hopeful of carrying stock safely through winter whose approach was already announced by several light frosts..... Fall-sown grain was already up in Victoria and promising well—barring injury from frost..... From Adelaide, South Australia, comes news of drought, with occasional light showers—population 277,000. Crop news fair from New Zealand—population of colony 489,561 on April 3d..... At Cape Colony May 2, all crop reports good.....

Kern county, Cal., reports an immense crop of grapes. Frost hurt the apricots and peaches..... ....There are 2,000 acres of flax within 15 miles of Santa Barbara, Cal. A fine yield is certain..... The hop crop of the Williamette Valley, Cal., will not amount to more than one-half, where the yards were overflowed by the floods of the past Winter.....Fresno peaches are being shipped to the San Francisco market this year for the first time. Fresno folks claim to grow the best peaches in California....., In Yolo County, Cal., crops are going to be moderate. A few farmers have concluded to pasture the whole of their farms and give the land a rest.....Some remarkable statistics with reference to New Zealand have been contributed to an English contemporary. In the single province of Canterbury agriculture has developed in a truly marvelous manner during a brief period. In 1876 the production of wheat there was 1,770,363 bushels; of oats, 2,888,683 bushels; of barley, 620,699 bushels; and of potatoes 17,895 tons, the total acreage under cultivation being 152,982. Last year the acreage had increased to 359,729, the products being 6,461,400 bushels of wheat, 7,776,275 of oats, 1,124,281 of barley, and 37,466 tons of potatoes. Similarly with regard to sheep raising. It is said that there are in New Zealand at this moment 12,000,000 sheep; a hundred years ago there were twenty-nine..... There will be no meeting of the New York Horticultural Society in July, and none in August unless notice thereof shall be previously given. Experience has proved that meetings in these two months are very poorly attended.....

The great St. Louis Fair will give liberal premiums for Short-horn, Hereford, Devon, Polled Angus, Polled Galloway, Jersey, Holstein and Ayrshire cattle. Polled Norfolks will also be admitted. The following are the premiums offered for each breed.

BULLS.

Best bull 3 years old or over	$100
Second premium	50
Best bull 2 years old and under 3	50
Second premium	25
Best bull 1 year old and under 2	25
Second premium	15
Bull calf under 1 year	10
Second premium	5

COWS.

Best cow 4 years old and over	$100
Second premium	50
Best cow 3 years old and under 4	50
Second premium	25
Best heifer 2 years old and under 3	30
Second premium	15
Best heifer 1 year and under 2	
Second premium	10
Best calf under 1 year and over 6 months	10
Best heifer calf under 6 months	10

SWEEPSTAKES.

Best bull of any age	$100
Best cow or heifer any age	100

HERD PREMIUMS.

Best herd comprising 1 bull and 5 cows or heifers over 2 years of age owned by exhibitor	$125
Second premium	75
Best young herd comprising 1 bull and 5 heifers under 2 years of age owned by exhibitor	$100
Second premium	50

These premiums, our readers will distinctly understand, are open to each one of the seven breeds named above.

No barren animal will be allowed to compete in breeding classes, and in all cases satisfactory evidence by affidavit or otherwise must be furnished that the animal has been and is a breeder, if not it will be excluded from competition.

No bull over one year old will be allowed *on the grounds* without a ring in his nose, or be led through the grounds for exhibition without a staff.

The scale of points made by the American Jersey Cattle Club will be used in judging of the merits of all Jersey cattle entered for exhibition.

Other than these the rules of last year will be adopted.

A comparison of the receipts of breadstuffs at the port of New York during the first six months in each year of the last two year's results thus:

	1880.	1881.
Flour, barrels	2,145,200	2,632,306
Corn-meal, barrels	62,600	100,600
Wheat, bushels	22,573,000	20,208,400
Corn, bushels	26,276,200	20,360,350
Rye, bushels	536,750	541,500
Barley and malt, bushels	2,733,700	2,596,600
Peas, bushels	301,300	140,000

And of the exports hence, same time, thus:

	1880.	1881.
Flour, barrels	1,939,100	2,632,850
Corn-meal, barrels	82,100	106,300
Wheat, bushels	28,283,350	22,316,300
Corn, "	22,468,600	15,809,000
Rye, "	943,650	668,000
Barley, "	262,636	15,100
Oats, "	282,250	80,900
Peas, "	204,500	159,400

Cows as well as deer, sometimes lock horns. The Blakely (Ga.) News records a recent case. The cows had been missing ten days and were found in a miserable plight. The horns had to be sawed. .....The Swiss colony recently established at "Bernstadt," Laurel County, Ky., is receiving new accessions almost weekly, and seems to be prospering finely. They have bought a large tract of land, and are, so far, highly pleased with their prospects.

The appended tables give the percentage of wheat imports into Great Britain and Ireland from the United States, Russia and Germany during the two past decades:

Calendar year.	Percentage of imports from— United States.	Germany.	Russia.
1861	36.6	21.1	15 2
1862	39.3	18 5	14.1
1863	35.7	21.7	18.6
1864	34.0	27.4	22.1
1865	5 6	32 6	38.5
1866	2.7	26.9	38.6
1867	12.1	20.5	40.5
1868	18.1	18 5	30.8
1869	35.0	16.3	24.3
1870	40.0	10.8	33.2
Total for decade ending 1870	27.1	20.5	26.9
1871	34.0	7.74	39.7
1872	21.0	9.24	42.4
1873	45.1	4.91	21.8
1874	55.6	7 38	13.8
1875	45 3	10.8	19.3
1876	43.4	5.22	19.8
1877	39.3	10.1	20.0
1878	58 2	10 3	18.1
1879	60.6	6.9	13.4
1880	65.4	2.91	5 22
Total for decade ending 1880	47.8	7.45	20.4

The latest accounts of the Rugby colony, in Tennessee, differ as to the probable failure or success of the enterprise, some making it appear that the colonists cannot much longer be kept together while other speak very highly of its condition and

THE RURAL'S NEXT

Free Plant and Seed Distribution will Surpass all Others!

See the FAIR NUMBER of the Rural New-Yorker, which will be Published Sept. 15. Specimens Free.

prospects.....Bermuda is esteemed by its inhabtants as the Madeira of America. The chief products of the islands are arrowroot, potatoes, onions and tomatoes, nine-tenths of which go to the United States. The total values of the crops exported amount to about $300,000 annually. As there are less than 3,000 acres of land under cultivation, this return is undeniably great, and shows the wonderful fertility of soil. A lack of public spirit is characteristic of the inhabitants or Bermuda islands and prevents them from holding the position that their natural resources should command for them.....

People Should

Purify the blood by cleansing the system of foul humors, and by giving strength to the liver, kidneys and bowels, to perform their regular functions. Kidney-Wort will do it. This remedy is now prepared in liquid as well as in dry form.—Inter-Ocean.

Lydia E. Pinkham's Vegetable Compound is a remarkable remedy for all those painful complaints and weaknesses so common to our best female population. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Kidney and urinary trouble is universal, and the only safe and sure cure is Hop Bitters—rely on it.

BURNETT'S COCOAINE.

Promotes the Growth of the Hair,

And renders it dark and glossy. It holds, in a liquid form, a large proportion of deodorized COCOANUT OIL, prepared expressly for this purpose. No other compound possesses the peculiar properties which so exactly suit the various conditions of the human hair.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, July 9.

Chicago.—WHEAT active. No 2 Chicago Spring. $1.08⅞@1.09¼, cash; $1.08⅞@1.09, July; $1.10⅞@1.11 August; $1.09⅝. September; sales at $1.10⅝@1.11⅝ August; $1 09⅝@1.10, September; No. 3 do, 97c.@$1.03; Rejected 76c@82½c. CORN steady, with a fair demand, at 46c@46½c., cash and August; 46⅛c @46¾c., September; 46⅜@46⅞c., October; sales at 46c@46¼c. August. OATS dull 38¾c., cash; 38¾c@38⅞c. July; 28c. August; 26¼c September. BUTTER.—Fair to choice creamery 18@22c. per pound; good to fancy fresh-made dairies at 14@17c, medium to fair do. at 10@12c; common and old do at 8@9c; good to choice fresh ladle-packed at 14@15½c, and fair to the best packing stock at 11@13c. CHEESE.—Good to fine cheddar creams at 8@8¾c per lb. while the part skim cheddars were quoted at 6@7c. and the skim flats at 5@6c. or as to condition. Poor and old goods nominal. EGGS.—A dull heavy market is noted under large offerings and a slow demand. Sales dragged at 13@13½c. per doz and buyers demanded a full guarantee. BEESWAX.—Good to choice bright is quoted at 20@23c. per lc. and common dark-colored lots at about 15@18c. HONEY.—There was nothing doing in this market worth mentioning. Good to choice comb was quotable at 12@15c, per lb and common at 7@10c. POTATOES.—Sales from store were quite free, and the offerings were ample. Salable at $3@3.50 per bbl. for good to choice large new, in a jobbing way, with the usual premium asked for small lots. HOGS—Mixed packing slow at $5 90@$6 30; light, active and 5c. higher than on Friday at $6 35@6 45 for good and $6 05@6 20 for common; choice heavy, $6 35@6 65; Culls and light Yorkers. $5@5 90. CATTLE—good to choice shipping, $5 65@$6; common to fair, $4 90@5 45; exporters, $6@$6 25; butchers', $2@4 25; shipping Texans strong at $4 35@4 60; canning weak at $3 10@3 75; native stockers and feeders very dull and weak at $2 50@$4 50. SHEEP—market steady; common to medium. $3 25@4 40; good to choice, $4 60@6 20. WOOL—The movement continues rather slow, though trade cannot be called dull, as sales are constantly being made of small lots and prices are quotably firm. The current quotations from store range as follows for bright wools from Wisconsin, Illinois, Michigan and eastern Iowa—dark western lots generally ranging at 2@5c. ₩ lb less:—Coarse or dingy tub, 33@36 ₩ lb; Good medium tub, 37@42; Fine unwashed bucks' fleeces, 13@15; Fine unwashed heavy fleeces, 20@23; Fine light fleeces, 23@25; Coarse unwashed fleeces, 18@22; Low medium, 23@25; Fine medium, 27@29; Fine washed fleeces, 34@36; Coarse washed fleeces, 32@34; Low medium fleeces, 35@38; Fine medium fleeces, 38@40; Colorado and territory wools range as follows: Lowest grades, 14@22; Best grades, 22@28; New Mexican unimproved grades 14@18; New Mexican best grades, 22@24; Burry from 2@10c ₩ lb off; black 2@5c off.

St. Louis.—WHEAT higher; No. 2 Red Fall $1 14¾ @1.15, cash; $1.13⅞@1.14, July; $1.14¾@1.14⅝, August; $1.12¾@1.13, September; $1.13¾@1 13¾, October; $1 11¾@1.12¾, all the year; No. 3 do., $1.08; No. 4 do., $1.03¾@1.04¾. CORN 44¾@45c., cash; 45½c., July; 45¾@46c., August; 46½c., September; 41¾@42c. all the year. OATS higher for cash; options lower; 36@37½c., cash; 34@34¾c. July; 26¾@26¾c., August. RYE slow at 96c. bid. PORK firm at $17.25. Bulkmeats steady; Shoulders 6¾c.; Clear Rib, $8.85; Clear Sides, $9.10. Bacon strong; Shoulders, 7¼c.; Clear Rib, 9¼c.; Clear Sides, 10c. Lard dull and nominal at $11.60. BUTTER — Creamery, 20@21c.; Dairy, 15@16c. for choice to 15@15c. for selections, medium 12@14c., low 8@9c.; Country in pails—sour-milky, light-colored, etc., 7¾@8¾c.; fair yellow 9@10c.; choice (in small quantities) 11@12c. CHEESE: Lots—full cream 9@10c.; prime part skim 6¼@7c.; poorer grades 5¼@6c.; hard skim 1¾@3c. CASTOR BEANS steady; in demand at $1 35 for prime in car lots. HEMP SEED in demand at $1 for dirty to $1 10@1.12½ for prime clean. POTATOES, new, in barrels, choice large, $3@3.40; inferior and damaged, $1@2.50—lots not well packed 25c. ₩ bbl. less; in bulk, 80@95c. ₩ bush.

POTATOES.—Old little done; season about over. Sound stock worth 75c to 85c. ONIONS.—Steady, the light receipts meeting ready sale sound nearby-growth $1.25 per bushel and $3.50@4 per bbl. Hogs active; Yorkers, $6 30@6.40; mixed packing, $6@6.30 choice to fancy heavy, $6.30@6 50. Cattle Supply light and altogether of grass Texans, which ranged from $3@4 25 native Heifers, $4 25; fat native Steers wanted at strong prices. Sheep nothing done; demand urgent. WOOL.—Offering fair in amount, and movement quite free—latter is due in no small degree to comparatively low freight rates ruling: Tub-washed—choice at 40@40½c, dingy and low 31@35c; Unwashed prime to choice medium 24c@25½c., fair do 23½@23½c., low and coarse 19c. to 23c. light fine 18@20c, heavy do. 14@17c. Black, cotted, burry and lots containing dung-locks, range from 3@10c. per lb. less than fleeces in good condition: Southern burry 11 to 13c.—for each wool sack, 3½ lbs are deducted and 25c. allowed.

PRODUCE AND PROVISIONS

NEW YORK, Saturday, July 9, 1881.

BEANS AND PEAS.—A good export call for medium beans: some West Indian shippers paying $2.45 for marrows The home trade has been replenishing to a fair degree in medium and they close quite firm for a warm weather term Black beans are a glut. The best outlet, a South American point, promises to be cut off by the imposition of heavy duties. Red kidneys very quiet. Green peas quiet; prime quality held as before, $1.50@1 55; off grades neglected. Southern B E. peas show the remnant of the crop and few are prime enough to bring $3@7.10 ₩ 2 bu. bag.

Marrow beans, prime, $2.43½@3.45; other, $3.25@2.35; medium, prime, $2.40; other, $2.20@2.35; pea, $2.30@2.40. white kidney, $2.25@2.45; red kidney, prime, $1.55@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.30@1.35.

Receipts for week, 5,728 bush.

Exports do. 173 pkgs.

BEESWAX—Parcels of shipping importance quoted at 23@25c. Odd lots shaded from those figures.

BUTTER.—Considering the broken week the market has held up well, receiving a good deal of support from English shippers. Supplies have not been oppressive; receipts will probably enlarge next week but dealers do not expect a severe break in prices if the local trade keeps its present pace and quality of butter retains its good uniformity.

Creamery—Western, good to prime, 23c.; State and Penn. 22½@24c.; poor, 21c.; sweet cream, 23@23½c.; State pails and half tubs, choice, 21@22c; fair to prime, 19@21c.; Welsh tubs, 19@21c.; poor State, 16@18c.; firkins yellow, 20@22c; Western imitation creamery, 16@20c.; dairy tubs 19@20c.; other, 15@18c.; factory or ladle-packed, best, 15@16c.; other, 11@14c.; very poor Western, 10@12c. Some marks of down factory, 17@17½c.

Receipts for week, 39,990 pkgs.

Exports for week, 11,712 do.

CHEESE.—Trade has had an active run regardless of the shortened week, and in the effort to obtain high quality stock colored and white prices have advanced. Supplies will probably be heavier next week and sellers look for a tamer market. Still all seem satisfied with the good support that has attended the recent heavy Summer receipts.

State fact'y, choice, colored, 10¾@10¾c. do. white, 10@10¼c.; fair to prime, 8¾@9¾c; poor to fair, 8½@8¾c.; Ohios, flat, fine 9@9½c; other 6@8c Wisconsin poor to fine 8@9¼c.; part skimmed, 5@7½c.; full skims, 2@4c.

Receipts for week, 87,625 boxes.

Exports for week, 102,625 boxes.

Liverpool cable, 53s.

Steam to Liverpool, 25s. 6d@27s. 6d.

COTTON.—Though the week has been broken by a long holiday, a very fair business may be noticed with some advance in quotations. A strong Liverpool market has helped spot cotton and home spinners seem in want of steady supplies.

	Uplands.	*N. Orleans and Gulf.*	*Texas.*
Ordinary	7¾	8¼	8¼
Strict Ordinary	8¾	8¾	8¾
Good ordinary	9 9-16	9 9-16	9 9-16
Strict good do	9 13-16	10 1-16	10 1-16
Low middling	10¾	10 ¾	10 ¾
Strict low middling	10 15-16	11 3-16	11 3-16
Middling	11 3-16	11 7-16	11 7-16
Good middling	11 11-16	11 15-16	11 15-16
Strict good middling	11 15-16	12 3-16	12 3-16
Middling Fair	12 11-16	12 15-16	12 15-16
Fair	13 7-16	13 11-16	13 11-16

STAINED.

Good ordinary	7¾	Low middling	9 ⅝
Strict good ordinary	8¾	Middling	10 7-16

The close of the market was officially reported as follows: July, 11.13@11.15c.; August $11.18@11.19c.; September, $10.79@10.80c.; October, 10.33@10.34c.; November, 10.19@10.20c.; December, 10.21c.; January, 10.32@10.33c.; February, 10.44@10.46c.; March, 10.57@10.59c. April 10.68@10.71.

DRIED FRUITS.—The supply of evaporated apples is light and some speculative demand has appeared. Sales for use very light. Sun-dried apples held with confidence. Peaches small but quiet with high prices. Small fruits not moving but prime are quoted full. Cherries show a good deal of strength as the crop of new is thought to be light. Samples of new offered at 15c.

Apples evaporated choice 8¾@9c; fair to prime 7¾ @8¼c North Carolina sliced, common to best 6@5c. Va. do. 3¾@4c; Tenn in bbls. 4@4½c. do bags 3½@4c; State fine cut 4@4¼c., quarters 4½@4½c; Western, 3¾@4c; evaporated peaches peeled 25@28c.; unpeeled 13@14c. sun-dried peeled 17@20c; unpeeled halves 5@5¾c. Plums 10@11c. Blackberries 8c. Cherries 13@14c. Raspberries 24c. Whortleberries 11@11½c.

In drying by a good process a bushel of raspberries should turn out 11 lbs.

Receipts for the week, all kinds, 412 pkgs.

Exports dried apples, 2,420 pkgs.

EGGS—Receipts for week, 6,837 bbls.; do. last week 10,252 do. Small supplies have given holders some independence and prices are quoted firm at the advance for strictly fresh. Ice house parcels are turning our poor. It pays at this point of the season to carefully sort and pack even if it involves frequent shipments.

Near points, 15½; State and Pa., 17@17½c.; Western, fresh, 15@16½c.; Canadian, 16¾@17c.; poor lots, 13¾@14½c.

FLOUR.—There has been no violent decline in prices, though the wheat crop reports have had some depressing effect of brief duration. The high grades and established brands may be said to close quite steady. There is a marked falling off in exports for continental use.

No. 2. ₩ bbl., $3.00@3 65; State and Western superfine, $4.00@4 40; city mills extra, $6.25@6 50; Spring wheat do. $4.80@5.10, Spring XX and XXX, $5.25@7.00; patents, $6.50@8 50; Ohio round hoop shipping, $4.80@5.20; trade brands, $5.40@6.25; St. Louis extra, $4.90@5.50; do. double extra, $5.75@6.25; do. family, $6.40@7.25; South'n shipping, $5.35@5.85; do. XX and family, $6.25@7.50. Rye, $5.10@5.50. Corn-meal, Brandywine, $3.35@3.40; Western, $2.90@3.30.

Receipts of flour for week, 103,650 bbls.; do. corn-meal 5,475.

Exports of flour, 43,622 bbls.; do. corn-meal 3,434.

FEATHERS.—Demand very moderate. Choice white live geese held at 58@60c.; common quality to be had at 55@56c.; mixed range 20@35c.

FRESH FRUITS.—Small fruits are offering in variety and prices are fair for prime sound sorts. Strawberries quoted for the last time this season. Watermelons have only a hotel and restaurant sale.

Apples, Red Astrachan, soth'n ₩ bu. crate $1@1.25; green sothn do. 75@87c. Strawberries Oswego fair to best 8@10c. ₩ qt. Blackberries, Wilson, 15@17c.; Dorchester 10@12c; wild, 5@7c. Whortleberries, ₩ bush. $1.25@2. Raspberries Antwerp up-river ₩ 3-to-qt. cup, 4½@5c.; native do. 3@3½c.; Brandywine, Jersey ₩ pint 6@7c.; Md. & Del. 4@6c; Black Caps, up-river 4½@5c. Jersey 4@6c Gooseberries, green, prime ₩ bu. $1.25@1.50. Currants Cherry, ₩ lb. 5@6c.; red, small 3@3½c.; black 6@8c. Cherries sweet choice ₩ lb 10@12c fair to prime, 6@8c.; poor to fair 4@5c.; sour, fair to prime 4@8c. Peaches North Carolina, ₩ bush. crate $2.50@3 50; Ga. ₩ 3-to-bu. box $1.50@1.75. Plums, Beach, Norfolk ₩ qt. 4@6c; Wild Goose Ga ₩ 3-to-bu. box $1.50@1.75. Watermelons Ga. & Fla. ₩ 100 $30@40. Peanuts quiet and unchanged. Pecans steady. Peanuts, Va. hand-picked ₩ lb. 4¾@5¼c; fancy, 4¼@4½c; extra prime, 4¼@4¼c.; good to prime 3¾@4c.; shelled, 3@3½c.; pecan nuts, 7@10c.

GRAIN.—A fair export demand is about the only solid feature of the trade this week. Sales for this purpose mostly Spring. Corn has arrived heavily much of it is destined to fill up contracts. The exportation is behind this date last year in quantity and the market evidently feels the over-weight. A strong effort to sell oats, which have arrived very liberally, has kept prices in buyers' favor: the market however closes a little stronger for owners. Rye has ruled dull. The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canals and on Mississippi River:

	1881. July 2. bush.	1880. July 3. bush.	1879. July 5. bush.
Wheat	15,370,746	13,201,920	12,134,153
Corn	24,511,547	16,733,218	11,547,230
Oats	8,332,493	2,823,762	1,681,995
Barley	198,974	235,772	366,374
Rye	136,071	211,334	428,074
Total	39,149,831	32,269,006	26,107,786

Wheat, Spring $1.05@1.23; do. No. 3, $1.19@1.21; do. No. 3, $1.13@1.15; red Winter No. 2, $1.26@1.26¼; red Winter $1.10@1.30; white Western and State $1.15@1.26. Rye, $1.03@1.07. Oats, white No. 1, 47c.; white No. 2, 43½c.; white No. 3 42½@42½c; mixed No. 1, 43½c do. No. 2 43@43¼c; do. No. 3 41@41¾c; Corn, West'n mixed 48@55¾c.; do. No. 2 55¾@55¾c.; do. do. yellow 56@57c; do, do. white 55@58c; Southern yellow 57@58c.; do. white 57@62c.

Receipts for week, wheat, bush., 1,293,698; corn, do 205,325; oats do. 489,100; rye, do. 2,400; malt, do. 87,868; rice pkgs. 509.

Exports for week, wheat, bush 55,312; corn, do. 1,139,125; oats, do. 3,072; rice, pkgs., 60.

HAY AND STRAW.—Exports for week 1,022 bales. The market is severely over stocked with hay and new will have to start pretty low. Buyers will not take much above regular wants while quality is so low. Shipping and car-stable grades in fair demand with prices favoring buyers. Straw easy.

Choice retailing timothy hay 80@85c. ₩ 100 lbs.; second quality, 60@70c, do.; shipping 45@50c. do.; clover mixed 50@55c; pure 35@40c: Long rye straw 75@80c; short do. 50@55c.; do. other grain, 45@50c. do.

HOPS.—Sales are confined to a small brewing demand. Exporters almost out of the market as it is impossible to fill a good sized order with choice quality. State crop advices at the movement not favorable.

Crop of '80 choice, 20@22c; good to prime 16@19c; fair to good, 13@15c; poor to fair, 11@13c; Eastern, 11@18c.; '79's, fair to prime, 12@15c.; olds, 5@8c. Wis, 14@22c.; Cal and Oregon 19@23c.

Receipts for week, 613 bales.

Exports for week, 301 bales

MILK.—Supplies have been under better control as the weather has favored enlarged use. The average was quoted $1.24½ per can of 40 qts.; range of prices 90c@$1.50, closing at $1.30. Farmers' price for contract milk for June 1½@2c. Commission milk hardly made freight.

RICE.—Carolina 5@7¾c; La. 5¼@6¼c.

SUGAR —Refined quoted:

Hard sugars—crushed ₩ lb 10¾c; do. powdered 10¾c do granulated 10¼@10¼c; do. cut loaf 10¾c; confectioners' "A" 9¾@9¾c; coffee "A" standard 9¼@9¾c do. off "A" 9¼@9¾c white extra "C" 8¾c; extra "C" 8¼@8¾c; "C" 7¾@8¼c; yellow 7¾@7¾c.

TOBACCO.—Kentucky promises a good average crop. There is no new feature in the market; prices seem established for the moment.

VEGETABLES.—Potatoes are in large supply and with L. I down to $1.25@1.50 other sorts are weak, A few Mo. rate $1.75@1 60, but other Southern range 75c@$1.25 with culls at 50c Garden stuff has an early exhibition of novelties.

Green corn, Burlington ₩ 100 $1.50@1.75; Green peas, L. I., ₩ bag, 50@75c; wax beans 50@75c, string beans 50@75c. Jersey ₩ bbl. $1@1.05; cucumbers L. I. ₩ 100 $1@1.25 Norfolk, ₩ bu. crate, 50@75c, egg plant Fla. $1@2. Tomatoes Jersey ₩ basket $2.50@2.75; Norfk. ₩ bu. crate $1.25@1.75; Cuba & Sav. $1@1.50; squash Norfk marrow ₩ bbl. 75@$1; L. I. ₩ basket 50@60; cabbages, Flat Dutch ₩ 100 $4. Wakefield $3; beets, L. I. ₩ 100, bchs $1.00; onions, Southern yellow ₩ bbl. $3@3.25; Bermuda ₩ crate, 15@50c; lettuce ₩ bbl. 50@75c; asparagus, Oyster Bay ₩ doz., $1.75; carrots $ 100 bchs $1@1.50; radishes 50@75c; rhubarb L. I & Jersey 75c.@$1; white turnips Jersey $1.50@3; turnips Russia ₩ bbl. 75@85c.; cauliflower, Jersey & L. I. ₩ bbl. 1@3.

POULTRY AND GAME—Supplies of dressed are moderate and prices are doing well, good quality especially in chickens helping sales.

Turkeys, Phila. choice ₩ lb 12@13c.; State & West. 12@13c. Phila Spring chickens 25@28c; New Jersey 24@26c; West. 21@23c. fowls, Phila. d. p. 16c.; N. J. d.p. 15 do. scalded 13½@14½c.; State and Western 13@14c; do. d.-p. 13½@14½c.; coarse 13@14½c.; Ducks—Spring, 14@20c.; old. 13@15c. Squabs, white, ₩ doz. $2.50 do. dark, $1.50@1.75

Live chickens active, sizes more attractive. Fowls are scarce and have been well used up. Geese quiet. Ducks in good demand with a highly supplied game market.

Spring chickens prime ₩ lb 21@22c.; other 19@20c. Fowls, ₩ lb. 13@14c; roosters, 7@8c.; turkeys, 11@12c.; ducks, ₩ pair 60@80; geese, extra $1.75; other $1@$1.50. pigeons, 25@40c.

There are few items and even these are not daily quotable. Wild pigeons $2.25 ₩ doz. Squab $1.75; Eng. snipe, $2.25; Plover, $2@2.25

PROVISIONS.—A strong speculative interest is again operating, and the market is in a feverish, unwholesome condition. The chief feature is in lard, but prices have run up to a point that restricts exportation. Lard may be said to hold the controlling interest, in hog products, taking the place formerly filled by bbl. pork.

Pork, extra prime, $14@14.50; Western mess, new, $17@17 25; old, $16.25@16 63. Lard, steam Western ₩ 100 lbs, $12@12.10; prime city, $11 50. Hams, smoked city, 11¾@12¾; pickled Western, 10¾@11¾; Shoulders smoked city, 8¾@8¾ pickled, 7¾@7¾; rib bellies, pickled, 9@9¾. Bacon, long clear Western, 9¾. Beef mess, bbl., 10@12c; India mess, tcs., 22@24c; beef hams, bbls. $23@23.50.

Receipts for week—Beef, bbls and tcs 715; pork, bbls, 3,250; Cut meats, pkgs. 14,725; lard, do 15,800. Exports—Beef, bbls and tcs. 1,475; pork, 2,900; cut meats lbs. 3,662,257; lard, 1,731,640. The estimated packing of hogs at the West from March 1st to June 29th 3,045,000, a decrease of 685,000 compared with the same period 1880.

WOOL.—The market still holds its high bearing; all points report a strong demand for the new clip. There is no further advance but full and steady prices are named with active trade. Growers are having a good participation in the profits of a buoyant market this season

Ohio, Penn. and W. Va. XXX and picklock, 43@45c.; X to XX, 40@43c.; No. 2 to No. 1, 40@45c. coarse, 31@38c. combing 40 215.

State and Western X and XX, 39@41c.; No. 2 to No. 1 38@41c.; coarse 32@38c.; combing, 40@44c.; combing unwashed 32@34c.

Va., W. Va. and Md. unwashed medium 28@32c. Ga. and Lake unwashed medium 28@33c.; coarse 23@26c burry and slightly burry 16@25c; Cal. Spring northern, free, 34@37c.; middle counties, free, 28@32c.; southern, 22@27c.; low grade and burry, 20@23c. Full, low grade and burry 16@21c. Texas—choice, free, 28@32c.; fair to good, 24@26c.; low grade and burry 17@20c. Pulled super 38@42c.; extra 35@38c; No. 1, 20@22c combing, 35@40c.; lambs 38@40c. Tub washed, fair to choice, 35@44c.

LIVE STOCK MARKETS

NEW YORK, Saturday July 9, 1881.

BEEVES.—Receipts for the week 11,414 head; do last week 12,530 do. Small supplies gave sellers a decided advantage and with quick pen-clearing sales the market advanced ½c. on medium to good cattle and ¼c. on other grades compared with Wednesday's market. Larger supplies are due next week, but it is thought that the new quotations will be sustained in the early business of next week. The market closed strong and buoyant. Twenty cars of Light Thin Grass Cherokees were sold at 8¼@8¾c; 7 cars of Colorados at 9½@9¾c. Small light Kentucky Stillers were sold at 10½@10¾c, and 4 cars of Good Cincinnati Stillers changed hands to 12c. to dress 56 lb, less 50c. ₩ head. There were no very low priced Native corn-fed cattle on sale, and the range from 11 to 12c covers nine-tenths of the sales. One drover ran out 3 car-loads at 12c to dress 57 lb, and 5 head at 12½c. to dress 57 lb. Dispatches were sent out immediately after the close of the market to have the cattle which are on the road crowded forward with all possible haste Twenty-five car loads are expected at Sixtieth street yards to-morrow.

MILCH COWS.—Receipts are moderate; common cows not wanted and barely make last rates. Prime to extra milkers rather firmer. The full range is $30@55 ₩ head. Part of a car-load of State brought $45@65 each.

VEAL CALVES.—Sales have been quick at good figures—nothing left over.

Live N. J. prime to choice, 7¾@8c do. state, 7¼@7¾c.; poor to good 5½@7c.; Mt. Hollys 6½@8c.; buttermilk, 3½@4c.; up-river, dressed, 10@12c.

SHEEP AND LAMBS.—Receipts for the week 23,901 head do. last week, 26,237 do. The demand was good and stocks sold readily at rather stronger prices than were current yesterday A bunch of Virginia culls sold at 3½c and some small lots of ewes at 4@4¼c. but fair sheep brought 5@5¾c, and choice export wethers could have been sold at 6@6¼ A few Western cull lambs sold at 5c. otherwise the sales of Va. and Ky. lambs were at 7¼@8c. with State Penn. and N. J. 8@9c.

SWINE.—Receipts for the week —— head; do. last week 23,253 do. The market has been quite bare of live as no shipments left Chicago or St. Louis on the 4th. Corn fed hogs named at 6¼@6½c City dressed State 8¼@9; do. Western 8¼@8¾c. Good demand for nice thin pork.

FARM IMPLEMENTS & SEEDS.

Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above. Address ts9 & 191 Water St.

AN OFFER

—TO—

CONSUMERS

—OF—

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We have made a specialty during the past four years of GIVING AWAY as PREMIUMS, to those who get up CLUBS for our Teas, DINNER SETS GOLD BAND TEA SETS, SILVER-PLATED WARE, and other articles both useful and ornamental.

We import and buy direct from manufacturers all the goods we handle, and own them at the *lowest possible price* cash will purchase. During the past four years we have sent from our store over 12,000 of these orders, and they have gone into almost every State in the Union.

We keep in stock *every variety* of Tea known, and at all prices.

Oolong, Japan, Mixed, English Breakfast, Old and Young Hyson, Imperial, 50c., 75c., very finest $1. Gunpowder, Black Japan, Foochow 75c., $1. Orange Pekoe and Assam, 85c and $1.

Below are a few of the many Premiums offered:

With a $5 order we send a *Silver-Plated Caster.*

With a $10 order we send an *English China Tea Set of 45 pieces.*

With a $15 order we send a *Silver-Plated Caster, Pickle Dish and Butter Dish* or an *English China Decorated Tea Set of 44 pieces.*

With a $20 order we send a *French China Gold Band Tea Set of 44 pieces,* or an *English China Dinner Set of 106 pieces.*

We have *hundreds* of letters like the following:

LIME ROCK, Conn., April 30th, 1881.

Gentlemen—Please accept thanks for the beautiful Tea Set, which is much nicer than I expected, and indeed it is surprising to every one how you can do so much for so little. All are so well satisfied with the Tea that I think you will receive another order soon.

Yours truly, MRS. A. THORPE.

TAUNTON, Mass., March 8, 1881.

Gentlemen—I have forwarded eight different orders for Tea, and have received as premiums a tea set, a silver-plated caster, a dinner set, a glass set, a case of silver-plated knives and forks, a pair of French china fruit dishes, and *two ladies' gold watches*, and am now on my ninth order. Both Tea and premiums I am well pleased with, and have found perfect satisfaction with both. Yours truly,

MRS. MARIA C. LYNCH.

Orders, with P. O. Order, or money enclosed in registered letter can be sent at our risk. All checks or Post Office orders should be made payable to F. M. LINNELL.

We also send Teas by mail, without premium, postage paid, at list prices, to those who wish for choice goods and are so situated they cannot obtain them at home. For full price and premium list, send us postal, with address PLAINLY WRITTEN.

GREAT LONDON TEA CO.

800 Washington St., Boston, Mass.

Reading for the Young.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

The Climate.

It was early in May and Mr. Erman sat reading his evening paper, the Los Angeles Express. He looked up from the telegraphic dispatches with an exclamation. "Warm weather has commenced already," he said. "There was a case of sunstroke yesterday in New York."

"As soon as this!" exclaimed Violet. "Why it seems as if the last news we had from the East was that they were nearly frozen. And now comes the other extreme. For my part I don't see how people endure it to live in such a climate!" concluded the out-spoken young damsel.

"Yet we were comfortable there for a good many years, and never thought of anything better," said her mother, smiling.

"*Comfortable!*" repeated Violet. "Perhaps you would like to go back again and live in *comfort!*"

"No," said Mr. Erman, "I don't believe one of us would be contented to stay east of the Rocky Mountains for six months."

"I remember how warm it was last Summer," interposed Daisy. "We used to roll our bed between the windows to get all the air we could and never thought of lying down without a palm-leaf fan. Once Uncle John slept in the hammock every night for a whole week, for he said he couldn't breathe in the house. And in the morning we felt as tired as when we went to bed."

"You will find no weather like that in San Gabriel, my dear," said Mrs. Erman. "Instead of fans you will want blankets, just the same as you use now. No matter how warm it is during the day the evenings are cool, and you can take a good night's rest under warm covers, and wake up bright and fresh the next morning."

"People can endure more heat here than in the East," said Mr. Erman. "It does not seem so prostrating. I can work here in the sun all day, when with the mercury at the same hight in Illinois I should feel it a great exertion to walk down to the store. And three things to which you have been accustomed you will miss here—sunstrokes, thunder storms and mad dogs."

"Why don't they ever have sun-strokes here?" asked Daisy. "It must be queer kind of weather. I always thought that California Summers were hot, hotter, hottest! And no thunder-storms—mother would like that, as they always make her sick. But how do you know there are no mad dogs, Mr. Erman?"

"Well, I must confess I take the old settlers' words for it, though I have never heard of one since we came here. The dogs are never muzzled at any season of the year, and you have probably observed that they are by no means scarce, particularly in the Mexican families, where I believe the rule is one for each child."

"People do have the strangest ideas about California, anyway!" broke in Violet. "They talk about the 'heated term' as if we nearly burnt to cinders from May till November, and think that the wet season means a continual deluge from November till May. I'm out of patience with them!"

"As your stock in trade was never very large I don't wonder that you are unable to meet the pressing demands made upon it," remarked Bertram. "However, when Daisy returns she can enlighten her friends as to the climatic conditions of California, which will doubtless relieve you to some extent."

"You hateful boy!" cried Violet. "I've a great mind never to say anything more while you are around!"

"What a deprivation that would be to us all," replied her brother, with a woe-begone look.

"There, there, children," interposed Mrs. Erman, "Violet, never mind Bert's nonsense. And as to our young lady's outbreak, Daisy, it is certainly true that Eastern people generally have strange conceptions of our climate. The dry season has commenced. I presume we shall not see any rain till the latter part of October—possibly later; though twice we have had a little shower in July. But it does not follow that because we have no rain we must be uncomfortable six months of the year. The beautiful green hills and plains turn brown, it is true; already they are beginning to loose their freshness. And it is dusty—but we become accustomed to that, and hardly notice the dust as much as we did in Illinois, when we had a few weeks without rain. There is no difference about the yard and orchard, for the plants and trees are all irrigated, and grow as well as if they had the benefit of a shower every week. Most of our fruit comes at this season, and in spite of the dust and brown landscape many people, myself among them, prefer the Summer months."

"Did you remember what young Heller at Pasadena said when he first came here in the Summer?" asked Mr. Erman, laughing. "He thought it was the most desolate, forsaken country he had ever struck, and was so homesick that he would have left on the next train if he had not promised his brother that he would test the climate thoroughly."

"Yes, and do you suppose you could hire him to return now? I don't know a young man that is more enthusiastic about California."

"But I don't wonder that people coming here in the summer are often disappointed," continued Mr. Erman. "The State has been described in such glowing colors that it must be a shock to find that one can travel for miles without seeing a spear of grass, or particle of green vegetation, and the land looking so dry and barren that it seems incapable of producing anything. But I always say to dissatisfied new-comers, "Don't judge hastily. Wait a year before you make up your mind to leave the State."

"One peculiarity that strikes Eastern people is the amount of clothing worn. The climate being so mild one naturally concludes that only thin clothes will be required; but most people wear flannel the year round. You see we have a steady ocean breeze during the Summer which tempers the heat, and there is such a regular change between the day and night that we are obliged to dress more warmly than if the temperature after sunset was higher. And when we go out for a drive I never start without extra wraps unless I am *positively certain* that we shall be back early."

"Which means that you always carry them along," added Violet.

"And what about the rainy season?" asked Daisy.

"You came in March, dear child, so you know something of it yourself. The country puts on its green dress in November or December, and we have about the same weather that you enjoyed this Spring—with a trifle more rain. You will find that the grumblers rarely complain of too much rain. All the farmers, and especially those engaged in raising grain, rejoice when we have, what Bert calls, a regular soaker. People say that all weather signs fail here, but we are always pretty certain of one thing, and that is that we shall have unpleasant weather at Christmas. It has been so every year since we came except the first and that was a dry Winter—the hills were brown during the whole season."

"Speaking of rain reminds me of the consequence. Do you know what that is, Daisy?" asked Mr. Erman.

"Mud!" answered Daisy with a laugh.

"Correct. Now we have very little of that here. It is amazing how soon the roads dry up. No toiling through mud up to the hubs of your wheels I have yet to see the time when I cannot drive to town in comfort the next day after a heavy rain."

"That must be a blessing," said Daisy. "I know I have heard so much complaint about the mud at home. Do you ever have any colder weather than since I came?"

"Yes; sometimes we have frosts, but they have never injured us much," said Mr. Erman. "One morning when I got up it was 27° above zero. We all thought it terribly cold, didn't we, Violet?" he asked with a meaning side-glance.

"You complained as much as any one, papa Erman, so you needn't wink at me!"

"Well, well, we won't quarrel about it. The new growth on the trees was nipped, and my young lime hedge was cut nearly back to the ground. But we received no serious damage. A good many trees that stood on low ground, however, were killed. It is wonderful what a difference there is in the temperature of places but a short distance apart. There is Willow Dale only a mile from here, but it is sheltered by the hills, and protected from the frost. Then three or four miles east of us is a settlement that is low and damp; the grass grows in the streets in Summer, they do not irrigate, and have so much frost that they do not attempt growing orange trees, but devote their attention to grain and stock raising."

"Changing the subject," said Mrs. Erman, "people can live much cheaper here than in the East. Their clothes do not cost as much for they can wear the same garments Summer and Winter, if necessary, with but little change. They do not have such enormous bills to pay for fuel, and are not obliged to build such substantial houses. Now I prefer a plastered house; but if one hasn't the money he can live comfortably in a cottage made of boards set up on end, and simply papered on the inside. You will find thousands of these little houses, made of one thickness of boards, in California."

"One of the things that I like best about this climate," said Violet, "is that for six months in the year we are *sure* to have pleasant weather. There is no danger of being caught in a sudden shower. We can plan our picnics and entertainments weeks ahead, and be *certain* that when the appointed time comes round it will be a delightful day."

"And during the six months of the rainy season we are as confident of pleasant weather as our friends in the East ever are," added Mr. Erman.

NOTES BY UNCLE MARK.

I find, in looking over the Cousin's letters now, that several, which were written in the Winter and Spring, have been "crowded out," and consequently are now rather "out of season." But it shall be my purpose to publish those which may now come to hand, providing, of course, they are up to the standard, and of interest. Flowers, vegetables and fruits are now all nicely growing, and if any of the Cousins have anything interesting or novel to report, our columns are open to them.

Will "Carnation" please send me a specimen or two of the peculiar violet she mentioned in a recent letter to this department?

I am glad so many of the Cousins have applied for the Pyrethrum seeds, and I wish them success in cultivating them. There are a few packages left which may be applied for.

Another letter from our talented correspondent in Southern California is provided for our young readers, this week; and we imagine the older Cousins will find information in it, too. We hope to continue these interesting sketches at short intervals.

THE following letter is from the winner of the prize for drawings and is self-explanatory.

DEAR UNCLE—I received your very interesting present to-day, and think I am more than repaid for my work. I wish to express my obligation for the book, and I hope the drawings may prove serviceable. Yours respectfully,

C. A. BUTTERWORTH.

THE YOUNG QUERIST.

H. M. S., Bainbridge, Mich., asks if a letter addressed to "Uncle Mark, RURAL NEW-YORKER office," will be properly directed?

ANS.—Certainly. He is always on the lookout for a word from the Cousins.

V. A. H., Caldwell, Texas, would like the name, of the black insect which is injuring his grape-vines.

ANS.—So many insects infest the grape that we can hardly answer your question. If you will enclose some of the insects in a little box and send them to us we will give their name.

G. Q. N., Elmira, N. Y., wishes to know the entomological name of the currant measuring-worm.

ANS.—Abraxis ribearia.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—Is it a long time since I wrote to you last? I should not wonder, for you see I was a little disappointed that my letter met with such a sad, although not uncommon, fate; but since you say, "try, try again," I will not be discouraged. My garden was quite a success last year, and I enjoyed the care of it, but I am trying to do still better this season. The melons were very large and fine and received great praise. My seeds all grew well except the portulaca of which there was but one plant.

Now, with your permission, Uncle Mark, I would like to tell the cousins about our play-house, it was built last year for my brother, my sister and me. It is eight by ten feet and has a window on the south side and a door on the north. Last Summer we planted a Madeira vine beside the door, which ran to the top and hung down on the other side more than half way, and was covered with blossoms in the Fall. We also had Sweet Williams, gladioli and asters under the window. Our family consists of a number of dolls, a kitten whose name is Winnie and a little black and tan dog whose name is Tip. He keeps the hens away from the flowers, and we think a great deal of him. We have a little stove that Grandpa gave us, a table, a lounge, and some chairs. Our stove furniture consists of a frying-pan, and an iron pot just like the one that came over in the May Flower only very much smaller. We have a set of dishes and a nice cupboard to keep them in. We sometimes keep house in real fashion, and our little friends visit us, and we get tea for them the same as mamma does. Now Uncle Mark, if you or any of the cousins will visit us, we will welcome you most gladly, and will try and have a real nice time. Truly, your niece, ANNA.

DEAR UNCLE MARK:—Last Spring I spaded and planted my own garden, I bought 25 cents worth of garden seeds which I sowed with some I saved over from last year's seed distribution. Altogether there was enough for the piece of ground Pa gave me. I will let you know how I get along with my vegetables and flowers this Summer. We live near a small town where I can dispose of radishes, lettuce and onions, almost daily. I keep account of all I sell and will let you know what profit I make. I have sown a nice, big bed with cabbage seeds. I sell the plants for 25 cents per hundred. I want to tell you and the cousins that I have a fine little puppy, his name is Bonanza. I call him Bon for short—he is a real beauty.

Sylvania, O. WALTER GAYHART.

[A bright future may be predicted for you, Walter, if you continue as you have begun, in farming and gardening. Your father has, I think, solved the problem in your case, of "How to keep the boys on the farm," by giving you a plot of land for a garden and encouraging you to buy and sell and keep account of your transactions. U. M.]

DEAR UNCLE MARK:—My little sister and I wrote to you last Winter. One letter was in the RURAL in the Winter and one this Spring. We wanted very much to apply for seeds of the Pyrethrum roseum and would have taken great care of them, even if we had to build a house to protect them. My little sister and I made a seed drill with which we have planted nearly two acres of ground. We have never seen a garden drill and had none to copy from, but we formed an idea of what it ought to be like. We tried several ways before we were suited and it works well. It makes a furrow, drops and covers the seed and rolls the ground We run it on a sled. It plants almost every kind of garden seeds. We are troubled greatly with cut-worms this Summer.

Your nephew.

Deer Valley, Col. CHARLEY TAYLOR.

[I have forwarded some Pyrethrum seed. Can't you send us a drawing and description of your new seed drill?—U. M.]

DEAR UNCLE MARK.—The seeds you sent brother Robert and myself came all right. We are very thankful for them and we will do the best we can in caring for them. The seeds you sent us one year ago were planted and did well except the Gumbo, which was injured by frost, but I saved one pod of seeds.

We attend school one mile distant and care for our plants at night. Roble is nine years old and I am eleven. In thanking for past favors which I appreciate much, (and think Uncle Mark a very kind man), we would like the seeds of Pyrethrum Roseum if it is not asking too much. We will do all we can for them and report you in due time. We wish you would come to H. and see the many and pleasant farms here in this old town. Most of the people are farmers. ROBIE & JENNIE COLT.

Harwinton, Connecticut.

A good excuse for sickness of yourself and family is that you don't use Hop Bitters.—*Adv.*

Miscellaneous.

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and contains a good COUNTY MAP of the STATE. It also contains the names and addresses of Farmers and Planters in Texas who have

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GENESEE VALLEY FARMS FOR SALE.—Some of the finest residences in the Valley, near R. R Inquire soon of JOHN SHELDON, Fort Collins, Colorado.

PERSONAL ITEMS.

William Inman of the Inman steamship line is dead.

Mrs. Mackey's chief cook is said to have $6,000 a year.

One of the cruelties charged upon Oscar Merritt of Detroit in his wife's complaint for divorce was, that he would not let her put her cold feet on him to warm them.

Associate Justice Clifford, of the Supreme Court of the United States, is reported to be very sick at Cornish, Me. The physicians say his death is likely to occur in a few days.

To-co-be, chief of the Shoshone Indians of Nevada, drives a spanking pair of trotters attached to a handsome carriage. He has made some successful ventures in mining, and is an extensive breeder of cattle.

Mr. Parnell, of West Point, Ga., the champion peach farmer, is the elder brother of the agitator, but was disinherited on account of infirm health. He further suffered injury by an accident some years ago on a Southern railroad.

Ex- Commissioner Bentley says that the pensions next year will probably aggregate $90,000,000. The pension appropriation for the year just closing was $50,300,000, and it was insufficient. Next year from 45,000 to 50,000 new cases will, it is expected, be added to the roll.

Mr. James Gilfillan, Treasurer of the United States, is forty-five years of age and is of Scotch descent. At Williams College he was in the class with Garfield, Rockwell and Knox. He was a clerk in the Treasury for many years. In his office he stands at a high desk, where he has sometimes signed his name more than three thousand times in a day. He wears no jewelry, and does not even carry a watch. The Treasury locks have a clock attachment, and are opened by its operation at nine o'clock in the morning. The Treasurer is the only person who knows all the combinations.

[St. Louis Globe-Democrat.]

A War Relic.

In a very full report recently published in the Philadelphia Ledger, reference is made to the case of Mr. George I. Graham, a prominent politician and active journalist (connected with the Philadelphia Sunday Mirror), who, by using the great German remedy, St. Jacobs Oil, was cured of a troublesome case of rheumatism, contracted during the war. He closes his statement with—"to those who are afflicted with that complaint, it is worth its weight in gold."—*Adv.*

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Miscellaneous.

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Because it cleanses the system of the poisonous humors that develope in Kidney and Urinary Diseases, Biliousness, Jaundice, Constipation, Piles, or in Rheumatism, Neuralgia, Nervous Disorders and Female Complaints.

SEE WHAT PEOPLE SAY:

Eugene B. Stork, of Junction City, Kansas, says, Kidney-Wort cured him after regular Physicians had been trying for four years.

Mrs. John Arnall, of Washington, Ohio, says her boy was given up to die by four prominent physicians and that he was afterwards cured by Kidney-Wort.

M. M. B. Goodwin, an editor in Chardon, Ohio, says he was not expected to live, being bloated beyond belief, but Kidney-Wort cured him.

Anna L. Jarrett of South Salem, N. Y., says that seven years suffering from kidney troubles and other complications was ended by the use of Kidney-Wort.

John B. Lawrence of Jackson, Tenn., suffered for years from liver and kidney troubles and after taking "barrels of other medicines," Kidney-Wort made him well.

Michael Coto of Montgomery Center, Vt., suffered eight years with kidney difficulty and was unable to work. Kidney-Wort made him "well as ever."

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The month of July, 1881, witnesses the completion of the largest and most important literary work this country and the century have seen. It is the Library of Universal Knowledge, large type edition in 15 large octavo volumes, containing 10 per ct. more matter than Appletons' Cyclopædia, at less than one-fifth its cost, and 20 per cent. more than Johnson's Cyclopædia, at a little more than one-fourth its cost.

Chambers's Encyclopædia, which forms the basis of the Library of Universal Knowledge (the last London edition of 1880 being reprinted verbatim as a portion of its contents), is the laborious product o

Victory

the ripest British and European scholarship. It has developed through a century of Cyclopædia making, its various editions having been many times revised, in successive years, till it has come to be universally recognized, by those competent to judge, as standing at the very front of great aggregations of knowledge, and better adapted than any other Cyclopædia for popular use. It contains such full and important information as the ordinary reader, or the careful student, is likely to seek, upon about 2,500 subjects, in every department of human knowledge. Chambers's Encyclopædia, however, is a foreign production, edited and published for a foreign market, and could not be expected to give as much

For The

prominence to American topics as American readers might desire. To supply these and other deficiencies large corps of American editors and writers have added important articles upon about 15,000 topics, covering the entire field of human knowledge, bringing the whole number of titles under one alphabetical arrangement to about 40,000. Thus the work is thoroughly Americanized, and the Library of Universal Knowledge becomes at once the latest and most complete Encyclopædia in the field, at a mere fraction of the cost of any similar work which has preceded it.

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Of course the old and wealthy publishers who have grown rich (it is said that the Appletons have made a profit of nearly two million dollars on their Cyclopædia) from the sale of their high-priced publications are not pleased that their monopolies are broken and their power overthrown. Of course the book agents and booksellers who have been used to getting from 40 to 60 per cent. commission for sell-

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ing these high-priced books are not so well pleased to sell the Library of Universal Knowledge on 15 per cent. commission, though those who are not short-sighted discover that their own interests, after all, are identical with the interests of *the people*, and their real profits, in the end, are increased, by the immense sales which result from meeting the people's wants. The majority of booksellers, however, are better pleased to *slander* than to *sell* this and our numerous other standard and incomparably low-priced publications. But the Literary Revo-

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The names of the subscribers must in every case be forwarded to us. The first $5,000 named will be distributed as specified as rapidly as the orders are received, and the remaining $5,000 will be distributed promptly on Sept. 1st. The names of the persons receiving these rewards will be printed, with the amounts received by each, and the list sent to all the club agents entering into competition for them. Subscribers must be *actual purchasers for individual use*, to entitle the club agent to the rewards under this offer, and not booksellers or agents who buy to sell again.

Persons desiring to raise clubs may send to us at once for sample volumes, if they desire, in the various styles of binding, paying us 75 cents for the volume in cloth, $1.00 for the volume in half Russia, sprinkled edges, and $1.25 for the volume in library sheep. Orders for the full sets will be filled by us with the utmost promptness, within our ability to manufacture, beginning not later than July 10th, orders being filled in the order of their receipt by us.

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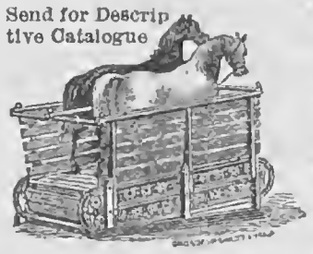

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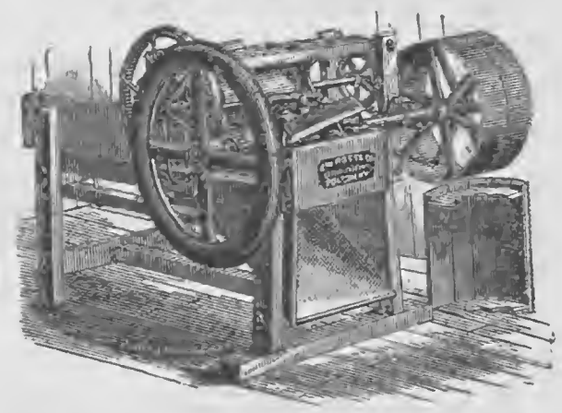

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Humorous.

A GENTLEMAN in New Orleans was agreeably surprised to find a plump turkey served up for the dinner, and inquired of his servant how it was obtained. "Why, sir," replied Sambo, "dat turkey has been roosting on our fence for free nights. So dis morning I seized him for the rent of de fence.

"I HAVEN'T any money with me to-day," said Pendleton to Blifkins, who had called to collect that little bill, "but I will give you my note." "Your note!" said Blifkins; "is it good for anything?" "I should say it was," replied Pendleton; "everybody in the city has got it." Blifkins declined with thanks. He would call again.

THEY were discussing how to pronounce "oleomargarine." Fogg gave the "g" soft, while Jones declared it should be hard. Said he: "The 'oleo' comes from Latin, and the 'margarine' from early English." "You are wrong there," said Fogg, who is given to levity, "everybody knows it all comes from grease."

"MY brethern," said a western minister, "the preaching of the gospel to some people is like pouring water over a sponge—it soaks in and stays. To others it is like the wind blowing through a chicken coop. My experience of this congregation is, that it contains more chicken coops than sponges.—Andrews' Bazar.

ANGRY wife (time, 2, A. M.)—"Is that you, Charles?" Jolly husband—"Zish me." Angry wife—"Here have I been standing at the head of the stairs these two hours. O, Charles, how can you?" Jolly husband, bracing up—"Shtandin' on your head on t'shtairs? Jenny, I'm saprised! How can I! By Jove, I can't! Two hours, too! 'Stronary woman!"—Cincinnati Gazette.

[Evansville Daily Courier.]

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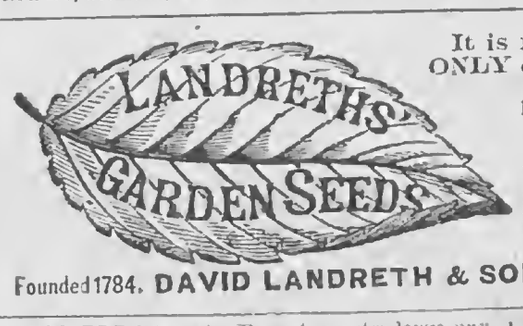

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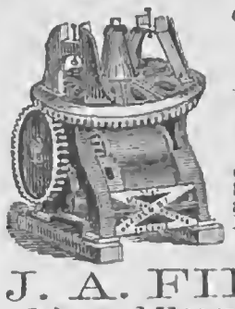

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL.—No. 1643.} NEW YORK, JULY 23, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

NOTES FROM THE RURAL GROUNDS.

The Silver Bell Tree. (Halesia tetraptera)

WE have but one specimen of this handsome little tree. It is sometimes difficult to separate tall-growing shrubs from dwarf-growing trees. Bnt the Silver Bell is in every way a small tree, having a straight main stem which is very hard, and a bark of dark gray and brown handsomely striated. It has moreover nothing of the shrubby habit, being rather pyramidal in its growth.

This tree is a native of most of onr States from Florida to North Carolina inclnsive, and is very common in rich woods and hedges. It blooms here in late May and the illnstration, which is drawn from our specimen, shows accnrately both leaf and flower, the latter of which gives to it its familiar name of Silver Bell and also of Snowdrop from its near resemblance to the common Snowdrop—Galanthns nivalis. This tree as it is laden with its drooping silver bells is a pretty sight, and the tree itself, from its small size and symmetrical form is well adapted to all grounds of moderate extent. The blossoms, however, are of short duration lasting only two or three days. These are followed by its nut-like, four-winged frnit which persists until frost.

Summer Transplanting.

If several "ifs" are provided for, yonng frnit trees as well as raspberries and blackberries may be safely transplanted at this season. Last year we transplanted two young peach trees in early July; this year ten in late June. All are thriving, the first two mentioned, though started from pits three years ago, are bearing fruit. These little trees were severely cut back. Only a twig or two—each having a few leaves—were left. The soil was carefnlly worked in among the roots and pounded down over them so as to be quite firm. Then the hole, or what remained of it, was filled with water, the rest of the soil loosely thrown in and the earth covered to the depth of three inches with meadow hay. If the season were wet, the watering and muiching would not prove necessary. Bnt it is by far the best to provide against dry weather which at this season is always liable to occur.

RAYS.

ONE of our friends—a merchant—has a pretty lawn aronnd his home. He cuts it well and waters it, and last Spring gave it a good dressing of artificial manure—that made from the blood and other animal refuse at the abbattoir. A month later the effect was very apparent, and, as he was unaccustomed to sowing broadcast, the irregularities in his sowing were as visible on his lawn as are the patches in a cow pasture; on the places where the most dressing fell the grass grew the strongest. All the street are now np in arms and fortified by abbattoir manure. You could not give them any other kind, let alone coaxing them to bny.

* *

THIS reminds me of the wicked waste we often see in stock-raising countries, where heaps of strong, intensely rich mannre are thrown into a pile, a hole, or dumped adown a bank beside our packeries, lost in usefnlness unto the world, bnt lending aid to pestilential vicionsness.

* *

AMONG the coming favorite flowers, Tnberons-rooted Begonias will take a leading rank. They grow so stout and stocky, bloom so continuously and copiously, and their flowers are so big, so showy, and so gracefully arranged, that all people must incline with favor to them. Rose is the prevailing color, but pnre white to deepest red and scarlet, also yellow, are represented, and there are double flowers as well as single ones. In pots or boxes in the window or the greenhouse, with care, they may be easily raised from seeds. Seedlings raised in Spring shonld bloom the following Fall, and again every Snmmer while the tnbers live, and they shonld exist for several years. These begonias are not hardy, but the tubers can be

THE SILVER BELL TREE.—Halesia tetraptera.—Fig. 349.

lifted and wintered as we do caladinms, gloxinias or dahlias, bnt as they are smaller they mnst be more carefully seen to. An exposed, snnny position does not snit them so well as a partially shaded one; nnder the drip of trees they will grow better than most plants.

* *

WAS not the RURAL, p. 340, a trifle too severe on the hardiness of Japanese maples? These lovely little bush-trees, so far as intensity of cold is concerned, will stand a deal without hurt—yes, several degrees below zero; bnt a searing, bleak exposure or a sodden bed in Winter may ruin them with less than even a zero frost. If onr ambition extends to such choice and expensive garden plants as these little maples, whose leaves, so deeply cnt and variously colored, are as beantifnl as blossoms, we should be prepared to give them shelter, not so much from cold as from the searing, frosty winds of Winter and of Spring—death-piercing blasts to animals and plants. Last Winter the woody vines of several of onr clematises were killed into the gronnd; our Japanese anemones are dead every one, while every little maple is to-day brighter, sturdier than it was the year before, nor did we protect them in the least beyond a nest of leaves around their base; their position, which is sheltered, did the rest. [The writer of the above lives a hnndred miles or more north of the Rural Grounds. The thermometer at the latter place on two occacasions marked 16 degrees below zero last Winter.—EDS.]

* *

MY friend Mr. Thorp, of the firm of Hallock, Son & Thorp, the great lily growers of Queens Connty, N. Y., called to see me the other day, and among other things spoken of was that fine ornamental bnsh, Rosa rugosa. He told me that an old lady who lives near them has a large bush of this Japanese rose in her yard, which she claims to be a plant left of an old hedge of the same which grew there in her childhood some 70 years ago, and which as children they nsed to know as the "Chicken Rose." Whence it came she knew not, nor did she apprehend its rarity until she saw it exhibited recently as a "new" plant. From specimens of it submitted by her to Mr. Thorp, he vouches for its identity as a Rugosa.

* *

SOME years ago the stone-crop was in great demand for cemetery work, but of late years periwinkle, ivy and gayer plants, and this "Perpetual Care" arrangement cemetery corporations are introducing, are fast displacing our old favorite. It is a tiny, fleshy-leaved, moss-like plant that makes a very thick carpet, evergreen and hardy, and loves an open, shadeless spot and light or sandy soil to grow in. In June it is a sheet of golden blossoms. An old Albany florist tells me he has made more money off stone-crop than by any other one plant he grows. It makes a nice edging in the garden patch or fringe in the rockery, bnt in all cases it should be grown in full exposure. Torn to pieces and laid npon a sandy snrface, every sprout and piece of broken stem will grow.

* *

GUANO WATER is a first-rate manure for green-house and window plants. It is no patent nostrnm; we know what it is, and that it is good. But in addition to being highly esteemed food for the roots of plants, as a wash for the leaves it is also excellent. Be your plants ontside or in the house, no matter. Yon syringe them with clear guano water, and you will soon observe an increased thrift and fatness of foliage and immnnity from insects over those syringed with clean water. Red spiders, thrips and mealy bugs hate guano water. Nor does the gnano water leave a sediment upon the foliage, as might be expected. Use it in this fashion:—Into a bucketful of soft water mix a teacupfnl of guano; stir well and leave for a day to settle; then pour off the water into another vessel, taking care not to stir np the sediment. Add abont as much more clean water, then nse as freely as you please.

* *

WE sometimes see yonng men and old dismonnt and thoughtlessly hitch their horses in the broiling noonday sunshine while they step inside to make a lengthened call, or on the cool piazza rest and talk, enjoy a melon, maybe, qnite heedless of the patient, snffering animal. Snrely no reader of the RURAL is so inhnman. But the guilty guest is not much more to blame than the indifferent host. Upon our treeless prairies, as soon as we "fix" a home and build a house, we plant some trees to shade our house, sometimes our yard as well, bnt far too often neglect the shade that every hitching rack demands. And little time and tronble would it cost us, but great good and comfort yield us, were we to plant a lot of fast-growing shade trees here and there upon our

farms, to be a sun-shade for our cattle at their pleasure.

* *

I SEE it often advocated that fruit trees may serve a double purpose, namely, shade and orchard, and therefore that they be used instead of elms, horse-chestnuts, maples, tulip trees, yellow-wood, Umbrella Chinus, or such other shade trees as are available for our locality; but I cannot admit it. Give me those graceful elms, umbrageous beeches and handsome maples that rise aloft to reach forth their leaf-laden arms and leave below a wide and high and shaded chamber, where the air is cool and fresh and through which breezes may unhindered blow. Plant your fruit trees in the orchard and set a fence around them there.

* *

YES, our houses are very pretty; they are painted the whitest of the white and the blinds the greenest of the green; but why are the the door-steps and the piazza in such neglected state? Apparently you don't paint them as often as you do your clapboards, while they need it oftener; neither do you always mend them when a board gives way, but swayed and ragged let them stay, a condemning evidence against your tidiness and thrift. They remind us of ladies gayly dressed with plumes and blossoms on their heads, with robes untarnished and bedecked with tasteful trimmings, but whose shoes may lack a button, have heels oblique, or have not yet been polished since they left the store. AGROSTIS.

RURALISMS

I HAVE just been looking at my Exochorda grandiflora, and am delighted to find it for the first time producing seed. This fact will render the plant of easy culture, reduce the price, and place it within the reach of all. We shall only have to wait a little. My plant is one of the first sent out in this country and consequently has some age, which may be necessary for the production of seed. It stands about nine feet high, and is growing in a light, sandy soil. It is pleasant to know that this beautiful hardy shrub may yet become common. It will be well for those who have large plants to examine them for seed. The seed vessel is five-angled and readily seen.

ANOTHER season's trial has satisfied me of the excellence of the Viroflay Spinach. The Savoy-leaved is also good, but will not endure the heat of approaching Summer as well as the Viroflay. The latter may finally be thinned out to a foot apart. The young flower stalk of the Viroflay is stout and very succulent when four or five inches high, and should not be discarded. Cut at the right time, I prefer the flower stalk to the leaf. Try it.

The Ox-eye Daisy of our fields has fairly driven its French cousin, the Paris Daisy, to the wall. In town and country all the women and many of the men now wear the Ox-eye Daisy; and I do not see why it is not almost as pretty to wear in the corsage or button-hole as the other, especially when it has been grown in a rather poor soil, when the common eye is not apt to see any difference between them. The Ox-eye was in common use last Winter, and may still be seen (July 2) in the window of the florist.

THERE has for some time past been more or less talk about forming a "syndicate" for the purchase of Mr. Durand's Jersey Queen Strawberry. The negotiations have come to an end at last, and Mr. Peter Henderson will offer the plant for sale in August. I do not know how far the plant has been tested in different soils, but of the fruit I can speak as being decidedly the best of all Mr. Durand's seedlings. It is not only a beautiful berry, but in quality as near perfection as anything we shall probably have in the way of strawberries for some time to come. I first became acquainted with it three years ago, but have said little about it since I felt doubtful whether Mr. Durand would find anybody to comply with his terms. The Jersey Queen ripens late, but is none the worse for that. I sincerely hope that this at least of Mr. Durand's seedlings will prove to be adapted to general cultivation.

THE engravings given by the editor, in the RURAL of July 2, show the "hilling" and "flat culture" systems of corn raising very nicely. Let me add a word or two in regard to the ability of the stalks to withstand a hard "blow" under flat culture, and in confirmation of the editor's experience in this respect. In "talking" flat culture for corn I have almost invariably been met with the objection, and nearly always in the same words, "Yes, but your corn will all blow down." The simple fact is that corn will stand up better under flat culture than under the hilling system. I have always found it to be so, and for reasons which the illustrations of the editor make obvious. Corn will go down more or less in very heavy rains accompanied by strong winds; but in flat culture it will mostly come up again, whereas in hilling the mass of earth lying against the stalks prevents this. Economy, too, is decidedly in favor of flat culture, as I have proved over and over again. The large farmers in a section where flat culture was before unknown, are giving it a trial this season, and thus far are quite satisfied. I know what the result will be. [As a matter of economy in time and labor, we hope they will next try drilling in the seed. EDS.]

A FEW years ago I rode frequently on the Northern Railroad of New Jersey. On one occasion a herd of cattle was on the track. The engineer slowed up and "whistled" the poor things along for half a mile or more, when he put on a head of steam and rushed into them pell-mell, tossing them in the air, killing and horribly mangling 11 of them. In doing this he endangered the life of every passenger on board, and lost at least ten minutes of time. A few weeks since I rode on the Southern Railroad of New Jersey, and, just this side of Manchester, some handsome young Alderney cattle were on the track. The engineer slowed up, and as they did not leave the track on the approach of the train, one of his assistants ran ahead and drove the cattle off. He may have lost two minutes of time (instead of ten), but no cattle were killed and no human lives endangered. The engineer's conduct elicited praise from everybody around me. I wish I knew his name. These two examples deserve the consideration of railroad managers throughout the country, or at least of those who are not so stolid as to be indifferent to human life. It seems to me that the conduct of the latter engineer should be made the basis of a rule for all railroads. Cattle, for some reason, seldom leave a track with a locomotive behind them. This has been a matter of common observation with me.

I SUPPOSE we may say good-by to the contemplated international exhibition, and, under the circumstances, I am not sorry it is so. The first one held in New York was a failure, and this, from the manner of its initiation, promised to be a greater one. New York would seem not to be a good place for such things. That it would succeed in Boston I have no manner of doubt. There is a fine spirit of local pride there which we have not.

DO NOT forget the forthcoming meeting of the Pomological Society in Boston. Let us once more gladden the heart of its venerable President by a great crowd. It will please him beyond measure to welcome a full delegation from every section of the entire country.

HORTICOLA.

THE HUCKLEBERRY.

THERE is one thing in the cultivation of small fruits which I cannot understand, and which I have oftened wondered at. We cultivate the strawberry, raspberry, blackberry, currant, etc., and we go to great pains and expense to improve these excellent sorts, but why do we entirely neglect the huckleberry which is hardier than any of them, and only second to the strawberry in most respects, and in some respects its superior? I would not dispute the claim of the strawberry to be "the finest fruit God ever made," and yet the day will come when it will have a powerful rival in the huckleberry, or blueberry, as it is sometimes called. When I remember its many excellencies, I do not know that I ought to place it after the strawberry, for I am inclined to think it is its equal. It holds the same place among small fruits which apples hold among large ones. It is perfectly hardy, passing through the severest Winters unharmed, while the berry is firm, a good keeper, and will endure long transportation. It may lack the aroma of the strawberry, yet it is scarcely less delicious. Served with sugar and cream it is fit for a sovereign; while for pies, or canning for winter use, it is in my opinion, unrivaled, and far superior to the strawberry or any other small fruit now in cultivation.

There are several varieties of the wild huckleberry, but no attempt has ever been made to improve any of them, so far as I am aware. [Yes—attempts have been and are being made.—EDS.] At least two varieties grow on my native mountains in Northern Pennsylvania. I suppose them to be the Vaccinium Pennsylvanicum and V. vacillans of the botanists. [The botanical name of the huckleberry or American whortleberry, is Gaylussacia (Gray); Vaccinium is the cranberry or bineberry. Outside of New England, however, the blueberry is commonly called huckleberry. The distinction is here noted, however, to prevent confusion in the minds of some readers.—EDS.] They grow on high, rocky and sterile soil, the first—which is most abundant—being from six to fifteen inches in hight, and the last, from one to three feet. The low variety is first to ripen, and I have frequently seen the ground blue with them. Often in my earlier boyhood have I gone in company with others and gathered a bushel or more in one day, and sometimes I have camped out on the ground, sleeping at night on the top of the mountain, by a pile of blazing pitch-pine. Such times are ever to be remembered in the life of a boy. I always observed that the most and finest berries were obtained from young and thrifty bushes springing up where others had been destroyed by the forest fires which frequently—almost annually—sweep over the mountains; and I have thought that perhaps here was a hint worth remembering in the cultivation of this fruit. I sincerely hope that our horticulturists and all fruit growers will give more attention to this neglected berry, which is a hardy native of our own land, thriving on the poorest of soils, free from all insect enemies, and which generally escapes the late frosts of Spring. I transplanted some of them to my own garden in late Spring and am giving them a trial. I can readily imagine that an acre of them well cultivated would look as fine as they would taste delicious. A. S.

Mansfield, Pa.

[We are afraid our friend will think less of them after the trial he proposes. But we wish him success.—EDS.]

REMARKS ON ORCHARDS.

WHEN an orchard is not cultivated, the roots lie nearer the surface and feed on the soil, which is not the case when the ground is plowed, as they are torn off and destroyed within the reach of the plow, which is usually about the depth of the soil.

I am aware that this idea is opposed to the general teaching, but, nevertheless, the orchard I have alluded to is a successful demonstration of the practical wisdom of not plowing orchards, or, at least, not plowing them as it is usually done. We intend to make our perpetual orchard a perpetual pig pasture, as we believe pigs are the best adapted of any stock to run in an orchard. They will help to enrich the ground more than any other animals, and at the same time, by eating the fallen apples, they will destroy the worms which prey upon the fruit. In accordance with this purpose we have seeded our orchard with Orchard Grass, which does best in the shade, and shall try the experiment of a continuous sod.

The trees planted to renew the old ones will be allowed to grow with low-spreading tops to facilitate the gathering of the fruit. Low branches will also render the fruit less liable to be blown off, which is an important item, as it will save a considerable percentage of loss. I do not believe in digging up old stumps when young trees are to be planted in their places. I prefer to plant the young tree by the side of the stump, as this affords a protection to it, keeps the ground mellow and moist by its decay, and also furnishes food for it. We hold that there is no more natural support for the tree than a tree or its equivalent—a stump. The proof of this is found in forests, where young trees are found growing rapidly by stumps and decaying logs. It is more attractive to see a young, thrifty tree growing with a future prospect of good fruit than an old one, unsightly and unprofitable. Young trees convey the impression of profit, while old ones suggest loss.

COL. F. D. CURTIS.

Floricultural.

DOUBLE-FLOWERING DEUTZIA—WEIGELA AMABILIS, ETC.

ONE of the prettiest shrubs to be found in blossom at the present time—July 4th—is the Double-flowering Deutzia—Deutzia crenata fl. pl. Like many others of our ornamental shrubs, its beauty depends upon the amount of care and attention it has received. The flowers are double, white tinged with rose, and last for a considerable time. They are produced in racemes from four to six inches long, in great profusion. It is very correctly described as being one of the most desirable flowering shrubs in cultivation. By the way, however, I notice that Ellwanger & Barry advertise a new variety of this deutzia, Pride of Rochester, which they describe as having larger flowers in longer panicles than the older sort. They also claim that it is of more vigorous habit and a more profuse bloomer. If this is all that is claimed for it, it is a decided addition to our list of ornamental flowering shrubs.

[Deutzias grow as readily from seeds as do beets. Seeds of the double-flowering kinds produce a goodly proportion of double-flowering plants. We have many seedlings at the Rural Grounds, several of which are in some respects superior to catalogue kinds.—EDS.]

I notice that the Lovely Weigela (Weigela amabilis) is in many places dead to the ground. As they are now throwing up an abundance of strong and healthy shoots, it is evident that the roots are healthy. As some are dead in sheltered as well as exposed situations, it cannot be that they were injured by the past severe Winter. I should like to know if they have been injured in other localities. Will some of the readers of the RURAL give us the desired information? This is a very desirable variety, as it blooms quite freely in the Autumn. In color the flowers are bright pink.

CHERRIES are ripe, and prove to be a larger crop than was expected; but they are being rapidly destroyed by the rose bugs, and some varieties are rotting very badly, the Black Tartarian especially so. I notice, however, that the rose bug prefers the Black Eagle to any other variety. It is impossible to obtain a plate of cherries from a large-sized tree, so numerous and destructive are these pests—and, by the way, we have no remedy.

THE CHINESE WISTARIA stood the Winter here without sustaining much injury; but all the blossom buds were killed.

THE STRAWBERRY season is about over, and I hope that we shall soon have some reliable notes concerning the new varieties that are candidates for public favor. From what I have seen of the Bidwell I regard it as the most promising of the new sorts. Among the older varieties Charles Downing excels all in the quantity of berries produced, but the largest-sized berries were obtained from Seth Boyden. Green Prolific bore an immense quantity of berries, but they were mostly of small size. Does this variety need extra cultivation to properly develop and perfect its crop of fruit?

THE COMMON WHITE LILY (Lilium candidum), that grand old flower, is now a very attractive object. The large clusters of pure white flowers are also deliciously fragrant, especially in the evenings. Were I confined to the cultivation of one lily, I would select this variety. It is perfectly hardy and thrives in almost any garden soil. It requires deep planting, and should not be disturbed for several years after being planted. Be careful not to give it rank manure, as this invariably destroys the bulbs. Good, strong bulbs can be cheaply obtained, and at least several groups of this noble lily should be found in all gardens. [That is true.—EDS.]

Is there any difference between the Round and the Savoy-leaved Spinach? Planted side by side here, they were pronounced identical by all who saw them growing. [We have never tried the latter.—EDS.] CHAS. E. PARNELL.

Queens Co., L. I.

BOCCONIA JAPONICA

For Ornament and for Bees.

PROFESSOR J. L. BUDD.

I NOTICE in the Eastern States this plant is becoming popular in sub-tropical gardening and for isolated beds upon lawns. We have a bed filled with it on the college lawn, which attracts the attention of visitors during all its stages of growth, but especially when covered with its immense, compound-panicled head of fringed white flowers and creamy white buds. During May and June its very large, tropical-looking foliage makes it an object of interest. Though coming to us from the land of the tea-plant, the oleander and camellia, the roots of the bocconia endure our Winters as perfectly as do those of the Dielytra spectabilis from the same region. For the three past years I have been watching the plant in view of its probable value to bee-keepers. During its extended flowering season our plot is frequented by honey bees to an extent not observed with any other plant except buckwheat. The bocconia is so rampant in growth, and its great leaves so cover the ground, that weeds and grass cannot exist beneath it. For this reason the care of a plot amounts to nothing after it is once established. Plants may be started from small sections of the surface roots, which suggests the possibility of its becoming a troublesome weed. We have found it so easily killed by cutting off the parts above ground in its stages of vigorous growth, that I do not apprehend trouble from growing it in flower gardens or in plots for bee forage.

Agricultural College, Ames, Iowa.

Success with the Rural Seeds.

WE had so many plants from the carnation and picotee seeds sent us that we could hardly find room to plant them out, and we anticipate great pleasure in seeing them bloom next Summer. We have two aquilegias from a previous distribution of the RURAL, that we consider very fine—one is sky-blue and white and the other cream colored with the carnation stripe, and both are very double. We have two Weigela shrubs from the RURAL seed, one of which is about four feet across; the flowers are single, of a deep rose-color, and bloomed in May. We have one Amorpha shrub that is growing very well. The leaves of one of the Rose of Sharon shrubs appear to be variegated. I send for name flowers and leaves of a rather beautiful shrub that grows in our timber. It blooms in June and July and is sweet-scented.

Tangent, Oregon. R. L. S.

[Please send us a few leaves of the variegated Rose of Sharon, giving your address and stating it was from the seed we sent you, that we may know about it. The plant sent is the Mock Orange, or Syringa—Philadelphus. EDS.]

Arboricultural.

THE PRESERVATION OF OUR FORESTS—NO. 3

CLINTON.

The Patriarchs of the Forest.

IT MAY perhaps be supposed that I am somewhat of an enthusiast on the subject of forest trees, and of trees generally. It may be true, and I am willing to plead guilty to the charge, if anything censurable is implied in it, for to me trees have always had an attractive charm. I could not in boyish days stand beneath a noble pine and listen to the songh and the sighing of the breezes through its branches, without a feeling of awe almost akin to veneration. And even now, in mature life, if I stand before a noble oak or a magnificent elm which for centuries has been contending with the warring elements, whose branches give evidence by their scars of the many severe conflicts they have had with the lightning and the tempests, and whose sturdy trunk, gray with the mosses of centuries, still stands firm and erect as if bidding defiance to the blast, I cannot resist a feeling of solemnity approximating to reverence. I once had opportunity to determine the age of one of these monarchs of the forest, which it became necessary to cut down on my own premises to prevent damages which might be occasioned by the fall of portions of its decaying top, and I found its concentric annulars to indicate it to have been a centenarian at the time Columbus discovered our continent. But this was a mere juvenile pigmy when compared with those stupendous giants of the Pacific Slope, whose origin is believed to date back thousands of years; not merely to the time of the advent of the Saviour, but back to the founding of Rome, back even further to the days of Homer and Hesiod, back even to the days of David and Solomon; even back, as it is claimed for some of them, to the foundation of Nineveh, or still further back to the days of Noah. And yet, there they still stand, as they have stood for thousands of years, gigantic columns, as it were, supporting the blue arches of heaven.

Admitting that they possess all the antiquity that is claimed for them (and I see no reason to doubt it), one thing is certain, viz., that they have been more enduring than the proudest and most lasting of the works of man; and on their native soil of the Pacific Slope, these trees are majestic witnesses of the average climatic ranges for thousands of years past, in steady succession. For if, on the spot where they have so long stood, there had been any great changes of temperature, even for a few months at a time, these great living witnesses would have been destroyed. They, therefore, testify, better than all our historians, to the average state of things since the dry land first appeared, after the Mosaic deluge. And their testimony is corroborated by that of the great trees of South America, Australia and Teneriffe. But a truce to sentimental theorizing.

The "Big Woods," N. Y.

I have advocated the adoption of a "conservative" policy with regard to our timber lands by our National Government. But I admit that it is becoming too late for such policy to repair the injury already done. Still, with the adoption of a right policy by the several States, much may yet be done to avert the evil which I apprehend as threatening us, in the absence of national action. But it is to be feared that no sufficient reliance can be placed on the action of the separate States, till they shall be aroused to its necessity by the demands of public sentiment. Take, for instance, our own State of New York, proud of the honor of being termed the "Empire State" of the Union. We find still remaining in her northern central portion, and mainly the property of the State, a vast, unbroken wilderness, comprising nearly 10,000 square miles of territory, or 6,000,000 acres of land, including what is known as "John Brown's Tract," entirely worthless for cultivation if cleared, but still covered with a dense growth of timbers adapted to its cold, damp soil. This growth of timber, extensive as it is, would be barely sufficient to supply the demands of our whole country with timber for a single year at the rate we are using it. The soil, as already stated, would be comparatively worthless for cultivation, were it cleared of its timber. This forest, therefore, should be reserved for the benefit of all the people of the State. And yet, twice within my own knowledge our Legislature has chartered companies to run railroads through this wilderness in different directions—not for any of the necessities of travel or commerce, but for the ostensible purpose of opening this wilderness for sale by securing a market for its timber; and, for the purpose of encouraging the enterprise, the Legislature granted to the corporators the right to purchase from the State 250,000 acres of this forest land lying contiguous to the line of their proposed roads, at the nominal price of *five cents per acre*—a tract of land equal in extent to an entire county, for $12,500! This, of itself, indicates how lightly our State values its forest lands. But these enterprises, thus far, have proved failures. Let us hope that all similar projects hereafter will result in failures.

We cannot *afford* to have that romantic region thus desecrated and denuded of its forests for any such purpose. We need its sheltering influence to protect us from the icy winds of the North; and who can estimate the injurious effects upon Central and Eastern New York were this protective barrier to be swept away, and the chill winds of the North and Northwest let in upon us in full force? This forest should be preserved as the great "Central Park" of our State for the benefit of all who desire to visit it and in it to breathe the pure air of heaven; and to which the student, the artist or the professional man can retire in the heat of Summer for rest and recuperation, and where the denizen of the crowded city can find a rejuvenating season of relief from the cares of business, and a relaxation from the restraints or conventionalities of city life. For, for such purpose, I feel assured it would prove more salutary and effectual in its influences and less expensive and demoralizing in its tendencies than any of our fashionable watering-places, or our crowded sea-side resorts.

The "Renewal" System.

But I pass to consider another means of relief from the evil I apprehend from the dearth of timber, and this I will designate the renewal policy. This is a measure in which every land-owner can aid, in some degree, however limited may be the extent of territory which he controls. If he be the owner of but a single rood of land he surely can find some nook or corner where he can plant at least one tree, either for ornament or for use: and every tree thus planted tends, in its proportion, to promote the general welfare by its sheltering and ameliorating influences, to say nothing of its adding to the general beauty of this scenery. To every such person, therefore, as well as to others, I would say, "Plant trees! Plant them for use; plant them for profit; plant them for ornament; plant them for comfort. What you thus plant may be a blessing to many succeeding generations. But the road-side should not be neglected. Plant trees upon each of its borders—fruit trees if you choose, but *plant the trees.*"

The State of New York and some of the other States of the Union have offered liberal inducements for the encouragement of road-side tree planting. But let us not limit ourselves to this. Let us plant wind-breaks and even groves to take the place of, and compensate for, those which have been so indiscreetly destroyed. A recent writer has said, "Young America always cuts down all his trees as a first step toward civilization; then, after an interregnum, when all the kings of the forest have been laid low, he sets out some saplings in white-washed tree boxes, and watches and tends them with fervor." How often have I seen the truth of this remark verified in a half century's opportunity for observation. Let us learn wisdom from the mistakes of those who preceded us.

Necessity for Tree Planting.

Tree planting is, in fact, becoming a *necessity* for us as it has been in the prairie States of the West from the first. There the necessity of planting trees for shelter and for their influence on the climate, as well as for timber and fuel, is more and more appreciated with each advancing year. The lack of timber was what so recently drove out the settlers from naked western Kansas and prompted them, after being thus forced to abandon their all, to endeavor to take possession, forcibly or otherwise, of a portion of the reserved Indian Territory; a purpose which it would seem they have not as yet entirely abandoned. So, too, in Dakota and elsewhere on our treeless Western plains, we read of several families deserting their houses and gathering in one, and pulling down the others and burning the fragments for fuel, to avert the danger of death from freezing during the past severe Winter. The "American Society for the Advancement of Science," at a recent meeting in Boston, recommended that the States should enact laws for the encouragement of tree-planting, and with this object should appropriate money to their agricultural and horticultural societies to be paid in premiums for the largest area of forest trees planted and for their best management. There is not a single State in which numerous barren localities may not be found, which are now treeless and affording no profit whatever for agricultural purposes; some moist, sunken ground that cannot be drained; some rocky ledge; some gravelly, barren knoll or sandy ridge or some precipitous hill-side, serving no useful purpose whatever, unless it be to hold the rest of the country together. Most of these places could be profitably planted to trees.

Judgment Needed.

But in this planting judgment must be exercised in adapting the kinds of trees to the locality, or the effort will be a failure. Our country was originally supplied with as many as 150 different varieties of trees, sufficient in quantity and quality to meet every reasonable requirement. But let us not mistake by supposing that all, or even a majority of these are adapted to our own locality. If we conclude to plant let us select such kinds as are *known* to be adapted to the climate and soil in which we propose to plant. For instance, we may learn by observation that the beech, the ash and the hard maple grow the most luxuriantly on lime formations; the oak on clay; the chestnut on gravel; the pines and the hemlocks on sand; the elms on alluvial bottoms; the walnuts on rocky ledges; and the spruce, white cedar, tamarack and black ash and alders in cold, damp soils and in swamps. Some of these, it is true, may succeed in other soils; but on the whole it will be found better to give observance to the teachings of nature, as shown in her general rules. We may also notice that nature, in her plantings, inclines to mingle a diversity of kinds of deciduous trees together, as she does of grasses. We may do well to follow her example to some extent in this also, and mingle different kinds of trees adapted to our soil and climate. Let us see that they are properly planted and then sufficiently cared for and protected, so that they may as soon as possible recover from the shock consequent on their change of position, if they are transplanted, and we may feel an assurance of satisfactory results. Some kinds are better grown from their seeds. I had designed to speak more fully of the season and the manner of transplanting, but my proposed limits do not now admit of my doing so. Directions are given, from time to time, in regard to tree planting, most of which are valuable but some of which are erroneous, according to my experience, and likely to lead to error. But my further remarks on tree planting, whether for ornament or use, must be reserved till some more convenient opportunity.

The Vineyard.

NOTES FROM THE RURAL GROUNDS.

Crossing Grapes.

THERE are many people who have vineyards of some extent or a number of different varieties of grapes, who never think of raising seedlings, much less of crossing one kind with another, thus selecting the parents. Yet grape-vines are raised from seeds as easily as peach trees, and the crossing of one kind with another is a very simple operation. In this climate the grape-vine blooms about the middle of June, the date varying, of course, with the earliness or lateness of the season. The perfect flower is shown at A, Fig. 350, enlarged to four times its natural size.

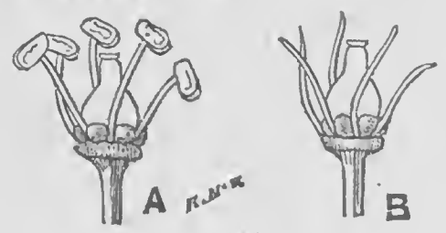


FIG. 350.

Before the anthers ripen, burst and shed their dust, or pollen, they must be cut off, the flower then appearing as in B, Fig. 350. The pistil, as shown, still remains and upon the head of this we are to apply the pollen from the variety with which a cross is desired. A fine camel's-hair brush may be used to collect it, or the ripe anthers may themselves be held in contact with the stigma (the head of the pistil), holding on by the filament, or thread-like stalk which supports the anther. If the pistil is ripe or in a fit condition to accept the pollen, we have nothing further to do except to cut off all the other flowers of the same raceme or bunch, and cover the manipulated flower with fine tissue paper, to prevent any interference on the part of insects or the wind. If, now, it be found that the pollenated flowers set fruit, we may know that our work has been effectual. No evidence of the cross will appear on such berries; but if we plant their seeds the new vine and its fruit will probably differ in part from either parent, while showing characteristics of both. The pollen, or fertilizing powder or grains, may be collected in phials from other vines miles distant, since it has been known to prove potent at least ten days after it has been collected.

We have often taken occasion to urge our readers to interest themselves in this work of producing new fruits. All fruit trees or plants of whatever kind which we purchase from nurserymen and plant in our door-yards, gardens or orchards, at once become the objects of our care and of an interest proportioned to our love of fruit and our desire to beautify our homes. But the cross-bred seedling is, in a measure, one's own creature, and the credit which attaches to the origination of a new and superior fruit is far greater if its parents were selected and united by our own choice and hands. It is better to plant the seeds of grapes as soon as the berry is ripe. Pots of any kind may be used for this purpose and kept in a green-house or sunny window. Some will then sprout in three weeks, though others will require from one to three months. Those sprouting in three weeks or even a month or so, will make fine plants from one to two feet high by the next Spring. They may then be thumped out of the pots into the open ground. But if the seeds are permitted to dry, a much longer time is required for their germination.

Farm Economy.

GREEN MANURING IN NEW ENGLAND.

T. H. HOSKINS, M. D.

NOTWITHSTANDING the unquestionable fact that we have in New England very large areas of land that would be much benefited by the plowing under of green crops, and notwithstanding the equally unquestionable fact that this is a quick and effectual method of restoring to land the "condition" lost by injudicious cropping, the practice of green manuring, so general in New York, Penn., and other of the Middle States, is almost unknown among us. What there is of it is found among the so-called "fancy farmers," and a few others who are above the average in thoughtfulness and firmness of purpose. Noah B. Safford, one of the early members of our Vermont Board of Agriculture, and a very successful farmer, (though a lawyer by profession), was one of the first within my knowledge to systematically and successfully adopt green manuring as a means of bringing up an exhausted farm. His large and now beautiful estate was a sandy farm upon the high bluff, at the junction of the White River with the Connecticut. He has, I believe, no valley land on either river, and his attention was first called to his present homestead by a fine grove of young pines, which were supposed to give about all its value to the property. He bought the farm to get the pine grove, which, though a nice one, is now of minor importance alongside of the fair and fertile fields that spread around it.

The improvement of this farm to its present pleasing and profitable condition is due mainly to green manuring. While the process was going on, and before the results now so apparent were fully realized, Mr. Safford was frequently called upon, at agricultural meetings, to give an account of his operations. Some ten years ago I heard him discuss the matter and was particularly struck with his declaration, that he had never done anything which required so much real courage as the plowing under of 20 acres of clover in blossom. He said he believed that had been, and would be, the rock upon which every farmer who attempted to improve his property by green manuring would split, unless he was a man of decided firmness of purpose. The temptation to "hay" the clover, instead of plowing it in, would almost invariably overcome him. I believe Mr. Safford was right in this, and that it gives the true reason why green manuring makes such slow progress among our farmers.

If any ask why it should be more so here than in New York or Pennsylvania, I think the answer must be that New England is not a wheat region. As a preparation for the wheat crop, clovering is so manifestly a success that the prospect of a fine yield of grain, to a grain farmer, is sufficient to overcome a temptation which very few dairy farmers can resist. Mr. Safford is strictly a dairyman, supplying from his excellent herd the village of White River Junction with milk, and also making considerable butter. The steady improvement of his grass-land, notwithstanding its apparently light texture, has necessitated a continual extension of barn space, until he now has I think, nearly, if not quite, the largest accommodations for storing hay to be found in the upper Connecticut Valley—and this on a farm where a 40 foot barn was once considered quite sufficient. While this improvement has been going on the farm has constantly paid its way, no large sums having been sunk to secure the ultimate improvement as now seen. The steady annual practice of green manuring, in connection with dairying and the careful utilization of the stable manure, have done it all.

I was myself greatly helped and instructed by hearing Mr. Safford discourse, years ago, upon green manuring, and it was that, with the free use of ashes and bone, which helped me in bringing my own little farm up from a seemingly barren pasture to its present comparatively high condition. I was unable to produce (or, had it been procurable to pay for) stable manure sufficient for the purpose. Ashes, which I could buy for 10 cents a bushel, and bones which I got from old slaughter-houses free, furnished me with mineral matter and clover turned down, stored the soil with organic substance, so that in four years' time the yield of potatoes went up from 80 to 460 bushels, and of hay from a quarter of a ton to over two tons per acre. I have all around me men who are called good farmers. I have

succeeded in satisfying them of the value of ashes and bones, but not one of them has yet been able to do so "wicked" a thing as to plow down a good field of either clover or rye. I can coax them, on their poorest land, to plow under a crop of buckwheat, but that is as far as I can toll them along. The difficulty is simply, as Mr. Safford has said, a lack of courage to forego the immediate use of so much good feeding material.

Orleans Co., Vt.

LEVELING PLOWED FIELDS.

In the article headed "Raising Good Crops of Corn Without Hoeing," published in a late number of the RURAL, there is an allusion to the plan of plowing with the furrows turned toward the center of the field. Now I think this is a matter of considerable importance. I have practiced the method quite a good deal on pieces of stubble ground that had been plowed around in the old way till they were all out of shape. I had never before heard of any one plowing in the way "S. E. T." names, but I took it up myself some time ago, as I saw there was need of some similar plan to level up the ground. How many farmers there are who will tell you that the easiest way to plow a field is to "just strike a furrow around by the fence and plow right around the whole piece." Now if your field were level and the first few furrows were plowed shallow, it would do very well for once or twice, perhaps. But after a field has been plowed around for a number of successive years it gets in wretched shape—heaped against the fences or at the edge of the piece plowed, with a broad dead-furrow extending from each corner to the center of the piece, and an ever-deepening one, like a canal, in the center. This dead-furrow is, of course, making the soil in that part leaner every time it is plowed; but the greatest damage to the crop then put in is done in the corners, where the team tramp down the plowed ground hard at the end of each furrow. It is very plain that the turnings of the team at the ends of the furrows does pack the ground a great deal—so much so that, in hauling out manure for spreading, any one will almost unconsciously drive as far as he can on these four packed roads to the center of the field. That ought to be proof enough of the hardness of the ground.

When a field gets in this state it cannot be remedied by plowing in "lands," or by plowing with the swivel plow, turning it all one way. The only true way to level it up is by simply *reversing the process* by which it was plowed out of shape. This is best done in the way named at first, and is easily done unless the field is partly on a hill-side, or is very uneven or full of knolls. Quite often the surface of it will show for itself just where the dead-furrow in the center of the field begins and ends. Then simply back-furrow, filling this up, and when a few furrows have been turned, plow across the ends of them, going around the back-furrow and turning towards the middle. It will come out alike on all sides of the field, and, instead of four hollows extending from the center, the land plowed in this way will be slightly ridged in the same places, like a flat back-furrow. Then there will be the satisfaction of knowing that every part of it is alike mellow, as the team have not stepped once on any part of the plowed ground.

If necessary it would be an easy matter to locate the center of the field each way by measuring or even carefully pacing it. I find it still better to place some marks on the fences opposite these points, as it saves time. I once read of a farmer, somewhat noted at the time, who would have his fields level and made them so by carting the soil from the edges to fill up the dead-furrow at the center. It probably had never occurred to him that there was an easier way to level it when out of shape, or he would have adopted a plan similar to this one. T.

South Cairo, Greene Co., N. Y.

Field Crops.

TOBACCO NOTES.

THE experiments of tobacco growers in Chemung Co., N. Y. this season, in setting tobacco plants, have lead to the general conclusion that plants will start more quickly and grow better when set before rather than after a heavy rain storm.

SMALL plants with large roots will succeed better than large plants with small roots. Of this there is no doubt. But the best plants are those having a good-sized top and a correspondingly large and fibrous root. Long tap-rooted plants are not desirable. They are difficult to set properly and are slow to become rooted. The acreage devoted to tobacco raising is rapidly increasing in this State. In Tioga Co. (Pa.) it has nearly doubled in the past two years. Farmers are now growing from eight to ten acres where last season not more than five were planted. What the increase will lead to remains to be seen, but the probability is that the lower grades of leaf will soon become a drug in the market.

THERE is much diversity of opinion among tobacco growers in regard to the best time for setting the plants. Some prefer to set early, or before June 10; others argue that late settings produce larger crops at less cost for cultivation and fighting insect enemies. The setting of plants in this valley has now continued for a full month and much yet remains to be planted. The yield of the crop of '81, if the season should prove favorable, must exceed last year's estimate by at least 20 per cent.

THE heavy rains during the past month have so compacted the soil in tobacco fields that early-set plants seem slow to start, and it is a difficult matter to get the soil in good condition with hoe and cultivator. The only way is to cultivate *very often* and *very thoroughly*, letting the cultivator's teeth run deep into the soil. Thorough and careful work in hoeing is also important. The soil between the plants should be made mellow, and when a crust has formed on the surface it should be broken or removed, to allow the air to penetrate and the gases in the soil to escape. It is an unwise practice in hoeing tobacco, to merely scrape the weeds out, leaving the surface about and between the plants as hard as a brick. It needs to be thoroughly pulverized.

THERE are always a good many farmers inquiring for tobacco plants after it is too late for successful planting. These are farmers who do not understand the tobacco-growing trade. They have not yet learned even the rudiments of tobacco raising. My advice to such men is to plant such ground as they intend for tobacco to some other crop which they can grow successfully, postponing tobacco culture until they have learned how a crop should be grown. It is true, experience is the only true teacher in this line of farming, but a few things need to be learned before it is attempted. The manner of making beds and sowing seed, the best way to prepare the ground and the best time to plant are all subjects which may be learned from others, and unless they are understood in a measure, failure is certain.

TALKING with an extensive tobacco manufacturer (who is also a grower of the weed) a short time since, I asked his opinion as to the probable outcome of the tobacco-growing business, mentioning the great increase of production. His answer was, "Good tobacco will *always* sell for a price that will well repay the producer. There is no danger of overproduction of the higher grades of leaf so long as the rising generation continues the use of tobacco." Low grades cannot now be produced at a profit to the grower. It is only by careful management and great energy employed in the growing and manipulation, that tobacco growing can be made remunerative. Therefore my advice to those who contemplate undertaking tobacco raising, is to first study up the matter until the rudiments of the business have become understood, and then, beginning first on a very small scale, aim to grow only good leaf. G. G., JR.

Chemung Co., N. Y.

THE FERTILIZATION OF WHEAT.—Referring to what has lately been said, in the RURAL, on this topic, S. B. P., of Ottoville, Ohio, writes us that last year he selected seven heads of smooth wheat and sowed the kernels alongside a bearded variety. This year one-third of the product are bearded. While some varieties in his opinion will "mix," others will not, as those that do not open their spikelets cannot receive the pollen from other sorts.

The Herdsman.

HEREFORDS IN THE WEST.

T. L. MILLER.

THE movement which has resulted in the high position attained to-day by Hereford cattle in the West began in 1873. At that time very few knew of the breed, and their claims to superiority were ridiculed. The breeders of Short-horns were convinced that for the production of beef the position of their cattle at the West could not be disturbed. The public sales of Short-horns during the above-named year averaged from $250 to $700, individual animals reaching from $1,000 to $8,000, and a couple of years before—in 1870—the McMillan sale averaged $900 per head. Accordingly when the Herefords made their first appearance here before the public the Short-horn interest seemed more firmly established than ever before. The fancied impregnability of their position had led the Short-horn men to indulge in a warm controversy among themselves as to the relative superiority of different families, and on this question the contest between them raged as hotly as it does now between Short-horn and Hereford breeders, and in the midst of the conflict the appearance of the Herefords and their modest claims to superiority over all the Short-horn tribes for economical production and excellence of beef, were scarcely noticed except to be ridiculed. The Short-horn supporters pointed to the fact that their breed had been generally accepted both in Europe and America as the best of all, and insisted that this public recognition of their superiority was ample proof of its existence. "If," said they, "the Herefords have the high excellence their present advocates claim for them, it would have been discovered before this and they would have found their proper place."

Such was the state of things from 1872 to 1875 and so powerful were the fame of the Short-horns and the influence of breeders and dealers in them, that if the success of the movement for the introduction of Herefords had depended on their introduction among the farmers and stockmen in the States, the result would have been doubtful. About that time, however, the cattle interests on the plains was assuming large proportions and offered a fair field for the new enterprise with good prospects of ultimate success. Already Herefords had obtained a foothold with Mr. Church, near Denver, Colorado; with Mr. J. W. Powers at West Las Animas, and with Mr. Culver at Longmont, whose herds were taken from that of Mr. Stone of Canada. The animals had proved themselves well adapted to the condition of the country, and other stock owners were willing, nay, anxious to try them on a small scale; but the distance was too great between those who wished to buy and those who were willing to sell, and it was therefore difficult to get the demand and supply together. This trouble, however, was soon overcome by taking the bulls to the West for a market. There they soon became favorites, and at even prices would be used in preference to all others. They were also shown before the leading agricultural societies and made a good exhibit at the Centennial in 1876 at Philadelphia. At the Western shows the "machines" were largely in the hands of the Short-horn men and used for the furtherance of that interest; but in spite of this drawback Herefords have made steady progress.

The first large sale of Herefords at the West was made to the Messrs. Swan & Bros. at Cheyenne, Wyoming Territory, and this was the result of the purchase of the Culver herd of cattle in which there were Herefords, Short-horns and Polled Scots; the Messrs. Swan, however, after due investigation determined in favor of the Herefords. They made their first purchase of some 40 bulls for $10,000 in 1878, and from that time the success of the Herefords has been assured. They are now in the hands of a great many men through the States, men that keep from 10 to 20 cows as well as those that keep from 50 to 200. Among these are some of the wealthiest cattle and business men of the country. Among them may be mentioned Mr. C. M. Culbertson, of Chicago, one of the leading and earliest packers of the West, formerly of Jones & Culbertson, afterwards of Culbertson & Blair. Having a farm of some 2 500 acres on which he was grazing and feeding steers, Mr. Culbertson purchased from me in the Fall of 1877 six Herefords at the Illinois State Fair, and afterwards he added several head more, and was so well pleased with them that he has purchased of several other parties and has made two importations from England. He has now a large herd of pure-breds and is breeding some 200 high-grade Hereford and Short-horn cows to Hereford bulls. Messrs. Earl and Robb, of Lafayette, Indiana, who have been for years large graziers and feeders of bullocks, are now owners of a large herd of thoroughbred Herefords, and are breeding a large herd of high-grade Hereford and Short-horn cows to Hereford bulls. Mr. Thomas Pouting, who has been a prominent cattle man of the West for 30 or more years, and for several years a breeder of thoroughbred Short-horns, is now breeding his thorough-bred Short-horn cows to Hereford bulls and has also a large herd of pure-bred Hereford cows.

These are but samples of what is being done with Herefords throughout the West. Those who have been breeders of Short-horns for years and then take the Herefords, indorse all that is claimed for them, and become firm Hereford advocates.

Herefords are good grazers and feeders; they are hardy, mature early and are of excellent quality. They have made their claims boldly and with confidence. They have been obliged to go before our agricultural Societies and show against Short-horn cattle with Short-horn judges. While often leaving the ground in such contests without awards, they have achieved a substantial success with the public. This has been especially true at Lafayette, Indiana. The Tippecanoe County Fair is held at that town and is one of the most prominent county fairs at the West. It is in its character a district fair.

At the first show there, there was no class for Herefords; but the sweepstakes exhibit was of Herefords and Short-horns. I left the ground without an award. The Herefords again made a show there, and as between them and the Short-horns they made no winnings, still the Herefords at La Fayette have more friends than at any other point in the West, and from the exhibits at this Tippecanoe County Fair. Messrs Earl & Robb and others in the immediate vicinity are strong friends of the Herefords. The show of Herefords before the Illinois State Board of Agriculture, at Chicago, as fat stock, for the past three years, has given them a prominence that promises a greater success than any other influence. While this show has called forth more hard feeling and more opposition, still the result must be largely to the advantage of the Hereford interest. The Hereford movement is a recognized success at the West, and there the Herefords are sure of topping the market as beef steers.

Early in this movement I made the claim of 25 per cent. advantage in the grazing and feeding quality of the Hereford over the Short-horn, and of 10 per cent. in the selling value. I offered to breed 200 cows in Illinois, the one half to Hereford and the other half to Short-horn bulls, and that their produce should be brought to the Chicago market to test the comparative value of the two breeds. I also made a proposition to breed 2 000 cows, one half to Hereford and the other half to Short-horn bulls, in Colorado, and that their progeny should be brought to the Chicago market and there submitted to a test that should determine their relative value for the plains. I recognized the fact that rival claims would be made, and that some fair and equitable test should be adopted that would determine values. Such a test, if begun ten years ago, would have now settled this controversy, and proved or disproved the claims the Hereford men are making, as well as the right of the Short-horns to the position they have occupied.

The demand for bulls of Hereford blood has prevented steers coming to the markets in large numbers. The number is continually increasing, however, and a few years will find them on the markets in quantities to command special quotations for Hereford bullocks. They have already established a reputation for being the best grazers of all the beef breeds, and the past Winter, which has been a very severe one on the plains, has established the fact that they are the hardiest, and not excelled in the faculty of taking care of themselves, or—as the plains-men express it—they are the best "wrestlers."

The Hereford breeders in England, from their first efforts looking to the improvement of this breed, have bred with a view to produce the best bullock for the butcher, and this is the strong point of the breed; and the butcher's block is the best test of the merit and fitness of any beef breed. Their efforts have not been simply to produce the largest and most stylish steer, but to produce the best at the least cost.

The standard Hereford steer is short in the leg, compact and heavily fleshed. Such a steer is always reckoned among butchers as the most profitable to kill and cut. He is recognized among cattle men as the profitable steer to purchase for grazing and feeding; and whether he is a Hereford, Short horn, Devon or Scot he is accepted and commands the highest market price. Such a steer is the rule among the Herefords; he is the exception among the Short-horns—hence the value of the Herefords as a beef breed.

In coming before the public at the Fat Stock Show held at Chicago, the Herefords came at a disadvantage, from the fact that the Short-horn breeders had thousands from which to select their show bullocks, while the Hereford breeders had but few. They gathered their choicest animals from every section, and were enabled to bring but four thoroughbred Hereford steers. Two or these were exhibited by me, and were purchased from the Hon. John Merryman, of Maryland; the other two were exhibited by Mr. William Powell, and were purchased of Mr. Blake, of Maine. Four grade Herefords were exhibited by myself. Three of them were purchased for the show and one was bred by me. These were all that could be got together for the show in 1878. Besides these there were exhibited three Hereford cows. The cow Jennie was exhibited by myself, and took the sweepstakes premium as the best cow in the show. The Hereford exhibit at the show of 1879 was somewhat better, and that at the show of 1880 was clearly in favor of the Herefords.

But these exhibitions have not touched the main question as between the Herefords and Short-horns, and that is the question as to economy of production. This is the real question at issue between the Herefords and all other beef breeds, and on this question, fairly tried, the Herefords will stand first of all breeds. Not only is this true of the thoroughbred Hereford bull, but it is also true of his produce from whatever breed he is put upon.

The produce of the Hereford is always a Hereford, and of Hereford quality; and this question should not be accepted because Hereford breeders claim it; *neither* should it be passed with the feeling that these are partisan views; for there is enough in the present and past history of this breed to warrant one in investigating these claims. If there is 25 per cent. more economy in feeding Herefords than there is in feeding any other breed, then there is a way for every New York farmer and every New England farmer to make his farming operations pay him a profit, to give him a pleasant employment and an outlook that will make it desirable for his son to hold the farm. And beyond this, if there is a market value of 10 per cent. for Hereford over Short-horn beef, there is a home market within 25 miles for every bullock that can be raised in New York and New England.

One other point—these bullocks can be turned off when 16 months old, weighing from 1,000 to 1,400 pounds, live weight, and of a quality that will command top prices; and at 30 months they will weigh from 1,500 to 1 800 pounds. The value per head any dealer can compute.

Will Co., Ill.

OUR ANIMAL PORTRAITS.

Guernsey Cow, Lady Jane No. 2.

Of late Guernsey cattle are winning a high reputation wherever they are known in this country, chiefly in New Egland, New York and Pennsylvania. In comparison with their neighbors from Jersey, the Guernseys are much larger and hardier; make better beef carcasses when turned off for the butcher; are able to endure rougher weather and shift for themselves better, while the bullocks make strong and excellent draft animals, a purpose for which their more delicate rivals are entirely unsuitable. The calves, too, are large at birth and make heavy veals when about a month and a half old. The milking capacity of the Guernsey cow is fully as great as that of the average Jersey, and the milk is usually as rich in butter, which in color is of even a deeper golden yellow. Guernsey grades are remarkably like their pure-bred ancestors both in color, "handling" and their milking as well as feeding capacity. In England Guernseys are quite numerous and have long been great favorites, and large exhibits of them are made at the principal fairs every year. One of the chief shows of this sort is that of the Bath and West of England Agricultural Society, which was held the other day at Tunbridge Wells, a fashionable watering-place on the borders of Kent and Sussex. The accompanying excellent likeness of "Lady Jane No. 2," re-engraved from the Agricultural Gazette (Eng.), is that of the first prize winner in her class at this fair. As will be readily seen, it represents an admirably formed animal—the *beau ideal* of a dairy cow.

Jersey Queen of Vermont.

The RURAL published a portrait of this remarkable cow some time since. Recently her owner, Josiah Kenerson of Barnet, has sent me some reports of her butter yield that are noteworthy. From May 20th to June 1st, (12 days) she gave 485 pounds of milk that made 20 pounds and 7½ ounces of butter. June 1st to July 1st (30 days) 1,396 pounds of milk that made 80 pounds and 6½ ounces of butter; or, for the whole time, (42 days) 1,881 pounds of milk, yielding 100 pounds and 14 ounces of butter. The feed was not reported, and I cannot state whether there was any preparation or "fixing up" for this trial or not. She was at pasture, and I presume she had some grain feed in addition, But a cow that even by "fixing up" will average nearly 2½ pounds of butter during a test of 42 days is "no slouch."

Orleans Co., Vt, T. H H.

Remedies for "Warbles" and Warts on Cattle.

W. F. K. writes from Clinton, La., that an effectual remedy for "warbles" or "wolves" on cattle is to drop from eight to ten drops of turpentine into the hole of each, which will kill the pests in from 24 to 48 hours without causing any pain to the animal. To cure warts on cattle he recommends equal parts of common cooking soda and lard, well mixed and thoroughly rubbed in. By this means a complete cure is painlessly effected in from three to four weeks.

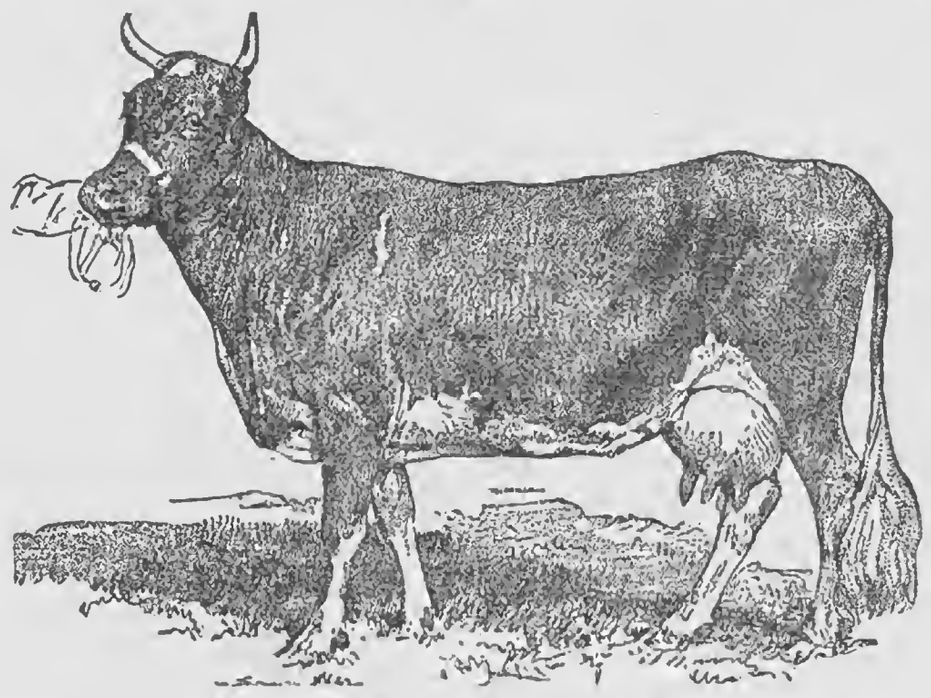
Entomological.

ABOUT THE ŒSTRUS BOVIS.

SERENO EDWARDS TODD.

In looking over back numbers of the RURAL I came upon an article on the above pest in the issue of last January 22, p. 53. The writer thereof has reiterated several grave errors concerning the Œstrus bovis, or gad-fly. Much that is recorded in cyclopedias in regard to the gad-fly is wholly erroneous. As the RURAL NEW-YORKER is desirous of publishing facts, truth and correct representations rather than error, I trust that no one will feel aggrieved at a friendly criticism. I have been practically familiar with the transformations and operations of the gad-fly for more than 50 years. When I was accustomed to yoke calves and young steers and hitch them to my hand-sleigh, my father explained to me all about the gad-fly, and during the 40 years past I have been familiar with the movements of the parent insect, the larvæ and the chrysallides, and also with the efforts and means employed to exterminate the troublesome pest.

The gad-fly is propagated in the following manner:—During the Summer months a large



GUERNSEY COW, LADY JANE, NO. 2.—FIG. 351.

fly, that annoys neat cattle exceedingly, darts down on the backs of the helpless animals when they are resting quietly in the shade, and also while they are eagerly grazing in the open field, and while clinging securely to the hair. the enemy thrusts her keen-edged lancet through the tough integument on the back of an ox or cow, until the ovipositor can place an egg in the soft adipose tissue directly beneath the tough skin. The puncture made by the sharp instrument of the fly closes as soon as the ovipositor is withdrawn, and the little wound heals in a day or two, so that the egg of the gad-fly is placed securely beyond the reach of any injury incident to rubbing or severe pressure on the surface of the body. A common opinion is that the eggs stick to the hairs of the animals, and that after hatching the insects eat their way into the skin. That will not do for one ambitions to be considered an entomologist. The warmth and moisture of the tissue beneath the skin cause the egg to hatch in process of time. An egg never would hatch on the back of a bullock or cow while clinging to the hair, and if it were to hatch, the little tender larva would be crushed forty times before it could bore a passage through the tough hide.

No one has ever been able to determine how long a period elapses before the egg hatches, neither has any entomologist learned how long the insect lives in the larval state, or how many days, weeks or months are passed in the pupa or chrysalid state. Yet we *do* know that the eggs which have been oviposited beneath the skin of the ox or cow yield each a larva, or grub, which subsists on the adipose tissue, or fat of the animal, all through the larval stage of transformation. Then, as soon as the larvæ have attained their full growth, they pass into the chrysalid state, where they remain secure from all harm during the Winter. There is no orifice in the skin through which air may enter to sustain the life of the tender grub. The larvæ of the gad-fly do not require fresh air any more than trichinæ in the flesh of swine.

After the Winter has passed and when the warm weather has come on, the chrysalid commences the natural transformation to the parent-insect state. After the chrysalid has become a *fly*, which is the parent insect, the fly gnaws and nibbles a passage up through the skin of the ox or cow, where it remains until it is fully developed. In many instances, when the eggs have been oviposited early in the Summer, the larvæ will become so large that *they* will wriggle and work and gnaw clear up through the tough hide, even before they have been transformed into chrysalides, and sometimes such premature larvæ actually wriggle out of the backs of the animals and tumble to the ground. But all such grubs, or larvæ, perish or are devoured by the birds The larvæ of the gad-fly never pass the transformation in the ground or on the surface of the ground. The writer of the article on page 53 is fearfully enveloped in numerous errors touching the manner of transformation of the gad-fly. The backs of cattle constitute the natural *habitat* of this insect. The parent insect spends its existence wholly in the open air.

The transformations of the gad-fly occur as follows:—The eggs are oviposited by the parent insect in the backs of neat cattle. Larvæ are produced from the eggs; and the larvæ *usually* pass to the chrysalid state while in the adipose tissue of the ox or cow. The chrysalides are transformed, while in the backs of the cattle, into *flies*, which, when fully developed, emerge from their cells in the backs of neat cattle, mount their wings and soar away. Then, while in this stage of insect transformation, the males and females pair, after which the females oviposit their eggs in the backs of cattle, and then die. The foregoing are scientific *facts* which cannot be controverted.

The remedy advocated by the writer of the article above referred to, *appears* all right on paper—pressing the grubs out of their holes on the animal's back in Winter with the thumb or two thumbs, and either killing them or leaving them on the ground to freeze—but after he has handled as many neat cattle as I have he will understand that it is not true that in the Winter the grubs may easily be pressed out in this way. (I know cyclopedias say so. A distinguished writer on the horse states, in a famous cyclopedia, that the mare always drops her foal while she is *standing*.)

The cheapest and most effectual remedy is to provide a rough rubbing or scratching pole for cattle. Then, as soon as an insect, whether it is the larval, chrysalid or fly transformation, begins to emerge from the back of an animal it will be crushed. If cattle are properly carded, every insect, as soon as it thrusts its head above the surface of the skin, will be lacerated by the teeth of the card. As soon as the grub or the parent insect has bored a passage up through the skin, the irritation will prompt the animal to scratch the irritated part of the body. Then, if a good rubbing pole has been provided, not a single insect will ever escape to oviposit eggs in the backs of other animals. I would recommend the above writer to examine the "bumps," as he calls them, before the insects have worked a passage through the skin, and then report to the RURAL whether he found it an easy thing to squeeze the grubs out with his thumbs. I have often taken a glover's needle (a needle having a triangular point) and thrust the point through the skin down into the grubs, or larvæ. The needle will kill every one it enters. But a good rubbing pole is preferable to any other means. To make such a rubbing pole, place one end of a long and heavy pole on the top of a post about five feet high, set firmly in the ground, and pin it fast. Let the other end rest on another post, two feet high, and pin it securely to the post. Neat cattle of high or low stature can pass beneath this heavy pole, adjusting themselves to the inclination of the pole. Animals that have unrestrained access to such a pole will never be troubled with the warbles, or with the anti-phrenological *bumps* to which our friend alludes on page 53.

Scientific and Useful.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 65, JUNE 23, 1881.

Fertilizer Analyses.

633. G. W. Miller's Raw Bone Superphosphate, made and sold by G. W. Miller, Middlefield. Sample drawn by E. P. Augur.

634. Dissolved Bone Black, made by Bowker Fertilizer Co., Boston and New York. Sold by Henry D. Torrey, Putnam.

635. Dissolved Bone Black, made by the Mapes F. & P. G. Co., 158 Front St., N. Y. Sampled from a set of experimental fertilizers.

634 and 635 were sampled and sent by W. I. Bartholomew, Putnam.

630. Dried Blood, made by Sperry & Barnes, New Haven.

631. Dried Blood, made by Strong, Barnes, Hart & Co., New Haven.

633. G. W. Miller's Pure Ground Bone, made by G. W. Miller, Middlefield. The above were sampled and sent by E P. Augur, Middlefield.

630 apparently contains considerable tankage.

631 contains some hair.

Chemical Analyses and Valuations.

	633	634	635
Nitrogen	3.41		
Soluble phos. acid	2.60	9.92	14.18
Reverted "	6.59	8.35	36
Insoluble "	3.61	1.29	51
Potash	5.09		
Chlorine	trace.		
Estimated value per ton	$43.97	$41.38	$36.71
Cost per ton	44 25	40.00	?

	630	631	632
Nitrogen	6.92	8.06	3.93
Soluble phos. acid			
Reverted "			
Insoluble "	7.32	3.80	23.21
Potash			
Chlorine			
Estimated value per ton	$36.70	$36.80	$37.03
Cost per ton	30.00	35.00	36.00

Mechanical Analysis of 632.

	Per cent.
Fine smaller than 1-50 in	42
Fine, medium. " " 1-25 in	33
Medium, " " 1-12 in	23
Coarse, medium " " 1-16 in	3
	100

Mussel Bed Deposit.

617. From Maine; brought to Station by Wm. Romer, Jr., of Warren, R. I. A useful fertilizer but not one that will warrant much cost of transportation.

Water	29.10
Sand and Insoluble	52.73
*Organic matter	3.20
Alumina and Oxide of Iron	4.55
Lime	4.15
Magnesia	88
Potash	30
Soda	57
Sulphuric acid	57
Phosphoric acid	18
Carbonic acid, chlorine and loss	4.09
	100.00

* Containing nitrogen 0.144.

CORRECTION.—The market price of Mapes Superphosphate (Export Brand), No 615. published in Bulletin No. 63 was incorrectly reported to the Station. It should be $37 instead of $34. S. W. JOHNSON, Director.

Miscellaneous.

ILL WEEDS.

W. G. WARING, SR.

Ill weeds grow apace. All farmers and gardeners learn, among their very first and plainest experiences, what prime necessity there is for care that neither the seed to be sown nor the manure to be used with it shall contain any germs of tares. For to prevent them is by far easier and safer than to pluck them out, after they have already absorbed the ready strength of the soil and weakened the plants we value, by their shade and their voracity.

In the moral garden of human community the same care is requisite. The more it is manured and stimulated with the salts of civilization the more weeds are apt to flourish and destroy all near to them. It is said of the county of Potter, Pa. that railroads have not penetrated it yet, nor are there any very large towns, and no licenses to sell liquor have been granted since 1852. In more than half the townships no poor-tax at all is levied or requisite. The jail has seldom an occupant. Of the three jury courts held last year all adjourned before the close of the first week.

Where these lines are written there is a very different condition of society—nothing like sleepiness or stagnation, but a whirl of stir and fever. Good schools for the young; but all the attractiveness of pleasant teachers, well kept, handsomely fitted rooms, pictures, maps, object lessons and illustrative apparatus—all do not equal the attractions of the stirring streets. Our school directors, justly proud of their schools, ruled that none of the children should ever be broken in spirit by the use of King Solomon's instrument of correction, but on proving refractory should be sent out of school—"suspended." This takes out of the schools the youth who above all others need the school's saving influences. The suspended children are apt to have imprudent or negligent, if not depraved, parents. They are suffered to roam the streets. After school they tell and describe to the school-goers all that they have learned or seen of wild and vicious conduct, and soon there are two opposing schools, one of which has the advantage (to itself) of being on a down-grade. No parent sees or hears or knows what infection of vicious thoughts and tendencies, and what desire for false pleasures and exciting sights their children derive from the contamination of the flock by suspended members.

These *moral* influences are like the seeds we sow in our gardens in the opening days of Spring. If not sown then, and duly cared for, and protected from weeds beside, they fail. There are other virtues—those of economy and thrift—which do not vegetate so early, but may

and should be sown at a later period. An admirable move is being made in England in this direction. The great number of wrecked lives there makes the poor-rates a terrible burden on the industry of the country and the expenses of courts, jails, etc. In addition are enormous. The wiser and better disposed of the poor have been led into more careful habits by various societies for their encouragement and notably in the cities by the late simple arrangement for post office savings banks.

BOOKS, CATALOGUES, ETC.

FERTILITY.—A treatise of 70 pages by J. B. Lawes, Rothamsted, England, published by David Bogue, 3 St. Martin's place, Trafalgar Square, London, W. C. The substance of this work appeared in late numbers of the Agricultural Gazette of England, from which, as our readers are aware, we have quoted freely.

THIRD APPENDIX to the Fruits and Fruit Trees of America. Second revision and correction, with extensive additions, including the appendices of 1872 and 1876, and containing many new varieties. Seventy-five pages. By Charles Downing. New York, John Wiley & Sons, 15 Astor Place.

INDIANA AGRICULTURAL REPORTS FOR 1880. A handsome volume of 502 pages. Alex. Heron, Sec., Indianapolis, Ind.

GOOD FARMING.—It is one sign of a good farmer if he prizes manure. It does not require a good farmer to raise bountiful crops on a farm already rich, but the art lies in so managing the farm that it will produce good crops every year without losing in fertility. A man may make money from his farm while he is wasteful of fertilizers, but he is not a good farmer, for he is constantly running his land into debt. Good farming consists of such management as will make the farm produce the best possible results without deteriorating the soil. This can only be accomplished by a rigid economy in the making and use of manure, and a systematic rotation of crops that will be the least exhaustive to the soil. G.

RURAL BRIEFLETS.

THE RURAL NEW-YORKER, strong as its words of praise have been in regard to a number of the plants and seeds it has sent to subscribers, cannot be accused of exaggeration, or of even indulging too freely in the "flourishes" which in advertising projects are quietly over-looked by truth-telling, right-minded people. The Cuthbert Raspberry may now be judged, since it has been tried in almost every part of our country. The claim made in our Fair No. of 1879, which announced the Distribution of '79 and '80, was that "it is at once the highest flavored, largest, most prolific and hardy variety of red raspberry known." The various opinions which have been expressed by leading fruit-growers everywhere have been placed before our readers from time to time, and it may be questioned whether any new fruit has recived a greater unanimity of praise or so little censure. Now speaks our leading pomologist, Charles Downing, in his Third Appendix (just published,) to the Fruits and Fruit Trees of America:

"A chance seedling in the garden of the late Thomas Cuthbert, Riverdale, N. Y. It is said to be hardy, *and is generally so*, but I have seen it more or less killed in severe and changeable Winters, or when the canes were not well ripened; it has so far proved a *valuable market* variety, also *one of the best for family use;* it is very productive; canes strong, vigorous, upright, sometimes branching; spines, short, stout, purplish, rather numerous; it suckers freely, too much so for the benefit of the plant and fruit.

Fruit medium to large, scarlet crimson, roundish, obtuse-conical; grains rather small, compact; separates freely from the stalk; flesh quite firm, juicy, sweet, sprightly, having a slight flavor of the common red, which, is probably one of its parents."

The Italics are ours. Mr. Downing pronounces it the same as Queen of the Market, an opinion in which all good pomologists agree except Judge Parry who first advertised the Cuthbert under that name.....

SPEAKING of the quality of the Niagara grape, Mr. Downing coincides with the opinion expressed by the RURAL, though objected to by a number of excellent judges, as rating it too low: Mr. Downing says:

"Flesh soft, tender, sweet, pleasant, and in quality about the same as Concord, and ripening with it or soon after."....

To our view, Mr. Marvin's "Word for Polled Cattle" in last week's RURAL, hits the nail squarely on the head. Horns are indeed deadly weapons rarely if ever needed by domesticated animals though frequently used to the greater or less injury of themselves and loss of their owners.....

WE are pleased to learn that trees of the Japan Maple, Acer palmatum (the species mostly used as stocks for the varieties and in itself a beautifully distinct maple), twelve feet in hight, growing in Prospect Park, Brooklyn, (N. Y.), have not been injured by the past Winter. We find also the following [note by the editor, Prof. Thos. Meehan, in the current number of the Gardeners' Monthly:

JAPAN MAPLES.—According to the RURAL NEW-YORKER, the Japan maples tested on the grounds of the editor "have not proved hardy during the past Winter." In the vicinity of Philadelphia the numerous varieties show so much sameness of character that only one kind may be said to be popular—"Acer Jap. atropurpureum," as it is popularly called, or Japan Blood-leaved Maple. We have seen, perhaps, four hundred of these this Spring without knowing of one to be injured. Passing along in the street-cars through Germantown, one may now see a pretty plant, some three feet high, on the grounds of the editor of the Germantown Telegraph, in full, healthy leaf, after total exposure all Winter. On the writer's grounds is one five feet, also wholly uninjured, though standing alone on a very exposed place on the lawn. We fancy the experience noted by the RURAL NEW-YORKER is exceptional.

WHAT in the world can induce agricultural papers to repeat nowadays that the mole is driven off by the Ricinus or Castor-oil plant? The mole has no repugnance to this plant whatever.....

SAMUEL HENSHAW, of Staten Island, has a full collection of the Japan Maples planted six years ago. Surprised at the report of the injury they had sustained at the Rural Grounds, he called to say that not one of his varied collection was harmed in the least. Mr. Henshaw is a florist and uses the leaves for decorative purposes. Thus, he says, we get the handsomest of Fall leaves in the Spring.....

YEARS ago, when we were crossing variegated and green-leaved pelargoniums (geraniums), it happened in a number of cases, that while the leaves of the seedlings of such crosses were all green, cuttings from them would sooner or later develop variegated shoots. Such shoots are called, in familiar language, "sports." Yet there can be little doubt that they were due to the development of the blood of the variegated parent. We have little doubt that "sports" of all kinds might be similarly traced, if they only could be traced at all. A lesser potency, if it may be so expressed, may lie dormant for years before favorable conditions occur for its development.

.....

A LITTLE party at the Rural Farm pronounced the Telephone peas the best, the sweetest, the most tender of any they had ever eaten.

What Others Say

HOW TO GET A FULL MILK PAIL.—We assume that the cow is properly fed. Lacking this condition, no cow can milk as she ought, says the London Live Stock Journal. But careful feeding seems to have but little influence on the milking properties of some cows; they lay on flesh instead. Yet, as they have first of all to live before they can think of giving much milk, or in fact any milk at all worth speaking of, and as about two-thirds of the food they have an appetite for goes to sustain the offices of life, it is clear that under-feeding will not lead to a profit. This is a proposition well enough established, and it appeals alike to our judgment and interest. Yet, after all, breed is of the first importance, because without it good feeding is of small effect on the milk pail; but, if we have both breed and feed, the pail will overflow—if we let it. Breed, then, is first; food, next; then good milking by hand, kind treatment, shelter from the storm, and all that.

A SIMPLE and excellent remedy, says Waldo, in the Ohio Farmer, in case of swelling and inflammation, is sal ammoniac dissolved in vinegar. He has never seen any liniment that would so quickly and certainly reduce a swelling in the first stages.

AGAIN he says that all milkers are likely to be troubled more or less with cracked teats, and when nothing is done to prevent or cure, sometimes a cow gets so bad that it is weeks before she can be cured. If one keeps a few ounces of glycerine in the stable, and at the first appearance of roughness or cracking pours a few drops in the palm of the hand before milking, it will stop all trouble at once. Occasionally a cow gets a teat cut or scratched with briars so as to make it almost impossible to milk her. He has known a cow to dry up from this cause. Every time we attempt to milk a cut teat we break open the old wound, and if it is a bad one, it is almost impossible to heal it. Every dairyman should have a set of milking tubes to use in such cases. Waldo does not use them at all for ordinary milking, but in such cases as those referred to he finds them of value.

DEAD BRANCHES ON TREES.—Mr. Thomas Meehan remarks that his readers must remember that only recently has it been clearly demonstrated that a dead branch on a tree makes almost as great a strain on the main plant for moisture as does a living one. It is one of the most important discoveries of modern botanical science to the practical horticulturist, as by this knowledge he can save many a valuable tree. When one has been transplanted some roots get injured, and the supply of moisture in the best cases is more or less deficient. Any dead branch, or any weak one, should therefore be at once cut away. So in pruning trees at transplanting, the large, lifeful branches should not be cut back, as is generally done, but the weak, half-dead ones that are usually left should be the ones to cut away. The large, stout ones are reservoirs of sap, which the plant needs; the half-dead ones draw on these reservoirs and contribute nothing of their own.

AND so it appears that cocoanut shells, ground up, are used to adulterate pepper and perhaps other spices.

THE Gardeners' Monthly says that scarce kinds of roses may be propagated this month, by eyes of the unripened wood taken off just after flowering, and set in sandy soil in a shady place. Cuttings from shoots grown in partial shade root better than those matured in the full light.

MAKING SIRUP FROM SORGHUM.—We find in the Husbandman a plain account of how a writer makes his sirup from the Amber Cane. He says that with a good two-horse, three-roller mill, worth $60, capacity 200 gallons per hour, by getting an early start he makes sixty gallons of good, heavy molasses per day. His boiling pans are made of wood, with galvanized iron bottoms, size 30x84 inches. The sides and ends are plank 1¼ inch thick and 10 inches deep. He allows two pans to a mill of this capacity. The furnaces are placed in a line, with the chimney in the middle. An old stack to a steam-engine makes a very good chimney. The furnaces are 24 inches wide in the clear, so that the pans extend over a little, which prevents the plank from burning and keeps them from boiling over. There are a few evaporators around there but with proper care and attention he makes just as nice sirup as the evaporators do. The main requisites are, quick boiling, careful skimming, and thorough cleaning of the pans after each boiling. The pans are furnished with four handles (hoop iron makes a very good handle) near the corners, extending high enough above the pan so that a pole can be passed through from one side to the other, and four men can lift the pan and empty it. To tell when the sirup is done, lift the skimmer, and if the sirup hangs to it and falls in drops, it will do. A little experience will decide. In regard to the cane, his experience has been that the best plan is to allow the cane to get ripe. What he calls ripe, is when the seed begins to get hard. So doing one gets less juice, but makes better sirup, with less boiling and less skimming; and to plant the seed at such a time that the cane will have all the hot weather on it that it will bear increases its saccharine qualities. For stripping he uses a forked stick, and gives the fodder to the land, as this crop is a very exhausting one. He often makes molasses from the various sorghum canes, so sugary that in Winter it can be cut with a knife, and all it needs to make sugar is to be drained. He uses no lime or anything of the kind to settle it.

THE Philadelphia Press says that Burlington's veteran gardener, Nathaniel Stowell, aged 92 years, has discovered and proved the efficiency of green sage leaves as a thorough preventive of the ravages of the Colorado beetle upon growing potatoes.

ANOTHER NEW STRAWBERRY.—The horticultural editor of the N. Y. Sun says that New Jersey strawberry growers are again jubilant over another new seedling strawberry which has been named the Manchester. Like all new varieties it is said to be something wonderful as to color, size and flavor, and it is thought will prove a very fine market berry because of its firm flesh. The Wilson's Albany, growing in the same field, is said to make a poor show beside this new wonder. The writer has seen similar reports regarding many of the newer sorts, but has never found a variety that was superior to the old Wilson for productiveness. Perhaps the "Manchester" is the strawberry of the future, he says, but of this we will know more a few years hence. [It will not take so long as that we confidently predict. The berry fruited at the Rural Grounds the present season. Our readers are requested to bear it in mind.—EDS.]

IT must be borne in mind, says Dr. Lawes, in the London Agricultural Gazette, that experiments conducted in a laboratory, or under any artificial conditions whatever, require to be tested in the field before they can be accepted as final, or have any value assigned to them as regards the settlement of practical questions of agriculture. Speaking as a farmer, the question he wants to be solved is, whether the organic matter of the dung which he applies to his land produces growth in his crops, either by increasing the ammonia in the soil, or by any other means, such effect being in addition to that due to the nitrogen and minerals contained in it.

IN the latest Mark Lane Express (London) we find the following: "The world's wheat prospects and present realizations are such as to render it an indifferent matter to Europe whether the United States wheat harvest turns out a little more or a little less than that of last year; there is a fair prospect of plenty. Reports from the United States are, as yet, strongly suspected of being influenced by speculative interests, so that in reality very little dependence is placed upon them here. The bulk of the testimony being in favor of an average crop of wheat on the area sown, it is accepted here tentatively, to that effect.

THE MANCHESTER STRAWBERRY.—Again we find in the N. Y. Times a startling account of the new Manchester Strawberry, which is not yet offered for sale: "The Manchester is a new seedling accidentally produced by a Mr. Batty, of Manchester, N. J. This berry is said by some good judges to be really extraordinary. It is growing upon almost pure sand and produces abundantly large, handsome, conical, scarlet berries, red-fleshed, firm, juicy, and of a sprightly and rich flavor. The keeping qualities are also highly spoken of. The varieties of this fruit that will do well upon sandy soils are few in number, and a good, well-flavored berry, firm enough to ship and keep for three days and of attractive appearance, as well as good enough for private gardens and farms, and that will succeed upon light, dry soils, will soon become a very popular one. For a berry that will do well upon almost pure sand and with but poor cultivation will be something remarkable on better soils and with good treatment. And this is what is claimed for the Manchester."

THE Herald says that honest industry is all very well in its way, but a bononza which enriches us in twenty minutes and helps us to make fools of ourselves all the rest of our lives—oh, that is our dream of bliss! . . . . "Sam you are not honest. Why do you put all the good peaches on the top of the measure and the little ones below?" "Same reason, sah, dat makes de front of your house marble and de back gate chiefly slop bar'l, sah." . . . . A little bit of a girl living near one of our cities, ran in to her mother from the road-side with some early Spring blooms in her hands, and full of the outside glow, exclaimed: "O mamma, how nice it is to live where somebody doesn't own everything!" . . . It takes 800 full-blown roses to make a table-spoonful of perfume, while ten cents' worth of cooked onions will scent a whole neighborhood. . . . . Agricultural chemists have published wrong conclusions too often to be dogmatic.—N. Y. Tribune.

"There is no unbelief:
Whoever plants a seed beneath the sod,
And waits to see it push away the clod,
He trusts in God."

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

WEYMOUTH, N. S., July 6.—Wheat looking well—principally Lost Nation and White Russian. Oats and barley good, but the acreage decreasing, both being superseded by wheat. Corn not much planted; prospect poor, but there is a slight improvement of late. Potatoes and garden crops look well; but owing to the cold, wet weather they are a fortnight late. The hay crop will probably be a good average, but late. Apples, pears, plums, quinces and cherries abundant. Small fruits plentiful. Squash bugs are the only insect pests of any account. The potato bug has never made its appearance in this county, and I have not heard of it anywhere in the Province. Altogether, with the exception of corn, there is a good outlook for an abundant harvest. W. H. S. D.

Colorado.

HILLSBOROUGH, Weld Co., July 6.—Farmers in this portion of the State are jubilant over their prospects, and from present indications the yield will be enormous. All kinds of small grain are doing well; wheat is stiff at $2 55 per cwt., and produce of all kinds brings a good price. J. W. C.

Maine.

LEWISTON, Androscoggin Co., July 7.—More wheat sown than last year—Lost Nation chiefly. Oats in area and yield are above the average, but little barley or rye grown here. The tendency is to grow more of wheat and oats. The former has done much better the last few years than formerly when rust and weevils nearly or quite destroyed the crops. Farmers are beginning to find out that they can raise wheat to advantage. The prospect

is very good for apples and pears, raspberries, blackberries and strawberries. More corn has been planted and more interest felt in the crop than formerly. Potatoes look well, but the bugs are very plentiful. The prospect is good for fine crops of almost all kinds of farmers' produce. It has been very cold thus far with frosts on low lands, cold and dry. H. A. C.

Nebraska.

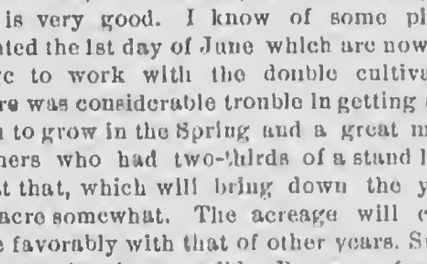
WOODLAWN, Lancaster Co., July 7.—All small grains, especially oats, are looking well. Chinch bugs are operating in wheat quite badly. I have seen some quite fine pieces of rye now being harvested. Not very much is raised here. But very little barley also. The principal varieties of wheat sown are China Tea, Grass and White Russian, the last mentioned is not much thought of in this section. Corn is king in Nebraska; the outlook at present is very good. I know of some pieces planted the 1st day of June which are now too large to work with the double cultivator. There was considerable trouble in getting seed corn to grow in the Spring and a great many farmers who had two-thirds of a stand let it go at that, which will bring down the yield per acre somewhat. The acreage will compare favorably with that of other years. Small fruits in abundance—wild. But very few orchards in bearing in this section. No apples of any account. "B"

New Hampshire.

KEENE, Cheshire Co., July 13.—Wheat and barley are but little grown in this county. Rye and oats are looking fine. Corn is very backward, but is of good color and a warm July and August will give us a good crop; acreage about the same as last year. Apples a very light crop; pears good; of strawberries we have had an abundance. Grapes have not set well and are mildewing somewhat. Raspberries and currants heavily loaded. W. L. D.

Ohio.

CAMDEN, Preble Co., July 2.—My Washington Oats are doing very well, considering the drought. My Mold's Ennobled Oats I thought would be a failure, but they are now looking better; but neither of them is as good as our Joway Oats, all sown on the same field—bottom land.



1, Washington; 2, Mold's; 3, selected side oats that I cut out of common oats; 4, 4 4, Joway Oats which are much the best. W. M.

OTTOVILLE, Putnam Co., July 2.—Acreage of wheat about the same as last year; it is about ripe—some have commenced cutting. It is rather short (owing to May drought) but well filled—mostly Fultz and Clawson. We have some early ripe oats; not much sown this season on account of the late Spring. Harvest is about a week late this year. Corn looks well, but late on account of replanting—too much bad seed was planted. Potatoes look well, but there are lots of potato bugs. Few apples and not much small fruit. Hay is short and thin. S. B. P.

South Carolina.

CLIO, Marlborough Co., July 4.—Wheat, an average crop with an average acreage—mostly Red May, Fultz and Baltimore White. A considerable falling off in yield of oats in consequence of late sowing and a dry Spring—mostly Rust-proof, White Winter and Black Norway. Corn prospect fair, with a decline in acreage. Orchard fruits almost a failure; small fruits about a fair yield. J. B. W.

Texas.

WACO, McLennan Co., July 4.—On Friday night last we had the first rain in six weeks, and the continued drought has cut off our corn crop. We cannot make half a corn crop in any event, but cotton is looking very well. Those that raised small grain have had a fine time for harvesting and saving it, and the yield of wheat and oats will be over an average. Owing to the want of rain, the potato crop is short, and they are now selling at $2 50 per bushel. I have had a hard time to keep my strawberries alive, and also my young grapes; many of each did succumb, although I watered the latter regularly, but I attribute the loss of them to the heat of the ground about the roots, and if I had placed around them a thick mulch I might have saved them. My raspberries and old grapes have suffered comparatively little and look green and fresh. From the seeds received from the RURAL this Spring, I have a fine supply of pinks of all colors and styles, some of the handsomest I ever saw. My asparagus came up well, but I lost some of them from the drought. My White Elephant potato did not do well, but I have seed enough to make a good trial for another year. A. S. S.

Vermont.

SHELBURNE, Chittenden Co., July 7.—It is quite dry again although we had a rain a week or ten days ago, which gave crops quite a start. Corn and potatoes are very small, owing to the cold weather we had soon after they came up. Farmers are in the midst of haying, but are getting a light crop. Butter is selling at 18 to 20c. W. H. P.

Washington Territory.

STEILACOOM, Pierce Co., July 5.—The crops are looking well. There is very little barley or rye raised in this section and no corn as a field crop. Our climate is not warm enough to mature corn well except in the valleys. No better crops of wheat, oats and grass are raised in any portion of the United States than in Western Washington Territory. Orchards immediately around Puget Sound are looking fine, but away from the Sound the frost has injured fruits generally. I planted about 60 plum trees two years ago last Spring and think I shall have five bushels of fruit from them this season. They were three-year-old trees when planted. I have never seen a section where fruit is so easily produced as around the Sound. Small fruit is doing well this season. I have been on the Sound only two years; have cleared my land of heavy logs and stumps and planted my fruit since my arrival. Strawberries and raspberries are fine. From young plants I raised Sharpless strawberries this season that were six inches in circumference around the base of the berries. The Cuthbert Raspberry is doing remarkably well. I think I received the first on the Sound of all the best new varieties of berries. I am sure they will thrive well here if anywhere. My raspberries grow all Winter, never shedding their leaves. We never have to cover any of our fruit. In the Charles River Valley, about sixty miles from here, I purchased, in 1874, a farm about 40 acres of which had been cropped upwards of 20 years without manure. The second year after my purchase I raised 30 bushels per acre of splendid wheat, upon an average, on the whole tract. In one instance, upon new land, I raised 45 bushels of wheat, and for oats and Herd's-Grass there is no better land in the world. But immediately around the Sound the soil is poor compared with that in the valleys. Still, with the energy that it requires in the New England States to make a success of farming, this would be superior to that section on account of the mildness of the climate. I think the climate of Western Washington Territory as healthful as any in the world and the soil quite as fertile as the average. C. T. F.

West Virginia.

LUMBERPORT, Harrison Co., July 11.—The acreage of wheat is equal to, if not greater than, last year's, and, generally speaking, the yield is heavier and the quality better. The wheat harvest is nearly over and has been nicely saved, it having been fine weather all through harvest. The varieties sown are Lancaster Red, Fultz, Clawson, Mediterranean, some Red Chaff and Zimmerman; but the leading varieties are Lancaster and Fultz. The acreage of oats is not large, the farmers giving more attention to the cultivation of wheat, but the present prospect is good, and if no accident befalls the crop it will be much heavier than for some years past. Barley, but little or none is cultivated. Of rye the acreage is small, but what little was sown is said to be good. The acreage for corn is said to be not so great as last year, but I think, taking the county over, it will foot up about the same. Owing to the lateness of the season and the difficulty of getting the first planting to stand, the crop does not give indications of being anything like equal to last year's crop, and wheat harvest coming on so soon, farmers have not had a chance to give the crop the attention it should have had. Generally speaking, corn is short and does not look well. Apples will not average half a crop. There will be a few peaches in favored localities. Pears and quinces but few. Cherries are a failure except in some favored localities, and other small fruits are equally scarce. I will just add here, meadows are unusually heavy, and potatoes and other garden vegetables are looking fine. We are having extremely hot weather, the mercury denoting 98 to 102 in the shade for the last two weeks, interspersed with heavy thunder, wind and rain, sweeping timber, unroofing and blowing down houses, scattering fences, etc. W. H.

Wisconsin.

WIOTA, La Fayette Co., July 4.—Business calls in various portions of this county have given me good opportunities for sampling the crops, and I can now confidently report as to their condition and promise. The bulk of the crops consists of corn, oats and flax. Corn is backward, but is hurrying up as fast as I ever saw it, to make up for time lost by late planting, rather poor seed, and many long, cold rain storms and very cool nights as a rule. Oats and flax cover a very large area and are magnificent—never better. Very little Spring wheat was sown and the Winter wheat, though of considerable area, is generally thin on the ground, though, taking the county altogether, probably one-third promised a very good yield, till within a few days. On sampling a field a few days ago, of luxuriant growth and very promising appearance, then in the milk state, I found it badly rusted on the blade, and this probably is, or will be, general. Clover fields of large extent, have become general within two or three years, and clover was very heavy universally and is now all in stack, well cured. This week the haying will be commenced and the prospect of a heavy yield was never more satisfactory. Owing to a scarcity of seed, probably not more than one-half as many potatoes were planted as usual, but I have not seen or heard of any bugs, and as what there are never looked better, we shall probably have enough for ourselves, but none to spare. As for fruit, I think I have never known so general a failure as to orchard products which consist, here, entirely of apples with a very few plums and cherries. Even the wild plums and crab apples have failed to a very great extent. W. F.

The Querist.

ANSWERS TO CORRESPONDENTS.

Green-Manuring for Wheat.

"Young Farmer," Yorkshire, N. Y., says that at writing he was plowing under a crop of clover and intending to sow buckwheat to be also plowed under when in blossom as a preparation for sowing Winter wheat, and he asks, 1 whether such a plan is advisable; 2, why does barley turn yellow.

ANS.—1. The plowing under of the clover is an excellent preparation for the wheat to follow, but the sowing of buckwheat and the plowing under of that crop is by no means a judicious one for the following reasons: wheat requires a firm, compact seed-bed, and the loose buckwheat plowed under soon before sowing the wheat will completely prevent this requisite condition of the soil; wheat also requires decomposed or mineralized food, and while the clover will provide this because there is time for it to decay before the wheat is sown, there will not be time to get the buckwheat in good condition for the wheat. But if you think the ground really requires the buckwheat to help it, the disadvantages of plowing it in may be avoided by spreading quicklime upon the surface as soon as the buckwheat is plowed in and thoroughly harrowing the ground. Then the ground should be rolled to pack the soil and again harrowed to mellow the surface just before the wheat is sown. This will produce the proper condition for wheat, viz decomposed and mineralized plant-food, a compact bed for the seed and a mellow soil on the surface above the seed; the necessary absence of weeds will also be secured. 2. Barley turns yellow from various causes; too much wet or too dry a state of the soil; an excess of heat; the attacks of the Summer brood of the Hessian fly and want of sufficient fertility in the soil; which of these causes is at work can only be discovered by a study of the particular circumstances in this case.

Hedge Plants for the South.

G. S. H., Austin, Texas, asks, 1, what deciduous hedge plants make the best ornamental hedge for city grounds in that climate; 2, what evergreen; 3 what is the best time to gather the seeds of evergreens, such as Arborvitæ and Red Cedar; 4 should they be gathered while the seed pod is green; 5, what is the best time to plant them.

ANS.—1, Of deciduous hedge plants, the Osage Orange and some species of Cratægus (Thorn) would probably be best adapted to your latitude. 2. For evergreen hedges, there is nothing superior to Euonymus Japonica. It grows rapidly, and is very vigorous and hardy and takes the shears well. The bright, glossy leaves make it one of the most desirable. The Tree-box is also very ornamental and in a rich, moist soil makes a fine hedge. The Red Cedar and Arbor-vitæ are also used with fine effect. 3 and 4, Seed should be gathered only when fully matured. Those of Arbor-vitæ when about opening the cones; those of Red Cedar about mid-winter. The latter should be allowed to dry off the resinous pulp before sowing; or, what is still better, collect, under the trees, the seeds which have passed through the crops of birds. 5, Plant in early Spring, in a somewhat damp and shaded place and cover lightly with a mulch of rotted leaves, to keep the surface damp and prevent the young plants from being scorched by the sun.

Forcing Strawberries.

L. F., Columbus, Ohio, asks, 1, whether a small, tight shed at the back of the house, with windows at the east and west sides, would do for forcing strawberries in Winter if heated by the passage through it of the flue from the stove in the kitchen and hot water pipes connected with "back of the stove;" 2, is it better to plant the strawberries in troughs or crocks.

ANS.—1, A shed at the back of the house, with windows only on the east and west ends, would *not* be a suitable place for forcing strawberries in Winter. Nothing less than a *glass roof* would meet the requirements of the strawberry. It might be heated very well by hot-water pipes connected with a water-back in the kitchen range or stove. A hot-air flue would be a very dangerous thing to use in a house attached to the dwelling. In anything you do in this way you must keep in mind that the strawberry is not an easy plant to force, and involves a good deal of trouble, especially if you want the fruit very early. 2, Pots will be better for you.

Blue Grass.

"Subscriber," Huntingdon, Pa., asks whether Kentucky Blue Grass would be likely to thrive in that latitude; the best time to sow it; how much seed should be used per acre, and what would be the yield and quality of the hay.

ANS.—Yes; it thrives well even farther north. A very decided advantage, not sufficiently dwelt upon, which this grass possesses over many others, is that though eaten off close to the ground it is not seriously injured, but soon springs up fresh and green. This is often called at the North "June Grass." It may be sown in early Spring or early Fall—or upon the snow in Winter. Sow broadcast at the rate of one bushel per acre, and harrow lightly. During the first year stock should not be permitted on the field. The next year it may be pastured as soon as the seed stalks show themselves. It is not suited for cultivation where short rotations are followed. The yield is light compared to Timothy and to many other grasses, though the herbage is fine. For hay it should be cut while in bloom. It is less nutritious than Timothy.

Treatment of Clematis.

H A., Georgetown, Mich., asks, 1, whether a covering of straw in Winter would benefit perennial flowers; 2, how to propagate clematis; 3 where can seeds be bought.

ANS.—1. Straw would have the effect of preventing the frost from heaving the ground, while successive freezings and thawings in extremes of weather would effect less harm. 2, The improved varieties of clematis are best grafted upon some of the strong growing species. Cuttings, however, of the half-ripened wood root quite freely. They may also be propagated, of course, by layering. They should be layered now. 3 Many of the seedsmen sell clematis seeds. They do not germinate freely—some requiring to lie in the soil two years.

Miscellaneous.

G. L. M., Lodge, Ill., has sprouted some 1 200 peach seeds and they are growing in a nursery, being now about a foot high. Wishing to bud them in September and plant them in the orchard a year from next Spring, he asks whether the following varieties would be good to bud on them, as he wishes to have half a dozen good sorts: Alexander, Crawford Early and Late, Foster, Old Mixon Free and Old Cling, Downing and King of Chester.

ANS.—We do not know anything about King of Chester. Downing is a new peach originating in Penn. It resembles Amsden and Alexander, ripening about the same time. It is of fair quality. We doubt if Foster will succeed in Illinois. Old Mixon Free and Cling will probably thrive well there—Alexander and Crawford's Early and Late moderately well.

A Subscriber, Lewiston, Me., asks, 1, what sort of grapes are the Niagara and White Hall; 2 when to plant the tips of Gregg and Caroline Raspberries.

ANS.—We do not know the White Hall. The Niagara is a productive white grape, ripening after the Hartford Prolific. Do not think you can purchase vines at present. 2. The tips may be covered in August and September.

I. F. W., Platte City Mo., asks the best way to kill out Red Clover which grows in the Court-house square, but for which it is desired to substitute Blue Grass.

ANS.—The blossoms must be cut off for two or possibly three years.

H. S., Bainbridge, Mich., says that from the seed sent out by the RURAL a small tree is growing, and he wishes to know whether it is a locust which it resembles.

ANS.—We have never sent out any locust seed.

J. W. C., Hillsborough, Col., asks when must competitors for the RURAL wheat premium make their entries.

ANS.—Any time before August the first—or a little later.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JULY 16.

T. H. H.—M. B. P.—M. W. C. W.—F. H. S.—T. F. W.—T. M. E.—E. S.—J. W. C.—A. E. B., thanks.—S. B. P. (Ottoville)—"Gardener."—W. T. S.—J. L. B., thanks.—R. L. S.—M. K.—T. J. B.—M. E. E.—A. S. R.—I. R.—L. Y. A.—J. M. A.—C. H.—R. H.—S. R. M.—G. W.—W. J. D.—H. B.—J. S. W.—J. B. G.—W. H.—Gardener.—F. H. S.—W. T. S.—M. B. P.—J. L. B.—S. F. B.—E. W.—A. G.—C. E.—J. A.—T. B. H.—H. A. W.—J. R.—O. J. C.—I. S. P.—J. N. P.—I. H.—H. N.—J. F. C.—A. J. P.—G. B. B. J. C.—E. B.—A. B.—D. R. B.—D. F. J.—A. E. G.—J. L. F.—E. E.—G. A. G., Jr.—O. H. S.—W. W.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, JULY 23, 1881.

All advertising copy for the Fair Number must be received by August 15.

Our next portrait will be that of Dr. James Bennet Lawes, of Rothamsted, England. Several years ago the Rural presented a portrait of this distinguished scientist and farmer; but it was not satisfactory. The next thereafter will be one of his associate, Dr. J. H. Gilbert.

It is, we judge, quite too much to say that the pollen of the tassel of a green stalk of corn never fertilizes the ear of that stalk. This is undoubtedly true of some kinds, but not of all. We find that several varieties of sweet corn now growing at the Rural Farm are self-fertilizing—that is to say, that the pollen is ripe at the same time that the silk is ready to receive it upon the same plant.

A Day of Thanksgiving.—In response to suggestions of Gov. Foster of Ohio, that a day of general thanksgiving be observed for the recovery of the President, as soon as the happy event shall be definitely determined, the Governors of nearly all the States and one Territory have, up to this writing, signified their hearty approval. If the President shall finally recover, as now seems probable, the whole land will unite in heart-felt thanks to the Ruler of nations for having spared to ours the man in whom, as President, are centered the affections of a great people. Such a day will unite more firmly all individuals, organizations and States, and will show to other lands that we, the youngest nation, have based our hopes for the present and future of the Republic on no uncertain foundation.

Some more stringent laws should be passed for the protection of farmers living near towns and cities from the depredations of Sunday excursionists. Besides the unseemly uproar created on the Sabbath in quiet country places by these unwelcome visitors, many of them consider it the chief part of their legitimate "fun" to injure fences, destroy flowers, chase or pelt cattle and other stock, rob fruit gardens and orchards, and make themselves nuisances generally. Of course, there is no objection to the denizens of crowded cities seeking health and fresh air in the open country whenever they have an opportunity, but at the same time restraint should be placed on the vagaries of many of them, who seem to think the wide freedom of the country means license to mischief. They, like others, should be taught that the rights of one man end just where those of another begin, and that dwellers in the country have some rights which even the rabble of the cities are bound to respect.

Hungarian Grass.—We have always heard that Hungarian Grass needs a good, if not a rich, soil; that it should be sown late, and that if the ground is either too wet or too dry at the time of sowing, the grass will fail. On May 12 we sowed it upon a twentieth of an acre of poor soil, without manure. It was plowed and harrowed—the seed covered with a rake. This grass is now in bloom and we are cutting it for chickens and horses. Another plot of two-fifths of an acre was sown upon similar land, with 100 pounds of "Soluble Pacific Guano," May 24. Of this we shall speak later. Hungarian Grass is valuable in many ways. As a green manure it would seem to be especially valuable, as two crops could be turned under in one season. All stock are extremely fond of it. It tillers freely, though the roots grow near the surface and take so feeble a hold upon the soil that the plants are readily pulled up by hand. We are merely giving our first impressions of Hungarian Grass, never having raised it until the present season.

THE RECALL OF CHINESE STUDENTS.

It may not be known to all that there have been, for the past few years, several Chinese students in some of the American colleges, but such is the fact. Yung Wing, who is as thoroughly American in education and habit as one born out of the country can be, saw how, in the education of his countrymen, he might bring his race to a much more advanced civilization both in national and religious matters. But this purpose he did not reveal to his home Government, nor did the high functionaries there suspect that a few years' education of young Chinamen here would so liberalize them and imbue them with a spirit essentially American. However, the action which the Chinese Government has recently taken in recalling the students and abolishing the Chinese Educational Commission in this country, has been under consideration for several months, and probably arises out of a fear that the progress made by these students, outside of the educational advantages proper, will not be to the advantage of the future of China. It is a wonder that this system of education should be allowed to run so long, but the Chinese Government has not until now fully realized the meaning of having Chinese youths educated in a country where social and political notions are at variance with those of the Celestials. But it is a compliment to our educational methods and to the civilizing and progressive spirit of our institutions that the Chinese Government should have taken this decisive step, if, as is possible, the cause for the action lies in the fears they entertain for the non-progressive, arrogant policy of the ruling classes in China.

STORAGE FOR CEREALS.

In all the great receiving centers of cereals much inconvenience and not a little loss have of late years been caused by insufficient storage capacity in late Fall and early Winter, when the bulk of the crops is hurried to market. San Francisco, Chicago and Baltimore were conspicuous in this respect last year, and the trouble was also felt, though less grievously, at Philadelphia, New York, Milwaukee, St. Paul and St. Louis. In some parts of the country, especially of the West, farmers, however hard pressed, found it impossible, sometimes for weeks, to sell their grain, except at a sacrifice, because all the storage room at the termini of the railroads and at the local stations was over-crowded. The production of the country had outrun the capacity for handling the products. Owing to the probable diminution of the aggregate yield of cereals this year, and to some late enlargements of the storage room in most of the above cities, the risk of similar trouble this year is generally less than last. The grain trade of St. Louis, however, has so greatly increased within the twelvemonth and is likely to increase even more rapidly in the course of the next six months, that there is great danger of a grain blockade at that city and of consequent trouble in the tributary country. Foresight in matters of this kind is very needful for the welfare of any place. Owing to the blockade at Baltimore last Winter not a little of the grain traffic that would have gone to that point, went elsewhere and took with it much trade that would have cheered the hearts and added to the profits of the merchants of the Monument City; for the market in which products are sold, is chiefly that in which goods are bought. A dozen years ago a prominent merchant of St. Louis, in answer to the inquiry "What is the great need of your city?" replied, "Half a hundred first-class funerals." From the increased energy and enterprise lately shown there, it is not unlikely that a few of the somnolent, wealthy old fogies who were content "to let well enough alone," have since been buried in first-class style, but a good many more similar funerals seem to be still necessary for the proper development of the trade of a city so advantageously located. A dispatch just received announces, it is true, that the construction of an elevator of 1,000,000 bushels capacity is to be begun this month, but it will not be completed in time for this year's trade—and it is to be built by Eastern enterprise and capital. Moreever, just across the Mississippi on the Illinois side, the capacity of the elevators is to be doubled rightaway, giving an additional storage capacity of 3,000,000 bushels of grain.

GENEROSITY, NOT "GUSH."

According to this morning's Washington telegrams, President Garfield may now be said to be "out of danger," although it may be many weary weeks or months before he will be able to "feel himself again." There is no doubt but that the dastardly attempt on his life has given him a much stronger hold than he previously had upon the affections of the American people, and thus increased his chances of that re-election which has been the ambition of all those who have once been elected to the presidential office. Whatever may be the outcome of this ambition, certain it is that an unusually prosperous career lies before Gen. Garfield. In the first excitement of his danger a movement was started in this city to raise a fund of $250,000 for Mrs. Garfield, as the apprehended death of her husband would leave her and her family, it was understood, in not very affluent circumstances. At first, while the President's life was in imminent danger, contributions poured in rapidly, but later on, as his recovery advanced, the donations grew fewer and smaller, so that although upwards of $100,000 were spontaneously promised the first day or two, not half that sum has since been obtained even by solicitation. It is certainly desirable that the families of the Chief Executives of the Republic should be placed beyond risk of want, or even the need of close economy, and therefore we heartily support this provident movement. Mrs. Garfield, no doubt, is a very estimable lady, and her conduct as mistress of the White House has been admirable both before the attempt on her husband's life and during the trying period when that life hung in the balance. Many people, however, gushingly insist that her attention to her wounded husband deserves this recognition of national gratitude, as something grand and exemplary. While fully alive to the high merits of Mrs. Garfield as a wife, however, we cannot see anything exceptionally noble in her conduct, in view of the fact that there are tens of thousands, aye, thank God, hundreds of thousands of other American wives who would be equally devoted to their dying husbands stricken down by an assassin's treacherous hand. How many devoted wives, in all parts of the country, faithfully and lovingly watch over their ailing husbands without the encouragement of public commendation, and often even without the ordinary conveniences of a sick room, and that, too, although the husbands, unlike our wounded President, are anything but patient in their suffering, and frequently have done nothing in their previous lives to win the admiration of their wives. By all means let Mrs. Garfield have this money, if there is a probability that she will ever need it, but for the honor of American women, do not insist that there is anything exceptionally fine in her conduct, noble as it undoubtedly is.

OUR FOREIGN MEAT TRADE.

To every owner of live stock in this country there are two important questions with regard to our export trade in live stock and dressed meats—will the traffic be continuous and are there other countries which from their position, soil or climate, may compete closely with us in supplying the European markets. From some elaborate statistics lately compiled by Dr. Von Neuman, it appears that since 1850 the number of food-animals has actually decreased in Great Britain, France, Austria, Italy, Belgium and Switzerland, while the population has been steadily increasing in all these countries; and the increase of food animals in the other European States is only sufficient to make the increase for the whole of Europe less than two and-a-half millions of cattle, sheep and hogs during twenty-five years.

In some countries, however, the actual decrease in the number of food-bearing animals, does not show the proper decrease in the amount of meat food, for, in these, breeding has received so much attention that the average weight per head of the animals is considerably greater now than formerly. For instance, in France oxen have increased in weight 21 per cent. since 1840; calves, 40 per cent.; and sheep 50 per cent.; but outside France and England few people have obtained such valuable results from breeding for meat. When the number of animals, however, is compared with the number of people at different dates in the present century, it is seen that the amount of meat pruduced per head has assuredly decreased. The following table shows the population of Russia, Austria-Hungary, France, the United Kingdom, Germany, Spain, Italy, Sweden, Norway, Holland, Belgium, Denmark, Switzerland and Portugal at various dates and the number of cattle, sheep and hogs, per thousand, of population:

Years.	Pop. of States.	Number of animals per 1,000 pop. Cattle.	Sheep.	Hogs.
1832, about	215,000,000	328	764	197
1857, "	244,000,000	355	724	166
1869, "	278,000,000	331	700	152
At the present time	294,000,000	310	682	156

As the years have gone by the people there have been consuming less and less meat, not because their taste for it has changed, but simply because its growing price has put it beyond the daily reach of the laboring classes, and forced even the moderately well-to-do to be sparing in its use. With the advent of cheaper meat from this and other foreign countries, however, the demand for beef, mutton and pork must continue largely to increase, benefiting the native population by the use of a more nutritious diet, and foreign countries by insuring for them a permanent market for their surplus meat-bearing stock.

The number of food-animals in this country in proportion to population is far away greater. For every thousand of our population, in 1878, there were 653 cattle, 764 sheep and 690 hogs, an enormous difference over the European ratio, except as regards sheep, and the high average of these across the Atlantic arises from the large numbers in Denmark, Servia, Roumania, Spain and Greece, where the wool is of more importance than the meat. It is evident, therefore, that the United States is well able to furnish a large supply of meat to Europe at present, and it has ample range and capacity for greatly increasing its surplus, but what is the prospect of other countries competing successfully with us in the trans-Atlantic markets? South America, and the Southern colonies of Australia seem admirably adapted to cattle raising, while Servia, Roumania and Austria-Hungary export large numbers of food-animals to neighboring countries, and northern Africa furnishes France with large amounts of meat. As in cereals, however, Russia is our strongest rival, and were it not for the dense stupidity of the lower orders, the mismanagement of the government and the undeveloped condition of the country's resources, there is no doubt but the Empire of the Czar would prove a very formidable competitor. The latest comparative statistics are those of 1877, and these give the following figures of the trade in meat, according, to a late issue, of Bradstreet's:—

VALUE IN DOLLARS OF EXPORTS.

	Live animals.	Meats.	Total.
United States	$4,498,000	$69,759,000	$74,257,000
Argentine Republic	3,173,000	2,724,500	5,897,500
Australia	.....	2,157,750	2,157,750
Uraguay	557,250	1,903,750	2,461,000
Russia	12,658,000	2,335,750	14,993,750
Roumania	4,975,500	.....	4,957,500
Austria-Hungary	1,696,325	28,750	1,728,075
Servia	4,511,750	.....	4,511,750

Since 1877 our cattle and meat exports have largely increased, but even then it is seen that we controlled two-thirds of the export trade in meats, and, considering our favorable position, our vast commercial relations with Europe, and the energy, ingenuity and goaheadativeness of our citizens, there is no reason to fear that, in the absence of hostile legislation, we shall lose any of our hold on our foreign meat markets. Let us, therefore, be still more earnest in following the admirable example of France in improving our stock by careful breeding and judicious management, certain that an assured reward awaits us.

BREVITIES.

Three bushels of buckwheat for seed to the acre, as stated in last week's Rural Brieflets, should have been *pecks*.

Of the 13 different kinds of sweet corn growing at the Rural Farm, Early Narragansett and Minnesota were the first to bloom and to set ears. Planted May 9, the sets were in silk July 10. Our tests with these kinds of sweet corn are being made in rather a poor soil without manure. Moore's Early Concord was the third to bloom viz., July 15.

Dr. Loring, Commissioner of Agriculture, we are informed, has not yet definitely decided to discontinue the Departments' experiments in tea culture. He is about to send Mr. Saunders, chief of the horticultural department, to South Carolina to make a thorough investigation of the question and to institute an examination of the tea farm established there by Gen. LeDuc. The future action of the Commissioner on tea culture will depend on Mr. Saunder's report. As the Department has about 140 acres of sorghum growing and a cane mill of sufficient capacity to test the practicability of sugar-making from sorghum as a profitable industry, experiments in this direction will be continued at least for the present year, with the aid of experts in the business from Minnesota, Missouri, Kansas and Illinois.

During the past week there has been a very severe cutting down of the passenger rates on the great trunk railroad lines to the West, and freight rates have largely shared in the reduction. From Chicago to New York rail freights have been as low as from 12 to 16 cents per 100 pounds, and rates from the other chief centers in the West have been correspondingly low. The rates by the lakes and canal from Chicago to this point are 8 to 8¼ cents on wheat per bushel of 60 pounds, and a shade less on corn per 56 pounds. It will, therefore, be seen that just now competition between the railroads has lowered rail rates as low as those by water, or even lower. Ocean freights on grain closed here on Friday at 4½d. per quintal by steam to Liverpool; 5½d. for Glasgow.

Miscellaneous.

WHEAT CULTURE IN MINNESOTA.

The Resources of the Red River Country.

MESSRS. HOLMES AND SWEETLAND,

[Special Correspondents of the RURAL NEW-YORKER.]

It has been well and truly said that a person should know his own country before visiting foreign lands. Thousands of people annually make the trip to Europe and wander about with an aspect of freshness, with gaping mouths and extended eyes, as if there was nothing in the world so attractive as those close, crowded old cities, those worn-out fields and ancient ruins. They put up with every description of discomfort to be in the fashion, and when questioned about their own glorious country they are either forced to acknowledge their utter ignorance of its extent, its capabilities and its attractions, or, if unwilling to make so humiliating a confession, they talk the baldest nonsense, usually betraying their ignorance to auditors better informed, although foreigners. Their knowledge of this country is confined to the eastern portion of the Union, and while they may go into raptures over the wonders of Niagara, the efficacy of the waters of Saratoga Springs or the splendors of the Eastern mountains and the sea-side—forgetful that the Old Country has higher mountains and as attractive a seashore—they can scarcely answer the most natural questions of foreigners who desire, of course, to know of the great new country in the West.

A proper preparation for a European trip would be a journey to the rapidly developing West which is becoming so important a factor in the commercial economy of the world. After an intelligent inspection of the newest part of the New World, a traveler would go abroad with a sense of his importance as an American citizen, proud of his land and anxious to be interrogated in regard to it. The people of the Old World, anxious to learn of this country, naturally expect to derive full and reliable information from its citizens, hence the great throng of tourists have splendid opportunities to perform efficient missionary work, if they have properly prepared themselves by observation or study.

Again, there are superficial observers who rush through the country in an elegant palace car and laugh and joke about the unfinished villages, the unfenced farms and the vast extent of untamed prairie, without obtaining any important facts. On their returning they talk or write with affected wisdom of the Far West. It is a reflection on the sagacity and intelligence of editors that such people should be allowed to air their ignorance in print. In the February number of Lippincott's excellent and usually reliable magazine, a lady who undertook to give an account of the Red River country, stated that the famous wheat farmer, Oliver Dalrymple, had over 6,000 acres in wheat in 1880! And sagaciously predicted that in the course of time the Northern Pacific Railroad might find sufficient traffic to keep it busy. Dalrymple had over 22,000 acres sown, and harvested and marketed nearly 500,000 bushels of splendid wheat in 1880. The Northern Pacific Railroad already finds it difficult to accommodate its traffic and with the rapid development in progress, a double track road across the great wheat belt will be required in the near future.

THE STORY IS NOT LONG,

and it won't take a great while to read and learn it. But little more than ten years have elapsed since the first locomotive made its way westward from longitude 92 degrees, north of latitude 46. Northern Minnesota was then only inhabited by lumbermen, who were dependent upon the more southern part of the State for every necessary. Northern Dakota was an almost unknown country, soldiers, trappers and hunters crossing it by a regular trail as rapidly as possible, little thinking how soon a great empire was to spring up on those immense prairies.

The Northern Pacific Railroad has steadily wedged its way onward to the Missouri River, and the railroad company acquired from the Government the odd sections in a belt of land 450 miles long and 40 miles wide in the State of Minnesota and 80 miles wide in Dakota Territory. In 1872 there were less than 2,500 inhabitants on the line, and they were all in the extreme eastern portion of Minnesota. There were not then over 1,000 acres under cultivation through the entire region. What do we find now?

From 1871 to 1875 the population on the line in Minnesota increased from 2,064 to 21,106, and at the close of 1880 we find 48,939. From 1,000 cultivated acres in 1870 the area increased to 58,150 acres in 1875, and in 1880, 232,992 acres were cropped in the Minnesota district. The great Dakota plains were avoided by settlers until 1875, when a successful experiment in wheat raising made by Mr. Oliver Dalrymple, 20 miles west of the Red River, demonstrated the wonderful producing value of the land, and settlement and improvement followed fast. The successful working of a single section—640 acres—of land in 1875 proved the inauguration of the greatest wheat district of the world; for last year there were 273,000 acres in the crop, and the population west of the Red River had grown to over 35,000 people. To recapitulate: In Minnesota and Dakota, on the line of the Northern Pacific Railroad between Lake Superior and the Missouri River, the area—

	Acres.
Under cultivation in Minnesota, 1880	232,992
" " " Dakota, 1880	273,000
	505,992
New breaking in Minnesota, 1880	67,049
" " " Dakota, 1880	127,000
Total area now (1881) in crop	699,041

Allowing that 10 per cent. is devoted to other than wheat culture, and assuming the low average of 20 bushels [Is this a low average?—EDS.] to the acre, the wheat crop from the line of the railroad will this Fall be over 12,600,000 bushels. The increase is just about 50 per cent. each year in population, cultivated area and number of farms. This ratio of increase has held for the past five years since the Dakota plains were opened, and, should the rate continue, the 30,000 square miles of land on the line, which are known to be capable of raising the

FINEST SPRING WHEAT IN THE WORLD,

will in eight years be entirely under cultivation, taking the present tilled area, about 1,200 square miles, as a basis. Allowing liberally for the cultivation of crops needed for home consumption, we find that, by the most conservative calculation, the country in Minnesota and Dakota on the line of this great highway—only about one-sixth of the length of the road when completed—can and probably will supply to the world within the coming decade 340,000,000 bushels of wheat! Is there anything visionary about a double-track road in the near future?

It is impossible at this time to give an idea of what the increase of population will be this year, but the tide of immigration is pouring in in a perfect flood, and the indications are that it will exceed the 50 per cent. rate mentioned. From actual investigation it is, however, known that an increase of fully 50 per cent. has been made in tillage, the amount of breaking done varying from 25 per cent. in the old Minnesota districts to 100 per cent. in newly opened portions of Dakota. This gives us not less than 1,000,000 acres for wheat in 1882, sure to yield 20,000,000 bushels of the golden grain! This amount of wheat will make 67,000 car-loads and the road will earn over $5,000,000 by its transportation at the lowest rates. One-half of this wheat belt devoted to wheat would produce enough to afford every inhabitant of the United States four bushels of wheat annually—about the average amount consumed in flour by each individual. The traveler here will find on every hand health and contentment, in fact, very general prosperity. Poor men who have passed through sufferings and privations, have here found comfort. Industry reaps a sure reward and enterprise and capital are quickly remunerated.

From Duluth westward for about 175 miles the country is heavily wooded, thus affording an ample supply of lumber and fuel for the prairies beyond. The production of lumber is probably 200,000,000 feet per annum and it is delivered to consumers westward at reasonable prices.

Beyond the timber country comes the beautiful Park Region which is dotted with charming lakes, and splendidly diversified by natural groves and rich, fertile prairie openings. This region merges into open prairie as it reaches the Red River, and the famous wheat country begins, continuing over the level and upland prairies to the Missouri River slope 200 miles beyond, and extending far northward and southward. The wheat grown through this vast territory is acknowledged to be without an equal, so that it was found necessary to establish a special grade for it, hence the title No. 1 HARD. Millers admit its value to be at least 25 per cent. more than other wheats, and consumers in all parts of the world anxiously seek the pure, sweet flour produced from it. All of the conditions favorable for the production of the finest wheat are found here and never since the wheat culture was commenced has there been a failure of a crop. Insects, drought and blight, the remorseless enemies of other western districts, are unknown and thousands of disappointed, weary settlers, who have been deluded by the glittering promises made for States and Territories further south, have deserted their farms where they hoped to find a home and prosperity, and with their wives and little ones driven where their dreams stand a better chance of realization. Such pilgrims can be found throughout this country, and the testimony they give in favor of their new-found homes is often so extravagant and enthusiastic, that it would scarcely be believed if published. That little fear exists of the exhaustion of the soil for years to come may be understood from the fact that lands in the Red River Valley, broken 25 years ago by the Hudson Bay Company have been cropped each year since, and are even now claimed to be *too rich!*

A writer, than whom few men are more familiar with this great Northwest says. "The soil on the great Dakota plains is a rich, black, vegetable mold, varying from two to six feet in depth and underlaid by clay in stratum. It is so easily worked that the cultivation proves truly restful to the Eastern farmer. The soil contains in itself the most valuable ingredients which can be selected to produce fertilizers, and the clay subsoil holds the moisture derived from precipitation, at the command of the growing crops. The seed is sown usually about April 15th and the harvest commences about July 20th. The showers are most frequent during the growing season in May and June; and are seldom known during harvest. The nights are short, thus giving the growing wheat the benefit of almost constant sunshine. But it is not alone for wheat that this rich land is adapted. Every production of the most prolific northern countries grows here in perfection and profusion. Wheat yields 20 to 30 bushels per acre; Oats from 40 to 75; barley from 40 to 55; potatoes 200 to 400 and all other crops are equally abundant. Vegetables and small fruits are as fine as those raised in any land and grow to enormous size."

The climate of this region is salubrious and healthful. The atmosphere is clear, dry and pure, devoid of moisture and possessing a healing power which few others possess. The cold of Winter is greatly modified by the dryness of the air, and is much more easily endured than a penetrating atmosphere saturated with saline dampness, which destroys or debilitates the residents of places in the same latitude, but nearer the Atlantic coast. In this land of plenty where the cultivation of the soil returns a sure profit, the Northern Pacific Company has nearly 3,500,000 acres of land for sale at $4 per acre cash or preferred stock on six months' credit, and a rebate of 25 per cent. is made on every acre broken within two years of purchase.

Between the Missouri and Yellowstone Rivers lies a country as yet but little settled where the agricultural lands belonging to the railroads are open to selection at the government pre-emption price of $2.50 per acre, with a charge of 10 cents per acre for surveying. This country differs from Eastern Dakota, being of a more rolling character having hills and buttes and is watered by numerous small streams, all tributary to the Missouri River. The country is as well adapted to the production of all crops as that described, and on account of its hilly character it is peculiarly adapted to the raising of stock, the valleys affording shelter and the grasses are abundant as well as of the most nutritious kinds. By the construction of the railroad through this territory the Northern Pacific Company acquires over 5,000,000 acres of land, the greater portion of which is desirable. One great advantage possessed by this region is an excellent quality of coal which appears to underlie it throughout its entire extent. Two mines are already being worked, and the coal finds a ready market on the line of the road. Thus we find the great treeless prairies of Eastern Dakota providentially provided with fuel, the wood of Northeastern Minnesota and the coal of Northwestern Dakota being supplied at reasonable prices. The Missouri Division of this railroad terminates at the Yellowstone River whose broad, beautiful valley is described as the most attractive and fertile on the continent; but space is too limited to enlarge upon it. The road is being rapidly built along its banks, and, before another Winter will stretch its iron rails far up the valley. Several thousand men are required for the work and many immigrants coming here secure employment, giving themselves ample time to secure a good location and become acquainted with the country.

There is no question that this region will become at no distant day a busy hive of civilized industry, and it should not be forgotten that besides the R. R. lands there are millions of acres of government lands open to citizens of the United States, the only cost to the settler being the fees of the U. S. Land Office.

The headquarters of the Land Department of the Northern Pacific Railroad are at St. Paul, and your correspondents must acknowledge courtesies received from Col. R. M. Newport, the General Land Agent of the company.

Literary Miscellany.

LIFE'S TRUE SIGNIFICANCE.

DEEPER than all sense of seeing
Lies the secret source of being,
And the soul with truth agreeing,
  Learns to live in thoughts and deeds;
For the life is more than raiment,
And the earth is pledged for payment
Unto man for all his needs.

Nature is our common mother,
Every living man our brother,
Therefore let us serve each other;
  Not to meet the law's behests,
But because through cheerful giving
We shall learn the art of living;
  And to live and serve is best.

Life is more than what man fancies!
Not a game of idle chances:
But it steadily advances
  Up the rugged hight of time.
Till each complex web of trouble,
Every sad hope's broken bubble,
  Hath a meaning most sublime.

More of religion, less profession!
More of firmness, less concession;
More of freedom, less oppression,
  In the Church and in the State;
More of life and less of fashion;
More of love and less of passion:
  That will make us good and great.

When true hearts, divinely gifted,
From the chaff of error sifted,
On their crosses are uplifted
  Shall the world most clearly see
That earth's greatest time of trial
Calls for holy self-denial,
  Calls on men to do and be.

But forever and forever
Let it be the soul's endeavor
Love from hatred to dissever,
  And in whateo'er we do,
Won by love's eternal beauty,
To our highest sense of duty
  Evermore be firm and true.

MY EXPERIENCE.

Continued from page 475.

"You will make her happy now," Mabel says, with a faint, wraithlike smile. "Never let her know—there is no need that she should. I think we need not say any more now," she adds, holding out her hand to him. "Believe me, it has been all for the best."

"I cannot accept such a decision," he says, hurriedly. "Mabel, have you no pity for me? I love you—I love you!"

"Hush!" she says, quickly, "I must not listen."

"Mabel—in pity——"

"It is for you to have pity," Mabel answers. Oh, Cyril! leave me now."

He stands hesitatingly before her; in a moment turns away, turns to her again, puts her hands in his, and presses them passionately to his lips; then releasing them, he turns away once more and leaves the room. Mabel stands for a moment where he has left her; then she holds out her hands with a little faint cry of pain, gasps for breath, and before I can get to her assistance she has fallen back into her chair in a dead faint.

CHAPTER III.

Mabel's fainting fit is not of long duration; only a few moments elapse before she opens her eyes, looks bewildered for a moment, then smiles faintly and says she is better—that it was very foolish of her to faint, but the heat makes her feel languid and weak.

I accept the explanation without seeming to doubt it, and induce her to go up to her room and lie down; and when she is lying on her bed, with her face turned away from me, I sit down in the old-fashioned window-seat, and for the first time in my sunshiny seventeen years of life think long and seriously.

Everything grows very plain to me now, and much that has seemed incomprehensible to me in my sister's past life is explained.

It had always puzzled me why Mabel—so beautiful, so accomplished, and so sweet—should have lived to pass her eight-and-twentieth birthday unwon; not unwooed, for she had had several good offers, but she had refused them all firmly and decidedly. Sometimes I had thought that she had sacrificed herself to us, motherless bairns as we were, but at others I felt sure it was not so; for Aunt Bessie, my mother's sister, could and would have taken her place, had she gone to make the sunshine of another home.

That Mabel was too essentially a woman to pass her life without love I was sure; but whenever I had touched upon the subject to her, she had always silenced me calmly and decidedly. I had heard some of our old friends say how much quieter Mabel was than she had been; but she had never seemed depressed, and I had never thought there was any special reason for that quietness of manner. She had always been quiet within my recollection, and I supposed it was natural to her.

Darling Mabel! how my heart goes out to her as I watch the quiet form on the bed, and listen to the faint, uneven breathings, for she is agitated still and tears are very near. Presently I see that her face is hidden in the pillows and I know from the movement of the shoulders that she is sobbing. I do not go near her, and smile a little as I think how happy I shall make her by-and-by, for there is no doubt in my mind as to what course I am to pursue. Mabel, who was ready to sacrifice her happiness to me shall be made happy with the man who has loved her and whom she has loved so long and faithfully.

Although I do not love Cyril—although I know perfectly well that the affection I feel for him is not the love a woman should feel for her husband—there is a sharp pain at my heart when I think of him.

"He had no right," I say, bitterly, "to allow me to think that he loved me, when his whole heart belonged to another. I feel as if he had tried to rob me of something great and precious which was mine by right. He had cared for me, not for myself, not for my beauty—for I am pretty—only because I resembled Mabel. It was not right—it was not fair. I felt very angry with Cyril when I thought of it—angry, and yet sorry, for all those long ten years which might have been so happy and were so miserable."

But mingling with that anger there was an undoubted sense of relief, which proved to me plainly how wrong it would have been to marry Cyril Vernon. More than once during our short engagement it had seemed to me as if I were bound by chains which should have been pleasant and which were irksome. More than once my heart had sunk at the prospect of a long life spent with my *fiance*. We had no tastes in common, and I soon felt that what I had taken for real pleasure in my engagement had been gratified girlish vanity at attention from a man so handsome, so distinguished and so thoroughly eligible a *parti*. It was not my heart, only my fancy, which had been touched, fortunately for me. Neither was it a case of "sour grapes," for, careless and frivolous as I was, I yet could recognize how great and precious a gift was the love of such a man as Cyril Vernon.

The long Summer day wears on; neither Mabel nor I go down to luncheon, and the afternoon slips by. I take a book from Mabel's little bookcase, and try to read, but I find my thoughts wandering. My sister lies still, her face hidden; but she is not crying, neither is she asleep. Presently papa and Cyril go out together—the former talking as they go down the garden-path, and the latter, listening and answering absently I feel sure, looks pale and grave, even sad. Soon after they have disappeared down the high road the schoolroom tea-bell rings, and Mabel lifts her head from the pillow, and raises herself on her elbow.

"Half-past four," she says, trying to speak lightly. "I have wasted the whole day. What shocking indolence! Have you been here all the time, Gracie? How good of you, dear!"

"Are you better, Mabel?" I ask, as I go to her side and smooth back her pretty disordered hair. "Shall we have some tea up here cosily? And after tea you shall dress comfortably for dinner."

"You will spoil me, Gracie," she says, smiling; but she makes no opposition, so I ring for tea, and settle her comfortably in a large old-fashioned chintz-covered chair by the open window, thinking sorrowfully how very pale she is, and what dark circles, almost like bruises, that one day's unhappiness has traced round her sweet dark eyes.

When tea is over, and I am sitting on a stool by Mabel's side, with my head resting against her knee, there is a moment's silence. I am puzzling myself how to begin, and Mabel is looking out of the window with "far-away" eyes, as if her thoughts were far away from the present, and lost in the past.

"Mabel!" I begin, desperately, at last.

"Well, dear?" she answers, with a little start, and turns to me with her own sweet, sad smile.

"I have something to tell you," I stammer, then go on hurriedly. "I want—do you think it will

be very wrong?—I want to break off my engagement."

"Gracie!"

"Are you dreadfully shocked?" I ask, lightly. "Really and truly, it will be the best thing for me to do. I do not love Mr. Vernon, and I do not think it will break his heart."

And then, without giving her time to speak, I pour out a voluble explanation. I plead my youth and inexperience, and tell her, with perfect truth, that I find that I have completely mistaken my feelings for Cyril. The engagement has been such a short one, and has been kept so quiet, that no one need know of it, and I end my explanation and excuses by asking her to tell Cyril.

But Mabel shrinks back.

"No, no," she says, hurriedly; "papa will tell him, if indeed you have decided; but, Gracie, have you really considered this well? Have you quite made up your mind? Do you know what a great treasure you are casting away? Do you know how happy you would have been? Dear child, think well. We, who love you, could wish you no happier fate than to be Cyril Vernon's wife."

"But I do not care for him, Mabel. You would not have me marry him, if I do not care for him?"

"No, dear; but——"

"No buts," I answer, gaily. "Oh, Mabel! here is papa—will you tell him, dear? He may be a little vexed with me; and while you are telling him I will go down stairs."

Papa comes in while I am speaking, and disregarding Mabel's entreating gesture, I leave them together. What passes between them I do not know; but when papa comes down, he looks somewhat moved, and kisses me without a word of the scolding I half expected to receive, and then he goes into his study, where Cyril is writing letters.

The interview between papa and his embryo son-in-law is a long one; and when they join us at dinner Cyril's face wears an expression of intense happiness, which shows me that the explanation has been ample and satisfactory, and his eyes seek Mabel's with an impassioned tenderness, which tells a tale of love few would be slow to read.

Thus it comes about that, when pleasant Summer days are nearly over, and Autumn's russet hues and golden browns are clothing trees and hedgerows, there is a pretty wedding at Easton Church. Mabel looks beautiful and queenly in her bridal robes—a far more fitting bride for Cyril than I should ever have been—while his face is transfigured with an expression of intense joy which bodes well for our dear sister's happiness.

Of course I am bridesmaid, and Jack Edmonds is Cyril's best man. Jack has passed all his medical examinations, and Cyril has asked him to settle at Vernon, where a clever, rising medical man cannot fail to make his way, and where Cyril has bought him a practice, which he whispers to me, smiling, is his wedding-present to Jack and me, while Mabel's gift is the furniture of the pretty house they have taken for us. Ah! I have let my secret out now.

Before the Summer comes again there will be another wedding at Easton Church, in which Jack and I will be the principal performers. Mabel and Cyril will be back from their long honeymoon under dreamy Italian skies then, and in my present cloudless happiness I sometimes glance back to the brief period of my first engagement, and rejoice unfeignedly and sincerely that I once played the part of eavesdropper concealed in the conservatory.—THE END.

NEW PUBLICATIONS.

Lost in a Great City. By Amanda M. Douglas. Boston. Lee & Shepard. 12mo. Cloth, $1.50.

An intensely interesting history of a semi-orphan, lost in the city of New York. It gives a detailed description of ten years of an outcast life,—bought by a desperado, and sold to a variety actor, who, by means of the severest chastisement human nature ever underwent, succeeds in developing her into an elegant dance and tight rope performer. She gets to loving her "Dick," who turns his cruel treatment into fondness and caresses,—dies and again leaves her cast upon a cold and unfriendly world. After several years of severe hardship she again enters the life of an actress upon her own independence, becomes recognized by friends who have looked long and earnestly for her, is restored to the arms of a fond and loving father, becomes an heiress and marries the man who persistently sought for her everywhere, both in Europe and America. The story is altogether well written, but at times her episodes are too much overdrawn to become real to the reader.

History of Woman Suffrage. By Elizabeth Cady Stanton, Susan B. Anthony, Matilda J. Gage. Complete in two volumes. New York: Fowler & Wells, Publishers. Price, cloth $5; sheep, $6.50.

The first volume is now published, the second will appear in due time. This is the outgrowth of an endeavor which has claimed the attention of the authors for many years, and also of many others in a more subdued manner. A faithful survey of the suffrage movement is comprehensively related. Brief personal sketches of women who have been practically interested in this work is an attractive feature. Fine steel portraits are interspersed, thus enhancing its value. A short chapter is devoted to "Woman in Journalism." The progress of woman in a general sense; State laws, and much information bearing upon matters distinctive of, as well as combining with suffrage, has received consideration. Those indifferent to its particular subject will find enough within its folds to guarantee a glance at least. Letters from distinguished authors, among them Horace Greeley and George William Curtis, have been selected for its pages.

Light and Life. For Sunday Schools, Prayer and and Praise Meetings. By R. M. McIntosh. Boston: Oliver Dilson and Co. Price 35 cts.

Light and Life has been very carefully prepared by Mr. McIntosh, and creates a very favorable impression on first sight, by reason not only of the bright, clean cut appearance of its pages and title cover, but by the unusual excellence of its contents, which have been especially chosen to give to Sabbath School teachers and scholars an entirely fresh collection of hymns and tunes, either original or selected, which will add a pleasing change to their work and exercises. The title is very apt, and the illustrated cover representing a missionary ship sailing into the harbor of a savage hamlet in the Southern Seas, is admirably executed, and is suggestive. The motto verse:

Light and Life to all he brings,
Risen with healing in his wings;
Hail, thou Heaven-born Prince of Peace!
Hail, thou Son of Righteousness!

Gleanings in the Field of Art. By Ednah D. Cheney. Boston, Lee & Shepard.

This book is written in a very pleasing style and shows much thought and research. The opening chapter is devoted to a discussion of art in general and this is followed by some 15 chapters, in which is traced the history of art from 600 B. C. down to modern times, giving us glimpses of the progressive steps, and pen pictures of the men who, like Angelo, have exalted it to its proud position. It is a book which will prove interesting to every lover of the beautiful, and will be a valuable aid to the student of historical art.

A Lesson in Love. Round Robin Series, No. 2. Boston: James R. Osgood & Co

A New York lawyer is the hero of this entertaining novel. Two women are recipients of his interest; with one he forms an engagement while his keenest interest is in the other. The striking points of the story are the manner in which the hero is disentangled from his unenviable position, and the unfolding of the characters. A famous lawsuit, rival incidents, &c., give to the story freshness and spirit.

BRIC-A-BRAC.

There was a young fellow of Milton,
Whose collar it would keep a wiltin';
The warmer he got
The freer he "swot:"
"Be jabers," said he, "I'm a miltin'."

A young lady was married in Louisville the other day, and a newspaper account of the event was headed, "Mated in May." The New York Graphic supposes that "Joined in June" and "Attached in August" will be the fate of those who come later in the season. It is to be hoped that "Separated in September" will be needed in no case.

Her lips were like the leaves, he said,
By autumn's crimson tinted.
"Some people autumn leaves preserve
By pressing them," she hinted.
The meaning of the gentle hint
The lover did discern:
And so he clasped her round the neck,
And glued his lips to her'n.

A Western writer thinks that if the proper way to spell tho is "though" ate is "eight," and boes is "beaux," the proper way to spell potatoes is "poughteighteaux."

Sweet flowers! that from your sunny nooks
Give welcome to the vernal sun!
How joyous, as each bright eye looks
Aloft, doth seem the life begun.
How eloquent ye seem of days
When lovers near your haunts will chance,
And she your dainty forms will praise,
And he up sodded cliffs will prance,
And get—much verdure on his pants.
—Yonkers Gazette.

An Oshkosh mother was remonstrating with her daughter for refusing what the former considered an eligible offer of marriage. "It's no use talking to me," exclaimed the recalcitrant maiden. "I won't never marry no man who scratches a match across the basement of his pantaloons."

ALL THE SAME.

The soap-fat man's familiar face
Is now no longer seen;
All kitchen grease finds a new place
In Oilymargarine.

Seeing is not always believing—you may see a man, and yet not believe him.

John Phœnix, the humorist, being one night at the theatre, fancied he saw a friend some three seats in front of him. Turning to his next neighbor, he said: "Would you be kind enough to touch that gentleman with your stick?" "Certainly," was the reply, and the thing was done; but when the individual thus assaulted turned round, Phœnix saw he was not the man he took him for, and became at once absorbed in the play, leaving his friend with the stick to settle matters with the gentleman in front, which, as he had no excuse handy, was not done without considerable trouble. When the hubbub was over, the victim said: "You told me to tap that man with my stick?" "Yes." "And what did you want?" "Oh!" said Phœnix, with extreme gravity, "I wanted to see whether you would tap him or not."

Wives of great men oft remind us
We may make their dress sublime:
Eighty shillings for a bonnet
Knocks a check-book out of time.

Sunday-school teachers have amusing experiences. In explaining the Gospel for the day, not long since, the subject being the "tares and the wheat," the children were much interested therein. In closing, I said: "Now, remember, the tares represent the bad people, and the wheat the good." Tommy who had been an intent listener, opened his great blue eyes and said: "Miss Jenkins, you say that the tares are the bad and the wheat are the good? "Yes." "Why." replied the practical Tommy, "its the wheat that gets thrashed; the tares don't."

Once he sang of maidens,
Sweet and jolly maidens,
Now he is a cynic,
Cynic, cross and cold;
Just because when smitten
He recieved the mitten,
He must think that maidens
Are all flirts and bold.

IT IS UNLUCKY.

To fall out of a third-story window on Monday.

To meet a red-headed woman on Tuesday (especially if you owe her anything.)

To break a $40 mirror on a Wednesday.

To dream you see red snakes or green monkeys on Thursday.

To get hung on Friday.

To lose $2 50 on Saturday.

Or to get locked up on Sunday.

Paste this in your hat.

FASHIONABLE NURSERY RHYME.

Old Mother Hubbard
Hangs in my cupboard,
Very æsthetic in tone;
What shall I wear,
When its threadbare,
And the new fashion is gone?"—Punch.

BEFORE AND AFTER.

"Women before marriage want nothing but husbands, and when they get them they want everything else," said an old bachelor. "How different it is with you," retorted a lady. "When a man gets a wife he just settles down contented, feeling that he has secured the best blessing that heaven could bestow."

THE TIME HAD COME.

THREE or four years ago when there was a grip on the potato market, there lived near an interior village in this State a farmer named Peters. He raised good crops, paid his debts, and was down on rings of all sorts. The price of potatoes kept going up and up and the old farmer was uneasy. He came into the village every evening to see how the market stood, and although he never said much it was evident that he would burst his hoops pretty soon if things continued on in that way. At length the climax came. One evening the old man and his son had a warm corner in a grocery when a citizen entered with a newspaper in his hand and said:

"This New York Daily says that the price of potatoes is certain to advance again before the week is out."

"What?" exclaimed Peters, "another advance in 'taters?"

"Yes, the Lord only knows what is to become of the poor if this potato ring isn't bursted."

The farmer arose, buttoned his old white overcoat clear to his chin, brought his fist down hard on the cheese box and sternly said:

"The time has come! I've stood it—and stood it, as long as I can, and now I'm going to act! George we'll go home and get ready to throw fifty-six bushels of peachblows on the market to-morrow, and bust that wicked ring all to thunder."—Wall Street News.

For Women.

CONDUCTED BY MISS RAY CLARK.

A MOTHER'S DIARY.

MORNING! Baby on the floor,
Making for the fender;
Sunlight seems to make it sneeze;
Baby "on a bender?"
All the spools upset and gone,
Chairs drawn into file,
Harnessed strings all strung across,
Ought to make one smile.
Apron clean, curls smooth, eyes blue
(How these charms will dwindle)
For I rather think—don't you—
Baby "is a swindle?"

Noon! A tangled, silken floss
Getting in blue eyes;
Apron that will not keep clean
If a baby tries!
One blue shoe untied, and one
Underneath the table;
Chairs gone mad, and blocks and toys
Well as they are able;
Baby in a high chair, too,
Yelling for his dinner,
Spoon in mouth; I think—don't you—
Baby "is a sinner?"

Night! Chairs all set back again,
Blocks and spoons in order;
One blue shoe beneath the mat
Tells of a marauder;
Apron folded on a chair,
Plaid dress torn and wrinkled;
Two pink feet kicked pretty bare
Little fat knees krinkled;
In his crib, and conquered, too,
By sleep, blessed evangel,
Now I surely think—don't you—
Baby "is an angel?"

CONCERNING FARMER'S DAUGHTERS.

MARY WAGER-FISHER.

ALTHOUGH the matter rarely, if ever, finds its way into print, it is nevertheless true that there is as much discontent among the daughters, as among the sons of farmers, but owing to the circumstances with which they are environed and their greater lack of venturesomeness, it is not often that a girl breaks away from the home life of the farm and turns to the city, or "goes West" to seek her fortune.

Every occupation not [illegible] evoid of personal incentive, is not worth much to the average American of either sex. We all lack the moderation and contentment of disposition that characterize the people of older countries. While we also have not reached certain methods of work that are an outcome of older civilization. For instance in Europe, the manufacture of butter is almost exclusively in the hands of women, and in France butter making is made such a speciality by women that consumers in making their purchases ask for certain brands—for the butter made by certain women who have achieved a reputation for the excellence of their butter. But in this country with its enormous production of butter and cheese, the manufacture and sale of both are carried on in the name of men, and in many large dairies the entire work is done by men. Although women have been quick to take advantage of many new opportunities for work during the past few years, yet in certain ways, particularly available to country women—ways which might be made pleasant, profitable and full of interest—they have been peculiarly slow in making efforts. For a farmer's daughter, to make butter, pack it in a tub, and send it to market to be dumped with numerous other tubs and sold in the lump, is a work that is commonplace enough; but if she applies herself to the making of a distinctive quality of butter, which in shape and brand has individuality like herself, and which must soon win a good repute among buyers, then the maker of it does her work to a new song. She has made a place for herself, and gets first class pay for her work. In the city of Philadelphia, and probably in other cities also, there are many families who pay from 75 cents to $1.00 per pound for their butter, whatever the market prices may be—being supplied with a certain brand of the article which they know to be always first-class, and this quality of butter rarely can be had in the markets.

No better time, could be had, than the present day of oleomargarine and butterine, for women to turn their attention to butter making in their own names and right—give their butter a stamp of their own design, and in their personal behalf make a place for it and fill it so well that there will be a continous and growing demand for it. The French women send their butter to their customers in small baskets, something like a strawberry basket. The butter, which is unsalted, and made fresh every day or two, is wrapped in a piece of muslin thoroughly soaked in strongly salted water and the butter remains in the wet salted cloth until used up.

In Finland, a far-away country to quote, there are traveling dairy-maids and dairy schools. The dairy-maids, or traveling teachers, were first appointed in 1866 officially, and as they were paid from the public treasury every inhabitant had a right to claim instruction from them. So much interest was awakened by the dairy-maids in butter and cheese making, that the government founded dairy schools, and schools were also founded by the owners of private dairies with women to teach the practical part of the work. There are but eight pupils allowed in each school, and after a course of two years they pass a final examination before the members of the Agricultural Society. During the two years the instruction consists of animal physiology, tending of animals in general, treatment of the common diseases of the cattle, the use of the thermometer, different methods of cooling milk and their effect upon the formation of cream, the treatment of cream, making of butter, the manufacture of cheese from skimmed and unskimmed milk and finally book-keeping by simple entry—in fact a thoroughly learned business, which in this country is taken up and carried on in a most unlearned and haphazard fashion.

Each dairy school receives from the State an annual subsidy of 2,400 Finnish marks. In addition to butter, cottage cheese can be made; where there is fruit in abundance, young farmerines ought to be able to make a local reputation for their jellies, preserves, spiced and canned fruits. Home prepared articles have a flavor and deliciousness that are never found in goods put up at factories, and there are always consumers of sufficiently refined and dainty tastes to buy these superior articles. So with certain cakes and pastries. Poultry raising is very profitable, and all occupations that bring one in contact with domestic animals and with nature have a healthful cheerfulness and wholesomeness about them that should make sweet and happy the life of any woman engaged in them.

If young country women want work to which they can put their brains as well as their hands, there is no place so advantageous for them as the country, especially, if they live in the region of a thriving town or on the line of railways, so that markets for their wares are available. To build up a business of any sort requires patience, pluck, perseverance and real capability. Before leaving the farm for the shop, or "store" or factory, I would earnestly advise all discontented and ambitious girls to first see what they can do with the means they have at hand.

If parents have money to "start the boys" in life, they should do so equally with the girls. Independence and self reliance are as necessary for women in this land of changing fortunes as for men, while work with a purpose in it is necessary to the best and truest happiness. And if farmer's daughters can establish a place for themselves by their work on the farm—work with aim and ambition in it—they can do no better, for life in the country is, beyond all question, of the best possible good to a human being. But a great many are exceedingly slow in finding it out.

WOMAN'S BEST WORK.

MANY different topics have been discussed in the Woman's Department of the RURAL NEW-YORKER—economy, etiquette, the fashions, etc.—but among all the good, energetic and intelligent women who write those articles, not one, I think, has brought forward the subject which of all oth-

ers should and does engross the mind of every thinking woman of to-day. While all those minor matters are entitled to a moderate share of attention, and are good as far as they go, still they should be considered *as* minor matters, and, as such, occasionally give place to something of infinitely more importance, namely, the battles to be fought and which are being fought by America's noblest daughters, for God, and home, and native land, against their greatest enemy—the rum traffic. Cannot the good women who discourse so wisely of securing the physical welfare of our children, say something of this matter? What though we so faithfully and tenderly care for the dear boys that they grow up into stalwart youths, straight as young pines and princely as modern Absaloms? None the less are the terrible snares set for them. Oh, mothers! none the less reason have we to fear and tremble as we think of the dread possibilities of their future.

So let us to the rescue, each in her own way doing what she can. This is peculiarly woman's work, and we cannot conscientiously ignore or set it aside; and so I think that in this department of the RURAL the subject of temperance might with great profit receive some attention. Has any one of you good news to tell as to what is being done in your community? Has any one sad news, of failure and discouragement? If so, sympathy is sweet, and perhaps we may help each other more than we know. E. A.

HELP, OR NO HELP.

A GREAT deal is said for and against hired help for women, though I do not recollect ever seeing much said on the matter of hired help for men. I suppose it is taken for granted that they must have it, when they have extra work to do. Extra work for woman only takes the place of fancy work and croquet and such little diversions which come in as a by play. She ought cheerfully to set these aside for a few months in the Summer considering what a long resting spell she has all the year. At least that is the way you would think some folks reasoned, about woman's work.

Those who suffer most from this peculiar man's view of the question are without doubt, young mothers with one baby in the arms, and an ambitious, money making husband. Men get more sense as they grow older, and two or three bad break-downs, are warnings not to be slighted.

I suppose the man does not live who has any conception of the care and labor which one baby in its cradle makes for a mother. Nor is the care very much lessened when it begins to crawl about the floor and pull over the water pail, and dig into the ashes and chip basket, though it is apt to be "so cunning" then, it pays its way pretty well.

If anybody needs a hired girl it is a mother with one baby. When there are four children the older ones can watch the younger, and when there are six it is quite possible for a healthy mother to dispense with the infliction of "help," and enjoy the luxury of having her house all to herself, and her work done in her own way. But it is at a fearful risk that the young mother attempts it. By "putting up" with help in the early years she may save herself for a happy, cheerful, mature age instead of making middle life a dreary bundle of infirmities. J. E. M'C.

HINTS.

LEMON.—The juice of a lemon, squeezed into a glass of water, without sweetening, drank before breakfast at this season of the year, is said to be a preventive of malaria, and an excellent thing for almost everyone to take, particularly if they are bilously inclined.

HAIR WASH.—Add to a wine glass of cold water a half tea-spoonful of sal-volatile, and with a small piece of flannel or sponge well wash the head and hair, dividing it into partings, so that every part is washed. This hair wash cleanses quickly, and that it preserves the color of the hair has been proved by an experience of ten years. Spirits of hartshorn may be used instead of sal-volatile, six drops to the wine-glass, and applied in the same manner.

NECESSITY OF GOOD VENTILITION IN ROOMS LIGHTED WITH GAS.—In dwelling-houses lighted by gas, the frequent renewal of the air is of great importance. A single gasburner will consume more oxygen, and produce more carbonic acid to deteriorate the atmosphere of a room, than six or eight candles. If, therefore, when several burners, are used, no provision is made for the escape of the corrupted air and for the introduction of pure air from without, the health will necessarily suffer.

DRYING FLOWERS IN SAND.—To dry flowers properly in sand, dishes sufficiently deep to permit the flowers to be covered at least an inch with sand should be procured. White scouring-sand will suit; lay it half an inch deep in the dish. Place your flowers, stem downwards, in this sandy layer and sprinkle sand over them till all the petals are filled and the blossom quite covered. It is as well to hold them firmly while sprinkling them, so as to insure a complete dusting. This operation over, place the dish in a warm and dry situation. In about a week you may examine the flowers, but some flowers will require a much longer time than others. Should there be any trace of moisture in the dish at the first inspection, dry the sand before using it again, or use new sand. This is a very much better way to dry flowers than pressing them out. They are by this method kept in shape, their colors are preserved, and may be retained even for years. Bright flowers, such as geraniums, carnations, pinks, pansies, gladioli, etc., are particularly adapted to this method. White flowers will not answer, nor will the plan succeed with succulent plants—as hyacinths; but ferns will answer very well under this treatment. Very pretty arrangements can be made of these dried flowers when mounted on card-board or placed in baskets, according to the taste of the individual.

ABOUT WOMEN.

ADELINA PATTI is suffering from acute bronchitis.

"He will not die," are words said to have been uttered by Mrs. Garfield in relation to her husband. May she realize their truthfulness.

AT the wedding breakfast of Whitelaw Reid and Miss Mills, the groom found at his plate a slip of paper which proved to be a certified check for $500,000 from the father of the bride.

MRS. LUCRETIA PLUME, widow of General Joseph Plume, of Newark, N. J., died on Sunday, aged 87 years. She was probably the oldest native resident of the city at the time of her death.

MRS. MARTHA A. MAXWELL died at the house of her sister, Mrs. Nathan Thompson, at Rockaway Beach. Mrs. Maxwell obtained a national reputation by her wonderful exhibit at the Kansas-Colorado department at the centennial. She was a most devoted lover of nature.

MRS. JOHN JACOB ASTOR has just sent another party of 100 children to homes in the West, through the agency of the Children's Aid Society. The whole number of homeless little ones thus provided for by Mrs. Astor, is 813, at an expense of more than $11,500.

Miss Dog Bull is said to be the belle of the Indians at the Standing Rock Agency, and several duels have been fought by the young braves who are rivals for her hand. As her father owns 300 ponies, she is considered a good catch, aside from her superior personal attractions.

MRS GLADSTONE is a benevolent woman, and does many kind things for the villagers of Hawarden. She has given them an excellent coffee-house which is open week days and Sundays. She has also established near the castle a home for orphans Many of the Gladstone servants have been on the estate twenty, thirty and forty years.

MISS CORSON gave the first of the series of lessons on cookery before the Training School for Nurses, in the parlors of the Maternity, on Concord street, Brooklyn, Monday, May 30, and despite the fact that it was Decoration day, there was a good attendance. Miss Corson had a gas stove, with which she practically illustrated her lessons and entertained her hearers hospitably. The course of lessons were continued a week, each afternoon, from three to five o'clock.

KEEPING ON GOOD TERMS WITH A WIFE.—When the celebrated Theodore Parker married Miss Cabot, he entered in his journal on his wedding day the subjoined resolutions, the keeping of which made his life a happy one:

1. Never, except for the best of reasons, to oppose my wife's will.
2. To discharge all duties for her sake freely.
3. Never to scold.
4. Never to look cross at her.
5. Never to weary her with commands.
6. To promote her piety.
7. To bear her burdens.
8. To overlook her foibles.
9. To save, cherish and forever defend her.
10. To remember her always, most affectionately, in my prayers.

Thus, God willing, we shall be blessed.

CORRESPONDENT'S CORNER.

WILL the lady that suggested those holders be so kind as to give the ladies of the RURAL a pattern of a butterfly, or some other pretty pattern for a holder to be used about a parlor stove?

MRS. T. J B.

Will you please ask Miss Harvey to give me a description, and possibly illustration of Kensington stitches? I would esteem it a great favor.

[Will Miss Harvey oblige?] MRS. W. V. A.

Mollie E. who asked, sometime since, for a sample of coverlet from Mrs. W. V. A., will oblige by sending her address to this office. R. C.

Far, far better for you than beer, ale or porter, and free from the intoxicating effects, is Hop Bitters.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

HOUSEHOLD NOTES.

MARY WAGER-FISHER.

TO DRIVE FLIES from a room, make "switches" for the purpose: to the end of a stick—a lath will do—nail a newspaper which has been folded the long way, and which has been cut into narrow strips to within an inch of the folded edge, so that it is like a length of wide fringe. Wind the "heading" around or across the end of the lath, and secure with two tacks. Make two or three, and renew the fringe of paper so fast as it wears it out. If the way in which the flies have poured into our house thus early is in any wise prophetic of the season, there will need to be an unrelenting battle with them for a long time to come, and "switches" made and worn out by the wholesale.

Anent fruit canning, a housekeeper tells me that she always runs a knitting-needle down into the hot fruit, as it lets out the air and admits of more juice being put into the can.

A nice way to cook a year-old chicken is, first to steam it until tender and then fry it on a griddle, that is, if one likes fried chicken; or broil it, if one likes it broiled. The griddle should be hot enough to brown the meat. Oil it with a little butter. Make gravy of the water that has steamed the fowl, which should be sufficiently reduced for the purpose.

When corned beef, ham, or any meat, is boiled, that is apt to be somewhat dry and juiceless, it is best to leave it in the juice in which it has been cooked until cold, as it will then reabsorb part of the juiciness drawn out in boiling. Roasted or baked meats are much nicer when the meat is placed on a rack which keeps it up out of the gravy in the roasting pan.

Don't throw into the rag bag soiled mosquito netting. It makes the best of cloths for cleaning wood-work; the coarse places in the threads act like a brush. Old underwear—such as knitted shirts and drawers—makes excellent wash cloths for smooth surfaces that require careful treatment.

Cast-aside tooth brushes are good for cleaning carved wood-work, especially ornamented bedsteads and other furniture that has a high polish.

REFINING INFLUENCES OF A WELL-ORDERED TABLE.

CHIEF COOK.

"ORDER is nature's first law," and neatness is her chief-cook, I was going to say, and I see no reason for not saying it. Well cooked food is as essential to health as pure air or water, but how disgusting it is to see it served in a slovenly manner. As well dress a pretty, graceful girl in fine stuff, spoiled by bad fitting and making. The neatness of a table is not necessarily dependent upon cloths, crockery and cutlery, for a bare pine table may show the skill and taste of the housekeeper, in the placing of the food and its accessaries, as perfectly as the most expensive and elaborate of furnishings.

The dishes should be evenly distributed around the edge; the meats should be in their appropriate plates, arranged with a view to convenience of carving and serving; the vegetables, by their bulk, shape and color should be utilized for effect of appearance, and the "*tout ensemble*" plainly saying to the guests, "Please make yourselves at home." Such a spread is evidence of skill and taste in the queen of the household.

No one can take a seat before such a table, without its banishing all unpleasant thoughts; the weary enjoy their food; sociability reigns, and pleasant, lively converse ensures healthy action from the food.

Certain arrangements should be stereotyped from day to day, that awkward habits may not be fostered among the juniors, such as the placing of the plates, knives and forks, napkins, glasses, salts, etc, etc. For the rest, a pleasing variety, depending upon the character of the viands, changing daily, prevents monotony and is exercise for the artistic faculties

Gentle surprises are pleasant here, and may be produced in a thousand ways, to suit the means of the family. Tiny bouquets, neat as neatness itself—I should have said herself, for neatness is feminine—green sprays and dainty folded napkins add much to the beauties of white cloth, clear glass, bright cutlery and orderly arrangements.

No one will deny that a well-spread table conduces to, I may say compels, cheerfulness, sociability, appetite, relish and health, and is notably elevating in its influence. It is merely beauty hovering o'er the ear of utility.

Each effort to improve the family table, making it a center of attraction, will, like a stone cast upon a placid lake, spread in an ever widening circle till the whole house, the household, the office, store, even the farm itself will show by their growing neat and orderly appearance that the "angel of the household" is a ruling power.

To those who are already "*au fait*" (*Anglice*, "up to") the niceties of the table, I need only say "persevere," but of the great majority of housekeepers I ask only a trial of a few months, satisfied that they will find that civilizing influences are always progressive.

DOMESTIC RECIPES.

Rural Berry Shortcake.

CRUSH the fruit and sweeten liberally with white sugar. Do this an hour or more before it is needed. For the cake take one quart of sifted flour, two teaspoonfuls of butter and milk to make only stiff enough to roll out. Divide and roll into oblong flat cakes and bake in a hot oven. When done split each cake and pile one layer on top of the other, with the crushed fruit between each and over the top. When served, pour a generous quantity of sweetened *cream* over each piece. This cake has been made with both strawberries and raspberries, and the many visitors at the RURAL FARM have pronounced it "the best of its kind."

Rice Pudding.

Beat together one and one-half pints of milk and three eggs. Stir in a pound of rice a pinch of salt, six tablespoonfuls of sugar, one-fourth of a nutmeg, grated. Put all into pan, boil until the rice is done, then add one-half pound of chopped raisins and bake the top brown. If the raisins are put in first the milk will curdle.

Mumbled Eggs.

Break eggs into a sauce pan, add an ounce of butter to each, and a little salt. Stir over the fire till of the consistency of a soft boiled egg and serve hot on thin slices of toasted bread.

CHIEF COOK.

Boston Tea

We received from the London Tea Company, 801 Washington Street, Boston, samples of their March Oolong and Japan teas, with request that we should try them and report thereon. The Company has adopted the plan of offering premiums to induce persons to get up clubs, or for families to order a large quantity at one time. We need only say that the samples of tea sent us were excellent. The Company will forward price list and circular to all applicants free, and samples of tea will be sent upon receipt of 10 cents.

Bad dreams, disturbed sleep, indigestion, stomach gas, all vanishes before Hop Bitters.—*Adv.*

Miscellaneous.

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News of the Week.

HOME NEWS.

MONDAY, July 18, 1881.

The President is now out of danger, as is thought by his attendants, and his full recovery is now but a question of time, as far as his wound is concerned.

On Saturday last Warner Miller was elected to succeed Platt in the United States Senate, receiving 76 votes out of 148 cast. The convention then adjourned until to-day, when another attempt will be made to elect a successor to Mr. Conkling.

A terrible cyclone passed over the village of New Ulm, Minn., on the 16th inst. Over a hundred buildings were destroyed and many persons killed or wounded. Hundreds have been left homeless.

Griscom, the Chicago faster, completed his 45 days without food on Tuesday last. He has lost 49¾ pounds since beginning his fast, his weight at at the close being 147½. He drank during the time an average of about 32 ounces of water a day.

A new war on passenger rates to the West has begun. From Boston to Chicago the cut rates are $16, and from this city to Chicago the fare is $14. This open rivalry between different lines is said to have been started by the sale of tickets at reduced rates to the students of New England colleges whose homes are in the West.

Gov. Cornell has vetoed the bill appropriating $500,000 for continuing the work on the Capitol at Albany. His objections are based on the grounds that the money is not needed for immediate expenditure, and that the builders may wait until the previous appropriations are exhausted before asking for more.

Extremely hot weather has prevailed during the past week, especially in the West. At Cincinnati the thermometer marked 103°, and over 1,100 cases of sunstroke were reported; at Indianapolis the thermometer stood 101° in the shade; at St. Louis, 104°; at Bloomington, Ill., 100°; Alton, Ill., 100°; Sullivan, Ill., 100°; Kankakee, Ill., 100°; Springfield, Ill., 100°; Lincoln, Ill., 104°; Charleston, Ill.; 103°; Decatur, Ill., 103°; Newark, O, nine sunstrokes, four fatal; Jacksonville, Ill., thermometor 108°.

Heavy rain storms are also reported. At Dubuque, Iowa, streets were washed out, trees blown down and other damage done; at Winona, Minn., a damage of $3,000 was done by a hail storm; at Des Moines, Iowa, 60 families were made homeless; at Oskaloosa, Iowa, heavy losses in stock, buildings and crops were suffered and at Marengo the Iowa River, by its overflow, has caused a damage to the amount of $200,000.

As a specimen of the extent to which "gambling in life" is carried on by the mutual insurance concerns in Northern Maryland and Southern Pennsylvania, to which reference was editorially made some weeks ago in the RURAL, a telegram on May 12th from Westminster, Md., says that an old negro named Robert Bell died there on the night of the 10th, on whose life insurance policies had been taken out in various "companies" aggregating over a million dollars, in sums of from $2,000 to $12,000 by different parties who had no interest in the rheumatic fellow beyond the desire for his speedy death. He supported himself by selling apples on the street.

A rather notable student finished his course at the Yale Law School, graduating third in his class. This was Peter Doyle, ex-Secretary of State of Wisconsin. Mr. Doyle is now 45 years old, and has been a successful lawyer and politician in Wisconsin. Being conscious of some defects in his legal education he determined to remedy them at an age when most men would not feel like "going to school." He worked hard while at the Law School and was popular with students and professors.

Fourteen cars of a freight train on the Chicago, St. Paul, Minneapolis and Omaha Railroad broke loose on Sunday and started backward down a steep grade toward North Hudson, Wis. At the depot they crashed into another freight train, killing its engineer, George Trider. The engine and several cars were badly damaged, the loss being estimated at $40,000.

Governor Foster has received telegrams from the Governors of Indiana, Massachusetts, Wisconsin, Tennessee, Arkansas, Illinois, Virginia, Alabama, Missouri, Georgia, Kentucky, Mississippi, New York, Nebraska, Vermont, Florida, New Jersey, West Virginia and Wyoming Territory approving the suggestion in reference to fixing a day to be observed as a day of prayer for the recovery of President Garfield.

The Hon. Phineas W. Hitchcock, ex-United States Senator from Nebraska, died in Omaha on the 12th, of general debility, augmented by exposure in the recent extreme heat. He was 50 years old and a classmate of General Garfield.

Six lines of railroad now enter Denver, and three more are soon to be added.

A statement prepared in the contract office of the Post Office Department shows that the Star Route service has been cut down $1,200,000 up to date. The Second Assistant Postmaster General says that the reductions in the Star Route service cause little complaint, and will be remedied where the complaint is just. Ten per cent. will have to be restored.

The Women's Silk Culture Association of Philadelphia is planning for an exhibition of the silk productions of the United States during the coming Autumn. The art schools will be invited to send exhibits of painting and embroidery on American silk, and manufacturers everywhere of American silk are assured that an opportunity will be given to them to display exhibits under the most advantageous circumstances. It is expected that the fair will be held in the latter part of October, and continue two weeks.

A little boy in West Virginia sent his pet fox to Baltimore to be sold for the benefit of the Garfield fund. He wrote: "Be careful that he don't gnaw his way out of the box. Sell him for Mrs. Garfield Tell her I sent it, and that I hope she will like my idea. Tell her I hope Mr. Garfield will get well. N. B.—I paid $1 for the chain and box. Please send me one-fifth of what it sells for, as I want to buy a pig."

Gen. John C. Pemberton, who commanded the rebel forces at Vicksburg during the memorable siege which ended in the surrender to Gen Grant July 4, 1863, died at Penllyn, Pa., on the 11th inst., at the age of 64 years. Gen. Pemberton was a native of Pennsylvania, having been born in Philadelphia in 1817. He was appointed a cadet in the West Point Military Academy in 1833, and was graduated in 1837, ranking 27 in his class.

A Dakota ranchman became convinced that life was not worth living, but desired to hear all that could be said on the other side before committing suicide. His only companion at the ranch was a boy, whom he gave one hour in which to dissuade him from his purpose. The youth used all the influence he could think of, and read some appropriate passages of Scripture, but failed to change the man's mind. At the end of the hour the misanthrope shot himself.

The Michigan State Supreme Court, Tuesday, rendered a decision in a grain gambling case. A party having lent another money with an agreement to share the profits in an attempt to "corner" wheat, the lender sued to recover the money. The Court held that a combination to artificially affect the price of any necessity of life was illegal, and that the money advanced to purchase such contract cannot be recovered.

The Troy Times says a game of base ball was played at La Salle, Ill., on Sunday last, at which the Rev. Moses Gunn, of that city, opened the exercises with prayer, and delivered an exhortation to the contesting nines. At the conclusion of the game the reverend gentleman indulged in another refrain, tendering his services as chaplain and umpire on the following Sunday, which were accepted.

"Like a Fearful Dream."

"I have been so much better this Summer," writes a lady who had used the Compound Oxygen. "Every time I think of it I feel as if words would not express my pleasure or my thanks to you for what you have done for me. I shall never forget it. *It seems like a fearful dream, when I think of two years ago. I dreaded to have night come, for I knew there was no rest for me*, but that I must bear the pain and sickness as well as I could until another morning, which I dreaded to see, for I was so weak it seemed as if I could not see even my own family. Sometimes I wished I could stop breathing just to get a little rest. *Now it is so different. I sleep good the most of the time, and am well compared with what I was then.*" Our Treatise on Compound Oxygen, containing large reports of cases and full information, *sent free*. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

The exports of live stock from Ireland to Great Britain were unusually large in June, amounting to about 100,000 head, mostly horned cattle, with a considerable number of sheep, swine and horses. The cattle were "stores" and fat beasts in about equal proportion. The animals were shipped from 18 ports, but mostly from Dublin, Belfast, Cork, Waterford and Derry.....The British Dairy Farmers' Association will hold its yearly fair at London Sept. 16—20. Liberal prizes will be offered for butter and cheese and American dairymen are invited to exhibit their products.....A severe plague that lately broke out in Siberia, has traveled westward as far as St. Petersburgh, Russia, where it is very destructive to horses and fatal also to human beings. It is spread chiefly by the sale of the hides of diseased animals by the ignorantly reckless peasantry.....The appointment of Hon. L. S. S. West as British Minister at Washington to succeed Sir Edward Thornton is gazetted at London.....Alfred H. Moore of Philadelphia owns $75,000 worth of dogs.....Negotiations were closed at Peoria, Ill., Wednesday last for the purchase of 60,000 acres of land on the line of the Little Rock and Fort Smith railway by the Catholic colonization society.....The army worm invaded Long Branch Wednesday, millions coming from the north. Hollywood, Mr. Hoey's place, is devastated.....Prof. C. V. Riley is appointed entomologist of the Department of Agricultural, *vice* J. H. Comstock, resigned, to take office August 1.....Reports of the cotton crop from Georgia, Florida and Virginia are to the effect that it is later than last year and in average condition. In Louisiana, South Carolina, Mississippi and Arkansas the crop is from 10 days to two weeks late. Considerable drought is reported—The first bale of cotton of the season of 1881, raised by Mrs. H. Hausman of Dewitt, county, Tex., was received at Galveston Saturday the 9th and sold at the exchange for $425.....Since 1871 the Virginia peanut crop has grown from 225,000 bushels to 1,600,000 bushels.... ...A granger war against the barbed wire manufacturers is threatened in Iowa. The farmers of the State some months ago held a convention, presided over by the governor, to protest against what they called the "barbed wire monopoly." A committee was appointed to wait upon the owner of the patent and see if some compromise could not be made. This has failed, however, and a company, called the farmers' anti-barb-wire-fence association, has been formed with a capital of $100,000 to fight the question in and out of court. Over 200,000 persons in the State are said to be interested in the movement.

There are now 200 persons connected with the Land League imprisoned in Ireland under the Coercion Act, including one member of Parliament, one priest, one magistrate, several town councilors and many poor-law guardians.....The sale of Queen Victoria's yearlings has of late years generally brought forward a very inferior lot of animals. This year, however, the contrary was the case; the yearlings, although the majority of them were small, realized an average of nearly $1,000 apiece.....There is reason to believe that in a few years carp will be abundant in this country. The fish that were put in ponds in Morris County, New Jersey, last December, all lived through the Winter and are thriving finely. They have increased from two inches in length to six inches. They find their own food and bid fair to multiply rapidly.....Australia suffers from both animal and vegetable plagues. It has groaned under a rabbit pest and a kind of watercress, which somebody thought would be "such a good thing," but which has served admirably to choke up streams; and now it is in mortal dread of the lantana, a shrub resembling a gigantic raspberry bush, which was imported as a garden ornament from France. Birds like the seed, and scatter it in all directions, and the shrub threatens to grow densely and become an insufferable nuisance..... According to the best information, there are about 4,600,000 sheep in Texas. This will probably be increased 20 per cent. during the coming lambing season, bringing the number up to 5,500,000. Valuing them at $2.50 each would make the total valuation of sheep in Texas $13,800,000.....At a late meeting of the California State Viticultural Commission it was determined to issue treatises on the various vine pests, remedies, translations on vine culture, etc., to be prepared under the direction of the chief executive officer and the committees on phylloxera, vine pests and diseases of the vine, these to be published from time to time in pamphlet form, and finally incorporated in a bound report at the end of the year. These pamphlets will be circulated free to those of the public desiring them.....The Monthly Bulletin of the American Jersey Cattle Club has been discontinued with the June issue. Mr. Geo. E. Waring, Jr. Secretary or the Club and Editor-in-Chief of the Bulletin, says its publication absorbed too much of the funds of the Club.....With regard to the Canadian crop prospects, the Toronto Globe published, on July 13, crop reports from all parts of the Dominion, which it summed up as follows:—"The general result obtained from the reports is that the harvest, as a whole, will be by no means equal to the splendid harvests of 1877, 1878, 1879 and 1880, but will be superior to that of 1876. Wheat is the only cereal in which a deficiency in the crop is threatened. Fall wheat is 12 per cent. below the average crop; Spring wheat is in a much better condition than Fall wheat, but 3 per cent. less than an average crop. Rye is an unimportant crop, except in certain localities. Barley, oats and peas all promise a bountiful yield, and the acreage, as well as the quality, is far above the average. The good promise in these crops will go far toward attoning for the anticipated shortage in wheat. The hay crop is somewhat below the average, but not greatly so. The figures relating to the corn crop show the effects of the unseasonably cold weather which marked the month of June; not more than 84 per cent. of an average crop is expected. The reports concerning potatoes and roots show a very favorable condition of these crops. The apple crop is a long way below the average. The maritime Provinces appear to have good promise for their staple crops—hay, oats and potatoes."..... A cablegram on the 13th announces that "the Italian Senate has passed a bill to prevent the spread of phylloxera"—a bull against the comet!—"and to attempt the acclimatization of the American vine."..... The French Vegetarian Society agitators say that vegetarians are never hungry or thirsty. Yes, that's the newest kind of "News." Agricultural? Why, yes, of course, vegetarian—vegetables—don't you see"..... Large quantities of coarse Spanish wine, after being handled at Bordeaux, are sent to England for good French wine.....Some of the New Jersey farmers will appeal to the Legislature for protection against English sparrows. They think that a bounty ought to be offered for every dead sparrow.....Enormous damage and loss were inflicted on crops and stock by severe storms in many parts of Minnesota and Iowa, last Monday, the 11th.....Early in the month the Army-worm was destroying Alfalfa fields in Chico, Cal, ...Los Angeles County, Cal., has shipped 282,186 pounds of honey, against about 1,250,000 from San Diego County.....Mushrooms are extensively cultivated in the Mammoth Cave, Ky..... .....After a discussion on the value of the University of California to the farmer and viticulturist, the following resolution was adopted:

Resolved, That it is the sense of this Board that the Agricultural Department of the State University has been ably conducted, and has already been of incalculable benefit to the farmers of the Pacific Coast, and indirectly to all its industries, that its weakness lies only in want of adequate appropriations of money to maintain and conduct its work, and that the agriculturists of the State be urged to accord to the University a cordial and zealous friendship and support.

The Secretary was instructed to transmit a copy of this resolution to the Board of Regents..... Country papers in Pennsylvania are asserting that whortleberries, in many places in that State, are infested with poisonous bugs.....The well known trotting mare, American Girl, was badly gored by a bull on Tuesday, the 12th inst, at Ottawa, Canada.....The trotter, Maud S., beat the best time by a quarter of a second at Pittsburg, on Wednesday last, making the mile in 2:10½.....Bush fires are doing an immense amount of damage in all directions about Quebec. Canada, according to a telegram of the 14th.....Volunteer Junior, a valuable horse, and one of the most promising stock getters in Ontario, died in Welland, Canada, on Wednesday, from lockjaw, which resulted from a kick..... Scarcely an average yield of crops is expected in Germany, according to the latest official estimate. .....Thirteen hundred sheep, with their shepherds, were recently overwhelmed by an avalanche near Brigel, in the Grisons, Switzerland..... .....The Agricultural Gazette (Eng.) of June 27, summarizing its crop reports from various parts of the Kingdom, says that as to the wheat crop opinions are very various. Upon the whole it thinks the impression made by these reports is favorable. The crop is late and in some places it is thin, but generally there is a prospect of a fair average yield. Of Spring grain the barley is generally looking better than the oats, which have suffered from the wire-worm, and are in many places patchy.....It is estimated that there are upwards of 600 commercial florists establishments within a radius of ten miles from City Hall, New York, and that probably $10,000,000 are invested in their lands, structures and stock.....The students at the Iowa College Farm, last year, made all the sugar they used from Orange Cane.

WASHINGTON, July 15.—The returns to the Department of Agriculture on July 1 show an increase in the condition of cotton since the reports of June. The average condition is 95, against 100 at the same time last year. The following are the reports by States: Thirty-four counties in North Carolina average 94; 19 counties in South Carolina average 93; 57 counties in Georgia average 98; 13 counties in Florida average 90; 32 counties in Alabama average 102; 39 counties in Mississippi average 94; 18 counties in Louisiana average 96; 61 counties in Texas average 89; 32 counties in Arkansas average 92; 18 counties in Tennessee average 105. The plant is generally reported small and 10 days late. Hot and too dry weather is almost universally noted, but, except in Southern and Western Texas, little injury was reported from that cause at the date of the returns. Alabama and Georgia each report a better condition than last year, while Texas and Arkansas are lower. Insect injuries are seldom mentioned. The condition of the wheat crop, as reported July 1, is much better than it was on June, 1, and averages 83 for the whole country. The Atlantic States fell off slightly as compared with the returns for the same time last year, but the large wheat region north of the Ohio River and west of the Mississippi returns a low condition compared with 1880. Michigan reports only 64 per cent, and Illinois 60. Ohio and Indiana are below last year, but report a fair prospect. Missouri and Kansas make great complaint of damage from insects. In the Spring wheat States Iowa alone returns a condition much lower than last year, namely 72. The increase of area planted in corn is nearly 2 per cent over that planted in 1880. The average condition of the crop is not so high as the last two years, and is 90, against 100 last year. In all the North Atlantic States the crop is backward owing to the cold, wet Spring, but in the States south of the Delaware River and on the Gulf of Mexico it is reported as fair. Texas, however, reports serious injury from drought. In the great corn-producing region bordering on the Ohio and Mississippi Rivers the average is below last year's, particularly in the State of Iowa, which only reports a condition of 77, caused by the cold Spring and too much rain. In Illinois and Missouri the condition is reported "very favorable."

San Francisco, July 15—A dispatch from Portland says that the crops throughout the valley and in Southern Oregon are greatly in need of sunshine, and that the bright weather which now seems to be promised is welcome. The whole crop east of the Cascade Mountains will be nearly 100,000 tons, of which about 75,000 tons will be exported. The supplies this year will exceed those of last year from 30 to 40 per cent.

A telegram from San Francisco this morning says the Produce Exchange of that city reports there still remains in the State, of the crop of '80: 12,248,278 centals of wheat and 134,592 barrels of flour. (A cental is 100 pounds) This is considered a low estimate; but it is the largest surplus of wheat ever carried over.

Special Despatch from Detroit.

The demand of the people for an easier method of preparing Kidney-Wort has induced the proprietors, the well known wholesale Druggists, Wells, Richardson & Co, of Burlington, Vt., to prepare it for sale in liquid form as well as in dry form.—*Inter-Ocean.*

Lydia E. Pinkham's Vegetable Compound is a remarkable remedy for all those painful complaints and weaknesses so common to our best female population. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, billiousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Feeble Ladies, aged persons, weakly children, persons of sedentary habits, all need Hop Bitters daily.

Premature Loss of the Hair

May be entirely prevented by the use of BURNETT'S COCOAINE.

THE superiority of **Burnett's Flavoring Extracts** consist in their perfect purity and strength.

The Markets.

CROPS AND MARKETS.

MONDAY, July 18, 1881.

THERE is a great deal of difference in the various crop reports throughout this country, even from the same sections, and the same may be said, to a less extent, of European advices both by mail and cable. Our Agricultural News Department furnishes all the official crop reports of this country, issued during the week just over. From those of the Agricultural Department, which alone take in the entire country, it will be seen that the outlook for all the principal crops has considerably

improved of late, so that the wheat crop is now put at only 17 per cent. less than last year's, and the corn crop at only 10 per cent. less. Advices from several of the great wheat and corn-growing States, however, do not altogether confirm this favorable view. The official estimates from the Boards of Agriculture of the following States report the following shortages in wheat as compared with last year's crops: Ohio, 12,000,000 bushels; Illinois, 37,000,000 bushels; Michigan, 14,500,000 bushels; and Iowa, 17,000,000 bushels, or a total shortage in these four States of 80,500,000 bushels. It is by no means likely, however, that this ratio of decrease will be maintained in the other States. In fact, as we have already stated, the total yield must be larger this year than last in some Sates. Views with regard to the wheat crop of this State vary greatly, some insisting that there will be fully an average yield, and others maintaining that there will be a decrease of as much as 20 per cent. Our neighbors of the Dominion, too, are likely to have a short wheat crop, Fall wheat being put at 12 per cent., and Spring wheat at eight per cent. below the average; but barley, oats and peas will be fine crops, much above the average in yield and acreage; while in corn the shortage is likely to be as much as 16 per cent., though next month and the rest of this may do much for corn so far North as Canada. The Winter wheat harvest is now over in Tennessee, Kentucky, Virginia, Maryland, Delaware, West Virginia, Ohio, Indiana, Illinois, Missouri, Kansas, and is progressing in New Jersey, Pennsylvania, New York, and the Southern parts of the other States which grow Winter wheat, and it is probable this week will complete the Winter wheat harvest. Last Thursday, July 14, there were numerous reports in the Produce Exchange here that the wheat threshing was in may places disappointing; but these reports came chiefly from Chicago. The generality of reports throughout the country, however, say that threshing shows the new grain to be unusually good, though the yield is not always so satisfactory. The excessively warm weather of the two last weeks is said to be injuring the Spring wheat considerably, and a great number of severe storms in quite a large number of places in the Spring wheat region, have also done vast local damage to that and all other cereals. On the whole, we do not yet see any reason to modify our previously expressed opinions of the crops.

With regard to crops across the Atlantic, the last Mark Lane Express—that of the 11th—says: "The sudden and violent reduction of the temperature about the middle of the week has unfavorably influenced all maturing crops. A white frost was reported on Friday night. The copious rainfall has, however, greatly favored the Spring sown crops." A cablegram of the 12th says: "The Austrian harvest promises to be fully up to the average." Another cablegram of the same date says that the French agricultural journal, the *Bulletin des Halles*, of Paris, reports: "The wheat crop will be fair in the southeast of France, poor in the south, good in the west and center, fair in the east, good in the northwest and north and poor in the northeast. On the whole, it cannot exceed an average crop, and it may be slightly under it. The best crop cannot exceed the average." This is a trifle less rosy-hued than previous French reports; but the *Bulletin des Halles*—the best market reporter in France—is generally trustworthy, though conservative, in its crop reports. A cablegram from Berlin on the 14th, says: "There is every prospect that the harvest will be much worse than it was last year. There appears to be a prospect for a general harvest in all crops valued at only from one-half to two-thirds of an average yield." This applies probably to Prussia, chiefly, but with its accessions of territory in 1866 and 1870 Prussia now embraces most of Germany, and last year's crops there were by no means good ones—not enough for home use, the German exports of all breadstuffs to Great Britain in '80-'81 having been only 512,976 cwts. against 2,210,361 cwts. in '79-'80 and 3,337,627 cwts. in '78-'79, while Germany imported from France 143,000 cwts. of flour and 127,002 cwts. of wheat, besides a much larger quantity from this country. Unless the above report, therefore, is either greatly modified in its evil gist, or restricted to a small section, Germany, despite Bismarck's late heavy duties on imports of foreign cereals, must use a great deal of foreign breadstuffs in '81-'82. This, however, is far away the worst report we have had from Europe. The new wheat will hardly come into market in Great Britain before September 1, but in Southern France the harvest is already in full blast, while it is completed in Spain whence mail reports are somewhat unfavorable; in Algiers, where the crops were good, but the belligerent troubles disturbed harvesting; and in Egypt, where the harvest was fair.

During the past week breadstuffs here have shown an upward tendency, though across the Atlantic prices were either stationary or a shade lower. Winter wheat and Indian corn were particularly stiff and were extensively dealt in—wheat mostly on speculative account, and corn chiefly for shipment, although for speculative purposes also to quite a respectable aggregate. Trade in Spring wheat was limited, but prices were firm. New Winter wheat came into the Baltimore market two weeks ago and a few odd lots of it brought fair prices in this market last week.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail and lakes, on canals and on the Mississippi River was as follows:

	1881. July 9. bush.	1881. July 2. bush.	1880. July 10. bush.	1879. July 12. bush.
Wheat	15,619,976	15,970,746	10,979,880	11,701,587
Corn	15,528,581	14,511,347	17,240,688	11,757,399
Oats	7,465,147	8,333,491	2,779,775	1,489,490
Barley	171,611	193,974	156,213	380,475
Rye	128,684	136,071	129,583	329,979
Total	38,913,979	39,149,631	31,286,138	25,658,940

It is thus seen from the difference between the visible supply in the different years, that farmers must have kept back a good deal more than usual of their wheat and oats from last harvest; and a considerable quantity is said to be still on their hands. This is especially the case in California and Oregon where lack of transportation facilities forced farmers to hold their wheat last season or sell it at a heavy loss. The amount still on hand from last harvest on the Pacific Slope is put at over 24,000,000 bushels. Henceforth, counting in flour as wheat, all the unsold old crop will, of course, come into competition with the new crop and affect prices. Last week, however, there was a pretty heavy falling off in the receipts of breadstuffs at this port, as will be seen by the following table made up to Friday evening, July 15.

RECEIPTS OF BREADSTUFFS AT NEW YORK.

	W'k end'g 8th.	W'k end'g 15th.
Flour, barrels	107,350	111,000
Wheat, bushels	1,303,600	939,500
Corn, "	2,053,250	1,576,000
Rye, "	2,500	2,700
Oats, "	489,000	312,250
Peas, "	1,200	18,700
Malt, "	89,200	48,000

The exports of breadstuffs from this port ending with Friday from the previous Friday, were

	W'k end'g 8th.	W'k end'g 15th.
Flour, barrels	45,500	88,000
Cornmeal, barrels	3,250	5,800
Wheat, bushels	540,060	647,300
Corn, "	978,900	1,149,000
Rye, "	9,100	7,800
Peas, "	2,300	3,550
Oats, "	3,200	6,350

Although there was a large increase of exports, as may be seen, yet the hoard of wheat in warehouses here increased during the week, 467,450 bushels; that of corn 321,500 bushels; and of oats, 93,750 bushels. Some demand arose during the week for oats for the French market, contracts having been made for 16,000 bushels for Havre at 6½c. freight per bushel of 32 pounds. There was a severe break in rye; and barley, being out of season, was utterly neglected. Flour went up 5 to 15c. per barrel and corn meal, from 5 to 10c. per barrel. Millers and others who buy cereals for prompt sale are strongly urged across the Atlantic, not to buy more than they actually need in order to keep down prices until the present harvest comes into market. Our greater promptitude in bringing our crops to market gives us some advantage over Russia and most of our other competitors; but not as much as might be thought, owing to the fact that contracts are generally made ahead, and thus Russian exporters, by making contracts now for future delivery, help to fix prices for our products already in the market. Heavy buyers in late Summer and Autumn do not want all their supplies at once, but arrange for them to arrive during the season, so that a great deal of the purchases made in our markets for future delivery—"option"—are *bona fide*, although a majority of them are undoubtedly speculative—mere gambling on a rise or fall in the meanwhile. The approaching danger of a fall in prices of agricultural products arises mainly from the tendency to rush them at once to market so soon as they can be got ready for sale. Even with a very short harvest, this practice would be sure to overload the market for a time, and thus reduce prices; speculators would then hold the goods and realize all the profits from subsequent rises. Yet much can be said in favor of the farmer who sells his crops as soon as he can, at *paying figures*.

(St. Louis Chronicle.)

Advice is cheap,—dreadfully cheap. But we must be true to our instincts of humanity and tell our suffering friends to use St. Jacobs Oil, and surprise their rheumatism and their friends also at the result. J. D. L. Harvey, Esq., of Chicago, says: I would be recreant to my duty to those afflicted did I not raise my voice in its praise.—*Adv.*

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, July 16.

Cincinnati.—WHEAT in good demand. No. 2 Red Winter, $1,16@1 17; receipts 17,000 bushels; shipments, 24,500 bushels. Corn strong; No. 2 Mixed, 51c. Rye firm. No 2, $1,05@1.07. Pork firm at $18. Lard higher at $12.40. Bulk meats quiet, but firm; Shoulders, 6¼c; Clear Rib, 9¼c. Bacon strong; Shoulders, 7¾c; Clear Rib, 10c; Clear Sides 10¾c. Butter dull and unchanged. Sugar firm and unchanged. Hogs steady; common and light, $4.90@6.50 packing and butchers' $5.90@6.85; receipts 1,500 head; shipments, 855 head. CHEESE.—Fancy creamery sells at 23@24c. prime do. at 21@22c, choice Dairy at 15@17c. prime to choice Western Reserve at 15@16c. prime to choice Central Ohio at 12@14c. and common do at 9½@11c. per lb. prime factory is firm at 8@8½c. while lower qualities range down to 2c. per lb. EGGS have met a light demand during the week, and prices declined to 9½@10c, but under small receipts the market closes firm at 10@10½ cents per doz. for fresh. POTATOES are in only moderate local demand and are selling readily at $2 25@2.50 per bbl. for prime to choice Early Rose. CABBAGE continue strong under a light supply, at $1.65@1.75 per bbl., and 3 00 per crate. ONIONS.—Prime to choice sell at 3.50@3.75 per bbl. but Bermuda are dull at $1.00 per bushel crate. TOMATOES are in better supply; prime to choice sell at $2.50@3.00 per bushel in crates and stands. HOPS are in good request, and prices are steady for prime to choice Eastern at 22@24c per lb. HEMP.—The offering are light, but there is only a jobbing demand. Rough Kentucky sells at $125 per ton from store. Single dressed sells at 8c. and double do at 10c. per lb from store. SEED.—There is little demand and prices are not much better than nominal. Clover is jobbing at 8c. per lb. Timothy at $2.65 and Hungarian Grass at $1,00@1.05 per bush.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 16, 1881.

BEANS AND PEAS.—Small receipts of beans together with the late free export sales have had a good strengthening influence upon the market for standard white beans of fine grade; poor lots or stock that shows indications of not keeping sound in hot weather dull and rather at buyers' option. Green peas quiet at $1.50@1.55. Southern B. E. peas have a small call at $3@3.10 ₱ 2 bu. bag.

Marrow beans, prime, $2.43¾; other, $2.25@2.35; medium, prime, $2.40; other, $2.20@2.35; pea, $2.30@2.50 white kidney, $2.35@2.45; red kidney, prime, $1.55@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.30@1.35.

Receipts for week, 1,840 bush.
Exports do. 1,190 pkgs.

BEESWAX.—The demand is small but there is not much stock here and the market is steady and firm at 23½@25c.

BUTTER.—The Summer trade helps out admirably, but with the falling off that must ensue as the hot term advances, nobody predicts a steady continuance of the present comparatively high rates. There are some worthy opinions that intimate that there is considerable risk ful speculation both here and in the country. Much depends upon the eventual wants of shippers, but home buyers begin to point to the known liberal cold storage, especially if a seller attempts to use a "light supply" theory. The market is off about ½c. since last week for State and Western, which has to be perfect to make the upper figures. Only choice fows ladle-packed makes 18c. The weather is warm and butter loses a showing value at such a time.

Creamery—Western, good to prime, 21½@22½c: State and Penn, 22@23½c.; poor, 20½@21c.; sweet cream, 22½@23½c.: State pails and h'f tubs, choice, 21c: fair to prime, 18@20c.; Welsh tubs, 18@21c.; poor State, 16@17c; firkins yellow, 20@22c: Western imitation creamery, 17@20c.; dairy fine 19c.; other, 15@18c.; factory or ladle-packed, best, 17@18c.; other, 13@16c.; very poor Western, 11@12c.

Receipts for week, 43,240 pkgs.
Exports for week, 12,756 do.

CHEESE.—Our dairy friends should be delighted with the marvelous movement that has attended cheese during the past two weeks. Receipts have run heavy—never larger than for this week—yet right in the midst of hot weather trade has kept up an active jump with prices wavering only slightly, compared with many former similar surroundings of the market. The fact is a good many orders had to be filled and all demands have included a call for fine grades and a good scale has been established for even serviceable lines. About 40,000 boxes remain unsold but it is confidently thought they will be wanted for early steamers. Ohio and Wisconsin have done well, skims are better.

State factory, choice, colored, llc. do. white, 10¾c; fair to prime, 9½@10¾c; poor to fair, 9@9½c.; Ohios, fair fine 9¾@10c; other 7@9¾c; Wis poor to fine 8¾@10c.; part skimmed, 6@8c.; full skims, 3@5c.

Receipts for week, 187 000 boxes.
Exports for week, 138,765 boxes.
Liverpool cable, 56s.
Steam to Liverpool, 25@30s.

COTTON.—There has been an active market attended with better prices. All interests have participated in the trading but the market obtained its start in the "covering of shorts." New crop will be a little late and old is in good control.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¼	8¼	8¼
Strict ordinary	8¾	9	9
Good ordinary	9 11-16	9 15-16	9 15-16
Strict good do	10 3-16	16 7-16	10 7-16
Low middling	10¾	11¾	11¾
Strict low middling	11 5-16	11 9-16	11 9-16
Middling	11 9-16	11 13-16	11 13-16
Good middling	12 1-16	12 5-16	12 5-16
Strict good middling	12 5-16	12 9-16	12 9-16
Middling Fair	13 1-16	13 5-16	13 5-16
Fair	13 13-16	14 1-16	14 1-16

STAINED.

Good ordinary	7⅞	Low middling	9¾
Strict good ordinary	8¾	Middling	10 13-16

Futures closed irregular at a decline of 17@20 points on July and August and 9@11 points on the later months; sales 106,800 bales. Prices paid:

July, 11.83@11.92c.; August 11.64@12c.; September, 10.92@11.25c.; October, 10 47@10.70c.; November, 10.31@10.48c.; December, 10.39@10.40c.; January, 10.41@10.73c.; February, 10.59@10.70c.; March, 10.66@10.72c.

DRIED FRUITS.—There is no change to note: business is moderate and prime lots are held with confidence with supporting light crop advances. It is asserted that evaporators in some peach sections will be almost idle this season, and apples will be mostly wanted green. Small fruits partake of the strong feeling.

Apples, evaporated choice, 9¼c.; fair to prime, 8@9c; North Carolina sliced, common to best 4¼@5c. Va. do. 4¼@4¾c; Tenn in bbls. 4@4¼c. do. bags 4@4¼c; State fine cut 4¼@4¾c., quarters 4¼@4¾c; Western, 4@4¾c; evaporated peaches peeled 25@28c; unpeeled 13@14c; sun-dried peeled 17@20c; unpeeled halves 5@5¾c. Plums 10@11c. Blackberries 7¾@8c. Cherries 14c. Raspberries 24c. Whortleberries 11@11¾c.

Receipts for the week, all kinds, 220 pkgs.
Exports dried apples, 900 pkgs.

EGGS—Receipts for week, 8,167 bbls.; do. last week 6 837 do. The demand has been moderate, especially for Western; buyers are shy of stock coming from a distance when the weather is damagingly hot all along the routes. Prices are steady for first class stock and large receipts are not urged.

Near points, 19@19½c.; State and Pa., 17½@18c.; Western, fresh, 16@16¾c.; Canadian, 17c.; low grades and ice-house parcels 14¾@15¾c.

FLOUR.—There has been a very fair business in low grades for export, beyond such wants only a fair regular business is reported. The market will be subject to alternations until wheat crop estimates are more decided. At the moment high figures are ruling.

No. 2, ₱ bbl., $3.10@3 75; State and Western superfine, $4 00@4 70; city mills extra, $6.25@6 50; Spring wheat do. $4.80@5.05; Spring XX and XXX, $5.25@7.00; patents, $6.50@8 50; Ohio round hoop shipping, $5.00@5.40; trade brands, $5.50@6.25; St. Louis extra, $5.10@5.50; do. double extra, $5.65@6 35; do. family, $6.40@7.25; South'n shipping, $5.40@6.00; do. XX and family, $6.25@7.50. Rye, $5.00@5.40. Corn-meal, Brandywine, $3 40@3.50; Western, $3.00@3.30.

Receipts of flour for week, 114.900 bbls.; do. corn-meal 7,250.

Exports of flour, 71,000 bbls.; do. corn-meal 6,975.

FRESH FRUITS.—The variety is large and frequently during the week berries have been forced down to preservers' prices. The offering of pears is quite good for the early date. Apples have a slow sale. Gathered reports from all points are very blue for the peach crop. The young orchards at new points of cultivation will not begin to furnish even a moderate supply.

Apples, Sweet Bough, Jersey, ₱ bbl. $2.50@3; Sour Bough, $2@2.75; Red Astrachan, south'n ₱ bu. crate, 75c.@$1; green southern do. 40@75c.; do. ₱ bbl. $2@2 25; Pears, Bartlett Sav. ₱ bu. crate $4@5; Clapp's Favorite, Norf. $3.50@4; Jargonelle, Md. ₱ bbl. $6@7; Bell., Md. $5 50@6; Burre Gifford, Md. ₱ ½-bu. crate, $1@1.25; Cooking pears, ₱ bbl. $3.50@4. Blackberries, Wilson, Jersey, ₱ qt., 10@12c.; Md. and Del 8@10c; wild, 4@7c. Whortleberries, ₱ bush. $1. Raspberries, Antwerp up-river ₱ 3-to-qt. cup, 3@4c.; natives do. 1½@2½c.; Brandywine, Jersey, ₱ pint 5@6c.; Md. and Del. 4@5c; Black Caps, up-river 2½@3½c. Jersey 2@3c. Gooseberries, green, prime, ₱ bu. $1.25@1.50. Currants, Cherry, ₱ lb. 3@4c.; red, small, 1½@2c.; black, 5@7c. Peaches, Md. Hales, ₱ crate, $1.50@1.60; North Carolina ₱ bush. crate $1@3 50; Ga. ₱ 3-to-bu. box, $2@3.50. Plums, Wild Goose, 8c. ₱ qt. 10@15c.; Beach 4@6c. Watermelons Fla. & Ga. ₱ 100. $15@25; N. C. $12@15. Nutmeg melons, Norfolk, ₱ bbl. $2.50@3. Peanuts in fair demand and steady. Pecans unchanged. Peanuts, Va. hand-picked ₱ lb. 5@5½c; fancy 5¾c; extra prime 14½c.

GRAIN.—Crop reports of wheat have been less favorable and the market has been in favor of sellers in prices without leading up to large sales. Cable rates have been discouraging and not at all in keeping with our home prices. Sales of corn have been a prominent feature with prices inducing exportation. On the whole however, a good volume of trade can be noted, especially as freight room is being largely absorbed by hurried produce, including cheese and provisions. Oats speculatively active. Rye dull; small stock to deal in.

Wheat, Spring $1.00@1.24; do. No. 2. $1.20@1.22; do. No. 3. $1.15@1.17; red Winter No. 2, $1.23@1.23½; red Winter $1.12@1.32; white Western and State $1.17@1.27. Rye, 94@98c. Oats, white No. 1, 46c.; white No. 2, 43@43½c.; white No. 3 42c; mixed No. 1, 43c; do. No. 2 42½@43c; do. No. 3 41@42c; Corn, Western mixed 57@57½c.; do. No. 2 56@57c.; do. do. yellow 58@58c; do. do. white '58@58¾c; Southern yellow 57@59c.; do. white 58@62c.

Receipts for week, wheat, bush., 991,400; corn, do 1,572,900; oats do. 291,500; rye, do. 1,092; malt, do. 48,400; rice pkgs. 705.

Exports for week, wheat, bush 450 305; corn, do. 1,197,200; oats, do. 29,978; rice, pkgs.. 1,875.

HAY AND STRAW.—Exports for week 4 016 bales hay. Receipts have been checked by low prices and pressing farm work and the market is temporarily firmer for hay. Straw quiet.

Choice retailing timothy hay 80@85c. ₱ 100 lbs.; second quality, 60@70c, do.; shipping 45@50c. do; clover mixed 40@50c; pure 35@40c. Long rye straw 70@75c; short do. 45@55c.; do. other grain, 45@50c. do.

HOPS.—There is no prominent interest. Brewers' wants seem to be small, and cheap hops, that is, cheap for the buyer, comprise the call.

State, crop of '80, choice, 20@22c; good to prime 18@19c; fair to good, 13@16c; poor to fair, 11@13c; Eastern, 11@18c.; '79's, fair to prime, 12@15c.; olds, 5@8c.; Wis, 14@22c.; Cal and Oregon 19@23c.

Receipts for week, 353 bales.
Exports for week, 38 bales.

MILK.—The weather has ruled good for use and a reasonable supply of commission cans have met fair prices. The average made was $1.42 for cans of 40 qts., prices ranging $1.25@1.60.

POULTRY AND GAME—Dressed poultry is scarce and generally bringing good prices. Quotations are thought to be rather more than the market will stand with a fair addition to receipts.

Turkeys, Phila. choice ₱ lb 16@18c.; State & West. 14@17c; Phila chickens 26@28c; N. J. 24@26c; West. 23@25c. fowls, Phila. d. p 19@20c.; Bucks Co. and N. J. d.p. 18@19c.; N. J. scalded 17@18c.; State and Western 17@18c; do. d.-p. 18@19c.; coarse 14@16c.; Ducks—Spring, 18@19c.; old, 12½@14c.; Squabs, white ₱ doz. $1.25@2.50 do. dark, $1 50@1.75.

Live chickens plenty and weak; fowls scarce and high; turkeys wanted.

Spring chickens prime ₱ lb 23c.; other 19@21c. Fowls, ₱ lb. 17@18c roosters, 8@10c.; turkeys, 13@14c.; ducks, ₱ pair 60@$1; geese, extra $1.75; other $1.00@1.50; pigeons, 25@50c.

In game there is nothing plenty enough for commercial quotation.

PROVISIONS.—Pork has shown an energetic movement quite welcome after the long pause that has prevailed. Provincial and W. I. buyers have operated very liberally, and prices feel the buoyancy that arises when stock goes out for use. Cut meats have a fair demand, though bacon is rather sluggish. Lard retains its "boom," and with settlement of contracts and cornering of spot prices are firm and high.

Pork, extra prime, $14@14.50; Western mess, new, $18@18 50; old, $16.25@16.63. Lard, steam Western ₱ 100 lbs, $13@13.25; prime city, $12 50@12 50. Hams, smoked city, 12@13c.; pickled Western, 10½@12; Shoulders: smoked city, 8½; pickled, 7½; rib bellies, pickled, 9¾@10 Bacon, long clear, 9¾@9¾. Beef, mess, bbl., 12@14c; India mess, tcs. 26@28c; beef hams bbls. $23@24.

Receipts for week—Beef, bbls and tcs. 807; pork, bbls. 15,952; Cut meats, pkgs. 15,530; lard, do 16.478. Exports—Beef, bbls and tcs. 2,241; pork, 4,261; cut meats lbs. 9 855,202; lard, 4,259,765.

RICE.—The market is firm. We quote Carolina and La. common to fair at 4¾@5¼c; good to prime at 5¾@6¾c.; choice at 6¾@7¼c.

SALT.—The quotations for leading brands are: Ashton's at $2.50; Higgin's $2.40. Holmes extra sifted $2.40; Deakin's at $1.25; Evan's $1.20. Washington's $1.25; Marshall's at $1.25; Virden's at $1.20; Worthington's at $1.20; Mediterranean at 25c.

SUGAR.—Refined quoted: Hard sugars—crushed ₱ lb 10¾c; do. powdered 10¾c; do. granulated 10¼@10¾c; do. cut loaf 10¾c; confectioners' "A" 9¾@9¾c; coffee "A" standard 9¾@9¾c; do. off "A" 9¾@9¾c; white extra "C" 8¾c; extra "C" 8¾@8¾c; "C" 7¾@8¾c; yellow 7@7¾c.

TOBACCO.—There has been a large business in seed leaf at about former prices.

VEGETABLES.—Long Island and N. J. now supply the market with potatoes and some to spare for Havana use. Prices low range $1@1.50 per bbl. The leading kinds of garden truck are abundant and cheapening daily.

Sweet corn, Jersey ₱ 100 $1.25@2.50; Green Burlington do. 75c@$1; Green peas, L. I., ₱ bag, 50c; wax beans 50c, string beans 50c; cucumbers ₱ 100 90c@$1; Norfolk, ₱ bu. crate, 20@40c; egg plant Phila ₱ doz. $3@3.50 Fla. ₱ bbl. $2@5. Tomatoes Phila ₱ bskt. $1; Hackensack ₱ bu. $3 50; Md. prime $2@3; Nfk 20@40c.; squash Norfk marrow ₱ bbl. 75c@$1; L I. ₱ basket 30@40; cabbages, Flat Dutch ₱ 100 $3@4. Wakefield $3.50@3; beets, L. I. ₱ 100 bchs $1.50; onions, Nfk yellow ₱ bbl. $3.50@3.75; Md. $3.75@4; lettuce ₱ bbl. 30@50c; carrots ₱ 100 bchs $1@1.50; radishes 50@75c; white turnips Jersey $1.50@3.50; turnips Russia ₱ bbl. 75c@$1; cauliflower, ₱ bbl. $3@4.

WOOL.—The market is rather quiet, but not more so than was to be expected after the late free business throughout the country and prices have a sturdy grip upon the points they have attained.

Ohio, Penn, and W. Va. XXX and picklock, 43@45c.; X to XX, 40@43c.; No. 2 to No. 1, 40@45c. coarse, 34@38c.; combing 40@45.

State and Western X and XX, 39@41c.; No. 2 to No. 1 38@44c.; coarse 32@36c.; combing, 40@44c.; combing unwashed 30@34c.

Va., W. Va. and Md. unwashed medium 28@31c. Ga. and Lake unwashed medium 28@32c.; coarse 23@26c; burry and slightly burry 16@23c; Cal, Spring northern, free, 34@37c.; middle counties, free, 28@32c.; southern, 23@27c.; low grade and burry, 20@23c. Fall, low grade and burry 16@21c. Texas—choice, free, 28@32c.; fair to good, 24@28c.; low grade and burry 17@20c. Pulled super 38@42c.; extra 35@38c; No. 1, 30@33c; combing, 35@40c.; lambs, 38@40c. Two washed, fair to choice, 35@44c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, July 16, 1881.

BEEVES.—Receipts for the week 13 031 head; do last week 11,414 do. Owing to unfavorable dressed beef reports there was a very cautious movement at the stock yards and a general disposition to restrict business on the part of the buyers. Good and prime cattle were held about steady, but sold slowly; medium to fair native steers of 1,150 to 1,200 lb average were in most demand and favored the seller; but very common natives and the poorer quality of Texas cattle were dull and lower—only a fraction, perhaps, at the Jersey City market place, but fully ½c. ₱ lb at Sixtieth street. The offerings included in car-loads of Ohio distillery-fed cattle, probably the last of the season. These cattle were shipped from Cincinnati during the hot weather of the early part of the week and 34 head died on the cars. The nature of the food upon which these cattle were fed during the Winter and Spring, and up to the time of shipment, is calculated to make them very susceptible to the heat, and it seems as though it would have been an act of prudence to have marketed the cattle earlier in the season. Three car-loads were light, but well fattened, and were mainly sold at 11¾c. to dress 56 lb; 8 car-loads were poor cattle, evidently the "tail ends" from some distillery, and sold at 9¼@10c. to dress 55@56 lb. Six cars of through Cherokees sold at 7¼c. to dress 55 lb; 9 cars through Texans at 8¼@8½c.; 2 cars of corn-fed Colorados at 9¾c. to dress 25 lb; 2 cars of Colorados, fed in Ohio, at 10½@11c. to dress 56 lb; and the range for ordinary to choice native steers was from 10c. to dress 56 lb to 13¾c. to dress 57 lb. Bulls were freely offered and very dull. About 2 cars of State grass bulls changed hands at $2.90@3 ₱ 100 lb, and more than 50 head will be carried over for which $3.75 was the highest price bid.

SHEEP AND LAMBS.—Receipts for the week 33,193 head; do. last week, 23,901 do. With a free supply trade was slow and only choice lots sold at fair prices. Common stock lower. Sheep quoted 4½@6c; Va., Ky. and Tenn, lambs 6¾@8c.; Penn. 8¾@8¾c.; N. J. 9@9¾c.

SWINE.—Receipts for the week 25,491 head; do. last week 17,418 do. Tone of market not strong; 6¾@7¾c. live corn-fed Western; city dressed State 8¾@9c.; do. Western 8¼@8¾c.

VEAL CALVES.—Arrivals have been larger and prices have declined; high beef helps sale.

Live N. J. prime to choice, 7¾@7¾c; do., tate, 7¼@7¾c.; poor to good 5¾@7¼c.; Mt. Hollys, 6¾@7¾c.; buttermilk, 3¾@4½c.; weather too warm for dressed; a few river quoted 10@13c.

MILCH COWS.—There have been moderate sales at $30@50 per head for fairest sort of cows; prime milkers would sell in a small way at $60@65.

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Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 28.

HENRY STEWART.

Preparing Food for Stock.

THE purpose of food is to support life. It does this by restoring the waste of the body caused, in greater part, by the motion of the muscles. Every time an animal moves a limb; every motion of the heart which forces the blood through the veins; every movement of the lungs which draws in or forces out the breath; all these motions use up a certain portion of the fibrous tissue of the body, of which the muscles are formed. This lost tissue is replaced by matter contributed by the blood. The blood is restored, as we have seen, from the food which is prepared for this purpose by the digestive organs. It follows, therefore, that the more the muscles are exercised, the more food is required to replace the loss occasioned by this motion. If an animal should be shut up in the dark and do nothing but sleep, it might live for several weeks without any food. A horse has been kept without food for 43 days in a condition of perfect idleness, but when kept at work without food it was unable to rise on the eleventh day. The difference shows the amount of waste caused by the exertion of the muscles in the performance of work.

It is clear then, that even in eating the food, which is a work requiring muscular motion, a portion of the food is used up. It is precisely the same as if a steam engine should lift the coal, by which the steam is produced to work the engine, crush it and put it into the furnaces. As in this case a portion of the power of the engine would be expended in feeding the fire, and of course some of the fuel is expended in producing this power, so in an animal, a portion of the food is actually used up to produce the vital force which is expended in masticating, digesting, and assimilating it, and carrying it in its completed form, as blood, to the small vessels, the capillaries, which serve it out, as it were, to the exhausted muscles as fresh matter, to replace their wear and tear. For this reason it is necessary sometimes to prepare the food so that it may be eaten and digested more easily, and labor—which is loss—saved to the animals. As food costs money, its saving is money saved; and therefore we may well consider as a practice of economy, how far we may profitably go in saving food in this way.

There is but one limit, and that is the health of the animal. If we injure the health by our manner of feeding, no saving of food would recompense us; and in considering how we may save food by preparing it, whether by grinding it, cutting it, cooking it, soaking it in water or in any other way, this point must never be lost sight of. Grinding grain is practised because it is an economy. The meal is more easily eaten than the whole grain, and it is more easily and perfectly digested; but still it is necessary to secure its proper mastication and mixture with the saliva, before it is swallowed, or it would not be wholly digested and might be more wasteful than feeding whole grain. We avoid this danger by mixing the meal with cut fodder, and we wet the fodder to make the meal mix better with it. Some persons believe that it is better to cook the food by steaming it, but it is doubtful if the saving—if there is any at all—is sufficient to pay for the extra labor.

This whole question is one which can only be solved by experiments. We can never reach a satisfactory knowledge by reasoning upon it; and if we could in one case, another could never be decided by that one. So that the farmer must try for himself, when he understands the facts, in what way he can prepare the food for his stock, so as to get the most value out of it and yet not to spend more in labor than the saving would amount to. It is very certain that there is a great saving in grinding the grain and in cutting the fodder for horses, cows and oxen; and in grinding or cooking the grain for pigs, in many cases; but there are cases in which there is no saving. Where corn and hay are very cheap, this saving is not equal to the cost of the work done; but where grain and hay are dear, it may be well worth the labor spent; more especially when the work is not paid for in money, and there is spare time to do it. But it is very doubtful if it will pay to go further than this in the preparation of food for stock.

THE YOUNG QUERIST.

P. M., West Haven, Conn., asks, 1, to what genus of plants does the nettle belong, 2, why does the sharp prick of a nettle produce itching and swelling.

ANS.—1, The nettle belongs to the genus *urtica*, which name is probably derived from the Latin word *urere* meaning to burn. 2. The stinging hair of the nettle has a little bulbous cell in which an irritating juice is contained, and when the sharp point or hair is broken off this juice flows at once into the wound and produces pain. Under the microscope the contents of the nettle-hair may be seen in constant motion, it is said.

N. E. B., Berlin, N. Y., wishes to know when and where Mary, Queen of Scotts, was beheaded.

ANS.—On February 8, 1587, at Fotheringay castle, Northamptonshire, England.

J. A. S., Mercer, O., asks if Olive trees can be grown so far north as Ohio.

ANS.—Only as greenhouse plants. They thrive well in the Southern States.

S. M., Leeds, N. Y. wishes to know when to trim Norway Spruce hedges.

ANS.—About the beginning of August.

O. N. C., Xenia, O., asks what is the best manure for flowers and house plants.

ANS.—Liquid manure from the barn yard, diluted so that but little color remains is probably the best.

THE DRAGON FLY.
(Libellula trimaculata.)

I IMAGINE that there are very few boys and girls in the country who do not know the Dragon Fly when they see it. It may be they have not all heard that name applied to it; if so, they may call it the Devil's Darning Needle, or Spindle for all these names are used in the country in speaking of this insect. It is probably this terrible name of Devil's Darning Needle that inspires such a fear in the minds of the children whenever they see one flying about. They know that it is the office of the

FIG. 352.

needle to pierce, and if this insect has anything to do with his Satanic majesty it must have been sent into the world to pierce and sting people. But no; the bright-winged little fellow wouldn't hurt anybody for the world; so, boys and girls, you need not let that curious idea that the Darning Needle is going to fly into your ears haunt you any more. But I wouldn't say that gnats, mosquitoes, bugs, or almost any soft-bodied insect would escape so easily, for they are choice food for Dragon Flies, and it is these that they are looking for when they dart about with such swiftness and ferocity.

These insects pass the larval state in the water, and in crawling along the bottoms of pools they find their food, in the shape of insects and little pin-fishes. I just said that they crawl along the bottom, which is partially correct, but they have, so we are told, a valvular apparatus at the end of the tail by which they draw in and expel water as a means of locomotion. They probably put this machinery into operation when they "can't touch bottom," so they are never without locomotive facilities. They remain in the water several months and change their skin several times, but when the time comes for their final transformation they crawl out upon the bank or upon a neighboring plant, where the pupa skin bursts open and the beautiful winged insect becomes an inhabitant of the air. It is said that these insects are two years in reaching their perfect state, after which their wings become torn and discolored, their strength fails, and in a few weeks they die. H. M

The Puzzler.

GEOGRAPHY PUZZLE.

I was awakened one morning by a city of China, which was perched on a fence near my window. From an adjoining room I heard a division of Great Britain, and I called a river of North America to make a fire, as I felt a division of South America. On going down stairs I found that one of the lakes of North America had spilled a division of Europe on my highly-prized city of Belgium while putting on the table my breakfast, consisting of a division of Asia, seasoned with a city of South America; also a cape of Massachusetts, an island of Oceanica, a city of France stopped with a city of Ireland, and a basket containing a river of Africa and other fruits. I paid a division of Africa for my breakfast, and then I asked one of the islands of Oceanica for some sugar to feed an island of Africa that was hanging in my chamber.

☞ Answer in two weeks. RUTH.

ACROSTICAL ENIGMA.

My first and my second are seen on the mountain,
My third and my fourth in the glade and the fountain;
My fifth and my sixth in the meadows are found,
My seventh and eighth in deep forests abound,
My ninth is in the desert,
My tenth has gone to ride,
My eleventh is in Italy,
My twelfth goes with the tide,
My thirteenth you will find is in the number three
My whole is very welcome as it often comes to me.

☞ Answer in two weeks. MARY WALEY.

PUZZLER ANSWERS—July 9.

HIDDEN FLOWERS.—1. Arbutus, 2. Batchelor's Button. 3. Box. 4. Buttercup. 5. Cactus. 6. Camellia 7. Jasmine 8. Carnation. 9. Bramble. 10. Celandine. 11. Orchis. 12. Calla Lily. 13. Clematis. 14. Coriander. 15. Cypress 16. Cowslip. 17. Dandelion. 18. Dahlia. 19. Forget-me-not. 20. Primrose. 21. Lichen. 22. Woodbine. 24. Portulaca.

FIVE-LETTER PUZZLE.—Apple.

DIAMOND PUZZLE.—

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        M
      M A T
    M A T E S
  M A T E R I A
    T E R I N
      R I N
        A
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For general debility and prostration Hop Bitters will do wonders. I rove it by trial.—*Adv.*

Sabbath Reading.

WHAT I LIVE FOR.

I LIVE for those that love me,
Whose hearts are kind and true,
For heaven that smiles above me
And waits my spirit, too;
For all human ties that bind me,
For the task by God assigned me,
For the bright hopes left behind me,
And the good that I can do.

I live to learn their story
Who've suffered for my sake,
To emulate their glory,
And follow in their wake;
Bards, patriots, martyrs, sages,
The noble of all ages,
Whose deeds crown history's pages,
And time's great volume make.

I live to hail that season
By gifted minds foretold,
When man shall live by reason
And not alone by gold;
When, man to man united,
And every wrong thing righted,
The whole earth shall be lighted
As Eden was of old.

I live to hold communion
With all that is divine,
To feel that there is union
'Twixt nature's heart and mine;
To profit by affliction,
Reap truths from fields of fiction,
Grow wiser from conviction—
Fulfilling God's design.

I live for those that love me,
For those who know me true,
For the heaven that smiles above me
And waits my spirit, too;
For the cause that lacks assistance,
For the wrongs that need resistance,
For the future in the distance,
And the good that I can do.

SELECTIONS FROM WRITINGS OF DR. E. H. CHAPIN.

THE true Church is not an institution to be kept apart from the world because the world "is common and unclean," but a vital heart of truth and love, beating with the life of Jesus, and sending abroad its sanctifying pulsations until nothing shall be common and unclean.

Christianity is, in society, like that agency in the physical world which drives suns and systems on their tremendous track, yet binds them in glittering harmony, holds them to a central order, fills them with joyful life, and illuminates them with universal beauty.

"Our life is what we make it!"—an insignificant game, or a noble trial; a dream or a reality; a play of the senses worn out in selfish use and flying "swifter than a weaver's shuttle," or an ascension of the soul by daily duties and unfaltering faith to more spiritual relations and to loftier toils,—to the company of the immortal,—to the presence of God and the fellowship of Christ.

You would feel that it was a great thing to stand upon the walls of a lonely fort, with your country's flag floating over you, knowing, perhaps, that your country's freedom depended upon your vigilant eye and quick ear. You would think it a great thing to stand upon the deck of a ship, keeping watch at night, knowing that the safety of all those on board depended upon your alertness and activity. Stand at the portals of your own soul, with the signal-flag of God's law floating over you, and feel what important results depend upon your care and watchfulness; stand upon the deck of the great social ship, watching the interests committed to you, and feel how much depends upon you. Drive every nail you drive, do everything you do, however small and significant, as though God's eye was flashing upon you.

I do not want any of that kind of respect for the clergyman that will check a man from swearing in his presence. "Oh, I beg pardon; I see there is a minister present." Never beg my pardon for swearing. If you dont care about offending God you need not trouble yourself about offending me. O, this miserable, mean kind of respect that is felt for the mere formalities and decencies of religion, when Jesus Christ is turned out of doors.

IT is not for him who excepts the spiritual interpretation of life and nature to affirm or fear any real antagonism between the world within us and the world without. * * * The work of nature displayed in all these forms of being is not merely analogous to the divine word; the work of nature is the divine word.—Dr. E. H. Chapin.

IF there be any true religion in us, it is much more likely to be discovered and drawn into actual exercise by an exhibition of the glory and grace of Christ than by searching for it in the rubbish of our past feelings. To discover the small grains of steel mixed among a quantity of dust, it were much better to make use of a magnet than a microscope.—Andrew Fuller.

THE pupils of a certain rabbi asked:—"Does a man know the day of his death so as to repent the day before?" "Not so," was the answer; "but so much the more should the man strive to grow better every day, because he may die the next. So all his days will be spent in repentance, as it is written—'Let thy garments be always white.'"

THE reason why the men of the world think so little of Christ is, they do not look at Him. Their backs being toward the sun, they can see only their own shadows, and are, therefore, wholly taken up with themselves, while the true disciple, looking only upward, sees nothing but his Saviour, and learns to forget himself.—Payson.

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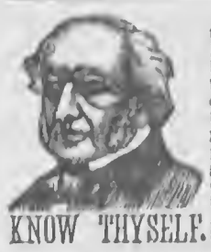

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PERSONAL ITEMS.

Judge Buren R. Sherman, the republican candidate for governor of Iowa, is not a brother of Gen. and Senator Sherman. He comes of Massachusetts stock.

Adelina Patti has signed a contract for a season of concerts in the United States, beginning at Steinway Hall, in New York, on November 9th. So says a cablegram of the 14th.

Senator Lamar, of Mississippi, has two married daughters and one who is still a school girl. He has also a little grandson, who is his namesake. His house at Oxford is a plain one. He is very fond of his registered Jersey cattle.

A lady in Taunton, Mass., received last week from Europe a bouquet containing, it is claimed, a clover from George Elliot's grave, a violet from Melrose Abbey, a buttercup from De Quincey's grave, a sprig of ivy from Walter Scott's old home at Abbotsford, and a bluebell from the grave of Helen Macgregor, near Loch Lomond.

The executors of Lord Beaconsfield have sent in the necessary papers for probate, and have sworn the gross assets, including insurances, at £75,000, which is reduced by corresponding charges and debts to a little over £30,000, upon which probate duty is paid; but this amount includes the valuable library, the heirlooms, and other inconvertible property.

The year 1878 was strangely fatal to Italy. The first Italian General, La Marmora; the king of Italy, Victor Emanuel; the first infallible Pope Pius IX; the first astronomer, Padre Secchi, and the first international arbitrator, Sciopis, died in less than three months. Monuments to each have now been put up and are continually being multiplied.

In the machine constructed by Herr Amadeo Gentilli, of Leipsig, the natural movements of the mouth in speaking produce action in a delicate series of levers, by which electric contacts are made and broken and the signs are regularly recorded similar to those of the Morse alphabet—a good thing for deaf people if it could be made cheap and easily portable.

The late Duke of Richmond, who was aid-de-camp to the Duke of Wellington all through the Peninsular war was shot down at Salamanca. The ball was never removed; and he carried it to his death. A few months after he received it he was able to resume his duties and was present at the after battles of the campaign and at Waterloo. Sir Richard England, then a Captain in the Twenty-third Fusileers, was shot down at the siege of Badajos, and carried also the ball to his death at the age of 83.

[Troy (N. Y.) Morning Telegram and Whig.]

Rubbing the Midnight Oil.

In the Philadelphia Times of recent date we notice an item referring to the miraculously quick cure of a prominent druggist of that city, Mr. J. M. Higgins, Germantown Road and Morris Street, who had an awful attack of rheumatism of the knee. He applied St. Jacobs Oil at night, and next morning was well and in his store as usual.—*Adv.*

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Sold by Grocers everywhere.

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New Publications.

THE CYCLOPÆDIA WAR.

The month of July, 1881, witnesses the completion of the largest and most important literary work this country and the century have seen. It is the Library of Universal Knowledge, large type edition in 15 large octavo volumes, containing 10 per ct. more matter than Appletons' Cyclopedia, at less than one-fifth its cost, and 20 per cent. more than Johnson's Cyclopædia, at a little more than one-fourth its cost.

Victory

Chambers's Encyclopedia, which forms the basis of the Library of Universal Knowledge (the last London edition of 1880 being reprinted verbatim as a portion of its contents), is the laborious product o the ripest British and European scholarship. It has developed through a century of Cyclopædia making, its various editions having been many times revised, in successive years, till it has come to be universally recognized, by those competent to judge, as standing at the very front of great aggregations of knowledge, and better adapted than any other Cyclopædia for popular use. It contains such full and important information as the ordinary reader, or the careful student, is likely to seek, upon about 2,500 subjects, in every department of human knowledge. Chambers's Encyclopedia, however, is a foreign production, edited and published for a foreign market, and could not be expected to give as much prominence to American topics as American readers might desire. To supply these and other deficiencies a large corps of American editors and writers have added important articles upon about 15,000 topics, covering the entire field of human knowledge, bringing the whole number of titles under one alphabetical arrangement to about 40,000. Thus the work is thoroughly Americanized, and the Library of Universal Knowledge becomes at once the latest and most complete Encyclopedia in the field, at a mere fraction of the cost of any similar work which has preceded it.

For The

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of the 15 volumes, complete, in extra cloth binding, $15.00. In half Russia, sprinkled edges, $20.00. In half Russia, gilt top, $22.50. In full library sheep, marbled edges, $25.00.

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Revolution

Of course the old and wealthy publishers who have grown rich (it is said that the Appletons have made a profit of nearly two million dollars on their Cyclopædia) from the sale of their high-priced publications are not pleased that their monopolies are broken and their power overthrown. Of course the book agents and booksellers who have been used to getting from 40 to 60 per cent. commission for selling these high-priced books are not so well pleased to sell the Library of Universal Knowledge on 15 per cent. commission, though those who are not short-sighted discover that their own interests, after all, are identical with the interests of *the people*, and their real profits, in the end, are increased, by the immense sales which result from meeting the people's wants. The majority of booksellers, however, are better pleased to *slander* than to *sell* this and our numerous other standard and incomparably low-priced publications. But the Literary Revolution has always looked to *the people*, in whose interest it is, for its patronage, and it has never looked in vain, as our more than one million volumes printed last year (this year being increased to probably more than two millions) abundantly prove. You can order the Cyclopedias directly from us, and by uniting with your neighbors and friends you can secure club rates as follows:

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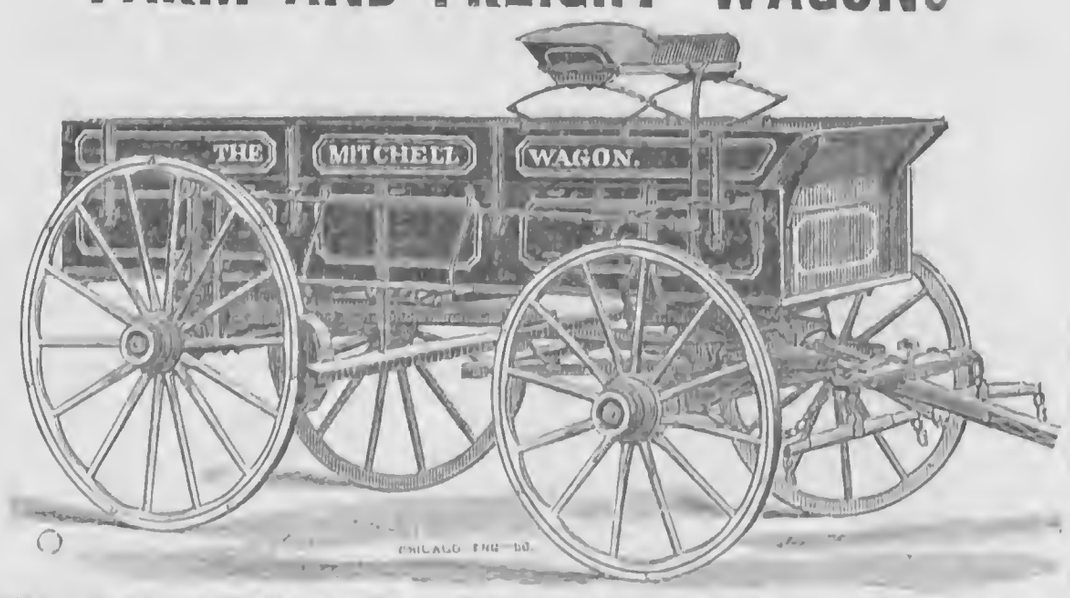

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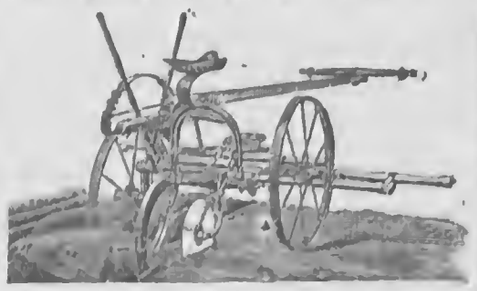

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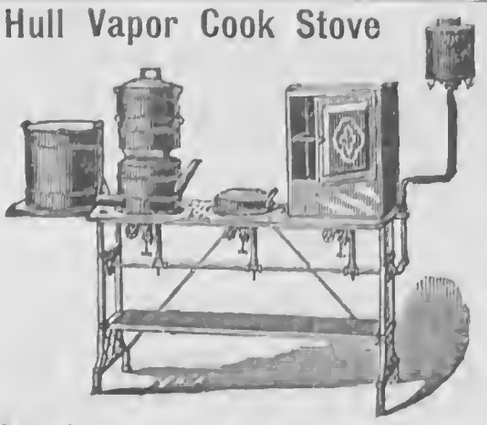

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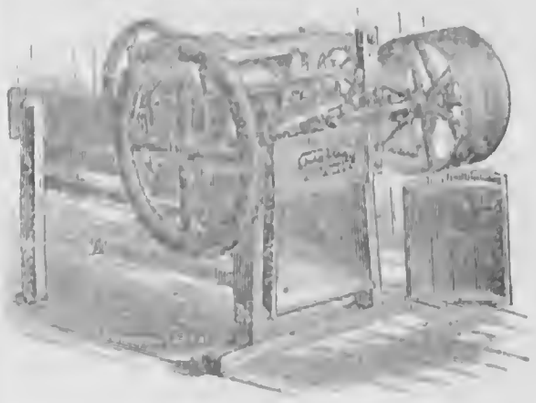

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Entries Close Saturday, August 13th,

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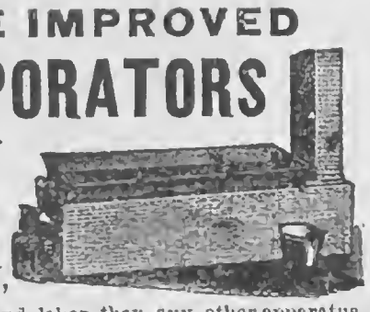

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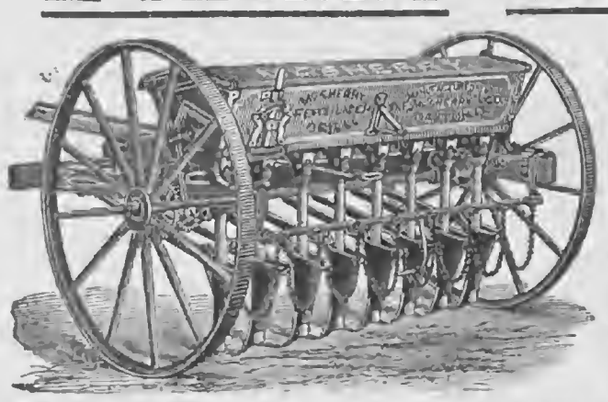

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OVER 300,000 IN ACTUAL USE.

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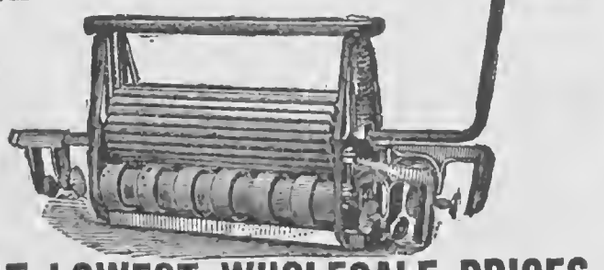

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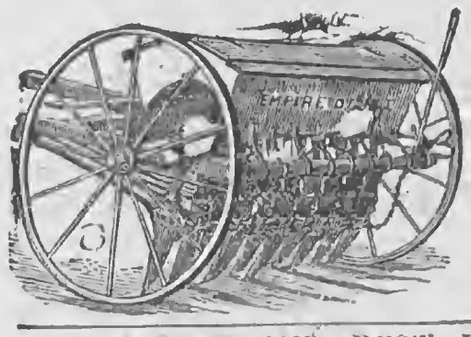

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PLANTS CORN FOR FIELD CROP.

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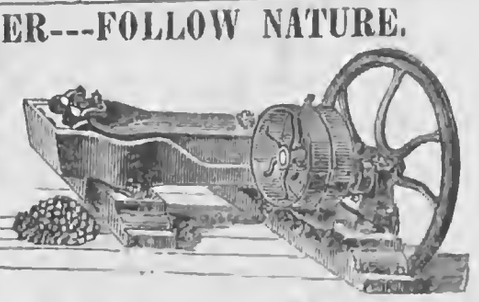

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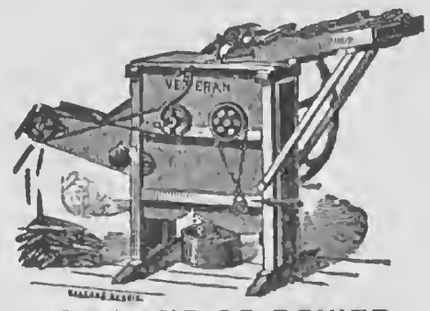

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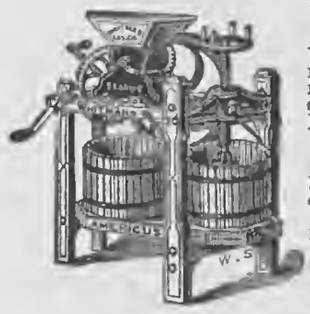

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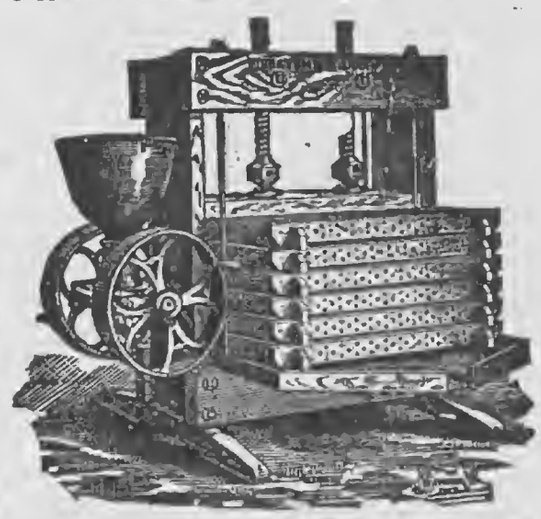

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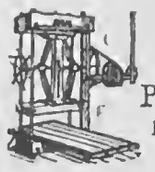

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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Floricultural.

THE JAPAN ROSE—ROSA RUGOSA.

SAMUEL PARSONS, JR.

The interest in the mixed border that contains a general collection of hardy flowering plants is becoming a distinct feature of the horticultural taste of the present day. The abounding, if not superabounding, fancy for bedding plants—coleuses, centaurias and the like—is, comparatively speaking, already checked somewhat, and employment is given more and more to a general collection or border of hardy herbaceous plants, wild flowers, blooming first one and then the other throughout the season. I believe far more of the numerous beautiful varieties of bedding plants will be used in the future than in the past, but bedding plants in a more advanced condition of horticultural taste, will not be used so exclusively as is often the case at the present time. A more discriminating taste will serve to have more or less of all the different classes of plants suitable for the lawn.

One of the most interesting plants for the mixed border is the rose, and among the kinds that succeed best—for roses are, as every one knows, much exposed to mildew, rose bugs, etc.—I want to call attention to the comparatively new Japan rose, Rosa rugosa. The first feature of this plant that strikes us in June is the appearance of its flowers. They are single, of a lovely rosy-pink color, and in one variety even white, and not numerous. It is the single-flowering quality, however, that strikes us as most peculiar. Accustomed, as we are, to innumerable varieties of roses, hybridized into every conceivable form and combination of petals, it is refreshing to happen once more on a single-flowering species that resembles the lovely wild roses that we pluck by the wayside. It is a question whether many would not confess, if they were disposed to be frank, that they really preferred these single flowers generally to the double ones. Nor are the singleness and color of the flower of the Rosa rugosa its only charming features. The shape and set of its petals and charming yellow stamens, imbedded in bright, healthy foliage, are equally attractive. But we are too much inclined to dwell exclusively on the charms of the flower of a plant that is also attractive in other ways. And herein lies one special value of Rosa rugosa—while it is essentially a flowering plant, with all the beauties of a rose flower developed in a high degree, it is also at the same time a charming shrub by right of its foliage. The leaves, more rounded and serrated than those of other roses, and of a dark, rich, healthy green, are never, to my knowledge, dimmed with mildew or blight of any kind, or injured by insects. These leaves are close-set and vigorous, and the general habit of the plant is strong and rugged in a striking degree. There are altogether a richness of hue and an evidently hardy, enduring nature that make it a plant of the very first rank for the mixed border or general shrub groups, or even for occupying isolated single positions. It is, to all intents and purposes, a new plant, and seldom found on any lawn, although it has existed in rare collections nearly 40 years. Lately, however, it has been gradually emerging from its obscurity and obtaining the recognition it has so long deserved.

[This rose, as will be remembered, has been of late referred to several times in these columns. Our illustration is re-engraved from the London Garden or Gardeners' Chronicle—we are in doubt which.—Eds.]

CHINESE WISTARIA.

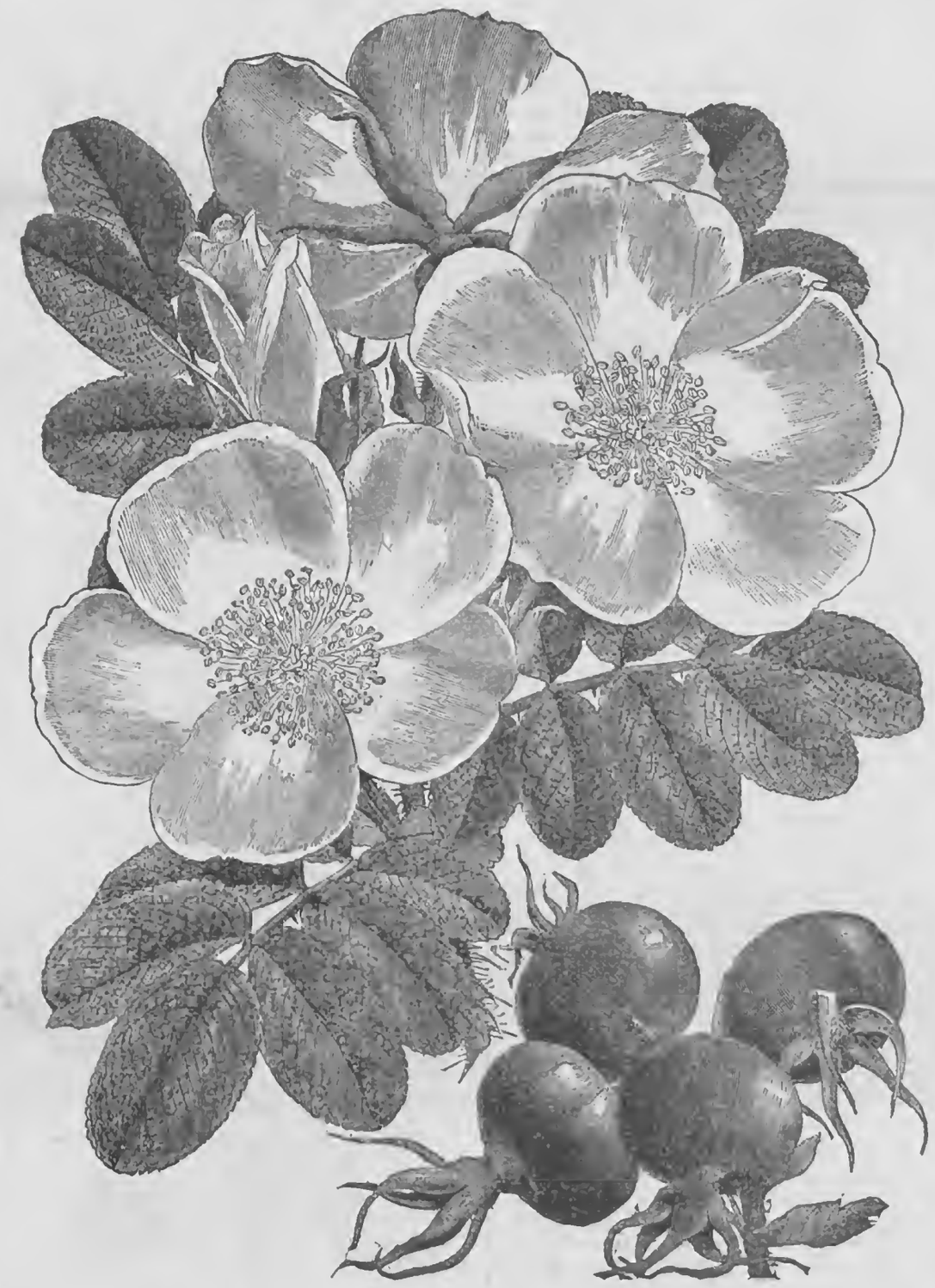
Hardiness a Relative Term.

PROFESSOR J. L. BUDD.

In the notes from the Rural Grounds I have just noticed the statement that the standard specimen of Chinese Wistaria is killed to the ground. In our trying climate I have grown it in nursery rows and on trellis for a number of years and have not known it seriously injured. During the past month I have noticed several fine, strong plants on trellis, in the central portion of Iowa, on which scarcely a terminal branch was injured during our past terrible Winter. On one vine, on the grounds of Capt. C. L. Watrous, of Des Moines, I noticed a number of very large and well filled pods yet clinging to the vine in June. I mention this to give an opportunity for saying that the term *hardy* may have a varied meaning. The hardiness of a plant depends often on its habit of determinate growth and the perfect ripening, in Autumn, of its wood cells. Plants native to the hot, dry portions of northern Europe and Asia may thrive perfectly in the hot, dry Summer air of Iowa, and the advent of severe frosts in Autumn finds them prepared for zero weather. On the other hand, in the moister and cooler air of New York or Michigan the leaves of such plants may less perfectly do their work of storing the cell structure, causing them to be ranked as half-hardy or even tender.

I had an opportunity to take lessons in this direction last week in Michigan. Around Lansing, and on the grounds of the Michigan Agricultural College, I was surprised to find such Chinese plants as Diervilla Japonica, Forysthia, Spiræa prunifolia, Spiræa callosa, Hydrangea paniculata, Lonicera confusa, Aralia cordata, and Prunus triloba, far more seriously injured by the past severe Winter than in Central Iowa. On the contrary, plants indigenous to moister climates, such as cotoneaster, cytisus, hibiscus, and apple, pear, plum and cherry trees from the south of Europe, endured the Winter far better in Michigan than on our prairies.

Ag'l College, Ames, Iowa.



ROSA RUGOSA AND FRUIT.—Fig. 353.

Horticultural.

SOME OF THE NEWER STRAWBERRIES IN THE WEST.

PRES. T. T. LYON.

This fruit has, this season, ripened here somewhat later than usual. The crop has not been as large nor the fruit as perfect as is commonly the case. The markets, consequently, have not been so overloaded as to seriously affect prices. Hence growers of this fruit are jubilant.

Crystal City was our first ripe berry, the first specimens having been picked on June 6. It is hardly likely to take a high position, except for earliness.

Metcalf ripened with the foregoing; but it has only its earliness to recommend it, while it is too small and unproductive, as compared with the foregoing.

Duncan is yet the best, with me, of very early strawberries. Its season may be put with those before named, or a day or two later. The plant, however, is so vigorous and regularly productive, even under unfavorable circumstances, that I esteem it decidedly the most valuable very early berry of my acquaintance. To this I may add that the firmness, large size and high quality of the fruit add greatly to its value, and may even render it desirable to lead the market as the opening variety.

Shirts commenced to ripen about June 14, and maintained its character as productive and a strong grower. The fruit also is large, dark-crimson or scarlet, and of fine quality—too soft for remote marketing. Much to my surprise, both this and Monarch of the West growing in adjacent rows under the same conditions, although they withstood the last Summer's sun satisfactorily, have suffered more severely from the past Winter than any other of the older standard varieties growing near them, among which I may name Sharpless, Seneca Chief, Wilson, Charles Downing, Duncan and Cumberland Triumph.

Crescent has shown its usual ability to produce both plants and fruit; but it must certainly, with me this season, yield the palm of productiveness to

Champion (Windsor Chief), which has this year exceeded itself.

Sharpless has shown its usual vigor, coming through the Winter unscathed, and producing a fair crop of fruit, mostly of fine, large size; but I regret to say that they were generally hard at the tips, apparently the result of a slight drought just before the season of ripening. Other varieties in adjacent rows were little, if at all, affected from this cause.

Marvin is said not to withstand the sun at the East. With us, however, this has not been a difficulty, although it cannot be said to be as strong as Sharpless. It is only a moderate producer of plants. It has suffered from the severity of the past Winter, though to a less degree than Shirts and Monarch of the West, in adjacent rows. Its first matured specimens were gathered this season from the 20th to 23d of June, but specimens may now (July 16) be found upon the plants in various stages of unripeness. Our exemption from Summer injury may be due to a lacustrine climate and a consequent exemption from extremes of heat. Be that as it may, my plants, though on rather light soil, are as fresh as could be desired under the excessive heat and bright sun of the past month. The past Winter with us has been decidedly exceptional, and, whatever Eastern planters may do, we at the lake shore may venture to plant the Marvin extensively for the market.

Woodruff's No. 1 is a berry originating at Ann Arbor, Michigan, and has now fruited with me two years. I am not confident that it will be found very desirable, although it is productive and of good quality. The fruit is long, conical and pointed, and has the rare peculiarity among long berries of ripening fully and even first at the tip. It ripened this season on June 18.

Woodruff's No. 2 from the same source, is said to be a cross of Jucunda upon Agriculturist. The fruit is of fine size and quality, in form truncate-conical to oblong-ovate; considerably elongated—a peculiar form; and, like the foregoing, it ripens first at the tips.

Red Jacket, President Lincoln, New Dominion, and a few others have this year shown much promise; but, considering the peculiarity of the season I omit further notice of them till they can be observed under less exceptional circumstances.

Cumberland Triumph has done wonderfully well, and has established itself yet more firmly in my confidence as a highly desirable berry for the table, and a profitable one for the good cultivator and for a near market.

MINER'S GREAT PROLIFIC has developed hardiness, size, productiveness and vigor enough to commend it for general market planting, and it only lacks hardiness and firmness to commend it to the first place as a market berry.

So. Haven, Mich.

STRAWBERRIES—THE BIDWELL.

THE past season has been a very favorable one for the growth of strawberries and the yield was exceptionally large, affording an excellent opportunity for comparing the productiveness of the different varieties as well as deciding the question of firmness. Although the continued wet weather was detrimental to the development of aroma in some of the higher flavored varities, it was interesting to observe the varying capabilities of those most generally grown for market, and experimenters may begin to draw the line closer, so as to exclude a great many kinds which have neither size, flavor nor habits of bearing to commend them over those that are old and well tried. In fact, when we consider the wonderful strides in advance marked by the Bidwell, Longfellow, Oliver Goldsmith, Shirts and Seneca Queen, it seems like folly for men who are engaged in the business of raising and disseminating plants to sound the praise of inferior kinds, and herald every new-comer without first thoroughly testing its merits alongside of its peers, in conditions wholly unpampered by tender care and treatment, leaving to their inherent qualities and natural vigor the right to rescue them from oblivion. [Surely, that is what the RURAL is doing. EDS.] Failing then to establish a superiority in some important particular, no berry however much of a pet, should be allowed to swell the already impracticable list and add to the perplexity of buyers.

It was under this most natural test that the Bidwell, in competition with over a hundred others, came to the front, and stands preeminently in the first rank to-day as a market and garden berry, exceeding, with improved cultivation, the most liberal expectations of its friends. I have seen it in all stages of growth till the close of its present fruiting—July 2d—which extended over an entire month, and the last two quarts were as handsome, large-sized berries, ripened as evenly to the tips, as any picked during the 31 days preceding; and, although familiar with its fine table qualities, I was surprised at the briskness and delicacy of flavor which characterized it to the last.

Can as much be said of any other strawberry? The foliage, a healthy, dark green, stands up well under all conditions. The plants form immense, compact stools; and the enormous quantity of large, regular-shaped, bright-looking berries which they ripen perfectly, astonishes every one who has seen them.

In this connection I would suggest that there are often too many kinds grown for profit. With one or more of the above-mentioned sorts as a staple crop, the Duchess for early and Hervey Davis or Memphis for late, there would be a succession of fruit, which, in this State, could not be equaled.

And, buyers, beware of a multiplicity of names. I can call to mind a number of instances where, undoubtedly, two or three well known names sell the same stock of plants. And above all things, be careful of whom you buy. A nurseryman who, after working for years and spending large sums of money to secure a certain stock, and finding it inferior after all, has the moral courage to tell you, "It has not done well with me, I would not recommend it," thus leaving thousands of worthless, profitless plants on his hands, may be trusted implicitly when he praises anything, as it is fair to presume he does so for its intrinsic value. W. C. S.

RURALISMS

WITH me the first raspberry to ripen was the Doolittle Black Cap, and next the Caroline, with perhaps a day's difference between them; and almost at the same time the New Rochelle. These three kinds, therefore, may be placed as very early. The next to ripen was the Cuthbert, a single ripe berry having been picked on July 9th, a fair mess having been picked from the Doolittle and the Caroline on the 4th. The Montclair is still later than the Cuthbert, no ripe fruit having yet (July 9th) been picked. The different kinds are all in near proximity to each other. Ripening in this way, the season is quite prolonged. The productiveness of the Caroline is so remarkable that I cannot help alluding to it again; and the New Rochelle is but little behind it. If anybody supposes that these plants are growing in a rich soil, he is laboring under a mistake.

WHY can we not have more articles like those from Mr. Parnell, Mr. Augur, "A. P.," and "Notes from the Rural Grounds?" They have a special value for all of us after a Winter like the last. A. P.'s notes on his experiments with the RURAL seeds, etc., are interesting, and I should be glad to see more like them. After taking as much labor and pains as the editor does to give seeds and plants to his subscribers, it must be a pleasure to him to know that pains are taken to grow them. [Horticola should look over the 'Everywhere" Department more carefully. We have only feared that we were giving too much space to the reports with which our readers are constantly favoring us, and which are always welcome.—EDS.] I fear, however, that the little boys and girls over in the juvenile department are far ahead of the big boys and girls in this respect, which, however, speaks well for the future.

How much wrangling, to say nothing of ill-feeling, might be prevented by fair and manly statements like those of Mr. Waldo F. Brown. He "hopes the Professor will accept his apology," and I think there can be no doubt about that. How much better this than to know you are wrong, and "stick to it?"

I HAVE been thinking that the winter-killing of the Japanese maples may have been owing in some measure to the fact that they had been grown in pots till the roots had become matted into a mass almost as hard as a stone, with very little earth left to sustain them, their chief dependence being upon the daily waterings. I know that such balls of roots are being constantly moved in the Winter, and that plants otherwise hardy are in this way not unfrequently winter-killed before new roots have been thrown out from the old ball, and this, under the circumstances, is a very slow process. It is often years before they recover from this stunting system. This cramping of the roots, moreover, weakens the constitution of the hardiest plant, familiar examples of which might be named; but I alluded to the subject chiefly for the purpose of eliciting an expression of opinion or experience from the readers of the RURAL. The subject is sufficiently interesting.

THIS, so far, has been an excellent season for testing artificial or commercial fertilizers. It has been my experience that they are of very little value without a fair supply of rain, and this from the very nature of their composition. We have had, thus far, an abundance of rain, and I shall be greatly disappointed if the readers of the RURAL do not send in, at the proper time, carefully-prepared statements of their experience. We shall have, of course, the results at the Rural Farm and at the experimental stations, and these will be valuable; but the stations are altogether too few and wide apart to satisfy the expectations of the general farming community. Perhaps the editor already has his attention fixed on this important subject.

I AM a little puzzled to know why that excellent early pea, the Alpha, should be so uncommonly sweet this season. This has been the case, not only with me, but wherever I have seen it or heard it spoken of. The moist weather has been unusually favorable to the pea, and it may be that this, in connection with the intense heat when the sun did come out, has had the effect of developing the saccharine principle in an unusual degree. Perhaps other kinds may be sweeter than usual, though I have not yet noticed it. HORTICOLA.

NOTES FROM THE RURAL GROUNDS.

Early Sunrise Pea.

MANY new peas of extraordinary merits are yearly brought out in England. The most notable of late years have been the Telephone and Telegraph, which, however, prove to be the same. Generally speaking, these pea novelties when cultivated here lose their distinctive character, and of all the English varieties introduced during many years the Champion of England still holds the first place. The Telephone, however, during three years has held its own well, and, as we have stated, proves to be of unusual excellence, while the vines are strong, free from mildew, and the peas large, tender and sweet. Last year a new pea was offered in England and was advertised under the name of DAY'S EARLY SUNRISE. We give the announcement as found in the catalogue of Daniels' Brothers, of Norwich:—

EARLY SUNRISE (Day) (see illustration). Large-seeded, first early, dwarf, white, wrinkled Marrow, of strong and robust habit. It is very hardy and extremely prolific (the haulm being covered with large well-filled pods), while, as the peas are large and very sweet when cooked, it is very desirable either as a market variety or for gentlemen's gardeners' use. It is especially free from mildew, and has proved itself extremely useful for late sowing. Per half-pint, 1s. 3d.; pint, 2s.

MR. JOSEPH FORD,

Gardener to H. R. H. the Duke of Edinburgh, says:—"It is of splendid quality, very robust, and as early as Ringleader. A large wrinkled Marrow as early as this requires little recommendation, and is what all gardeners have long wanted."

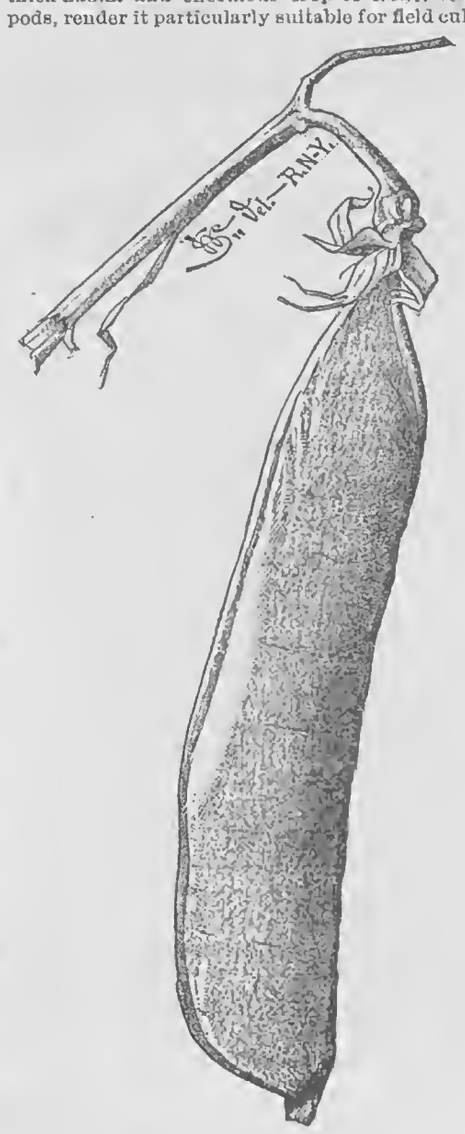
MR. T. HOSSACK.

Gardener to the Marquis of Conyngham, also tried it, and writes of it:—

"Your Early Sunrise Pea is a strong grower and great bearer. It is of splendid quality, yet comes in with our very earliest sorts. Being a Marrow, it will be a great acquisition to our early crops, while it is also very useful for late sowing."

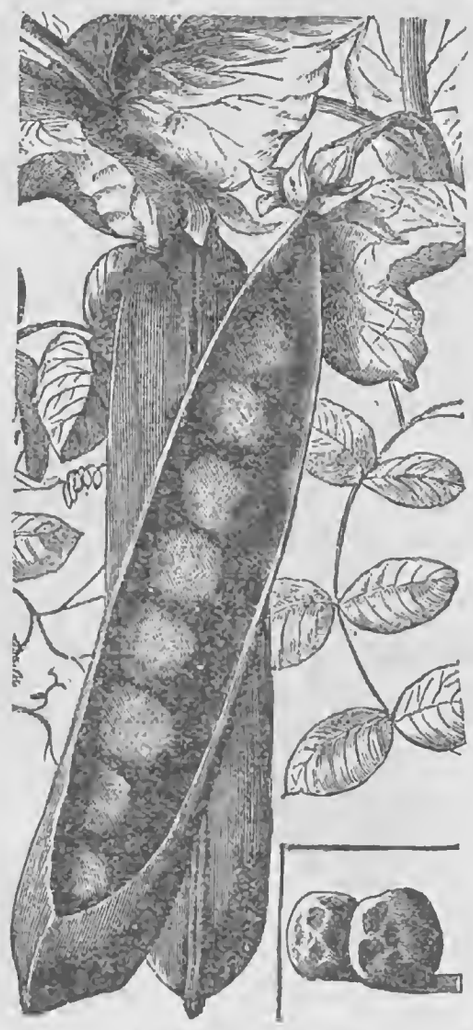
A large market grower, Mr. Joseph Collard, of Hardacre, having, by desire, tried it, reports:—

"It surpasses anything I have ever seen or grown as a first early or general market variety. The short, thick haulm and enormous crop of large, well-filled pods, render it particularly suitable for field culture."



DAY'S EARLY SUNRISE—FROM LIFE—FIG. 354.

One-twentieth of an acre of this pea was sown May 10. They were ready to pick July 10. It will be seen that in this climate it is not a very early pea, but should take an intermediate place between the early and the late. The leaves are rather small, though the stems are strong, growing about three and a-half feet high. The pods, as shown in our engraving, are of medium size, containing from four to five peas of good size, which are of fair quality. Thus far there seems to be nothing remarkable about the Early Sunrise. But we have to add that it is as prolific as any kind of



DAY'S EARLY SUNRISE—FROM ENGLISH CATALOGUE FIG. 355.

pea we have ever raised. The single pea (Fig. 354) is an average of our crop; Fig. 355 is reengraved from the catalogue above referred to.

GARDEN NOTES.

THE ALPHA POTATO I am very much pleased with. I have grown it for the first time this season, and I can cheerfully recommend it to all who desire an excellent early potato. I obtained a bushel this Spring and planted them on April 14, using Forrester's Potato Fertilizer, and the crop is all that could be desired. The vines are maturing now while those of the Early Rose, grown alongside, are quite green. On being cooked, the flavor is found to be excellent, with a dry, white flesh. The tubers are of medium size, smooth and white, with a trace of red near the eyes. The stalks or vines average 14 to 16 inches in hight. As a variety for garden culture where early potatoes are desired this kind is without an equal [Did they yield well?—EDS.]

ROSA RUGOSA, the Ramanas Rose of Japan, is, when well grown, a very desirable addition to our ornamental plants for lawn decoration. Grown in a deep, rich soil, with an annual dressing of well rotted manure, it will soon attain a hight of five or six feet, with large terminal clusters of rosy crimson flowers which are about three inches in diameter. They are produced very abundantly in June and also at intervals throughout the Summer months; being succeeded by large red berries which are a great addition to the ornamental character of the plant. This rose is best grown as a standard with a single stem, 10 or 12 inches in hight, before it is permitted to branch. Do not prune it severely, but pinch back the young shoots occasionally during the season of growth, so as to keep the plant in shape. See illustration, page 497.

COBÆA SCANDENS is one of the most beautiful and useful of our climbing annuals. Strong plants set out early in May in good, rich soil, often grow 30 to 40 feet in a single season, besides the branches which are freely produced. If the plants are carefully taken up and potted just before frost, they will be found to be very useful for the decoration of the greenhouse as well as the window garden.

Queen's Co., L. I. CHAS. E. PARNELL.

Strawberries.

I had a pleasant visit to a neighbor's farm lately. He has fruited 22 varieties of strawberries this season and nearly all of them seem to do well under his system of cultivation. I picked some of the largest and finest-flavored berries I have ever seen from his bed of Sharpless. He regards the Col. Cheny as one of the finest berries he raises. The Green Prolific is smaller, of fair quality, but it is too soft for market. The Glendale, contrary to his expectations, proved no later than the Kentucky and resembles this variety in many respects.

Addison Co., Vt. GARDENER.

Field Crops.

CORN CULTIVATION.

Reasons for Various Methods.

S. RUFUS MASON.

THE RURAL for July 2 has "Notes from the Rural Farm" on page 435, in which are several important queries and conclusions from home practice. I offer the following remarks:

Hilling up corn is necessary in heavy, solid clay soils, as the only mode of letting the sun's heat down into the cold soil around the corn roots. On such soil flat cultivation would not answer. Root-pruning is, to a certain extent, a misnomer; few, if any, roots are cut off, but the frequent close cultivation checks and prevents the full development of surface roots and stimulates the downward ones, acting upon the plant exactly as if the upper roots were really cut off. The engraving, No. 317, does not represent this operation at any stage. Root-pruning begins at the first cultivation, never exposes any roots to the air, is never performed when the ears are formed, as all cultivation ceases long before then. Hilling does not support the plant, and I never heard any one say he thought so. High winds (and we have ample experience with them here in Nebraska) never prostrates corn till the ears are so large as to make the plant top-heavy, and so by their leverage they help the wind to tear out the roots from the soil softened by the accompanying rain. Flat culture is suitable to sandy land, as that is warmer than clay; it is also necessary on hill-sides as not presenting gullies inviting heavy rains to wash.

Check-row culture is required on weedy land, as it enables the cultivator to reach all weeds by cross work. Drill-rowing is only advantageous on very clean land, kept so by repeated harrowings before the corn is up and till it is six inches high, and where the farmer can attend to it constantly till July 4th. It is not necessary to make drills further apart than checks, but they must run North and South. Root-pruning will not answer in shallow soils with rocky or impenetrable subsoils; but here, where our soil is from two and one-half to four feet deep, it is a benefit. When we have a hot, moist May and June, if we do not root-prune, the surface roots are scorched by the fervid July sun, and the leaves curl, much injuring the crop.

Fig. 318 shows the roots only as they grow here in a wet, cold Spring, when they rise to

the surface in search of warmth, and possibly as corn grows on thin soils in the East. Corn has as much natural instinct as an animal, and accommodates itself to the season, if its changes are not too sudden, and to almost any sensible mode of cultivation, if steadily pursued; but the work of a fickle-minded farmer will demoralize a corn crop more quickly than any other crop I know of. "The great crops of Indian corn produced by plow cultivation and hilling up" were no doubt grown on the cold, heavy soils of the Illinois bottoms, and if flat culture had been employed there would have been no corn. "The narrow belt" in drill corn, on which the plants grow, must be kept clean by horse culture; our corn cultivators do that nicely. We never use the hand hoe in any field crop. There is a wonderful amount of good, solid schooling to be had at the tail of a corn cultivator in a 60-acre corn patch. If economy is a valuable item in life, there is no better place to learn and practice it; it doesn't pay to be extravagant while growing corn to sell at 10 cents per bushel. Corn is an extremely succulent plant, a too great profusion of roots grows a large, delicate stalk, very watery, growing late, setting its ears late, getting caught by frost and yielding a small crop of soft nubbins. "Root-pruning" obviates all this, if practiced at the right time with great judgment. We "corn-crackers" don't believe that much practical or useful knowledge can be obtained from the limited area of a one-half-acre corn field.

Dodge Co., Neb.

TOBACCO NOTES.

TOBACCO, being by nature a tropical plant, requires hot weather to produce its best development. When grown in the Northern States, therefore, it is important that the growth should be stimulated as much as possible in its earlier stages, in order that it may accomplish its development during the hot weather of midsummer.

AN experienced tobacco farmer stated, at a recent meeting of the Chemung County Tobacco Club, that he was told, when he first commenced to grow the weed, that "he must draw all the soil from between the rows, around the plants, at the second hoeing." He followed the plan for a number of years, but finally tried the effects of level culture, and, to his surprise, he found the plants not hilled grew fully as well as those hilled up at great cost for labor. Of late years he has done away with the "hilling-up" process.

A TOBACCO RAISER ought always to bear in mind that there is quite as much in the quality of tobacco as in the quantity. A small, poor plant will usually be destitute of many, if not of all, desirable qualities, and must bring a correspondingly small price, which sometimes is below the cost of production. A large, healthy plant, grown with an abundance of suitable food, will generally produce leaf of desirable qualities that sells readily at a price which will be remunerative to the grower.

A GOOD crop of tobacco cannot be grown without thorough cultivation. Clean and deep culture is essential to success. The roots of the tobacco plant are naturally very fibrous, requiring a loose, mellow soil for their natural growth; therefore it is clearly to be seen how important it is to keep the soil in a loose, mellow condition with hoe and cultivator. A common mistake is in not cultivating deep enough. The shares of the cultivator should be run deep into the soil. Thus not only the surface proper is pulverized, but the soil to a considerable depth, which allows the rootlets to spread out and penetrate a greater area of soil than could otherwise be possible.

I HAVE the past season used a small quantity of the Maryland "Tobacco Food"—a special fertilizer for tobacco. Two hundred pounds were first applied upon the first half-acre prepared for the plants. It was scattered along the rows evenly, after which it was covered by the ridges. I am now able to see a decided gain in the growth of the portion of the piece where the first lot was applied. The first setting consisted of about an acre, set May 27, about half of which was treated as above stated with the fertilizer. The rows thus treated show a marked difference in size of plants, in favor of its use. Another sack of 200 pounds was applied to another portion of the field, but later, so that its effects are not as yet visible. I have also applied the Swift-Sure Superphosphate and some hen manure to portions of the field, the effects of which I will speak of in due time.

TOBACCO does not deteriorate in quality when the same soil is used for many successive years, if enough manure is annually applied. Mr. John Brand, a noted tobacco grower of Chemung County, has planted a field with tobacco for 12 consecutive years, each succeeding crop proving to be of better quality than the previous one. He manures with stable manure, applying it at the rate of 15 large two-horse loads to the acre each year. The soil, however, in this field consists of alluvial, sandy loam. With clay soil the case might be different. For the benefit of the farm it is usually advisable to change the tobacco field every three or four years and substitute a rotation, ending with a seeding with clover. Thus, the various fields of the farm pass through the same thorough cultivation, which destroys all noxious weeds and reduces the soil to the finest possible tilth.

G. G., JR.

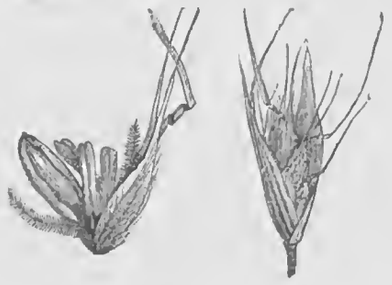
Chemung Co., N. Y.

TRITICUM REPENS,

Couch, Quitch, Scutch, Quick, Quack or Rye-Grass.

I NOTICED in a late RURAL an application for seed for Quack Grass! As I have just had a sweating job digging out "Quack," along the garden fence, as it was encroaching rather too freely into the vegetable department, I again read the article asking for seed of the pest. I was amused that any person in a sane state of mind, should want "two sacks or bags of the seed, and offer to pay therefor the price of timothy seed!" I don't believe that any respectable seed dealer would allow it to be brought to his warehouse, if it should be offered to him *gratis*. I doubt very much if seed of this "pest," has ever been collected or offered for sale, unless some scamp would offer it as some new forage plant far superior to the "Rural Branching Sorghum," as it may be cut half a dozen times in a season and yet only grow the more vigorously, *and last forever and a day*. I would much prefer to have patches of Canada Thistles in my fields as these I can easily destroy. All I would have to do would be, when the fields were in pasture, to sow some salt over them and the cattle would soon make an end of them.

Many years ago, receiving some trees from Flushing, Long Island, I saw a strange-looking grass come up from the roots of a Pyracantha shrub. There was at that time in the meadow a hill-side on which no grass would grow to make a sod. Thinking this vigorous-growing grass might take root, I foolishly took up some roots and transplanted them on this barren spot, to keep the ground from washing. Of course I did not then know what "Quack" was; but I have found out all about it since to my cost. On this barren spot it flourished and in a few years spread round more than was "bargained for." It got into the orchard, meadows, and along fence rows and in clearing ditches in the meadow it was dragged to low places, etc.



FLOWER.—FIG. 357.

If your correspondent really desires to have this pest on his ground, his best plan would be to go where it is growing, dig up some of the roots, run them through a straw-cutter—as Mr. Meehan, Editor of Gardeners' Monthly, recommends for propagating the blackberry—sow the cut roots on freshly plowed ground, harrow the ground afterwards, and I'll warrant he will get enough plants to satisfy him, and he will have enough to last him a life-time, I consider this "Quack" the worst pest that was ever created.

T. B. G.

Columbia, Pa.

[We are much obliged for the opinions and experiences of our readers. We do not agree with our friend as to this grass—as we shall one day attempt to show.—Eds.]

COMPRESSED OAT GRASS—DANTHONIA COMPRESSA.—FIG 356

Poa pratensis.

Mr. Hillgard makes a handsome showing for Poa pratensis (Kentucky Blue Grass), and I rejoice to hear that this eminently excellent and beautiful lawn and pasture grass carries its usefulness over so wide an extent of our vast territory, and that it can be so well supplemented in the hot season, in the South, by Bermuda Grass. But why do you call it "blue" when it is so intensely green—the greenest of our grasses? Poa compressa is fitly called blue in comparison with P. pratensis, being but grayly viridescent, and parching on dry, thin soils in hot weather about equally with it, never dying out, however, and supporting grazing animals as long as they can nip off the least bite, green or dried. We call the pratensis "Spear Grass" here (Pa.), probably from the round, erect, cleanly, tapered culm, and the trim lanceolate form of the panicle at its summit. June Grass and Green Sod are other names for it. An enterprising neighbor sent to Kentucky for seed of their famous Blue Grass, and sowed it on carefully-prepared ground. Grass spires shot up quickly, but when they bloomed next season they were precisely the green grass of every road-side and common in the neighborhood. His first conclusion was that the Kentucky seed had all failed, and that native grass appeared in its stead, and he was a good deal exercised in mind over the substitution until he was shown Kentucky Blue Grass and Pennsylvania Blue Grass, as both were on his own ground. The only hurt that Poa pratensis takes here is from shade. It does not flourish out of sunlight. It will even kill itself by a thick mass of second-growth blades left unpastured or uncut too long, in August and later.

W. G. W.

Tyrone, Pa.

Compressed Oat-Grass—Danthonia compressa.

This is not very common in many localities. It grows in dry hills in New England and farther south. As the illustration shows, it is taller than the other species heretofore mentioned. The leaves are fewer and very long and narrow. It forms a good turf and makes a fair pasture. I cannot learn that any one has given this grass a thorough trial, and it may be questioned whether it is worth much notice.

PROF. W. J. BEAL.

THE RURAL BRANCHING SORGHUM.—I sowed a few seeds in a box in March, in the greenhouse, and planted them out after danger of frost was past. Each plant now has a main stem four to five feet high, tasseled out and in full flower. These will ripen seed, no doubt, in good time. There are plenty of sprouts, or suckers, from the roots also.

T. B. G.

Columbia, Pa., July 8

[The dwarfness of the plant is due to its having been started in a box in the greenhouse. If not cut back, the stalks will grow at least nine feet high before blooming.—EDS.]

Farm Topics.

PRESERVATION OF BREWERS' GRAINS.

PROFESSOR F. H. STORER.

SOME cheap and easy method of preserving brewers' grains has long been needed, and striven for; and during the last few years renewed attention has been given to the subject by European inventors. Several plans have been suggested and some of them appear to have found favor in the eyes of competent critics. There are good reasons why these endeavors should be welcomed and encouraged by farmers as well as by the brewers, for the discovery of a really economical and efficient method of preserving this kind of fodder would be a decided gain for agriculture. The amount of brewers' grains actually produced in the world is something enormous, and, as things are now, much of this "waste product" cannot be utilized to the best advantage, during the warm weather of Summer, at least.

Many farmers living at a distance from breweries will naturally derive immediate benefit from the use of the preserved grains as soon as they are to be had; but, more than that, the mere fact of their being procurable would undoubtedly serve as a spur and encouragement to the use of other kinds of concentrated foods. It happens to be a well-known fact, admitted by everybody, that brewers' grains are excellent fodder for many purposes. They are used freely by farmers wherever they can be bought. Indeed, little if anything, can be said against them except their liability to spoil, and the fact that, in the fresh state, as ordinarily sold, they contain more than three quarters of their weight of water. It is true, withal, that the milk of cows fed with grains that have become sour is itself peculiarly liable to turn sour on keeping; hence any process which may serve to keep the grains sweet in hot weather ought to be welcomed both by the producers and the consumers of milk. Furthermore, there can be no doubt in anyone's mind that the merit of the grains must depend upon the nitrogenous constitutents of the barley from which the starchy portion has been well-nigh completely removed by the operations of the brewer. There is consequently good reason to believe that if the dried grains were to be had at a reasonable price they might serve an important educational purpose by familiarizing

many persons with rational systems of foddering.

It is a matter of common observation both that milkmen take very kindly to the use of brewers' grains wherever they have access to them, and that men who have once had practical experience with the use of this kind of food are thereafter much more ready than they were before to employ shorts, and oil-cake, and cotton-seed meal, and the other nitrogenous reinforcements to rough fodder, which so greatly enhance its value. It is not improbable, even, that the use of flesh-meal, and fish-meal for foddering purposes, instead of for manure, might follow as a consequence of the introduction of dried brewers' grains to the American markets. Methods of drying, baking and ensilaging the wet grains have been suggested. Indeed, it was proposed many years ago to dry them in the malting kilns, and an excellent product was actually obtained in this way though at too great a cost for profit. A more recent method is to whirl out as much as possible of the water in a centrifugal machine into which hot air is subsequently admitted so that the remaining moisture may be dried off. The product is then pressed firmly into cakes which are said to serve admirably as fodder. A still newer method, recently patented in Berlin, consists in baking the grains to a sort of bread after they have been worked up to a kind of dough by the addition of other matters appopriate to the purpose. The German patent commissioners are said to have accepted the plan, as being novel and worthy, and a company has been formed for working the process in Germany. The product of the baking is described as a brown, porous, friable substance which smells like new bread and even tastes somewhat like bread. It softens readily in water, and may be fed either mixed with cut-feed or given to the animals as a drink. It is readily eaten by cows and their milk keeps without souring as long as good milk should.

With regard to ensilaging brewers' grains, it has recently been urged that the product keeps best when mixed with an equal volume of chopped straw at the time of packing. In a case described in a recent journal the walls, but not the bottom, of the silo were cemented. The bottom of the trench was simply covered with straw to shield the grains from dirt, and alternative layers of the grains and of chopped straw of equal bulk were thrown in. Each of the layers of grains is forked into, and incorporated with a layer of the cut straw, and the whole is firmly trodden, and covered in, and weighted with, a couple of feet of earth. When thus prepared the grains are said to keep perfectly well. It was remarked that the silos were built in soil that was not completely impermeable, and that in some earlier trials where the floor of the silo was cemented and the mixing with cut straw was less thoroughly done, the grains did not keep so well. It is held to be important anyway to have an abundance of cut straw in the mixture, especially towards the bottom of the pit.

SOUTHERN OHIO NOTES.

How to Make Profit from Raising Grain and Feeding Cattle.

WALDO F. BROWN.

It is in hot, rainless, dewless seasons such as this that good farming tells. Meadows sown on strong land or top-dressed with manure made a fine crop in spite of the drought. So, wheat that was put in early and in good condition, is up to or above the average in spite of an unfavorable Fall, a hard Winter and an intensely dry Spring. The corn that was planted the first ten days of May on well prepared soil that had been thoroughly cultivated, is not as yet seriously injured.

The great curse of our farming here is it "muchness." Grain, grain, grain, without rotation, fields growing ten or fifteen grain crops in succession, and when a hard Winter, a severe drought, rust, or chinch bug comes, the wheat or corn has not vitality enough to resist, and a failure is the result.

It would seem as though many farmers had never calculated where the profit in farming comes from. It certainly is not from average crops. Our statistics extending over a period of about 20 years, show the average of the wheat crop to be about 11 and of the corn 34 bushels per acre, and the farmer must be good at "figgers," who can "cipher out" any profit on such crops. There is a fixed expense in growing a crop, no matter what the yield, and if it will not sell for enough to meet it, the less land we plow the better, for when we seed land in grass or clover, and pasture it, there is so little expense that a much less income from it than from grain gives a profit, and the land, instead of growing poorer, is improving.

I believe I have learned the secret of profit in feeding cattle, and also how to make the most out of pasture land. It is to take advantage of the season of growth, which is late Spring and early Summer. I believe that double the increase of weight in a given time can be made with cattle on pasture at this season, when grass is fresh and sweet, and making a rapid growth, and there are no flies to trouble. Another thing which is in its favor is, that when the stock is to be sold in June the pasture can be stocked twice as heavily as if the same stock must be kept all Summer. With good judgment in buying and selling, there can often be twice as much profit realized in six weeks' pasturing as is usually done in as many months, and it is certainly better for the land than if tramped and pastured till late in the Fall and left bare for Winter.

In order to get this large gain and consequent profit, I think it absolutely necessary that the cattle should be grain-fed for a few weeks before turning to grass. They need not be put on full feed, but must have enough grain so as to begin to improve in condition and show that they are thrifty. March is a favorable month for buying cattle for two reasons: 1st, they are generally cheap from the fact that many farmers find themselves over-stocked and must either buy feed or sell stock; and 2nd, cattle bought at this season and well cared for will not shrink in weight, but begin at once to gain, while if bought from the pasture in the Fall the shrinkage often amounts to 100 pounds or more each. I think there is more demand and a better market for beef at the season of the year when these cattle come into market, than at any other. The start they get from the month or six weeks' feeding brings them in ahead of grass beef, and at a season when the butchers are troubled to find stock enough to supply their wants. My account book shows a profit of $16 a head, on an average, on the cattle I bought in March and marketed in June, and I estimate $12 of this for six weeks pasturing, and as good pasture will carry, for this short time at this growing season, at least one full-grown animal to the acre, this is a fine rent for the land. The cattle I have managed in this way were two-year-old heifers, but I think I should have done better with larger cattle, as they brought a better price. So thoroughly convinced am I of the profit of this method that I shall keep no cattle except my milch cows either in Winter or Summer, but save all my grain and hay for March and April, and either let my pastures stand empty or take in stock to pasture for others after selling off my cattle. I was first led to experiment on this plan by the experience of an Illinois feeder who has been very successful since he adopted this plan. I have been in correspondence with him for three years and have been very much interested in his success. I will, if desired, show what he has done. [Please.—EDS.]

Dairy Husbandry.

THE DAIRY COW.

HENRY STEWART.

Management of a Heifer.

WHEN a calf has reached the age of nine or ten months, she may be introduced to the company of the bull. Some forward calves have been known to be in breeding condition at five months, and have become cows at the age of 14 months. This early breeding is not advisable, and it is therefore well to avoid the company of the bull until the calf is at least nine months old. A dairy cow should be bred at an early age, for the reason among others that it encourages precocity and aptness to milk liberally, and, as a matter of course, lengthens the profitable life of the cow by making an early beginning. When the calf has become pregnant, it is a heifer and upon its treatment until it becomes a cow, which occurs when it drops its calf and begins to milk, depends very much of its future usefulness. There are three important points to consider: the feeding, the discipline and the health of the animal. These three points successfully managed, make up the value of the cow.

The feeding should be such as to maintain a constant, uninterrupted and healthful growth. The course which has been recommended for the calf is right for the heifer, but the quantity of the food may be judiciously increased. As the young animal grows, its own requirements increase in a progressive ratio, and a regular increase of its ration may safely be given. The warning point of danger in excessive feeding is shown when an animal eats its food with reluctance; when its general appearance denotes that it is out of order; its muzzle dry; its dung hard, of a disagreeable odor and dark color; its skin rough and coarse and its demeanor dull and listless. A frisky young animal, with bright eye, moist muzzle, sleek coat, always ready for its food may be considered as doing well, and while it is making a satisfactory growth it is well to let well enough alone. Oats and bran with a little linseed meal furnish the most wholesome food for a heifer, in addition to grass or hay. The Summer food may be pasture, and even in the best pasture, two quarts of oats and bran mixed and a pint of linseed meal will be well paid for in the increased value of the heifer.

A considerable element in the value and usefulness of a cow is the capacity for the digestion and assimilation of food. This is a matter, not of natural ability, but of education and training, and, like all other training, it requires to be secured by slow and gradual steps. If a calf is stinted in food and the capacity of its stomach and digestive organs is economized, it may be healthy, but it will not acquire the habit of eating largely, and become a large animal. So, when a calf becomes a heifer the training in regard to feeding should be continued and the food be gradually increased until there is established a habit of eating and digesting as much food as can possibly be consumed healthfully. Rules cannot be laid down for quantities of food, for what one animal can eat and still ask for more, would dangerously gorge another. The owner of an animal must make a study of its capacity and watch it, and, understanding the principles upon which the practice of feeding is based, apply them to each particular case with as much good judgment as he can. In a dairy, every cow will probably differ in respect to appetite, and, which is most important, the profitable use to which the food may be turned; and each dairyman will do well to become thoroughly acquainted with his cow in this respect and not make the bushel basket his only guide in feeding.

The discipline of a heifer will make her gentle, kind, docile, easily manageable and contented. Persuasion is a good thing, but a whip is a better—at times. All young animals will be willful, and their wills must be curbed at the first opportunity. It may never be required afterwards if it is used rightly. Every dairy should be provided with a sharp raw-hide. If a heifer needs punishment to restrain some budding vice or propensity to evil, the punishment should be short, sharp and decisive. A raw-hide stings, but does no injury except when used so as to strike an eye, which should be avoided most carefully. The young animal *must* be subordinate and learn its inferiority, or when full-grown it may be dangerous. The first lesson taught to a heifer should be to lead by the head; the next, to be handled. She should learn to lift any foot that may be required at a touch; to turn around by pressure on the hind-quarters in either direction; to submit to handling of the teats and udder. Nothing teaches these better than a daily or occasional brushing and carding when tied up. After each lesson she may be patted and stroked on the neck and will always be ready to lick her owner's hand, even after having been punished for a fault. The worst fault to be avoided is that of kicking. This is always caused by fear, and fear is avoided by having the heifer tied up when convenient and handled quietly and gently. If an effort is made to kick it should be punished at once with a sharp cut of the raw-hide on the offending leg. Inconvenient faults are, refusal to stand quietly when desired and running from its owner. These may be avoided by familiarizing the heifer (and the calf previously) to these duties by giving it a little salt, sugar or meal, in the hand, occasionally and teaching it to come at call and to follow.

Health becomes a habit and is secured by training. Attention to the feeding, watering, cleaning, pure lodging and avoidance of dangerous exposure, will make a robust animal, which will be rarely subject to ailments. A strong constitution is built up by attention to sanitary rules as much as a stout body is built up by generous but judicious feeding. Good, wholesome, clean food, generously supplied, but not in excess; pure water in abundance; a clean skin, free from vermin; pure air and comfortable lodging will secure a good constitution, and may even counteract hereditary failings in this respect. One of the most important points in this regard is the management of the heifer when approaching maternity. The greatest danger is over-feeding and the undue stimulating of the milk organs. It would be safe to gradually reduce the feeding at this time and, if possible, to have the heifer come in when she is upon good grass, so that all the organs are in a cool and relaxed condition. For two months previously the extra food may be gradually decreased, and grass only in the Summer, and hay only in the Winter, be given for two weeks previous to the arrival of the calf. At this time it would be advisable to prepare a separate pen for the heifer in which she could have her calf. As to this, however, nothing more than has been said in regard to cows in the same condition need be mentioned here.

The Herdsman.

NOTES BY A STOCKMAN.

IT is a common opinion that domestication has had the effect of weakening the constitutions of our domestic animals and has rendered them more subject to disease than their wild progenitors. This is by no means justified by facts. That wild animals are hardy and robust may be due to the fact that all the weak ones die young and only the strong are able to reach maturity. But the wild races are really the means of infecting our domestic animals with parasites and parasitic diseases. The liver fluke, which produces a deadly disorder in sheep, and which last year more than decimated the English flocks, is disseminated far and wide by deer, rabbits and other animals. The wild hogs of Europe are affected with trichinosis, and partridges die by thousands from the gape worm. A recent case is recorded of the infection of a whole village on the banks of the Jordan by the flesh of a large wild boar which was affected with trichinosis: 124 men, 103 women and 35 children, in all 262 persons, became diseased, but of these only three men and three women died.

This case proves that domestication does not produce trichinosis, and has not the effect of spreading disease unduly; and, further, it shows that this particular disease is by no means the dreadful pest that some believe it to be. When but two and a small fraction per cent. of persons affected die, and in a Turkish village where medical help is the poorest in the world, the disease is by no means so bad as some others that the public treat with very little regard. The truth is, that under domestication our live stock is not only greatly improved in value, but it is more robust and less disposed to disease than wild animals are.

It ought not to be omitted to state that the body of this wild boar was eaten in a very partially cooked state. The head was sent as a present to a neighboring village and was thoroughly cooked before it was eaten. Not one person who partook of the head suffered any inconvenience whatever.

The breeding and rearing of horses is attracting a good deal of attention. The recent sale of the Preakness yearlings, when 38 one-year-olds brought $25,602, the highest price being $4,100, and the Alexander sale of 36 animals of the same age for $36,265, with $5,650 and $3,250 as the leading prices, have called wide attention to the profit of breeding good horses. Kentucky has the monopoly of this business, as it had for many years the monopoly of breeding Short-horns. In this regard it may be said "it is not the place but the man" that makes success; and why should not other States compete with Kentucky in rearing horses, as they have, in rearing cattle?"

The profit in rearing a three-year-old colt that will sell for $100 only is much greater than in rearing a steer that sells at that age for $50. Just now horse flesh is the most profitable stock that can be produced. There is a steady demand for horses both for working and for driving, at very remunerative prices. The bug-bear of over-supply need not stand in the way of enterprise in this direction.

The great point that should not be overlooked is the breeding of good stock. It costs no more to feed and rear a $300 colt than one worth but $50. The cost of the sire is the only difference. This is now a seasonable matter to make a note of.

Another very important point is the use of only sound mares. The whole country is infested with unsound horses. Spavins, ringbones, founder, roaring, blindness; diseases of "wind, limb and eyesight," are far too common. And, as a rule, these come from breeding mares so diseased. By the veriest neglect and carelessness, and in some cases ignorance of the ill effects, very poor mares are permitted to breed; and to save a few dollars the cheapest and poorest service is sought. This is a wasting of opportunity and a squandering of one's resources. But it is consistent with the practice which permits stock to perish for want of food or water in rigorous seasons, or which sends the good heifer calves to the butcher, rather than spend a few dollars extra in feeding and rearing them to improve the stock of cows.

Byron once sarcastically alluded to the "spasms of public virtue" from which he suffered detraction, perhaps well deserved to some extent. Public opinion, it is true, often goes off prematurely and fails to hit the mark if it does not do mischief. This vice is very apparent in regard to public exhibitions of speed on the track; in fact—not to put too fine a point upon it—in regard to horse racing. Now I must confess to a liking to a well contested trial of speed. As a boy, ambitious to excel, I have entered the lists and have experienced the pleasurable excitements of victory. It is a human attribute and it is reckoned a manly ambition to indulge in athletic sports and the race between a couple of urchins, a pair of college crews, a gang of pedestrians, or a number of horses, furnishes a popular, pleasurable and innocent excitement. The race-

course and the trotting match have undoubtedly done much to foster the enterprise of horse breeding, and to cultivate the demand for good horses. This is a gain to agriculture and to stock interests, and seems to me to be worthy of encouragement.

But, unfortunately, the gambler and pool dealer have forced themselves into the ring and have contaminated the otherwise innocent amusement. How to eliminate this evil has been a difficult task with some agricultural associations whose members have been desirous to encourage the exhibition of horses. It can be done, no doubt easily done. There is a way to permit tests of speed in a legitimate manner at agricultural fairs and to give the horse the benefit of all the advantage that may result from it.

By-and-by the programmes for agricultural fairs will be made up and it might here be made an occasion to urge earnestly upon the managers of these affairs to sturdily cast out these nuisances and to give the noble horse his due share of place and room at the fairs in every legitimate and harmless manner, by entirely separating the trials of speed from every approach to betting or gambling. Horse racing is very popular, and the pecuniary advantage that may accrue from this popularity may be gained without any drawback or injury to the public morals.

Miscellaneous.

What Others Say.

A WRITER in the Mark Lane Express says that for roaming on the prairies of America and over the great runs of Australia and New Zealand, the hardy and docile Merino has not yet been beaten. It is a curious fact that their domestic sheep, tame enough at home, become quite wild when let loose in large "mobs" in the great sheep-producing colonies, while the Merinos, used to almost uncontrolled freedom, know how to use it.

SKILLED LABOR ON THE FARM.—The Editor of the New England Farmer heard a large farmer say recently, that if he could hire a man to work for him that could fill his own place on the farm, so that he could be relieved from some of the responsibility of management, he would pay him as much wages as he was then paying three of his ordinary men, and he was not paying low wages by any means. As mere brute force in workmen is growing less and less in demand, from year to year, as steam and horse-power machinery takes the place of hand labor, so the demand for really skilled labor must increase, and this is quite as true of the farm as of the shop and factory. Young men who aspire to any position in society now, whatever occupation or calling they adopt, must understand that it is good workmen that are wanted. While ignorant, inefficient laborers are always in full supply in every department of industry, it is one of the rarest things to find a first-class workman unemployed. Good workmen are not only needed, they are really indispensable.

SAYS Dr. Hoskins in the Vermont Watchman: "Are we not compelled to believe that the stinginess of the people is a chief cause of the inferiority of our schools? It is a wasteful, a fatal stinginess. A good many besides the editors are not awake as they ought to be to their true "pecuniary interest." The five cent piece is so near their eyes that it hides the dollar in the distance."

DAY'S EARLY SUNRISE PEA.—On June 15 we (the Gardeners' Chronicle of England) received a liberal sample of this pea from the raiser, Mr. John Day, Jun., Ash, near Sandwich, and found the quality excellent, superior indeed to any other early pea we have eaten this season. Mr. Day informs us that they were grown in an exposed field, without a hedge round it, the seeds being sown in November last, and the peas picked on June 13. In the same field and under the same conditions the best strain of Sangster's No. 1 was sown three days earlier, and each was ready for picking at the same time. Early Sunrise, however, made one-third more per bushel in the market than the others, being so much finer and superior in quality. [Sangster's No. 1, is known here as Daniel O'Rourke.—EDS.]

LOSSES OF BEES LAST WINTER.—The American Bee Journal publishes some valuable statistics on the losses of bees last Winter from which we make a few extracts. The tables are compiled from reports on 521,230 colonies or about one-sixth of the whole number of colonies of bees in America. In the following table the first column of figures denotes the number of colonies in the Fall; the second the number that died; the third, per cent of loss.

In bee houses	15,864	3,299	.21
In cellars	91,171	29,734	.33
Protected	145,883	67,338	.46
Total	252,917	100,271	.39
Unprotected	268,313	229,741	.85
Grand total	521,230	330,012	.63

All that were left on the Summer stands, but which were well packed with chaff, leaves, sawdust, straw, or otherwise, are included under the heading "Colonies Protected;" while those left on the the Summer stands with chaff cushion or other slight protection (or none at all), are classed as "Colonies Unprotected." No bees in box hives were wintered in a bee house; 10,656 colonies in box hives were put into cellars, where the losses amounted to 4,393, or 41 per cent. Only 4,704 were protected, and of these 2,016 perished (43 per cent.), while 13 times as many were left on summer stands unprotected, and 93 out of every 100 unprotected colonies perished. Another valuable lesson is taught by the following comparison: Colonies of bees protected by being placed in cellars or bee houses, or by being packed on the summer stands, number 252,917: of these, 100,271 died—39 per cent.; 268,313 colonies were wholly unprotected, but the loss was 229,741—85 per cent.—or nearly thirty thousand more than double the number that died, out of a like number protected! As to kinds of hives used the following table is instructive:

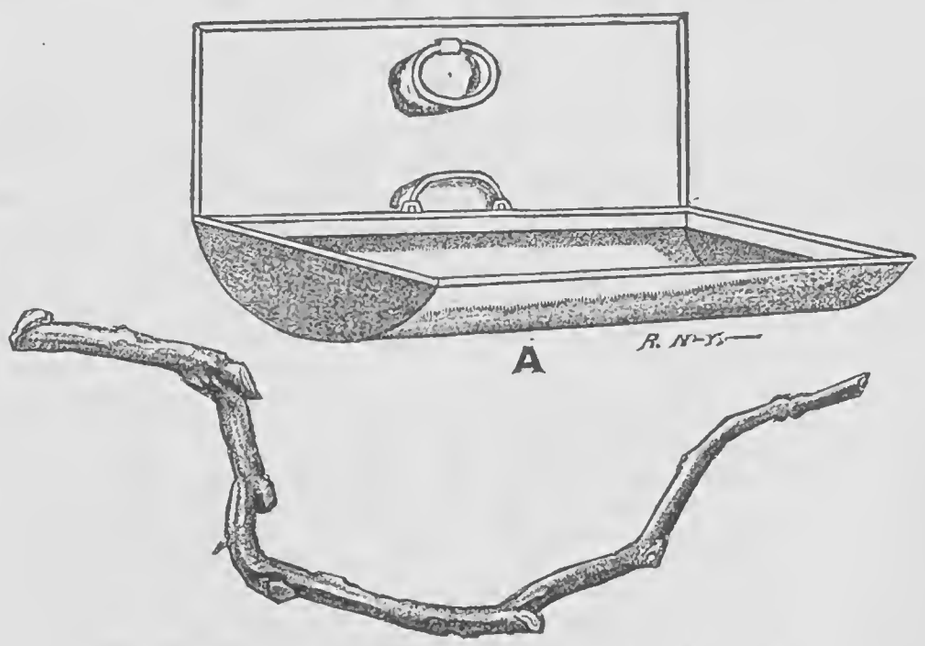
Box hives	211,732	187,705	.89
All frame hives	309,498	142,307	.46
Langstroth	196,957	83,965	.43
Other frames	113,541	58,342	.51
Grand total	521,230	330,012	.63

It will be readily seen that while the average percentage of loss in box hives is 89, in all the frame hives it is but 46—an unanswerable argument in favor of frame hives.

SELLING MILK IN BOTTLES.—H. Stewart, of Bergen Co., N. J., tells, in the Country Gentleman, how he persisted for a year in endeavoring to establish a custom for milk put up with every care in Warren milk bottles, sealed up and carried under ice to the customers, and how and why the laudable enterprise proved a failure. As to the "why," he attributes it to the indifference and neglect of customers, who often failed to return the bottles, sometimes returned them broken or minus the rubber rings, and very generally unrinsed, with soured milk dried on the inside, making them very troublesome to clean. Many refused the bottles, not wishing to have the trouble of preserving and returning them. Mr. S. tells the story simply and with seeming fairness. He says that he would prefer the bottles, as the milk is then already measured and packed, convenient for prompt and clean delivery, like the general stock of a modern grocery. But the general experience, he says, coincides with his, and proves that the losses are too great, and that, in short, it doesn't pay.

ROSA RUGOSA AND ITS VARIETIES (see Fig. 353).—"I must say these plants are too little known, otherwise they would be more largely grown; and, possessing three very distinct characteristic qualities, viz., beauty in flower, in foliage, and in fruit, they should be recommended to all true lovers of gardening. They also make good single specimens on the lawn, on the tops of mounds and like places. The fruit when ripe is delicious, and I believe largely used as a preserve in its native habitat." So says a writer in the London Garden.

PRESERVING EGGS.—Mr. Henry Stewart gives the New York Times an instructive article upon the subject of keeping eggs from the time they are cheap and plentiful until they are scarce and dear. The man in any business who makes the most profit is the one who lessens most the cost of his product. And the poultryman who will get rich next Winter and make the least boast of it is he whose hens are now laying each four or five eggs a week; and these are carefully packed away while perfectly fresh so as to come out next Winter equal in all respects to the new-laid, and selling at nearly the prices of fresh. Perhaps some persons may consider this a questionable business. But is it? Eggs sell on their merits; and if, by preserving them so that in six months they are in every respect equal to new-laid eggs, in what respect does this differ from preserving Summer pears or grapes in ice-cold store-rooms for sale six months afterward; or canning honey for future sale; or other similar methods of holding over surplus products for future periods of scarcity?—always excepting, however, any attempt to deceive the purchaser by untruthful representations, and always disposing of the eggs as preserved ones and not as fresh. There are several methods by which eggs may be perfectly well preserved for six months, and this is the season for putting these into practice. To relieve the market of its surplus now, and also to relieve it of its scarcity in the Winter, would tend to equalize prices, to raise them now and to moderate them then. But, as the preserving requires both care and regular attention in the Summer time and some little neatness and skill, and the majority of persons are averse to taking the requisite trouble, there will probably never be a sufficient quantity of eggs kept over to have an effect upon prices in the directions referred to.



CONTRIVANCE FOR CATCHING THE POTATO BEETLE.—FIG. 358.

The common methods of preservation all depend for their effect upon closing the pores of the shell and excluding air from the perishable interior. It is also especially requisite that the eggs be treated while they are perfectly fresh, for if decay has begun it cannot be arrested by any known process. The most popular preservative is lime, used in the following manner: A tight barrel is half filled with water, into which are stirred slaked lime and salt, at the rate of half a pound of each for each pailful of water. Some dealers add four ounces of saltpeter to the half barrel of pickle. The eggs, perfectly fresh and gathered twice a day, are placed in a shallow dish and carefully let down into the pickle, in which they settle to the bottom, always with the small end downward. The barrel will be filled when it is half full of eggs, the equal proportion of pickle making up the difference. A cool place for storage is required to keep the eggs. The pickle has a certain corrosive action upon the shells after two or three months, but to avoid this the eggs may be smeared with lard before they are put in the pickle.

Another method used for domestic purposes is as follows: The eggs are placed in a convenient willow basket or net, and are immersed for five seconds in a boiling solution of five pounds of common sugar to a gallon of water. The heat sets the albumen in a film on the inside of the shell and the sugar closes the pores. The eggs are then packed, small ends down, in a mixture of two parts of dry bran and one part of finely powdered charcoal. The French, who produce and keep enormous quantities of poultry, have several methods of keeping the eggs. All of them, however, are alike in respect to the materials employed. These are oils and wax. One of the best of these processes is as follows: Four ounces of bees-wax are melted with eight ounces of olive oil. When the mixture has cooled to a safe temperature each egg is dipped into it and wiped with a soft cloth to remove the excess. The eggs are then packed in boxes in powdered charcoal, freshly burned, and have been thus kept perfectly fresh for two years. Fresh charcoal is desirable because of its excessive affinity for oxygen, which it absorbs and occludes within its pores, thus keeping the eggs free from contact with the only agent of decay that is to be feared.

Paraffine is odorless, tasteless, colorless, harmless and cheap; it is a mineral wax or fat, and may be used instead of bees-wax or oil with equally good effect. As it melts and becomes liquid at a little over 100°, it is easily applied and easily removed when the eggs are boiled for use. Fresh charcoal finely powdered is at least four times as effective a preservative as the lime pickle. Dry salt has been recommended for keeping eggs, but it is totally useless where the air is at all damp, as it is in a cold cellar. Water glass—soluble silicate of soda—has been used by the Germans for keeping eggs. This is a clear liquid, of the consistence of syrup, and, when smeared over the shell, soon dries into a thin, hard, glassy coating, entirely impermeable to the air. Eggs are to be packed with the small ends downward, because in that position the yelk is suspended exactly in the center of the egg and does not touch the shell. When it touches the shell and air reaches it, decay instantly begins. One stale or broken egg will spoil a whole barrelful. The packing should be so placed between the eggs that no two shells come into contact. An even and cool temperature is necessary. A changing temperature causes disturbance of the air among the packing, and starts a molecular action in the egg, which is favorable to, if not productive of, decomposition.

A MAN is known by the company he keeps out of.—Independent. . . . . "How much butter do you suppose I have sold this year?" "All you made," was the reply of the neighbor who knew his miserly habits. . . . . It is a mistake to assume that a rose by any other name would smell as wheat.—Yonkers Gazette. . . . . Every lie, says Owen, must be thatched with another, or it will soon rain through. . . . . A Georgia editor says:—"Gold is found in thirty-six counties in this State, silver in three, copper in thirteen, iron in forty-three, diamonds in twenty-six, whisky in all of them, and the last gets away with all the rest." It is so, more or less, with all the States of the Union. . . . . Mr. J. S. Woodward says, in the last Report of the Michigan Pom. Society, that in selecting a location for grapes on the farm of course there is a choice. The grape, to show the best results, should have a soil with more or less clay; but they do fairly well on almost any soil, *if it is dry*. Remember the grape is nearly as sensitive as the peach to having *wet feet*. Unless your soil is naturally dry, see to it that it is made so by a few deep-surface ditches, or, what is better, under-drains, put deep. . . . . Mr. Woodward also said that he did not wish to say anything against quality in the grapes, but that quality is not everything. "What is the good of quality without grapes?" he asked. . . . . For farmers' use we want *certainty*. . . . . The first thing to be looked to in selecting a vine is its *leaves*. These are more important than all else combined. We want the leaf healthy and able to withstand the attacks of both insects and diseases. Next, see that the vine is a strong grower. But if it have large, thick and persistent leaves, it can hardly fail in this respect.

Entomological.

A HANDY "BUG-CATCHER."

WITH the pan I use for catching Colorado beetles any one can do as much work as three or four people collecting the pests according to the ordinary method of hand-picking. The pan Fig. 358, is made of tin, and any tin-man can fashion it. It is a box or pan, two feet long, one foot wide and six inches deep. The bottom should be round, or cylindrical, so that the rim of the pan can be got close to the ground when the vines are small. Stiffen the edge with wire. On the inside, at the top, solder a rim or flange about three-quarters of an inch wide. This should slant downward somewhat, as its object is to prevent the "bugs" from crawling out when once they have got in. On one side of the pan solder or rivet a handle such as those on common tin milk pails. On the same side as the handle solder a shield of tin 18 inches high and of the same length as the pan, slanting backward a little. The edges should be stiffened with wire. About four inches from the top of the shield, and in the center, solder a loop or ring large enough to admit the arm to the shoulder. In using, insert the left arm through the loop and grasp the lower handle with the hand, then, holding the pan close up to the vines and near the ground, with a crooked stick, like the one represented, gather the vines over the pan, giving them a smart shake against the shield and over the pan. A good, active man, with this contrivance can "bug" an acre of potatoes effectively in two hours. G. W.

[In the above description, unaccompanied by any drawing, we infer that the two handles are to be placed on the inside of the tin shield, but could they not be on the outside just as well, yet occupying the same relative position? We would suggest that braces from the upper corners of the shield to the ends of the box would add greatly to the strength of the "bug-catcher." EDS.]

RURAL SPECIAL REPORTS.

Arizona.

PHŒNIX, Maricopa Co., July 14.—The principal crops here are barley and wheat. Corn is not cultivated to any extent; what is raised is principally for green corn for the table; the country is too dry for this crop. Sorghum grows exuberantly and is cultivated considerably for fodder and sirup. There are no extensive orchards; all kinds of fruits flourish except, perhaps, apples and pears. Every sort of vine yields abundantly. All our products are consumed in the Territory except those of our mines. F. A. H.

Arkansas.

BEEBE, White Co., July 14.—It will be three years next March since I came here, and I am satisfied that the big stories told about this part of the country are not true. The soil will not produce such crops as some correspondents report. It takes just as much labor to prepare the ground for our oats, corn, millet, etc., as it does up North, and we only get half as much of a yield per acre. Of oats I get from 15 to 20 bushels per acre, and of corn from 12 to 20 bushels. On old ground millet will not do well unless manure is used, and we have nothing here to make manure of. Cotton is the only crop on which money is made, and but little is made on that. Flour is from $8.50 to $9 per barrel on credit, $6.50 to $7 for cash; best grades still higher. I do not think this is as much of a stock country as some make it out to be. There is nothing here for stock to eat but bushes. I have tried to raise grass ever since I came here, but it is killed out by drought or severe Winter weather. I brought two good cows with me from the North which would make four and a-half pounds of butter a week each, but here I cannot make butter enough from them to use. Hogs are never killed here until they are two or three years old, as the people say they do not get their growth before that age; but the reason is, they haven't corn enough to fatten them sooner. Some feed a little corn about two weeks before killing, to harden the meat. I was told that peaches never fail here, but this season there are none. Strawberries, half a crop, and blackberries none. Apples are very good. I have shipped some early ones, but late ones do not do well. Sheep up North are just one half larger than here; so is everything. The people think the wolves kill the sheep, but I tell them it is the dogs, of which the white farmers have about four each and the blacks still more. The people are very clever, but ignorant. They go to town on Saturday to get the news, but do not take the papers. Some want free schools and some want none, and the teachers are all poor. I have never worked so hard as I have since I came here, and we have not made over 50 cents per day in a year. It costs about one-third to get stuff to market in St. Louis. Last week we had two nice rains, which helped corn very much H. B.

California.

PENRYN, Placer Co., July 15.—We do not raise enough wheat or corn here for home consumption. All kinds of orchard fruits are good crops. Berries are not up to the average, except blackberries. Prices of fruits of all sorts have ruled low. E. W. B.

PENTZ, Butte Co., July 17—The wheat crop in this section is light. The Ennobled Oats turned out good. I sowed six pounds (which I raised last year) broadcast on about one-sixth of an acre and harvested eight bushels. The straw very heavy and the heads fine. W. H. S.

SOQUEL, Santa Cruz Co., July 15.—The wheat crop in the vicinity of Soquel is not an average compared with last year; the same is true of barley. Very little rye is grown. Oats are mostly cut into hay. Owing to the extremely wet season the farmers could not get in their usual grain crops, and as a last expedient planted corn as late as May 25, which crop never looked better. The majority of corn growers rarely market their corn, but feed it to stock. In San Francisco fruit dealers are in the hight of a busy fruit season, with an abundance of everything, at better prices than usual, owing to an increased demand for canning. R. H.

Dakota Territory.

FARMINGTON, McCook Co., July 14.—The acreage of wheat is at least one-fourth greater than last year and the outlook is very promising. Oats are looking well and bid fair to give a good yield. Barley is an excellent crop and does well in this locality. I have 10 bushels sown upon last year's breaking and can ask for nothing more favorable. Corn, as a general rule, is not very flattering owing to poor seed, late planting and unfavorable weather. I have several different varieties and fields, all of which are excellent; Blount's White Prolific and Chester Co. Mammoth are just "booming." I have also white and yellow dent, Calico, etc., the present bad outlook for corn is owing more to the negligence and carelessness of the farmers in general than to anything else. Some expect a crop without any exertion. An unusually large amount of flax was sown this season and it promises to be a good crop. I think it is safe to say that the acreage of all kinds of grain compared with last years is one-third greater. We have a new country which is rapidly settling up. Three years ago there was little or no grain raised in neighborhood. No orchards; some have a few young trees that are doing well and I think fruit trees will do well here. We have the finest wild fruit I ever saw, in abundance along the Jim River and various other streams. Small fruits have not been much introduced here, but there are those that have some started and they are doing well. Strawberries are of an excellent quality; that is, those that grow wild, and they are only in places that have not been burned over. I have also seen tame ones that were excellent. There are some who approve of burning off the surplus grasses annually. I am not a practical farmer, but I do not approve of the burning process. I have derived more knowledge on agricultural and horticultural matters through the columns of the RURAL than from any other source. It has helped me in very many respects; some simple advice on what might be considered small things has benefited me more than ten times the amount of subscription price. W. S.

SPRINGFIELD, Bon-Homme Co., July 12.—The acreage of all kinds of crops is much less than it would have been had not the season been so backward. The yield of wheat will not exceed one half crop. Barley and rye and flax little better. Oats look well but will be short in straw. Corn late, much of it thin on the ground on account of poor seed. Looks well. Small fruits have done well. There are but few orchards old enough to bear. M. C.

Florida.

MARION Co., July 17.—There is no agricultural association in this county, so that statistics of the areas under different crops are mere guesses; or, at best, estimates. I would say, however, that in this county 500 acres of oats were harvested this year, giving, on an average, about 15 bushels per acre—which is very fair for our lands. No wheat, barley or rye. Rye would yield, comparatively, as well as oats, but there is more uncertainty of a crop. Of oats, Georgia and Mexican rust-proof alone are worth sowing. The corn prospect is the worst for many years, owing to unseasonably cold weather in Spring and a severe drought in May and June. Probably the crop will not average five bushels per acre. The area of the crop is probably 10 per cent. greater than last year. Peaches promise a fair crop. The peach-tree is usually short-lived here, but the fruit is very fine. The tree is sometimes troubled with worms, but the fruit, never. The orange crop will be greater than last year, owing to the increase of bearing trees; but the yield per tree will not be so great. J. L. W.

Indiana.

SANDBORN, Knox Co., July 13.—Since my report to the "Crop Special" of the RURAL, the crops here have changed a good deal, so that what I truly said then with regard to them would not be true now. A quarter of the wheat crop is threshed and turns out to be only from a quarter to a third of an average crop, and that of poor quality. Corn is generally good; hay is good, but there is no market for it. This is in the great Winter-wheat belt, the two adjoining counties being the "banner" wheat counties of the State. "H."

Iowa.

EAST DES MOINES, Polk Co., July 14.—Hereabouts there has been a more general failure of all crops, except oats, than has ever before occurred—causes, late planting, defective seed and wet weather. W. T. L.

DAVENPORT, Scott Co., July 18.—The total yield of wheat will be much less than last year in this county. Owing to several successive failures of the crop many farmers have entirely abandoned its cultivation and others have reduced the area formerly given to it. Sea Island and Odessa are the favorite sorts. The Winter sort was all killed. The acreage under barley is greater than last year, as it is the sort of small grain mostly raised here. It was greatly injured by rains in the latter part of June and the beginning of July. Though the quality will be inferior, the yield will be good. Early-sown oats are good; but late-sown are thin—acreage about the same as last year. The outlook for corn is poor owing to late planting, bad sprouting and cut-worms. Acreage about the same as last year. C. W. L.

Kansas.

RENO Co.—Kansas is a wheat-growing State remarkably adapted for it by nature. The elements for producing strong straw—indeed all plant stocks—are very abundant in our soil. Very little headway can be made mowing here with a scythe, the silica, or silicates, so permeate the stems of the grass, millet, wheat, etc. In 1878 this State came into prominence as a Winter wheat producing State. In 1879 a hail storm in this county destroyed what the early drought had left of our wheat, and 1880 was like '79—we had a long-continued and severe drought and but a very little wheat was grown to spare in Western Kansas. Rains came last Fall and with a favorable Winter and mild Spring our prospects for this year were early recognized as being very good and many placed our average yield as high as 20 bushels per acre. The immense rains that came early, accompanied by warm weather, caused rust to make its appearance about the time when wheat was in bloom, which, of course, interfered with our crop. This was followed by an almost unprecedented development of chinch bugs; fields were literally alive with them, at least on some varieties of wheat; on the May wheat worst of all. These influences—rust and chinch bugs—weakened the straw and it early began to fall, and ere it was ripe enough to cut, large fields were straw-fallen to a degree to almost defy machinery except the mower. On the 25th of June came a hail storm of terrible severity accompanied by severe wind and an enormous rainfall—10 inches on the level—and the wheat remaining uncut—probably three-fourths of all in the county that was in the line of the storm—was destroyed, as was everything else. Fields of from 25 to 100 acres, that would have made an average yield of 25 to 30 bushels, were threshed out and beaten into the earth. All these untoward things tend to diminish our crop. Some Spring wheat was sown but the rust and wet weather destroyed it. The principal varieties of wheat grown here are May Walker, Turkey, Fultz, Mediterranean and some little Clawson. The Fultz and Mediterranean were free from rust and chinch bugs on my farm. The finest berry I have seen this year was in the last named. Wheat is largely cut here with headers. Self-binders and harvesters, etc. are also used. Harvest begins about the 1st of June and lasts through the month. We are in a state of great uncertainty as to what to do in regard to sowing for next year. The chinch bugs are so numerous that we fear the entire destruction of wheat another year. Large fields of corn that escaped the hail storm are now black with bugs. The railroad monopoly causes us to take a small price for our wheat, as a rule—from 40 cents to 75 or 80 cents; it is worth the latter figure now. Would it be any more than simple justice to place railroads under control of law enough to give us uniform *fair* rates and prevent extortion and monopoly? J. W. MEC.

Michigan.

KALAMAZOO, Kalamazoo Co., July 10.—In traveling between Albion and this place on the railroad, I only saw two good stands of corn and three good fields of wheat. People generally, however, are feeling in good spirits over Fall prospects. W. K.

Missouri.

CHARLESTON, Mississippi Co., July 12.—The drought which had prevailed since the first week of May ended on the 21st ult., after damaging the early potato crop 40 per cent., and the corn crop, 25 to 30 per cent. With a good season, however, from now until September 1, we shall have good crops; otherwise the horn of plenty will not be filled to overflowing. The wheat crop of this county in quantity is a good average, and in quality the best ever harvested. Our farmers made greater efforts than usual to secure the best seed. M. V. R.

New Hampshire

KEENE, Cheshire Co., July 13.—The weather is very warm and farmers are pushing haymaking rapidly. "B."

New York.

CHENANGO Co., July 15.—Haying is advancing rapidly, many farmers having finished. The yield is good, especially in the Unadilla Valley, where the crop is seldom better. In Madison County I noticed, a few days ago, that the crop is light, especially on old meadows. The hot weather is pushing the drowned corn vigoronsly; the crop now promises finely. The potato beetle is as rampant as ever, though Paris-green is a valuable sedative. Oats look well. Wheat is nearly ready for the sickle. The long-continued east wind, or some other cause, has checked the fruitage of the orchards, which blossomed full. Apples will not be plentiful. E. J. R.

FISHKILL, Dutchess Co., July 17.—We are still having an abundance of rain and the country is looking fine. J. G. B.

Ohio.

CAMDEN, Preble Co., July 13.—Weather very hot and terribly dry. Our corn is beginning to curl up very badly. Pastures are getting burned out and are quite brown. My Blount Corn is tasseling. The Rural Sorghum is doing well. It is too dry for the White Elephants; they have been blossoming for two weeks. The Washington Oats are good; Mold's Ennobled Oats are quite a failure. W. M.

Oregon.

BROWNSVILLE, Linn Co., July 12.—Wheat acreage fully an average; outlook good for a large yield—Club, Sonora and White Winter. Oats and barley have an average acreage, and promise large yields. Corn but little raised. Orchards, average yield. J. B.

Pennsylvania.

ANNVILLE, Lebanon Co., July 18.—Wheat is now harvested; it is about 75 per cent. of last year's crop; quality on an average good—Mediterranean and Fultz. Oats promised to be an extraordinary crop. The corn prospect is very good. Early potatoes pan out immensely; acreage larger than last year; worth about 50 cents a bushel. Apples promise an ordinary crop; so do pears and grapes. J. A. B.

Texas.

ARCOLA, Fort Bend Co., July 16.—This is the Texan sugar belt. Owing to the severity of last Winter the cane stubble was nearly all killed, and it will take three years to make a full crop of sugar here. Corn is burning up in the fields; we have had no rain for eight weeks. What corn there is has made only nubbins, and there is not half a crop at that. Cotton is doing well, and this is just the kind of weather to have for it. It is well formed and has commenced to open. The acreage is about the same as last year; but the crop is fully 10 per cent. better. The Rural Branching Sorghum is just splendid; it is now over 10 feet in hight, with 19 branches to the hill. I want to let it all go to seed, which I hope it will do here. F. W. P.

DAYTON, Liberty Co., July 10.—No rain for a month, and corn is suffering severely. Cotton is beginning to shed its squares. My RURAL flower seeds have all perished under our broiling sun, and the White Elephant is going the same way. I tried watering, but it did no good. The Rural Branching Sorghum is doing splendidly, the dews feeding its roots through its mass of leaves. G. G.

Vermont.

HUBBARDTON, Rutland Co., July 18.—Wheat in this section is good; I never saw it looking any better at this time of the year—mostly Spring wheat—and the prospect is now that the crop of 1881 will be more than an average one; it will certainly be more than last year's if no mishap befalls it. The oats are looking well now; the crop will compare favorably with last year's. Rye is good, although it was winter-killed in some places; taking it all in all, the crop is a fair one, though there was not so much sowed last Fall as usual. The apple crop will fall far below an average. Grapes will be good. All small fruits are light. E. G. S.

Virginia.

FORT MITCHELL, Lunenburg Co., July 19.—The wheat harvest is over and the farmers are in the hight of thrashing. The yield is over an average; quality generally very good. The oat crop is very poor, many fields being hardly worth cutting owing to a severe drought. The corn crop looks well and a full crop is planted. There will be rather over half a crop of tobacco which is rather late owing to drought at planting time. Cotton looks well; it is rather a new crop with us; but owing to the very low price of tobacco large numbers of the farmers have tried King Cotton, some on a large and some on a small scale. Owing to dry weather the hay crop is short. Gardens late and poor. The Washington Oats received from the Free Seed Distribution have been harvested and the yield was very heavy. The Rural Branching Sorghum is about four feet high and outbranches anything we have ever seen in these parts in the shape of sorghum or corn. It is a perfect wilderness. How is it for sirup? [So far as we know no practical tests have ever been made in getting sirup from it. Eds.] It doesn't seem to me it will do well owing to the immense number of small branches, but it must be fine for hay or ensilage. The apple crop is the heaviest for many years. The peach crop is a total failure in many places: on high ridges, however, the crop is good. J. L. T.

NEW MARKET, Shenandoah Co., July 15.—The Telephone Pea has done wonders, I am highly pleased with it. We have had hot, dry weather for the past two weeks, the thermometer ranging from 85° to 101° in the shade. On July 2nd we had a very destructive hail storm. P. S. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

Churning—Asparagus Culture.

Inquirer, Crawford, asks, 1, how long should butter be churned after particles of butter appear on the sides of the churn; 2, what do we personally know of the German or Dutch asparagus; 3, directions for the planting and field culture of asparagus.

ANS.—1. Sometimes particles of butter appear in the churn some time before the cream is fully changed into butter. In some milk and under some circumstances, particles of butter will even form in the milk pail from the agitation of the milk during milking, and the cream of such milk will produce particles of butter long before the bulk of it is changed. It is also very uncertain how long the cream should be churned after the small butter begins to form, as this depends upon a variety of circumstances, as temperature, condition of the cream, the food of the cows, etc. It is a matter of practice for

which no strict rule can be laid down, any more than the time occupied in churning can be restricted to rule. The rule should be to examine the cream as soon as the peculiar "slip-slop" sound is heard, and to take no notice of scattered particles of butter that may appear, but when the fine butter begins to form all through the cream to turn the churn slowly, by which the fine butter is gathered more quickly and in better condition than by quick churning. It may take five minutes, or less, or 15, or even more, to gather the butter; but the time may be shortened in Summer by putting some ice water in the churn, and in Winter by adding a little warm water. 2. Nothing. 3. Plow deep and thoroughly pulverize the land. A sub-soil plow is desirable. Select a sandy loam if possible Plant in rows *not less* than three feet apart, the plants one foot apart or more—not less. One-year-old roots if well grown are best. Salt is considered an excellent dressing for asparagus unless the plantation is near the sea. The field may be dressed with any quantity of manure. We are of opinion, however, that a reasonable quantity—say 20 tons to an acre—answers just as well as the immense amounts sometimes used.

A Drag Rake for Hay.

"Subscriber," Stanwood, Kansas, asks for a plan of a drag rake for hay.

ANS.—The drag rake is made as follows:—A stout pole is bored at intervals of six inches so as to receive rake teeth one and a-half inch thick and four feet long on each side. These should be of tough wood, either white oak or hickory. The rake teeth are tapered and pointed at the ends so that they will easily slide over the ground. The rake head is about 11 feet long,

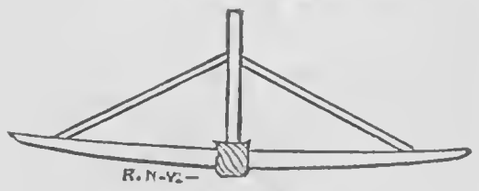


FIG. 359.

and when finished appears as shown at Fig. 363. The end teeth are of extra strength, and are braced to a post set in each end of the main bar, as shown at Fig. 361. The bracing is required to strengthen the post, because the weight of the draft comes upon it. A center post is fitted in the middle of the main bar and two strips are bolted to the end and middle posts, as shown at Fig. 359. The ends of the drag consist of gates made as shown at Fig. 360, and hinged strongly to the end posts. Each of the end gates has a stout ring fitted

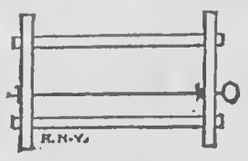


FIG. 360.

to it, as shown, and the bolt should pass through the rear post and be secured there by means of a washer and nut. The ends swing around on their hinges so that the rake, which is a double one, may be drawn either way. A horse is hitched to each end and is ridden by a boy; the rake gathers up its load and is drawn to the stack or barn, when the horses are swung around, drawing the ends around at the same time, and the rake is drawn out from under the load, leaving it ready to be forked up to the stack or in the windrow. The drag may be eleven feet long and eight feet wide, that is, four feet on each side; the center may be four feet high. It will hold 500 pounds of hay, when filled.

Quack Grass—Migration of Swallows.

G. C. B., North Rochester, N. Y., sends grass for name, which is very tenacious of life and is there called "Dog Grass," and asks, 1, how to exterminate it: 2, where do swallows go in winter. A learned neighbor of his says they go into the mud.

ANS.—1. The grass is a kind of wheat often alluded to in this journal. Its name, botanically, is Triticum repens. Couch, Quitch, Quick, Rye Grass and Quack are some of its many "common" names. If a field infested with this, be planted to corn and well cultivated during the season, the Couch Grass will have been killed, root and stem. There is one thing to be said against suffering this grass to get a foothold upon one's farm, viz, it is *hard* to get rid of. But, as we hope to show some day, there are many things to be said in its favor. We have just cut one old field, three-quarters of the grass upon which was "Quack," and harvested two tons (or nearly) per acre therefrom. 2. There are more than 50 species of swallows, differing more or less in shape, habits and time of migration. None of the 50 go into the mud in Winter, so that that learned ornithological neighbor of yours must be, for once, in error. The cliff swallows, however, have occasionally been found hibernating in the inmost recesses of their nests instead of migrating southward, like the rest of the genus. They all go as far south as the Tropics where swallows are seen in the greatest numbers in our midwinter season. The barn swallows start southward in large flocks by the end of August or the first of September on some fine morning, following the shore or course of rivers. They reappear in the Southern States from the middle of February to the first of March, a few at a time, reaching the latitude of New England in mild seasons by the middle of May. The white-bellied swallow or house martin comes the earliest of all in Spring and generally leaves the last or almost the last.

Cow Milkers.

S. C. B., Deadwood, D. T., having heard about a newly patented "cow-milker" with which a friend's friend is reported to have milked 100 cows a day, asks as to the merits of this and other milking devices.

ANS.—There have been many so-called milking machines and devices for drawing milk invented and puffed into transient notoriety, but all have failed. We suspect your friend's friend never milked 100 cows with a machine, and that there is some misunderstanding about it. The cow can't be made to submit to any machine. The engraving here given represents a milking machine of which some thousands were sold by profuse advertising about three years ago. It consists of four silver tubes to be pushed into the teats, each attached to a rubber tube, and these are gathered together at the end as shown. The cows, and owners who used these machines regularly, came to grief, for the tender mucous membrane of the teats and udder, which is as sensitive as the peritoneal membrane of the abdomen, became inflamed by the contact of the tubes: and garget and other troubles supervened. Here is the difficulty. The writer in pursuit of knowledge and experience devoted two good cows to experiments with these machines, and persevered to the end with them with the effect of completely ruining one old cow, and nearly spoiling a young one in less than two months. The milk flows perfectly well, but the irritation of the tender membrane is a serious evil. Other machines, operated by air pumps which cause suction and are intended to milk a whole dairy of cows at once, have been introduced, but the thing wont work and the pipes and tubes and attachments to the teats give endless trouble and bother. We know of none of these milking devices in use at the present time; but know of many that were discarded very soon by dairymen who would gladly have made them successful if possible.

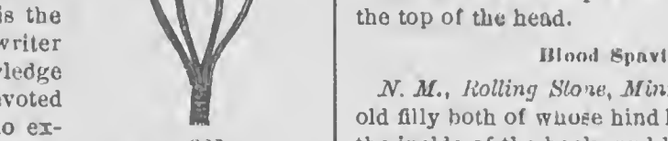


FIG. 361.

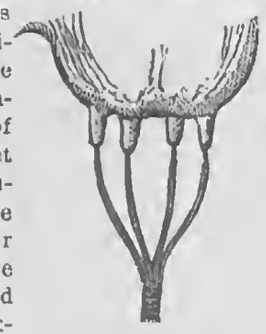


FIG. 362.

Treatment of a Young Calf.

J. B. R., Rouseville, Pa., says:—"I have a calf eleven weeks old, that has as yet eaten no grass. It is in good health apparently, and lively, though somewhat thin in flesh. It gets about two quarts of corn and oats chop and bran mixed with skimmed milk nights and mornings. Its teeth appear to project, so that their edges come outside of the upper jaw when its mouth is closed. They are somewhat loose, and the calf is continually rubbing them against the board fence. What should be done under the circumstances, if anything?"

ANS.—This calf has been perhaps over-fed with grain. A young animal requires judicious feeding and before any grain is fed it should begin to eat hay or grass. The looseness of the teeth indicates disordered digestion and an inflammatory condition of the system. It would be better to give the calf a little fine grass or clover wetted and dusted with the chop and bran, and withdraw the clear meal until it eats the grass with relish. A calf of this age should eat at least a bushel basketful of grass or clover daily, and until it takes this naturally and with good appetite it would be well to give only a small quantity of meal. Grain food should not be the base food for a young animal, but only the additional ration added to the base food to increase its nutritiveness, and the grain should be given with care to see that it is healthfully digested and assimilated.

Ailing Pigs.

A. J. B., Belmont, Miss., says that his hogs, and especially his small pigs, have of late been attacked by a disease in the ear, which becomes completely raw inside; the green fly then "blows" on the place and the hog dies soon afterwards; sometimes it holds its head to one side, as if it had the blind staggers, and our friend asks for some preventive and remedy.

ANS.—The cars should be cleansed with soap-suds and then the parts affected should be touched with a mixture of carbolic acid and water in the proportion of one drop of acid to twenty of water. The sore should then be smeared with gas coal-tar, which will keep the flies away. The smearing with coal-tar should be repeated every two or three days until the ears are healed. The gas coal-tar is healing and antiseptic, and may be a sufficient remedy without the application of the carbolic acid. Staggers may be relieved by bleeding in the neck followed by an active physic—a pint and a-half of linseed oil or a pound of Glauber salts. Bran mashes should be given afterwards for a week. If horses are liable to this trouble, their heads should be shaded in hot weather with a canvas or cloth hood, which may be stretched on a wire frame-work and attached to the bridle and suspended a few inches over the top of the head.

Blood Spavin.

N. M., Rolling Stone, Minn., has a one-year-old filly both of whose hind legs are swollen on the inside of the hock, and he asks what is the remedy.

ANS.—This is a case of blood spavin, an ailment to which young horses are peculiarly liable. It has no relation to bone spavin and is usually comparatively harmless. As treatment a persistent application of cold water will generally be effectual in the early stages, followed by cooling lotions—equal parts of alcohol and water, or a pint of brandy mixed with half a pint of water, applied as a lotion. In later stages a strong infusion of bayberry bark should be applied and, lastly, brandy and salt should be perseveringly applied.

Watering Trees.

H A. P., Zanesville, Ohio, asks whether it is advisable to water deciduous shade trees and evergreens a great deal in Summer. A neighbor of his waters his trees thoroughly every night all through Summer.

ANS.—Generally we do not think it a good plan. The earth becomes hard over the roots and air is excluded. When trees are newly set out and evidently suffering for moisture, the best way is to remove the surface earth and give the roots a good drenching. Then replace the surface earth and cover with leaves, old manure, straw or hay This will carry the plant through the drought, and it will thrive better than if watered every night according to your neighbor's practice.

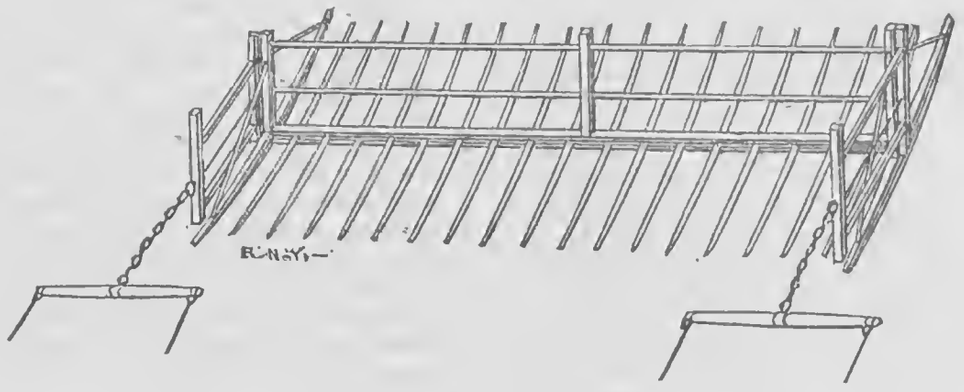


FIG. 363.

Information Wanted.

J. C. Dyson, Washington, Ga., writes: "The RURAL's correspondents, Messrs. Holmes and Sweetland say that the herd or fence law in Iowa is the poor man's friend. An election on which the question of establishing a herd-law depended has just been held here, and has resulted in the defeat of the proposed law by a vote of nearly five to one, the majority being swelled by all the poor men—negro and white. I would therefore like to know something about the provisions of that Iowa herd law which is a boon to the poor man. A good law of the sort would be worth thousands of dollars to farmers here; but they can't have it because the poor man thinks it would curtail his privileges—or rights, as he deems them"

Miscellaneous.

W. H. P., Mt. Eaton, Ohio, in the RURAL of June 9, complains of some White Russian Spring Wheat which he ordered from a N. Y. seedsman and which came to hand poor and shriveled. It came up nicely, but after a time stopped growing and he asked whether its stoppage was due to the fact that the seed was shriveled or to the climate. We replied that in our experience wheat grew fairly well from shriveled seed, but that the grain was smaller; and the heads longer. Our friend A. M. writes, from Bay City, Michigan, that the trouble was due to the fact that White Russian is a Winter wheat, and having been sowed in Spring it will not mature until "after it has encountered the frosts of Winter." White Russian wheat, however, is a Spring variety, although it is often sown in Fall in some parts of the country. As W. H. P. sent for White Russian *Spring*, however, it is highly probable he got the Spring sort, so that the above "explanation" of the trouble will not "explain" it. We have raised both kinds of White Russian wheat at the Rural Farm, and have succeeded in changing the Spring into a Winter variety.

S. F. B., Buckeye Center, Ill., has a grape vine, 43 years old, that has never borne a grape though it blossoms every year. It is a fast grower, the vine increasing from 14 to 20 feet per season, and he asks, 1 what will make it bear fruit; 2 a remedy for light on fruit trees; 3. where can Tree Peonies nght and at what price.

ANS.—The blossoms are probably sterile—that is; they have no stamens. If you would procure pollen from other vines and dust it upon the blossoms as soon as fully open, we think such blossoms would bear fruit. This is neither so impracticable nor difficult as it seems. 2, Nothing that we know of. Saw or cut off the branches as soon as it appears. Wash the stems (trunks) with lime and whale-oil soap. 3 Tree Peonies cost from one to two dollars each; of most nurserymen.

"T.," no address, asks whether it would not be well to bind grain with cord after it has been cut with the cradle, in view of the great use of cord binders now in connection with reapers, and the loss of time in binding the sheaves with straw bands.

ANS.—So far as our experience goes, and from what we can learn from others, there is nothing cheaper than straw for hand-binding. Twine at present costs from 20 to 35 cents per acre.

M. W. H., Roanoke, Ind., asks, 1, when is the best time to sow turnips; 2, what is the best kind.

ANS.—1 In Indiana all turnip seed, with the exception of Rutabaga, may be sown up to September 1. 2. The best turnips, such as White Egg, Red top Strap-leaf, Golden Ball, etc., do best sown about the middle of August. Rutabaga should be sown in the latter part of July to August 1.

J. H. G., Hart, Neb., is preparing ground for artichokes, but his neighbors say "Don't get 'em; they'll spread over the whole country," and he asks whether there is any danger of their doing so, and which is the best kind.

ANS.—The artichokes are hard to get rid of when once established, the root-stocks spreading out in every direction. That known as the Large Globe is preferred.

W. H., Van Wert, Ohio, asks why Potato Onions are rotting at this season, while in the bed—the bulbs are as large as hulled walnuts, and both the sets and the large ones are rotting alike.

ANS.—This passes our understanding. If we were on the spot and familiar with all the circumstances, we would, possibly, be able to fathom the mystery.

C. P. H., Evansville, Wis., asks whether there is any strawberry that doesn't have runners, but multiplies from the roots, and, if so, whether it is hardy.

ANS.—None that we know of, except the Bush Alpines. Mammoth Bush comes the nearest. After hot Summers the Alpines often fail.

Mrs. M. H., De Ruyter, N. Y.—They are as good as any. You should have sent your *full* name. Inquiries of that sort we prefer to answer by mail.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JULY 26.

W. F. B.—F. W. P.—T. T. L.—W. F.—H. H. C.—M. W. J.—B.—E. J. R.—E. W. B.—H. S.—P. H. B. A. B. A.—W. K. E.—L. H.—S. T. R.—D. L.—S. R. M., you should *try* our methods of corn culture on a small plot. An experiment farm, conducted on your plan, would need to consist of several thousand acres.—G. C. B.—W. M.—J. W. McC., M.D.—F. H. S.—J. C. D.—W. H. M.—C. E. P.—Mrs. B. C. D., wheat number—M. W. H.—J. W. S.—G. A.—J. B. R.—E. L. P.—Mrs. S. H. R.—A. M.—P. S. W.—"Stockman"—T. H. H.—I. H. M.—H.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
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SATURDAY, JULY 30, 1881

IN deference to many requests we shall defer, until the Fair Number, the publication of the names of those who take the wheat prizes. Engravings of the best heads will also appear in that number. Heads may therefore be sent so as to reach this office as late as August 20th—not later.

WE find that peaches of ordinary size and inferior quality were selling July 23, on Broadway, (N. Y.) at $1.50 per dozen.

OUR friends will have to hurry up their wheat specimens. Please be particular to write the name of the wheat on the outside of the box and give the name and address of the sender. Five heads are required.

THE Chicago Grain Receivers' Association has reduced the commission on the sale of flax-seed from two to one per cent. in store and one and a half per cent. on the railroad track. In view of the large increase in the cultivation of flax in the West, this reduction is as just as it decidedly is expedient. The larger amount of sales will reimburse the operators for the curtailment of their commissions, while had the higher rate been maintained, probably flax growers would have patronized a less exacting market.

A NEW GRADE OF WHEAT.—At a late meeting of the Grain Receivers' Association of Chicago, a resolution was introduced to request the Railroad and Warehouse Commissioners to establish a grade of No. 2 Southern red winter wheat covering all the No. 2 red winter wheat that may come from the States of Illinois, Indiana, Missouri, Kansas and Nebraska. It was urged that red winter wheat grown further north was not as good as that raised in the above area, the latter being intrinsically worth from five to ten cents per bushel more, and that grain inspectors could easily tell the difference between the two sorts. Very properly objection was made to depreciate sweepingly the more northern wheat by branding it geographically, and the resolution was amended so as to refer to the quality only irrespective of the place where the grain was raised. It is to be hoped that while this classification will raise the price of one grade, it will not lower that of the other.

THE GREAT ATLANTA SHOW.—The total number of entries for exhibition at the great Atlanta Exhibition down to July 18th, was 1,086, and their character shows the all-embracing nature of the exhibits, only two entries having been hitherto made of the same kind of articles. Among agricultural exhibits the most prominent hitherto are: cotton gins, cotton presses, cotton-seed cleaners, fertilizers, plows, harrows, cultivators, an agricultural steam engine and various food products. The buildings are being rapidly pushed to completion and Secretary Ryckman, now in this city, says they will be ready to receive exhibits by August 15, and that the Exhibition will certainly open on the date fixed—October 5. There is to be a large exhibit of foreign goods and two steamers are now under charter to leave Liverpool on August 15 for Savannah with articles for the show; while other exhibits will follow either on specially chartered vessels or by the regular lines. Now that the project of an international exhibition here has collapsed and the Boston Grand Show is likely to remain where it is now—in the clouds—let us turn all our attention to the making of this Southern show a grand success.

MISSISSIPPI GRAIN TRANSPORTATION.—Hitherto the great impediment to the development of grain transportation on the Mississippi River, for export *via* New Orleans, has been the apprehension that grain shipped by that route is likely to become heated. The recent experience in transporting grain from St. Paul and St. Louis to the Crescent City, however, have exploded this notion. Of 30,000 bushels of wheat lately shipped from St. Paul for Liverpool to be transshipped at New Orleans, the weigher at that point reports that the entire loss was only about 66½ bushels, of which only a bushel and a half was injured on the barges; whereas the loss from western points to this city is said to average nearly one per cent. To still further lessen any existing risk, a new system of ventilation has been introduced by the St. Louis and New Orleans Transportation Company. This consists of a funnel from the deck to the grain room and of openings above water on each side of the barge, through which air passes into and through a space between the hull and a lining to the storage department. A stiff current of air passes through the funnel and intermural space all the time, and it is said that a cargo of corn or wheat will keep fresh and dry all Summer on the water in barges ventilated in this way.

RIVER TRANSPORTATION seems to be about to have a good effect in cheapening freight rates by rail to the seaboard from all points on the Mississippi River, and consequently from all points west of it, from which there is water transportation to the Father of Waters or transportation by railroads terminating at the river, as at St. Paul and St. Louis. The great through lines from the trans-Missouri country will doubtless so arrange freight rates to their termini at Chicago and other points, that it would not pay to ship by them to the Mississippi freight to be transmitted on barges to New Orleans. Neither farmers nor speculators, however, should insist on reaping great immediate advantages from cheap river transportation, lest their unwise greed should check or defer its development. Arrangements were lately made at St. Louis to send five barges up the Missouri to Kansas City, the boats to start on telegraphic notice that the merchants of that place had their grain ready for shipment. On the announcement of the prospective arrival of the barges, however, the price of grain at Kansas City rose at the rate of two cents a day until it was higher there than at St. Louis, and the proposed trip of the barges was abandoned, and as they lost a good cargo to New Orleans while waiting orders for Kansas City, the proprietors are hardly likely to be anxious to renew the project.

SOFT WHEAT.

AMONG millers, especially in the Northwest, there is a growing agitation against soft wheat. A local paper reports that all the millers at Minneapolis lately refused to buy a load of Lost Nation because they had resolved to grind no wheat so soft. The flour from Minneapolis and other milling points in Minnesota has obtained its superior reputation principally because it is made of such very hard wheats as Fife. While this and other hard wheats will not yield so much per acre as soft varieties, mill-men can make a higher grade of flour from them by the "new process" and are therefore willing to pay a better figure for them. Quite a considerable number of mills in Western Wisconsin will not, it is said, buy Wisconsin wheat, because it is deemed too soft, preferring to send grain buyers into Minnesota for their supplies. Of late years farmers of the latter State have been tempted to grow soft wheats more extensively than formerly, and consequently the Minneapolis and other "high grade" mills in the Northwest have lately been buying heavily in Dakota where a new grade, "Hard No. 1," gives great satisfaction, while the soft grain is being shipped in bulk to the Eastern markets, mostly for export. It would seem that if the miller cannot ordain what sort of wheat the farmer shall grow in any other way, he will, wherever he can afford to do so, go so far as to refuse to buy soft wheat.

LOSS OF BEES LAST WINTER.

ANY process by which we may arrive at the causes of the great loss in bees during the past Winter, will be greeted with joy by the apiarist. The best way to ascertain what these causes are, is to consider the conditions as to location, kind of hive, protection, etc., under which the colonies were placed during the severe cold of Winter, and then make a comparison of the results as shown by the number and strength of the colonies that were alive in the Spring. In another column will be found statistics bearing on this question.

From these reports, received from all parts of the country, at least two important facts are evident—first, that it is profitable to carefully protect the hives in Winter, and, second, that frame hives are superior to all others for Winter use. The first fact is shown, as nearly as may be, from the summary that out of 268,313 unprotected colonies, 229,741 were lost; while of the 145,883 protected colonies but 67,238 succumbed to the cold. The second fact is shown by the statement that of 211,732 colonies in box hives, 187,705 were lost, and of 309,498 colonies in all frame hives, 142,307 were lost. That is, the average percentage of loss in hives is .89, and in frame hives but .46. It is probable that these figures are as nearly authentic as can be obtained, being derived from so large a number of reports and, being such, they are worthy of consideration.

IMMIGRATION AND THE PUBLIC LANDS.

THE total number of immigrants to this country during the year ending June 30 last, was 660,239, against 451,902 for the twelve months ending June 30, 1880—an increase of 208,337. This is the greatest tide of immigration that has ever flowed to these shores, and if each newcomer added only $500 to the wealth of the country, the aggregate would, in six years, overtop the national debt, if the rush continued equally large. A very large proportion of these are going West, many of them with the intention of "homesteading" so soon as they can legally do so. Besides a fair opportunity to win a livelihood or a fortune, the United States offers to every adult among them who "declares his intention" of becoming a citizen, 160 acres of unoccupied public land in any State or Territory possessed of land subject to entry, on condition of actual settlement—dwelling upon and cultivating the soil embraced in the entry. At the end of five years of continuous residence on, and improvement of, the land, he can receive a patent for it, though the final title will not be issued until full citizenship is obtained. The only payment for such a bountiful grant is a petty fee amounting to $34 on the Pacific Coast and to $24 in any other part of the country. Moreover, if the "locator" wishes to purchase his homestead outright, he can do so at the end of six months, paying for his land at the rate of $1.25 or $2.50 per acre, according to the provision of the law on the commutation of homesteads. The homestead act has been in operation 18 years, though much the same system of disposing of the public lands has existed for nearly 80 years, and up to the end of the last fiscal year—June 30—the United States has donated to immigrants and others 19,265,337 acres.

THE CATTLE COMMISSION.

THE Secretary of the Treasury has appointed a Cattle Commission whose duty it shall be to investigate all cases of pleuropneumonia in neat cattle, especially along the line dividing Canada from the U. S., and along the lines of transportation from all parts of the United States to ports from which cattle are exported, and to perform other duties prescribed by the Secretary with reference to this disease, in order that cattle shipped from this country to foreign ports may be known and certified to be free from this pest. The Commissioners are Dr. James Law, of Cornell University, N. Y. the standard veterinary authority of the country; Mr. James H. Sanders, of Chicago, Editor of the National Live-Stock Journal, who in the course of his editorial duties has obtained a great deal of information with regard to the plague; and Mr. D. F. Thayer, of West Newton, Mass., one of the best authorities in the land on contagious pleuropneumonia, who has been twice instrumental in stamping it out in Massachusetts. We have several times strongly urged a measure of this sort, although we would have preferred that the Commission should be connected with the Department of Agriculture rather than that of the Treasury, for we desire to add to the importance of the former, and this cannot be done if business that properly belongs to it, is performed by any other Department. The Commissioners are to meet on August 1, to form a plan of action, and it is to be hoped that no time will be lost in setting vigorously to work. The strongest objection hitherto urged in England by those who opposed any modification of the restrictions on the importation of cattle from this country, has been that no "clean bill of health" certified to the sound condition of the animals on their embarkation here; as the new Commissioners are to take measures to furnish certificates at the various ports at which cattle are shipped, it is to be hoped that our trans-Atlantic friends may either remove or greatly modify the present embargo on our cattle.

BREVITIES.

WE have to announce that our supply of Pyrethrum roseum seed is exhausted.

IT will be noticed that F. W. P., Texas, says, in our Everywhere Department, under date of July 16, that his Rural Branching Sorghum "is 10 feet high, with 19 branches to the hill"—that is, from a single seed. See, also, J. L. T's report from Virginia.

MR. GEO. W. CAMPBELL in his horticultural report of the Paris Exposition, speaks of a new plum called Merignon, which was to have been offered for sale in 1879. He says that it is of enormous size, nearly black in color, oval or egg-shaped, and as large as a hen's egg. It is, however, rather coarse in texture, and not above third-rate in quality. We presume some of our nurserymen have obtained trees and that it will be offered for sale in this country in due time.

A SHEEP DAIRY! Yes, indeed, one has just been started at Chattanooga, Tennessee. An Austrian, backed up by "men of means," has there begun the manufacture of Schafkase—sheep cheese—a delicacy which is said to far surpass "cow cheese" in all desirable qualities. Schafkase is made like ordinary cheese, it is reported, and the Chattanooga factory has started with milk from 200 sheep, which number is to be increased to 500 or even 1,000. Mutton and wool have hitherto been the chief points held in view in raising sheep, must their milking qualities also be taken into consideration?

THE famous cow Jersey Belle of Scituate, died the other day of milk fever, having dropped a bull calf the previous day. She was dropped July 10, 1871, got by Victor (3550) out of one of his own daughters, and was considered among the best Jersey cows in this or any other country—if she was not the very best. In her seven-year old season she gave 705 pounds of butter in 365 days—a yield that made her famous the world over. Some doubt of this performance has been insinuated by the skeptical, but while mourning her untimely death we have no heart to cast a shadow on her great merits.

FROM an English "blue-book" or Parliamentary report just published, it appears that during the year ending last February, the number of live stock shipped from this side of the Atlantic to Great Britain was 242,681. Of these 1,563 were washed overboard in rough weather, 156 died from exposure, 512 were suffocated, 63 died through lack of proper ventilation, 1,327 died from exhaustion, and 3,491 were thrown overboard during stormy weather for the safety of the vessel and the rest of the freight, making the total number lost 7,112. Although the loss is thus shown to be a trifle less than three per cent. of the total number shipped, yet what a world of suffering does it not represent, and what an opening for the exercise of humanity does it not afford to shippers!

BETWEEN Kansas and Colorado on the north and New Mexico, Texas and the Indian Territory on the South, lies an unexplored tract of public land about 160 miles long and about 30 miles broad, which is within the borders of no State or Territory and of which nothing whatever is known by the Government officials. At its last session Congress passed an act authorizing the Secretary of the Interior to have this tract surveyed, and Commissioner McFarland has just completed the necessary arrangements, so that this tract will soon be open to homestead and pre-emption settlement. It is believed to contain at least one large river with a dozen, or so, considerable branches. It is thought to be rocky and suitable for grazing, but not for tillage. There will soon be no corner in our wide territory whose capabilities and attractions have not been investigated and set forth.

AMONG the many novel projects discussed in England for the relief of land-owners one at least is about to be tested—in the form of an experiment in joint-stock agriculture. A company has been organized, embracing such prominent noblemen as the Duke of Buckingham and Lord Dacre, and skillful agriculturists like Mr. Stratton, the well-known cattle-breeder, with the object of leasing single farms or groups of farms in various counties and of cultivating them according to the very best principles. Ample means for doing so are at the command of the Company whose capital amounts to $5,000,000. Each group of farms will be under the management of some one whose skill and local experience will enable him to deal in the best way with that special land. Special attention will be bestowed on dairy farming, the rearing and feeding of cattle, sheep, pigs and poultry, market gardening and fruit culture. Special rates will be obtained, where possible, for transporting the products of each group of farms to market, and whenever practicable all products will be sold directly to consumers.

THE National Cotton Exchange convened at St. Louis, July 20 and 21, and appropriated $3,550 to defray the expenses of the year 1880-1881, and recommended that an assessment of $70 be made on each member. A meeting of one expert from each constituent Exchange, and of two delegates from New Orleans and New York are to meet in this city on August 15, for the purpose of establishing a uniformity of standard. A committee of three were appointed to memorialize Congress for an appropriation to establish stations throughout the South to furnish additional crop reports, and it was decided to ask local Exchanges to use their influence to secure the passage of such a measure. The time and place of the next convention are to be determined by the Executive Committee. It was urged that the Agricultural Department and Signal Service Bureau be extended and more liberally fostered, as both are capable of being made of great use to agriculture; while owing to the parsimony which now hampers their efforts, neither is able to do much good. The present method of collecting official crop reports was strongly reprobated, and, so far as cotton is concerned, it was declared that unless a change were made for the better, it would be advisable to discontinue the publication of the reports. A change is certainly desirable, but only a change—not an abolition.

Miscellaneous.

FILTERING CISTERN.

R. J. DODGE.

Our bread and meat are no more important for our well-being than the liquids we drink. The outlay for food is so constant that purchasing all the variety of which our solid nutriment is composed has with us become a second nature, but when we see water upon every side, and are often injured by the too plentiful torrents from above, we find it difficult to realize that there may at some time be a scarcity, and are not willing to bestow much labor in laying by a store of this luxury and necessity of every day and almost every hour. Experience, however, has taught us that, although the heavenly supply is generally bounteous, its fall is so irregular that, in general, provision in time of plenty must be made for coming times of scarcity, and wells and cisterns were hence needed and constructed by the most ancient of our race.

For many years my daily drink at Montclair, N. J., was rain water, fallen upon an ordinary tin roof, covered with some sort of metallic paint, said to contain no lead, and flowing into a large cemented brick cistern, whence it was pumped into the kitchen. This cistern differed from the usual construction in this manner: across the bottom, about three feet nearer one side than the other, was excavated a trough or ditch about two feet wide and two feet deep; along the center of this depression was built a brick wall from the bottom up to the top of the cistern and having a few openings left through it at the very bottom. The whole cistern, bottom, sides and canal included, was then cemented as usual, excepting the division wall. Upon each side of the wall, at its base, from six inches to a foot of charcoal were laid, and covered with well washed stones to a further hight of six inches, merely to keep the charcoal from floating. The rain water passing from the roof into the larger division of the cistern, passes through the stone covering, the charcoal, the wall, the charcoal upon the other side, lastly the stones, and is now ready for the pump placed in this smaller part. It is much better that the water at first pass into the larger division, as the filtration will be slower, and the cistern not so likely to overflow under a very heavy rainfall. I used this cistern for many years, and was troubled only once, when some toads made their entrance at the top, which was just at the surface of the ground, soon making their presence known by a decided change in the flavor of the water.

If your house chances to be in a dusty situation, several plans will suggest themselves whereby a few gallons at the first of each rain may be prevented from entering the cistern, but I employed no such means and never felt the need of any. Should the house be small, and therefore the supply of water from its roof be limited, do not lessen the size of the cistern, but rather increase it, for with one of less capacity some of the supply must occasionally be allowed to go to waste during a wet time, and you will suffer in a drought, whereas a cistern that never overflows is the more to be relied upon in a long season without rain.

Rain-fall varies exceedingly in different places, and even in the same situation it is impossible to foretell the amount to be expected during any short period of time, but the most careful observations show us that about four feet in depth descends at New York and vicinity every year, or nearly one inch a week. If this amount were to be furnished uniformly every week, the size of a cistern need only be sufficient to contain one week's supply, but we often have periods of four weeks without receiving the average of one, and we must build accordingly.

The weekly average of one inch equals one cubic foot upon every 12 feet of surface, or 3.630 cubic feet upon an acre, weighing about 113 tons. Upon a roof 40 by 40 feet, 1,600 square feet, it would be 133 cubic feet, 1,037 gallons, or about 26 barrels of 40 gallons each. A cistern eight feet across and ten feet deep would contain 502 cubic feet; and one of 10 feet across and 10 feet deep, 785 cubic feet or 6,120 gallons—about the average fall upon a roof of the above size for six weeks; while the smaller cistern would hold 3,900 gallons or a little less than four weeks' rain-fall. The weekly supply of 1,037 gallons, is equal to 148 gallons per day or nearly 15 gallons to each individual of a family of ten. This is certainly enough and more than enough, if used as it should be; but where water is plentiful it is wasted, and in our capricious climate, whether we depend upon wells or cisterns, it is wise to waste no water at all, at least during the warm Summer months, and lay by not for a wet but a dry day.

Experience in Carp Raising.

Last Summer I saw in a paper an article treating of the German carp, and for further information it said application should be made to Professor Baird, Fish Commissioner, Washington, D. C. I applied to him for fish and got 20 on November 19. In the mean while I had prepared a place for any I might get, by scooping out a pond of about 30 rods in a depression near a small creek, and dug a ditch from it to the creek, putting in four-inch tile to supply the pond with water and placing a screen at each end of the tile—one to prevent the ingress of refuse matter and the other to keep out the fish. When the pond was "full," the deepest part was four feet. When the fish arrived they were from two to four inches long; the largest I have seen lately are about ten inches long, and all appear to be doing well. I have been feeding them with hominy bought at the grocer's and have also given them some rice. From a large creek four miles away I brought a tubful of a sort of water weed and planted it around the margin of my pond, and I think the fish feed on it. Grass and various weeds are also growing in the shallow part of the pond. During the coming Fall I shall probably extend my pond so as to include two or three acres of hitherto nearly worthless land.

Preble, Ohio. W. M.

BOOKS, CATALOGUES, ETC.

Hand Book of Insect Collecting—W. P. Manton, Lee & Shepard.—This little book of 32 pages is well adapted "to furnish the beginner in the practical parts of entomology, with reliable information in a cheap form," as its prefatory note suggests. It gives instructions on the requisites for insect catching, how to prepare insects for the cabinet, time and places to hunt, etc., etc.

The Apiarian.

MID-SUMMER BEE NOTES.

The Strength of Colonies.

In case of scanty pasturage for bees at this season of the year, there is great necessity for providing them with food in the hive. The feeding should be done regularly after sunset, and as they are more liable to be vicious when the fields fail to supply them with honey, the bees should be smoked sufficiently to keep them quiet; and then, as always, they should be disturbed as little as possible. The practice of feeding, either in Spring before flowers bloom or in the Summer intervals during the absence of the best honey-producing flowers, is a wise one, as it keeps the bees in good condition for the work before them. Cheap honey is recommended by some as a good food, but "A" sugar reduced to the consistency of honey, is quite as good. There is but little to be said in favor of feeding grape-sugar and glucose.

The Moth Worm.

Honey which is removed from the hive in hot weather is apt to be inhabited by the moth worm, which hatches from the eggs deposited in one way or another by the bee-moth. Just how, or when, this is done is not known, but it is not at all unlikely that the moth finds her way into the hive and there lays her eggs, though some say she deposits them on the bottom boards of the hive and then they are carried inside by adhering to the feet and legs of the bees. If the honey taken out is to be kept in boxes during the Summer, it should be closely watched and at the first appearance of a fine, whitish powder on the combs, it should be removed by fumigating with sulphur. It is well to smoke combs from which the honey has been extracted.

Light and Dark Honey.

It is important to keep the light-colored, as basswood or clover honey, separate from the dark-colored, such as buckwheat honey. The apiarist who expects to get good prices for his honey will be careful not to let these two kinds go to market in the same box. White honey, though it be but soiled with dark, will not command as good a price. However, nice buckwheat honey, though not commanding as large prices, is yet a source of much profit, inasmuch as, in some sections, a good supply is obtained after the white honey plants have failed.

Ventilation and Shade.

Much attention should be given these subjects in hot weather especially. The brood nest needs to be well ventilated, but the boxes for wax-working should be closed. The hives should be protected from the intense heat of the sun during the heated term, though early and late in the season it is essential that the hives be exposed to the warm rays of the sun.

Italianizing.

August is a good month for Italianizing, as the queens can be obtained quite reasonably then, and good Italian workers will be ready for the next season. Every effort should now be made to build up the colonies with young bees, even if feeding is required. Colonies thus well prepared will stand the Winter much better. J. W. D.

Literary Miscellany.

"DOG LOST."

Oh who has seen my doggy dear—he of the stubby tail—
He of the soft and liquid eyes, and melancholy wail?
No more I hear his gentle step, nor see his happy face
When licking off his dinner-plate, or running on a race?

He was as ugly as they grow upon the Isle of Skye—
And that's what makes his loss so great, and made his price so high?
So tell me now, "ye winged winds that round my pathway roar,"
Will my dear doggy ne'er come back? Shall I ne'er see him more?

He was a brown and curly thing, who ran about the house,
And up and down the stairs he'd go, as still as any mouse;
I have never seen a dog so small, so horrible to see!
And will that darling, precious thing come never back to me?

Oh, no! he's gone! My heart will break! That terrier from Skye
Has left me for some other home! The tears fall from my eye.
Alas! If I should search the world, I know it could not be,
That I should find another dog as ugly as was he.

And so I mourn my doggy lost. Good people join my wail:
He was the dearest little dog that ever wagged a tail.
He *was* so ugly! Precious dear! So blest I cannot be
As ever to possess a dog as ugly as was he!

("*U-r-r-r-r-r-r-r, Ow, Ow, Ow!*")

But stay! What's that mellifluous sound that breaks upon my ear?
It is! Oh, can it then be true! It is his voice I hear!
And now, dull Time, bring all thy woes—I care not what they be—
Since my delightful ugly pet has been restored to me.

—St Nicholas.

THE MANOR HOUSE.

Can I find a lodging in the neighborhood?" I asked, hoping the person questioned would offer to put me in his own cottage.

"Not within a dozen miles."

"Could not you take me in yourself? Give me those two nice rooms over the porch."

"How do you know of them?" he asked, eyeing me suspiciously. "Anyhow, I can't, and that's all to be said."

"Well, how if I can get leave to live in the house itself, would the family object? They never come down you say, and the place is to let. I might write and ask the Squire."

"There ain't no Squire. It's Miss Judith as owns the place, and you can't write to her."

"Then I'll write to her lawyers, or the agent, if you'll give me his address."

An artist, a landscape painter, who has come unexpectedly upon "good stuff," to use the cant phrase, is not to be turned aside from his purpose by small difficulties. While wandering through counties in search of subjects for my brush, I had stumbled, quite by accident, upon Maxted Manor House, and I was resolved to make the most of my discovery. The place was a paradise for a painter—an ancient and embattled mansion, lying half hidden in a wooded dell, but moat-encircled and strongly entrenched with its stout sixteen-feet-thick walls. It stood four-square around an inner court-yard, in which grew one or two fine old ewe trees.

Guided by the caretaker, an illiterate, somewhat surly old man, who was also gardener, I had explored all that was in view within the Manor House. From him I had extracted, as though they were his favorite back teeth, a few particulars about the place. No one had lived in it for years. Why? The Maxteds were free to do as they pleased, surely? Now it was to be sold? "No, not to be sold. Why should Miss Judith part with the property? There had been Maxteds before the flood. Well, why not? it would only depend upon which flood; they had many floods in those parts. But Maxted could not be sold. It must go to some one of the same name—there were cousins always—if Miss Judith didn't marry; but that she was certain to do. A proper beauty she was—a pure Maxted, tall and fair and merry hearted, she is the living image of the picture over there," and he pointed to a large portrait of a lady in white, long, flowing robes, her face partially concealed by a gracefully draped veil, which gave greater effect to a pair of brilliant brown eyes. I was constrained to admit that if the present owner of Maxted Manor resembled the original of that picture she must be the possessor of at least one beautiful feature.

I had some difficulty in persuading the old gardener to give me the address of Miss Maxted's agents; he would only tell me that they were to be heard of in Blueburgh, the county town. I found them out at length, at Blueburgh, but they positively refused to forward my request to occupy the Manor House. Miss Maxted did not seek a tenant, they said, and would not be pleased with them for suggesting the idea. I asked them whether I could not apply in person, and was told that Miss Maxted did not choose to be disturbed by business affairs. I was not to be balked, however, and before I left the agents' office in Blueburgh, I had ascertained the name of Miss Maxted's lawyers in London. To them I wrote, reiterating my request, but giving no reasons; presently I received a civilly worded but very distinct refusal. Messrs. Burke and Bingham were instructed to say that Miss Maxted had no desire to let the Manor House, and that my application could not be entertained. I made one last effort, I wrote to an old aunt, who was much in the great world, and who knew everybody in it worth knowing. I asked her if she had ever met Miss Maxted, and if or whether she could further my views. She wrote back to say that of course she knew Judith Maxted. The girl was a near neighbor of hers in the country—an heiress and a beauty. Her fame was widespread; she was a most charming girl "In fact," said my aunt, "she would just do for you." As my aunt had already proposed some five-and-twenty girls as exactly cut out for me, I did not put much store by this, her latest suggestion. What was more to the purpose was that my aunt had made a point of seeing Miss Maxted, and had made her aware of my wish to pay a long visit to the Manor House. What followed I had better tell in my aunt's words: "Miss Maxted shook her head very positively. 'He had better not think of it,' she said. 'If you take an interest in your nephew, you had better dissuade him from his project.' I asked her to be more explicit. For a long time she hesitated and demurred. I asked her why she never lived in the house herself. 'I can't,' she answered, as I thought rather abruptly. 'That's nonsense,' said I, thinking she had some stupid scruples as a young unmarried woman; 'you are at liberty to live anywhere you please.' 'I can't live there, at any rate; *they* won't let me.' 'That's preposterous,' I went on, knowing she was quite independent, and, having no relations, would certainly not allow her agents or people to interfere with her. 'Who are *they?*' I asked. 'The ghosts,' she replied, quite as coolly as though *they* had been the rheumatism or smoking chimneys. "But after that, my dear Henry," wound up my aunt, "of course you will give up the idea."

Yet I had not the slightest intention of doing anything of the kind. If anything, this news made me all the more keen. My curiosity was piqued, my interest doubly aroused. Should I, a full-grown man, who had seen and done most things, be frightened out of my purpose by a silly story of a ghost? What if Maxted was reputed to be haunted? The ghost would hardly interfere with my sketching; and, if I succeeded in this, my sole object in visiting the place, I should not mind a little nightly disturbance. So I wrote back to my aunt in these terms, and begged her to assure Miss Maxted that all the ghosts in Christendom, or out of it, should not drive me from the Manor House if I had but the fair owner's permission to occupy it.

I think Miss Maxted must have been piqued in her turn by her reply. She did not seem pleased that I should make light of her family ghosts; she did not say so in so many words; but in finally yielding to my request, which she did with the best grace in the world, she accompanied her consent with one or two conditions which proved to me that she wished to make my tenantry as terrible as possible. She played, as it were, into the ghost's hands. In the first place, she stipulated that I should live in the house by myself, her ostensible excuse being that she did not like the notion of having strange and unknown people about the place. She could rely upon me, an artist, to have a reverent care for the furniture and contents of the house, which, although ancient and worn, were still precious as heirlooms and from their associations. Therefore, she left the house to me, and to me alone. Moreover, she hoped I should not want to bring any servants of my own. So far as my personal comfort was concerned, the the gardener and his wife would take every care of me. I might not mind a little roughing perhaps, but the old man had once been a page boy, and had some knowledge of valeting, and his wife was equal to cooking and caring for a single gentleman. If I agreed to these terms I might enter into occupation at once.

Of course I agreed. I did not mind roughing it; that was all in the way of business, and I had done it a dozen times already in far worse quarters than a snug country house, and, instead of a gardener and his wife, had often been contented to do without servants at all. Moreover, I seemed to see below these conditions a certain tone of irony and chaff, and I was determined that Miss Maxted should not terrify me out of my purpose by insisting on my facing the nameless terrors of Maxted Manor House alone.

Shall I confess honestly at once that I did not feel quite so courageous when I returned to the place?

It was not without a certain sense of trepidation—that peculiar feeling of gooseflesh which accompanies a shiver of terror—that I crossed the hanging bridge over the moat, and passed under the old arched gateway. The gardener unlocked and then swung back with difficulty the heavy iron-studded oaken outer door; a second presented itself, and opened into the central courtyard. High up on every side rose the straight, dark walls; windows were there in plenty, but all were closed with shutters, and reflected no light; above all, on one side, the tall belfry and clock-tower soared aloft, till its pinnacle seemed lost in the clouds. A grim, unearthly silence reigned around, which was mocked and soon conquered by the sounds made by our clattering feet upon the pavement of the courtyard. My impulse up to this point was to withdraw at once from my enterprise and return without delay to Blueburgh.

But now the old gardener had made good his entrance into the house. The moment he opened the door a flood of welcome light flashed out across the passage into the court. It came from one of the sitting rooms which had been prepared for me. The gardener's wife had kindled a blazing fire on the hearth; near it dinner was laid on a small oval table, and the fire-light danced pleasantly upon glass and cutlery and snowy cloth. Miss Maxted, as I afterwards heard, had desired that I should be made thoroughly comfortable, and under these instructions the best table linen and a portion of the family plate were brought out. From the kitchen, which was at no great distance, came a most savory smell, and assured me that at least I might count upon dining well.

I threw myself into a great high-backed chair before the fire, and immediately felt thoroughly at home. Meanwhile the gardener went to and

fro, bringing in all my belongings from without. When he had finished, he asked me if I should like to see my room, and went out to ask his wife in the kitchen in what room she had made my bed. I heard their conversation every word. The old lady was extremely deaf, and the gardener was obliged to shout very loudly to make her understand.

"In the state chamber, surely," she said. "Why not, you old image?" she went on. "It's the biggest and best of the beds—the downiest in the Manor House; you ought to know, for we slept in it—"

"Only once, dame, only once."

"Well, and whose fault was it that we did not use it oftener? Yours; gaffer. You pretend to be deaf when it don't suit you to hear. But that night you heard more than I did with your capers, for I slept through it all."

"I wouldn't sleep in that room again, not for worlds. You'd better change it. Come."

"I won't. I don't want to do my work over twice, just to fall in with your tantrums. Besides, Miss Judith said he was to have it—so there! The gentleman's not like you, afraid of his shadow; so g'long and show him up to his room."

I gathered much from these remarks: first, that there was some mystery about the state chamber; last, that Miss Maxted herself wished me to occupy it—probably out of mischievous desire to try my courage—and as this notion grew with me, I felt that I was bound not to draw back.

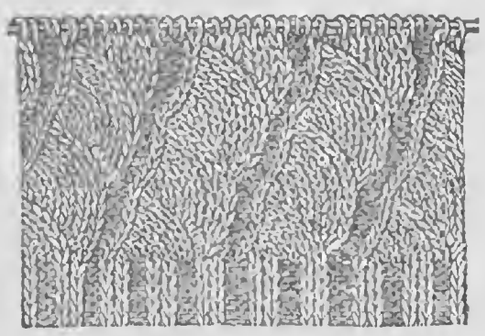

FIG. 364.

When the gardener returned and, holding a candle high overhead, led the way up stairs, we passed through those rooms *en suite* with that in which I was to dine—low snug rooms with ancient hangings and furniture, and each having two or three small windows looking upon the moat. On the other side, all the rooms had doors opening upon the corridor, and the windows of this corridor looked into the central court. The last room had a small door at the far end, up three steps, and I asked whither it led?

"To the tower staircase and so to the clock tower," said the old man carelessly; "it is locked and never used." With that we passed out into the corridor, and I found a flight of wide oak stairs leading to the first floor. Here there were rooms the counterpart of those below, and that which I was to occupy was exactly above my dining room. It was entered from the corridor and its windows also gave upon the moat. There was nothing very peculiar in my bed-room except that it had an old-fashioned air. The big bed was of dark old oak, richly carved; there was a press of the same wood; the wash-stand was of quaint shape, fitted with basin and jug and phials of some metal which, on closer inspection, I found to be silver; the floor was of dark oak; and the only carpet was a narrow rug by the bed and before the fire-place. This last was a wide, cavernous affair with large brass dogs, and on these crackled and sparkled a magnificent fire, which diffused warmth and comfort into every corner. A sweet smell pervaded the place as of new lavender and some antique perfume combined. If the ghosts loved this room they were luxurious ghosts, with a taste above brimstone and sulphur.

"I shall do very well here," I said cheerily to my conductor.

"So you ought; so you ought," he replied, but it was with an effort, as though he knew of reasons why I should not.

"There are a many more rooms," he went on, "if it happens you don't like this one. And you may not—you may not!" he went on with a dubious, mysterious shake of the head.

Half an hour later I was at dinner. Mrs. Duke gave me some very succulent soup, and a cunningly contrived stew, in which there were several kinds of game, rabbit, hare, partridge and a quantity of vegetables, shreds of cabbage, onions, carrots, broad beans and soft marrowfat peas. I had brought a case of wine with me, and after a glass I felt equal to face a whole legion of ghosts, if they wished to force their acquaintance upon me. But the evening slipped away most tranquilly; I sat and smoked, and read an odd volume and occasionally dozed. I was disturbed only by the visit of old Duke, who came about ten p. m. to ask me if I had any further commands, and at eleven I took my candlestick and went upstairs to bed. The state chamber well deserved its name, with its rich hangings, its dark, polished floor, which here and there reflected the fire-light, its gorgeous bed and general air of splendor, it was worthy to be the resting place of a prince.

Throwing another log or two on the fire, I prepared to retire to rest. There was a small table by the bedside, and on this, according to custom, I placed my candlestick and match box. I might want a light during the night. Last of all, I thought it advisable to lock and bolt my door. Ghosts, like love, may laugh at locks, but the latter are useful against living humanity; and, after all, I was alone in a strange deserted house.

I soon went to sleep. How long my slumbers lasted I could not say, but it seemed to me barely a short half hour before I was suddenly awakened by a most tremendous noise. I could not have been more startled, or have more suddenly regained all my faculties, if I had been drenched from head to foot by buckets of icy cold water.

To be continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

DESCRIPTION OF CUTS.

FIG. 365.—LAMP-CYLINDER CLEANER.

It is made of soft, unbleached knitting-cotton. Make a chain of twenty stitches, join round, draw the thread through the first stitch, work six chain, and draw through both loops on the needle together; work to the end of the round.

FIG. 365.

The following rounds (twenty-two in number) are worked in the same way.

For the handle take a piece of cane 16 inches long, cover 10 inches of the cane with soft cotton-wool, and fasten it firmly on. The cover is drawn over the padding and tacked at the top, so that it may easily be taken off to wash when soiled. A chain of cotton is fastened through the handle to hang it up by.

FIG. 367.—CHINESE ANTIMACASSAR.

This novel antimacassar is composed of Japanese pictures, which are sold at most Japanese and fancy repositories, at a very low price. The pictures are each bound with olive-green sarsanet ribbon, and are seamed together at the edges like ordinary patch-work. One corner of each corner picture is cut off and the edge is bound. The border is composed of oblong pieces of cotton batiste, alternately olive-green and crimson; they are bound, joined together and fixed to the center.

FIGS. 364 AND 366.—CHILD'S STOCKING: KNITTING.

THIS stocking is suitable to be made in knitting-cotton (No. 16) and pins (No. 18) or knitting-silk and the same size pins. Fifteen stitches are cast on, and twenty rounds knitted for the inch. As the stocking may be made for a child of any size, we think these directions will be more useful than if we gave any stated number of stitches. We may, however, mention that for a stocking to fit a child from four to five years of age knitted with the pins and silk or cotton described, about 111 stitches should be cast on. The number of stitches cast on must be divisible by

FIG. 366.

ten, as that number is required to form each pattern. Eleven extra stitches are allowed, which must be knitted plain in the middle of the back of leg, so that the requisite decrease may not throw the pattern out.

For the top of stocking: Commence with the ribbed pattern, knit two and purl two alternately for about forty rounds, or two inches. After this the pattern Fig. 364 is commenced.

1st Round: Purl two, make one by turning the cotton over the pin, knit seven, pass the next stitch over the seventh knitted stitch. Repeat from the beginning of the round until you are within eleven stitches of the end; these are knitted plain. The center stitch of the eleven must be purled in every round for the seam. In order to remember to do this, tie a piece of colored cotton in the stitch in the first round. As these stitches in nowise form the pattern, we shall not mention them in the following directions.

2nd. Round: Purl two, knit one, make one, knit six, pass the next stitch over the sixth knitted stitch, and repeat from the beginning of the round.

3rd. Round: Purl two, knit two, make one, knit five, pass the next stitch over the fifth knitted one, and repeat from the beginning of the round.

4th Round: Purl two, knit three, make one, knit four, pass the next stitch over the fourth knitted stitch, and repeat from the beginning of the round.

5th. Round: Purl two, knit four, make one, knit three, pass the next stitch over the third knitted stitch, and repeat from the beginning of the round.

6th Round; Purl two, knit five, make one, knit two, pass the next stitch over the second knitted stitch, and repeat from the beginning of the round.

7th. Round: Purl two, knit six, make one, knit one, pass the next stitch over it, and repeat from the beginning of the round.

Repeat from the first round.

The decrease is commenced when you have made the leg the length required from above the knee to the center of the calf of the leg. To decrease, knit two together before and after the seam-stitch in every sixth round until you are within two inches of the commencement of the heel. These two inches are knit two and purl two every round.

For the heel, divide the stitches, leaving the same number on one pin for the heel as there are on the two other pins for the front of foot, knit and purl a row alternately until you have worked

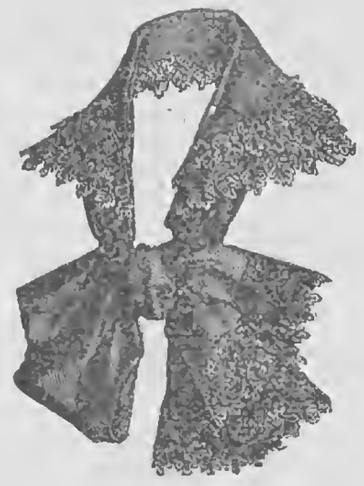

FIG. 368

the length required for the heel. The seam-stitch must be purled in the knitted row, and knitted in the purled row. For the gusset, begin with the knitted row, slip the stitch next after the seam-stitch, knit the second, pass the slipped stitch over, and knit the next, turn back, purl to the other side of the seam, purl two together, purl one, turn back. In the next row, slip the second stitch past the seam, knit the next, pass the slipped stitch over, knit one, turn back; continue in this way until you have taken in all the stitches each side the seam. Having finished the heel, pick up the stitches at the edge, beginning at the left side, with the pin on which the heel-stitches are, knitting each stitch as you pick it up. With another pin work off the stitches on the two front pins, then with another pin pick up the stitches on the right side of the heel; work half the gusset-stitches on to this pin. Now commence the gusset of the foot; knit around to the right-hand side of the back of foot, knit the first stitch, slip the second, knit the third, pass the slipped stitch over the knitted one, knit to within three stitches of the end of the next pin; slip one, knit one, pass the slipped stitch over, knit the last, the front pin is always knitted without decrease; knit one plain round between every decrease. Continue to knit without increase or decrease until the foot is within an inch of the length required; then decrease for the toe. Knit the first stitch of the front pin,

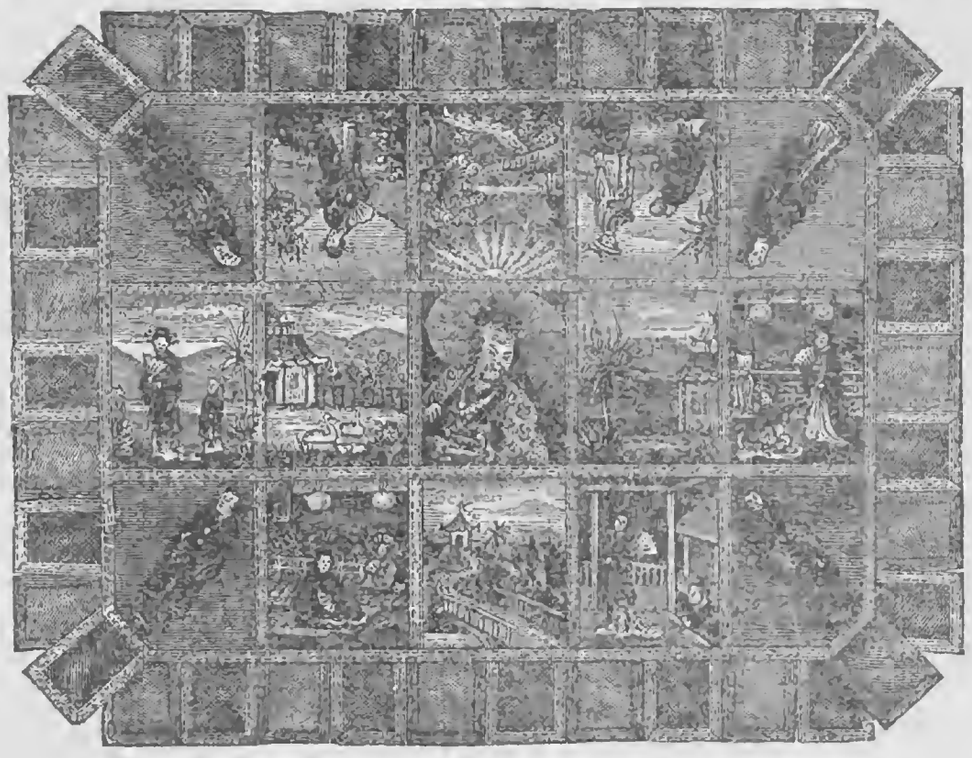

FIG. 367.

slip the second, knit the third, pass the slipped stitch over, knit to within three stitches of the end of the pin, slip one, knit one, pass the slipped stitch over, knit one, decrease in the same way at the beginning of the next pin and at the end of the last pin. Work one plain row between each decrease, until you have ten stitches on the front pin and five on each of the back pins; take the stitches from the last pin on the second, place the front and back pins together, and cast the front and back rows off at the same time.

FIG. 368.—COLLAR AND CRAVAT.

The collar and cravat are of blue satin and white lace.

FIG. 369.—FICHU.

The fichu is of cream-colored surah and lace.

HOW TO DRESS WELL AND ECONOMICALLY.

BY MARY E. BURROUGHS.

How not to look slovenly at home or shabby abroad is a problem which—to those of moderate and often very limited means—seems almost incapable of solution. In this, as in all good work, there must be a definite plan of procedure. You must decide in the first place, how much money you can afford to spend each half year on dress.

FIG. 369.

Very few women know how much it has cost them to dress heretofore; they spent just as it seemed convenient and perhaps found when three-quarters of their Spring wardrobe was provided, that all their money was gone, and they were obliged to go the rest of the Summer only three-fourths well dressed and consequently dissatisfied. You cannot decide how much you can afford unless you have at some time kept an accurate account of your expenditures for this purpose and thus know how much you have afforded before. When once you know somewhat definitely the amount of money at your disposal the next step is to find out for what occasions you are to provide dresses, these are usually comprised in the following enumeration: parties, church, visiting, shopping, calling, etc., and home.

Of party dresses little need be said since many of my readers probably could not afford it, even if they had occasion for an elaborate evening costume. As a general rule it may be said, however, that while dresses with natural flowers or ribbon trimmings are always suitable for young ladies and need not be either expensive or elaborate when made of the materials now so much in vogue: dotted muslins, lawns, bunting, nun's veiling, etc. Such dresses can also be worn to church and elsewhere in hot weather.

For church nothing is so appropriate as black in cassimere, grenadine or silk materials. But a black dress must never be of cheap quality; therefore, unless you can afford a fine quality, do not get one. A dark blue, brown or gray woolen dress, plainly and tastefully made is much more ladylike than a cheap black silk or cassimere. For church then, any dark materials, whether silk or woolen are admissible and suitable, although almost everything is worn.

For visiting, shopping, etc., woolen dresses are most used, and for home wear in the afternoon; these need not necessarily be of very dark shades but should always be *inconspicuous* in color. In fact, this is one of the essentials in the solution of my problem. At present, the most serviceable dress one can have is a soft flannel suiting which costs 50 cents per yard, single fold. It is usually medium brown or gray, or very dark blue in color, and is made with no trimming except a few rows—three or five—of machine stitching. It may be made round waist, with belt and trimmed skirt or plain basque and trimmed skirt.

For home wear, if you do not do your own housework, such a dress as the one described above is appropriate; if you do, two gingham dresses which may be washed alternately are necessary. And I wish here to recommend gingham over calico; though slightly more expensive at first, it does not crumple or soil so readily and both wears and washes better. Make them simply; if you do not like the wrapper style, make the skirt short with one plain flounce and the waist either a long gored half-fitting sack or a round waist and belt. Such dresses are easily laundried and need never be made over.

Now, about making over; do not do much of it; it does not pay; you will find it a far greater saving of time and strength no less than of money, to have fewer and plainer dresses and to wear them out as you go. This rule does not always apply to children's clothing. The great mistake which women make who have not time and money to follow the fashion but who do not wish to look "dowdy," is in fancying they must have so many changes. Do not be afraid of wearing one dress almost everywhere you go until it is worn out. People notice it far less than you imagine.

It is most economical to wear somewhat the same color all the time; then whatever you may have on hand in the way of bonnet trimmings, gloves, etc., will always match what you buy new.

It is now considered not only sensible but extremely fashionable to have all dresses short.

If I have helped even one to the solution of this

much vexed question of dress, I shall be satisfied. At another time I will give some hints on the accessories of dress which are almost more important than the dress itself.

ABOUT BOOKS.

MOSS DALE.

LYING around here and there in our house we find much reading which hardly deserves the name of books—magazines, papers, such as the RURAL, and often numbers of the Franklin Square and other libraries—which, if only in some style of binding, would make a nice little library. Such publications, being cheap, are often bought, but by careless handling and by the aid of borrowers they disappear very quickly.

Many of the best works in the English language can now be obtained at very slight cost, and as I had gathered together a number of them that I wished to keep for future reading, I lately bound them after my own fashion, and as it was quite a success, I will give the method:—

Take numbers of like size and shape for one book; if they are numbers of a periodical, arrange them in the order of their dates. Now touch the back edges of them with a little paste, not allowing the paste to extend more than one-eighth of an inch on the margin; pile them very squarely on each other, place a board and weight on them and let them remain for some hours, or even over night. The paste is only to keep them in place while being sewed. Next procure some very stout cotton cloth and cut two pieces just the length of the back of your book and of sufficient width to cross the back of the book and extend three-quarters of an inch on each side; lay this on the back of your book and sew it through and through firmly from top to bottom. For sewing mine I used a stout needle, some fine white carpet warp and a small awl to make the holes. The sewing should be about a quarter of an inch from the back of the book. You are now ready for the covers, which should be made of stout card-board slightly larger than the pages of the book, and fastened with paste between the pieces of cotton cloth on each side. White paper may now be pasted in as a lining to the covers and a cover of the magazine or other suitable paper fastened on the outside. Then finish the whole with a strip of black cambric down the back. In putting on these use as little paste as will serve, as it has a tendency to soften the card-board. After finishing, let the book lie under a weight till dry.

Nicely-bound books should be provided with a paper cover while being read; works of reference or others in constant use should be covered permanently. School books should be covered with calico or gingham, and slate frames with flannel or some other soft substance to prevent noise in the school room.

Impress upon the children, both by precept and example, that good books are treasures, and as such should receive careful handling. *Provide good reading matter* for yourself and family with a bounteous hand, and then take the best of care of it.

CORRESPONDENT'S CORNER.

CAUTION.—In RURAL of July 2, in list of books recommended to "Improvement" in my paper "Concerning Correspondents' Questions," for "*Seeky's* Intellectual and Moral Histories of Europe," read *Lecky's* Intellectual and Moral Histories. M. W. FISHER.

PLEASE tell a RURAL reader how to clean kid gloves. A. N. F.

ANS.—Get naptha or purified benzine and wash them by rubbing as you would a handkerchief or other article; wring and draw out smoothly, then hang up to dry in the sun, if possible. The unpleasant odor is removed sooner by contact with the sun and air.

This is more effectual than rubbing the gloves with a saturated cloth.

WISHING to do some decorative work in the way of ornamentation for colored scent bottles, cushions, etc., and not being possessed of sufficient artistic talent to paint designs, I would esteem it a favor to be informed of some other means than that of pasting paper pictures upon them.

C. A. E.

ANS.—Mineral decalcomanie designs in varied representations will no doubt meet your wants; they are the best substitute we know of.

Pressing with a hot iron is the manner of transfer.

How shall I prevent my bonnet—a light one—from being injured by the hair? The usual lining does not keep it clean. K. E. G.

ANS.—Baste a piece of oiled silk between the lining and bonnet, extending it well up in the crown and as far below the rim as the style will allow without exposing to view. The oil from the hair will not penetrate this.

BAD WORDS IN CHILDREN.

THE pain that mothers feel when, as a late correspondent of the RURAL expresses it, "one of the children says a bad word," is something that every good parent can appreciate. But do we always have faith enough in "a good bringing up?" A sound, healthy child would go unharmed through the measles or whooping cough, and do they not also go through and throw off these little undesirable habits which all children will catch up either behind your back or before your eyes? Mind and body are alike in that they have a self-righting power of their own that we cannot understand. Sow the good seed and have faith in your work.

B. C. D.

Obstructions of the kidneys and attendant organs will prove fatal if not removed by Hop Bitters.—*Adv.*

BRIC-A-BRAC.

THE SMOKER'S CONFESSION.

There's not a pipe, I ween,
Like the stumpy, black dhudeen
That all of us have seen
In Paddy's hatband, O.
For it makes his thought take flight,
And it fills him with delight,
As it gives him second sight
Of far-off Patland, O.

I have read in Eastern books
How the Turks will smoke chibouques,
As grand and grave as dukes,
In seraglio.
That ye'd rather take a pull
At Paddy's pipe when full
Than lounge in old Stamboul,
I'll go bail ye, O.

HOW TO VISIT.

If you call at a friend's house Sunday evening and they are polite enough to invite you to call again, trot up Monday, saunter up Tuesday, drop in Wednesday, make a short call Thursday, step in Friday, spend the evening Saturday and repeat the dose the following week. Of course they'll become attached to you and after a time you can call twice a day. They may pray that you'll fall off the steps and break your neck, or that a bolt of lightning may strike you as you ring the door-bell, but that makes no difference to you so long as you can escape such deserved calamities. They won't dare to shoot you or set the dog on you, because that wouldn't be polite. Go it while you can, because after a certain time a suffering people will become desperate and give you the cold shoulder.

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE DIET OF MOTHERS.

MOTHERS who nurse their children should bear in mind that what they eat at such a time is of great importance, both to themselves and to the children. The very best article of food that they can avail themselves of, is oat-meal mush or gruel, which is always delicious when properly cooked. The oat-meal furnishes the earthy phosphates and other materials out of which good milk is made, so that the mother's own structures are not drawn upon, and her teeth are saved from decay. M. W. F.

JELLIES.

As it is the season of the year for laying in a store of jellies a few hints from an old housekeeper may be acceptable to young housewives.

Crab apples make a very fine jelly; wash them in pure water, cut out all specks and put them in a large porcelain kettle. Six quarts of apples will need a gallon of water. Let them boil slowly till the apples will mash easily with a spoon; then press them through a sieve, and put the liquid back into the kettle. Let the liquor boil away half, then strain through a jelly-bag. To two cups of the juice, add one cup of granulated sugar, boil about fifteen minutes, remove from the fire and when cool dip into the cans or jelly glasses. This makes a very bright, tart jelly, that is very nice for table use. Common sour apples, make a good jelly only they will not make as pretty a color and the jelly will be more acid. The old rule for jelly was a pound of sugar to a pound of juice but it is much better to use less sugar as the jelly is then more acid and is not so liable to candy. The jell from grapes is of a very dark color, and pleasant flavor. Put the grapes into a stone jar, and cover it tightly; set the jar into a kettle of boiling water, and let them scald till the grapes burst; strain through a jelly bag and then add one-third of the quantity of sugar that there is of juice, and boil till it begins to thicken; you can test it, by taking a spoonful into a saucer for trial. All kinds of jelly need to be skimmed while boiling, so that they will be perfectly pure. Rhubarb jelly is very good when one cannot obtain apples, and is made the same as crab apple jelly. A lemon sliced and boiled with it gives a very nice flavor. It is boiled in the sirup after the rhubarb is strained out. FARMERS' WIFE.

DOMESTIC RECIPES.

Long Cake.

When making bread into loaves, set aside a mass of dough till, say, one hour before the next meal. Then knead it a little, roll it into cakes a half inch thick, and bake on a griddle on both sides. This will be far better and more wholesome than any kind of soda cakes ever made, and a surprise to those who never ate of them. To be eaten hot.

Bannocks.

Into one pint of Indian meal stir one pint of buttermilk, one-half teaspoonful of salt, one teaspoonful of molasses, one of butter, and add two well beaten eggs and a pint of wheat flour. Thin with milk to a thin batter; last, stir in two large teaspoonfuls of soda dissolved in hot water. Pour into buttered shallow pans and bake an hour in a quick oven, which bakes top and bottom brown. Excellent.

Corn-Starch Cake.

Two cups of sugar, one of butter, one of sour milk having in it one-half spoonful of soda, one spoonful of extract lemon, one cup of corn-starch. Mix well. Then beat up six eggs; add them; mix in quickly two cups of flour having one spoonful of cream-of-tartar in it. Bake in a quick oven.

Angels' Food (O 'Eavens!).

Slice oranges, and sugar them down, then cover with finely-grated cocoanut. Let stand ten hours and serve as dessert, or for afternoon tea.

Cocoanut Custard.

Grate the cocoa, mix with milk, boil five minutes. To one pound of this add one quart of milk, eight eggs, four tablespoonfuls of white sugar, one glass of wine, two tablespoonfuls of melted butter, one-half a nutmeg, grated. Beat the eggs, sugar, butter and nutmeg well; then add the wine. Put this into the milk and cocoa when cold. Fill the custard shells and bake.

Cocoanut Cake.

Whites of ten eggs, whipped; two cocoanuts, grated; one pound of powdered sugar; one-half pound of sifted flour. Beat well together; add a little rose-water; pour into pans and bake three-quarters of an hour.

Cherry Pudding.

Beat eight eggs, add, gradually, one and one-half pound of flour, one and one-half quart of milk, a little salt. Set it in the oven, bake 15 minutes; stir in the cherries, then bake till done. Serve with any sweet sauce.

Tomato Fritters.

Slice ripe ones, dip in a thick, rich batter; season with pepper and salt; fry like oysters. Or, they may be seasoned with sugar and almost any spice, and fried as before.

Biscuit.

Sift two teaspoonfuls of cream-of-tartar and one of soda into one quart of flour; work in one cup of butter and a little salt. Mix all with a large pint of water; knead briskly, bake quickly.

Tomato Catsup—A Secret Disclosed.

Boil one-half bushel of tomatoes three hours; strain out the skins and seeds; to the remainder add three pints of vinegar, one-half pound of salt, one-fourth pound of black pepper, one ounce of Cayenne pepper, one-fourth pound of allspice, one ounce of ground cloves, two pounds of brown sugar. Boil one hour. I have never seen any catsup to equal this, and have kept the above secret for 35 years till now. CHIEF COOK.

Elderberry Brandy.

Gather only the berries that are perfectly ripe. Pick from the stems, and to six quarts of fruit add two quarts of water. Put into a porcelain kettle and boil 20 minutes. Then strain, pressing out all the juice. Add another quart of water, half an ounce of whole cloves, allspice, cinnamon and ginger root. Return to kettle, boil gently three hours, and, just before taking from the fire, stir in three pounds of loaf sugar. When dissolved let cool, then strain through a flannel bag. When cold add a quart of good brandy. This will keep for years if bottled and corked, and is an excellent medicine for the bowels.

Chickens for Luncheon.

Split down the back, then through the breast—wash and wipe dry. Sprinkle with salt and pepper, put into a dripping-pan with two or three spoonfuls of butter and place into a well-heated oven. Baste frequently. Bake until cooked through and nicely browned. Serve cold. Garnish with parsley.

Chicken Pudding.

One full-grown chicken—let it be a young one. Cut into small pieces, put in a stew-pan with a little water, season with salt and pepper, and boil until it begins to grow tender. Take the pieces out and lay into a three or four-quart pudding dish. Have a quart of green corn cut and scraped from the cob, add to it three beaten eggs, a pint of rich milk and salt and pepper to taste. Pour this over the chicken, dredge thickly with flour, lay on bits of butter, and bake 30 to 45 minutes.

Corn for Winter Use.

Throw the ears into boiling water and let remain just long enough to set the milk; then cut carefully from the cob and to every two quarts of corn add a pint of salt; mix thoroughly, pack in earthen jars, spread a cloth over the corn with a weight on top. Keep in a cool place. When wanted for use put into a stew pan, cover with cold water, let heat, turn off, put on cold water again and so repeat 'till fresh enough for taste. Cream, butter, salt and pepper may then be added.

Green Corn Pudding.

Draw a sharp knife through each row of corn, lengthwise and scrape out the pulp. To a generous pint of this pulp add three beaten eggs, a teaspoonful of butter, sugar to taste, a little salt and any spice or flavoring liked. Bake in a moderate oven two hours. Stir the pudding occasionally at first until it thickens.

Drying Corn.

Be careful to select ears not too old. The success of your corn depends upon this. Carefully remove the husks and silk so that it will not be necessary to wash the corn. Cut and scrape from the cob—not too close—and when you have cut off three or four quarts spread upon *earthen* dishes and put at once into a moderate oven for 20 minutes, stirring frequently. Then set a table out in the sun, cover with a cloth, spread the corn on it evenly and thinly. Bring into the house before the dew falls and spread out. The next morning heat as before and put out in the sun. If care has been taken, the corn will now be dry enough to put away. If not dry, heat and put in sun another day. Tie up in paper bags.

Corn Fritters.

One quart of grated corn, three eggs, the yelks and whites beaten separately, two crackers, salt and pepper. Beat thoroughly. Have ready in a skillet butter and beef drippings in equal proportions. It should be hot, but not burning. Drop the mixture by the teaspoonful into the hot fat and brown upon both sides. Be very watchful lest they burn. The whites of the egg should be beaten stiff and lightly stirred in just before frying. A. B.

"That medicine goes right to the spot, refreshes, revives and cures."—A patient on Hop Bitters.—*Adv.*

Miscellaneous.

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News of the Week.

HOME NEWS.

MONDAY, July 25, 1881.

The President's condition on Saturday, the 23d inst., was for a time somewhat precarious. Fever set in, and pain was somewhat increased. Dr. Agnew has performed a surgical operation on the President to open a sack of pus which had formed near the wound. The incision was made about three inches below the wound and at a depth of two inches and a half. There the abscess was found which had caused the recent relapse. It is thought that if no other abscesses exist, he will recover from this relapse in a few days. The President is weak being unable to lift his arms or his legs, yet he has great vitality and keeps up good courage. The latest reports this morning state that the President's condition is improving, and is as good as can be expected so soon after the relapse.

On Friday the 23d, the election of Elbridge G. Lapham, to succeed Conkling in the U. S. Senate closed the long and bitter struggle at Albany. A conference was held by the republicans in which both factions participated, and the form of electing a candidate was gone through with. Mr. Lapham received 61 votes, and Mr. Conkling 27. Then, when the 56th ballot was taken, Mr. Lapham received 92 votes and Mr. Potter (dem.) 42, and the work was done. Mr. Miller of Herkimer, it will be remembered, was elected to succeed Platt, on the 16th inst.

The widow of the late Rev. E. H. Chapin, D.D., died suddenly at her summer residence, at Pigeon Cove, Mass., on the 22nd inst., of heart disease.

The little town of Red Bank, N. J., was visited by fire on the 18th inst., which destroyed about $75,000 worth of property. Help was rendered by fire companies from Long Branch. One fireman was killed.

During June last there arrived via San Francisco, from foreign ports, 4,110 persons—the largest number for any month during the past five years. The greater part of these immigrants are Chinese. The arrivals of through passengers overland at San Francisco numbered 4,415. This is some 1,200 more than for the corresponding month in the previous two years.

There is so great a demand for labor at Castle Garden that it cannot be supplied, even with the enormous immigration. There are now on the books 1,000 orders for male labor, and nearly 500 orders for household servants. The demand for laborers by railroads is very large, and numerous applications come from the South for mill and agricultural hands.

A monument to the confederate dead was unveiled at Culpepper, Va., on the 21st.

Sitting Bull and about 200 of his followers surrendered on the 19th inst. to Major Brotherton, at Fort Buford, D. T. They were nearly starved, it is said.

Gen. McPherson's monument was unveiled at Clyde, Ohio, on the 22nd inst., in the presence of about 20,000 people. Prominent gentlemen and officers of the army were present. Ex-President Hayes presided. The procession was over two miles long.

A fund of $10,000 to be known as the "Diman Memorial Fund," in memory of the late Professor Diman of Brown University, is about to be established. The income of the fund will be devoted to purchasing historical works for the "Diman Memorial Alcove" of the new library.

A lucky blacksmith at Titusville, Pa., has "struck oil" in reality. While at work, one day, in his garden with his spade, he noticed little pools of crude petroleum forming in the cavities he had made in the ground. He dug a pit four feet deep, and took therefrom five barrels of oil which proved to be excellent, and which sold at a neighboring oil refinery for $1.10. Immediately a great demand for leases of adjoining territory arose and numerous wells are being dug, and the oil is flowing freely. The blacksmith's garden is yielding 100 barrels a day, and he is making $100 per diem, with encouraging prospects.

The board of alderman of Virginia have passed a resolution, inviting Pres. Garfield and his cabinet to visit the Yorktown centennial, and appropriated $5,000 for their entertainment and that of visitors from France. The same body passed a resolution appropriating $15,000 to the centennial. This is the first step taken by any municipal or state authority to give substantial aid to the enterprise.

The Welting Opera House building at Syracuse N.Y., in the center of the city containing one of the handsomest opera houses in the state burned on the morning of the 19th. It was wholly destroyed and it was the most disastrous fire in Syracuse for thirty years, involving a loss of over $300,000. Fifty tenements occupied the block which was four stories high. Half a dozen persons were injured by falling walls and one or two persons perished.

Carrier pigeons last Sunday morning conveyed to Tom's River, N. J., before eleven o'clock, a summary of the most important news published in the city papers here. These fleet winged aerial messengers may yet play an important part in the distribution of information to points not quickly attainable by post or telegraph.

The Hon. Levi P. Morton, United States Minister to France, started for his new post of duty on the 10th in the steamship Amerique, of the French line.

A monument to the memory of the Union dead of Michigan has just been completed in Detroit by the addition of four statues representing History, Emancipation, Victory and Union.

At a meeting of the New Capitol Commissioners at Albany, the contract with the Hallowell Granite Company was rescinded, and the Superintendent was ordered to advertise for proposals for furnishing granite for the completion of the building. It is thought that by this action $50,000 or $60,000 will be saved to the State.

One of the most violent thunder-storms ever known in Massachusetts occurred on the 21st. The storm was accompanied by a terrific shower of hailstones ranging from half an inch to one and one-half inches in diameter, which did a great deal of damage. Hundreds of dollars' worth of glass was broken, nearly all the manufactories suffering more or less damage. Reports from the surrounding agricultural towns indicate an immense amount of damage to the crops.

A curious coincidence is found in the fact that the nurse who attended the President at the time of his birth died about the hour the assassin attempted his life. Her name was Mrs. Stewart C. Gardner, and she died at the residence of her son, A. J. Gardner, in Mason Township, near Dowagiac, Mich., at the age of 87 years.

Twenty-five tenement houses, two saw mills, the depot stores, boarding houses and stables in Wallace, Mich., were burned on Wednesday; also, the year's stock of logs, a large lot of piled lumber, and thousands of ties, posts and telegraph poles. Mr. Mellon Smith was the owner of nearly all of this property, and his loss will not fall short of $75,000; insured for $9,500. One school house and two small tenement houses are all that are now left of this recently thrifty burgh.

The drains leading from the Philadelphia Mint yielded about $1,000 worth of gold and silver at the last annual scouring. The recovery of metal by that operation has amounted to $21,000 in nineteen years.

Martin Murphy, of Santa Clara, Cal., one of the original settlers of California, celebrated his golden wedding Tuesday. One ox, 12 sheep and 12 hogs were roasted whole for the villagers, and a car-load of ale and wine were drank by them.

A scrap book is being prepared to contain editorials, public expressions, etc., regarding the attack on the President's life. It will be an immense volume. All telegrams of sympathy are to be preserved. All dispatches from abroad are to be kept in the records of the State Department.

One of the census reports says that for the last ten years the national debt has been paid off at the rate of $160,000 a day.

At one time last Winter the Chicago and Northwestern Railroad had 4,000 men at work shoveling snow, and the St. Paul 3,000 men, at $1.50 a day and board. The Illinois Central had also at one time several thousand men employed at this work. The total cost to the Western railroads by the snow blockade was not less than $2,000,000.

The Secretary of the Navy issued an order, Tuesday, directing that the work of repairing the United States steamer Tallapoosa, the dispatch vessel of the navy on the Atlantic coast, now at the Washington Navy Yard, should be prosecuted with all possible haste, so that the vessel may be ready for sea by the 12th of August. The Tallapoosa has been undergoing extensive repairs for some months and in the ordinary course of work would be ready for sea service about the first of September next. Anticipating the recovery of the President, who is very anxious for a sea voyage, the Secretary of the Navy desires to have the Tallapoosa ready for that purpose.

Connecticut had a young cyclone last week that ruined crops, unroofed houses and killed stock. A load of hay was blown on to a yoke of oxen at Hartford, and while the owner was trying to cut them loose with an ax he killed them both. At Berlin and Meriden the storm did great damage.

It is said that $29,000 has been subscribed of the $35,000 needed to establish the Daniel Webster Professorship of Latin in Dartmouth College.

The Postmaster General commands a much larger force than our combined army and navy. It numbers 65,000 in all.

In the next election in Colorado the location of the State Capital is to be an issue. Denver, Pueblo and Colorado Springs are the principal contestants for the honor.

Friday week a company of highwaymen led, it is believed, by one or more of the notorious James brothers, boarded and robbed a train of the Rock Island Railway, killing the conductor and one passenger, and badly frightening the rest, but robbing the express safe of less than $2,000.

This country spent a million and a half more for postage during the last fiscal year than the year preceding. There could be no better index of business activity than this fact. Yes, business in match-making.

More than 32,000 men are at work on the extension of the Denver and Rio Grande Railway. Almost 19,000 are employed in old Mexico.

"A Hundred Per Cent. Better."

A patient in Michigan, who reports a gain of thirteen and three-quarter pounds in two weeks, says: "I cough about once where I did ten times before, and do not raise one-quarter the mucus from my lungs that I did. My pulse has gone down from 120 to 85. My digestion is very much improved, and the stomach retains the food. In short, *I am one hundred per cent. better than I was three weeks ago*, and I give all the praise and credit to the use of Compound Oxygen. The expressions of my friends are 'Wonderful!' 'Astonishing!' 'Almost miraculous!'" Our Treatise on Compound Oxygen, containing large reports of cases, and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

Last Friday Charles Harris, of Hardwick Township, New Jersey, left his horse standing for a few moments in the potato patch that he was plowing, and the animal bit off some tops upon which Paris-green had been sprinkled. On the following morning the horse was found dead in his stall..... Lovers of hock will be rejoiced to hear that the reports from the Rhenish vineyards are this year very favorable, and should the fine weather which those countries are at present enjoying continue, there will be no lack of fruit. But whether 1881 will rank as a comet year can only be determined after the crop is gathered. The accounts from Rudesheim are especially encouraging.....Under the title of "Associated Agriculturists of Great Britain," a company with a capital of a million, in shares of $25, has been formed for joint stock farming in Great Britain. Each estate will be under a manager of local experience and the prospectus points to the fact that the shareholders of a farm in Holland of 4,000 acres have for 10 years divided annually 10 per cent. The Duke of Buckingham, an excellent man of business, and Lords Londonderry, Carysfort and Herries are on the council.....A plague of rats has appeared near Dagneux, in France. Innumerable swarms, which come from the direction of Lyons, have invaded many communes, doing great damage to the crops. Some farmers have killed from five to six thousand rats in their fields in a single day.....In 1860 a manufacture of fish guano was begun at Lofodon, Norway, and gradually grew from 3,798,550 kilos in 1875 to 5,972,682 kilos in 1879. [A kilo is somewhat over 2⅕ pounds.] Before 1860 this valuable matter was all wasted. It is believed that the refuse will now become much more valuable under a process by which albumen, isinglass and fish glue will be extracted from it.....The city of Newburgh, on the Hudson, is noted for its elegant trees and especially for its towering elms. A strange disease has attacked them, and unless the authorities of that slow and beautiful place should happen to wake up, the trees will probably die..... According to the English Mechanic, M. de Gasparin has rejected the theory that the fertility of volcanic soil is due to a superabundance of phosphoric acid. M. de Gasparin has discovered that the luxuriant garden between Catania and Nicolori, as well as fertile lands in Nimes and Caen, contain very small proportions of phosphoric acid. The richness of the soil about Etna may be traced, he thinks, to the concomitance of muddy formations and the climate.

The official count of the cotton crop of Georgia in 1879-80 shows an aggregate of 813,965 bales, the acreage being 2,615,563.....A cablegram of the 22nd says:—"The importation or transit through Schleswig of Danish cattle is prohibited on account of pleuro-pneumonia."....."The prizes for the grand circuit races at Chicago this week are $40,000.....Statistics of the wine and grape crop for 1880, prepared by the Department of Agriculture at Washington, show that the principal States ranked as follows in order of acres under cultivation:—

States.	Acres.	Gallons.	Value.
California	32,368	13,557,155	$4,046,865
New York	12,646	584,148	387,308
Ohio	9,973	1,633,073	1,627,926
Missouri	7,376	1,824,207	1,320,050
Georgia	2,991	903,244	1,335,521

These statistics are not entirely accurate. California, for instance, never produced 13,000,000 gallons of wine. The claim for the current year by the San Francisco Bulletin is only 12,500,000 gallons, which is more than any previous yield..... Mr. Henry G. Vennor has extended his "revised" predictions so that they include August in detail, as given below: July 21—Warm and fair, cool nights; 22 and 23—Heavy rain storms in many parts of Canada and the United States; 24 (Sunday)—Hot and windy; 25—Oppressive and stormy weather; 26—Heavy rain storm and wind; 27 and 28—Cloudy and cooler weather, with cold nights and cold showers; 29—Cool and showery; 30 and 31—Warm and high winds and rain showers; Aug. 1—Probably warm and oppressive; 2 and 5—Generally pleasant weather, fairly warm days, and cool to cold evenings and nights; 6—Fair and pleasant; 7 (Sunday)—Heat and storms; 8 and 10—Sultry weather, with heavy showers; cooler evenings and nights. 11 and 13—Heat again in the United States, with cloudy and sultry weather, storms in Canada; 14 (Sunday)—Cooler change; 15—Cooler to cold and cloudy and pleasant; 16—Storms throughout portions of Virginia; 17 and 18—Hail storms and frosts probably in some portions; 19 and 20—Heat and storms; 21—Sultry and showery; 22—Sultry and windy; 23 and 24—Heat and wind; 25 and 26—Heavy storms on the lakes, on the St. Lawrence, and around New York; 27 and 29—Cooler weather, with rains and frosts in the northern section; 30 and 31—Fair and pleasant weather, with cool evenings and nights, with indications of returning heat.....A telegram from Chicago on the 23d says that severe storms on the preceding day had beaten down the crops in many parts of the Northeast.....The Parisian journal, Le Moniteur Universel, with the omniscence characteristic of French papers, attributes all the late trouble over the election of U. S. Senators at Albany, N. Y., to the "corruption of calf-breeders." Who ever heard of a corrupt calf-breeder!.....On July 22 hail storms did much damage to crops in parts of New Brunswick, Nova Scotia, especially in Kent County.....On the same day violent hail storms did a world of injury to crops, especially tobacco, about Hartford, Conn. Violent winds at the same time greatly damaged trees and stock also were considerably injured.

A scarcity of harvesters in some parts of Ohio has brought the young women into the grain fields.....The Mass. Agricultural College will try to paddle along as an independent institution and would like to be remembered when rich men are giving away money.....At Connemara, in the west of Ireland, the old women of the vicinity are given the privilege of gathering the wool scratched off the sheeps' backs on the stones, hedges and bushes; this wool they then spin and knit into stockings, selling them at 12½ cents a pair. As many as 200 pairs are knitted by a person in a season.....English wool is subject to a purifying process in a heated room during six months before it is used, whereby the "eke," or grease and dirt, is taken out of it. American wool just fleeced from the sheep's back is worked up and, as the eke is still in it, it will not take the colors. The imperfect dyeing of American cloths results in rapid fading, while the English lasts.....Philadelphia tobacco dealers are alarmed at the influx into their market of Lancaster-made cigars that are sold at $10 a thousand, including the Government tax of $6 a thousand. This is at the rate of five cigars for two cents. It is said that they are really made of tobacco, and a dealer admits that they are as good as the cigars he retails for three cents apiece. The tobacco is grown in Lancaster, and is said to be as good as some of the Connecticut loaf.....An army of crickets seven miles wide is marching at the rate of two miles and a half a day over Lake County, Oregon, and eating every kind of vegetation in its track. Whew!.....Says the Chicago Inter-Ocean of the 14th: "A sample of wheat was exhibited on 'Change to-day from a field of eighty acres in Kankakee County, Ill. It is thought that the yield will be about 20 bushels per acre. A short time ago the owner plowed up a portion of the field, thinking that the crop would not amount to anything." It is much to be feared that farmers of Illinois and some other States lost heavily by plowing up parts of their wheat too soon..... The Mark Lane Express of the 18th, in its weekly review of the grain trade says: "The week of tropical heat has brought on crops rapidly toward harvest. Wheats vary a good deal. Ears are generally short and some insect injuries begin to be spoken of. The exceptional heat will doubtless prematurely ripen wheats. Barleys certainly want rain. In Southern and Eastern Midland counties the oat crop may be regarded as lost..... .....According to the "Cyprus Times" locusts' eggs, which would have produced 2,830,472,500 live insects, have been destroyed in the Island during this year.....The legislature of Ohio has passed a bill providing for the inspection of butter and cheese, and for inspecting dairies and all places where milk is sold, or butter and cheese manufactured.

New Zealand, in 1870, produced 1,770,363 bushels of wheat, 2,888,633 bushels of oats, 630,699 bushels of barley, and 17,895 tons of potatoes, the total acreage under cultivation being 152,982. Last year the acreage had increased to 389,729, the product being 5,461,000 bushels of wheat, 7,776,275 of oats, 1,124,281 of barley, and 27,466 tons of potatoes. Sheep raising has similarly advanced. A hundred years ago there were 29 head, and now, it is stated, there are 12,000,000.....Professor J. P. Stottes, in advocating the use of arsenic for the destruction of cotton worms, says that it will cost only a cent, and a quarter per acre to exterminate the worm with that poison. The method of employing it, which he recommends, is a solution, made by adding to five gallons of water five pounds of arsenic and one pound of soda, and boiling until the arsenic is dissolved. In using, one measure of the solution is added to one hundred and sixty measures of water, and sprinkled upon the plants infested by worms.....Hon. Wm. Gonney, Secretary of State of Michigan, gives reports of the Wheat crop from 1,036 towns, being 96 per cent. of all towns. In 1880 the wheat acreage of Michigan was 1,765,645, with yield 17.29 bushels per acre, giving an aggregate of 30,526,567 bushels. Acreage this year, 1,781,865 acres, with reported prospects of yield of nine bushels per acre, which would give an aggregate product of 16,200,000 bushels, or, say 5,000,000 bushels for shipment.

The third meeting of the Association of Agricultural Chemists will be held in Cincinnati during the Session of the American Association for the Advancement of Science, in August. The day and hour of meeting will be announced later. Manufacturers of Fertilizers, Agricultural Colleges, Experiment Stations and Boards of Fertilizer Control are expected to be represented by chemical experts. A. R. Ledoux, 17 Cedar Street, New York, Secretary.

The following is a summary of the prospects of the chief crops, condensed from the crop reports for July, by J. R. Shaffer, Secretary of the State Agricultural Society of Iowa.

CORN.—Ninety-seven counties, representing 784 townships, place the average condition of the crop at 77 per cent., being a decrease of about 4 per cent. since June 15. Heavy winds, rains and hail-storms have reduced the prospect, and many acres are worthless for want of cultivation because of excessive wet weather. Wire and cut-worms are still at work. The decrease in the product, as compared with the previous year, is estimated at 60,000,000 bushels.

WINTER WHEAT.—Sixty-three counties, representing 267 townships, place the average condition at 55 per cent., a decrease of 32 per cent. in one month. Many acres were plowed up, being winter-killed, and chinch bugs and rust have been fatal to the crop.

SPRING WHEAT.—Seven hundred and twenty-four townships in 88 counties give the average condition of the crop at 72 per cent., a decrease of 16 per cent. since the June report. The loss is attributed to chinch bugs, rust and wind and hail storms and much of it is on the ground. Many acres are reported as not worth harvesting. Des Moines County reports the lowest average—18 per cent. The highest average is reported from Hancock and Kossuth Counties—100 per cent. Basing an estimate on these figures, as compared with the crop of the previous year, there will be a deficit in the product of 17,000,000 bushels.

OATS.—Ninety-seven counties, representing 793 townships, place the average condition at 92 per cent., a decrease of only 2 per cent. There is some complaint of rust and lodging.

FLAX.—Five hundred and ten townships, reporting from 69 counties, give the average condition as 89 per cent.—an increased prospect in product of 9 per cent. over the previous report. The area has been largely extended and promises to give better results than almost any other crop grown.

IRISH POTATOES.—Ninety seven counties, representing 777 townships, place the condition at 93 per cent. There is some complaint of the bug injuring the crop prospects.

MEADOWS.—Ninety-four counties, from 756 townships, reporting upon the condition, give the average at 96 per cent.

PASTURES.—Ninety-four counties, from 732 town-

ships, place the avorage condition at a fraction over 100 per cent.

TOBACCO.—One hundred and two townships in 56 counties give the average condition of the crop at 87 per cent.

A Sanitary Measure.

Life and health are preserved by carefully aiding nature whenever it shows lack of ability to carry on its work. For torpid liver, bowels or kidneys, no other remedy equals Kidney-Wort. It is sold in both dry and liquid form by all druggists.—Call.

Thousands of women have been entirely cured of the most stubborn cases of female weakness by the use of Lydia E. Pinkham's Vegetable Compound. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Oh, how refreshing, palatable and reviving is a draught of cool water with Hop Bitters in it, to a fever patient.

BURNETT'S COCOAINE

Softens the hair when harsh and dry.
Soothes the irritated scalp.
Affords the richest lustre.
Prevents the hair from falling off.
Promotes its healthy, vigorous growth.

The Markets.

CROPS AND MARKETS.

CROP reports are still very conflicting both in this country and Europe. The report of the Department of Agriculture we published last week, gives the three States of Illinois, Michigan and Iowa, 27½ million bushels of wheat more than the State reports. The very unéven nature of the stand even in the same or adjoining fields renders it almost impossible for different people to come to the same conclusions about the average yield in any section. On the whole, however, the outlook for wheat of late is worse than it was some weeks ago. Thrashing shows that while the quality is good, the yield is generally deficient. Even in the quality, however, there is a great deal of difference. Most of the samples of the new crop received here are of Fultz, and that raised on sandy soil is considered deficient in strength and flouring qualities, while that grown on loamy and limestone soils gives much satisfaction to the millers. Within the week most of the daily papers, East and West, that have been loud in their prophecies of an abundant wheat harvest, have greatly modified their tone, and nearly all of them now agree in the opinion that the crop will be considerably short. The market, too, proves that this opinion, which we expressed a long time ago, is now generally accepted, as prices have stiffened since our last report. In comparison with prices of grain at this time last year, those on Saturday last at this place were considerably better; No. 1 white wheat was $1.15 per bushel last year and $1.27 this; No. 2 red, $1.10@1.12, then; $1.28½@1.29 now, and on all grades prices now average fully 10c. per bushel more. Corn, too, is from 9c. to 11c. higher, and oats from 8c. to 10c. In other markets the same difference prevails. Chicago being a Central point, the following table of prices there for No. 2 Spring wheat, on the 1st and 15th of each month, will be instructive and interesting:

1880.	1st.	15th.
July	.87½@ .88¼	.94½@ .95¼
August	.90½@ .91¼	.87½@ .88¼
September	.87½@ .88	.94¾@ .95¼
October	.92¾@ .93¾	$1.00½@1.01½
November	$1.01¾@1.02¾	$1.05¾@1.06
December	$1.09¾@1.10	$1.00½@1.00¾

Average price for six months, 97c.

1881.	1st.	15th.
January	.97¾@ .98¼	.97½@ .97¾
February	.99½@ .99¾	.99¼@ .99¾
March	.98½@ .98¾	$1.00½@1.00¾
April	$1.00¾@1.01¼	$1.02½@1.02¾
May	$1.01¾@1.02¾	$1.00¾@1.01¾
June	$1.09¾@1.10¼	$1.08¾@1.09¾
		24th.
July	$1.10½@1.11	$1.19@1.19½

Average price, January 1 to July 12, 1881, $1.03.
Average price, July 1, 1880 to July 24, 1881, $1.00.

It will be seen that the average was materially reduced by the low prices during the first three months.

Last Tuesday there was immense excitement in the Chicago wheat market on the discovery that a "corner" existed in wheat, and indeed in nearly all other agricultural products, and prices there went up rapidly and those at other points throughout the country sympathized with them. Here also on Thursday morning both Winter wheat and No. 2 corn were worked up to the highest quotations yet reached in the present upward movement, but in the afternoon there was a tumble of fully 1½ to 2¼ cents per bushel, followed near the close of the day by a slight rally. Besides the operations of the "corner" manipulators, the bad outlook for the crop has raised prices for wheat; for reports from the Spring wheat region tell of much damage from the tropical sun as well as from storms and insect pests. The cablegrams from Europe, too, are not quite so flattering as formerly. In the south of England the wheat harvest had already begun on the 20th of July. Some new wheat will be in market before the end of the month. Just now no speculative sales are made there, as folks are buying only as they are forced to do so; and prices there are lower than here, which, of course, greatly checks exportation. Accordingly much of the grain that arrives here is warehoused, the quantity of wheat so stored having increased about 508,700 bushels last week, and that of corn about 995,000 bushels. Nearly all the grain so put away is on speculative account, kept in expectation of a rise or to prevent a fall by overstocking the market. Of wheat the visible supplies on July 16 were 14,823,400 bushels, against 15,620,000 bushels the preceding week, and 10,924,100 bushels the same week last year, showing a decrease for the week of 796,600 bushels. Of corn the aggregate was 15,979,200 bushels, against 15,228,600 bushels a week earlier, and 15,477,900 bushels same week last year, indicating for the past week a gain of 450,600 bushels. The visible supply of oats is now 7,314,800 bushels, against 7,465'150 bushels the preceding week, and 1,993,300 bushels corresponding week last year. The following is a comparative exhibit of the amount of wheat in sight:—

	July 9, '81. Bushels.	July 10, '80. Bushels.
Visible supply in U. S. and Canada	15,619,976	10,979,880
On passage for the United Kingdom	16,424,000	14,720,000
On passage for the continent of Europe	4,432,000	5,760,000
Grand total	36,475,976	31,459,880
Previous week	38,418,746	32,252,120
And of Indian corn in sight—		
Visible supply in U. S. and Canada	15,528,881	17,240,688
On passage for the United Kingdom	5,360,000	4,776,000
On passage for the continent of Europe	3,568,000	5,200,000
Grand total	24,456,581	27,216,688
Previous week	23,227,247	25,903,818

During the eight weeks ending July 20 the export clearances for Europe from the ports of Montreal, Portland, Boston, New York, Philadelphia, Baltimore and New Orleans amounted to 595,419 barrels of flour, 15,148,820 bushels of wheat, 16,105,891 bushels of corn, 273,259 bushels of rye, 953,250 bushels of peas, 718,837 bushels of oats.

The price of corn is steadily improving and will probably continue to do so until the next crop comes into market. While the stock of old wheat on hand is unusually large, that of corn is unusually small. The amount raised last year was 1,537,536,040 bushels, according to the Agricultural Department, which estimated that 200,000,000 bushels more than usual were consumed owing to the length and severity of last Winter. On May 1, the reports of the Department stated that 14 per cent. of this, or a little over 215,000,000 bushels, were still on hand, exclusive of corn owned by dealers at the time—possibly 50,000,000 bushels. This would make 265,000,000 for the whole country on May 1. The average domestic monthly consumption of corn during the past two years, has been 115,000,000 bushels in Summer and about double that quantity in Winter, so that there was then only enough on hand to last for four months, or until September 1st, exclusive of what might be exported, which, according to the statistics of the Treasury Department, amount to about 100,000,000 a year, or 33,000,000 bushels for those four months. It will thus be seen that the prices of corn ought to be good, as the demand is likely to exceed the supply. Reports of the growing crop are, on the whole, favorable, showing considerable improvement from the prospect for it earlier in the season.

The reports about oats are good, and, as predicted by us earlier, the aggregate yield must be unusually large. In view of this, prices have a downward tendency. Reports of the cotton crop, average good, and there seems to be a larger acreage under it than was reported earlier in the season. The increase is now put at not less than four per cent. over last year's area, and the heaviest crop ever picked is expected, most estimates putting it as high as seven millions bales, and some adding half a million to that. The prices for the next crop will, therefore, most likely be comparatively low, but just as it is unwise to "count one's chickens before they're hatched," it is not safe to reckon up the cotton bales until the cotton is picked, in view of its many enemies and the risk of insufficient labor at the critical time. The latest reports from Delaware and the Michigan fruit belt declare the peach crop a failure. Although reports of a shortage or failure of this crop are circulated every year about this time, while later on there are always plenty of peaches, it is very likely indeed that this year peaches will be very scarce and high-priced. The wolf has come at last.

The Chief of the Bureau of Statistics reports that the total value of the exports of domestic breadstuffs from the United States were as follows:—June, 1881, $20,605,915; 1880, $28,253,990; six months ended June 30, 1881, $111,981,154: 1880, $122,356,985; twelve months ended June 30, 1881, $265,561,328; 1880, $282,132,618.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 23, 1881.

BEANS AND PEAS.—Marrows have had a fair inquiry and have ruled generally firmer: sales are reported at $2.45 f. o. b. Choice medium beans are quite scarce and held at $2.45, but that is above a selling price for car lots. Choice pea beans are very scarce; a lot could be easily sold at $2.55; only choice inquired for. White Kidney beans are quiet and unchanged. Red Kidney of choice quality have had a moderate sale at steady prices, but are quiet at the close. Turtle soup beans are without sales, flat and nominal. Prime green peas are steady; a lot of peas from Vermont but not of a quality to suit our trade sold at $1.20, including bags. Southern B. E. peas nominal.

Marrow beans, prime, $2.43½@2.45; other, $2.25@2.37½; medium, choice, $2.40@2.42½; other, $2.20@2.35; pea, choice, $2.50@2.55, fair to good, $2.30@2.45; white kidney, choice, $2.40@2.45; other, $2.25@2.35; red kidney, choice, $1.55@1.60; other, $1.40@1.50; black or turtle soup, $1.30@1.35. Peas, green, prime, in bbls, $1.50@1.55.

Receipts for week, 4,100 bush.
Exports do. 535 pkgs.

BUTTER.—Receipts for the week 42,692 pkgs.; exports 9,533 do. A feeling of tameness pervades the market that is frequently followed by actual dullness. A lull in the demand, however, may reasonably be expected as August nears and city consumption is effectively reduced. Quotations for Western are generally weak.

Creamery—Western, choice 22@22½c; good to prime, 21@22c; Ohio choice 22c; good to prime 21@21½c; State and Penn. 21@22½c.; good to prime 22@22½c; sweet cream, 22½@23½c.; fair 20@20½c.; State dairy pails and h'f tubs, choice, 21c; good to prime, 19@20c.; fair to good 18@19c; Welsh tubs, choice 20@21c.; good to prime 19@20c; fair to good 18@19c; tubs poor to fair 16@18c; firkins fine 21@22c; fair to good 20@21c; Western imitation creamery, 17@19c.; dairy, fresh choice 18@19c.; good to prime 16@17½c.; fair to good 15@16c; factory Iowa, fine June 17@18c.; Ohio and Ind. June 15@16c; good to prime 14@15c; fair to good 13@14c.; poor 11@12c.

Receipts for week, 49,240 pkgs.
Exports for week, 12,730 do.

CHEESE.—Only fine cheese, perfect in condition has been in comparatively light supply and fairly sustained; The finest State colored are still quoted at 10¾@11c. to-day, but the outside figure is very full. Creamery skims show a decline of about ½c., but are in fair demand.

State fact'y, fine, colored, 10¾@11c. do. white, 10½@10¾c; good to prime, 9¾@10¼c; fair to good 9½@9¾c; poor to fair, 8½@9c.; Wis. good to prime 9¾@10c.; fair to good 9@9¾c; Ohio, factory cheddar, fine 9¾@9¾c; do. fair to prime 8½@9¼c; flat, fine 9c; do. good to prime 8@8½c; do. fair to good 7½@8c; do. poor 7@7½c; creamery part skimmed, 6@7½c.; full skims, 3@4c; full skimmed factory 3@4c.

Receipts for week, 123,735 boxes.
Exports for week, 137,261 boxes.
Liverpool cable, 54@55s.
Steam to Liverpool, 28s.6d.@32s.6d.

COTTON.—Southern combinations have not supported the market here and the market has ruled weak, with a shade of recovery at the close.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	8¾	8¾
Strict ordinary	8¾	9¾	9¾
Good ordinary	9 13-16	10 1-16	10 1-16
Strict good do.	10 5-16	10 9-16	10 9-16
Low middling	11	11¼	11¼
Strict low middling	11 7-16	11 1-16	11 11-16
Middling	11 11-16	11 15-16	11 15-16
Good middling	12 3-16	12 7-16	12 7-16
Strict good middling	12 7-16	12 11-16	12 11-16
Middling Fair	13 3-16	13 7-16	13 7-16
Fair	13 15-16	14 3-16	14 3-16

STAINED.

Good ordinary	8	Low middling	9¾
Strict good ordinary	9	Middling	10 15-16

The close of the market was officially reported as follows:—
July, 11.67@11.68c.; August 11.71c.; September, 11.23@11.24c.; October, 10.62@10.63c.; November, 10.43@10.44c.; December, 10.43@10.44c.; January, 10.55@10.56c.; February, 10.67@106.9c.; March, 10.79@10.81c.; April, 10.91@10.93c.

DRIED FRUITS.—Receipts for the week, all kinds, 23 pkgs.; exports 825 do. apples. The offering of evaporated is light and small buyers have paid an advance. Sun-dried have been marked up and are firmly held at the new figures. State and Ohio grades are doing the best. No movement in peaches; further advices from crop or drying sections still favor the high views of holders. Small fruits are not plenty; it is early for wholesale buyers to look around and prices for new cannot be called settled.

Apples, evaporated rings, 9@9½c.; rings, prime, 8½@9c; fair 8@8½c; North Carolina sliced, fancy white 4½@5c, good to prime 1½@4¼c; Va, 4@4½c; Tenn. in bbls, 4½@4¾c, do. bags 4@4½c; State fine cut 4½@4½c., quarters choice 4½@4¾c; O. & Mich. choice 4½@4¾, Western, fair to good 4@4½c; evaporated peaches peeled 25@28c.; unpeeled 13@14c; N. C. peeled, extra choice 21@22c; choice 19@20c; Ga. peeled 17@20c; State 17@19c; 1879 peeled, poor to prime 10@18c; unpeeled halves—N. C. 1880 5½@5¾c.; Tenn. 5@5½c; quarters N. C. 5@5½c. Plums State black 10@11c. Blackberries prime 7½@8c. Cherries Southern 14c. Raspberries prime 24c. Whortleberries prime 11@11½c.

Receipts for the week, all kinds, 290 pkgs.
Exports dried apples, 900 pkgs.

EGGS—Receipts for week, 8,915 bbls.; do. last week 8,167 do. The week has been a severe one on eggs. The Producers' Price Current says:—The oldest dealers remember no worse time. The Western stock arriving has been nearly all bad. Many lots have been carted off to the dumping ground as entirely worthless. Often one-half to three-quarters of the eggs have been found bad in counting out; in many instances lots which were evidently good when shipped have had the hatching process started in them by the heat on the way. In two instances chickens hatched in the barrels have been taken out alive. It was thought that the refrigerator lines would enable shippers to get their eggs to market without such losses from hot weather on the way, but in this there is great disappointment; some, if not all, of these lines have delivered their eggs in very bad order, showing that they have not given shipper the service for which they are paid. A few choice Western arriving to-day have sold at 16c., but few receivers have stock worth that price. Lots which have been held here in ice-houses in perfect condition have turned out generally better than fresh receipts. Inferior lots are offering at almost any price, from $2 per barrel up to 15c. per doz. There is a fair call for good Canada at 16½@17c. State fresh eggs arriving by express in perfect condition have sold to-day at 18c., but some lots have not been so desirable and have sold lower.

Jersey, single bbls. ₩ doz. 18@19c.; State and Pa. fresh laid, 17½@18c.; Canadian, fresh laid, 16½@17c.; Western, fresh laid, 15@16c.; Western and Southern, inferior, 12@14c.

FLOUR.—A strong feeling prevails in flour following the activity in wheat, and the market is fairly active.

No. 2, ₩ bbl., $3.30@4.10; State and Western superfine, $4.30@4.80; city mills extra, $5.25@6.50; Spring wheat do. $4.85@5.25; Spring XX and XXX, $5.40@6.75; patents, $6.00@8.00; Ohio round hoop shipping, $5.10@5.40; trade brands, $5.50@6.25; St. Louis extra, $5.15@5.50; do. double extra, $5.15@6.25; do. family, $6.40@7.00; South'n shipping, $5.40@6.00; do. XX and family, $6.25@7.25. Rye, $5.00@5.55. Corn-meal, Brandywine, $3.40@3.50; Western, $3.00@3.30.

Receipts of flour for week, 114,900 bbls.; do. corn-meal 7,250.

Exports of flour, 71,000 bbls.; do. corn-meal 6,975.

FRESH FRUITS.—With consumers more or less away and so many items offering, the market is unsettled and prices are weak.

Peaches, Md. Hales, ₩ crate, $1.50@3; North Carolina ₩ bush. $2@4; Ga. ₩ ½-bush. crate, $1@1.50. Gooseberries, green, ₩ bush. $1.25@1.50. Whortleberries, ₩ bush. $2@2.50. Raspberries, natives ₩ ½-cup, 1½@2c.; Brandywine, ₩ pint, 4@6c.; Antwerp, ₩ cup, 3@4½c.; Blackberries, Wilson, ₩ qt., 10@12c. Currants, small, ₩ lb. 2@3c.; Cherry, 2@4c. Plums, Beach, ₩ qt. 6@8c. Apples, Southern green ₩ crate, 50@75c.; do. ₩ bbl. $1.50@2; Red Astrachan ₩ bbl. 75c@$1.; Sweet Bough, do. $1.50@2; Sour Bough, $1.75@2.25. Watermelons, N. C. and Norfolk, ₩ 100, $10@16; Ga. $15@30. Nutmeg melons, ₩ bbl. $2.25@3. Pears, cooking, ₩ bbl. $3@4; Bell, $2@5.50; Harvest, $4@4.50; fancies, $3@6.50; Va. Bartlett ₩ crate, $3.50@4.50. Peanuts, Va. hand-picked ₩ lb. 5@5½c.; do. fancy, 4½@4¾c.; do. extra prime, 4½@4¾c.; do. good to prime, 3½@4c.; shelled, 3@3½c. Pecan nuts, ₩ lb, 7@11c.

GRAIN.—Crop reports indicating a smaller yield have given strong impetus to the wheat market and prices are firm and better with the largest speculative business ever known. Corn has shared in the speculative excitement and there have been liberal sales for export. Oats have done better with a more active trade.

Wheat, Spring $1.10@1.24; do. No. 2, $1.21@1.23; do No. 3, $1.15@1.18; red Winter No. 2, $1.28@1.28½; red Winter $1.15@1.32; white Western and State $1.17@1.27½. Rye, 87@91c. Oats, white No. 1, 43@43½c.; white No. 2, 41½@45c.; white No. 3 43½c; mixed No. 1, 45c; do, No. 2 44½@44½c; do. No. 3 42@43½c; Corn, West'n mixed 56@57½c.; do. No. 2 55@57½c.; do. do. yellow 58@59c; do. do. white 58@59c; Southern yellow 58@62c.; do. white 57@59c.

Receipts for week, wheat, bush., 1,428,600; corn, do 1,778,550; oats do. 311,400; rye, do. 3,711; malt, do. 59,419; barley, do, 700; rice pkgs. 650.

Exports for week, wheat, bush 612,000; corn, do. 1,242,000; oats, do. 25,329; rice, pkgs. 1,200.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports and on rail, on lakes, on canals and on Mississippi River:

	1881. July 16. bush.	1880. July 17. bush.	1879. July 19. bush.
Wheat	14 823,393	10,924,075	12,473,247
Corn	15 979,164	15,477,913	10,796,086
Oats	7,317 764	1,991,503	1,536,691
Barley	154,9 8	180,656	357,8 9
Rye	114,077	133,674	311,713
Total	38,389,356	28,709,631	26 606,456

HAY AND STRAW.—Receipts of hay continue light and stock in store is reducing. The firm feeling has developed into an advance of about 5c. ₩ 100 lbs. Straw about steady.

Hay, prime timothy 85@90c. ₩ 100 lbs.; medium do. 70@75c, do.; shipping grades 50@55c. do.; clover mixed 45@55c; clover 35@40c. Straw, long 75c; short, do. 50@55c.; oat and wheat straw 45@50c

HOPS.—The market is very quiet. Brewers are the principal buyers and they take stock only for immediate necessities. There is a good deal of talk about the crop in this State. Some quite unfavorable reports have been received, estimating the yield as not more than two-thirds of last year. Other observers estimate fully three-fourths of the yield of last year. The vine in most localities is very short-armed and in the blow. Should the English crop turn out as well as it promises, but few American hops of the new crop will be wanted for export, and indications are that we shall have a considerable surplus beyond home requirements, even with a considerably lighter crop than that of last season.

Crop of '80, choice, 20@22c; good to prime 18@19c; fair to good, 13@18c; poor to fair, 11@13c; Eastern, 11@18c.; '79's, fair to prime, 12@15c.; '78's, 5@8c.

Receipts for week, 353 bales.
Exports for week, 38 bales.

POULTRY AND GAME.—Dressed is in fair supply for hot weather. The wants of best trade are helped considerably by the arrival of Bucks County stock. The main improvement of the week is in fowls. Fine turkeys have sold well.

Turkeys, Phila. prime ₩ lb 15@17c.; State & Western d. p. 15@16c. Chickens, Phila. Spring, prime, 22@24c.; Bucks Co. Spring, 21@23c; N. J. Spring, 21@22c.; State and West. Spring, 20@22c. Fowls, Phila. d. p. 15@16c.; Bucks Co. 15@16c.; N. J. d.p. prime, 15@16c.; N. J. scalded 14@15c.; State and Western d.-p. prime, 15c; do. scalded, 14c.; do. coarse 13½@13c. Ducks—Spring, Phila. ₩ lb 19@20c.; do. Jersey and Bucks Co. 16@18c.; old, fair to good, 12@13c. Squabs, white ₩ doz. $2; do. dark, $1.25@1.50.

Live fowls declined to 14c. early in the week and have since remained barely steady at that price for the best lots. Geese are not plenty, but are very little wanted and rule weak. Old pigeons are in demand at 45c. Young ones dull at 25c. Most of the lots coming are of mixed quality and sell at a price between those quoted for old and young.

Spring chickens prime ₩ lb 18c.; other 15@17c. Fowls, ₩ lb. 13@17c; roosters, 6@8c.; turkeys, 12@15c.; ducks, ₩ pair 70c@$1; geese, extra $1.75; other $1.00@1.50; pigeons, 25@45c.

PROVISIONS.—Lard has run up in price beyond exporters' views or margins and all interest is among home manipulators. Pork has continued to go out for export; not much home demand. Cut meats quiet here though good orders especially for bacon are being filled at the West.

Pork, extra prime, $14.50@14.75; West'n mess, new, $18@18.25. Lard, steam Western ₩ 100 lbs, $12.10@12.15; prime city, $11.75. Hams, smoked city ₩ lb 12@12½c; pickled Western, and city 10½@11½; Shoulders: smoked city, 8½@8¾; pickled, 7½@7¾; rib bellies, pickled, 9¾@10. Bacon, long clear, west. 9¾@9¾. Beef, western mess, ₩ bbl., $12@14; India mess, tcs. $26@28; best hams bbls, $23.

Receipts for week—Beef, bbls and tcs. 1,097; pork, bbls, 6,471; Cut meats, pkgs. 17,532; lard, do 20,476. Exports—Beef, bbls and tcs. 2,180; pork, 2,843; cut meats lbs. 5,719,466; lard, 1,863,426.

SUGAR.—Quotations for refined

Hard sugars—crushed ₩ lb 10¾c; do. powdered 10¾@10¾c; do. granulated 9¾@10c; do. cut loaf 10¾c; confectioners' "A" 9¾c; coffee "A" standard 9¼c; do. off "A" 9@9¼c; white extra "C" 8¾@8¾c; extra "C" 8¼@8¾c; "C" 7¾@8¼c; yellow 7½@7¾c.

TOBACCO.—Seed leaf in good demand. Hhds. quiet. Foreign buyers the main stay of the market, not operating at moment.

Seed leaf, crop of 1880 choice at 10@18c. for assorted lots; Pa., 7½@10c. for State, Onondaga, Havana seed and ital., and 10@13c. for N. E. 2ds.; also crop of 1879 at 7@40c. for Pa. fillers and wrappers and 12@16c. for N. E. 2ds; Ky. lugs 4¾@5½c. and leaf 6@12½c

VEGETABLES.—Potatoes are in good demand; prices obtain some support by Havana wants. Exports for week 25,000 bbls. L. I. & N. J. quoted $1.35@1.50 bbls. in bulk. Garden truck in good supply and assuming its usual Summer cheapness.

Sweet corn, Jersey ₩ 100 75c@$1; Burlington corn do. 50@75c; Green peas, L. I., ₩ bag, 50@75c; wax beans L. I. do. 75@$1; string beans L. I. do. 50@61c, cucumbers ₩ 100 $1@1.25c; Phila ₩ bbl. $3, egg plant Phila ₩ doz. $7@8; Tomatoes Phila ₩ bskt. 60@70c; N. J. & L. I. ₩ bu. $1.50@1.75; Md. $1.50; Nfk. ₩ cr. 25@60c; squash Norfk marrow ₩ bbl. 75@$1; L. I $1@1.25; cabbages, Flat Dutch ₩ 100 $3@4, beets, L. I. ₩ 100, bchs $1@1.50; onions, potato prime ₩ bbl. $4.25; fair to good $3.50@4; lettuce 30@60c; carrots ₩ 100 bchs $1@1.50; white turnips Jersey $1.50@3.00; turnips Russia ₩ bbl. 75c@$1; cauliflower, J'y & L. I. $1.50@4.

WOOL.—The new clip is arriving forward liberally and with free stocks available holders views are slightly shaken. The condition is thought to be one likely to follow the excited opening and there may be no serious break in quotations.

Ohio, Penn. and W. Va. XXX and picklock, 43@45c.; X to XX, 40@43c.; No. 2 to No. 1, 40@45c. coarse, 34@38c.; combing 40@45.

State and Western X and XX, 39@41c.; No. 2 to No. 1 38@44c.; coarse 32@36c.; combing, 40@44c.; combing unwashed 30@34c.

Va., W. Va. and Md. unwashed medium 28@30c. Ga. and Lake unwashed medium 28@31c; coarse 23@26c; burry and slightly burry 16@22c; Cal, Spring northern, free, 31@35c.; middle counties, free, 27@30c.; southern, 22@26c.; low grade and burry, 20@23c. Fall, low grade and burry 16@20c. Texas—choice, free, 28@31c.; fair to good, 24@26c.; low grade and burry 17@20c. Pulled super 38@43c.; extra 35@38c; No. 1, 20@23c; combing, 35@40c.; lambs, 38@40c. Tub washed, fair to choice, 35@41c.

LIVE STOCK MARKETS.

NEW YORK, Saturday July 23, 1881.

BEEVES.—Receipts for the week 14,481 head; do last week 13 031 do. With more cattle offering than the demand called for the market was extremely dull, and the most disastrous one for the selling interest that we have had this month. The large arrivals from the West have convinced butchers that for the present there is no scarcity of beef cattle. Corn-fed steers sold fairly at about steady prices, but poor to medium natives were very dull a strong ¼c. lower than on Wednesday; Texans were also quoted ¼c. off and were selling slowly; transactions ranged 7¼@8¼c. to dress 55 ₩ to 11@12c. to dress 58@57 lb. Bulls nearly unsalable.

SHEEP AND LAMBS.—Receipts for the week 23,902 head; do. last week, 33,198 do. Heavy receipts and large stock on hand have placed buyers at a disadvantage. The small business reported up to 12.30 p. m. was at 4@5½c. for sheep; 5@6¾c. for Ky., Tenn. and Va. lambs; 6¾@7¾c. for Canada, State and Pa. do. with a small bunch of Canada lambs sold up to 8¼c. and at N. J. at 8½c.

SWINE.—Receipts for the week 25,052 head; do. last week 25,494 do. Receipts mainly consigned to slaughterers direct. Market quoted nominally firm at 6¾@6¾c.; lighted city dressed Western 8¾c.

MILCH COWS.—The receipts during the past week were, generally speaking, of poor quality and sales were slow, prices ranging $35@65 ₩ head.

FARM IMPLEMENTS & SEEDS.

Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above.
Address 189 & 191 Water St.

New York State Fair.

The 41st Annual Cattle Show and Fair of the New York State Agricultural Society will be held at

ELMIRA,
Sept. 12th to 17th, 1881.

Entries Close Saturday, August 13th,

Excepting only entries of Flowers, Plants and Fruits, which may be made at any time until Tuesday, September 13th, at 10 o'clock A. M. All other entries must be made by mail or otherwise, at the Society's Office, at Albany, on or before Saturday, August 13th.

Competition Open to All.

The Premiums offered may be competed for by residents of other States, and countries, on equal terms with residents of New York. Copies of the Premium-List and Regulations will be mailed on application.

BLANK FORMS OF ENTRY

Will be sent on application. In writing for them please specify what it is proposed to enter, as different forms are provided for different classes of exhibits. Address

N. Y. STATE AGRICULTURAL SOCIETY,
ALBANY, N. Y.

Reading for the Young.

MENDLE'S SONGS FOR CHILDREN.

THE SOAP BUBBLE.

FAR over the hills, and over the lea,
As far as the eye could possibly see,
A bubble of air went floating along—
Wherever it floated it sang this song:

"I came from the end of a little pipe-stem,
Which Arthur had dipped in a saucer of soap;
But look at me now, all so round and so plump,
I never could stay in a corner and mope.

"They say I am empty and puffed up with air—
But look at my sides with their beautiful hues;
I can dance over meadows and dance over brooks,
And as I go dancing I frighten the 'blues.'

"I dance on the sunlight and float up to heaven;
And when I fly up till I'm out of their sight,
The boys and the girls talk it over together,
And call me a sweet little thing of delight.

"I float on the breath of a little child's mouth,
And upward I go to the heavens above,
Because little children are wedded to truth,
And breathe from their hearts a pure spirit of love."

FARMING FOR BOYS AND GIRLS—NO. 29.

HENRY STEWART.

What is Manure?

AFTER studying the nature of the soil; the characters of the plant, and the feeding of animals, we are led directly to the subject of manure. For the soil requires manure to remain fertile; plants need it for food; animals produce it; and its quality and value depend upon the kinds of food that have been used by the animals. The care and use of manure is the principal thought of the farmer. Without it he can have no crops, but with it there is hardly a limit to the productiveness of the soil. The market gardener who often uses 100 loads per acre at a cost of $200 to $300, and after that applies 1,000 pounds of guano at a further cost of $30, produces $1,000 to $1,200 worth of produce to the acre in a season; while the farmer who uses it very sparsely may not be able to get more from an acre than a poor ten dollars' worth. This may be a very strong way to put this case, but it is true and its application may be of use in showing how true it is in the cultivation of the soil, that out of nothing nothing comes, and that the richer we can make the soil the more we may be able to get out of it. It is very useful for a young farmer to know what manure is; how it operates in the soil and how it should be used.

Manure may be said to be anything that feeds the crops that are grown upon farms or in gardens. But in common use it is considered to be the dung of farm animals mixed with whatever litter, such as straw, that may be used to absorb it. It is certain that the manure can contain nothing but what was in the food of the animals and not all of that, because a certain portion of the food is used up in supporting the animals and making flesh, bone and other portions of the body. We know very nearly how much of the food is thus used and as we know precisely of what the food consists, it is quite easy to tell what is left in the manure. As plants require to be fed chiefly with three substances, viz, phosphoric acid, potash and nitrogen, we are more concerned about these than anything else that the manure may contain and disregard all besides. The following tables show how much of these elements of the food escapes in the dung and the urine and in both together and of course how much is used up by the animal.

TABLE 1.

In 100 pounds of the dry substance in the food there is found in the waste matter discharged

Dry matter.	Cow. lbs.	Ox. lbs.	Horse. lbs.	Sheep. lbs.
In dung	38	45½	42	47
In urine	9	5⅝	3½	6½
In the whole manure	47	51⅛	45½	53½

TABLE 2.

In 100 pounds of organic matter in the food there is found in the waste matter discharged

Organic matter.	Cow. lbs.	Ox. lbs.	Horse. lbs.	Sheep. lbs.
In dung	36½	44	38⅝	45½
In urine	6	3⅛	2½	4
In the whole manure	42½	47⅛	40⅝	49½

TABLE 3.

In 100 pounds of nitrogen in the food there is found in the waste matter discharged

Nitrogen.	Cow. lbs.	Ox. lbs.	Horse. lbs.	Sheep. lbs.
In dung	45⅛	51	56	43⅜
In urine	18⅛	38⅛	27⅛	51⅛
In the whole manure	63⅜	89⅛	83⅛	95⅛

TABLE 4.

In 100 pounds of the mineral matter (phosphoric acid and potash) in the food there is found in the waste matter discharged

Mineral matter.	Cow. lbs.	Ox. lbs.	Horse. lbs.	Sheep. lbs.
In dung	53¾	70⅜	85½	63⅛
In urine	43⅛	46⅜	16⅛	40⅛
In the whole manure	97	117⅛	101¾	103⅛

In the last table it is seen that there is an excess of mineral matter in the manure. This should not cast doubt upon the figures because account must be taken of the water drank with the large quantity of food required to contain 100 pounds of phosphoric acid and potash, and the water so used will amount to several thousand pounds while so much food is consumed. The water may easily contain in solution this excess of mineral matter. The figures, however, show that a grown animal discharges in the wastes very nearly all of the mineral matter of the food and this is so important that further consideration should be given to it.

THE BOOK FARMER.

A Leaf from a Life.

BY MRS. E. J. R.

WELL pet, we are going into the country," said Herman Carroll to his pale young wife, as he came in from his business with a huge pile of books under his arm, "see, here are agricultural works, and I intend to make a capital farmer of myself."

Mrs. Carroll, who had looked up with a startled air when her husband first entered, burst into tears. Her childhood and youth had been spent in the country, and during the long months of failing health she had thought with a heartsick longing of the old familiar scenes, but three little daughters, and the cares of her little household, more than all her husbands' business cares seemed to forbid the hope that she should ever look upon the dear old haunts again.

"Why Anna," said her husband coming to her side, "I thought this would please you," and he stroked her black silken hair soothingly noting with pain the almost transparent whiteness of the blue veined forehead.

"What would please me? Oh, Herman, you can't know how I long for the country, but I know that it cannot be."

"Why not puss? people live in the country, a good many people."

"But we are not rich and you have all your life been a merchant; was any such thing ever known—a New York merchant turning farmer?"

"We will make a precedent then," he answered, "but seriously, I have an offer for my store and business which I shall accept. Then a friend tells me he knows a pretty farm of nearly one hundred acres, near a thriving village in the central part of the State and I have about decided to buy it. So I must begin to study for my new—profession shall I call it?"

Mrs. Carroll sank back in her easy chair, her hands clasped above her heart which was beating wildly, but she wore a happy smile, while she saw her husband carefully examining his authorities with a grave business like air.

"You always do succeed in what you set out to do, Herman," she said at length, "but this seems too good to be true."

There was a good deal of homely prose however, before the Carroll's found themselves settled in the large roomy house which was to be their future home. Mr. Carroll's new neighbors shook their heads when they learned his history and said, "he'll soon tire of farming, besides the farm is all worn out and needs a deal done to bring it up.",

This was precisely the state of things which Mr. Carroll found to be true, but instead of despondingly he set himself to work. He did this more cheerfully when he saw the faint color coming into his wife's pale cheek and the brightness in her eyes. The little girls, too, never tired of admiring the sleek fat cows, which constituted Mr. Carroll's dairy, nor the gentle ponies which were to do the work of the farm. And Mrs. Carroll, not to be outdone, learned the art of butter making. She skimmed the thick, leathery cream and placed it in the churn with her own hands, and then the little girls churned it, singing as the dash went up and down so many, many times:

"Churn, butter, churn,
Peter's at the gate
Waiting for the butter cake,
Churn, butter, churn,"

"Who taught you that, chicks?" said mamma, stopping in the door to listen.

"Aunt Dinah over the way! Isn't it pretty and it helps bring the butter," said Anna, who, in the dignity of her ten years assumed the leadership of her sisters.

Mr. Carroll laughed, and the eager little faces watched the whole proceeding of taking up, washing and salting the butter with interest.

"Really pet, you have learned the art of making "gilt edged butter," said Mr. Carroll at the breakfast table the following morning helping himself liberally. "I never tasted sweeter butter."

"It must be because my little birdies churned it," said Mrs. Carroll, laughing.

"And oh! papa it was such fun," said the three little girls in a breath.

Mr. Carroll did not find farming "such fun" as the children did. The hard work of plowing and planting and cultivating the soil was different, from selling goods, but he persevered. There were now and then rainy days and the ever returning holy Sabbath, for Mr. Carroll was an earnest Christian man and kept holy time with great strictness.

The result was, that although often very tired he grew stronger and more vigorous. Mrs. Carroll too, constantly improved in health and the little ones were fat and rosy.

Mr. Carroll spent a good deal upon fertilizers, though his rustic neighbors shook their heads and predicted ruin.

"I must feed my farm if I expect it to feed me," he answered and went on with his "book farming."

"It beats all what crops that Carroll is having!" said these same neighbors a few months later.

"A pretty pass things have come to when we must look to a city feller for a pattern," growled another.

"I don't care who sets the pattern so we get big crops" answered the first speaker.

The years rolled on, nearly a score of them, and the gentle, sweet-faced Mrs. Carroll was still the center of a happy home. Three bright intelligent graceful girls, who had grown up into womanhood receiving the mother's impress, gathered around the hearthstone.

Herman Carroll looks abroad upon his fertile acres, and around upon his happy home-circle, and although his locks are silvered, says with a grateful heart,

"We have made a precedent, dear wife. Book farming may pay," to which she answers lovingly:

"We owe it all to your great loving heart, Herman, and to your sterling good sense. Yes, brains are needed in successful farming and all your neighbors now respect the "book farmer."

THE HORTICULTURAL CLUB.

THE other day I received a letter asking for information about the Horticultural Club, as to when it originated, how many members it had, etc., etc. As this is not the only letter of such a nature that has reached this office, I will answer the query in this column so that all may know.

It is probable that the RURAL visits but few farmers' homes in which there are no children, and in a large majority of cases these children, when they grow up to manhood and womanhood, will become farmers and farmers' wives. This being so, any instruction and practical information received in their childhood days will be of some material benefit to them in later life. For the purpose of giving such instruction the Horticultural Club was organized some four or five years ago. Horticulture is but a division of agriculture—the former being the art of cultivating gardens, the latter the art of cultivating fields. While some men devote themselves to horticulture only, it is probable that most of our farmers' sons will be taught that gardening is a preparatory school, so to speak, for farming, and having learned some of the principles which control vegetable and plant growth, the best methods of cultivation and of fertilizing, they will be enabled to apply these principles to the broader field of agriculture when they become older. With the hope that what information we might be able to give would aid them, this Club was organized, and if we shall succeed in interesting the young in some of the topics which pertain to gardening or farming, we shall be glad. Besides this, we aim to give interesting stories, puzzles, etc., so that all may find something in this page to benefit and interest.

There are now nearly a thousand members of the Horticultural Club, whose names are enrolled on our books. We invite all farmers' boys and girls into whose hands the RURAL falls to send us their names, as that is all that is necessary to secure a membership and entitle them to the Youths' Seed Distributions whenever they are made. A word as to this. Nearly every year we have seeds of rare plants and flowers in quantity not sufficient to supply the large number of subscribers to the RURAL, so that it is our custom to give the children a chance, though on a small scale, to experiment and thus put into practice what lessons in the cultivation of plants and flowers they may learn from our pages or elsewhere. With this purpose in view the Horticultural Club exists, and each member should be desirous of making it mutually interesting and profitable.

UNCLE MARK.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—My little sister Eula May wrote you a letter and you sent her some seed when you sent Uncle Johnny's, and they are growing nicely. Ma says we both can write this time, and ask for a few of the Insect Powder Seed, that she will take great pains with them and report for us. We have such a pretty yard it would make the letter too long to tell you about it. I wish you could see our wild flower bed, there is always something now in it that we had not found before. Don't you think everybody ought to have one in their garden? I would like to tell you about our water lilies, and how mamma saves her flowers. Last Winter while almost everybody lost theirs or part at least, mamma did not lose any.

Cool Springs, Ga. OSCAR AND ECLA MAY.

[Certainly, let us hear the secret of your mother's success in wintering flowers. U. M.]

UNCLE MARK:—I have not time to write much, but I want to tell you what our grape seed are doing. We planted them last Spring, but only two came up, of which only one lived. This Spring seven more came up, four of which are still alive, but a little black insect, so small that I can't well tell what it is like, is killing them. The ants are working on the insects, but they seem to multiply too fast for them. The Horticultural Club at our house all thank you for seed sent this Spring. We have carefully planted them, will cultivate in a proper manner, and will send the leaves and flowers of the Japan Red Bud if we succeed with them.

Caldwell, Tex. VIRGIL A. HERRON.

DEAR UNCLE MARK:—You must think by this time that I have deserted you, but not so. I received the seeds all right, for which please accept my thanks. I shall try to do my best to give you a good report of everything. I am now living at Corunna, which is a very pleasant place. We have four flower beds this year. I have some seeds, just started to grow, of a Southern tree that I don't know the name of. I will send you a sprout when it gets large enough.

Corunna, Mich. HENRY WELFARE.

DEAR UNCLE MARK:—I have long wanted to join the Club. My sister takes the RURAL. I am eleven years old and the youngest of the family. I have a few flowers but no plants among them, and mamma has a great many beautiful roses and a lovely hydrangea. If you give this a place in the dear old RURAL I will write again and tell the cousins something about my pets. Your affectionate niece, WEETA M. RICE.

Abbeville, La.

UNCLE MARK:—I read in our last RURAL that you had some Pyrethrum seeds yet, so you may send me some, if you please. Only one plant of the Japan Red Bud came up. It is growing nicely and is a beautiful plant. Some of the pinks that we raised from the RURAL seed are budded. Please accept thanks for all the seeds.

Keepville, Penn. HELEN A. RANDALL.

Sabbath Reading.

[For The Rural New-Yorker.]

AFTER.

AFTER the night of darkness
Cometh the light of day;
After the storm is over,
The shadows will pass away.
Never a day so gloomy,
But some ray of light shines through,
With promise of golden sunshine
And skies of azure blue.

We cast the seed in the furrows,
Hoping to reap the grain;
Trusting in Him who has told us
We shall not sow in vain;
Then, after days of waiting,
The tiny plants appear,
The blade and unfolding leaflets,
And then the "full corn in the ear."

The flower yields its sweet perfume
After wet with the morning dew;
And sends up its grateful fragrance
Each day to its maker anew.
The bird that sings most sweetly,
Has sometimes the saddest strain,
But the cheeriest notes of the robin
Ring clearest after the rain.

After our trials are over,
For us comes a morning bright,
With never a cloud of sorrow,
To again obscure the light;
On the other side of the river,
Where all shall be "made plain,"
We'll see, how 'mid earth's trials
There never came one in vain.

Let us wait in patience the dawning
Of light on the other shore,
Where sin is forever banished,
And sighing and tears are o'er.
How sweet in that glorious after,
To dwell in a world of light,
With all the redeemed forever
"Who walk with the Lord in white."

We now "see through a glass but darkly,"
And our human faith is dim,
There, with clear, unclouded vision,
We will be "face to face with Him,"
The dear Saviour who purchased our pardon,
With Jesus the crucified:
We'll wake to the heavenly likeness,
And our souls shall be satisfied.

CONFIDENCE IN GOD.

When the author of the Hebrews wrote the text (Chap. x; 35), this was what he had immediately in mind. Cast not away your confidence in things unseen—in God, in Christ, and in religion. Religion is a universal fact; it is peculiar to no race or age or civilization. Dogmas differ, sects vary, ordinances change; some religions are better and some worse; but man believes not only in the life that now is, but in that which is to come. A strong faith in the unseen world, in immortality, in retribution, is essential to man's greatest power and highest happiness. An atheist looks out upon a future as cheerless and lifeless as the frozen ocean. What can strengthen and warm his heart? Even the despairing Carlyle said, "A man's religion is the chief fact with regard to him."

Some will say that nothing more is needed than confidence in God. They will enlarge upon the weakness of man, and dissuade him from trusting in man's power. They will quote the psalm, "All my springs are in thee." This is merely a question of words. No man is strong in God until God has come into him. He is strong with God's might in his inner man. There are two ways of looking at the subject. Paul states them thus:—"Work out your own salvation, with fear and trembling, for it is God that worketh in you, both to will and to do His own good pleasure."—President B. A. Hinsdale, of Hiram College.

You may be nearer to Christ than you think. Those men who went stumbling along the road to Emmaus, weeping and mourning that their Christ was gone, poured into His very ear the tale of their bereavement. They told Him of their trouble—that they had lost their Christ; and there He was talking with them. In the midst of their great grief there was their Victory, and they did not know it. There is many a man whose misfortune is the occasion of Christ coming nearer to him. There is many a man in embarrassment, overwhelmed with care, who does not know what to do. It is the pressure of God's hand upon him for the purpose of betterment. It is God present in His affairs; Christ near to him for the sake of winning him to Himself.—Watchman.

LOVE Him that first loved you, and while you sink into his arms, and surrender all to Him, with a joyful, absolute self-renunciation, let this confiding love swell and abound, till every figment of distrust shall be swept away. For against every challenge, in time or eternity, this may be your rejoinder, "He that spared not His own Son, but delivered Him up for us all; how shall He not with Him also freely give us all things!"—J. W. Alexander.

THE grass of the field is better than the cedars of Lebanon. It feeds more, and it rests the eye better—that thymy, daisy-eyed carpet, making earth fair and sweet and home-like. Kindness is the turf of the spiritual world, whereon the sheep of Christ feed quietly beneath the Shepherd's eye.—Faber.

GOD never forgets or forsakes us; it is we who wander from Him. Like the earthly parent waiting for the repentance of an erring child, so He waits with a holier love.

No sense in having sickness in the family if you will use Hop Bitters in time. Ask those who know.—*Adv.*

PERSONAL ITEMS.

President Lincoln's widow is able to take drives and is likely to recover.

Secretary Robert T. Lincoln has been invited to deliver the address at the coming Vermont State Fair.

The Minneapolis, Minn, Tribune thinks it worth while to say that the name of Mr. Villard, of railroad fame, is pronounced Vil-*lard*.

Mr. Vanderbilt is said to have expressed a purpose of devoting to benevolent objects all of Maud S's earnings on the turf this season.

The Earl of Rosebery, at his rent audit, remitted fifteen per cent. on the half year's rents due at Lady Day from the tenants on his estates at Mentmore.

Just as soon as his haying is finished Ex-Governor Seymour expects to invite to a picnic on his Deerfield farm a hundred little orphan girls from a Utica asylum.

The handsome fountain presented by the late Mr. George Armour of Chicago to Campbelton, Argyleshire, of which he was a native, was completed and handed over only two days before his death.

The Empress Augusta of Germany is a woman of great courage and patience. For many years she has suffered tortures of intense pain from a wearing disease, and has borne it with a remarkable firmness, energy and quietness.

Lord Kimberley has turned land reformer, and is in favor of the abolition of all laws impeding the free distribution of landed property. He can easily take a leading position in such a reform for he is the owner of 11,000 acres, which yield a rental of £25,000, or $125,000, per annum.

[Springfield (Mass.) Republican.]

A Prominent Lawyer's Opinion.

In one of our New England exchanges we observe that Wm. T. Filley, Esq., of Pittsfield, Attorney-at-Law and Asst. Judge Police Court, and late County Commissioner, was restored to perfect health and activity, by the use of St. Jacobs Oil. He had suffered with rheumatism for years intensely; but by the recent use of the remedy he was, as stated, completely cured, and says the Oil deserves the highest praise.—*Adv.*

Miscellaneous

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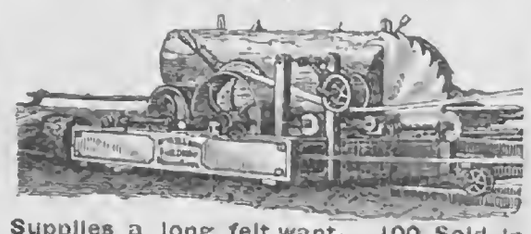

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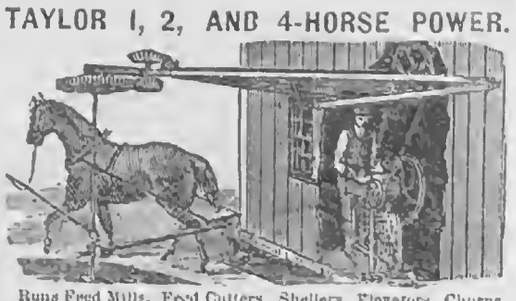

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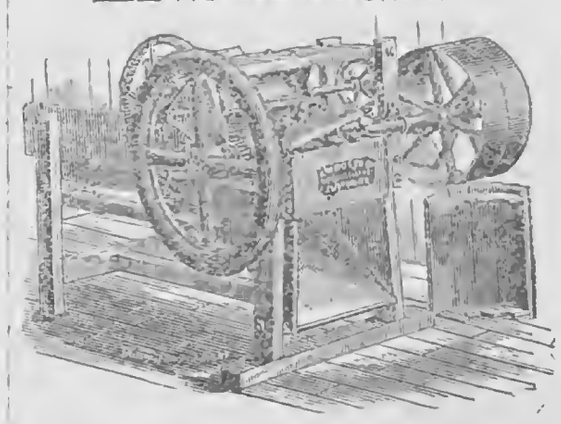

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IT takes 800 full-blown roses to make a tablespoonful of perfume, while ten cents' worth of cooked onions will scent a whole neighborhood.—Scientific American.

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[Gouverneur, (N. Y.) Herald.]

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Mamma—"When two horses reach the winning post at the same time so there are two winners."

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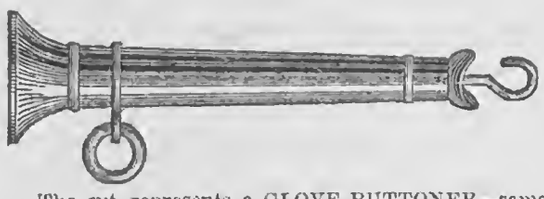

The cut represents a GLOVE BUTTONER—same style in pencil of gold plate, other fancy pencils in various designs; in gold, silver, gold and silver plate, celluloid and nickel at wholesale or retail. Retail price of Buttoner $1.50, prepaid; all at wholesale, C. O. D. Address G. S. CLARK,

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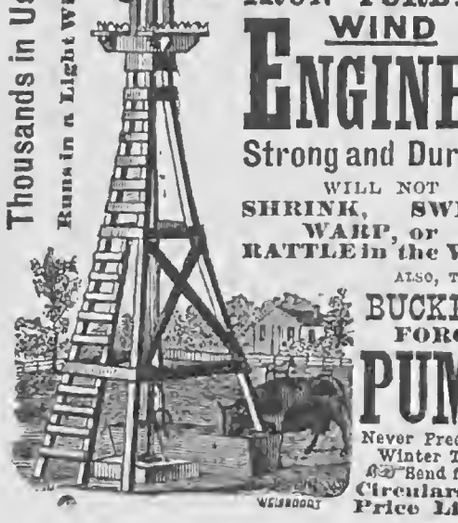

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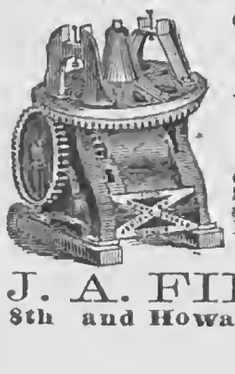

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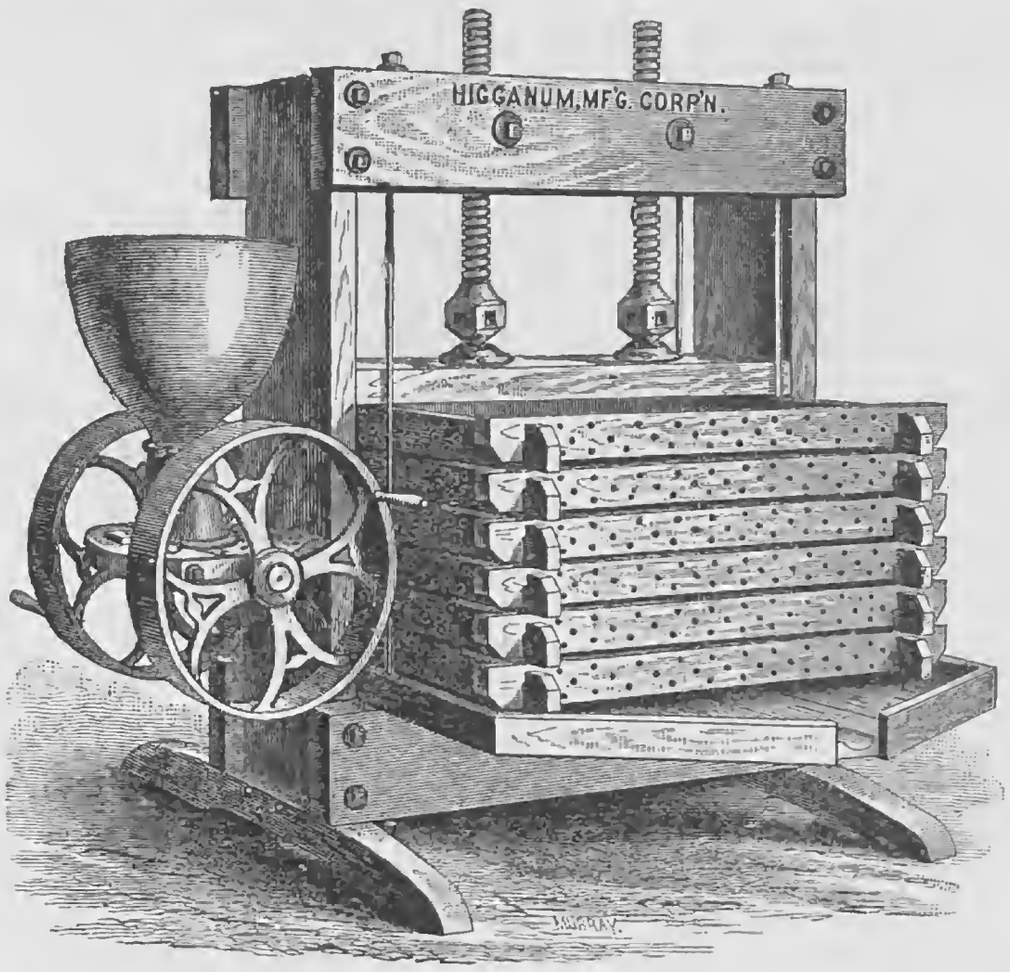

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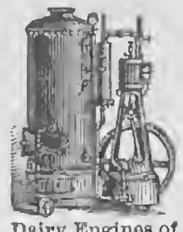

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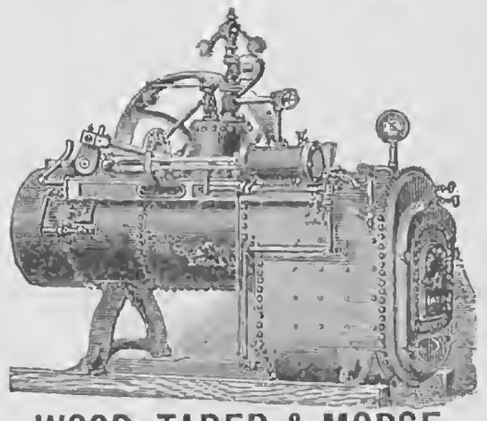

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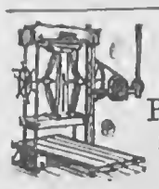

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL.—No. 1645.} NEW YORK, AUG. 6, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

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Industrial Implements.

A SELECTION OF IMPLEMENTS FROM THE PARIS EXPOSITION.

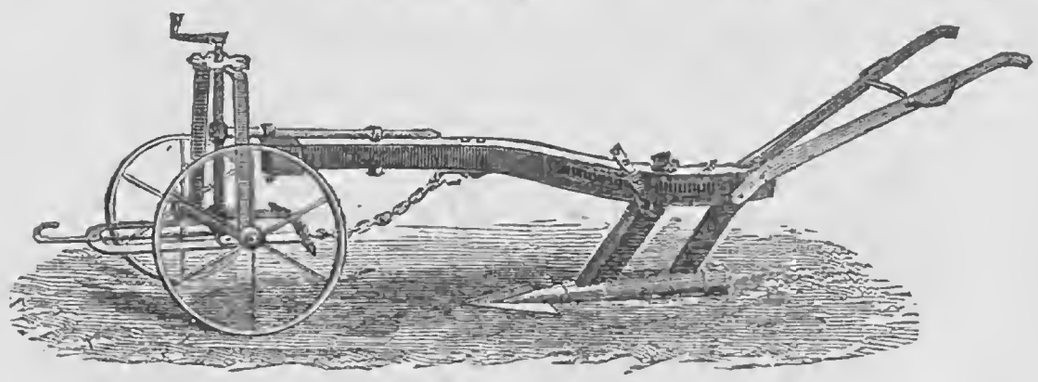
THE display of agricultural implements and machinery at the Paris Exposition of 1878 was unusually large and interesting. Edward H. Knight, A. M., L. L. D, member of the United States Commission at the Exposition and editor of the United States Official Reports, has just favored us with a copy of the illustrated report on agricultural implements, and from the great variety of exhibits therein represented we have selected and re-engraved for presentation to our readers, a few which either are not made in this country or have some peculiar features not usual in implements of the same class made here.

A MOLE PLOW.—Draining plows are constructed for either of two purposes—to make an underground passage for the water, or to excavate an open drain or ditch. Among us a plow constructed for the former purpose is known as a mole plow, from the round, tunnel-like channel it makes in the ground. The implement is not at all adapted for general use, however, as it will only do good work in strong, clay soils, and even there it does not always give satisfactory results, and it should not be used in the expectation of obtaining permanent drains; for where it does its best work the drains keep open only a few years, as they are apt to cave in from the top and sides and thus prove useless. For a poor man on the clay soil the use of such an implement may be advisable as a makeshift until the means for making a more substantial drain can be obtained. The accompanying cut, Fig. 370, represents one of several forms exhibited. The method of "working" the plow is evident, and in its passage through the ground it leaves a conduit of its own diameter for carrying off the water.

TRENCHING PLOW.—The other class of drain plows follow the ordinary plow and lift the subsoil to the surface, forming an open drain. In practice the subsoil to the depth of from 15 to 20 inches is thrown out upon the earth raised by the precedent plow. The trenching plow here illustrated, Fig. 371, is that known as Billot's plow, which is intended for cutting drains in natural prairies. The sloping cutter and the curved share cut the sod which is lifted and thrown in two equal parts, one on each side of the ditch. The plow has an ordinary coulter not shown in the figure.

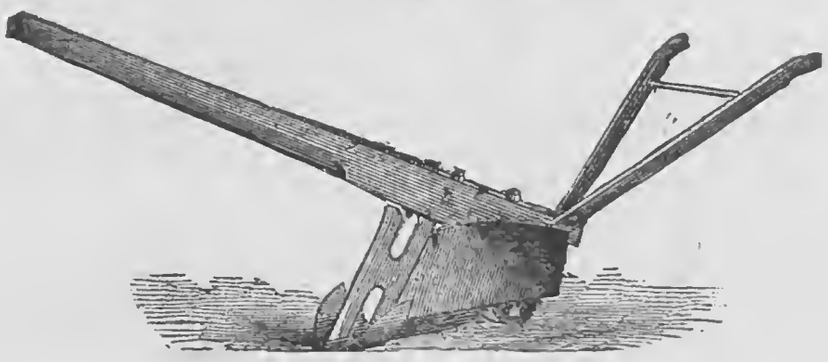
STEAM DRAINING PLOW.—The plow shown at Fig. 372 is a steam draining plow, which is used either as a mole plow or to put in pipes, and it may be worked to a depth of 42 inches. It is worked by a winding engine and rope, and when the wire rope passes over the pulley the speed of the plow, at great depths, is only half what it would be were the wire simply connected to the front of the carriage, while the speed of the engine remains the same. The price of a machine like this in Europe is about $250; here the owners of large farms could well afford one, or several owners of smaller farms, each contributing a part of the price, might profitably obtain one for their own use, and to be hired to their neighbors.

SHEAF BANDS.—Of the numerous forms of sheaf bands exhibited, Fig. 374 represents a hand band composed of two cords knotted together, forming loops, and tightened round the sheaf by means of a stick furnished with a handle, shown at fig. 3. The point of this tool is introduced through a loop at or near the end, and is thrust as far as the hand permits, as shown at fig. 2. The band being then pressed around the sheaf, the point is again thrust through the other loop, and the handle end of the stick is then carried over, describing an arc of a circle on the point which has sunk into the sheaf. The first loop slips down the handle to the pointed end, and the loop B, caught there in the notch, is drawn through the loop on the stick, which is then withdrawn, allowing the knot to be drawn through to catch on the loop, held by the swelling of the sheaf. These cords are five feet long, and in France they cost from $5 00 to $7 00 per 1,000, according to their thickness.



MOLE PLOW—FIG. 370.

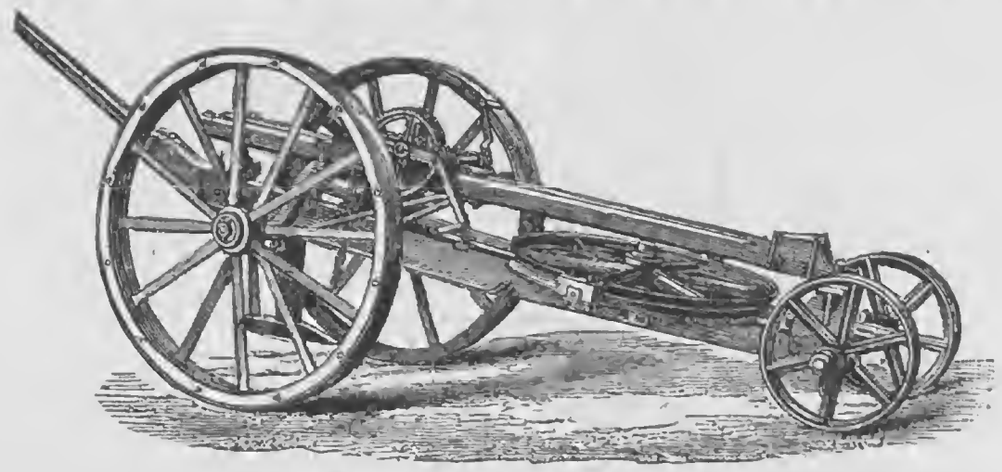
In economical France much attention has been given of late to substitute something else for the bunch of straw taken from the sheaf to form a band. It is estimated that the grain crops of that country amount yearly to 4,000,000,000 sheaves, and that 50 straw bands contain one franc's worth of grain; the whole representing 80,000,000 francs or about $15,000,000; most of which is lost by shelling out on the ground or mildewing under the band. Add to this the loss in time in making and applying the straw bands and the injury to the grain from the size of the bands which causes dampness in the sheaf, and the loss is formidable Of course, in this country where the grain crops are much greater, if only straw binders were used, the loss would aggregate much more. In France the peeled bark of osiers, two or three strips twisted together, and hempen strings, are the chief substitutes used. One of the latter kind exhibited had a string attached to a block and after passing round the sheaf it was rove through a ring, as represented at Fig. 376. The mode of using it is evident from the engraving; the wooden block being held in one hand, one knee of the operator is placed upon the sheaf to compress it, while the other hand draws the cord through the ring. The expansion of the sheaf pinches the cord between the ring and the block and makes a perfectly tight fastening. The cord and block are treated with tar and are smoked to render them indestructible by dampness and disagreeable to insects and vermin, so that they can be used in many successive seasons. The price is about $14 per 1,000. In Europe where cereals are dear in comparison with their prices here, it pays to save any avoidable waste; while the comparatively low price of labor renders it economically possible to expend a considerable amount of work in making small savings, such as that of the grain mildewed or lost by straw binders as well as the preservation of the cord binders from year to year, which can be done the more readily inasmuch as a great deal of the grain is still thrashed by hand.



TRENCHING PLOW—FIG. 371.

TREE SEED PLANTER.—The planter, Fig. 373, is a sheet-iron tube, with an enlarged bell-shaped mouth at the upper end and a sharp iron spud with a steel point which is thrust into the ground. The seed is dropped in the tube by the left hand. It is designed for the seed of trees, such as acorns, pine and birch seeds, and also for beet seeds which cling and do not run freely in an ordinary piston-feeder.

HAND PLANTER.—The planter, Fig. 375, is designed for small grains and for other seeds that run freely, such as some kinds of tree seeds, beans, peas and garden seeds that are planted in detached hills. Like the former, it consists of a tube and lance-shaped spud; but it carries the seed in the tube, the upper end having a cover, and the seed is discharged at a point near the lower end. Pressure on the piston, which projects above, opens a valve and permits a certain quantity to escape. It is used with both hands and the stroke of the plunger rod is adjustable to regulate the extent of valve opening and to limit the amount of seed discharged at each impulse.



STEAM DRAINING PLOW—FIG. 372.

Horticultural.

RAYS.

YOUR correspondent "C. E. P.," page 466, speaks of the Rough-leaved Deutzia (D. scabra) so plausibly, that many may be inclined to consider it as a common shrub, whereas the fact is that there are very few scarcer shrubs in cultivation. I know it is advertised in many catalogues, and plants are sold for it, but in every instance that has come under my observation, D. crenata, and not scabra, was the species handled. If "C. E. P." is satisfied he has the true Scabra would he please tell us regarding its distinctness from Crenata?

* *

SCHOOLS for female farmers (page 470) are not what we want in America. Out-of-door farm work or any other legitimate employment is no disgrace to a woman any more than to a man, but our wives, our sisters and our daughters can find more becoming work inside than outside. I believe in educating women as thoroughly as men—not for ornament but for use, and there is no work so honorable for women, in my estimation, as housework. School-teaching, shop-tending, factory work and the like may be good enough as a means of subsistence, but surely no woman can regard such work as the climax of her ambition. Do not all women yearn for a home of their own, and when they get it how can they enjoy it unless equal to the task of caring for it. American women throughout have a business inclination, are intelligent and educated, and those brought up upon a farm have an inborn knowledge of its working, so that should an emergency occur they need but little prompting in its management.

* *

I HAVE had some experience with women as farm hands, and fully appreciate their value in that direction, but out of consideration for the women themselves I disadvise their employment in the field except in the interest of of their own families; then it is often their duty. Many a day of my boyhood have I worked in company with the women in the field, cleaning land for crops, putting out and spreading manure, carrying seed to the sowers, harrowing, planting potatoes, hoeing and storing potatoes and turnips, haying and harvesting, milking and the many other kinds of light work incidental to the farm and for which we found women more enduring than boys and more nimble than men. Again in nurserywork, behold how useful women are, still I do not like to see them at it. In my earlier years I was employed in large nurseries where firs and larches were grown by the million, and other trees and shrubs in proportion, according to the demand. The seeds were sown broadcast in long, narrow beds which were cleaned by weeding only. The weeding was all done by women; they were more expert at it than men and more particular than boys; they also did the light hoeing, counting plants, etc. In the Fall and Winter they went into the woods and lanes for miles around to gather cones, acorns, elm and other seeds, which they carried to the nurseries upon their backs, and we bought them from them by measure. Those women seemed happy and contented, but that ambitious nature, progressive intelligence and domesticated capacity so visible in the women of to-day were greatly lacking in them,

* *

GARDENING is peculiarly woman's outside sphere; she takes a pleasure in it; it does her good—mind and body. It is not labor but exercise. It has an elevating influence upon herself and family and, too, upon the neighborhood. It induces in the community that noble contention or rather emulation of who the most and prettiest flowers can grow, and who

can have the sweetest and most cheerful homes.

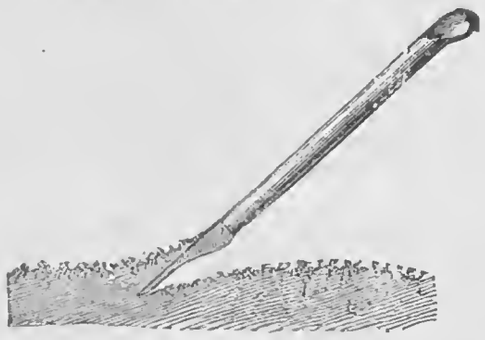
* *

In the London Garden an artist speaks of the Lombardy Poplar thus: "The repetition of straight line is what you want. I think, too, for an avenue or for a line of trees by water, the Lombardy is not easily beaten." Perhaps not, but of all the homely, ungraceful and uninviting trees styled "ornamental," I think this one of the most objectionable. I had a run through the State of Maine some weeks ago, and saw many old trees of this poplar about the farm houses and roadsides along the Androscoggin Valley, and mostly all were in a more or less dilapidated condition. It added neither beauty nor character to the landscape, shade nor ornament to the homestead, nor by its wood was it useful in any way. No one spoke of it in love or sympathy. One farmer "guessed" that as it grew so tall and slim, a mile of them might be raised upon an acre for pulp-wood, and in that way be worth something. LEON.

N. J. NOTES ON TREES AND BERRIES.

The Aquilegia bloomed very nicely; some of the flowers are quite large and finely shaded in color; about half of the plants gave double flowers.

The Japan Maple, Polymorphum, was killed to the snow line. The plant was about five feet high and was killed to fifteen inches of the ground. The Double White Deutzia crenata is also killed in the same manner.



HAND PLANTER FOR TREE SEED.—FIG. 373.

The Japan Retinosporas of the following varieties passed the Winter unharmed:—

Aurea is now tipped with its golden new growth, and is a thing of beauty. Argentea is of slower growth, yet equally beautiful, showing silver foliage. Leptoclada, dense in growth, pyramidal and clothed in beautiful green. Obtusa is hardy, of straggling growth and rather a nice tree; it looks like the Arbor-vitæ. Squarrosa is of rapid growth, upright, and very nice, of light-green color—a pretty tree. Aurea and Argentea turn green in the Fall and Winter. [The Aurea does not with us. Eds.]

The Thujopsis borealis, Douglas and Nordmann's Firs should be more common. The Spanish Chestnut is not hardy according to my experience. Of 200 small trees all are gone and of some bought last Spring there is only one tree that is not killed to the snow.

Strawberries were very nice this year. Among the newer berries Miner's Prolific is truly a great cropper of fine berries; size large, and moderately firm; flavor deficient—the last being the weak point of this berry otherwise among the best. Glendale and Continental did not do well for me—not productive. Cumberland Triumph, Sharpless and Kentucky are among the best. Great American is fine, when the ground is rich. Durand's Beauty is fine for hills, making very few runners. It is productive and high-flavored.

Peaches are an entire failure here; the trees were considerably injured by Winter; but they are looking unusually well at present.

Pears are looking well. Bartlett gives a good show for fruit.

Apples of the Smith's Cider variety present a fair prospect for fruit—not much else.

I. J. B.

GLASS.—All who are fond of the companionship of growing plants, and who have some leisure to attend to their few needs, and find solace or pleasure in the occupation, have no aid of more service than the shelter of glass. A little glass room, or greenhouse, gives, of course, the greatest advantages, but a mere sash or hand-glass or a fruit jar inverted—or, better, bottomless and covered when necessary by a broken pane—is often the means of saving plants that would otherwise perish, or at least lose their beauty. The glass, while admitting light, incloses an artificial atmosphere always somewhat warmer than the exterior air, and usually moist from retaining the vapor evaporated from the leaves or the soil. But the heat may become excessive, and the air may become so dry that the leaves will burn, or be eaten up by the red spider; so any one undertaking to use glass, must be on hand daily, especially when vegetation is young and tender in the Spring, to change the shading or the ventilation with the changing influences of sun and wind. Many plants, including grapes, will endure great heat if the air is moist enough to prevent the leaves from scorching: others require, at least while young, to have the glass shaded during the heated term. Lettuce which is brought forward in quantities under glass, requires both vapor and screen when the sun shines out strongly. When upper and lower ventilation is given at such times, the air that enters absorbs vapor as it warms, and carries it out as it leaves by the upper openings. This is apt to make the inclosed atmosphere burningly dry, and must be counteracted by occasional syringing, or by reducing the ventilative airflow unless the plants require hardening, when the flow is essential.

A cave or cellar, fronted with glass towards the east or south, is the best provision for sheltering half-hardy plants, shrubs, roots etc. in our climate. The door-way should enter on a level from an area on which the plants can be placed or planted out when the weather becomes genial, and from which they can easily be taken in, in September or later. W.

Small Fruits.

THE CUTHBERT RASPBERRY.—The RURAL asserts, on page 486, "that the Cuthbert is at once the highest flavored, largest and most prolific and hardy variety of red raspberry known. As to the latter quality it may be so, but in regard to "flavor," I have never found anything equal to the Herstine; and in size it is as large as any. The only objections I know to it for general cultivation are that the berries are too soft for shipping any considerable distance, and the canes require to be buried in Autumn to preserve them from being winter-killed.

THE MANCHESTER STRAWBERRY.—I am of opinion it required just such a cool, wet season as the past May and June were, to grow this berry satisfactorily in a sandy soil as is represented. In an ordinary or very dry season, I doubt whether it will do better on such ground than the Wilson and several other varieties. These latter have borne infinitely better with me on a very light soil this season than they ever did before. A. B. ALLEN.

Gooseberries.

MR. PECK sacrificed his half dozen gooseberry bushes as more of a plague than profit, as told in a late RURAL p. 473. Here on the contrary, everybody seeks to plant some, Downing's and Smith's and Houghton being the favorites. It has been suddenly and generally found out how piquantly delightful a sauce they make while quite green and thin-skinned, when we are tired of rhubarb, and before strawberries come. They are the easiest of things to keep, too, in jars or bottles. At that stage they have nothing of that harsh, unpallatable acidity of skin which sugar falls to mollify, that makes them barely tolerable when ripe. G.

A Backsliding Thorn Tree.

MR. Y. WHEELER of the Unadilla Valley, N. Y., grafted a thorn bush several years ago with a nice pear cion. The tree grew finely and one year produced quite a crop of most luscious pears. The effort exhausted the better nature of the tree, however, for it never bore another pear. Instead, huge thorns came out here and there upon the branches, and at last Mr. S. grafted it again with apples. I shall watch the refractory tree with interest for further developments. E. J. R.

SAWDUST MULCHING FOR STRAWBERRIES.—A few weeks ago the RURAL requested any of its readers who had mulched their strawberries with sawdust to report the result for publication. I mulched a part of mine with sawdust this year, and I am satisfied it is worthless for that purpose. It takes a long time to dry and the berries are badly rotted by lying in it. The Cuthbert Raspberry was uninjured last Winter except a little at the tips. The RURAL seeds are doing nicely, especially the flower seeds.

Factory Point, Vt. "WALLACE."

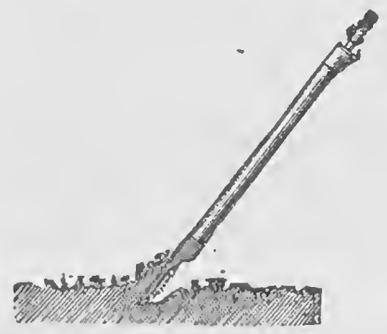
A WELL-KNOWN horticulturist remarked to us that there is a greater variety of fine specimens of evergreen and deciduous trees and shrubs in Prospect Park, of Brooklyn, L. I., N. Y., than in any other one place in this country....

Field Crops.

THE CULTURE OF CORN.

Mr. H. Stewart's Reply to Dr. J. B. Lawes, of Rothamsted.

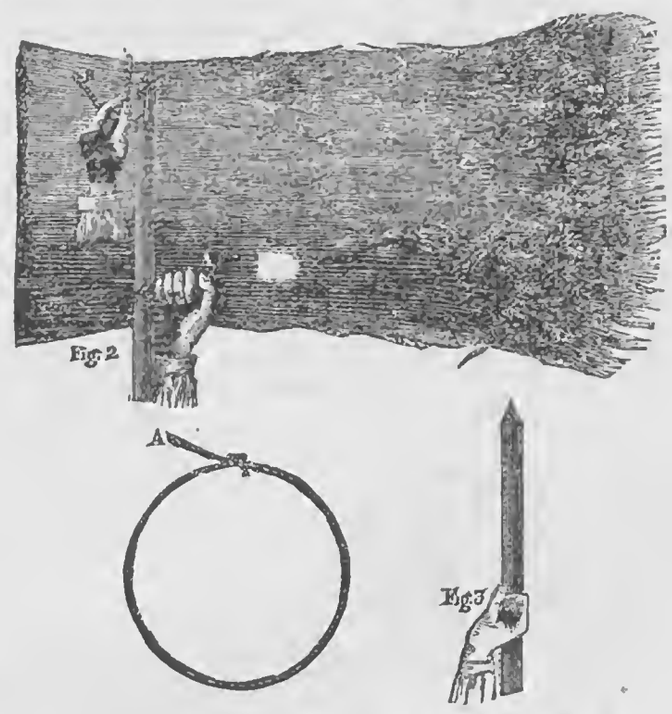
WHEN I complied with the request of the Secretary of the New Jersey State Board of Agriculture to give him my views upon the culture of corn for publication in the annual report of the Board, I little expected that



HAND-PLANTER WITH PISTON-FEEDER.—FIG. 375

it would bring me into conflict with the world-renowned agricultural chemist and experimenter, Dr. J. B. Lawes. But that I feel some confidence in the truth of my views and perceive from my point of view that they do not conflict very much, if at all, with those of Dr. Lawes, and that he may, perhaps, miss some important element in this question through want of familiarity with this especially American crop under its special characteristics in American fields, and under some special conditions, I should scarcely care to discuss this question under the certain disadvantages which Dr. Lawes's greatly superior position throws upon me. I would take this opportunity of acknowledging very gratefully the obligations under which, in common with the many American admirers and students of the Doctor, I have been placed for the fund of information derived from his elaborate experiments and his life's work. We can never too highly appreciate the services he has conferred upon American agriculture, and I am not without some hope that perhaps we, in America, may some day be able to add something to the great mass of information which has been gathered up at Rothamsted, through our investigations here, under somewhat different circumstances of climate, soil and crops.

On careful study of Dr. Lawes's communication [see RURAL NEW-YORKER of July 2], I must confess that I fail to see any serious point of difference between his views and mine in regard to this question. I don't wish to discuss it in regard to wheat, because I have not given so much attention to wheat growing as to corn growing, and confess that, so far as regards the former crop, I have not yet been able to produce it here so cheaply as I could buy the Western grain; and I doubt very much if we Eastern farmers can compete in wheat production with the West any better than the English farmers can. But I would like to say that I do not think it depends altogether upon the supply of nitrogen in the soil; that it is not so much a question of fertility as of cheapness of culture. Here in the East our lands cost too much, and our farms are not large enough for the use of the labor saving implements and machines, so that the cost of a crop of 40 bushels of wheat per acre even is not repaid by the price fixed by the cost of the smaller crop of 18 or 20 bushels grown in Minnesota or Dakota. The very same difficulty exists in England as regards this crop. But with regard to corn this difficulty is greatly lessened. Corn cannot be grown and harvested as cheaply as wheat, in the West. The Western corn must be cut and shocked and husked by hand, and at the same cost as in the East, so that the relative disability of the Eastern farmer is not so great as in the case of wheat. It is, therefore, wholly a question of fertility with corn, while the element of labor enters into the question as regards wheat to the greater detriment of the Eastern American and the English farmer. Then, if the cost of the artificial fertilizer required to produce a bushel of corn in New Jersey is less than the freight on it from Chicago, I hope to be able to compete successfully with the Iowa and Illinois farmer in growing corn. It rests wholly on this point, and in my paper referred to by Dr. Lawes, I made this my chief point.



HAND-BINDING STICK AND BAND.—FIG. 374.

My experience in this respect has been limited to a few years, during which I have been growing corn repeatedly with artificial manures. I am not in a position to say how much nitrogen is naturally contained in my soil, which is poor and had been badly farmed by former owners, but I suspect it is very little. The nearest approach to a knowledge in this respect is the fact that on part of a field planted with corn and left without any manure or fertilizer, the crop produced did not bear one sound ear; there were some small stalks and poor nubbins, but not one good ear on a strip four rods wide through the field. This field (two acres), manured with 600 pounds of the Mapes' Corn Manure (containing 23½ pounds of nitrogen) per acre, gave me 98 bushels of shelled corn, containing about 88 pounds of nitrogen, per acre. A plot of one-sixth of an acre in another field, manured in precisely the same manner, gave 25 bushels and 8 pounds of shelled corn, equivalent to 150 6-7 bushels per acre. Here was presented a serious problem, and one upon which, it may be easily perceived, depends a most important sequence for the Eastern farmers, who are confronted with a harrassing, if not ruinous, competition with Western farmers. This, with some repeated crops, not grown experimentally, but in ordinary farm work, make up the sum of my personal experience.

With this there are many similar experiences of others, reference to which may, perhaps, go no farther than the crops grown on the Rural Farm, a large number of experiments collated by Professor Atwater, and several competitive crops grown by farmers and farmers' boys. These all showed a large product grown with totally inadequate nitrogenous manuring, and

SHEAF-BINDING BAND AND BLOCK.—FIG. 376.

some of them showed a seriously injurious effect from an excess of nitrogenous manures. Now there seems to be but one explanation for these facts, and that is that corn is able to avail itself of a supply of nitrogen from some occult source when it is sufficiently provided with potash and phosphoric acid. What this source is I do not attempt now to question. The corn gets the nitrogen, that seems certain, and I infer, from Dr. Lawes's communication in the RURAL NEW-YORKER of July 2, that he and I do not differ in the least as regards this bare fact. For he says, "The only manner in which such a result, viz., that a quarter of a pound of nitrogen in manure will produce a pound of it in corn, might possibly be arrived at, would be by the continuous growth of corn by means (1) of a mineral manure alone, and (2) by the same manure combined with salts of ammonia, if this were done with very great care and for a sufficiently long period." Further he says, "more nitrogen would be recovered by the corn than by the wheat."

Now if I have said any more than what this purports to mean, and Dr. Lawes will allow me, I will withdraw all beyond that, and rest my case upon it. That includes every point I wish to make, for the whole sum of my argument is that the Eastern farmer, by the perfectly right employment of a quarter of a pound of nitrogen, can recover one pound of it in his corn crop, if he will only give enough potash and phosphoric acid. In discussing the question of the culture of corn in my paper I considered it solely in its practical bearings, and did not give much attention to its relative character as compared with clover. But if the above admission of Dr. Lawes is correctly quoted, it certainly seems that it must also be admitted that "corn should not be placed on the list of grain crops which require to be supplied with a surplus of nitrogen, but, rather, classed with clover and the leguminous crops which yield larger quantities of nitrogen in their product but require an inconsiderable supply." And why not? Consider the season

of growth and of the maturity of corn. It occupies a period of the year marked by numerous thunder showers and a torrid temperature, when the production of nitric acid is known to be greatly in excess of that at any other season, and probably, if not certainly, greater than the product of the whole of the rest of the year; while wheat is mature and ready for harvest before the hot weather fairly begins. Corn, in fact, is a tropical plant, and cannot be justly compared with wheat, oats and barley, which thrive in the cooler parts of the temperate zone, and is, therefore, as Dr. Lawes admits, "less dependent upon an artificial supply of nitrogen than wheat, oats or barley." Now wherein do we differ in respect to the character of corn as a gatherer of natural nitrogen? I have read with great care all that Dr. Lawes has written in criticism of my paper, but I leave it with the satisfaction of believing that Dr. Lawes really agrees with my views; or I would rather say that my views appear to be based on a true understanding of Dr. Lawes's teachings, to which I confess I am indebted for the most of my opinions and beliefs on this subject. I disclaim any desire to stand in the relation of a disputant with Dr. Lawes: I rather claim the relation of a disciple, and recognize him as my apostle and authority in this investigation, and shall rejoice if it may induce him to study still more closely the subject of American corn culture, in connection with our peculiar climate, and our enforced necessity for mineral fertilizing, with continuous cropping to a great extent.

In conclusion, I would say that I am much pleased to have so favorable an opinion in regard to the permanence of mineral fertilizers from Dr. Lawes, when he says that "phosporic acid and potash enter into fixed compounds with the soil and are only recovered over long periods of time." American farmers can scarcely have any more encouraging evidence of the permanence of artificial fertilizers than the fact that at Rothamsted the potash and phosphoric acid applied 30 years ago are still showing their effects upon the crops. In my attempts to grow corn continuously, and chiefly with artificial manures, I have already had evidence of the same fact; and if the most costly ingredient of these fertilizers, viz., nitrogen, is required only in the small proportion admitted by Dr. Lawes, I can see my way clearly to grow corn cheaper than I can buy it from Western farmers, and either feed it in my dairy or dispose of it at a profit.

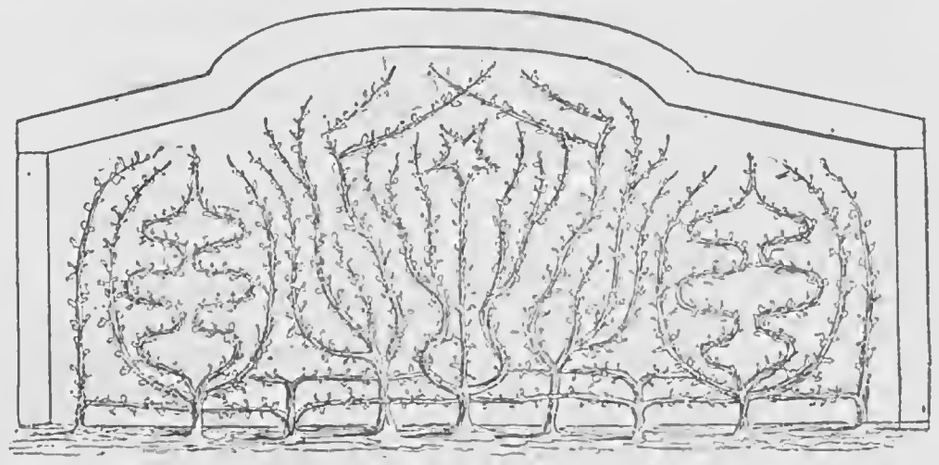
TOBACCO GROWING NOTES.

It may be safely affirmed that land can hardly be manured too highly for tobacco. Yet we sometimes hear complaints of positive damage to crops from too much manure. This is only the case when the manure is very coarse and the season is dry. The combined influences of dry weather and a large amount of coarse, unpulverized manure are destructive to a large growth of plants.

With corn and some other hoed crops it is sometimes impossible to have a full stand of plants. Insects of various kinds cause "missing" hills until it becomes too late for replanting. With tobacco, however, it is different; there is little excuse for "missing" plants, and where vacancies are found, it is pretty good evidence that the planter is a careless grower or one not experienced in the business. All that is necessary, in the majority of cases, to secure a full stand, is to set, at the time of planting, enough extra plants to fill vacancies that may appear later in the season. It is best and safest to re-set from the plant-bed for a time or until the first plants have commenced to grow, after which the "extra" plants should be used. If the work of re-setting is done in damp weather, when the soil is moist, and the plants are removed with a ball of earth upon the roots, they will bear removal without apparent injury, and a perfect and even stand of plants may be effected.

A full stand of plants is always very important to the outcome of the crop. A full yield cannot be expected in fields where there are "missing" hills, as is often the case where care is not exercised to make the stand perfect. The labor of cultivation and manipulation is almost as great where a percentage of hills are missing, as the ground must be passed over just as often as when every plant is in, and the loss from the "missing" hills is apparent.

It is now time for the tobacco fly to make its appearance. It is well to watch for the pests and to adopt some method for their destruction. The Jamestown-Weed (Stramonium) which is common in a wild state in many parts of the South and West, forms a useful medium for destroying this insect. The blossoms, which are eagerly sought after by the fly, should be charged with a solution of cobalt or other poison, and the fly is destroyed. In the North where the Jamestown-Weed does not mature early enough, the flies are sometimes killed in large numbers by keeping fires —torchlights—burning in and about tobacco fields during the night time. The moths are attracted by the lights and are destroyed either by the fires themselves or by attendants. But no care on the part of a planter can prevent the appearance of the larvæ of this tobacco fly in a greater or less number, and the utmost vigilance is necessary to prevent them from causing serious damage to the crop. Worming should begin as soon as the first one is seen, and the work should be thorough or



ORNAMENTAL WALL-TRAINING—PEACH WITH APPLE CORDON IN FRONT.—FIG. 377.

those that are not destroyed will cause much harm. The eggs of the larvæ can be found by a careful eye, and it is well to keep a sharp lookout for them also.

Late tobacco can be hastened to maturity by watering the plants with liquid manure. Water from the barnyard—leachings from the manure—is as good as anything for the purpose. It is best to apply it in cloudy weather or just previous to a rainfall, as when the soil is dry and the weather bright and hot, it is likely to cause the surface soil about the plants to bake, when composed in large part of clay. Next to this there is nothing that will promote rapid growth and early maturity better than constant cultivation. G. G. JR.

Chemung Co., N. Y.

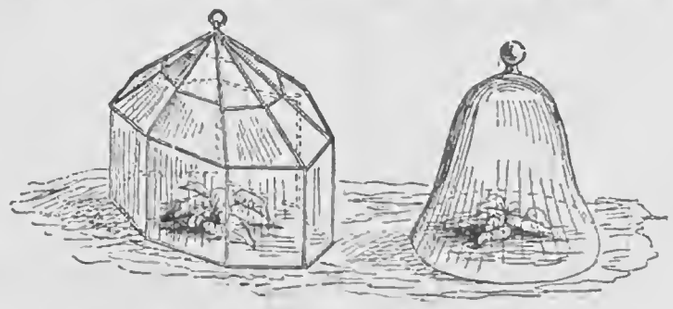
RURAL BRANCHING SORGHUM.

An Important Report from Texas.

It is with great satisfaction I state to the many readers of the Rural New-Yorker that the above sorghum is a perfect success in this latitude. Notwithstanding that we had no rains in June, it stood the drought without wilting in the slightest degree, while the corn in the adjoining row was yellow half way up the stalk. I can truthfully say I am repaid tenfold, in this one item of the Free Seed Distribution, for the price of the paper.

It was planted on the 28th of April, and on June 15 it was about eight feet high, with ten and thirteen stalks to the hill. It is assuredly a marvel of luxuriance and productiveness. If our kind Rural farmer would in future send our free seed a month or two earlier, it would greatly help the good work down South. [We have fully appreciated the necessities of the case and have always endeavored to send Southern seeds at the earliest day. But hitherto we have been unable to control the matter, owing to the fact that every succeeding season has brought an unexpected increase of labor. Again, in the case of imported seed, we are unable, in many cases, to procure them in time. Such was the case with the Dutch and Argenteuil Asparagus of our last Distribution. We look for no delays in our coming Distribution, for the reason that most of the kinds are growing upon the Rural Farm.—Eds.] Our corn is planted about the first of March, and if I had the sorghum seed at at that time I would have had an extra cutting for stock this Summer. On June 18 I commenced using it for feed, and will report progress if you think it will be of any interest to your readers. [Most assuredly it will.—Eds.] I may state it was planted in poor prairie soil, in my garden, without the application of any manure whatever. It has had but one plowing and one hoeing, but is free from weeds and grass. I have a very poor stand; the seed must have been at fault, for I planted it with all the care possible, while only one seed in twenty germinated. [That is our experience.—Eds.] If ensilage is a success, and it seems to be from the Rural writers, then we have found the coming fodder plant. G. G.

Texas, Latitude 30°.



FRAME AND BELL GLASS USED BY PARIS MARKET GARDENERS FOR YOUNG PLANTS.—FIG. 378.

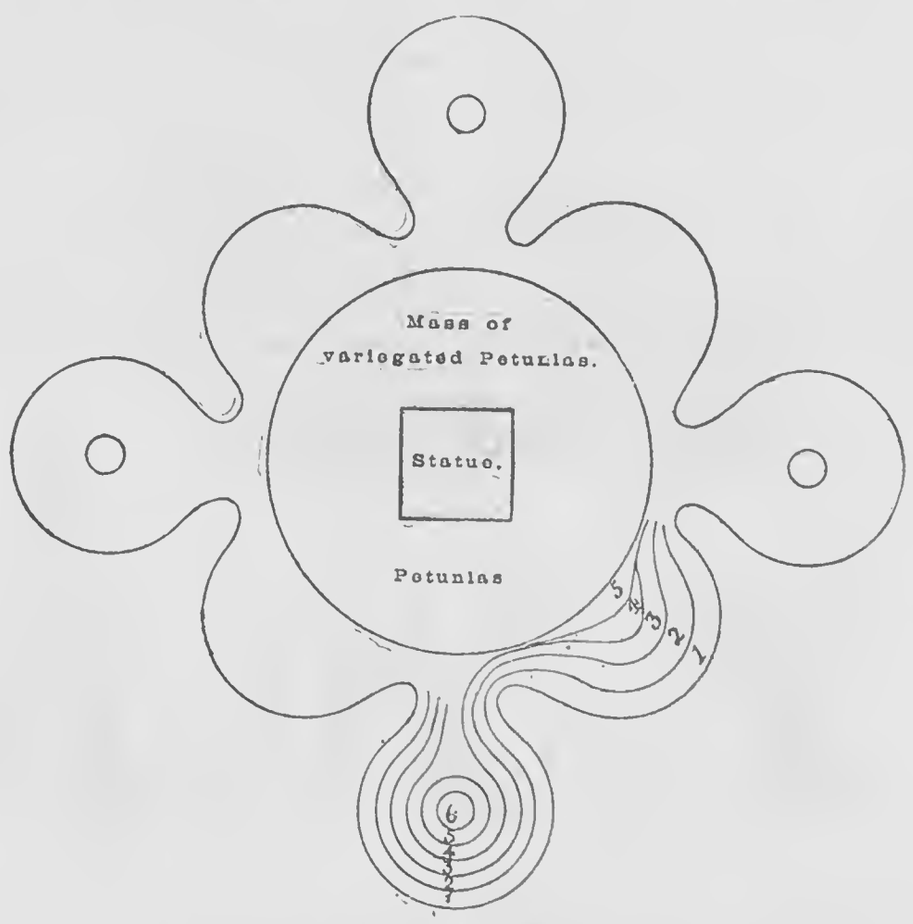
EXPERIMENTS WITH SEED POTATOES.

Carefully conducted experiments have repeatedly proven that the manner of cutting the seed has much to do with the yield of a crop of potatoes. Having been told last Spring that a great difference exists in the growing and yielding qualities of the stem and seed ends of a potato, I decided to prove the assertion correct or otherwise by experiment. I carefully planted and marked two rows of potatoes planted at the same time and in rows side by side. In one row the seed was cut in the usual way and two pieces planted in a hill. In the adjoining row the seed ends of the potatoes (the ends having numerous eyes) were first removed and cast aside and the remainder of the potato cut in the usual way and planted as above, two pieces in a hill.

Watching carefully the manner of growth in the respective rows, I noticed as soon as the potatoes were fairly up a decided difference in the foliage and stalks of the young growth. The row planted without the seed ends were of a deeper, healthier color, and the stalks also were much stockier. It was plainly to be seen that the row planted with the seed ends of the potatoes removed had the advantage of the other row planted with the seed cut in the usual way. The growth was stronger and larger in the former row as could be plainly seen several rods away. The treatment of the two rows from the time the seed was planted was precisely the same. London-purple was applied to the foliage as the bugs made their appearance, but the treatment was not sufficient, for enough bugs remained to test the strength of the plants. The row planted in the usual way, having a feebler growth of tops, suffered most.

When the potatoes were dug the same difference noted in the growth of the tops was visible in the size and yield of the tubers. Owing to carelessness on the part of a workmen the product of the respective rows was not measured, but it was plainly noticeable both in size and quantity of the tubers in favor of the row planted with the seed the seed ends of which had been removed. G. A. G. JR.

Elmira, N. Y.



GEOMETRIC BED AT THE PARIS EXPOSITION.—FIG. 379.

The Washington Oats.

What's in a name? I have grown the Washington Oats, and about half the yield is smut. Indeed I have grown the same oats for years, having got them from the Department of Agriculture first, and afterwards I bought a bushel from B. K Bliss & Co., of N. Y. City, under the name of English Challenge Oats. Having compared all, I know they are identical. After harvest I will send the Rural samples of a sort of heavy white oats imported from Scotland, and also of the Washington Oats. G. C.

[We should much like a quart of the heavy oats from Scotland sent by mail at our expense. We have the Washington Oats, as well as several kinds of English and Australian. They very nearly resemble each other.—Eds.]

Farm Economy.

GOOD DRAINAGE ESSENTIAL FOR WHEAT.

The past two or three years should convince farmers in this section that land sown to wheat in the Fall should be well drained. The Winter of 1878 was a very open one with considerable rain, very little snow and very mild weather generally, and the consequence was that we had considerable wheat. On low land that was poorly drained, however, it was water-killed while the crop on an average was very poor. Last year we had an unusually hard, cold Winter with considerable snow, and we had an uncommonly good yield of wheat. This year we have again had an open Winter with considerable rain, scarcely any snow and very mild weather generally, and the prospects now are very poor, the wheat having been considerably water-killed and injured by the fly. Hence I conclude that land, to produce the best yield of wheat, must be well drained so that the water will not stand on the wheat at all, either from a rain or from melting snow, as it seems to take very little water standing on wheat to kill it. Then it seems that where the land is plowed once, and the volunteer wheat is allowed to come up and the land is then plowed again, well harrowed and rolled, the fly does not injure the wheat so much. This has been the result for the last three years, and since these facts are known it seems to me that in order to raise a good crop of wheat the land should be plowed well and as early as possible after harvest, especially if it has been in wheat the year before. By plowing early the volunteer wheat has a good chance to sprout and grow, and the land should be plowed the second time to kill this well, and then harrowed and rolled before it is seeded, to get it as solid as possible before seeding it. It should also be well drained so that the surface water can all run off easily and as quickly as possible. With these preparations we can expect a reasonable harvest.

Miller Co., Mo. N. J. S.

The Vineyard.

THE NIAGARA GRAPE.

To Mr. C. A. Green:—

Your reply to Mr. Suel Foster in reference to the Niagara Grape, in the Rural of July 16, should be given a wide circulation, because there is an inkling of truth in it that should have seen the light at an earlier date. Mr. Foster has probably declined the splendid offer of the operators for making an everlasting fortune. It is my (private) opinion that the Niagara Grape has *hung fire* too long for the good of the incorporators; and, as the

RURAL does not appear to be included in the list of those who have nothing but praise for a seedling that has been tested only in one place, perhaps the editor will allow me an additional word.

You mention three white grapes as before the public—the Niagara, Pocklington and Lady Washington. The first cannot properly be before the public until it has been tried in differing soils and climates. But when you speak of the fruit, I have tasted clusters of these varieties in their supposed perfection, and I must say it is an injustice to name the Lady Washington in connection with the other two. This grape, although somewhat lacking in spiciness, is a good dessert fruit, entirely free from the foxy odor so plainly and, allow me to say, so disgustingly prominent in the Niagara and Pocklington.

You remark that the Niagara may be good enough to sell well in the general market. Let me tell you that grape-eaters are growing yearly more exacting in their demands for good fruit, and the cultivators of really fine grapes are even now reaping their reward. Catawbas doubled on the price of Concords in the New York market last season. Good judges there report a continued inquiry for a better quality of grapes than the Concord and Hartford, while a dull, greenish-yellow grape like the Niagara is most unattractive, and the quality is *not* up to the *ordinary* standard. Between the Niagara and the Pocklington, with their sickening odor, there is the difference that the latter shows larger berries, more nearly golden, with a shade more of saccharine, although neither can serve the purpose of a wine grape, for which I understand the Niagara is now recommended.

Newburgh, N. Y. A. A. BENSEL.

The Herdsman.

NOTES BY A STOCKMAN.

WHEN a person undertakes to criticise another he should be sure he is right before he goes ahead. I am led to make this remark by reading the strictures of Sereno Edwards Todd on Mr. French's description of the cattle gad fly, Œstrus bovis. Mr. Todd is all wrong, notwithstanding his 50 years' study of this insect. He even convicts himself of error when he says in one place that the mature fly gnaws and nibbles a passage through the skin and in another place that the larvæ do the same thing. He says that the larvæ pass into the chrysalid state before the Winter, and that there is no orifice in the skin, etc. Further, he uses the following curiously incomprehensible sentence, viz., "After the chrysalid has become a fly, which is the parent insect, the fly gnaws and nibbles a passage up through the skin of the ox or cow, where it remains until it is fully developed." Now, after 50 years of study of this creature, Mr. Todd can perhaps tell us precisely where this "where" is located, where the perfect fly "remains until it is fully developed.

THE facts are that the larvæ remain under the skin, in the tumors which they cause, until late in the Spring and the early Summer; and that there is an orifice during the whole life of the larvæ in the tumor. The orifice may sometimes be covered by a sort of scab of dry pus, but there is a distinct hole in the hide and it is these holes which cause the tanners to grumble so much when they get together at conventions and pass resolutions against these very holes. The Chicago hide dealers who buy the hides of the cattle which are packed in the Winter in that city, have complained loudly of the damage, and deduct a certain sum for every wormy hide.

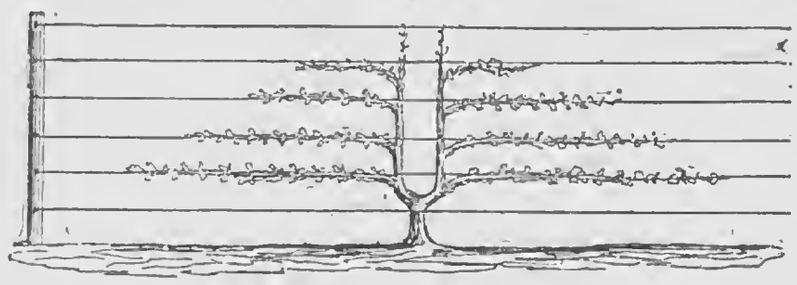
MR. TODD advocates the use of the card or a rubbing pole to destroy the insect, "*whether it is in the larval, chrysalid or fly transformation,*" as soon as it begins to emerge from the back of the animal. Here it seems the insect may emerge at any state; but how can a chrysalid which is dormant and helpless gnaw itself out? And how can the carder be on the watch to catch the creature when it puts out its head, and card its head off? And, lastly, how would these remedies answer in the large droves on the plains where the most of the mischief is done? A person who deals with "scientific facts which cannot be controverted," should at least give reasonable and practical remedies. I think there are at least 10,000 readers of the RURAL who know that at least some of Mr. Todd's statements are wrong and I leave them to judge.

The death of Jersey Belle of Scituate is a loss to mourn over. She was undoubtedly a phenomenal cow and has met the fate common to such large producers. Milk fever is the bane of heavy milkers and it seems, whether they are naturally prolific or are made so by undue forcing the danger is equally to be feared. The unnatural excitement of the organs is more than a cow can survive for a full term of life.

There was once a man—either real or imaginary, it serves the same purpose—who wanted to carry on wars by contract. His method was as follows: "I will take a thousand men and challenge a thousand of the enemy. Kill them. Challenge a thousand more. Kill them. In a hundred days a hundred thousand men are disposed of. Let them bring on a hundred thousand more; I will kill them all off by computation." This seems very absurd, but things equally absurd are said and proposed every day. Here is an instance. A person tells us in an agricultural paper how to get cheap butter. He feeds 32 quarts of meal daily to eight cows and gets 26 pounds of butter in a week. He feeds the same quantity of meal to six cows and expects to get 35 pounds a week; then he feeds the meal to four cows and gets 40 pounds a week. Alas! why did he stop? Had he given the meal to two cows he might have, at the same rate of computation 120 pounds of butter and with one cow about 240 pounds. And all by computation. Such foolishness as this does much harm by weakening the confidence of the persons who read it.

HARVEST time is a weariness for the housewife who is put to her wits' ends to provide food for the help. The farmer who has a small flock of sheep is saved all bother of this kind. A carcass of mutton is a very acceptable provision for a lot of hungry men and there is no danger of the meat spoiling before it is all consumed. Domestic consumption is the first thing for a farmer to consider and for this purpose a few sheep might be usefully kept on every farm, just as a moderate flock of poultry is kept for eggs and meat for the household. If this were done the dog nuisance would be got rid of; for farmers would then get along without dogs of their own, and stray ones would be cursorily dealt with.

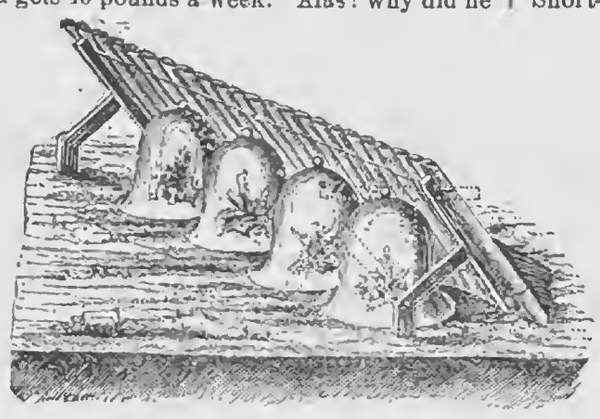
WE do not sufficiently estimate the value of the modern improvements in our methods of watered regularly. On the old system o carrying stock the loss of weight caused by the suffering of the cattle was 10 per cent.; in the new cars the loss is found to be only three per cent. The value of the quantity of humanity involved can be computed to a dollar, being seven per cent. on the gross value of the live stock carried. Humanity costs money, but it is money well spent always.



ESPALIER PEAR TREE—HORIZONTAL TRAINING.—FIG 380.

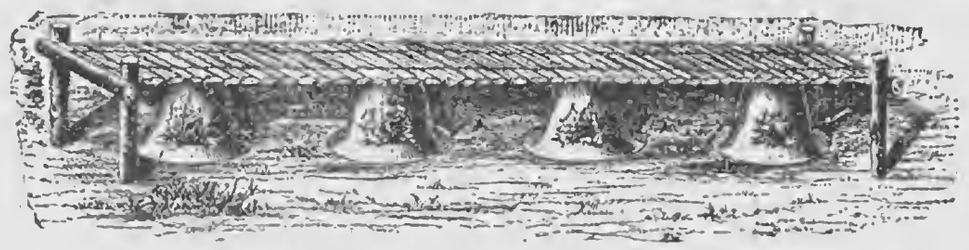
Hereford Cattle.

In his article on Hereford Cattle in the RURAL of July 23, Mr. Miller asserts that they have the advantage of 25 per cent. in the grazing and feeding qualities. This is very *easily said*, but it remains to *be proved*. Some of the choicest Herefords imported by Mr. Corning, of Albany, New York, in 1840, and subsequently, were taken into Erie and Genesee Counties, kept for several years alongside of Short-horns, and did no better, if even so well. At any rate, they soon ran out there, and scarcely one can now be found in that whole region; while Short-horns have multiplied rapidly, and the full-breds, and their grades are at present a majority of the cattle in these and some adjoining counties. It has been proved over and over again, for the past 50 years in America, that Short-horns are as hardy as any other cattle in existence. If some bulls turned out on to the ranches of the great Western plains have not proved so hardy, it is simply because they were *too* high-fed, pampered and forced from birth till taken there; and consequently when let loose to shift for themselves, and deprived of their accustomed meal or grain ration, and above all allowed to serve numerous cows without restraint, they very naturally lost in condition. Herefords, or any other breed of cattle would have suffered in the same manner, reared and then used like the Short-horns above.



ADJUSTABLE PROTECTION OF STRAW-MATTING. FIG. 381.

NOZZLE OF FRENCH WATERING CAN WITH COPPER LIP.—FIG 382.



CLOCHES PROTECTED BY STRAW-MATTING.—FIG 383.

Jersey Working Oxen.

What is said of Guernseys on p. 485, is excellent and no one values them more highly than I do. In speaking of the bullocks, it is said they make strong and excellent draft animals, and work of the admirable Connecticut working oxen. They are also very hardy, and do not mind the hot sun at all. Considering the small cost of their harness—a simple yoke and a pair of bows—and the quickness and ease with which they can be attached to and detached from the cart, plow or harrow, these cattle are more economical than either of the three pairs of work horses which are kept on the same farm with them.

Jersey bulls are not very salable as a general thing, and hundreds of the calves now annually go to the butcher for veal. As there is no doubt if made steers that they will make first-rate, smart working oxen, it is to be hoped now they may be more often saved and reared for this purpose. The doing of this will prove quite an advantage to the country, and render the Jersey cow more popular than ever among us. A CATTLE BREEDER.

Pure-Bred Holstein Cattle.

ON the 28th ult. there arrived in this city, by the "Red Cross Line" from Holland, 127 head of pure-bred Holstein cattle, imported by Messrs. Smiths & Powell, of Syracuse, N. Y. The herd consisted of 101 heifers, 19 heifer calves, three bull calves, one cow, three bulls, aged three, two and one years respectively. It has not been our good fortune to see all of the importations of cattle that have arrived in this port, but of all that we have seen this was certainly the finest lot that we have ever examined. The animals were selected from the representative herds of North Holland by one of the above firm, who are dealing largely in this breed. They were looking unusually well after their eight days' voyage, and were immediately transferred to Lakeside Stock Farm at Syracuse. This breed of cattle is fast becoming popular in this country and as milkers they have already taken a front rank, for the record of some of the Holsteins has not as yet been excelled. Speaking of the record of some of these cows, we are reminded of a recent inquiry from one of our subscribers, who was anxious to know if *we, personally*, believed that the record of the Holsteins, as published in our special "Cattle Number," was a true and correct one. The RURAL has certainly nothing to gain and much to lose by stating things in its columns that are not strictly true. We answered our inquirer that we certainly did believe it true, otherwise we should not have inserted it, and we are informed that the parties are ready to make affidavit to the correctness of the record as printed in that number.

The Apiarian.

COMB FOUNDATION.

How Constructed.

THE process of making comb foundation is not an intricate one. In a deep boiler wax is melted, and in this a thin piece of board or metal plate of the desired width is dipped and to this the melted wax adheres. After the requisite thickness is obtained the sheets are left to cool and will then cleave readily from the molds. Sometimes cylinders are revolved in the melted wax, so constructed as to be raised or lowered at will and on these the sheet is formed. When the sheet is thus prepared it is ready for the foundation machine which gives it the honey-cell impression.

There are before me four specimens of comb foundation recently received from J. Van Deusen & Sons, Sprout Brook, N. Y., varying in measure from four to fourteen square feet to the pound. One specimen for brood frames illustrates the use of wire in comb foundation, which prevents the sagging or breaking down of the comb when weighted with honey. In extremely warm weather there is a liability for the wax to melt and the cells to become somewhat distorted. This distortion the wire is said to preclude. Our best apiarists prefer foundation measuring about five square feet to the pound, and not less than four inches in width.

Reasons for its Use.

It economizes time for the workers. Bees busily engaged in making foundation cannot do this and work in the fields also, and in honey-harvest time it is essential that every worker be at its post. Wax is a secretion formed underneath the abdomen in little pellets, and there may be as many as eight of these at a time. The time consumed in removing, molding and working these wax pellets into comb foundation is considerable, and the rapid secretion of wax requires large consumption of food. The amount of honey required to secrete a pound of wax is said to be not less than 15 pounds. Again, comb foundation insures worker comb. Anything that shall aid directly or indirectly in the rearing of the brood, should be sought for, and in no way can worker-comb be more economically produced than by this artificial means.

Aid the Bees

In the time of comb-making by placing cappings of new combs in feeders near the hive, and they will quickly appropriate it to their

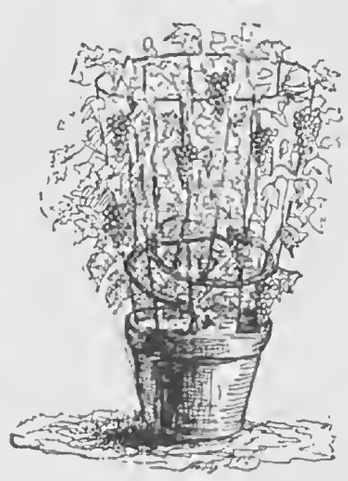


FIG. 384.

FIG. 385.

FIG. 386.

GRAPES IN POTS.

life. Ease and comfort prevent physical waste and tend to lengthen life. What is good for man is good for his beast. When men traveled much on horseback it was customary for the horseman to see his horse fed and watered and rubbed down and made comfortable before he fed and rested himself. We ought not to ignore this principle now. It pays. There are now parlor and eating cars for cattle in which the beeves travel in comfort and are fed and a purpose for which their most delicate rivals (meaning the Jerseys), are *entirely unsuitable*. The Italics are mine. In reference to them I wish to add there are exceptions to this. A neighbor of mine has a pair of four-year-old full-bred Jersey steers at work now on his farm, which are as strong and useful as a pair of good 15 hand horses. Their natural walk is at least four miles per hour, and they are fair brothers, reminding me in all their movements

use. Aid them, also, indirectly by saving the old comb, fragments of wax, cappings, etc., and melting them together to be manufactured into comb-foundation by a process of art. More than is thought will be gained by taking care to collect and melt these "scraps" during the busy season, and all will cost but a little labor. J. W. D.

Miscellaneous.

THE RURAL'S liberal offer of premiums for fine heads of wheat has interested me considerably, for Western Washington is a good place to raise them, but I notice that the awards are to be made in the Wheat Special to be issued in August, I believe. This would leave us out, for we raise mostly Spring wheat which does not ripen till near the last of August, and it would take at least 15 days to send it to you, so that we would need till September 20 to do our best. Of course, it would not be fair to suggest a delay for the few that would be likely to compete from here, but I notice in the RURAL that the farmers of Wisconsin, Minnesota and Michigan sowed their wheat as late as, or later than, we did. Perhaps their warmer Summers ripen wheat much sooner, and, all things considered, you may not be able to give more time. So I will do my best with Fall wheat, a rather small chance, however, as it ripens hardly soon enough—from July 25th to August 10th. D. N.

[The RURAL should consider the above. It may be suggested that those who are unable to send in their wheat heads as announced, may send them in later, and should they prove better than those previously sent, some additional premium or recognition may be provided. We see no other way. All should have a fair, equal chance.—EDS.]

What Others Say.

MR. GEO. W. CAMPBELL, the Commissioner of Horticulture to the Paris Universal Exposition of 1878, sends us his interesting report. We can do no better for our readers than to copy the following portions, accompanied by Mr. Campbell's illustrations, which we have had re-engraved.

Speaking of artificial flower-beds, in regular geometric figures cut out of the grass, as shown by Fig. 379. 1st was an outside row of echeverias, carried around the whole circumference of the bed. 2d. Pyrethrum Prince's Feather, yellow, feathery foliage. 3d. Alternanthera, variegated foliage, red, purple, orange, and green. 4th. Another row of Pyrethrum Prince's Feather. 5th. Filling up to center circle, Blue-flowering Lobelia. 6th. Center of small circles, an agave, bedded in green moss. The other plants carried around the whole figure in circular lines and in regular order. The center massed with closely-planted variegated petunias.

Several interesting collections of fruit trees trained in some of the fanciful shapes for which the French gardeners have long been celebrated, attracted much attention. Several of the most characteristic forms are shown in the succeeding figures, which will give a more intelligent idea of this kind of work than an elaborate written description.

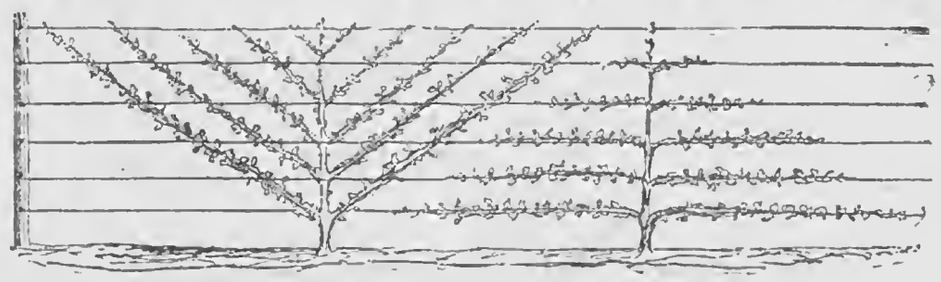
These trees had been trained to their peculiar shapes in the nurseries, and were transplanted to the Exposition grounds in March and April. As represented in the drawings, they were mostly supported by light wire trellis, upon which the limbs were spread flat or fan-shaped, and in some cases additional supports of light wooden lath were tied with willow twigs both to the limbs and the wires, holding them in position.

Fig 377 represents the most elaborate work of this kind in the Exposition. At each end an apple tree, with the lower limbs trimmed in "cordon" in front; two other apple trees, trained in double "cordon" for a low line in front of the wall upon which the principal training was done, with five peach trees, which were made to form the figures as represented, and which figures were first sketched upon the wall behind.

Fig. 388 represents a pear tree trained flat on the trellis, an apple tree trained in the same way, and a pear tree in spiral form, not on trellis. This spiral form is thought to increase productiveness, and is given by training to an iron rod of the desired shape, which is planted in the ground near the stem of a young tree, which is kept tied to the rod as its growth proceeds.

Fig. 389 shows one of the more elaborate styles of training pear trees. This kind of work involves much care, combined with both taste and skill, and can only be profitable where labor is cheap and space is limited and valuable; but there are many places in gardens and yards in towns and cities where unsightly walls, fences, and out-buildings might be utilized by some of these methods or modifications of them, and covered by grape-vines, peaches, pears, apples or other fruits, and thus be rendered not only pleasant to the eye, but sources of pleasure and health to their owners and their families.

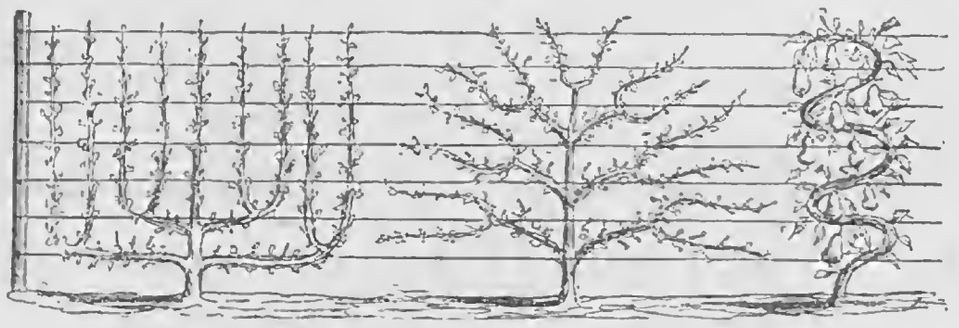
THE grape-vines in pots, a fine illustration of which appeared in these columns, Sept. 20, '79,



ESPALIER PEACH AND APPLE TREES.—FIG. 387.

were trained mostly in spiral forms and seemed very productive and well ripened. Figs. 384, 385 and 386 show some of the most frequent styles of growing and training in pots.

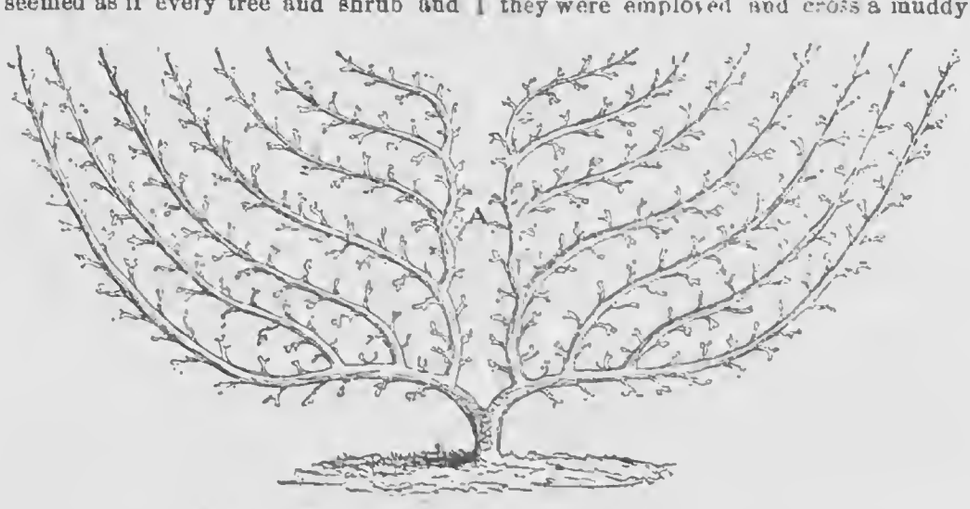
ASPARAGUS.—The growth and culture of asparagus Mr. Campbell says is regarded by the French people as among the most important of their horticultural industries, and during the early part of the season no vegetable is more abundant in their markets, green-grocers' shops, or in the carts of vegetable venders upon the streets. It is not less remarkable for extraordinary size and quality than for quantity. Specimen stalks were brought into the Exposition, perfectly blanched, nine inches to ten inches long and six inches in circumference. This, of course, was exceptionally large, but there were plenty of bunches in the markets the stalks of which would average one inch in diameter or three inches in circumference. They claim to have two or three distinct varieties, among which the Early Argenteuil and the Late Argenteuil are considered the best for general use. Large portions of ground are given up to the asparagus beds in the neighborhood of Paris and Fontainebleau. It



CANDELABRUM, FAN AND SPIRAL TRAINING.—FIG. 388.

is also grown as a supplementary crop between the rows of vines in vineyards. For Winter use it is forced in hot-beds or in glass structures heated with hot-water pipes. In open air culture, the roots are planted in trenches about nine inches below the surface; these trenches are filled with manure and rich fine earth, in successive years, as the roots and plants increase in size and strength, and when the beds are fully established the crowns of the plants are eight or nine inches below the surface of the ground. The asparagus is always cut six or eight inches under ground, and when the tips are about one inch above the surface, and the more perfectly the stalks are blanched the more highly it is esteemed. Small and green asparagus is regarded as very inferior and only sells at a low price, and is used principally in soups. Something may be due to improved varieties, but the principal reason for the extraordinary size and excellence of the French asparagus will be found in skillful culture, giving the plants plenty of room, and an annual dressing of rich compost.

THE prominent and distinguishing features in French horticulture seemed to be almost infinite painstaking and special care; and it really seemed as if every tree and shrub and



PEAR TREE TRAINED IN PALM SHAPE.—FIG. 389.

plant in and about the city of Paris and in the Exposition grounds had some one whose duty it was to look after and care for its special wants and requirements. All were so nicely kept that a faded flower or decayed leaf was rarely seen. Even in the grounds appropriated to the animal shows, one of the first things was the formation of a green lawn, in which were large oval beds made gay and attractive with brilliant flowering plants; and around the inclosure, and the exhibitors' tents, sheds and buildings were large plantations of ornamental plants and shrubbery.

MARKET GARDENS.—The market gardens about Paris are also remarkable for careful culture and wonderful productiveness. They are generally small, containing from one to three or four acres, and nearly all those near the city are surrounded by high stone walls, upon which are closely trained pears, peaches and grapes. Numerous hot-bed frames, sometimes heated by hot-water pipes, and great numbers of *cloches* or large bell-glasses, are found in all these gardens for growing and protecting early vegetables and plants, and are in constant use from October to May. The sashes for many of the frames are of light cast-iron, with handles at the ends, making them very convenient and durable. The bell-glasses are very large, 16 to 18 inches in diameter. The market gardeners about Paris, in addition to the high cost of manure and other fertilizers, are obliged to pay a rent of $100 to $125 per acre per annum. But they cultivate every inch of the ground and often have two or three crops on the same area, which are taken off in succession. They manure highly, plant closely, cultivate perfectly, water abundantly and keep the ground constantly occupied both Winter and Summer. Mr. Campbell was told they managed to take as many as eight successive crops in a season, with various kinds of salads, radishes, potatoes, cauliflowers, cabbages, &c.

Figs. 382 and 390, represent a very ingenious and useful implement, having important advantages over perforated sprinklers. By changing the shape of the lip or having tips of different sizes and increasing or diminishing the aperture, these water-cans may be adapted to all kinds of work in sprinkling for the garden or greenhouse. The work is done more rapidly, and the stream of water is spread into a wide thin sheet, falling in fine spray and always uniform, and never clogging by slight impurities in the water, as with the perforated sprinklers. It is the invention of M. Raveneau, of Paris, and is largely used by the gardeners of Paris and vicinity.

DOMESTIC AND IMPORTED WINE.—Our old friend, the Germantown Telegraph, says that as a rule our domestic wines are much purer than the imported, and a far greater degree of cleanliness is observed in their manufacture. A gentleman of Philadelphia, who was in the wine-producing districts of France some time ago, and saw the process of making clarets, says that the juice is still expressed by tramping with the naked feet, and that he saw some of these "trampers" leave the vats in which they were employed and cross a muddy road to get their dinner, without covering their feet and on their return jumped into the vats again with the mud still clinging to them!

SPEAKING of the water-cress, the editor remarks that all that anyone who has a spring upon his premises has to do is to introduce the plants along the edges and wherever there is a low place into which the water from the spring can spread, and he will raise watercress according to the extent of the arrangements which nature provided. It is very appetizing for breakfast or tea, eaten with a little salt only; and we are very sure that if it is once introduced it will never be abandoned, either for private consumption or for marketing.

LEARNING A TRADE.—"I say, then, lads of sixteen, if you would lay a foundation for a sure prosperity, begin by learning a trade." So says James Parton. "If you would escape the perdition of being a fool, learn a trade. If you would do a man's part for your country, begin the work of preparation by learning a trade." Our friend, Dr. Hoskins, commenting editorially upon the above, says: "We glory in Mr. Parton's 'spunk,' in saying what his experience in life leads him to think in regard to this matter, and would only add that one of the very best trades for a young man to learn is that of a farmer. We shall never have many good farmers until farming is regularly learned as a trade at an agricultural school

WATERING CAN OF M. RAVENEAU.—FIG. 390.

with a first-class farm, or upon the farm of an educated and first-class practical farmer. Preferably we should say, take both courses."

A NEW WAY OF PRESERVING FRUIT is described by the Republican, of Sisson, California. Among the fruit lately shipped East from that place was a car-load of assorted fruit put up according to the Dietz packing, a recently patented process. The preservative agent is carbonized wheat bran, and by it fresh fruit is preserved from decay so that it can be shipped East as slow freight and sold off as the demand is made for it, without being compelled to sacrifice it for fear of loss. The car-load shipped goes to Philadelphia. It contains grapes, plums, peaches, apricots, etc., and goes as fast freight, though hereafter it is the plan to ship by slow freight, as it will reduce the charges over one-half, or from $1,100 to $600 a car-load to New York. If fruit can be packed in this inexpensive manner, and preserved indefinitely and shipped anywhere, the business will develop. "Fresh peaches at Christmas and grapes in mid-Winter" are very alluring, and Mr. Dietz says they may be had by simply packing them in wheat bran reduced to charcoal.

CONUNDRUMS ASKED AND ANSWERED.—At one of the meetings of the Michigan Pomological Society, the following questions were asked and answered:

1. Which is the best of the new colored grapes?

Several gentlemen of experience named the Brighton?

2. Which is the most promising of the new white grapes?

Mr. Woodward was asked to give his preference outside of the Niagara (which was known to be his own grape), and he replied "unquestionably the Prentiss." Quite a discussion upon this topic brought out the champions for several of the later white varieties, including the Lady.

3. What is the best evergreen for ornamental hedges, and how expensive is it by the hundred?

The hemlock. Good hedge plants can be purchased for $13 00 per hundred, and of small size for a good deal less.

FROM Puck:—"The weight of a bale of hay is governed entirely by the capacity of the team following the wagon."

MATRIMONY, says a quaint writer, is a flourishing tree, and cradles are the fruit baskets. . . . . It was a little hard to say of a doctor who was taking a stroll in a churchyard that he had gone to see some of his old patients. . . . . Said Lady Montague: "It goes far to reconcile me to being a woman, when I reflect that I am thus in no danger of ever marrying one." . . . . . Said Jane Porter: "He that easily believes rumors, has the principle within him to augment rumors. It is strange to see the ravenous appetite with which some devourers of character and happiness, fix upon the sides of the innocent

and unfortunate."—Detroit Free Press. . . . . According to a truthful India newspaper, a hungry lion invaded a young ladies' seminary on commencement day, and, bouncing in among them, carried off the prettiest and plumpest, with her composition in her pocket—a school-girl essay on kindness to animals.—Detroit Free Press.

RURAL BRIEFLETS.

SPITE of all the little difficulties and vexations connected with our Seed and Plant Distributions, the many pleasant letters we receive regarding them give us much pleasure in many ways. Here is one which differs from all others:

DEAR RURAL, Just a line to let you know
The seeds you kindly sent some months ago
Were planted acording to direction,
And are now worthy of inspection.
Nearly all have well repaid my labors,
And quite roused the wonder of my neighbors.
The Branching Sorghum measures six feet high,
And still the plants are rising toward the sky.
Washington Oats have grown to such a size
I fondly hope to carry off the prize
At the Hudson Fair, unless the wind plays tricks,
As it already has with wires and sticks.
The Elephant "tater claims attention,
And therefore here I briefly mention,
From the tuber I cut nine fleshy eyes,
And *one* has grown to such a monstrous size,
I've had to pull up plants to give it air,
And it takes up now fully one yard square;
The rest are smaller but still quite healthy,
In spite of the bugs which crawl so stealthy.
As for the Picotees and Pinks,
A failure here is sure, methinks;
However, they were planted rather late,
So I shall try to "labor and to wait."
I'll give them water, light, heat, shade and air,
And hope they'll by-and by repay my care.
I really could not find a place to spare
In which to sow asparagus—so, there!
I'll keep the seeds another year or so,
And hope that won't injure them when they grow.
I'll send further letters if you ask it,
If not, just pitch this in your waste basket.

P.S.—
Yesterday I cut one big sorghum plant,
And left it from the ground but one foot scant;
'T was almost worth your while a mile to walk,
To see the cows snap up both leaves and stalk.

Hudson, N. Y., July 20, 1881. TOM.

WE are sad to learn that our correspondent, Henry Smith of Henderson, N. C. fell from a scaffolding on which he was at work and dislocated his neck. He was a prominent man among the fruit culturists of that section, being largely interested in the cultivation of all kinds of fruit.....

EVEN though the Henrietta (Belle de Fontenay) is killed back every year, it is still a good raspberry for the amateur, as it bears a fair crop on the young canes and the berries are large and of fine quality. Our Caroline Raspberry is still (July 21) bearing fruit.....

HERE is one of those positive and often erroneous notes which appear from time to time in the Ag. columns of the N. Y. Sun:

PERENNIAL CLOVERS.—"The agricultural editor of the Weekly Times informs a correspondent 'that there is no perennial clover except the white. The common red is a biennial plant, flowering and seeding the second year, when the roots dies.' All this will be news to many farmers, and to every botanist in the world. It is certainly true that both red and white clover do burn up and die out very quickly on some light, poor soils, but they are, nevertheless, perennial plants, and in good soils live for many years."

There are several statements in the above note that should not go uncontradicted. It is news "to every botanist in the world" that the Common Red Clover is a biennial—is it? The editor of the agricultural columns of the Sun will probably concede that Dr. George Thurber is a botanist and one of our first authorities on grasses, among which Red Clover may be reckoned since practically it is a grass, though botanically a pulse. He says that "the plant is generally considered to be a biennial." Dr. Darlington says: "Root biennial, or perennial?" Dr. Gray calls it a short-lived "perennial," hence, according to him, our first botanical authority, it does *not* "live for many years." We do not say that Red Clover is a biennial, strictly speaking—agreeing with Dr. Gray that it is a short-lived perennial. In congenial, rich soil, no doubt this clover will reseed itself from year to year and thus preserve the field in clover "for many years." But there is no evidence that this may be said of the individual plant.....

SEVERAL years ago this same Ag. Ed. took the RURAL to task for stating that the Japan Persimmon was tender in the climate of New York. He has since admitted that it is tender, himself, though without allusion to his previous blundering assault. Those who in their arrogance are ever on the look-out to pick musses with others, should at least be manly enough to confess their ignorance when it has been plainly pointed out.....

"I SEND you to-day (July 18)" says Mr. P. R. G. A. of Connecticut, "a branch of the Naomi Raspberry, by many said to be identical with Franconia. It is from six-year-old bushes. I have just picked from a quarter of an acre 70 quarts, of which those I send are fair samples. The Naomi has never been winter-killed with me."

It has been at the Rural Grounds. The fact is that in this climate and south most foreign kinds of raspberries lose their leaves in late Summer and do not in consequence fully ripen their canes. "Hardy" and "tender" as applied to many plants, but to raspberries especially, have little to do with cold. Those which are generally injured by the Winters in this latitude may prove quite hardy further north—even in Canada. Heat and drought are often more trying to raspberries than severe cold.....

CONSIDERABLE has been said of late about the Manchester Strawberry which originated on the grounds of Mr. Jesse Battey of Manchester, New Jersey. Plants were first sent to us by the Messrs. Hales of Glastonbury, Conn. to be tested at the Rural Grounds. There they behaved splendidly, no other of many varieties set out at the same time having borne more fruit, which was firm and of a good quality. From favorable reports which came to us from a number of leading small-fruit growers who had visited Mr. Battey and seen this strawberry growing upon his sandy soil, we were disposed to place it in our Distribution of 1881-2. Later, however it appeared that the Manchester was not controlled by Mr. Battey as he had sent plants to several growers who, believing it to be of considerable promise, had propagated it as fast as possible. The RURAL NEW-YORKER concludes therefore that the Manchester needs no assistance and that it is better to leave it in the hands of those who have it for sale.

Our opinion of this strawberry is that it is larger and more prolific than the Wilson; of a brighter color; fully as firm and of a better quality. On the other hand, there is this to be said against it, viz,, that the flowers are *pistillate* and consequently to prove productive need other plants bearing *perfect* flowers close at hand.....

IN an able dissertation on the Influence of Agriculture upon Character published in the Massachusetts Ploughman, the author, G. H. F., of Maldew, after showing how uniformly nations of all times and continents have prospered in proportion to their culture of the "joyous cornfields," laments the increasing tendency to forsake the rural comfort and respectability of our fathers, for the excitement and strifes of the city; an insatiable desire for wealth taking the place of the 'earth-hunger,' as Emerson terms it, of our forefathers. Tacitus said of the early Anglo-Saxons that they shunned the city and sought their abodes in green glades by the sparkling springs. The article concludes with the following poetic paraphrase by Whittier of the idea expressed by the words "growing two blades of grass where but one had grown before."

Give fools their gold, and knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field; or trains a flower,
Or plants a tree is more than all.

For he who blesses, most is blest;
And God and man shall own his work,
Who toils to leave, as his bequest,
An added beauty to the earth.

WE are receiving thus soon quite a number of reports as to the Rural Branching Sorghum. Most of them, we are very glad to see, are favorable. Here is one from Mr. Mark W. Johnson, of Atlanta, Ga.

"About half a dozen seeds of your R. B. Sorghum germinated, and so far the plants are growing and branching finely nothwithstanding severe drought and great heat.....

HERE is another from Mr. H. H. Clark of Illinois: "I see in the last RURAL that the seed of the Rural Branching Sorghum you sent out has not germinated well. The package sent to me has done extra well—nearly every seed grew, making from 10 to 25 stalks per seed."

He also adds: "I cut the Washington Oats to-day (July 14.) They stood four and a-half feet high; heads 10 to 16 inches long; grain plump and heavy. They rusted a little."....

DR. HEXAMER, after a visit to Mr. Battey of Manchester, New Jersey, called at the RURAL office and was requested to give his estimate of Mr. Battey's "Manchester" Strawberry. He replied as follows: "It bears the most uniformly large berries of any kind I am acquainted with. They are of regular shape, of good quality and sufficiently firm for market. The plant is entirely hardy; stands the heat and drought well. It is of a more desirable color than the Wilson."

It now remains to be seen how the Manchester will act in other soils and climates. But the presumption is that as it thrives in the sandy, poor soil of Mr. Battey's farm, it will thrive almost anywhere.....

BOOKS, CATALOGUES, ETC.

TENTH ANNUAL REPORT of the Secretary of the State Horticultural Society of Michigan—616 pages. We are always glad to receive this volume which this year, from the cursory glance thus far given, seems more interesting than usual. Michigan is blessed with many wide-awake, enthusiastic horticulturists who are doing fine service to the State. Chas. W. Garfield, of Grand Rapids, is the efficient Secretary. His Portfolio comprises 100 pages of matter selected with good judgment and evident care from the current horticultural literature of the country. We shall refer to this book on future occasions.

MEMORANDA OF THE ORIGIN, PLAN, and Results of the Field and other Experiments conducted on the Farm and in the Laboratory of John Bennet Lawes, LL D., F. R. S., at Rothamsted, Herts; Also a Statement of the Present and Previous Cropping, etc., of the Arable Land not under Experiment. This publication comprises 28 pages 7x13 inches in size. It is to be regretted that a copy of this and all other of Dr. Lawes's publication could not be placed in the hands of every intelligent farmer.

PETER HENDERSON & Co., 35 Cortland St., N. Y., Circular of Pot-grown Strawberries for 1881. Specialty of Durand's new late Strawberry Jersey Queen, the sale of which Mr. Henderson controls. Mr. Henderson also issues two handsome colored plates—one of Jersey Queen, the other of Glossy Cone, Sharpless, Jucunda, Bidwell, Downing, Pres. Lincoln, Gipsy and Monarch of the West.

G. H. & J. H. HALE, Elm Fruit Farm and Nursery, South Gladestonbury, Conn., Circular (sent free to our subscribers) of pot-grown and Layer Strawberry Plants for Summer and Fall. Among the novelties we find the Manchester, the sale of which is for the most part the present season controlled by the above firm and Mr. Lovett.

E. P. ROE, Cornwall-on-Hudson, N. Y. Catalogue of Small Fruits and Grape Vines for the Summer and Fall of 1881. The Bidwell Strawberry a specialty. This catalogue of 25 pages will be sent without charge to those of our subscribers who apply to Mr. Roe by postal or otherwise.

ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y. Catalogue (No. 3) and Descriptive price list of Strawberries and other small fruits. The lists are divided into American, Foreign and New Varieties. No charge, we believe, is made for this catalogue.

J. T. LOVETT, Little Silver, Monmouth Co., New Jersey. Pamphlet of Pot-grown and Layer Strawberry Plants for the Summer and Autumn of 1881. The Manchester a speciality. Sent free to applicants.

Everywhere.

RURAL SPECIAL REPORTS.

Illinois.

WALNUT, Bureau Co., July 25.—Spring was three weeks late. Winter wheat was nearly all winter-killed, and Spring wheat is poor, being injured by chinch bugs. Corn is late and poor, but growing rapidly now. Rye is good; oats are fair, the grains being plump, but the straw short. Barley is good but colored. Potatoes poor. Very few apples; no cherries; plenty of small fuits. W. C.

Iowa.

CARROLL Co., July 21.—My Washington Oats are, in common with all other oats in this section, badly affected with rust. They are also troubled with a disease which I have not noticed in any other variety—it resembles smut in corn. In 110 heads 25 were ruined by this disease. But as this has been a very trying season I am not surprised. I shall try them again next year. Can you suggest any precautions that may be used against the spreading of the smut in next crop? G. S.

[Only that of steeping the seed, as recommended for wheat, in strong brine or a solution of sulphate of copper—a pound of sulphate to two gallons of water.—EDS.]

Michigan.

BYRON CENTER, Kent Co., July 20.—Wheat in general is a thin stand, but the heads are large and well filled; will yield from seven to eighteen bushels an acre. The Washington Oats I sowed in the last week in April. They made three rows sixty feet long in my garden and to-day they stand four and one-half feet to five feet nine inches high. The panicles are nine to fifteen inches long. I hope to make a good report on the White Elephant Potato this Fall. The pink seeds came up well. Several plants are in bloom and are beautiful. I am more than ever pleased with the RURAL. Although farming on a small scale the information and advice which it gives are just what I need. WM. K. E.

Nebraska.

FULLERTON, July 18.—Crops excellent. Corn simply immense. Fifteen hills of the White Elephant were doing tip-top. The Rural Branching Sorghum is all you recommended it to be. I am suckering a few stalks to make seed if possible. The Washington Oats are about half smut; other oats are not injured at all. The flower seeds did not do well; the soil was too new; those growing are beginning to bloom and are beauties. J. H.

New Jersey.

HAMMONTON, Atlantic Co., July 20.—No grain worth mentioning is raised in this town. Fruits of all kinds are our speciality. A month ago our fruits were running the gauntlet of the rose bug. The blackberry canes had been killed above the snow line, and it looked as though the rose bug meant to finish what was left and it did nearly in some fields, and also destroyed tons of grapes. The pests do not take the apple blossom, as I read in the RURAL, but the apple itself, as the fruit is well formed before they arrive. But in spite of them, the apple crop was never more abundant than now. Pears ditto. Strawberries were a heavy crop; but the price was low. Black and red raspberries are good crops and bring good prices. We have about 600 acres of this crop in bearing this year, probably 100 acres of it being under one-year-old vines. About 200 acres also were set the past Spring. Our shipment of blackberries on Monday July 19, was 1,100 crates—about 1,200 bushels. We began picking on July 8th. With seasonable rains, the picking lasts about four weeks. For pickers we depend mostly on Italians who come down from Philadelphia by the hundred during the berry and cranberry season. As to potato bugs, with Paris-green or London-purple we are masters of the situation, but who, pray tell us, who will give us a successful method of fighting rose bugs! Hand-picking has been tried, but it is too expensive. P. H. B.

TOM'S RIVER, Ocean Co., July 21.—A field of corn, planted very early, was doing very well until it began to ear, about three weeks ago, when it was struck almost all dead by the hot, dry blast which has come on, and it will not yield one-tenth as many ears as if cooler weather, with an occasional shower, had kept on. The cool, wet weather of June gave the stalks such a rapid growth that they immediately wilted when the drought began. The later-planted is doing well and will give an abundance of ears. Last year it was quite dry in May and June, and yet the corn grew finely and by the 15th of July supplied our table bountifully. A neighbor has a considerable field alongside of mine, which was sowed broadcast the last week of May for soiling his Jersey herd of cows. It had a fine growth till the hot weather set in, and this has killed several acres of it on the most sandy part of the soil, making it look almost as bad as if a fire had passed over it. In the yellow, gravelly soils around me the corn keeps on growing nicely and it is suffering very little from the hot drought. A. B. A.

New York.

AVOCA, Steuben Co., July 23.—We are having here one of the best seasons for the growth of agricultural products that we have had for several years—just rain enough to make everything shoot. Wheat is not quite up to an average owing to a dry Fall giving a small stand and to the large amount of snow that in some places "smothered" it, and to the presence of rust in some localities; still, a good fair yield will be secured. Oats are very heavy and lodging badly, which, of course, will interfere with their filling, but to what extent yet remains to be seen. Barley is good and will be more than an average crop; it is raised here to a considerable extent, but is not a specialty. Rye is a fine crop and is being secured in fine order. Hay is heavy—excepting on old meadows—it is selling for $8 for 2,200 pounds, delivered. Considerable wool is grown and sold this year at from 35 to 38 cents. Corn is mostly late and small, but there is a good stand where it has not been badly eaten by worms. Apples are not a large crop this year, owing to the enormous one last year; many apples are falling prematurely, but the prospects are good for enough for home consumption. Dairying is a speciality here, as the many cheese factories and large farm butter dairies scattered over the country will show. The abundant rains give plenty of feed, which is readily converted into these two new necessities of life. Cheese now is worth 10½ cents and butter 20c. Buckwheat is scarcely far enough advanced to report upon, although appearances are favorable. The crops of small fruits are abundant, excepting perhaps cherries. SCRIBE.

CATO, Cayuga Co., July 20.—The Rural Branching Sorghum seed sent me must have been better than the average, for out of 115 hills I have 110 that are three feet high. I planted three kernels to the hill or flat place, using one table-spoonful of phosphate to the hill, and have thinned to one stalk, each of which has from 10 to 15 spears or suckers. The Washington Oats are in drills manured with phosphate, and covering a space of 6x25 feet. They are nearly five feet high with heads one foot long. The White Elephant Potato I cut into 25 pieces with one eye to each piece, and I planted one piece in a hill. I have now 24 hills that are very large, I brushed the dirt from one side of a hill to-day, and saw three large tubers—larger than the one sent me. They have been planted only two months. I am highly pleased with the RURAL and shall preserve a piece of my best land for the next Seed Distribution and get more to subscribe for the paper. [Thanks.—EDS.] J. K. R.

HIGGINSVILLE, Oneida Co., July 23.—I have just measured a few heads of the Washington Oats you sent me last Spring. I found many 14 inches long and one 15 inches. The Branching Sorghum begins to grow. One stalk measured was 22 inches high. I have 24 hills of White Elephant Potatoes, but I do not expect much of a yield on account of the bugs. They injured them badly early in the season. The asparagus is growing finely. It is very dry here at present. Potatoes will be a short crop if we don't have rain soon. Corn is very backward. Oats bid fair for a fine crop. H. E. D.

OAK BURN, Columbia Co., July 21.—My Washington Oats are splendid; the straw is stiff and heavy, stands four feet eight inches in hight, and the panicles are remarkably well filled with grain. They may be identical with the Canada or Barley Oats which were rated at 40 pounds to the bushel. R. M. L.

Ohio.

RICHFIELD CENTER, Lucas Co., July 22.—The Beauty of Hebron Potato you sent me, I think is the best early potato I ever saw. The White Elephant is doing well—many thanks. I think the RURAL is one of the best of papers. O. T.

Pennsylvania.

NEW LEBANON, Mercer Co., July 22.—The weather has been very favorable for harvesting—not very warm and but little rain yet. The wheat harvested has been a pretty fair crop and the hay and oats are as good as, if not better than, last year. Corn seems to be a failure all over, a great many having had to replant on account of the wire-worm. Many have sown their corn-fields to buckwheat. If there is not more rain than we have been having, the potato crop will be small tubers and few in the hill. Apples are plentiful this year again. The strawberry and raspberry crops were good, selling from 8@10c. per quart. Butter 14c. per pound; eggs, 12½c. per dozen; potatoes 75c. per bushel. J. E. C.

Vermont.

TROY, Orleans Co., July 23.—The past two weeks have been cold and wet so that hay will not be an average crop, though it will be a fair one. Corn is small and the frost in June ruined so much of it that the crop will be small, as a good deal was plowed up and the ground sown with barley which will be a larger yield than we have ever had here. Wheat does not look as well as it did at this time last year, but the acreage under it is larger. On the whole, I think the outlook for farmers in Northern Vermont is fair. I see reports of thunder, hail and wind storms doing great destruction to crops, buildings, stock and human lives out West, whereas Vermont has suffered little from these agencies, and I, for one, don't want to "go West." D. A. B.

Washington Territory.

OAKVILLE, Chehalis Co., July 16.—The RURAL seeds came all right about June 20. I was well pleased. The pinks came up very well, and the potato sets are coming up already. It was rather late for oats, so I left them for next year. We had a mild Winter and an early Spring. Rainy weather in April hindered sowing somewhat and some grain is rather late, but the season is favorable and grain looks well. Hay will be a little lighter crop than usual as the cool weather and showers seem not so good for grass as for grain. Wheat is our main dependence; it is worth 70@80c. at the mills 22 miles distant. Sheep are very profitable to those who have prairie land. Wool is 23@27c. Cattle and hogs pay well this year. At the mouth of the river and around Gray's Harbor cattle raising and dairying are the chief industries. Haying will commence as soon as it clears up again. D. N.

YAKIMA CITY, Yakima Co., July 12.—The amount of land under cultivation in this county is very small; it has been used almost entirely for grazing purposes and the only farming to any amount is across the Columbia River in Walla Walla County. W. D. I.

The Querist.

ANSWERS TO CORRESPONDENTS.

Caponizing Roosters.

H. O. G. R., Liberty, Va., asks how to caponize young roosters.

ANS.—The best birds for capons are the large breeds, Asiatics or Dorkings. They should be two to three months old; old birds seldom survive caponizing. Before the operation they should be deprived of food for from twenty-four to forty-eight hours, so as not to have their bowels distended. There are instruments made for the operation, which can be purchased in most cities. Capons should be kept till the age of 15 to 18 months, which will bring them to full size, which should be double the size they would have attained had they not been caponized. The bird to be operated on, must be fastened down on his side to a board or bench through an augur hole; the wings should be drawn together over his back and well secured; the legs drawn backward, the upper one drawn out furthest and secured. The feathers must be plucked from the right, or upper side, near the hip joint, on a line with and between the joint of the shoulder. The space uncovered should be about one and a-half inch in diameter on an ordinary-sized bird. Draw the skin of the part backward so that when the operation is finished the skin slides back to its natural position and covers the wound in the flesh, and does *not*, when neatly done, require sewing. Make an incision with a fine, sharp penknife (or proper instrument is best), between the last rib and hip, commencing about an inch from the back-bone; extend it obliquely downward, from an inch to an inch and a half, just cutting deep enough to separate the flesh; take great care not to wound the intestines. The wound must be kept open with an instrument with a spring, called a retractor, or with something answering the same purpose, stretching it wide enough to afford room for the work. Then, carefully cut the membrane covering the intestines which if not sufficiently drawn up, may be pushed towards the breast-bone lightly by a spoon-shaped instrument, or the handle of a teaspoon. The organs to be removed are readily recognized—a small reddish-yellow cylinder attached to the spine on each side, covered with a fine membrane or skin which must first be removed with forceps and a fine hook to draw it away. With the left hand introduce the bowl of a spoon (an instrument is made for the purpose) under the lower or left testicle, which is generally a little nearer to the rump than the right one. Then take the instrument called a cannula, which is a hollow tube with a horse hair passed through it forming at the end a loop which can be tightened by pulling on the two ends of the hair at the other end of the tube. Pass this loop around the testicle with the help of something to place it in position (the cannula has a hook for this purpose) so as to bring the loop to act upon the parts which connect the organ to the back. Then by drawing the ends of the hair loop back-ward and forward, and at the same time pushing the lower end of the tube or cannula towards the rump of the fowl, the cord or fastening of the organ is severed. A similar process is then to be repeated with the uppermost or right testicle, after which any remains of the organs together with the blood around the wound or at the bottom must be removed with the spoon. The reason for operating on the left or lower organ first is to prevent the blood from covering the lower one if left last. When the operation is performed, which if skillfully done occupies but a few minutes, the retractor is taken out, the skin drawn over the wound, which if it was drawn on one side before cutting (as mentioned above), will connect at a place not exactly opposite the wound in the flesh, thereby covering the flesh wound. If skillfully done it requires no sewing. The old French system was to operate on each side of the fowl, but the system here described is considered an improvement on the antiquated Gallic method. The necessary tools can be had of H. H. Stoddart, Hartford, Conn.

"Listing."

W. H. W., Beaver Crossing, Neb., asks for a description of "listing"—the new method of tending corn described in a late "Everywhere" report from Kansas.

ANSWER BY PROF. E. M. SHELTON, OF THE KANSAS AG. COL.

The method of corn culture known as "listing" consists primarily and simply in striking furrows wherever the rows of corn are to be, and in these furrows planting the seed. The work is done by a "listing plow," which is simply a plow having a double mold-board, which throws the earth equally to the right and left. This plan is used without other preparatory tillage. The "lister" is worked by three horses, and, as will be seen, after the field is finished its surface is made up of a succession of ridges and furrows, but presenting an exposure of fresh earth in all its parts. In the furrows made by the "lister" the corn is drilled by any one of the numerous corn drills, which put in the seed at intervals of eight to sixteen inches. In some cases the lister is provided with a drill attachment, which drills in the corn as fast as the furrow is opened. The advantages of this method of corn culture, so far as labor is concerned, will be appreciated when it is remembered that a man and team will thus put in eight to ten acres of corn per day. After the corn is planted the harrow is kept at work over the field until the corn is eight to ten inches high, when the cultivator finishes the work. The harrow acts very efficiently upon the ridges between the rows of corn, leveling the ground and working the fine earth about the corn. Upon loamy bottom lands in Kansas and other parts of the West this method of corn culture has been very successfully practiced for a number of years, and the use of the lister is being rapidly extended. The advantages claimed for this method are: 1, that the crop may be made at one-fourth less cost than by the old method; 2, that the yield per acre is considerably increased, and, 3, that listed corn endures dry weather better than that planted by the old method.

The Influence of the First Male Parent.

J. H., Fullerton, Neb., says, if as is claimed, when a heifer is got in calf by a good pure-bred bull, the influence of the first male parent extends to the future progeny of the female, then it follows that the next calf by the same parents would be perceptibly improved, and he asks how many calves must the same parents have before the progeny become pure-bred.

ANS.—The influence of the first male parent upon the future offsprings of a female has been noted only where those offsprings have been begotten by other males. The influence is most intense in the first impregnation, and is very much slighter in subsequent impregnations by other males. If the female is covered by the same male in different impregnations, how can the dominant influence of a first impregnation be detected? This peculiar influence is not confined to cattle, for it has also been noticed in other members of the brute creation as well as in human beings. This is not a matter of opinion; but a matter of fact, of which numerous well authenticated instances are on record. Of course, it is not maintained that the influence is always apparent, but there are too many striking examples of it to permit its existence to be doubted. How often does it not happen that a mare bred to a jack, afterwards produces colts with mulish characteristics when bred to stallions! All the standard works on breeding are full of instances of this influence in cattle, horses, sheep, swine, dogs and humans, and numerous cases in point are mentioned from time to time in the agricultural press.

Keeping Grapes, etc.

J. B., Arkansas City, Kansas, asks, 1, how to keep grapes fresh for Winter use, to make unfermented wine; 2, how to kill crickets in a well.

ANS.—1. Those who want to keep grapes for a long time should grow for that purpose only the tough-skinned varieties. Concord, Martha, Wilder, Goethe and Elvira have a very thin skin and cannot usually be kept much longer than Oct. 1; but Lindley, Ives, Catawba and particularly North Carolina can be kept for months, as they have a tough skin. Rogers's No. 2, Norton's Virginia, and Cynthiana, Mr. Husmann says, can easily be kept all Winter, though they will shrivel somewhat while remaining spicy and good. Grapes that are to be kept should be fully ripe and gathered only in dry weather; the bunches should be cut carefully, and all unripe, shriveled or decayed berries should be carefully cut out. They should be kept in an even temperature of 40°. They will keep the better if stored in pure dry sand, or if fine paper is put between the layers; and the room should be properly ventilated. 2. Cement the sides if of stone or brick. We should need to know more of the construction of the well.

Miscellaneous.

E. F., Providence, R. I., asks the addresses of some persons who are successful in raising early lambs for market, as he would like to visit such establishments to learn the business.

ANS.—It would hardly be right to give away the names of parties engaged in a special business in which skill and particular experience, often gained at great cost, are the elements of success, without their consent. Usually such persons are quite reticent when interviewed by a possible competitor, and object to "giving themselves away" after building up a business for some years with much care, and especially as this business is desirable only because special care and knowledge are necessary for success, and few there be that find these. The localities where raising early lambs for market is chiefly carried on, near New York, are Orange County, Ulster County and Westchester County, N. Y., Sussex, Warren and Morris Counties, N. J. There are no "establishments," so to speak, of this kind; the sheep are kept in small flocks of 10, 20 or 50, and as adjuncts to ordinary farming, or upon farms where there is sufficient pasture land that is unsuitable for cultivation. Around Middletown, N. Y., and Newton, N. J., some flocks kept for this purpose could be found.

N. C. J., Westhampton, N. Y., wishes to have his cows covered by a well-bred bull, but his neighbor's scrub bull is constantly getting into the lot with them, however carefully he guards against his doing so, and he asks, 1, whether the neighbor is justified in keeping so unruly a brute. 2. Wishing to make a line fence of barbed wire, he asks whether his neighbors can collect damages if their cattle or horses get hurt by coming in contact with it.

ANS.—You can sue a neighbor for trespass for permitting his bull to come on to your land, providing your own fence is a legal one. You can recover any reasonable damages for the mischief he may do among your cows. 2. You are liable for any damage that may happen to others' cattle from your barbed wire fence. The legal maxim applicable to both of these cases is, "One must so use his own property as not to injure another's."

"Comet," West Haven, Conn., wishes to seed down to grass, the coming Fall, a field the soil of which is a light sandy loam. Timothy and Red Top are the prevailing grasses thereabouts, but they do not thrive on that field, as they soon run out, being succeeded by daisies, and our friend asks, 1, what mixture of seed would make a thick sward and be likely to exclude weeds; 2, what good grass can be grown with Orchard Grass that will ripen at the same time.

ANS.—1. We would mention Rhode Island Bent Grass (Agrostis canina)—two bushels to acre or less; Sweet Vernal Grass (Anthoxanthum odoratum)—20 pounds to acre; Meadow Fescue (Festuca pratensis)—25 pounds to acre. 2. We know of nothing better than Kentucky Blue Grass (Poa pratensis)—two bushels per acre or less.

S. G., Church Hill, Md., wishing to start a small fruit garden, asks what kinds of strawberries, raspberries, blackberries, currants, gooseberries and grapes would we recommend for family use.

ANS.—Our advice in such cases must be taken with many an allowance. Strawberries: Sharpless, Bidwell, Cumberland Triumph, Charles Downing. Raspberries: Cuthbert, Turner, Gregg, Caroline. Blackberries: Kittatinny, Snyder. Currants: White Grape, Cherry, Old Red Dutch and Fay's Prolific. Gooseberries: Downing, Houghton's Seedling. Grapes: Concord, Lady, Brighton, Lady Washington, Duchess, Prentiss, Pocklington. For suggestions as to ornamental shrubbery, trees, etc., our friend is referred to our Hardy Shrub and Tree Number.

W. F., Florence, Texas, asks where can he get Clawson and Shumaker wheats and whether they are smooth or bearded.

ANS.—Any seedsman can furnish Clawson, which is a smooth wheat. We do not know whether Shumaker (sometimes spelled Shoemaker) is at present offered or not; but so good a wheat is sure soon to find its way into seedsmen's hands. It is a smooth sort.

C. L. H., Mercer, Mich., says, 1, "I am sowing perennial flower seed now, shall I transplant this Fall or next Spring? 2, how can I propagate Hydrangea grandiflora and when?

ANS.—1. Next Spring. Cover lightly this Fall. 2. Make cuttings of the nearly ripened wood. Place them in boxes of sand and keep moist. Branches which rest upon the ground root freely if held there.

E. W. B. desires directions for treating the Japan Red-bud.

ANS.—At this season of the year it would be best to start them in pots so as to remove the young plants to the house for the Winter. Plant the seeds in well-drained pots and cover with pieces of glass until they germinate.

H. T., Wessells, New Jersey. The white chaff must be Fultz, though the breasts are rather too far apart for that variety. The other is as near Clawson as any we know of. The kernel seems too dark, but this may be owing to the fact that it is shrunken somewhat.

L. B. R., Buckland, Mass., says that while attending an exhibition of the N. Y. Horticultural Society he marked a strawberry called the Battey Seedling as good, and he asks whether it is the same as the Manchester lately commended in the Rural.

ANS.—Yes.

G. C., Green's Landing, Pa., wishing to send some heads of Spring wheat for competition for the RURAL premiums, asks for more time, as they will not be ripe by August 1.

ANS.—Send them so soon as they are ripe, please.

C. B. asks how to rid his garden and lawn of moles.

ANS.—We are sorry we cannot help our friend. Soft tar runs into their holes here and there is offensive to them.

J. W. S., Ash Grove, Mo., asks whether Navy Bush Beans run.

ANS.—Nearly if not all bush beans will occasionally "run" if planted in rich soil.

M. J. M., Le Roysville, N. Y., sends for name what he considers the worst weed in that section.

ANS.—Hieracium scabrum—Hawkweed.

F. D., Snyder, New York. We are not positive as to the name of the bearded kind of wheat with Fultz. Thanks for specimens.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, JULY 30.

H. S.—J. G. B.—D. N.—J. H.—Tom, thanks—L. B. R.—G. C.—J. E.—G. C.—C. B.—H. L. W.—J. K. R., thanks—G. S.—M. A. H.—G. G.—A. C. A.—G. A.—B. S.—T. H. R.—B. N.—J. H. G.—W. W.—R. H. G.—F. D.—W. F.—G. H. F., thanks—S. O. R.—J. T. H.—I. K.—A. B. J.—W.—H. N.—K.—B. L. G.—R. H.—H. S.—T. H. H.—W. L.—H. M.—R. S.—X. Y. Z.—I. W., thanks—W. L. H.—F. M. C.—J. McS.—H. H.—T. W. M.—N. S.—A. R. N.—S.—A. B. J.—L. E. V.—J. K.—I. H.—W. B. D.—E. M. B.—W. M. C.—F. L. H.—C. S. M.—I. M.—J. M. R.—G. W. H.—W. H. M.—W. A. H.—S. N. C.—F. D. P.—J. W. M.—E. S.—W. C. A.—J. M. G.—D. A. S.—C. A. S.—I. N.—L. A.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, AUG. 6, 1881

WE again request that any reader having heads of the so-called "Golden Grains" Wheat will please forward specimens to us.

MANY FARMERS use a spoonful of bone flour to each hill of corn. This is at the rate of at least a bag or barrel—200 pounds—per acre. The spoonful can only help the corn plant while very young. We should much prefer to sow the 200 pounds broadcast, which would exert an influence upon the plants during the entire season.

WE HAVE A LITTLE PATCH of Bermuda Grass growing at the RURAL FARM. It grows in a very dry, sandy place and is beautifully green now when all other grass—except it may be Quack—is burnt. The color is a blueish-green like our Northern Blue Grass, Poa compressa. We shall give an illustration of this grass and its singular growth in due time.

WE MAY NOW (July 26) state positively that not one of several kinds of Sorghum or Doura sent to us from various seedsmen and others, thought to be the Rural Branching Sorghum, proves to be so. Three specimens were sent from California, one from the South, and three from Eastern seedsmen. The best of these show but three branches, or tillers, or suckers, from one seed, which, if cut back, make no further growth of any account, while the Rural Branching, if cut just above the ground, seems to grow faster than before and to produce additional branches. Our subscribers are now asked to try the experiment.

NEXT TO SPRING, August is the best time to set strawberry plants. Several announcements of small-fruit growers' catalogues appear in this number, which will be sent free to all of our subscribers who apply to those who announce them. Pot-grown plants, if properly pot-grown, will produce nearly a full crop next Spring. All things considered, however, we prefer those which are not so prepared. Those who order strawberry plants and receive them in bad order, should return them to the seller at once. It is his duty to send out healthy, vigorous plants and he should be held to it, the same as any merchant is bound to furnish merchantable goods when they are bought and paid for.

SINCE LAST SPEAKING of the experiment corn field at the Rural Farm, the corn has been growing finely and now promises a fair yield. We have, however, to fear the drought and then, should this be safely passed through, that the season will not be long enough for it to ripen. The manured acre is far ahead of the rest, and is easily distinguishable without any need of guidance from the stakes which mark it out. The specially manured plots of one-twentieth of an acre each are very variable. Some seem to be harmed by the fertilizers applied; on others they seem to have produced no effect and on still others a marked benefit. The advantage of flat cultivation and having the plants stand a foot apart instead of crowded together in hills, is very apparent during this drought. The leaves up to this time have curled far less than those of neighboring fields.

ILLITERACY IN THE UNITED STATES.

INTERESTED as we are in whatever affects the welfare of the country and the millions who inhabit it, we do no less than our duty in calling the attention of our readers to some facts on education, which were elicited at the recent University Convocation at Albany. The census of 1870 revealed the fact that there were in the United States, 1,580,000 illiterate voters, of whom 1,123,000 were in the Southern States. This would leave 457,000 for all the other States, which, though a comparatively small proportion, is yet in reality a large one where educational institutions are our boast. Of these 457,000, New York has 77,000 and Pennsylvania 67,000, while the other States, with fewer great cities, have a less number of illiterates. Ten years ago one voter in five could not read the ballot he cast into the box, and now advance sheets of the census reports show that this illiteracy has been greatly on the increase, and that over 21 per cent. of the 9,297,000 votes at the last general election, were cast by the illiterate.

These facts are sufficient to show that there is great need of extending the privileges of the common schools, and of enforcing attendance, if need be, upon those for whose benefit they are established. The rapid growth of cities and a corresponding increase of illiteracy are unfavorable omens for a people such as ours, whose welfare depends on the right use of their privileges, the greatest of which, it may be, is now threatened by misuse. It is gratifying to know that these facts are being considered by the people, and the sooner the General Government aids the several States in this matter of popular education, according to the illiteracy in them, the better it will be. This, too, is a question in which the farmers of the country should have a deep interest, and they should not deem it sufficient that their sons can read the ballot they deposit, or think that a *very* common education is all that is necessary. Much depends on the education their sons receive in enabling them to counterbalance by their intelligence the vast and increasing power of the illiterate.

A MONOPOLY OF RIVER TRANSPORTATION.

A COMPANY, it seems, has just been organized in this city for controlling the freight transportation on the Mississippi, Missouri and Ohio Rivers. Sixty-three steamers and 120 barges, it is reported, have already been bought at their actual value. The purchasers claim that they can run them at a reduction of $800,000 a year from present expenses. Mr. James R. Keene, widely known as an extensive manipulator in "corners" of wheat, pork and other farm products, as well as a bold speculator in railroad stocks, is said to be at the head of the company. Its projectors say they are now completing arrangements by which grain and provisions can be shipped to Europe at little more than half the prices now ruling via rail and the Atlantic ports. The company, it is said, has already bought all the warehouses on the three rivers except those owned by the railroads, and others are to be at once built by it at New Orleans and other points. It is expected that a vigorous competition will be at once begun with the railroad companies in transporting the surplus of our present harvest to foreign markets. In spite of the objections that can always be urged against a monopoly, this new company is likely to be of considerable benefit to agriculture in the way of cheapening freights on farm products from points at which water and rail transportation come into competition. The large capital at the command of the company will probably develop the former within a few months to an extent it might not otherwise have attained in as many years, besides enabling it to fight against mighty railroad corporations with better chances of success than could be hoped for by punier organizations. From the contention of these powerful monopolies the public is pretty sure to be the gainer, on the principle that "when rogues fall out, honest men are likely to get their due."

THE SIBERIAN PLAGUE.

THIS disease which has lately occasioned great fatality among cattle and horses as well as many deaths among the human inhabitants of several Russian provinces, and especially in villages near St. Petersburg and along the railroad line thence to Warsaw, has been identified with malignant anthrax, or carbuncular erysipelas, various forms of which are commonly known as black leg, black quarter, black tongue, charbon, bloody murrain, etc. This disease Exodus tells us constituted the 5th and 6th plagues from which the Egyptians suffered in the days of Pharaoh—plagues there described as "a grievous murrain," and as "a boil breaking forth with blains upon man and upon beast." In the true sense of the term, it never becomes epidemic so far as the human race is concerned, but it not uncommonly becomes epizootic among flocks and herds, especially sheep, goats and camels in Eastern Europe and Asia, especially in the Russian possessions. It is essentially a disease of the lower animals, appearing in man only in sporadic cases, and only among those that come in contact with infected matter. It has caused considerable fatality, however, among the wool sorters in England, especially in the West Riding of Yorkshire, the chief seat of the worsted manufacture, where it is known as the "wool-sorters'" disease. In the Spring of 1880, the Local Government Board ordered a medical investigation into the nature and cause of the malady, and the Inspector who conducted the inquiry has lately reported that it is due to the importation of infected wool and hair, chiefly from Asiatic Russia. It has its origin in a low parasitic vegetable organism, called Bacillus anthracis, which soon dies on its removal from living blood, but its spores or germs may, in ordinary circumstances, retain vitality and power of development for an indefinite time. In one form or another this disease causes more deaths than any other among the flocks and herds of this country.

RIVAL WATER ROUTES.

PROBABLY there is no question, political, social or commercial, that now agitates the West, and especially the trans-Mississippi region, so deeply as that of transportation. All over the broad Western country farmers, merchants and business men generally are alike alive to its importance, and politicians of all parties are already shaping their policy with reference to it. The belief in the oppression of railroads is earnest and widespread, and the prospect of successful competition by water routes is hailed with hope and exultation, not, however, as a final settlement of the grievance of railroad extortion, but as a beneficial makeshift until appropriate legislation shall have curbed such exaction. While the whole Western country is, however, unanimous as to the desirability of water transportation to the seaboard, there is some difference of opinion in regard to the most desirable route. St. Louis, Hannibal, Burlington, Keokuk and other towns below Rock Island and west of the great river favor the Mississippi route, while Davenport, Dubuque and the upper river towns prefer the proposed canal from Rock Island to Hennepin, thence by the old canal to Chicago, and thence by the lakes and the Erie Canal to this city or by the lakes and the Welland Canal to Lake Ontario, and thence, by the St. Lawrence and the short canals that circumvent its rapids, to Montreal, which, though 600 miles from the mouth of the River, is the great sea-port of Canada. The bugbear that until lately frightened off traffic from the Mississippi route, was the notion that grain would heat in transit—a delusion now exploded. Not only does this route communicate directly with numerous parts of the mighty Mississippi Valley by natural channels, but below St. Louis it is seldom frozen up, while its northern rivals are closed by frost for five months in the twelve. The South and West are constantly making demands on the whole country through Congress, to improve the river route by removing obstructions to navigation, building levees and straightening channels; Canada is now spending $30,000,000 in improving the Welland Canal and those along the river, and showing a disposition to reduce rates as low as competition may require; while New York has already abolished tolls on westward-bound freight on the Erie Canal, and initiated a movement for amending the Constitution so as to permit all tolls to be done away with. Doubtless before long, too, the requirements of commerce and competition will force this State to enlarge her great water-course—a measure which has already been strongly urged upon the Legislature. This great competition of rival water routes to the seaboard is destined not only to greatly reduce freight charges by rail and water, but also to influence the direction of traffic, and consequently the relative growth and importance of the chief shipping ports on rivers, lakes and seboard.

BREVITIES.

GIVE your babies *ripe* blackberries; give them to your children and eat them yourselves.

IF no other work presses—plow, now that harvest is over. It will equalize farm work, destroy weeds, give a better fitting for wheat or rye, and, finally, will assist farmers to sow earlier.

AFTER a heated struggle of several months' duration the Irish Land Bill has at length been passed by the British House of Commons without any very material alteration from the shape in which it was originally introduced by Mr. Gladstone. It is now before the House of Lords, who will hardly dare to make any grave changes in it, and thus enter into dangerous contention with the popular branch of the Legislature.

AT the late great cattle and dairy show at Birmingham, England, the silver medal for the best cheese was borne away by Jubal Webb, who has been styled "the Cheese Fiend," on account of his indefatigable exertions in procuring the very best American cheese. That which obtained the prize was one of the largest cheeses ever made, weighing three-quarters of a ton, and it came from Iowa.

TOMATOES, cabbages, etc., growing in gardens or plots that are likely to be injured by drought may be carried through by the following simple method:—Hoe the earth about each plant so that the hollow thus made will hold half a pailful of water. To the water a pint of liquid manure may be advantageously added. As soon as the water has disappeared, hoe the ground nearly level, leaving it about the stem slightly concave, and cover with salt hay or something of the kind.

THE Rural Farm and the country thereabouts is suffering from dry weather. Corn is curling. It received too much rain when rain was not needed, and gets none at all now that it is in tassel and needs it most. Fodder corn is beyond help. Blackberries are drying up; peaches shriveling. The leaves of many trees are turning yellow and falling. Pastures are brown and clover is burning up. Still, immense hay, oats and wheat crops have been harvested and farmers, even though the corn crop fail, should not complain.

IT will be remembered that last year Congress made an appropriation of $25,000 for boring artesian wells on the arid Colorado lands, to see if by their means water could be obtained in sufficient quantities to supply stock or for irrigating purposes. Reports from Washington declare that this appropriation has been entirely expended, while not a drop of water has yet been got out of the solitary well which Gen. Le Duc sank to the depth of 450 feet near Fort Lyon. Another appropriation of $10,000 was made at the last session of the Forty-sixth Congress to continue the experiment, and Commissioner Loring, warned by the failure of his predecessor, has employed Prof. C. A. White of Greeley, Col., and Prof. Samuel Aughey, of Lincoln, Nebraska, to explore the dry region and locate the best place to sink the well, the work at Fort Lyon being suspended until these gentlemen make their report.

SOME doubt has existed as to the light in which Commissioner Loring views the sorghum sugar making business of the country; but a late letter of his to the Hon. S. H. Kenny, President of the Minnesota Amber Cane Association, removes any apprehension of lukewarmness on his part in promoting the welfare of this promising industry. After promising his hearty co-operation, so far as practicable with the means at his disposal, in the Association's efforts to extend and perfect the manufacture of sugar from sorghum, he says, "The production of sugar in this country that shall successfully compete with foreign markets, and supply the constantly increasing demand, is an object of commercial, as well as agricultural, importance, and may well engage the attention of our farmers. * * * Such encouragement, therefore, as is compatible with other interests and legitimate obligations of this department, it will give me pleasure at all times to extend to your praiseworthy pursuit."

THE newly appointed Cattle Commissioners will hold their first meeting, to arrange a plan of action, at Saratoga, N. Y., on the 10th inst instead of assembling at Washington on the 1st., as at first designed. Judge French, Asst. Secretary of the Treasury, who has always taken a deep interest in the subject and chiefly through whose instrumentality the appropriation of $15,000 for the commission was made, has charge of the matter on behalf of the Treasury and will sit with the Commissioners and assist in framing the rules. The object of these will be to discover precisely where contagious pleuro-pneumonia exists in this country; to take measures for stamping it out there and for preventing it from spreading to other places; and to insure that no affected cattle shall be exported. The fact that all American cattle imported into the United Kingdom must now be slaughtered at the port of debarkation 14 days after landing, causes a loss of from $10 to $25 per head—a serious loss to raisers and shippers of cattle here. It is pretty confidently expected that on account of the precautions to be taken here for the shipments of sound cattle exclusively, the order of the British Privy Council on this subject will soon be greatly modified so as to allow the animals to be fattened after landing and to prevent the frequent necessity for forcing their sale on an over-stocked market, but in view of the growing demand across the water, for the "protection" of home industries, we do not share, to any great extent, in this confident expectation.

THAT 200-acre experimental tea farm of the Department of Agriculture at Summerville, near Charleston S. C., seems to be a poor investment even at the rental of $1 a year. Mr. Sanders, of the horticultural branch of the Department, who was recently sent south by Commissioner Loring to examine it, has reported that it is an exhausted plantation literally worn out by successive crops taken from it without care or fertilization. The soil, according to report, is poor, hungry sand, some portions of which might once have been classed as poor sandy loam, but it now supports only the scantiest sort of vegetation, and there is scarcely a trace of loam. On the place there is an old ramshackle mansion formerly occupied by the governor of the State, and so far the Congressional appropriation of $15,000 seems to have been mainly spent in the partial removal of this old structure preparatory to rebuilding it, and in laying out an avenue through the grounds. The report states that at present about $300 per month are expended for the supervision of $60 worth of labor, and that the climate is too cold to grow strong tea. Mr. Sanders recommends that the farm be abandoned, one person being retained to take care of the tea plants already there, and advises that experiments in tea culture, if they are to be continued by the government, should be carried on in Florida. As we have several times stated, while telling our readers what is known about tea culture, we have never had much faith in the profitable cultivation of the plant in this country under the present condition of the labor market, and we shall not therefore be inconsolable should Commissioner Loring decide altogether to abandon the experiment.

Miscellaneous.

THE NORTHWEST.

Facts About Clay and O'Brien Counties, Iowa.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

IN writing of Clay and O'Brien Counties we will endeavor to state tersely the truths which can be substantiated by any one interested, and it should be remembered that the RURAL cannot, knowingly, be subsidized in behalf of any error.

These counties are the second and third east of Dakota, in the second tier south of Minnesota, each being 24 miles square, and each containing 16 Congressional townships (six miles square) and an area of 368,640 acres, of which between one-fourth and one-fifth is under cultivation, by a population officially given by the last census at 4,800 for Clay and 4,155 for O'Brien, now safely estimated at 11,000 for the two, so rapidly are they advancing.

Their entire topography is gently undulating prairie, more marked in its elevations and depressions in the southeast part of O'Brien, and more level north and south through the center of Clay, in the northeast quarter of which is a cluster of four lakes, Lost Island, Trumbull, Swan, and another. The Ocheyden and the Little Sioux Rivers flowing south, form a confluence at Spencer. In this county are also five creeks and several streamlets, and a number in O'Brien, which secure ample water for stock and good surface drainage.

The soil in the southwest corner of Clay, and in the most of O'Brien, is a silicious marl, or a species of bluff deposit, but in the remainder of the area it is alluvial, both being very rich and productive and varying in depth from 20 to 36 inches, overlying clay and sub-strata of gravel. Though there is some low land, it is not waste land, and 'tis very desirable for grazing and pasturage. In both counties there are numerous artificial groves of timber, as their culture secures, by State law, a rebate from taxation; besides, there is natural timber along the streams and in small bodies in different localities. Lands range in price from $4 to $10, and farms from $7 to $15 per acre. Of the latter but few are for sale, only where some man, by misfortune or mismanagement, is obliged to "go West." The sale of lands in these counties this year is estimated at over 30,000 acres, fully one-fourth of which is already under the plow.

FLAX CULTURE on new breaking has given fresh impetus to this interest and to the improvement of the lands, which it helps to subdue while yielding a liberal profit. About three pecks of seed to the acre, which may be sown from the middle of May to the 10th of June upon the sod, will yield an average of seven or eight bushels. Flax is also largely raised here upon older ground, yielding 12 to 15 bushels per acre. A careful estimate places the number of acres of breaking sown to flax this Spring at 7,500, and the quantity of seed sown in both counties, on old and new ground, at 12,000 bushels. The Northwest is taking the lead in the practical exclusion of imports of Calcutta linseed. The receipts of flax-seed in Chicago for 1880 were 3,033,491 bushels, which will doubtless be increased about 80 per cent. in 1881, and Northwestern Iowa will be the most prominent factor in this exhibit. Harker & Dean, of Storm Lake, Iowa, are helping immigration practically. Having purchased a large quantity of land, they pay $2 cash per acre for breaking, furnish flax-seed to sow the sod, pay half the expense of thrashing, and give half the crop of flax, and when the land is under cultivation sell it to the same parties, if they desire to purchase, on easy terms. Mr. B. F. Felt, Jr., Hartley P. O., is their superintendent. All crops are now looking well; wheat, oats, corn, flax, domestic grasses, in fact everything gives promise of nearly an average yield. More attention should be given to fruit, and in the infancy of a farm there should be planted a good orchard.

Yet, with the flattering statements already made there is no branch of industry which is as well adapted to this country, or, pays as large and sure a profit as stock-raising. The natural grasses are abundant and nutritious; water is in ample supply and pure, the climate healthy and invigorating, both counties provided with a herd law, and with these advantages great interest is taken in buying blooded stock, so that herds of good grades of Short-horn strains are large, numerous and increasing. From one of the leading stockmen we learned that stock pays an average of 30 per cent. per annum net profit, which is certainly better than clipping 6 per cent. coupons. Closely allied to this is the dairy product: the conditions named above insure good butter; and the reputation of Iowa Creamery in our Eastern cities, renders comment needless The farmers, too, can realize more for their cream by patronizing the creameries than in any other way. To emphasize the extent of this interest, we heard that Penfield, Allen & Co. were starting a creamery at Spencer with a capacity for making 2,000 pounds of butter per day. They will make, the present season, 600 to 800 pounds daily; they practice the cream-gathering plan, and will use horse-power this season, but will probably require steam next year.

The educational interests of these counties are well sustained, and exhibit the characteristics of an intelligent, cultivated and enterprising populace.

The Iowa and Dakota Division of the Chicago, Milwaukee, and St. Paul Railway supplies them with the benefits of the two great Western markets—Milwaukee and Chicago; and the road connects in the same depot at Chicago with the Pittsburg, Ft. Wayne and Chicago Railway, and this in turn connects at Pittsburg with the Pennsylvania Railroad, making the best and most direct route from the East to these counties. The R. R. Co. have stimulated settlement and improvement by selling a large quantity of their lands here and allowing rebates upon the price, where breaking is done the season of purchase. Their agents are J. L. Hewitt at Spencer, and Harker and Green at Sanborn. The Chicago, St. Paul, Minneapolis and Omaha R. R. passes through O'Brien Co., making connection with the lumber districts of the north and all prominent markets in the county. Other roads are anticipated in the early future. The valuations of property are:

Real Estate, Clay Co.		$1,152,849
Personal,	"	220 481
Railroad	"	97,240
Real Estate, O'Brien Co.		1,028,000
Personal	"	152.000
Railroad	"	119,000

These are the assessed values, being about one-third of the actual figures; and, considering the difference in estimated worth, the taxes here compare favorably with those of older and wealthier Eastern localities. Homesteads and land grants, exempt from taxation, have also tended to make their taxes higher than they will be from this time onward.

We have spoken of cattle—a word more of other stock; many flocks of sheep grading into pure Cotswolds are noticeable. Berkshire and Poland-China hogs have supplanted the "prairie rooters" by thousands, and many are turning their attention to a finer stock of horses, both draft and roadsters. Among these are Geo. W. Sherwood with a 640-acre farm two miles south of Sheldon, 320 under cultivation. Beside his stock of cattle and hogs, he has about 25 good mares, and several blood stallions. Mr. Sherwood, and W. T. Williams (Sheldon) are doing much to raise the grade of stock in this section.

SPENCER, The county seat of Clay County, is a pretty prairie site with wide, clean streets, good side-walks, comfortable residences, and a supply of business houses, elevators, etc.; many trees have been planted, and lawns, shrubbery, flowers and other evidences of æsthetic taste are receiving attention. Its growth is marvelous, from a population of 342 in June, 1880, it now numbers about 1200, and there are at present over 60 buildings in process of completion. There are six religious organizations with three church edifices, and a fourth under contract; a graded school of four departments under efficient teachers, and a remarkably vigorous local press, including the Clay County News, a seven column quarto, in its eleventh volume, by C. M. Whitman; the Spencer Reporter, a nine-column folio in its fourth year, by A. T. McCargar. Both flourish upon their merits, *sans compliments*. "The Owl," a monthly real-estate journal is published by J. B. Edmunds. From its name it should impart wisdom. Civic societies, and social privileges equal those of Eastern villages. Surrounded as it is with a fine agricultural district, it ranks high as a shipping point; probably a ton of butter is handled here every day and from one to seventeen car-loads of stock are shipped daily in the season, and this year the shipment of flax-seed will be immense. Every line of trade is well represented and prospering. By the way, we found here one stock of goods in gents' furnishing and boots and shoes, that in quality, display and prices, is really metropolitan, and entitled to special notice and commendation. Spencer is now well supplied by the C. M. & St. P. Railway, but the people are hoping for connection with the Wabash system, via Des Moines, securing competition South and East. There is an excellent opening here for a foundry, steam flouring mill, flax mills, both oil and fiber; canning and packing establishments, light manufacturing, and a good hotel building. We were nicely entertained by Frank Daniels of the Gregory House, but his building does not meet the demands of the public or his own wishes. Griffin and Adams (bankers), A. W. Miller (Clay Co. Bank), J. P. Edmunds (banker), C. S. Penfield (loan agent, and creamery), A. Hubbard (attorney), J. L. Hewitt (R. R. Agent), all dealing in real estate, extended us valuable assistance, which deserves public recognition as representatives of THE RURAL. Address any of them (inclosing return stamp), and you will be sure of a courteous answer. We are also under obligations to Evans Bros., liverymen and proprietors of the stage line from here to Spirit Lake.

SHELDON, with a population of 1,000, is a pretty town at the crossing of the C. M. & St. P. and C. St. P. M. & O. railways on the west side of O'Brien County. It has five religious societies with three churches; civic societies, too, are well represented; there is also a graded school—four rooms, with three teachers; well conducted. We compliment the town on having such a thoroughly first-class paper as The Sheldon Mail by F. T. Piper, an eight-column folio completing its first decade. A local press is regarded as a kind of mirror, reflecting the general characteristics of the majority of the citizens. There is a large steam flouring mill, as well as three elevators, and a lively business in all departments.

SANBORN, eleven miles east of Sheldon, on the railroad, with 436 population a year ago, now numbers over 700, and is steadily growing. There are three religious orginizations, with one church building, A. F. & A. M. There is a good school; folks expect to erect a large school building this season. The O'Brien Pioneer is a newsy paper, an eight-column folio, by Walker and Willets—a valuable auxiliary to the town and well sustained. Sanborn is a division point for terminal train service, next west of Mason City; it has a round-house with six stalls, repair shops, ample side tracks, a good well with wind-mill power, the best stock yards on the line west of the Mississippi River, covering five acres, with shoots for loading and a large number of men are employed. Over 50 new buildings have been erected within a year. The location is pretty; the surroundings healthy; the business men energetic. There are also a bank, stores, a hotel (the Jenkins House by A. W. Creed), shops, etc. There is a demand for a homœopathic physician, harness maker and a good stock of general merchandise.

We record our thanks as press representatives, for valuable information and assistance to Warren Walker, of the Pioneer, and attorney; Harker and Green, bankers: and Broadstreet and Day, attorneys, all of them dealing in real estate in O'Brien and adjoining counties. Any letters addressed to either regarding the town or county will receive a prompt response.

PRINGHAR is the county seat, located near the geographical center, with an intelligent, thrifty population of nearly 400; a frame school building valued at $3,000—graded school of two departments, lodge of A. F. & A. M. The M. E. Society have a church building and the Episcopal will soon erect another. The Pringhar Tribune is an eight-column folio, of neat typographical appearance and well edited by C. G. Bundy. Though deprived of railway advantages the town exhibits the elements of progress and improvement, and as it is now expected that the Chicago & Northwestern Railway will build through here this season, the town and this portion of the county will receive a new impetus in growth, a prospect that makes the present a desirable time for locating here. The place needs a steam flouring mill, a flax and a tow mill, and, in fact, any industry adapted to the products of the country would do well here. C. E. Achorn, of the law and real estate firm of Schee & Achorn (representing 75,000 acres of land); J. R. Pumphrey, banker, real estate and merchandizing, here and at Hartley, and Warren Walker (also of Sanborn) took each an active interest in aiding your correspondents, for which we return thanks. They also consented to answer any letters of inquiry addressed to them by parties interested.

HARTLEY is a prairie town of about 150 population, on the railroad between Sanborn and Spencer, in O'Brien County; it is laid out with wide streets and presents a fair opportunity for growth; town lots range from $20 to $50. Its growth has all been within two years and mainly since September last. The M. E. Society will soon build a church edifice. There are a substantial frame school building and a creditable district school. There is an opening here for almost any business or industry, but a harness maker and wagon shop are specially desired. J. S. Finster, alive to the interests of the town, has just erected a frame building which he will use for a store below and a hall above, affording a place for public gatherings. Several other structures are in process of construction and the town bids fair to prosper.

Literary Miscellany.

SOUND ADVICE.

"You wish to be a lawyer, John—well, I'd not say a word
Unless I felt quite certain that your longings are absurd;
I don't wish to discourage you, but then I can't consent
To board you, as I hev to do, and pay your office rent

"You've got a lusty set of limbs, and ordinary head,
And you were meant by common toil to earn your daily bread;
But thriving farm and pleasant home where man and wife agree,
Beat any one-horse lawyer's luck as far as you can see.

"If you'd been born with talent, John, you'd long ago. hev shown
That you had gifts, by stealing off to study books alone.
Now, if you've read a book, I r'ally don't know when,
Though, come to think, I b'lieve you sling a somewhat legal pen.

"Be wise, my boy, the legal ranks are more than crowded now,
And half of them who starve therein were cut out for the plow,
But they mistook pure laziness for talent, understand.
And helped to fill a big supply where there was no demand.

"Are they not educated? Yes, but here let me explain
That seed that's sown in shaky soil brings forth but little grain;
And this higher education to an ordinary mind,
Is like a pair of big gold specs upon a man that's blind.

"There is no prouder place than 'twixt the handles of a plow;
(Though stumpy land has humbled me at times I'll allow,)
And as for human greatness, I should think I had my share.
If I could take the prize for hogs at our next county fair.

"Just emulate your sire, my son, and just as sure as fate,
You'll be respected, though, perhaps, you won't be great;
But enter law, and five short years will clean you out so bad,
You'll have no recollection of the last square meal you had."

THE MANOR HOUSE.

Continued from page 506.

IT seemed to me if my room had been invaded by a host of armed men—men literally in armor, or carrying a whole arsenal of weapons, for the noise was mainly that of clattering steel and iron. The noise must have gone on for some seconds before I was perfectly awake; after that it prevaded the room for a time, then abated, but never so far ceased that I was free from the impression that I was in the company of a crowd. The room was quite dark all this time (how long exactly I never knew), and I felt extremely uncomfortable. I may go further and confess without shame that I was seized with a panic of terror—a fear so paralyzing that for the moment I could do nothing. My lights were there at my elbow, but I did not dare move a hand to reach them. All I could do, as so many of us have done in childhood, and indeed long afterwards, was to pull up the bed-clothes and try to bury myself among them. By degrees, as there was no more noise I was beginning to be reassured, when all at once the clamor recommenced, this time, as it seemed, at the very foot of my bed. There was the same hurrying to and fro of heavy feet, the same clattering and banging of steel. Then this was followed by a sudden seemingly simultaneous rush towards the windows. I heard the rattle of one of the casements, a fierce struggle, then a piercing shriek. Something heavy had been thrust out, and had dropped into the moat. I distinctly heard the splash in the water, like a great boulder rolling off a high cliff into the sea. There was another sound of feet rushing back towards the door, thence out into the corridor; and for some time I still heard them, but growing more faint, till they presently faded altogether away.

I lay quiet for some time, quite unable to sleep, but becoming gradually more and more composed. By and by I mustered up courage to strike a light. The room was as snug and habitable as ever. I looked at my watch—it was past three. Daylight was due in an hour. I fancied that there was no fear of a recurrence of my visitation, so I got up and examined the door; it remained locked and bolted as I had left it on retiring to rest. The windows, which I had so distinctly heard opened, were also securely fastened and closed.

I once more retired to bed, and very shortly went off soundly to sleep. When I awoke the sun was shining brightly into my room. I had been awakened by the old gardener, who was knocking loudly at my door. He was very anxious to know what sort of a night I had passed.

Should I tell him—cross-question him—endeavor to find out whether the same thing happened to all occupants of the state chamber? No! I felt it would be a premature confession of weakness. I preferred to go farther into this mysterious business before I admitted that I had been scared.

All that day I spent in wandering about the place, doing no work, but fixing upon the best points of view, I constantly met the old gardener. I tried to draw him into conversation. I questioned him concerning the Manor House: what was its history—was it very old? had anything odd, any deed of violence, occurred in it? when did the family last live there? and so on. All he would tell me was that it had seen many changes and chances. There had been much fighting there in times past; it had been a garrison for King Charles; it had been beleaguered and besieged, and well nigh lost to the cause through a traitor within the walls, who had betrayed it to the enemy, but who had been detected in time, and had paid the penalty of his treachery with his life.

Was this a clue to the strange noises I had heard? I determined to give the state chamber the trial of another night. But on this second occasion, although I retired to rest as before, I kept a light burning, and, having fortified myself with two cups of strong coffee, I had no desire to go to sleep. I read steadily on through the night watches—my book was a novel of Anthony Trollope's; and as two o'clock came without a repetition of the previous noise, I concluded I was not to be disturbed, and was actually on the point of extinguishing the light and turning over to sleep, when I heard far off, but distinctly in the corridor and making towards my room, a hurried frenzied movement, as of the approach of a number of armed men. Next moment my bedroom was invaded hotly and hastily by a crowd. The noises were exactly those of the night before. My burning candle made no difference whatever; the room was just as fully occupied; my ghostly visitants were as busily employed. After the same delay I heard the window opened, and the same heavy fall into the waters of the moat.

The more I pondered over this strange occurrence, the more I was inclined to think that the mystery was connected with the moat, and with the old gardener's story of a deed of violence done ages ago. I determined to question him further about this moat. Had it ever been drained off? I asked him next day. "Not that he knew of; why should it?" he replied. I suggested that stagnant water was reputed unwholesome, and that the health of the occupants of the Manor House might some day suffer. It was not likely to have many occupants, "except perhaps the likes of yourself," he remarked somewhat contemptuously, as though he thought me a fool for living there at all. Finding I could make nothing of the gardener, I went over to Blueburgh and saw Miss Maxted's agents. I pointed out that, on sanitary grounds alone, the occasional draining of the moat would obviously be of great advantage to the house. If Miss Maxted would permit it to be done, I should be very much pleased to superintend the operation. All the answer I received at first was a series of questions. Did I complain of the unhealthiness of the house? If so, I was the first who had done so, and the remedy was in my own hands. Did I propose to inflict the cost of drainage upon Miss Maxted? She could hardly be expected to meet the outlay, especially for a tenant who had in a manner forced himself upon her. Unless I had better ground for preferring my request, the answer was certain to be in the negative.

Upon this I had recourse once more to my aunt. I begged her to see Miss Maxted, and inform her that I was not quite satisfied with the Manor House. It was not exactly uninhabitable, but it was difficult to get a good night's rest there. Miss Maxted would doubtless be well aware to what I referred. I was not particularly alarmed, nor had I even been made uncomfortable. I was prepared to face even worse than that which I had encountered at Maxted; but in the owner's best interests, I wished to purge the house of the annoyance which troubled it, and if I was given full powers I thought I knew how. What I wanted was permission to have the moat drained, cleaned and thoroughly examined. Would Miss Maxted agree to this?

My aunt's answer came at length. It was very rambling and rather hysterical. She began by imploring me to leave Maxted Manor without a moment's delay. From that she passed on to a catalogue of all that had come under her notice

during the last five-and-thirty years. It was only towards the end of her letter that she referred to the matter which I had at heart. Then at last she confided to me that she had seen Miss Maxted who had seemed much surprised, not to say vexed, at what I had written. But whether this arose from concern at my sufferings in the state chamber, or annoyance at the light way in which I treated the Maxted ghosts, I could not for the life of me make out. All I could gather was that Miss Maxted had somewhat grudgingly yielded to my request, and had instructed her agents to give me every assistance in draining the moat.

So the moat was drained. The whole country side, not a very populous district, came to assist. It was not a difficult job, as the house stood at a higher level than the surrounding ground, and the water from the moat was run off into a large duck-pond near the gardener's cottage. The work was nearly finished towards sunset, and the men went off, leaving the rest of the water still to run. The moat must have been quite empty by midnight. I once more occupied the state chamber, which after the second night's disturbance I had vacated, and I sat up till two in the morning, awaiting the usual visitation. The affair came off as heretofore, but with one curious difference. The window was opened; there was a struggle, a shriek and a heavy fall—but not into water, obviously because the water was all gone. This made me all the more anxious to inspect the bottom of the moat, and I was determined to be the first to do so. Very soon after daylight I was moving, and, having dressed myself, hastened to the spot to explore. The bottom of the moat was in a filthy condition. Paved with massive blocks of granite, in which the process of disintegration was slow, there had been in all these years but a slight accumulation of muddy sediment: but the stone floor was encumbered with a thousand odds and ends, a heterogeneous collection of the most extraordinary nondescript things. Fragments of crockery and glass; drinking vessels, some of horn and evidently centuries old; scraps of various metals; the carcass of a cat recently drowned and not yet decomposed—these were what first caught my eye. There would be fine pickings for mud-grubbers and chiffonniers if they might be permitted to sift and search among these newly exposed treasures. I did not pause to turn them over myself, but made for that part of the moat which lay immediately below the window of the state chamber and peered down.

What was that lying all of a heap, like a collection of old iron at the door of a rag and bone-seller's shop. A number of pieces of iron evidently, all oxidised and corroded, covered with red rust and a deposit of slimy aqueous lichen. Without delay I clambered down into the moat and began to examine them more closely. They were clearly pieces of old armor, breastplate or cuirass, greaves, gauntlets, with a round helmet lying a little apart from the rest. I turned over everything one by one, and, to my horror, discovered within, a quantity of human bones, all in excellent preservation, each encased still in the armor which had once been their protection against mortal foes. The breast-bones were plainly distinguishable inside the cuirass, the thigh bones were within the greaves, the hands in the gauntlets; worse than all through the open visor of the morion grinned the still perfect teeth of a ghastly skull.

"These then," thought I, "are the mortal remains of some poor wretch whom revengeful or other passions have sent thus secretly, and probably without warning, to his long account. They must be taken up and buried without delay."

"Hulloa, master, what are you after down there?" cried a voice at this moment, and I saw the old gardner above, looking at me with suspicious eyes.

"Come and see for yourself. You may as well lend a hand. These bones are human bones—"

"I wouldn't touch them with the end of my long rake," he said, shuddering. "You'd best leave 'em alone too; what call is there for you to meddle or mix with these things? They don't concern you."

"I'll go bail that when these bones are buried there'll be no more haunting of the state chamber. Come, don't be an old fool. Lay hold: I'll hand them up to you, one by one."

Very reluctantly, and grumbling audibly, the gardener received the armor and the bones they encased, as I gave them to him. Then I climbed up the stone counterscarp of the moat, and with his assistance removed them all to a corner of the garden. There I made the old man dig a deep hole, and we consigned them to the earth. A small stone was set to mark the spot, in case Miss Maxted or any one might wish to reopen the rude grave.

"There, Mr. Duke," I said with a sigh of relief, "that's the end of that business. The manor House will be no longer worried by ghosts."

"Ghosts never forgive, master," said the gravedigger, gloomily. "You may think to muzzle 'em and put a stop on 'em here; but they're like weeds. If they're pulled out of one corner, 'll spring up faster in another."

"I feel certain at any rate, that they'll leave the state chamber alone."

"Maybe, and it'll not be a day too soon. But there is a curse upon the old place, I'm afeared, and if you stop here, master, you'll be troubled by them in some other way. Mark my words—in some other, worser way."

I was right, however, as to the state chamber. I slept in it that same night, and the next night, and still a third, without encountering the slightest disturbance or annoyance. After this I felt justified in writing, through my aunt, to advise Miss Maxted of the success of my operations. In due course, and through the same channel, I received the owner's warmest thanks. But doubts underlaid every line. Miss Maxted, like her gardener, mistrusted the completeness of the cure. I might be confident that the Manor House was purged, but she knew the place better, and feared that manifestations and visitations would crop up in some other shape and form. The message I received ended with a sentence which gave me, as I thought, much insight into Miss Maxted's character. "Perhaps, as I seemed an amateur in ghost laying," she told my aunt, "I might not mind exercising myself a little longer in the attempt to render the Manor a hospitable house." Miss Maxted was clearly chaffing me—making game of me—and I am not sure I was altogether pleased.

But the days and nights slipped by without any fresh occurrence. The former I spent at my easel in the air; it was perfect painting weather, and I had already several pictures well on towards completion. The latter I passed in the snug dining-room reading and dozing before the fire. I slept now always in the state chamber, and retired early to rest. One night—it was about a fortnight after the drainage of the moat—as usual I took up my candlestick soon after ten, and went through the door leading into the corridor, which, as I have said, margined all these rooms, and led to the foot of the staircase. All along this corridor, it will be remembered, were windows opening into the central court.

I had issued forth a little brusquely, as was my wont: but the moment I was through the door I became conscious that some one was watching my movements from the central court. I caught sight—I was nearly positive of it—of a partially veiled face at the passage window. It was but a momentary glimpse; directly my eyes rested upon it, it had disappeared. Yet it left a distinct impression on my mind. It could not be mere fancy or imagination. I was perfectly cool and collected, and I had a clear recollection of what I had seen. The head was enveloped in a white hood or snood, which was drawn across the lower features and concealed them, and indeed most of the face but the eyes. Those eyes! as they glittered bright and balefully in their snowy setting, I felt certain I had seen them before. But where?

To be continued.

BRIC-A-BRAC.

See the lawyer as he stands
Moving jaws and waving hands,
Telling lies he understands—
Pressing of his suit.

See the tailor, with a zest,
Like all tailors poorly dressed,
Ironing coat, pants and vest—
Pressing of his suit.

Mark the lover while he kneels;
Tell the thrilling throb he feels;
Hear the nonsense he reveals—
Pressing of his suit.

Lawyer's suit may be amended,
Tailor's suit may be a-mended
Lover's suit may be aim ended
Where the suit don't suit.

THE STORY OF AN UMBRELLA.

The Nachrichten of Basle tells a story which may give the bold purchaser a hint of a new method of protecting himself against fraudulent shopkeepers. A young gentleman bought a silk umbrella from an umbrella-dealer indefinitely characterized as C——. The next day was rainy; the umbrella was put into use, but the silk tore in six places during the first hour of its contact with the rain. The purchaser went straight to the shop, exhibited the ruined article, and demanded a sound one in its stead. C——'s silk umbrellas, however, were made to sell, not to endure use; the dealer smiled politely, and observed that purchasers ought to be careful when they made their selections. The young man took home his umbrella, painted around it the following inscription in big letters: "This is how an umbrella looks to-day which was at C——'s shop yesterday," and hired a commissionaire to walk to and fro before C——'s shop with the opened umbrella for a whole day. This unusual form of advertisement naturally irritated Herr C——, and could not have been without a deterring influence upon possible customers. C—— sent for the police, and asked them to arrest the bearer of the umbrella, but they declared that they could see no legal crime in the commissionaire's proceeding, and declined to take him off to jail. Early the next morning, the imperturbable umbrella-carrier appeared again, and he kept sentinel in this manner in front of C——'s shop for nearly a week. At the end of this period, the shopkeeper saw that he must give way, and calling the man, asked him to go to his employer and say that everything should be settled according to his wishes. When the bold inventor of the stratagem entered the shop, the dealer offered him a sound silk umbrella in exchange for the sickly one. The purchaser agreed to accept it, but added the further demand that the dealer should pay the commissionaire a week's wages, to which suggestion he was compelled to assent.

Now doth the comet serenely sail,
Throughout the cerulean blue;
Walking ahead of its tortuous tail,
And setting astronomy askew.
—Irvington Washing.

A child in a small Bavarian village was being catechised by a priest, and, asked how many things are necessary in a service of baptism, he promptly replied, "Three, father." "Ah, you stupid," retorted the holy man, "I thought everybody knew that only two are absolutely necessary; first, water, and second the Bible. Now, young sir, won't you tell me what are the three?' The boy looked up with a bland smile, and answered, "My father, the three are first, water; second, the Bible, ; and third, a baby."

"Two heads are better than one,"—on a letter that weighs over half an ounce.—Yawcob Strauss

For Women.

CONDUCTED BY MISS RAY CLARK.

THE CHILDREN.

"I'm tired of this ceaseless worry"—thus the weary mother said:
"I rise up betimes in the morning, and I'm always the last to bed;
Yet my labors are never ended, and the children's frolic and strife
Seems sometimes to drive me crazy, and I'm tired of this wretched life."

I grieved for the weary mother, for her face was worn and wan,
And a rosy bride I'd seen her but scarce five Summers gone:
But, when I looked at the children—so happy, so healthful and gay—
I spoke not a word of pity, but turned with a sob away.

For I minded how once my dwelling, now orderly, still and neat,
Re-echoed my children's voices, and the pattering of their feet.
As they scampered thro' hall and parlor, and in and out at the doors,
While dollies usurped my sofas, and picture-books strewed my floors.

And I minded the day they sickened, and their voices grew sad and weak,
As the fatal fever hightened, and wasted the burning cheek,
Till over the pale, pinched features, so changed from their winsome grace,
Crept the look—O so hard to witness!—of woe on a baby's face!

O God! Thou dost all things wisely, and I question not Thy decree!
Perchance I had else forgotten that my treasures were lent to me.
But, ah! the benumbing anguish to list for the failing breath.
As the dear form chills and stiffens in the cold, cold clutch of Death!

To-day, thro' my lonely dwelling, so quiet, precise and neat,
Where the echoes are sadly silent, I wander with restless feet;
I find not that old confusion which once did sorely annoy,
But I moan 'midst the drear precision, for the sight of a broken toy!

O courage! ye weary mothers whose labors seem never o'er;
Ah! vapid and vain your being should your little ones need no more!
My children are gone forever; but all that a mortal might strive
Were bliss—but bliss—could I clasp them safe, safe in my arms alive!

SUMMER DREAMS.

"Thus, gazing on thy void and sapphire sky,
Oh, Summer! in my inmost soul arise
Uplifted thoughts, to which the woods reply,
And the bland air with its soft melodies,
Till, basking in some vision's glorious ray,
I long for eagle's plumes to flee away."

In this noon of Summer's glory, when her radiant smile spreads a russet-glow over earth, and her brown, ripening palm showers the beautiful and the needful in lavish abundance around us, even the world's busiest toilers will pause to inhale her perfumed breath and dream,

"Forgetting awhile all their trials and strife;
The dull, cheerless factories, the long, toiling hours,"

Generally we think only of fortune's favored ones dreaming beside the crested ocean wave, or, solitary, beneath the shadow of the lofty mountain peak, as though ease and favorable surroundings alone could foster that luxury of thought and emotion. But the busiest, the humblest and the most practical have their Summer dreams. No perception so dull, no heart so callous, but it yields, consciously or unconsciously, to the subtle influence of Summer's charms, whether in the dusty avenue of the city, in the din of the workshop, or the bustle of the humblest home, so long as grass grows by the wayside, and trees retain their foliage and zephyrs fan the languid air.

Our emotions are strangely allied to external nature. Every chord vibrating in her heart finds a responding echo in our own. The brilliancy of the morning calls forth a song of joy; the languid, tremulous silence of mid-day claims—

"The voiceless thought which would not speak but weep,"

and in the solemn grandeur of the night it becomes a prayer. Youth dreaming of the golden future, age of the mellow past. One half the world expressing in song what the other half would say in sighs. One sweet influence upon different minds. We can scarcely realize or define the subtle spell, but it is upon us nevertheless,

"Filling our hearts with beauty not of earth,"

making it feel strangely tender and teaching our lips a new language of love and humanity.

They say that dreams are idle, the outgrowth of a weak sentimentalism; but we have ever found them humanizing and elevating, springing from an imaginative, generous mind to enhance the beautiful and beautify the unattractive by their magic coloring.

See, for instance, the wee bare-footed, brown-limbed bit of humanity by the roadside, intent on building a mud castle. Is not that a dream beautifying reality? Would we have it otherwise? Would we have the little hands idle, and the young, creative brain inactive, because it is only a dream? Yet what are we but older children, embryos of divine excellence to whom just such dreams serve to show and incite to live for the highest beauty and perfection attainable? The castles we build, the dreams we dream, evince a spark of the soul's loftiest aspirations.

Dream, therefore; sing, weep, pray: whatever good, or tender, or beautiful thy heart impels thee to will ennoble thy soul, enrich thy life and soften its rugged aspect! Open thy heart's sanctuary to the music of nature's thousand voices! drink in its heaven-born inspiration

"Till the toil-weary soul leaps forth from the dark
To worship its God in His temple of trees."

BERTHA A. WINKLER.

ECONOMICAL COMFORT.

WHILE traversing a road in a city's suburb I chanced to see what the seeker of comfort no doubt will be pleased to learn of. A plan so simple has perhaps, been devised by many, but as minds run in so many different channels there may remain some to enlighten. The story is this: gazing at a cottage near the road I noticed the piazza had been enveloped in mosquito netting. From the further end to, but not covering the doorway portion, it was tacked securely from top to bottom and the division between the entrance and the part fronting the windows was framed off with narrow strips just heavy enough to hold a door frame, in this was a door, the whole being covered with netting. Double width netting can be bought from 8 to 10 cents a yard, and a dozen yards probably was all that was necessary so the cost must have been trifling. The occupant had added a hammock which hung inside the inclosure and increased the picture of solid enjoyment. Those who are driven indoors by the tormenting mosquitoes and flies should invest in a few yards of netting, some tacks, etc., and make out-door like sufferable. INTEREST.

FASHIONS.

Parasols to be stylish must have a pompon of feathers or a bunch of roses on top.

Panama straw hats with the brim faced with white surah and trimmed with white pompons, are very pretty.

A popular style in millinery is to line the brims of hats and bonnets underneath with dark-colored velvet.

New Lisle thread stockings show feet entirely of lace work, with the upper portion of lace-work, alternating with widths more closely woven. The lace is either ecru, pale tan-color, lemon or tea-color, and the solid portions are Indian red, dark, blue, or else dark-brown.

Shoe-buckles of antique silver contribute such designs as stars, horse-shoes, the clover leaf and heart, as well as frogs, lizards, snakes, sheep, elephants and camels.

Ornaments for presents include a pair of tiny gold spurs, one of which is to be attached to the top of a riding boot and the other worn on the chateleine as a charm. Some spurs are ornamented with a jewel, such as a ruby, diamond, sapphire, or an emerald.

Some of the new shirred basques have gatherings which cover the shoulders only to the depth of a yoke; the shirring is then discontinued across the bust, and begins again below, the shirrs being extremely small around the waist, and becoming larger as they extend even beyond the hips to the outline of the basque. Much more dressy shirred basques have shirrings at the neck, back and front, in pompadour shape; the interval over the bust is left free, and a width of shirring appears around the waist. The skirt of the basque is then pointed in front at each side, and the much-extended and full back is festooned in the center.

Fashionable seaside toilets are now the order of the day. The latest models in elegant costumes have skirt-fronts of shaded silk, shirred across. Tunics of torquoise, lavender, or terra-cotta-colored vailing are in great favor.

A very fresh looking toilet is thus composed—skirt of Louise-blue summer satin, entirely covered with pretty bands of embroidered unbleached cambric, scalloped out round the edge, bordered with narrow lace, and gathered into flounces; bodice trimmed to correspond.

Linen dresses are made very much in the same way, and trimmed with striped materials to correspond. Outside pockets are no longer worn; the one useful pocket is concealed among the folds of the draped scarf or under the drapery of the paniers.

Little girls wear frocks of pompadour sateen, in pretty floral patterns over light-colored grounds.

Shoes of black kid, semi-high and laced, are adopted for morning toilets; the colored stocking has decidedly taken the place of the white one, which has almost disappeared. Dark colors, such as grayish-blue, garnet, purple and iron-gray, are alone worn for morning hose; for the evening light-colored silk stockings with lace clocks applied are fashionable.

Simple, useful costumes for the country or the beach are made of striped limousine, or of light cheviot cloth in tiny checks upon grounds of uncertain color. To the dress is very frequently added a small pelerine-sort of large collar, either plain or gathered upon the shoulders, lined with bright-colored silk and fastened with a long flowing bow or ribbon of the same color. This pelerine does not come down lower than the shoulders, and does not hide the waist; it, however, dispenses with wearing any other mantle for out-walking.

ABOUT WOMEN.

MISS DOROTHY DIX, well known for her services in the hospitals, is critically ill in Washington.

JAMES RUSSELL LOWELL is giving sittings in London to Anna Lea Merritt, one of the best of the young American portrait painters.

A GRAND-DAUGHTER of the famous beauty, the Marquise de Minute, has just died. Louis XV once said of her "This Minute has no second."

THREE women residing in Brooklyn, N. Y., were lately burned by kindling fire with kerosene and died from the effects. It would seem that there were lessons enough on record to prevent such occurrences; why will they not be heeded?

MRS. MARY A. LIVERMORE has been tendered a great many flattering receptions from distinguished people in London, Eng. She will sail in the "Scythia," for Boston, on the 20th of August, making her so-journ in all about three months.

MRS. ELIZA GARFIELD, mother of President Garfield is very ill and her condition is such that, owing to her age—81—it is feared she will not recover. It is to be hoped that the President will not be subjected to this bereavement in his present condition.

LASELL SEMINARY, a school near Boston, which has taken the lead in directing the education of girls toward making home life useful and happy, is making a much needed addition to its buildings, one feature of which is a model kitchen for the use of the cooking class.

MME. LA MARQUISE ANCONATI VISCONTI, of Paris, has, like M. Gambetta, a silver bath, but the bath of the President of the French Chamber cannot be compared with that of Mme. la Marquise. The water is spouted into the bath by a dolphin. By pressing his right eye you have warm water, and by pressing his left eye you have cold water. A slight pressure on his tongue empties the bath in a few seconds. The bathroom is splendid with painted glass windows and tapestries. The floor is of lava, and also the walls.—N. Y. Evening Post.

NOTE.

WORDS of commendation are occasionally acceptable by everyone, so I judge an acknowledgement of favors and encouraging comments will be appreciated by our kindly disposed patrons—these are now tendered.

Occasion is here taken to remind lady friends, as in times before, that information within our power will be cheerfully given and hints or other communications received with pleasure. Of course we are at times by necessity obliged to honor time and the waste basket, but hope not to discourage thereby. R. C.

Ice water is perfectly harmless and more refreshing with a little Hop Bitters in each draught. —*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

PITHS.

VEAL and pork should always be thoroughly cooked.

A soup of tomatoes and beans is very good—a pint of cooked tomatoes to a quart of soup.

A little chopped parsley added to liver while frying improves it for most people.

Melons are very much nicer if thoroughly chilled before eating.

Never overload a plate or over-supply a table—it is a vulgar hospitality.

The sixth, seventh and eighth ribs for a rib roast will be found the choicest cuts.

When cooking Lima beans, add a handful of minced parsley just before taking from the fire.

Pork steaks, chops or sausages should be served with apple sauce or fried apples.

Custard pie with a generous dusting of powdered cinnamon, will be in favor with those who like that seasoning.

White table linen we think preferable to the delicate pinks, creams and grays which are at present so much used.

Do not neglect to dry sage, thyme, parsley, celery, etc. for Winter use. Dry and pulverize and keep in tin cans or glass bottles.

It is best to make soup the day before it is used. By so doing it can be entirely freed from fat and settlings.

Delmonico is said to allow one and a half pound of coffee to a gallon of water. His coffee is not boiled.

Fill finger-bowls half-full of water and drop a sprig of lemon verbena in each—it leaves a pleasant odor on the fingers after pressing it in the bowl.

Try boiling sweet corn in the husks. This method of cooking adds sweetness and flavor to the corn besides keeping it tender.

Large napkins—without starch—are used for dinner; small fringed ones for tea, and those of medium size for breakfast. But the last-named answer very well for all times.

Never ask a sick person what he will have to eat. Give a variety if possible, and by all means serve the food, if only tea and toast, in the very daintiest manner.

Cottage pudding can be varied by adding ripe berries, cherries, chopped peaches, in fact, almost any fruit, and it generally proves an acceptable dessert. More flour, however, should be added than when making the plain pudding.

Good bean soup can be made from the remains of baked beans. Add water and an onion and boil to a pulp. Press through a colander and season with parsley, butter, pepper and salt.

A covering of thick felt—it comes for the purpose—is used under thick table cloths; it improves the appearance of the linen, it protects the table, and less noise is made with the dishes.

When a light is needed at night and kerosene is used, by removing the fire-board and placing the lamp in the chimney, all bad odor escapes, and one can turn down the wick as low as he pleases without feeling any bad effects.

The remnants of any pudding left from one dinner may be served for the next by arranging it into a compact mass and covering it with a meringue of whipped whites and a little powdered sugar. Set into a hot oven just long enough to brown.

"Larding" is not so difficult as many cooks imagine. Little strips of salt pork and a larding needle—costing about 15 cents—to draw the pork or "lardeon" through the skin, are all that are necessary for the operation. Leave the pork in the punctures so that the exposed ends shall be of equal length.

Housekeepers who have plain white china, and who do not care to discard it or have not the wherewithal to buy new, can give a pleasing variety to their table by buying decorated coffee and tea-cups, "solitaires," or the beautiful dessert sets which can be purchased for a fraction of the cost of an entire new set.

A friend tells us that wheat pancakes, made with either sour or buttermilk, are much better if allowed to stand for 12 hours or even longer before baking. The night before wanted, add enough flour to a quart of sour milk to make a thick batter. In the morning add salt, two well-beaten eggs, and half a teaspoonful of saleratus dissolved in a tablespoonful of boiling water.

Fruit or wine stains on colored cotton or woolen goods may sometimes be removed by wetting the spots with a solution of alcohol and ammonia and then rubbing gently with clear alcohol. The fumes of sulphur will many times remove fruit stains from delicate fabrics.

DOMESTIC RECIPES.

To Can String Beans.

Remove the strings and break into two or three pieces. Boil for a few minutes and then can air-tight.

Good Rusks.

To about a quart of raised bread dough add the beaten yolks of three eggs, a cup of sugar, and half a cup of flour. Mix into little cakes and place close to one another. Rub the tops with sugar and water, sprinkle half an hour, then bake.

Ripe Tomato Pickles.

Pare ripe tomatoes without scalding and pack into jars; pour cold spiced vinegar over them.

Ripe Cucumber Pickles.

Pare and cut ripe, solid cucumbers into rings, remove the seeds, cook just a little in weak, salted vinegar, take out, drain, pack in a stone jar with alternate layers of whole spice. Cover with a sirup made of one pound of sugar to a quart of good vinegar, boiled ten minutes. Cover tightly and keep in a cool place. A. E. J.

Truth is mighty and has prevailed. See its triumph in Hop Bitters.—*Adv.*

Music Teachers

WILL NOW SELECT BOOKS FOR THE FALL CAMPAIGN,

and cannot possibly find a better book for Choirs, Conventions and Singing Classes, than L. O. EMERSON'S HERALD OF PRAISE ($1.00). which is to be the leading book for 1881-1882

Success follows success in the successive issues of Emerson's books, and this is to be no exception to the rule. *It is in press and nearly ready.* A less expensive book will be THE IDEAL (75 cts.), made expressly for Singing Classes, and except in size, is quite as good, and on the same plan as THE HERALD OF PRAISE.

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will search far and long before finding a better Sunday School Song book than THE BEACON LIGHT, (50 cts.) By TENNEY and HOFFMAN. Or LIGHT AND LIFE. (35 cents.) By R. M. McINTOSH.

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will not fail to examine our new and superior WELCOME CHORUS. ($1.00.) By W. S. TILDEN. For High Schools. And the newest and best Common School Song Book, by L. O. EMERSON, called SONG BELLS. (50 cents.)

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PROFESSOR HORSFORD'S PHOSPHATIC BAKING POWDER

Made from Professor Horsford's Acid Phosphate.
Recommended by leading physicians.
Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.
In cans. Sold at a reasonable price.
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ON THE LINE OF THE WISCONSIN CENTRAL R. R.
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REAL ESTATE of every kind, town and country, in the Valley of Virginia. Correspondence solicited. Send per postal card for pamphlet catalogue. TIMBERLAKE, STICKNEY & GUYER, Real Estate Agents, Middletown, Frederick Co., Virginia.

PYRETHRUM
Cinerariæ Folium,
THE GREAT
CALIFORNIA
INSECT-DESTROYING PLANT.

This celebrated plant has been pronounced unequaled as to its value and efficacy by any other production ever introduced on the American continent. Its growth and general use will eventually destroy all noxious vermin which infest the dwellings and persons of men and the domestic animals, as well as the insects which create such havoc with the products of the soil and of human industry.

Among the eminent scientists who have given the Pyrethrum exhaustive and thorough examination and trial may be named Prof. C. V. Riley, Chief of the United States Entomological Commission, and Prof. S. Henry Comstock, of the Agricultural Department, Washington, D. C.; Prof. A. J. Cook, Agricultural College, Lansing, Mich., and Prof. E. W. Hilgard, State University, Berkeley, Cal., all of whom unite in declaring it superior and infinitely surer and safer than any other insecticide ever offered to the public.

On receipt of $5 we will send a package of seed by mail to any address, with instructions for cultivating the wonderful plant from which our G. N. MILCO'S BUHACH CALIFORNIA INSECT POWDER is made. Each package will furnish plants for two or three acres. All orders for seeds must be sent to the

BUHACH PRODUCING AND MANUFACTURING COMPANY,
154 Levee Street, Stockton, California.
J. D. PETERS, Secretary.

Stock and Poultry.

POWELL BRO'S,
Springboro, Crawford County, Pa.
THE MOST EXTENSIVE IMPORTERS OF
CLYDESDALES
IN AMERICA.

SEVEN IMPORTATIONS
for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow.
Largest and Finest Collection ever seen on the American Continent.
ALSO,
HAMBLETONIANS,
And other strains of trotting Stock.
HOLSTEIN & DEVON CATTLE.
Catalogues sent free. Address as above, and mention the RURAL.

BERKSHIRES
AND
Small YORKSHIRES
THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to
Bagg's Hotel Farm,
UTICA, N. Y.

The Rural New-Yorker has in its Free Plant and Seed Distributions in past years introduced or disseminated the following, all of which are generally considered the best of their respective kinds, viz:

Beauty of Hebron Potato, White Elephant Potato, Mold's Ennobled Oats, The Cuthbert Raspberry, Champlain Wheat,
Telephone Pea, Clawson Wheat, Rural Branching Sorghum, Golden Rural Tomato. Defiance Wheat,

Giant Purple Dutch Asparagus, Argenteuil Asparagus, Acme Tomato, Yucca filamentosa (Adam's Needle), Geranium sanguineum, Magnolias of various kinds, Rural Bronze Ricinus, Iris Koempferi, Abies Siberica, Pinus edulis, Hibiscus Syriacus, Hibiscus militaris, Hibiscus moschentos, Deutzias, Weigelas, Rural Hybrid Aquilegias, Bronze Lettuce, Eryngium Lævenworthii, Hybrid Pentstemons, Vitis heterophylla, Molucca Balm, Grindelia squarrosa, Pyrethrum roseum,
AND MANY OTHERS.

THE SEED AND PLANT DISTRIBUTIONS OF 1881 & 1882,
Which will be Sent FREE to all Subscribers who apply, will exceed in VALUE all other DISTRIBUTIONS.

The Seeds and Plants comprising the first Distribution will be announced in the

Fair Number of the Rural New-Yorker,

Which will be published early in September. This will be sent FREE to all applicants. Most of the seeds are now being grown at the Rural Experiment Farm, the first Experiment Farm conducted by any Agricultural Journal purely in the interest of its subscribers. Address
THE RURAL NEW-YORKER, 34 Park Row, N. Y.

News of the Week.

HOME NEWS.

MONDAY, August 1st, 1881.

The President's condition and progress toward recovery are to-day very favorable. Public anxiety has almost entirely subsided. The physicians say that he takes ample nourishment, rests naturally, the wound is acting satisfactorily, his general condition is favorable, and there are no bad symptoms or indications whatever.

The Government has issued orders to the customs authorities of New York State not to allow Canadian vessels to carry lumber to American ports in bond. Heretofore Canadian barges were able to load for New York and other American points by transhipping at Whitehall, but this new order practically shuts them out of the trade. Lumber carried in Canadian bottoms can now only be consigned to Whitehall, where there are no bonded warehouses.

A dispatch from Ottawa, Canada, on July 29, says that the revenue of the Dominion for the year ended June 30, exclusive of British Columbia, shows a surplus over the expenditure of $3,500,000.

During the decade ending 1880, Nevada was the great silver and gold producing state of the Union. Colorado now leads the van, and last year produced gold and silver to the value of $23,000,000. California came next, with $19,000,000, then Nevada, with $15,000,000. Next in order were Utah, Dakota, Arizona, Montana, Idaho, Oregon, and New Mexico.

The progress of the world during the decade between 1870 and 1880, as computed by Michael G. Mulhall, an English statistician, was as follows: Percentage of increase in population, 9.70; in agriculture, 8.58; manufactures, 18.60; commerce, 38.20; mining, 47.06; carrying trade, 53.32; earnings of nations, 19.84; public wealth, 10.57; taxes, 22.34; public debt, 43.39.

The magnitude of the shipping trade of San Francisco may be estimated by the fact that 359 vessels entered from foreign and eastern domestic ports during the half year ended June 30, 1881, aggregating 408,235 tons; the departures were 452,216 tons. The value of foreign exports was $22,044,649. The coastwise tonnage in the same time ranged from 60,000 to 70,000 tons.

Keene, Flood and Mackey are said to be preparing to build a "postal" telegraph line as a rival to the Western Union, which is to connect a number of points within a year, and make a specialty of night messages, which are to be dropped in the local post-office instead of being delivered, an arrangement which would save the cost of delivery by boys—a source of expense as heavy as the transmission by wire, and is already in operation in the Rapid telegraph company. The capital of the new company is to be $21,000,000.

Keene also heads a company just formed to control freight tonnage on the Mississippi, Missouri and Ohio rivers. The company has 63 steamers and 120 barges, and claims to be able to ship grain and provisions to Europe at half the prices by rail from the West and steamer from Atlantic ports.

The New York Legislature, before its adjournment, passed the constitutional amendment for free canals which is intended to make the Erie canal as free a water-way as the Hudson river with this difference that the State will keep the canal in order and the Federal river and harbor bill is supposed to take care of the Hudson river. The passage of the constitutional amendment now will make its consideration by a new Legislature next winter possible and, if passed then, it will come before the people in the Fall of 1883.

It takes 1000 doctors and members of the medical staff to keep the navy with 8000 men in good health, and 200 doctors to look after the army with 25,000 men. In another government medical service, the marine hospitals, which cares for none but transient patients, and in most instances for cases of slight illness, 35 doctors manage to keep themselves busy on an average of less than 800 patients a year.

The New York hoop-skirt factories are busy again with orders from all parts of the country. The crinolines are coming, beyond a doubt.

A remnant of the Modoc Indians, some 40 bucks and 30 squaws, have been committing outrages near Alamo canon in the Sacramento mountains, two Americans at least being killed. A squad of soldiers under Lieut Guilfoyle has killed one of the redskins and is chasing the others.

The main centennial building at Philadelphia is to be sold in August at public auction, and some of the newspapers are trying to have it remain for the 200th anniversary of the landing of William Penn, which comes in 1882.

They hung a judge in Colorado by vigilance committee the other day because he had let off so many scoundrels.

Gov. Crittenden of Missouri has issued a proclamation offering $50,000 reward for the arrest of the Rock Island train robbers, $20,000 of this sum to be given for the capture of the two James boys, supposed to have been the leaders of the robbery, and $6,000 each for the other five men of the party.

Prompt Action in Acute Cases.

In acute cases, Compound Oxygen has been found to act with great promptness. Says one of our correspondents: "I was suffering from cold at the time I received your Treatment—with a pain in the head, sore throat, and violent cough—*and kept getting rapidly worse*, till in a few days I was compelled to keep in my bed. *In three days I was able to get up, and was entirely over it in less than ten days*, which, considering that I am now an invalid at the best of times, is doing well; and I give the Oxygen credit." Our Treatise on Compound Oxygen, containing large report of cases, and full information, sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv*

AGRICULTURAL NEWS.

THE CENSUS ON THE COTTON CROP.—The Superintendent of the Census shows that 14,432,008 acres of land were planted in cotton in 1880, and that the crop of 1879-80 amounted to 5,732,969 bales. The annexed table will show the cotton-producing States, together with the acreage and production of each for the year ending in 1880:—

States.	Acreage 1880.	Bales Produced.
Alabama	2,329,577	699 576
Arkansas	1,041,019	607,223
Florida	245,595	54,977
Georgia	2,615,568	813,965
Indian Territory	55,000	17.000
Kentucky	2,667	1,367
Louisiana	864 490	508,442
Mississippi	2,093,330	955,808
Missouri	32 711	19,733
North Carolina	892,982	389.516
South Carolina	1 361,249	522,548
Tennessee	722,501	330,624
Texas	2,168 319	801,140
Virginia	24,000	11,000
Totals	14,432,008	5,632,969

It is possible that the corrected census report will make some slight variation in the foregoing, as the returns for Arkansas, Texas and Virginia are only approximate. In the following table the products of 1880 are compared with those of 1870, the figures being in each case those of the Census Office:—

States.	Bales, 1880.	Bales, 1870.	Increase in bales.
Alabama	699,576	429 482	270,004
Arkansas	607,223	247,968	359,255
Florida	54 977	39,789	15 188
Georgia	813 695	473,934	339,761
Indian Territory	17,000	.....	17,000
Kentucky	1,367	1,080	287
Louisiana	508,442	350,832	157 610
Mississippi	955 808	564,938	390,870
Missouri	19 733	1,246	18 487
North Carolina	489,516	144,935	244,581
South Carolina	522,548	224,500	298,048
Tennessee	330,624	181,842	148,782
Texas	801,180	350,628	450,512
Virginia	11,000	153	10,817
Totals	5,732,969	3,011,375	2,721,694

A cablegram of July 27 says that a horse disease like that which appeared in this city in 1873 has lately appeared at Berlin and caused much inconvenience to the running of street cars and the employment of horses generally.....The Siberian plague among horses and humans is increasing at St. Petersburg, and has also broken out near Warsaw, where it is producing a panic.....A special to the Chicago Times from Watertown, Dakota, dated July 28, says:—"The wheat harvest begins next Monday. The crop is the best ever grown here, and all the crops are excellent. Grasshoppers are doing no injury in this section of the country. The wheat harvest on the Jim River has begun. The crops are No. 1."....A telegram from Red Bank, N. J., on July 29, says:—"Horses for the past week in this place, Long Branch, Ocean Grove and other places have suffered severely from a peculiar colic. Fourteen fatal cases have been reported. The animals in almost every case succumbed to the disease in about one hour. In a few cases they dropped dead on the road.....Freight from the Pacific Coast to the East, in the half year ending June 30, was 101,040,080 pounds, nearly all of which, excepting 4,331,650 pounds of tea and coffee combined, consisted of California and Oregon products. The wool shipment East reached 5,642,950 pounds.

The following table shows the number of homesteads entered in the different States and Territories up to the end of the last fiscal year, July 30.

States and Ter's.	Acres.	States and Ter's.	Acres.
Alabama	381,425	Minnesota	3,224,203
Arkansas	975,844	Mississippi	162,080
Arizona	4,448	Montana	88,547
California	887,802	Nevada	21,394
Colorado	297,736	New Mexico	13,083
Dakota	796,447	Nebraska	3,105,841
Florida	192,703	Ohio	7,313
Indiana	1,272	Oregon	437,328
Illinois	4 793	Utah	173,496
Iowa	831,969	Washington	340,517
Idaho	66 434	Wisconsin	1,180,825
Kansas	3,684,187	Wyoming	6,630
Louisiana	217,524		
Missouri	975,050	Total	19,265,337
Michigan	1,186,372		

A telegram from St. Paul, Minn., on July 29, says that an exhaustive review of the crop situation in Minnesota, Central Dakota and portions of Iowa and Wisconsin, based on careful personal inspection, shows about the following promise for the harvest now at hand: That the average yield of wheat per acre for the State of Minnesota and for the Red River Valley and along the Northern Pacific Railroad, in Dakota, is not quite equal to the average yield in 1879, the cause of the falling off being damage by high water on the low land and the backward Spring; that the total yield of the State and of the section of Dakota specified will equal that of 1879, the damage from the causes named being compensated for by increased acreage. Probably 1880 should be substituted above for 1879. A telegram from Chicago of the same date says: Crop reports received here from 70 of the 99 counties in Iowa indicate that the wheat and corn will not average more than two-thirds of a crop as compared with last year, the wheat especially being very poor. Early frosts would cause great damage to the corn. The chinch bugs are reported numerous in ten or a dozen counties, and they are at work in more than half of the State. The Army-worms appeared in about 20 counties, but they came too late to do much harm to the small grain. Rye is generally good, and flax-seed is very good with a largely increased acreage. Hay is good, except in low lands, where the crops of all kinds have suffered greatly. The oat crop is fully as good as last year. Many fields of potatoes are rotting. The harvesting is about half done. The late season, wet weather, worms and bugs have injured the crops as a whole at least 25 to 30 per cent.

The wife of a manufacturer in Elgin, Ill., hearing that her carriage horse, which was being used in a team, had been overloaded and beaten with a board by the driver, called the teamster into her husband's office and soundly horsewhipped him till he begged for mercy.....A dispatch from Long Branch N. J., on July 29th says: "The long-continued drought is burning up the corn and other grain in the southern portion of the country, and the dry rot and bugs are making havoc with the potato crop. The handsome lawns of Hollywood Park, comprising 50 or more acres, are burned bare.....The Australasian wheat yield for 1880-81 shows an average yield per acre of 9 81 bushels against 13.29 last year.....The Orkney Islands appear to be a good egg-producing district, as from trustworthy statistics it has been ascertained that during the last twelve months more than 11,000,000 have been exported by steamers and sailing vessels.....The Rev. W. W. Colley, recently a missionary in Africa has distinguished himself at Norwich, Conn., by declaring in a lecture that there was no barren Sahara, and that the whole country known on the maps as sterile and uninhabitable was fertile and densely populated. The wily Arabs started the lie, he explained, in order to keep out competition in the ivory traffic. Is the Great Sahara like the Great American Desert? .....Many of the clergy of the disestablished Church of Ireland are in great distress, inasmuch as those landowners who have hitherto supported them cannot now support themselves.....Reports from over 100 counties in western Missouri, Kansas, southwestern Iowa and Nebraska show a very largely increased acreage in corn, only six counties reporting a less acreage than last year. The yield will also be largely increased if the weather continues favorable. Reports from the same counties indicate that the supply of hogs to be marketed before the close of the Summer packing season will be materially less than last season.....The wheat crop in Minnesota, reported in a dismal condition, it is said by merchants who have many salesman traveling through the State, and whose duty it is to observe the crops carefully, to be very good, especially in the north, which is the great wheat region. The immense amount of buying done in New York by Minnesota merchants shows their faith in the crop.....Tobacco-growers down in Connecticut complain now the cut worms have disappeared that they have to contend with the green worm, which destroys the leaves and makes the prospect of the crop rather discouraging.....It is reported that Boston will try the ensilage system and furnish milk for several city institutions.....The Department of Agriculture says there has been an increase of two per cent in area in potatoes throughout the whole country since 1880. The increase is general in all sections. The States of New York and Michigan report an increase of five per cent each; Missouri an increase of six per cent, and Ohio a decrease of two per cent. The condition of the crop is reported very high. Insect injuries are reported in many localities, but the damage will be slight. The acreage of tobacco is largely in excess of last year, particularly in Maryland, Virginia and Kentucky. But in view of the large decrease in 1880 in these States, owing to the scarcity of plants, the area will not be greater this year than it was in 1879, the year in which the area was given for the census of 1880. The condition of the crop is reported higher than last year at the same time. .....A telegram from Cincinnati on the 29th says: The leaf tobacco market has been unusually excited this week. Sales have been made of 2,132 hogshead at an average of $11.55 per 100 pounds. One hogsheads of extra quality was sold at $65 per 100 pounds. A number of premiums for the best three hogsheads sold during the month were awarded to-day, the first to B. K. Davis, of Owen County, Ky., the second to Larkin Ferguson, of Owen County, Ky., and the third to Capt. McCormick, of Brown County, Ohio .....

Inquiries as to the prosperity of negro farmers in Louisiana were sent to all parts of the State by the New Orleans Picayune, and the replies show clearly that "it is within the reasonable ambition of any healthy colored man now to own land, and to establish himself in an independency".....A vengeful Illinois farmer has commenced 9,000 suits against a railroad company for failing to keep axes and saws, as ordered by law in that number of cars. The aggregate penalty would be $1,800,000 if the prosecution proved successful, and the complainant would receive half.....Virginia farmers in the neighborhood of battlefields are still able to gather up enough old gun barrels to supply their blacksmiths with horse-shoe iron.....Gen. John Pope has ordered Lieut. Shoemaker and a company of men to report to United States Agent Tufts, at Fort Sill, for duty in the Choctaw Nation. The troops will be used to expel white intruders. There is great excitement, and those who were ordered to leave have already sent an attorney to Secretary Kirkwood to plead their case.

THE NEW YORK PLOW CO, 55 Beekman Street, N. Y., desire the address of parties who have, or who propose to build Silos.

Goods of a Prominent Firm Counterfeited.

The Evening Star of Washington, D. C., in issue of June 25th, states that—

"Joseph L. Daniels and William S. Sammons were charged in the Police Court to-day with unlawfully counterfeiting and using certain copyrighted labels of the Rumford Yeast Powder Company."

The Company above-named is identically the Rumford Chemical Works of Providence, R. I., a house whose productions have a world-wide reputation for their superior merit. Their preparations consist of Horsford's Baking Powder, Acid Phosphate, etc., and are the inventions of Professor Horsford of Cambridge, Mass., which fact in itself is a guaranty of their excellence.

The Rumford Chemical works have had quite a number of cases similar to that alluded to; their labels and packages having been so closely copied that the casual observer was readily deceived. They are determined to proceed against infringers of their rights to the fullest extent of the law, and this course is due to the public as well as to the proprietors.

As a Cure for Piles

Kidney-Wort acts first by overcoming in the mildest manner all tendency to constipation: then, by its great tonic and invigorating properties, it restores to health the debilitated and weakened parts. Try it.—Item.

The Horsford Almanac & Cook Book sent free on application to Rumford Chemical Works, Providence, R. I.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 50 cents per box.

Thousands of women have been entirely cured of the most stubborn cases of female weakness by the use of Lydia E. Pinkham's Vegetable Compound. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

All your own fault if you remain sick when you can get Hop Bitters that never fail.

BURNETT'S COCOAINE.

Promotes a Vigorous and Healthy Growth of the Hair.

It has been used in thousands of cases where the hair was coming out, and has never failed to arrest its decay.

USE **Burnett's Flavoring Extracts**—the best.

The Markets.

CROPS AND MARKETS.

There is nothing new of special importance to mention with regard to wheat and corn. Owing to the large supply, the break in values at the West, and speculative manœuvering, wheat here, especially winter wheat was depressed during the early part of the week. This was particularly the case with graded and ungraded red, the fall on Tuesday amounting to 3@4c. per bushel. Owing to this shrinkage export operations assumed large proportions both on that day and the next, and on Thursday evening prices rose to within 1@1½c. per bushel of the final quotations last week, and since prices have been stiffening. Corn suffered slightly early in the week from the "bearish" tendency, but soon strengthened as we predicted, leaving off from ¾c to 1c higher than week before. By the way, in speaking of the average domestic consumption of corn here last week, a slip occurred in putting it at 115,000,000 bushels per month in Summer and double that quantity in Winter. It should have been an average of 115,000,000 bushels per month, about twice more being used in Winter than in Summer. The 265,000,000 bushels estimated to be on hand on May 1st, would then last about four months in Summer or two in Winter. This was a mere slip in writing hastily, but did not at all affect the truth of the conclusion reached—that corn must be high-priced until the growing crop comes to market.

The interesting features in oats has been a marked rise of 4@5c. per bushel in No. 2 white and No. 2 for July delivery, mainly because some large operators were "short" of those grades and had to pay steeply to fill their contracts. Special telegraphic advices from Virginia, Tennessee and North Carolina indicate that the peanut crop will be very short. Virginia, which raises the larger portion of the peanut crop, will, it is estimated, produce this season from 800,000 to 1,000,000 bushels, against 1,750,000 bushels last year. The crop in Tennessee last season was 730,000 bushels; this season a yield of 150,000 bushels is looked for. In North Carolina it is estimated that the crop is about one-fourth as to acreage. Similar reports were widely circulated a month or six weeks ago, but they were largely accredited to a "syndicate" who, it was alleged, had accumulated a vast quantity of Tennessee peanuts at Cincinnati and were trying to raise the price by prophecies of a failure of the present crop. There is no doubt now, however, that the crop will be unusually small.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, July 30.

Chicago.—Wheat fairly active No. 2 Red Winter, $1.14@1.18; No 2 Chicago spring, $1.19½@1.19¾ cash; $1.19¾, July; $1.19¾, August; $1 15¾; September; $1.15½, October; No 3 do. $1 03@1 06; Rejected, 77c. Corn unsettled 49c. cash; 48⅞c.@49c, August; 48¾c., September; 49c. October; Rejected, 44½c. Oats fairly active and a shade higher at 45c. cash; 30⅞c., August; 29@29⅛@29⅛c. September, 29½c. October; Rejected, 27c. Rye steady at 82c. Barley easy at 92½c. Pork easy at $18. cash, July, August, September, and October. Lard easier and in regular at $11.65@11.70, cash; $11.65, August $11.65@11 67½, September, $11.55@11.57½, October. Bulk-meats irregular and higher. Shoulders $6.60; Short Rib, $9.30; Short Clear, $9.25. Flax $1.17½ cash; $1.16, August; $1.12@1.14, October. BUTTER.—Fair to choice creamery 19@23c. per lb; good to choice fresh made dairy 16@19c; medium to fair do 12@14c; choice to fine ladle packed 15@17c; common to good packing stock 11@13c; grease butter 8@9c. CHEESE.—Prime to choice full-creams cheddars at 9½@10c per lb. fair to good do. 8½@9c; prime part skimmed do at 7@7½c; fair to flat shapes at 5½@7½c. and hard skimmed sour and poor goods nominal at 2½@4c. EGGS.—Business was dull, and the bulk of the stock offered was in poor condition. The demand was limited at 11@12c per doz, for good to the best counts. HOGS.—Market weak; mixed packed, $6@6.60; light, $6.40@6.80; choice heavy, $6 70@7.05. Cattle market dull; shipping grades nominal; common to choice natives, $4 35@6.10. Sheep market very dull.

St. Louis.—WHEAT strong; No. 2 Red Fall $1 19@1.19½, cash; $1.19@1.20, August; $1.20@1.21¾, September; $1.22@1 23½, October; $1 23½@1.25½, November; $1.19¼@1.19¾, all the year; No. 3 do., $1.10@1.11½; No. 4 do., $1.06¼@1.07. CORN 49@49¼c., cash; 49¼@49⅝c., August; 49¼c., Septem-

ber; 49@49½c., October; 47c., November; 45@45½c., all the year. OATS 44c., cash; 29¼@29½c., August; 29¼@29⅞c., September; 30½c. October. RYE dull at 99c. asked. PORK quiet; jobbing at $18 30. Bulkmeats firmer; Shoulders 6½c.; Clear Rib, 9½c.; Clear Sides, 9½c. Bacon irregular; Shoulders, $7.40@7.50; Clear Rib, $10.12½@10 20; Clear Sides, $10.45@10.60. Lard dull and nominal. BUTTER steady; Dairy, 14@22c. Eggs quiet at 8@10c. Hogs steady; Yorkers, $6 50@6 60; packing, $6.25@6 50; choice to fancy heavy, $6 60@6.90. CATTLE—Supply very light; little done; fat natives and and good grassers wanted; export steers would bring $6@6 15; heavy shipping, $5 50@6; good to choice grass Texans, $3.50@4.50; common to fair, $2.50@4.50. SHEEP—Market steady; fair demand; muttons, 3@4; fancy heavy, $4,50.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, July 30, 1881.

BEANS AND PEAS.—All well preserved standard white beans are firm and holders are not pressing such marks for sale. A fair trade runs on the good useful cheaper sorts of mediums and marrows. Pea beans are scarce and higher. White kidneys also doing better. Red kidneys still in overstock for present trade wants and the few sales are at between prices, best selling best. Green peas are weak and neglected at $1,4?. Southern B.E. or Canadian held of no importance.

Marrow beans, prime, $2.42½@2.45; other, $2.25@2.37½; medium, prime, $2.40@2.42; other, $2.20@2.35; pea, $2.35@2.40; white kidney, $2.25@2.45; red kidney, prime, $1.55@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.30@1.35.

Receipts for week, 6,670 bush.

Exports do. 1,100 pkgs.

BEESWAX.—Demand light at 23@25c. Exports since January 1st, 80,109 lbs; same time last year, 83,500 lbs.

BUTTER.—The demand is almost fully supplied by current receipts and there has been occasion to put out speculatively held stock largely. Now and then a round buyer wants a special line that is known to be in store and when rich goods are called for the fact imparts courage to the light-crop believing owners. The quality of arrivals is not as a rule first-class and fine fresh and stored June may be noted firm but without present tendency to advance. There has been a fair eastern trade during the week which has moved some of the cheaper style of butter. Exporters have not exceeded 22½c. for the creamery they have taken and have not seemed ambitious to take it at that. The best local trade, now moderate, is using creamery almost in every case.

Creamery—Western, good to choice 21@23c; State and Penn. 23@24½c.; poor 18@20c; sweet cream, 22@24c.; State pails and h'f tubs, choice, 21@22c; fair to prime 18@21c.; Welsh tubs, 18@21½c.; poor State 16@18c, firkins yellow 20@22½c.; Western imitation creamery, 16@19c.; dairy, fine 18@19c.; other 15@16c; factory or ladle packed best 17@18c.; other 13@17c; very poor Western 12@13c.

Receipts for week, 40,138 pkgs.

Exports for week, 8,920 do.

CHEESE.—Strong prices in the country strengthened the views of some holders early in the week but the later developments of trade have shown that cheese, to sell upon its real merit, in the decision of shippers, would not exceed 11c. It may be remarked that a few fancy factory are held above figure. Western cheeses are not attractive in quality and receivers press them for sale. Skims in fair demand. No pressing surplus of any kind remains and the market closes with a fairly wholesome tone.

State fact'y, choice, colored, 11c. do. white, 10½@10¾c; fair to prime, 9½@10½c; poor fair to 8½@9½c; Ohio, flat, fine 9@9½c; other 7½@8½c; cheddar, 8½@9¾c; Wis poor to fine 9@10c. part skimmed, 6@7½c.; full skims, 3@4c.

Receipts for week, 91,603 boxes.

Exports for week, 89,592 boxes.

Liverpool cable, 55s. 6d.

Steam to Liverpool, 29s.@30s.

COTTON.—The week has been a brighter one all through. Exporters have dealt more largely, spinners have replenished a good deal, and with the "short" speculative interest covering its transactions, prices are better.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 9-16	8 13-16	8 13-16
Strict ordinary	9 1-16	9 5-16	9 5-16
Good ordinary	10	10¼	10¼
Strict good do	10⅛	10⅜	10⅜
Low middling	11 3-16	11 7-16	11 7-16
Strict low middling	11⅝	11⅞	11⅞
Middling	11¾	12⅛	12⅛
Good middling	12⅜	12⅝	12⅝
Strict good middling	12⅝	12¾	12¾
Middling Fair	13⅜	13⅝	13⅝
Fair	14⅛	14⅜	14⅜

STAINED.

Good ordinary	8 3-16	Low middling	9 13-16
Strict good ordinary	9 3-16	Middling	11⅛

The averages of yesterday's forward deliveries as officially reported were as follows:—

July, 11.83c.; August 11.90c; September, 11.37c.; October, 10.70c.; November, 10.49c.; December, 10.48c.; January, 10.61c.; February, 10.73c.; March, 10 48c.; April, 10.97c.

DRIED FRUITS.—Evaporated apples show a material advance and it is thought that the light stock will support it. Old style have also improved though figures are mainly of a speculative character. No new peaches showing. Last crops nominally firm. Market quite clear of blackberries. Few ought to start well. Small fruits will not exhibit much interest until later on.

Apples, evaporated choice 11@11½c.; fair to prime, 9½@10½c; Southern sun-dried, common to best 4½@5½c; State fine cut 6@6¼c., quarters 5½@6¼c.; Western, 4½@6¼c; evaporated peaches peeled 25@28c; unpeeled 13@14c; sun-dried peeled, 17@22c unpeeled 5½@6¼c; Plums 10@12c. Cherries 17c. Raspberries 25c. Whortleberries 14c.

Receipts for the week, all kinds, 187 pkgs.

Exports dried apples, 50 pkgs.

EGGS—Receipts for week, 6,687 bbls.; do. last week 8,945 do. Western stock continues low in quality and a salable lot is an exceptional one. Supplies from other points are small, but buyers do not seem inclined to purchase as they have had such an unsatisfactory time with the bad quality of Western. Lots sold at loss off are at the mercy of the buyer in counting, and returns will be light for a time.

Near points 19c.; State and Pa. 17@18c. Canadian, 16½@17½c.; Western, fresh, 15@16c.; doubtful, 10@14c.

FLOUR.—The weather has been severe upon many low grades and they have declined. Exporters operate cautiously when their brands begin to show the effect of heat. High grades of flour especially patents have sold well at steady prices.

No. 2, ₹ bbl., $3.20@3,80; State and Western superfine, $4 25@4 60; city mills extra, $5.25@6.50; Spring wheat do. $4.75@5.10; Spring XX and XXX, $5.25@6.75; patents, $6.00@8 00; Ohio round hoop shipping, $5.00@5.40; trade brands, $5.50@6.25; St. Louis extra, $5 10@5.50; do. double extra, $5.75@6.25; do. family, $6.40@7.00; South'n shipping, $5,40@5 50; do XX and family, $6.25@7.25. Rye, $5.00@5.60. Corn-meal, Brandywine, $3 40@3.50; Western, $3 00@3.80.

Receipts of flour for week, 107 450 bbls.; do. corn-meal 4,400.

Exports of flour, 51,350 bbls.; do. corn-meal 3,250.

FRESH FRUITS.—There is quite a steady run upon the various sorts. Some extra activity is caused by the waning of some items that have a preserving call to fill. A good market is looked for as soon as consumers become reconciled to the loss of peaches. We can note the success of the "Early Alexander," a small Staten Island orchard has ripened and sold, brings $5@6 per basket. Peaches from the Pacific Coast are a market novelty. Several hundred cases have sold at $8 per case of 80 large peaches. It is not likely that California will often have opportunities like this year to enter the New York peach trade but growers are certainly to be praised for their enterprise in showing us a sample of the elegance of their product. Cal. Bartlett pears and plums are in good supply; selling at $5@7 per box and $4 per box respectively. Pears run from $1.30@1.60; plums about 200 all paper wrapped. Paper wrapping is a great point of preservation in the carrying of tender fruit and California nurserymen very profitably utilize "Chinese cheap labor" in packing in that way. There is a good offering of apples, but they are of a grade that have to be sold soon, many being windfalls and prices are easy. Muskmelons at our best supplying points are reported backward and a good season is expected for prime picking. A good variety of pears is offering.

Apples, Sweet Bough, ₹ bbl, 75c@$1; Sour 75c@$1 25; Red Astrachan $1.25@1 75; do, ₹ bu crate, 60@75c; windfall ₹ bbl.50@75c. Pears, Bartlett Sav. ₹ bu. crate, $3 00@4.00; do, Va. ₹ crate $3@3.50; Clapp's Favorite sh'n ₹ bu. crate $3@4; Manning's Eliz. do. $3@1; Jargonelle ₹ bbl. $3@3.50; Bell, M 1. $2.50@3; Burre Giffard ₹ ½ bu. crate $1@1 25; Sugar Top ₹ bbl. $3@2.50; Scooter $1.50@2.50; cooking, $1.50@2; Blackberries, Wilson, Jersey ₹ qt, 10@11c.; Md. & Del. 9@11c; wild 5@7c, Huckleberries ₹ box 75@$1.12, Raspberries Antwerp up-river ₹ 3-to.qt. cup 3@5c. Currants, Cherry, ₹ lb 4@5c; red small, 2@2½c.; black 3@4c. Peaches, Md. Hales, ₹ crate, $1.50@4.50; North Carolina ₹ bush. crate $3@5; Ga. extra ₹ 3-to-bu. box $2.50@3 50 Ga. fair to prime ₹ bush. crate, $3.50@5. Plums, Wild Goose Southern ₹ qt. 10@13c; Bunch, do 4@6c. Watermelons, Ga. ₹ 100. $20@30; Norfolk, prime $14@20; N C prime $15@25; culls $6@10 Nutmeg melons, Jenny Lind J'y ₹ bbl. $3,50@4; Md. 2.50@3; N'fk $2@2.50 citron Md. $2.50@2 75.

Peanuts in good demand and show a further advance of fully ½c. The true rise in prices is attributed chiefly to an increased Western movement, which has reduced the stock in the South.

Peanuts, Va. hand-picked ₹ lb 6@6½c. do. fancy, 5½@5¾c. do. extra prime 5½@5¾c.; do. good to prime, 5@5½c.; shelled, 3½@4c Pecan nuts, ₹ lb, 7@9c.

GRAIN.—Speculators have struggled hard to keep up an excitement on wheat and have obtained several high turns during the week. With better crop reports, however, and stocks accumulating at many important centers, the natural market closes easier and exporters have paused in their operations. Corn active and higher under a continued free export trade. Shipments abroad more than double those of wheat. Oats active and firm. Rye dull.

Wheat, Spring $1.10@1.25; do. No. 2, $1.20@1.22; do. No. 3. $1.14@1.16; red Winter No. 2, 1.25½; red Winter $1.12@1.18 white Western and State $1.15@1.26. Rye, 84@89c. Oats, white No. 1, 49c.; white No. 2, 48½@49c.; white No. 3, 46c; mixed No. 1, 49c do, No. 2 48½@49c; do. No. 3 44@46c; Corn, West'n mixed 48@50c.; do. No. 2, 57½@59c.; do. yellow, 56@59c.; do. white 56@59c. Southern yellow 56@59c.; do. white 58@60c,

Receipts for week, wheat, bush., 1,878,775.; corn, do 1 534,275; oats do. 256,386; rye, do. 2 872; malt. do. 94,300; rice pkgs. 462.

Exports for week, wheat, bush 506,625; corn do. 1,243,580; oats, do. 2,144; peas, do. 745; rice, pkgs., 1,435.

HAY AND STRAW.—Exports for week 1,075 bales hay; since Jan. 1, 147,967 do., in 1880, 73,786 do. The demand for hay is good, low prices stimulating use. Straw dull and lower.

Choice retailing timothy hay, 85@90c. ₹ 100 lbs.; second quality do. 65@75c, do.; shipping 50@55c. do.; clover mixed 60@65c; clover 35@45c. Straw, long rye 75@80c; short do. 55@60c.; other grain, 30@40c.

HOPS.—The market continues dull. Estimated remnant of hops here, 10,000 bales. Quality of this year's growth will be fine from present appearances. It is thought that the increased acreage will make up for light bearing in some sections.

State crop of '80, choice, 20@22c; good to prime, 16@19c; fair to good, 13@15c; poor to fair. 11@13c; Eastern, 11@18c.; '79's, fair to prime, 12@15c.; olds, 5@8c.

Receipts for week, 958 bales.

Exports for week, 27 bales.

MILK.—Prices for commission milk averaged $1.28 per can of 40 qts. Demand not equal to some former warm seasons.

OIL CAKE.—Western quoted $31.

POULTRY AND GAME.—Supplies of pressed have arrived ahead of the markets' wants and prices are lower with many parcels seeking buyers. It is very easy to over stock this market in Summer.

Turkeys, Phila. prime ₹ lb 15@17c. State & Western d. p. 14@16c. Chickens, Phila. Spring, 18@20c: N. J. & Bucks Co, 18@19c: Western 17@ 18. Fowls, Phila. d p. 15c. N. J. & Bucks Co. 13@15c.; do scalded 12½@13½c.; State and Western 12½@13c.; do. d.-p. 12@12 -; do coarse 11@11½c. Ducks—Spring, 15@18c old, 12@13c. Squabs, white ₹ doz. $1 do. dark, $1,25.

Live poultry has also arrived abundantly and with further free receipts expected the market closes lower and weak especially for fowls. Chickens are off fully 1c. within a day or two. Ducks and game quiet. A few stall-fed squab at $1.50@1 75 and Eng. snipe and plover at $2@2.25 complete the game list.

Spring chickens prime ₹ lb 17@18c.; other 15@17c, Fowls, ₹ lb, 13@14c; roosters, 7@8c.; turkeys, 12@15c; ducks, ₹ pair 75c@$1; geese, extra $1.75; other $1.00@1.50; pigeons, 20@30c.

PROVISIONS.—The trade has been mainly speculative in all classes of hog products; light supplies and especially light receipts of hogs have aided operators in holding up figures.

Pork extra prime, $14.00@14.50; West'n mess, new, $17.75@18. Lard, steam Western ₹ 100 lbs, $12.00; prime city, $11 75. Hams, smoked city ₹ lb 11¾@12¾c; pickled Western, and city 10¼@11; Shoulders: smoked city 8¼@8¾; pickled, 7¼@7½; rib bellies pickled, 9¾@10¼ Bacon, long clear, west. 9¼@9¾. Beef, western mess, ₹ bbl., $11@13; India mess, tcs, $27@29; beef hams bbls. $12@23.

Receipts for week—Beef, bbls and tcs, 687; pork, bbls, 2,748; Cut meats, pkgs, 21,169; lard, do 14,921. Exports—Beef, bbls and tcs, 2,126; pork, 3,641; cut meats lbs 6,337,764; lard, 2,519 005.

RICE.—Firm and fairly active. Quotations—Carolina and La. common to fair at 4¾@5¾c; good to prime at 5¾@6¾c.; choice at 6¾@7¼c.

SUGAR.—Stock quite liberal; we quote refined—Cut loaf ₹ lb 10¾c.; crushed 10¼@10¾c.; powdered 10¼c.; granulated 9¾@9¾c.; mould A, 9¾c.; confectioners' "A" 9¾@9¾c.; standard "A" 9¼@9¾c; off "A" 8¾@9¼c; white extra "C" 8¾@8¾c; yellow extra "C" 8@8¾c. "C" 7¾@7¾c; yellows 6¾@7¼c.

TOBACCO.—There is a fair home demand and but little doing for export. There is some accumulation of stock rather early in the advent of new receipts. Sales 2,989 cases, including Pa. crop of 1880 at 12@17c; do. crop of 1879 at 10@40c.; New England crop of 1880, 10@12½c., and sundries, 9@18c. Ky. sales 100 hhds. at 4¾@12¾c.

VEGETABLES.—Potatoes are active at $1@1.50 ₹ bbl. bulk, quality fine. Va. sweet $6@6 50 Tomatoes are scarce. L. I. farmers do not fear damage to the future crop by the late drought. Cucumbers have mostly run out on the Island. Cauliflowers will run light this season; they are very backward on this end of L. I. Cabbage has advanced.

Sweet corn, Jersey ₹ 100 75c@$1; Burlington corn do. 50@75c; Green peas, L. I., ₹ bag. $1@1.25; wax beans L. I, do. 75@$1; string beans L. I. do. 50@75c. cucumbers, L. I. ₹ 100 $1; egg plant Phila ₹ bbl. $5@6.50; Tomatoes Phila ₹ basket, 80c@$1; L. I. ₹ bu. $1.50@1,75; Md. prime do. $1 50@2; Norfolk ₹ crate 25c@$1; squash marrow ₹ bbl. 75@$1; L. I white 75c; do. yellow, $1; cabbages, Flat Dutch ₹ 100 $5@7. beets, L. I. ₹ 100, bchs $1@1.50; onions, potato prime ₹ bbl. $1.25@1 50; fair to good $3.50@4; lettuce 75@1.25; carrots ₹ 100 bchs $1@1.25 white turnips, Jersey, $2 50@3.00; turnips Russia ₹ bbl. 50@75c; cauliflower, J'y & L. I. ₹ bbl. 12@5; okra ₹ 100 15@20c.

WOOL.—Market dull and weak at about last week's prices. Buyers for the moment seem well supplied, having made frequent purchases before prices ran up to present points.

LIVE STOCK MARKETS.

NEW YORK, Saturday July 30, 1881.

BEEVES.—Receipts for the week 12,456 head; do last week 14,481 do. A surplus of stock on hand forces sellers to make concessions in order to effect a clearance. Good and prime native steers sold at about previous prices, but the common and medium grades were fully ½c lower. Fair Texans sold at 8c. to dress 55 lb.; the bulk of the sales was from 9½ to 11¾c. to dress 56@57 lb, and included ordinary to strictly prime.

SHEEP AND LAMBS.—Receipts for the week 23,526 head; do. last week 38,650 do. A few prime sheep and lambs sold at fair prices, but all other grades were in buyers' favor. Sellers look for some turn of improvement. Sheep ranged 3¾@5½c.; Southern and Western lambs 4½@6c.; State and Pa. 5½@7½c.; very choice Del. Co. 7¾c.

SWINE.—Receipts for the week 12,917 head; do. last week 35,025 do. No hogs on sale at the yards, receipts went to packers. Live nominally firm at $6 90@7.10 ₹ 100 lbs. medium to light N. Y. pork 9@9¾c; city dressed Western 8¾@9c.

COWS AND CALVES.—There is some inquiry for good cows at $60@65 ₹ head; common run down to $40 and the sales mainly range from $40@50.

VEAL CALVES.—Prime light calves have sold well; market easier for all grades with a large supply.

Live N.J. prime to choice, 7½@7¾c; do, State, 7¼@7½c.; poor to good 5@7c.; Mt. Hollys, 6¾@7¾c.; buttermilk, 4@4½c.; up-river dressed 11@12c.

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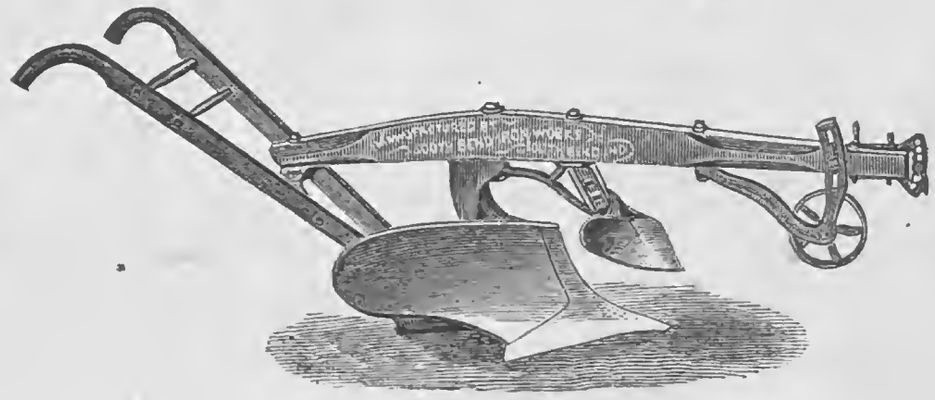

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Reading for the Young.

FARMING FOR BOYS AND GIRLS—NO. 30.

HENRY STEWART.

What is Manure?

In looking over the tables given in the last article we may note some interesting facts, which go to show in a very clear manner to what purposes the food consumed by animals is applied. The figures given relate to full-grown animals, in which the bone and muscles have been formed, and only the wastes of the body and the support of life have to be provided for. A young animal is daily adding to its size and weight, and of course a large part of its food is used up in supplying the substances of its body—the bone, flesh, skin and hair and another part goes to support the vital action and the heat of the animal. But in a full-grown animal it is different. There is no bone to be formed and no flesh, only the wastes caused by the action of the muscles in work in the horse or ox and the product of milk in the cow. We see on looking over the tables that the cow which yields a large quantity of milk consumes more of the food than any other animal mentioned, and leaves less in the waste discharged, or, in other words, in the manure. To make this more plain the precise figures are put in the following table:

Of 100 lbs. of	Amount of food used up by the Cow. lbs.	Ox. lbs.	Sheep. lbs.	Horse. lbs.
Dry substance	53	48½	46½	54½
Organic matter	57½	53	50½	59½
Nitrogen	36½	10½	4½	16½
Mineral matter	3	..	..	..

The above figures are very interesting. They show how truly the results of scientific inquiries are supported by the plainest facts, and prove how very much the results that are reached by the labors of men of science deserve our confidence. For instance, we know that the cow gives us a large quantity of milk, which is the most nutritive food in existence, because it is of itself sufficient to support life and enable a young animal to thrive and grow. Milk, in fact, contains all the elements of every variety of food. Its production must therefore be a great tax on the cow, and should require a large quantity of food. And so we see that the cow uses up, that is, digests and turns into blood (from which the milk is formed), 57½ pounds out of every 100 of the whole organic matter of the food, which is chiefly carbonaceous and goes to support the vital heat, and to make fat and butter; while the horse, which plows and draws heavy loads, and works as hard as he can be forced to, uses up only 1½ more, and the working ox even less; while the sheep, which lies around and eats, and makes only wool and fat, uses up but 50½ pounds out of every 100. But the next line shows this fact even more plainly; for the cow, of whose milk we make cheese, which is very rich in nitrogen, takes 36½ pounds of nitrogen out of every 100 pounds in the food; while the horse, which works hard and needs the nitrogen to replace the waste of muscle, takes only 16½ pounds; the working ox takes but 10½ pounds, and the lazy, idle sheep uses only 4½ pounds, and of this the most goes into the wool.

When we think of these things which are shown by persons working with scales and weights and chemical substances, in rooms furnished with what we call chemical apparatus, and of how a quantity of hay, corn-meal, bran, straw and other food can be examined, and of how the animals themselves can be weighed and watched and observed several times a day, and how the results of all these studies can be made so clear, and put into figures so plain, that we can easily understand all about it, and know of our own knowledge that they are reasonable and agree with what we can perceive ourselves if we only try to, we may well wonder at the capacity of the human mind and get some little insight and glimpse into the ways and methods by which men of science find out and discover things, and the practical uses to us of their studies and discoveries.

One more view should be taken of this subject. It is plain that if we take a certain quantity of grass, corn, wheat or oats from our land, or buy a certain quantity of food, and feed it to the cows, or horses, or sheep, that the most of it will be used by the cows and the least by the sheep. It follows, then, that the least of the food will be returned in the manure by the cows and the most by the sheep. And so we find it in fact, although we may not have known the reason for it, that cow manure is the least rich; that horse manure is better than cows' manure, and that the manure from sheep is the richest of all.

Then if a farmer has a desire to feed some animals in the Winter for the sake of making manure for his farm, he should get a flock of sheep; and if he has some hay and feed from which he desires to make the most money by feeding them, he should keep cows, because these will return the greatest part of them in a condition in which they may be sold and turned into money. But, as we cannot have a thing and sell it too, what is left of the food in the manure from the cows will be of much less value than that left by the sheep.

RURAL LIFE.

UNCLE MARK.

"Give fools their gold and knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field, or trains a flower,
Or plants a tree, is more than all."

Our first thought of rural life in Summer is that of pure air, cooling breezes, green earth and with it we associate thoughts of peace, contentment and happiness. But yet, with all these delightsome things there are others, as in all business or professions, which are quite the opposite, and with which every farmer's boy or girl is familiar. But for the farmer's children there is a happiness or a pursuit of happiness to which city boys and girls are strangers.

The expression "pursuit of happiness" conveys to the mind the idea that happiness is to be sought after and if we would *have* it we must *pursue* it. Happiness in rural life or anywhere else, comes not to the idle; it is the wide awake and active who enjoy most, and it is well that to her leafy bowers there are many paths though, perhaps, they are not always pleasant ones. I presume my young friends often feel that they would like to leave the farm and come to the great, busy city, here hoping to find happiness and, in time, wealth. Some come, perhaps, but a few weeks or months of city life weary them of their choice and they long to return to green fields and fragrant flowers. Such can fully appreciate the true happiness of rural life, and such only. The children who have never seen the beauty of the country in Summer time or who catch but faint glimpses of it in a brief Summer vacation, know little of rural happiness.

But some one will say, perhaps, "I want to be rich. Father has always been a farmer and he isn't rich. I am going to the city." Are you quite sure your father isn't rich? He may not have many government bonds nor much money in the bank, but he has his farm paid for; he has money enough to purchase the necessities, perhaps some of the luxuries, of life: he can give his children an education; he has health and a beautiful home. Is not this riches? There are various kinds of riches, and much of our happiness depends on which we choose!

One day a gentleman congratulated William B. Astor on his great possessions and the happiness he must enjoy on account of them. Said Mr. Astor, "I come to my office at nine o'clock in the morning and find a small army of mechanics of all kinds awaiting my orders or seeking employment. Then come my collectors with rent-rolls and complaints about tenants unwilling or unable to pay. After some hours all these are dismissed. I devote perhaps twenty minutes to lunch, then correspondence, bank accounts and other business matters take up my time until five o'clock and I go home tired out."

Mr. Astor asked "How would you like to do all this for your board and clothing? That's all I get!" This was approximately true, since the great wealth of the Astors' was accumulated in the fur trade and was greatly increased by real estate investments.

Happiness dwells sometimes in marble hall and gilded palace, but oftener in the unpretentious home of the farmer or in the rude hut of the pioneer. Contentment is the secret of it all, and this makes "man king, woman queen and their darlings, princes and princesses in the rural kingdom." The farmer's boy who loves his work is not the one who looks with longing eyes toward the town or city, but he it is who lives content in the prospect of having some day an interest in "father's farm," and this, if nothing more, is an incentive to labor. It *may* be that these lines will be perused by some who are inclined to be discontented on the farm, and there may be reason for it, but unless there is choose certainty rather than uncertainty; a fair competence rather than insecure millions, and in the end you shall realize the truth so beautifully expressed in the stanza above from Whittier.

The weakest woman, smallest child and sickest invalid can use hop bitters with safety and great good.—*Adv.*

The Puzzler.

HIDDEN INSTRUMENTS OF MUSIC.

1. He cast a net into the bay.
2. Run Bob as soon as you hear me.
3. You acted base Viola.
4. Of my own accord I only waited once.
5. Is not that Jew sharp?
6. They had rum.
7. Ally reads well.
8. 'Twas corn Ethel fed her bird.
9. I worked tambour in each corner.
10. No, nor ganders either.
11. I saw the camel Odeon brought.
12. At the concert I napped it.
13. She'll have Jeff if Eva don't cut her out.
14. I saw harm on Ica's stairs.
15. With sharps I chord my tunes.
16. Cal I opened the can myself.
17. Take the flag Eole to Tom Brown.
18. Oh pshaw! mamma.
19. To Percy M, balsam was given.
20. It is Jo Boenton.
21. With scorn Opia treated us.
22. Put Romb one kit away.
23. Clario netted over sixty dollars.
24. He is French, Horner.
25. I put the viol in Cello's hand. LITTLE ONE.

☞Answer in two weeks.

ENIGMA.

I am composed of five letters;
My 1st is in well, but not in brook.
My 2nd is in stare, but not in look.
My 3rd is in plant, but not in flowers.
My 4th is in time, but not in hours.
My 5th is in rain, but not in snow.
My whole is something you very well know.

☞Answer in two weeks. G. G. S.

PUZZLER ANSWERS—July 23.

GEOGRAPHY PUZZLE.—I was awakened one morning by a Shanghai which was perched on a fence near my window. From an adjoining room I heard a Wale, and I called a Negro to make a fire, as I felt Chili. On going down stairs I found that a Slave had spilled Greece on my highly-prized Brussels while putting on the table my breakfast, consisting of a Turkey seasoned with Cayenne, also a Cod, and Sandwich, Bordeaux stopped with a Cork, and basket containing Oranges and other fruit. I paid a Guinea for my breakfast and then asked a Cook for some sugar to feed a Canary that was hanging in my chamber.

ACROSTICAL ENIGMA.—Maud E. Meredith.

Miscellaneous.

THE LIVER.

The Unusual Attention which this Organ is now Attracting from the American People.

Its Delicate Structure and Susceptibility to Injury from Wounds or Disease.

In the opinion of the ancients the liver was the seat of the affections and of the passions. Modern research, however, has shown this to be an error, and hence less attention and care have been bestowed on this organ than in the early days when it was supposed to play so important a part in making war and cajoling love. Undoubtedly the discovery of the fact that the liver is not the seat of the affections, and of the passions, has led the people, as is natural, to neglect what formerly was an object of great solicitude, but the truth still remains that though it may not be the special seat of love and passion, it is after all of the greatest importance in physical health.

During the past few weeks, owing to an event of national interest, much has been said and written about the injurious effects of wounds in this organ, and according to the Surgical History of the War of the Rebellion, of the thousands of cases of wounds in the liver, not above sixty survived, and they were not violent ones. The record is filled with recoveries from gunshot wounds in the head, the lungs and the pelvic region, but it is a "miracle" when one outlives even an ordinary wound in the liver. No other proof is needed of the delicacy of its structure, nor of its extreme susceptibility to injuries, whether violent, like a gunshot wound, or as the result of disease. Of course injury from a wound produces speedy results, and though organic diseases may affect the patient for years, and render his life a long continued burden, the same end is eventually reached.

The structure of the liver is delicate and yet simple. It is composed of two lobes, which lie directly under the right lung, and is of a spongy character. When the venous blood is circulating from the various parts of the body to the lungs it passes through this organ, and is there relieved of its rank poisons, part of which are used for digestion and part for a cathartic of the waste materials of the food we eat. If the organ is at all diseased *these poisons remain in it*, instead of being used as nature designed, and with every coursing of the blood through the lobes of the liver, the nature of the disease is intensified, and hence a neglect of any disorder in this organ is almost certain to bring on chronic liver disease, so terrible to contemplate. In curing liver troubles not only must the organ be rid of its old complaint, but, at the same time, it must be prevented from contracting other diseases, and the agency used must have such power with the kidneys and lungs (the other two purifiers of the blood) that it will, while restoring the impaired liver, give to them strength sufficient to do part of the purifying work of the disabled organ. There is a peculiar dependency between the kidneys and liver, and no remedy can be of benefit which does not act upon both at the same time. The reason why so little success has hitherto been reached in the treatment of liver disease is because the philosophy of treatment has been lame and the remedies employed have been inadequate. It is a conceded fact that until within the past few years there has been no known remedy for chronic kidney diseases, and it is certain that the liver cannot be restored to its right action if the kidneys are affected. It is a fact that when the liver is diseased the kidneys are also troubled; hence, it follows that liver diseases are hard to cure chiefly because the doctors know of no agency which will at one and the same time operate on both the kidneys and the liver.

Admitting then that no form of treatment can be effective which cannot restore both the liver and the kidneys at the same time, it would be strange indeed if in all the researches of this wonderful age of scientific invention no such remedy had been found. The doctors admit they have nothing to offer, but independent scientists have honored their learning and patience by discovering a pure vegetable remedy whose success in the past few years in the treatment of kidney difficulties shows conclusively that it can cure every form of known kidney disease, and what it has done for the kidneys it is equally able to do and does for the liver. Warner's Safe Kidney and Liver Cure was the discovery of a practitioner, who proved its worth in his own case and then gave it to the world. It acts both as a food and a restorer on the kidneys and liver, so that when disease is cured in one of these organs it cannot go to the other, but is entirely removed from the system.

The symptoms of kidney and liver difficulties are great and unnatural weariness, headache, belching of wind and food from the stomach, constipation, piles, displacements and inflammation of the sexual organs of women, a sallow countenance, skin eruptions, and the especially fatal complaints of the hot season. These troubles are caused principally by malaria, which is, at the present time, becoming so great an evil in this land—so much so that President Paul A. Chadbourne, of Williams College, has just published a long and interesting article on its wide-spreading prevalence. He states that malarial poisons appear in all localities, the high and dry, the low and damp, in the crowded city and the roomy country, and there are no differences as to the effects produced. Malaria is in the water we drink, in the air we breathe, in the food we eat, and while constantly and naturally increasing with the growth of the country, it is just at present afflicting us, as the epizooty did a few years ago as a widespread and dangerous epidemic. Prof. Chadbourne is not an alarmist and what he says is confirmed by other distinguished medical authorities.

What, therefore, can be the cause for this terrible increase of malaria in all parts of the states and territories? Unquestionably the drinking water used in every portion of the land is the most active agency for carrying malaria into the system. This water may be clear, but it has become poisoned by filtration through the vaults, cesspools and barnyards in the country, and other impure agencies in the city. Heretofore the Western states and territories and almost the entire South have been considered the field of malaria, owing doubtless to the poor drainage in many localities and the consequent accumulation of green poisonous matter. This theory is, however, now exploded because malarial poisoning is becoming just as common in other regions, and those which have been settled for hundreds of years. Nor are low lands alone subject to malaria, for it is found in the Berkshire Hills of New England and up among the snows of the Rocky Mountains.

Whatever may be the cause of malaria, its existence is a terribly established fact, and so much so that it is attracting the attention of the leading physians, scientists and scholars in every portion of America. By means of its blighting powers the blood becomes poisoned and the most terrible diseases follow. The special field for the operation of this poison is in the liver. If this organ is at all diseased, malaria seizes it with a death grip. It is therefore absolutely necessary to keep the liver in perfect condition and especially at this time. The elements of Warner's Safe Kidney and Liver Cure are exactly fitted for just this very purpose. Composed of a pure and simple vegetable extract and prepared in the most careful manner it has been the means of restoring more people to health within the past year than any other agency known in the land. Prof. S. A. Lattimore, Ph., D., LL. D., one of the analysts of foods and medicines for the New York State Board of Health, pronounces its elements and composition purely vegetable, neither poisonous nor injurious, and the manufacturers present it to the public with the utmost faith that if taken faithfully and persistently, according to the directions, it will cure every form of liver disease and kidney disorder.

There seems to be a constant struggle between mankind and disease. Malarial poison, with its insidious power, the influence of heat, cold, bad water and impure food all combine to undermine the health and strength, both of which are the privilege of the race. In order to counteract these terrible influences, the greatest care is required, especially at the present time in guarding the kidneys and liver, which are the governors of the system. How this can best be done has been outlined above, and as such it is cordially recommended to all as the most efficient means for securing the best of health and continued happiness.

New York State Fair.

The 41st Annual Cattle Show and Fair of the New York State Agricultural Society will be held at

ELMIRA,
Sept. 12th to 17th, 1881.

Entries Close Saturday, August 13th,

Excepting only entries of Flowers, Plants and Fruits, which may be made at any time until Tuesday, September 13th, at 10 o'clock A. M. All other entries must be made by mail or otherwise, at the Society's Office, at Albany, on or before Saturday, August 13th.

Competition Open to All.

The Premiums offered may be competed for by residents of other States, and countries, on equal terms with residents of New York. Copies of the Premium-List and Regulations will be mailed on application.

BLANK FORMS OF ENTRY

Will be sent on application. In writing for them please specify what it is proposed to enter, as different forms are provided for different classes of exhibits. Address

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PERSONAL ITEMS.

Bismarck habitually reads a chapter of the New Testament at bedtime.

Ex-President Filmore's widow has been giving money to a Havana, N. Y., academy.

James Gordon Bennett is among the foreign notables now paying a brief visit to this country.

In the Senate there are now two Millers, two Joneses, two Hills, two Davises and two Camerons.

The heirs of the San Francisco millionaire, Mark Hopkins, claim that $11,000,000 of the estate are still undivided.

The President's sick-room is constantly fragrant with fresh flowers arranged by his wife. Every morning the White House conservatory is visited for his benefit.

Edw. Richardson is probably the most wealthy cotton planter in the world. The New Orleans Picayune estimates that he is worth $8,000,000.

Senator George is said to be esteemed the greatest lawyer in Mississippi. He has a sledge-hammer way of doing things and suggests the Western man rather than the Southerner.

Governor Roberts, of Texas, is getting it hot and heavy from church people of that State because he refused to name a day for thanksgiving for the President's expected recovery.

The Chicago Inter-Ocean has learned that Jay Gould proposes to connect Chicago and the City of Mexico by a direct line of steel, running through cars.

New Orleans has about a half-dozen millionaires. E. J. Gay, planter and sugar refiner, is put down at three millions, and D. H. Holmes, Leon Godchaux, E. J. Hart and R. T. Buckner at between one and two millions.

Senator Sherman's library at Mansfield, Ohio, is a large, square, uncarpeted room at the top of the house. It has deep windows, and is full of choice books. His Mansfield neighbors are said to greatly like the Senator, who is thoughtful of their feelings.

John Russell Young tells Gath that General Grant's income is about $50,000 a year from his son's firm in which Grant is a silent partner, from his railroad positions, his own investments and the Grant fund.

The Czar has commuted the death sentence of Hessy Helfmann, the pregnant woman, convicted of complicity in the assassination of the late Czar, to penal servitude for life.

David Davis, of Illinois, announces his purpose to retire from public life at the end of his Senatorial term. He will live at Bloomingdale and attend to private business.

Rosa Bonheur is 58 years old. Not infrequently she has been paid for her work at the rate of $500 a day. Her first picture was received at the Paris Salon when she was but 19 years old.

[Philadelphia Times]

Philadelphia Police Department.

The Philadelphia Ledger of Dec. 29, 1880, mentions among many others, the case of Chief of Police of that city, Samuel H. Given, Esq., who says he used St. Jacobs Oil in his family, for various painful ailments, with excellent results. He has also heard from many who have used it for rheumatism, that it alone of all remedies did them good.

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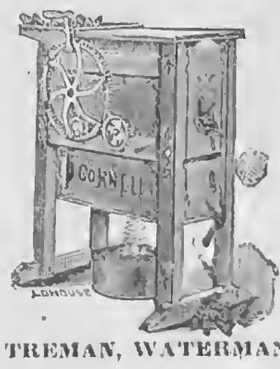
FOR 1881.



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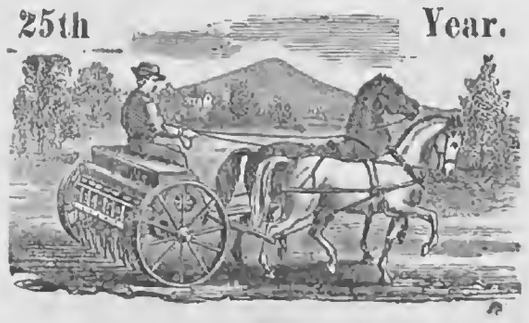

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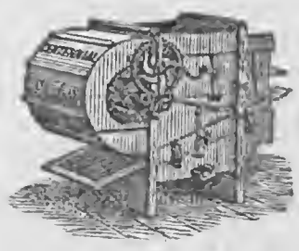

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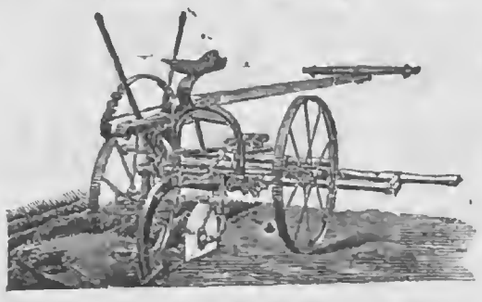

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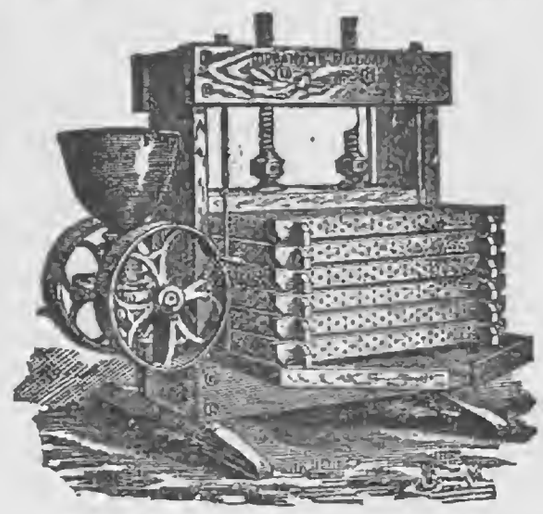

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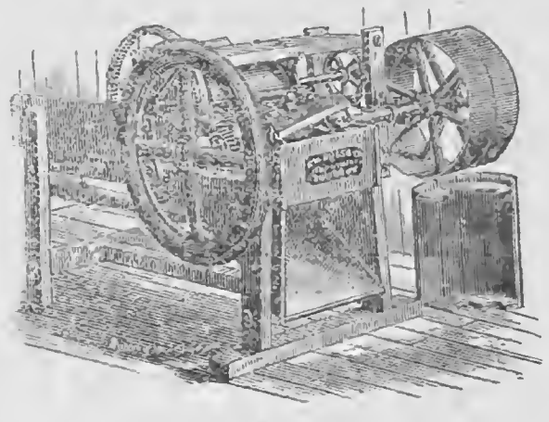

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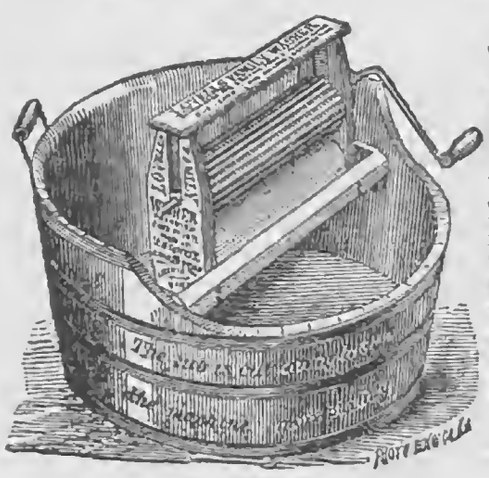

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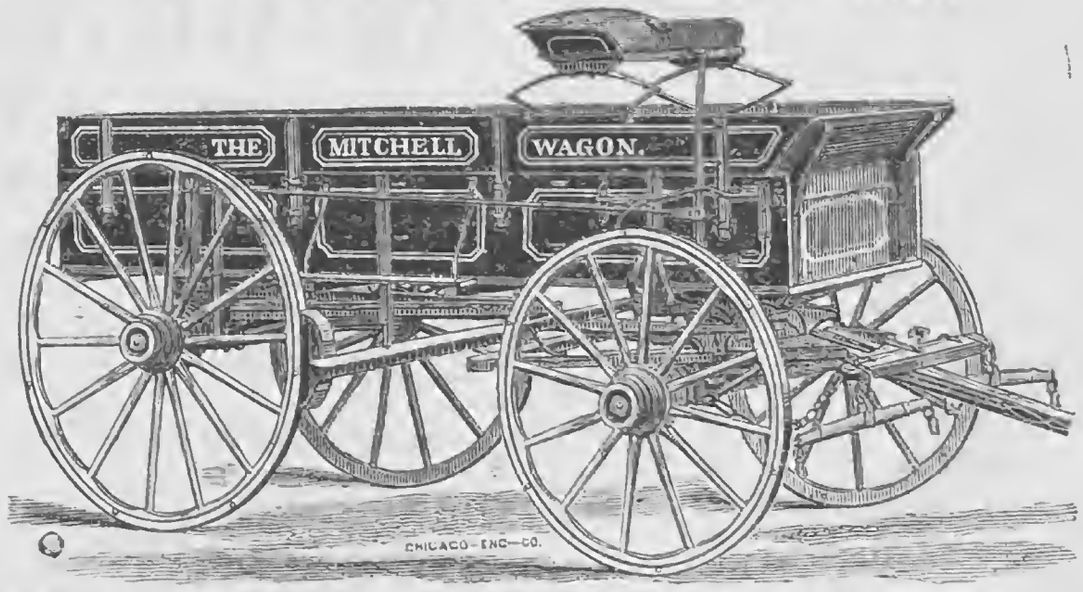

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Humorous.

There was a young fellow named Sam,
Most exceedingly fond of raw ham,
Till he got trichinosis,
In four or five doses—
And they buried him close by his Mam.
—Steubenville Herald.

EXCITED AND ANXIOUS PATIENT.

"Doctor, I do wish you'd tell me what's the matter with me; I'm clear out of sorts this morning, and I'm afraid I'm going to be down sick. What is the matter with me?" Doctor (gravely:) "Let me see your tongue." Patient thrusts it out. "What have you been eating?" Patient (reflectively:) "Well, I was out late last night, had a bit of supper at midnight, oysters raw and stewed, lobster salad, cold tongue, pressed chicken, curds and cream, coffee, some fruit cake, a little cheese, and a handful of hickory nuts." Doctor (doubtfully:) "Let me see your tongue again." Looks thoughtfully at it, then, in authoritative tones, "Ah, yes, I see; you've been eating something that doesn't agree with you." Grateful patient gives him two dollars.

The obituarian of the Philadelphia Ledger (if it was indeed he) outdid himself in the ingenuity of his rhyme, in the following effusion:

Our little Sallie to heaven did go;
Baby life so sweet is;
She was affected with the cerebro-
Spinal meningitis.

'Tis hard to lose our Sallie so,
But the reflection sweet is
That she has gone where there's no cerebro-
Spinal meningitis.

The bride who sings, "Do they miss me at home?" is unreasonable. They speak of her as Mrs. now.

HONESTY THE BEST POLICY.

Recently a lady stepped into a bird shop to purchase a parrot for a household pet. Having examined the collection, she turned to the proprietor, and without otherwise designating her selection, simply said, "I will take Honesty." "Beg your pardon, ma'am said the dealer. "Which one is it you said you will take?" "I will take Honesty." "Honesty," repeated the puzzled dealer; and which one is Honesty?" "Why, that one, of course," said the self possessed customer, pointing to by far the fairest bird of the flock. "All right, ma'am," said the ornithological trader. And as he was making the necessary change he timidly ventured to ask, "And may I inquire, ma'am, why you call it Honesty?" "Certainly," answered the customer, with a heavenly smile. "That parrot is Honesty because Honesty is the best Poli I see," The dealer was struck with a congestive chill, and gave the lady a half-crown short of her change.

CORTEOUS, kind-hearted editors never—well hardly ever—object to contributors writing on both sides of the paper, articles for the waste paper basket.

YOUNG LADY—"I have called Mrs. Brown, to ask you why your children do not attend the Sunday-school now, as they used. Do they not like going?" Mrs. Brown—"Oh, yes. miss, they like goin' well 'nough; it's the stayin' after they gits there as they don't like."

WE cannot agree with some folks, who believe the world is "growing wickeder every day." It is easier to get trusted now than it was three months ago. Tais shows that the beautiful idea of man's faith in his fellow man is gaining ground.—New Haven Register.

A HUSBAND who lately went to execute a few little commissions for his wife gives it as his experience that there are two dozen different brands of lilac sewing-silk so exactly alike that no male eye can tell the difference, and a wrong choice means ruin to a new silk dress, and no pie in the house for a week.—Commercial.

Two Cincinnati ladies, who had lately returned from a trip abroad, were exchanging opinions with reference to the famous pictures they had seen. "Give me the reconaisance school of art," exclaimed one, "so full of sympathy, of poetry; so different from the pre-Rachelite." "It is very true what you say," observed the other; "but as for me, I just dote on the Dustledrop school; the paint is so much fresher."—South and West.

[Quincy, (Ill.) Daily Herald.]

Speaking "By the Card."

C. H. Wood, Esq., of the C. & T. Ry., Port Huron, Mich., favors our correspondent with the following: After suffering for nearly a year with rheumatism, receiving treatment from most of the best physicians of Michigan and the West, I happened to try a bottle of St. Jacobs Oil. Upon the first application I used fully half a bottle, and its effect was almost instantaneous. I immediately dropped all other treatment, and confined myself to its use alone. After the use of three bottles, instead of being driven to my business, or moving about on crutches, I walked from one to three miles daily about business, and have been free from this horrible disease for over a year, not having the slightest twinge of it. Hence, I say that all medicines known to me are useless when compared with the Old German Remedy. Use this statement when and where it suits.

FALLING INTO FAST COMPANY.
A Hare's-breadth Escape.

THE NEW SHEEP DIP.
Little's Chemical Fluid.
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DOGS—Mange and Fleas; makes the coat glossy.
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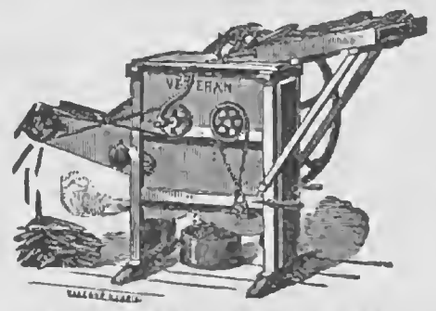

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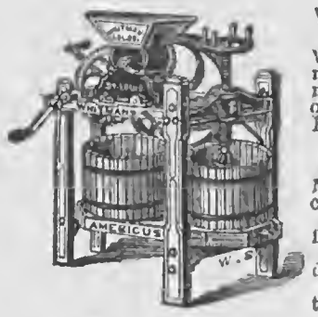

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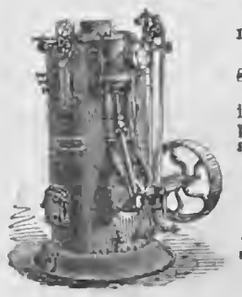

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Ralph Evans

VOL. XL.—No. 1646.} NEW YORK, AUG. 13, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

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Biographical.

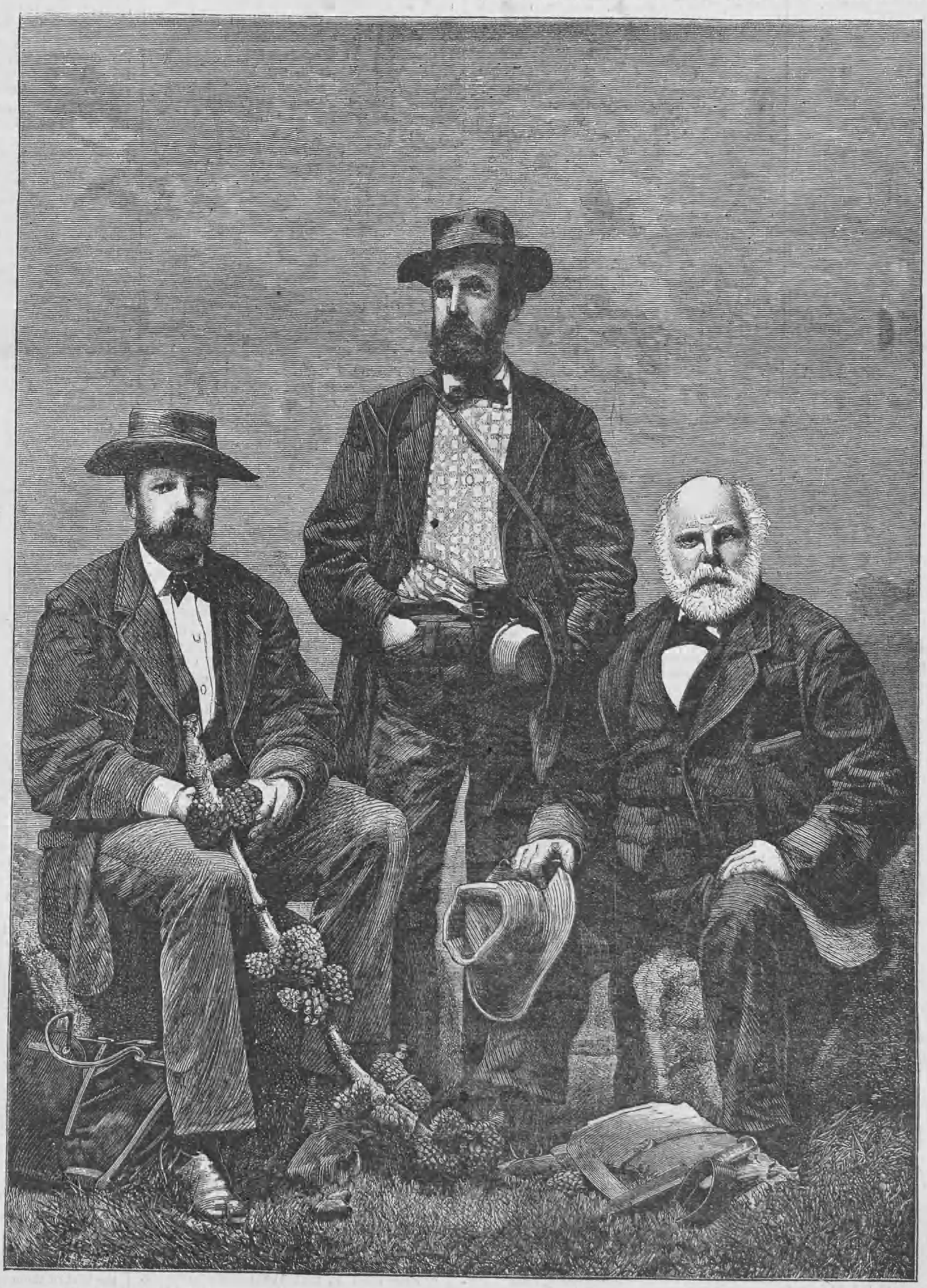
EXPLORERS OF PACIFIC SLOPE FORESTS.

As one of the special investigations undertaken by the United States Government in connection with the tenth census of the United States, a thorough study into the forest area and forest wealth of the country, and of the economic importance of the American forests in relation to agriculture, commerce, the railroads, etc., was determined on. Professor Sargent, Director of the Arboretum of Harvard College, was placed at the head of this Department. He organized his investigation by dividing the country into several sections, placing at the head of each a competent observer whose duty it was to examine and report on the extent and nature of forests in his section, the development of the lumbering industry, and the other industries dependent on the forest. The forests of the Pacific Coast being least known, both in their economic importance and the distribution and specific characters of the trees comprising them, Professor Sargent reserved this for his individual investigation. Accompanied by Mr. Robert Douglas, of Illinois, the well-known grower of trees, and Mr. Skinner, his private secretary, he left Boston in June, 1880, passed some time in Eastern Kansas studying the western limit of the Atlantic forest, and then devoted some weeks to a hurried examination of the forest of Central Colorado. Then the Professor and Mr. Skinner went by rail to California, being joined en route by their associates, Dr. George Engelmann, the distinguished botanist of St. Louis, and Dr. C. C. Parry, who for more than thirty years has explored the botany of Western, and especially Southwestern, North America. From San Francisco the party went by sea to Portland, Oregon, and then through Puget's Sound to Vancouver's Island, and up the Fraser River in British Columbia to above Yale. In descending the river they ascended a high peak south of it near the town of Hope, a Hudson's Bay station. Here much was learned in regard to the northern distribution of the coniferous species of the Pacific forests, and there the party was fortunate enough to re-discover the Abies amabilis, a species discovered by Douglas more than 50 years before in Oregon, and about which great confusion and doubt have always existed in the minds of botanists. The re-discovery of this truly magnificent species, the most beautiful representative of the genus in North America, and the determination of its range and specific character may be considered, perhaps, among the most important of the scientific results of the expedition. The party then returned to Portland, stopping at various points to study the forests in their different aspects.

They then, Dr. Parry having left them to explore the botany of Mt. Adams, ascended the Columbia River to the Dalles on the eastern edge of the Pacific Coast forest, and in returning Prof. Sargent made the ascent of the high mountains south of the Cascades of the Columbia River and succeeded in reaching the very spot where, 50 years earlier, Douglas discovered his Abies amabilis and Abies nobilis, a spot which no botanist since Douglas had visited until August 4, 1880, when Professor Sargent made the ascent.

From Portland the party went overland to Southwestern Oregon and explored the magnificent forests of Lawson's Cypress which abounds in the neighborhood of Coos Bay and Port Orford. Then crossing the Coast Range, they proceeded south to the Mt. Shasta region in Northern California, where several weeks were passed in exploring the forests of Northern California. Thence they returned to San Francisco and then went south to the forest of the "Great Trees" (Sequoia) in Tulare County, and then to Los Angeles and to the San Bernardino Mountains. Then by rail eastward through Arizona to Tucson, the then eastern terminus of the railroad. From this point they went south by wagons to near the Mexican boundary into the high Santa Rita Mountains, where many interesting discoveries were made and many trees peculiar to the Mexican flora were collected. From this point the party returned to San Francisco, and then after a short stay in the Sierras near the crossing of the railroad, Professor Sargent returned home, after an absence of over four months, during which nearly 15,000 miles had been traversed.

The expedition was thoroughly successful, and resulted in the most comprehensive and thorough survey of the Pacific forest which has ever been made, and which extended from far north of the British boundary to the Mexican boundary in the south. A vast amount of information was collected in regard to the distribution of species, their specific character and economic



PROFESSOR SARGENT. MR. SKINNER DR. ENGELMANN.

EXPLORERS OF THE PACIFIC SLOPE FORESTS.—Fig. 891.

importance, adding besides several new species to the sylva of the United States. Wood specimens of every tree of the Pacific from the northern to the southern boundary were procured, often only with great labor and difficulty, and sent home, to furnish material for a series of experiments undertaken by Professor Sargent, for the purpose of determining the exact value of all North American woods as fuel and for various purposes of construction. The result of the tests, and the scientific and economic results obtained in the course of this expedition by Professor Sargent's numerous assistants in various parts of the country, will appear in his final report, now in course of preparation.

In 1872 Professor Sargent succeeded Dr. Asa Gray as Director of the Botanic Garden at Harvard College. In 1874 he visited the important botanic gardens and institutions of a kindred nature in Europe, and on his return to America with the view of remodeling that under his own charge, he made a general clearance of all movable shrubs and herbaceous plants to a reserve garden and cut down the many duplicate trees. The garden was then re-surveyed, and laid out afresh according to a definite and convenient plan, the plants being disposed as far as practicable in the sequence of genera given in Bentham and Hooker's GENERA PLANTARUM. In 1876 he secured the able assistance of Mr. William Falconer under whose superintendence all these changes and plans were executed. When Prof. Sargent assumed control of the garden in 1872 it contained 2,400 species of plants, and when he resigned its charge in 1879 5,901 species were represented in it.

In 1872 he was likewise appointed Director of the Arnold Arboretum of Harvard College. The Arboretum contains 125 acres of woodland near Forest Hills Station a few miles from the center of Boston. It is intended to convert the Arboretum into a beautiful park and include it in the general park system of Boston, and with this end in view a plan of it has recently been prepared by Mr. Fred Law Olmsted the eminent landscape gardener of New York. It is intended that it shall contain every tree, shrub and herbaceous plant, native or exotic, that will be found hardy there, and from the great variety of soils and situations upland and lowland, rock and pond, contained in it, we may expect soon to find therein represented such an extensive collection of hardy plants—trees, shrubs and herbs, as are nowhere else represented on an equal given space on this continent. Propagating houses and nursery grounds are contiguous, and thousands of plants are ready for planting. This is supplemented by a herbarium and museum, illustrative of trees, their products and uses, and which is now temporarily contained in the Dwight House—a spacious residence-building on Mr. Sargent's private estate at Brookline, and which is entirely given up to this use.

In addition to his directorship of the Arboretum, in 1879 he was appointed Professor of Arboriculture. Prof. Sargent is a strong man—a man of talent, perseverance and will, progressive, and with a passionate fondness for the branch of science he has assumed.

Horticultural.

RAYS.

I DON'T care how pretty the Ox-eye Daisies are, or how much "Horticola" (p. 482) blesses them, they are vile weeds at the best, a curse upon our land, and it is our duty, man and child, to root out what is bad. The Ox-eye Daisy is not fit for winter-forcing, the Paris Daisy is. My neighbors have got to calling the common Rudbeckia (Cone-flower) that grows in our hay fields by the name of "Yellow Ox-eye Daisy." Now if the American system of naming plants—which is, giving precedence to priority—is to be adhered to, my neighbors are wrong. The Yellow Ox-Eye Daisy, or Corn Marigold, as it is likewise often called, is a European plant, next of kin to the White Ox-eye Daisy, and, too, as villainous a weed.

* *

AND then comes Professor Budd with a good word for Bocconia Japonica! Yes, Professor, it may be handsome and the bees may love it, but once it gets a foothold it intends to stay there. The roots reach down into the subsoil, stretch out beyond the parent-stool, and every broken piece will grow. In this way it resembles the giant Knotweeds, also handsome plants, but, alas! a miserable nuisance, too.

* *

"CLINTON" you tell us "Plant Trees;" now please tell us what trees to plant and where to plant them. We don't care whether they are native or foreign trees, we wish something cheap, quick-growing and suited to our wants. Don't lump them and call them pines or oaks, but tell us what kind of pines, what kind of oaks. Robert Douglas, in Illinois, grows forest trees by the million; that is the sort of stuff we want.—White Ashes, European Larches and the like, but we do not wish to incur the danger of planting bog trees on hill tops or those that only thrive in gravelly land upon our hog-wallow prairies. And when it comes to timber trees, we don't want beeches, balsam firs or poplars, but something of sterling value. Please help us, "Clinton."

* *

IN addition to what is said in a late issue about raising clematises from seed, let me add: On the 14th of February last, I sowed a pan of mixed clematis seed and kept it in the greenhouse; a few plants appeared in May and to-day, July 20, I have potted off from the same pan over two dozen plants about two inches high. There are lots more of smaller ones—some just bursting the seeds, others peeping above ground, etc. Last Fall a neighbor of mine sowed seeds of the Scarlet Clematis in a pan and put a slate over it. It was wintered in a cold-frame and no notice taken of it till last May, when the shoots began to creep out from under the slate.

* *

G. S. H., AUSTIN, Texas, asks, p. 487, about ornamental hedge plants for that part of the country. As so many shrubs are applicable for the purpose, it is more a question of expense, choice and care to be given, than of the sorts that would answer. All shrubs cost money and the finer they are the more costly they are. Among deciduous shrubs the Bridal-wreath Spiræa is exceedingly handsome; crape myrtles, chaste shrubs, double deutzias, althæas, mock-oranges, are all applicable. Of sub-evergreens, that is, plants that are evergreen far South but deciduous further North, are Yanpon, Japan Quince, pomegranate, privets, and white and red-berried pyracanthas. Of true evergreens there are many, for instance, Japanese euonymus, oleanders, Chinese and Golden Arbor-vitæs (the American Arbor-vitæ is useless in Texas), and the like. The tea plant grows well in Texas and would make a pretty garden hedge, and what can be better for the same end than the green or variegated Pittosporum Tobira? [We saw this fine shrub in South Carolina and Georgia last year. It is beautiful as grown alone or in hedges—always beautiful and must sooner or later be highly prized throughout the South.—EDS.] At Whittaker's Nursery, at Houston, Texas, I remember seeing a fine hedge of Cape Jessamine; and then there is the Cherokee Rose. On the Island of Galveston, where shelter from wind is of vast importance, the farmers use oleander, tamarix (they call it Sea Cedar) and Chickasaw Plum hedges. In the case of a garden hedge, please do not use shears in clipping, but, instead, a knife. The shears cut leaves and shoots alike, leave snags, and make no discrimination between weakly and strong growths, contorted or misplaced ones; with the knife you can cut what and how you choose. For fence-hedges the Red-berried Pyracantha is good, but the Osage Orange is the quickest grower and most impenetrable harrier. The alkali soils—poison patches—are detrimental to the pyracantha as well as to many other trees and shrubs, and the "cut-leaf" ants love its foliage dearly.

* *

LAST Fall I lifted and potted a lot of Mourning Bride (Scabiosa) and wintered them in a cool greenhouse. They bloomed a little all Winter long, but not enough to compensate for their room and care. In the Spring I cut them back and planted them out in the garden; they are not growing as rankly as this year's seedlings, but they are blooming extravagantly. The same rule holds good with pelargoniums, fuchsias and other plants,—old plants bloom more copiously than young ones.

* *

WE can prolong the blooming period of many of our plants by cutting off the flower stems as soon as the blooms have past; in fact, the more we cut the blooms off heliotropes and ageratums the more they will branch out and bear a further supply. So will verbenas, Evening Primroses, red valerians, snapdragons, and the like.

* *

EVERYBODY knows the Century Plant; it is Agave Americana. There are a great many varieties of it, and as many other species probably as much entitled to the name "Century Plant" as it is. The notion that the Century Plant blooms once in a hundred years is all nonsense; so is the idea that it dies when it blooms. The grosser you feed it and the thriftier it grows, the less likelihood there is of its blooming; on the other hand, starvation may cause it to bloom. When at maturity it is very large, often too big for our hospitality, hence we seldom have plants big enough to flower. But in greenhouse gardens, also in Florida, we sometimes see them in bloom. Many of the other and smaller species are seen in bloom more frequently. The evergreen species, like the true Century Plant, live the longest and bloom the seldomest, but the herbaceous kinds, like the Virginian and Spotted-leaved (Maculosa) usually bloom every year. I have a plant of the Yucca-leaved species, which is only three years old, showing flower just now. Its scape is already 11 feet high and still growing. When the Century Plant blooms, the crown from which the flower stem proceeded dies, as is the case with the banana, or, in fact, with any herbaceous plant; but a multitude of side growths, or suckers, remain to perpetuate the plant. The blooms of the ordinary Century Plant are not unlike those of our common yucca, and are arranged in candelabrum-fashion on stems some 20 to 40 feet high, according to the strength of the plant.

* *

JUST about this time of year we often have damp, muggy weather suddenly succeeded by hot sunshine, and we find our plants "scald" badly and often rot off. Shade is the only preventive of "scald" and in most cases shading is impracticable; but we can lessen the rot-evil to a great extent by keeping our plants free of decaying leaves, thinning out overcrowded leaves or growths, and keeping the surface soil so loose and well stirred that the least "air" will dry the top. Dry sand or dust charcoal strewn around the necks of plants, is also good. When by hoeing or otherwise the earth is worked up around the necks of the plants in basin-fashion rot is worse than in the case of level earth; indeed, where the plant crowns are elevated a little above the ground level, the rot is the least.

* *

THE other day, when scrambling over rugged Mount Munroe and peering down into Oakes's Gulf, a precipitous abyss a thousand feet below, we beheld a vast wreath of snow, and in ecstacy I remembered that at the head of that snow-filled gulch a year ago, I found that little beauty cassiope, the phyllodoce, the glaucous kalmia, violets, veronicas, pale castilleias, white orchids and many other alpine gems, and I straightway proposed to my companion that forthwith we descend thither and see nature's mountain garden. But in earnest, prosy innocence he answered me, "I have sent to London for Anthurium Andreanum and I want to see it bloom before I kill myself!" LEON.

RURALISMS

THE EDITOR, I understand, intends to publish this month the annual Fair Number of the RURAL, with an unusual number for free distribution. While this denotes great enterprise and wise forethought on the part of the publisher, it presents a rare opportunity for advertisers of all classes to make their wares known, and the shrewd business-man is not slow to avail himself of it. In this connection I wish to make a remark or two in regard to a deficiency quite too common among advertisers; I allude to the omission of prices, especially in the cases of novelties, new implements, etc. It is altogether unsatisfactory and little to the purpose to request that a price list be sent for. It is not necessary, of course, to insert a long list of prices (though some do it), and it is not needed in things commonly well known, or in advertising a business; but in the case of specialties and novelties, especially in implements and machinery, it seems to be quite necessary, and the omission, I am convinced, is generally a loss to the advertiser. Some understand this, but others do not. The small additional cost is nothing compared with the gain. I am inclined to look suspiciously at a new thing advertised without a price, and I know many others are, and never think of it again.

ABOUT July 18 the wistarias began coming into bloom again. This, in a small way, is not a thing of very unfrequent occurrence, and is commonly attributed to the weather, which doubtless has something to do with it. I had some plants then blooming profusely, however, which I think the sparrows had more to do with than the weather. Last Spring the little pests picked off nearly all the buds (of which they are very fond), and only a solitary flower here and there made its appearance. This disbudding seems to have had the usual effects of this operation. Speaking familiarly, I might say that the wistarias, knowing there are no sparrows about now, have resolved not to be altogether deprived of their usual Spring festival of flowers, and are having a good time of it, and we enjoy it. If the flowers had any special value at this season, the disbudding might be imitated. The sparrows were got rid of by persistently destroying their nests as fast as they made them. They finally got mad and went off. I might have shot them, only I could not find it in my heart to do it.

WHILE speaking of the wistaria, I will add, having tried it, that the double-flowering, sweet-scented Japan variety is a good subject for forcing, and could be made valuable for cut flowers for use by the florist. It is almost, if not quite, as fragrant as the best of the violets, and might be made to supplement this deliciously fragrant flower. It would, of course, be necessary to wire the individual flowers; but this is done with almost everything the florist uses. How far it could be made profitable to force it I do not know, but it is worth the attention of the florist for this purpose, and deserves to be grown out-of-doors, at least wherever a place can be found for it. But what an act of sacrilege to tear to pieces the noble clusters of the wistaria!

THE orange crop in California has already become so abundant, and the prices, in consequence, so low, that attention has been directed to its preservation in some other than its natural form. It would seem, from recent experiments, that its conversion into wine has been fixed upon as the most profitable. It is said to make a very palatable drink, and to sell at a good profit. The best oranges will be marketed and the smaller ones converted into so-called wine. Wine of this kind has been made in Florida, in a small way, and is well spoken of; but what I should like to know is, whether it makes a refreshing drink that is conducive to health. Of the other kind we have more than enough already.

IN a former number I spoke of Burr's New Pine as being the second strawberry to color with me. When I wrote I supposed the plants to be the Burr; but subsequently my suspicions became aroused, and on critically examining the foliage and the fruit, I found, much to my regret, that the plants were not true. I mention this that others may not be misled by my former remark. I gave a few plants to the Editor last Fall, and must now request him to remove the name to prevent further error. I have for years been trying to get the true Burr, and I do not mean to give it up yet. The above plants came to me in a way that led me to suppose I had the true kind.

AN article is "going the rounds" in which it is said that an Italian gardener has succeeded in raising fragrant camellias, and it is added that the colored kinds are more fragrant than the white. This may be so; but Italian gardeners have a reputation for doing queer things with plants, and the newspaper article does not come to us in a way to entitle it to unlimited confidence, to say the least of it. I would advise the readers of the RURAL to wait a while before investing much capital in fragrant camellias. When such really do come, I shall rejoice in common with all lovers of that noble flower.

OUR large cities are full of idlers and the country is overrun with tramps, yet farmers in many places have been unable to secure sufficient help at almost any price to get in their crops. During the past week (July 23) I have seen acres and acres of wheat lying just as the machine left it, for want of help at least to bind and stack it; and one enterprising farmer told me he had ridden over into an adjoining State and secured men at from $2 to $2 50 a day, rather than run the risk of loss by leaving his wheat in the field. His crop was an unusually fine one, and this probably had something to do with his willingness to pay well to get it under cover. Painstaking in growing a fine crop naturally leads to painstaking in securing it. Others had put the few men they had into the "harvest," and left their corn to chance and the weeds, and the latter were having a "tall" time of it. Those with whom I have talked do not seem to have been unwilling to pay the prices asked; the difficulty has been to get men at any price. It seems strange that this should be so when we consider the idlers, the tramps, and the immense number of immigrants that have poured into the country during the past year.

IT should be borne in mind that turnip seed of some kind or other may be sown during the whole month of August, the best for a late sowing being the Red-top Strap-leaved. There are always vacant places about the garden and field that may be profitably used in this way, and which are too commonly left to waste and weeds from simply not knowing what to put in them.

THE two most attractive climbers just now are the honeysuckle and the clematis, the latter not by any means as common as it should be; indeed, it may still be called a rare plant in its best forms. It may now be bought at a reasonable price, and the different classes or types afford varieties that will furnish an abundance of lovely flowers from Spring till Fall. It may be grown either as a climber or a trailer almost anywhere without being out of place, and is surpassed by few plants for bedding purposes. The colors are varied and beautiful, and the whole plant graceful to a degree. In regard to the honeysuckle, I repeat what I have said before, that L. Halliana is the best of them all.

A WELL-KNOWN horticulturist says in a letter that "people are beginning to find out that

there are better grapes than the Concord." Yes, and it has taken them a good while to learn it; but better late than never. It is encouraging, however, to know this. Years ago I predicted that we should yet have a native grape that, in its make-up and goodness, would compare favorably with the Black Hamburgh, and Mr. Ricketts and his worthy colaborers have put us well on the way to it. Nothing less than this will content me, and I do not think I stand entirely alone.

LADIES and other amateurs who have plants of the Scarlet Pelargonium too large for their room may put down cuttings early in August and have nice young winter-blooming plants by the time it is necessary to take them in. The cuttings should not be made from wood that is old and hard. Pot them off as soon as the roots appear, or even as soon as they are well callused. With a little care and encouragement they will often prove more satisfactory than large plants.

THE sooner now that new strawberry beds are made the better. The readers of the RURAL should not forget what has been said about frauds, and buy their pot-grown strawberry plants of well-known and reliable parties, of whom, thank goodness! we still have several left. Among new kinds the Bidwell will be a safe one to buy, but of novelties the Jersey Queen and possibly the Manchester will take the lead, and fill up two different seasons. There are now many good kinds on the lists to choose from, as the reader will see by referring to the Small Fruit Number. HORTICOLA.

Leveling Strawberries in the Baskets.

A DEALER who buys berries of me, and also reads the RURAL, said lately, "Why don't you tell your brother berry growers how to level the berries in the baskets; it adds 50 cents a crate to their value." I have not the opportunity of a dealer to learn how other growers "fix" their berries, and have supposed they understood the business as well at least as I do. But this dealer says it is not so. My pickers fill the baskets as full as they will stay on, heaped. When they are brought in an experienced hand—a woman hired for the purpose—throws out upon a table before her half a pint from the top of each basket and replaces them with the hulls down, so as to make a flat, level top, about three-eighths of an inch higher than the edge of the basket. This is what the buyer alluded to says increases the value to him 50 cents per crate. It does not cost 10 cents, and has always been done here because it prevents the mashing which is sure to attend the practice of leaving the berries in a conical form, or highest in the middle. T. H. H.

Orleans Co., Vt.

Gooseberries.

As these are just now ripe in abundance, I would remark that I prefer the Downing to any other variety for table use on account of its tender flesh and its very good, sweet flavor. The fruit is of fair size and of a greenish-white color. The plant is with me of moderate growth and very productive. Houghton's Seedling is of vigorous growth, but has rather slender branches and is remarkably productive, the fruit being of moderate size and of a pale red color. With me the berry remains longer in perfection than that of the Downing. I suppose I shall have to abandon the cultivation of the English varieties. They are so subject to mildew that it is impossible to obtain any fruit from them. If any of the readers of the RURAL have had any experience with them or can suggest any remedy for the mildew, I shall be pleased to hear from them. Have they been tried at the Rural Farm, and, if so, with what success? [Yes, mildew destroys them.—EDS.] CHAS. E. PARNELL.

Queens Co., L. I.

Entomological.

ŒSTRUS BOVIS.

FROM what appears on page 485 of the RURAL under the signature of Mr. Sereno Edwards Todd, it seems that either Mr. Todd or myself had better study the transformation of the Ox Bot-Fly. All I wish to do in this article is to correct a few of the writer's statements, and cite a few of the authorities or the writings of those who will doubtless be taken as authority. I could have done this in my first article, but I have always looked upon a popular newspaper article as no place for such dry details, unless it be for the purpose of correcting a wrong impression. From the citations I shall make the reader will doubtless see that I did not derive my information from cyclopedias, as the writer referred to seemed to infer.

In regard to the place where the eggs are deposited, whether glued to the hair or deposited beneath the skin, there is a difference of opinion, some good authorities being found on both sides, hence we will pass that point, as only an actual observation can decide it.

The statement that there is no orifice in the skin through which air may enter to sustain the life of the tender grub, I can not admit as a fact. Spending, as I did, the early part of my life on a dairy farm in Central New York, I may be presumed to have had some chance to observe the habits of this insect. I have always found an opening, during the Winter, at the summit of each bump on the backs of cattle, and never found any difficulty at the season in removing the grub with pressure by the thumbs. On this point E. B. Reed, in the report of the Ontario Entomological Society for the year 1873, page 38, says "It is, therefore, very essential to the grub that the hole of the tumor should remain constantly open, for by this operation a communication with the air necessary for respiration is preserved." Dr. Harris, in his Insects Injurious to Vegetation, page 624, says on the same point, "The maggots of the Œstrus Bovis, or Ox Bot-fly, live in large, open boils, sometimes called wormils or wurmals, that is, worm-holes, on the backs of cattle."

The statement that the larvæ "pass to the chrysalid state while in the adipose tissue of the ox or cow" I can not accept as a fact. I do not know of an instance where any species of this family of parasitic flies pupates in the body of its host. On this point Dr. Harris, in the book above referred to, page 622, says, "The larvæ or young of bot-flies live in various parts of the bodies of animals. * * When they are fully grown they drop to the ground and burrow in it a short distance. After this, the skin of the maggot becomes a hard brownish shell, within which the insect turns to a pupa, and finally to a fly." Reaumer says, as quoted by Mr. E. B. Reed in the Ontario report above referred to, "At last it comes out backwards and falls to the ground, when it gets under a stone or buries itself in the turf, remaining quiet, and preparing for its last transformation." Dr. A. S. Packard, Jr., one of the U. S. Ent. Commission, says in his Guide to the Study of Insects, page 405, "The larvæ are found during the month of May and in the Summer in the tumors on the backs of cattle, and when fully grown, which is generally in July, work their way out and fall to the ground." Further on, in relation to the length of the pupal period, he says, "They exist in the puparium twenty-six to thirty days, and the fly appears from June to September." But perhaps here is enough.

In regard to remedies, Mr. Todd's suggestion of the rubbing pole or carding is a good one, though with ordinary cattle the pole might fail to reach many. As I have intimated before, the process of squeezing them out and killing, will be as effectual as any means of killing them. G. H. FRENCH.

Carbondale, Ill.

Farm Topics.

THE EVAPORATION OF FRUIT.—No. 1.

J. G. BINGHAM.

Its Necessity.

AMONG the great industries of our country the cultivation of fruit has reached a magnitude that is indeed surprising. The Yankee nation are enthusiasts in this branch of industry; they grasp after new varieties and eagerly test their qualities, that they may, if possible, improve upon the present supply.

Fruit culture is unquestionably profitable. It is a fact that in good fruit sections of the United States many orchards of from six to ten acres pay larger profits to the farmer than the 90 acres put into wheat or other farm products. That my readers may properly appreciate the importance of the fruit interest of the country it must be borne in mind that in the so-called fruit belts of the United States there are more than four and one-half million acres of land under cultivation in orchards. Carefully prepared statistics report the estimated value of our green fruits at $138,000,000, nearly half the value of our average wheat crop.

At our Centennial Exposition the show of fruits exceeded 60,000 dishes and over 400,000 specimens. Michigan values her apple crop at $2,000,000. Illinois has 320,000 acres in orchards. California sends East millions of baskets of grapes and pears, and will shortly supply the whole Union with raisins. The Gulf States rival Southern Europe in semi-tropical fruits. Delaware and Maryland produce from seven to fifteen million baskets of peaches per annum. New York City has received in one day 10,000 bushels of strawberries.

The fruit crop of 1880 was enormous; millions of bushels, more particularly of apples, were allowed to go to waste for want of a market. There is an authentic statement in the New York Tribune of August 23, 1871, that a single fruit grower of Delaware lost by rot 10,000 bushels of peaches, while the total loss during that season in that little State exceeded 50 times that amount. He would have been a benefactor indeed who could have rescued from decay this half million bushels of luscious peaches.

How to preserve the surplus is the question which has agitated the minds of farmer and fruit grower in time past. The solution of so important a problem, involving individual and, I may say, national, pecuniary interest, has been reached by *fruit evaporation*. In no one department of farm economy has there been as much interest manifested in the last few years as in the recent application of better methods and appliances for this special purpose. Erroneous principles and practices have, in a great measure, given way to more advanced methods, based on well-known facts in chemistry, comprehending the component elements of fruits, their growth, cell structure, development and preservation. The great progress made in this department of domestic economy is commensurate only with its importance in deciding the question, how to secure a universal and regular supply of fruit for all seasons and sections, combining all the healthful and nutritious properties of fresh, ripe fruit, which, when properly treated, is easily restored to the nearest possible former condition of freshness. The demand for evaporated fruits of all kinds has more than kept pace with the production, and prices have steadily advanced as the supply has opened up new markets, gaining in general favor and entering into consumption as a wholesome article of food instead of a mere luxury.

McGrawville, N. Y.

AN ENGLISH GRAIN CRUSHER.

Careful experiments with the omnibus horses of London show that there is an average gain of one-fourth, or twenty-five per cent., in crushing grain for feed. Much more attention is paid to saving grain in this way in England, France and Germany than in this country. Doubtless the main causes of this greater lack of thrift among us, especially in the thinly inhabited regions of the West, is the comparatively low price of grain and high cost of labor. If crushing grain however, makes a gain of one quarter in its nutritive value as stock feed, it should be much more widely practiced than it is at present, especially in the more thickly settled States whose denser population, closer proximity to market and greater diversity of agricultural industries render grain higher-priced than in the Frontier

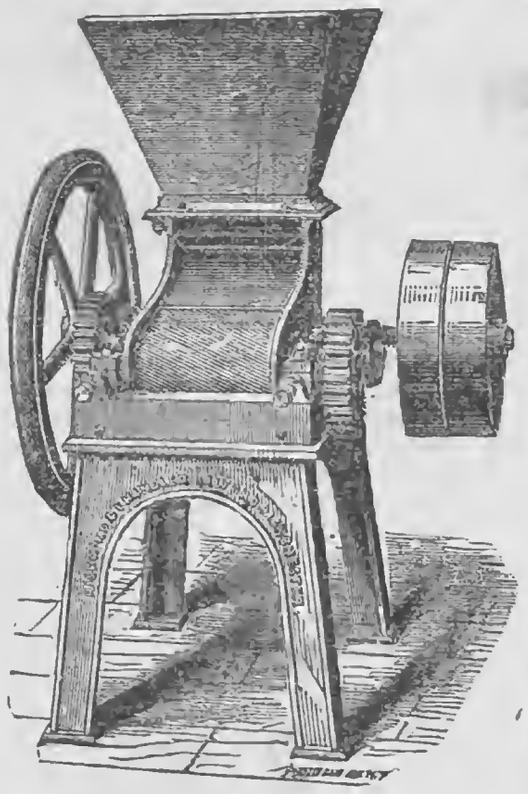


FIG 392.

States. From time to time we have presented to our readers engravings of the best grain crushers and feed grinders made in this country, and now we call their attention to an English grain crusher, shown at Fig. 392, which attracted considerable attention at the Paris Exposition of 1878. It is known as the Richmond & Chandler machine, and is made of various sizes and used for crushing beans, peas, oats, barley, corn, flaxseed, or malt. In it the "set" of the rollers is regulated by means of two thumb-screws in front of the machine, so that the grain may be crushed to the required degree of fineness. The feed of the grain to the rollers is determined by a small regulating wheel. There is also a machine known as a kibber which is designed for cracking oats, beans, and corn for horse feed. It is like a large coffee mill, with renewable iron plates, and a capacity for cracking into various degrees of fineness.

OIL-CAKE BREAKER.

THE Treasury statistics show that in 1880 there were exported from this country 458 023,225 pounds of oil-cake, valued at $6,259 827, against 340,995,395 pounds, valued at $4,394,010, in 1879. For the previous ten years the exports had been steadily increasing from 203,587 040 pounds in 1871, with the exception of a slight falling off of about 9,000,000 pounds in '73. It is doubtful whether the country does not lose more than it gains by this large trade—whether we would not be all the richer by keeping this vast amount of oil-cake at home to feed to our own flocks and herds, thus increasing the quantity and quality of our butter, cheese, beef, mutton and provisions for domestic consumption and exportation, besides adding to the amount of our manure piles and greatly improving their fertilizing properties. The United Kingdom

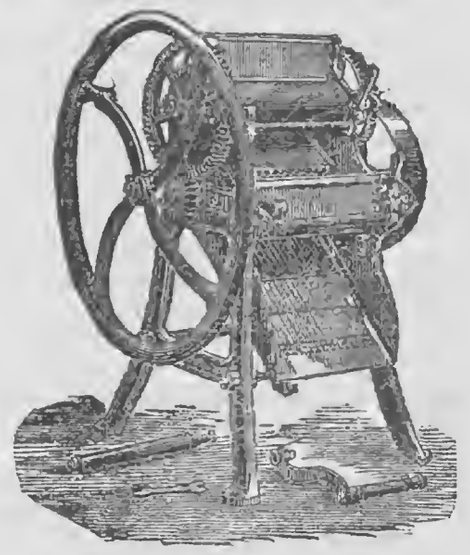


FIG. 393.

and France are the chief gainers by our improvidence in this respect, although Germany also has lately begun to be a considerable importer of our cotton-seed and flax-seed oil-cake. Beyond the Atlantic, European economy is rigidly practiced in the use of this article of feed, both in proportioning the proper amount to each class of animals, and in preparing it in the best way for obtaining all the advantages possible from it. For this purpose, the oil-cake breaker is an important device. One of the best forms in use in Great Britain is shown in engraving, Fig. 393. The cake is slipped edge-wise into the hopper, and is there gripped by a pair of spiked rollers, which reduce it to pieces suitable for sheep or beeves. Six different sizes of cake-meal are made by this machine, which is furnished with cleaning combs, to prevent the adhesion or clogging of damp cake. Boxes receive the broken cake and dust separately.

BREWERS' GRAIN.

THE hint thrown out by Prof. Storer in regard to the drying of brewers' grains in a late RURAL, is well worthy of consideration. But, after having used them for several years, I wish to point out to persons interested some circumstances which would affect the process of drying and some which relate to methods of preserving them. First, in regard to the prejudice against this excellent, nutritious, wholesome and cheap food for dairy cows. Boards of Health, who move in mysterious ways their duties to perform, and who think it right to prohibit the removal and temporary storage of manure, not only in the city of New York but in rural villages, and yet thus compel its retention in large stables in crowded and sweltering streets, have put their foot—so to speak—down upon brewers' grains and have peremptorily forbidden the selling of milk in the city of New York from dairies in which they are used. Further, the renowned Farmers' Club of the American Institute has put its foot, (a club foot?) also down upon brewers' grains and declares them to be an unwholesome and (to use a recent remark of the late Senator Conkling) "an abhorrent and forbidden" fodder.

Now I venture to say that not one of these persons who have thus put their foot down, knows the difference between brewers' grains and distillery waste, and actually confound the one with the other and with all the abominations, "abhorrent and forbidden," of the vile swill dairies. Those who know brewers' grains know them to be unobjectionable in every respect, a healthful and valuable food. And if there is any way in which the vast quantity of this waste product can be brought to distant dairies for use, it would be a great and useful economy. I have long been considering this question and believe the system of drying and pressing into cakes, the most feasible of all suggested methods. The German method of baking, mentioned by Prof. Storer, would be excellent if not too laborious and costly; but the pressure of the partly dried grains, between steam-heated plates, into solid cakes, would seem to be by no means too costly a process. If the cost would not be larger than the gain in the cost of freight upon the weight of the expelled moisture, the value of the product would not be really increased. But by whatever process the grains are prepared, it must be such as will prevent the loss of the soluble matter in the contained water to be got rid of. This moisture contains

a large quantity of glutinous and nitrogenous matter as well as sugar and gum. It will hang in thick strings from the floor of a car loaded with grains until it reaches the ground, and will dry on the car like glue. To dry by centrifugal machines would cause the loss of this valuable matter and leave the dry husk much less nutritious.

The method of preservation by ensilage has been in use for many years. I have kept them pressed in flour barrels for six months without difficulty or waste, and have packed 100 wagon-loads in an ice-house (without ice, of course), with perfect success. There are extensive dairymen in Westchester Co., N. Y., who have long practiced ensilage for keeping them. The silo is a stone pit at the end of the basement cow stable and opening into it by a door at the bottom, from which the grains are removed for use. The floor and sides are cemented and the open top, on a level with the ground at the end of the barn, is covered with a shed. When the pit is filled, the mass is covered with some straw and then with planks closely arranged. The mass settles by its own weight sufficiently to exclude air, and no pressure is required. Many thousand bushels are thus put away every season and a year's stock is laid in when the supply is abundant and the price cheap.

Corn starch waste, which is the same as the corn sugar or glucose waste, or "maize slump.' is another fodder substance that could be utilized in a similar way so as to be available for carriage to a distance of hundreds of miles; whereas in its soft and moist condition, like brewers' grains, it cannot be freighted profitably over 100 miles. H. STEWART.

A Good Way of Plowing.

HAVING tried all of the various ways of plowing, please let me suggest a plan of my own, which for convenience, ease to plowman and team, and also for expedition, I think cannot be beaten, *especially* where sulky plows are used.

If the field is fenced, run a furrow across each end six steps from the fence; if not fenced, five steps from the edge of the field. This will leave a strip five steps wide to plow in either case. Then run a back-furrow fifteen or sixteen steps, as the case may be, from either side; back-furrow on these until a strip is left the same width as at the ends; then forty steps from the back-furrow run another back-furrow, and plow until you have back-furrow off twenty steps; then you will have a land of the same width; that is, twenty steps: by laying off a field in this way, you can plow to the end furrow, throw out your plow and turn easily both team and man, on good hard ground, obviating all lifting and tugging for man, and backing and jerking for team. After all is plowed within, then commence on the outside strip, plowing from the fence, and you will have an evenly and well plowed field without any hard places and few back or dead furrows, and by this means, a flat field can oftentimes be drained. Successive plowings in this manner will raise the field into beds, using the dead furrows as ditches to carry off the water. C. A. MC C.

Princeton, Ia.

The Herdsman.

OUR ANIMAL PORTRAITS.

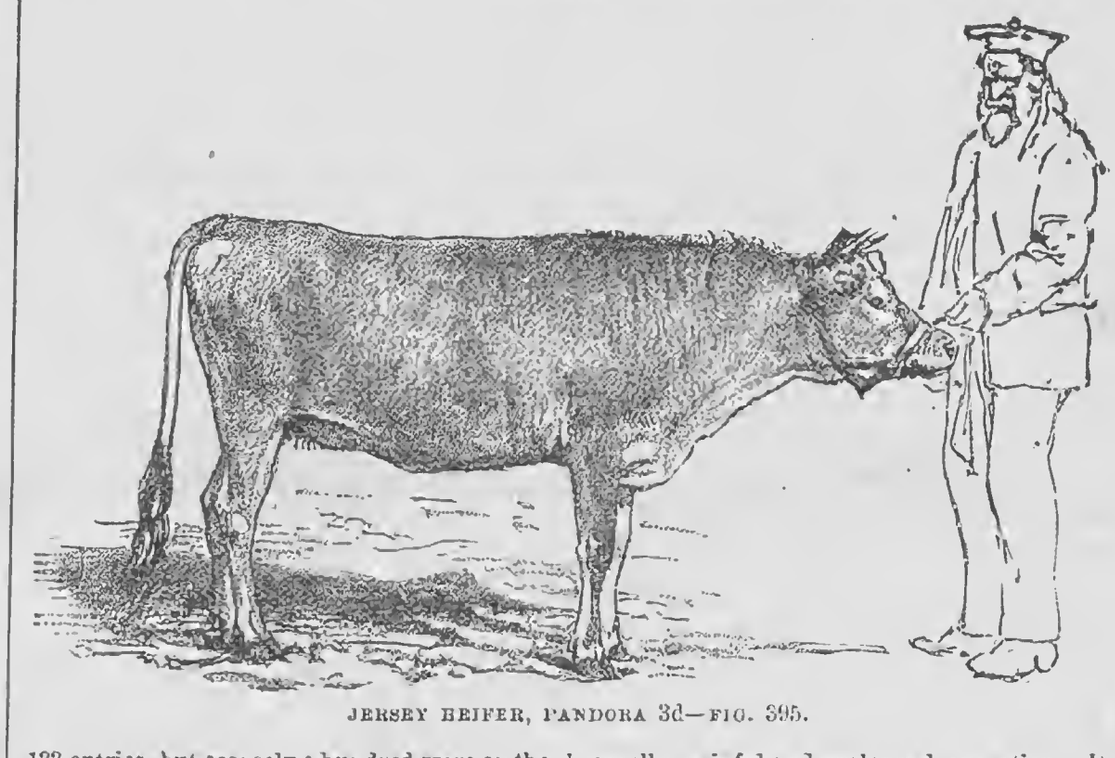
Jersey Heifers Patricia and Pandora, and Short-horn Cow Lady Carew 3d.

LIKE the agriculture of Great Britian, the Royal Agricultural Society of England has had much ill fortune to contend against for the last few years. Just as an excess of wet weather during the growing and harvesting season used to grievously damage the farmer's crops, so a tropical downpour during its annual great show dampened the spirits of the visitors and curtailed the receipts of the Society for the last two or three years. The harvest throughout England, however, by all accounts, will be a fair average one, as compared with those that cheered the farmer before the late era of agricultural depression, and the last show of the "Royal" shared in the bright fortune of the industry it was founded to promote.

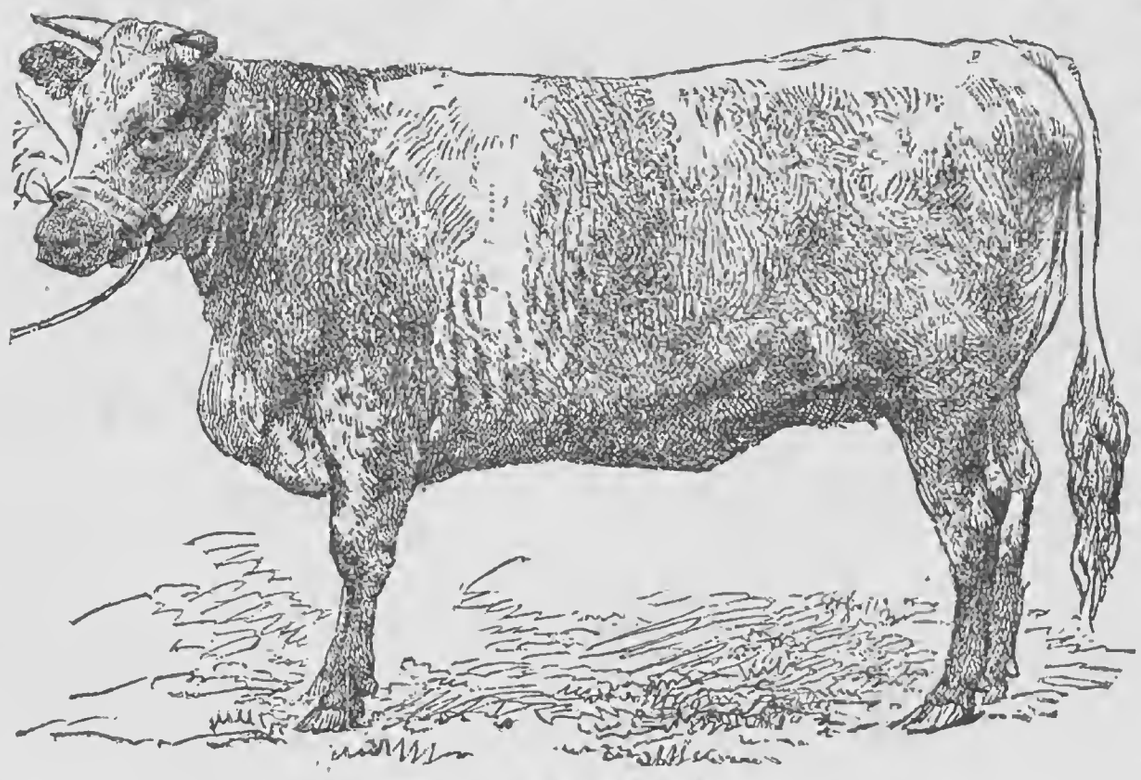
This great show took place at Derby from Wednesday, July 13, to Monday, July 18, both days inclusive. The weather was all that could be desired, except that the brilliancy of the sun had a trifle too much heat in it. The number of visitors was large and highly appreciative of the unusually fine exhibition prepared for their pleasure and instruction. A short time back the success of the show was greatly endangered by the prevalence of foot-and-mouth disease which led the Privy Council to issue Orders forbidding the movement of cattle, sheep and pigs, but the outbreak abated just in time to enable the Council to relax this order. Of horses, cattle, sheep and pigs, there were 1231 on exhibition, the cattle numbering 396, for which £1475 were offered in premiums. In Jerseys Mr. J. Simpson's silver-gray Patricia, which had just calved, won first prize in the Jersey class "for heifers in milk or in calf" and in the yearling class he again came to the front with another of his silver-grays, Pandora 3rd. Of these the Agricultural Gazette (from which we have re-engraved the accompanying likenesses) says that they had divided between them the champion prizes for the two best cows at the Royal Counties' show at Salisbury this year, and that Patricia has been exhibited five times, winning five first prizes, while Pandora has been exhibited four times, and taken four first prizes.

JERSEY HEIFER, PATRICIA—FIG 394.

LADY CAREW 3d.—In Short-horns there were 133 entries, but scarcely a hundred were on the ground. The Cow Class was a grand one. There were ten entries of choice animals, and after thorough deliberation the first prize was awarded to Mr. John Acker's Lady Carew 3rd, a beast with a grand, massive, level form, remarkably full and thick over the hips, with well sprung ribs and of good length and depth. Her only faults are said to be rather gaudy rumps, excessive fat, and a slightly stained nose. At the Essex County Fair, this year, she won the 100 guinea Challenge Cup for the best Short-horn in the yard. She also bore off the honors at the Bath and West of England Show the other day at Tunbridge Wells, and since then has also won the Havering Park Challenge Cup and had some other triumphs. Altogether, she is no doubt the best showyard Short-horn cow in England to-day.



JERSEY HEIFER, PANDORA 3d—FIG. 395.



LADY CAREW 3D, AS A HEIFER IN 1879—FIG. 396.

The Horseman.

FIRING FOR SPAVIN CRUEL, AND OFTEN USELESS.

C. W. GREGORY, an English veterinary surgeon, says in the Live Stock Journal, "During an active practice of 20 years, for the last ten I have not fired a single horse, although here in Bristol, the neighborhood being hilly, horses of all classes are severely worked. I have found mild and almost painless treatment *more speedy, more effective, and more permanent.* "In my opinion firing is unscientific. It is a cruelly painful and prolonged operation. Its results are very uncertain, and do not justify the operation. It considerably blemishes and consequently depreciates the money value as well as the owner's respect for his horse; and, finally, firing seldom removes, often does not diminish, and sometimes increases the disease under treatment."

Two years ago a favorite horse of mine, then at my country place, had become badly spavined on each leg, making it so lame as to be entirely useless. Although then 20 years old, it was so fine an animal, gentle and intelligent, I could not bear to give it up, and so called in the advice of a veterinary surgeon to see if the spavin could not be cured. He applied mild blisters and ointment, and in three months the horse became well enough to be used at light work, and has shown no lameness since. The spavin swellings are not reduced in size, still they do not blemish the legs.

Some years ago, every now and then, a car-horse used for city work, became spavined. I then had it fired and turned out to pasture for four or five months before it was sufficiently cured to be brought back to town. This was not only expensive, but a cruel operation, and I permitted it only from the advice of a skillful veterinary surgeon, who said a cure could not be effected in any other way. I have been greatly rejoiced to find since that a milder and more humane treatment of a horse is equally effectual. A. B. ALLEN.

Watering Horses.

In the RURAL of July 2d, some good advice is given on the above practice; but while looking at the circumstances as they actually exist, we readily see that in a majority of cases in the country where teams are used, it is very inconvenient and often impossible to water the teams as often as we would wish to; and the idea of drinking troughs in every field is simply impossible from the fact that no water could be conveyed into them. Now, if farm and other teams are watered regularly in the morning, twice at noon and at night throughout the season, no particular inconvenience will be felt, as it is well known that habit largely controls the desire for drinking both of man and beast. Care should be taken to water at regular intervals during the entire Summer—not several times a day for a part and only a few times for other parts of the season. If circumstances are such as to allow watering five or six times a day during warm weather, so much the better; but do not do so a part of the time and not all the time. I have known farmers that only drank at meal times and suffered no inconvenience from their moderation even in hot weather, it being the result of habit. SCRIBE.

The Swine-Herd.

CHEAP PRODUCTION OF PORK.

COL. CURTIS gave an excellent example of this in the RURAL of Jan. 29. A resort mostly to grass, clover, soiling crops and roots, is the only way in which the Eastern can compete with the more fertile Western States in the production of pork; and this I know from my own considerable experience, when rearing large numbers of swine years ago. There are other great advantages obtained by this method. The labor is much less, the pork is of a better quality, and the animals are kept almost perfectly healthy. If Western swine breeders would adopt this system set forth so clearly and simply by Col. Curtis, I am persuaded we should hear no more of "Hog Cholera" there. This would put an end to the foul, destructive disease which has caused a loss of millions of dollars annually to the farmers of the West for years past, and still continues there to a greater or less extent.

I am for calling things by their right names, and plainly stating facts. It is the only way to get at the truth of the matter, and insure a greatly needed reform. I say that "Hog Cholera" comes from mere filth, want of proper exercise, pure, fresh air, and feeding the animals almost exclusively in the hot season on highly fattening corn. A variety of food is what swine require and this should be mainly of a succulent character to help keep them healthy, especially in hot weather, and give them a due proportion of bone and muscle to the fat. Learned treaties by the dozen have been written on "Hog Cholera," and any number of remedies have been prescribed for it; and what have all these amounted to? Just nothing at all but a continuation, if anything worse, from year to year, of the loathsome, destructive disease. Swine breeders read what Col. Curtis has now written on rearing pigs and keeping their dams, and go and do likewise. This will put health in their bones, money in your pockets, and afford you the consciousness of acting rightly and humanely.

A. B. A.

Industrial Implements.

THE "DEERE SPRING" CULTIVATOR.

THIS implement, made by Deere & Co., Moline, Ill., has given complete satisfaction during the two seasons since its introduction in which time over 20,000 cultivators, we are told, have been sold. Among its many merits the makers claim that the new coupling and springs hold the first place. By shortening or lengthening the chains the weight on the springs is regulated according to the condition of the ground and the required depth. By the method here employed for attaching the springs not only are the shovel-rigs easily

hung up; but the side motion is so easy that each hill of corn can be hoed with little labor The spring assists all operations and does not lose its tension until the gangs are hung up. It is adjusted to carry as little or much weight of the gangs as desired, by hooking the chains in different links.

Miscellaneous.

RURAL BRIEFLETS.

ATTENTION to the strawberry beds at this season will help them another year. All weeds should be cut out and the ground mellowed about the plants and between the rows.....

CUT off a bud with an oblong slice of bark and insert this between the bark and the wood of the tree or shrub to be grafted. Here we have a short story of the process of budding. For the long story see the RURAL of July 26, 1879, page 482.....

BUDDING is a simpler operation than grafting, and every boy and girl should learn how to do it. It is now time to bud many kinds of fruit trees. See that the bark parts freely from the wood. Between the wood and bark is a mucilaginous substance which is really a thin layer of delicate young wood cells, and it is these which serve to unite the wood of the bud to the wood of the stock from which the bud is thereafter to derive its nourishment, the same as if it were an original part of the stock itself.....

CHOICE grape-vines suffering from drought, should be drenched with water and the soil covered with straw, hay, grass or even cornstalks.....

THE Broadway Agriculturist gives some very valuable hints respecting wheat. The gist of the article is that there are "good wheats and poor wheats." (!) It mentions the Clawson as having "gone through the mill" taking a "high rank as to quality of flour." (!) Then it says that "there are others." (!) We were going to reserve the above for our Wheat Number. But it occurred to us that all the papers in the land would copy it and that it would seem old by that time.....

ONE of our most valued lady contributors writes us: "I must tell you I *do* think there is something 'exceptionally fine' in Mrs. Garfield's conduct. I'm afraid *I* should have broken down under it: and she, too, just from a sick bed. Then she has such a discreet tongue, too. Most women are so demonstrative."

MR. STEWART says of Quack (Triticum repens) that it is one of those varieties of grass whose best qualities, when misapplied, give it a bad reputation. That's just the truth. We have little doubt that the day will come when seedsmen will offer its seeds for sale and that all men who purchase and sow will not be considered fools.....

WE believe that the RURAL is the first journal that has ever spoken a word in favor of this Quack, Quitch, Couch, Scutch or Rye Grass, and it has been hinted more than once since that we could have known little of it. But the RURAL has had it to deal with for over 13 years, and although it is at times annoying, we are free to say that if upon demand we could have every root at once removed from our farm, we should not make the demand.....

THE neighboring farmers, however, do not one of them join in our opinion, though not one of them has ever given it a fair trial. As soon as it appears, they fight it until it disappears. "It makes too much work"—they say. The fact is, however, and we have a right to speak positively, that let a sod consist of pure Quack when turned under, if the succeeding corn receive all the cultivation it *should* have the Quack will be exterminated. For the rest, we value the hay as highly as Timothy, while the best crop of corn ever raised at the Rural Farm was upon a Quack sod. At this time the drought is curling corn, killing clover, and the fields—save one—are brown. That one yielded about two tons of hay to the acre, though cut for the sixth year; and three-quarters of the sod is Quack.....

WE do not advice anybody to give this grass a footing upon his farm. We do not set ourselves up against the hundreds of farmers who condemn it *in toto* and whose judgment is the result of a longer and, possibly, a more discriminating experience. We do but state, in this case as in all others, our own convictions as they are arrived at from constant observation and experiment—and that is the foremost object of the Rural Farm.....

What Others Say

BED-BUGS.—We have found something about bed-bugs in our esteemed contemporary the Broadway Agriculturist, that should prove highly interesting to those whose houses are infested with this disgusting pest. A correspondent, it appears, having the misfortune to occupy a house in which "every crack in the floor and walls was full" of the insects, he commenced first with the bedsteads. These were taken down and each one "was painted from top to toe with paint in which kerosene was mixed." He suggests that kerosene alone would probably have done as well, of which we have no doubt. In his desperation he was led to cover his bedsteads with the mixture of paint and kerosene, but kerosene alone, applied to the joints only, would have served the end in view, which was to get rid of the insects already in the bedstead. Having freed the bedsteads, his next point was to keep the bugs out. He took old tomato cans, removed the tops, and set one under each leg of the bedstead, and partly filled them with water. This method was a complete success; the water in the cans offered an impassable barrier to the marauders, and he afterwards was free from the attacks of those established in the floor and walls. This insulation, so to speak, of the bedstead reminds us of an account of the intelligence of the scorpion, that we were told in Mexico. The scorpion makes a most painful bite, but it is by no means, as generally supposed, deadly. A Mexican officer told us that being where scorpions were especially abundant, he fitted his bedstead with dishes of water under the legs. This answered for a night or two, after which the scorpions climbed to the top of the room (for it can hardly be called ceiling), and dropped down upon his bed. If Yankee bed-bugs are as cute as the Mexican scorpions that are above described, the "protection will not protect."

MR. BERGH, president of our Society for Prevention of Cruelty to Animals, says in the organ of that society, never to whip your horse for becoming frightened at any object by the roadside, for if he sees a stump, a log, or a heap of tan-bark in the road, and, while he is eyeing it carefully, and about to pass it, you strike him with the whip, it is the log, stump, or the tan-bark that is hurting him in his way of reasoning, and the next time he will be more frightened. Give him time to smell all of these objects, and use the bridle to assist you in bringing him carefully to those objects of fear.

PLANTING EARLY POTATOES.—Mr. P. T. Quinn says in the Philadelphia Press that his practice has been to plant early potatoes in the Spring and to manure the ground heavily. These potatoes are ready for market by the middle of July, when they are dug and sold. The ground is then plowed, harrowed and marked out for strawberries. The rows are opened with a one-horse plow two feet and a-half apart, and about four inches deep. The young strawberry plants are taken up with great care and set out twelve inches apart in the rows. He always endeavors to get the bulk if not all of his planting done on or before the 10th of August. With ordinarily good growing weather, these plants increase in size and numbers, so as to make continuous rows, six, eight and sometimes twelve inches wide by the end of November. The spaces between the rows are kept clean and loose during the growing season by a small horse cultivator and one hand hoeing, to cut out any weeds which may come up in the rows. The intention is to have the beds entirely free from weeds before the end of the season.

WE say of a picture or a statue, "it is the expression of the artist's thought." So, too, a noble edifice is called an expression of the thought of the architect, and a fine park or garden likewise expresses the thought of the gardener. Run now, if you please, the dividing line through all the works of man, separating those which should be the expression of thought from those which need not be, and on which side of the line would you find the farmer's work? The question is asked by Mr. I. M. Hubbard in an essay before the Conn. Board of Agriculture.

"I NEED not dwell on the influence fairs have in spreading a knowledge of machines and appliances; the host of agents at every fair, however small, with all kinds of machines from a patent apple-corer or pot-washer to a steam thrasher or ditching machine, is evidence enough that the manufacturers of to-day believe, from experience, that this is a great and sure way to get a knowledge of their wares before the people. And we all know the eagerness of breeders of fine stock to exhibit and thus advertise their animals." We take the above from a very interesting essay by Prof. Brewer, delivered before the Conn. State Board of Agriculture and published in its recent Report, p. 115. T. S. Gold is the Secretary, West Cornwall, Conn.

SALTING PORK.—The Husbandman says that Mr. G. S. McCaun a few days ago, opened a barrel of pork that had stood in the cellar through Winter, and found the meat slightly tainted—not spoiled entirely, but the odor suspicious. He asked his club if there was any way to restore it?

S. M. Carr replied that if not much tainted, the pieces might be taken out and washed thoroughly, then soaked in buttermilk and afterward washed in clean water, when they may be re-packed and very possibly they would keep in good condition until required for use.

W. A. Armstrong remarked that the error was in salting. No farmer has a reasonable excuse for losing pork, provided the meat is entirely sound when it goes into the barrel. All he has to do is to cut the pieces of proper size, as nearly uniform as practicable; then put a layer of salt fully an inch thick on the bottom of the barrel; on that a layer of pieces set on edge, stowed closely, then cover with salt and fill all the interstices, and so continue until the barrel is full. At the proper time pour on brine as strong as it can be made. By this plan Mr. Armstrong kept pork four or five years as good as on the day it was packed.

KEEPING SWEET POTATOES.—Mr. T. S. Gold Secretary of the Conn., State Board of Agriculture, says in its latest report, "A gentleman in northern Ohio, who makes a business of raising sweet-potato plants for sale, and raises them by the hundred thousand, keeps his potatoes by carefully drying them and putting them in barrels, and those barrels are placed in an upper room in his house, in which he has a stove, and he keeps that room at a moderate temperature by the use of that stove, and preserves his potatoes perfectly for seed every year. He keeps hundreds of bushels through the Winter in that way. He is located in a northern climate, quite as cold as ours, and where the seasons are no more favorable for the maturity of the sweet potato than ours."

REMEDY FOR THE CODLING MOTH.—Mr. Woodward said, in the Report above alluded to, that he has tried in Western New York almost every remedy for the codling moths, and found them ineffectual. A friend of Mr. Woodward, in 1876, had what he called canker worms in his orchard, and wanted to know what he should do for them. He told him to get a force pump and syringe his trees with Paris-green. He did so, and later in the season he told Mr. Woodward the Paris-green had not only killed the canker worm, but the codling moth. Mr. Woodward went with him to the orchard, and one could tell where the Paris-green had been applied just as easily as he could see the row of trees. There were twenty times as many codling moths in the apples on one side of that line as there were on the other. Since then, Mr. Woodward has recommended it to many of his friends. He has tried it himself, and there is no more doubt of Paris-green being an entire preventive and specific for the codling moth than there is that it is an entire preventive and specific, if properly applied, for the Colorado beetle.

HINTS TO FLAX GROWERS.—The Minnesota Linseed Oil Company has issued the following letter of advice to its patrons respecting the cutting and curing of flax, and the hints here given are applicable to all places where flax is grown for the seed:—

"As the season for cutting flax approaches, we wish to give our friends a word of advice and caution as to harvesting and securing their crop.

First, cutting.—When most of the bolls and lower parts of the stalks have turned yellow, and the seeds have turned slightly brown, and the lower leaves have dropped off, it is ready to harvest. At this stage it will cut as easily as wheat. Be careful not to cut before ripe. Unripe seed cannot be properly filled out, and must fall short in weight.

Use a smooth knife in your reaper. Cut high—only low enough to get all the bolls.

Second, shocking.—Set it up as soon as cut, in gavels. It may be handled the same as barley or buckwheat; but, better still, bind with a self-binder and shock the same as wheat. This treatment makes thrashing easy and pays well.

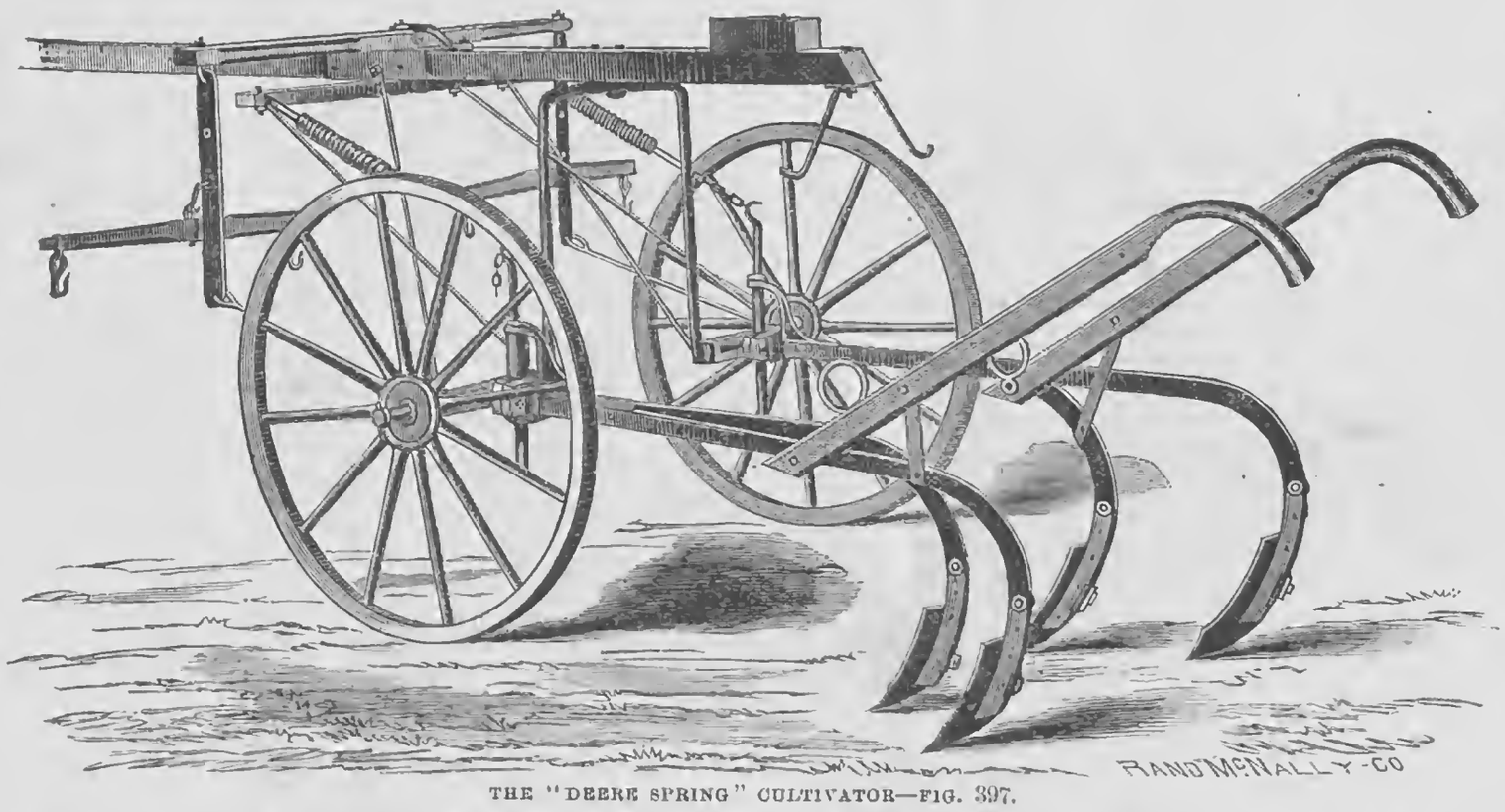
Third, stacking.—Flax cures very fast, and in good drying weather may be stacked the day after cutting. Don't waste a day after it is ready, for a thrashing machine or anything else, but stack, stack, if you want to save your crop. Build a good, solid stack, always keeping full in the center—heads in and butts out—and top out with prairie hay. Stacks must not be disturbed for two or three weeks, or more, until the flax is through the 'sweat,' which leaves the seed heavier and better.

Fourth, thrashing.—The 'Vibrator' and 'Minnesota Chief' are considered the best flax thrashers; but good work is also done with the Chase and other makes, with flax attachments."

THE BARBED WIRE FENCE.—Prof. S. A. Knapp, of the Iowa Agricultural College, in discussing the Barbed Wire Fence Monopoly, says: "It is gratuitous advice we offer on the subject of fencing, but among the items worthy of consideration is that of using less barbed wire. It is our observation and experience in building four wire fence, that the fence is in every way as serviceable and durable to use two barbed and two smooth—the top and third wires barbed; the second and bottom wires smooth. The smooth wire should be two-strand, steel, twisted wire—the same as barbed wire—and can be purchased or ordered of a factory at 5½ cents per rod. We are building such a fence upon the college farm at a cost of 35 cents per rod, dipping in coal tar. The posts are furnished by the farm."

THE Editor of the Rural Home takes occasional rides over his section of country, (Rochester, N. Y.) to observe the crops and ascertain the methods of the best farmers. One large farm of 300 acres through which he rode, he says, yields less clear profit, he was informed, than a patent mouse-trap invented by the proprietor. The mouse-trap probably accounts for the diminished profits of the farm.

THE best rule for salting butter is to salt to suit the taste of the consumer, says L. B. Arnold, in the N. Y. Tribune. There is no use in applying any particular amount of salt for the sake of preserving it, because the very lightest salting is always more than sufficient for all the effect salt can have as a preservative of butter. Generally one ounce of salt to sixteen ounces of butter is used.



THE "DEERE SPRING" CULTIVATOR—FIG. 397.

Two Pictures.—The Connecticut Farmer presents these two suggestive pictures from real life, that have come under its own observations:

"1. The boys like to read, and the master says, 'no time for readin', them tater bugs must be picked off,' and out the boy goes, though he only wanted to read just one piece after dinner. The best of everything is sold, for no buyer wishes second-rate articles, and if any suggestion is made concerning a new kind of pear tree or grape-vine, the answer is, 'I've no money to throw away for such truck, there's plenty of apples and wild grapes.' 2. A pleasant home; attractive dishes of fruit always handy; educated, home-loving boys; good society sought by father and mother and children; books by the best authors and 'papers that smell of the printing office'; an exceedingly neat farm, whose walls are made to last, where trees of all kinds of choice fruit are grown, and where the cultivated land yields just the kind the farmer wishes, for no weeds are allowed to grow, and, best of all, a proud mother saying to me, 'My boys never gave me an hour's pain in their lives."

Continuing our quotations from Secretary Garfield's Report of the Proceedings of the Michigan State Pomological Society and President Lyon's remarks: The Hawley has no superior in flavor among the very large mid-September apples. Its exceeding delicacy of texture unfits it for marketing abroad; but during its very short season it can hardly be excelled as a dessert apple. . . . . Jefferis is of medium size, striped, bright-colored and ripe the latter part of September and early October. Boys, those excellent judges of quality in fruit, award due praise to the Jefferis. . . . . Jersey Sweet as an early sweet apple, is hardly equaled by any other in high, rich flavor. . . . . Melon has hardly an equal among the larger early and mid-Winter apples. In beauty, delicacy of texture and excellence of flavor it is unexceptionable. . . . . Northern Spy is the King of the orchard, so far as the tree is concerned, and if by any fatality Mr. Lyon were compelled to choose a single variety for the supply of his own wants, t would beyond doubt be this. . . . . Pomme Gris only needs to be known to be appreciated. For the amateur it has no superior, if, indeed, it has its equal in all respects. . . . . Prof. S. W. Johnson says that (see Conn. Board of Ag. Reports, p. 86) one of the best parts of the education of children is the interesting matter which they read aloud in school. The giraffe, the kangaroo, the boa constrictor and other wonderful creatures that belong to strange countries, are not necessary to such instruction. The Alderney, the Devon, the Cotswold, the Colorado beetle and the codling moth would answer the same purpose. . . . . Mr. Potter, of the Mich. Pom. Society, said that he once heard of a man who took a great amount of pride in his three smart boys. The old man said they worked industriously in good weather and when it rained they would borrow his jack-knife and go out to the barn and trade that old knife among themselves until they had made fifty cents apiece, and then come and give him back his knife. . . . . President Lyon thinks the Early Joe is among apples what the Seckel is among pears. Its season in Southern Michigan is early September. . . . . Scarlet Pearmain, he says, is one of the richest and most beautiful of September apples. Lack of productiveness is almost its only defect. No amateur's orchard should be without it. . . . . Chenango Strawberry is one of the finest and most delicate in texture of the larger mid-September apples, and its great beauty, juiciness and mildness give it a high rank among even dessert apples. . . . . Farms never were cheaper according to their value than they are to-day in New England, but it is not because they have been "small farms well tilled," says the Vermont Journal. It is because they have been farms, large or small but generally very equal in size, *not* well tilled, for lack of money and lack of skill in their occupants. . . . . The man who acquires a skill superior to that of his fellow workmen and commands better wages is the one who *thinks*, says Dr. Hoskins. . . . . The farmer who told Lord Landsdowne that he was so accustomed to the company of "honest, plain-spoken people" that he felt out of place in the presence of His Lordship, showed that the simple truth is sometimes the sharpest kind of sarcasm. . . . . It is the pride of America that she offers an opportunity to the humblest to become great. We knew a boy who was so poor twenty-five years ago that he had to secretly borrow a loaf of cake from a passing baker's cart to keep himself from starving, while now he is one of the best shoemakers in Sing Sing. . . . . It is said that the real difference between a blunder and a mistake is this—When a man puts down a bad umbrella and takes up a good one he makes a mistake, but when he puts down a good one and take up a bad one he makes a blunder. For the former there is abundant excuse, but for the latter there is none at all.

BOOKS, CATALOGUES, ETC.

American Berkshire Record, published by the American Berkshire Association; edited by Phil. M. Springer, Secretary. Volume IV. Springfield, Ill., 1880. This is a handsome volume of 255 pages octavo, with numerous illustrations, carrying the male pedigrees up to the number of 3,305 and the females to 6,810.

The swine interest is one of the most important of American agricultural industries and the production of a superior quality of hams and bacon takes precedence in it. But these cannot be produced in the requisite perfection, unless a suitable breed of swine is kept especially adapted by their nature to do it. Of all races of swine the Berkshire excels in much the greatest proportion of tender, lean, juicy meat in its hams, shoulders and side-pieces. Hence their superior value for growing these, their popularity and the extra-high prices at which they rule. This also was the cause of grade Berkshires being so often palmed off upon the public by unscrupulous persons for thoroughbreds, which made it a necessity a few years ago to get up a record for their pedigrees so that breeders might thereafter know where to resort when they wished to replenish an old herd or start a new one.

Aside from the pedigrees, as above stated, this volume contains a valuable preface by the Secretary, Mr. Springer, the names of the various officers—twenty-seven in number—all well-known and highly respectable gentlemen; the Fifth Annual Report, of eight pages; the rules governing entries; and an essay on Demand and Supply.

We heartily commend this volume to all breeders of Berkshire swine, and assure them that they will greatly enhance the value of their stock by a record of their pedigrees in it.

Geo. S. Wales, Bannockburn Farm, Rochester, N. Y. Catalogue, of Pot-grown and Layer Strawberry Plants, Raspberries, Blackberries, Currants, Grape-Vines, etc. This list, as to both old and new sorts, is well selected. Mr. Wales also offers the Manchester Strawberry, which, he thinks, is the berry that has "long been sought for."

W. L. Ferris, Jr., 387 Main Street, Poughkeepsie, N. Y., Midsummer Catalogue of Small Fruits. The Manchester and Bidwell Strawberries and the Cuthbert and Gregg Raspberries are specialties.

Field Crops.

TOBACCO-GROWING NOTES.

There is no rest for the successful tobacco grower from the time the seed is sown in the seed-bed until the fully matured plants, with their heavy green leaves, are safely housed in the curing barn. The entire season is a long struggle with weeds and insect enemies, and then "continual cultivation" is necessary in order that the plants may attain their fullest development.

It is the general opinion among experienced tobacco growers, that the seed bud of a tobacco plant should be broken off *before* the blossoms can be seen. All growth of top after the plants have produced their whole number of leaves, is practically lost, and the more strength that is allowed to pass into the top before the "topping" is done, the greater the loss of plant force. It is plainly seen that if the buds are pinched out as soon as they appear in the plants, there is less loss of plant growth than when allowed to form long tops with leaves and blossoms.

There is no definite rule that can be safely followed in the work of topping tobacco. It is impossible to fix a rule as to just how much of the plant should be broken off or the exact number of leaves that should be allowed to remain upon the stalk. Experience and good judgment are required to perform the work correctly. It is safe, however, to say that there is less danger of breaking off too many leaves with the top, than too few. If the top is broken off before it becomes of full growth, the strength of the entire plant is confined to leaf growth, which is the object desired. The best rule that can be given on the subject of topping tobacco, is to top *early* and *low*.

It is not best to undertake to top all the plants in a row, at one topping. The rows should be passed over as soon as the seed buds show above the leaves, and the tops of the most forward plants be broken off. The remaining backward plants should in turn be topped when they show their buds, and in order to make the crop ripen evenly it is best to top the late plants a leaf or two lower down than the earlier plants were topped, which will cause an even maturity of the crop.

It should be remembered that soundness of leaf is an important point in judging the quality of tobacco. Hence it is that great care should be used in working among the plants after they have become large, not to break or tear the leaves. The tobacco worm (Sphinx Carolina) should be thoroughly looked for and all that can be found destroyed. If worms of large size are found on plants, it is evidence that the tobacco has not been thoroughly "wormed." In seasons when the worms are numerous, the plants should be looked over at least twice a week, and all worms and worm-eggs that can be found, destroyed.

Chemung Co., N. Y. G. A. G., JR.

Experience with Chester Co. Mammoth Corn.

The Rural Corn Number of last Jan. 1, filled me with a strong desire to try my skill with "Chester Co. Mammoth." My experience thus far being somewhat different from that on the Rural Farm, it might interest Rural readers to know it. My first seed I bought of B S. Wood, Doe Run, Chester County, Pa., but not a quarter of it came up, owing to worms I think. I sent to Landreth & Company, of Philadelphia, and got seed to replant with. I have a fair stand now. A large portion of the field (10 acres) is in silk now, and unlike your experience, I find that generally each stalk has three ears growing from different joints. Here and there I find a stalk with two ears, quite a large number with four ears to the stalk, and occasionally I find a stalk bearing five and six ears, all from different joints, and as yet I have found none with but one ear to the stalk. I think in my case it would be desirable to "fix this habit," and I am now marking the earliest top ears on such stalks for my seed corn for next year. My corn field had a heavy growth of clover, which was turned under in March, and harrowed twice with the "Acme" Harrow. The corn was dropped with an "Albany" Planter, 20 inches apart, one grain in a place. As soon as it sprouted I ran the "Thomas" Harrow over it, and kept it going until it was one foot high; I then worked it three times with Perry's Scarifier, working shallow and level. The land is sandy loam, and has not been worked for four years. There was an old worn-out peach orchard on it, which we grubbed up last Fall. Before plowing down the clover, we scattered a thin coat of barnyard manure over the land. No other fertilizer was used. I inclose grain of the "Chester Co. Mammoth" received from Landreth. I suppose it is the same you refer to in your Corn Number. J. W. L.

Marshall Hall, Charles Co., Md.

[Yes, it is the same. Quite enough of "sets" also appeared on many (most) of our stalks; but except one or two, they did not develop. Hope to hear from your field after harvest.—Eds.]

How to Tell Sound Seed Corn.

I notice in the Rural crop reports that a great many have had trouble with their seed corn. I used to have the same trouble a good many years ago; but I have not had any for the last 15 years, since I learned to pick good seed corn, and I always take it out of the crib.

Now I will tell you how anybody can find out good seed corn, and if readers of the Rural will pay attention, it will benefit them thousands of dollars in the future. It is simply this:—Look at the chit of the grain; if it is smooth and glossy it will grow, and if it is blistered, it will not grow. I generally examine it by breaking into the ear and looking at the chits. Of course, the middle of the ear might be good and the ends not; but a little care about that will save all trouble. Now if any of my readers wishes to test this, he can do so now while he has some of the same corn he had last Spring. Let him pick out some in which the chits are smooth with not a blemish on them, and count the grains and put them in the ground, and see if every grain does not sprout; then take some in which the chits are blistered, and see how few of them will grow, and he will be satisfied that he can tell good seed corn. There is a difference between a chit that is blistered and one that is wrinkled: some are wrinkled naturally and are good; but if there is a blister on a chit, don't plant it—it will not grow. If you will take your knife and dig into it, you will find the germ, the sprout, dry and hard and loose, or the grain dried away from it, while a good, smooth one is soft and oily. Samuel Miller.

Allen Co., Ind.

Good Rural Branching Sorghum Seed.

I see by the issue of July 16, a statement that not over 15 per cent. of the Rural Branching Sorghum seed germinated on the Rural Farm. This does not correspond with my experience. I planted only 25 hills in the Spring, putting six seeds in a hill, and I got not less than two and not over four seeds to germinate per hill. When I saw the statement I got my package of seeds, and poured out 60 seeds, as they came out, and planted them in a box, and in about eight days 43 were up. I let them grow until now, so that I know that it is Sorghum. The way I manipulated the seed was to soak them in water near the stove for 48 hours and then I planted them. My sorghum is growing very fast. It is branched all it ought to I should think; it averages two and one-half feet high. I write this for I know that the seed that I have is better than the Rural calls for. R. W. C.

Stratford, Ct., Aug. 1.

Cheat or Chess.

About 33 years ago, when I was about 17 years old, my father said to my brother and myself, "Clear that three-acre field of new land, I will furnish seed and team and you can have the first crop." Well, we sowed it to wheat, and in the Fall the crop looked as well as the average run of wheat crops in the neighborhood; but in the Spring it seemed to have been much injured by the frost. On the three acres we had sowed four bushels and one half of seed as nice as any one could desire. Now mark the result: we harvested four bushels of inferior wheat and twenty-seven bushels of Chess. Now will the writer of the article on Cheat or Chess, in the Rural of July 16, explain the cause of the change.

Wayne, Mich. A Subscriber.

[There was no change; for every plant of Chess that grew, a seed was either sown, or lying in the ground.—Eds.]

A Large Yield of Wheat.

From two and three-fourths bushels of Red Stem Amber Wheat I thrashed, last Friday, July 29, 66 bushels of clean wheat. The drill was set to sow two bushels per acre. The plot was summer-fallowed and one-half was fertilized with phosphates; no other manure was used—soil fair loam, partly drained, and about one-half of the piece had a heavy clay subsoil. We were obliged to cut nearly all of it with the scythe, as it was lodged badly. R. C. H.

Canajoharie, N. Y.

Arboricultural.

THE WINTER-KILLING OF JAPANESE MAPLES IN FLUSHING, L. I.

SAMUEL PARSONS, JR.

The Winter of 1880 and 1881 in Flushing was unquestionably a severe, and in many ways, a peculiar one. Japanese maples in company with many other plants suffered considerably. It is only justice, however, to distinguish the Japanese maples that were injured from those that were not injured; for the number of the species of maples in Japan is great, far greater than elsewhere, and in one species at least, i. e. Polymorphum, the number of varieties also is legion. It is noteworthy, too, that all these species and varieties are widely diverse in behavior as well as in appearance. Indeed, the effects of last Winter, if nothing else, prove this conclusively. Members of the best known species or type—Polymorphum—suffered much in Flushing, and, contrary to ordinary experience, particularly in the case of the parent, Polymorphum itself. Good-sized, well-established plants of Polymorphum were, in some instances, cut down to half their original size. Roseo-marginatum, Cristatum and Alba laciniata, all Polymorphum varieties, were much injured, Altro-purpureum, likewise of the Polymorphum race, proved, however, unexpectedly hardy. The popular and splendid A. polymorphum (more properly palmatum) sanguineum and a beautiful weeping form also did well. The A. Japonicum and its varieties, large-leaved and rugged-looking, magnificent in form and color, suffered somewhat, while, strange to say, the delicate, tropical-looking foliage of the Palmatifidum and Pinnatifidum varieties, both purple and green, as well as the tender-looking, shred-like A. polymorphum rosea-pictis, showed no lack of enduring qualities during the past Winter.

On the other hand I saw lately on the south side of Long Island, on Mr. W. K. Vanderbilt's lawn, where the wind and sun had great power, all these varieties that have shown weakness in Flushing, standing entirely free from signs of injury, although laboring under the difficulty of having been transplanted only last year. Perhaps it was the sudden and protracted cold following a dry, hot season that did the damage, and perhaps much damage was done early in the Spring. It is very strange, however, to note how here, in this vicinity, they are injured and over there not. Of one thing we may be assured though: wherever the ground is cold, low and even rich there will be found, as a rule, the most winter-killing. A late, over-stimulated growth must succumb to an early and protracted cold spell. Fortunately, now, at the date of writing, all Japanese maples are so far recovered in their new growth from the effects of the past Winter, that, except in diminished size one would not know, unless told, that any damage had been done them. It may be a dozen years and more before a similar mishap will occur again; and, doubtless, it is because we prize these exquisite Japanese maples so much that we dwell with concern on their late unsatisfactory behavior. If there were only existing carefully kept records extending over a period of years, we would find, I believe, that almost all trees suffer at one time or another from winter-killing. The commonest hardy shrubs and trees die badly, we know, during some exceptional Winters. We must not condemn, therefore, Japanese maples in a sweeping manner on account of one partial failure strictly limited to certain varieties and localities; nor do I believe that a year or two

hence any one will hesitate to plant Japanese maples on accounnt of their behavior this year. People will take their chances with these maples as they have to take them with nearly all trees and shrubs. [The above seems to us a very reasonable view of the case.—EDS.]

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

BELMONT, Nova Scotia, July 28.—Hay a good crop—about the average. All kinds of grain look well. Wheat is just heading out; not so much as usual has been sown on account of the weevil. Potatoes will be a light crop on account of cold and wet weather. Not much corn is raised and what there is is very sickly-looking. Haying commenced about the 15th but not much has been cut yet; there have been only two fine days since. Vegetables of all kinds look well. Our chief crops are potatoes, hay, beef, butter and pork. The prices at present are: hay $6@8 per ton: loose potatoes, old, 40c. per bush.; beef, $7@9.50 per cwt.; butter, 16c. per lb; pork, 7c. per lb.; eggs, 10c. per doz.; oats, 55c per bush.; flour, $6.50 per bbl.; corn-meal, $3.50 per bbl. Raising beef for the English market is now being entered into. A company has been formed for that purpose and is sending about 40 tons per month. A sugar refinery and a cotton and woolen factory have been started in Halifax. Times are looking brighter for this Province. Although we cannot boast of the large number of acres that the Western farmer has; yet we have one farmer here who has just built a barn 101 feet long, 40 feet wide, 16½ feet posts, with a cellar under all nine feet deep. He has, in addition, two barns 60x40 and one barn 100x30. He cuts 250 tons of hay. L. D.

Dakota Territory.

HAMILTON, Pembina Co., July 24.—The acreage of wheat, oats and barley is small as yet in this county. As it is only five years since any settlement of account has taken place in it, we are all new beginners. The acreage under cereals, however, is much larger than last year. Spring wheat is the staple here. (We can't grow winter wheat.) Quite a large number of varieties are grown; but Scotch Fife gives best satisfaction. Lost Nation out-yields it, but it is not liked by the millers. Spring wheat where sown on dry land is going to be heavy; but there was a good deal that was sown late, as we had a late, wet Spring; such will be light. Oats do splendidly here, yielding as high as 80 bushels per acre. This is an exceptional yield. There is not enough grown for home consumption. Barley does finely, but it is not much grown, as there is but little demand for it. Corn is not grown except in small patches and then it is rarely attended to, so that it does not amount to much; but what is properly cared for looks well. We grow Squaw and flint varieties which ripen here. I don't think apples will succeed here; currants and gooseberries do well, and there is an abundance of wild strawberries. This is a great potato country, and they are looking well this season, but there are a few potato bugs. The White Elephant Potato is doing finely, so are the oats, but the other seeds did not do well. I am highly pleased with the RURAL. J. F. H.

Illinois.

FULTON, Whitesides Co., August 1.—Winter wheat all killed; no Spring wheat to speak of—Odessa chiefly. Oat acreage about three per cent. increase over last year's; prospect slim until last week—thin on the ground which is very dry—mostly Norway and Surprise. Rye thin on the ground through winter-killing; no Spring rains to "make" it. Corn is backward, but generally clean and a good stand where it was planted deep enough—acreage the same as last year. There will be only one-fifth of a crop of apples; currants and gooseberries abundant. Snyder blackberries one-third of a crop; other kinds dead. H. E. S.

GALCONDA, Pope Co., July 30.—Thrashing began more than a week ago, and wheat will not turn out more than five bushels to the acre on an average. Grass and oats are good, but there is very little of the latter. The weather has been unprecedentedly hot—over 100° in the shade every day for a week—but there is no sickness on account of the intensely hot sun. The weather is very dry; we have had no rain of any account in this country since the first of the month. Corn is suffering badly, and if the drought keeps on a week longer, the crop will be ruined. Late potatoes planted in June will suffer, but those planted about July 1 will stand it better. Early potatoes have been very good; but not more than enough for home consumption was planted. Peaches on high ground, half a crop; very few apples. Prospects are not very bright for the farmer, although everything he has to sell brings a good price. J. K.

Kansas.

BLAINE, Pottawatamie Co., July 28.—Harvest is over, but it is far from a "bountiful harvest." A few pieces of Winter wheat were fair: most of the Spring wheat was left in the field; rust and chinch bugs took it. Oats were *good;* acreage larger than usual. Very little rye or barley sown. It has been very dry and hot for four weeks, and corn has suffered in consequence. More corn was planted than last year; but the prospects are that the yield will be considerably less. Potatoes were planted extensively, but they have been badly damaged by drought and beetles. Early sowings of flax are good; some that was sown late will not amount to much. Sorghum, of which there is considerable in this locality, is looking well. Of fruits, in the older orchards there is a good crop of apples, especially of the Ben Davis variety. Peaches are scarce, although most large trees have a few. Grapes a medium crop; plums (wild) an abundant crop. Strawberries and raspberries were good. Of the former we need better varieties than we have. Blackberries are all burned and dried up on the bushes. Light showers on the 23d and 24th, the first in four weeks, help the looks of vegetation somewhat; we need more. H. P. M.

LEAVENWORTH, Leavenworth Co., July 30.—The White Elephant sent me weighed 3½ ounces. I cut it into nine eyes and planted them 12 inches apart in a light sandy loam. At the same time I also planted a patch of Early Rose. The White Elephant was the first to make its appearance, followed six days afterwards by the Early Rose. The W. E. was much the stronger and it blossomed nine days earlier than the E. R. After the second hoeing I was unable to give the plants any personal attention, and the potato bugs completely cleaned out the patch of E. R., and not till then did they commence upon the W. E. The weather for the past month has been very hot and dry, still I dug my crop yesterday, with the following result: 44 tubers, weighing 5⅝ ounces. With regard to the other seeds, the oats and sorghum I gave to a friend who is farming in Northern Kansas, but have not heard from him since. The other seeds I have not planted yet, not having the time to devote to them. I shall, however, try both next season, when I hope to have more time to give them F. E. C.

Missouri.

BUCKLIN, Linn Co., July 26.—I was surprised to read the comments in the RURAL of July 16, that the Branching Sorghum seed failed to germinate. I believe every seed sent me grew and the stalks are now from four to five feet high. The White Elephant Potato is looking well. If it proves to be as good for a late potato as the Hebron is for early, we shall be more than pleased. And now I want to say a word in favor of the Red Jacket Strawberry. I received a dozen plants as a present in connection with an order for other plants, and they outstripped any other variety I ever tried. The few berries that I allowed to grow were large and delicious. Harvest is about over; oats good; hay very heavy; corn looking splendid. F. M. B.

New Jersey.

NEW GERMANTOWN, Hunterdon Co., July 28.—The White Elephant has done well. I planted every eye separately and thus got 11 hills. To-day from one small seed potato so treated, I dug 48 pounds, one tuber weighing 17 ounces. All tubers tried were first-rate for table use. S. A. P.

Nebraska.

PLUM VALLEY, Knox Co., July 30.—We have had a fine growing season with plenty of rain. The Spring was too wet and late for getting in wheat in good time, which makes it a poor crop,—acreage about the same as last year. Corn is looking well but late. Barley is short but well filled. Oats are good though not many were sown. Wheat is harvested; mine will thrash 10 bushels to the acre. J. P.

New York.

CANAJOHARIE, Montgomery Co., Aug. 1.—Farmers are nearly all through haying; the crop is somewhat better than last year. Potatoes are a light crop, owing to the drought and beetles. Corn late, although it is growing rapidly now. The RURAL seeds are all doing well except one package marked carnations; they proved to be rather poor pinks, and I have one common Sweet William. R. H.

GRAFTON, Rensselaer Co., Aug. 11.—The RURAL seeds were carefully planted. The carnations and picotees are now blooming, and a fine variety of splendid flowers they are, too. The Washington Oats have a splendid growth of strong straw, standing about six feet high, with very large stools. But above and beyond all the rest are the White Elephants, of which I have succeeded in getting 23 excellent hills. D. L. P.

Ohio.

KINGSTON, Ross Co., July 26.—Wheat about half thrashed in this county; so far the yield has been from six to 14 bushels per acre; the average yield in the county will be 10 bushels per acre against 18½ last year. The present indications are that the corn crop will be short, at least one-fourth less than last year's, both in yield and acreage, in consequence of dry weather and late planting. From July 1st to 10th, the most extreme heat ever known in this county was experienced, the thermometer indicating upon two occasions 107°, and once, 102°, in the shade. Several times it was 104° and 100. O. P. G.

WAYNE Co, July 30.—Wheat harvest is over and people are thrashing; the yield will average about one-half of what was anticipated before harvest. I have a nice piece of Mold's Oats from the produce of the seed sent last Winter a year ago. The Washington Oats look nice now. The White Elephant from appearances gives promise of an abundant yield. I have been petting the R.-B. Sorghum, but do not think it will succeed here for feed as well as corn. A. L. G.

Pennsylvania.

DARLINGTON, Beaver Co., Aug. 1.—Wheat at harvesting seemed a fair crop; the straw was heavy and had lodged a good deal. Some, however, have thrashed, and the yield is not turning out well. Oats are a fair crop; hay was never better. Corn is not very good owing to bad seed and wet weather. The RURAL seeds are doing well. Apples not half a crop; no blackberries. E. M'C.

The Querist.

ANSWERS TO CORRESPONDENTS.

Barley Growing.

J. W. S., Ash Grove, Mo., asks, 1, what is the best time to sow barley and how much seed should be sown to the acre; 2, how soon after harvest may it be stacked in good weather; 3, is the fly as destructive to it as to wheat; 4, is it not a more profitable crop than wheat.

ANS.—1. Barley should be sown earlier than wheat and it is the rule to sow it in the latter part of August if possible. 2. It requires more seed than wheat, and two bushels to the acre are generally sown. 3. The price of barley depends so much on its bright color that farmers are anxious to get it secured as soon as possible and it is usually put in barn or stack within a week of cutting. If it is evenly ripened and the weather good for curing, it can be hauled in the fourth or fifth day from cutting. 4. We think the fly works on the barley as much as on wheat; but as barley is always sown on the best land, the crop is seldom destroyed from this cause, as it has vitality enough to resist it. 5. We doubt, all things considered, if the crop is more profitable than wheat, for the following reasons: 1st. It takes the best land to grow barley, either bottom or a warm, black upland—precisely such land as suits Indian corn is good for barley—and a strong clay, which will grow excellent wheat, will not grow a profitable barley crop. 2nd, The risk of the crop is much greater than that of wheat. A day or two of rainy weather, which will not damage a wheat crop at all, will stain the barley and reduce its market value largely. 3d, It is very uncertain what one will get for it as it is subject to great fluctuations in price, and, unless one is able to hold the crop over a year, he must often sell at a price that will give no profit. We believe that the same quality of land it takes to grow barley will, in the long run, pay better in wheat. Lastly, we would much rather grow a crop that helps to feed the world than one which is made into beer to demoralize our boys and be guzzled by men whose families need every dollar so spent.

Budding Peach Trees.

T. T. K., Outlet, Lucerne Co., Pa., wishes to know, 1, when to cut peach buds for budding 2, the best time to bud; 3, how to treat the trees after they are budded.

ANS.—1. Peach tree buds should not be cut more than a half day or so before they are used. 2. Budding is done in August and September, though it may be prolonged in some sections even into October. As a general rule, budding may begin as soon as as the buds are large enough to cut from the twig, and be continued as long as the sap flows freely. From the middle of August to the middle of September we should think a good time for this work. 3. The buds should be examined in about two weeks after they are set, and those that have taken, will have a lively green appearance. If the ties are cutting the buds, they should be loosened or cut. In another week or two if the bud appears to be flourishing, remove the band, but if this is not the case, let it remain until Spring when the sap begins to flow. All bands should be then cut. In the Spring cut away the natural stocks just above the bud. This must not be done too early on account of frost, nor too late since much sap will be drawn from the roots by the limbs, and also numerous suckers will be thrown up from the stem. In two or three weeks after topping, or sooner if the growth has been rapid, all natural buds *below* the cion must be rubbed off, and repeat the process a week or two later. Keep the ground about the stocks free from weeds, loose and friable.

Scaly Legs in Poultry.

L. D., Belmont, Nova Scotia, asks for the cause of, and a remedy for, scaly legs in poultry.

ANS.—Dr. Moxen and Mr. Tegetmeier, after carefully examining the scurfy or scaly matter on the legs of fowls, under a microscope, ascertained that it is due to the presence of a minute acarus, or mite, allied to the itch insect on the human subject. As a remedy they advise to soak the legs in warm water so as to remove the scurf without injury, and then to apply sulphur ointment, to be had at the nearest druggist's. We have cured it, however, by washing the legs as above described and rubbing kerosene freely upon them while they are held upwards, so that it can penetrate under the scales. They should have wholesome diet, including animal food at least once a day. Another remedy is to wash the legs with a *weak* solution of sugar of lead in the morning and anoint them with clean lard mixed with ointment of creosote just before going to roost. The affected birds should be separated from the rest of the flock so soon as the first symptom of the malady appears, as it is extremely "catching." The ailing fowls should not be exposed to rains or even permitted to roam on wet grass, but be kept quiet until the disease disappears, which it will do in from eight to ten days, if properly treated.

Miscellaneous.

F. M. B., Bucklin, Mo., asks, 1, whether there is any truth in the statement of the agent of an Ohio nursery firm, who says that Russian apples budded on Russian stocks are borer-proof; 2, what are the merits of the Weaver Plum; 3, is it true that the Lady Grape has only one seed.

ANS.—1. No truth in the statement, we believe. 2. Ellwanger & Barry say (and there are few better authorities) that it is simply one of our ordinary wild plums of fine size, good flavor and productive. The tree is hardy. Where good, cultivated plums can be raised, the Weaver may not have much value. 3. We have never noticed it or before heard that the Lady Grape has only one seed.

D. K. Litchfield, Mich., sends samples of earth for name, and to learn whether their presence in the soil indicates any undetected source of wealth.

ANS.—The samples marked No. 1 and No. 2, are principally carbonate of lime. Nos. 0 and 4 are pieces of granite. No. 3 is argillaceous matter. None of the samples is of any value, nor does their presence in the soil indicate anything especial.

L. E. V. Bothwell, Ont., Canada, asks, 1, where can the Saunaker Wheat be obtained; 2, a description of it. He has tried the Lancaster Red there, but it failed on account of the straw being too soft and it lacked hardiness, especially where the ground was wet.

ANS.—We know not whether it is offered for sale. A description will appear in the Wheat Number.

J. P., Plum Valley, Neb., asks, 1, the best time to set Black-cap raspberries; 2, when should strawberries be set and how far apart.

ANS.—The Fall (October) is as good a time as any. 2. In August and September, or in the Spring, as you prefer. One foot apart in the rows—the rows two feet apart for garden cultivation.

E. K., Thoroughfare, Va., says they are having a frightful drought in that section; the potato beetles are doing a world of mischief and he asks how to destroy them.

ANS.—Use London-purple or Paris-green, mixed with water in proportion of a tablespoonful of poison to a pail of water.

J. I. D., Elgin, Ill., asks, where can evergreen seeds of different sorts be obtained.

ANS.—Of Thomas Meehan, Germantown, Pa.; Robert Douglas, Waukegan, Ill.; Thorburn & Co., 17 John St., N. Y. City.

L. W., Allison, Ill., asks where can Lost Nation Wheat be purchased.

ANS.—We procured our seed of Dr. T. H. Hoskins, Newport, Vt. He can supply it or give information where it can be obtained.

G. B. R., Mountain Home, Idaho, sends a wild flower for name.

ANS.—A leaf, bud and flower would be required. We do not recognize it by the dried flower alone.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, AUG. 6.

B. W.—W. F. K.—H. P. M., thanks—J. M.—A. K.—Chas. Carson, many thanks—J. P. P.—H. D. F.—B. S.—L. B. A.—E. W.—A. W. J.—N. J. S.—W. F. R., thanks for Bermuda heads. We shall plant them under glass.—C. E. P.—A. C.—D. S. M.—A. R. L. D.—F. E. C—H. S.—S. P., Jr.—N. R., thanks—"Carnation," violet received, thanks—S. E. N.—R. W. F., thanks, wood received—S. H.—J. P.—O. P. G.—I. F. B.—C. A. McC.—M. D.—W. F. B.—C. A. G.—T. H. H—J. W. L.—S. M.—L. W.—F. M. B.—J. A. R.—G. N. W., Washington County, Neb., thanks. Will endeavor to attend—F. M. B.—J. N. M.—J. P.—P. B. M.

THE
Rural New-Yorker,
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PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

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SATURDAY, AUG. 13, 1881

We have decided to have the Wheat Number *follow* the Fair Number. The latter will reach our subscribers Sep. 3. the former Sept. 10.

See page 542 for annual Fair List of the Rural New-Yorker.

Fair Trade instead of Free Trade is becoming Great Britain's maxim. After preaching Free Trade for 35 years to her peers among the Nations and forcing the practice of it with the bayonet down the gullets of the Chinese and other helpless races, she is now beginning to become a pervert to her own Faith so soon as her interests seem to be endangered by adherence to it.

The severity of the drought on Long Island may be understood when we state that peaches, pears and grapes are shriveling and drying up upon the trees and vines. To save the fruit of our experiment grape-vines, we have hoed the surface soil from each vine leaving it in circular ridges about each stem, then applied five or six pails of water, replaced the earth and covered with salt-meadow hay. All plants may be carried through droughts in this way.

We have made such arrangements for the coming subscription season that we hope to escape all errors which have hitherto originated in this office. Last year we were so cramped for room that our assistants stood in each others' way and all worked at a great disadvantage. This year we shall have plenty of room and all the assistance required. We shall endeavor to supply our seeds in the order in which the applications are made and to close the Distribution early enough to satisfy our Southern friends. Those who subscribe for other papers with which the Rural may club are promised on our part prompt and careful attention to their orders.

A Visiting Texan.—We hear much about the superior qualities of thoroughbred Jerseys, Holsteins, Devons *et al.* but when you want a first-class sensational scare, let a long-horned bristly-backed Texan, fresh from the prairies get loose in the streets, and all the fancy breeds are nowhere. That is the Texan's peculiar *forte*. A while ago one of these foreigners started out to see the sights in New York, soon after he landed. His line of march was up Second St, and shortly, he met a man who tried to persuade a cessation of hostilities but the Texan "drove him to the wall" or rather through a doorway, and went on. He then advanced on a flagman who attempted to turn him back with a flag, but this is considered a challenge to battle by unscrupulous Texans, so he pursued the fleeing flagman who suddenly felt himself elevated in position, and when he again reached *terra firma* he was some fifteen feet from his starting point, and slightly bruised. After this little fiasco the steer changed his course colliding with various peanut stands until he was finally "cornered" by a lot of carts, lassoed and carried to the abattoir on a truck.

A Device for Discovering Subterranean Water.—Witch Hazel has long been used by "common people" to discover subterranean water, to the amusement or contempt of the scientist skeptical of its virtue. The latter, however has at length hit upon a device of his own for accomplishing the same object. Our readers are aware that the microphone is a newly discovered device by means of which the volume of sound is enormously increased, so that sounds otherwise inaudible to the most sensitive ear, are heard with marvelous distinctness. This is the means which has lately been successfully used to discover underground water. Count Enzenberg has an estate in the Tyrol, which has suffered severely from lack of natural moisture. From the formation of the hills and the density of the woods it had long been suspected that there were on it a number of hidden springs. Along the foot of the hills the Count placed several microphones and connected them with an insulated telephone and a small battery. At night, when the vibrations of the soil and all other noises are fewest, he listened for subterranean ripples, and already he has thus been enabled to discover several springs which he has turned to practical purposes. Could not the learned Professors who are now hunting for underground water on our Western plains, utilize the same device, or, at any rate, test its utility under unfavorable conditions?

The Rain Tree (Tamai capsi) seems to be in most respects the opposite of the Eucalyptus. The latter absorbs great quantities of moisture from the ground and exhales it into the air, thus drying up surrounding marshes; the former absorbs great quantities of moisture from the air and lets it drip on the ground beneath, thus converting the surrounding soil into a veritable marsh. The French consul at Loreto, Mexico, says the tree grows to the hight of 60 feet with a diameter of three feet at its base; that it possesses the power of strongly attracting, absorbing and condensing the humidity of the atmosphere, and that water is always dripping copiously from its trunk, especially in Summer when the rivers are all nearly dried up and the tree is most active. Lately some travelers in traversing an arid and desolate tract of country in South America, were struck by a strange contrast, says Nature: on one side was a barren desert; on the other a rich and luxuriant vegetation which was due to the presence of the Rain Tree. Why should not the admirable quality said to be possessed by this tree be utilized on our arid Western plains? We commend the investigation of the subject to the Commissioner of Agriculture. A part of the money uselessly sunk in a "dry hole" near Fort Lyon, might have been usefully expended in planting this tree in the arid parts of "The Great American Desert," if what is said in its favor approximates the truth.

RENOVATE THE WHITE HOUSE.

We do not assume to advise those who are in governmental authority over us, but we simply suggest that it is high time that some process of renovation be undertaken at the Presidential Mansion whereby the malarial influences may be counteracted. The recent statement of one of the President's attending physicians that certain rooms and closets were so poorly ventilated, and the air and gases therefrom were so infected with disease germs, as to be positively injurious to health, is a statement which should have weight. Those who have occupied the White House for the last few years have felt these injurious effects and there should be no longer any delay in thoroughly renovating and reconstructing, if need be, the entire building. We are terribly shocked when our President is brought near death's door by the hand of an assassin, but let us not nourish in parlor and drawing-room the very germs of a disease which is far more to be feared than the wicked designs of all the crazy men in christendom.

WELLS AND CESSPOOLS.

The fact that in New Haven, Conn., about 500 wells have been lately abandoned on account of their proximity to cesspools and other sinks of disease, calls attention to the necessity of building wells and cesspools at as great a distance as possible from each other. One of the most, if not the most, prolific sources of disease is the foul matter with which our drinking water becomes infected, and yet how little is done to prevent such infection. New Haven people are beginning to realize their danger, and we do not think New Haven an exceptional place for impure wells and cisterns. In every city or village and on many farms disease is generated by just such means, and yet we wonder why we become sick, and are satisfied when the physician pronounces it a widespreading "malaria." As long as the farmer's well emits no unpleasant odor, and the quality of the water is not positively bad, no notice whatever is taken of it, albeit a cesspool is not ten feet away. Let us not "go to destruction" when we have the means of prevention in our hands.

ARBITRATION vs STRIKES.

There is sound good sense in the way all difficulties as to wages, are settled between a large firm in this city and their 1,500 employés, and the policy should be adopted wherever there is any tendency for labor and capital to conflict. A Board of Arbitration, composed of nine members, five of whom are workmen, consider all questions of advance in wages, hours of labor, etc., on the ground of mutual confidence and justice. An election of arbiters among the workmen is attended with almost the excitement and interest of an election to public office, great care being taken to get the best men for the place. Fifteen representative men are chosen and they, in turn, choose five out of their number to serve on the Board. The Board has been in existence two and a half years, and all differences have been adjusted with complete satisfaction to both employers and employes. By this means wise counsel and peaceful deliberation take the place of inconsiderate action and fierce passion and the system has brought the firm and their workmen into the best of relations. The adoption of such a course wherever many laborers are employed would, in eight cases out of ten, be attended with the most satisfactory results.

AMERICAN WINES.

If there were needed any sufficient reason for Americans to look with favor upon the products of their own native vineyards and with disfavor upon foreign wines, the fact that our wines are the pure juice of the grape and foreign wines impure and sophisticated abominations should furnish that reason. American wine manufacture is a new art, but even at this early day our product has reached to one half of our consumption. Last year we made six million gallons and imported precisely the same quantity. Unfortunately, so persistently prejudiced are the American people in favor of imported foreign products, that the greater part of the American-made wines are sold as choice foreign kinds, with false brands upon them. The bulk of the real foreign wines is vastly inferior. But "who hath believed our report" when we have reiterated time and again this fact? And now we have some fresh evidence of the same sort, only, so to speak, "more so." It comes from foreign parts and is imported direct from Paris and should therefore be received at least with as much confidence as the French wines themselves. This report, taken from statistics of the Paris municipal laboratory, where the food analyses required by law are made, shows, among other facts, that in the month of June 455 samples of wine were examined, and of these but 14 were found to be good; 123 were reported tolerable, and 318 bad. Of 455 samples but 14 were good! If the French people thus treat themselves, what consideration might a foreigner expect, and how many samples of real imported wines (excluding the American sold for foreign) might be found to be even tolerable and without any distinct shade of goodness at all?

FRENCH IMPORTS OF AMERICAN FLOUR

Lately the Flour Commission of the Society of Agriculturists of France reported that the agricultural and milling interests were greatly disturbed at the enormous increase in the importation of American flour into western Europe. This increase amounted in France to 53 per cent in 1879, and since then importations have been steadily increasing. English millers are also greatly "exercised" on the same account, but they have not hit upon the ingenious French theory to account for our growing exportations of flour instead of wheat. According to our astute Gallic friends, we have substituted flour for wheat with the direct purpose of annihilating the English and French milling industries in order in this way to bring about the ruin of the agricultural industries in both countries also; for farmers no longer finding any purchasers for their grain, would be forced to discontinue its production, giving us shrewd, far-sighted Americans a permanent market at prices limited only by our own moderation and generosity!

To say nothing of the great reduction of freight secured by sending abroad flour instead of wheat, the 30 per cent. of bran and inferior flour thus kept in this country is as great a benefit to our own farmers as it is a disadvantage to those of England and France, as it enables us to keep more cattle and other stock, while it forces them to keep less, thus giving us an advantage in the competition in the European meat markets. Of course, the chagrin of our French friends is quite pardonable, but then their recommendation to impose an import duty of 10 francs per *setier* (2½ bushels) on all products manufactured from cereals is carrying their chagrin really a trifle too far.

BREVITIES.

It will be remembered that last year from about 70 different kinds of potatoes, we did not succeed in finding one seed ball. This year several kinds (new seedlings) fruit quite freely,

A great deal of complaint was last year made as to the rotting of tomatoes when half-ripe. This year the same trouble exists. We find that the tomato worm is causing much of this. Sometimes this disgusting worm prefers the green fruit to the leaves and eats a small portion, returning to the leaf. Every tomato so harmed will rot. The best way to destroy these pests is to go over the vines with scissors in hand and cut them in two.

A paragraph has been "going the rounds" of the papers stating that the Italian government has offered a large reward for a remedy against some parasite or disease which damages orange and lemon trees. The Italian Legation in Washington has been receiving hundreds of inquries from all parts of the country on this subject, and as it is impossible to answer all correspondents. Individually, Count Camporeale, Chargé d' Affaires of Italy, announces that so far nothing whatever of such a reward is known to the Legation.

Frederick Martin has the reputation, among our English cousins, of being a perfect encyclopedia of information. Some of our Western friends, however, may possibly think that this encyclopedia, like most others, is sometimes misleading. In the "Statesman's Year Book" for 1880, after giving a good deal of statistics of the area and population of this country, he adds: "The States and Territories here enumerated do not occupy the whole area belonging to the United States. There are, besides, vast tracts of land described as "Kansas," "Minnesota," "Nebraska," "Oregon" and the "Indian Country," not as yet organized."

Dr. John A. Warder, the eminent pomologist and President of the Ohio State Pom. Society, reminds members and others that the Summer meeting will be held on Wednesday evening, August 21, at the time of the State Fair, at Columbus. All are invited to bring specimens of new fruits, and also contributions to the Bateham Memorial Fund, as the committee desire to report. We trust that all our Ohio readers and those, indeed, in other States also will testify their appreciation of the earnest services of our late contribntor, M. B. Bateham, to the cause of horticulture and agriculture, by generously contributing to the above fund.

In view of its importance we once more inform our readers that the 18th session of the American Pomological Society will be held at Boston on September 14th, 15th and 16th. The exhibition of large collections of fruit is not desirable, but the show should be confined to new or rare varieties and remarkable specimens. Intending contributors should give immediate notice of what quantity they desire to exhibit. Three specimens of each variety will be quite enough. Packages of fruit, with the names of the contributors, may be addressed as follows:—"American Pomological Society, Boston." Freight and express charges should be prepaid. A limited number of Wilder Medals will be awarded to the objects of *special* merit. Any other desired information will be furnished by the Secretary, Mr. Robert Manning, Salem, Mass.

The era of agricultural depression in Great Britain and Ireland has borne very hard not only on tenant farmers and their laborers, but also on small land-owners. Even before the troubles began, an investment in farm lands did not bring, on an average, more than 2½ per cent., and the income from it in Great Britian is much less to-day, while in Ireland the smaller landlords can often obtain absolutely nothing from their tenants. Many of them are suffering severely and a few have been brought to absolute want owing to their inability to collect rents or to find a purchaser for their property. Among this class in England the land is being mortgaged as heavily and commonly as that of our own Western farmers a few years ago; but owing to the disturbed state of Ireland, money cannot be raised on land there except at a ruinous interest. It is expected that the number of small land-owners must soon be considerably diminished, and that the Squire's oldest son, instead of being a 'man of pleasure' while waiting for his father's shoes, must attend an agricultural college and go to work as a practical farmer or overseer.

In announcing, last week, the reported formation of a monopoly of river-transportation, we were careful to introduce each statement by such qualifying phrases as "it is said," "it is reported," inasmuch as we could hardly think it likely that so vast a transaction should have been carried on so expeditiously and quietly that the public should know nothing about it until its close. Our suspicions of the truth of the announcement are confirmed by a dispatch from St. Louis which says that the warehouse and river transportation people there think that the alleged purchase of all the barges and warehouses not controlled by the railroad companies on the Mississippi, Missouri and Ohio, is quite impracticable, as the owners of these wish to buy rather than to sell, and would have refused to break up their established business, the volume of which is as large as they can manage with the present facilities. From New Orleans we learn that there are now in the transportation of grain on the Mississippi five barge lines, employing 16 tow boats and 103 barges capable of transporting 4 865,000 bushels per month, while there are in process of construction 21 more barges which will carry up the transportation to 6,000,000 bush. a month. Very naturally the voracious pike, Monopoly, would like to swallow all the smaller fish in the rivers, but very naturally, too, some of these object to be victims to the glutton's insatiable maw.

Miscellaneous.

EMMET AND DICKINSON COUNTIES, IOWA.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

IT is not our purpose or mission in visiting different points in the West and writing of what we see to embellish our letters with the fancies of imagination, nor to present prophetic pictures of the possible future; but we aim to state facts such as are known to the intelligent yeomen of the West, such as are capable of demonstration to any who are interested; and such as many a young farmer among our Eastern readers should learn, know, and profit by. A gentleman in the East, for whom we have a warm regard and sincere respect, wrote us, after perusal of our letters from Palo Alto, and Sioux, Lyon and Osceola counties.—"Your correspondence is *all* puffs. It is too transparent to continue to interest readers. * * * The figures you present are too heavy; such statements should be within the truth." * * We know facts are stubborn things, and their inflexible corners sometimes wound the sensibilities of those who are guarding an erroneous opinion, because they have not taken the time and pains to acquaint themselves with the truth, and if our correspondent will visit those localities, he will become convinced as we have been, and doubtless, from his broad views and earnest nature he will be more of an enthusiast.

The two counties named at the head of this letter are on the Minnesota line, the third and fourth east of Dakota Territory. Their topography is undulating prairie, with not to exceed 5 per cent. of waste land, the lower lands being available for grass and pasturage, while the deep, dark, loam of alluvial cast, underlaid with yellow clay, which overlies gravel, renders the upper lands very fertile and their tillage in corn, oats, flax and root crops exceedingly profitable. Wheat, rye, barley and some other products usually do well, but are not as reliable; nor indeed is it necessary that they should be, for this is emphatically a stock country, and not a wheat-producing locality as 'tis further north. The grasses are rich and luxuriant, and corn will give an average yield of over fifty bushels per acre; concentrate these products into beef, pork and mutton, and you secure to the farmer an average profit of thirty per cent. net on his combined investment in land, improvements, stock, grain and labor. The demonstration of this to the thinking farmer, is shaping and giving direction to the investments and methods; stock interests are increasing at least fifty per cent. per annum both in quantity and quality; herds have full-blood Short-horns at their head, and the grades are steadily improving; the flocks of sheep which now number probably 7,500 head, have the best Cotswold bucks, and the hog product of the past year, estimated at $80,000, was principally Berkshire and Poland-China Stock.

From careful inquiry we have learned the fact that fleeces of wool from sheep of the same age and of the same grade, are from 1½ to 2 pounds heavier here than east of the great lakes. Will some one who knows why, please rise and explain. The explanation might remove some of the incredulity we have referred to. Much information regarding stock was obtained of Messrs. R. E. and J. W. Ridley, of Estherville, who handled the last year about 2,000 head of cattle, 1,000 sheep and $40,000 worth of hogs. We give their address and our authority so that those interested may know of whom to seek information.

Land can be bought from $4.50 to $8 per acre; it can be broken for $2 25, the sod be sown to flax, three pecks to the acre for $1; harvesting and thrashing per acre cost $2 52; and the yield is from seven to ten bushels, worth $1 per bushel. The land is cross-plowed in the Fall, and in the Spring either seeded down to domestic grasses or planted to corn. Farms range in price from $7 to $12 per acre, according to improvements, proximity to railroads, etc. There are over two dozen lakes, with good banks and plenteously stocked with fish. The Little Sioux River in Dickinson County and the east and west branches of the Des Moines in Emmet flow through it, the east fork heading within its limits. There are also four good-sized creeks, two or three lake outlets, and many springs of pure, living water, while wells of excellent quality are obtained at an average depth of 25 feet.

OKOBOJI AND SPIRIT LAKES deserve more than a passing notice, and in their *tout ensemble* would set at naught the descriptive powers of a more gifted pen than ours. The first of these is divided into two by a kind of strait (though passable for boats), and the two parts are known as East Okoboji and West Okoboji. The water is deep and clear, much of the bottom and shores is covered with sand and gravel, the latter in some places so uniform in size, clean and presenting such a variety of colors as to possess marvelous beauty; the shores and banks are high, well defined and mostly covered with bodies of fine timber, except here and there, where a well tilled farm runs down to the beach, while some near-by eminence bears the residence and barns of a thrifty farmer. The two lakes have nearly 32 miles of shore line, and a succession of beautiful landscapes. M. J. Smith has built a commodious residence in an attractive locality, on the bank of the lake, and his home-like hospitalities are in constant requisition by guests from hundreds of miles away, while near-by, at the shore, are Messrs. Mills Brothers, courteous, attentive and obliging, with boats, fishing tackle, bait, etc., as desired. Spirit Lake is much like the descriptions already given for the Okobojis; it is almost five miles wide, and over six miles long, its northern extremity reaching to the Minnesota line. Its bottom, shores, banks and bordering beauties are the peers of its twin sisters to the South. On the Southern bank is a State fish hatchery, and from Mr. A. A. Mosher, Assistant Fish Commissioner of the State, who resides in the town of Spirit Lake, near-by, we learned, that of California Salmon, Mackinaw Trout and other varieties he had put into the Okobojis this season, 450,000, and into Spirit Lake 250,000, making 700,000 imported fish, beside the abundant supply of pike, pickerel, bass, etc., found naturally in them all. At the north end of Spirit Lake is "Hunter's Lodge," an extensive establishment kept by Mr. O. Crandall, for sportsmen and their families. We only halted there an hour, but his guests were loud in their praises of table, and accommodations. Mr. C. keeps a fine array of boats, tackle, etc.

On the southwest shore is another large building in process of completion, with every convenience for hunting and fishing at hand, known as "Lillywhite Lodge." This fronts a beautiful gravel beach.

There is a liberal growth of natural timber along the rivers, creeks and chain of lakes, with numerous artificial groves of trees scattered through the country. The growth of these counties has been retarded, and their gaming and pleasure resorts measurably neglected because there was no railroad in either county, but at this time the builders of the Pacific Division of the Burlington Cedar Rapids and Northern railway are busily at work extending their line from Clarion in Wright County, *via* Emmetsburg, to Estherville and Spirit Lake. The Company (C. J. Ives Sup't.) being progressive and enterprising, will give new life to this section. They expect also the Des Moines and Northwestern Narrow-guage Railway to come north *via* Milford, a thriving little place four miles south of Okoboji, about which W. F. Carlton will answer inquiries.

We were told that great benefit was anticipated from an investment by the

Scottish-American Land Co.,

in Emmet County. This consists in the purchase of over 40,000, acres which through the capital and influence of this corporation (incorporated jointly by Iowa and Great Britain), will be improved rapidly and permanently. They sell for actual settlement only, at low prices, and on favorable terms, loaning the settler money, if necessary, at six per cent. interest, in amounts equal to half, two-thirds, or three-fourths of the cost of his improvements. A purchaser of a quarter-section (160 acres) can be furnished by them with ten heifers, two and three-years-old, and a thoroughbred Short-horn bull for four years, he returning then the orginal stock and half the increase as the only remuneration to the company. When desired they furnish the land, pay in cash $2 per acre for breaking, furnish seed for sowing to flax on the sod, pay half the thrashing bill and divide equally with the renter, or, as they are constantly opening and improving farms, they will, if preferred, rent for cash or on shares to desirable tenants. Alex. Peddle Esq., is the land Commissioner and attorney of the company, their only representative in the United States, and he gives personal and special attention to the interests of his colonists, gratuitously. His address is Emmetsburg, Palo Alto County, Iowa. The property valuations, real and personal of both counties are about $1,250,000 which are assessed upon a third of the actual values, the tax averaging three and one-quarter cents, all included.

ESTHERVILLE is the oldest town in, and the former county seat of, Emmet County. It is situated on a plateau encircled on the south and west by the Des Moines River, and the tree-clad hills beyond. It can boast of a pretty site and surroundings; two religious societies and one church edifice, a good school with two departments, a live newspaper, the Vindicator, by Frank Davey; a population last census of 225, now probably over 300; a railroad building in and out of the town; numerous new buildings under construction; a brisk business and enterprising lot of citizens, and a promising future. The Defiance Creamery was started last March by C. T. Simpson on the cream-gathering plan; capacity, 1,000 pounds daily; present average 225, soon to be increased to 500 pounds *per diem*. At present it is using the milk from 300 cows and will soon use that from 600. The milk is gathered by two teams from a radius of fourteen miles; it churns by horse-power, uses the Davis and Fairlamb patent cans. It pays for cream on the basis of the price of creamery butter in the market, and ships to New York and Boston. It has plenty of ice and the business promises fairly. Dr. E. H. Ballard came here years ago, has established a large practice, and now, having become a member of the mercantile firm of Ballard & Barker, wants to retire from his professional life. This makes an excellent opening for a physician. There are also needed a hardware store and a harness maker. As soon as the railroad is completed many other things will be needed. 'Tis a good point for business. We received valuable assistance from Howard Graves (banker and dealer in real estate) Soper & Allen (attorneys and real estate dealers), Knuet Espeset (county treasurer and real estate agent), Frank Davey (editor, auditor and dealer in real estate), and J. W. Ridley (proprietor of the Emmet House); address any of these gentlemen (with stamp inclosed) for information and it will be promptly and cheerfully forthcoming. Mr. Espeset will answer correspondence in either American or Norwegian.

SWAN LAKE, the present county seat, is a prairie town on an elevated site about half a mile north of the lake of the same name—a body of water about three-quarters of a mile by seven miles. The town has a wide awake population of less than 100, a church, a district school, a G. T. lodge, and three good stores. A company recently organized are starting the Emmet County Creamery. They will commence with from 300 to 400 pounds daily, though having capacity for 1,000 pounds. They will gather from about 600 cows and churn by horse power. C. W. Jarvis, Esq., of the Emmet County Bank, placed us under many obligations, and merits our thanks. He is also dealing in real estate, and would be a desirable correspondent for information.

SPIRIT LAKE, the county seat of Dickinson County, commands a pretty site, elevated, undulating and fringed with a natural growth of trees. It stands at the south end of Spirit Lake, but lying more immediately upon the western bank of East Okoboji Lake. It has a good school of two departments, with two teachers; three religious societies, with two church edifices; A. F. & A. M. and I. O. O. F. civic societies; good hotels for the accommodation of guests, sportsmen and pleasure seekers coming to the lakes. The Spirit Lake Beacon, by A. B. Funk, and the Spirit Lake News are two of the newsiest papers in Northern Iowa. With good stocks of merchandise, a live business, wide streets and sound sidewalks, this is a brisk, bright, promising little town of about 400 population. They need a nursery for raising fruits, shrubs, etc., a creamery, and other industries not now represented. At this point we were the recipients of attentions and assistance from J. A. Smith (land agency), Rice & Rice (attorneys and real estate agents), and Messrs. Osborne and Perrin (respectively the Treasurer and Recorder of the county, and real estate agents), and they consent to answer any correspondence, covered by return postage.

Literary Miscellany.

THE PRESIDENT'S CHANCE.

"WE'LL take that chance," though it may be small,
The eye that noteth the sparrow's fall,
Is over me, and I shall arise
If knowing all, He shall deem it wise.

Honor and trust by a nation given,
Shall nerve my will, by the help of Heaven;
The prayers of love shall not rise in vain,
If courage and faith may but conquer pain.

So I will not fear but calmly lay
My hand in the one, outstretched alway,
For help of the bruised but striving one,
And so shall I live 'till my task is done,

Strong is my heart, and knows no fear,
Though prone and helpless I find me here,
Who an hour ago, with life's hopes high,
Stood under the light of the morning sky.

I will take the chance and hold me still,
Waiting in patience the Sovereign will,
That suffered for ends *I* may not know,
To fall unhindered the cruel blow.

He had taken always the chance that lay,
In the narrow passes, along his way,
From an orphaned childhood poor and lone,
Steadily up to a people's throne.

Had taken the chance to store his mind,
With wealth of science and art combined,
To lay in his youth foundation sure,
For the coming manhood strong and pure.

Had taken the offered chance of Heaven,
That to all is in love and mercy given,
To save his soul from the death of sin,
And gather the fruits of virtue in.

And now in the strength of manhood's hour,
From his proud position of peace and power,
In a moment hurled by a dastard hand,
While horror of darkness filled the land,

He said with strong and resolute will,
"I will take the chance" that is left me still;
Struggle for life may be sore and long,
But God is good and my heart is strong,

—MRS. EMILY J. BUGBEE, in Cleveland Herald.

THE MANOR HOUSE.

Continued from page 506.

I did not waste time in thinking. The whole thing might be a mere trick, and I was resolved not to allow myself to be easily deceived. I made all haste into the central court, and, candle in hand, made a close and searching investigation of the place. The light burnt without flickering in the still September air, and illuminated a large area around me as I moved about. But I could see nothing unusual. All was perfectly quiet. There was no one in the court; no one at least of earthly, ordinary mould—for the notion that I was not really and entirely alone had somehow gradually taken possession of me, and it was not without a quickened pulse and a slight tension of the heart strings that I re-entered the passage and made for my own room upstairs. As I passed along I still had the feeling that something else—I could hardly call it some person, for the companionship was of the vague impalpable kind which argued no bodily form or existence—was near me all the time. I seemed too, as I got to the foot of the staircase, to hear a light pattering of feet upon the oaken floor, and the gentle closing of a not very distant door.

On reaching my bed room I locked and bolted the door as usual, and, setting down my lamp, sought to recover my somewhat shattered self-possession. This was an entirely new and unexpected line of attack. It was to my mind, far more weird and ghostly than the other, and I was proportionally the more disturbed. That face with its quaint dress—these eyes—where had I seen them before? I sat thinking, thinking, with my ears on the stretch for any fresh, unusual, disturbing sounds, and wondering what strange events the coming night would produce. But the house was quiet and silent as death; so it continued till long after midnight. After watching intently till well on in the small hours, worn out but still somewhat dazed and confused, I turned into bed and was soon sound asleep.

I slept late next day, and the old gardener remarked upon it, as I thought a little pointedly. Did he know more than he chose to tell? I questioned him closely, as I had often done before. My efforts were just as fruitless. He positively denied that he or any one he knew of had come to the house after ten that night. Why did I ask, had I been disturbed? I would not tell him all, but I described the quaint head-dress which encircled the face I had seen, and I asked him if he knew of anything like it anywhere.

"Why, master, it's jist that that the Lady wears; you've seen in her picture—in the great banqueting hall."

And then I understood why it was that those eyes of the night previous still haunted me with their malevolent gaze.

"Has her ladyship the character of being at all uneasy in her grave?" I next asked, in as flippant, off-hand a tone as I could assume. "Is she supposed to walk about this house at night?"

"You don't say you've seen Her, master? Her?", and the old man clutched my arm convulsively, looking into my face with a mixture of horror and incredulity which considerably impressed me.

"I think so; last night about half-past ten."

"Dear, dear, dear! I warned you not to be too cock-sure that you'd done with the ghosts. Oh, master, for the love of Heaven be careful. Don't stay in the house, don't; or if you must, keep to yourself. Don't follow her, don't meet her, don't thwart or anger her, or—" He did not finish, but shambled hurriedly off, leaving me a prey to mixed and slightly uncomfortable emotions.

The lady was much in my thoughts the remainder of the day. Would she show herself again at night? I did not wait to be startled, but as soon as the Dukes left the place, which they did as usual at my particular request, I patrolled the centre courtyard for a couple of hours, walking in the dark, but having a match-box handy and a candle end in my pocket. But nothing appeared, and about eleven I went upstairs to bed. Nor was I disturbed again that night. Next morning the first disagreeable impression was already fast fading away, and I began to think that my fears had been the father of my vision, and that I had never really seen any lady at all.

But now came another phase of the mystery. Artist-like, I am devoted to flowers. Old Duke humored me willingly in this, and kept my room well supplied. The evening before, he had brought me an unusually fine bouquet of late roses, which I had myself arranged in an old-fashioned vase and placed on a table of my sitting room. These roses had been one of the last things I had looked at and handled before going up to bed the night before. When I came down stairs I missed the flowers. Had old Duke come in and removed them? I called out for the old man. He was not in the kitchen nor yet was his wife. Inwardly cursing him for moving the roses, I went out to see where he had put them. I hunted through several rooms, and discovered them at last in a little boudoir adjoining the state chamber.

"Fussy old fellow!" I said to myself as I carried them down stairs, "why can't he leave things alone?" and I repeated the remark to him directly he came in.

"I never touched the flowers," he replied, in an injured, surly tone. "This is the first time I've been to the house this morning."

"Then your wife did."

"She's down with the rheumatis, and can't come over."

"Who did, then?" I asked sharply.

"Ah! who knows? But you must expect to find more things moved than that—aye, and worse too—now that She is at her pranks again, and trapesing up and down this house."

There was truth in what the old man said. It seemed now as if some especially malicious and mischievous spirit were resolved to worry and annoy me. I seldom found things of a morning as I had left them in the sitting room the night before. Now it was my easel, now my painting apparatus; on another occasion I found all the books of the library scattered about the floor. I bore these small vexations stoically for some time. They did not disturb me greatly, as throughout I was never personally visited and annoyed. But at last, as if to goad me to desperation, my tormentor took to interfering with my work. I was in the habit of often leaving my canvasses fastened together just as I brought them in from nature. I now frequently found them undone, and hidden in out-of-the-way corners. In some instances the color was still wet, and had been considerably smudged. Had this been all, I might still have borne my troubles with patience. But when ghostly hands presumed to use my own palette and brushes to paint upon my own work, I felt that it was nearly time for me to leave Maxted Manor. Yet this actually happened. One night I had left a carefully executed sketch of the great gateway, seen from within, on my easel, and next morning I found a figure—a shadowy female figure in white—interpolated in the attitude of passing out on to the bridge. The figure was not badly painted, be it understood, but it was unnaturally large, and its introduction gave the picture a weird, uncanny effect. Next day another sketch, of the exterior of the house from the lawn, had been similarly tampered with. The same white figure had been introduced, with the same contempt of proportion, and with the same bold, flowing handling of the brush.

I confess that by this time my feeling was one of exasperation rather than of terror. I began to think that it was time either to unravel this last mystery, or remove entirely from the annoyance which I endured. Only I did not like to beat too hasty a retreat. It would savor of cowardice, and I was no more a prey to this now than before. I determined before I left the place to make another effort to get at the bottom of the thing. Perhaps I might end this as I had already done the mystery of the moat. At least I would watch for a night or two, and try and trace back effects to their cause.

The next night, before retiring to my bed room I first made a careful examination of the central court, as I generally did, and with the same negative results. I then entered and locked carefully

through all the rooms on the ground floor; I tried all doors and windows in them, as well as those in the corridor or passage. I did the same on the first floor. After that I entered my bed room, set down the light, and went through the form of locking the door. But I unlocked it in one and the same moment, and left the door a little ajar. Next I put on a pair of list slippers. Then I sat down for half an hour, to wait till my enemy was established upon the theater of her nightly operations.

About midnight, I crept stealthily out into the corridor. I carried no light, and it was pitch dark, but by this time I know every inch of my road. I reached the top of the staircase, passed down the steps into the corridor on the ground floor, and so towards the sitting room I always used. More than once I stopped and listened. The house was absolutely still and quiet. Stay, what was that?—the rustle of a silken robe? No: only the sighing of the wind among the distant trees. Again I stopped and listened. I fancied I heard rustling and crackling, as of papers opened and unfolded: but, although I held my breath in my eagerness to listen, I found myself mistaken again. But now I was abreast of the sitting room, and once more I paused. It was here that all the mischief had been perpetrated, and this was the spot I especially desired to observe. I stood in front of the door for fifteen minutes, as keenly alert as a hare on its form. But the stillness of the night was unbroken. I could not detect the slightest movement inside. Indeed, I had all but made up my mind to enter the room and finally set all my doubts at rest, when I became suddenly aware that it was really occupied after all. I never quite understood how this conclusion was borne in upon me. But I know that I heard footsteps within; more than once I detected a slight "hem;" last of all there was the unmistakable grating of a chair as it was pushed across the solid oaken floor.

My object now was to turn the door handle gently and peer, unobserved if possible, into the room. It was my only way of ascertaining whether anyone, and if so, what kind of person, was there. I might have been a professional burglar, I did the trick so cleverly. I got the door opened quite artistically. There was not a rattle or a creak; everything seemed to play into my hands. Presently there was room for me to get my head through—and I looked in.

What I saw was not unexpected, yet it startled me considerably. A tall female figure in white was seated at my easel, leaning over and painting busily. I was spell-bound for the moment, and could neither go backward nor forward.

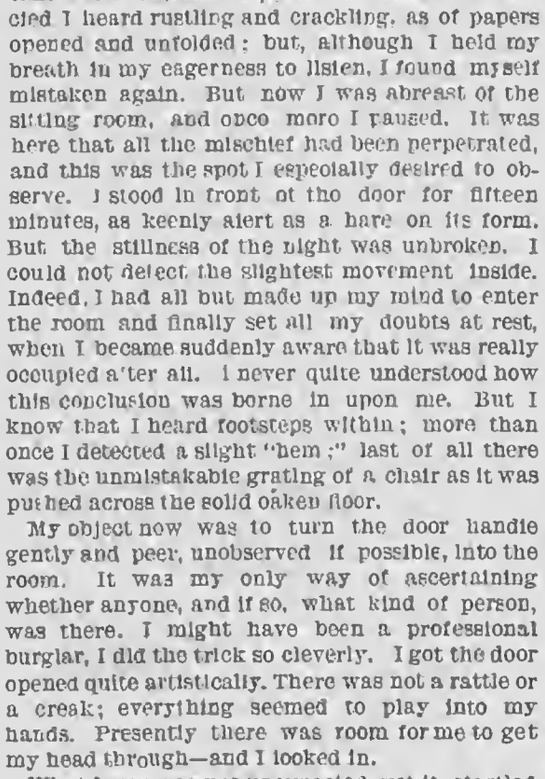

FIG. 398.

How long I should have remained thus it is impossible to imagine. But after a few minutes, perhaps under that strange mesmeric influence which conveys to all of us the impression that we are being watched, the female raised her head suddenly and looked round. The face was the same which I had seen through the window in the court—the same which I knew by heart by the portrait in the great hall.

She did not give me long to observe her, however. The moment our eyes met—how well I remembered those great wild brown eyes!—she rose to her feet with a startled exclamation, and glided rapidly away. It was a strange but not unearthly shout; on the contrary, it had a distinctly human intonation, and was not without a tinge of mockery and laughter. I rushed into the room and gave chase. All of the doors of the rooms *en suite* were open—had they been left so purposely?—and the figure on passing through the first banged it behind her. This gave her the advantage, and increased the distance between us. It was the same with the next door, and the next: still I was close behind her and might eventually have overtaken her had the race been a little longer. But the last door was that into the turret with its winding stairs. This she also banged behind her and I distinctly heard the bolts shot in the lock, accompanied by another sound, that of suppressed laughter.

She was gone. I struck a light, then tried the door, shook it repeatedly, but it withstood all my efforts. I knew that I had failed, yet I was not dissatisfied with my adventure. At least I had driven my tormentor off the field, even if she had left no trace behind her.

No trace? There I was mistaken. The ghost, or whatever she might be, in her hurried exit had lost one of her shoes, and there it lay just where she had disappeared—a pretty, dainty, artistically made high-heeled shoe.

I took it up and examined it closely by the candle light. It might have been the property of some supernatural personage, but it gave me a very distinct impression that it had just fallen from a human foot. There was nothing shadowy or unsubstantial about it; it was made of good honest purple kid, adorned with a fresh rosetto of crimson ribbon and lined with soft pink silk. That I held in my hand a clue, however, to the mystery of Maxted Manor, I was more and more convinced as I turned over and inspected my high heeled shoe.

It was not till I had carried the shoe upstairs to my own room and had made a second inspection, that I discovered names and a number stamped upon the sole. The names were somewhat blurred but I made out at length to read them with the numbers 379,063.

The names, of course, were those of the makers, the number that of the customer's last. I surely might ascertain from the shoemakers whether this customer was a denizen of this or another world. Full of this idea I telegraphed to a friend to make the necessary inquiry, leaving word at the telegraph office to send me over any message that might arrive.

My road back to the Manor House led me past the gardener's cottage. As I passed, it occured to me that I might perhaps extract something from old Duke, and I paused in front of his door. As I did so, I caught sight of a face at the window upstairs—the face of a young girl, as I thought—but the moment I looked up it disappeared. Duke was not in, nor was his wife seemingly, I called to them both, but no one replied. I was turning to leave the cottage, when I heard the heavy clattering footsteps descending the stair. I waited, and presently a young woman entered the kitchen parlor, and walked straight up to me.

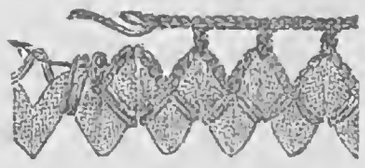

FIG. 399.

In spite of the heavy brogues which I had heard and now saw, I was fairly taken back, for I did not remember to have ever met a prettier girl. She was tall and shapely, and had a noble, a strikingly noble and handsome face, with bright curls rippling over a sunny brow, and large brown eyes full of expression. There was breeding in every feature A lady surely, although so quietly not to say shabbily, dressed. But the plain drab frock of dark home-spun fitted her figure perfectly, and the pink ribbons in her hair and at her throat, if faded, were yet arranged with the taste that argued a cultured mind.

"Pardon, me," I began, raising my hat. "I had no idea——"

Then she spoke, and all poetry, all sentiment, vanished.

"What's your wull?" she said in the sweetest voice, marred by the most atrocious northern burr; "Oi canna help ye, can oi?"

"I was looking for old Duke."

"Oncle's out; so's aunt. What's your wull?"

"How is it I have never seen you before? Do you always stay here with the Dukes?" I felt rather disposed to hold her in conversation.

"Na; I'm only biding for a wee. O'im soon ganging whoam." She stooped, and, looking me full in the face for a moment, said abruptly, "And you'd better be ganging too. You mayn't bide here."

"Well, perhaps you're right; tell your uncle I'll call again. I want to speak to him about something I picked up in the Manor House last night—a shoe."

"I'll tell him. A shoe, eh? What like? would it fit me?" she said, sticking out a foot which seemed enormous in a coarsely-made heavy hob-nailed boot.

"Hardly, unless——"

Somehow I had my suspicions about this girl. Her accent did not sound quite true; I thought it varied. She had a ring on one finger. These boots were too obviously ill-fitting. What if they had been assumed as a disguise? As these thoughts passed rapidly through my brain I kept my eyes on hers, struck no less by their beauty than by their resemblance to another pair I had seen only the night before.

It was she who put an end to the pause by once more saying, "You'd better be ganging," and pointing with her thumb to the door. Of course I could not well stay at the cottage, and I could not well tax her with having been a party to the annoyance I had endured at the Manor House—not, at least, without more evidence than I had just then. So I said good-bye civilly, and turned on my heel.

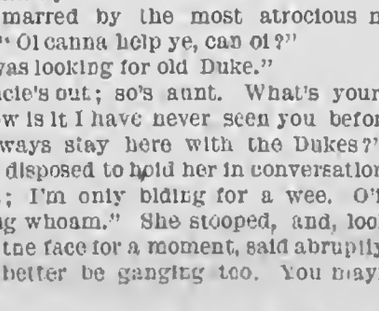

FIG. 400.

Just outside the house I encountered the telegraph boy on a pony. He had just trotted over with my answer. I tore open the yellow envelope and read:—

"Have seen shoemakers; no difficulty. Three hundred and seventy-nine thousand six hundred and sixty-three, number of Miss Judith Maxted's last."

I knew it! It was the fair owner herself who, from a mischievous desire to try my courage, had been haunting the house. More, it was she herself whom I had just seen in the cottage.

I hurried back, and, without knocking, hastily lifted the latch and walked in.

"Who's that? How dare you come in here?" The voice was the same, but the accent was gone and I saw my young friend trying hard to conceal something which she held in her left hand.

"I beg your pardon, but I came to restore something to its owner," and I produced the shoe. "You have its fellow there in your left hand. Allow me to present you with your property, Miss Maxted."

She started. "I'm not Miss Maxted. My name's Barbara Duke. What do you mean?"

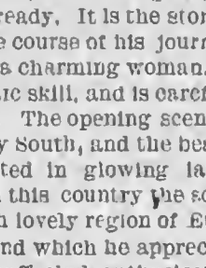

FIG. 401.

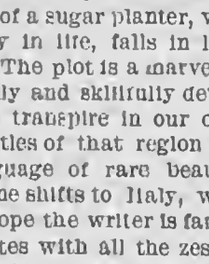

FIG. 402.

"I mean that I've found out the whole trick. You have been too hard on me. Now, of course, I shall leave the house."

"No, no," she said. "It was only a foolish escapade. I am extremely grateful to you for having put an end to the ghosts in the state chamber, and now I will go away myself, and you will be troubled no more."

To make a brief conclusion to this long tale, I may say at once that she did leave Maxted Manor that evening. I stayed on till the end of October. But that Winter I renewed my acquaintance with her under pleasanter auspices, and the following Summer we returned to the Manor House in a new relationship.

NEW PUBLICATIONS.

The Earl of Mayfield, by Thomas P. May. Philadelphia: T. B. Peterson & Brothers. Paper Cover, Price 75 Cents.

The Earl of Mayfield has achieved great popularity, seven editions of the book have been exhausted, and the eighth, revised by the author, is now ready. It is the story of a sugar planter, who in the course of his journey in life, falls in love with a charming woman. The plot is a marvel of artistic skill, and is carefully and skillfully developed. The opening scenes transpire in our own sunny South, and the beauties of that region are depicted in glowing language of rare beauty. From this country the scene shifts to Italy, with which lovely region of Europe the writer is familiar, and which he appreciates with all the zest of an unaffected, enthusiastic lover of nature. The events in the closing chapters transpire in England, and an English home is described with peculiar beauty.

The Twin Cousins. By SOPHIE MAY, Boston; Lee & Shepard, Publishers.

The mere mention of the authoress's name, doubtless, is sufficient to excite an interest in this one of her many well written and appropriate books for children. Indeed, those of older growth who appreciate childish interest, will not feel time wholly lost by a perusal. Flaxie Frizzle the heroine is of that family of little girls that uses the expressive "orful." Auntie Prim in giving permission for a party to Flaxie and her cousin, gave the instructions for invitations, adding, with a sigh, "And I shall be thankful when it is over." The youthful hearer did not forget a word, but

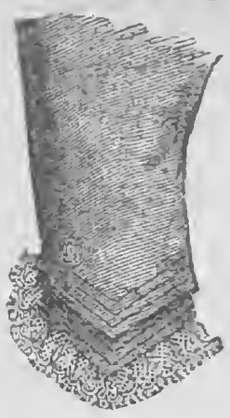

FIG. 403.

repeated the unintentional addition much to the chagrin of the old lady. Many are the adventures related of waywardness; lovableness also is depicted, showing child life as it really is.

Drugs That Enslave. The Opium, Morphine, Chloral and Hashish Habits. By H. H. KANE, M. D., Philadelphia; Presley Blakiston. Price $1.50.

This work is calculated to be of great benefit if properly appreciated. As a preventive influence it will, no doubt, be most beneficial, as it is much easier to abstain when free from a habit than to correct one already formed. A few of the introductory words will suffice to show the importance of a well written exposition of facts and needed revelations. "A curse that is daily spreading, that is daily rejoicing in an increased number of victims, that entangles in its hideous meshes such great men as Coleridge, De Quincy, William Blair, Robert Hall, John Randolph, and William Wilberforce, besides thousands of others whose vice is unknown, should demand of us a searching and scientific examination. Imports of opium into the United States for ten fiscal years, ending June 30th:—

1871,	315,121 lbs.	$1,926 915
1872,	416 864 "	2,107 341
1873,	319.134 "	1,978,502
1874,	395 909 "	2,540,228
1875,	132 541 "	939 553
1876,	389 311 "	1,805,906
1877,	349.223 "	1,788.347
1878,	434,950 "	1,874.815
1879,	405,957 "	1.8 9 696
1880.	533,451 "	2,786,606

Either the compilor of the given table or the type setter has committed an error. According to the Treasury Statistical Report, the importation in 1875 was 305,186 lbs; value $2,037,792.

Motherhood. A Poem, Boston; Lee & Shepard. Price, $1.50.

The authoress has chosen to keep in obscurity in connection with this production. Fear of depreciation, however, need not have prompted her, for while humanity as a mass may treat it with indifference, those who have experienced maternal relations and others who are sensitive to the purifying influence of childhood, and are filled with love for the dependent innocents, will enjoy its sentiments and properly estimate its value.

The French Revolution. A History. By THOMAS CARLYLE. New York: American Book Exchange Publishers.

This is a reproduction of a standard work the subject matter of which would require a lengthy review to make it comprehensible; this we forego on account of limited space. The book is well gotten up: strongly and prettily bound. The print is clear—a feature above all to be commended. The only inferior part is the paper, and that is not objectionably poor. Cheapness in a financial sense serves to recommend it to the public.

For Women.

CONDUCTED BY MISS RAY CLARK.

DESCRIPTION OF CUTS.

FIG. 398.—CROCHET LACE FOR COUNTERPANE.

Begin in the narrowest part between each point; make a chain of thirty-two stitches, and one to turn with.

1st. Row: One double into each stitch.

FIG. 404.

2nd Row: One chain to turn, one chain into each of sixteen successive stitches, four chain, pass over four stitches, one double into each of four next successive stitches, four chain, pass over four stitches, one double into each of four next successive stitches, four chain, one to turn.

3rd Row: Same as first row.

4th Row: One chain to turn, one double into each of twelve stitches, four chains, pass over four stitches, one double into each of four next stitches, four chain, pass over four stitches, one double into each of four next successive stitches, four chain, pass over four stitches, one double into each of four next stitches; four chain, and one to turn with.

5th Row: Same as third row.

6th Row: One chain to turn, one double into each of eight next stitches, * four chain, pass over four stitches, one double into each of four next stitches; repeat from * three times more, four chain, and one to turn with.

7th Row: Same as fifth row.

8th Row: One stitch to turn, one double into each of four next stitches, * four chain, pass over four stitches, one double into each of four next stitches, continue this until row is finished. Repeat the directions for continuing the pattern.

FIG. 403.—DESIGN: MORESQUE EMBROIDERY.

This design is suitable for a variety of purposes; it may be used to ornament cravat ends, sachets, drape for work baskets. The outline of the pattern must be traced on silk and worked over with rather open buttonhole stitch in embroidery silk, leaving loops at regular intervals. A row of chain-stitch is worked inside the buttonhole stitch. When it is finished the work is to be cut away with a sharp pair of scissors.

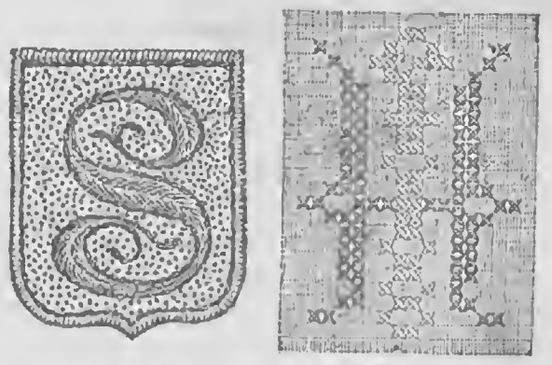

FIG. 405.—INITIALS FOR MARKING.

FIG. 404—DESIGN FOR SLEEVE.

FIG. 400.—DESIGN FOR TRIMMING OF INFANTS CLOTHING, ETC., IN EMBROIDERED BRAID OR CANVAS AND CROCHET.

FIGS. 401 AND 402.—CROSS AND ITALIAN STITCH DESIGNS.

These designs are suitable to be worked in the corners of dollys, serviettes, etc., or they may be repeated to form borders.

FIG. 399.—EDGING: CROCHET AND WAVED BRAID.

1st Row: Work a double under the braid between the scallops (see design), three chain, one double into the point of braid, three chain, one double under the braid (see design). Repeat from the beginning of the row.

2nd Row: One treble into a point of braid, four chain. Repeat from the beginning of the row.

THE GIRLS AGAIN.

MUCH has been written and said about the bringing up of the girls; so much that it would seem as if every mother must have heard or read enough on the subject to awaken her to a full realization of the arguments and the wisdom of the suggestions; but yet every day we see homes where it is evident that either the voice of the reformer has not been heard or the newspaper containing this gospel for mothers and daughters, has not strayed or that those concerned have not taken it in sufficiently to heed and resolve to put it into practice.

The subject has been dealt with by the best thinkers of the day on every side, physical, moral intellectual; from infancy to maturity; from heredity to higher education. That the young women of this country are not the very perfection of womanhood is not the fault of the pioneers in this movement of philanthropic progress.

I have nothing new to offer, nothing new to consider, but the old topic of the slavish mother and the incapable young-lady daughter has lately come to my notice practically illustrated to such an extent that, in a state of acute exasperation, I have taken my pen to-night to have my little say about it.

Many a good mother, looking back over the long road of the past, and remembering the rough, hard places, and gazing at her horny hands resolves that her daughter shall have a better time. That is good and right; but too often she carries it too far, and the girl who might have become a kind, thoughtful, efficient woman, she renders selfish, indolent and dependent by waiting on her unduly and teaching her to expect to do little or nothing for others, while all must deny themselves for her sake.

The mother to whom I referred just now is no longer strong and Miss Jenny is a healthy young woman of twenty-two. Yet the mother does all the housework including the sewing and mending for her daughter. The latter makes tatting and edging for her underclothing, and tidies and mats and rugs innumerable, and plays very fairly on the piano, which has been squeezed in somewhere, for the family is anything but rich. The mother goes without a new bonnet and fixes her dress over and over, in order that Jenny may appear as well dressed as the other girls of her set. When company comes, Jenny entertains them and her mother goes on with her work in the kitchen. She waits on the table and if anything is wanted during the meal, Jenny never rises to get it, but passes the empty dish to her mother for replenishment and adjusts her pretty wristlets in happy ignorance of the thoughts of those looking on.

Now this is all wrong. This girl is not naturally bad; her mother, is solely to blame. Instead of making her more attractive in the eyes of the world, she has taught her to treat her parent as a servant, and has caused strangers to regard her as an undutiful, selfish, indolent child.

I for one, do not believe in the plan of wearing the oldest out first. Let the younger ones have a good time, spare them the rough sides as much as possible without conflicting with duty and right development; don't be so strict as our ancestors were with their families, who had to walk a chalk line from their very cradles to manhood and womanhood, but, parents, have some respect for yourselves and for your own rights or your children will doubtless have none for you. R. B.

LABOR.

THERE never has been a doubt in my mind but that labor was a curse, as it was intended to be. "By the sweat of thy brow thou shalt earn thy bread." The normal condition of childhood and youth is idleness or unproductive activity. A boy will build snow houses, or pile stones for a mock fort, or sit upon a bridge patiently fishing all day, but put a shovel in his hands to clear the snow from the path from the house to the gate, or set him to throwing the stones on to a boat, or to watching the cattle with an ox goad in his hand, and you will have a pitifully tired boy at night, and a wronged and abused one.

Let that boy get the idea that his father ought to support him, and his mother work for him, and he is on the broad road to loaferism.

The natural heart is not to be trusted to guide into paths of industry and usefulness. Every hour of play should be earned as soon as the child is old enough to know how to pick up his scattered playthings, and put away his shoes and stockings, and put on his own "nightie" when the birds and babies alike seek their nests.

There is nothing should be taught sooner than that this is a working world, and that labor, physical or mental, is a necessity for the whole progeny of the first tiller of the ground and sower of the fig leaves.

I find that mothers try to spare their daughters the necessity of labor (by taking the burden on themselves) much more than fathers do their sons. In fact, my experience is that men, as a rule, are lazier than women. The boys are made to work and earn for their fathers before the mothers think the girls can do more than to hem their ruffles or trim their hats. Mothers take pride in their daughters' soft hands and round cheeks when their own hands have become hardened, their own cheeks hollow. The danger of this is that the soft hands and smooth faces become the first thought of the daughters, and a selfish and idle life is the result. Daughters, you will have but one mother—care for her and spare her. "No love like mothers' love," unselfish, thoughtful, unreasoning often for herself, but always taking thought for "the children."

An idle life is always a selfish one. No heart is so naturally good as to escape the demoralizing effects of days without labor, that bring nights without weariness. I know this is all old, trite and has been said thousands of times much better, but I see so much of trying to shirk the curse of labor among the young people of the day that it will not hurt to say it again. O. W. P.

FOOD TAKING.

"ALL the world and the rest of mankind," to use the expression of a great American statesman, claim to believe it to be very unhealthy and highly improper to retire for the night soon after a full meal. Many persons feel compelled to go to bed hungry when obliged to wait supper till bed time, and many at such times eat, if at all, but sparingly, and that under a protest, through fear of bad dreams, nightmare, spooks and incubuses. I have no doubt that such unhappy events often occur after eating a full meal near the time of retiring, especially if of tempting dishes and out of the usual time that has been established by habit. But is it really true that sleep is more perfect and refreshing, the body more perfectly invigorated, by sleeping on an empty stomach than on one moderately filled, and the appetite satisfied? or is it true that digestion and assimilation are more perfect if performed during working hours than if performed during sleep? or are these unpleasant feelings during sleep after a full meal simply the effect of breaking over a long fixed habit? Let us reason this matter, for during the whole historic period more or less of popular opinions have in the course of time been proven to be but popular errors. Experiments are recorded of dogs of the same age, size and breed, fed alike, one put on the chase at once and the other left at rest. After a stated time the food upon the hunter was found scarcely affected, while in the other it was fully digested. All our domestic animals lie down and rest after their appetites are satisfied. Beasts and birds of prey are almost incapable of action during the digestion of the contents of a gorged stomach. Experienced teamsters learn to give their animals their fullest feed at night after their labor for the day is finished, and in all the brute world, so far as we are able to observe, their natural habit of digestion induces rest and sleep.

But says my lady friend of a dyspeptic diathesis "they are but brutes," admitted, but they don't have dyspepsia, neither do I admit that we can learn nothing of benefit to ourselves from the natural habits of brutes; were it so the many innocents, dogs, cats and hares that have been sacrificed to science by the surgeons scalpel, have been made martyrs in vain. But let us refer to the animals of our own species, man as near as we can find him following his own natural instincts. The Indian hunter gorges himself and lies down to sleep when he has slain his prey. The overland travelers across the plains eat their principal meal when camped for the night. Soldiers on the march do the same. Explorers and surveyors follow suit; and our grandfathers and grandmothers when relieved from the cares and labors of life are very apt to take a nap after dinner. Your own physician if he is orthodox, tells you, it is better to rest after a full dinner and your lawyer who labors with mind and brain to defend your cause will eat but lightly at the dinner recess, and make it up when the trial is over or adjourned for the night.

But let us reason further, physiologists tell us that while any portion of the body, whether brain or muscle is in full exercise, there the blood flows in excess of what is wanted during rest, for the support of the organ in use, and to repair its waste.

Man retires at night with his stomach moderately filled his appetite satisfied his mind relieved from the cares and labors of the day; he falls to sleep, his brain and muscle are at rest, his lungs are inhaled less frequently his diaphragm more sluggish his pulse beats slower, for his spare blood has gone to the assistance of his stomach, for the involuntary muscles of it are at work, his sleep is tranquil, and if he has dreams they are of a pleasant nature, for Nature has had her own way, and the man is all right. S. B. P.

TAKE LIFE CHEERFULLY.

THERE are great numbers of people of both sexes who live in a continual atmosphere of delight in being unhappy; they seem to see everything through a jaundiced or otherwise diseased vision; they judge, weigh and measure everything in proportion as it has bearing upon their peculiarly morbid state of feeling.

The man will never have done grumbling and mourning over the loss of some trifle, and will neglect many more times its value in some parts of his business, apparently for the delight in nursing the recollection of a loss, or an injury.

Wholesome, timely regret is good; is a part of all manhood and womanhood, but not the foolish effort to perpetuate the regret or sorrow after due consideration should have laid it aside.

Cheerfulness is the next thing in life to godliness, and instead of making keepsakes or injuries done us by accidents or design, let us lay away the yesterday's troubles with our cast-off-clothing, as having done its purpose, served its office, and being no longer of practical use.

It is touching a tender subject to say to a woman that she shall not keep the little shoes, the hat and dresses, and doll's house about her, day by day, the same after her child is with the angels as when it prattled in her care; but to those who can by easy remorse and judicious disposal and change withdraw from view the unnecessary mementoes and reminders of sorrow, there is an opportunity for doing a service of inestimable value.

There may be no harm in storing away the little articles, the mementoes, in convenient or remote places where purposed effort may turn to them, but there is much pity for the otherwise healthful mother of intelligence and native energy who must live day by day in the presence of the things which most disturb her happiness, and tend to bow her perpetually under the heavy influence.

Cannot thousands such make a determined effort and lay away sorrows, and live in the hopeful view that there are health, love and desirable purposes of life to be lived for?

To by far the greater number of persons who will thus be persuaded to step out from under the gloomy shadow, there will early come most delightfully interesting tasks of value to them over the world. B—A—B.

PROFESSOR MARIA MITCHELL, at Vassar College, always gives a "Dome Party" to her graduating astronomy class.

MISS LILIAN WHITING, of the Boston Traveler, is at the Concord School of Philosophy, in the interest of that paper.

My wife and daughter were made healthy by the use of Hop Bitters and I recommend them to my people.—Methodist Clergyman.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

CONCERNING STORE BILLS.

MARY WAGER-FISHER.

IF I were to proffer a bit of advice to young people at the outset of their housekeeping, the sentence that I would put foremost would be, "*Don't run up a store bill!*" And there are people no longer very young who would profit by heeding the homely advice.

The habit of having small bills charged becomes, after a time, a seeming necessity to certain classes of people, while to many of them it seems such from the outset of their beginning. Certain articles are required, there is no ready cash to pay for them, the shop-keeper is asked to charge the amount, and so the account continues with frequent additions, until at the end of a year, there's a large bill to be paid for what, it appears, there has been no substantial benefit from. My knowledge of "store bills" is of an entirely indirect character, for if my memory serves me rightly, I never had a store bill charged. My father very thoroughly trained me never to buy an article unless I had the money in my pocket to pay for it, and the older I grow, the more apparent the soundness of that principle becomes. If I had no other cause for which to thank his memory, that alone would be sufficient to fill my heart with a large measure of gratitude, as it has saved me a great deal of annoyance, as well as of money. It has saved me from buying what I really did not need. It has saved me from the mortification of small debts. It has taught me to discriminate between real and apparent necessities. It has held me to a wise decision in innumerable instances. It is an invaluable doctrine to teach a child, and I in turn shall teach it to mine with explicit care. But "indirect knowledge" is sometimes very emphatic, and from what I know of "store bills," I judge there is nothing else that eats up so surprising an amount of money, and yields in turn so little satisfaction. I have observed, too, that the habit of making such bills, leads people into dishonest dealing, and bills are run up, here and there, whenever one can get trusted, until finally honest payment is out of the question, and the shop-keeper may "whistle" for his money. There are people who have no conscience whatever about their indebtedness to shop-keepers, their entire anxiety being limited to ways and means of supplying their wants, and who will wear a garment that is unpaid for with all the *aplomb* imaginable. Such people have no true pride of character and the audacity with which they face the world is simply incomprehensible. But to the person of ordinary feeling and honesty, to be in the meshes of small debts, must be very harrowing. I can't well imagine anything more uncomfortable than to owe for one's tea and coffee, sugar and rice, nutmeg and allspice—to always be cognizant of the fact that the food you eat and the clothes you wear are unpaid for! A large debt, like that for land, or for any basis upon which one's income is to be obtained, is altogether a different affair, while to be owing for what is all the time being lost sight of, really, what is more annoying and degrading, too? As a rule, I opine, the bulk of store bills is made up of what *could have been dispensed with*, until the money was at hand to pay for them. The people who at once dispute this, are those who have never made the experiment of dispensing with what cannot be paid for on the spot, and to my mind there is no comparison between the "enjoyment" of gratifying one's appetite, at the cost of self-respect, and the freedom and independence of mind that comes from self denial, for the worst slavery is that which hampers the mind and vexes and irritates its serenity. To incur debts for the sake of "keeping up appearances," is to mortgage one's liberty to the most ungrateful of things—the public. I can see no difference between living off the charity of others, and in buying what you require "on credit," where you do not see your way clear to the honorable payment of such debts, except, that in the one case, the help extended is gratuitous, while in the other it is extortion in legal parlance. The result is the same, it is living off the labor and income of other people.

There is no time in the career of householders, when self denial and a resolve to keep free from small debts, can be more easily put in practice than by young people at the outset of their housekeeping. They have youth and health and hope and ambition, and can forego many luxuries and "necessaries" that would be hard for old people to dispense with. At all events, I believe it to be the experience of the majority of people, that money, or its equivalent, usually comes, *somehow*, to meet the demands of what is *absolutely essential*, and that it is possible for even the poorest to avoid running in debt for their daily expenses.

I used often to see a poor little lady in Paris, who earned a modest living by teaching music and French, and when pinched by her poverty, she comforted herself by saying: "It is so *distingue* to be poor—and *honest*," and I often think of the consolation lying in the truth of her remark To be poor, and to owe no man beyond one's means, is consistent with great happiness. But there is nothing at all "distinguished" in being poor, and in debt up to your ears. I would have peace and freedom of mind, if I had to live on a crust and had nothing better with which to serve my friends.

THE KITCHEN CLUB HAVE A PICNIC.

ANNIE L. JACK.

THE mid-summer heat has well-nigh passed and there comes now a little breathing spell broken only at intervals in the housekeepers routine—by preserving and pickling the later fruits and vegetables. So the members of the Kitchen Club thought they would have one holiday, and with wonderful and mysterious baskets they met at a grove near-by to enjoy the rest and shade afforded. No subject had been prepared, the talk was desultory, but many things spoken of were important and useful, as is often the case in "a multitude of counsel." Mrs. Stratford had just put her daughter to school in a distant city and we discussed the *pro* and *con* with her, and by a quiet count I discovered that more people were in favor of a course of home training than that of the boarding-school when the influence of home was pure and good. Then Miss Renshaw, the teacher, had successfully carried out a pleasant little concert a few evenings before, and the chief topic of interest was whether it was to the advantage of our children to take part in these entertainments. The gem of the evening was a "Floral Cantata" called "The Quarrel among the Flowers" by a number of little girls. It is musical throughout with such charming little bits of harmony and pretty airs that they haunt one long afterward. Some mothers thought this was likely to make the children vain, and forward, but I argued that while it would give them confidence it need not add to their vanity, for I thought the dressing in simple white, with beautiful flowers for ornament, was not so likely to create pride as the jewelry so often put upon little girls for display even at church, and other public gatherings. Mrs. Rhodes shook her head, she thought the girls who took part in the Cantata had spent much time and thought upon their dress. "So did you Auntie Rhodes on that nice new cap" said saucy Nellie Rhodes who had been one of the "flowers" at the concert. I thought it was a mistake to assert that such a pure exhibition fostered pride—that it was the very thing to give children grace and ease of manner. But, of course, it would not do to be carried to excess. It is too much of anything that is injurious, and that must be guarded against. Our talk had occupied all the spare time and we had none left to speak about the generous dainties that were spread for our picnic, some of which I will give to our readers in time for the Fall shows, at which time it is pleasant to have a picnic lunch.

DOMESTIC RECIPES.

Sweet Potato Pie.

BOIL until two-thirds tender then skin and slice. Line a tin pie-plate with a good crust, put in a layer of the sliced potatoes, sprinkle abundantly with white sugar, dust with cinnamon and then alternate until the dish is full. Add a little water, two spoonfuls of melted butter and a teaspoonful of lemon extract. Cover with paste and bake.

Tomato Soup.

Slice an onion and fry to a reddish-brown in a soup-pot in two spoonfuls of beef drippings; then add a dozen good-sized tomatoes peeled and sliced, and when very hot put in three pints of boiling water with a spoonful of chopped parsley. Boil half an hour then pass through a sieve, rubbing through the tomatoes, and return to the pot. Season with pepper, salt, two spoonfuls of butter rolled in flour and when boiling stir in a cupful of hot boiled rice. Simmer 10 minutes and serve.

MRS. KATE BIRDSLEY.

QUESTIONS ANSWERED.

Charlotte Russe and Lady Fingers.

Will you please give recipes for the above and oblige, M. D.

ANS.—*For Charlotte-Russe:* Cut sponge cake into slices and line bottom and sides of a Charlotte pan or mold. Whip one pint of thick, sweet cream, flavored with vanilla, or any other flavoring you fancy, to a stiff froth, and add to it the well beaten whites of two eggs and one half pound of pulverized sugar. Mix lightly and carefully together. Fill the lined mold and set on ice to harden. If preferred, several small charlottes can be made instead of one large one. Many add gelatine but it is unnecessary as it will harden without it.

For Lady Fingers: Mix the beaten yelks of six eggs with half a pound of powdered sugar until the mixture becomes frothy, then stir in the whites of the eggs beaten to a stiff froth and at the same time a quarter of a pound of flour dried and sifted. Put the batter into a meringue bag and squeeze it through onto pans lined with paper not buttered, in strips three inches long. Sprinkle over a little fine sugar and bake 15 minutes in a moderate oven. The bag spoken of is funnel-shaped and made of firm twilled cloth. At the bottom a small, tin tube one-third or one-half inch in diameter is fastened while the top is gathered with a shirr string. This bag will be found very convenient in making macaroons, icing cakes, etc.

Old men, tottering round from Rheumatism, Kidney trouble or any weakness will be made almost new by using Hop Bitters freely.—*Adv.*

News of the Week.

HOME NEWS.

MONDAY, August 8, 1881.

The President's condition remains favorable according to the latest reports. There was a slight increase of fever on Saturday and Sunday, but there is no cause for anxiety the physicians say, these variations being due to local and comparatively unimportant causes.

The front doors of the new house of William H. Vanderbilt in New York will cost, including settings, $25,000. They are of bronze and fac-similies of those of the Church of San Angelo at Rome.

Electric lights are beginning to scatter their brilliancy all over the country. The little city of Aurora, Ill., is to be illuminated from lights placed on tall iron pillars.

Four colored men were appointed to the police force last week in Philadelphia, being the first of the race to wear police uniform in that city.

There is great excitement over the discovery of rich carbonates nine miles west of Deadwood, D. T. Ore brought in week before last is alive with native silver, and assayed $2,600 to the ton. Big strikes are made in the Lawrence, Utica, Amsterdam, Greenland and Jefferson mines, and miners are flocking thither from all parts of the hills.

The Canadian census returns for 1881 show a total population of 4,350,930, an estimated increase of 710,565 in 10 years. Ontario has 1,913,460 inhabitants, an increase of 290,609; Quebec, 1,853,469, an increase of 156,953; Nova Scotia, 440,585, an increase of 52,785; New Brunswick, 321,129, an increase of 35,594; Prince Edward Island, 107,787, an increase of 13,760. The population of British Columbia and Northwest Territory is estimated at 160,000. The census of 1873 gave British Columbia 60,000 inhabitants including Indians.

The Postmaster General has decided to reduce the amount allowed for clerk hire in post offices where the present allowance is in excess of the sum allowed by law. There are about 150 offices in this class.

Major-General Hancock has been invited to take command of the troops at the Yorktown celebration, in October.

The Chicago and Wilmington Coal Company, being unable to secure workmen enough, has sent an agent to Europe to engage and bring over 500 practical miners with their families as soon as possible.

Palatine, N. Y,, is the richest village of the size in the world. It has about 500 inhabitants, and it is said that over thirty of these are worth from $5,000,000 to $20,000,000, while six are said to be worth over $20,000,000.

The Emperor of Germany has conferred upon Prof. Dwight Whitney, of Connecticut, the order of merit made vacant by the death of Carlyle.

The Hon. William G. Fargo, President of the American Express Company, died at his residence in Buffalo on the 3d inst., after a long and painful illness. He was the eldest son of William C. Fargo, a descendent of Moses Fargo (or Firgo, as it was written) who emigrated from England to Connecticut about 1670.

A dispatch from San Francisco announces the death from uræmia, at Salem, Oregon, of Bishop Erastus Haven of Syracuse, the distinguished educator and scholar. Bishop Haven was born in Boston, Nov. 1, 1820, and was graduated from the Wesleyan University in 1842.

The ceremony of laying the corner-stone of the monument to Gov. Caswell, the Revolutionary war Governor of North Carolina, attracted fully 10,000 persons to the village of Kinston, N. C., on the 3d inst. Senator Vance delivered an eloquent address, and Gov. Jarvis made a stirring speech. Grand Master H. F. Grainger laid the corner-stone with Masonic ceremonies.

George Morrison, living at Brownsville, near Newark, Ohio, remarked, upon hearing of the shooting of President Garfield, that he hoped the President would die. An old soldier named C. A. Cook, who was standing by, slapped Morrison in the mouth. For this act the old soldier was arrested, and he has been fined $10 and the costs, which amounted to $22. The Commercial, of Cincinnati, announced that it would receive one cent subscriptions from citizens, the money to be used in paying the fine and costs against Cook. The response was overwhelming. Before night over 8,000 names had been placed upon the subscription list, each for one cent. The names of wealthy citizens and the poorest laboring men appear side by side. Over 15,000 names are now on the list.

The officers and Commissioners of the Yorktown Centennial Association held a meeting at their rooms, in the Exchange Hotel, in Richmond, Va., on the 1st inst., and finally prepared a programme of ceremonies in addition to that arranged and already promulgated by the Congressional Commission. The celebration will be formally opened, under the auspices of the Association, on Thursday, 13th October, and will be continued until the 18th, when the national ceremonies will begin. Mr. John Goode, president of the Association, will deliver the opening address, and on alternate days addresses will be delivered by Secretary Windom, Mr. Carl Schurz and Mr. Frederick R. Coudert and Professor Elie Carlier, of New York. Religious services will be conducted on Sunday, 16th, in the morning, by the Right Rev. J. J. Keane, Catholic Bishop of Richmond, assisted by the most Rev. James Gibbons, arch-bishop of Baltimore and primate of the Catholic Church in the United States, and in the evening by the Rev. John Hall, of New York. The festivities will embrace grand pyrotechnic displays, promenade concerts every afternoon and evening and a grand national regatta on Saturday, 15th.

Four disappointed Arabs are in Boston. They were sheiks of distinction in their own country, and one claims to be the head of a Moabite tribe descended direct from the Moabites spoken of in the Bible. They were brought out here for exhibition and were told that they would become objects of social honor here. On the contrary, they proved unattractive as a show, and, being abandoned by their manager, are paupers, without much prospect of getting back home.

The Garfield boys are through with their classical review, and are brushing up their mathematics prior to entering Williams College next month. The college authorities will admit the boys on Dr. Hawke's, their instructor, certificate.

Dr. Tanner, at Erie, Pa. is drawing up propositions to the medical faculty of New York to fast three months. He claims that he can fast 95 days if fed on electricity, the air in the room to be charged with a strong current. He is now fattening for the fast.

Forest fires are raging all around Bay City, Mich. For a hundred miles north fences and farm buildings, in addition to vast quantities of pine timber are being destroyed. Trains find it almost impossible to run. The city is enveloped in a dense smoke and the air is full of burned leaves and ashes.

The Indian chief Ta-tan-ka-i-you-tan-ka, better known as Sitting Bull, gets the idea. He wants money for what he does now. A $10 note set his tongue to running very glibly for a reporter a few days ago and that's all that would do it. He is becoming civilized rapidly.

Mr. James G. Fair heads the personal assessment roll just filed in San Francisco with $42,200,000. Mr. J. C. Flood is assessed at $36,500,000 for himself, and $20,500,000 as trustee for J. W. Mackey. Mr. Charles Crocker is assessed at $20,000,000.

Postmaster General James is considering the feasibility of cheapening and facilitating the transmission of remittances thro' the mails. It is probable he will recommend to Congress the adoption of a new and safe system of postal money orders, which has been devised at the department.

Nathan Orlando Greenfield, the Orwell wife murderer, suffered capital punishment in the Onondaga Syracuse Penitentiary on the 5th inst., after a battle with the law lasting nearly six years.

The Brooklyn bridge is rapidly approaching completion. The contractors expect to have the promenade across the river open some time in October.

Thirty thousand persons have petitioned the Georgia Legislature asking that the people of the State be allowed to vote on the prohibition of the liquor traffic. The petition was 600 feet long, and had names from every county.

A Life Saved.

In letter from a lady at Council Grove, Kansas, the writer says: "I have used your Oxygen at times for nearly three years for *lung trouble*. Am nearly well now, and feel that it *has saved my life* as the disease is hereditary, and has been for *generations* in our family, *and I am the first one who has recovered after being attacked.*" Our Treatise on Compound Oxygen, containing large reports of cases, and full information, sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

The northern part of the peninsula of Sturgeon Bay, Wis., has been damaged considerably by forest fires, which are raging now harder than ever, ruining cut and uncut timber and threatening immense damage. The people are seriously alarmed and doing everything possible to prevent the destruction of their chief source of revenue.... The commission of the General Land Office has reported favorably upon the request of the Yosemite commission and the Governor of California for the increase of the Yosemite valley reservation to include the Mariposa Big Tree reservation and surrounding territory.....The United States smoked 160,000,000 more cigarettes last year than the year before. Beer drinking and cigarette smoking are increasing more rapidly than any other ways of using barley and tobacco..... Col. Le Grand B. Cannon of Burlington, Vt., has sold his herd of Short-horns to Western men. This herd is said to be the largest and best in the country.....Paris green on the fingers of a Colraine, Mass., farmer while he was poisoning bugs became mixed with the "fine cut" in his tobacco box and caused him a severe illness.

A sixth volume of the Polled Cattle Herd Book has been issued by Mr. Alex. Ramsey, Secretary, Banff, Scotland.....At the Hamilton Short-horn sales at Winchester, Ky., the other day, the Rose of Sharon family brought an average of $1,500 each.... ...Pennsylvania has a law for the prevention of trespassing on gardens, yards, orchards, fields, etc., and doing damage to property of any kind. The fines for infraction are not less than $5 nor more than $50... .....A Berlin dispatch of the 4th says:—"The harvest prospects in Schleswig-Holstein have never been so bad as they are this year. Most of the farmers are getting quit of their cattle and horses, owing to the scarcity of fodder."

The sale of meat infected with trichinæ is subjected to severe punishment in Germany. A butcher and an inn-keeper of the city of Halberstadt, who failed to have pork that they offered for sale properly examined by the Government inspectors, and who were the cause in consequence of more than 100 cases of trichinosis, including four cases of death, have just been sentenced to three years' imprisonment.. .....The fifth annual meeting of the New York State Farmers' Alliance will be held at Watertown on Wednesday, August 24, at 11 A. M. Local and county Alliances, Grangers and Farmers' Clubs and Agricultural Societies are invited to send representatives. So are Anti-Monopoly Leagues. The Rome, Watertown and Ogdensburg Railroad will carry visitors for one cent a mile as the return fare.. ...The following details of the condition of wheat in the various States will be of interest just at this time:—

DEPARTMENT OF AGRICULTURE,
WASHINGTON, D. C., July 29, 1881.

AVERAGE CONDITION OF WHEAT JULY 10, 1881.

States.	Winter wheat.	Spring wheat.
Maine	87	92
New Hampshire	98	99
Vermont	97	86
Massachusetts	100	..
Connecticut	100	..
New York	88	98
New Jersey	83	..
Pennsylvania	102	97
Delaware	105	..
Maryland	87	..
Virginia	93	..
North Carolina	92	..
South Carolina	91	97
Georgia	92	77
Alabama	88	..
Mississippi	97	..
Texas	101	110
Arkansas	87	93
Tennessee	87	..
West Virginia	95	95
Kentucky	83	87
Ohio	86	84
Michigan	64	88
Indiana	80	..
Illinois	60	80
Wisconsin	75	92
Minnesota	..	95
Iowa	48	72
Missouri	73	75
Kansas	77	75
Nebraska	99	98
California	92	92
Oregon	102	106
Colorado	90	108
Territories	97	97
General average.	83	90

Acting Commissioner Carman, in his letter accompanying the foregoing table, states:—"Our estimates of acreage not yet completed, but indicate an increase of about four per cent. in Winter wheat, and a lessened area of Spring wheat, owing to an unfavorable season for sowing.

The imports of flour into Great Britain in 1876 amounted to 850,000 barrels; they have been constantly increasing, until in 1879 and 1880 the amount was over 3,400,000 barrels, or about 800,000,000 pounds.....The Dairymen's Association of this State will hold a butter and cheese show in September, in connection with the Oneida County Fair, at Rome, N. Y. The whole State will probably be represented, and it will be a grand affair. ... .New York receives one-half of the cheese product of the country. Chicago comes next. Over 40,000,000 pounds of cheese were exported in 1880, Great Britain taking 65 per cent. of the quantity. The home cheese trade is growing rapidly, and assuming vast proportions. It is said to be increasing at the rate of 12,000,000 to 15,000,000 lbs. a year. The trade is much more concentrated than that of butter, only 12 States out of 38 producing as much cheese as butter.....Seth Green says of the distribution of California mountain trout in the waters of this State:—"One million two hundred thousand have been placed in about 150 different bodies of water. I am now getting favorable reports from the small fry. In three years they will be heard from in the shape of fish weighing a pound and a half. They will then furnish fine sport for the angler and excellent food. We are now very busily engaged in rebuilding ponds and repairing our hatching houses and apparatus for the coming season."..... ...Prof. Baird has called upon all those who wish eggs of the quinnat, or California salmon, to apply at once. The eggs are collected and packed at the expense of the United States Fish Commission, but they do not propose to pay the express charges. Each order should be for at least 50,000 eggs....The Mark Lane Express of Aug. 1 says:—"The temperature the past week has been on an average 30 degrees lower than during the late spell of heat. There have been general rains and local thunder storms, but wheat was not thick enough to take serious damage. The nights have been cold in England and severe night frosts in Scotland will retard the harvest there. Mildew is reported among the wheat in various parts of England. A decline in the temperature will not be of advantage to wheats except in North England. The barley crop will be very good in some localities, but in the remainder it is of very irregular growth, and has ripened prematurely. Oats are good in Ireland and parts of Scotland, but variable and generally indifferent in England."..... Two car-loads of Spring wheat were received in Chicago on July 29 from Nebraska. One inspected No. 2 and the other No. 3. Last year the first arrivals were from Missouri on July 21.

In Florida the value per acre of cleared land is $9 48, and of timbered land $3 03. In Louisiana cleared land is worth $14 36, and timbered land $3 53. In Texas cleared land is worth $8 98, and timbered $4. In Arkansas cleared land is valued at $11 78, and timbered land at $3 58. In Oregon cleared land is worth $21 71, and timbered $4 50. But in Nebraska cleared land is worth $8 82, and timbered $25 85 per acre.....Recent Mail advices from Melbourne, Australia, state that the rainfall had been insufficient for wheat fields and pastures. Frosts are also reported. The wheat statistics for last year issued by the government had been corrected so as to increase the yield by 230,020 bushels, but the Melbourne Argus says that, even with this addition, it was clear that the colony had exported too much, and that 120,000 bushels would have to be imported for seed. The revised figures still showed a deficiency against the preceding year, notwithstanding the increased acreage.....The official wheat statistics for South Australia for the year 1880-81 had also been published. The area under wheat was 1,733,542 acres, and the yield 8,606,610 bushels, giving an average of four bushels 58 pounds per acre. In the preceding year the yield was 14,260,064 bushels, giving an average of nine bushels, 47 pounds per acre, so that in South Australia, as in Victoria, there was a marked decrease in the productiveness of the land during last year.....Paris postal reports from France of July 16 state that the temperature during the week had been higher, causing fresh complaints, much grain having matured too rapidly, causing deficiency in weight. As regards wheat, which might have been over an average, it will only perhaps just come up to one.....

DANDRUFF

Is Removed by the Use of Cocoaine,

And it stimulates and promotes the growth of the hair.

Burnetts Flavoring Extracts are the best.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Lydia E. Pinkham's Vegetable Compound has done thousands of women more good than the medicines of many doctors. It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Ask any good doctor if Hop Bitters are not the best family medicine on earth.

Nature's Sluice-Way.

The kidneys are nature's sluice-way to wash out the debris of our constantly changing bodies. If they do not work properly the trouble is felt everywhere. Then be wise and as soon as you see the signs of disorder get a package of Kidney-Wort.—Constitution.

The Markets.

CROPS AND MARKETS.

WHEN we went to press this time last week agriculturists all over the country were praying or wishing for rain. In the North another week or two of dry weather would be the ruin of the corn crop and greatly injure most of the others still in the field; while in the South a little longer drought would inevitably greatly damage cotton, already in a very critical condition. During the week ending last Friday evening the rainfall in the Cotton Belt was much smaller than during the corresponding week last year, as shown by the following extract from the meterological summary telegraphed to this city by the Signal Service Bureau at Washington:—

Stations.	Rainfall—Inches, 1881.	Rainfall—Inches, 1880.
Fort Gibson, Indian Ter	0.02	2 34
Little Rock, Ark	0 00	0.77
Shreveport, La	†	1.69
Port Eads, La.*	0.64	3.74
Corsicana, Tex	0.00	0.15
Denison, Tex	0.24	4.76
Galveston, Tex	0.40	0.26
Indianola, Tex	1 82	†
San Antonio, Tex	†	1.13
Vicksburg, Miss	0.10	1.29
Montgomery, Ala.	2 70	1.72
Cedar Keys, Fla	1.89	1.37
Jacksonville, Fla	4.99	5.19
Pensacola, Fla	14 35	1.76
Atlanta, Ga	0.29	1.83
Augusta, Ga	0 11	0.24
Savannah, Ga	2.70	0.41
Charleston, S. C	0.66	†
Charlotte, N. C	0.04	4.27
Smithville, N. C	0 70	2 30
Chattanooga, Tenn	0.16	0 32
Knoxville, Tenn	0.27	1.45
Memphis, Tenn	†	0.15
Nashville, Tenn	†	0.48
Louisville, Ky	0.00	0.57

* As compared with New Orleans, † Inappreciable.

Total, 26 stations; average rainfall, 1.28 inches, against 1.52 inches last year. HAZEN.

Washington, August 5.

During the past week the New York cotton market has been very strong for future delivery especially for August. Spot cotton opened firm and prices were advanced ⅛c. this day week after an advance of ⅛c. on the previous Saturday. On Thursday, however, quotations were reduced 1-16c. per pound on low middling and above; ⅛c. on strict good ordinary; 3-16c. on ordinary and good ordinary; and 5-16 on ordinary. The closing quotations last Friday in this market compare with those at the corresponding date last year, thus:

	Last Friday.	Last year
Ordinary	8⅛	8 3-16
Good ordinary	1-16	9 11-16
Low middling	11⅜	10 15-16
Middling	1-16	11 9-16
Good middling	9-16	12 1-16
Fair	5-16	13 7-16

The sales for the week summed up 373,400 bales against 214,600 bales for the corresponding week last year. The following shows the closing prices in "futures" in this market:

	Last Friday.	Last year.
August	12.18	11.40
September	11.31	10.88
October	10.72	10.58
November	10.55	10.47
December	10.55	10.48
January	10.66	10.57
February	10.78	10.70

The prices show an advance in the week of 19 points on the early months, and of six points on the later months.

The Southern markets have been firm, and have generally advanced during the week. The following are the sales for the week and closing quotations at five leading ports as compared with last year's quotations:

	Week's sales.	Last Saturday.	Last year.
Galveston	470	11¼c.	10⅞c.
New Orleans	3,600	11⅞	11⅝
Mobile	300	11⅜	11
Savannah	700	11¼	11
Charleston	275	11⅜	11⅜

After two days bank holiday the Liverpool market opened on Tuesday steady, and has continued so till close, though at close prices were somewhat easier. The following were the latest quo-

tations for uplands at Liverpool, compared with those of same date last year:

	Last Saturday.	Last year.
Good ordinary	5 7/8d.	6d.
Low middling	6 3/8	6 1/4
Middling	6 13-16	6 13-16

Orleans cotton is quoted 1-16 higher.

The receipts to date show an increase of 825,425 bales over those received last year to the same time. The total at each port is as follows:

New Orleans, bales		1,559,025
Mobile	"	384,266
Galveston	"	670,355
Savannah	"	869,242
Charleston	"	619,396
Wilmington	"	116,419
Norfolk	"	715,010
Other ports	"	793,535

The latest reports announce considerable rainfall in most of the Cotton Belt, and as this would brighten the prospects for an unusually large crop, prices for futures after this month have a downward tendency.

Telegrams to Bradstreet's announce that copious rains have fallen during the week over a large portion of the Cotton Belt. Charleston telegraphs that rain has fallen all over the State during the week. Savannah reports that rain has fallen steadily since Saturday, July 30. Galveston reports improved cotton prospects, owing to increased rain, but that in some localities in Texas the drought has held on. At Memphis the weather has continued dry, but with prospects of rain. Along the entire line of the Mobile and Ohio Railroad, from Columbus, Ky., 500 miles south, to Mobile, fine rains have fallen. The Signal Office gives the average fall, as reported from 25 stations in the Cotton Belt, 1.23 inch, against 0.78 inch for the previous week. Advices from Galveston on the 5th say new cotton from all parts of the State was coming in small quantities daily.

Advices from Western Europe do not speak so exultantly of crops; and reports from this country bear out our predictions, in the main, or thereabouts. Accordingly prices of cereals have been firm during the week and business both in wheat and corn here has been on a liberal scale and at present the drift of opinion seems to be in favor of higher figures. Up to last Friday evening New York prices showed an advance on wheat of 1½@3c. and on corn, of 2@5c. per bushel, on very extensive transactions, No. 2 corn for September and October gaining most. Spring wheat attracted more attention from export buyers near the close, especially No. 2 Chicago and Milwaukee, which rallied from the lowest figure of the week about 1½@2c. per bushel. Here, as at the principal points of the interior, the bulk of the winter wheat arrivals represented the new crop, and, all the circumstances considered, it grades well up to the received standards. Oats and rye closed higher than a week ago, and flour also is hardening a little.

As the following table shows, most of the sales of cereals here, like those at other points, are for future delivery, the prices of which are to be found in our market reports.

CLASSIFICATION OF SALES OF GRAIN IN NEW YORK.

		Prompt deliveries, bushels.	Options. bushels.
Wheat—	Week end'g Aug 5..	*1,945,000	8,304,000
	Preceding week....	1,891,000	11,906,000
Corn —	Week end'g Aug. 5..	1,690,000	6,319,000
	Preceding week....	2,009,000	6,024,000
Oats —	Week end'g Aug. 5..	558,000	670,000
	Preceding week....	617,000	425,000
Rye —	Week end'g Aug. 5..	16,000	24,000
	Preceding week....	14,500	4,000

*Of the wheat sold for prompt delivery were 322,000 bushels Spring, including 171,000 bushels No. 2 Chicago and Milwaukee.

While our exports of wheat flour and corn-meal have increased considerably since last year, those of other cereals have fallen off, as seen by the following table of exports from this port from Jan. 1 to Aug. 1.

	1880.	1881.
Flour, barrels	2,325,600	2,917,650
Corn-meal, barrels	104,000	125,250
Wheat, bushels	34,393,500	24,655,000
Corn, "	28,657,500	20,274,600
Rye, "	951,900	711,250
Barley, "	202,650	15,150
Oats, "	392,000	131,200
Peas, "	213,300	170,700

The visible supply at latest date is somewhat larger than last year, but not large enough to account for the smaller amount shipped, as is here seen:

THE VISIBLE SUPPLY OF GRAIN, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canals and on Mississippi River:

	1881. July 30. bush.	1880. Aug. 1. bush.	1879. Aug 3. bush.
Wheat	16,772,508	14,272,015	14,352,416
Corn	15,928,014	16,739,593	11 000,554
Oats	7,373,806	1,506,377	1,762,250
Barley	124,808	176,204	324,929
Rye	188,836	271,912	462,436
Total	40,387,972	32,976,101	28,001,585

P. S.—Telegrams received this afternoon from Cincinnati—the chief collecting point for telegrams in the country—say there were copious rainfalls yesterday (Sunday) all over Ohio, Indiana, Illinois, and probably over most of the Northwest. "There are millions" in these rains for farmers.

Temperance clergymen, lawyers, ladies and doctors use Hop Bitters, as they do not intoxicate, but restore brain and nerve waste.—*Adv.*

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, August 6.

Chicago.—Wheat active and firm; No. 2 Chicago Spring, $1.24½ cash; $1.23¾ August; $1.17¾@1.17⅞ September; $1.17¼, October; No 3 do. $1.05@1.10; Rejected, 79½@80c. Corn active but weak at 52¼ 52⅜c. cash; 42⅝@52⅜c. August; 41⅛@53¾c. September; 54@54½c. October; Rejected, 47½c. Oats dull and weak at 31½@32c., cash; 31¾c., August; 31⅞c. September, 32c.. October. Rye firmer at 85c. Pork easy at $18, cash, $17.90@17.95 August, September, and October. Lard steady, with a fair demand; $11.40cash; $11.42½@11.45, September and October. Bulk-meats steady and unchanged. BUTTER.—Strictly fine goods are held at outside quotations; indeed, higher figures are being realized for favorite brands. Creamery, choice, 22@24c.; do. fair to good, dairy, choice, 19@20c.; do. fair to good, 15@18c; packing stock, 11@13c.; grease, 7@8c. CHEESE.—Full-cream, 9½@10½c.; part skim cheddar, choice, 8½@9¼c.; do. flat, choice, 8½@9½c.; do. common to good, 6@8c.; low grades, 3@5c. HOGS.—Fair demand and steady; good to choice shipping, $6.50@6.80; common to fair packing, $6 @6.45; light, $6.20@6.70; skips and culls, $4.40@6. CATTLE.—Market steady; good to choice shipping, $5.70@6.20; common to fair, $4.50@5.20; butchers' steers, $3.75@4.25; cows, $2.25@3.75; bulls and mixee, $2.50@3.50; stockers and feeders, $2.65@ 3.90; Texans, $3@3.75. SHEEP.—Market steady, with a fair demand; common to medium, $3@4; good fat, $4.30@4.75.

Cincinnati.—WHEAT strong and 1c.@2c. higher than on Friday; No. 2 Red Winter, $1.25@$1.27; No. 2 Amber, 11.23@1.25; Corn excited and 3c.@ 4c. higher than yesterday; No. 2 Mixed, 59c.; August, 58½c. Rye strong and higher; No. 2 95c. Barley strong; No. 2 fall, $1. Pork quiet at $18.25. Lard easier at 11¼c. Bulk-meats and Bacon steady and unchanged. Butter quiet; fancy Creamery higher at 23c. Sugar firmer, but not quotably higher. Hogs quiet and unchanged. Fancy Creamery sells at 25c. prime do. at 23@24c. choice dairy at 20c. prime to choice Western Reserve 18@ 20c. prime Central Ohio at 14@16c. and common do. at 12@13c. ₱ lb. CHEESE.—There is a fair demand, and under moderate receipts the market rules stronger for prime to choice factory 9½@ 10¼c, per lb. EGGS.—Firm at 10@10½c. per dozen for fresh, guaranteed. HEMP.—Is in light supply and prices are firm. Rough Kentucky sells at $130.00 per ton from store. Single dressed sells at 8@8½ and double do. at 9@10c ₱ lb. from store. PEANUTS.—There has been considerable speculative as well as a good consumptive demand, and prices have advanced largely and rapidly, closing about ½@1c per lb higher than a week ago. Common to good Tennessee white sell at 3½@4c. prime 4¼@4½c, choice hand-picked at 4¾@5, common to choice Red and at 3½@4c, and Virginia at 5½@6 per lb. Small lots ¼c more.

St. Louis.—Wheat firm and higher; No. 2 Red Fall, $1.22⅞@1.23¼, cash; $1.23¼ August; $1.23⅝ @1.24½, September; $1.25¾@1.26¼, October; $1.27½@1.28¾, November; $1.30¼@1 31, December; $1.20¾@$1.23½ all the year; No. 3 do $1.14¼@1.15¾ No. 4 do., $1.10¼. Corn weak at 54½c.@55c., cash; 55c., August, 54⅞c@55½c., September; 54½c. @55c., October; 51½c.@52¾c., all the year. Oats weak at 35¾c@36¼c., according to location, cash; 34½c@34⅞c., August; 33¾c.@35c. September; 33½c.@34c. October 33@33 1-3c. Rye slow 34½ bid. Bacon slow; Shoulders, 7⅜ cents; Clear Rib 10¾c. Clear Sides, 10¾c. Hogs slow; Yorkers, $6.35@6.45; packing, $6.10@6 40; choice to fancy heavy, $ 50@6.80: Cattle supply large; good fat shipping Steers command good prices, but half-fatted cattle are slow; all grades have declined appreciably within three days; export Steers, $5.80@6; heavy fat Steers, $5.50@5.80; light do.. $5@5.40; native butchers' Steers, $3@4: Cows and Heifers and Grass Texans, $2.50@3.75.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug. 6, 1881.

BEANS AND PEAS.—The demand is light, but there is no urgency to sell fine white maras, as the stock is not above what can be used with fair attention by the time new crop appears, colored beans quiet. Green peas offered at $1.15@1.50 for best Wisconsin.

Marrow beans, prime, $2.42½@2.45; other, $2.25@ 2.37½; medium, prime, $2.42½@2.45; other, $2.25@ 2.37½; peas, $2.35@2 60; white kidney, $2.25@2.45; red kidney, prime, $1.55@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.30@1.35.

Receipts for week, 5,070 bush.

Exports do. 1,100 pkgs.

BEESWAX.—Demand light at 23@24½c.

BUTTER.—Current receipts of fine of any style of package have found a ready sale, the advance noted is for faultless selected lots. If these prices can be made to hold a week some of the stored stock of choice table will find a profitable place. Western is already doing better in the fall range.

Creamery—Western, good to choice 21@24c; Ohio, choice, 23@24c.; do. good to prime, 21@22½c.; State and Pa. good to choice, 24c.; State sweet cream 23@24c.; poor 18@20c; State pails and h'f tubs, choice 22@25c; fair to prime 20@22c.; Welsh tubs, 19@20½c.; State dairy tubs, poor to fair, 17@19c; firkins, fair to fine, 20@23½c.; Western imitation creamery 17@20c.; dairy, fresh choice 18@19c., other 13@17c.; factory, Iowa, fine June, 17@18c.; other 11@17c.

COMPARATIVE RECEIPTS AND EXPORTS FROM MAY 1

	Rects. pkgs.	Exp'ts, firkins.
May 1, 1881, to Aug. 1, 1881	494,462	68,043
May 1, 1880, to Aug. 1, 1880	473,135	103,705
May 1, 1879, to Aug. 1, 1879	478,868	92,135
May 1, 1878, to Aug. 1, 1878	40,,987	75,580
May 1, 1877, to Aug. 1, 1877	353 211	91,22

CHEESE.—The week has been a tame one and it is not likely that much animation will develop during the possible hot month of August when uncertain grades are apt to be the ruling ones. There does not seem to be any urgent export orders and best shippers at this advanced period will hold off for the desirable late grades.

State fact'y, fine, col'd, 10¾@10½c. do. white, 10¼@ 10⅝c; good to prime, 9¾@10c; fair to good 9@9¾c; poor to fair 8½@9c; Wis nominal; Ohio, factory, cheddar, fine 9¾@9¾c; fair to prime 8¾@9c' flat, fine 9c, good to prime 8@8¾c; fair to good 7¾@8c, poor 7@7¾c, creamery part skimmed, 5@6¾c.; full skims, 3@4c.

Receipts for week, 86,824 boxes.

Exports for week, 74,611 boxes.

Liverpool cable, 53s. 6d.@54s. 6d.

Steam to Liverpool, 3os.@37s. 6d.

COMPARATIVE RECEIPTS AND EXPORTS.

	Receipts. pkgs.	Exports, lbs.
May 1, '81, to Aug. 1, '81	1,185,608	27,423 806
" 1, '80, " 1, '80	1,091,653	56,661,835
" 1, '79, " 1, '79	957,740	47,673,742
" 1, '78, " 1, '78	1,353,970	59,472,192
" 1, '77, " 1, '77	991,441	47,169,545

RICE.—The market has a firm temper and is fairly active. Quotations are—

Carolina and La. common to fair at 4¾@5¼c; good to prime at 5¾@6¾c.; choice at 6¾@7¾c.

COTTON.—The market has been somewhat listless operators for cotton for use seem disposed to await the development of new crops. Besides a good many prominent dealers are out of town, Liverpool prices reported firm and home spinners are buying small but steady supplies.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas
Ordinary	8¾	8¾	8¾
Strict ordinary	9⅜	9⅜	9⅜
Good ordinary	10 1-16	10 5-16	10 1-16
Strict good do	10⅜	10⅜	10⅜
Low middling	11⅜	11⅜	11⅜
Strict low middling	11 13-16	12 1-16	17 1-16
Middling	12 1-16	12 5-16	12 5-16
Good middling	12 9-16	12 13-16	12 13-16
Strict good middling	12 13-16	13 1-16	13 1-16
Middling Fair	12 9-16	13 13-16	13 13-16
Fair	14 5-16	14 9-16	14 9-16

STAINED.

Good ordinary	8¼	Low middling	10
Strict good ordinary	9¼	Middling	11 5-16

The averages of yesterday's forward deliveries as officially reported were as follows:—

August, 12.09c.; September, 11.18c.; October, 10.95c.; November, 10.41c.; December, 10.41c.; January, 10.51c.; February, 10.62c.; March, 10.76c.; April, 10.93c.; May 11.08c.

DRIED FRUITS.—The principal sorts hold their late speculative pace and there has been some actual trade at the new figures for apples and peaches. Small fruits of not much interest at present.

Apples, evaporated rings, choice 12c.; prime 11@ 11¼c.; fair to good 10½@11c; Southern in bbls. 4¾@ 5¼c.; do. in bags, 4¾@5¼c; State fine cut 6¼@6½c.; quarters choice, 6@6¼c.; small lots 5¾@6c; Western, fair to choice, 5@6¼c, evaporated peaches peeled 33@ 34c.; N. C. do. 19@25c., Ga. do. 17@ 23c.; State 17@19c.; old poor to prime 12 @18c. Penn. halves 6¾@6¾c.; unpeeled ₱ qt. 5¾@6¾c. Blackberries, prime old, 9c. Cherries, Southern dry, 20c. Raspberries, prime new 25@26c. Whortleberries, prime 12½c.

Receipts for the week, all kinds, 633 pkgs.

Exports dried apples, 50 pkgs.

EGGS—Receipts for week, 7,800 bbls.; do. last week 6,687 do. Western had begun to arrive in more merchantable condition, but unfortunately the weather is now severe on this end of the route and another blue week is looked for. Supplies are small but there is not life enough in the demand to make strong rates.

Near points 19c.; State and Pa. 17½@18c. Canadian, 16½@17c.; Western, choice, 15½@16c.; inferior lots 9@14c.

FRESH FRUITS.—With improved quality apples have a better sale. Pears are in good supply; a good state crop expected. Grapes have appeared and will have a show, as berries are giving out. Peaches scarce and high. Melons in good demand.

Apples, Nyack Pippin ₱ bbl. $2; Orange $3; Sweet Bough, $1.50@1 75; Sour $1.50@2; Bough Interior $1 a 1.25; Red Astrachan $1.20 2; soth'n ₱ bu. crate, 60@ 75c. Pears, Bartlett Sav. ₱ cr. $2@4; do. Va. ext. $3@ 3.50; soth'n fair $1.75@2.50; Clapp's Favorite sth'n $3 @3.50; Manning's Elizabeth $2.50@3; Burre Giffard 75c@$1; Bloodgood ₱ bbl. $2@3; Catharine $2@3; Jargonelle $1.50@2; Bell, $150 1.75; Sugar Top $1@1.50; Scooter $1@1.50. Grapes, Hartford, Va. case of 18 3-lb. bxs, $3.50@4.50; Ives, do. $3.50@4; Concord, N. C. ₱ lb. 6@10c. Ives's seedling, do, 8@9c. Blackberries, Wilson, ₱ qt, 8@11c. Huckleberries ₱ box 75@$1.25. Peaches, up-river prime ₱ bskt $1.50@2; poor to fair 75c.@1.25; Md. Hales, ₱ crate, $1.50@3 50; North Carolina, $2.50@4.50; Ga. extra ₱ 3-to-bu. box $2.50@3.50; clings do. $1.50@1.75 Ga. fair to prime ₱ bush. cr. $3.50@5. Fla. free stone $1@4; clings $1@2.50. Plums, Wild Goose southern ₱ qt. 12@14c; Damson do. 7@8c. Watermelons, Norf. & N. C. prime ₱ 100 $18@25. Md. selected 25@35; culls $6@10. Nutmeg melons, Jenny Lind Jersey ₱ bbl. $2@3; Md. 2@2.50; N'k 75@1.75.

Peanuts, Va. hand-picked ₱ lb. 5¾@6c.; do. fancy, 5¼@5½c.; do. extra prime, 5@5¼c.; do. good to prime, 4¾@4¾c.; shelled, 3½@3¾c. Pecan nuts, ₱ lb, 7@9c.

FLOUR.—Severe weather for quality has kept up and as before the low grades are not worked in to more than want-filling extent by exporters. Patents and high family grades are in demand Rye flour is high.

No. 2, ₱ bbl., $3.30@3.50; State and Western superfine, $4.30@4.75; city mills extra, $6.25@6.50; Spring wheat do. $4.85@5.15; Spring XX and XXX, $5.25@ 6.75; patents, $6.00@8 00; Ohio round hoop shipping, $5.00@5.40; trade brands, $5.50@6.25; St. Louis extra, $5.10@5.50; do. double extra, $5.65@6.25; do. family, $6.40 @7; South'n ext. shipping, $5.40@6; do. XX and family, $6.25@7.25. Rye, superfine, $5 40@5.75. Corn-meal, Brandywine, $3.50; Western, $3.00@3.30.

Receipts for week, flour 115,451; bbls., corn-meal do. 1,750.

Exports for week, flour, 64,875 bbls.; corn-meal do. 3,125.

GRAIN.—Prices for wheat have put the product out of exporters' limit or views and the market for the moment is in the hands of speculators with crop reports pointing to easier rates. Corn has been unusually active and with outside capitalists dealing heavily in futures the market has had a strong upward movement. There has not been as much spot business as for last week. Crop reports have tended to make owners cautious in their liberation of stock. The settlement of last month's contracts in oats sent the market down four or five cents during the week; the close is showing rather more vigor. A good yield of State is expected.

Wheat, Spring $1.10@1.35. do, No. 2. $1.21@1.23; do No. 3. $1.15@1.17; red Winter No. 2, $1.27½@1.27¾; red Winter $1.12@1.13; white Western and State $1.15@ 1.27. Rye, 86@91c. Oats, white No. 1, 60c.; white No. 2, 46c.; white No. 3, 45c; mixed No. 1, 46c; do, No. 2 45½c; do. No. 3 42@44c; Corn, Western mixed 59@60c.; do. No. 2, 59@59½c.; do. yellow, 58@62c.; do. white 59@62c; Southern yellow —@ —c.; do. white 60@63c.

Receipts for week, wheat, bush., 1,101,650,; corn, do 1 193,158; oats do. 155,740: rye, do. 2,374; malt, do. 72,000; rice pkgs. 1,939.

Exports for week, wheat, bush 883,850; corn, do 716-233; oats, do. 6,168. rice, pkgs., 650.

HAY AND STRAW.—The abundant yield of the hay crop this season hereabouts and at many inner railroad sources has prompted shippers and farmers to forward any reserve of choice hay they have been holding. At all events the offering is quite attractive and a fairly brisk business follows the easy evident rates. Straw will have a cheap season in the common grades.

Prime retailing timothy hay, 85@90c. ₱ 100 lbs.; medium do. 60@75c, do.; shipping grades 50@55c. do.; clover mixed 50@55c; clover 35@45c. Straw, long rye 80@85c; short do. 55@60c. other grain, 30@40c.

Exports for week 1,017 bales.

HOPS.—Brewers have replenished to some extent taking about all the good hops offering. It is thought that new crop will have a fairly clear market to open on. English market dull. Reports from the German crop good.

State crop of '80, choice, 20@22c; good to prime, 16@ 18c; fair to good, 13@14c; poor to fair, 11@13c; Eastern, 11@17c.; '79's, fair to prime, 5@8c.

Receipts for week, 958 bales.

Exports for week, 27 bales.

LEATHER.—Quotations are

HEMLOCK SOLES.

	Buenos Ayres.	California.	Com. hide
Light	23 @24	23 @—	22 @23
Middle	23½@27	24½@25½	23 @25
Heavy	24 @26	24½@25	23 @25
Good damaged	22 @24	22 @25	21 @22
Poor damaged, all kinds			18 @21
Export and jobbing leather			25 @26

UNION TANNED.

Slaughter.			
Light backs	36 @38	Middle crop	34@35
Middle backs	37 @39	Heavy crop	35@36
Light crop	32½@33	Bellies	15@17
Calcutta buffalo—			
Light			20 @21
Middle			20½@21
Heavy			20 @—
Damaged			17½@18

MILK.—Supplies still exceed consumption. The average for commission milk during the week was $1.13 per can of 40 quarts. The country price paid to farmers for the month of July was 1½@2c; platform or commission did about as well.

OIL CAKE.—Western quoted $31.

POULTRY AND GAME.—The market shows considerable improvement in dressed; but there is no call for heavy receipts. Much of the trade depends upon city killers.

Turkeys, Phila. prime ₱ lb 16@18c.; State & Western d. p. 16@17c.; scalded 15@16c. Chickens, Phila. prime 18@20c; N. J. & Bucks Co, 17@18c; State & W'tn sp'g 15 @17c, Fowls, Phila. d. p. 15@16c. Bucks Co. 14@15c; N. J. d. p. prime 14@15c; do. scalded 13@14c.; State and Western d.-p. prime 14@14½c.; do. scalded prime 13@13¾; do. coarse 12@12½c. Ducks—Spring, Phila, ₱ lb. 16@18c; J'y & Bucks Co, 15@16c. State 14@16c; old, fair to good 12@13c. Squabs, white ₱ doz. $2; do. dark, $1.25@1.50.

Live fowls have very unsettled prices according to supply and at the moment they are on the high scale. Chickens easy.

Chickens J'y Spring ₱ lb 15½@16½c.; State and 15@16c spring western and southern 14@15c. Fowls, J'y, State and Pa. 13@14c; western 13c. southern 13c; roosters, old 6@7c.; turkeys, Jersey & Pa. 14@15c.; western 13@14c; ducks, Jersey, N. Y. and Pa. ₱ pair 60@$1; western 55@65c. spring 75c@$1 geese, Jersey $1.50@1.75; J'y & Pa. $1.25@1.37; western mixed $1.12@1.25; pigeons, large strong birds 30@35c; young ₱ pair 20@25c.

Woodcock are selling promptly and are not plenty. Wild squabs from western shooting matches sell up to $1.50 ₱ doz. when prime, but slowly, being high in comparison with tame squabs. English snipe and plover dull. Black birds quoted at 25c read birds at 25@30c ₱ doz.

Woodcock ₱ pair $1@1.25; wild squabs, stall-fed ₱ doz. $1.25@1.50; Eng. snipe $1.75@2. plover $1.75@2.

PROVISIONS.—One week seems to be the counterpart of the other utterly. A strong speculative clinch holds the light supplies away from exporters; and for that matter local consumption is very much restricted as well.

Pork extra prime, ₱ bbl. $14@14.50; Western mess, new, $17.75@18. Lard, steam Western ₱ 100 lbs, $11.50 @11.60; prime city, $11 40@11.45. Hams, smoked city ₱ lb 12@12½c; pickled Western and city 10¾@11¾c; Shoulders: smoked city, 8¾@8¾; pickled, 7¾@7¾; rib bellies pickled, 9¾@10¾ Bacon, long clear, west. 9¾c. Beef, western mess, ₱ bbl., $10@3; India mess tcs. $27@29; beef hams bbls. $23@23.

Receipts for week—Beef, bbls and tcs. 1,339; pork, bbls. 4,849; Cut meats, pkgs. 22,544; lard, do 11,781. Exports—Beef, bbls and tcs. 2,706 pork, 2,263; cut meats lbs. 6,433,455; lard, do. 2,374,832.

SALT—For a week lots the demand is moderately active and prices firm. Quotations are—

Ashton's $2.50. Higgins's $2.40; Holmes's extra sifted $2.40. Deakins's $1.25 Evans's $1.20 Washington's $1.25; Marshall's $1.20; Verden's $1 20, Worthington's $1.20; Mediterranean 25c.

SEED—Clover seed is quiet; quoted at 7¼@8c. Linseed is dull; quoted at $1.85. Timothy has a small demand; quoted at $2.80@2.90. Flaxseed is firm and in demand; quoted at $1.28½@1.30 to arrive.

SUGAR.—Refined is held firmly with a very good demand.

Cut loaf ₱ lb 10¾@10¾c.; crushed 10¼@10⅜c.; powdered 10¼@c.; granulated 9⅜c.; mould A, 9¾c.; confectioners' "A" 9⅜c.; standard "A" 9¼c.; off "A" 8¾@9⅛c; white extra "C" 8¾@8¾c; yellow extra "C" 8@8⅜c.; "C" 7⅝@7¾c; yellows 6¾@7⅛c.

TOBACCO.—A large sale of hhds has occurred for Spain; market now quiet, Seed leaf in good demand,

	Light.	Heavy
Common lugs ₱ lb	4½@ 5	5 @ 5¼
Good lugs	5¼@ 5½	5½@ 6
Common leaf	5¾@ 6½	6½@ 7
Medium leaf	6¾@ 7¾	7½@ 9
Good leaf	8 @10	9½@11
Fine leaf	11 @12½	12 @13
	Crop of '79.	Crop of '80.
New England Havana seed	18 @25	18 @25
Wrappers, common	13 @15	15 @—
Medium	16 @20	— @—
Fine	25 @35	— @—
Selections	37½@45	— @40
Seconds	10½@13	10 @12
Fillers	6 @ 7½	6 @ 7
Penn. assorted, low	11 @13	11 @12½
Assorted, fair	14 @18	14 @16
Assorted, fine	21 @25	17 @20
Wrappers	18 @15	18 @45
Fillers	6 @ 7½	6 @12
N. Y. ass't'd, com. to med	8 @11	5 @11
Assorted, good	12½@16	13 @16
Ohio assorted	7 @10	6 @11
Wrappers	12 @18	12 @18
Wisconsin assorted	6 @ 9	6 @ 9
Havana seed	14 @18	14 @17
Wrappers	10 @15	10 @15
Blackwork common to medium	13 @17	
Blackwork, good to fine	18 @23	
Brightwork, common to medium	19 @22	
Brightwork, good to fine	23 @25	

VEGETABLES.—Supplies of potatoes are enlarging and extremes are only made for very choice good-sized L. I. J'y quoted $1.12@1.37 ₱ bushel bbl. Long Island $1.12. Va. sweet red $3@3.50; yellow $4 50; New Jersey $3.50@4. There is a good offering of green stuff and several new items. Good corn is not plenty; prices generally easy.

Sweet corn, prime 60@75c; poor 30@50c; wax beans L. I. $1.25@1.50; string beans L. I. 75@$1; Lima ₱ bag, $2,75@3; cucumbers, L. I. ₱ 100 $1; egg plant Phila ₱ bbl. $3.50@4 Tomatoes Phila ₱ peach basket. 30@40c; L. I. ₱ bu. $1, Md. prime do 75@80c; squash marrow ₱ bbl. $1; L. I white 75c@$1; do. yellow, $1; cabbages, Flat Dutch ₱ 100 $3@5. beets, L. I. ₱ 100, bchs $1.50@2; onions, potato prime ₱ bbl. $4.25@4 50; fair to good $3.50@4. lettuce Chester $3; carrots ₱ 100 bchs $1.25@1 50; okra ₱ 100 15c.

WOOL.—The stock is quite large. Manufacturers are holding off for more favorable figures. Many holders express confidence in the near-by later markets and would rather hold than shade.

LIVE STOCK MARKETS.

NEW YORK Saturday Aug. 6, 1881.

BEEVES.—Receipts for the week 12,238 head; do last week 12,456 do. The arrivals have been liberal all the week, and the weather the past three days has been extremely hot, and there was no disposition this morning to buy cattle ahead of immediate wants. Prices were irregular. The sales at both market places yesterday included 352 Texans at 7¼c and 50c. ₱ head to 8c. to dress 55 lb, and 356 Colorados at 8¾@9¾c. to dress 59@56 lb. There was a miscellaneous assortment of native cattle from the West which took the wide range of 8¾@11¾c. to dress 55@ 57 lb. and a load of poor Mich. oxen sold at 7@8¾c. to dress 64@65 lb. The week as a whole has been unsatisfactory for both drovers and butchers.

SWINE.—Receipts for the week 17,573 head; do. last week 19,017 do. Market very firm; 6¾@7c, quoted, city dressed Western 8¾@8¾c.; N. J. fine 8¾@9¾c. City demand for light pork good.

SHEEP AND LAMBS.—Receipts for the week 37,519 head; do. last week 34,525 do. The market generally was very dull. A few prime lambs were sold at fair prices, but every other class of stock was hard to sell at the low figures current yesterday. An exporter bought 100 prime Kentucky wethers at 6c, and some out of town butchers paid 5¾c, for several small lots, but most sales of sheep were at 4@ 5c, A car-load of Kentucky cull lambs sold down to 4c, and a few choice up to 7c' two cars of Va & Pa. do at 5@5¾c; two of Canada do, at 7¼c; three cars of State do. at 6¾@7¾c, and 10 head of Lower Jersey do, at 7¾c.

VEAL CALVES.—Hot weather has checked the market trade and small meats have had their share of neglect; common calves, fed or other, dull.

Live N. J. prime to choice, 7½c: do, state, 7¼c. poor to good 5@6¾c.; Mt. Hollys, 6@7¾c.; buttermilk, 5¾c.; grass 2¾@3c.

MILCH COWS.—Receipts are quite liberal and there is an easy feeling. The selling range has been $30@55 per head common to good. Fancy wants are apt to be filled by orders.

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ANNUAL FAIR LIST.

STATE, INDEPENDENT AND DISTRICT FAIRS.

Alabama, Montgomery	Nov. 7, 12
Am. Institute, New York City	Sept. 14, Nov. 26
Arkansas, Little Rock	Oct. 17, 22
California, Sacramento	Sept. 9, 24
Cal. Hort. Fair and Centennial Exposition, Los Angeles	Sept. 5, 10
Central New York Fair, Utica	Sept. 20, 23
Central Ohio, Mechanicsburg	Sept. 13, 16
Chicago Exposition, Chicago	Sept. 7, Oct. 22
Cincinnati Industrial Exposition	Sept. 7, Oct. 8
Connecticut, Meriden	Sept. 20, 23
Delaware, Dover	Sept. 26, 30
" Peninsula Ag'l and Pom. Ass. Middletown	Sept. 20, 22
Georgia, Macon	Oct. 17, 22
" State Hort. Fair, Atlanta	Aug. 4, 5
" International Cotton Exposition Atlanta	Oct. 5, Dec. 31
Illinois, Peoria	Sept. 26, Oct. 1
Indiana, Indianapolis	Sept. 26, Oct. 1
Iowa, Des Moines	Sept. 5, 9
Kansas, Western National, Lawrence	Sept. 5, 10
" Topeka	Sept. 12, 17
Kentucky Agr'l and Mech'l Ass. Lexington	Aug. 30, Sept. 3
Maine, Lewiston	Sept. 6, 9
Maine Pomological	Sept. 27, 29
Maryland, Baltimore	Oct. 25, 30
Michigan, Jackson	Sept. 19, 24
Minnesota Agr'l and Mech'l Ass., Minneapolis	Sept. 5, 9
" Rochester	Sept. 5, 10
" N. W. Ex., Minneapolis	Sept. 5, 10
Missouri, St. Louis	Oct. 3, 8
" St. Louis Fair, St. Louis	Oct. 3, 8
Mississippi, Aberdeen	Oct. 11, 15
" Stock Breeders, Meridan	Oct. 31 Nov. 5
Montana, Helena	Sept. 26, —
Washington, D. C., National Fair Ass.	Oct. 18, 28
Nebraska, Omaha	Sept. 12
New England, Worcester, Mass.	Sept. 6, 9
New Jersey, Waverly Park	Sept. 19, 23
" Cranberry-Growers Ass. Haddonfield	Aug. 30
New York, Elmira	Sept. 13 17
North Carolina, Raleigh	Oct. 10, 15
Northern Kentucky, Florence	Aug. 30, Sept. 3
" Ohio Cleveland	Sept. 5, 9
Northeastern Indiana, Waterloo	Oct. 3, 8
Ohio, Columbus	Aug. 29, Sept. 2
" Tri-State Fair Ass., Toledo	Sept. 12, 17
Pennsylvania Pittsburg	Sept. 5, 17
" " Millers' Ass	Sept. 5, 17
" Tri-State Picnic Williams Grove	Aug. 31, Sept. 3
Rhode Island, Providence	Sept. 27, 30
South Carolina, Columbia	Nov. 8, 11
Southern Ohio, Dayton	Sept. 26, 30
Texas, Austin	Oct. 18, 22
Vermont, Montpelier	Sept. 14, 17
Virginia, Richmond	Oct. 17, 27
Western New York Ag'l Soc. Exposition Rochester	Sept. 27, 30
Western Michigan Ag'l and Ind. Fair Grand Rapids	Sept. 26, 30
Western Nat'l Fair Ass, Bismarck Grove Kansas	Sept. 5, 19
Western Virginia, Wheeling	Oct. 3, 8
Wisconsin, Fond du Lac	Sept. 26, 30
" N. W. Ag'l and Mech'l Ass. Oshkosh	Sept. 12, 14

EXHIBITIONS IN CANADA.

Dominion Exhibition, Halifax, N. S.	Sept. 21, 30
Great Central Fair, Hamilton, Ont.	Oct. 4, 7
Ontario Provincial Exhibition, London Ont.	Sept. 21, 30
Provincial Ag'l and Arts Ass., London, Ont.	Sept. 21, 30
Quebec Provincial Exhibition, Montreal Que.	Sept. 14, 23

COUNTY AND LOCAL—CONNECTICUT.

Clinton, Clinton	Sept. 21, —
Danbury, Danbury	Oct. 4, 7
Fairfield, Norwalk	Sept. 15, 16
Guilford, Guilford	Sept. 28, —
New London, Norwich	Sept. 27, 29
New Milford, New Milford	Sept. 28, Oct. 1
Ridgefield, Ridgefield	Sept. 20, 23
Simsbury, Simsbury	Oct. 5, 6
Tolland (east), Stafford Springs	Oct. 6, 7
Union (Falls Village), Falls Village	Sept. 7, 8
Union (Monroe, etc.), Trumbull	Sept. 21, 23
Watertown, Watertown	Sept. 27, 29
Windham, Brooklyn	Sept. 13, 15
Woodbridge and Bethany, Woodbridge	Sept. 28, 29
Woodbury, Woodbury	Sept. 14, 15

COUNTY FAIRS IN ILLINOIS.

Adams, Camp Point	Sept. 5, 9
Boone, Belvidere	Sept. 6, 9
Brown, Mt Sterling	Aug. 22, 26
Bureau, Princeton	Sept. 20, 23
Carroll, Mt. Carroll	Sept. 6, 9
Cass, Virginia	Sept. 13, 16
Centralia, Centralia	Sept. 27, 30
Champaign, Champaign	Aug. 30, Sept. 2
Clay, Flora	Sept. 27, 30
Coles, Charleston	Sept. 13, 17
Crawford, Robinson	Sept. 27, 30
Cumberland, Prairie City	Sept. 28, Oct. 1
DeKalb, Sandwich	Sept. 19, 23
DeKalb, Sycamore	Sept. 20, 23
DeWitt, Clinton	Aug. 23, 26
Douglas, Tuscola	Sept. 13, 16
DuPage, Wheaton	Sept. 6, 8
Edgar, Paris	Sept. 6, 9
Edwards, Albion	Oct. 4, 7
Effingham, Effingham	Oct. 4, 7
Fayette, Vandalia	Sept. 31, 33
Ford, Paxton	Aug. 30, Sept. 2
Franklin, Benton	Oct. 11, 14
Fulton, Canton	Oct. 4, 7
Fulton, Avon	Sept 20, 23
Gallatin, Shawneetown	Aug. 30, Sept. 2
Greene, Carrollton	Oct. 18, 21
Hamilton, McLeansboro	Sept. 13, 17
Hancock, Warsaw	Oct. 19, 21
Henderson, Biggsville	Sept. 13, 16
Henry, Cambridge	Aug. 29, Sept 2
Iroquois, Onarga	Sept. 13, 16
Iroquois, Watseka	Aug. 15, —
Jackson, Carbondale	Oct. 11, 14
Jasper, Newton	Sept. 20, 23
Jefferson, Mt. Vernon	Oct. 11, 14
Jersey, Jerseyville	Oct. 11, 14
Jo Daviess, Galena	Sept. 27, 30
Jo Daviess, Warren	Sept. 15, 16
Kane, Aurora	Sept. 13, 16
Kendall, Bristol	Sept. 6, 11
Knox, Knoxville	Sept. 12, 16
Lake, Libertyville	Sept. 21, 23
Lake, Waukegan	Sept. 26, Oct. 1
LaSalle, Ottawa	Sept. 5, 10
Livingston, Pontiac	Sept. 13, 16
Livingston, Fairbury	Sept. 5, 9
Logan, Lincoln	Aug. 29, Sept. 2
Logan, Atlanta	Sept. 6, 9
Macon, Decatur	Sept. 20, 23
Macoupin, Carlinville	Sept. 6, 9
Marion, Centralia	Sept. 27, 30
Marshall, Wenona	Sept. 19, 23
Mason, Havana	Oct. 4, 7
Massac, Metropolis	Sept. 13, 16
McDonough, Macomb	Sept. 13, 16
McHenry, Woodstock	Sept. 13, 16
McLean, Bloomington	Sept. 21, 24
Mercer, Aledo	Sept. 20, 23
Montgomery, Hillsboro	Sept. 27, 30
Morgan, Jacksonville	Aug. 22, 26
Moultrie, Sullivan	Sept. 20, 23
Ogle, Oregon	Sept. 20, 23
Ogle, Rochelle	Sept. 6, 9
Perry, Pinckneyville	Oct. 4, 7
Piatt, Monticello	Aug. 15, 19
Pike, Pittsfield	Sept. 20, 23
Pope, Golconda	Oct. 5, 8
Randolph, Sparta	Sept. 26, 30
Randolph, Chester	Oct. 11, 14
Richland, Olney	Sept. 13, 17
Rock Island, Port Byron	Sept. 7, 9
Rock Island, Hillsdale	Sept. 11, 16
Sangamond, Springfield	Sept. 12, 17
Schuyler, Rushville	Aug. 30, Sept. 2
Shelby, Shelbyville	Sept. 20, 24
Stark, Wyoming	Sept. 6, 9
Stark, Toulon	Sept. 20, 23
St. Clair, Belleville	Oct. 11, 14
Tazewell, Delavan	Sept. 12, 16
Union, Jonesboro	Sept. 13, 17
Vermilion, Catlin	Sept, 13
" Danville	Sept. 20, 24
" Hoopeston	Aug. 22, 26
Warren, Monmouth	Sept. 6, 9
White, Carmi	Sept. 6, 10
Whiteside, Sterling	Sept. 13, 16
" Morrison	Sept. 6, 9
" Albany	Aug. 31, Sept. 2
Williamson, Marion	Sept. 27, 30
Winnebago, Rockford	Sept, 12, 16
Woodford, El Paso	Sept. 12, 17

COUNTY FAIRS OF INDIANA.

Allen, Fort Wayne (Northern Indiana)	Sept. 26, 30
Bartholomew, Columbus	Aug. 29, Sept. 7
Blackford, Hartford City	Sept. 20, 23
Boone, Lebanon	Aug. 22, 27
Cass, Logansport	Sept. 20, 24
Clark, Charlestown	Sept. 6, 8
Clay, Brazil	Aug. 29, —
Daviess, Washington	Oct. 11, 15
Decatur, Greensburg	Aug. 23, 26
Delaware, Muncie	Sept. 13, 16
Elkhart, Goshen	Sept. 27, 30
Franklin, Brookville	Aug. 30, Sept. 2
Fulton, Rochester	Sept 22, 24
Gibson, Princeton	Sept. 19, 23
Grant, Marion	Sept. 6, 9
Greene, Linton	Oct. 3, 7
Harrison, Corydon	Sept. 5, 9
Howard, Kokomo	Aug. 29, Sept. 2
Huntington, Huntington	Sept. 21, 24
Jackson, Brownston	Aug. 29, Sept. 2
Jasper, Rensselaer	Sept. 13, 16
Knox, Vincennes	Oct. 3, 8
La Grange, La Grange	Sept. 21, 23
Lawrence, Bedford	Sept. 13, 16
Madison, Anderson	Sept. 6, 9
Montgomery, Crawfordsville	Sept. 9, 10
Morgan, Martinsville	Oct. 3, 7
Newton, Morocco	Sept. 6, 9
Noble, Ligonier	Oct. 12, 15
Perry, Rome	Oct. 3, 8
Pike, Petersburg	Sept. 5, 9
Porter, Valparaiso	Sept. 28, 30
Posey, New Harmony	Sept. 13, 16
Putnam, Greencastle	Sept. 12, 17
Randolph, Winchester	Sept. 14 17
Ripley, Osgood	Aug. 16, 19
Rush, Rushville	Sept. 13, 16
Shelby, Shelbyville	Sept. 6, 10
Steuben, Angola	Oct. 11, 14
Tippecanoe, Lafayette	Aug. 29, Sept. 3
Tipton, Tipton	Sept. 20, 23
Vigo, Terre Haute	Sept. 12, 16
Wabash, Wabash	Sept. 13, 16
Warren, West Lebanon	Sept. 12, 16
Wells, Bluffton	Sept. 20, 23
Whitley, Columbia City	Oct, 4, 9

DISTRICT FAIRS OF INDIANA.

Bridgton Union, Bridgton	Aug. 22, 27
Dunkirk Union Fair Ass, Dunkirk	Sept. 7, 10
Edinburg Union, Edinburg	Sept. 20, 54
Fountain, Warren and Vermillion, Covington	Sept. 20, 23
Henry, Madison and Delaware, Middletown	Aug. 23, 26
Knightstown Union, Knightstown	Aug. 30, Sept. 2
Lawrenceburg Agr'l Association, Lawrenceburg	Aug. 25, 27
Loogootee A. and M., Loogootee	Sept. 13, 17
New Ross Union, New Ross	Aug. 15, 21
Orleans Agricultural Fair Co, Orleans	Oct. 4, 8
Prairie Farmers', Francesville	Sept. 6, 9
Russellville Union, Russellville	Aug. 22, 27
South Eastern Indiana, Aurora	Sept. 5, 10
Switzerl'd & Ohio Co, East Enterprise	Sept. 8, 16
Thorntown Union, Thorntown	Aug. 8 —
Union Agr'l and Mechan'l, Union City	Sept. 20, 23
Worthington Farmers & Mech'n's, Worthington	Oct, 4, 7
Xenia Union Dist. Agr'l Soc'y, Xenia	Aug. 30, Sept. 3

COUNTY FAIRS IN IOWA.

Agency City District, Agency City	Oct. 4, 7
Alamakee, Waukon	Sept. 20, —
Appanoose, Centerville	Aug. 30, Sept. 2
Benton, Vinton	Sept. 13, 16
Black Hawk, Waterloo	Sept. 20, 22
Boone District, Boone	Sept. 13, 16
Botna Valley District, Avoca	Sept. 12, 14
Bremer, Waverly	Sept 21, 24
Buchanan, Independence	Oct. 4, 7
Chickasaw, New Hampton	Sept. 28, 30
Clayton, Farmersburg	Sept. 14, 16
Dallas, Adel	Aug. 31, Sept. 2
Decatur, Leon	Sept. 13, 16
Delaware, Manchester	Sept. 6, 9
District at Mechanicsville, Mechanicsv.	Sept. 13, 16
District at Mt. Joy, Davenport	Sept. 13, 16
Floyd, Charles City	Sept. 13, 16
Franklin, Hamilton	Sept. 14, 16
Grundy, Grundy Center	Sept. 21, 23
Guthrie, Guthrie Center	Sept. 28, 30
Hamilton, Webster City	Sept. 27, 29
Hardin, Eldora	Sept. 13, 16
Harrison, Missouri Valley	Oct. 4, 6
Iowa, Marengo	Sept. 20 22
Jackson, Maquoketa	Sept. 6, 9
Jasper, Newton	Sept. 27, 30
Jefferson, Fairfield	Sept. 27, 29
Johnson, Iowa City	Sept. 13, 16
Jones, Monticello	Aug. 30, Sept. 2
Keokuk, Sigourney	Sept. 20, 23
Louisa, Wapello	Sept. 20, 22
Lucas, Charlton	Sept. 21, 23
Madison, Winterset	Aug. 31, Sept. 2
Marion, Knoxville	Aug. 23, 26
Marshall, Marshalltown	Aug. 31, Sept. 2
Mitchell, Osage	Sept. 13, 16
Monroe, Albia	Sept. 13, 16
Montgomery, Red Oak	Sept. 27, 31
Moulton District, Moulton	Sept. 28, Oct. 1
Maple Valley District, Battle Creek	Sept. 13, 14
Plymouth, Le Mars	Sept. 21, 23
Poweshick Cattle, Malcom	Sept. 13, 15
Scott, Davenport	Sept. 5, 9
Shelby, Harlan	Sept. 22, 23
Stuart District, Stuart	Oct. 4, 6
Tama, Tama City	Sept. 20, 22
Taylor, Bedford	Sept. 13, 17
Union District, La Porte City	Sept. 13, 16
Union District, Villisca	Sept. 15, 18
Union District, West Liberty	Aug. 31, Sept. 2
Van Buren, Keosauqua	Sept. 13, 16
Warren, Indianola	Sept, 27, 29
Washington, Washington	Sept. 13, 16
Winneshiek, Decorah	Sept. 20, 22
Woodbury, Sioux City	Sept. 13, 15

COUNTY AND LOCAL, MASSACHUSETTS.

Barnstable, Barnstable	Sept. 27, 28
Berkshire, Pittsfield	Oct. 4, 6
Bristol, Taunton	Sept. 27, 29
Deerfield Valley, Charlemont	Sept. 22, 23
Essex, Haverhill	Sept. 27, 28
Franklin, Greenfield	Sept. 29, 30
Hampden, Holyoke	Sept. 27, 29
" East, Palmer	Sept. 20, 21
Hampshire, Amherst	Sept. 22, 23
Hampshire, Franklin and Hampden, Northampton	Oct. 5, 7
Highland, Middlefield	Sept. 15, 16
Hingham, Hingham	Sept. 13, 14
Hoosac Valley, North Adams	Sept. 20, 21
Housatonic, G. Barrington	Sept. 28, 30
Martha's Vineyard, West Tisbury	Oct. 4, 5
Marshfield, Marshfield	Sept. 14 16
Middlesex, Concord	Sept. 28, 30
" North, Lowell	Sept. 27, 28
" South, Framingham	Sept, 20, 21
Nantucket, Nantucket	Sept. 7, 8
Plymouth, Bridgewater	Sept. 21, 23
Union, Blanford	Sept. 21 23
Worcester, Worcester	Sept. 6 9
" West, Barre	Sept. 29, 30
" North, Fitchburg	Sept. 27, 28
" Northwest, Athol	Oct. 4, 5
" South, Sturbridge	Sept. 15, 16
" Southeast, Milford	Sept. 27, 29

COUNTY AND LOCAL—MICHIGAN.

Ingham, Mason	Sept. 28, 30

COUNTY AND LOCAL—MISSOURI.

Franklin, Washington	Sept. 14, 16
Kansas City Fair, Kansas City	Sept. 14, 19
Knox, Edina	Oct. 4, 6
Nodawny, Maryville	Sept. 19, 24
North-East, Williamstown	Sept. 19, 23
Platte, Platte City	Sept. 19, 23
Saline (Central), Marshall	Sept. 6, 10
St. Clair, Bates & Henry, Appleton City	Sep. 28, Oct. 1

COUNTY FAIRS—NEBRASKA.

Hall, Grand Island	Sept. 7, 9
Johnson, Tecumseh	Sept. 21, 24

COUNTY AND LOCAL—NEW YORK.

Alleghany, Angelica	Sept. 27, 29
Cattaraugus, Little Valley	Sept. 6, 9
Chautauqua, Jamestown	Sept. 20, 23
Columbia, Chatham	Sept. 20, 22
Cortland, Cortland	Sept. 6, 8
Delaware, Delhi	Sept. 20, 22
Dutchess, Washington Hollow	Sept. 20, 23
Erie, Hamburgh	Sept. 13, 16
Essex, West Port	Sept. 13, 15
Franklin, Malone	Sept. 27, 29
Genesee, Batavia	Sept. 19, 21
Greene, Cairo	Sept. 21, 22
Hudson Fair, Hudson	Sept. 27, 29
Jefferson, Watertown	Sept. 20, 23
Livingston, Geneseo	Sept. 20, 21
Montgomery, Fonda	Sept. 13, 15
Niagara, Lockport	Sept 22, 24
Oneida, Rome	Sept, 19, 21
Onondaga, Syracuse	Sept. 20, 23
Orleans, Albion	Sept, 23, 24
Otsego, Cooperstown	Sept. 26, 28
Queens, Mineola	Sept. 27, 29
Rensselaer, Lansingburgh	Sept. 6, 9
Sandy Creek, Richland, Orwell and Boylston, Sandy Creek	Aug. 31, Sept. 2
Schoharie, Schoharie C. H.	Sept. 20, 22
Schuyler, Watkins	Sept. 28, 30
Seneca, Waterloo	Sept. 27, 29
Steuben, Bath	Sept. 27, 29
Suffolk, Riverhead	Oct. 4, 6
Sullivan, Monticello	Sept. 28, 29
Tioga, Owego	Sept. 26, 28
Tompkins, Ithaca	Sept. 27, 29
Union Fair, Ballston	Sept. 6, 8
Warren, Glens Falls	Sept. 13, 16
Washington, Fort Edward	Sept. 6, 9
Wayne, Lyons	Sept. 20, 22
Wyoming, Warsaw	Sept. 21, 23
Yates, Penn Yan	Sept, 20, 25

DISTRICT AND LOCAL FAIRS—OHIO.

Ashtabula, Orwell	Sept. 7, 9
Ashland, Hayesville	Sept. 20, 23
Brown, Ripley	Sept. 20, 24
Cleveland, Northern Ohio	Sept. 6, 9
Chillicothe, Scioto Valley	Aug. 9, 12
Clinton, Blanchester	Aug. 30, Sept. 2
Clinton, Sabina	Aug. 22, 24
Cuyahoga, Berea	Oct. 4, 6
Dayton, Southern Ohio	Sept. 26, 30
Exposition, Cincinnati	Sept. 7, Oct. 8
Franklin, Westerville	Aug, 24, 26
Green, Jamestown	Aug. 10, 12
Guernsey, Independent, Washington	Sept, 28, 31
Highland, Greenfield	Oct. 11, 14
Licking, Putuskula	Aug. 23, 27
Licking, Hartford	Sept. 6, 9
Lorain, Wellington	Aug. 23, 25
Mechanicsburg, Central Ohio	Sept. 13, 16
Orville, Central Ohio	Oct. 12, 15
Portage, Deerfield	Sept 24, —
Ross, Adelphi	Sept. 6, 9
Richland, Plymouth	Oct. 4, 7
Sandusky, Clyde	Oct. 11, 14
Seneca, Attica	Sept. 20, 23
Stark, Minerva	Oct. 11, 14
Toledo, Tri-State	Sept. 12, 17
Tuscarawas, Newcomerstown	Oct. 4, 7

COUNTY FAIRS IN OHIO.

Allen, Lima	Sept. 27, 30
Ashtabula, Jefferson	Sept. 27, 30
Athens, Athens	Oct. 5, 7
Auglaize, Wapakoneta	Oct. 4, 7
Belmont, St. Clairsville	Sept. 14, 16
Brown, Georgetown	Oct. 4, 7
Butler, Hamilton	Oct. 3, 7
Carroll, Carrollton	Oct. 4, 6
Clarke, Springfield	Aug. 23, 26
Clinton, Wilmington	Aug. 16 19
Columbiana, New Lisbon	Sept. 27, 29
Coshocton, Coshocton	Oct. 11, 14
Crawford, Bucyrus	Sept. 27, 30
Cuyahoga, Chagrin Falls	Sept. 27, 29
Darke, Greenville	Sept. 12, 16
Defiance, Defiance	Sept. 27, 30
Delaware, Delaware	Sept. 27, 30
Erie, Sandusky	Sept, 20, 23
Fairfield, Lancaster	Oct. 12, 15
Fulton, Wauseon	Sept. 21, 24
Gallia, Gallipolis	Sept. 7, 10
Geauga, Burton	Sept. 13, 15
Greene, Xenia	Sept. 7, 9
Hamilton, Carthage	Sept. 6, 9
Hancock, Findlay	Oct. 5, 8
Hardin, Kenton	Sept. 28, Oct. 1
Harrison, Cadiz	Oct. 5, 7
Huron, Norwalk	Sept. 27, 30
Jefferson, Smithfield	Sept. 28, 30
Knox, Mt. Vernon	Sept. 27, 30
Lake, Painesville	Sept, 21, 23
Logan, Bellefontaine	Oct. 4, 7
Lorraine, Elyria	Sept. 27, 29
Mahoning, Canfield	Oct. 4, 6
Marion, Marion	Oct. 4, 7
Medina, Medina Village	Sept. 13, 15
Meigs, Rock Springs	Sept. 14, 16
Mercer, Celina	Sept. 21, 24
Miami, Troy	Sept. 27, 30
Morgan, McConnellsville	Sept. 13, 16
Morrow, Mt. Gilead	Sept. 20, 23
Muskingum, Zanesville	Sept, 6, 9
Ottawa, Port Clinton	Oct. 5, 7
Paulding, Paulding	Sept. 21, 23
Perry, New Lexington	Sept. 27, 30
Pickaway, Circleville	Sept. 27, 30
Portage, Ravenna	Sept. 27, 29
Preble, Eaton	Sept. 27, 30
Putnam, Ottawa	Oct. 5, 8
Ross, Chillicothe	Aug. 9, 12
Sandusky, Fremont	Sept. 27, 30
Seneca, Tiffin	Oct. 4, 7
Shelby, Sidney	Sept. 27, 30
Stark, Canton	Sept. 27, 30
Summit, Akron	Oct. 4, 7
Trumbull, Warren	Sept. 13, 16
Tuscarawas, Canal Dover	Sept. 27, 30
Union, Marysville	Oct. 4, 7
Van Wert, Van Wert	Sept. 29, Oct. 1
Warren, Lebanon	Sept. 20, 23
Washington, Marietta	Sept. 13, 16
Williams, Bryan	Sept, 20, 23
Wood, Tontogany	Sept. 27, 30

COUNTY AND LOCAL FAIRS OF PENNSYLVANIA.

Armstrong, Kittanning	Sept. 20, 23
Berks, Reading	Sept. 27, 30
Bedford, Bedford	Oct. 11, 14
Bradford, Troy	Sept. 21, 23
Bucks, Doylestown (Doylestown Agr'l and Mechan'l Ass)	Oct. 4, 7
Butler, Butler	Sept. 20, 22
Butler, Harmony (Connoquenessing Valley Agr'l Ass	Sept. 27, 29
Chester, Oxford (Oxford Agr'l Soc'y)	Sept. 28, 30
Crawford, Meadville (Central Agr'l Soc'y)	Sept. 28, 30
Crawford, Connecautville	Oct. 5, 7
Crawford, Titusville (Oil Creek Agr'l Ass.)	Sept. 20, 23
Cumberland, Carlisle	Sept. 27, 30
Dauphin, Harrisburg	Sept. 13, 16
Dauphin, Gratz, Gratz Driving Park Ass.	Sept. 20, 24
Erie, Erie	Sept. 13, 16
Franklin, Chambersburg	Oct. 4, 7
Indiana, Indiana	Oct. 4, 7
Jefferson, Brookville	Sept. 27, 28
Lawrence, New Castle	Sept. 13, 16
Lehigh, Allentown	Sept. 27, 30
Luzerne, Wyoming	Sept. 27, 30
Lycoming, Williamsport	Sept, 20, 23
Mercer, Mercer (Western Penn. Agr'l Soc'y)	Sept. 7, 9
Mercer, Greenville (Shenango Valley Agr'l Soc'y)	Sept. 20, 22
Mercer, Stoneboro	Oct. 5, 7
Montgomery, Ambler Park	Sept. 20, 23
Montour, Danville	Sept. 29 Oct. 1
Northampton, Easton (Farmers' and Mechanics' Institute)	Sept. 20, 23
Schuylkill, Orwigsburg	Sept. 20, 23
Schuylkill, Ringtown (Ringtown Agr'l Society)	Sept. 4, 7
Susquehanna, Montrose	Sept. 14, 15
Susquehanna, Harford (Harford Ag'l Soc'y)	Sept. 21, 22
Tioga, Wellsboro	Oct. 4, 6
Venango, Franklin	Sept. 21, 23
Warren, Sugar Grove (Union Ag'l Soc'y)	Sept. 13, 15
Washington, Washington	Oct. 4, 6
Washington, Canonsburg (Chartiers Valley Ag'l Ass)	Sept. 27, 29
Wayne, Honesdale	Oct. 4, 6
Westmoreland, Greensburg	Sept. 27, 30
York, York	Oct 4, 7

COUNTY FAIRS—SOUTH CAROLINA.

Anderson, Anderson	Oct. 19, 21
Chester, Chester	Oct. 4, 7
Darlington, Darlington	Oct. 27, 29
Greenville, Greenville	Oct. 11, 14
Newberry, Newberry	Oct. 19, 21
Sumter, Sumter	Oct. 25, 29
Union, Union	Oct. 25, 27

COUNTY AND LOCAL—VERMONT.

Rupert Ag. Soc., West Rupert	Sept. 20, 22

COUNTY AND LOCAL—VIRGINIA.

Staunton and Winchester	Oct. 11, 18

COUNTY AND LOCAL—WISCONSIN.

Calumet, Chilton	Oct. 5, —
Chippewa, Chippewa Falls	Sept. 20, —
Dane, Madison	Sept. 19, —
Dodge, Juneau	Oct. 3, —
Grant, Lancaster	Sept. 21, —
Iowa, Dodgeville	Oct. 5, —
Outagamie, Appleton	Sept. 7, —
Racine, Burlington	Sept. 13, —
Sheboygan Co. Ag. and Ind. Soc, Sheboygan	Oct. 4, —
Walworth, Elkhorn	Sept. 20, —
Waukesha, Waukesha	Oct. 4, —
Wisconsin Ag. and M. Ass'n, Northern, Oshkosh	Sept. 12, —
Wisconsin Ag. and M. Ass'n, Central, Watertown	Sept. 19, —
Southern Wis. and Northern Ill, Ind'l Ass'n, Beloit	Sept. 6, —

Miscellaneous

PROFESSOR HORSFORD'S PHOSPHATIC BAKING POWDER

Made from Professor Horsford's Acid Phosphate.

Recommended by leading physicians.

Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.

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THE GREAT CALIFORNIA INSECT-DESTROYING PLANT.

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On receipt of $5 we will send a package of seed by mail to any address, with instructions for cultivating the wonderful plant from which our C. N. MILCO'S BUHACH CALIFORNIA INSECT POWDER is made. Each package will furnish plants for two or three acres. All orders for seeds must be sent to the

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J. D. PETERS, Secretary.

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$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

IT PAYS to sell our Rubber printing Stamps. Samples free. J. M. MITTEN & CO., Cleveland, O.

200 CAR-LOADS LEACHED ASHES for sale. The best and cheapest fertilizer for farmers' use. See advertisement in this paper. JAMES HARTNESS, Detroit, Mich.

THE request often made by publishers that readers will mention their journals when answering advertisements, seems to us a very reasonable one. Such mention is a helpful and friendly act to the journal mentioned and enables the advertiser to determine which journals are the best advertising mediums. Reference to our advertising columns will show there is not one advertisement of an exceptional or ambiguous character admitted. In so far as this is possible we hold ourselves responsible for their high-standing and trustworthiness.

PERSONAL ITEMS.

The Baroness Burdett-Coutts and husband are coming to America in October.

Walt Whitman is in the city. He is busy at an edition of his complete poems in one volume to be out next winter. He is still a half-paralytic.

Miss Eliza M. Marshall has resigned as a teacher in the public schools of Portsmouth, N. H., after 45 years of uninterrupted service.

Brigham Young's brother, Joseph, recently died at Salt Lake, Utah, aged 84. He was born in Hopkinton, Mass, and had been with the Mormons since 1835.

Several pious women united in a week of prayer for rain at Eaton Rapids, not because there was a drought, but that it might spoil a track for horse racing.

Sitting Bull on his enforced tour along the borders of civilization is having a high old time. He sold his pipe to a relic hunter for $100, and he gets from $2 to $5 for his autograph.

Senator Ben H. Hill, of Georgia, has gone to one of the Virginia springs. He is reported to be getting along well since the operation upon his tongue, and can talk with very slight impediment.

Lord Napier of Magdala is in London. His tenure of office as Governor of Gibraltar will expire in October, when being 71, he will, according to the present regulations, be compelled to retire from the army.

George Barrow, who died lately, was noted for his labor as an agent of the British and Foreign Bible Society, a part of which was a translation of the New Testament into Chinese; also for his love of boxing and beer, in both of which he freely indulged.

Colonel John S. Mosby has given Washington friends to understand that he has no intention of returning at an early date, as heretofore reported, but will remain at his post. It is known that President Garfield was always a warm personal friend of Colonel Mosby.

The late Dean Stanley had that fine, keen appearance which marks a thoroughbred Englishman—the generous, half-pouting lip, the long nose, with wide, thin nostrils; the delicate, unnoticeable ear: the soft, silky, half curly hair; the intense, far-reaching eye.

Sir Frederick Roberts has been selected to represent the British army at the great autumn manœuvres this year in Hanover and Schleswig-Holstein. The General's march from Cabul to Candahar was a feat warmly admired in Germany.

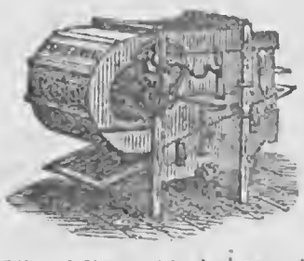
[Pittsburgh Catholic.]

Their Statements Indorsed.

A strong statement unqualifiedly indorsed must induce confidence. In this connection we note the following from Dr. Louis Bock & Son, Sheboygan, Wis.: We have been handling St. Jacobs Oil and are pleased with the large demand. Hardly a day goes by without hearing from some one or another of our patrons having used it with entire satisfaction, saying it is the best thing they ever tried, and we join them in so saying.—*Adv.*

Implements and Machinery.

The "Centennial" Fanning Mill.



The best mill in the world. It separates Oats, Cockle, and all foul stuff from wheat. Is also a perfect cleaner of Flax, Timothy, Clover and all kinds of seeds. The great improvement over other mills is that it has two shoes. It is especially adapted for warehouse use. Send for Descriptive Circular and Price List.

Liberal discount to dealers. Address
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PENNOCK'S PATENT ROAD MACHINE.
KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS
MACHINES SENT ON TRIAL. KENNETT SQUARE PA

BOLSTER SPRINGS FOR FARM WAGONS.
Made of Best Oil Tempered Steel.
The ONLY RELIABLE Bolster Spring in Use.

SIMPLE AND SATISFACTORY.

They save largely from wear and tear in every part of the Wagon. They remove all necessity for a Spring Seat. They convert a common Lumber Wagon into a Spring Wagon, making it equally comfortable for from one to twenty persons. They are admirably adapted to the wants of Fruit and Vegetable Growers. They are suited to all makes and sizes of Farm Wagons, and can be attached by any one. They make the cheapest and easiest riding Spring Wagon in the market. These Springs have been in practical use for over four years, and are a pronounced success. No Teamster or Farmer can afford to be without them. We want Agents everywhere. Send for description and prices, and mention this paper.

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Miscellaneous.

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TRADE MARK.

THE GREAT
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FOR
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Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents**, and every one suffering with pain can have cheap and positive proof of its claims.

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THE ONLY MEDICINE
IN EITHER LIQUID OR DRY FORM
That Acts at the same time on
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WHY ARE WE SICK?
Because we allow these great organs to become clogged or torpid, and poisonous humors are therefore forced into the blood that should be expelled naturally.
KIDNEY-WORT
WILL SURELY CURE
KIDNEY DISEASES,
LIVER COMPLAINTS,
PILES, CONSTIPATION, URINARY DISEASES, FEMALE WEAKNESSES, AND NERVOUS DISORDERS,
by causing free action of these organs and restoring their power to throw off disease.
Why suffer Bilious pains and aches?
Why tormented with Piles, Constipation?
Why frightened over disordered Kidneys?
Why endure nervous or sick headaches?
Use KIDNEY-WORT *and rejoice in health.*
It is put up in **Dry Vegetable Form**, in tin cans one package of which makes six quarts of medicine. Also in **Liquid Form, very Concentrated**, for those that cannot readily prepare it.
It acts with equal efficiency in either form.
GET IT OF YOUR DRUGGIST. PRICE, $1.00
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40 Clydesdale Stallions

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Clod Crusher and Leveler.
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Especially adapted to hard clay where other Harrows utterly fail.
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The A. P. Dickey Farm and Warehouse
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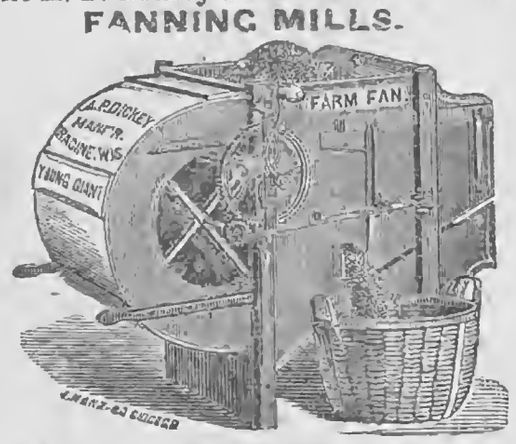

THE BEST IN THE WORLD.
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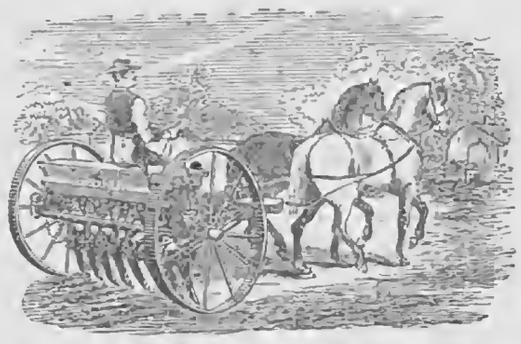
Address DICKEY & PEASE, Racine, Wis

The New Buckeye Force Feed



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Combined Force Feed Grain and
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AS IMPROVED FOR 1881.
Over 100,000 Now In Use.

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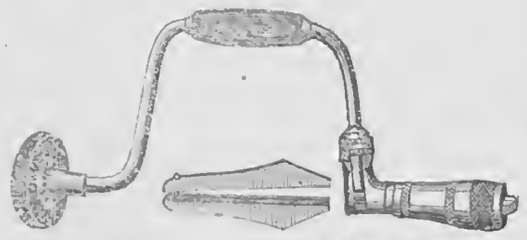

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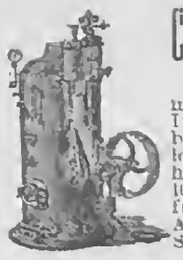

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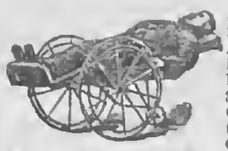

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Make better
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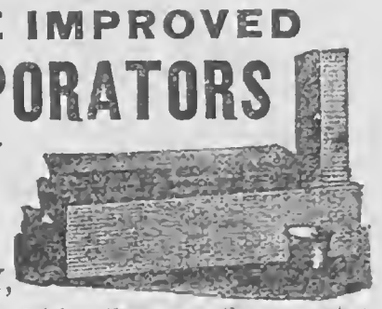

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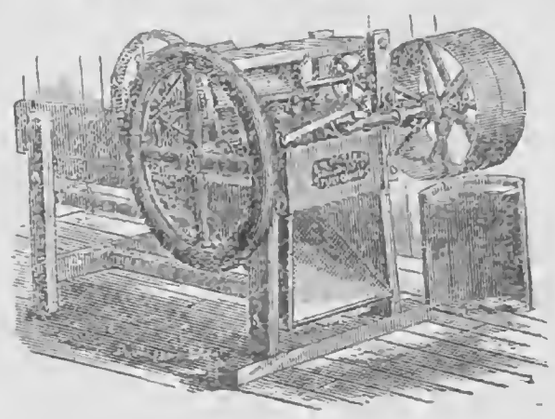

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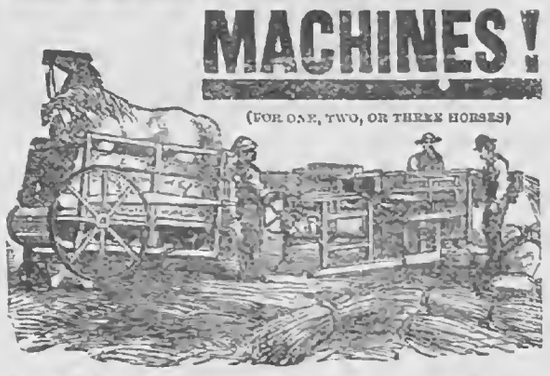
(FOR ONE, TWO, OR THREE HORSES)



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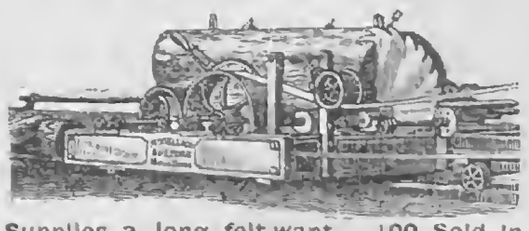

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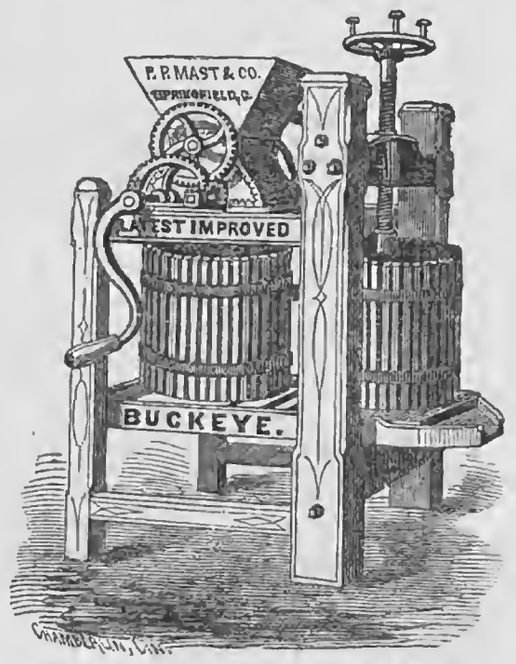

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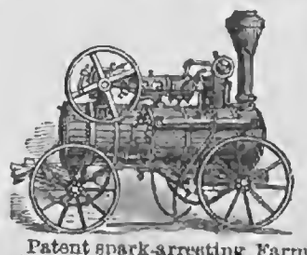

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A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL.—No. 1647.} NEW YORK, AUG. 20, 1881. {PRICE FIVE CENTS $2.00 PER YEAR.

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Biographical.

OUR PORTRAIT GALLERY.

John Bennet Lawes, LL. D., F. R. S.

JOHN BENNET LAWES was born in 1814, and on the death of his father, in 1822, succeeded to the estate of Rothamsted, Hertfordshire. He was educated at Eton and at Brasenose College, Oxford, where he remained from 1832 to 1835, and afterwards he spent some time in London for the purpose of the further study of chemistry, to which he had devoted much attention at the University. In October, 1834, he took possession of his property at Rothamsted, and at once instituted experiments in agricultural chemistry. He studied with great interest the researches of De Saussure on vegetation, and sought to apply his scientific knowledge to the solution of questions affecting practical agriculture. Among other subjects, his friend and neighbor, the then Lord Dacre, particularly directed his attention to the fact that while bones proved a highly valuable manure on some lands, they were quite, or almost, useless on others. To test this and other subjects several hundred experiments were made, some upon various crops in the field and others with plants grown in pots, and in these experiments the constituents found in the ashes of plants, as well as others, were supplied in various states of combination. Of all the experiments so made, those in which the neutral phosphate of lime in bones, bone-ash and apatite was rendered soluble by means of sulphuric acid and the mixture applied to root crops, gave the most striking results. Those obtained on a small scale in 1837, 1838 and 1839 were such as to lead to more extensive trials in the field in 1840 and 1841 and subsequently. Early in 1842, as one of the results of his investigations, Mr. Lawes took out a patent for the manufacture of the manure now known as superphosphate of lime. Before the publication of Baron Liebig's works in 1840, but little attention was given anywhere to agricultural chemistry, and many of the terms now in common use found no place in agricultural works published before that date. In 1843 Mr. Lawes established large works in the neighborhood of London for the manufacture of the new fertilizer according to the process covered by his patent, and when, shortly afterwards, vast deposits of mineral phosphates were discovered, the business of converting them into superphosphates attained vast proportions: nine years ago, when Mr. Lawes discontinued his connection with the works he had established, the amount of superphosphates manufactured there alone was upwards of 40,000 tons annually.

For some years Mr. Lawes had been aided in his investigations by a young chemist, Mr. Dobson; but in 1843 he secured the valuable services of Dr. Joseph Henry Gilbert, then 26 years old, who has ever since had charge of the laboratory department, and so closely have the two been associated that the name of one has almost become a complement to that of the other. The scope of the investigations was now so greatly enlarged and systematized that the foundation of the Rothamsted Experiment Station may be said to date from that time. The problem to be solved was to determine, by exact experiments, the principles, chemical and physiological, which are involved in the general and fundamental processes of successful agriculture; in other words, to determine the actual relation of various crops with the soil in which they are sown and with the fertilizers used to promote that growth, and to do this on so extensive a scale, both as regards time and area, as to settle upon a definite basis the fundamental principles of agricultural practice.

The investigations have chiefly embraced researches, 1, into the exhaustion of soil, including experiments on wheat, barley, oats, potatoes, clover, root and leguminous crops; 2, on the principles of rotation and fallow; 3, on the mixed herbage of grass lands; 4, on the process of vegetation generally, including researches on the action of manures; 5, on the origin of nitrogen in plants; 6, on the feeding and fattening of animals; 7, on rainfall and drainage; 8, various supplementary investigations, such as extensive researches into the application of town sewerage to crops, especially to grasses; the chemistry of the malting process, etc., etc.

In systematically undertaking the experiments in 1843, fourteen acres, divided into about twenty plots were devoted to wheat; seven acres divided into about twenty-five plots to experiment with turnips; subsequently as the number of plots experimented upon increased, the area devoted to the work steadily grew larger. The number of assistants and other helps has also increased from time to time. At first only one laboratory man was employed; but very soon a chemical assistant was necessary and next a computer and record-keeper. During the last twenty-five years the staff has consisted of one or two or sometimes three chemists; two or three general assistants whose principal occupation is to superintend the field experiments; an occasional botanical assistant with from three to six boys under him; a varying number of laborers always employed in field and other work; two or three (lately always three) computers and record-keepers for calculating and tabulating field, feeding and laboratory results, copying, etc., and one, and sometimes two, laboratory men. Besides the permanent laboratory staff under Dr. Gilbert, chemical assistance is frequently engaged in London and elsewhere; and in this way Mr. R. Richter of Berlin has, for some years, been almost constantly engaged in analytical work sent from Rothamsted. Professor Way, Prof. Frankland, Professor Voelcker and the late Dr. Pugh have also done a great deal of work for the Station.

Rothamsted is an entailed estate of over 1,000 acres situated twenty-five miles from London on the Midland Railway, near Harpenden Station. The house is a battlemented mansion built of brick in the Tudor style of architecture. The oldest part was erected four hundred years ago, in the reign of Edward IV.; but extensive additions were made to it in the days of James I., and still more in modern times. In 1878 we presented to our readers a likeness of Mr. Lawes, which was not satisfactory, and accordingly we have engraved the present one from a photograph lately received from the benevolent owner of Rothamsted. The RURAL NEW-YORKER is the first American journal to which he has contributed frequently, and for the interest of agriculture we are glad to see that our American journals are now pressing him for his valued communications.

At the beginning of the association of Mr. Lawes and Dr. Gilbert an old barn was fitted up for a laboratory, but as the range of investigation extended this proved insufficient. About 1854 the farmers of England subscribed a considerable sum as a testimonial to Mr. Lawes for the service he had rendered to British agriculture, and it was proposed to expend the amount in plate; but at his suggestion it was devoted instead to the construction of a new and more commodious laboratory, which has enabled him to extend his inquiries for the benefit of those who thus honored themselves by their grateful recognition of his eminent services. In the same year he was elected a Fellow of the Royal Society, and in 1867 the Royal Medal was awarded to him conjointly with Dr. Gilbert by the Council of the Society.

During the whole period of its existence the Experiment Station has been completely disconnected from any external organization, and has been maintained entirely by Mr. Lawes. His object all along has been, not to put money into his own pocket, but to afford the farmers of the United Kingdom, aye, and of the whole civilized world, information by which they may be able to put money into theirs. For upwards of 40 years this philanthropic object has been sought by a series of experiments conducted with a skill, perseverance and success which, in the words of Sir Edward Sabine, President of the Royal Society, "have placed their authors, by general consent, at the head of all those who have pursued this important branch of experimental inquiry." When investigations such as these have occupied one's attention for many years, he is led to regard them, as Dr. Lawes remarks, in some way as his children, which he is unwilling to desert or leave destitute at the time of his death. Acting on this principle, Mr. Lawes has set apart a sum of $500 000 and a sufficient area of land for the continuance of his life-work after an honored memory of him alone and the lasting results of his labors shall remain among the living.

It is impossible in the compass of this short sketch even to outline the practical conclusions arrived at from a series of investigations upon so many subjects, each so complicated in its nature, so important in its object and continued systematically over so protracted a period. A great deal of the results of his labors from 1843 to the present time has been given to the public through various English agricultural and scientific periodicals as well as in official reports, while of late years, as those who have had the advantage of reading his prized contributions in our columns are aware, he

JOHN BENNET LAWES.—From a Photograph.—Fig. 406.

has also given much valuable experience and information directly to the people of this country. Indeed, it is doubtful whether within the last quarter of a century a single standard work relating to agriculture has been published in which references are not specifically made to his experiments; and certain it is that in that time not only has no valuable work of the kind been published, but that no valuable number of an agricultural periodical has been issued which did not derive a fair share of its best information from the scientific and practical lessons taught by the investigations at Rothamsted.

Horticultural.

CRUDALISMS

THE question in regard to potatoes "mixing in the hill" is again undergoing discussion. *How* they do or can mix in the hill has not yet been explained in a manner that can be accepted as in the least satisfactory. I will mention a fact that may serve to throw some light on the subject. Many years ago I grew an acre or so of the Early Dykeman Potato, now almost forgotten. The drills were opened with a double mold-board plow, and, as an experiment, *horn* shavings or turnings were sprinkled in the drills before the potatoes were covered, the latter operation being done with a drag. When the potatoes were dug I noticed that many of them were highly colored with pink or red, some more and some less. This might have passed for a case of "mixing in the hill;" but a little examination showed conclusively that the coloring had been done by the horn shavings, the impression or form of single shavings being very distinct in many cases. I have noticed something similar many times since, but I have never seen anything that could be called mixing in the hill. Those Dykeman potatoes were Dykemans still, and nothing else. Artificial manures or substances already in the soil may change the color or outward appearance of the potato, but its specific character remains the same. When a white-skinned and a red-skinned potato are put in the same hill, the white one may show some change of color, as in the case of the horn shavings; but no change occurs in the potato itself. As a rule, there can be no change except through the medium of seed. What is called a "sport" does not come under the head of "mixing."

I MET in the cars lately a gentleman with a fine flower (closed) of Cereus triangularis. I admired it, and then remarked, "This is a very fine specimen of triangularis," to which he replied, "Oh no; this is the Lily of the Night." A lady friend, who has a very fine plant of Cereus McDonaldi, calls it the Queen of the Night; a very pretty name for that grand flower.

JUDGING from what I have seen of the Taylor Blackberry, I should say it was quite as productive as the Snyder and equally hardy. The fruit is larger, not quite so sweet, but more juicy and better flavored. It is later than the Snyder. They are sufficiently distinct to prevent any further suggestions that they are identical. The Taylor would seem to have a prosperous future before it. I had an unusually fine specimen of the Ameden Peach which ought to be made over again into a free-stone. Pears are abundant. Melons are very backward, and might ripen a good crop next Summer if they could be wintered over. And so I might go on and name a good many other things; but time is short, and so is this column.

I AM glad to see Mr. Mason's criticisms on the flat culture of corn. Discussion will only be the more certain to bring out its merits. He says, "Hilling up is necessary in heavy, solid clay soils, as the only mode of letting the sun's heat down into the cold soil around the corn roots. On such soils flat cultivation would not answer." Again, "Flat culture is suitable to sandy land, as that is warmer than clay." I do not agree with Mr. Mason's premise or his deductions on this point; but there are no arguments so convincing as good solid facts. Westchester Co., N. Y., as a rule, is only moderately heavy, and I will let it pass. Portions of New Jersey are heavy enough, and flat culture does well there. In fact, I know of about a hundred acres of corn and potatoes now growing on a clay so heavy that it becomes as hard as a rock when dry, or rather did before it was underdrained. Both the corn and the potatoes are grown flat, and the corn looks as well as any I have seen. The soil, as I said, is underdrained; and this is what Mr. Mason ought to do instead of hilling up. The RURAL will hear from the owner of these crops at the proper time. But let us go up into Orange Co. N.Y., where the soil is heavy enough and where flat culture is pursued with results entirely satisfactory, not on half-acre lots, as Mr. Mason seems to think, but on 50 and 100-acre lots. I ought, in fairness, to state most Orange Co. farmers fully understand the advantages of underdraining. Let us, again, go up into Columbia Co., N. Y., noted for its remarkably stiff clay, and we find flat culture to do exceedingly well there. In these heavy clays, where the surface is kept flat and well pulverized, corn sustains a drought without injury much longer than where it is hilled up. And all this, as it seems to me, for very good reasons. Mr. Mason further says, "Hilling does not support the plant, and I never heard any one say he thought so." His experience on this point has been very different from mine. I have been "agitating" the question of flat culture for upward of 30 years. I have written about it, and talked about it at Farmers' Clubs and at meetings of horticultural societies, and have always been met by the argument that corn will blow down unless it is hilled up, and I should feel warranted in saying that at least 80 per cent. of those who hill up corn do it for this reason alone, not thinking of any other. There are other points which I will notice hereafter. The space to which I am limited is already full, and I will only add, that Mr. Mason is evidently a man of so much intelligence that he can well afford to do without that common, ponderous but weak argument of throwing a five or ten thousand acre lump of Western soil at our poor Eastern heads. The laws of plant life and plant growth in a one-acre lot and a thousand-acre lot are the same, whether on Long Island, in New York, or in Nebraska, and hence it is the RURAL is prized as much in the West as in any other part of the U. S. The principles of economy in cultivation are not yet fully established, and may be profitably discussed for years to come. HORTICOLA.

EARLE'S BERRY BOX.

A GIFT BERRY BOX, to be given away with the fruit, has been demanded more or less frequently during the last 10 or 15 years. When at the Messrs. Hales' last month I was shown a box designed for this special purpose, which, with some slight alterations, comes nearer my idea of "filling the bill" than anything I have yet seen. It is very simple, and ought to be cheaply constructed. It consists of three pieces only:—First, a piece of sufficient length and breadth to form the bottom and ends; second, one for the sides, going all round the

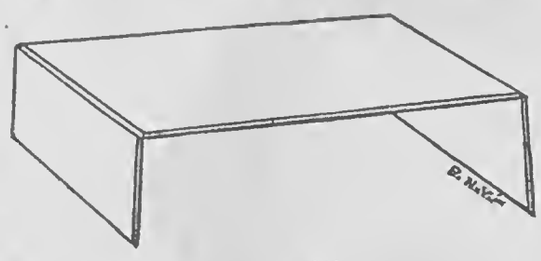


FIG. 407.

box, lapping on one side and tacked together, also tacked to the small ends forming the bottom, thus stiffening and holding them in place; third, a top-piece the wings of which pass down over the ends and between them and the sides, holding and stiffening the whole structure. The ends rise above the sides sufficiently to allow the berries to be rounded up and to hold the top off of them, affording ample ventilation. The illustrations, 407 and 408, will make this brief description readily understood.

These boxes pack closely and help to support each other, and if the demand should warrant their use, the only obstacle in the way would seem to be their cost. If this can be sufficiently low, and yet secure a good article, it will be a great relief to berry growers, saving them the trouble of sorting, cleaning, and using all sorts of dirty and dilapidated baskets

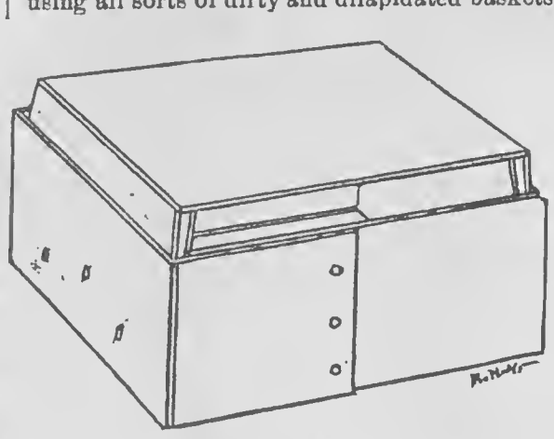


FIG. 408.

that are invariably returned to them, and purchasers will have the satisfaction of having their fruit in clean packages. The crates, not having to wait for the empty baskets, can also be more promptly returned—often quite an important consideration. This box is the invention of W. H. Earle, of Worcester, Mass., a practical fruit grower, and is what might be expected from a practical man who knows just what he wants. The great fault with inventors generally is that they are more theoretical than practical. E. WILLIAMS.

Entomological.

THE CLOVER-LEAF MIDGE.

IN the report of the Entomologist to the Commissioner of Agriculture for the year 1879, Prof. Comstock speaks of this little insect as being found in considerable numbers infesting the White Clover (Trifolium repens) on the Department grounds at Washington, but says he had not seen it elsewhere. Since my attention was called to it, I have carefully examined the clover, both white and red, in several places in Southern Illinois, but do not

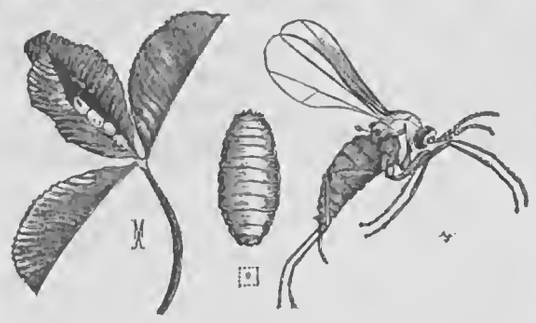


FIG. 409.

find anything of the kind in this locality. As Loew found this species in Europe, the probability is that it is another of our importations from the Old Country, especially as it seems to be found in only one locality in this country; and it appears quite probable that it has been brought over in hay that has been used in packing some articles brought to Washington. On the other hand, as Loew found his insect feeding only on Red Clover (Trifolium pratense) instead of White Clover, future investigation may prove the European one and ours to be specifically distinct, though this is not very probable, as the two food plants are so nearly alike. If we have here a new importation, it would be well if it could be totally destroyed before it spreads over the country.

Prof. Comstock's description of this midge (Cecidomyia trifolii) is substantially this: About the middle of June the leaflets of White Clover may be seen folded upwards and fastened together something like a small pod. Inside of these would be found from one to twenty small, pale, orange-colored maggots about .06 of an inch in length. These little worms live in this leafy inclosure, appropriating the juices of the leaf very much as the Hessian Fly maggots (Cecidomyia destructor), an allied species, do the juices from the stalks of wheat, and with the same effect to the plants.

The figure accompanying this gives an idea of the insect in its different stages as well as of the way the leaves are folded. To the right is the perfect insect that deposits the eggs; in the middle a larva, both magnified; on the left a leaf, two of the leaflets folded and the middle one opened to show the larvæ or pupæ inside. The perfect insect or fly is smaller than its relative, the Hessian Fly; but resembles it somewhat in shape, as may be seen by comparing the figure here with one of that insect. In color this is brown, while the Hessian Fly is black. As Prof. Comstock reports the flies appearing in June, there are probably two broods of them in a season.

Carbondale, Ill. PROF. G. H. FRENCH.

TWO GRASS INSECTS.

BESIDES the Army-worm (Leucania unipuncta) and the Wheat-head Army-worm (L. Harveyi), there are two other larvæ of Leucania that are known to be grass-eating insects.

Because they occur in smaller numbers than the first mentioned insects, they are not so destructive, and, as a natural result, they have not come so prominently into notice. I find, however, that the moths are pretty widely distributed, and as they must be destructive in proportion to their numbers, I will give a brief description of them here.

The first of these, Leucania Phragmitidicola, I have found a number of times in clumps of grass. It is a lighter-colored caterpillar than the Army-worm, the general color being light gray. When full-grown it is an inch and a quarter long, rather robust. Along the back is a fine, light line and a distinct dark brown line about midway from this to the breathing pores. Between these two lines are several fine, brown lines that scarcely interfere with the general color. Just below the breathing pores is a flesh-colored line. Between this and the dark brown line are three pale brown lines and three pale buff lines.

From this description one may easily distinguish this caterpillar from its darker relative, the Army-worm. In eating it crawls upon the stems and blades of grass and feeds like the Army-worm, but it hides itself mostly at the roots of the grass during the day-time and feeds at night.

The other caterpillar, Leucania Pseudargyria, is found in similar situations, but is more slender in build and differs in color from the first. It is somewhat smaller, being only about an inch long when full-grown. In color it is a fleshy-brown, rather light, sprinkled over with fine dark-brown dots, only seen distinctly with a pocket lens. These dots form two rather broad stripes along the back and another along the sides, each one being very indistinctly divided in the middle as though it were two lines. The stripe along the sides is the lightest. The stripes along the back are darker in some parts than in others, making a faint V on each joint, the angle turned back. The head is gray, mottled with brown, but the top of the neck is dark brown.

The moth that the first of these caterpillars produces has light gray fore wings with a dark mark through the center and white along the veins. It resembles the Wheat-head Army-worm moth, but is lighter. The moth of the second species resembles more the Army-worm moth, though while the fore wings of the Army-worm moth are somewhat fawn-colored, these are drab with a row of black or dark brown dots near the outer end and a single larger black dot at the base of each fore wing. The hind wings are quite dark.

It is possible these may not become sufficiently numerous to be troublesome, and, in that case, the above is merely a contribution to the knowledge of our grass-eating insects. If they should be troublesome I doubt not that the same remedies that are used for the Army-worms would be effectual with these.

Carbondale, Ill. G. H. F.

A Colorado Beetle Catcher.

By using the bug catcher illustrated by the accompanying drawing, two persons can gather bugs very rapidly without stooping over the vines. It is a light frame eighteen inches wide and four feet long, including the handles. A piece of cloth is tacked over the frame, not tightly, but loosely enough to allow it to sag considerably and form a receptacle

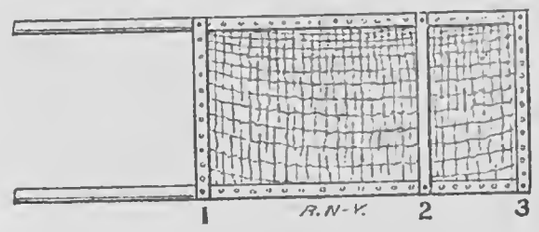


FIG. 410.

for the bugs near the lower end. One person holds the trap as near the vines as possible, while another, on the other side of the row, bends the vines over with an old broom, and shakes the bugs off. Cross-piece No. 2 is only for the vines to strike against in jarring off the bugs. The cloth is not fastened to this, but hangs loosely beneath it. A handful of dirt will hold the cloth steady when the wind blows. G. S.

Carroll City, Ia.

[Would it not be as well to use half of a shingle split lengthwise and cut narrow for a handle with which to strike the vines, thus *throwing* the beetles or grubs into the bag? We have found that rapid and effectual work may be done in this way.—EDS.]

HANDY "BUG-CATCHER."—W. J., of Godfrey, Michigan, referring to the illustrations of the above device, on page 501 of the RURAL, says that a little coal oil in the pan will prevent the bugs, once they get in it, from crawling up the sides.

Field Crops.

WHY BLUE-GRASS IS SO-CALLED.

PROFESSOR F. H. STORER.

THE question has repeatedly been asked by Northern farmers why the Kentuckians call Poa pratensis "Blue-Grass;" in the same sense that your Pennsylvanian correspondent, W. G. W., inquired in a recent number of the RURAL: "But why do you call it 'blue" when it is so intensely green—the greenest of our grasses?"

I am inclined to believe that the explanation of the matter really depends upon some superiority of the soil, and perhaps of the climate, of the Middle States, in respect to this particular grass. For, even in Massachusetts, I have observed that when Poa pratensis is grown under exceptionally favorable conditions its blossoms have a well-marked purple color such as would not unnaturally be called blue by persons unaccustomed to discriminate carefully in respect to tints and shades. In one particular experiment, for example, which I made a few years since here at the Bussey Institution, a quarter-acre plot was staked out in the middle of a poor old mowing field the sod of which consisted largely of Poa pratensis,—"June Grass" as we call it in this vicinity—and upon this plot a variety of chemical fertilizers were scattered, in large

excess over and above what the grass conid possibly make use of. The resnlt was a vigorous stand of June Grass upon the manured plot, and when the time for blossoming came, there was a very decided and a very beautiful bnish-purple quarter-acre patch in the midst of the otherwise green field. The tall, purple plants were examined repeatedly and found to be really June-Grass (Poa pratensis), and not Wire-Grass (Poa compressa.) This experience naturally excited the interest of our students in the subject and led them to detect the same "blne" coloration in several small patches of June-Grass in different localities where the circumstances happened to be especially propitious for the growth of this plant.

As a matter of course, there must be somewhere in the world a best possible place for growing each and every particular plant—June-Grass, as well as the rest—and the mere fact that this grass presents such an appearance in Kentncky that the inhabitants of that State have been led to name it "blue," is evidence which goes to show that it is there doing if not its very best, why then at least as well as can be expected. In this special instance, indeed, there seems to be justification for a certain tendency towards "tall talk" which has sometimes been noticed as a peculiarity of the inhabitants of that ancient State.

MEADOW FESCUE—FESTUCA PRATENSIS.

Many of the fescnes have deservedly won a high reputation for the nutritious pastures and meadows which they afford. The species are much mixed and run into each other, or cross, in a way to puzzle the best botanists. Pratensis is gived as a mere variety of Festnca elatior, by Dr. Gray and others. This matters little at this time. There are several others growing at the Michigan Agricnltural College, which are as promising as the one above named, especially for the dry Western prairies. The leaves are rather firm in texture, long and flat. Meadow Fescne flowers in June to Angust. It comes from Europe and is not so often found in meadows as its merits deserve. I deem the best varieties of the fescues well worthy of careful experiments. Like Indian corn, they seem ready to break np into many permanent varieties. By careful selection and cultivation there is no telling what might not be produced.

It (Meadow Fescue) grows two feet high. Cattle are very fond of the green grass or the hay. The seeds are rather large and easily sowed. These are good qualities not to be overlooked, especially in countries subject to extremely dry weather. There is enough of seed to give the young plant a good start. Many of the seeds in market are imported and possess low vitality or none at all. They are often much mixed with seeds of Perennial Rye Grass and others. What is said of imported seeds of Meadow Fescue applies also to most other imported seeds of the grasses. More attempts should be made to grow them in the United States. Prof. W. J. Beal.

Mich. State Agr. College.

TOBACCO-GROWING NOTES.

Whenever, from the depredations of cutworms or other causes, vacant places are found in rows of tobacco after the proper season for transplanting has passed, it is well to occupy such vacancies by sowing in them turnip seed. Flat turnips will grow finely and yield good crops when grown in this way. The shade from the plants does not seem to injnre them when starting, and the tobacco is removed before their growth is completed.

There is a tendency with many tobacco growers to continue the work of setting plants after the proper season has passed. A plot of ground where some early crop has been removed is frequently planted with tobacco so late that the crop has not time to matnre before Autumn frosts. Such tobacco is rarely of good quality, because it does not have time to become sufficiently ripe, or, if left too long, it may be frost-bitten. A small amount of such a product may be "worked in" with a crop of good leaf without being discovered by the bnyer, but it is a fraudulent practice and is of the poorest policy. No tobacco farmer can afford to follow any practice that will injnre his reputation as a grower, for a good repntation is one of the chief requisites to success in tobacco culture.

There is no one thing that is more certain to injnre a crop of tobacco after it has commenced to grow in the field than neglect in the work of "worming." It is a slow and costly task to worm a crop of tobacco, and in the busy season when other work is crowding the farmer, it is, therefore, frequently neglected until great damage has been sustained. There is no perfect way of destroying the worms except to pick them off by hand one by one. A single worm after it has become of large size will sometimes completely destroy a large plant in a few days if allowed to follow its own course, and the utmost vigilance is always necessary to prevent the pests from greatly injuring a crop.

MEADOW FESCUE.—FIG. 411.

The tobacco plant-bed should not be forgotten at this season of the year. In order to keep it from becoming foul with weeds and weed seeds, it should be forked over as soon as the planting season has passed and covered with a liberal dressing of well-rotted manure. When the weeds begin to show themselves it should be forked over again, and this continued at intervals of from four to six weeks until the growing season is over. With this management no weeds can mature or scatter their seeds in the bed, and the frequent forking makes the soil in excellent condition for another crop of plants. Grass and weeds about the plant-bed should also be pulled or cut to prevent them from maturing and scattering their seeds, lest some of them become rooted in the beds.

MEADOW FESCUE—FESTUCA PRATENSIS.—FIG. 412.

Ingratitude of a Carefully Flayed Elephant.

The White Elephant was planted in April. It was very carefully peeled so that the potato could be eaten. Then the skin was cut into eight pieces and very carefully planted between two grape-vines so that the hills would be sure to have plenty of shade. I had Peerless planted on one side; Peachblow on the other; Pinkeyes on each end; Early Rose between, and Colebrook Seedlings in the middle. Then for better protection I had orange plants on one end; Japan Plums on the other; sweet potatoes on one side and okra and tomatoes on the other—and now, after all that care and trouble they only average one small potato to the hill. The W. E. is not worth a "red cent"—for this portion of Florida. N. K.

Archer, Florida, Aug. 2.

[We should hardly suppose that the eyes with the skin only for their support, could have done any better. We have tried the experiment of planting potato skins cut to single eyes, with results similar to our friend's, except that many of them failed to grow.—Eds.]

Farm Topics.

THE EVAPORATION OF FRUIT.—No. 2.

J. G. BINGHAM.

Its Advantages.

Since 1872 the business of fruit evaporation has made steady progress, annually absorbing more capital and receiving more general attention. Though the business is yet in its infancy, the evaporated products of the United States now amount to many millions of dollars annually, besides the fact that the entire fruit crop of the country is immensely enhanced in value on account of so much perishable fruit being withheld from the (otherwise overstocked) markets. Thoughtful observers have remarked during the past few years that the fruit evaporators have saved the fruit growers of the States from the disastrous effects of a broken-down and demoralized market. Whenever the point is reached that one-half the regular crop of fruits can be profitably cured at home, and thus withheld from the fresh fruits sent to market, then, and not till then, will the peach grower of the Peninsula or the fruit grower of the United States be reasonably sure that he is going to market his products at a profit instead of a loss, the latter being too often the case during a very fruitful season.

Particularly valuable to the peach grower is the economical industry of fruit evaporation. His fruit demands careful handling; slight bruises engender decay. Certain varieties, from their juicy, mellow nature, cannot be shipped to the city markets, and must be worked up at home. With a portable evaporator, like the Zimmerman, manufactured at Cincinnati, Ohio, or the American, of Chambersburg, Pa., either of which is perfectly adapted to his needs, he can, with proper help, place this perishable product beyond the possibility of loss. Evaporated peaches are always salable at good prices. This fruit probably gives the best returns for cost and labor bestowed upon the production of a first-class article. The supply never has been, probably never will be, such as to cause prices to fall below a profitable margin. Peaches now can be pared almost as readily as apples, and the commercial value of the pared over the unpared is an increase of 200 per cent. Pneumatic evaporation preserves the essential properties and saccharine richness of the peach. It turns out to be a process which not only forestalls decay, but carries out the organic process of ripening to an artificial perfection. In 1874 the total amount of American dried fruit exported was less than 1,500,000 pounds. In 1880 the exportations had increased to 2,000,000 pounds *per month*, notwithstanding the greatly increased consumption at home, owing to the superior quality of the product.

Few of the smaller fruits are exported, the foreign demand being chiefly for apples. In France the distillers are using large quantities of dried apples for the manufacture of brandy. The English market will take little except evaporated apples, and the demand is steadily increasing. The old custom of exchanging two pounds of domestic dried fruit for one of imported has been more than reversed. Even our wild raspberries and whortleberries, properly evaporated, stand at par with many of the far-fetched luxuries of Smyrna and Italy. One pound of evaporated peaches commands in our markets a value equivalent to three pounds of raisins, four of Zante currants, and five to eight of figs, prunes or dates. Current prices of all kinds of domestic evaporated fruits, rated on a specie basis, were higher in 1880 than ever before, with, perhaps, the exception of apples, which was due to the large stock of perishable fresh fruits—green apples—which crowded our markets. This, however, will only tend to open up new markets where they will be indefinitely retained, and increase the demand for evaporated apples in the future.

McGrawville, N. Y.

ENSILAGE, COTTON-SEED MEAL, ETC.

While on a visit recently to the Experimental Farm of Rutgers College at New Brunswick, N. J., we asked Superintendent West for his opinion on the ensilage question. He said they had 14 tons put into a silo for experiment, which was fed to three cows, but as it was put in at three different times, it did not seem to keep well. He saw no increase in amount of milk, and thought it gave the hair a dull appearance, denoting unfavorable effects of the ensilage fodder. He was not willing to give the system much praise, nor would he condemn it *in toto*.

An interesting experiment on the relative merits of cotton-seed meal and corn meal as feed for cows has also been tried at the College Farm. Again three cows were chosen which had been receiving about three pecks of brewers' grains per day. Six pounds of cotton-seed meal per day were given each cow for 10 days, and the quantity of milk taken was noted. After 10 days six pounds of corn meal were given with the same amount of brewers' grains, and on the tenth day of feeding the quantity of milk was found to have been increased nine and one-half pounds per cow. The corn meal was now withheld, when the quantity of milk was again reduced to the same amount as before feeding the corn meal. Cotton-seed meal costs two cents per day more than corn meal, which Mr. West considered quite an item in a dairy of 40 cows. He considers brewers' grains the best feed he can give his cows, and he has just siloed 150 tons.

HINTS AND SUGGESTIONS.

Watering Shade and Ornamental Trees.—Where irrigation of olive and orange trees is practiced in the south of Europe water is brought to the roots by punching three or four holes in the ground among the roots and then applying the water by the usual irrigation. The point of the bar being sharp and

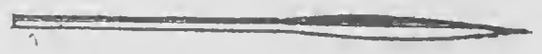
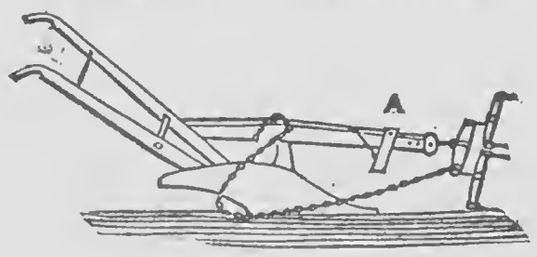


FIG. 413.

smooth passes between the roots without injuring them, and the stream of water at its latter end carries down some soil and closes the hole. This renders it unnecessary to remove the mulch on the top soil, and H. A. P., who inquires (page 503) about this matter, will

find the plan very convenient and effective. A wooden bar, if of tough, hard material, may do, but an iron one is better. The lower end should be thickest (see Fig. 413). A bar of this kind will be useful for many other purposes, digging post-holes, etc.

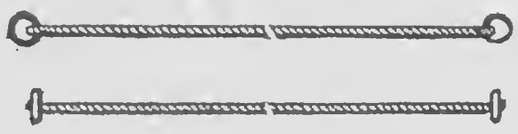
COVERING WEEDS WITH A PLOW. — One would suppose every man whose business is to plow, would know how to attach a chain for the purpose of covering weeds. But a hired man who claimed to know everything about farm work and who was set to plow a field containing some tall weeds, made wretched work because he had never heard of this method of covering the weeds. Many others, doubtless, are equally ignorant of this plan, which is so old as to be forgotten, and really new again. The chain is looped around the plow beam at the standard, as shown at Fig. 414. It is made to trail so that it is just in advance of the falling furrow and barely escapes being covered. The other end is fasten-



CHAIN ATTACHED. — FIG. 414.

ed to the double-tree, as shown; or it may be fastened to a bar bolted to the beam and braced, as shown at A. This should be known by every one whose business it is to handle a plow, and is specially useful just now when weedy stubbles or fallows are to be plowed for wheat.

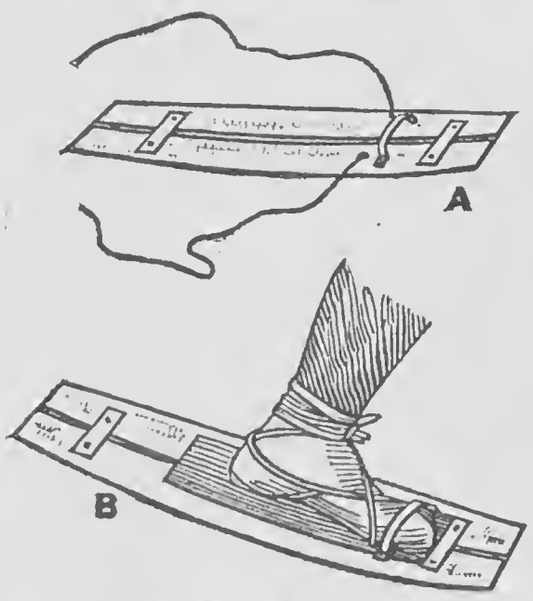
LAYING OUT FIELDS BY MEASURE — Few farmers know the size of their fields or how many acres they contain. A field of the writer's, before it came into his possession, had been plowed and reaped by contract for 15 acres. On measuring it, it was found to have but 12 acres. It is desirable, in fact, indispensable for good work, that a farmer should know how many acres each field contains, for otherwise he cannot apportion seed or manure for it, nor can he tell how much time it should require to be plowed. A measuring cord should be part of the furniture of every farm. To make one, procure 67 feet of



SECTIONS OF MEASURING ROPE.—415.

strong rope, one inch around: make a loop or fasten a ring or a bar at each end, and make these precisely 66 feet apart. This is four rods. Then tie a piece of red rag in the center. One acre of ground will be a piece four of the cords (chains) long and two and one-half wide, equal to 16x10 rods, making 160 square rods, or one acre. The arrangement of the rope is shown at Fig. 415. The advantage of the ring or loop, is that one person can measure alone by driving a stake in the ground to hold the rope while he stretches it out. The rope should be soaked in tar and dried, which will prevent it from shrinking when wet.

MOWING MARSHES.—Farmers having occasion to mow wet meadows or swamps, may keep their feet dry without going to the expense of buying rubber boots, which, besides being costly, are not very agreeable to work in for a whole day. Swamp shoes may be made as follows: two wide, strong, smooth staves of a flour barrel are fastened together, as at Fig, 416 A. A leather strap is passed through two holes in the forward part of the



MARSH SHOE.—FIG 416

shoe and two laces, or strings, are fixed there, as shown. A piece of carpet doubled, or leather, may be nailed on the shoe where the foot will rest. The foot may be wrapped in a piece of blanket, which is done by the Indians and white trappers when wearing snow-shoes. These pieces of blanket are called "neips." The neip is tied around the ankle and the trousers are gathered and tied over it. The toes are then put under the strap and the shoe is fastened to the foot so that it is attached only to the toes and the foot can move freely. As the person walks he lifts the foot and the shoe drags, with the hind part on the ground, the fore part being lifted, thus escaping any obstacle. A pair of light rubber or arctic overshoes may be worn. With these one can travel easily over the softest swamps. A shoe may also be cut out of a large cypress or cedar shingle, or a piece of thin board, but the curve of a flour barrel stave is just about right for this purpose. The foot strapped to to the shoe is shown at B, Fig. 416. The neip is fitted by placing the foot on it with a corner at the toe and one at the heel; it should be 18 inches square. The corner is turned down over the toe upon the foot; each side is then turned over the foot and then the hind part is brought up to the heel: this brings it about the ankles evenly and smoothly. Or the sides may be turned up first and then the heel and, lastly, the corner brought over the toe, which would in that case leave a thick cushion to come under the strap to protect the toes from chafing.

The Herdsman.

A SUCCESSFUL CATTLE FEEDER.

WALDO F. BROWN.

Profitable Cattle Feeding.

THE gentleman I referred to in my former article and who is entitled to the above appellation, is Mr. Samuel A. Deal, of McLean Co., Ill. Before giving, however, the figures which he gave me and which show how handsomely he was paid for his grain in his cattle feeding, I wish to point out some of the reasons why farmers so often fail to make cattle feeding profitable. One (where the cattle are bought) is from buying at the wrong time of year.

Perhaps the majority of farmers who intend to "winter feed," buy from pastures in the Fall, the last of October or first of November. Cattle at this season have a good deal of what the butchers call "gross" about them, and it will take extra care to make the transition from grass to dry feed without losing considerable weight. I think that ordinarily cattle will be found from 50 to 100 pounds lighter at Christmas than when they came off grass, and even if they are put on grain at once, it is doubtful if there is any gain during the first four or six weeks. Another cause of loss is from unwise feeding at the start. Cattle that have been on a bulky diet all Summer must be brought gradually to heavy grain feeding, and if they are over-fed a few times, so as to produce indigestion and derangement of the bowels, they will be permanently injured. My first experience with winter feeding was with six large steers, and as there was a rivalry between a neighbor and myself, I tried to push them from the start, and from subsequent experience I am sure that I would have made a greater gain if I had only fed half as much grain. Loss often comes from feeding too long. If the cattle are fed partly in the stables and finished off on grass, the time of profitable feeding can be lengthened, but for winter feeding I think about 100 days the profitable limit, and the first six weeks of this time the cattle should not be on full feed. It will pay the cattle feeder to weigh regularly that he may know just how his cattle are doing. The best results will follow from careful and regular feeding of mature cattle and a varied diet. All my experience favors a rather liberal use of bran, as it keeps the bowels regular and avoids the danger of indigestion and sours which the feeding of corn meal alone so often produces. If a steer on full feed will eat 12 pounds of grain and meal a day, I believe the best results will be had by giving two pounds of bran four of corn meal and six of whole corn; but I should not feed more than half this amount at the start.

But I will now give Mr. Deal's experience. In his letter to me in 1879 he stated that he had failed to make any money in feeding cattle bought in the Fall, and so concluded that year to try Spring feeding. With regard to his success that Spring I have merely these brief figures. He says, "I put 55 steers, averaging 1,010 pounds, in the feed lot on February 17; I fed them shock corn until turned on grass, and fed one peck each per day of ear corn in boxes while on pasture. I sold these cattle June 20, when they averaged 1,429 pounds, making an average gain of 419 pounds. These cattle ate 1,500 bushels of corn during this time, which made a fraction over 27 bushels each, which is less than a peck each per day, or, to be exact, three-fourteenths of a bushel."

In the Summer of 1880 I again wrote to Mr. Deal, and in reply he gave me the following facts: "I fed 64 head of cattle this year, beginning on light feed the first of February. My cattle were quite thin and averaged 1,000 pounds each, and were worth $3.50 per hundred or $35 per head. I kept them on light feed until the first of April, but from then until they were turned to grass I gave them all they would eat of shock corn. While on pasture I fed, as last year, one peck each of husked corn in boxes. I fed these cattle in all, 2,752 bushels of corn, worth 25 cents per bushel, making $688. I kept them considerably later this year, selling on Aug. 20, at $4.50 per hundred, and they averaged 1,536 pounds, or a gain of 536 pounds each, and the price per head was $69.12, or nearly double what they were worth when I began feeding them. Allowing $1.25 per month for pasturing and eight per cent. interest on the cost of them, there is left me a net profit of over $1,100, with which sum I am well satisfied. I expect to feed 90 head next Spring in the same way, for I find that to combine grass and grain feeding is the way to make cheap beef. Cattle will gain rapidly on grass alone; but they do not lay on as solid and lasting flesh and fat as when corn is fed with the grass, and in this way you can get your cattle in condition to bring the highest market price."

In all my experiments with cattle I have found Mr. Deal's method a profitable one, and I hope others will be helped by this statement as much as I have been.

HORNLESS vs. HORNED CATTLE.

READERS of the RURAL will soon be at the fairs looking over the different varieties of cattle, with a view of selecting the best breeds. In the discussions I have heard and read upon the merits of the various sorts, the question has been viewed in its economical and material aspects; there is undoubtedly another and a higher plane upon which it should also be discussed. I refer to its moral bearings, and the baneful influences that cattle-wearing horns exert upon the advancing civilization of the age. Man is very largely a creature of circumstances; his surroundings generally determine his intellectual and moral progress. Place him in a genial climate among pleasing surroundings, and he usually advances from generation to generation in the scale of civilization. Reverse those conditions, arm him with offensive and defensive weapons, and turn him loose, he becomes an aggressive and a fighting animal. Again disarm him, and place before him the choice of intellectual and moral pursuits, he again advances in civilization—[Because it may show that in our opinion no part of the human race has yet attained ideal perfection, therefore do we regret that we cannot coincide with our friend in the opinion that a genial climate and pleasing surroundings have on man an exceptionally civilizing influence. The inhabitants of the South Sea Islands had for generations a genial climate and unusually pleasant surroundings, but even before their exposure to the barbarizing influence of the less favored white man, their civilization certainly was not unusually high. The races that, within certain limits, have had to struggle hardest for a livelihood against natural inhospitality and for existence against human hostility, and that have had force and vitality enough to triumph most signally in both cases, have always become the most civilized—the best fighters have always attained the highest civilization. Let any people once lose the disposition to fight when needful, and the capability of doing so strenuously, and they soon sink into effeminacy, immorality, impotence and deserved contempt.—EDS.] It is right here that the question of horns upon our domestic cattle has its moral bearings. Horns are unquestionably both offensively and defensively deadly weapons. There is a question in my mind whether or not the first pair of cattle were so armed. I should say, from what we are taught in the Bible, that cattle were created hornless; certainly from what we conceive as a moral plan of the universe, they did not originally need such defensive weapons, but when the world went to the bad, and turned savage, they would be needed, and perhaps evolved out of the need for them amidst their evil surroundings. Be this as it may, we cannot now determine the question.

Wars and warfare in all time, and among all people have ever been demoralizing; the bad habit of carrying deadly weapons was, and is, a relic of this warfare and savagery. Contrast the moral condition of our remote border settlements with that of the older settled communities; those living in the former carry arms, and there both life and property are uncertain. The inhabitants of the other walk unarmed amidst peaceful scenes of quiet and plenty. Our domestic animals should imitate these contrasted conditions. Hornless cattle are peaceful, and quiet in their habits; they cannot, if they desire, injure and mutilate their own or the human race. We are never required to "take the bull by the horns" if he has no horns; there is no opportunity for such dangerous encounters; therefore animal is precisely like human nature in this respect—armed, it wants to fight, domestication does not, and cannot eradicate the disposition; but disarm it, and it grows more and more peaceful.

Suffering our cattle to wear horns is a good deal like permitting such men as Guiteau to go at large, and assassinate at will whomsoever they may take it into their disorderly heads to kill. There is no telling whether a bull is safe or not, or at what moment he may conceive himself aggrieved, and become an aggressor; even the gentlest cows commit both intentional and unintentional assaults, and become wonderfully ingenious and mischievous in opening granary doors and garden gates with their ready horns.

Three hundred years ago the Spanish was the foremost nation in Europe; now it is one of the poorest and least enterprising, to say nothing of its moral condition; the main reason for its decadence was because it cultivated savagery in its horned cattle, and in itself at the same time. Its bull-baitings were national pastimes, the moral force and energy of the nation became merged and engulfed in this savagery. So we find that it is an unmistakable fact, or rather law of our nature, that we cannot see and accustom ourselves to savagery, even in our domestic animals, without its reacting upon ourselves.

There are certainly no morphological reasons why we cannot have hornless cattle; they are as healthy as the horned in every respect, perhaps more healthy, for they surely will not have "hollow-horn." That horns still exist is because the force of habit has been too strong for this change for the better.

I once met a Texan upon the plains, who insisted that if we had horned horses, (just think how they would look!) they would be far preferable to our present kind; but he had never used anything but mustang ponies or seen anything but the Texas steers, and the savage and rough surroundings of the Western plains, and there was therefore some sense in his remark, judging from his stand-point. But from our stand-point and our present surroundings, there is no sense in any longer breeding horns upon our domestic animals, for it retards religious or moral elevation. We ought in this age of boasted progress and advancement to get upon a higher plane, and above the continuance of this relic of the barbaric ages. D. S. MARVIN.

The Apiarian.

IMPROVING HONEY PLANTS—A POINT TO SEED GROWERS.

THE family of the Leguminosæ is one of the best for bees and for cattle. In this family we find the White Clover (Trifolium repens) of our pastures, the Melilot (Melilotus alba), whose name is derived from the Greek word *meli* (honey), and the Sainfoin (Onobrychis sativa), a plant which does not withstand our Winters, but which, in France, gives the best honey and the best fodder.

Nearly related to the White Clover is the Red Clover (Trifolium arvense), which furnishes as great a quantity of honey as any one of the other plants mentioned. Every country boy has sucked the honey from the tubes of its corollas; but few know that, if they had the chance of tasting this sweet, it was because bumble bees are nearly the only insects which can reach it, and bumble bees are too few in number to absorb such a large crop, which, therefore, remains unharvested, the corollas of Red Clover being too deep to allow the honey bees to suck it.

These corollas are only a very little too deep; for, during the drought of some Summers, the flowers of the second crop, being a little shorter, the Italian bees find in them a good harvest; yet it is doubtful whether in the best circumstances their probosces are able to reach the bottoms of the tubes. Moreover, the honey of the main crop is always out of reach of the bees, and the aim of bee-keepers is to produce a kind of bees endowed with a tongue long enough to reach the bottom of the clover blossoms, or to produce a kind of red clover whose blossoms would be shorter or wider, so that bees could suck all the honey; or to attack the difficulty in both ways at the same time. The work has already begun. Some bee-keepers try to produce bees endowed with longer probosces, and some others are selecting, in the fields, the plants whose corollas are wider or shorter than usual, in order to secure a sort in which they will be broader. But the task will be long, and we want help, if not in regard to bees, at least in regard to the selection and propagation of selected plants.

A seed grower who would take the thing in hand, planting selected clover with this object in view, if he succeeded, would be sure of a good sale of seeds at remunerative prices; for every bee-keeper would try to have the new variety introduced to his neighbors. Of course, the end to be attained is, not to produce a short corolla by raising a diminutive plant, but to create a strong, vigorous kind, endowed with short or wide corollas, the sap of the plant being directed more towards the branches and the leaves than towards the corollas.

I dare to predict to the lucky man who would

succeed in raising a clover with such fixed characteristics, large sales and big profits.

Hancock Co., Ill. CHAS. DADANT.

Industrial Societies.

The Atlanta International Exposition.

THERE is a general impression all over the country that the International Cotton Exposition, which opens in this city on the 1st of October next, is to be simply a cotton exposition, confined to cotton, its culture, preparation for market, and its manufacture, the various implements and machinery connected therewith, and the various and varied fabrics into which it enters. Such was the impression of your correspondent when he called to-day on Hon. H. I. Kimball, the Director-General of the Exposition. In fact, this was the original idea of the exhibition, but it has been changed to a general fair to include all of the products of the soil as well as stock and all of the industries. But cotton is to be king—the most prominent feature. Notwithstanding the general character of the show, it still bears the name of Cotton Exposition. From the great interest manifested, not only in this country but in foreign lands also, it promises to be the most important and interesting exhibition ever held in this country, excepting, of course, the Centennial.

Through the courtesy of Dr. A. L. Kennedy, of Philadelphia, Pa., who is here assisting in arranging the preliminary details of the Exposition, I am able to furnish you in advance of publication with the dates of entries of the different departments not connected with the cotton department proper.

Fruits and Flowers	Nov. 2
Cattle, Horses and Mules	Nov. 9
Sheep and Swine	Nov. 16
Bench Show of Dogs	Nov. 23
Poultry	Nov. 30
Dairy Products	Dec. 7

For the benefit of those interested in the canning business, I would state that, notwithstanding the unfavorable Spring, the peach crop in this State is abundant, and for the next two months an ample supply for this purpose can be had at reasonable prices.

Atlanta, Ga. A. J. C.

Arboricultural.

PANICLED FLOWERING KŒLREUTERIA.

I SHOULD like to know how many of the readers of the RURAL NEW-YORKER are acquainted with the Chinese or Panicled Flowering Kœlreuteria—Kœlreuteria paniculata. I presume not many of them, for I do not recollect seeing many specimens, and the name is but seldom mentioned in the horticultural periodicals. Now I am inclined to the opinion that a tree possessing all the desirable qualities of this interesting species, viz., the short, stocky growth of its blunt shoots, its light-colored, airy foliage and the abundance of its peculiar, large, bladder like seed vessels or capsules, and, last but not least, its large, showy, loose terminal panicles of bright yellow flowers which are abundantly produced at a season when few if any trees are in blossom, render it a very desirable addition to our list of very choice ornamental trees for lawn decoration, for which purpose it should be more employed.

The Kœlreuteria belongs to the natural order Sapindaceæ and is a native of China, from which country it was introduced in 1763. It forms a round-headed tree of small or medium size from 20 to 25 feet high, with short, stout branches with a brownish-colored bark. The leaves are alternate pinnate and are composed of about 13 serrate leaflets. The highly ornamental flowers are produced in terminal panicles about the end of July, and soon after the large bladder-like seed pods, or capsules, appear.

The Kœlreuteria is unfortunately of remarkably slow growth in light, loamy soil, which appears to be the most suitable for it. Its annual growth rarely exceeds one foot, and when transplanted to a wet or exposed situation, the young shoots are occasionally injured by our severe Winters; but when grown in light soil and a partially sheltered situation it remains uninjured. In Summer the color of the leaves is light green, changing in Autumn to a fine yellow. The Kœlreuteria is propagated by seeds or cutting of the roots; but strong plants can be obtained cheap from most of our leading nurserymen.

Queens Co., L. I. CHAS. E. PARNELL.

[A full first-page engraving of a branch and flower panicle was presented in the RURAL of April 24 of last year (p. 261) with fruit and seed on page 262. The drawing was made from a specimen growing on the Rural Grounds.—EDS.]

Industrial Implements.

THE NEW BUCKEYE STEEL SPRING WHEEL HARROW AND CULTIVATOR.

THIS implement is likely to gain a wide popularity for the excellence of its materials and workmanship and its efficiency in the field. Its high wheels and broad tires insure a light draft, while its steel spring seat must make it a favorite with the operator for whom it saves the trouble of trudging alongside. The pressure on the teeth and the depth for deep or shallow cultivation, or for hard and soft soil, are regulated by the lever handily near the driver, who, whether man or boy, can easily either throw the entire weight of the harrow on the teeth if desired, or raise them out of the ground for transportation. The teeth are, we are assured, made of the best spring steel, tempered in oil, and they are thoroughly tested before they are sent out. Their shape is the best for soil cultivation, and being coiled around the pressure bar, they easily pass over stones, roots, or other obstructions. To insure durability the points are hardened and they can be readily sharpened when use renders them dull. This newly devised implement is manufactured by P P. Mast & Co., Springfield, Ohio.

Miscellaneous.

RURAL BRIEFLETS.

A SOUTHERN correspondent writes us as follows:—

"Inclosed I send you some Bermuda Grass seeds. They are not quite perfectly mature.

Clinton, La. W. F. K."

If our friend would examine these spikes under a microscope, he would find that there were no perfect seeds. The stamens and pistils can easily be seen, which shows they were plucked too early. We have Bermuda Grass in bloom, and it would be hard to tell it from the specimens sent. In a postscript our correspondent adds:—

"From an article by Mr. Todd in a late RURAL, his gad-fly must be a different insect from what we have here. When the lumps appear on the backs of the cattle we can easily find the orifice into which we drop the turpentine. This remedy was first made known to us by a colored ox-teamster and farmer, and it is a specific."....

A friend writes us:—

"So Mr. LeDuc has been obliged to resign after all, and the "ways that are dark and tricks that are vain" did not secure the place for the Broadway drawing-room editor who was "born, bred and reared a farmer," and we sha'n't know just yet how he would run the Department. If the croaking editors who have found so much fault with Commissioner LeDuc's management would indicate their policy, we might judge as to the advisability of adopting it; but I fear the politicians have decided to run the Department in their own interest for the future. It looks that way, but *nous verrons*. But, Mr. Loring, you have my best wishes."....

The Best Berry-Pickers.

I notice a statement in the Tribune of July 20th, that P. T. Quinn considers "boys" very unsatisfactory strawberry pickers. This agrees with my experience, and for several years I have refused to employ them. Women and girls are far more faithful berry-pickers, and are more easily managed. Another peculiarity I have observed is, that those who need money the most are the poorest workers, being as a rule, unsteady, shiftless and always ready for a strike. My best pickers own a house and lot; while the very best have money besides in the bank. I suppose that poverty is not the cause of laziness, but that laziness causes the poverty. NELSON RITTER.

Onondaga Co.

What Others Say.

OUR DOCTORS.—Speaking on this subject, the Journal of Chemistry says that the disadvantages under which the public rest in their relations to physicians are numerous and positive, and it is not easy to see how they can be fully removed. A coarse, vulgar charlatan is easily detected by persons of ordinary intelligence and sagacity, but even such manage to thrive in many communities not distinguished for ignorance or credulity. The low, unlearned quacks are bad enough and numerous enough in every community, but they are not always the most dangerous class that presume to prescribe.

OUR legalized schools of medicine turn out every year scores of young men who are no more competent to practice the healing art than they are to use the brush of the painter or the chisel of the sculptor. They go out into the world under the cover of a "diploma," a sort of license of a supposed respectable character, which raises them above the plane of the recognized quack, and gives them standing in the community. These men are more dangerous than the vulgar charlatans, because they escape, to a larger extent, public scrutiny and suspicion.

A PHYSICIAN of the highest order, says the Journal, is the man who is great in emergencies, who is keen in discernment, cool in judgment, sagacious in expedients, assuring in demeanor, kind in counsel. The great physician is one who relies but little upon medicines, little upon dosing, little upon specifics. He realizes that if a cure comes nature, in nine cases out of ten, must have the credit.

LIME IN AGRICULTURE.—Mr. Stewart speaks, in the N. Y. Times, of the Use of Lime as a Fertilizer. Lime is the most conspicuously active substance known to the farmer in operating upon inert matter in the soil, and is directly a most important constituent of all plants. The almost universal presence of lime in the soil is shown by the so-called hardness of the water.

LIMESTONE consists of 56 per cent. of lime and 44 per cent. of carbonic acid. The stone burned in kilns is deprived of its carbonic acid, loses nine-twentieths of its weight and becomes the hot, acrid, alkaline substance which we know as lime. Freshly burned lime will absorb and unite with one-third its weight of water without appearing the least moist, and in thus combining produces violent heat, sufficient to inflame wood, and falls to a fine powder, swelling to three times its original bulk. This powder is hydrate of lime, or caustic or quick lime.

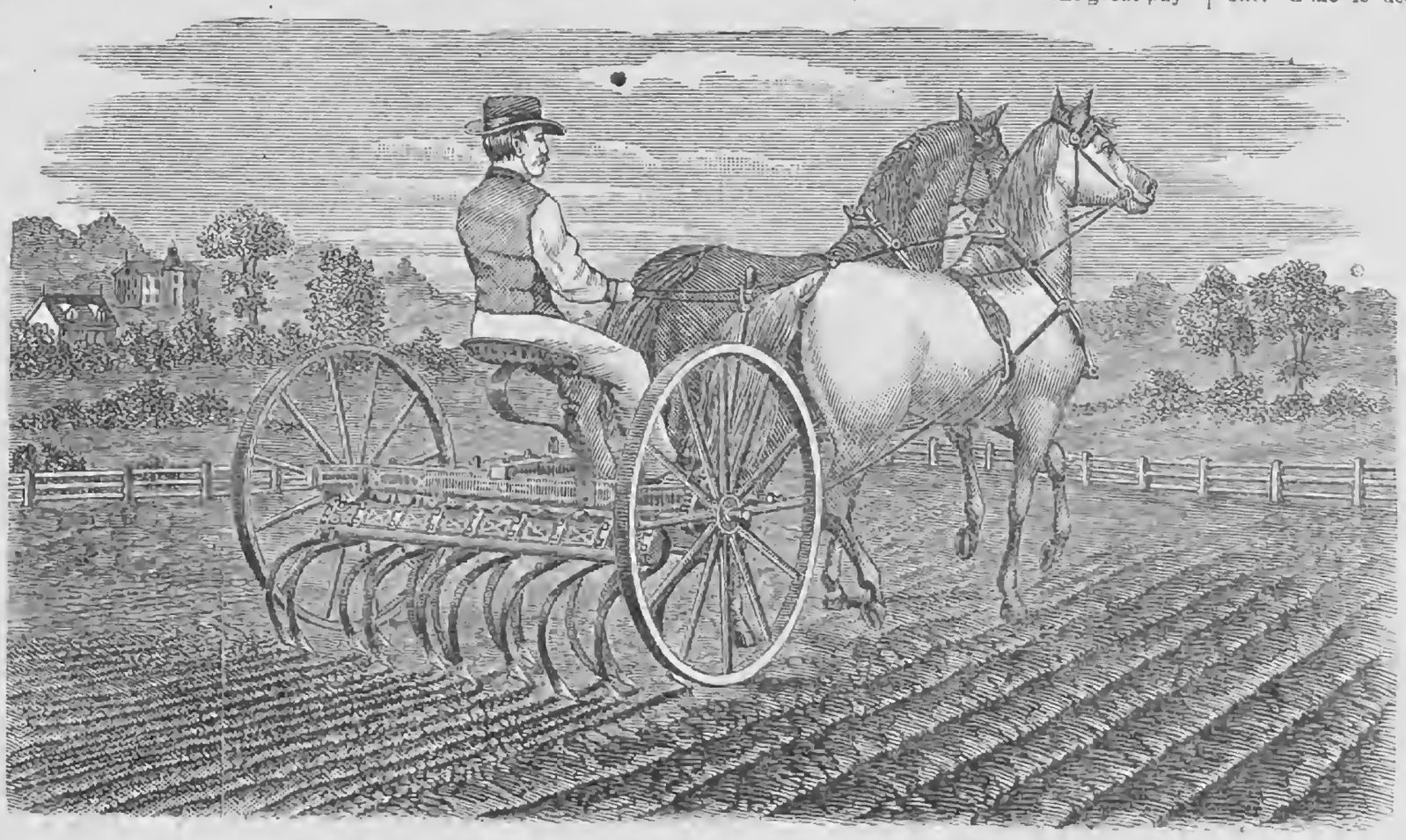
CAUSTIC lime is of the greatest value in the soil. It rapidly decomposes organic matter, separates the nitrogen from it, and causes very effective nitrification; it makes the other elements soluble and available as plant food, and supplies in itself a needed food for plants. It also has a very energetic action upon the mineral elements of the soil; it makes the limestone (the almost insoluble carbonate of lime) itself more soluble; it separates potash from clay and sand, in which it exists as a silicate, and sets this useful element free for plant food. It loosens the texture of heavy clays and binds together loose sands, and thus improves both of these soils and makes them more easily and effectively worked. Of such varied and effective value is lime to the farmer.

THE methods of using lime are two, and in each of these it is indispensable. One of these is by direct application to the soil by top-dressing and the other is in composts. When lime is to be spread upon the soil it is first slaked. This is effected by causing it to absorb water to the extent above mentioned, when it becomes a fine powder or dust. It is then easily spread over the soil by means of a shovel. The quantity used varies from 10 or 15 to 40 or 50 bushels per acre. The method of application is as follows: When the land has been plowed and harrowed the first time, the manure is spread and covered with a light furrow; the lime previously air-slacked is spread upon the field as evenly as possible from a wagon, and with a long-handled shovel.

LIME is of the greatest value in composts. Pure swamp muck contains from two to four per cent. of nitrogen, which, if it were available, would make it worth from $10 to $20 a ton, equivalent to a value of many thousand dollars for an acre of muck two or three feet deep. If this inchoate but inherent value of muck can be made available, it can be best done by the aid of lime in the compost heap, and a ton or 40 cubic feet of the muck, composted with four or five bushels of fine air-slacked lime, with a little stable manure as leaven to start the fermentation, might possibly be made worth the sum stated.

This subject is a pertinent and timely one. Lime is used in some localities with the greatest benefit in others its use is unknown. It has been said of localities in which handsome and fertile farms fine orchards, houses indicative of comfort and contentment, barns bursting with plenty, fine horses, handsome and sleek cows, and other signs of thrift abound, that "these farmers lime their land." And the remark is generally justified. It has also been said, *per contra*, that "lime enriches the fathers but ruins the sons." But this is properly to be interpreted as casting whatever blame there may be on the fathers, and not upon the lime, for it is a part of good farming to use the proceeds of the land, in part, in maintaining its fertility, and if any agent, as lime, is capable of enriching one generation, those who squander so generous a gift are alone to blame, and not the agent. Lime has its valuable uses; it is the good farmer's business to use it with understanding and good judgment, so as to permanently improve the condition of the land and not as a means of exhausting it as rapidly as possible.

BLACK WALNUT LEAVES AS A REMEDY FOR DIPHTHERIA.—Dr. C. R. S. Curtis, of Quincy, Ill., reports, in the Boston Medical and Surgical Journal, results of the local use of a decoction of leaves of Juglans nigra in diphtheria. The remedy was chiefly employed as a gargle, or applied with a swab to the throat and fauces. A poultice of the leaves was also resorted to in some instances. Dr. Curt



THE NEW BUCKEYE STEEL SPRING WHEEL HARROW AND CULTIVATOR.—FIG. 417.

adopted the practice in consequence of the recommendation of Prof. Nelston (in his "Elements de Pathologie Chirurgicale") of the Juglans nigra as a remedy in malignant pustule. The use of the gargle was unattended by discomfort, no patient objecting to it; and improvement in each instance was rapid, the œdema subsiding, the ash-colored spots disappearing.

BASSWOOD TREES FOR HONEY.—For a number of years we have been advising farmers who keep bees to plant basswood trees in every available place for the purpose of furnishing pasturage for the little honey gatherers. Honey gathered from the flowers of any of the numerous species of basswood or lindens—as they are known by both of these common names—is equal to that obtained from the White Clover, says the N. Y. Sun, and there is no good reason why the farmer should not provide pasturage for his bees as well as for his cattle. The European basswoods come into bloom at an earlier age than our American species, and produce flowers in greater abundance, and for this reason are preferable for supplying the bees with honey; but all species are excellent for this purpose.

THE Rural Home says that the multiplication of machinery in farm operations renders it quite important that young farmers should study mechanics, and if afterwards they should spend a few months in learning the machinists' trade they would be better qualified for their business.

THE SPIRIT OF GAMBLING, Gov. Seymour says, is the greatest evil our farmers have to contend with. Take hops, for instance. That is an extreme case. More men have been ruined by holding their hops for higher prices, when they could have sold at 30 cents a pound, than have been hurt by selling in season when the market ruled at 10 cents a pound. So with wheat. Farmers are always holding out for higher prices. This peculiarity seems to be confined to the native or American farmers, and that is the reason why they are put at a disadvantage when they have to compete with German and other foreign-born farmers, who sell whenever they can realize a fair profit. Not until the American farmer rids himself of the gambling mania can he compete on terms of equality with his neighbors abroad.

WE find the following in London Truth:—"One of the strangest farms in the world is the gigantic terrapin farm of Mr. Dorton, in Alabama, which is stocked at present with 20,000 head of turtle, that are reared and fattened for the New York market. They eat nothing in Winter, and they can be fattened on crabs in Summer, at a cost of a dollar a dozen. Mr. Dorton sells them at a dollar each in New York. Yet we have to pay a guinea a quart for turtle soup!"

WHEAT FOR LAYING HENS.—The Mark Lane Express (London) says that an American writer says that as chemical analysis proves wheat to contain more albumen than any other grain, it should be the foundation of egg production. If the white of a hen's egg contains 12 per cent. of albumen, it is certain she cannot produce so many eggs from food which is deficient in albumen. On the other hand, it is not so useful as maize for flesh and fat-forming—thus, while one food is useful for laying fowls the other would appear to be more valuable for fatting for market. There is, however, something else to be considered, viz., cost. Wheat may be better than maize, but the question is—Is it better at the price? If wheat is 50 per cent. dearer than maize, weight for weight, does it contain 50 per cent. more in feeding value? If not, it is not so cheap.

THE English say that the relation of friendship between England and the United States was never so strong as it is now, and that all things are now even. Yet England accuses us of sending dynamite, infernal machines, potato bugs and trichinæ, all of which are not half as bad as the English [sparrows.—N. Y. Herald. . . . . The Detroit Free Press wonders why it is that when a pedestrian is drenched by a basin of water from a fourth-story window he always wants to whip somebody who lives on the first floor. . . . . "If ever I deliver another agricultural lecture it will be on 'The Farmer as a Gambler,'" says Gov. Seymour. If all gambling in farm products could be stopped, it would be a consummation most devoutly to be wished for. . . . . A Michigan farmer tells the N. Y. World that to kill Quack Grass he plows the land early in the season and cultivates often, so that no grass can grow. He does not cultivate the land deep at first, but cultivates shallow and often. "This," the editor of the World remarks, "is not in accordance with the general opinion. Most farmers advise deep plowing in addition to repeated cultivation as the only true remedy." It is just in so doing that they make a mistake. We rid a field of Quack at the Rural Farm by giving it the cultivation which the crop should always have—but the cultivation is shallow. . . . . Beecher says that Hades is a state rather than a place. Jersey, we'll bet.—Turner's Falls Reporter. . . . . A man need not flatter himself on everything about his house being as regular as clock-work, simply because he buys everything on tick. Unlike a clock, he will run down when his affairs are wound up.—Boston Transcript. . . . . Longfellow says:—

"Joy, temperance and repose,
Slam the door on the doctor's nose."

. . . . . We heard of a conscientious cow, once, that always made a point of filling the pail, turning her head to see. A wicked man one day milked her in a pail that had a hole in the bottom; the pail did not fill; the cow saw this and fled; she was hopelessly insane ever after. This is the sort of cow we should like, without the insanity.—English Live Stock Journal, *via* N. Y. Tribune. . . . . Mr. Hovey pronounces "the golden Pocklington" as large and handsome as a Golden Hamburgh, as rich and transparent as a Thomery Chasselas, and quite as sweet; and this, with the black Concord, the red Brighton, and the amber Rebecca as the four finest grapes sufficiently hardy to stand 20° below zero. The Pocklington, comments Mr. J. J. Thomas, is a fine grape when ripened into October, but he could never place it quite so high as the above estimate, and he would add to the list of fine American sorts such grapes as the Delaware, Duchess, Niagara, Prentiss, Jefferson and a few others. . . . . The Husbandman says pork slightly tainted may be saved from further harm by putting pieces of wood charcoal into the brine. Use freely according to the degree of taint, and offensive odors will be absorbed and decomposition arrested. . . . . We find the following good item from Harris's Talks on Manures in the Elmira Husbandman: One ton of good bone dust contains about as much nitrogen as 8½ tons of fresh stable manure, and as much phosphoric acid as 110 tons of fresh stable manure. But one ton of manure contains more potash than five tons of bone dust.

Everywhere.

NOTES FROM SOUTHWESTERN VIRGINIA.

To the people of the North it is not easy to believe one can feel as much at home in the South as he really can, and little can they realize the great pleasure that is born of so mild and pleasant a climate. To tell them that here, save along the creek or river bottoms, there is far less annoyance from insect pests, such as mosquitos, gnats, etc., than is usual at the North, is often considered a mere allurement to settlers; but all through this intensely hot Summer we have lived with windows and doors open both day and night, and only the common house fly has troubled us, although we have had no protection, such as netting, etc. In this respect we never passed a more pleasant six months than the past here.

It is only energy that is needed. Land is cheap, good, and easily worked—really the *best* I ever tilled, and I have seen most of the land from Boston to St. Louis and from St. Paul to Galveston. Storms are many degrees less in severity than in the Northern States. This region is not subject to the cyclones of the West. It is a comparatively new country; yet it has been inhabited for 250 years, more or less.

Since the close of the war in 1865, all is changed. The former condition of the people was based on the labor of the colored man; their present condition rests on the labor of each individual. The country has to be repeopled and as these will come from the "land of vim" there will be an entire change. The choice farms (lands that can and will be made such) will change from the present dilapidated condition to that of the orderly and productive possessions of the Yankee land, and the $10-land now begging for an owner, when properly cultivated will have as high a reputation as the Genesee Valley of N. Y., or the famed Lancaster Co., of Pennsylvania. I have seen them all, and know of their worth and character, and believe these lands, especially here in Chesterfield Co., will, a decade hence, be appreciated, and sought for, and eventually take a *front* rank even above those named. It requires light tools, fine-toothed cultivators, rakes, plenty of fertilizers, and continued attention to produce the highest results; but the returns will well repay all the needed outlay. [Strange, isn't it? that, as a rule, it is the richest land, in the most delightful region, and among the most charming people, that is for sale! Eds.] The old way of "plowing the corn," "hacking weeds" with a three or four-pound hoe and the various other antediluvian methods will soon be memories only. Health, one of the most, if not *the* most important point to be considered in selecting a new home, is found here in perfection. The best of water is not far from the surface, while much of the land abounds in excellent springs.

It is necessary to have a small fund to live on during the first year. Don't hurry to buy. Come and look. Take no one's word. Choose for yourself; buy of the owner if possible. Better stay a season and look around than buy too carelessly. There will always be found more or less fever and ague along rivers; but none on the rolling portions. I will add I have no land for sale nor am I interested in any. I am only a home-seeker, but I like the country better than any other I have seen and intend to stay the rest of my life in the South. The cold North has no charms for me, though it is my birth-place and where I have spent nearly 50 years. The South is the "coming" land for home-seekers. Life and property are as safe here as in any portion of the North or West. Churches, schools, stores and all that a Northern settler should want are here, though often in a different shape from what he might have expected. We hear the news from all points of the globe as readily as in New York or Ohio. It is a "Sunny South;" yet the heat is no more intolerable than at higher latitudes. Two crops can be grown per year: so if the first one is a failure there is plenty of chance for another. The advantages of this region can only be appreciated when one has had personal knowledge of it. [While willing to permit our correspondent to give his early impressions of the country, we would attach more importance to what he says of it, if he spoke from a personal experience of a few years.—Eds.] It must be remembered that this portion of Virginia has been settled and worked, and that the soil has been more or less drained of its fertility by the wasteful and careless culture of the disinterested laborer for over 200 years. Where else can a soil be found, that, under such treatment, would be capable of producing even pines? but here a quick and strong growth of both pines and hard wood immediately succeeds the close of culture. This is the home of the grape. Wild ones produce very large berries and grow everywhere. Strawberries and blackberries (cultivated) are always a sure and plentiful crop, while whortleberries of some three or more sorts grow at every turn. I care not where one may go there will not be found anywhere more good points in one location than can be here met with.

Chesterfield Co., Va. A. Q. M.

RURAL SPECIAL REPORTS.

Arkansas.

GRAND PRAIRIE, Near Carlisle, Prairie Co. Aug. 5.—When so good and widely read a paper as the RURAL NEW-YORKER publishes such an article as that from "Arkansas" in the issue of July 30, it requires special notice. Mr. H. B.'s three years' residence has not fully qualified him to be a reporter of the State. The fact is there is not on the face of the globe a section at this latitude which produces more corn and oats per acre than this, if any attention is given to cultivation such as the soil and climate demand. Every variety of grape, sweet potatoes, peanuts, melons, early peas and strawberries are No. 1. Tobacco does finely, as do broom corn, sorghum, beans, etc., etc. The White Mulberry grows luxuriantly, and undoubtedly the raising of silk-worms would be a first-class success. While it is generally considered good, successful farming to produce from half a bale to a bale of cotton to the acre, Arkansas has rich bottom lands that always produce a bale to the acre, along the rivers which are numerous, four large navigable ones crossing the State. It has a great number of beautiful prairies which produce large quantities of good hay that is cut, baled and shipped, being considered nearly as good as Timothy. A kind of grass called Crab Grass in this locality grows up after oats and makes excellent feed and hay worth $8 per ton. I milk a cow (a Short-horn brought from Michigan) and she gives more milk at a milking than she did North. The fact is people that come from the North, as I did, are apt to demand things that are quite unreasonable in this climate; for instance, an average of from 20 to 30 or 40 bushels of corn per acre so far South of the grass and corn belt of the Northern States; and yet in this vicinity there are many places that will yield nearly that quantity. The soil is a fine compound of fine silicate, alumine and sedimentary vegetable deposit. This country is about one-half occupied by people from the North—Iowa, Illinois, Indiana, etc. The other half are native-born or from the States further east, and they are, many of them, colored. West of the center of the State there are fine mountain ranges, valleys and clear streams; here we get water that is good at from 30 to 40 feet. J. A. J.

Canada.

PERTH COURT, Ont., Aug. 6.—Crops as a rule in Canada are much better than was expected. The severe Winter killed out much of the Fall wheat, but what is left is of excellent quality and a good yield. Spring wheat has been to a great extent given up, but yields exceedingly well this year where grown. Barley and oats are heavy; and a very fine sample. Peas, owing to the bug, have been mostly given up. Roots have improved since the late rains and will average nicely. Fruit of most kinds is a failure. The potato bug was never so plentiful or so destructive. C. M. Y.

Connecticut.

NAUGATUCK, New Haven Co., Aug. 6.—Grass was a full average and very fine. Corn promises a full crop. Rye was extra-good; so were oats. Potatoes promised well till the present week; the rot has appeared on many vines. Apples are scarce. Blackberries were mostly winter-killed; other small fruits are plentiful. Pears are a large crop—equal to that of 1879. Quinces were destroyed; something eats them and eats off small twigs also; yellow fungus begins on the stem and destroys the quince. H. N. W.

Kansas.

EDGERTON, Johnson Co., Aug. 5.—I have thrashed my wheat and it only made eight bushels per acre—I expected 15 bushels. The wheat crops of my neighbors have turned out about the same; and so will all those in this section—on thrashing, wheat will yield about half as much as was estimated in forecasting the harvest. W. F. JR.

Kentucky.

WILSONVILLE, Spencer Co., Aug. 3.—Our wheat is very light; oats very good; rye ditto—very little sown. Potatoes excellent. My Beauty of Hebron is large and fine and will yield more than the Early Rose. My Argenteuil Asparagus came up nicely and did well, but R. B. S. did not follow its excellent example. My oats did, however, and the flowers, pinks, etc., have just begun to bloom—they are beautiful. We appreciate our RURAL seed very highly. J. P.

Missouri.

PLEASANT MOUNT, Miller Co., Aug. 1.—We have had a spell of very hot, dry weather curling up the leaves of corn and damaging late corn and all kinds of garden vegetables to a considerable extent. Wheat thrashing has fairly commenced and so far the yield is very poor, being from three to eight bushels to the acre while the quality is equally poor. Oats yield better, but the grain is light, weighing about 25 pounds to the measured bushel. Corn that was planted early and well cultivated is very good, while late corn will amount to nothing unless we have a good rain in a short time. A few farmers who lost their wheat by chinch bugs plowed up the ground and sowed buckwheat which seems to be doing very well. Potatoes are not doing well—too many bugs and too little rain. In short, there seems to be a general failure of all kinds, no crop of any kind making a full average, unless we except grass. The chinch bug has damaged wheat, corn and oats to a large extent. I hear of a few cases of cholera among hogs. N. J. S.

Montana.

STEVENSVILLE, Missoula Co., Aug. 3.—The Telephone Peas and the Washington Oats appear to be grand acquisitions. I would not take five dollars for the oats I will raise from this year's sowing. R. P.

Nebraska.

ALBION, Boone Co., Aug. 4.—Harvesting is in progress. A very poor crop of wheat. Oats pretty good. Corn magnificent so far. Potatoes, a fair yield. W. F.

New Jersey.

COLUMBUS, Burlington Co., Aug. 4.—I have dug my Elephant Potatoes and got 21 pounds. My Washington Oats yielded three pounds. My Argenteuil Asparagus came up finely and now stands eight inches high. It has been too dry for the R. B. Sorghum; what is standing looks pretty well. I had 20 grains of "Golden Grains" wheat sent to me last Spring, and out of the 20, 18 sprouted. They were sowed on March 2, but owing to the drought the ears did not fill very well. I think it would do best as a Winter wheat. I have one-fifth of an acre of Marvin Strawberries from which I picked 514 quarts. They were the finest berries grown around here; some of them measured six inches in circumference. I have set out about an acre for next year; they are looking fine. I have tried them on three different kinds of soil and find they do best on that which is light with clay bottom. C. C.

North Carolina.

HENDERSON, Vance Co., Aug. 2.—Hot, hot and dry. Corn can hardly recover. Cotton suffering. Grapes ripening rapidly; Ives will all go forward this week; Concords close on their heels. P.

The Querist.

ANSWERS TO CORRESPONDENTS.

The Healthfulness of Manure Cellars.

S. L. Sharon Center, N. Y., says: "Intending to remodel my stables with a view not only to make but to save manure as well as to avoid

the labor of carrying it out by hand, I propose to keep my cows over the basement or cellar so that the liquid and solid droppings can find their way below together, which, I think, will be the easiest way to keep the stables clean; but here I am met with the objection that the manure cellar will make the stable overhead unhealthy for cattle, and my object in writing to the RURAL is to learn whether this is the truth from those who have had experience in this mode of stabling cattle.

ANS.—There is no possible objection to the use of a manure cellar on the score of healthfulness, if proper arrangements are made; and there are many advantages arising from it. A description of the writer's manure cellar may serve to answer fully all the points of the above inquiry. It is under the cow stable and is eight feet deep, placed on sloping ground, so that the cows enter the stable from a level surface and a manure wagon can be backed into the cellar to take out manure at the other end and at the side through wide doors. The cellar wall is of brick and stone, and the floor is not cemented, and is kept covered with swamp muck and other absorbents to take up the liquid. The floor above is double plank, with joints broken. The manure falls into a gutter behind the cows and the gutter has two trap-doors through which the manure is drawn with a broad hoe into the cellar. All the liquids are saved. The cows have a dry, clean bed always. No smells come up from the cellar, as it is thoroughly ventilated by the two doors and two open windows. Plaster is always scattered over the floor and gutter when the manure is cleaned out, and this absorbs all the bad odors. There is less odor about a stable so kept than in one where the yard adjoins it, and the cows have to tramp back and forth through the manure piles. With a manure cellar the yard may be kept clean and well littered, and be made as free from smells as the stable.

Salt for Stiffening Straw.

W. W. P., Karnett, Kansas, having some ground on which the wheat lodges every year, asks whether applying salt to the soil would be likely to stiffen the straw.

ANS.—The general experience is that the application of salt to wheat stiffens the straw, brightens the berry and increases the yield. It has been found, however, that it has little or no effect near the sea-coast, probably because enough of it is carried on the air to the soil in such places. Spring is the best time to apply it, and five bushels per acre are usually sown. Even in inland regions its effects vary greatly according to the needs of the soil. For ourselves, we have found little or no benefit from salt on the Rural Farm, although the air is often so laden with it that it can be tasted on the lips. It has been supposed that salt prevents rust on oats, wheat, etc., yet it certainly has not had this effect on the Rural Farm. Our friend's land may be too rich, or lacking in silicates—a rare thing—or it may need some special fertilizer. It might be well to apply salt, at the rate of five or six bushels per acre, on one part, and on another bone flour, at the rate of 600 or 800 pounds to the acre. Perhaps some of our friends who have had trouble under like conditions may give us the result of their experience.

Using Hen M

A. B. K. Mt. Holly, one of the six in the country—having collected from his neighbors about 200 bushels of hen manure, and wishing to drill it in with wheat, asks how much it should be adulterated so that the seed may germinate, and also with what should it be adulterated. He has plenty of good marl, and would like to know whether it would be an advantage to mix the dung with land-plaster or salt.

ANS.—We would prefer to mix the hen manure with dry earth or coal ashes—about four parts to one of the manure. Dry muck, however, where obtainable, is the best thing with which to mix it. Let the mixture lie in a heap until it heats; then work it over and mix more, repeating the operation until the dung is mixed with fully four times its weight of muck, which will probably be eight times its bulk. When hen manure is drilled with any seed, there is much danger that it will "burn" the seed, unless it is greatly diluted. It is always safer to have a thin layer of soil between the manure and the seed. Land-plaster, salt, etc., had better be spread separately,

Raisin Grapes.

A. C. Somerset, Md., asks whether the raisin grapes of California will succeed on the Atlantic seaboard.

ANS.—The raisin grapes all belong to Vitis vinifera, or the foreign class, and all the varieties become hot-house grapes upon our slope of the continent. They are of little value for general out-door culture here; they differ from our native grapes in being larger, more meaty, and of firmer pulp, which adheres more to the skin, and less to the seeds than in our grapes. There is no good raisin grape among our native classes or their varieties. Some of our specialists are working in this direction, but the meaty characteristics required for a satisfactory raisin grape not being found in any of our sorts, it will require many years of special development to produce such a variety.

Egg Plants, etc.

J. P. H, Mt. Repose, Ohio, asks how to cultivate the Egg Plant; he has tried it for two seasons without success. As soon as the plants are growing nicely, small black flies infest the leaves, causing them to dry up soon. He has fought them in vain with ashes, plaster, soot, etc., and even with diluted carbolic acid; 2, how to get rid of pennyroyal in wood pastures.

ANS.—1. The seed should be not more than one year old. Sow in drills three inches apart, in hot-beds, from the 15th to 20th of March, and when the plants are two inches high transplant them into another bed, setting them two inches apart each way. Protect the sashes at night with straw mats till the weather is warm. Avoid opening the sashes until an hour or so after removing the mats, so that the plants will not "damp off." Transplant to the open ground about May 30. Soil should be deep, rich and well tilled. Set the plants three feet apart each way and sprinkle bone-dust or superphosphate around the roots. Keep the ground free from weeds. The New York Purple is the best and most productive kind. The aphides, or lice, may be destroyed by the use of the atomizer, which is now sold by many seedsman. Use tobacco water the color of tea. 2. We presume you mean the American Pennyroyal (Hedeoma pulegioides). The root is annual, so that if the seeds are collected for a single season there can be no more trouble.

Miscellaneous.

E. M., Darlington, Pa, asks, 1, for a plan of an "evener" for three horses hitched abreast on a wagon tongue so that the draft may be equal for each horse; 2, treatment for a two-year-old colt which has lately been afflicted with farcy, which has dried up now, leaving the animal stiff in the hind-quarters, affected apparently in the liver, with scant urine of a light yellow color; 3, will the R. B. Sorghum be more likely to ripen its seed if the suckers are removed; 4, should clover seed be sown with wheat and Timothy.

ANS.—1, Just such eveners were described and illustrated in the RURALS of March 26, page 209; April 2, page 225, and June 4, page 367, and we refer our friend to either one of them. 2, Give the horse 12 ounces of Epsom salts; repeat after three days. Then give one ounce of hyposulphate of soda daily for a month. The blood is diseased and an early cure cannot be expected. Give bran and linseed washes occasionally and no corn. Avoid musty or smutty fodder or grain very carefully. 3, Probably not. 4, We prefer to sow the clover in early Spring and harrow it in.

C. W., Corning, N. Y., has a cow which about six weeks ago began to have a thin watery discharge from the nostrils. Later the discharge become thicker and darker, and then bright yellow tinged with blood. The poor beast delights in rubbing her nose against anything, and a stake which she can run up her nostrils for from one to six inches is a godsend which she greets with a snort of satisfaction. She is falling of her milk and the "male old grannies" there say, "hollow horn" is what's the matter with her, and our friend asks what really ails her and how to cure the ail.

ANS.—The description of symptoms does not allow of a diagnosis. We should think it was "nasal catarrh" and would advise fumigation, with tonics twice a day; also a liberal supply of salt and generous feed. We would like a fuller description of the symptoms of this case before venturing any further advice.

W. F., Albion, Neb., says squash and pumpkins are thereabouts suffering from a white grub about an inch long, with a black head, that enters the vines near the ground, and he asks its name and a remedy for it.

ANS.—It is the larva of the Squash-vine Ægeria, first described by Harris in 1828, under the name of *Ægeria cucurbitæ*. This grub or borer perforates the stem of the pumpkin and squash plants near the ground and devours the interior. It becomes a winged insect the second year. A teaspoonful of saltpeter dissolved in a gallon of water, and a pint poured on each hill, is said to "do the business."

M. A. H., Westfield, Mass., asks how can clippings from Arbor-vitæ be made to root, and how far apart should the plants be set.

ANS.—Cuttings of the Arbor-vitæ root readily. Cut them into six-inch lengths and plant them firmly in mellow soil in a cool, half-shady place. Or the cuttings may be placed in sand-boxes, kept moist and cool. Three or four inches apart according to the size of the cuttings. Other questions will be answered next week.

J. A. R., Wardena, Ia., sends for name specimen of a grass that has lately appeared in that neighborhood.

ANS.—This is common Crab or Finger Grass—Panicum sanguinale. It is an annual, producing such quantities of seed that it sows itself—a very valuable grass for pasture. Horses prefer it to almost any other. It is valuable also as giving a green nip after clover fields are cut and the stubble parched, as is often the case from drought.

R. T., Ulster, Pa., sends specimens of a grub for name.

ANS.—It is the larva of the common May beetle. The eggs hatch in about four weeks after being deposited, and the grubs grow slowly until the Spring of the third year, when they are transformed to the beetle state. They infest grass the worst and such crops as the potato and strawberry. These should be planted on land that has not been to grass for at least two years. No effectual remedy is known.

R. P., Stevensville, Montana, says he was surprised to read, in the RURAL of July 16, "Sow buckwheat generally three bushels to the acre," and he asks whether that isn't too much. He sowed five bushels on ten acres and the stand was too thick.

ANS.—The oversight was corrected on the editorial page of the next issue—July 23—having been detected too late for correction in the issue of the 16th. Pecks were intended.

R. A. Pine River, Wis., asks what kind of wheat would be the best for his neighborhood—Lost Nation, Russian or Fife.

ANS.—Fife is a hard wheat and rates No. 1 in the markets, bringing the highest price. Lost Nation and the Russian wheats are soft and have a bad reputation among millers; although they are growing in favor with farmers because they are generally more productive than the harder varieties.

A. O., Westover, Md., asks what is the difference between agricultural lime and stone lime.

ANS.—There is no difference, except that the so-called "agricultural lime" in Maryland has been air-slaked by exposure to the weather. As in slaking, lime is greatly increased in bulk, a bushel of fresh stone lime is worth twice as much as one of the common powdery "agricultural lime."

F. T. J., Mt. Oscar, Canada, asks, 1, for the name of a book on cider and apple vinegar making; and, 2, one on bee-keeping.

ANS.—1. The Cider Maker's Manual, by J. S. Buell, published by Haas & Kelley, 198 Main St., Buffalo, N. Y. Probably $1. 2. Cook's Manual of the Apiary, $1 25, published by T. G Newman & Son, Chicago, Ill., is the best work on bee-keeping.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, AUG. 13.

E. A. P.—E. M.—W. H. A.—G. S. J.—D. S. M.—H. S.—C. C., thanks for "Golden Grains."—L. B. A. (Fair No.)—G. W. F.—E. W., reserved to accompany illustration.—C. C.—G. S., we are always thankful for drawings of labor-saving implements.—J. B. V. Wheeler, we are always happy to answer any questions without compensation of any kind—unless, as it sometimes happens, we receive a greater number than we can attend to or find space for.—W. J. V.—W. F. B.—J. A. J.—N. J S.—W. F. H—W. B. H., Mobile, Ala., thanks; we fear it is too long for Fair No.—E. A. P.—H. A. C.—F. H. S—P. B. M.—W. F. K.—W. W. T—C. E. P.—W. W. P.—F.—T. T. L.—T. B. H.—H. A. W.—J. R.—O. J. C.

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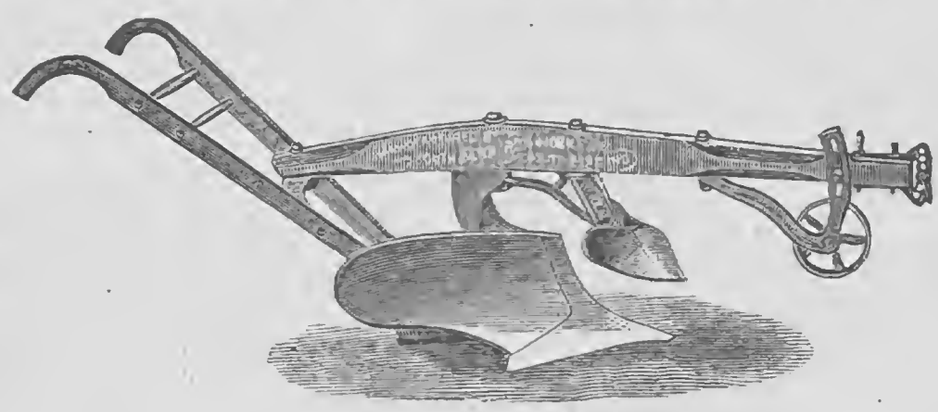

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Conducted by
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SATURDAY, AUG. 20, 1881

WE HAVE received a hundred or more samples of wheat sent in competition for our wheat premiums, which cannot be placed with the letters of those sending them. It seems that our requests that names and addresses should be written on the parcels, have been overlooked or forgotten. We regret that so many have thus been deprived of their chances in the little contest.

FRIENDS are now invited to send for the Fair Number, which will be dated September 3. The Wheat Number will immediately follow the Fair Number, and the prizes for the best heads of wheat will be announced in it as originally intended. We have received many beautiful specimens, which we wish our readers might have the opportunity of examining.

WE ARE NOW, from further observation, fully convinced that the tomato rot is caused by the tomato worm. This green, reptile-looking pest often turns from the leaves to the young tomatoes, eating a part of the flesh and then returning to the leaves. The injured portion of the tomato soon turns black and rot commences. Every instance of rot among our tomatoes, the present season at any rate, has been thus caused.

THE SOJA BEAN is being tested at the Rural Farm. It is growing in very poor soil and grows thriftily. It is now about two feet high, with many hairy leaves and upright stems. We have given it to our cattle and horses and they eat it with a relish. This plant has been praised by Prof. Cook as highly nutritious, and as promising to excel the Cow Pea, both for fodder and as a renovator for worn-out lands. We shall tell the whole story later as it reveals itself at our farm.

WE ARE glad to receive many favorable reports as to the Russian White Oats which were extensively advertised and sold during the past season. Their early growth, it will be remembered, at the Rural Farm, was not such as to inspire us with much hope as to a heavy yield. In this we have been happily disappointed. They ripen later than most kinds which bear spreading panicles—as late, indeed, as Mold's Ennobled Oats sent out several years ago in the RURAL'S Distributions. We shall give a more definite report when we come to consider our oat experiments.

FARMERS are frequently induced to sign promissory notes in payment of wire fences, lightning rods, patent rights, etc., on fraudulent representations, and there seems to be some difference of opinion among the judges in different States as to whether these notes can be collected. The other day we recorded an adverse opinion of a Wisconsin court, and now we learn that on July 19 a decision contrary to this precedent was rendered by Judge Adams, of the Supreme Court of Iowa, in the case of Scofield *vs.* Ford. The maker of the note admitted he had made it, but said it was procured from him by fraud. The Judge said the maker could not successfully defend the action on this account, as the plaintiff had purchased the note for value and in good faith before its maturity, relying on the promise therein set forth, as he had a right to do.

THE YORKTOWN NAVAL RECEPTION.

THE Secretary of the Navy has issued orders to the North Atlantic squadron to prepare for the reception of French visitors at the Yorktown celebration of October next. There is only one drawback to our making a grand naval display on that occasion, and that is, we haven't got any navy—or hardly any. We have an "elegant sufficiency" of naval officers, but if they ever wish to exhibit their proficiency in naval tactics, they will have to charter a few ferry boats and an old scow or two, to do it. And then what if we should have an occasion to go to war with foreigners? We pause for a reply! After all, a naval reception can just as well be held on land. The Frenchmen are kindly disposed and can haul their triremes up on the shore when they arrive and then repair to a hall somewhere when our Admirals, Commodores, *et cetera*, will be delighted to welcome them. All we wish is to create a good impression on our French naval cousins, and this we can best do at a distance from our "noble fleet," where their attention will not be distracted from the glittering tinsel and golden epaulets of our officers by our iron-clad monitors. (!) Then when the Frenchmen get ready to go home our officers can delegate some "middies" to kindly assist them in launching and they will go home with exalted ideas of the great American navy and its immense "reserved power."

GO TO THE FAIR.

There are a few farmers in almost every community who never attend their county or local fair, and of course take no interest in them. In pursuing this policy they are losers, though it would doubtless be difficult to make them think so. There is much for every intelligent farmer to learn at these fairs, and if he would keep abreast of the times it is his plain duty, rather highest privilege, to seize every opportunity which shall give him a more extended knowledge and a greater familiarity with everything that pertains to agriculture and horticulture.

At such times he can "compare notes" with his brother farmers and in relating his own experience with certain fruits, grain, etc., and in noting the experience of others with the same, he may impart, as well as gain, some useful hints which shall be of use in the future. There is no better place for such discussion and such "experience meetings" than at the fair. It also gives him an opportunity to examine the latest improved machinery and to get, on the spot, the unprejudiced opinions of his farmer friends, to guide him in purchasing for himself. There is machinery on exhibition every year, especially at our State Fairs, which some farmers would never see at all if they absented themselves from these exhibitions.

Not only should every one go to the fair but he should contribute, from his farm and garden products, in making the fair a success. Almost every one has something "unusual," some novelty which will add to the attractions, therefore we say to every farmer "Go to the fair, and do all in your power to support and to elevate it."

A PUBLIC BENEFACTOR.

WHAT Jenner did for the human race, Pasteur has done for the lower animals as Sir James Paget, one of the most renowned of England's great physicians, said in thanking the eminent scientist last Monday, in the name of the International Medical Congress now assembled in London. Pasteur's address on his latest researches in animal vaccination, delivered before the Congress, is, according to cablegrams, creating deep interest in medical as well as in agricultural circles because of the prospect it affords of reducing cattle diseases to a minimum. France, said the Professor, every year loses animals to the value of 20,000,000 francs by splenic fever, better known in this country by one or other of the names of the numerous forms of anthrax. As mentioned by us a couple of months ago, he has lately, after a world of experimenting, discovered a form of vaccine which protects the vaccinated animals, whether horses, cattle, or sheep, from splenic fever as effectually as Jenner's vaccination protects the human subject from small-pox. To publicly demonstrate its efficacy the other day he vaccinated twenty-five of fifty sheep placed at his disposal. A fortnight afterward the whole fifty were inoculated with the most virulent "anthræcoid microbe"—the infectious germ of anthrax. The twenty-five vaccinated sheep resisted the infection; the twenty-five unvaccinated sheep died of splenic fever. Small wonder that within 50 hours of that time his energies were taxed to meet the demands of farmers for supplies of the vaccine, or that within 25 days he and his assistants vaccinated more than 20,000 sheep and a large number of cattle and horses in the departments surrounding Paris. Two other kinds of virus attended with similar results have also been discovered by him, and all his experiments will soon be communicated to the public. So great a benefactor of the public deserves the thanks of all classes and all nationalities, and among the first we hereby inscribe ourselves, in our own name and that of the American agricultural community, the grateful admirers of Professor Louis Pasteur.

FANCY STOCK AT THE FAIRS.

WE WERE at an agricultural fair when a farmer and his young wife were passing some cattle pens where a herd of fine cows were on exhibition. "Oh John! do look at these beautiful cows," said the wife, arresting her husband and leading him to one of the pens. "Isn't she a beauty? What a bag she has; and what beautiful yellow skin. Why could we not have some cows like that." "Oh, come along," replied the young farmer, those cows are not for us; they are fancy stock only good for show."

There the young farmer made a grievous mistake. Everything to be seen at the fairs is for the farmer. But he must not be misled by the appearance of the animals on exhibition. They are made to look their best by every art of the breeder. The tails are often tied up at night in wet straw bands to make them appear thin, the horns are scraped and sand-papered and waxed; the hide is washed with colored water to make the skin yellow and the hair is washed and oiled to make it shine. The cows and bulls are fed plenty of rich feed and come to the show in "show condition." This is all reasonable and unobjectionable. A fair is intended to please by its attractiveness, and we expect to see everything put on its very best appearance. Besides it is important for farmers to see how fat beef stock, pigs and sheep that are intended for fattening purposes can be made, because this is the chief end for which this stock is kept and is valued.

But farmers should be informed of the real actual value of the improved stock exhibited at fairs. A difference in the yield of milk of four quarts a day, even at two cents a quart is equal to $24 a year, which is the interest at six per cent. on $400. A difference of 100 pounds of butter in a year is equal to the same amount. With ten cows, this counts up pretty fast. A pure-bred Ayrshire or Jersey cow will easily make this difference in the value of the yearly product, as there is no extra cost for the keeping, the increase is all profit.

THE PUBLIC DOMAIN.

IT SOUNDS a trifle sensational to say that at the present rate of settlement the agricultural portion of our public domain lying within the arable region, will be all taken up within three years. Yet that is precisely the estimate of the the Public Land Commission which has just completed its labors and made its report which cannot, however, be printed for public distribution until Congress shall have made an appropriation for the work. The Land Office tells us that in 1879 the surveyed arable agricultural lands capable of cultivation without irrigation or other artificial modes of watering and subject to entry under the Homestead Act, embraced not more than 25,576,960 acres made up of comparatively small sections in Wisconsin, Minnesota, Dakota, Nebraska, Kansas, Washington Territory, and Oregon and still smaller areas in some of the other States. In addition to this, the estimated area of vacant surveyed public land is 15,180,256 acres in the following Southern States: Florida, Alabama, Louisiana, Mississippi, and Arkansas. These are the only States for which there is a general act of sale according to which all these lands are open to private entry at $1.25 per acre, except some "mineral tracts" in the Huntsville and Tuscaloosa districts, Alabama. Altogether of surveyed and unsold public lands there still remain, it is estimated, 189,622,455 acres, most of which, however, is either "mineral" or "coal" or "timber" land, and therefore not included in the "homesteadable" area, or else barren land or land suitable for grazing, but not included in the "arable limits." The total area of public domain yet to be disposed of is estimated by the Land Office at 1,163,946,438 acres. This large estimate includes not only all the agricultural lands within the arable limit, as well as the public domain in the Southern States and the surveyed but unsold Western lands, but also the vast area of partially unexplored and totally unsurveyed land west of the Mississippi, including the 369,529,600 acres of Alaska. During the fiscal year of 1880, 7,000,000 acres of the public domain were entered for settlement, and at this rate of absorption it is estimated all available agricultural land within the arable region would be taken up before June 30, 1883; while the total area of unsold public domain would furnish 7,274,665 homesteads of 160 acres each.

BREVITIES.

THE Wall Street brokers divide themselves into two great classes—bulls and bears. There ought to be a third—jackasses.

OUR first page cut of Messrs. Engelman, Sargent & Skinner of last week, was re-engraved from the London Gardeners' Chronicle.

THE latest news respecting the President's condition, as we go to press, are disheartening. A poor night with continued nausea and a higher temperature is the gist of the report.

WE have received from a friend, a panicle of "Russian White" Oats which measures 18 inches in length and bears 122 spikelets. This is longer than any we have seen in our own crop.

IRRIGATION FOR THE WEST.—It is said that Commissioner Loring will form a commission of thoroughly skilled engineers and scientific men to consider the feasibility of artesian irrigation for the Western plains. He will do well to consider this. Large tracts of land worth millions of dollars may, by a successful method of irrigation, be rendered yet more valuable and productive. We imagine that there is no way the Commissioner can better work into the good graces of the farmers of the great West than this; so now is his opportunity.

PROHIBITION has been defeated in North Carolina by the negroes, by the very people for whom it would be the best. Under the influence of United States marshals and others for whose interest it is to make the receipts from the sales of liquor as large as possible, the negro vote was thrown against prohibition. The best element in the South was in favor of it, but as it happened the decision was made by the votes of those who had been deceived, and led to believe that prohibition meant that their rights as citizens were to be taken away.

SINCE the French decree issued last February against the importation of American hog products, there has been a falling off of from 12 to 15 per cent. in importations of American meats into Switzerland. Into the cantons of Berne and Zurich American meats are introduced only under invoices that make it appear they came from Germany, the local butchers having influenced the cantonal authorities to refuse admission to American bacon and hams, on the unofficial certificate of a private inspector. It is only in these two cantons, however, that any discrimination is made against American meats.

RECENT investigations show that the following is a fair statement of the degree to which the hogs of the various places mentioned are affected with trichinæ;—"Of native Swiss pork, one piece in 2 000 is affected; of pork from Berlin and northwestern Germany, one piece in 250; of Westphalian pork, one piece in 200. Among the hogs in Brunswick, one in 5,000 is affected; of those in Gotha, one in 1,800; in Schwerin, one in 550; in Kiel, Prussia, one in 200; in the Lower Rhine Valley, one in 100; and in some parts of Sweeden, one in 63. It seems that our government ought rightaway to prohibit all European importations of hogs and hog products—especially German sausages—in order to preserve our citizens from that dreadful *European* disease, trichinosis.

IN the case of Kimball *vs* Adams, tried before the Supreme Court of Wisconsin in May 10, the facts were these: Kimball had built a permanent fence by mistake on land adjoining his own. The land was sold by the owner to Adams who took up the fence and put it to some other use. When the fence was built there was no agreement as to its removal, and Kimball brought an action against Adams for its value as personal property. The Court, through Judge Cassoday, decided that the building of a fence upon land as a permanent structure, in the absence, of any agreement that it might be removed "will necessarily convert the material of which it is built from personal property into reality." The judge added that the fence in question having become a fixture and the title to it having passed to Adams with the title to the land, it followed that he had a legal right to pull it down and dispose of the material as he pleased.

THE RETURNING PROSPERITY and the promises of better times, have in a measure turned the heads of the public; and too many people are misled into the hope of making themselves rich at a stroke by some fortunate speculation. Does it ever occur to a speculator that no one ever made a dollar by any speculation, that some other person did not lose; that no value is added to any property by buying or selling it, and that the prices of most speculative property are utterly fictitious? We have no desire to "run down" railroad or mining property, or to make it appear that it is of no value, but it is a fact that is undeniable, that the greater part of the stocks that are dealt in by speculators have no basis of value at all; that the railroad stocks known as the fancies are overwhelmed with bonds and mortgages and that the greater part of the mines which are now especially favorite investments for speculation are "stocked" at amounts enormously greater than any real value that the wildest estimates could approach. But yet the sharpers who thrive by this business are continually engaged in inveigling farmers and country people into their nets of speculation, and fleecing them of their hard-earned money. The amount of money that is constantly flowing into the pockets of stock brokers is amazing. It is to be reasonably estimated at a yearly sum larger than the revenue of the United States government. It has contributed to the vast wealth of the so-called magnates of Wall Street, who sum up their riches by millions and some by scores of millions; every dollar of which has been made by no process of honest productive industry, but by speculations in which they have gained what thousands have lost.

Literary Miscellany.

OBSERVATIONS OF REV. GABE TUCKER.

You may notch it on de palin's as a mighty resky plan
To make your judgment by de clo'es dat kivers up a man;
For I hardly needs to tell you how you often comes ercross
A fifty dollar saddle and a twenty dollar hoss.
An', wukin, in de low-groun's, you diskiver as you go
Dat de fines' shuck may hide de meanes' nubbin in a row!

I think a man has got a mighty slender chance for heben
Dat holds on to his piety but one day out of seben,
Dat talks about de sinners wid a heap o' solemn chat
An' nebber draps a nickle in de missionary hat;
Dat's formose in de meetin'-house for raisin' all de chunes,
But lays aside his 'ligion with his Sunday pantaloons

I neber judge o' people dat I meets along de way
By de places whar dey cum fum an' de houses whar dey stay;
For de bantam chicken's awful fond o' roostin' pretty high,
An' de turkey-buzzard sails above de eagle in de sky;
Dey ketches little minnies in de middle ob de sea,
An' you find de smalles' 'possum up de be biggest kind o' tree! —Scribner's Monthly.

COUSIN FRED.

CHAPTER I.

DISCOVERY.

"This is the second time! It's singular, to say the least of it, let alone mysterious. Who can the little figure dressed in gray be? I'll not rest until I find out!"

* * * * * * * *

"Lucy, cousin Fred is coming down again to-morrow. Think of that! Why, he only left a fortnight ago. He certainly must find some particular attraction in old, dull Silverville;" and with a laugh the speaker took a furtive glance at herself in a looking-glass. "Nevertheless, I am awfully glad, aren't you?"

"Yes indeed; it's always a pleasure when cousin Fred comes," responded the young girl addressed, looking up from the book she was reading in the large bay drawing-room window of Silverville.

She was a quiet, graceful-looking girl of about eighteen, with delicate features; large, brown, thoughtful eyes; soft, plainly braided brown hair; unassuming, ladylike manners; and was neatly attired in a dark costume, relieved by snowy collar and cuffs and a becoming ribbon at the throat—altogether as great a contrast as could be to her handsome cousin, Linda Brand, the heiress, who was fair, with rather classical features; a tall erect figure; and a toilette as bright and pretty as the flowers on the lawn.

An only child—Linda Brand, spoiled from infancy, was proud of nature, petulant at times, and inordinately conscious of the prestige which the being an heiress gave her.

Lucy, on the other hand, was penniless: having been taken out of charity, when a little more than an infant, by her Uncle, Mr. Brand, and supported by him.

"How calmly you take it!" exclaimed Linda, with a movement of her pretty head, as she arranged the tiny flower-wreath about her white throat. "You're awfully ungrateful! I don't think you care for Fred a bit! Yet he's very kind I am sure, to you," in a condescending tone, which the speaker often used from habit in addressing her younger cousin.

Lucy Brand raised her head quickly; a delicate color was on her cheek.

"Not like cousin Fred!" she exclaimed; then coloring deeper, and as if ashamed of her earnest protest, she added, with a little laugh, "Of course I like him, Linda, but you would not have me care for him too much, would you?"—a laugh—"though, if I did, there would be little danger of his caring for me, would there?"

Linda laughed too, tried to look conscious, but failed. She had a score of lovers, and such innuendoes as Lucy's were familiar; though certainly as yet handsome cousin Fred had won her preference.

"No, there would not, I suppose, be much danger," she rejoined placidly; "but I never meant that. I've put you down, you know, for a curate; you are just the neat, quiet little person to go doddling among your husband's parishioners, darning his socks, and attending Dorcas meetings."

"Well, one might do worse," said Lucy quietly.

"Oh, of course! There's a place for everyone in this world. Now, I should no more do for yours than you for mine. What a delightful morning it is! I'm off for a row."

Lightly she passed through the open window and across the lawn, shadowed by silver beeches, towards the river.

Leaning, forward, her elbow on her knee, her chin in her hand, Lucy Brand watched her, an expression half sad, half amused, in her eyes.

"Not do for my place any more than I would do for hers! I wonder, if our childhood had been changed--mine hers, hers mine—whether then it would have been so? Circumstances have much to do in forming natures. I think——"

She paused, then added:

"Not like cousin Fred! Would to Heaven I did not! then one trouble of my life would be removed.

For a second time she paused—for a second time she proceeded, now rather bitterly:

"No; there would be no danger of his caring for such as I! None. I must be content with the curate and sock-darning! There, how foolish I am!" and she dashed away a tear. "Everyone would say I ought to consider myself a most fortunate young person; only, as Linda says, I suppose I am ungrateful."

Rising, she went to give orders about the preparation of cousin Fred's room; for though two years younger than Linda, the duties of housekeeper were passed to Lucy.

In due course cousin Fred arrived. There was little wonder that both Linda and Lucy liked him, for he was one of those handsome, manly, good-natured, genial specimens of masculine humanity that is a favorite with all.

"How kind of you to come down again so soon!" remarked Linda, gaily, on greeting him.

"I am glad, fair coz, that I am so welcome," he rejoined. "Ah! beauty is a greater magnet than steel, isn't it? And you, Lucy, are you not going to say I'm welcome?"

"Indeed, yes, Fred; though there is scarcely need to state that of which you are so sure," She smiled, extending her hand.

He took it; but the light that was in his eyes when he spoke died out. Cousin Lucy was the strangest girl he ever knew—why did she not care for him like Linda? He told himself that he tried to be kind, but she was always drawing away or answering his approaches so indifferently.

"Well, Fred, so here you are again," said Mr. Brand, entering. "What has brought you down, eh? Pleasure or business?"

"Both, uncle, I may say. I have been offered a fine position by my father's old friend, Mr. Melbroke. I need not say," with a laugh, "I have accepted it; for Mr. Melbroke says it may lead to a lot of other good things. So before I start I thought I would run down and spend a few days at Silverville.

"Oh! delightful—charming!" Linda exclaimed.

"I congratulate you, Fred," added Mr. Brand.

"Thanks; I knew you would, uncle. Yes, it's a good thing."

Then cousin Fred's eyes strayed round the room, having missed a third voice; but Lucy, unperceived, had disappeared.

As pale as death, she stood bene ath the veranda, one hand pressed to her heart.

"He has come to ask Linda to be his wife," she murmured. "I know it! Well, have I not known this all along? Have I not expected it? And why not Linda—Linda as any one? is it not the same to me? Only it is hard to bear. How foolish I am. Am I the only girl who has loved without return?

Later on she came to cousin Fred, a bright smile on her face.

"Is it true," she said, "what Linda tells me, about your going away? I am so, so glad! I congratulate you so much!"

"Yes, Lucy, I'm off. You'll be glad to get rid of me, eh?"

"I!" She could not help it, the tears sprang Quickly she averted them before she had seen the expression in his, and with a forced laugh, added, "Ask Linda—if she can bear your departure, I must try to."

He dropped her hand, and she moved away, not seeing the look of half pain, half anger on his features.

There were rarely dull moments at Silverville when Fred Beaufort was a guest. The dullest, in Linda's estimation, was the after-dinner period when she and Lucy were alone in the drawing-room, and the gentleman remained over their wine. If cousin Fred had any great fault it was smoking, and the hour his uncle dozed he enjoyed his cigar. It was the fourth evening after his arrival, that directly Mr. Brand had emptied his wine-glass and thrown his handkerchief over his face, Fred Beaufort, lighting a fresh cigar, passed into the grounds.

The night was calm and warm; but it was evident that was not the cause that attracted him, for directly he had got beyond the light issuing from the dining-room, he increased his pace and walked, with an undoubted purpose, obliquely through the grounds. Entering finally the wooded portion, he came out by the river, just where the willows drooped most thickly. Here he threw himself down among the ferns, extinguished his cigar, and waited.

In a few moments he raised his head slightly. There was the soft sounds of oars. Soon a boat containing one person loomed through the gray twilight, and stopped just opposite him at the other shore. Watching, he saw the figure—which, man or woman was clothed entirely in a somewhat loose gray garment with a hood—attach the boat, land and disappear among the trees.

Fred Beaufort drew himself higher up under the willow. There was no mistake about the boat. It was the one belonging to Mr. Brand; he knew it by the red and white water-line. Then he uttered the sentences which commenced this chapter.

The previous evening while smoking his cigar, he had chanced to stroll in this direction, and had seen the boat arrive as it had to-night. In less than half an hour the gray figure had returned, got in and rowed away. Fred had followed along the bank, but bushes had intervened and he had lost sight of the little craft.

Why, he hardly knew—he had mentioned the circumstances to no one—but with the curiosity of an idle man, noting the time, resolved to watch the next time—the thing surprising him being the use of Mr. Brand's boat.

Again the solitary rower had appeared and acted in the same manner; and now he determined to find all out. No one had any right to use the boat but Mr. Brand's own family. If some maid were carrying on clandestine meeting with a lover, they had no right to use the skiff, which might create mistakes not pleasant to his cousins, for he was assured now that the rower was a woman.

Hardly had half an hour elapsed when the gray figure re-appeared. Fred, who had already risen was about to move away along the bank, when he perceived the figure look back, and then he saw another figure just shadowed under the trees; then, with a motion like a wave of the hand, it went back, as the rower, taking the oar, shot the boat along the silent river.

This time Fred Beaufort was prepared for the bushes, and skirting them quickly, managed to keep the boat in sight, himself unseen. Rapidly it proceeded until it turned into the pretty little red-and-white boathouse; there he was able to overtake it, and concealing himself among the trees, wait for the rower to issue forth.

Speedily she came, but the gray mantle was now carried under her arm. She walked hastily, yet with caution, passing within a foot of him.

Fred Beaufort gave a great gasp, for he recognized his cousin, Lucy Brand.

The slight sound he had made when he started at the discovery reached her. She halted and glanced round. The expression of her face was pale and troubled. Believing she had been deceived in the noise, she hurried on again, and Fred Beaufort followed slowly, heavy at heart.

Whom did Lucy go thus stealthily to meet? Could it be a lover? Then why clandestinely? If he were not worthy to come to her home, then he was not worthy of Lucy. Ought he to tell his uncle? What danger might not Lucy be running into?

But there was reason why he shrank from himself being Mr. Brand's informant in this matter; and yet undecided, he approached the drawing-room windows. Ere he entered he heard a light touch on the piano, and soon Lucy's voice, sweet, clear, and sympathetic, broke forth, singing—

"'My heart is sair to sickness,
Ne'er may I smile again:
My een will aye be greeting,
For bitter is my pain.'"

The pathos of her voice thrilled Fred Beaufort, He listened until the song ended, then:

"No, by George, I can't tell uncle!" he thought. "Only one who feels the words could sing them like that! Poor Lucy is in trouble, and has a sad heart! Perhaps she loves some one that uncle does not approve of—then *I* know my fate. Bah! as if I ever had any chance! Never!"

Yes, Linda Brand was right. Cousin Fred had a particular attraction at old, dull Silverville, and the attraction was Lucy.

To be continued.

MAGAZINES FOR AUGUST.

HARPER'S MAGAZINE.—Contents: Frontispiece, Illustration for "Almond Blossoms;" The Surrender of Cornwallis; Almond Blossoms, a poem; A Day in Africa, II.; The White Mountains, III.; The Parcæ, or, Three Dainty Destinies. The Armelet; Anne, a novel; Left Behind, a poem; Then; The Various Languages of Billy Moon; A Neglected Corner of Europe, III.; Water Routes from the Great Northwest; Miss Pickett; Assassins and Nihilists; Sheltered, a poem; President Madison and the Baptist Preacher; A Laodicean; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

CIRCUMSTANTIAL EVIDENCE.—A lawyer in Central New York gives the following account of one of his first cases:—

"My client sued a neighbor for the alleged killing of a favorite dog. The proof consisted in the mysterious disappearance of the animal, and the possession of a dog's skin by the defendant, which after considerable argument, was brought into court in evidence. It was marked in a singular manner, and was positively identified, with many tears, by the plaintiff's wife and daughter as the undoubted integument of the deceased Bose. In summing up to the jury, I was in the midst of a highly colored picture of the virtues of the deceased, and of the love of the children for their four-footed friend, when I was interrupted by a slight disturbance in the crowd near the door of the little school-house which served as court-house. Looking around, I saw my client's youngest son, a tow-headed urchin of twelve, coming forward with a dog whose skin was the exact counterpart of the one put in evidence. The dog wagged his tail with good-natured composure, and the boy cried, in his childish treble, 'Paw, Bose has come home.' I gathered up my law books and retreated, and I have never had perfect confidence in circumstantial evidence since."—Editor's Drawer, in Harper's Magazine for August.

LIPPINCOTT'S MAGAZINE.—Contents: A Glimpse of the Cumberland Border—first paper; The Home of the Giant Squid: Thalatta: Craque-o'-Doom, a story: New Ground; Before the Dawn; Captain Put's Novel; Zoological Curiosities—V., Secretiveness; Flowers; On the Wrong River; New York's Fresh-air Fund; Santa Lucia; The Pension Office: Going to Housekeeping in North Carolina; Our Monthly Gossip: Art Matters, Anecdotal and Miscellaneous; Literature of the Day.

THE PENSION OFFICE.—The first law providing pensions for deaths and disabilities incurred in the War of the Rebellion was approved on the 14th of July, 1862. Since then the Government has paid in pensions more than five hundred millions of dollars. The payments for many years, up to 1879, averaged about thirty million dollars a year. During the fiscal year ending in 1879 the payments rose to nearly thirty-four million dollars; and in that ending in 1880 they went up to over fifty-seven million dollars. For the current fiscal year nearly seventy millions have been appropriated, but nearly a hundred millions will be needed.

The highest pension known to the general law is seventy-two dollars a month; the lowest is one dollar a month. In cases of surviving soldiers, the rates are graded according to the degree of disability for manual labor found to exist in each case. As a matter of fact, the disabilities of many do not interfere materially with their ability to gain a livelihood. A jeweler or dentist with one foot may earn his living as well as with two. The law pensions all, however, as if they were hewers of wood and drawers of water.—Lippincott's Magazine for August.

THE ATLANTIC MONTHLY.—Contents: Dr. Breens Practice, I-III; French Domestic Life and its Lessons; Corda Concordia, read at the Opening Sessions of the Summer School of Philosophy; Concord, July 11, 1881; In Exile—a story in two parts, Part I.; The New York Art Season; On the Acting of Iago; The Portrait of a Lady—XXXIX-XLII; Sleep's Threshold; The Indoor Pauper: a study; Tidal Waves; Recollections of James T. Fields; Parton's Life of Voltaire; Ward's English Poets; The Contributors Club; Books of the Month.

CLERICAL ORATORY.—Why do not our preachers study oratory? As preachers, not pastors, their business is to work a certain effect, and all helps to its production it should be a part of their education to learn. I presume I shall not be misunderstood to mean the effect of displeasing self and winning admiration for personal gifts. What the true preacher seeks to do is to inform the intellect with Christian truth; to stir the heart, and thereby influence the will, of his hearers. Half the sermons annually preached are, so far as human insight goes, a waste of labor and breath. Two things partly account for this: one is that a majority of the men set to preach are out of their real vocation,—good pastors they may be, but fit preachers they are not; another is that those with more aptitude for preaching do not yet understand the means to be employed to attain their object.

Sometimes the preacher has some conception of the needs of human nature, and knows that the truest truths fail to move when put before men in a dull, dry way; perhaps he does his best to acquire a good style, and succeeds in making an ably-written discourse. But when he comes into his pulpit to give it to his people, where is the impression it should produce? What becomes of his choice words, his considered sentences? There they lie upon the page he holds; he proceeds to read them. Why do they fail of any result? It is for want of delivery, of the oratorical art of making mere words "tell." His faithful effort goes for little; he seems to his hearers to be reading something to them, as he is,—not to be speaking to them from the heart.—August Atlantic.

NORTH AMERICAN REVIEW.—Contents: The Christian Religion; Obstacles to Annexation; Crime and Punishment in New York; A Militia for the Sea; Astronomical Observatories; The Public Lands of the United States.

CRIME AND PUNISHMENT IN NEW YORK.—It is not the purpose of this paper to present the statistics of crime in the city of New York, but to exhibit some of the principal causes of crime which are here in operation, and the inadequacy of the administration of justice to meet the case. A large city presents the greatest advantages and incitements to deeds of fraud, sensuality and violence, by the denseness of the population and the facilities of concealment. Temptation is multiplied and the risk of exposure diminished from the same cause. The latter fact draws evil characters to a large city, and the former manufactures evil characters from among the citizens. But New York is not only a large city, but it is a seaport, and the principal gate of immigration to the United States. Men of every clime throng its streets, and nearly one-half of its population has no personal or inherited interest in American institutions. The worst elements of European society are constantly brought into this civic caldron—in many cases the emptyings of almshouses and prisons. It is no light task to meet this onset of depravity with the firm hand of order, and to make this heterogeneous mass take on any assimilation to the general constitution of American life. Too much has been said thoughtlessly of the misgovernment of this metropolitan city, where the critics have not considered the peculiar obstacles to social order to which we have referred. The real wonder is that New York is so well governed—that, amid all the antagonisms to public peace which are found in it, it is, on the whole an orderly city, and offers attractions for residence beyond any other city in the Union. There is far more rowdyism and drunken rioting in Glasgow and Liverpool than in New York; and the streets of New York, which have formed the theme of so much indignation because of their unclean condition, are pure and spotless in comparison with the streets of the cities of Southern Europe. It has become popular to condemn New York, and to call it a modern Sodom; but nowhere in the world are so many and so mighty agencies in active operation for the material and moral welfare of the community. Churches, hospitals, charity homes, schools, libraries, galleries, benevolent societies and other forms of gratuitous help to the comfort and welfare of the city abound, and a general liberality toward all measures tending to elevate the tone of society is very conspicuous. It is, then, with no cynical feeling that we endeavor, in this article, to show where effort is still lacking and where remedies ought speedily to be applied.

We have taken New York City as our text, because of that city we have a thorough and accurate knowledge; but the principles, as well as the facts, will doubtless apply to all the large cities of our country, and hence our article, we trust, will not have a merely local interest or value. We have not used rhetorical appeals, or spread before our readers heart-rending pictures of vice and and crime. We wish to arouse something deeper than emotion or sentiment. We wish to convince the reason and establish a firm basis of principle from which systematic action may be expected to grow. The appeal is to the common sense of citizens. We have no patent theory, or radical measure of moral reform to propose; but ask our fellow citizens to take time to consider this great fundamental question of crime and punishment in the community, to see what their duty is in the premises and to do it.—Howard Crosby, in North American Review.

For Women.

CONDUCTED BY MISS RAY CLARK.

OUR COLLEGE GIRLS.

I PASSED them on the thoroughfare,
  One hundred college girls;
A wavy line of faces fair,
And Summer robes, and ribbons rare,
  And speaking lips, and eyes and hair,
  In tresses, bands and curls.
And later, as through porch and aisle
I saw the bright procession file,
It lightened, like a living smile,
  The shadows that unfurls
The reaches of cathedral rooms.
I blessed them for their rosy blooms
Of cheek and lip; for nodding plumes
  And fans that made their breezy swirls;
For breastknot flowers and soft perfumes;
For brightness in a world of glooms;
  Our bonnie college girls!

Intent they watched the speaker's face,
  Our quiet college girls;
And as the great thoughts grew apace
And bloomed in words, 'twas good to trace
The impress of their royal grace
  On youthful brows. The pearls
Of wisdom sought and found for them
Were wasted not. Each shining gem
Was gathered to the diadem
  The spirit wears; and whirls
Of eloquence that clustered round
The central stalk of thought profound
Were grasped of all. But quick rebound
  Comes when the college father hurls
The name for which each prize is found.
How cheer the small hands, round on round!
  Our generous college girls!

But other gifts the searcher finds
  In these, our college girls:
Eyes that are set to read the lines
Of life in hieroglyph, the signs
Of coming change, the world divines
  But dimly in its whirls;
Hands that are skilled to turn the keys
That lock the world's best mysteries;
Brave, earnest hands, outthrust to seize
  The rugged husk that curls
About each corn of truth; that hold
The book of snow and pen of gold
For nineteenth-century thought, untold
  Upon the passing year that furls
Its scroll to-day; true-voiced, true-souled;
Their names are on our hearts enrolled;
  Our noble college girls!

TIGHT LACING.

THIS is a subject which bears much comment and should be heeded by all women. In consideration of the importance of this question we make the following extract from the Lancet: "A verdict was lately returned by a Coroner's jury which is quite as applicable to not a few cases of premature death which do not happen to be made the subject of medico-legal inquiry. It is difficult to speak with moderation of the folly of tight-lacing in view of such facts as these, especially as no attention seems ever to be paid to the warnings repeated *ad nauseam* against irrational and unhealthy modes of dress. Physiology does not enter into the sphere of the "fashions," the follies of which are productive of more suffering and ill-health than people are willing to concede. In spite of satire on one side and admonition on the other, there seems to be but little diminution in the degree to which these vagaries are carried, as may be proved by any one who walks abroad during the hight of a London season. Why is it that in this matter of "tight lacing" there should be such tenacity, for there is hardly any subject that has been so unmercifully and yet so necessarily criticised as this? There are only two possible reasons for its maintenance—the one that it is indispensable to the present form of female attire, and the other that it is believed to lend grace to the wearer. Neither of these contentions can seriously be maintained in the face of the known evils which follow the practice, but they are at present ideas so firmly rooted in the female mind that their dislodgment is not easily effected. Now and then, indeed, there seems to be an attempt to introduce a more rational style of dress, but such attempts are rarely successful, owing in a great measure to the disposition to ridicule new departures which do not harmonize with the "mode." The medical profession has never ceased to express its opinion upon the evils of tight-lacing, being well aware of the derangements for which the practice is responsible. To be effectual, however, such remonstrances must be given not only to those who follow the practice, but to those who either tacitly or openly encourage it. We are treading, we know, on delicate ground, but it is time there should be plain speaking, even at the risk of giving offence, for it must be confessed—and it is no disparagement to the fair sex to admit it—that so long as men persist in regarding an unnatural deformity as a beautiful object, so long will many women do their utmost to become "beautiful," no matter how painful the ordeal to which they will have to submit.

A well-known writer upon female dress not very long since admitted that it was the object of women so to dress as to render themselves attractive to the opposite sex, thereby following out a law which obtains throughout animal creation, and of which there is no denying the truth. But the same author spoke out boldly against the practice of tight-lacing, showing that in her opinion, at any rate, the practice was not essential for the purpose above stated. In all seriousness, it is a pitiful thing that in these days, when all our youth can obtain an insight into the principles of physiology, there should still prevail a practice so unphysiological as that of which we speak. It stands to reason that long-continued, firm compression of the lower ribs cannot be indulged in with impunity. The dorsal, thoracic, and abdominal muscles are rendered feeble from enforced inactivity, respiration is impeded, circulation is carried on under greater strain, and the viscera are displaced to a remarkable degree. In the case which forms the text of these remarks, not only was the liver deeply indented and displaced but the stomach was constructed into two portions, and both of these effects have often been observed before. The affections attributed to tight-lacing are many and various—some perhaps without sufficient ground; but most certainly respiratory, circulatory and digestive derangements not to mention difficulties and danger in parturition, are directly traceable to tight-lacing. Such derangements lead the way to other and graver changes; they may cause many ailments which render life a misery, or eventually lead to the premature extinction of life—not perhaps directly, but by rendering the organism unable to cope with disease, however arising. Once more, then, we urge the female members of the community to abandon this fatal practice; its utilitarian purpose could no doubt be supplied by means at once more simple and less injurious; and its æsthetic function exists only in the imagination, being grounded on the false and perverted notion that the natural contour of the body is ungraceful, whilst the deformed, contracted "waist" is considered beautiful in proportion as its constriction is extreme.

FASHIONS.

SOLID colors are most fashionable in hosiery. White will be fashionable again.

"Dawn" is a new shade of pale gold.

Sateens are extensively used this season, which is not surprising when such tempting and charming patterns are offered.

Yellow, red and olive green guipure lace has appeared.

Brick-red and olive-green shades prevail among the chintz-figured foulards.

Stylish evening wraps are eastern in texture, color and design.

Pink and red barred zephyr ginghams are made up with many pleatings edged with black thread lace.

A great deal of "rip-rap" trimming, i. e., lace made of serpentine braid, is used on ginghams and linen lawns.

Bracelets made of old silver medals, linked together with silver beads, are the fancy of the moment.

The Lucia cape is one of the daintiest of fashionable little mantelets. It unites the coachman's cape and a small Capuchin hood, and is composed of a variety of material for demi-saison, and for long Summer days.

Surah petticoats of pale blue, pink, or corn color are worn under thin, white evening dresses. The underwaist of the white bodice is also of the colored surah, and is cut low in the neck, and with short sleeves

Shoes are now made with low, broad heels, placed where heels belong, and not under the center of the foot, which show for all they are. Women with large pedal extremities are opposed to this change, naturally enough.

Gathers run riot this season, and we now find every article more or less ornamented with them; for instance, the new walking dress is gathered on each shoulder, while the latest novelty in night-dresses is to gather the yoke and cuff. Everything in Hubbard form is the leading style, and the Hubbard polonaise, Corsage-Basque, waist-bodice, and pinafore polonaise, are all the rage for soft fabrics, although we still find that useful garment—the polonaise, still worn, also the princess dress with scarf drapery.

For ordinary traveling use, when the color of the dress is not matched, black hats are the favorite selection for old and young. Whatever they require in jauntiness, to be properly becoming to a school-girl, they gain from the gipsy shapes and fantastic brims of the present modes.

Among rich fabrics imported for polonaises is black China crape, embroidered all over in black in Oriental designs of pagodas, birds, butterflies and the favorite flowers of the East—chrysanthemums, peonies, etc.

White associated with gold, is the fancy of the moment both in bonnets and in costumes.

Large linen collars worn with yachting suits have a wide hem, and just above, a broad blue or red stripe. On imported collars the color is stamped; on designs made here, a colored band is inserted at half the width of the collar.

The advancing season has shown that the predicted change to large hats is gradually taking place. Each new importation contains larger and more elaborate shapes than the last.

One of the novelties in belt decoration is the fancy for large bows worn directly in front or a little to one side of the belt. They are very stylish, and will be much worn during the Summer.

Watered silks or *moires* have reappeared, and are employed for combination toilettes. Varieties which come in delicate colors have large watered stripes occurring between stripes of satin.

Ribbons with mixed colorings—called harlequin ribbons—are extensively used now, and the block or checker-board kinds are equally admired. Toilettes made of brocaded and plain fabrics combined are decorated with knots of brocaded ribbon or brocaded silk, doubled.

Flower and fruit bonnets are composed of wire shapes over which tulle or net is puffed, and concealed by a flat wreath either of fruit or of flowers, the leaves being laid flat upon the crown and thus concealing the foundation. All such hats are of the capote form.

Initial pins are among the newest fancies approved by fashionable young ladies. The first name of the young lady is written in silver, each letter being clearly cut and separate from all the others; the imitation of a running handwriting is exceedingly good, and the flourish at the end of the name is turned back and under, forming the pin. The device is novel and effective, and before long one will be able to discover the name of any fair damsel one may chance to meet by simply glancing at the pin which holds in place the silken tie or is half hidden in the folds of the creamy lace scarf.

MRS. ELIZABETH PEABODY, the sister of Mrs. Hawthorne, is in failing health.

MRS. COWDEN CLARKE has nearly ready a new and revised edition of her Concordance to Shakespeare's works.

MRS. GARFIELD has received a gift of beautiful glassware from some American manufacturers who were so unselfish and considerate that they sent the ware through another firm, and would not allow their names to be mentioned.

NOTE.

IN issue of July 30, Mary E. Burroughs mentioned the price of flannel suiting of single width at 50 cents; this is correct, of course, as applying to the quality to which she refers but for the benefit of those who are obliged to be extremely economical it may be well to state that an inferior, yet very good quality in double width can be purchased for 50 cents.

The Solid South, to a woman, are for Hop Bitters, using them as their only family medicine.—*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

SODA FOR HEAD-ACHE.

IN the RURAL of June 25th W. M.. says: "To use soda for headache will be making a remarkable leap toward confirmed dyspepsia." It has been in the past a hygienic hobby that soda was injurious to health, even in biscuit, but I hold that other ingredients did the mischief and soda got the blame. If you take into your stomach an over-dose of opiates or any other detrimental substance, will you not take something to neutralize it? Assuredly, yes. So, also for excessive acidity of the stomach soda is an antidote, neutralizing the acidity, and so likewise the acidity neutralizes the soda. I have practiced carrying a vial of soda in my pocket for several years for the purpose of neutralizing the stings of insects, but find its use internally of inestimable value. One-eighth of a teaspoonful can be taken at intervals of an hour with remarkably good effect in most cases of headache, pains in the stomach, attacks of bowel complaint, nausea, etc., etc. I was for a number of years afflicted with that dread dyspepsia referred to, and spent dollars for medicines and even had beer, wine and tobacco prescribed, and I half starved myself on hygienic diet. My stomach would not retain food and had apparently an indigestible brick in it, which would turn over and about, changing its position. I was working hard at manual labor when able, but never did I find instant and permanent relief until I took common baking soda, and by its use I am entirely cured, and now am not the least particular about my diet. I have noticed lime-water and milk recommended through the RURAL for dyspepsia. Are not lime and soda both alkalies and of the same kind? I have for years used soda myself; given it to my children even when infants; recommended it to my neighbors and friends, and have yet to see the first injurious effects from its use. In my judgment the abstinence from the use of soda as a family medicine is fast going the same road that the abstinence from the use of cold water in cases of fever went a number of years ago. J. M. M.

DRESS vs. DRAPERY.

A WRITER in the London Sanitary Record says that one radical mistake we make with regard to modern dress is to look upon it as an affair of drapery. Let us keep drapery for bed and window curtains; to cover statues or lay figures; but for the dress of women in the crowded, bustling life of the nineteenth century, it is totally out of place. We want to be clothed, not draped. The idea of beauty, therefore, derived from flowing drapery (and this seems to be the chief one of the so-called æsthetic school) is of no use to us, as not applicable to modern daily life.

Modern dress must learn to gain what beauty it can without the aid of superfluous drapery; from the beauty of the form it covers, from its graceful movements, and by discarding the false and hideous outline which fashion would give it. We must also put outside, at least for the present, the idea that art can improve nature; for this we must wait until we have obtained a more correct knowledge of the "nature" we have to improve. If not, the result will be what it always has been, the deforming and caricaturing of the figure rather than its improvement. We are even now threatened with the re-introduction of a specimen of this false taste. Crinolines are to be worn again, for the double purpose of "improving nature" by setting a hump on the middle of a woman's back, and of making her carry about a frame over which to hang "drapery."

DOMESTIC RECIPES.

Spiced Gingerbread—Excellent.

One cup of butter, one cup of brown sugar free from lumps, one cup of molasses, four eggs, one cup of sour milk, two teaspoonfuls of soda, four cups of sifted flour, a little salt, a teaspoonful each of ground cloves and cinnamon, a teaspoonful of ginger and a tablespoonful of grated orange peel. Mix the salt and soda with the flour. Beat the yelks of the eggs, then the whites, and then both together. Mix the molasses, sour milk and spice together, and cream the butter and sugar. Now drop the butter and sugar into the flour, add the eggs, stir a little, add the milk and molasses and stir quickly until a smooth mass. Bake in shallow pans in a well-heated oven. MRS. K. L.

Cheese Mixture for Sandwiches.

A quarter of a pound of good English cheese, grated, the yelks of three hard-boiled eggs, a tablespoonful of melted butter, pepper and salt. Rub the yelks to a paste with the butter and seasoning and work in the cheese. Cut thin slices of bread, butter, spread the mixture on evenly, cut and place one on the other.

Rice Meringue Pudding.

One generous quart of rich, new milk, a small cup of raw rice, a cup of sugar, four beaten eggs and two spoonfuls of butter. Soak the rice in a cupful of the milk for two hours, turn into a farina kettle with the rest of the milk and simmer till tender. Rub the butter and sugar together, beat the eggs light, and mix all with the rice until the mixture is very light. Put all into a buttered baking dish and bake 45 minutes in a moderate oven. When done, draw to the door of the oven and cover with a meringue made of the whites of three eggs, a spoonful of powdered sugar and the juice of half a lemon. Close the oven and bake until delicately browned. Eaten hot or cold.

MRS. J. MC.

Apple Layer Cake.

Two cups of fine white sugar, one-half cup of butter, one-half cup of corn-starch, one-half cup of sweet milk, the whites of six eggs, three cups of flour and two teaspoonfuls of baking powder. Cream the butter and sugar, add the milk, stir, then the corn-starch, and last the whites, beaten stiff, and the flour (with baking powder sifted with it). Bake in jelly-cake tins.

Filling.

Beat together one egg, one cup of sugar, and grated rind and juice of one lemon. Into this mixture grate three ripe, tart apples. Put at once—to preserve color—into a farina kettle or tin pail set within a kettle of boiling water, and stir until it boils. Let cool before spreading between the cakes.

Lemon Snaps.

A pound of powdered sugar, a quarter of a pound of butter, three beaten eggs, juice of two lemons and the grated peel of one, a teaspoonful of baking powder and flour enough to mix. Roll thin, cut into rounds and bake in a quick oven.

Lemon Extract.

The yellow rind—not the white—of eight lemons, a quart of white whisky or brandy. Cut the rind into bits, put into wide-mouthed bottles and cover with the spirits. Cork and shake frequently for two or three weeks. It will then be ready for use, and will be found superior to most of the lemon extract sold at the shops. MARY B.

A Nice Lunch Dish.

The remains of cold baked or boiled chicken cut into dice; the bones and skin put into a saucepan with a minced onion and water enough to cover. Boil an hour or longer. Strain, skim off the fat and return to the pan. Thicken with a tablespoonful of flour rubbed smooth in a half cup of cream, season with pepper, salt and minced parsley. After it thickens, put in the chicken and take from the fire. Butter a deep dish, strew thickly with fine bread crumbs, pour in the chicken, cover with fine bread crumbs and break fresh eggs carefully over the top. Put a bit of butter on each, pepper and salt and bake in a quick oven until the whites set. ECONOMY.

KEYSTONE WASHER.

MRS. V. A. in the RURAL of MAY 14, P. 327, inquires for experience in the use of Keystone Washers. I used one of the first made of this machine for seven years; it is now worn out and I have bought a new one. I find the new one is quite an improvement on the old; but there is no change in the work or principle. To be brief, I would say that the washer is as good as recommended; does good work with a great saving of water, soap, time, strength and patience, which are items of importance in domestic economy. It is not necessary to have your hands in the water, in which case suds can be used as hot as desired.

MRS. G. W. F.

QUESTIONS ANSWERED.

Chocolate Mixture.

Housekeeper asks how to prepare chocolate to put between layer cake.

ANS.—Whites of two eggs beaten to a stiff froth, a cup of powdered sugar, a quarter of a pound of grated or scraped chocolate, mixed smooth in a tablespoonful of sweet cream, a teaspoonful of vanilla. Stir the sugar into the whipped whites, then the chocolate. Stir all together hard for two or three minutes before adding the flavoring. The cake should be cold before spreading. Reserve a little of the mixture for the top and stir more powdered sugar into it to form a hard icing.

Or, to a cup of thin, sweet cream add a cup of powdered sugar, a quarter of a pound of grated chocolate and simmer until it thickens. You must be very watchful lest it burn. Take from the fire and whip in the beaten yelk of one egg. When somewhat cool, flavor with vanilla and spread while warm between the cakes. Do not frost the top but strew thickly with powdered sugar.

"My mother drove the paralysis and neuralgia all out of her system with Hop Bitters."—Ed. Oswego Sun.—*Adv.*

A Second Literary Revolution.

The first literary revolution consisted in the publication of standard books in every department of literature at from one-third to one-tenth of their former cost.

The second literary revolution consists in a still further very great reduction (conditional) even from the revolution prices, while, at the same time, the average quality of the books will continue to be materially improved.

How Can These Things Be?

To attempt an impossibility could of course result only in failure, and it would be useless, in our own interest, or in that of the many thousand customers who have shown us such earnest favor, and have given us such great patronage, to announce or promise what could not be performed. We have dealt frankly with our customers in giving facts concerning costs and profits in the past, and we do it now, by giving facts and figures illustrating how we can afford to still further reduce prices:—

Facts and Figures.

Please note, at the start, our apology for not having done heretofore what we now propose to do, and consider—

1st—We published our first book only so long ago as January, 1879. Previous to that time we were entirely without experience in book publishing. What knowledge we had of the business was gained in newspaper publishing and in book selling.

2nd—We were also at that time almost entirely without capital, and until so late as February, 1881, we labored under the difficulty of being without capital, even approximately adequate for the magnitude of the enterprise we were undertaking.

3rd—Our entire scheme was in opposition to all previous methods of publishing and book selling. And from the beginning to the present we have had the combined bitter opposition of almost the entire book publishing and book selling classes of the United States.

4th—Starting thus, with a minimum of knowledge, and less capital, and with such immense opposition, we thought it best, in the interest of both the reading public and ourselves, that we undertake too little rather than too much; partial success would be better than total failure.

5th—In spite of our want of resources and of experience, and in spite of opposition, and with the necessity of organizing and training our *new forces*, and necessarily trying many experiments, all of which no one could expect would be uniformly successful, we have from January 1, 1880, to June 30, 1881, manufactured and sold nearly 2,000,000 volumes of standard books, for which we have received the considerable sum of $709,521.22.

6th—In a circular issued in January of the present year we made the following statement:—"The public have so long been taught to believe books to be expensive luxuries and low prices impossible, that incredulity has from the first been the greatest obstacle to the progress of the Literary Revolution. It was easier to make good books cheap than it was to make people believe it could be done. We could readily have made prices even lower than they have been, but for the terrible tax we have been compelled to pay to this incredulity."

We have during this period from January 1, 1880, to June 30, 1881, paid for advertising the large sum of $140,878.93. This immense item necessarily has to come *out of the profits we make on the books sold.*

7th—Although our scheme originally embodied the principle of selling direct to the consumer, and doing away with the exorbitant cost of middlemen, we have not undertaken to put aside the book seller and the book agent altogether, because a large portion of the book buyers of the country have got into the habit of looking to them for their supplies, and if we were to supply the wants of such customers at all, we were compelled to do it through these ordinary channels. But we have endeavored to induce or compel these middlemen to work, as we have been doing, on a more reasonably small percentage of profit (the immensely increased sales at the reduced prices, even with the smaller commissions, really give the book sellers larger net profits than they formerly had). Accordingly we have during this period, from January 1, 1880, to June 30, 1881, allowed to the book sellers and book agents commissions averaging about 25 per cent. of our total receipts. In other words, in addition to the $709,521.31 we have received from the public for our books, the public has also paid to the middlemen the large sum of $177,380.73 simply for handling these books, making the total cost of the books to the consumer $886,901.65.

8th—From these statements you can readily see that if

From the total amount which the public has paid for our books, . .		$886,901 65
We deduct the amount we have paid for advertising these books, .	$140,878 93	
And the amount paid to middlemen for handling the books, . . .	177,380 33	
We have a total deduction of		318,259 26
And a remainder of		$568,642 39

Thus it is evident that if the public had bought these books *directly from us*, the unnecessary expense of advertising and of paying middlemen for handling them, being avoided, the books would have cost them only $568,642.39; being almost 36 per cent. less than the $886,901.65 which they paid for them, and our net proceeds would have been none the less.

A Better Illustration.

The above figures show clearly the possibility of a great reduction from our prices as heretofore given without diminishing our net income, but they do not necessarily show that it is possible for us to manufacture and sell books at such low prices *without loss to us.* As we have never made pretense of publishing books from charitable or philanthropic motives, and do not wish our friends to think we are doing business at a loss, we will give a conclusive and interesting illustration of how we can afford these low prices.

Library of Universal Knowledge.

After a labor of nearly two years by an able corps of American editors and writers, for whose services we have paid nearly $30,000, we have within the brief period of less than ten months made electrotype plates for the Library of Universal Knowledge at a further cost of nearly $30,000, making a total investment on this work of about $60,000. This labor all being done and paid for, the 15 large octavo volumes, making the largest Cyclopædia ever published in this country, can be manufactured at a cost per set of 15 volumes of—

For paper, ...	$2.52
For printing	.96
For binding	2.48
Total	$5.96

These electrotype plates which we have manufactured will readily print 100,000 copies, and then by slight repairing will print from 50,000 to 100,000 additional copies, but to make our estimate absolutely safe we will assume that it will be necessary to manufacture a new set of electrotype plates after 60,000 copies have been printed. Thus we must add to the above cost of the manufacture of one set of the books ($5.96) an additional $1 as the proportionate cost of the plates for each set of 15 volumes. A further item must also be added to cover office expenses, handling, shipping, etc., which experience leads us to estimate below 50 cents per set, but as we must do at least a *safe* business, we will add, instead, for this item another $1, making the total cost of manufacture and handling the 15 volumes of the Library of Universal Knowledge $7.96.

Thus you see that if we sell a copy of this great Encyclopædia even at the net price of $10, we still have a net profit of over $2. As we have already sold about 15,000 sets in advance of completion, we think it very safe to estimate (and we have heard of neither friend nor enemy who makes an estimate lower) that we shall sell, as fast as we can manufacture them, at least 100,000 sets, and allowing our figures above given to be correct, we have the comfortable sum of $200,000 to cover contingencies, and dividends to our stockholders.

As some of our friends may question whether our estimates above given are perfectly safe, and as we have heard of some instances where the accuracy of figures previously given by us have been disputed by our enemies, we will say that the cost of the paper is put at 8 cents per pound, the cost of press work at $1.20 per thousand impressions, and the cost of binding at 16½ cents per volume.

The Practical Point.

We now come to the practical point in which *you* are interested—how *you* may get the books you want at the lowest possible cost.

It is evident that it can only be done by *your* doing away, *so far as you are concerned*, with our immense expenses for advertising, and with the commissions which we or you are compelled to pay the middlemen; if you buy through the middlemen.

Another extremely important point in enabling us to afford the lowest possible price is that we receive *quick* returns for the investments we have made.

You readily see that we have invested about $60,000, cash, before we are able to offer you a *complete* set of the Library of Universal Knowledge at any price. We must sell a great many thousand sets before we can even get back the money which we have invested, to say nothing of the reward which we *must* have, in some measure, for our labor and the capital of the stockholders involved.

A large portion of the public still persist in getting their supplies of books through the middlemen (who must be paid for their services) instead of from us direct; and as a large expenditure for advertising will also continue to be necessary, in finding out new customers, we must continue to hold to our present retail prices, in order that we may be able to pay these enormous expenses for advertising and for commissions to middlemen.

But because we are thus compelled to tax book buyers generally with these heavy expenses, there is no occasion why we should continue this heavy tax upon *you individually* if you choose to unite with us in avoiding it.

Our Proposition to You.

We therefore make you this proposition; If you will send your order for the Library of Universal Knowledge (either for yourself or for any number of friends and acquaintances), so that we shall *receive* the same on or before the first day of September, 1881. We will accept such orders at a *discount of one-third from our published list prices*, making *net* prices to you as follows.

Library of Universal Knowledge.

For the 15 vols in cloth, net.	$10 00
In half Russia, sprinkled edges.	13 33
In half Russia, gilt top.	15 00
In full library sheep, marbled edges.	16 66

Orders sent to us under this offer will be accepted and filled by us under the following terms and conditions;

Conditions.

1st—We do not in this case, as has commonly been our custom, require that remittances shall accompany the orders. Payments may be made at any time that may suit the convenience of the purchaser, on or before the delivery of the books to him, and not later than January 1, 1882.

2d—But in making deliveries, of the books we shall give precedence to orders which are accompanied by remittance in full payment, shipping first those for which payment is first received.

3rd—After filling all orders which have been fully paid for at time of order, we shall in shipping give precedence to orders which are accompanied by a payment of 10 per cent or more on account of said order, the balance then due to be paid on or before delivery of the books.

4th—Thereafter shipments will be made to those who have sent no payment with the order, precedence being given to those whose orders are first received by us, payment of course being required on or before delivery of the goods.

5th—We shall not consider orders unaccompanied by the remittance as *binding* upon the person making it, if from any cause he is unable to take the books, or shall not then desire to do so; but in case payment is not made promptly when such person is notified that his books are ready for delivery, he will first forfeit his position on our delivery list, his name being transferred to the end, and in case payment is not made promptly when his name is again reached and he is notified, he will then forfeit the privilege of purchase at less than our full list prices, and no order will thereafter be accepted from him under any similar special offer which we may in the future make on other of our publications, unless the same is accompanied by payment.

About our other Publications.

As the present stock of our miscellaneous publications is now comparatively limited, and as our entire manufacturing resources will in all probability be for months to come taxed to the utmost by the manufacture of the Library of Universal Knowledge alone, we cannot undertake to make an offer similar to the above upon the books covered by our miscellaneous list, except to the extent of our stock in hand. Until our supply is exhausted we will accept *in connection with an order for the Cyclopædia, under the above offer*, orders for any of our miscellaneous books at the same rate of discount (one-third) from our list prices, but in all cases we shall require that orders for miscellaneous books shall be accompanied by the cash, as these books can be delivered at once and cash orders will certainly soon exhaust our supply.

Any remittances received for miscellaneous books, the supply of which may by that time have been exhausted, will either be returned promptly, or the amount will be applied toward the payment for Library of Universal Knowledge, as may be directed.

Very Important.

In connection with the special terms given above, please note particularly the following points;—

1st—We look to *you direct* for your order, and we also ask you to assist in spreading the knowledge of the existence, character, and low prices of our publications. The larger our sales, and the more promptly they are made, the more rapidly can we go forward manufacturing other equally good books, at equally low prices. We will gladly furnish you any reasonable quantity of catalogues and circulars for distribution.

2nd—The terms herewith given are limited strictly to orders which shall be received by us on or before September 1, 1881. Orders received after that date must positively come under our usual list prices or terms to clubs, which latter are limited to 10 per cent., or, at the utmost, 15 per cent. discount from our list prices.

3rd—We are well aware of the fact that very many book-buyers have not at a moment's command even $10 which they can invest, however great the inducements. This offer gives you the privilege of making payment *when it suits your convenience*, at any time before January 1, 1882.

4th—The Library of Universal Knowledge was completed on July 15, 1881, and we are now delivering the same in the various styles of binding advertised.

Library of Universal Knowledge.

Large Type Edition.

This is a verbatim reprint of the last (1880) London edition of Chambers's Encyclopædia, with copious additions (about 15,000 topics) by American editors, the whole combined under one alphabetical arrangement, with such illustrations as are necessary to elucidate the text. It gives an amount of matter about 10 per cent. more than Appleton's Cyclopædia (price, in cloth, $80 00) and 20 per cent. more than Johnson's Cyclopædia (price $51.00, in cloth). For the general reader it is undoubtedly the best Encyclopædia ever published, whatever the price. Price for the set of 15 volumes, in extra cloth, $15.00; in half Russia, sprinkled edges, $20.00; in half Russia, gilt top, $22.50; in half Turkey morocco, marbled edges, laced boards, raised bands, extra strong, $33.00. Publication completed in July, 1881, and now being delivered to purchasers. See reduced rates, given above, during August. Specimen pages and full particulars will be sent free on application.

Views of the Press.

It is the crown of the cheap and solid literature movement of the day. The original Chambers's is valuable, and for reference better than the more ponderous and diffuse Brittanica. This edition is greatly enhanced in value by the addition of 15,000 articles by American editors.—*Presbyterian Journal*, Philadelphia, Penn.

A reference to the more important articles supplied by the American editors shows that they have done their work well. The work is a marvel of compression and of cheapness, and well deserves the title it bears.—*New York Herald.*

We recommend it upon its own merits. We know that for ninety-nine out of every hundred of our readers this is the best work of the kind they can buy.—*Church Advocate*, Harrisburg, Penn.

The fullness, the variety and accuracy of the information given on American topics is at once the most distinctive and the most commendatory feature of the work.—*North American*, Philadelphia.

The "Library of Universal Knowledge" seems to meet the popular need. The additions by the American editors supply just what was required to adapt the old standard Encyclopedia to the wants of American families.—*The Advance*, Chicago, Ill.

Contains much matter that has never before made its appearance in any Encyclopædia, and is especially full and satisfactory upon American topics. These additions will make Chambers's perhaps the most valuable of all the Cyclopædias.—*Herald*, Columbus, Ohio.

It is a work of immense value, a companion that answers every question and asks none, and it is an exceedingly interesting work for general reading as well as for reference.—*The Courant*, Hartford.

Foremost among the contributions of our time to the poor man's library.—*Christian Cynosure*, Chicago.

The publication of this work was a grand undertaking, which is being carried out in a most creditable manner.—*Morning Herald*, Rochester, N. Y.

The character of Chambers's Encyclopædia is too well known to need commendation, and the American additions very greatly enhance its value. It is a marvel of cheapness, a whole library in itself. It is no humbug, but all that it claims to be.—*Methodist Recorder*, Pittsburg, Penn.

Varied and valuable is the material which the American editors have added.—*Journal*, Boston, Mass.

One of the most comprehensive Encyclopædias extant. The volumes make a handsome and desirable library in themselves, a library, too, that comes within the reach of a very moderate purse.—*Interior*, Chicago, Ill.

Their low price and their comprehensive and scholarly value will render them widely popular.—*Congregationalist*, Boston, Mass.

It stands almost unique in literature, and justifies in the infinity of the matters treated its claim to really represent universal knowledge. Ten years ago this work, though in a vastly inferior form, could not have been purchased under $50.—*Times*, Brooklyn, N. Y.

The American Book Exchange is rendering the reading public an important service.—*Evening Journal.*

AMERICAN BOOK EXCHANGE,

JOHN B. ALDEN, MANAGER. 764 Broadway, New York.

News of the Week.

ROME NEWS.

MONDAY, August 15, 1881.

The latest reports this morning concerning the President's condition denote no material change. The physicians are hopeful of his recovery, but Dr. Agnew is somewhat reticent. It is said that another operation will be performed to allow the escape of the pus which is continually gathering in the wound. It was thought during the week that he was doing much better as he was able to write a short letter to his mother at Mentor, but later the indications are that his condition is yet very critical.

LATEST.—Telegrams of this morning (16th) state that the President spent a poor night, and his temperature is higher this morning with continued nausea and vomiting.

The main Centennial Exhibition building was sold at the Philadelphia Exchange on the 9th, to Mr. W. C. Bullitt, attorney at law, for the sum of $97,000. It was rumored that the real purchaser was the Pennsylvania Railroad Company. The building originally cost $1,600,000. In its construction 75,000,000 feet of lumber and 8,500,000 feet of iron were consumed. The structure was 1,830 feet long and 464 feet wide. It was sold clear of encumbrance, the mortgage to be paid out of the purchase money.

The first party of Chinese students connected with the Educational Commission in this country left for home on the 8th, going by the way of San Francisco. The party numbers about 20; other parties will soon follow.

The official returns from 73 counties in North Carolina give 9,000 majority against prohibition. Haywood gives the Prohibitionists 21 majority. So far it stands alone.

Edgar M. Johnson, the Democratic nominee for Lieutenant-Governor of Ohio, is a devout Hebrew.

A vein of silver two feet wide has been discovered at Moretown, Vermont, on the top of a mountain. The ore has been assayed in Boston and found to be worth $5,000 per ton. The owner of the land has refused $18,000 for the claim.

A party of nearly a thousand Mormon immigrants arrived in Utah a few days since. They were foreigners, and described as having no appearance of intelligence among the men nor comeliness among the women.

Mrs. Millard Fillmore, widow of President Fillmore, died at Buffalo on the 11th,

Eighty thousand acres of Arkansas land have been bought by the Catholic Colonization Society. The aim is to induce Irishmen to become farmers.

Eight New York ladies, whose husbands are estimated to be worth $300,000,000, aggregate, dined together the other day at one of the Saratoga hotels.

Mr. William H. Vanderbilt offers to defray two-thirds of the cost of suitable buildings for a female college at Nashville, Tenn., provided the trustees of Vanderbilt University contribute the remainder. The cost of the undertaking is estimated at $50,000, and the Rev. George Price is named as the probable head of the institution, when completed.

To the Mrs. Garfield fund Bostonians have subscribed $125, against $117,500 subscribed in New York, $12 000 in Philadelphia, $11,500 in Chicago and $5 200 in Washington.

Judge Cooley, of Michigan, is prominently mentioned for the vacant place on the Supreme Court bench, to succeed Justice Clifford. He is very favorably known to the profession as a jurist and and a law writer. Ex-Attorney-General Devens and Chief Justice Gray, of Massachusetts, are also spoken of.

The convention of the American Bankers' Association opened at Niagara Falls Wednesday with a good attendance,

A Washington dispatch says the essence of the verdict in the Whittaker case will be the finding of Whittaker guilty of committing the alleged outrage on himself. This verdict will be unanimous and coupled with the unanimous recommendation that he be dismissed from the service.

The boat race between the Cornell University crew and the Vienna crew was won by the latter. The Cornells haven't won a race.

The English pedestrian, William Gale, who undertook to walk 6 000 quarter miles in as many consecutive ten minutes, in New York, finished his task Tuesday night at 6:40, and continued on the track until he added 14 additional quarters to his wonderful record.

The most destructive flood ever known to have occurred in the northern gold mining country took place in Gilpin and Clear Creek counties, Colorado, on Monday, the 8th inst. The damage resulting was confined to the town of Central, Blackhawk Idaho Springs. The first indications of the storm were visible from Central about two o'clock in the afternoon, when dark threatening clouds began to increase over James' Peak and the surrounding mountains and the roll of heavy thunder swept over the city. Soon the clouds burst and the village streets were flooded to the depth of four to five feet. The damage at Blackhawk and Central is over $100,000. Some lives were lost.

Judge Colt, of Pittsfield, Mass., shot himself through the head with a pistol on Tuesday night. He was appointed to the Supreme Bench in 1875.

Matthew Vassar, nephew of the founder of Vassar College, Poughkeepsie, N. Y., died in that city on the 10th inst., aged seventy-two years. His wealth was estimated at over $1,000,000.

Ex-Senator Browning, of Quincy, Ill., died on Wednesday night, aged seventy-six.

"Maud S." reduced her time to 2:10¼, on Wednesday last at Rochester, N. Y. She performed the feat with the greatest ease, and her driver says she can do still better. Mr. Vanderbilt, her owner, expects her to make 2:09 this season. She will trot next at Hartford, Conn., when she will be driven with a view to securing her owners desired record.

Paterson, N. J. is a circus afflicted city. It is estimated that in the stoppage of mills and loss of time whenever one of these tented excrescences puts in an appearance the manufacturing interest suffers to the extent of at least $50,000.

Ten dollars fare from Boston to Kansas City! For some days it has been possible to buy a passage from Boston to Chicago by way of the Grand Trunk Railway for five dollars, and on Tuesday announcement was made that the Chicago & Alton Railroad would accept five dollars for passage from Chicago to Kansas City on the western boundary of Missouri—half way across the continent.

A secret meeting of Irishmen who believe in fighting England with dynamite, has been held in Chicago. The members are reported well organized, with $100,000 in their treasury.

The government realized the sum of $658,209 by the sale of postage stamps in the cities of Boston, New York, Chicago, Philadelphia and St. Louis during the month of July.

Ex-President Hayes, Secretary Blaine and ex-Senator Conkling have, it is said, promised to visit the Atlanta exposition. Dates have, of course, been carefully arranged so there will be no clashing.

The population of this country increases in compactness. The cities grow more rapidly than country towns. At the beginning of the century one seventy-fifth of the population of the United States was in the cities; the present proportion is one-fifth.

Elder James White, founder of the Seventh Day Adventists, and president of the publishing association and college, located at Battle Creek, Mich., died Saturday, aged 60. He was a direct descendant of Peregrine White, the first child born in the Pilgrim father's colony.

A Connecticut patriot has tendered to President Garfield the use of a magnificent mansion, on the dividing line between Newport and Middletown, for as long or as short a period as he may desire. It commands lovely views and is, besides, a historic spot, for there earthworks were thrown up during the revolution and engagements fought between the British and American troops.

An old historical document has been found by a clergyman in Morris county, New Jersey, containing an account of an attempted assassination of Gen. Washington, in the summer of 1776, in which a member of his life guard was implicated. The guard was hung for it on the 28th of June, 1776.

The Legislature of Georgia proposes to deal with the Mormon propaganda in that State without gloves. A bill has been introduced and will pass the Legislature which provides that any person convicted of teaching Mormon principles, or endeavoring to decoy emigrants to Utah, shall be fined not exceeding $1,000 nor imprisoned not more than one year or both, in the discretion of the court.

The expected report of the sub-committee of the World's Fair at Boston, will be submitted to the full committee in September. It is said that among its recommendation will be that the Fair be held in Boston four years hence, that $6,000,000 be secured as a guarantee fund, and that the Back Bay site originally proposed, be the place selected for its location.

The silk industry in this country has prospered and grown with remarkable rapidity under the fostering care of a protective tariff. The silk mills number 77. The number of firms engaged in the manufacture of silk and silk machinery is 102. The number of hands employed is upwards of 13,000. The capital invested is over $10,000,000; more than $4,000,000 are expended in wages, and the value of the yearly product exceeds $12,000,000.

The Atlantic Fleming Mills at St. Louis were struck by lightning and destroyed on the 12th inst. The flames spread rapidly to the Oil Works which were damaged to the extent of about $45,000.

Lafayette, a city in Indiana, having a population of 14,000, supports 14 different regular publications; Akron, Ohio, a town of about 18,000 inhabitants, has seven newspapers, and Erie, Pa, a city having a population of 28,346, has seventeen newspapers—ten weeklies, three dailies (one German), three Sunday morning and one monthly.

Denver, Colorado, has a population of less than 50,000, but it includes six men who are worth from $1,000,000 to $5,000,000 each, twenty who are worth $500,000, and two hundred who represent $250,000 in their own right. Denver has, b sides its batch of rich men, six widows whose combined fortunes aggregate $3,000,000.

An enormous cannon, called the Lyman Haskin Accelerating or Multicharge Gun, is to be made at the Scott Foundry of the Reading (Pa) Iron Works. It is to be 25 feet long and have a bore six inches in diameter. The gun will be expected to throw a 150 pound shot ten or twelve miles and penetrate through two feet of solid wrought iron.

Geo. W. Tabb, a former citizen of Jefferson County, West Virginia, and foreman of the jury that convicted John Brown, in consequence of which his family had been greatly persecuted during the war, died at Harrisonburg, Va, recently.

Mr. W. H. Vanderbilt's Government bonds are now estimated to be worth $60,000,000.

A dying thief was compassionately released from the Rhode Island State Prison, and sent to pass his remaining days at home in Providence; but before his death he crawled out and robbed seven houses.

Statistics of the postal operation during the last quarter of the fiscal year just ended, compared with the corresponding period of the preceding year, are interesting and encouraging. At four of the principle offices in the country, the receipts in these periods were:—

	June 30, 1881.	June 30, 1880	Increase.
New York	$757,058 43	$636,416 50	$120,641 93
Boston	254 255 66	211 292 06	43.063 60
Baltimore	88 506 09	80,094 84	18.412 05
Chicago	305,091 18	245,251 59	59,839 50

People should avoid, as far as possible, being run over by railroad cars. An empty platform car weighs 18,000 pounds; an empty box car, 20,000 pounds; a passenger car, 36,000 pounds, and sometimes more; and an average locomotive, 80,000 pounds. A single pair of car wheels weighs 500 pounds.

The tide of immigration is still setting in strongly. The total number of immigrants landed at this port last month was 34,835. During the month of July, 1880, 25,382 were landed, showing an increase of 9,453 for the last month as compared with the corresponding month last year. The total immigration for the past seven months was 276,738, and for the corresponding period last year 202,367, showing an increase of 74,271 in 1881.

The school fund of Texas will at no distant day be enormous. That State has yet unsold 40,000,000 acres of school land, which will probably bring her public school fund to $100,000,000, a sum equal to the combined school funds of all the other States of the Union. The University of Texas, soon to be established, has more than $500,000 with which to erect buildings, and a permanent endowment of between $2,000,000 and $3,000,000.

Arresting Disease.

What we would particularly impress upon invalids and their friends, *is the value of Compound Oxygen in arresting disease in its early stages and before chronic conditions have been established.* It must be evident to the common sense of every one, that an agent which acts so potently in breaking the force of diseases which have been at work upon the system and have been exhausting it for years, can scarcely fail to arrest like diseases in their beginning, and when the vitality of the body has not been wasted. If, therefore, you have the early symptoms of Consumption, Catarrh, Bronchitis, Neuralgia or the indications of any other disease which may keep its hold upon you until it becomes chronic, *do not neglect the warning indications.* Meet the enemy upon the very threshold, and while your vitality is yet unimpaired. If your regular physician fails to reach the case, then we offer you, in Compound Oxygen, an almost certain means of restoration—the way back to health—*the agent that may save you from a life of invalidism, or from premature death.* Our Treatise on Compound Oxygen, with large reports of cases and full information, *sent free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard St., Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

COMPLAINTS are made all over the West, particularly in Kansas, Nebraska and Iowa, that wire fences attract lightning, which often results in the killing of stock. The stock imagine that the fence affords protection from the storm and accordingly huddle close up to it. One instance is given where 65 head of sheep were killed in Nebraska at a single stroke, and another where 10 head of cattle were killed.....Connecticut was famous for its fine peach orchards 30 years or more ago, but for twenty years the trees have failed to bear. It is now said that the trees are fast improving, and the State may again boast of fine orchards and perfect fruit. This year's apple crop will be small, but the pear crop large.... ...The Cincinnati Price Current says reports received by Secretary Chamberlain that of the Ohio State Board of Agriculture, after thrashing, indicate that the yield of wheat in the State will average 13 bushels per acre, which will aggregate about 70 cent of last year's crop. The crop last year, according to the State report, was, in round numbers, 52,000,000 bushels, and consequently the crop this year will be about 39,400,000 bushels. Even this is more than the National report gave the State credit for last year.....One of our southern exchanges says that Louis Kent, a colored man of Mississippi, has had the honor, for three years past, of sending the first bale of cotton to market.....Switzerland has always been considered as an eminent cattle breeding country, but the consumption exceeds the production. The Custom House returns show that there are every year about 80,000 head more cattle imported than exported. Corned beef, hams and pork of the United States largely contribute to the market.....The San Francisco Journal of Commerce, after patient investigation, puts the acreage of wheat in California this year at 2,908,000 acres and they yield 27,182,000 centals, which is equivalent to 45,300 000 bushels, or nearly 20.4 per cent less than last year. The surplus for shipment will be 1,000,000 tons or 33,300,000 bushels. According to the official report issued August 4, the total acreage of wheat for 1880 in Minnesota is 2,960,073 acres, and for 1881, 2,960,678 acres, showing an increase of only 605 acres. The crop for 1880 is reported to be 39,371,799 bushels, which gives an average yield per acre for the State of 13.30 bushels. The average per acre for the State of the principal cereals was for 1880:—Oats, 33.49 bushels; corn 31.07; barley 23.21. The increase in acreage for 1881 is:—Oats 8.07 per cent: corn, 12 62 per cent. and barley, 71.24 per cent..... The hight of the Nile at Cairo last Friday was thirteen cubits and twenty-three kerats. At the same time last year its hight was nineteen cubits and four kerats. As the Egyptian harvest depends on the hight to which the Nile rises, the prospect for next harvest is not as good yet as that for last harvest at the corresponding date; for the Nile then did not rise quite as high as desirable. A writer in Land and Water says there are from one to two thousand English land holders in Virginia, with farms of from 100 to 1,500 acres, and that they are remarkably happy. He especially recommends Virginia for gentleman emigrants with large families. "It offers almost the only genuine country life with congenial surroundings to the expatriated gentleman."..... The Census Report on the fuel of the country states that four-fifths of the fuel is wood and one-fifth coal, with small quantities of hay, corn-stalk and corn used in some regions.

The latest reports from Mysore, India, are unfavorable. Rain is much needed, and crops are withering, prices rising, pastures failing, and the prospects decidedly gloomy. Unless rain falls within a week a large portion of the crops will be lost. There is a scarcity in vegetables. Reports from the province of Coorg also give a bad account. The reports from other parts of India are fairly good..... The agricultural commission of the Ontario government reports four hundred and seventy cheese factories in the thirty-six counties of the province .....The English Jockey Club has bought for $900,000 a fine estate near Newmarket. It includes 2,500 acres, with a fine mansion.....An Ohio farmerine owed a man $320. To wipe out the debt she married him, and then for $60 she got a divorce, thus saving $260..... At a meeting of the New Orleans Sanitary Association on the 11th, Dr. C. B. White reported that 2 484 hogs had been examined by the microscope at the slaughter-house, and six hogs infected with trichinæ were found, all of which came by rail from St. Louis.....Vennor says: "We may expect a great change in the weather about the time the new comet is at its perihelion, when it will be also nearest the earth. During the week from the 15th to the 20th, instead of being burned up, we shall be nearly frozen by frosts and strong cold northerly winds."

An important sale of Missouri lands was effected in this city on this day week, by Messrs. Donnell, Lawson & Simpson, bankers. The lands sold form part of a tract of the Agricultural College lands apportioned to the State of Missouri under the act of Congress of July 2, 1862, donating public lands for the benefit of colleges of agriculture and mechanic arts. They were ceded by the State to the University of the State of Missouri, at Columbia, and they are sold for the account of that institution. Mr. Geo. H. Nettleton, President of the Fort Scott, Southeastern and Memphis Railroad, purchases 115,301 acres of the lands situated in Douglass, Howell, Oregon, Ozark and Texas Counties for the average price of $2.50 an acre. The lands are divided up as follows:—Howell County, 53,128 acres, sold for $1.50 an acre; Oregon County, 8,613 acres, sold for $1.50 an acre; Ozark County, 4,406 acres, sold for $5 an acre; Texas County, 9 345 acres, sold for $3.50 an acre; Douglass County, 48,807 acres, sold for $1.50 an acre. The railroad company will probably extend its tracks through the lands, which are both agricultural and mineral, to increase their value.....The Secretary of the Kansas State Board of Agriculture reports the acreage of Winter wheat at 1,974,693, and the product at 23,154,399 bushels. The acreage of Spring wheat is reported at 208,179—a decrease of 20,318 acres compared with last year. The acreage of corn is reported at 4,171,554, against 3,554,396 last year. The quantity of old corn on hand is estimated at 18,539,000 bushels, against 19,111,000 bushels at this time last year. The acreages of oats and barley are smaller than last year. The decrease in acreage is mostly in wheat, while there is a marked increase in corn and grasses. The acreage in cotton is 135,200, an increase of 51,366 acres. There is also a large increase in flax and hemp.

Gould is gathering himself about St. Louis like an octopus. He owns its railroad connections, its bridge, its largest iron works, its barge line down the river, and he has just bought a controlling interest in the stock-yards which serve its railroads. .....Ground was recently broken for important additions to the botanical department of Cornell University, Ithaca, N. Y., consisting of—1. A large addition to the present laboratory, the whole to be used exclusively by specially advanced students. —2. A new laboratory for general students.—3. A range of five plant houses. With these improvements Prof. Prentiss will be able to make better a department already very efficient.....At a meeting of Professors of Agricultural Colleges recently held at Lansing, Mich., a committee consisting of Profs. Knapp, Shelton and Beal was appointed to make reports on experiments tried at the Agricultural Colleges. The following are some of the subjects that are to be reported upon: "Propagation of Swine," "Testing the Vitality of Different Breeds of Swine," "Testing New Varieties of Wheat," "Breeding of Corn," "From What Sources do Plants get their Supply of Nitrogen?".....The Arkansas valley in Kansas bids fair to become noted for the production of sorghum, sirup and sugar. Several new factories of considerable size are now in process of construction, and the growing crop is reported in excellent condition.....Angus cattle are bringing higher prices now in Scotland than Short Horns. At a late sale a cow brought 225 guineas, or $1,125, and others, with bulls, from 42 to 180 guineas. The average price obtained for 15 cows was $273..... ....The shipments of strawberries from Southern Illinois the past season was estimated at about 3,845,000 quarts, equal to about 160,220 cases of twenty-four quarts each. It would require about 350 cars, allowing 350 cases to the car, to ship these berries to the market.....Four years ago thirty-two acres of rugged hill-top a few miles back of Oakland, Cal., being unfit for cultivation, was planted to that quick growing semi tropical tree, the Eucalyptus globulus, 680 to the acre, and it is said that this tract with its valuable crop, would now command $6,000.

A Remarkable Revolution.

The success of the Literary Revolution in producing a Cyclopædia, the largest ever published in this country, in large type, well printed and bound, at the nominal cost of $15, seemed to the majority of book-buyers so remarkable, that the *second* Literary Revolution, which reduces the cost of this most excellent work to $10, seems almost incredible. The facts of the case are, however, made so evident and so reasonable, that there can be no questioning them. We have in this office some of the volumes which demonstrate their superior character in every way, and the facts and figures which are published in detail in an article

elsewhere in this paper, under the title of "A Second Literary Revolution," show very clearly, though very surprisingly, how it is possible to make such an extremely valuable and costly Cyclopædia accessible to the masses at such trifling cost.

To remove any possible incredulity which might exist in the minds of some that this is only a plausible scheme for getting a large amount of money in small sums from a great many individuals, in return for books which might never be delivered, the publishers do not *require* any payment whatever in advance. You may, if you please, simply send your order by postal card, and make no payment except upon delivery of the goods themselves, and after you have examined them and found them satisfactory. Orders should be sent to the publishers at once, in order to secure the special terms given during the month of August.

"My Tormented Back,"

is the exclamation of more than one poor hard-working man and woman; do you know why it aches? It is because your kidneys are over-tasked and need strengthening, and your system needs to be cleansed of bad humors. You need Kidney-Wort.—Democrat.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Lydia E. Pinkham's Vegetable Compound has done thousands of women more good than the medicines of many doctors It is a positive cure for all female complaints. Send to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets.

Lazy and dull feelings are sure precursors of sickness, which nothing but Hop Bitters will banish.

BURNETT'S COCOAINE.

The Best and Cheapest Hair Dressing.

It kills dandruff, allays irritation, and promotes a vigorous growth of the Hair.

Burnett's Flavoring Extracts are invariably acknowledged the purest and best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, August 13.

Chicago.—Flour quiet but steady. Wheat strong and higher No. 2 Red Winter, $1.28; No. 2 Chicago Spring, $1.28, cash and August; $1.19½@$1.19⅝, September; $1.19½@19¾, October; $1.17⅛@1.17⅜, all the year; sales at $1.27½@1.28, August; $1.18⅛@1.19⅛, September; $1.18@1.19⅛, October; No. 3 do., $1.05@1.11; Rejected unchanged. Corn unsettled, but generally lower, 56¾c., cash and August; 57⅝c. September; 58¾c. October and November; sales 56⅞@58¾c, September; Rejected, 56¼c. Oats active and firm, and higher, at 34¼c. @34⅜c. cash; 34⅛c. August; 34¼c. September, 34⅜c. October; Rejected, 33c@34c. Rye strong and higher at 90c. Barley strong and higher at $1⅛. Pork active, firm and higher at $17.85, cash and September; 17.92½@17.95. October; $16.60, all the year. Lard strong and higher at $11.50@11.55 cash $11.55, September; $11.60@11.62½, October. Bulk-meats active, firm and higher. Shoulders $6.85, Short Rib $9.50; Short Clear, $9 65. Timothy seed fairly active and a shade higher, at $2.30@2 60. In store; $2.45, August; $2.42½, September; $2.42½@2.45, October. Clover-seed firmer at $4.20@4 35. Flaxseed firmer at $1.24 for crushing; $1 23@1.24 September and October. Butter quiet and unchanged. Eggs rather slow at 14@14½c. Cheese nominally unchanged. Hogs receipts, 7,500 head; shipments, 4,100 head; market weaker except for choice; sales of mixed packing 5c, lower at $5.90@6.35.

Cincinnati.—FLOUR in good demand at full prices; Family, $6@6 25; fancy, $6 50@7. Wheat in good demand at full prices; No. 2 Red Winter, $1 31@1 33; receipts, 7 500 bushels; shipments, 6 500 bushels. CORN quiet but firm; No. 2 Mixed, 62½c. OATS quiet; No. 2 Mixed, 38@38½. RYE stronger at 95@96c. for No. 2. BARLEY—No offerings. PORK quiet, but firm, at $18 Lard quiet at $11 20. Bulk meats stronger; Shoulders, $7 25; Short Rib, $9 70. Bacon in good demand at full prices; Shoulders, 7¾c.; Clear Rib, 10¼c.; Clear Sides, 10¾. WHISKY active and firm at $1 10; combination sales of finished goods, 904 obls. on basis of $1 10. BUTTER scarce and firm; fancy Creamery, $26@27c.; choice Western Reserve, 18@20c.; choice Central Ohio, 14@16c. SUGAR steady and unchanged. Hogs steady and firm; common and light, $5@6; packing, $5 90@6 50.

St. Louis—Flour nominally unchanged. Wheat higher; No. 2 Red Fall, $1 26½, cash; $1 27½, September; $1 30¼, October; $1 32½, November; $1 33¾, December; $1 25½, all the year; No. 3 do, $1 20½; No. 4 do., $1 13½. Corn irregular and generally lower at 58¾c, cash and August; 58¾c, September; 59¼c. October; 59¾c, November; 59½c, December; 58¼c, all the year. Oats—Cash higher and options lower; 38¾c, cash; 36¾c, August; 36¼c. September; 37½c, October; 38¼c, November; 36c, all the year. Rye higher at 92¾c bid. Pork quiet; jobbing, $18.35@18.40. Bulk-meats strong and higher. Shoulders, $6 80; Clear Rib, $9 50; Clear Sides, $9 80. Bacon firm: Shoulders, $8; Clear Rib, $10 60@10 62½; Clear Sides, $11. Lard higher; nominally $11 45. Butter and Eggs nominally unchanged. Hogs easier for light grades; Yorkers, $5 50@5 60; packing, $6 10@6 50; choice to fancy heavy, $6 55@6 85; receipts, 1,500 head; shipments, 3,500 head. Cattle dull; receipts, 600 head; shipments, 1,000 head; supply light; grass Texans range from $2 50@3 75; fair to choice fat natives, $5 20@6. SHEEP steady and unchanged; receipts, 80 head; shipments, 1,100 head; range, $3@4 50.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug. 13, 1881.

BEANS AND PEAS.—Marrow beans are quiet; no export inquiry of moment. Mediums are firm; strictly choice are scarce. Few pea beans here. White kidneys steady. Red continue in overstock. Green peas have a small sale when prime at $1.45, which is easier.

Marrow beans, prime, $2.42½@2.45; other, $2.25@2.37½; medium, prime, $2.45@2.50; other, $2.30@2.40; pea, $2.60@2 85; white kidney, $2.25@2.45; red kidney, prime, $1.55@1.60; fair to good, $1.40@1.50; black or turtle soup, $1.30@1.35.

Receipts for week, 4,084 bush.
Exports do. 276 bbls.

BUTTER.—The week has been one for the sellers and even if the new figures are not lasting ones a good deal of encouraging trade has transpired. The home trade has bought upper stock freely and have paid the stiff rates demanded without a murmur.

Creamery—Western, good to choice 26@26½c; Ohio, choice, 24@25c; do. good to prime, 24@25c.; State and Pa. good to choice, 26@27½c; State sweet cream 24@25c.; poor 22@23c; State pails and h'f tubs, choice 24c; fair to prime 21@23c.; Welsh tubs, 21@23½c.; State dairy tubs, poor to fair, 19@20c; firkins, fair to fine, 22@24c.; Western imitation creamery 17@23c.; dairy, fresh choice 20@22c.; other 14@18c.; factory, Iowa, fine June, 17@18c.; other 12@16c.

Receipts for the week 35,496 pkgs.
Exports do. 6,964 do.

CHEESE.—There is no special feature nor likely to be until warm weather is over. The market opened dull; but with light receipts sellers have managed to keep stock for accumulating heavily, and prices for both state and western factory may be called steady. Skims of all kinds dull and in buyers' favor.

State fact'y, fine, col'd, 10@10¼c. do. white, 10@10¼c; good to prime, 9½@10c; fair to good 8¼@8¾c; poor to fair 8@8¼c; Wis none; Ohio, factory, cheddar, fine 9@9½c; fair to prime 8½@8¾c, flat, fine 9c, good to prime 8¼@8½c; fair to good 7¾@8¼c; poor 6¾@7¼c; creamery part skimmed, 5@6c.; full skims, 3@3c.

Receipts for week, 56,373 boxes.
Exports for week, 44,012 boxes.
Liverpool cable, 53s.
Steam to Liverpool 30@40s.

COTTON.—The past week is regarded as the dullest of the year not only here but at all English and Southern points. There is not likely to be much excitement or interest, until new crop appears or until definite figures come from the counting ports and places.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas
Ordinary	8 7-16	8 11-16	8 11 16
Strict ordinary	9 1-16	9 5-16	9 5-16
Good ordinary	10	10⅛	10⅛
Strict good do	10 9-16	10 13-16	10 13-16
Low middling	11 5-16	11 9-16	11 9-16
Strict low middling	11⅛	12	12
Middling	12	12⅛	12⅛
Good middling	12⅛	12⅝	12⅝
Strict good middling	12⅝	13	13
Middling Fair	13⅛	13⅝	13⅝
Fair	14⅛	14⅝	14⅝

STAINED.

Good ordinary	8 1-16	Low middling	9 15-16
Strict good ordinary	9 13-16	Middling	11⅛

August 12.05@12.07c.; September, 11 17@11.18c.; October, 10.84@10.85c.; November, 10.49@10.50c.; December, 10.19@10.50c.; January, 10.62c. February, 10 73@10.74c.; March, 10 86@10.87c.; April, 10.99@11c.; May 11.10@11.12.

DRIED FRUITS.—There is little demand, but there is a strong holding market for apples of all grades. New fruit will make some variation but the speculative interests feel safe in what they have already done. Peaches too high for business. Small fruits open well for prime new; market well cleared of old.

Apples, evaporated rings, choice 12c.; prime 11@11½c.; fair to good 10¾@11c; Southern in bbls. 4¾@5¼c.; do. in bags, 4¾@5¼c; State fine cut 6¼@6¾c.; quarters choice, 6@6¼c.; small lots 5¾@6c. Ohio and Mich. 6@6¼c.; Western, fair to choice, 5@5¾c; evaporated peaches peeled 33@36c.; N. C. do. 19@25c.; Ga. do. 17@23c.; State 17@19c.; old poor to prime 12@18c.; Penn, halves 7¼@7¾c.; unpeeled ₩ qt. 7@7¼c. Blackberries, 11@11¾c. Cherries, 20@21c. Raspberries, prime new 27@28c. Whortleberries, prime 12½c.

Receipts for the week, all kinds, 800 pkgs.
Exports dried apples, 123 pkgs.

EGGS.—Receipts for week, 6,864 bbls.; do. last week 7,809 do. The demand has improved and Western stock is turning out better. Care should be taken by shippers in packing Western to avoid suspicious lots, as it will not do to have the confidence of buyers too often shaken. Near points scarce; Canada fills most extra wants.

Near points 19@20c.; State and Pa. 17½@18½c; Canadian 17@17½c.; Western, choice, 16½@17c.; inferior lots 14@16c.

FLOUR.—Buyers for export have reappeared and as desirable brands are not plenty they close in favor of the seller. The dealing has been largely in No. 2 and superfine Minn. patents and other high grades have had a liberal movement. The trade in upper priced flour has been unusually steady this season.

No. 2, ₩ bbl., $3.40@4,00. State and Western superfine, $4 30@4 80; city mills extra, $6.25@6.50; Spring wheat do. $4.85@5.15; Spring XX and XXX, $5.25@6.75; patents, $6.00@8 00; Ohio round hoop shipping, $5.00@5.10; trade brands, $5.50@6.25; St. Louis extra, $5 10@5.50, do. double extra, $5.50@6 25; do. family, $6.40@7; South'n ext. shipping, $5.40@6. do. XX and family, $6.25@7.25. Rye superfine, $5 40@5.75. Corn-meal, Brandywine, $3.50; Western, $3.00@3.30.

Receipts for week, flour 18,200, bbls.; corn-meal do. 3,400.

Exports for week, flour, 18,190 bbls.; corn-meal do. 4,568

FRESH FRUITS.—Apples are doing well; they already seem to feel the influence of a light crop. Other fruits, when quality is fairly good, have a good dull and realize reasonable prices.

Apples, Nyack Pippin ₩ bbl. $1 75@2; Orange do. $1.25@1.50; Sweet Bough, $2@2.50; Sour do $1,25@1;50 Red Astrachan $1.75@2 50. Pears, Bartlett Sav. ₩ cr. $2@2.50. do. Va. ext. $2.50@3 south'n fair $1.50@2.25; up-river ₩ bbl. $4@4.50, Clapp's favorite sth'n $3.50@4.00; Flemish Beauty, up-river, $3@3.50; Bloodgood. $2@3 Catharine $2@3; Jargonelle $1.50@2; Bell, $2 25@2 50; Sugar Top, $1@1.50; Scooters 1@1.50. Grapes, Marina, Va. case of 18 2-lb. bxs, $6@6.50; Delaware do, $4.50@5 50; Hartford do. 3@3.50; Ives do. $2.50@3.50; Concord, do. $3.50@4 50.; Ives's seedling, N. C. ₩ lb. 5@6c. Blackberries, Wilson, Jersey ₩qt, 8@12c. Huckleberries ₩box 75c@$1. Peaches, up-river prime ₩ bskt $1.50@2; poor to fair 75c.@1.25; Jersey $1@2, Md. Troth, ₩ crate, $3@4; Crawford $4.50@5 50, North Carolina, $2.50@4.50; Ga. extra ₩ 3-to-bu. box $2.50@3.50, clings do. $1.50@1.75 fair to prime ₩ bush. cr. $3.50@5. Plums, Damso southern ₩ qt. 9@10c.; Green Gage ₩ bbl. $5.50@6; Egg $5@5.50; Lombard $4@4.50. Watermelons, Norfolk & N. C. prime ₩ 100 $15@20 Md. selected $30@25; culls $6@10; Jersey Negro-head $15@20. Nutmeg melons, Jenny Lind Jersey ₩ bbl. $2.50@3; Del. & Md. $2@2.50; Norfolk 50@1.75. Peanuts are quiet, but reports of activity at the South lend some strength to prices here; Va. hand-picked ₩ lb. 5¾@6¾c.; do. fancy, 5¾@5¾c.; do. extra prime, 6¼@6¾c.; do. good to prime, 4¾@5¼c.; shelled, 3¾@4¾c. Pecan nuts, ₩ lb, 7@9c.

GRAIN.—Wheat has assumed a more business tone since crop reports are more beyond conjecture Winter wheats especially having come into quite settled visible supply. Exporters have bought largely and speculation holds. There has been more or less fluctuation in prices but as a rule quotations close with a wholesome crispness.

Wheat, Spring $1.19@1.30; do. No. 2, $1.26@1.27½; do. No. 3, $1.18@1.20; red Winter No. 2, $1,32@1.32½; red Winter $1.29@1.35, white Western and State $1.20@1,30. Rye, 85@93c. Oats, white No. 1, —c.; white No. 2, 51¾@52c., white No. 3, 49@49¾c; mixed No. 1, 45c. do, No. 2 43c; do. No. 3 41@42c Corn, Western mixed 59@60c.; do No. 2, 60@62c.; do. yellow, 60@61c.; do. white 62@65c; Southern yellow —@—c.; do. white 65@66c.

Receipts for week, wheat, bush., 894,500.; corn, do 3,645; oats do, 659,250; rye, do. 5,190; malt, do. 93,054; rice pkgs. 689.

Exports for week, wheat, bush 1,294,349; corn, do 1,098,602; oats, do. 47,745; rice, pkgs., 1,830.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports and on rail, on lakes, on canals and on Mississippi River:

	1881. Aug. 6. bush.	1880. Aug. 8. bush.	1879. Aug. 10. bush.
Wheat	17,539,095	14,791,197	15,189,594
Corn	15,894,283	16,647,605	11,436 314
Oats	7,404,718	1,465 557	1,914,457
Barley	145,573	169,717	318,434
Rye	250,521	387,682	479,119
Total	41,214,185	33,461,758	29 337,983

HAY AND STRAW.—Exports for week 920 bales. A good many poor lots have arrived that are rejected as there is an abundance of good quality to come and prices favor trading in best qualities. Straw doing fairly.

Prime retailing timothy hay, 85@90c. ₩ 100 lbs.; medium do. 60@75c. do.; shipping grades 50@55c. do.; clover mixed 50@55c.; pure 40@45c. Straw, long rye 80@85c.; short do. 65@75c.; other grain, 35@40c.; new rye straw 65@75c.

HOPS.—There is ready sale for all the good hops offering, as the supply is known to be small. Low grades are dull. A good many lots have heated during August; these are very hard to sell. New hops not arriving in quotable quantities.

State crop of '80, choice, 20@22c; good to prime, 16@18c; fair to good, 14@16c; poor to fair, 11@14c; Eastern, 14@17c.; '77's, 12@15c.; olds, fair to prime, 5@8c.

Receipts for week, 400 bales.
Exports for week, 1 bale.

POULTRY AND GAME.—Supplies of dressed are more controlable and good stiff prices are ruling for all good stock. Turkeys when prime have a steady sale for steamer use; it is useless to send poor quality; spring ducks in demand; few in market. Chickens and fowls have had a brisk week; quality good.

Turkeys, Phila. prime ₩ lb 18@20c.; State & Western d. p. 18@19c.; scalded 16@18c. Chickens, Phila. prime 22@23c; N. J. & Bucks Co, 20@22c; State & W'l'n sp'g 18@20c. Fowls, Phila. d. p 15@16½c. Bucks Co. 15@16c; N. J. d. p. 15@16c; do. scalded 14@15c.; State and West'n d.-p. prime 14½@15½c.; do. scalded 14@14½; do. coarse 13@13½c. Ducks—Spring, Phila. ₩ lb 18@19c; J'y & Bucks Co. 17@18c. State 15@17c; old, fair to good 12@13c. Squabs, white ₩ doz. $2; do. dark, $1.50.

Cooped stock has ruled unsteady. Daily free supplies are not needed in Summer, as city killers do not as a rule count upon more than two or three busy days, and these come at the close of the week. Prices, however, average fair for a hot Summer month.

Chickens, Jersey ₩ lb 17@18c.; State 16@17c.; Western and Southern 14½@16½c. Fowls, Jersey, State and Pa. 13½@14c; western 12@13c; southern 12@12½c.; roosters, old 5@6½c.; turkeys, Jersey & Pa. 14@15c.; western 13@15c; ducks, Jersey, N. Y. and Pa. ₩ pair 65@87c; other 55@65c; geese Jersey & Pa. $1.50@1.75; other $1@1.37; pigeons, large strong birds 30@35c; young 20@25c.

Ing'me Woodcock are scarce and firm; a choice lot of State might slightly exceed our quotation No wild pigeons or squabs arriving; the last squabs here sold at $1.25 ₩ doz. English snipe and plover are not wanted at present.

Woodcock ₩ pair $1.25; wild squabs, stall-fed ₩ doz. $ .25 Eng. snipe $1.75@2, plover $1.75@2.

PROVISIONS.—Hog products continue to run in the track of speculative manipulation. A possibly reduced corn crop is a material source of help to the "bull" or high priced interest when cash or or spot goods are to treaty but with quotations at present points buyers fill only pressing requirements. In lard the tendency at the moment is for lower figures, but the material both "proper" and real stock, is so strongly concentrated in the hands of a few prominent operators that the easing up is suspected to be merely a part of speculative tactics. Light smoked meats are wanted for current use, but the supply is light as cutters cannot furnish the full demands of customers at a profit.

Pork extra prime, ₩ bbl $14@14.50; Western mess, new, $17.75@18. Lard, steam West'n ₩ 100 lbs, $11.3 ½@11.35; prime city, $11 35. Hams, smoked city ₩ lb 12@12½c; pickled Western and city 11@11¾c; Shoulders: smoked city, 8¼@8¾; pickled, 7¾; rib bellies pickled, 9½@10½. Bacon, long clear, west. 9¾@10c. Beef, wes ern mess ₩ bbl., $11@13.50. India mess tcs. $25@27.50; beef hams bbls. $21@23.

Receipts for week—Beef, bbls and tcs. 502; pork, bbls, 1,656; Cut meats, pkgs. 13,403; lard, do 6,700. Exports—Beef, bbls and tcs, 1,750; pork, 2,335; cut meats lbs. 5,079,044; lard, do. 1,159,226.

TOBACCO.—Spanish buyers have again appeared and good sales have been made for France. The Western crop of leaf is said to be badly injured by prolonged dry, hot weather, and there is an active inquiry for attractive leaf at some advance. The following rates for hhds show an advance of ¼c.—

Light and heavy common lugs 5@6¾c; good do, 6@7c; low leaf 6¾@7¾c; medium do, 7¾@9c; good do, 9@10¾c fine do, 10@12½c; select do. 12½@ 14¾c; other stock about as last reported.

VEGETABLES.—Potatoes are not arriving so freely and prices have advanced. The new prices do not check the demand for prime L. I. Sweet sell well and are of good quality. Long Island extra, bulk, ₩ bbl. $1.75@1.87. fair to good $1.37@1.62. New Jersey $1.50@1.75; Va. sweet yellow $3.75@4 red $2.75@3; Del. $1@1.50

Sweet corn, prime 60@75c; poor 30@50c wax beans L. I. $1.25@1.50; string beans L. I. $1@1.50 Lima potato $1.50@1.75; cucumbers, L. I. ₩ 100 75c@$1; egg plant L. I. ₩ doz. 75@$1 25. Phila ₩ bbl. $2@2.50 Tomatoes L. I. ₩ bu. 20@25c; squash marrow ₩ bbl. $1.50; L. I. white $1@$1 50 do. yellow, $1.25@1,50; cabbages, ₩ 100, $3@5. beets, L. I. ₩ 100 bchs $1.50@2; onions, white ₩ bbl, $2.50@3.00; yellow prime $2.50@3.50; red Eastern $2.50@3; red Chester $2@2.25; carrots ₩ 100 bchs $1@1.50, turnips Russia ₩ bbl, 75@$1; okra ₩ 100 15c.

WOOL.—There are no very free sellers. Owners who secured a good portion of the clip at early prices have parted with some stock shading from time to time until the actual late sales are 3c. off from what are still holding rates. A large stock is being carried much of it laid in at high figures. Its owners decline to sell under and seem buoyed up with the hope that a future stronger run upon the market will support their views. The demand at the moment certainly is not of a decisive character to test prices for fine lines or large useful parcels. Selling prices will be reported next week.

LIVE STOCK MARKETS.

NEW YORK, Saturday Aug. 13, 1881.

BEEVES.—Receipts for the week 12,585 head; do last week 12,398 do. Cattle sold readily at all the yards and nothing was left over. Nearly all grades of native cattle advanced 1¼c. ₩ lb. and even Texans and coarse Colorados were doing better. If supply is not large Monday's market will be good. Today's sales of Texans were at 7¾@8c, with 10 cars of Colorados at 8¼@9c. Very poor to choice native steers ranged from 8c. to dress 65 lbs. to 12c to dress 57 lbs. Bulls were dull and lower.

MILCH COWS.—Trade is quiet at $30@55 per head for the grades arriving. This market loses some of its call owing to scarce pasture in immediate grazing points and the long low rating of milk.

SHEEP AND LAMBS.—Receipts for the week 33,761 head; do. last week 37,519 do. Very common to good sheep sold at $3.62½@5.50; a deck-load of W. Va. lambs, 6¾c; 1 car of Va. 7¼c; 2 cars of Ky & Tenn. do, 5¾@6¼c; 41 head of Penn. do, 7c; and 131 at 6c; 3 cars of Canada do, $7.25@7.50 2 cars of State do, 7¾@8c; and 427 head of Jersey do, 6¾@8c.

VEAL CALVES.—Small meats have not had a brisk run and veal has had its share of dullness; only selected N. J. live brought the extreme.

Live N. J. prime to choice, 7½c; do. State, 7¼c.; poor to good 5@7c.; Mt. Hollys, 6@7½c.; buttermilk, 3¼@3¾c.; grass 2¼@2½c

SWINE.—Receipts for the week 18 838 head; do. last week 17,573 do. Prime live quoted at strong figures, States 6¾c. and prime Ohio corn-fed 7c. N. J. pork 9@9½c; city dressed 8¾@9c.

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The Apocryphal Books of the New Testament, rejected on the First Revision by the Council of Nice, under Constantine, A. D. 325.

The books that exist, of those not included in the canon, are carefully brought together in the present volume; and the possessor of this and the New Testament has in the two volumes a collection of all the historical records relative to Christ and his apostles now in existence, and considered sacred by Christians during the first three centuries after his birth. Illustrated from Ancient Missals. 8vo. Cloth, $1,50 postpaid. *Send for Circular.*

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HAMILTON, ONTARIO,

On Friday, Sept. 9, 1881,

Commencing at 1 O'Clock P. M.

Selections from this herd have carried off the herd prize at the Provincial Fair, in Canada, for the past ten years, competing against all the principal herds in Canada; and two years in succession at the New York State Fair the only two occasions they were placed on exhibition in the States.

Breeders of Ayrshire Cattle

Are reminded that this sale affords them an opportunity for the selection of stock never before offered on this continent, and may never occur again.

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VERMONT FARM MACH. CO., Bellows Falls Vt.

Reading for the Young.

MARY AND HER LAMB.

Mary had a William goat,
And he was black as jet;
He followed Mary around all day,
And liked her—you just bet!

He went with her to school one day;
The teacher kicked him out—
It made the children grin, you know,
To have that goat about.

But though old Whack'em kicked him out,
Yet he lingered near,
He waited just outside the door
Till Whack'em did appear.

Then William ran to meet that man,
He ran his level best;
He met him just behind, you know—
Down just below the vest.

Old Whack'em turned a somersault,
The goat stood on his head,
And Mary laughed herself so sick
She had to go to bed.

FARMING FOR BOYS AND GIRLS—NO. 31

HENRY STEWART.

Fertility of the Soil.

If any product of the soil, any plant or any animal that feeds upon plants, be consumed, as by fire, or the slower process of decomposition by decay, a portion goes off, or escapes into the air and the remainder is left in the condition of earthy matter similar to fine soil. It is reasonable to suppose and believe that that portion of organic matter which escapes into the air, as it decays, comes from the air at first; and that portion which returns to soil came originally from the soil, and this is precisely the fact. Furthermore that portion which escapes into the air exists as a part of the vast store of plant food in the air just as the earthy part adds, on its return to the soil, to the stock of plant food there.

The atmospheric or gaseous portion of the substance of plants and animals, which is known as organic matter, consists of oxygen, carbon, nitrogen and hydrogen or combinations of these. The mineral or soil portions consist of phosphoric acid, potash, lime, soda, magnesia and some other substances. And that property of the soil, which we call its fertility, or in other words its power and capability of producing crops, consists of the presence in it in sufficient quantity of those substances which plants take from it.

It has long been a disputed point among scientific men if the nitrogen of plants has been derived from the soil or the air; some believing one thing and some the other. There is proof of some kind on either side, and opinions are divided upon this point. It may not be wise to decide either way, but to leave the question as one not yet settled. But it may be worth while to consider a few facts in relation to it.

First, that all the nitrogen in the soil has come from the decay of plants and animals during all the vast periods since the first plants grew and the first animals fed upon plants.

Second, that the first plants which grew could not have derived any part of their nitrogen from the soil unless it came directly to the soil or to the plant itself, from the atmosphere of which it furnishes four parts out of every five of its bulk or volume.

Third, that natural laws never change; and what was once true in regard to the life and growth of plants and animals, must be always and ever true.

Fourth, if plants at one time derived their nitrogen from the atmosphere—and it is evident that at one time this was the only source of this portion of the food necessary for plants—then it is also evident that plants always did, and do, and will continue to, derive their nitrogen from the atmosphere.

So then we may consider that the actual fertility of the soil consists of certain mineral matters above mentioned and that this natural fertility is enlarged by the addition to the soil of elements containing carbon and nitrogen. It is important that every farmer and every youth expecting to become a farmer, should understand clearly how it is that the soil is enabled to produce crops, and if there is any question connected with it that is as yet not clearly settled, this should be presented clearly to the mind, that it may be considered as well as may be possible, with the knowledge and experience that comes to us through our daily work in the fields, and through the fruits of our own thought.

INSECT TRANSFORMATIONS.

Among the interesting and wonderful things of nature is the transformation or change of the ugly-looking, sluggish worm of the clod into a beautiful insect, whose wings are painted bright with the rainbow's various hues.

In the life of an insect there are three periods, in some more distinctly marked than in others, and these periods are known as the *larval*, or time of infancy, the *pupal*, or time of rest, with most insects, and the *adult*, or time when full growth is attained. In the first period those insects which undergo complete transformations pass their time in eating and changing their skin, but they grow rapidly. There is nothing in their appearance to denote that they will ever be anything more than the ill-looking worms they then are. Indeed, they seem to live for the purpose of eating, and when they can eat no more, they die.

But not so. Let us consider—not the lilies of the field just now, but the caterpillars. On any vine, almost, we can readily find a specimen. Watch it patiently and see how fast it eats! See the great holes in the leaves, cut out as neatly as can be! It acts as if it were preparing for the long sleep it is about to take; and so it is. When the caterpillar becomes fully grown he crawls away into some concealed place, throws off his "old coat," and enters the pupal or chrysalis state.

Now he can neither move about nor eat; he simply exists. Probably nearly every one has seen the little house in which the caterpillar now lives. It is generally, though not always, a whitish oblong cocoon which, as time passes, turns to a reddish color. We may open this and on close examination we shall find that quite a change has come over our caterpillar. He was once large and long, but in this pupal state his body is much contracted. Wings, legs, antennæ or feelers are closely compressed and stuck to the body by a varnish-like substance. After a while there is a struggle within the "little house," the cocoon bursts open and from its dark and confining walls emerges the butterfly or moth. It has entered upon the last stage of its existence, it has become an adult. It is weak at first, and its wings are shriveled, but the light and air soon dry off the moisture, the limbs acquire strength and flexibility, and it spreads its wings to the sunlight, which now become the means of locomotion to carry the once ugly-looking caterpillar which fed on leaves, from flower to flower to feed on honey-juices.

The transformation is complete! The form and size of the body has been changed; eyes are there; some legs have gone, others have appeared; four wings, sometimes colored in most exquisite beauty, now adorn it, and a slender tongue sips liquid nourishment, which, alone, the stomach can digest. But its life in this stage is brief. It has passed many dark days to sport for a short time in the light. UNCLE MARK.

THE MAGNITUDE OF A MILLION.

Having noticed that few pupils in our schools have any definite idea of the magnitude of large numbers, I have taken the method described below for the purpose of elucidating the subject. Being a little surprised myself at the result of the calculation I have asked several grown persons and among them some good business men, to guess how much a million kernels of corn would measure, and have never yet known a person to guess half enough. So I have counted a quart (not the liquid quart but the thirty second part of a bushel) and found it to contain 2,176 grs., which multiplied by the number of quarts in a bushel 32 makes 69,632 grains in one bushel. Then 1,000,000 divided by 69,632 gives over fourteen bushels as the measure of one million corns. As it is pretty generally understood that figures will not lie I have recommended this method of ocular demonstrations of magnitude. S. B. P.

Muskegon, Mich.

THE YOUNG QUERIST.

E. L. P., Homer, N. Y., wishes to know what will kill myrtle.

ANS.—Spading it up frequently will do it.

S. O. F., Petersburgh, Ohio, asks what produces the "black rust" on verbenas.

ANS.—It is caused by the verbena mite, an insect closely related to the Red Spider, and which can hardly be seen without the aid of the microscope. It infests the heliotrope, petunia and other plants. No good remedy can be given for it. It is said that it does not attack strong plants, hence, stimulating them with liquid manure may prove a preventive.

J. D., Beverly, Oregon, wants a book on catching and preparing insects for the cabinet.

ANS.—There is a little book published by Lee & Shepard of Boston, Mass., which gives excellent information on this subject to beginners. It is entitled "Insects; How to Catch and Prepare Them for the Cabinet."

F. E. C., Leavenworth, Kansas, asks how his daughter can become a member of the Horticultural Club.

ANS.—By sending her name and address to "Uncle Mark," at this office.

NOTES.

A few days since, Mr. Heins of Patterson, N. J., called at the RURAL office and exhibited a very peculiarly marked and beautiful butterfly, which, I wish every one of the cousins could have seen. Viewed through a small magnifying glass the number "1881" was distinctly visible on its wings, the figures 18 being on the left wing, and 81 on the right. I am not going to attempt to account for this peculiarity, but if any of the cousins wish to try, I shall be glad to hear from them. Mr. Heins calls it the "Admiral," or Papilio atlanta, speaking entomologically. He has four specimens all marked precisely alike.

One of the cousins on the prize drawing list, who received an engraving from us, writes as follows:—

"DEAR UNCLE MARK:—Many thanks for the picture. In haste, FRANKIE BROOKS."

Madison, Wis.

Will "Amanda" please send her full name and address. We must have these from all who wish to join our Club.

It would doubtless be a good plan, for those of the Cousins who are interested in Geology, to exchange specimens and correspond with one another on the subject, as Mary Everts suggests, in her letter. UNCLE MARK.

LETTERS FROM THE COUSINS.

UNCLE MARK:—My father has taken the RURAL NEW-YORKER twenty-five years, and I have been its constant friend since old enough to look at the pictures. I've received much instruction from it, in many ways. The letters from the Cousins are interesting, coming, as they do, from all parts of our grand country. How would it please the Cousins to pay a little attention to geology, just for a change? I think among so many Cousins there must be some, like myself, interested in geology and the collecting of specimens. Perhaps we may exchange, and in this way get fine collections for our cabinets. Mr. Chadwick wrote such a nice article for Harper's Magazine last year, about Western Massachusetts and the tourmalines, garnets and other fine specimens, and I've been anxious to get some of them. Maybe some of the Cousins can help me. MARY E. EVERTS.

North East, Erie Co., Pa.

DEAR UNCLE MARK:—I have been very much pleased lately reading the Cousins' letters and thought I would write you. I think you must be very much like my Uncle Richard from the description one of the Cousins gave of you, and it makes me feel like writing to you. I have got two sisters but no brother. We have a large cat which my little sister is very fond of dressing up like a baby. He weighs about twelve pounds, and will roll over for something to eat, and catch hold of the door knob and shake it when he wants to come in. My papa takes the RURAL and thinks everything of the Tree Number, especially. My grandpa took it almost ever since it was first published until a few years past. Papa received the White Elephant in a box all right, and he expects to raise a big crop of Elephants. I would like to join your Club, if agreeable. Your would-be niece,

MARY E. HUMPHREY.

Illyria, Fayette Co., Iowa.

DEAR UNCLE MARK:—We subscribed for your paper this Spring, and have planted the seeds you sent us. They are all doing nicely, especially the potatoes, and they were planted late. There are three hills. The tops are very heavy and in bloom. I have a flower bed of my own, containing carnations, pinks, lemons, balm, and a blush rose that is in bloom. If I join the Club can I write more than once? I like your paper very much; and would like to join the club. I am 11 years of age, and have four brothers, all older than myself. I live in the country about five miles from Oconto City. Yours truly, ALICE M. COOK.

Oconto, Wis.

[We are always glad to hear from the Cousins whenever they have anything interesting to communicate.—U. M.]

DEAR UNCLE MARK:—As I have not seen many letters from the Cousins lately, I concluded to write and tell you how I got along with my Cousin correspondents. I only had one and he dropped out of sight, for after a few letters had passed I heard nothing more about him. I wish Alma Allen would write to me as I like to correspond with my relations. I thank you very much for the seeds you sent us, but am sorry to say the celery seed did not come up. I sowed some okra, portulaca and mignonette seed, but none came up; but the pinks are doing very well. I will have to close for this is on the road to the waste basket. With love to all the Cousins I remain your niece,

Wolfe Island, Ontario. FANNY HORNE.

The Puzzler.

HIDDEN HOUSE ARTICLES.

1. So Fanny has gone at last.
2. It is enough to set teeth on edge.
3. Hallo! ungenerous boy.
4. That run kept him in bed a week.
5. What a poke Richard is.
6. I'll shove Louise down hill.
7. In Boston, G. Sterling lives.
8. The grass plot terminates there.
9. What no terrace in front.
10. Bob Racket is unendurable.
11. Job rooms with Tom.
12. Caleb rushed into the room.
13. Did you stub your toe?
14. What fun Nellie enjoys.
15. Did Elmo use trapeze ropes.
16. How is Peter.
17. I saw a cab in Nettles yard.

☞Answer in two weeks. LITTLE ONE.

CROSS-WORD ENIGMA.

My first is in plantain but not in quince.
My second is in cantaloupe but not in mince.
My third is in muskmelon but not in pumpkin.
My fourth is in wintergreen but not in raisin.
My fifth is in mango but not in cassava.
My sixth is in apricot but not in guava.
My seventh is in sapadilla but not in dewberry
My eight is in damson but not in strawberry.
My ninth is in persimmon but not in papaw.
My tenth is in bread-fruit but not in haw.
My eleventh is in nannieberry but not in banana.
My whole is a delicious fruit. L. O.

☞Answer in two weeks.

PUZZLER ANSWERS—Aug. 6.

ENIGMA.—Water.

HIDDEN INSTRUMENTS OF MUSIC.—1, Castanet; 2, bassoon; 3, base-viol; 4, accordeon; 5, Jewsharp; 6, drum; 7, lyre; 8, cornet; 9, tambourine; 10, organ; 11, melodeon; 12, concertina; 13, fife; 14, harmonica; 15, harpsichord; 16, calliope; 17, flageolet; 18, shawm; 19, cymbals; 20, oboe; 21 cornopia; 22, trombone; 23, clarionet; 24, French horn; 25, violincello.

Malarial fever, Ague, and Biliousness, will leave every neighborhood as soon as Hop Bitters arrive.—*Adv.*

Sabbath Reading.

MAY BE YOUR TURN NEXT.

Judge not too harshly, oh, my friend!
Of him your fellow-man,
But draw the veil of charity
About him if you can.
He once was called an honest man,
Before sore trials vexed—
He stepped from out the narrow way;
It may be your turn next.

Fainting upon the great highway
A suffering soul doth lie;
Go staunch his wounds and quench his thirst,
Nor pass him idly by.
God will not brook the swift excuse,
The thoughtless, vain pretext;
A fellow-mortal bites the dust:
It may be your turn next.

You heard, one day, a single word
Against a person's name;
Oh, bear it not from door to door,
To further hurt his fame.
If you're the man you claim to be,
Remember, then, the text
To "Speak no evil," true or false;
It may be your turn next.

The world is bad enough, we own,
And many need more light;
Yet with true love for all may we
Help on the cause of Right.
Lift up the sinful and the weak,
The souls by care perplext,
Well knowing that to drink the gall
It may be our turn next.

CHRISTIANS IN BUSINESS.—How to be a Christian in business is a question sometimes discussed in the prayer meeting. It may be well to reflect that we are all Christians in business, if we are Christians at all; since we all sustain business relations with our neighbors. The question concerns not the commercial classes alone, but all the rest of us. The laborer, the mechanic, the teacher, the preacher, the professional man, are all exchanging their services for money or its equivalent. There is a business side to every man's life. The lady who goes shopping is a Christian in business—or ought to be The same virtues that we demand of the trader we ought ourselves to possess, truthfulness and honesty and promptness and courtesy are required of all Christians in their dealings with one another, whether they belong to the commercial class or not.—Sunday School Times.

The preciousness of little things was never more beautifully expressed than by B. F. Taylor, in the following: "Little words are the sweetest to hear. little charities fly farthest, and stay longest on the wing, little lakes are the stillest; little hearts are the fullest, and little farms are the best tilled. Little books are the most read, and little songs the most loved. And when nature would make anything especially rare and beautiful, she makes it little—little pearls, little diamonds, little dews. Everybody calls that little which he loves best on earth."

What shall I give? To the hungry give food; to the naked clothes; to the sick, some comfort; to the sad a word of consolation; to all you meet, a smile and a cheery greeting Give forgiveness to your enemies; give patience to the fretful; give love to your households; and, above all, give your hearts to God.

"Holiness carries a graceful majesty with it wheresoever or in whomsoever it is truly and sincerely possessed."

Miscellaneous.

Music Teachers

WILL NOW SELECT BOOKS FOR THE FALL CAMPAIGN,

and cannot possibly find a better book for Choirs, Conventions and Singing Classes, than L. O. EMERSON'S

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Examinations for entrance, Sept 14th. Catalogues sent on application. W. L. DEAN, Registrar.

PERSONAL ITEMS.

Not only is the Lord Mayor of London a Methodist, but he goes to class meeting in the warmest weather.

Ex-Senator Conkling already has had three $50,000 retainers, according to the Washington Republican.

Mrs. Frances Hodgson Burnett, the novelist, is at Long Branch, where she is enjoying the sea sands between pa ragraphs.

Washington rumors have it that Senator Plumb, of Kansas, has cleared nearly $3,000,000 in mining operations in the last two years.

The baggage taken by the Crown Prince and Princess of Germany and their suite to Norris Castle, in England, weighed nearly eight tons.

"Gesticulation," says an eminent actor, "is fast becoming a lost art?" He probably never saw Talmadge fencing with an imaginary lobster.

Mrs. M. C. Steele, a sister of Senator Conkling, has been a searcher of women passengers at the New York Custom House for the last twelve years.

Sitting Bull has named one of his twins "The War is Over." "She-Who-Glances-at-You-as-She-Walks," is fourteen years old and a very nice girl.

"Boss" Shepherd's associates in Chihuahua, Mexico, write that he is rapidly rebuilding his fortune. He now has control of twenty-one mining properties, several of which are said to be yielding very rich ore.

A telegram from New Orleans on the 10th says: "Mr. and Mrs. Jefferson Davis will sail Sunday morning for Liverpool on the British steam-ship Bernard Hall, of the West India Line. They are going after their daughter, who is being educated abroad."

A correspondent of the Cincinnati Commercial says that Mrs. Lincoln, the President's widow, bids fair to reach three-score and ten years. Her trouble is in her mind. She fears that she may be reduced to want before she dies. Some time ago she pinned $3,000 in the folds of her walking-dress for safe-keeping.

Kossuth is still living at Barraccone, in Piedmont, not very far from Turin. He leads a most retired life, visits nobody and cares to see no visitors but Americans, to whom he is always "at home." In spite of his advanced years—he was born in April, 1802, and is consequently well on to eighty—he still retains largely his extraordinary powers of work.

(Indianapolis Indiana Farmer.)

Everybody Right:

When every one says a thing is so, it must be so." On this point Mr. A. H. Lyman, Druggist, Manistee, Mich., writes: Every one who tries St. Jacobs Oil, says that it is the best remedy ever used for rheumatism. Mr. White, a customer, after having employed every known specific for rheumatism was cured by St. Jacobs Oil.

Stock and Poultry.

POWELL BRO'S,

Springboro, Crawford County, Pa.

THE MOST EXTENSIVE IMPORTERS OF

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SEVEN IMPORTATIONS

for 1881 already received, and another on the way, and another ready to leave Scotland, and others still to follow,

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HAMBLETONIANS,

And other strains of trotting Stock.

HOLSTEIN & DEVON CATTLE.

Catalogues sent free. Address as above, and mention the RURAL.

Registered Jersey Bull for Sale,

Of the best butter stock; runs directly to Alphea through Jupiter, 93, her full brother, and Mr. Faile's Edith 2d, 805, her half sister. The sire of this bull is Butter Boy, 3248, whose dam, Oak Leaf, made 17 lbs. 9 ozs. butter in 7 days. The dam is Mr. Hand's Witch Hazel, 1360, 15 lbs. butter in 7 days. He is 2 years old; deep yellow skin; solid dark faun; full black points; of vigorous constitution, and very gentle. Price $150.

RICHARD GOODMAN, JUN.,
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Small YORKSHIRES

THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to

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UTICA, N. Y.

Miscellaneous.

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THE GREAT

GERMAN REMEDY.

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30 elegant cards, Snowflake, etc., 10c. *Agts. wanted.* 20 samples 3c. List free. C. VIOK, Arbela, Mich.

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Miscellaneous

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On receipt of $5 we will send a package of seed by mail to any address, with instructions for cultivating the wonderful plant from which our G. N. MILCO'S BUHACH CALIFORNIA INSECT POWDER is made. Each package will furnish plants for two or three acres. All orders for seeds must be sent to the

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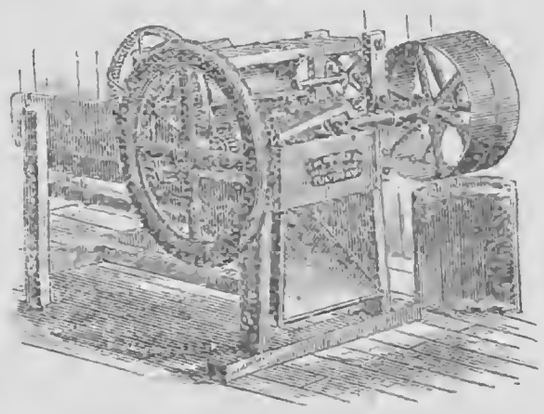

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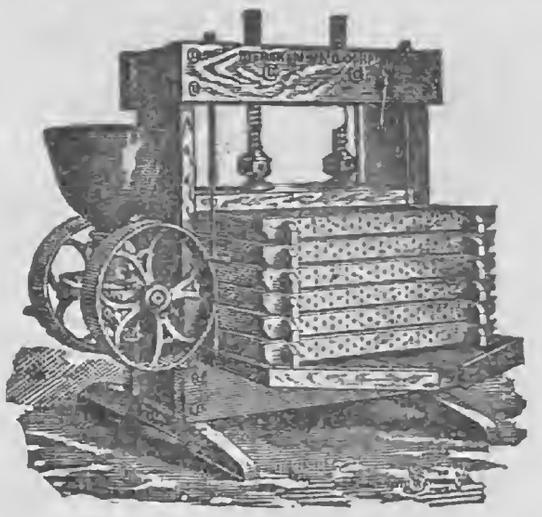

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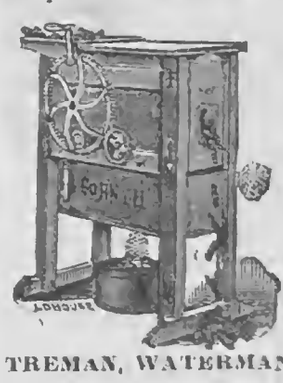

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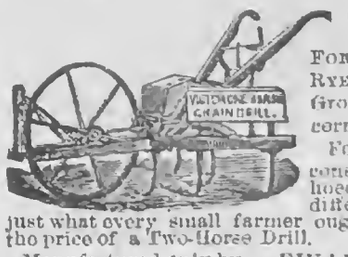

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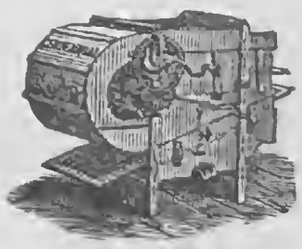

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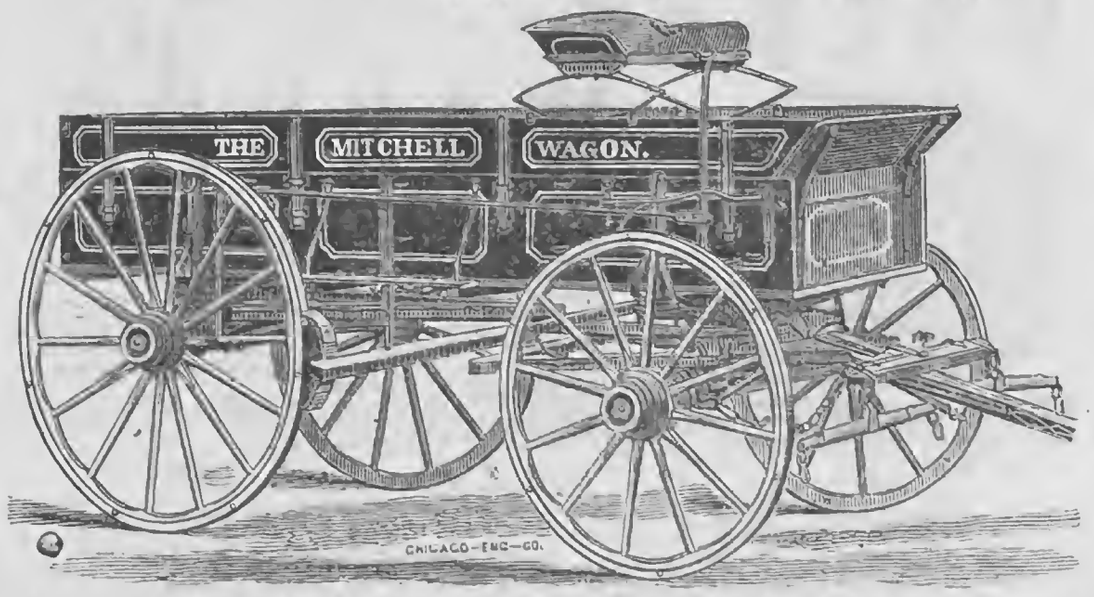

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Humorous.

MORSE, who invented the telegraph, and Bell, the inventor of the telephone, both had deaf-mute wives. Little comment is necessary, but just see what a man can accomplish when everything is quiet.

A DISCONSOLATE young man who had been jilted by a lady equally notorious for her conquests and her heartlessness, imploringly asked a bachelor friend what he should do about it?"

"Do about it," was the answer, "I'd have her indicted for robbing the males."

FOGG—"I say, Jones, that dog of yours gave me an awful fright last night. As I was passing your house he came tearing out of the yard, barking and yelping like all possessed." Jones—"Oh, he won't hurt you, Fogg; he's perfectly harmless." Fogg—"Yes, that's what I told Mrs. F. this morning. He's perfectly harmless. He began to be harmless just after he ran at me last night. I had my revolver in my pocket. Good morning, Jones."—Boston Transcript.

[Fall River, (Mass.) Daily Herald.]

Barnard Manufacturing Company.

Mr. Isaac L. Hart, Superintendent, No. 3 Ashton Street, says: I have used that superior remedy, St Jacobs Oil, in a severe case of rheumatism in my arm, and its effect was wonderful, having banished, after a thorough trial, all pain, leaving my arm as well as ever.—*Adv.*

SPORTING.

GENT.—"Well there's the bird, but where's my dog?"

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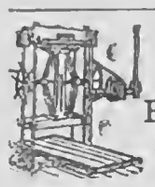

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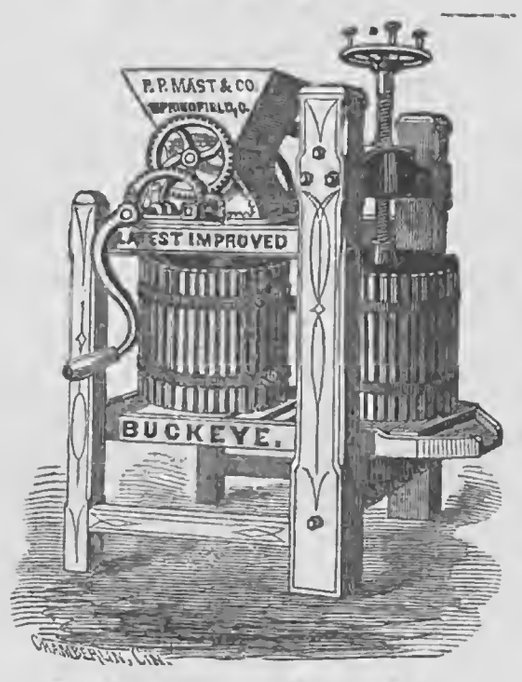

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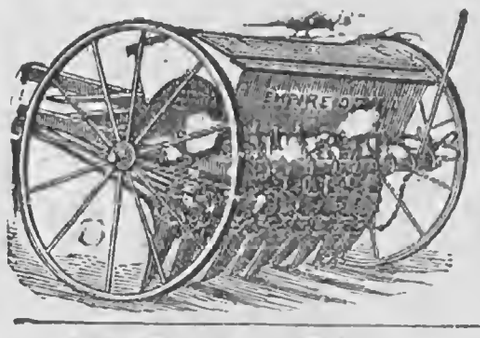

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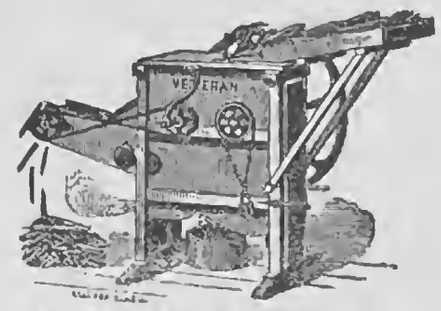

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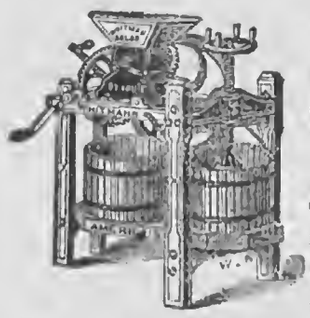

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THE RURAL NEW-YORKER

Ralph Evans

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

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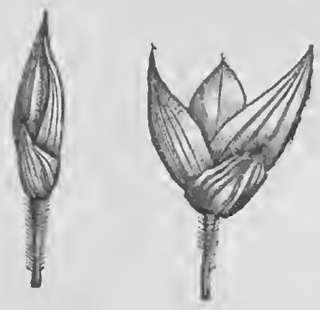
Field Crops.

OLD WITCH GRASS, HAIR GRASS.
(Panicum capillare.)

THE leaves and sheaths of this annual grass are usually covered with large numbers of bristling hairs. The culms grow from one to two and a half feet high. They are rather stout and bear broad, linear leaves. The panicle is large, pyramidal, with very slender branches which are quite spreading with age. The bases of the branches are enlarged and when mature are quite brittle and easily separated. It grows in waste places and fields where it is generally considered a weed. It varies much in appearance. In color it may be green or dark purple. The flowers appear in July and later. It does not seem to be a promising grass for lawns, meadows or pastures. Owing to its stiff hairs and coarse texture, cattle are not fond of it. The chief place where it can claim attention is in the garden of ornamental grasses. If cut when young the panicles will not easily break in pieces. They are very ornamental in suitable places. The seed is often sold under a variety of names. I obtained the grass, among many others, from the Kew Gardens under three different names. It is very easy of cultivation and, when once introduced, will not be readily exterminated. It is common on the prairies, where it is admirably provided with means for wide distribution. The panicles, when ripe, easily break off. The branches stand out



OLD WITCH GRASS—FIG. 418.

at a wide angle. The light mass is freely driven for long distances by the wind, scattering seeds on the way as the brittle branches separate from the panicle. It may sometimes be seen very lightly piled as high as the top of the fence which checks its motion, or in the tops of shrubs or even in the tops of trees, 20 or 30 feet from the ground. I have frequently seen it tumbling over the fields driven before the wind with great speed.

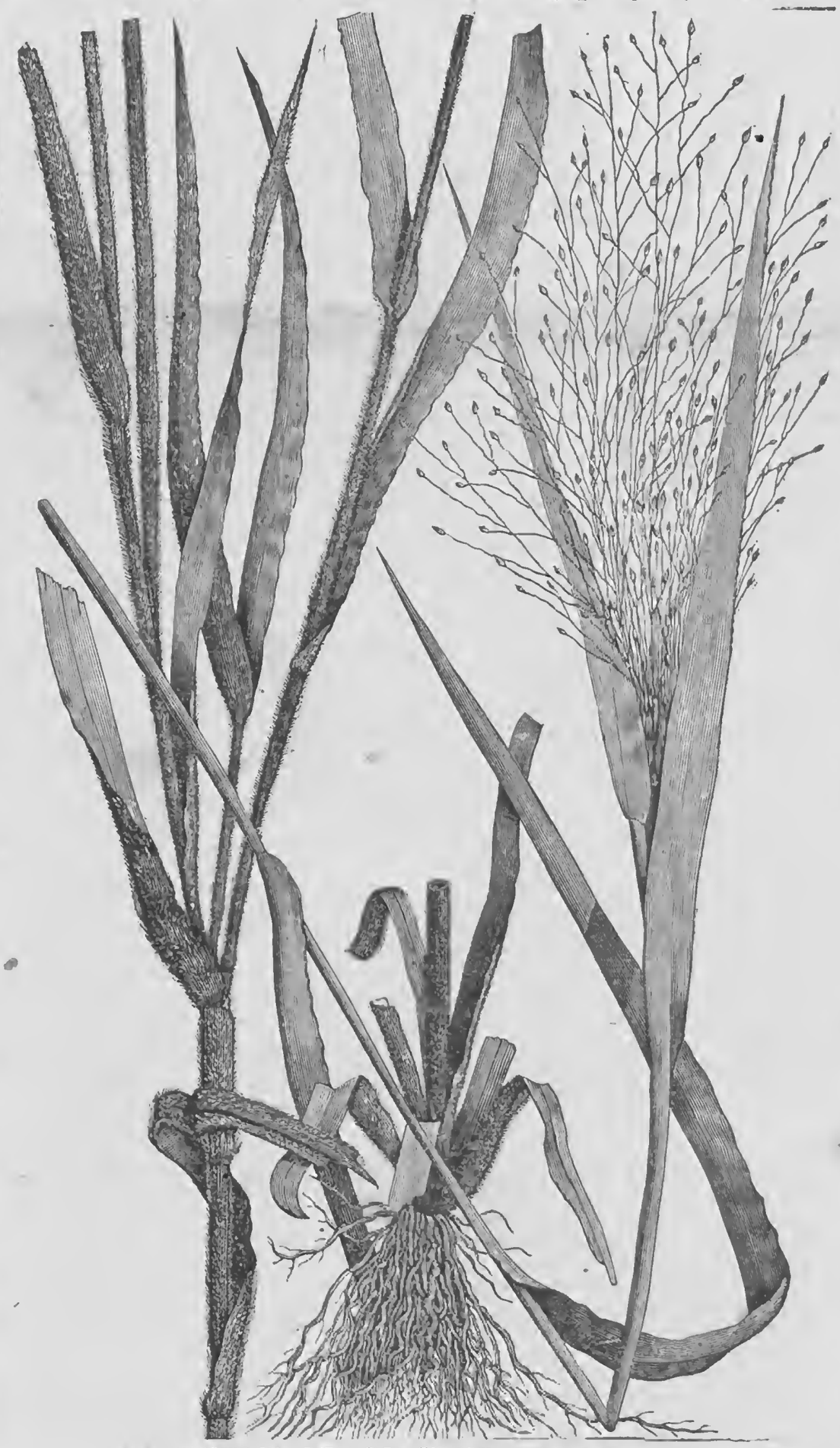
PROF. W. J. BEAL.

TOBACCO-GROWING NOTES.

As tobacco worms continue their work of destruction upon tobacco plants through the whole growing season, the work of "worming" must be continued as long as the crop remains standing in the field. It is also important that no worms are upon the plants when hung in the curing barn, as they will there continue their depredations until the plant has become partially cured, causing much damage to the crop.

THE selection of seed is an important point in tobacco culture. As a general thing, it is best for growers to raise their own seed, as they may then be certain of procuring a good article. Unless great care is exercised in choosing the plant from which seed is to be saved, the variety, or the strain of the variety grown will deteriorate in quality or "run out." The best plants for seed are not usually those first to show their blossoms; but those of medium earliness that have rich, healthy color with large, well developed leaves closely set upon the stalk. The top should be trimmed to a single seed-stalk so that the seed will become more perfectly developed. When the seed is perfectly ripe—which may be known by the tips and seed cups turning brown—the plants should be removed and hung up in a dry, airy loft until cured, after which the seed may be shelled out and put away for future use. Tobacco seed will remain good for many years if kept dry. When a desirable variety or strain has once been secured it is well to save enough seed to last a number of years, which will prevent the deterioration so common with most planters when seed is saved each year for use the succeeding year.

THE tobacco plant-bed should not be forgotten during this season: in order to prevent it from becoming foul with the roots and



OLD WITCH GRASS, HAIR GRASS—Fig. 419.

seeds of grass and weeds it is necessary to prevent grass and weeds from growing and maturing their seeds in or about the bed. This is best accomplished by frequently forking and raking over the soil in the bed during the months when it is not in use. It is well also to apply to the bed a liberal coating of manure, that it may have time to become thoroughly rotted and mixed with the soil before the bed is again needed for plants. With this management all seeds that may be in the manure will germinate, and the forking over of the soil will destroy them. A little care thus exercised in the after management of tobacco plant-beds, will greatly lessen the labors of next year's plant growing and go a long way towards insuring good success in the work.

As the season for harvesting tobacco approaches, the grower should look to his curing barn, and if not already in readiness for the work of hanging the plants, no time should be lost to put it in proper order. Let the building be cleared of all rubbish and of whatever else it may contain that will be in the way of free working, so that there may be little delay when the harvest has been once commenced. Materials and implements needed for the work should be procured in good season and everything made ready.

THE natural desire of the tobacco plant to produce seed shows itself clearly even after the top of the plant has been broken off in the process of "topping". Side or lateral branches start out at the axils of the leaves, which would ultimately form blossoms and seed if not prevented, thus sapping the stalk of the the elements which it is desired to contribute to leaf growth. Hence it is that these sprouts, or "suckers," should be broken off as fast as they appear. The work is termed "suckering" and must not be neglected.

Chemung Co., N. Y. G. A. G. JR.

COST OF WHEAT GROWING.

WALDO F. BROWN.

IF every farmer could be induced to keep an account with each wheat field sown on his farm, I believe it would do more to improve his methods of management than anything I can suggest. The farmer likes to be paid for his labor as well as any one else, and a careful account kept with his wheat, would soon show that all the profit came from the bushels grown above an average crop, and that the cost per bushel decreased in proportion as the bushels per acre increased. I began keeping an account with my wheat in 1877, with a two-acre patch. My account with it is as follows:

Breaking two acres	$ 3 00
Harrowing and rolling	4 00
Seed wheat 1¾ bushel	1 80
Drilling	80
10 loads of manure	5 00
Harvesting	3 50
Total	$18 10

The two acres yielded 70 bushels of wheat which sold for 85 cents a bushel, making $59 50. Deducting the expense, it leaves $41.40 net income from the two acres. I have allowed nothing for hauling and thrashing, because after a careful estimate I believe the straw is worth to me this amount. But even deducting this, which I estimate to cost 13 cents a bushel, it leaves $32 30, and counting the land at $75.00 per acre and eight per cent. or $6 an acre, for the use of the land, it gives a net profit of $20.30 besides the straw. In 1878 I kept an account with a six-acre field. Four acres of this were corn land and the other two acres, the same as above.

Plowing, harrowing and rolling	$13 50
Picking off corn butts	5 00
5½ bushels of seed at 90 cts	4.95
Drilling	2 40
Harvesting	9 60
Total	$35 45

This field yielded 30 bushels per acre, or 180 bushels, and was sold at 95 cents per bushel, making $171.00, less $35 45, equals $135.55 or $22.59 per acre for rent of land, estimating that the straw paid for hauling and thrashing. The cost of this wheat per bushel, after allowing $6 an acre rent for the land, is a fraction less than 40 cents, or, if we do not count the straw anything and add 13 cents per bushel for hauling and thrashing, 53 cents. The same Fall I sowed 11 acres of wheat on some cheap land. I bought, in the Spring of 1877, 50 acres of run-down land for $1000, and these eleven acres were a part of it. About seven acres of it were corn land, and the remainder beans, potatoes, and millet. The crops were very light, all of them, scarcely paying for the labor. The expense account with this field is as follows:

Plowing, rolling and harrowing	$33 00
Forty loads of manure	20 00
One barrel of bone meal	5 00
Eleven bushels seed wheat	11 00
Drilling	4 40
Harvesting	17 75
Total	$91.15

Credit 241 bushels of wheat at 95 cents, equaling $228 95, making for the use of the land $12.52 per acre, or more than half of the cost of the land; or, if we count the straw nothing and charge 13 cents for hauling and thrashing, it still leaves over $9.50 per acre for the use of the land. The cost of this wheat,

not counting the rent of land and balancing the straw against hauling and thrashing, was about 37½ cents per bushel. I have charged manure at only 50 cents a load because I find its benefits extend through several years, and I think this is all that ought to be charged to one crop. I can buy good manure delivered on the field for $1 25 per half-cord load.

The next year this same field was put in wheat at an expense, when harvested, of $97 62 and the yield was but 15 bushels per acre, which brought the cost of the wheat to nearly sixty cents a bushel, not including ground rent or thrashing. From the accounts kept with my wheat crop during the last four years, I find that the crop must exceed twelve bushels to the acre, or else the price must be considerably above one dollar a bushel, to meet expenses. I have never grown a crop of 20 bushels or upward to the acre, that did not give a fair profit, and when I have raised 30 bushels to the acre and sold for much above a dollar a bushel, I have found it largely profitable. In closing this article I wish the honest opinion of the RURAL readers as to the value of straw. I have been severely criticised for saying that the straw would pay for hauling and thrashing. What do experienced farmers say?

Butler Co., O.

WHEAT IN IOWA.

IN the early settlement of Iowa 25 or 30 bushels of Spring wheat per acre were considered a fair yield. The average crop, of late years, has so far decreased that hereafter very little wheat will be sown in Central Iowa.

In my experiments with the various wheats two very important points in successful wheat culture are apparent: 1st, the want of an extra-early variety not easily affected by rust; 2nd, the need of a special fertilizer adapted to the perfect growth and development of the plant. Aside from the result of experiments establishing this fact, there is abundant evidence to be found in the wheat fields of any county in our State. This assertion applies to all kinds of soils, provided they are well drained. I send you a list of wheats, all grown under similar condition (on a clay loam), with the remark that this year has proven to be the most unfavorable, not only for wheat but for *all* other crops, ever known in Iowa. The various Russian wheats named in the list, though in appearance they promised to be very fine, being entirely free from rust or blight, failed to mature at the proper time. The grain was shrunken and a very peculiar insect destroyed a large portion of it, though on no other variety was this insect observed.

I give the names of varieties in the order of their evident relative value for this year, judging only by the number of pounds they have yielded per acre.

1. Eng. Gem, bearded
2. Touzelle
3. Champlain (Pringle's)
4. Saxony Fife (bald)
5. Doty (bearded)
6. Judkin (bald)
7. Scotch Fife "
8. Sea Island (bearded)
9. White Russian (bald)
10. Dominion "
11. China Spring "
12. California Mammoth (bearded)
13. White Fife (bald)
14. Lost Nation "
15. China Tea (bearded)
Mediterranean "
Rio Grande "
16. Golden Drop "
17. Defiance, Pringle's (bald)
18. Wild Goose (bald)
19. Red Chaff "
20. Golden Globe (bearded)
21. White Michigan (bearded)
22. Egyptian (bearded)
23. Brook's (bald)
24. Sherman "
25. Red Fern "
26. Australian Club
27. Canada Club
28. Odessa
29. Blue stem
30. Golden Grains, or Palestine
Russian varieties,
Triticum No 3
" No. 4
Durum No. 1
Saraton No 6
Vulgare Annua No. 7
" No. 8
Samara No. 2
Sarat No. 5

I have carefully noted the habit of Mr. Pringle's hybrids for two years, and while I have no disposition to defraud Mr. Pringle of any merit due him as an improver, I must say that I have failed to observe the faintest indication of a hybrid or cross production, and would place them on record as the first and only exception to the rule, viz., that all hybrids or crosses are less fixed in their characters than an established variety.

Finally, I cannot close this article without referring to your efforts to introduce new and valuable additions to our list of farm and garden products. I hope and believe that your work will be appreciated. I acknowledge myself your debtor on this score, as well as for the many practical suggestions found in your excellent paper. W. T. SCOTT.

Polk Co., Iowa.

CORN RAISING IN CENTRAL NORTH OHIO.

THIS is how we raise corn in Central North Ohio:—In the first place we tile the low places, dig out all the stumps, raise all the stones within reach of the plow and draw them all off; then break up in April, plowing sod five or six inches deep. Then we harrow thoroughly before planting, and plant about May 20, using a two-horse, three-row marker; then we plant with a two-horse planter from three and a-half to four feet apart each way, putting from three to five grains to the hill; we next go over it with the harrow, straddling the row, before the corn comes up; then cultivate as soon as possible, first with the iron "fuke," then with the two-horse walking cultivator at least once a week, if big rains don't interfere. We cultivate shallow above the sod. It is never too dry to work soon. Going over four or five times will bring harvest, when there is no more time for corn plowing.

After breaking sod this depth, next year we plow an inch or two deeper and we have a soil seven or eight inches deep—enough for practical purposes. Our soil is a black loam with a stiff clay subsoil. This same field we plant in corn three or four successive years. The universal practice is to shock the corn in the field, 12 hills square—144 hills—husk, and feed or crib it in the Fall. Put the fodder two or three shocks in a place; tie it well; then haul out and feed when wanted, but if possible when the ground is dry, as treading injures the fields.

After three or four crops of corn, then we sow wheat in the corn if not ripe early enough to cut. The next year we break up soon after harvest and sow wheat in September, putting a peck of Timothy seed to the acre and in the Spring half as much clover. We use no fertilizers; hence it is not best to run land too low—three or four crops of corn and two of wheat are enough. By rotating crops in this way, and by not pasturing too closely, land will improve. Under this treatment mine produces 50 per cent. more than it did 20 years ago, yielding of shelled corn from 40 to 75 bushels and of wheat from 20 to 30 bushels per acre. Corn land rents for half in the shock; wheat for one-third in the bin or half in the shock. Wages, $18 a month; by the day, $1; in harvest, $1.50 per day.

Scott, Marion Co., Ohio. W. J. V.

An Interesting Report.

I mail you to-day a few heads of Golden Grains Wheat sowed March 21; it is not ripe yet (Aug. 8) and is blasting badly owing to rust and dry weather. I do not think it will mature. I obtained the seed from J J H. Gregory, Marblehead, Mass.; it was represented as being a Spring wheat in the South. I send a sample of the seed Mr. Gregory sent, also two heads of Arnold's Victor, sowed last Fall. I dug the White Elephant Potatoes on August 8th the yield, as anticipated, was enormous. The potato received I think would not exceed three ounces. It contained 13 eyes. I cut it in 13 pieces, making as many hills, and planted them on April 11. Every eye came up and grew vigorously. I weighed the tubers when dug and got 336 ounces, or 21 pounds, of good potatoes. I weighed six tubers that weighed four pounds or an average of 10⅔ ounces. I shall save what I have for seed. I procured from Benson, Manle & Co., Phila., one pound each of Beauty of Hebron and Watson's Seedling Potato. The package of Beauty of Hebron contained three potatoes from which I made 26 hills. Watson's Seedling contained five, making 31 hills. I planted both March 26 dug them on June 22 and got 38 pounds of nice, smooth potatoes of Beauty of Hebron, and 46 pounds of Watson's Seedling so nearly resembling Early Rose that I am unable to distinguish them. G. W. P.

Prince George Co., Va.

Farm Topics.

ENSILAGE AT THE WEST.

W. I. CHAMBERLAIN.

YOUNG mothers complain that for sound advice on nursing babies and training children, no one can equal the traditional "old maid!" And so I am not at all surprised that those who have tried ensilage are restive under the criticisms of those who *have not*. And yet they provoke criticism by their tone and manner (of which I shall speak again) and by losing sight of certain general principles.

One of those general principles is that "circumstances alter cases." Ensilage may pay in France or Massachusetts, with dear lands and cheap labor, and not in Ohio or Illinois, except near cities or under peculiar circumstances. I have before me three essays on "soiling," two of them prepared, delivered and published in 1819. They were by that fine writer and able statesman, Josiah Quincy, of Massachusetts. His arguments then, 52 years ago, in favor of "soiling" were essentially the same as those now used for ensilage; viz.: economy of land, fencing and food; increased product of milk and manure; and better condition and greater comfort of the cattle. His facts were moderately and truthfully stated, and his arguments were fair and courteous, and were conclusive for his latitude and longitude—twenty miles from Boston. Fifty-two years have passed and soiling has not been found to pay except in a few city localities. And ensilage, its younger sister, will probably succeed under similar circumstances, and be a necessity when our population is five hundred (instead of fifty) millions.

In marked contrast with Josiah Quincy's little book have been the writings of the apostles of ensilage—the "new dispensation." They have largely been marked by a certain swell and swagger, a kind of "It's so and you're a fool if you don't believe and practice it." The "facts" have often been exaggerations, the figures untruths, and the arguments the sheerest special pleadings. Everything has seemed to have an air of extravagance and even of charlatanry, that antagonizes and puts one on the defensive.

The question is, does the evidence thus far warrant the adoption of ensilage at the West, or even its trial. For the change must be radical and most expensive, and should not be made except on the fairest, most candid and disinterested evidence—just the reverse of that thus far offered. I say the change is radical. Ensilage is called a "new dispensation." Our barns, tools, implements, methods, help and training; in short, our whole system of agriculture is adapted to the old. Succession in farm labor, diversified farming and rotation of crops distribute the labor through the year as we can handle it. Shall we change all this? Again, land is cheap and rich at the West, and we have more than we can till well even under our present system. Shall we immensely increase the necessary labor, and mass it at one time of the year? Again, we have more coarse feed, straw, corn-stalks, etc., that we can feed to our stock now, shall we increase and ensilage it?

I note a few of the assumptions of the "new dispensation" that lack proof:—that grass loses immensely in nutritive value by (properly) curing; that if succulent food is best in Summer and for one purpose, it is also best in Winter and for all purposes. Man craves succulent food in Summer; but at zero he asks something more solid than cucumbers, melons and radishes. Possibly cattle have similar tastes and requirements. It is assumed that the milk is as rich from ensilage as from rightly cured clover hay. But June milk is hardly half as rich as that of October, when the grass is not so rank and succulent. It is assumed that the alcoholic element in the ensilage will not injure either the cow or her product or progeny, whereas several years may be required to establish this important negative. It is assumed that if ensilaged maize will keep most cows per acre, it is necessarily most economical, whereas this is purely a question of local prices and circumstances.

If one wishes to keep the largest possible number of cows per acre, probably maize or roots (with some meal) will do it, simply because they will *stand more manuring*. All the other grains and grasses will lodge with too rich a soil. Maize will not. And if maize is to be used for Winter, it must be ensilaged or left in the field in shocks. It cannot well be cured like hay for storage, or buried in trenches like roots.

In short, the whole question is one of local circumstances. A few city milkmen in Ohio are building silos. For them it will probably pay. For the average Western farmer, probably not. For the most of us it will probably be wisest to "go slow."

Columbus, Ohio.

THE EVAPORATION OF FRUIT—NO. 3.

J. G BINGHAM.

Its Benefits.

IN properly evaporated fruit there is no loss of pleasant or valuable properties, but an actual increase of fruit sugar, from the fact that evaporation is essentially a ripening process, the development of sugar ranging from 10 to 25 per cent. in different fruits as determined by chemical analysis. Instead of a retrograde transition awaiting our really unsurpassed fruits, berries and vegetables at their full stage of ripening, we have in the use of the evaporator a culmination of the same organic forces, and in a few hours the juices, which heretofore formed and perfected the fruit (but which after this hasten decay) are quickly matured and the maximum development of sugar secured and the water evaporated, the change being analogous to the transition of the grape to the sweeter raisin, or the acid green apple to ripeness, with corresponding delicacy. The cell structure remains unbroken and the articles when placed in the rejuvenating bath of fresh water return to their original form, color and consistency. Thus, a few ounces of pumpkin flour make a sauce or custard at all seasons, and rarely can an expert distinguish a pie or pudding of evaporated apples from that made from fresh fruit, by sight or taste. The Summer squash becomes an all-the year vegetable for every climate and market on the globe. A large load of pumpkins may be driven in from the field in the morning, and the next morning shipped to the antipodes, in a barrel. The sweet potato which perishes so rapidly as to be unknown to most of the markets of the world, is reduced to an imperishable condition by pneumatic evaporation, and will soon become a familiar luxury on the tables and markets of the world, and at all seasons of the year alike. Its slices, placed in cold water and brought to a boil for 30 minutes, are ready for the table or frying pan, and are in no respect inferior to the original vegetable. The Northern potato, like the turnip, improves by evaporation, and for Spring use, for ship stores and for exportation, leaves its original out of sight, occupies little room and is proof against decay.

Sweet corn is rejuvenated. If taken strictly in the milk and treated before wilting, it will be as tender and sweet at the world's end as at the start. Green currants and gooseberries retain their favorite characteristics of flavor sealed up in them for travel and time. Forty pine-apples have been compressed into a small cake which an infant might hold in its hand, and afterward resurrected as 40 pine-apples. The evaporated tomato is a remarkable product. No successful attempt had ever before been made to remove the condition of fermentation (water) from this fruit. The pneumatic evaporator reduces the whole pulp of the tomato to a condition like that of the dried fig. A bushel of the fruit after evaporation, is compressed into a solid cube like plug tobacco, measuring four or five inches each way. Every pound of this makes eight quarts of tomatoes in the original state. Tomatoes may now be raised with advantage, like so many other things wherever there is an evaporator at hand. The manufacture of evaporated fruit by the individual farmer and orchardist has popularized the industry, the future of which it would be difficult even to anticipate. With an apparatus of universal adaptation and suited to the wants of the large or small orchardist and fairly managed, the business is made both remunerative and pleasant. Few farm implements can be so continuously employed, beginning with the early Summer berries, vegetables and fruits, extending its usefulness through the Winter upon the Fall crops, the daily wasting products of the farm suggesting its use and inculcating the maxim, "It is not what we make, but what we save that accumulates wealth."

In the close rivalry and competition of the markets, it is interesting to note the high reputation that American evaporated fruits have lately obtained abroad, and that the industry yet in its infancy has accomplished so much. It certainly promises to become a fertile source of revenue to our agriculturists.

McGrawville, N. Y.

Horticultural.

THE RURAL has asked for reports from those who have used sawdust as a mulch for strawberries. "Wallace" says he tried it this year, and considers it worthless, as the berries rotted badly by lying on it. The past season, however, was so wet that strawberries rotted badly with mulchings of all kinds. I have found sawdust to be a good mulching when the ground is not too thickly covered with it, and I have seen it used by others in an entirely satisfactory manner, though some have thought it produced an injurious fungus, which I have been unable to discover. There were writers among us at one time who fairly had fungus on the brain, and who saw in it the latent as well as the apparent cause of all the ills that plant life is afflicted with. I remember that some years ago the Cheney Brothers (the large silk manufacturers) used sawdust very largely as a mulch for strawberries, and may do so still. Your correspondent, Mr. Goodman, of Lenox, saw these large beds many times, and will probably admit that he seldom saw better. One trial is insufficient to prove the value of a mulch of this kind, or, indeed, of any kind. Roofing slate and cedar shingles make the best mulch for strawberries I ever used.

I WAS at Mr. Battey's with the visiting committee, and will state that the Wilson (as well as Russell's Prolific) was growing in beds adjoining the Manchester, the Wilson being chiefly used as the fertilizing plant. The Wilson and the Manchester had been growing side by side in this way for several years, and no better opportunity or conditions for comparison could have been asked for. Mr. Allen is unquestionably right in saying that the past moist season was a good one for growing strawberries in sandy soils like that at Manchester; but the Wilson was unmistakably beaten, not only during the past moist season, but also during the exceptionally hot and dry one that preceded it. It seems to have been the fact that the two varieties had been grown for years in adjoining beds, that determined the visiting committee to use the Wilson as the subject for comparison, several members hav-

ing seen them thus grown together for years past. There were not a few old friends of the Wilson present, but there was no difference of opinion, so far as I could learn, as to the superiority of the Manchester. I am of opinion that we have in the Manchester a plant with all the vigor, ruggedness and productiveness of the Wilson, and a very much better fruit.

Let me say a word or two in support of "Stockman's" position about the gad-fly. My observation is to the effect that there is always an orifice in the skin immediately above the larva. Several years ago I made a prolonged visit at Mr. James Todd's, an extensive Orange Co., N. Y., dairy farmer, and a good one, too. (This is another family of Todds). Well, Jimmy Todd, Jr., and I used often to go up to the barn and squeeze the larvæ out of the back of the old bull, just as a man squeezes the so-called black-headed worms out of his nose or his face. The old fellow seemed to be grateful for it. There was no necessity for making a hole, for there was always one already there.

There is a ring of the real metal in Mr. Bensel's remarks on the quality of grapes, p. 516. Evidently he is a lover of *good* grapes and knows one when he sees it. He might have added the Delaware to the Catawba, so far as the New York market is concerned, for it at all times brought double the price, and late in the season five to eight times the price, of the Concord, as did also the Catawba. I think the Brighton has now been sufficiently tried to be admitted to the select company of good grapes; but in regard to some others, I prefer negative goodness to positive badness. My theory has always been, that to secure good grapes you must first educate the public taste, and that the public is now at last doing for itself reasonably fast. There is a good deal still to be said and done on this subject.

I have said that I began picking the Caroline Raspberry on the 4th of July. On the 4th of August five plants were picked, and furnished an abundant supply for a party of nine. I think this quite equals the editor's picking.

I. J. B. says the Spanish Chestnut is not hardy, according to his experience. This, to some, will be discouraging. On the other hand, there are quite a number of large bearing trees within 50 miles of New York (in Westchester Co., in New Jersey, on Staten Island, etc.,) that were not injured last Winter and are now in fruit. Some of these trees must be quite 40 years old. Those of Mr. Meyer, on Staten Island, I think are about 18 years old. These examples would go to prove the hardiness of this chestnut in a general way. B's trees were probably exposed to some local influence that helped to kill them.

A large and well-grown plant of the Blue African Lily (Agapanthus umbellatus) is a very beautiful subject for the lawn. Its long and gracefully curved leaves and large umbels of brilliant blue flowers make it indeed, as its name indicates, a plant to be loved. It is now (Aug. 8) in full bloom with me. It is much too seldom seen, but once successfully flowered, is not likely ever again to be abandoned. I prefer to grow it rather closely in a pot; and I not only keep the pot out of the ground, but elevate it on the the top of another. The effect will be even better if the plant be grown in a vase. It is only in this way that the full beauty can be seen and appreciated. It should be daily and abundantly watered, and when thus treated does better in the sun than in the shade. It will keep well in a cool cellar during the Winter, and bloom all the better for its rest. There is an interesting but rare white form of this.

On looking over the strawberry beds I find the Sharpless very badly browned by the drought and heat; much more so, indeed, than any other variety I have. I find this to be the case wherever I have seen it this Summer. [Not so at the Rural Grounds.—Eds.] It would appear to be a characteristic fault, and I am sorry it is so. The Bidwell bears the heat about as well as any and looks well. It promises to take a permanent place among the "creams," that being the proper word just now in polite horticultural circles. Next it will probably be the "cream of the creams," a sort of very high-toned horticultural aristocracy. Horticola.

RAYS.

Yes, Mr. Parnell, the climbing cobæa is a handsome vine. An old lady, a neighbor of mine who has no greenhouse, has a very big cobæa; she plants it out in May and runs it up on a trellis alongside of her parlor window, and away it goes from the trellis-top on strings to the chamber window above, a thicket of vines and leaves and full of its big purplish blossoms. In the Fall she shortens back the vines, lifts and pots the plant, keeps it for a while on the piazza, and then sends it to bed in the cellar till April, when it is again brought forth to the piazza so that the influence of sun and moisture may start it a little before planting-out time comes.

* *

This old lady is a great gardener; she has a large, rough yard but a multitude of plants and blossoms. She saves her own seeds, exchanges with her neighbors, and in this way increases her stock. Her heart is in her garden, and, weather permitting, she is nearly always there herself; this strict attention gives her good results; she saves and preserves her plants while her neighbors by oversight lose a lot, and in order to recuperate their store must buy or get afresh. They so arrange it that they buy what our old lady has not got, share with her and she with them, or, in other words, the neighbors furnish the money and the old lady the brains.

* *

The Rural folks have so much to say about strawberries, that, like myself, I reckon they have a biting fondness for them. All the people hereabout are planting the Sharpless and many cannot get enough of it to plant. It is late, a rank grower and heavy cropper, and has large but very homely berries; "putting-up" is the end they have in view.

* *

I was amused the other day to find in one of our most pretentious gardens, the owner of which is worth his millions, in a moist and faintly shaded nook, a patch of our common wild strawberry evidently well cared for. The garden sorts had finished bearing some weeks since, but there were still a few good berries on these wildlings. The gardener told me his employer was very fond of the wild strawberries, and especially so after the garden kinds were past.

* *

"G. G's" Tobacco Notes' p 499, prompt me to say that if all others used as little of the weed to smoke, to snuff or chew as I do, Lorillard would never have been rich enough—at that business at any rate—to own Iroquois. But, notwithstanding that, I have a fondness for the living weeds. There are the night-blooming, white-flowered sorts, as profuse and bright as evening primroses and many of them are sweetly fragrant,—for instance N. suaveolens. Indeed, Mr. Cullingford of London, Eng., in the Garden, goes so far as to predict that a kind (N. affinis) he grows, for elegance and fragrance will rival the tuberose. And if you want a rival to the Blue Gum or Fever Tree of California, try N. glauca; its flowers are nothing, but its handsome, tree-like form and bluish cast throughout render it a prominent ornamental plant where there is plenty of room. And the showy, red-blooming varieties of the big-leaved kinds are not amiss as decorative plants.

* *

"H. A. P's query, p 503, reminds me of the many stupid notions that are afloat regarding watering trees. I often see men and women spill a pailful of water around the stem of a lawn, street or orchard tree and think they have done a good thing, but they haven't. The absorbing rootlets are not there, but instead, the bulk of them are about as far away from the stem of the tree as the branches extend, therefore, it is there and not at the bole of the tree the water is needed. Observe an isolated, thrifty tree: it rains, and you get underneath its boughs to get away from the shower; you keep dry while beyond a little way the water comes down from off the leafy branches as if off a shingled roof, and that is just where it is needed, where it can do the most good; for it is there the fibrous roots prevail. And just about as stupid a practice is the annual piling of manure around the trunks of trees; the manure is needed where the water is and no nearer. But in the case of a general plantation or orchard where the branches of the several trees meet, the rootlets are all over the ground, but much less so at the boles of the trees than elsewhere.

* *

It is no uncommon sight to see the hogs wallowing in the earth or mud around our Western doors, ducks and chickens stepping in and out of the house, the dogs at rest upon the bed or elsewhere, where they choose—man and beast complacently contented. And what a sight, what a state of things in this progressive age! breeding stench and filth and fleas, erasing the healthful comfort that is proverbial to the farm, which it renders little purer than the poorer tenements of city streets. But in this respect the West is not more erring than the South where swine often make their homes beneath the human dwellings. There, houses are usually set upon blocks or pillars, rather than over cellars, as is the case in the North. This pig-home, dry and dusty, is a paradise for fleas. Because this indifference may affect some of our neighbors, that is no excuse for us; on the contrary, we should the more emphatically endeavor after greater cleanliness, and thereby induce our neighbors by example to forsake their thriftless heedlessness.

* *

Now is the time to go into the woods and meadows and gather fern-fronds for winter bouquets. They are plump, fresh and green, and if gathered now and dried, will be far prettier than if left till their vigor fades and their color becomes yellowish. People usually delay gathering fern-fronds till they go out hunting after Autumn leaves, but it is wrong. Lay in a store of airy grasses as well; gather them when they are in flower just before they bloom. If gathered after they have gone out of bloom, their scattering seeds will be a littering nuisance during the Winter months. And if you have sown a lot of "everlasting" annuals their blossoms will brighten up your bouquets. Cut the buds before they are fully opened; they will open in the drying and appear clean and fresh, whereas if delayed till fully expanded their centers will look old and dirty and with age become undone and scatter about. Be on the outlook for clematis wreaths. As soon as the seeds begin to swell a little and show their silky tails, gather your wreaths; they may appear immature enough at gathering time, but when dried, they will floss out whiter and softer than if they had been gathered when older. Those who live near the sea can get any quantity of sea-lavender or marsh-rosemary as it is also called, growing in the salt-marshes; the flower-bunches make splendid "everlastings." But remember, gather early, if you wish good material and pleasure of it.

* *

It would add materially to the interest in the summer display of our public gardens if a few beds in suitable places were filled with economic plants as castor beans, paper reed, cotton, hemp, india rubber, tea, coffee, sugar-cane, tobacco, fever tree and the like, and each plant legibly and neatly labeled. True, these plants may already be seen in our public grounds, but when mixed in clumps with other plants, who knows what they are? Our public gardens should instruct the mind as well as please the eye. Let us take a group of palms for instance: How much more instructive it would be to have the clump consist of the wine palm, oil palm, ivory palm, date palm, sugar palm, cabbage palm, walking-stick palm, and so on, than to have them nameless and to the uninitiated unknown, stuck hither and thither in beds or vases for appearance's sake alone. Plant them for effect's sake if you will, and how and where you will, but group them also and tell us what they are. Because of their great diversity in leaf and shape they cannot make a formal bed. Our bananas, too, are noble plants, and many who want to know them, seeing them, have no means whereby to recognize them. A neatly painted label would give us light.

* *

The Trumpet Vine is loaded with its blossoms now, and what a splendid thing it is! Running up a naked tree trunk, set upon a pillar by itself, trained up by the water spout at the corner of the house, the posts of the piazza or the door-porch, it matters not; its roots stretch deep into the earth and more beyond the influence of Summer drought than many vines; its hard and woody stems reach as high as twenty feet or more, and from them droop on every side graceful, leafy wands, each one tipped with a bunch of trumpet blooms. Sometimes these wands are winter-killed to the hard-wood, but it matters little, fresh ones come forth in quantity and all will bloom. The older the vine is the more it will bloom. Beetles, bugs and caterpillars pass it by, it is not to their liking. But the prettiest way of growing it I have seen is in its wild state, where by the edge of creek and river bottom timber belts it drapes and mantles trees and bushes as grape-vines do in the North.

* *

I observe the Rural notes regarding the hardiness of Japanese maples are causing quite a stir. Most growers prefer the maples as they do roses—on their own roots, and suggest that nurserymen propagate by layering. Nurserymen do raise what they can from layers, but the mode of increase is slow; they want to economize every little shoot they can remove in pruning, and the only feasible way of doing so is by "working." But I would suggest that a trial be given to our common mountain maple and some of the smaller species of the Rocky Mountains, as stocks to work the Japanese maples on. If any of your readers have already done so, would they please report with what success.

* *

What an aversion there is to yellow flowers in California! The florists tell me that even so good a thing as an allamanda bloom would ruin a common basket of flowers. I wonder if they will show equal antipathy to the lovely wreaths of dendroblums, the airy sprays of oncidiums, the fragrant blooms of lemon cattleyas and many other orchids when these floral aristocrats of India and Brazil become common with them? I reckon not. Fashion governs the popular taste. It will take some extra-fashionable party and the reigning light thereof to show partial taste for yellow flowers—and orchid blossoms are the only flowers in such a case that will command that taste—to break this formidable prejudice. Leon.

IN THE GARDEN.

We have a most beautiful bed of flowers from the Rural seeds. I started the plants in a cold-frame, and then transplanted them out in a rich piece of ground, and they did finely. I also have about 150 asparagus plants. The potato beetle so nearly destroyed my White Elephant potatoes when they first made their appearance above the ground that in despair I hoed them up. The other seeds I did not plant.

The present season has been exceptionally good for all hardy vegetables. From thirty rods of ground I harvested 50 bushels of Alpha peas in the pod, and I think I would have had 60 bushels if I could have let them stand another week; but a more valuable crop crowded them off the ground. They were planted in rows three and a half feet apart five or six inches deep; and were brushed with brush about four feet high; they were kept well cultivated, the last hoeing being given just before picking. They were just one week later in ripening than the same kind of peas were last year. The pods were large and well filled and were so easy to pick that several mornings I went out and picked a bushel before breakfast, or in an hour's time. They were of extra quality, and sold for twenty-five per cent. more than other peas. They averaged about $1 40 per bushel. The 30 rods of ground are now occupied by 500 heads of cabbage, 1 800 heads of celery plants, 200 hills of cucumbers, three by three and a half feet; and one row of beets, 15 rods long. The cucumbers were planted close up to the rows of peas and they got nicely started before the latter were removed. The cabbages were also set out about one foot from each side of the rows of peas. After these were removed I gave the cabbages and cucumbers a good hoeing and worked in a handful of phosphate around each hill. By the way, my early crops turned out so well that I gave the ground an extra barrel of phosphate over and above the regular allowance, just to encourage it to do well in the future. For the past five years my acre of land has made an average increase of 100 dollars each year in the value of its products, and this year will not be an exception. This is what I call progressive gardening—keeping up with the times so to speak. Adelbert Wakefield,

Oneida Co., N. Y.

The most satisfactory Strawberry.—If I were asked which strawberry I would recommend as most certain of pleasing everybody, I should say the Cumberland Triumph. Its size is very large and there are few small berries. It is very prolific, being in this respect almost equal to the Wilson and Crescent. Its shape is perfect; its quality hardly inferior to that of Monarch of the West and Triomphe de Gand. It stools well; is good on all soils; has a strikingly handsome, dark green foliage. It is, in fine, sure to satisfy. Among 18 kinds I would on the whole prefer it, if confined to one. For a short and excellent list covering the season take Duchess, Cumberland, Monarch, Triomphe and Kentucky. Sharpless and Bidwell I do do not know enough about, but so far think they should make, after Duchess and Cumberland, the main planting. Probably the Bidwell and Cumberland will be the two best. Duchess is by far the best very early.

A Remedy for the Rose-bug.—One of the Rural correspondents begs for a remedy for the rose bug. The following recipe is absolute. Fill an ordinary sprinkling pail with water, put in three or four spoonfuls of hellebore and two spoonfuls of kerosene oil. Keep it frequently stirred and sprinkle the rose bushes just as the slug begins to work. It will need but one application to entirely get rid of the pest. E. P. Powell.

Dairy Husbandry.

THE DAIRY COW.

HENRY STEWART.

The Vices of Cows.

Cows are given to few vices, and all that belong to them are caused by faults of management. The most troublesome are the habit of kicking, holding up the milk, and sucking themselves. Cows are caused to kick by fear, and the act is an effort to defend themselves. Some young heifers may kick when first handled in the effort to milk and from nervousness, but if they are gently used this trouble is easily got over and nothing further may be seen of it. But if the young animal is beaten

or whipped, especially if this is cruelly done as is usual in such a case. the association of the punishment with the act becomes fixed upon the memory, and ever afterward the cow may be a kicker, because it naturally expects the punishment at milking time and tries to defend itself from it. The frequent change of ownership also greatly helps to produce this habit, because some cows will resent the approach of a stranger; but this only happens with very fretful cows or those which have been habitually ill-used.

This habit may be prevented by the cautious and kindly treatment of the calf and heifer before she becomes a cow. A young calf will usually make an attempt to kick when the udder and teats are handled, but the objection is soon removed by gentle persistence in the treatment previously recommended both for calves and heifers, in regard to handling, brushing and other familiar attentions. A cow that has been thus reared and trained will never become a kicker except by very brutal treatment. To cure this vice is sometimes, if not always, easy. I have never found any difficulty about it by using patience and kind and gentle treatment, notwithstanding some occasional relapses and annoying accidents. The method of treatment has been as follows:—

First, to secure the confidence and friendship of the animal; second, to approach her cautiously, both to avoid alarming her and to secure myself against an attack; lastly, never to strike or punish the cow for an attempt to kick, but, instead, to soothe her and so remove the fear of danger which has given occasion for the kicking. All this may be done by gently patting and stroking the cow, speaking to her when approaching her, and familiarizing her to the handling. After this milk her in a small pail, which can be held so that it cannot be upset, and with the left arm pressing upon the cow's leg so that a kick can be warded off as much as possible. While milking, the cow is spoken to, to attract her attention, and every movement about her should be slow and deliberate, so as to avoid anything to cause her to suspect that a blow might follow the movement. When the milking is safely over the cow is petted and spoken to, and a handful of meal or oats may be given to her. If a kick is made or threatened, the cow is never to be beaten for it, but spoken to kindly. No other person than the milker should approach the cow during the milking. Having entirely cured some cows that had been in the habit of kicking badly, by this treatment, wholly dispensing with sticks and ropes and other arrangements to prevent the kicking, and which only irritate the cow, I have confidence that there are few cows that have been so utterly spoiled that they may not yet be made quite gentle by it.

Some cows kick because their sight is defective and they cannot distinguish the person approaching them. I have one such cow that is perfectly gentle and kind and free from all vice of whatever kind, that will yet lash out the foot when she is approached from behind without being spoken to, and especially when the udder is touched on the wrong side suddenly and without notice. Nevertheless, when spoken to she will turn her head and lick the hand which is stretched out to her. This cow's sight is not good, and the defect is shown in other ways. Such cows should be approached and handled always with gentleness, or they may be very easily startled, when it is instinctive with them to kick.

Holding up the milk occurs chiefly when the cow is fresh. A cow that has been used to suckle her calf will naturally prefer that way of being milked. It is most frequent with cows that are so habituated, and for this reason it is rare among those cows whose calves are not permitted to suck them. It is a fault more easily prevented than cured, and at the same time one that is very troublesome and mischievous in its results. A fresh cow that holds up her milk nearly always provokes thereby an attack of garget and future loss of milk all through the season, so that the dairyman or owner of a family cow should be on the watch to avert the trouble. When the calf is habitually taken from the cow before it has had time to suck, the cow will come to her milk naturally and without resistance, and this practice cannot be too strongly recommended as a constant rule in the dairy. When, however, the trouble has occurred and a remedy is sought, we find how powerless we are to strive with the natural instincts of an animal excited to stubborn resistance. Many devices have been tried and recommended to overcome this vicious propensity, but none of them is of much value. One of these is to hang a heavy chain across the loins; another is to press upon the loins forcibly with the hands while efforts are being made to draw the milk. Others are to give some feed at milking time, or to distract in some way the attention of the cow from her supposed grievance. Soothing measures and perseverance, or the use of milking tubes, are the only effective remedies. To give some feed or salt, and to sit down and rub the udder and manipulate the teats as in milking, and to persevere with gentleness, is often effective; but the only successful method of getting the milk is by the use of milking tubes (to be more particularly described hereafter), by which the milk flows by force of gravity in spite of any unwillingness of the cow. The tubes are inserted gently into the teats and the milk runs in a stream until all is drawn off. This method, or any other, is only temporary, and to be used only in the special emergency, because of the danger of injuring the lining membranes of the teats and producing inflammation of the udder.

Self-sucking is the worst vice which a cow can contract. It totally destroys her usefulness and is a constant irritation and disappointment. It is contracted by old cows as well as by young ones, and cases occur in which 10 or 12-year-old animals begin to practice the vice. How it is learned seems to be unknown; but it is more frequent than might be suspected. The remedies proposed have been numerous, but all fail excepting that of slitting the tongue, by which the act of suction is made impossible. It may seem that this is a cruel and unusual punishment, but it is not so severe an operation as castration, and we do not hesitate at that to increase the value of our male animals. The use of the "nose jewel," which is a piece of board fastened to the nostrils so as to hang over the muzzle, and of variously arranged pokes, neck bracelets and straps, has been recommended as sure cures, but all have failed in practice. I do not hesitate to recommend the operation of slitting the tongue when the cow is a valuable one, the division being made two inches in length. The operation should be performed when the cow is dry, and the wound heals very soon. It is necessary to give soft food or slop until the healing is well advanced.

Entomological.

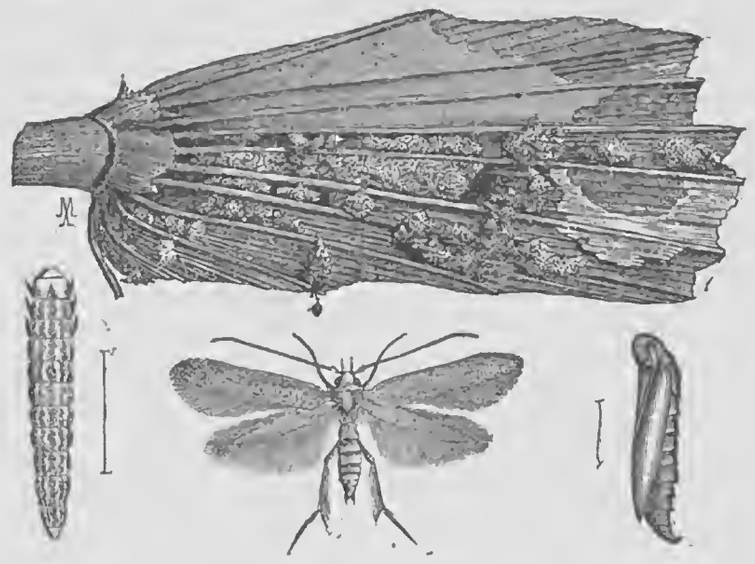
THE PALMETTO-LEAF MINER.
(Laverna Sabalella.)

The saw-palmetto (Sabal serrulata) on whose leaves the leaf-miner lives, is found in the sandy wastes of South Carolina and southward, and, as yet, it is of but little use in manufacture, so that any insect infesting it can scarcely be called injurious in the sense that we use the term in applying it to such insects as the cotton-worm. However, a study of its nature, habits andcharacteristics is interesting.

According to the report of the Entomologist to the Department of Agriculture, for 1879-80, the larva feeds only on the upper surface of the palmetto leaf, leaving the lower surface or skin unharmed. Reference to the Illustration, Fig. 420, will show the manner in which the larvæ proceed in their work on the leaf, and also the nests which they occupy when eating. These nests are delicate sheets of silk, covered with excrementitious pellets of the larvæ, the mass resembling a collection of particles of sawdust. These little masses entirely cover that portion of the leaf on which the larvæ are immediately engaged; hence the true nature of their work is concealed. The larvæ are about half an inch in length, white in color, tinged with yellow, the head and mandibles a yellowish-brown. They are active in their movements, and, if disturbed, they can quickly spin out a silken thread by which they descend to the ground. Alcohol will change their color to a brilliant pink or rose. Inside the nest the chrysalis is formed, which is about three-fifteenths of an inch in length, the color reddish to reddish-brown. It is represented on the right of the engraving, the larva on the left. In the center the moth is shown, which is of a silver-gray color, with a slight tinge of lavender in some cases. The front wings bear two small, black spots, each near the hind margin. These insects have sometimes been found on the young Cabbage Palmetto; but they are generally found on the species above mentioned.

A New Clover Enemy!—The Supposed Army Worm.

Prof. Riley called at this office on his way to attend the Scientific Ag. Association at Cincinnati and Am. Asso. Ad. Sc., of which he is General Secretary. He will spend some time on the way in Yates County, N.Y., looking into a recently reported injury to clover by a large snout-beetle (Phytonomus punctulatus), which has never been found in this country before, and which is apparently an importation from Europe. He states that he has recently reared the smaller worm which did so much injury to the grass in the dairy counties of this State in June, and was at first looked upon as the Army worm. It proves to be a common moth (Crambus vulgivagellus), belonging to a genus which, in the larva state, is partial to grass.



PALMETTO LEAF MINER—FIG. 420.

The Vineyard.

THE NEW WHITE GRAPES.

At a recent meeting of our Western New York Horticultural Society, this question was asked: "Is there any hybrid grape that can be recommended for general vineyard (field) culture in Western New York?" The replies were to the effect that while there were many that were very desirable for the garden, no hybrid could safely be planted extensively in the field. The Lady Washington Grape is superior to Pocklington or Niagara in quality and beauty, but as it is a hybrid, and as the other two are natives, I should be tempted to offset the demerit of foreign blood against the merits of superior quality and beauty. I am glad to learn from Mr. Bensel that the public is becoming more discriminating in regard to the quality of fruits, but the facts in the premises incline me to the belief that, while we can see some slight change for the better in New York, Boston and Philadelphia, the present race of fruit growers will have departed from this life long before the masses will pay twice the price of Concord for Catawbas. But if they did pay twice the price, still the Concord would be the more profitable in New York State at large, for there are only a few favored sections where the Catawba can be grown successfully.

I have a high opinion of the Lady Washington. With slight protection it wintered without the loss of a bud with me. At Rochester W. C. Barry tells me it was injured as it hung on the trellis, but last Winter was exceptional, and I infer from the RURAL's report that the Niagara was more or less injured at the Rural Grounds, though it does not say so. [The Niagara at the Rural Farm, on the ocean, was not harmed in the least. The Lady Washington at the Rural Grounds, Bergen Co., New Jersey, (in a valley) was killed nearly to the ground. Eds.] Lady Washington is pre-eminently vigorous and productive here, and thus far perfectly healthy. The clusters are very large and often double-shouldered. Should it prove hardy and healthy enough for vineyard planting in Western New York, it will exceed our present expectations of hybrids, yet it may prove an exception, and I sincerely hope it may. There is a vast difference in tastes respecting the quality of fruits. What is one man's meat is another's poison. As highly as I respect the opinions of our pomological authorities, I cannot but think it best that individuals should express their own opinions as to quality, otherwise we shall be led into error. It is altogether too common at the present day for writers to express opinions that are simply reflected; if an authority says a grape or a strawberry is of ordinary or poor quality, such writers dare not risk their reputation by giving a contrary report, whereas in their peculiar locality the quality may be vastly different, and the difference plainly perceptible to them. Geo. W. Campbell thought his Triumph Grape wanting in character at Delaware, Ohio; but in Missouri, George Husmann, Samuel Miller, and others think it one of the most attractive table grapes they have. The Crystal City Strawberry is reported by good authorities as of poor quality, but here it is delicious, though faulty in other respects.

Clifton, N. Y. CHAS. A. GREEN.

Vitis Arizonica and Vitis Californica.

Seed of these two classes of grapes was kindly sent me by the Commissioner of Agriculture. I sowed it in a common hot-bed with seed of Iona and Eumelan: all were cared for alike. Result: the young plants of Arizonica and Californica are nearly all dead, or so badly mildewed that I fear I cannot save them. The Iona plants are mildewed to some extent; the plants from the Eumelan are apparently free from the mildew, but making a slow growth. It should be stated that it has been a cold season here, and that there is more or less mildew on the old vines in the same garden. The following varieties are injured about in the order in which they are here named: Sweet Water (a foreign vine), Othello, Rogers's No. 5, Salem, Merrimac, Agawam (all hybrids with the foreign), Delaware, Iona, Adirondac and Creveling. Other varieties are not much injured. Both the leaves and young canes of Arizonica, Californica and Sweet Water are attacked; the fruit on the others suffers most, turning white, hardening, and growing darker. The fungus is perhaps Oidium Tuckeri, or a kindred variety; my glass does not magnify enough to tell me which for certain. My first thought upon observing the young plants was, that I had introduced with the seed a new fungus, but upon comparison with the old plants, I concluded it was the old enemy in an unusual form. The lesson seems to be that these new classes will not stand our Atlantic seaboard climate and that the European and its hybrids must give place to our more robust classes, their hybrids and varieties. D. S. MARVIN.

Jefferson Co., N. Y.

Industrial Topics.

RAISING CARP.

In answer to an inquiry, we have received the following communication from the head of the United States Commission on Fish and Fisheries:

"The European Carp are propagated in the United States breeding ponds in Washington for distribution throughout the country. In distributing these fish, imported some few years since for the purpose of supplying to the innumerable ponds over the country a good food fish that could be readily domesticated, it has been my aim to send them to persons who have localities and conditions in which they would be likely to succeed. In order to enable me to do this, I have solicited the advice of the Members of Congress, as being more familiar with the capabilities and surroundings of their constituents than any others to whom I could apply, and have based the issues of the fish on their indorsements.

The only conditions of the distribution are that the small fish issued shall be properly cared for, *i. e.*, placed in water likely to be suitable for their maintenance, and which are not filled with other fish. The number given to an individual is, of course, governed by the supply. This, the first season, was limited to 16, but the increased production of last year enabled me to furnish from 20 to 25 to each applicant. To persons in the adjacent States the issue is made from the breeding ponds in Washington; but for those in the more remote ones central localities are selected as points of distribution to which the fish are transferred from Washington free of cost to the applicants, who are required either to send to the points designated or pay the cost of their reshipment.

The Express Companies have been so successful in transporting the young fish during the colder months, that I propose, the coming Winter, to send to all those persons whose applications are favorably indorsed and who are willing to meet the cost of transportation from the ponds, as many fish as can possibly be allowed them. By this arrangement those parties who are willing to pay the express charges will be enabled to receive the fish more promptly and without the risk and contingencies of a general distribution.

SPENCER F. BAIRD, Commissioner."

The carp has a small mouth, thick lips with barbels, or feelers, at the corners of the mouth. Instead of having the teeth, as usual, in the jaws, they are situated on the pharyngeal bones which are arranged in three rows leading to the gullet. The general color of the back and sides is a dark or olive-brown, the abdomen being often of a whitish-yellow or orange tint, the coloring varying somewhat with the season, water and soil, as well as with the age and food of the fish. The carp has been known for centuries in Europe, having, it is thought, been orginally imported from Persia. It has been extensively cultivated in different parts of the continent, especially

in Germany and Austria. carp cultnre in the latter country having been traced as far back as 1227. As the carp has for centnries been raised under varions conditions—in small ponds, large bodies of water, rivers, etc.,—different varieties or species have been developed. These are divided into three principal groups:—1. The scale carp, with regular concentrically-arranged scales, supposed to be the original species slightly improved 2. The mirror carp, thus named on account of the extraordinarily large scales which run along the sides of the body, the rest of it being bare. 3. The leather carp, which has on the back either only a few scales or none at all, and possesses a thick, soft skin which feels velvety to the touch. The two last named have a somewhat stouter and shorter but more fleshy body than the first. The leather carp, whether old or young, bears transportation and other hardships the best. Each kind is prized most in one or other district in Europe; but here the leather carp is generally esteemed most highly.

The increase of the carp is extremely rapid nnder favorable conditions of location, food and protection from enemies. In Angnst 1872 the late Mr. J. A. Coppe, out of eighty-three carp of various sizes he had shipped from Germany, succeeded in transporting alive five of the smallest, about the size of a steel pen, to his farm in Sonoma Co., California, where they were placed in a pond previonsly prepared for them. In the following May they had grown to sixteen inches in length, and the yonng fish had increased to over 3,000. Since that time the increase has been equally rapid, but overstocking has been prevented by large sales to other persons anxious to raise carp. The spawning season lasts from May until August according to the latitude, though most of it takes place in May and June. The nnmber of eggs in each fish is enormons, one weighing five pounds containing from four to five thonsand. The eggs are agglomerated, not detached, and adhere in lnmps to aquatic plants, stones or brnsh-wood, and in this position they can be readily removed from one pond to another. In stocking ponds three females should be put in for two males.

As older carp feed on the spawn, the place where this rests should be either partitioned off from them or so shallow that they cannot get to it. Other fish, too, devonr this as well as the young carp, and should, therefore, never be admitted into a carp pond. This rule should be especially enforced against the voracious pike. In addition to whatever food they may find in their habitation, a good feed for the young fish consists of one-fourth corn meal and three-fonrths flour, mixed into a paste and scattered here and there in the pond in order to force them to seek it, as the carp, probably throngh its long maintenance in a state of semi-domestication, is one of the laziest fishes that swim, when food is plentiful without the need of exertion. The carp is very easily satisfied in the way of food. It feeds on almost all sorts of aquatic plants, snch as the ordinary pond weeds, splatter docks, pickerel-weed. arrow-head, pond-lilies, duck-weed, wild rice, etc., etc., as well as npon garden vegetables, barley, wheat, corn, peas, coagnlated blood, curd, worms, larvæ of aqnatic insects, kitchen refuse, slaughter-honse offal, refuse of breweries and even excrements of cattle and pigs. Indeed there are very few kinds of food on which a carp will not thrive, though, of course, it does better on some than on others. Food should be given only early in the morning or evening so that the fish may search for food during the day.

As cold weather approaches, generally in late October or early November in northern latitndes, the fish seek the deepest waters to hibernate in groups of from 50 to 100 and more. In the muddy bottom they make a cavity called a "kettle," in which they pass the Winter, huddled together in concentric circles with heads close to each other, the posterior part of the body raised and held immovable, scarcely lifting the gills to breathe and without a particle of food. In cold climates this fast lasts from the beginning of October to the end of March, the period decreasing as the temperature grows milder on the way south. As the fish do not grow at all during this hibernation, they increase all the more rapidly the farther south their habitation, as they have then a longer time each year to feed and grow fat. When they are transported for propagation in Spring or Winter, however, they arrive at their destination worn and hnngry, and should be placed in a tank where they should be fed a little. For this purpose a good mixture is boiled barley or rye flonr made into a paste with hot water and mixed with a little loam or dry bread. Carp grow only in May, June, July and August, remaining apparently stationary throughout the rest of the year—at least in the more northern latitudes, thongh in Sicily it is found their period of growth is considerably longer.

In warm, shallow water the embryo fish breaks from its shell from the twelfth to the sixteenth day, and then its growth differs according to the temperature of the water, the amount of food and the quality of the soil—whether muddy or stony, cold water and stony ground not being favorable to its development. In three years the fish average from three to three and a quarter pounds; and if the weather has been nnnsually warm or the food very plentiful, they will weigh considerably more. The carp is known to have lived to the age of 140 years, increasing in size np to the thirty-fifth year, when it measures in length about 3½ feet by 2⅝ feet in circumference, weighing between 30 and 40 pounds, thongh some "old stagers" have been caught weighing over 75 pounds. In warm, southern climates, Professor Baird thinks there is no donbt bnt carp wonld gain a weight of two and three-qnarters to four pounds in eighteen months, while in colder climates it would reqnire two and a half years to attain this.

The carp is excellently adapted for raising in inclosed waters, such as lakelets, pools or artificial ponds, and also for stocking open waters, such as rivers, lakes, etc. A large proportion of the farms in the conntry have places which might very profitably be converted into ponds for the purpose, by the nse of an ordinary road scraper to deepen marshy ground or any natural depression which can be snpplied with water from a spring or adjacent stream. A rocky, gravelly ground is of no use; though a small pond with a sandy bottom may be rendered suitable by coating it with a thick layer of loam. Clay or loamy ground is the best for a carp pond. If it contains marl or some elements of humus, so much the better; bnt too much humns or dissolved peat is injurions. Water from bog meadows or oak wood contains too much humic acid and tannin and gives a moldy taste to the fish: so does water which it passes. The most favorable water will always be that which comes from rivers and brooks, and the snpply should be so regulated that it will always be the same hight in the pond—neither overflowing from excess of rainfall, nor sinking low from drought.

The accompanying engravings illustrate varions sorts of ponds both for carp culture and carp keeping, the former term being applied to the raising of carp for sale: the latter, to the raising of carp for the use of one's own family. In the first case at least three adjajent ponds are needed—one for the yonng fry; one for the larger or growing carp; and one for wintering the fish. On the last the success of the ventnre mainly depends: while the ponds for the yonng fry and the growing carp may be shallow, the wintering pond should be from eight to twelve feet deep and should have some flowing water even during the coldest weather. What more space permits us to say, however, must be confined to an explanation of the cuts which will explain the chief requirements in the constrnction of the ponds.

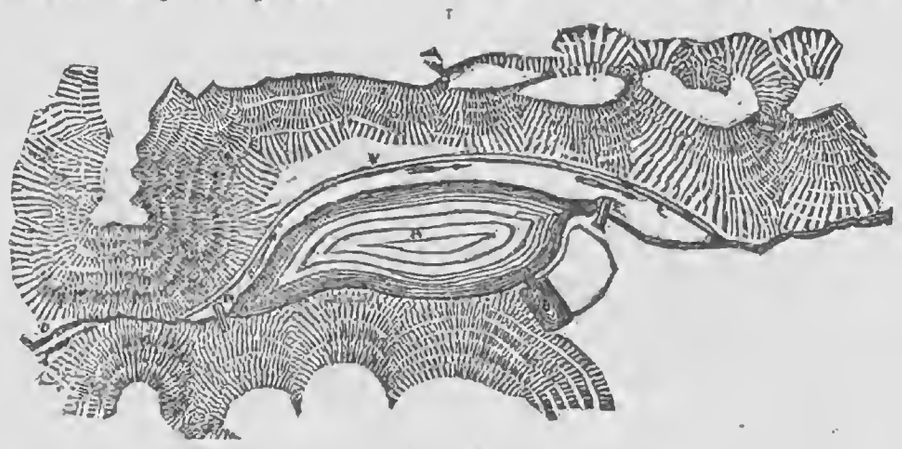


FIG. 421.

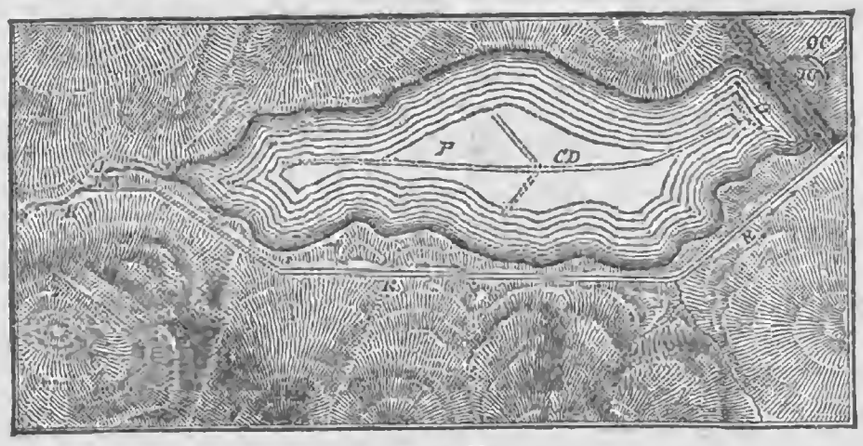


FIG. 422.

Fig. 421 A. is an ordinary farm pond for *carp keeping*. B. is a shallow cut connected with it designed as a hatching pond where the yonng fry will be safe nntil old enough to be transferred to the pond. C. is the supply stream; G. the gate that regulates the supply;

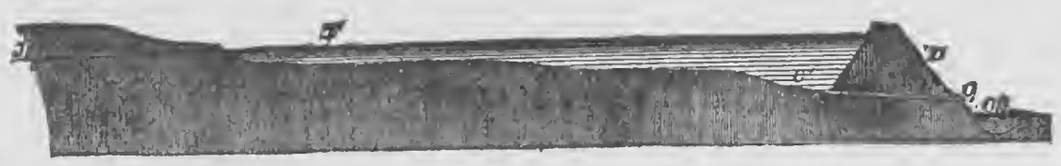


FIG. 423.

be snpplied with water from a spring or adjacent stream. A rocky, gravelly ground is of no use; though a small pond with a sandy bottom may be rendered suitable by coating it with a thick layer of loam. Clay or loamy ground is the best for a carp pond. If it contains marl or some elements of humus, so much the better; bnt too much humns or dissolved peat is injurions. Water from bog meadows or oak wood contains too much humic acid and tannin and gives a moldy taste to the fish: so does water collected from rainfalls. Too mnch carbonate or snlphate of lime is also injnrions, and water from mineral springs shonld never be admitted, while that from ordinary springs should be condncted to the pond through narrow, shallow ditches so as to become warmed up and hold in solution some of the soil over which it passes. E. that which regnlates the discharge; F. F. the stream condncted *around* the pond instead of allowing it to pass through it—a mnch better plan.

FIG. 423.—Pond *P* is a natural body of water formed by a dam, *D*, abont seven to eight feet high, crossing a valley and thus collecting the water of a rnn flowing there. Before *D* is a deepening, *C*, the collector, for gathering the fish previous to scooping them ont. In the dam *D* there is an outlet leading to another deepening—the so-called outlet collector *O C*.

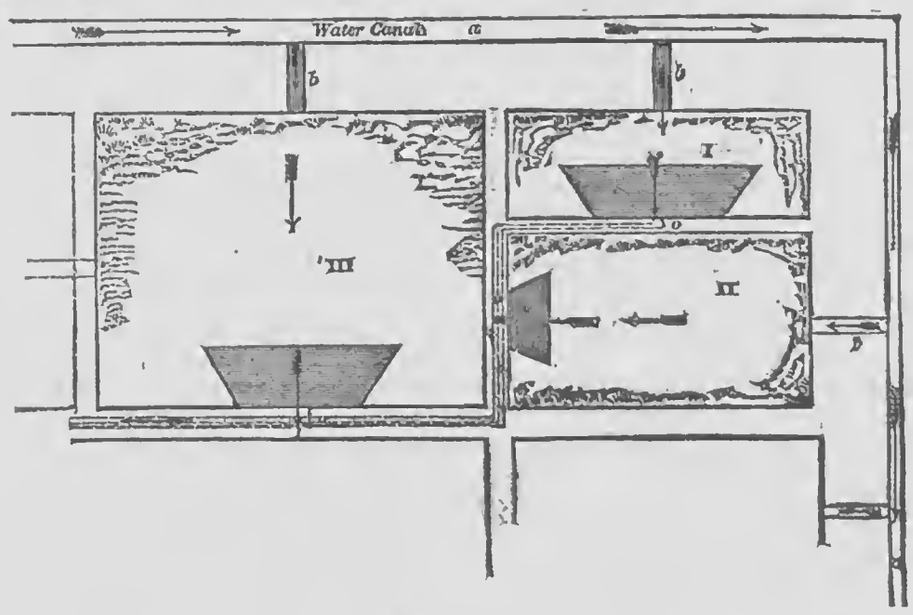


FIG. 424.

The purpose of this collector is to keep back fishes that may have passed the ontlet when opened. It is provided with a screen or netting, *C D*. Upon the bottom of pond *P*, is the collector-ditch, which conducts the fishes to *C* when the water is let out, and thus prevents their being caught in the mnd. *R* is the run of water which, to prevent overflow, has to be conducted arnnd the pond in a separate ditch, leaving an inlet at *I*, protected by a sluice with screens.

Fig. 423. F, snrface of the pond; C, collector; D, dam; O, outlet through a tile drain to be blocked up except when the pond is to be drained in order to catch the fish: OK, outlet collector; J, inlet. Here, too, the stream is conducted arnnd the pond.

Fig. 424 shows a grouping of three ponds for carp culture, all snpplied by one stream; I, breeding-pond for spawning fishes and spawn; II, pond for small fry; III, pond for large fish; *a*, supply of water; *b*, inlet; *c*, collector for gathering fish; *o*, ontlet.

In all farm carp ponds there shonld be a depression, preferably in the middle, large enongh to permit all the fish to hibernate in it, and deep enough to prevent the water in it from freeziug to the bottom in the coldest winter nights, thns causing the death of the fish. How deep this shonld be will depend on the exposnre of the pond, its surroundings and latitnde.

Pomological.

PEAR BLIGHT.

It is a common idea that when a pear tree is strnck with the blight, it never recovers. The disease is regarded very mnch as consnmption in the case of a hnman being—sometimes slow bnt always snre death. This idea has no foundation in fact. I can see from my window a tree that was badly affected with blight ten years ago, but which is now a healthy tree. Snch examples are plentiful. The object of this article is to try to impress npon the minds of the owners of pear trees the neccssity of keeping constant watch of the trees at this time of year. As soon as the blight appears, there should not be an hour lost before the part affected is removed. If this is done soon enough in most cases the tree will be saved. The blighted limbs should be cut off below where blight is visible. Whatever is the nature of this blight the poison appears to work downward, and consequently the germs of the disease exist below where the blight is visible; if the limb is promptly removed there is no more danger of that tree than any other. The danger consists in allowing the blighted part to remain until the poison has extended so far as to endanger the life of the tree. During the last year important observations have been made with the aid of powerful microscopes to ascertain the true character of this disease. These efforts I think have been perfectly successful. There is no longer any reasonable doubt of the trne cause of pear blight. Onr only concern here is abont the remedy. Prompt removal is the only remedy we know of at present. My advice is, let this be qnickly and thoroughly done. A. M. Williams.

Onondaga Co., N. Y.

Another Early Peach—Fredenburg.

It has been made evident to me by my experience of to-day that the limit of earliness, in addition to size and quality, has not yet been reached in the peach. I had heard of an early peach at Kingston in the neighboring county of Ulster and one of the local papers attempted to describe it, but this was done in such an incomplete manner that I resolved to make an examination. Mr. Fredenberg, a respectable and successful businessman of the city, received me very cordially, bnt Mrs. F., who has the principal care of their frnit and flower garden, and who planted the pit of this new variety, was unfortunately not at home. Yet I saw the peach tree and ate of the fruit, which is of the largest size for a peach ripening in this latitude on the 25th of July. I have little doubt, from its general appearance, that this new seedling is from the Alexander, the constitution of that class being so strong that it continues to reproduce from the pit. It is a most beautiful frnit, and may prove valnable for the peach region of the Hndson River. The leaf is without glands and finely serrated; blossoms large. A. A. B.

Newburgh N. Y., Ang. 4.

Miscellaneous.

VARIOUS TOPICS.

That excellent early dessert pear, the Doyenné d'Eté, has with me prodnced an immense crop of frnit this season, and ripened it in an excellent condition. I do not think this pear is as extensively cultivated as its merits entitle it to be, and why it is not more generally planted is more than I can say. The tree is of vigorons, healthy growth and is also remarkably productive. The fruit is of small

size, juicy and of a remarkably sweet, pleasant flavor. It is also very attractive in appearance, the skin being of a fine yellow color beautifully marked and shaded with red. As this variety ripens about the first of August, when fruit is not very abundant, a dozen trees should be found in every suburban garden. Indeed every farmer should have at least several trees. I think that if farmers could only be shown a plate of the fruit of this variety they would need no further inducement to give it at least a trial. The size of the fruit can be improved to a considerable extent by judicious thinning when about half grown. As before said, it ripens about the first of August, so it is a few days later than the Madeleine or Citron de Carmes, which ripens about the 25th of July. Of this variety I happen to possess one fair-sized tree from which I obtained about three pecks of very fair fruit. It is of vigorous, erect growth, bearing medium-sized, obovate fruit which gradually tapers towards the stalk. When properly ripened, the fruit is juicy and of a pale yellowish-green color. It is not a very long keeping variety, and should be picked, and ripened in the house. This is a pear but little grown and is only desirable on account of its being so early. Some persons think it of value, but I do not prize it very highly. In other localities it may, however, be found of more value.

In reply to "Leon" who inquires, on page 513, for information concerning the difference between Deutzia scabra and D. crenata, I do not claim my plant to be true scabra, but it is certainly different from D. crenata in its more erect growth and its much narrower, rougher leaves. It has been here for many years and I regret I do not know from whom it was obtained. I shall have either to remove or destroy it this Fall, as it is in the way of other shrubs. I am aware that D scabra is a scarce shrub, but for ornamental decoration of our lawns, D crenata will prove to be of as much value as D scabra.

Will "Agrostis" who wrote the article on R sa rugosa, page 481 of the RURAL for July 28 please be so good as to send me a postal card through the RURAL Office and let me know the name of the person who has the large bush of this rose. I am interested in its history, as I have a large plant that was raised from seed brought from Japan by the Commodore Perry Expedition I think that it is an error as to its being grown some 70 years ago; but I may be mistaken; however I should be pleased to hear from "Agrostis."

Queens Co., L I. CHAS. E PARNELL.

The Morality of Wine Production.

So far as our experience has gone, it appears that our fertile hills, with excellent natural drainage and a genial climate, are admirably adapted to grape growing for wine making. The grave question that confronts conscientious people is, "If wine making should be developed into a great industry, would its tendencies be evil by inducing intemperance." Prof. George Husmann says, (American Grape Growing and Wine Making, p 235). "I have always looked upon the general use of pure, light wine as the best temperance measure that could be adopted." That the substitution of pure wine for whiskey and brandy as a common beverage would be an improvement I have not a doubt; but this leaves untouched the question of the intrinsic evil tendencies of wine making Therefore if through the RURAL an expression should be given to the matnre conclusions of the most able persons who have studied this phase of the question, together with any statistics showing the intemperance of wine-producing countries as compared with that of others, it would turn attention to an important subject, of even more interest to agriculturists than to the rest of the community.

Bedford Co., Tenn. K. J. P.

BOOKS, CATALOGUES, ETC.

THOMAS MEEHAN, Germantown Nurseries, Philadelphia, Pa.—Catalogue of all sorts of forest and ornamental trees—deciduous and evergreen—vines, fruits, hedge plants, ferns, plants and bulbs—also seeds of many of the above. Sent free to subscribers who apply to Mr. Meehan.

QUARTERLY REPORT of the Kansas State Board of Agriculture for the quarter ending June 30—containing reports as to condition of winter wheat, rye, farm animals, etc., together with special papers collating the practical experience of growers of broom corn, castor beans, flax and hemp throughout Kansas, etc, etc J K Hudson is the Secretary (Topeka) and he is one of those secretaries that the agricultural community of Kansas should prize.

NASH & BROTHER, 22 College Place New York City. Illustrated catalogue of the Acme Pulverizing Harrow, Clod Crusher and Leveler. Sent free. This, as we know from several years' use, is an excellent implement.

F. R. PIERSON, Tarrytown, N. Y. Pot-grown strawberries and other small fruits for Fall planting. A specialty of the Sharpless and Manchester. Gratuitously distributed. Apply to Mr. Pierson.

What Others Say

FLAX CULTURE IN KANSAS.—From the last quarterly report of the Kansas State Board of Agriculture, we take the following respecting the culture of flax in that State. We wish that some of our many Kansas subscribers would write us their experience as to this important crop. The soil here (Monrovia Co) is a deep, black loam, containing a large percentage of sand, and seems well adapted to flax culture. The ground should be well plowed, and then harrowed until thoroughly pulverized. Drilling and sowing broadcast have proved about equally successful in my experience, but as a rule I favor drilling, for many persons who cannot successfully sow broadcast can use a drill without difficulty. After sowing, I go over the ground with a heavy, wooden roller, to smooth and pack the soil, and crush any clods, as one of the secrets of success with flax is to have the soil in proper tilth. The proper quantity of seed is about three pecks per acre, or perhaps a trifle less. When the bolls assume a brown color, it is ready to cut, notwithstanding the leaves and stalks may still be green; at that stage of ripeness it will shatter and waste less than when ripe. I cut with an improved Buckeye table-rake machine, but any other good self-raker will answer as well. Left on the ground as dropped by the machine, it will in four or five days of good weather be cured enough to thrash at once or to stack. The curing can be very much expedited by turning the gavels over, two or three days after cutting; this I have found desirable. My crops average about 11 bushels per acre, though in exceptional cases the yield has been 16 or 18 bushels. Have usually marketed, in October or November, for 98 cents to $1 05 per bushel. The straw I carefully stack at thrashing-time, and in Winter cattle and horses eat it greedily, in preference to any kind of hay, which I think it equals in value. The yield of straw per acre will not exceed one-half ton. In preparing for the ensuing crop I fall-plow the ground. A flax crop leaves the land in excellent condition for Fall wheat, or if fall-plowed is in readiness for corn in the Spring, either making a very desirable rotation. The cost of preparing the ground and sowing flax is about the same as for wheat; the cost of seed this Spring was about $1 per acre, or considerably less than wheat; the cost of harvesting is about 75 cents, or perhaps less than half the expense of wheat; to thrash flax costs eight to ten cents per bushel, and wheat four cents, which will equalize the difference in cost of seed. The entire total expense of handling a crop of flax is 30 to 40 per cent. less per acre than wheat. It has demonstrated that flax is one of the most profitable productions of this part of the State, and it is no longer an experiment.

CASTOR BEAN CULTURE.—From the same source we take the following as to castor bean culture. I have raised castor beans in Cowley four years; they will do well on any soil suitable for wheat. Prepare the ground as for corn, and if light soil, make rows four feet apart; if rich soil, five feet apart. Aim to have one stalk in a hill, requiring about one quart of seed per acre. Prefer the large gray variety. As soon as ripening begins I commence harvesting, and go over the field once a week. Have a narrow one-horse cart to gather in. Have a dirt floor to snap them on, and clean them with fanning-mill having a bean riddle. On light sod land I obtain seven to ten bushels; on light old land, 12 to 15 bushels, and on rich bottom land as high as 35 bushels per acre. Prices have averaged a little more than $1 per bushel. Raising castor beans enriches the soil and leaves it in most excellent condition for a corn crop. My stock has always had access to my beans, without loss so far. The stalks I drag down with a harrow, and they can be readily plowed under. The cost of production per acre is about the same as that of corn.

BROOM CULTURE.—As to the cultivation of Broom Corn another correspondent says:—I have raised Broom Corn in this State, Chase County, seven years, and found it a profitable crop. Any soil that will raise corn will produce a good crop of brush. Prepare the ground as for corn, and have it clean. Plant with drill, one-quarter of a bushel of seed per acre. I use the Improved Evergreen variety. Begin to table and cut as soon as the bloom commences to fall. To make a table, break two rows diagonally across each other, about three feet from the ground; cut the stalks four to six inches from brush, as fast as they are broken, and throw in bunches on the table, upon which four rows may be placed. One man can break as fast as three can cut. When a load of brush is cut the hauling should begin and no time be lost in cleaning and putting under shed to dry. It may be cut wet or dry if cleaned and properly scaffolded. Broom Corn should never be fully ripe when cut, except for seed. Any kind of a good two-horse power, with a cylinder, makes a good seeder. On fair land, with good cultivation, from 500 to 700 pounds of brush can be raised per acre. It is not the largest brush that is the most salable, consequently it should not be planted too wide in the row. My corn is all made up for home trade. The stalks are of no more value than those of the sunflowers. Tabling, cutting, seeding and drying should be done at one time.

BETTER CARE FOR STOCK THAN FAMILY.—There is truth in the following from the New York Sun: We might name, says the writer, some of the richest farmers in the richest agricultural regions of this country who provide magnificent barns, stables, sheds, and pastures for their animals, but at the same time keep their wives and children in mean and uncomfortable houses, with few conveniences for doing their work easily and properly. Shade trees are left or planted in the pastures for their stock to recline under, but there is not one near the house, while as for flowers and ornamental plants, a whiff from some fragrant old lilac or syringa is about all the garden perfume which reaches the inside of thousands of country homes.

FLOWERS IN FARM-HOUSES.—It is simply a low, vulgar taste or relic of barbarism, the article states in another part, that excludes the the flower garden from too many country homes, and we are further compelled to say that in a majority of instances it is the men of the family, and not the women, who are the barbarians. Go where we will in the United States, the flower pots in the window, the vine over the door or porch, the little bed of Sweet Williams or humble verbena in the front yard are almost infallible signs that there is a woman about, with taste and love for the beautiful in nature; and, although circumstances may not be favorable for developing her ideas in such matters, still the taste and desire are there, and she is a better woman for entertaining them.

HEREFORDS IN THE UNITED STATES.—Speaking of the demand for Herefords in this country, T. C Jones, writing to the London Live Stock Journal, says that it is to be observed, in the first place, that it is of recent origin, and it cannot be predicted what the future of the business will be, or whether the Hereford calves will be so well adapted to the hardships and privations of our wild ranges as is now anticipated. The Hereford breed, like other approved breeds of British cattle, has been much improved of late years, and will not endure the hardships it was accustomed to undergo in some quarters fifty or a hundred years ago; and it is not likely it will prove more profitable than crosses of the Short-horn breed under a system which allows a large percentage of the unimproved cattle of the plains to perish from hunger and the severity of the cold every Winter. It is, moreover, believed by a majority of intelligent observers that this ranch-method of producing beef—barbarous alike in its influence upon man and beast, will prove an ephemeral business. The grass in these wild and unenclosed districts is scanty, and really nutritious but a few months in the year, so that vast ranges are required—it is said, from three to five acres to graze a single sheep. The most of the varieties being annuals, the re-seeding necessary is each year of course diminished by heavy stocking; we, therefore have reports of increasing scarcity of grass in all the older districts. It is, in fact, the general opinion of men best informed in regard to the system of beef production, that it has already reached its maximum.

FLOWERING TREES.—Mr. W. C. Barry, of the Mount Hope Nurseries, Rochester, N. Y., in his essay read before the American Association of Nurserymen (Dayton, Ohio, June 17), refers to some trees which are desirable on account of their attractive flowers as well as for their foliage. First he names the Yellow Wood, which undoubtedly is the finest flowering tree we have. Its long, white racemes of pure white flowers hang gracefully about the tree and form a picture, the admirable points of which it is difficult to describe.

The Chinese Magnolias are so well known that he refers to them only in a general way. The Judas Tree may be associated with them in groups with fine results.

The large Double-flowering Cherry, White-flowering Dogwood, Double Scarlet and Double White Thorns, White Fringe, and the lindens, are all admirable trees, and merit prominent places in ornamental grounds.

The Double-flowering Horse-chestnut is justly admired for its elegant form and magnificent inflorescence. The absence of fruit, by which much litter is avoided, is an important argument in favor of its employment.

The Red-flowering Horse-chestnut is surpassed by few ornamental trees.

Koelreuteria paniculata, with its golden yellow flowers, and Catalpa syringæfolia, producing great clusters of white and purple flowers, cannot be too highly prized, as they blossom at a season when flowers are very scarce.

The double-flowering peaches, which flower immediately after the Prunus triloba and Dwarf Double-flowering Almond are very desirable. One variety produces double rose flowers, another double white, and another double red. At the flowering season every branch of these trees is thickly studded with blooms, which are remarkable for their size, beauty, and the length of time they remain fresh. The three are a trio of flowering trees which deserve to be extensively planted.

The Scarlet Maple yields a profusion of flowers early in Spring, before the leaves appear. It is very showy and ornamental.

It is very strange, Mr. Barry remarks, that gentlemen who have spent thousands upon a house would be willing to sacrifice beautiful grounds by careless planting. The same attention and care which are bestowed upon the house should be devoted to the garden, in order that the house and its surroundings may present one harmonious whole. Another common error is that of planting trees which attain large size, in small lots. A tall elm or Norway Spruce, or other large tree, is very much out of place on a small lawn.

SINCE the introduction of the lawn mower the lawn has come to be regarded as the great feature of a garden. When it is well kept there is nothing more beautiful or pleasing than a broad, open space of turf, and in the planting and arranging of trees it should be our endeavor to keep the lawn as open as possible. This can be accomplished by arranging the trees and shrubs in borders or belts around the margin, with a fine specimen tree occasionally standing alone in a prominent position, where its beauties can be seen to the best advantage.

THE ONION MAGGOT.—A writer says, in Vick's Magazine, that a neighbor and he each secured an ounce of Danvers Yellow Onion, and prepared the ground and sowed the seed in the same manner, with one exception—the neighbor covered the bed with a good supply of coal ashes. The crop in both cases came up and looked well until the plants were about six inches high, when the onions without ashes became infested with the onion maggot, and in a short time wholly disappeared. The neighbor never lost an onion. The gardens were adjoining, the beds being less than 100 feet apart.

SHALLOW CULTURE OF CORN.—We are pleased to see that recent experiments made by Mr. J. J. Thomas, the horticultural editor of the Albany Cultivator and Country Gentleman, as to how far the roots of the corn plant extend at various stages of its growth, may be offered in support of our advocacy of shallow cultivation and the injudiciousness of hilling up to any considerable extent. He says that in Summer, before the corn plants were six inches high, they were found to have horizontal roots in some instances a foot in length, making a circle of fibers two feet in diameter, or four times the hight of the plants. When the corn had reached 12 or 15 inches the roots had met between the three-feet rows, and while yet the plants had not attained more than one-tenth of their final weight or bulk. Long before the ears form, the entire ground between the rows is occupied with long and slender fibers.

A HORSE POISONED BY EATING OLEANDER.—By reference to the RURAL NEW-YORKER of 1877 it will be seen that we warned our readers against the oleander as being deadly poisonous, and though beautiful in flower and leaf as a house plant, yet it ought never to be permitted to grow where children may touch it. The following is going the rounds of the press without credit:—Prof. James Law writes: "A case that occurred recently under my notice may be recorded as a warning of the dangerous qualities of a favorite house plant. A fine, healthy mare ate a single tuft of leaves from a branch of an oleander temporarily set by the door; then went on a journey of six miles, appearing playful and well, but on returning refused her feed. Next morning she still refused to eat, looked dull and haggard, and had partially lost control of her hind limbs. The mare died before assistance could be obtained, and on opening the body the dark-red congested stomach showed the action of an acrid poison, and inquiry brought the account of the cropping of the oleander, of the injurious qualities of which the owner was entirely ignorant. As this ignorance is very widespread it may be well to say that all parts of the plant are deadly. A very small quantity of the leaves is fatal to the horse, as we have just seen. The flowers have produced death in those who carelessly picked and ate them. The branches, divested of their bark and used as skewers, have poisoned the meat roasted on them, and killed seven of the twelve people who partook of it.

MR. VICK reminds his readers that the "White Worm," or any other worm, in pots, may be destroyed by sticking three or four common matches down into the soil, also one or two up into the drain opening. The phosphorus on the match is certain death to animal life, and a powerful fertilizer for plants. . . . . A farmer relating his experience in the Husbandman, says that when he took possession of the farm he now has, there were many very large apple trees on it, and as they had no value as an orchard he cleaned them off. The brush and other waste were piled about the stumps and burned to prevent sprouts from starting. That was ten years ago or more, but from that day to this the crops raised about those stumps are better than on other portions of the field—the effect of the ashes he supposes. We have more than once observed the same effects from similiar causes and have heard several farmers say the same thing. . . . . It is pleasant to find the carnation, and its near allies, the pink and the picotee, says the London Chronicle, keeping their hold on the sometimes fickle taste of the public. For variety, purity and delicacy of color, symmetry of form, freedom of bloom, and in many cases rich fragrance, there are not many garden flowers that surpass them; and then they are in a sense everybody's flowers. But we think that this delightful class of flowers has never been fairly appreciated here in America, and we hope the RURAL's last distribution will greatly aid to change this. We should feel obliged if our readers would send us any specimens from the RURAL seed, which they deem specially handsome. . . . . "Not here?" said the man from the County Court, "where's he gone to?" "I can't say: he's dead." . . . . . De wire grass lubs a lazy nigger. . . . . Twelve er clock nebber is in a hurry. . . . . Nebber depend too much on de blackberry blossoms—Aphorisms in Scribner. . . . . It is the young city clerk who draws a week's salary in advance, and remains at a country resort over Sunday, who acts as if he owned the whole establishment and all its surroundings. . . . . Louisville Courier-Journal:—"Public school play-grounds and the streets would demoralize little angels, much less little boys." . . . . . "Is there *anything* fit to eat?" asks the N. Y. Herald. . . . . We can't all think alike. The horse thinks one thing and the man who rides him thinks another. The rider thinks it is easy to get over the road in that way, but the horse differs from him. . . . . Lavater said, what it will do us no harm to ponder upon, that he who purposely cheats his friend would cheat his God if he could. . . . . There is many a man who threatens to cut off his son with a shilling who would have to borrow the money in order to accomplish the threat. . . . . It is very easy to believe that we are in every way equal to those who are above us and very hard to believe that those below us are in any way equal to us. . . . . A practical farmer says that he always applies manure as a top-dressing for a wheat crop, and derives double the benefit from it used in that way. The growing season for wheat in the Fall being a short one, it is advisable to apply the manure in such a way that its effect will be immediate. It should be finely pulverized, says the N. Y. Herald. . . . . Mr. Purdy, in his Fruit Recorder, reminds his readers that this is the time to layer grapes to get good roots for setting next Spring. Bend down the joints of new growth into a trench and fasten them with little crotched sticks. . . . . One cane of six to eight feet in length will make three or four layers, by laying in the soil near the old plant and then out and over a small stone and then in again, and so on to end of cane.

Everywhere.

RURAL SPECIAL REPORTS.

Maryland.

FLOYD, Garrett Co., Aug. 8.—The R. B. Sorghum came up first-rate. It now has from 15 to 26 branches from each seed. The Washington Oats have done splendidly. They grew five feet high and the heads are 14 inches long. The flower seeds came up finely and are now the most beautiful I ever saw. I had bad luck with the White Elephant Potato—the bugs ate it up so completely that I shall hardly be able to save seed. The asparagus seeds I shall try next year. I hadn't a fair chance with the seeds this year, for I had just begun to clear up a farm right in the woods and the land did not yield as well as it will in the course of a few years. Still I have corn 18 feet high that is earing first-rate. All crops are tolerably good in this section. A. R.

Michigan.

HOWELL'S, Livingstone Co., August 15.—On April 23 I planted one White Elephant Potato cut into eleven pieces; it yielded half a bushel. One Early Rose cut into eleven pieces, yielded not quite a quarter of a peck. Two Snowflakes cut into eleven pieces, gave 1¼ peck. This is the first time Snowflake ever yielded more than Early Rose with me. Two tubers of Brownell's Beauty cut into eleven pieces yielded nothing—sets rotted. One Late Rose cut into eleven pieces yielded 1¼ peck. All were planted in a row, one foot apart, and received the same care, being kept free from weeds. If the W. E is as good to eat as it is to yield, it will be just the thing wanted. The W. Oats are very large—some of them six feet three inches. The R. B. Sorghum by July 10, had all grown four feet high. Then I began to cut it for feed; where cut first it is now three feet high. T P. SR.

TROWBRIDGE, Allegan Co., Aug. 7.—Of the Branching Sorghum nearly every seed came up and the plants are about four feet high, with 28 stalks in some hills. The soil is a clay loam, having a clover sod plowed under with no manure. My White Elephant weighed four ounces. I cut it into 12 pieces and planted them as you directed. We had to fight the bugs to save them; but feel well repaid. We dug a hill this morning and got three pounds and one ounce of nice, large tubers. We would not take what the RURAL cost for them alone. We did not do so well by the Washington Oats as we would like on account of sickness. They were not sowed till late, but they grew 22 large heads from one seed and five or six from almost every one; but, being late, they rusted. Our asparagus did well and looks nice. S. O. A.

New York.

RUTLAND CENTER, Jefferson Co., Aug. 10—I have 17 hills of the White Elephant Potato planted on June 5, and as they are all doing well and there are no bugs, I expect a large yield. The Washington Oats were sown in drills on the same date; the ears are well filled; but the oats are very rusty. R. B Sorghum has been doing well for the last two weeks. Hay is very good, and so are small grains. Corn, however, will not be much of a crop this year. C. L. F. K.

VERNON Oneida Co., Aug. 12—I dug to-day the White Elephant Potatoes grown from the seed received from the RURAL Free Seed Distribution last Spring. I had 49¼ pounds in actual weight. I consider this a very good yield, and they are large and fine though this is not considered a very good season for potatoes by people here on account of the want of rain. I can't say how large they would have been with plenty of water, but am pleased with the results. L. A. G.

Ohio.

SCOTT, Marion Co., Aug. 10.—In this county there is the poorest prospect for crops possible. Spring was late; the last week of March had snow from two to three feet deep, which went off slowly and made plowing late. Corn came up badly and had to be replanted. It grew slowly owing to the cold weather. Early in July we had the hottest of weather, which rolled up the corn like cigars. This lasted for two weeks; then for a week we had flooding rains, which ran the ground together hard before dry enough to plow. Harvest then came on; hence half a corn crop. Wheat was "likely" in the early Spring, but the fly, with other causes, cut it to half a crop, with inferior grain. Potatoes were first scalded, then burnt up by the hot weather; late crop, poor; early, good. At this time the weather is cool. Hay is about all in the stack. W. J. V.

Oregon.

MONUMENT, Grant Co., Aug. 12.—The agricultural resources of the country are very limited. It is chiefly a stock country and very rough—not adapted to farming. Fruit trees and small fruits do well where tried. Most vegetables do well, but the nights are rather too cold for corn. A. K.

Tennessee.

LINCOLN, Lincoln Co., Aug. 10.—We are suffering severely from drought; have had no rain of account in six weeks. Corn will be nearly a failure; cotton a scant half crop. A great deal of the millet that was sown has failed to come up on account of the drought, and what has come up will be very light. Oats were a good crop, but wheat was not so much better than last year as it promised just before harvest. W S.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

"Preserving" Crabs, etc.

F., Delaware, Wis., asks the best method of utilizing the Siberian crabs which bear fair crops of fruit this year while there is a great scarcity of choice eating apples, cherries, tame plums and blackberries. Native crabs, however, also give fair crops and so do wild plums and wild grapes, and our friend inquires whether all these will not make good jelly and how can they be best put up for next Winter.

ANS.—Of course it hardly need be remarked that Winter crabs should be carefully put away for use at maturing; and that several kinds, like Hyslop, and perhaps some of the newer ones, may be easily kept for a considerable period in the fresh state. Siberian crabs make a superior jelly: and this is so easily manufactured that almost every housewife will be familiar with the process. This would seem to afford the most ready means of utilizing much of the crop for use in the family; while our cities and villages supply an almost unlimited demand for any surplus that may be produced, if neatly and conveniently put up. For this purpose the fruit should be used when fully mature—not over-ripe, nor yet unripe, if the best results are to be attained. A few simple and cheap appliances will greatly expedite and economize the process, if it is to be conducted on an extensive scale.

Another and a very satisfactory mode of utilizing a surplus of this fruit, is in the manufacture of marmalade, which is done by removing the calices, cooking it thoroughly and forcing it through a sieve to separate the seeds, cores, stems and skin from the pulp, which is then prepared with sugar enough to prevent fermentation and put up in any convenient manner for keeping till wanted. The refuse of the crop will yield a very superior cider, whether for use as a beverage or for conversion into vinegar. The small size of nearly all the crabs constitutes a serious objection to their use for drying. There is yet another process to which this fruit is well adapted—that of canning—which, if properly done, leaves it with more of its natural flavor as well as beauty of appearance than can be retained by any other process. We fancy, moreover, that the verdict of an immense majority of the housewives of the land, has long since determined that with the modern glass, self-sealing can the summum bonum is reached, so far as the preservation of perishable fruits for home use is concerned. For this purpose the fruit should not be pared; only the calyx should be removed. The stems, which are always long and slender, may be left as a convenience, not to the purveyor only, but also to the partaker.

Breeding for Beef.

A. H. C., Beatrice, Neb., wishing to breed for beef stock, asks, 1, whether a pure-bred Hereford bull calf which its dam dropped before she was two years old, would be a suitable sire for beef stock—both have good pedigrees; 2, the breeding value of a bull calf out of a pure-bred Durham cow by a pure-bred Durham bull; the cow is a deep milker, but she looks very homely and raw-boned, and has no pedigree; 3 would it be advisable to breed heifers for beef stock as early as nine or ten months, as Mr. Stewart advises breeding them for dairy cows.

ANS.—1. Such a Hereford bull as above described would doubtless make an excellent stock animal. The precocity of the dam would be an advantage rather than a detriment. 2. The Durham (Short-horn) calf would not be a desirable animal to use for breeding for beef. The character of the dam is objectionable; it is quite probable that she may be a good dairy cow, as a good milker is apt to be raw-boned and the reverse of a beef animal in appearance. A large bull is by no means desirable for breeding purposes simply because it is large. The bull which founded the best families of Short-horns, the renowned Hubback, was a small bull. It is quality and not size that is required in a stock bull; size can always be gained by feeding. Your Hereford bull might be made of good size by good and judicious feeding, notwithstanding he is the first calf of a young heifer. 3 Mr Stewart recommends breeding dairy cows only at the age of nine or ten months, and does not refer to beef animals. He gives a good reason for it, viz., that the cows come into profit sooner. With grazing animals the case is different. Size is necessary, and the heifer should be at least two years old before she is bred. A beef animal, properly fed, will reach a good size and become mature at two years.

Plowing Under Clover.

J. B. T. W., St. Charles, Ill., asks when should he plow under a field of clover that was seeded in the Spring of '80 and from which he has taken one crop of hay. The soil is clay, with a little sand and a gravel subsoil. To obtain the best results for a crop of corn, should it be plowed with a breaking or a stubble plow. Should it be too dry to plow in the Fall, what would be the next best thing to do with it?

ANS.—As a rule, it is better to plow a clover sod upon clay soils in the Fall, and upon light soils in the Spring, for the reason that the Winter weather has a beneficial effect upon fall-plowed heavy soil, but a contrary effect upon light soil. The plowing should be done as late as possible in both cases. This is because corn succeeds best upon a freshly plowed clover sod and upon fresh, moist, mellow soil. In this special case it would doubtless be best to plow the ground in October, when the Fall rains have softened the soil, and leave the surface rough until Spring, when it may be worked fine with a cultivator and prepared for planting without a second plowing. A stubble plow which will turn the furrows on edge and lap them should be used.

To Purify Sorghum Molasses, etc.

J. B. F., no address. 1, asks what is the best method of purifying sorghum molasses; 2, what kind of fish is best for a small pond.

ANS.—If it has been made from cane growing on bottom land where no limestone abounds, or has a bitter taste from not being properly defecated, put it into a pan and dilute it with water until it stands 12° Baumé Bring it to 160° Fahr. and add sufficient milk of lime to destroy any acid taste. The heat may be raised to 212° Fahr., perhaps with benefit Then allow it to cool and settle one hour; draw off and cook down to a thick sirup. If sorghum molasses contains other impurities, then it must be purified by passing through a bone charcoal filter. Always bear in mind that iron pans or evaporators and too much lime tend to produce dark-colored molasses. Where cane grows on limestone soil, lime is never needed at all. 2. European Carp. See article on it elsewhere in this issue.

Miscellaneous.

J. E. S., Wellville, Va., asks, 1, whether there is any grass that will grow in an oak and hickory grove, so as to make a good sod—soil light, sandy; 2, what sort of millet is most forward for feeding in the Spring; when should it be sown; and would it be well to sow grass seed with it. 3, He has some land on which he wishes to sow wheat, seeding it to grass at the same time, and desiring to plant pear and apple trees on it, he asks what should be the distance between the trees and whether they should be set out in Fall or Spring.

ANS.—Quack and Orchard Grass are the best that we can suggest. 2 Hungarian Grass. May 10th, we sowed ours. Yes; grass seed might advantageously be sowed with it. The Hungarian requires but 60 days to mature sufficiently for cutting. 3 Plant the apple trees 30 feet apart each way; the pears not less than 20. For your climate we should prefer Fall.

W H A., Westfield, Mass., asks, 1, does it improve sweet corn to top it; 2, what is the best liquid manure for celery—would hen manure do.

ANS.—1, The ears of a given stalk might be improved by cutting off the tassel, so long as there were plenty of pollen from other tassels to pollenate the silk. 2 Yes, admirable—a gill of pure hen manure to a gallon of water. Perhaps no liquid manure is better than barnyard—a teacupful or so to a gallon. The apples are not yet received.

S R C, Balesville Miss, says he sends a specimen of a bean and leaf to see if it is the Catalpa bignonioides, *var.* speciosa, which Western railroads are reported to be setting out extensively for ties, one set being reported to outlast three of white oak.

ANS.—The specimen does not seem to have come to hand, though possibly it will be found among our wheat specimens. The wood of the Catalpa speciosa has been proven very durable. Later. It is C. bignonioides. Cannot say as to speciosa.

A K M, McKenzie Tenn, asks what would be a good hedge plant for that section.

ANS.—The Privet should do well with you. These grow more readily from cuttings and young plants may be bought of any nurseryman for a small sum per thousand—probably $5 00. The Japan Quince is a fine shrub for hedges and may be bought for $5 00 per hundred. Look in the catalogues for Cydonia or Pyrus Japonica.

E N. B., Bedford, N. Y., says: "I would like to hear the experience of some one who has used oat or wheat chaff for packing ice or for lining an ice house. In the latter capacity would it be *more* or *less* likely to rot than sawdust?"

Charles Couch Schoharie, N. Y. asks where can be purchase some good Duroc or Jersey Red pigs—pure-breds with registered pedigree, from four to six months old.

Mrs. R. J., Utica, Ill., asks whether the Great London Tea Company of Boston, which advertises in the RURAL is trustworthy.

ANS.—Quite so.

J H. Marshall Cordova, Ill, says he wants 200 calves for feeders.

COMMUNICATIONS RECEIVED FOR THIS WEEK ENDING SATURDAY, AUG 20.

H. S—C. J. R—F H S—S B. P—C. E. P.—E. M, B.—W T S (Iowa) thanks. The head does not speak well for "Golden Grain"—S. & P—S. R. C—Wm Hess, thanks.—P. S.—H & S—F D. C.—G W. P.—C. V R.—E W K, bulbs not received, unless they have been placed with our wheats—C. A. G—A. H. C—A. A. B.—A. J. C.—J. P R—O. S R—E. P. P.—J L. B—J. W. M.—G. A. G, Jr.—S O A.—A M. W.—W. W.—R G.—E R. P.—W F.—J. B. G.—A. R. (Floyd), thanks—I. H.—C. L. F. K.—C. M. T.—E. K. B.—H S—S. B. U—S. B. A.—G. W P—I. T.—H M. G—S R. M.—F. H. S.—R. W. K—T. D. E.—J. W. H.—I. P. R—J. G E.—P. H. W—A. A. S.—O. W. D.—S C. G.—F. R. M.—A. K. J.—A. F. H.—M. W.—G. W. F.—J. H. S.

THE
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A National Journal for the Country and Suburban Home.
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SATURDAY, AUG. 27, 1881

A FARMER'S HOLIDAY.—The annual "harvest home" celebration or farmers' pic-nic is an event eagerly anticipated by the farmers of lower New York, and Rockland Lake is the chosen place for the yearly holiday. Last Wednesday some 10,000 or more "merry-makers" assembled there to enjoy a good old-fashioned pic-nic, and, as we have no reason to doubt, it was a gala day for them. However, we do not mention this simply as a fact, but for the moral. If there is one class of people who deserve, and can enjoy, such a day of recreation, it is the farmer, yet no class thinks so little about a day's or a week's rest as they. Now that harvest, in most parts of the country, is over, why cannot the farmers in every town unite in a day's recreation and resolve to have a little respite from continual toil? Our holidays are too few, and the farmer's "off" days in the Summer are scarce, yet he can increase them if he will.

THE BOSTON EXHIBITION.—Boston's Mechanical Fair opened in that city on the 17th inst. under favorable auspices. It is the first annual exhibition of the New England Manufacturers' and Mechanics' Institute. Governor Long of Massachusetts presided at the opening exercises and the oration was delivered by Commissioner Loring. Beginning with an interesting outline of the changed condition of life resulting from modern invention and science, and glancing at the usefulness of State and National Expositions, he passed on to a consideration of the leading industries, of this country. The exhibition is intended to fully represent New England's arts and industries and we have no doubt but that it will be a grand success. The buildings cover about ten acres of ground, and will be open from now until November; thus ample time is given for many thousands to be present from all parts of the land. We congratulate Boston on her enterprise.

A MARVELOUS CHANGE.—The Bureau of Statistics has just stated that during the month of July 1881 there arrived at the principal ports of the United States 56,000 immigrants, against 49,850 during the corresponding period in 1880. Statistics show that of all the immigrants who arrive in this country seven-tenths land at Castle Garden in this city; thus, 39,200 of the new-comers must have passed through this huge caravansary. One of its departments is a Labor Bureau, whose object is to provide for the laboring classes among the strangers work in any part of the country where their services may be needed. In spite of the enormous influx of late, the Bureau finds the supply of this class less than the demand. Requisitions for help are pouring in from the wheat and corn fields of the Northwest and West, from the cotton fields of the South, from the railroad-building works of the Southwest, from the factories of New England, the mines of Pennsylvania and the varied industries of the other Middle States. Singly, in tens, in hundreds and once or twice in thousands the strangers are sent off to their various fields of labor to make a livelihood for themselves and add to the wealth of the country. It was only the other day that hundreds of immigrants after a vain search for work here, returned embittered and disconsolate "home"—home whence distress and starvation had driven them. How marvelous a change in a few years! And then in what exultant trumpet-tones does it not speak of the mighty push and energy of our multitudinous industries!

PLANT BLACK WALNUT.

THE Boston Furniture Exchange, at a meeting the other day, announced an advance of from 10 to 15 per cent. in the price of black walnut furniture. The advance was based on information that the great demand for furniture of this kind since the war had made such great inroads on the black walnut forests of Indiana, our main source of supply, that the supply there had begun to fail. Everywhere prices for this timber are rising. From $75 to $80 a thousand in 1874 the price has already gone up to from $90 to $125 a thousand, according to size and quality. Next to oak and hickory, black walnut used to be the the commonest tree in the State of Illinois, but the State of Illinois is now almost destitute of black walnut, and attention is being directed to other sources of supply, especially to Kentucky, Tennessee and Mississippi. A black walnut tree will grow to sawing size sooner than a pine; and to-day in our markets it is quoted at three times the price of pine. In view, then, of the ease with which it can be propagated, its rapid growth, the high value of its timber and the certainty of a constant and profitable demand, why is it not more extensively planted? In this as in other cases, we are living on our timber capital instead of on the interest of it.

INTERNATIONAL SYMPATHY.

ONE thing even the most careless observer of events will scarcely have failed to notice, and that is the sympathy for, and interest in, our stricken President, as manifested by foreign governments and peoples. Almost every civilized nation has more than once cabled its messages of condolence and sympathy, and the intense anxiety with which the least item of news from Washington is awaited in foreign lands shows plainly that these expressions of sympathy are not simply cold and formal, but sincere. Especially is this true of our Mother Country, England, which through its admirable Queen, has many times expressed the greatest concern for our President; indeed, if report be true, the whole populace are on the *qui vive* for the latest cablegrams. But in the message which Queen Victoria sent to Mrs. Garfield, when recently the President suffered a serious relapse, there was a warmth of womanly feeling, an intense anxiety, a keen sympathy for a sister in affliction, such as have not been expressed by any other ruler in Europe. Mrs. Garfield's unusual fortitude, which has won for her the highest encomiums of the American people, is scarcely less appreciated abroad, and the sufferings of the President and this fortitude of his wife are subjects of comment in other countries than our own. These marks of respect from other peoples Americans will not easily forget.

AMERICAN OLEOMARGARINE OIL IN HOLLAND.

HOLLAND is the largest European importer of American oleomargarine oil. The product is there churned with about 20 per cent of fresh milk and some coloring matter and after it has been chilled into "butter," or butterine, it is exported chiefly to Great Britain, either under its rightful name or in the guise of genuine Dutch butter. It began to be imported in large quanties in 1874, and so profitable to all parties connected with it did the handling of the stuff prove that in 1878 there were 20 butterine factories, which had increased to fully 100 in 1880, according to the report just made by our Consul at Amsterdam. In that year estimates of the quantity imported vary from 75,000 to 120,000 tierces, or from 11,000 to 15,000 tons. For the first time almost all concerned in the business then suffered heavy losses. Prices of the product varied greatly every month of the twelve, from 110 francs per 100 kilograms in January to 65 francs per 100 kilograms in March, sinking in November from 106 to 88 francs per 100 kilograms. During the fierce competition that then reigned a great deal of inferior stuff was thrown upon the market, and the butterine made from this, coming into direct competition with the poor article made from the low-grade, home-made oleo of France, Austria and Russia, inflicted heavy losses on all who handled it. Hitherto it had been the general practice with Dutch dealers in American oleo to buy and sell the article on the faith of inspection certificates from American inspectors; but as our exporters of the concoction in the heat of the struggle frequently palmed off on their customers an article much inferior to that called for by the certificates, it is likely that in future all consignments will be sold on arrival, at public sale, an opportunity being afforded intending buyers to inspect as many tierces of each lot as they may desire before purchasing. American greed seems to have over-reached itself here.

COMBATTING RAILROAD ABUSES.

THE Anti-Monopoly League is an organization lately founded, whose efforts are at present directed mainly against the abuses of railway transportation. Last Thursday a conference of this body and of other organizations in sympathy with it objects, was held at Utica, New York. The pinciples enunciated must meet with the hearty support of all good citizens. Pithily they were, the duty of advocating, supporting and defending the rights of the many against the privileges of the few; that corporations, the creation of the State, shall be controlled by the State; that labor and capital are allies, not enemies, and that both should have even-handed justice. Among the expressed objects of the organization that meet our unqualified approval are, briefly, the enactment of laws compelling transportation companies to base charges upon cost and risk of service, instead of on the theory, "what the traffic will bear;" also of laws to prevent discrimination in freight charges against any citizen or place, as well as of laws making it the duty of public law officers to defend a citizen's rights against injustice by powerful combinations. We also heartily advocate laws to prevent the further "watering" of stock and other devices by which a fictitious value for public highways is created; stringent laws against bribery, including the prohibition of free passes to legislators or to influence legislation, and laws providing for the restriction within proper limits, of corporate powers and privileges generally. While not willing to oppose, we are not prepared to support without qualification some of the other enunciated objects of the body, such as the enactment of laws to prevent railroad combination, which in our opinion should be restricted, not entirely prevented; and the appointment of a Board of Railroad Commissioners, a measure towards which we are well disposed, but whose paramount advantage is still a matter of fair discussion.

In view of the approaching Fall election of those who will have to deal legislatively with transportation questions in the various States, and also in consideration of the gross abuses of the privileges accorded to railroad companies as well as of the danger to the public interests from the monopolizing tendencies of these gigantic corporations, and the difficulty of reaching a just decision as to the best form of legislation in regard to them, we shall henceforth give more attention and space than heretofore to the discussion of the important question of railroad transportation.

FAIR TRADE AND FREE TRADE.

IN 1846 the British Parliament, under the leadership of Sir Robert Peel, and through the tireless agitation of Richard Cobden, supported by the widespread and energetic Anti-Corn-Law League, passed an act repealing the duties on importations of cereals. The measure was bitterly opposed by the farmers of the United Kingdom with whose products it permitted foreign goods to be brought into free competition; and for this reason the farmers of the United Kingdom have ever since been outspoken in their antagonism to it. It was also bitterly opposed by the Conservative Party because that party found its main support in rural districts where its leaders were mighty land-owners; its leaders have continued to be mighty land-owners, and the party has continued to find its main support in rural districts, and therefore though the Conservative Party has from policy generally masked its disapprobation of the repeal of the corn-laws; yet whenever a favorable opportunity has arisen to strike a damaging blow at the principle on which the repeal was made, the Conservative Party has never hesitated to strike that blow.

Quick upon the repeal of the duties on imported cereals, the duties on importations of a great number of other articles, especially those on all raw materials, were also removed, and England straightway became the apostle of Free Trade among the Nations—the earnest, ubiquitous advocate of the removal of import duties on all foreign wares by all governments. The country was a vast workshop in which goods were made by the best machinery, the most skillful labor and the largest capital in the world. The raw materials of her manufactured products were her only importations of any account beyond the food for her toiling millions. By removing the import duties on both of these she cheapened the bread of the multitude as well as the goods they turned out, and by advocating Free Trade abroad she was merely canvassing for markets everywhere for her cheapened wares. Other countries having continued deaf to her persuasions and having so vastly improved their own manufactures that not only is England losing what markets she has in them, but finding them sharp competitors in other markets which she has hitherto deemed exclusively her own, she is now changing her cry of Free Trade to Fair Trade.

So long as Free Trade gave the multitude cheap bread and promised an unlimited foreign demand for their goods, the multitude hurrahed for Free Trade, but having failed in its promise, the multitude is likely to abandon it, and with equal enthusiasm shout Fair Trade, which makes the same promise. The country is seeking ample markets for her goods, and is willing to preach any doctrine the voluntary or compulsory adoption of which by other nations is likely to give her the boon she craves. Reciprocity is the burthen of the new cry—that all foreign goods shall be admitted duty free only from those countries which shall admit British goods on the same terms. It is proposed to admit duty free the raw materials of Britain's manufactures, but not those of her population, for, as a sop to the farmers, a very moderate duty is to be levied on all articles of food from foreign countries. This principle is likely to grow in popular favor and to have much weight henceforth in political action. Already the agricultural community, the manufacturers and the Conservative Party may be put down as its supporters, and on the plea of protection for British agricultural and manufacturing industries thousands of the working classes, hitherto mainly Liberals, will probably soon yell lustily Fair Trade instead of Free Trade.

BREVITIES.

GROWING grain is personal property, and an attachment upon it will hold good as against a subsequent mortgage, according to a recent decision of the Supreme Court of California.

THOSE who have so kindly favored the RURAL with specimens of their wheat would greatly oblige us if they would state the yield when it has proven large, and also to what special cause they think it is due.

No property pays so well for improving as a flock of sheep and none can be so well improved by careful breeding. But a shepherd should exercise the greatest care in changing his rams. When one has procured good stock he should hesitate to destroy it by introducing animals that will not match. Matching is necessary to successful mating, especially with sheep which are so easily impressed for good or ill by breeding.

SECRETARY W. I. CHAMBERLAIN telegraphs us from Columbus, Ohio, under date, Aug., 21, "The August estimate of the Ohio Board of Agriculture, compared with 1880, is as follows: wheat, 72 per cent., or 38,000,000 bushels; against 52,500,000 bushels; corn, 70 per cent., or 74,000,000 bushels; against 105,000,000 bushels; oats 107 per cent., or 22,500,000 bushels; against 21,000,000 bushels. The wheat estimate is based on actual measurements of the yield per acre from 1,000 thrashing machines for three week's thrashing in all parts of the State."

Compare this with our estimate of the outcome of the crops in our Crop Special as long ago as June 25—a remarkable coincidence, isn't it?

Is the relation of supply and demand, tempered by speculation, the only means of regulating the price of grain? Nations that have advanced farthest in political economy seem to think so. Russia is not in the front rank of these, so Russia is about to try to regulate the price of grain by governmental interference; or, to put it in more official language, "the Ministry of the Interior is considering measures for preventing the productive power of the people from being improperly turned to account by speculators." It is intended to establish throughout the Empire official control over all the Russian grain markets, and over the price of grain for home consumption and exportation.

IN the case of Thomas vs. Moody, tried the other day before the Supreme Court of California, the facts were these:—Moody instructed an irresponsible firm to buy wool for him, expressly agreeing to furnish the money to pay for it. When the wool was delivered to him he sold it, and, after deducting his commission for selling it, placed the proceeds to the account of his purchasing agents who were indebted to him. Upon demand being made on the agents for the price of the wool, they stated the facts to the sellers who at once brought an action for the price of the wool against the principal, Moody. When they sold the wool they were ignorant of the relations between Moody and his agents. The Court below had given judgment in favor of the defendent; but this was reversed by the Supreme Court which gave judgment for the price of the wool, $13,268.20. In a scathing opinion the judge indignantly exclaimed. "Whence comes the right of the defendant to make the property of the plaintiffs, innocent parties, pay the debt of his agents?"

IN the case of Dresbach vs. the California Pacific Railroad Company, decided on July 2, the railroad had taken a lot of grain sacks to be carried from San Francisco to Jacinto, and they were lost. Dresbach sued for their value and the company set up as a defence that as its line ended at Knight's Landing, a point short of Jacinto, it was not liable for damages. The Court, however, said that as the evidence showed the sacks had been received at Jacinto by the company's agents and had been lost through their negligence, the company must be held liable for their value.

Miscellaneous.

SOUTHERN MINNESOTA.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

HAVING two or three days to spare, we drove across the country, from Estherville, Iowa, to Sherburn, Minn., and were enabled to get a very accurate idea of the interests we can after all but so feebly portray. Many features of the landscape which greeted us were well calculated to inspire admiration and a desire to proclaim the marvelous beauty of the picture, and the wondrous wealth it adorned; undulating prairies, dotted here and there with natural or artificial groves of timber, beautiful lakes of clear, limpid water, with gravel bottoms and banks well defined; farm houses, and barns in the edge of large fields of waving grain, and all evincing industry and thrift; grazing herds numbering each from tens to hundreds; district school-houses within convenient reach of the youngsters; and in the dim distance the telegraph poles indicating the line of the Minnesota Southern R. R. now a busy division of the C. M. and St. P. Ry. which has contributed so much to develop and advance this section. Corn looks thrifty, and is doing well, though backward on account of the late, wet Spring and drought. Wheat, (of which there is only a limited amount sown), as well as oats and other small grain are very promising for a full average yield, should no mishaps intervene. There has been considerable breaking done this season, which has mostly been sown to flax, upon the sod; this too is looking fine and, by the by, deserves more than a passing notice as this method of flax culture gives remunerative returns the same season the virgin soil is turned to the sunlight; about three pecks are sown to the acre, which gives an average yield of seven to eight bushels, worth from 90 cents to one dollar per bushel. This, of course, could not be done upon stump-ribbed and rocky-faced farms, where extensive fertilizing is the *sine qua non* for a crop, but Martin County has a deep, rich soil, possibly a little deficient in sand, yet with enough to aid in growth and drainage; and these lands, covered with a luxuriant growth of nutritious grasses can be bought from $4 to $8 per acre. As might be inferred, the most lucrative branch of husbandry here is stock-raising and dairying, which are increasing fully fifty per cent. per annum in the numbers as well as quality of the herds and flocks. Several of the best Short-horn strains have been introduced for the raising of grades; and full-blood Cotswolds are at the head of the flocks; while Berkshire and Poland-China hogs are the favorite cross. Farms partially improved can be bought in this county from $5 to $20, according to location, improvements and surroundings.

There are four creeks of considerable size coursing through the county, and 66 meandering lakes within its limit, all abounding in fish, which are being augmented by the Fish Commissioner of the State. Wells of good water average about 35 feet in depth. Natural timber is found along the streams and around the east, center and west chain of lakes, more abundantly in the southern tier of townships; while artificial groves of timber are almost as numerous as the developed farms of the county; groves ten years old, containing five acres or over furnish fuel for the family fireside.

Let us give you a brief statement of a single farm we visited, as an eye-opener: about two miles southwest from Sherburn is the farm of Messrs. Cargill and Van Valkenburg, of La Crosse, Wis., containing 6,600 acres of which 4,000 are under the plow. There are two good residences and two large barns, with a cattle shed 30x1,000 feet inclosed by a tight board fence, two stock wells, run by wind-mills, for Winter use, there being a good supply of water from the lakes in the Summer. There are 675 head of cattle, fully one-third Short-horn grades; 1,050 sheep, grading from full-blood Cotswold bucks, and about 300 head of Berkshire and Poland-China hogs; and the firm is yet in its infancy. The above firm farm the entire interest without renting any portion, C. E. Wenzel of Sherburn being their agent, who also buys grain, wood, etc. at the station, while H. E. Anderson is their superintendent on the farm. We heard there was a new creamery building about four miles north of Sherburn, but were unable to get detailed information. It cannot help doing well, and several others would prove profitable both to the farmers and their projectors, for the grazing is ample; the grasses are sweet and succulent; the water is pure; the climate salubrious, healthful, free from malarial taint, and the numerous groves furnish Summer shade and Winter shelter from wind. Stock and dairy investments will pay here 30 per cent. net profit per annum. Nor should we overlook the great interest felt in raising good horses, including many roadsters, but principally the solid, tractable, serviceable Norman.

The population of Martin County, in June, 1880, was 5,921, and since then there has been a material increase. The county is well supplied with market facilities, and connections with "all the world and the rest of mankind," by the Southern Minnesota Division of the Chicago, Milwaukee & St. Paul Railway, passing through east and west. Jno. M. Egan is Division Superintendent. This is a part of one of the most extensive railroad systems on the continent, under the general management of S. S. Merrill, of Milwaukee.

This county has no railway indebtedness, and while the present aggregate tax averages only about three cents, this will soon be diminished, as many lands heretofore inaccessible will soon be subject to taxation, comprising the railroad and State lands, thereby increasing taxable values and reducing the per cent. of the tax. Here are a rich soil, healthy climate, abundance of pure water, natural and artificial groves of timber, railway advantages, educational, religious and social privileges. Moreover, the geniality and enterprise of the citizens must be added as a no less attractive feature in its desirability as a resort for hunting and fishing. So many, indeed, are the sporting advantages of this region, that it is a kind of sportsmen's paradise, where the fruition of the angler's or hunter's hopes is assured to satiety. There is talk of connecting the chain of lakes north and south in this county, which is feasible at an expense of from $3,000 to $5,000, which would open the way for a steamer over a beautiful route fifteen miles in length.

FAIRMONT, the county seat, is prettily located on an undulating site, an elevation rising to the south, fringed with timber to the south and southwest, under the shadows of which lies one of the beautiful lakes of the chain. The town has three church edifices, a graded school of three departments with three teachers; Masonic and Odd Fellow organizations, two live newspapers, the Martin County Sentinel, an eight-column folio in its eighth volume, by Frank A. Davy; and The People's Advocate, by Mr. V. B. Scribner, a seven-column folio in its first year. The last census gave the place 541 population within the corporate limits while some of the best residences and a liberal percentage of the population are located just outside of the enumeration. Pleasure-seekers, for hunting and fishing, from as far as our Eastern and Southern cities, make this a place of resort, and securing the comforts of the Occidental Hotel, they hunt, fish, recreate and are happy. Situated in a good agricultural center, business is well sustained, and possesses every element for growth. Among these is a flour and feed mill (two buhrs to flour and one to feed) run by wind power, having a 60-foot wheel, which in a twenty-mile breeze is equal to 40 horse-power. This belongs to P. Wallaston from near Liverpool, England, who in addition to extensive mercantile interests is also farming 380 acres, and raising stock adjoining the town; his wheat last year averaged 17½ bushels per acre. Mr. Wallaston; C. H. Bullard; (Land, Loan and Insurance Agent) A. L. Ward; (of the Martin County Bank), and H. M. Blaisdell, (Attorney and Real Estate Agent) will accept our thanks as representatives of the THE RURAL, for their numerous courtesies. Inclose a stamp for return postage, and either of them will cheerfully contribute his time to answer any letters of inquiry regarding the town or county.

SHERBURN is a nice prairie town next west on the railroad, on an elevation which gives an extensive and picturesque view of the surrounding country, and with a population of only 113 by actual count, it is the largest, healthiest, brightest infant of its age we have seen. A church edifice, good--school-house, costing $2,000, efficient teacher, steady improvement, stores, lumber yards, warehouse and streets filled with teams laden with grain, wool and other farm produce even at this dull season of the year, bespeak a fine present and a promising future. A trifle over a mile north of here is Fox Lake, one of the "beauty" spots of Southern Minnesota, with a gravel bottom and sandy beach, skirted with a fine natural timber, and embossed with a couple of green-clad islands, and abounding in fish. This beautiful body of water, about one mile wide and five or six long, could be made the most popular place in this section. To do this, a good lodge, convenient and comfortable, with satisfactory beds and board, should be erected on the bank of the lake for which there is an elegant location. Here conveniences should be supplied for hunting and fishing—in season—and there should be conveyance to run regularly to and from the trains, for the exclusive accommodation of the guests. Here is a chance for some man to make himself both happy and useful, and make money beside, by developing this project.

"Thank you gentlemen!" is what we said in private, and would repeat in public, to Messrs. C. E. Wenzel, and W. M. Masters; (proprietor of the City Hotel) for their kind attentions and assistance in our work. Any correspondence addressed to them, would receive prompt attention.

THE THREE F'S.—To-day, Monday, August 22, the new Land Act goes into force in Ireland. The Lords' amendments somewhat emasculated the measure originally proposed and valiantly defended for seven months by Gladstone, yet it now gives to Irish farmers more than they have ever had of the three F's—fair rents, fixed tenure and freedom of sales.

Fay's Prolific Currant.

IN reply to the remarks of Mr. Lyon on Fay's Prolific Currant in a late RURAL, it may not be improper to say that no one acquainted with the late Mr. Fay would wonder at his holding this variety for the purpose of testing it in different generations alongside of all the popular varieties. In this connection let me ask—is not the practice of rushing new varieties of fruit plants on the market.—i. e. selling them first and testing them afterwards—sometimes overdone? Of the two, is it not better to be rather too slow than a little too fast? As our good friend, Mr. Fay, has now departed from us we hardly think anyone will question his wisdom in doing just as he thought right and best in the matter. His enthusiasm on the subject of fruit growing was almost without bounds. In this community as a citizen, neighbor or friend, none stood before him, and in our Fruit Growers' Association we all feel that there is a gap which will never be filled. His success in originating was great. His new peaches alone (better and earlier than any others known in this locality) would have netted him a fortune had they not been destroyed by the yellows. G. S. J.

Fredonia, N. Y.

Literary Miscellany.

WEEDS.

ALONG the roadside and up the hills:
Peering demurely into the rills:
Lifting their faces up to the sky;
Throwing their kisses to each passer-by;
Trailing their gowns all over the grasses;
Waving their hands to a bird as it passes;
Calling the butterflies—laughing and gay,
Ragged and rollicking all the long day.

How the winds love them! How the bees linger!
How the birds woo them, each happy young singer!
How the sun kisses them, eager and warm!
How the grass shelters them safely from harm!
Who is so jolly, who is so free,
Of all the bright blossoms that grow on the lea?
Purple and azure, golden and red,
Some with big bonnets and some with bare head;

Some with gold stars on their foreheads so sweet—
Some with great mantles straight down to their feet;
Some like a drift of May snow, pure and white,
Some that are dark as the middle of night;
Some with shy eyes that are hidden 'neath lashes,
Some with the largest and gayest of sashes;
Some with lips sober and some with arch smiles—
All with the bonniest, gladdest of wiles.

Amber and rosy, snowy and blue,
Some that are false and some that are true;
Yellow and crimson, sapphire and pink—
All are as fresh as the dews that they drink.
Along all the roadsides, down by the brooks,
Hiding away in magical nooks
Down in the meadows, always aglow—
Dearest of all the things that grow.

—FANNY DRISCOLL, in Boston Commonwealth.

COUSIN FRED.

CHAPTER II.

DECISION.

Cousin Fred slept but little that night: not only was he miserable on his own account, but most anxious on Lucy's. He held a secret that he felt it would be terribly wrong for him to pass unnoticed.

His cousin was not quite eighteen. Supposing some scoundrel, afraid openly to show his face, had secured her affections, and harm were to come to her, Fred Beaufort felt he should never forgive himself.

Yet he still shrank from informing his uncle—at least, until he knew something more about the man she met. Mr. Brand was stern, not to say hard, of disposition; and Fred Beaufort felt capable of doing anything rather than get Lucy into trouble, for he well knew her position at Silverville. So again he returned to the old question—what was he to do?

He couldn't possibly tell Lucy that he had been spying on her actions, request then her confidence. Of all persons—and he sighed—he would be the last she would give it to.

"I know, he finally determined, "As her cousin, and next to her, after uncle Brand, I have a right—nay, it is a duty—to shield her from harm. I will see if I cannot find out who is the person she meets. I'll come upon them as if unexpectedly. She then will be forced to confide in me; and, as Heaven hears me! if the man is worthy of her love, I'll stand her friend without one thought of myself."

And no more loyal and chivalrous heart beat than Fred Beaufort's.

The next day Linda was out of temper. She had risen amiable enough, but cousin Fred, for a wonder, was thoughtful, not to say pre-occupied and dull—an offence, when in her fascinating presence, which she held punishable by her law. Hence she was out of temper; and to spite him, when visitors called, flirted desperately with a certain captain of the Guards who was one of them.

Poor Linda! If she had but guessed how thankful her cousin was to be released, as it were, from duties she rather exacted than he voluntarily paid, and able to watch Lucy! Her manner, like his own, was changed. She was quieter, more retiring, while he noticed frequently, when she fancied she was not observed, a pained, anxious look steal over her pretty face. Once, raising her eyes, she had encountered his. A rush of color had come to her cheek; then, after a moment, she had changed her place.

"No one would less prefer to meddle in her affairs than me," he thought; "yet it must be."

When the girls had left the dining-room that evening, instead of resuming his seat, Fred Beaufort fetched his hat, and telling his uncle he had a call to make, quitted the house by the window, as the previous evening.

During the day he had formed his plans. About half a mile down the river was a bridge. Proceeding to this, he crossed to the other side, and made his way back to the spot where twice he had seen Lucy attach her boat.

The question then was, would she come this evening? Almost as he put the mental query he heard the oars. Three minutes later he perceived through the bushes Lucy, in the gray garb, land and come on, swiftly passing him. He followed cautiously at a safe distance, fearing discovery. Not for worlds would he have Lucy see him!

Just then his cousin arrived at where the bushes were clearer. He saw her move quickly forward. A dark figure advanced as quickly to meet her. A second, and they were clasped in each other's arms. Fred Beaufort dropped back a step, with difficulty checking the astonished cry that rose to his lips. It was a woman!

A woman—yes! But though his heart began to beat with a great sense of relief that amounted to joy, he rapidly asked himself what woman? Who could she be? What woman need Lucy thus meet clandestinely?

As yet the question was not to be answered. The two had moved on to the more open space, where he dared not follow.

The conversation, which seemed animated, lasted not more than a quarter of an hour, when, turning, they came slowly towards the bank. While they were within his hearing Fred Beaufort heard these words:

"Do not seek to persuade me. It is useless; I am resolved."

The voice was Lucy's—the accents low and passionate.

"Do not act hastily," replied the other. "Reflect—think, Lucy, what you renounce."

"Nothing," broke in the girl, "but what I shall esteem greater gain. You cannot tell how I hate Silverville! How I long, long to be away—away with one whose love I know is true. Ah! better love than all! What is poverty to that? I shall be here again at midnight. If you do not meet me, I shall go alone."

The woman made some inaudible response, then they were beyond hearing. What did it all mean? Surely the mystery increased.

Soon there was the sound of the woman returning.

Letting her get to a safe distance, Fred Beaufort followed her. She proceeded to the town; there by the light he saw her face. It was that of a middle-aged woman, and had once been very handsome, but now was pale and haggard, as from illness or privation. She made her way to a house in a retired street. As she reached it, a woman came up from the opposite direction.

"Ah! Mrs. Melville," she said, as Fred Beaufort passed. "Here you are, ma'am; I was so frightened, I was, lest I couldn't get my bit of shopping done, and be home before you; and here we are together."

Mrs. Melville, whatever had she to do with Lucy, or Lucy with her? Then, with a start Fred Beaufort remembered that Lucy had said she would leave Silverville that very night, and hurriedly he retraced his steps. Great Heaven! what was he to do? Surely he must inform Uncle Brand now—matters were growing desperate. Still he hesitated. How could he tell it? What could he say? Yet one thing was certain—Lucy must not be permitted to go.

On entering the drawing room he found Linda alone, her temper by no means improved by having enjoyed her own company for nearly two hours.

"Where is uncle?" asked Fred Beaufort.

"Gone to Mr. Fairbro's," was the short reply, as the beauty returned to the book she was not reading.

"And Lucy?"

"Has a headache, or pretends she has, and has gone to her room; not that her society or anybody else's has been much loss to-day."

"What has put you out, Linda?"

"Put out!" responded the beauty. "I am not put out; but I suppose one is not expected to be very gay when one has been alone all the evening. I fancy Lucy has given me her headache. I shall go to bed too; there is nothing to entice one to sit up when papa is out. Good night."

With an assumption of indifference she moved to the door. Perhaps she imagined her cousin would detain her, but he did not.

"Good night, Linda," he said quietly. "I am sorry you have had so dull an evening. I trust sleep will remove your headache."

"Thanks," she replied, coldly, as she passed from the room.

Never had Fred Beaufort been so glad to get rid of his handsome cousin before.

"Linda ought to be the one to seek Lucy's confidence,," he thought, "but I could not entrust such as she, so purely selfish, with Lucy's secret. To me she seems to regard Lucy little more than as an upper servant or lady-help. Well, my dilemma yet remains—Uncle Brand's out at Farebro's, and may not return until two or three; for when those two get talking politics, there's no separating them. I see, whatever is done must be done by myself."

He first thought he would send a message to Lucy, asking to see him. But that might appear singular, as she had given out that she was indisposed, and had gone to bed. No, he must wait, as he knew she was doing—for midnight.

The household were generally all in their rooms at a quarter past eleven; and Mr. Brand's absence made no difference, for he always let himself in the back way, leading from the stables, and went to his room, where everything that he might require was placed ready.

Thus as that hour approached, Fred Beaufort went to his own chamber; but as soon as all was still, he descended again to the dining-room. He had no light; but the hall through which Lucy must pass was flooded by moonbeams coming through the large oriel window.

The clock struck—midnight! Would she come? Had her courage failed her? No! There was a step on the stairs—so light, that it would not have been heard but for the stillness.

Then in the moonlight he saw her quickly crossing the hall. In a moment he was by her side, whispering her name.

"Lucy!"

With a startled cry the girl turned round, and cowered from him.

"Lucy," he said, gently, "where are you going? Oh! Lucy, has there been no one kind to you in this house, that you can go like this?"

"You do not know—you do not know, cousin Fred," came her trembling answer. "Oh! it is not that, no one has been unkind—but I must go—I must! You must not stay me!"

"Yes, Lucy, I must!" he responded, gravely. "What danger may you not be running into? Do you fancy for a moment that I could quietly stand by—I—your cousin—and—friend—and see you quit the house at such an hour? You—so young, and without a friend save this house contains!"

"You are wrong," she replied, in a low tone, but which was quickly recovering firmness, "I have a very dear friend!"

"One, Lucy, you may imagine so, but who can be no friend to you if they permit you to take such a step as this!"

"I do it without their permission—of my own free will! Cousin Fred you must not—shall not stay me! You have no right!"

"Yes; that of a cousin who loves you, Lucy! Who would have no harm come to you!" he answered, placing his hand on her arm. "Surely that is something."

At his touch a violent trembling seized the girl; tears started to her eyes. He did not know how sweet it would have been to yield to his cousinly authority in all cases but this.

"I repeat, cousin Fred," she murmured, softly, "I must go! No harm will come to me, be assured! I may not tell you more—it's better perhaps, not—but believe that!"

She made a movement from him, but he took [illegible].

"...y, you may not!" he said, firmly; "if you resist my request, I must summon those whose authority——"

"Cousin Fred," she interrupted, with quiet decision, "no authority in this house can stay me! If I would yield to any, it would be to yours—but I cannot! There is one who has greater need of me than any here—and to that one I go!"

"Then, Lucy, I go with you! I will see this person myself, unless you tell me who it is, and why you go!"

The girl paused; then said:

"Cousin Fred, if I tell you, will you then let me go? If I tell you that I have a right to go—that power, no law, can prevent me!"

"Tell me!" he responded.

"Then, I go—to nurse, to cherish, and support—my mother!"

"Your mother!" cried Fred Beaufort, starting back. "She is dead, Lucy!"

"So uncle Brand made us believe, but it is not true! I have seen her! She is poor—she is ill—that is why I am going to her. My mother surely has first claim to my love and to my help!"

"Your mother!"

The voice that spoke came out of the darkness. It was that of Mr Brand, and in a moment, white and stern, he had advanced into the moonlight. For a second Lucy drew back in alarm, then quietly, firmly, she stood before him.

"You have seen her?" he proceeded: "she has dared to break her word, and see you!"

"Uncle, she is ill; I fear, dying! A craving came upon her to see me—her only child!"

"Enough," broke in Mr. Brand; "she has broken her word, and has a right to bear the penalty. She knew well what it was; your banishment from my family. But you are old enough now to judge for yourself. You must renounce her—or us. Choose!"

"Uncle, I have chosen. I am going to her; she is waiting for me now," was the calm reply.

"Go, then, and never put foot beneath this roof nor address word to me again!" exclaimed Mr. Brand.

And Lucy went; Fred Beaufort accompanied her through the moonlit grounds, amazed, pained, yet conscious of a feeling akin to happiness at his heart.

CHAPTER III.

BETTER LOVE THAN ALL.

Had not Mr. Brand been so indignantly angry no doubt he would have seen the advisability, even for appearance sake, of requesting Lucy to quit his house at a more reasonable hour. As it happened he did not, and great was the amazement of the household next morning to find her gone.

He announced that a relation of hers was ill, and she had been called away late in haste.

"A relation of Lucy's, papa?" had ejaculated Linda. "Why, who could that be?"

"A relation on her mother's side," was the curt response. "The less you inquire the better."

"If that's the case, papa, dear," remarked Linda, "I should not dream of making inquiries."

"You are right."

Fred Beaufort said nothing, and his cousin believed he was no better informed than herself. They had both known that their uncle—handsome gay Harry Brand—had married foolishly, and had died shortly after, but that was all they knew, save that the wife had soon followed the husband. This, rather, was what they had been told. Fred Beaufort, however, now knew this information had been false.

After what had occurred the previous evening he fancied that his uncle would give him some explanation; but, as Mr. Brand betrayed no such intention, his nephew did not seek the confidence. His good spirits had returned, also Linda's temper, and to the latter the day passed delightedly. She hardly missed Lucy.

The next morning, however, among his letters Fred Beaufort said was one requesting his immediate return in reference to business regarding his position. Of course he must go.

Of course. So after luncheon he made his adieux in his old, happy way, and was driven to the sta- leaving disappointment behind.

[illegible] had fully made up her mind he would have proposed to her before he left; and she was irritated and annoyed, for cousin Fred's future promised to be a brilliant one. Mr. Brand had also hoped that the cousinship had grown into warmer feelings. Still, it was not too late, unless some one else won his heart.

When Fred Beaufort reached his destination taking a slip of paper from his pocket, he read it. Then, he hailed a cabman, and drove down to Mrs. Melville's.

"You're please to walk up," called the grubby maid of all-work over the balusters.

The young man, complying, was ushered into a dingy sitting-room, furnished after the fashion of cheap lodging-houses. By the window, pale and wan, sat Mrs. Melville; while coming forward to meet him was Lucy, her sweet beauty "making sunshine in the shady place."

"Oh! cousin Fred," she said, "this is kind!"

"Kind, Lucy! Why, did I not say I would call as soon as I came to town? If I have hurried my coming," he went on, in his bright, genial way, "it was because I wanted to learn all about it, for uncle Brand didn't seem likely to tell me."

"Ah! Mr. Beaufort, look round at this miserable room," said the elder lady," and think what this dear child has renounced for me!"

"Mamma you must not talk so!"

"No, indeed, aunt. Love is better than all, you know"—he felt Lucy look quickly at him, but he kept his countenance—"and, by-the-way, I am your nephew Fred. I forgot I had not been introduced, so we will have no more of Mr. Beaufort, Now, aunt will you tell me all about this family secret of the Brands?"

"You are very good," smiled the lady: "I would tell you anything, though in the end you may hold your uncle was right."

"I don't think that possible," glancing at Lucy seated at her mother's feet, holding her wasted hand.

"Then I will make the recital as brief as I am able. When young, I was like Lucy, and not older than she, when my father, who was a scholar and a gentleman, but poor, died, leaving me utterly destitute. I strove to make a livelihood in the usual branches ladies follow, but I was friendless, unknown! Failure met me everywhere. Illness—that of despair—seized me, and I was almost starving, when a kind landlady told me she knew she could get me a place in the showrooms of a milliner. My father had been a gentleman; my pride rose a little; but I was without bread. I accepted the engagement. It was while there, that I met Henry Brand; he loved—he married me. For some months we kept our marriage secret, but your uncle Brand discovered it, acquainted his father, who, in his wrath, disinherited my husband. Six months later Harry was drowned by accident, and his father, stung possibly by remorse, died from the shock, his will unaltered.

"Then your Uncle Brand found me out, and offered, if I would change my name and never own connection with his family, Lucy should be brought up like a lady, and he would endow her well. Only I must promise never to see her; never to let her know of my existence. It was a hard request; but when I knew the suffering I had endured, and might again, I shuddered at the idea of my darling suffering thus. I knew the sorrow would be only mine. She was too young to miss me, and would be reared a lady, as Henry Brand's daughter should. I let her go, though it nearly broke my heart!"

"Dear mother," murmered Lucy, kissing fondly the white slender hand. "Oh, I owe uncle Brand nothing. How dared he part mother and child?"

"Hush, hush, darling; your cousin——"

"Perfectly agrees with Lucy, my dear aunt," said Fred Beaufort. "It was an unmanly and unnatural act. But go on."

"There is little more to tell, I called myself Mrs. Melville, and once more worked for my living. I might have done pretty well, but having no heart, I had no energy. My life was a blank. My only pleasure was to try to picture my Lucy grown, and form little pictures about her. Then my health began to fail, and were it not a sin, I could have said I was glad."

Again Lucy kissed the slender fingers.

"As I grew worse, however, a craving came that I must see Lucy before I died, and I started for Silverville. I waylaid her; I managed to get into conversation. I thought I was strong, but I was weak. I betrayed who I was—and—and—you know the rest. Heaven forgive me if I did wrong!"

"Wrong! Oh, mamma, mamma!" cried Lucy throwing herself on her bosom, "that will not be Heaven's decree nor mine. I am here to nurse you, and soon you will be strong again."

Mrs Henry Brand smiled faintly, then said:

"We are very inhospitable, Lucy. Your cousin needs some refreshment. Go and see to the tea, my love."

Fred Beaufort would have demurred, but his aunt made him a quick, imploring sign, and no sooner were they alone than she said:

"Mr. Beaufort, you seem Lucy's friend—oh, pray be one to her when I am gone. I dare not tell her, but I have not a month to live!"

"Her friend, aunt!" he answered, earnestly. "Ah, if she would let me be that, and more! If Lucy will not be my wife, I shall never marry!"

"Is this true?" cried the sick lady, her eyes brightening.

"Indeed yes. But Lucy does not, I fear, care—"

"Not care! Ask her," and she pointed to the inner room.

His heart beating, Fred Beaufort took the hint. He entered, and found Lucy preparing tea.

"Dear cousin," he said, "aunt is very ill, and is anxious about your future. Now, for such invalids the best medicine is a happy mind. I want to make her happy while she is with us; so I'll say now what I have wanted to say so often, only I thought you never cared for me."

"Not cared for you, cousin Fred?" said Lucy.

"Then if you do, I want you to be my dear, dear wife."

"I your wife! Oh, Fred," gasped Lucy, "no—no—no. Think. What am I? Nobody, and penniless; and you——"

"Are of your opinion," he smiled, drawing her, blushing, bewildered, to him. "Better love than all. Yes, I'll make a confession, but not now, Lucy, for I have something else to say. We shall be married before I go abroad, so that I shall have a right to take care of aunt, who will then be my mother as well as yours."

A week after Linda Brand read with bitterest feelings of mortification the announcement of the marriage of Frederic Beaufort to his cousin Lucy, daughter of the late Henry Brand. She tore the paper in her rage, and that evening accepted Captain Ellis—"Better love than all" not being her motto."

ALL SORTS OF ITEMS.

The Philadelphia Ledger says that Wong Tze Fung, an elderly Chinaman, recently saw a live turtle lying uncomfortably on its back in front of a restaurant, and having purchased it for fifteen dollars, had it conveyed to a wharf and thrown overboard. He is a man after Mr. Bergh's own heart.

Socrates said that there are two sciences which every man ought to learn- first, the science of speech, and second, the more difficult one of silence.

Finding fault with everything is not a good way to make home happy.

A curious discovery is reported from Spain. While engaged in working the lead mines in the Province of Segovia, seventy miles northwest of Madrid, the miners found an entrance into an immense cavern in which they found upon an argillaceous deposit, and in the midst of stalagmites, 500 skeletons of men and women. Ten well-shaped and perfect skulls have been obtained, besides chipped stone and quartz implements and fragments of rude pottery.

Profanity never did any man the least good. No man is richer, happier, or wiser for it. It recommends no one to society; it is disgusting to refined people, and abominable to the good.

Dew is more abundant on cloudy nights, since the heat which is radiated by the earth does not return to it.

Harsh counsels have no effect: they are like hammers, which are always repulsed by the anvil.

Some of the largest mirrors ever manufactured were recently made for the Grand Opera House at Paris. They measured 45 by 52 feet, their weight being from 1,200 to 1,600 pounds each.

Life is divided into three terms: that which was, which is, and which will be. Let us learn from the past to profit by the present, and from the present to live better for the future.

Dean Stanley's last words: "I have labored amidst many frailties and much weakness to make Westminster Abbey the grand center of religious and national life in a truly liberal spirit."

The potato is quite an important and useful item in France. Much of the so-called cognac imported into England from France is distilled from the potato, while in Poland, the manufacture of spirits from this esculent is an extensive trade.

Dr. Franklin recommends a young man, in the choice of a wife to select from a bunch, giving as a reason that, where there are many daughters, they improve each other, and from emulation acquire more accomplishments, and know more, and do more, than a single child spoiled by paternal fondness.

During a recent earthquake at Stockton, Cal., a most curious circumstance which occurred was the stoppage of all of the pendulum clocks hanging against eastern walls, showing that the vibration was from North to South. Clocks hanging against other walls were not effected.

The noble silent men scattered here and there whom no morning newspaper makes mention of! They are the salt of the earth. A country that has none or few of these is in a bad way; a forest that has no roots, all turned into leaves and boughs, which must wither and be no forest.—Carlyle.

Dr. Maclaren, of Edinburgh, Scotland, states that the types of insanity have changed with modern times. For instance, acute delirious mania is now comparatively rare, but mental enfeeblement attended with paralysis is becoming more and more common, and is the result of the overwork and worry of the struggle for existence at the present day.

A nobleman of the Court of France, taking leave of Louis XIV., who was sending him as ambassador to another sovereign, the monarch said to him: "The chief direction I have to give to you is to pursue a course of conduct entirely different from that of your predecessor." "Sire," replied the new ambassador, "I trust that I shall act so that your majesty will not have to give similar instructions to my successor."

The earliest notice of the use of cotton in manufacture is by Herodotus, four centuries and a half before the Christian era. In his day the cotton shrub, in some of its larger varieties probably, was utilized by the natives of Southern Asia. He speaks of a certain plant of India, bearing, instead of fruit, fleeces more delicate and beautiful than those of sheep, and of which the people of that country made their garments. Alexander's generals also brought back similar accounts of the cotton tree and its woundrous products; and Theophrastus describes its culture from exact information.

The fashion of writing on black-bordered paper is about a hundred and thirty years old, and comes to us from Italy. In "Mann and Manners at the Court of Florence, 1740 1786," Mann writes to Walpole, on January 28th, 1745, on paper with a narrow mourning border, as follows: "I believe you never saw anything like it before; here everybody uses it but myself. I begged a sheet for this occasion only, and another to keep as a curiosity. Madame Royale was very unpolite to die just at the beginning of Carnival, to deprive us of all our diversions." Madame Royale was the mother of the Grand Duke of Tuscany.

Adornments for African potentates are an item of some little importance in the Birmingham jewelry trade, which embraces both real and sham jewelry. A firm of what are known as "floral jewelers" has just completed a crown for King Eyo, of Greek Town, Africa. It is a copy of that of William the Conqueror. The cap is of blue velvet, the binding of ermine, and the circle and spikes are of semi-dead gold, decorated with thirty-two real stones, consisting of amethyst, topaz, crystal and emerald. Two scepters have also been supplied—one of gold and the other of silver—for Duke Ephraim Fyamoa IX., of Duke Town, Old Calabar. These ensigns of royalty are five feet, six inches long, one being surmounted by a Maltese cross another by a dove. They are made to unscrew at the end for the insertion of a peacock's feather, which is used in some portion of the state ceremonies of Old Calabar.

MAGAZINES FOR AUGUST.

St. Nicholas.—Contents: Frontispiece. "A Brown-study"; A Brown study. Poem; From Sandy Hook to the Light ship; Milkweed Playthings; Under a Fly Wheel; The Tuneful Old Woman. Jingle. (Illustrated(; Camps. A Game; A Russian Harvest Scene. Picture; Slumber Song; The True Adventures of an Angora Cat; How Miss Jenkins "Got out of it"; The Elf and the Spider. A Fable in Verse; Phaeton Rogers. Chapters XVII and XVIII; Mark the Dwarf; Proud Prince Cham. Poem; Cathie's Story; Flat Boating for Boys; Builders by the Sea. Verses; "A Boy on the Place;" A Strange Foundling; Little Maid Margery. Verses; In Nature's Wonderlands. Chapter X; How we Belled the Rat and What Came of it; The Treasure Box of English Literature; Saltillo Boys Chapters IX. X, XI., and XII; Dame Toad. Verses; For Very Little Folk; Jack in the Pulpit; The Letter Box; The Riddle Box.

Milk-Weed Playthings.—Almost everybody, at some time or other, has made the acquaintance of the milkweed or silkweed, as I have heard it called.

A reason for each of these names is very apparent. If you break a stem, a sticky substance like milk runs from it, which will stain your clothes. You must have seen them many a time. The silk radiates in every direction from the central seed, making a gauzy, filmy sphere, with a small dark center. The seeds cluster about the opening of the pod, until the wind picks them out and carries them abroad, but if you pick some of the pods when green, and put them in a vase where they are not disturbed, the pod will open part way, like an oyster shell, and the fine silken threads, folded and packed so closely in the center, will fly apart and get out, in some way, so that after a while the pod will be covered with a cloud of white. This is very beautiful, and, if it stands in a corner out of the way of sudden breezes, it will be likely to remain so all Winter. You now see why it is called silk-weed. My sister and I yearly collected several of these silk-weeds for our play-house by the stone-wall, where we kept our bits of broken china, and transformed the pods into domestic animals. Often, a pod would be well shaped for a chicken, requiring only feathers to be stuck into the pointed tail, and the stem to be broken off short at the other end and sharpened to represent the bill. Two sticks put in served for legs, so that it would rest on these and on the point of the tail. We not only transformed these pods into poultry but also into quadrupeds of all sorts. Put in four legs, a pair of horns, and a tail, and you have your cow, and one, too, which really gives milk! Leave off the horns, take a a bit of your own hair to use for a tail, and you have a horse.—Emma M. Davis, in St. Nicholas.

Scribner's Monthly.—Contents: The Sailor's Wife; The Isle of Peace; The Daughter of Henry Sage Rittenhouse—I; "No Man's Land; By the Sea in Normandy; To My Dog "Blanco;" Ice-Yachting on the Hudson: Poetry in America, first article; Our Circle; Songs of Nature; Robert Fulton's Experiments in Submarine Gunnery; The People's Problem—II., A People's Government; Peter the Great as Ruler and Reformer—X.; Queen Titania—I; The River Inn; A Rainy Day with Uncle Remus—III.; The Village Convict; Topics of the Time; Communications; Home and Society Culture and Progress; The World's Work; Bric-a Brac.

Purchasable Health.—It is often said, when a rich man dies, that all the money in the world cannot purchase the prolongation of life. It is often said, too, when a rich man's health breaks down, that money will not purchase health. As general propositions, however, both these statements are unsound. When expended at the right time and in the right way, money will purchase health and the prolongation of life. Money will not purchase peaches out of season, but money will purchase peaches when they are in the market. Money will not purchase health out of season, but health is to be had for money, under the proper conditions. When a machine is actually worn-out, it is beyond the reach of repairs. Nothing will do but complete renewal. So, when a man is worn-out, money will not renew him, but there are always times in his life when, by the proper expenditure of money and of time, which is its equivalent, he can buy health and the prolongation of life.

A man crowds his powers through a series of years of excessive labor, and, some day, he drops with paralysis, and from that day forward he becomes a powerless child, to be led kindly and carefully to the grave. The increase of this disease is undoubtedly the result of the increase of unwisely conducted labor. Money can do nothing for it when it befalls a man, but it can do everything to prevent it. "Nervous prostration" has become a too familiar phrase in these latter years. Money cannot restore a shattered nervous system, but, properly expended, at the proper time, it will prevent it, which is a great deal better.

There are two plans of life, by either of which money will buy health and prolong a comfortable existence. The first is, the setting aside of a part of every day for recreation. So far as this can be done it ought to be done, but there seem to be some peculiarities in our American life that forbid it. Competition in business is cruelly sharp, and most men feel obliged to devote themselves to it, when they are in it at all, from morning until night. The

sleeping hours are the only ones which give them release from active care. Now business, followed in this way, from year's end to year's end, is just as certain to ruin health and shorten life as the recurrence of seed-time and harvest is sure. The alternative of daily recreation is a yearly period of rest. There are always slack seasons in business, and these every business man should avail himself of, for rest and recreation. It is in these seasons that there is health in the market, to be bought for money.—Scribner for August.

THE PHRENOLOGICAL JOURNAL.—Contents: Jay Gould; The Phrenological Commentator; Studies in Comparative Prenology; The Puritan Child; Teachers in the Summer School of Christian Philosophy; The Old Orchard; The Cause of Somnambulism; Young Folks of Cherry Avenue; The Injurious Effects of Tobacco; Inebriety in Offspring; A New Bathing Machine; Spoiling vs. Cooking in Diet: Notes in Science and Agriculture; Editorial Items; Answers to Correspondents; Poetry—Personal—Wisdom and Mirth—Library—Publishers' Department.

THE INJURIOUS EFFECTS OF TOBACCO.—The practice of tobacco-using is evidently rapidly increasing. The introduction of the use of cigarettes has greatly extended its use among the young. A larger proportion of the rising generation is likely to be the consumers of the weed than the present generation. If this practice is to continue to increase at the rate it has for the past few years, we shall soon nearly all use tobacco. In such an event, the effect upon the race can scarcely be otherwise than disastrous. The injurious effects of tobacco upon those who use it, and upon their offspring, are sufficiently grave to deserve the serious attention of all those who have contracted the pernicious habit, or who contemplate contracting it. Are the artificial pleasures which the use of tobacco affords worth the cost which they exact? Would not natural and more continuous pleasures spontaneously arising from a healthful condition of body and mind, be the preferable portion? Every one must answer for himself.—Henry Reynolds, M. D., in Phrenological Journal for August.

APPLETONS' JOURNAL.—Contents:—Saints and Sinners; French Family Life and Manners; Authors for Hire; Badeau's Military History of General Grant; Arab Humor. II.; A Talk about Odes; The Wit and Humor of Lord Beaconsfield; Jefferson Davis and the Confederacy; Editor's Table; Notes for Readers.

ARAB HUMOR.—The Arabs, especially under the caliphate, were much given to wine-bibbing, in spite of the dictum of the Koran, which says: "They will ask thee about wine, and gambling, say, in them both is sin and profit unto men; but the sin of them is greater than the profit of the same." Subsequently Mohammed condemned these vices in much stronger terms, declaring them to be abominations which true believers must avoid. There are no fewer than a hundred names for wine in the Arabic language, to say nothing of figurative terms such as "the maiden," "the bride," the antidote," "the captivator," "the pole star" "the ripe," "the sweet-savored," "the beloved," "sweetness," "joy" "Babylonian" (*sell*, enchantress,) "the companion of the sleepless," "the consoler," "the friend," "the babbler," "the soporific," "the key," "the heart of the tun," "quicksilver," "the mother of vices," "the unlawful," "sin," and the like. Alluding to the last term, a poet says:

"They told me that my drink was *sin*,
But I could ne'er believe it.
The only sin I see therein
Is when I have to leave it.

[Appletons' for Aug.]

GODEY'S LADY'S BOOK.—Contents: Colored Fashion Plates; Steel Plates; A Midsummer Drama; Shorter Stories, Poems and Sketches; Recipes, puzzles, games, and Fashion and Work Departments; Diagram pattern.

WE think our readers will agree that our August number is the best midsummer issue of the Lady's Book that has been made in many years. Both in its illustrations and letter press we have striven to make it a valuable companion to each member of the home circle.—Note in Lady's Book for Aug.

The Taxidermist's Manual, or the Art of Collecting, Preparing and Preserving Objects of Natural History. By THOMAS BROWN, F. L. S. New York: G. P. Putnam's Sons.

This book was written more particularly for the purpose of imparting information for collecting and preserving objects of Natural History. It embraces other matter pertaining to this particular field of knowledge and will be found to treat of its subject with much exactness without the prosiness apparent in other productions of like nature.

The strictly scientific researcher finds entertainment in the most tedious treatises on 'ologies, but the amateur does not grasp with the same spirit.

THE life story of the late Viscountess Beaconsfield was, it is said, as strange as that of her husband. It appears that she was the daughter of a retired army captain, named Evans, and in her youth was employed at a millinery establishment at Exeter, first living in Mint Lane, and for a longer period in the old house, which still stands next to the Acland Arms, St. Sidwells. Having casually made the acquaintance of Mr. Lewis, a North Devon gentleman, her attractions fascinated him, and she became his wife. He was considerably her senior, and before long died. She was then living in London, having inherited her husband's fortune, and the fascinating widow was wooed and won by Benjamin Disraeli.

ROSA BONHEUR has nearly completed "A Lion and her Progeny," a picture which is destined for the gallery of M. Gambart, at Nice.

For Women.

CONDUCTED BY MISS RAY CLARK.

IS LABOR A CURSE?

IN a late RURAL "O. W. D." frees her mind on the above question and advances some opinions which, if true, would make this world a sorry place and us most unfortunate mortals. Think of the toiling millions at the plow, in the shop, at the counter, in law, medicine and the ministry, aye, even in housekeeping, and consider that all these, according to "O. W. D.'s" doctrine, are victims of a curse which darkens home and makes life itself a burden. Unfortunate we, who by the sweat of our brow must earn our bread; happy they who have no work to do!

But is this the truth, as ascertained by experience? It seems improbable that one can feel the labor he enjoys to be a curse. Experience teaches us that in labor there is happiness; but no curse brings happiness. Experience teaches us (if we have been so unfortunate as to be its pupils in such a case) that idleness brings with it anything but joy. Yet your correspondent would have us believe that it is less a curse than labor. Let her for a single week enjoy the bliss of "doing nothing," but sit with folded hands from morn' till night; then for another week let her be employed with household duties, or perform any work which may have fallen to her lot, and tell us which seems most a curse—which brings the worst affliction.

But "O. W. D." admits that "nothing should be taught sooner than that this is a working world, and that labor, physical or mental, is a necessity." That is true, but strangely inconsistent with her previous statement that "labor is a curse, as it was intended to be." Labor, as most of us know, is a necessity; but we hesitate to pronounce a curse a necessity. Intemperance is a curse, but not a necessity. The world would be quite as well without it. It is not absolutely requisite and indispensable to our happiness.

By whom was labor intended to be a curse? From the quotation we infer that it is God. But in the interpretation of the Scripture we are not to derive a universal principle from a single passage, but are rather to inquire what is the general teaching of the Bible on that particular point. Is the general tenor of these teachings in praise or in condemnation of labor? Is it not that labor is a blessing? We hardly believe it to be intended as a curse.

However, I can only think that "O. W. D." has been some time unfortunately perplexed, and may be, so driven by work, day in and day out, as to make her so heartily disgusted with it as to pronounce it a curse. Indeed she has probably had too much to do, judging from her statement that her experience is that men, as a rule, are lazier than women. As we have no statistics on this point, we shall probably have to admit it, and this we would sooner do than believe labor to be a curse and intended as such. J. W.

SPEAK YOUR MIND.

I HOPE no one will be deterred from speaking her mind for fear she will be thought to give personal history every time she comments on some domestic short-coming. I think we are quite as likely to write from the very opposite.

A work on the "Comforts of Human Life" was written in prison under the most distressing circumstances. The "Miseries of Human Life" on the contrary was written in a drawing-room where the author was surrounded by all the luxuries of life.

So the fun-makers of the world are often the gravest or dullest of men in every day life, and Burton, who wrote "The Anatomy of Melancholy," was a very facetious man in conversation.

So, RURAL friends, just say what you please about domestic life in any of its phases, where you think an improvement may be made, and no one will suspect that there is "a guilty husband" behind the scene, or a cross mother-in-law by the chimney corner. An observing person does much in her intercourse with others that she feels calls loudly for redress. She thinks perhaps if she writes it out it may meet the eye of those to whom it may prove a word in season, and so do good in the world. Oftentimes the faults which are most annoying are the result of thoughtlessness rather than premeditated wickedness. If the owners could be brought to "see themselves as others see us," they might be induced to change their methods. Many, too, may find themselves in the border-land and take warning in season. Fault-finding, for the mere pleasure of it, is never profitable, but eye-openers are often very useful.

Indeed we ought all of us to hold ourselves open to conviction and ready for improvement to any extent. Better still when we feel that a course is the right one for us, we ought to try and follow it.

I, for one, learn much from the hints and suggestions that come to us from time to time in our chatting corner. Example goes a long way. When some good woman tells us how she manages, what a spur it gives to others to undertake a similar enterprise. People can lead each other on into good as well as bad ways. I never read over the thoughts from "Every day House" without finding something to my advantage in them, and so of many other articles. OLIVE.

ADVICE TO THE GIRLS.

WHEN a man chooses the profession of law he does not expect to be a musician and a journalist also; he knows that if he would succeed he must devote himself to the one chosen calling. When a woman marries she realizes that in order to reach lofty hights in wife and motherhood, she must sacrifice lesser aims. She must be willing to lay aside the delightful occupations which have made her girlhood pleasant; she must know that from the hour when her baby is laid in the cradle, dressed with loving forethought, to that darker hour when the mature man lies down in his last sleep, that she will give full meaning to the words, Constant care" That her mind once unfettered will be at liberty no more, but is bound by ties stronger than life or death to those who have come to her from out of the great unknown. Wait a while, girls; think it all over before you promise to become wives—to take these duties and burdens upon you. Sweet and satisfying as are the obligations of wife and mother, they are not to be taken lightly. A husband must not be looked upon as a sort of perpetual beau, and children as extremely uncertain and improbable adjuncts. Unless, like Wilhelm Meister, your apprenticeship ended, you reach out of yourself and ask for larger duties, for a wider field of labor, you had better stay at home with father and mother, dignifying the relation of daughter, filling the old established home with a mild radiance which would seem but a dim light in a new one.—New York Post.

LETTER WRITING.

I WAS quite interested in the account of Madge's ten postal cards, which appeared a few weeks ago, as there seemed to be a moral connected with it. Let us remember our absent friends by correspondence, particularly when as grown children we leave the parental roof to make homes of our own.

I knew an affectionate mother who had for many years been busy providing for the wants of a large family so that letter writing and penmanship almost became one of the lost arts. But when her children began to leave her, some of them to settle in distant States, she took time daily to practice with her pen. It was hard work at first for her muscles had become stiffened with hard labor, but she persevered. She used to copy pieces of poetry from the newspapers as an exercise. She said to me one day: "I must hear from the children and this is the best way for me to do it and I do not mind if it does come awkwardly." She gradually succeeded in writing easily and well. One of her daughters showed me some of the scraps that had been written as an exercise, which she had treasured up as a touching evidence of a mother's love. So let us remember the old folks, who in the silence of the old home look often and sometimes long for letters from absent children who are not unloving but unthinking. B. C. D.

CORRESPONDENT'S CORNER.

IN RURAL July 30, "Moss Dale" tells about covering slate frames with flannel; I do not exactly understand how it is done. Will some one please tell me through the RURAL?

A CONSTANT READER.

Keep the kidneys healthy and unobstructed with Hop Bitters and you need not fear sickness. —*Adv.*

Domestic Economy.

CONDUCTED BY EMILY MAPLE.

THE GARROTE MOUSE TRAP.

ABOUT the year 1820, while our family, in what is now the town of Prospect, Conn., were eating dinner there came a knock at the door of the dining-room and kitchen, all in one, the answer to which was "*Walk.*" This was then and there the customary answer to a knock and it was not uncommon in big families like ours that this welcome was given by half a dozen at the same instant.

In came Mr Farrall, a neighbor whom we all knew, and said to father, "Don't you want to help build a saw mill on a dry stream?"

In the middle of a piece of some thirty acres, used mostly for pasture, was a swale in which grew bullrushes, cat-tail flags and bull frogs and out of which in Spring and wet weather ran a small, muddy stream. Here was where Mr. F. wanted to build a saw-mill. Father declined to invest, but offered to sell the mill site. A bargain was struck, price $30, and the mill went up and there was where the Garrote Mouse Trap was invented and made and scattered all through the Northern States and how much further I know not. It is certain, however, that no dwelling house is completely furnished without it and no hardware store is well stocked that lacks it, and it is to-day just the same as neighbor F. made it; no man ever had sufficient ingenuity to attempt an improvement. Whether the inventor ever got a patent I have not learned, but I am sure that thousands are granted for devices not half as worthy of it.

Years after I left that country I was told of the following incident. An old man, a neighbor of Farrall's, not wise in trap lore, on his return from market at New Haven, fell into company with a young man with a big load of two-inch pine plank. This being quite an uncommon commodity excited the old man's curiosity, and as then and there everybody had a right to know what others were doing, asked what he was going to do with such lumber. "Going to make mouse traps of it," was the reply. For fear he had misunderstood, the question and answer were repeated.

The old man was indignant and gave the young man a severe reprimand for his lack of respect to age. Every one can see that the trap is made from a pine plank. VIELLARD.

Muskegon, Mich.

EXPERIENCE NOTES.

Pickled Grapes.

LATE last Fall I was presented with a large basket of Catawba grapes. Having more than the family wished to eat, I filled several wide mouthed glass bottles with perfect fruit *on the stems*. Bunches that were too large to go in the bottles I cut into small clusters, rejecting any that were soft or shriveled. A teaspoonful of white mustard seed was put into each bottle and hot, not boiling, sweetened, cider vinegar poured in until filled to the brim. A teacupful of white sugar to two quarts of not very strong vinegar was the quantity of sweetening used. The bottles were sealed with several thicknesses of paper and kept in a cool place. These pickles were so appreciated by the members of my own family and friends eating of them, that I shall preserve several pounds of grapes this season in like manner.

Picking Chickens.

After Mary had picked a pair of Spring chickens the other day she apologized for their ragged skin by saying that in Ireland she always wet the chickens first with *cold* water before pouring over hot. This she said toughened the skin and made it less liable to tear; but as I had scalded the chickens she had picked them as best she could, Since then she has tried her method with far better results.

Fly Brushes.

Tired of cutting and fastening paper onto sticks for fly brushes, I looked about for a substitute, when I thought of corn stalks. Happy thought! A half dozen barren stalks three feet long were quickly cut and brought to the house. I put them in the sun for an hour to dry and toughen the leaves before using. Now, no more strips of paper to be picked up or blistered fingers from cutting.

Winter Bouquets.

Quite by chance I discovered that tassels of corn when cut while a greenish-white and before they are entirely out of the sheath, make when dried, a desirable addition to grasses and "everlastings" for Winter bouquets. Suspend the tassels downward until dried. MARY B.

DOMESTIC RECIPES.

Huckleberry Cake.

Two and a half cups of sugar, one cup of butter, five eggs, yelks and whites beaten separately, a cup of milk, a teaspoonful each of nutmeg and cinnamon, two cups of berries, four cups of sifted flour, and two teaspoonfuls of baking-powder sifted with the flour. Cream the butter, add the sugar, then the beaten yelks, the flour and whipped whites alternately, and lastly the berries rolled in flour. Bake in small loaves in a moderate oven.

Baked Tomatoes.

Remove the skins with a sharp knife and cut into thin slices. Butter a pudding-pan, put a layer of fine bread crumbs on the bottom, cover with the sliced tomatoes, season with pepper, salt and bits of butter, and cover with crumbs. So continue until within an inch of the top, having crumbs for the last layer. Cover and bake three-quarters of an hour; then remove cover and brown.

Lima-Bean Soup.

Three quarts of soup-liquor, a quart of Lima beans, an onion, a handful of parsley, pepper and salt. Boil until the beans break. Put through a colander, return to the pot, and serve with bits of fried bread. E. I. V.

Liver and Bacon.

Two pounds of calf's liver, three-quarters of a pound of streaked bacon, one onion, juice of a lemon, pepper, salt and a tablespoonful of flour. Wash the liver, wipe dry and cut into pieces an inch wide and three inches long. Cut the bacon into thin strips and fry; take out and keep hot while the liver is frying. Mince the onion, pepper, salt, and dredge the liver in flour and fry with the onion in the bacon fat. When done take out and arrange the bacon and liver upon a platter. Strain the fat and return to the pan with a cupful of hot water. Thicken with the spoonful of flour, and when it boils up strain in the lemon juice. Pour at once over the liver and serve. KATE B.

Sweet Pickled Peaches.

PARE freestone peaches, place in a jar and pour over them boiling hot sirup made in the proportion of one quart of best cider vinegar to three pints of white sugar. The next day turn off the sirup, heat and pour over the fruit as before. Repeat this each day until the fruit is the same color to the center and the sirup like thin molasses. The last day strew bits of cinnamon and a few cloves over the fruit before pouring over the hot sirup.

Spanish Pickles.

FOUR medium heads of cabbage, twelve good-sized cucumbers, one peck of green tomatoes, three ounces of white mustard seed, ounce of turmeric, six tablespoonfuls of made mustard, three pounds of brown sugar, vinegar to mix well. Let the cucumbers stand in brine three or four days, chop onions, tomatoes and cabbage the day before making and sprinkle with salt. When ready to make take cucumbers out of brine, peel and cut into thin slices. Drain the other vegetables, put all into a kettle with sugar, mustard, turemric, seed, and cider vinegar to cover. Simmer slowly one half hour and then bottle. ECONOMY.

Why be sick and ailing when Hop Bitters will surely cure you.—*Adv.*

A Pleasant Quiet Home in the country, near N. Y. City is in need of a respectable girl to take care of a two-year old child, and to render herself generally useful in the lighter work of the house. Honesty, gentle manners and an appreciation of a pleasant, quiet home indispensable. A companionable person of some education preferred. Address
Box 3318, New York P. O.

News of the Week.

HOME NEWS.

MONDAY, August 22, 1881.

During the week past the bulletins and newspapers have been scanned for the latest news from the President, with quite as much eagerness and anxiety as when he was first shot. On Sunday night the 14th he suffered another relapse, owing to the extreme weakness of his stomach and its consequent inability to retain food. His pulse rose rapidly to 130°, which, with vomiting and nausea, made even his attendants fearful as to the result. He was so low on Monday night that all hopes of his recovery were, by some of his attendants, given up, and the general impression upon the public who waited in suspense for the bulletins, was that his recovery was impossible. However, the slight nourishment he was able to take aided him much in passing this—another one of those terribly critical points in his case. The physicians did not attribute the relapse to the wound, which was doing exceedingly well they thought, but the whole trouble originated with stomachic weakness. On Thursday the 18th, another complication was added to the President's case in the inflammation of the parotid gland, the principal salivary gland situated beside the front and lower portion of the ear. The swelling which was very painful, was caused, it is thought, by putrescent matter in the blood, which, if true, is a very discouraging symptom.

LATER, Monday. 8. A. M.—Up to Saturday morning there was considerable cause for encouragement concerning the President, but on Saturday night he did not rest well and the swollen gland caused considerable annoyance, the accumulations of phlegm producing much discomfort. At noon, on Sunday, vomiting again took place, caused, it was thought, by the effort to eject the phlegm. He vomited twice during the afternoon and as a result was much weakened. Dr. Bliss does not contemplate any serious result from the swollen gland, and is as confident as ever of the President's ultimate recovery. Mrs. Garfield still keeps up great courage and has faith he will survive the terrible ordeal. At midnight of Sunday the annoyance from the gland was reported much less, and there was no further trouble from the stomach.

LATEST—11.30 A. M.—The President has not vomited since yesterday afternoon and this morning has twice asked for and received a small quantity of liquid nourishment. He slept well during the night and this morning his condition is considered a little more favorable.

The Mrs. Garfield fund now amounts to over $155,000 subscribed.

The American Association for the Advancement of Science is in session at Cincinnati, Ohio. Many of the leading scientists of the country are present.

Leo Hartmann, the Russian Nihilist, who lately left the United States for Canada through fear of extradition, has returned and has declared his intentions of becoming a citizen of the United States and on the 18th received a certificate to that effect from the Clerk of the Superior Court in this city.

Secretary Blaine has extended an invitation to the descendants of Baron Steuben in Germany, to attend the centennial anniversary of the surrender of Lord Cornwallis at Yorktown. Baron Steuben was an eminent German soldier who tendered his aid in the war of American Independence and joined Washington at Valley Forge in 1778. The descendants of Lafayette have also been invited.

The Castle Garden officials report the continuance of an urgent demand for help, and say Rhode Island, New Jersey and Connecticut are absolutely begging for weavers in silk, cotton and woolen goods. Skilled hands command high wages. Children will be taken and taught the trade of weaving. Farmers, molders, railroad workman, and for that matter, men and women in all branches of industry, are wanted

The members of the Cornell Univ. crew have returned to London, having abandoned the idea of rowing a race at Frankfort, and will embark for home in the National line steamer Spain, which sails from Liverpool on the 24th inst. for New York. They accuse their stroke, Shrinkel, of having sold the last race they lost against the Vienna crew.

A feature of the Atlanta Cotton Exhibition will be the making of a suit of clothes from raw cotton in twenty-four hours. The cotton will be picked, ginned, spun, dyed, woven and made into a suit of clothes for Senator Brown inside of one day.

John H. Horton, of the Syracuse Journal, John J. Flanagan, of the Utica Herald, and Dewitt G. Ray, of the Utica Observer, saw Greenfield hung. It was Ray's fifteenth, Flanagan's twenty-third, and Horton's twenty-fifth hanging. What a lot of ghouls!

President White of Cornell University, telegraphs from Berlin that he has secured Dr. Edward Augustus Freeman, the distinguished English historian, as a non-resident Professor for Cornell University. Dr. Freeman is conceded to be the ablest and most eminent historical writer now using the English language. His masterpiece is the "History of the Norman Conquest," in five volumes. He is the author of some 20 historical works accepted as authorities.

The sudden change in the temperature has been felt keenly at some of the "shore" resorts. The Providence Press of Tuesday says: "The Summer residents on the Massachusetts and Maine coasts think that Winter has come to-day. Over coats and coal stoves are at a premium."

Three children in one family died on Wednesday last in President, Penn., under peculiar circumstances. Two of them while playing in the yard, were bitten by snakes. Their mother, going to their assistance, left a kettle of boiling water on the floor, and the third child fell into it.

Dr. S. A. Boynton, writing August 12, tells how the president is nursed: In regard to nursing, we have things well arranged now. Mrs. Edson takes him one night until 3 A. M., and General Swaim follows her and remains with him until Mrs. Edson's return some time during the day, and then she and I take turns staying with him until 3 A. M., then Colonel Rockwell follows me and remains until 7 A. M., when I again take him, and so it goes day after day and night after night.

The Commissioner of Pensions is considering the advisability of recommending congress to pass an act pensioning the Union soldiers who were in the rebel prisons any length of time. The commissioner holds that the constitutions of many men were wrecked and more injury done their usefulness in thousands of cases by starvation in prison pens than by service in fields or wounds received in battle. The commissioner is investigating what such an act would cost the government annually.

Professor A. R. Leeds, of the Stevens Institute of Technology, has been analyzing the aqueduct waters of many cities. The order of purity was found to be: 1, Brooklyn; 2, Philadelphia; 3, Baltimore; 4, Washington; 5, New York; 6, Hoboken Jersey City, and Newark; 7, Oswego; 8, Wilmington; 9, Boston.

After legacies to his widow and relatives, Matthew Vassar's will makes the following among other bequests; To Vassar College; for scholarships and educational funds, $50,000; for Vassar College professorship, $80,000; Vassar Brothers' Home for Aged Men, $15,000; Vassar Brothers' Hospital, for grounds and buildings, $75,000; furniture and fixtures for the same, $10,000; the Poughkeepsie Young Men's Christain Association $3000.

Lord Lorne, Governor General of Canada, and suite, are traveling through the great Northwest. They camp among waving fields of grain, and hold frequent "pow-wows" with the Indians. We advise the Governor to keep an eye on his scalp.

Guiteau, the assassin, attacked one of his keepers in jail on the 17th inst., and inflicted some wounds with a sharp piece of steel which he had obtained in some mysterious way. The struggle lasted some five minutes or more. It was not an attempt to escape but simply one of Guiteau's "insane" freaks.

Money Saved.

A gentleman in Louisiana, who sent for Compound Oxygen for his daughter, writes: "She is in better health now than ever before. I consider her completely restored." He then adds: "I purpose keeping constantly on hand your Compound. *I have saved in actual cash not less than fifty or one hundred dollars since I commenced its use last August. No purchase of medicine, no call of physician. I consider its use a matter of economy.* Our Treatise on Compound Oxygen, its nature, action and results, sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.

AGRICULTURAL NEWS.

EX-SENATOR Dorsey, the grand jury at Santa Fe has just found, holds a large portion of his New Mexican estate of 12,000 or 15,000 acres on a title which runs back to a large number of fraudulent entries. The land is highly valuable for its control of the water-supply of a large region, and was taken up, in part at least, under the desert land acts. These limit each person's entry to one square mile, too small an extent to be held with profit by any one person in the case of true desert lands, and larger tracts are taken up in almost every instance by collusive entries, sometimes wholly fraudulent, and nearly always outside of the spirit of the law, even if within its letter. In Dorsey's case, his character leads to the worst conclusion.....The last N. J. Legislature went wild on sugar bounties and voted a bounty of a cent a pound on beet-sugar and $1 a ton on the sorghum cane from which sugar is made. As a fertile acre will yield from 15 to 20 tons of cane, the bounty is likely to cost the State a pretty penny before it can be repealed.....It is conceded that India can grow better tea than China. Since 1860, when the imports of Indian tea to England first reached 1,000,000 pounds, the growth of the trade has been rapid and continuous. At the end of the first decade, in 1870, the quantity imported was 13,000,000 pounds, while last year, at the close of the second decade, the imports were 45,000,000 pounds, of the estimate value of $15,000,000. The area of land now under the plant is over 200,000 acres, representing an investment of British capital to the extent of $75,000,000, and giving employment to a population of over a quarter of a million souls. The crop of tea this year is not likely to be less than 50,000,000 pounds..... From all parts of British Columbia good crops and bountiful harvests are reported. Vancouver's Island has been particularly favored, little or no unseasonable weather having occurred. The largest crop ever raised on the island will be harvested this season.....A commissioners' sale of 100,000 acres of land lying in Harlan and Bell counties, Ky., is advertised to occur at Mt. Pleasant, Harlan county, Ky., September 5th.

A man in Sonoma County, Cal., has sold over $700 worth of carp this year from a pond covering less than an acre of ground, and has 20,000 fish of various sizes remaining.....A correspondent of the San Antonio (Texas) Press, who recently visited the Rev. W. H. H. Murray's Texas farm, says he has on his place half a dozen horses worth $60,000. It has been generally believed that orchard fruits will not thrive in Texas soil, but Mr. Murray has succeeded in raising apples, pears and peaches in abundance..... Ireland will have, if reports are true, an excellent harvest this year. An unusually large area of the Island is under cultivation, and the outlook has not been so favorable for good crops since 1872. The tillage in Leinster comprises a million and a half of acres and the barley there is fine, while the hay crop is the most abundant on record. Hay is also a large crop in Ulster, and much of it will probably find its way across St. George's Channel, to supplement the falling off in the English production.....The Shetland wool trade owes its existence entirely to Sir John Sinclair (father of Catharine the novelist) about the most useful man Scotland produced in the last century. He founded a "Society for the Improvement of British Wool," and in one year collected 800 sheep of all sorts of breeds from different countries, to see which would best answer wool purposes..... Exports of wheat from California for the year ending July 30, 1881, reached a total of 18,367,767 centals, valued at $19,023,615, showing an excess in quantity, when compared with the same period of 1879-80, of 2,842,353 centals, with an increase in value of $3,027,110. The exports of barley amounted to 1,289,498 centals, of the value of $1,534,475, an increase of 655,859 centals, of the value of $748,434. Then there were 662,023 barrels of flour shipped for the period given, an increase of 169,338 barrels, the respective values being $2,911,006 and $299,956. Of the wheat exports 8,661,093 centals were shipped and were delivered in Europe; of flour, 151,179 barrels, and of corn, 17,945 centals. In the course of the twelve months 358 vessels were dispatched from San Francisco with grain cargoes, the foreign making 234 and the American 124, and of the former number 185 carried the British flag.

Mr. Clare Sewell Rand, a high practical agricultural authority in England, told the Chamber of Agriculture of England's leading agricultural county, Norfolk, lately, that even if all local taxation were abolished, they could not live. All taxes had increased during the last thirty years, although the price of grain was lower. Unless rents are reduced a separation must take place between landlord and tenant. This distress, he averred, was the outcome of free trade, which other countries had not adopted. He thought that England would be absorbed by America, or perhaps become the harbor of the world, and Englishmen become, like the Dutch, mere hucksters.....

BREADSTUFFS.

THE AGRICULTURAL DEPARTMENT REPORT of the condition of the Corn, Oats, Rye and Clover crops on July 1, 1881, is as follows. The report on wheat we gave in advance in the RURAL for August 13.

States.	Corn—Acreage*	Corn—Condition	Oats—Condition	Rye—Winter	Rye—Spring	Cl'vr.—Condition
Maine	100	82	92	91	93	93
New Hampshire	100	88	96	96	96	102
Vermont	99	87	98	105	96	99
Massachusetts	100	82	100	105	..	75
R. Island	100	75	110	100	..	100
Connecticut	100	80	107	100	..	102
New York	95	86	109	94	87	98
New Jersey	97	90	115	97	..	92
Pennsylvania	100	86	105	100	100	104
Delaware	100	85	100	100	..	105
Maryland	99	90	102	98	..	93
Virginia	100	91	88	97	93	88
North Carolina	98	95	90	97	100	95
South Carolina	100	84	70	97	94	81
Georgia	97	100	89	97	..	103
Florida	96	88	95	..	..	
Alabama	100	99	100	97	..	97
Mississippi	101	91	97	..	..	99
Louisiana	95	83	80	..	..	92
Texas	105	69	102	99	105	..
Arkansas	105	93	104	99	92	100
Tennessee	101	98	101	96	..	100
West Virginia	99	89	95	94	..	105
Kentucky	98	88	96	94	88	97
Ohio	98	83	93	96	97	101
Michigan	100	87	98	82	92	96
Indiana	101	97	96	92	..	98
Illinois	106	91	100	90	97	101
Wisconsin	103	92	102	92	98	106
Minnesota	110	89	99	96	100	108
Iowa	94	77	93	90	88	102
Missouri	100	94	94	88	99	103
Kansas	113	107	96	96	103	105
Nebraska	106	98	111	107	117	114
California	100	96	91	82	..	96
Oregon	103	91	107	103	100	108
Colorado	100	104	104	105	100	105
Territories	107	97	102	103	81	102

* Compared with last year.

William Dunbar is a swindler. Last Friday he was arrested at Watertown, N. Y., charged with using the United States mails to carry out a scheme of fraud. Lately he has been flooding the country with letters soliciting one-dollar advertisements for Dunbar's National Hotel and Pleasure Resort Directory and Dunbar's National Stock-breeders' Directory and Register, neither of which publications exists.

The program of the National Fair Trade League which will shortly commence an active campaign against free trade in England has been issued. The League demands that there be no renewal of commercial treaties, unless terminable at a year's notice; that imports of raw materials for home industries be free from every quarter; that adequate duties be levied on the manufactures of foreign States refusing to receive British manufactures in fair exchange, and that the same be removed in case any nation agrees to take the British manufactures free of duty; that a very moderate duty be levied on articles of food from foreign countries, the same being admitted free from the colonies and dependences which are prepared to take British manufactures in a reasonably free interchange.

The last lengthy paragraph is aimed directly against this country on account of its protectionist policy; and urges that all efforts should be employed to foster the agricultural and other industries of the British colonies and dependencies by sending them emigrants and buying their products rather than aid in building up rivals by dealing chiefly with the United States.

$40 Rifle for Only $15.

The Evans 26-shot Sporting Rifle, advertised by E. G. Ridout & Co., 10 Barclay St., is a great bargain. We are positively assured that the retail price of these Rifles was $40 each; any one can get the same Rifle now, by sending to the above-named firm only $15. They offer to refund the money sent if the Rifle is not as represented. Read their large advertisement in this issue.

Suffer no More.

If the bowels are torpid, if piles torment, if the back is full of pain, get a package of Kidney-Wort and be cured without more suffering. It can be bought of all druggists in either dry or liquid form.—Republican.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is the dose. Price 25 and 60 cents per box.

Write to Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for pamphlets relative to the curative properties of her Vegetable Compound in all female complaints.

The vigor of youth for the aged and infirm in Hop Bitters.

Premature Loss of the Hair.

May be entirely prevented by the use of BURNETT'S COCOAINE.

HOUSEKEEPERS should insist upon obtaining **Burnett's Flavoring Extracts**, they are the best.

The Markets.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, August 20.

Chicago.—Grains were all active, at times excited, and generally strong and higher, but very unsettled under encouraging Eastern and cable advices. The fluctuations were heavy and frequent. WHEAT—No. 2 Chicago Spring, $1.34, cash and August; $1.24½@$1.24½, September; $1.25½@$1 26, October; $1.26½, November; $1.24@$1.24½ all the year; sales quiet at $1.34 cash and August; @$1.23½@$1.26½, September; $1.24@1.27½, October; $1.24½@$1.29, November; $1.22½@$1.25½, all the year; No. 3 Chicago Spring, $1.10@$1.14; Rejected, 82c. Corn, 63½c., cash and August; 63½c.@63½, September; 65½c., October; 65½c., November; 63½c., all the year; sales 62½@64½c., cash and August; 62½c.@65½c., September; 64c.@67½c., October; 61½@64½c., all the year; Rejected, 60c. OATS 39½c., cash; 39@39½c., August; 39½c., September; 40½c., October; 40½@41c., November; 38½c., all the year; sales at 39c.@40c., August; 38½c.@40½c., September; 39½c.@41½c., October. RYE strong at $1.01½. BARLEY strong at 97c.@97½c., September. PORK strong and higher, but unsettled, at $18.25, cash; $18.10@$18.15, September; $18.35@$18.40, October; $17.80, all the year. Lard strong, but closed weak and lower at $11.55, cash; $11.55@$11.67½, September; $11.67½@11.70, October. Bulk-meats moderately active and higher. Shoulders, $7; Short Rib $9.55; Short Clear, $9.70. SEEDS.—Timothy strong at $2.30@2.65, in store; $2.47½@$2.50, August; $2.40@$2.45, September. Clover strong at $4.50@$5.20. Flax strong at $1.32. BUTTER firm; packing advanced ½c. EGGS quiet at 15@15½c. for strictly fresh. CHEESE steady, with a good demand, but nominally unchanged. HOGS—Market active and stronger; mixed packing $5.85@$6.35; choice heavy, $6.50@$6.90; light, $5.40@$6.75; culls and grassers, $3.75@$6.20. CATTLE—Prime in sharp demand; poor very dull; exports, $6.20@$6.50; good to choice shipping, $5.60@$6.10; common to fair, $4.50@$5 25. native butchers', $2.50@$4 20; stockers and feeders, $3@$3.90; range cattle active and firm; Texans, $3@$4; canning mainly at $3.20@$3.50. SHEEP—Market dull and weak; common to medium, $3.50@$3.75; good to choice, $4.20@$4.60.

Cincinnati.—WHEAT declined 1c. since yesterday; No. 2 Red Winter, $1 38@1 39. CORN unsettled and irregular; buyers and sellers apart; No. 2 Mixed, 68c. OATS dull; No. 2 Mixed, 43c. RYE in good demand and prices a shade higher at $1 13. PORK nominally; unchanged; held at $20. Lard dull and neglected; unchanged. Bulkmeats quiet; Shoulders, $7 35; Clear Rib, $9 80. Bacon in good demand at full prices; Shoulders, 7¾c; Clear Rib, $10 35; Clear Sides, $11. BROOM CORN is not very active, but there is a steady order demand from manufacturers and prices are well sustained. Choice hurl is selling at 7½@8c, medium do. at 6½@7c, carpet brush at 7@7½c, prime green stalk braid at 6@6½, red tipped at 5½@6c, and crooked brush 3½@4½c ₱ lb. HEMP—There is little demand, but with a light supply prices are well sustained. Rough Kentucky sells at $130 per ton from store. Single dressed sells at 8@8½c and double do. at 9@10c ₱ lb, from store.

St. Louis Mo., Aug. 20.—WHEAT very excited and unsettled; opened higher, broke badly, but partially recovered at the close; No. 2 Red Fall, $1 34, cash; $1 36, September; $1 39½, October; $1 42, November; $1 43¾, December; $1 34, all the year; No. 3 do., $1 27, No. 4 do., $1 18½. CORN the same in tone as Wheat, but decline greater at 63½c., cash; 64c., September; 66½c., October; 67½c., November; 67½c., December; 63½c., all the year. OATS 37c., cash; 39½c., September; 41½c., October; 47½c., November; 44c., December; RYE higher at $1 10 bid. PROVISIONS—Job trade only. HOGS quiet; Yorkers and Baltimores, $6 30@$6 55; packing, $6 10@$6 50; choice to fancy heavy, $6 60@$6 85. CATTLE—Supply light; native butchers' Steers, $5 50@$4; Cows and Heifers, $2 50@$3 75; grass Texans, $2 50@$4, latter for choice; native shipping tops wanted at firm prices. SHEEP scarce and in urgent demand; fair to fancy, $3 25@$4 50. BUTTER—Creamery at 23@25c, for ordinary to 26@27c. for choice; Dairy, choice at 20@21c, in lots to 20@23c. for selections, prime 16@18c, low to fair 11c, to 15c. Ladle-packed and country make in pails nominal at 10c. to 16c. HEMP—Common Un-

dressed plenty and dull at $70 to $90, good to choice in light supply—quotable at $95 to $110; Dressed $115 to $165; Shorts $115 to $125; Hackled Tow $50 to $55. EGGS—Fresh scarce, and in light local demand, at 5@9 c. to 11c. candled. GRASS SEEDS—Timothy in demand and firmer. Prime New quotable at $2 50@$2 70; 163 sks fair (not clean) sold at $2 40. Other seeds neglected. CASTOR BEANS—None offered; prime in car lots, would probably bring $1 55. HEMP SEED—Nominal, at $1 10@$1 15—recleaned held higher. FLAXSEED—Easier at $1 20, pure test.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Aug. 20, 1881.

BEANS AND PEAS.—A good home and export demand for medium and marrow has advanced prices. Mediums are so scarce that local buyers have been forced to use some marrows; this fact helps white kidneys. Pea almost out of the market. Red kidneys doing a shade better. New crop white will be wanted early this year, but that is no reason for hurried or imperfect curing. Green peas quiet at $1.40@1.45 for Wis, in bbls.

Marrow beans, prime, $2.45@2.50; other, $2.35@2.42½; medium, choice, $2.55; other, $2.40@2.45; pea, $2.60@2.90; white kidney, $2.30@2.47½; red kidney, prime, $1.65@1.67½; fair to good, $1.40@1.65; black or turtle soup, $1 25@1.35.

Receipts for week, 27,781 bush.

Exports do. 1,085 bbls.

BUTTER.—The Market has had an unusually active term for August and the strong rates for last week have been more than supported. The demand is chiefly for fine State stock, and, in the absence of creamery, selected half tubs have obtained a good deal of trade. Exporters have taken quite a number of lots but not at the later range of rates. At the close the local call is not quite so sharp: when butter nears 30c. wholesale, there is always more or less curtailment in use. Still receipts are light—a favorable feature for sellers—and no great break will occur before supplies enlarge. Western is selling well: fine fresh dairy and ladle-packed June is steadily sought for by the medium class of buyers. Common styles of Western are neglected. Fall receipts from the West will, it is thought, show considerable falling off compared with former years, and speculative holders of all stock are encouraged by the possibility.

Creamery, choice Western, 26@27c; do. State and Pa. 27½@28c; prime, 24@25c; poor to fair, 20@23c.; sweet cream 25@26c.; State pails and half tubs, choice 25@25½c; good to prime 23@24c: fair to good 22@23c.; Welsh tubs, fair to choice, 22@26c.; State dairy, poor to fair, 20@22c; firkins, 22½@24½c.; Western imitation creamery 17@23c.; dairy, fresh, 20@22c.; other 14@18c.; factory, Iowa, June, 18@19c.; other 14@17c.: very poor 11½@13c.

Receipts for the week 31,329 pkgs.

Exports do. 6,686 do.

Refrigerator room 90s. per ton to England.

CHEESE.—There has been a fairly sharp demand and prices have responded with a daily advance to their present point. Nothing of account is left over, but liberal supplies are due next week, and as many prominent shippers are away prices close with tameness.

State fact'y, fine, colored, 11¼@11½c. do. white, 11@11½c; good to prime, 10¼@11c; fair to good 9¾@10½c; poor to fair 9@9½c; Ohio, cheddar, fine 10@10½c; other 9¼@9¾c.; flat, fine 10c: other 7½@9½c.; partly skimmed, 4@7c.; full skimmed 2½@3c.

Receipts for week, 109,368 boxes.

Exports for week, 86,954 boxes.

Liverpool cable, 58s.

Steam to Liverpool, 30@35s.

COTTON.—The market has ruled weak and uninteresting and there are no points which have any special bearing upon the market for the moment. There is an increase of cotton in sight and that fact gives assurance to dealers in spot stock. Liverpool seems to be following the New York market.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas
Ordinary	8 11-16	8 15-16	8 15 16
Strict ordinary	9 5-16	9 9-16	9 9-16
Good ordinary	10¼	10¼	10¼
Strict good do.	10 13-16	11 1-16	11 1-16
Low middling	11 9-16	11 13-16	11 13-16
Strict low middling	12	12¼	12¼
Middling	12¼	12½	12½
Good middling	12¾	13	13
Strict good middling	13	13¼	13¼
Middling Fair	13¾	14	14
Fair	14½	14¾	14¾

STAINED.

Good ordinary	8 5-16	Low middling	10 3-16
Strict good ordinary	9 7-16	Middling	11½

August 12.15c.; September, 11.33@11.33c.; October, 10.92@10.93c.; November, 10.87@10.88c.; December, 10.9@10.91c.; January, 11.03@11.04c.; February 11.16@11.18c.; March, 11.30@11.32c.; April, 11.40@11.42c.; May 11.52@11.54c.

DRIED FRUITS.—There is no trade to note in apples and holders are unwilling to depart from their late views to bring out trade. Peaches are scarce even with the additions of new that come forward. Small fruits are quoted on the rates that might be realized for moderate supplies of new crop.

Apples, evaporated rings, choice 12c.; prime 11@11½c.; fair to good 10½@11c; Southern in bbls, 4½@5½c.; do. in bags, 4½@5½c; State fine cut 6½@6½c.; quarters choice, 6@6½c.; small lots 5½@6c: Ohio and Mich. 6@6½c.; Western, fair to good, 5½@5½c; evaporated peaches peeled 33@35c.; N. C. do. 19@25c., Ga. do. 17@23c.; State 17@19c.; old poor to prime 12@18c.; Tenn. halves 7½@7½c.; unpeeled ℔ qt. 7@7½c. Plums State, black, 15@17c. Blackberries, 11@11½c. Cherries, 21@21½c. Raspberries, prime 27@28c. Whortleberries, prime 12½c.

Receipts for the week, all kinds, 850 pkgs.

Exports dried apples, 123 pkgs.

EGGS—Receipts for week, 7,355 bbls.; do. last week 6,484 do. Business begins to run satisfactorily; that is, the bulky portion of the supply of Western have regained their customary demand and prices are quoted with strength for all fine marks. With a scarcity of State and fancy near points, Canadian are firm for best class of trade.

Near points 21c., State and Pa. 20@20½c; Canadian 19@19½c.; Western, 19c.; poor lots 17@18c.

FLOUR.—During the later high ruling phases of wheat flour went up to present rates, and all useful brands are quoted firm at the new rates. A good trade has kept up, especially for the trade brands, as buyers feared that stock might go out of reasonable reach in the grain excitement. Exporters have bought very liberally, the shipments being quite equal to the receipts.

No. 2, ℔ bbl., $3.75@4.50; State and Western superfine, $4.75@5.40; city mills extra, $6.85@7.25; Spring wheat do, $5.50@5.85; Spring XX and XXX, $6.00@6.25; patents, $7.00@8 50; Ohio round hoop shipping, $6.00@6.40; trade brands, $6.50@7.25; St. Louis extra, $6.25@6.60; do. double extra, $6.75@7.15; do. family, $7@7.50; South'n ext. shipping, $6 40@6.85; do. XX and family, $7@7.50. Rye, superfine, $5.50@. Corn-meal, Brandywine, $3.85@4; Western, $3.05@3.75.

Receipts for week, flour 96,050 bbls.; corn-meal do. 6,500.

Exports for week, flour, 95,000 bbls.; corn-meal do. 5,925.

FRESH FRUITS.—Apples scarce and firmer, Pears plenty and prices low, especially for green Bartletts. Peaches have wide range but no trade in making outside rates for fine pickings. Prices for choice as high now as during the week. Plums scarce, Grapes plenty but slow, Melons lower: cool weather always checks melon trade.

Apples, Nyack Pippin ℔ bbl. $2@2 25; Orange do. double-head $1.50@1.75; single head $1.25@1.50; Codling $1.50@1.75; Red Astrachan $2 50@3; Windfalls 75c@$1. Pears, Bartlett J'y single heads $2.50@3.50; up-river ℔ bbl. $3@4; Clapp's Favorite $3@3.50; Flemish Beauty, up-river, $2.50@3.50; Jargonelle $1.50@2; Tyson $2.50@3.50; cooking $1.50@2; Grapes, Martha, Va. case of 18 2-℔. bxs, $4@4.50; Del. do, $4.50@5.00; Ives do. $2,50@3; Concord, do. $3@3.50; do. N. C. ℔ ℔ 5@6c; Ives's seedling, N. C. ℔ ℔. 4@5c. Huckleberries ℔ box 87c@$1.25. Peaches up-river prime ℔ bskt $1.50@2; poor to fair 40c.@1.25; Jersey $1.25@2 25; culls 40@75c; Md. Crawford $2.50@3.50; Mixon $2@2.50. Plums, Damson southern ℔ qt. 6@7c; Green Gage ℔ bbl. $6.50@7; Egg $6,50@7; Lombard $5@5.50. Watermelons, Norfolk prime ℔ 100 $12@15; Md. selected $15@20, culls $5@10; Jersey Negro-head $12@16. Nutmeg melons, Jenny Lind Jersey ℔ bbl. $.50@2; Keyports $2@2.50; Hackensack $3.50@4; Peanuts Va. hand-picked ℔ ℔. 5½@6½c.: do. fancy 5½@5¾c.: do. extra prime, 5½@5¾c.; do. good to prime, 4½@5½c.; shelled, 3¾@4½c. Pecan nuts, ℔ ℔ 7@9c.

A sample of Summer oranges has been shown in New York. Some Indian River growers intend to introduce them into this city if possible and they would be a desirable addition to the fruit list. Foreign oranges that are sweet are apt to be thick-skinned and of very bitter juice.

GRAIN.—The week has been marked as one of intense speculative and spot activity. On 'change there has not been a single quiet period, and dealers have utilized all of session time allowed from morning till night, and many operations transpired after the close of 'change. The sales for the week of wheat foot up 18,300,000 bush., or more than 1,600,000 compared with last week; corn sold something larger than last week, adding up 6,574,000 bush. Oats have been heavily dealt in: sales for week 2,044,000 bush.; do. last week 1,185,000 bush. Wheat shows an important advance. Corn is much higher, and some parcels of S. & W. white oats have made a big jump compared with seven days ago. Rye has sold well into its stock.

Wheat, Spring $1.20@1.35; do, No. 2 $1.33@1.34; do. No. 3, $1.25@1.37; red Winter No. 2, $1,44@1.45½; red Winter $1.35@1.43; white Western and State $1.35@1,44. Rye, 90c. Oats, white No. 1, 52c.; white No. 50c.; white No. 3, 47c; mixed No. 1,47½c; do, No. 2 46½@47c; do. No. 3 44@46c; Corn, Western mixed 65@75c.; do No. 2, 74@75c.; do. yellow,73@75c.; do. white 73@76c; Southern white 75@78c.; do. yellow 73@76c.

Receipts for week, wheat, bush., 801,612,; corn, do 763,190, oats do. 1,025,438; rye, do. 4,196; malt, do. 45,600; rice pkgs. 729.

Exports for week, wheat, bush 1,645,581; corn, do. 1,267,620; oats, do. 43,159, rice, pkgs. 879.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports and on rail, on lakes, on canals and on Mississippi River:

	1881. Aug. 13. bush.	1880. Aug. 15. bush.	1879. Aug. 17. bush.
Wheat	17 405,069	11,179,091	16,026,837
Corn	16,045,101	17,363,832	12,140,032
Oats	7,259,348	1,330,783	1,605,031
Barley	104,784	169,757	366,311
Rye	298,748	432,718	493,906
Total	41,113 630	33,506,181	30,572,117

HAY AND STRAW.—Hay has weakened under heavy receipts and stock has begun to accumulate. Old straw scarce and firm; new dull.

Prime retailing timothy hay, 85c. ℔ 100 ℔s.: medium do, 60@70c, do.: shipping grades 50c. do.: clover mixed 50@55c.; pure 40@45c. Straw, long rye old 85@90c: do. new 65@70c.: short rye old 65@70c.: oat and wheat 40@45c.

Exports of hay for week 2,980 bales, some of which are for Great Britain.

HOPS.—Brewers, the chief buyers at the moment, are taking very light quantities and prices are about nominal: not much animation expected until new are plentier. A few fancy new hops have brought 25@30c.

Crop of '80, choice, 20@22c; good to prime, 16@18c; fair to good, 14@16c; poor to fair, 11@14c; Eastern, 11@17c.; '79's, fair to prime, 12@15c.; '78 5@8c.

Receipts for week, 371 bales.

Exports for week, 122 bales.

RICE.—The demand is active for domestic, with an advance of fully ¼c on high grades. We quote—

Carolina and Louisiana, common to fair 4¾@5½c; good to prime 5¾@6½c.; choice 6¾@7½c.

SALT—Quotations are—

Ashton's $2.50; Higgins's $2.40; Holmes's extra sifted $2.40; Deakins's $1.25; Evans's $1.20; Washington's $1,26; Marshall's $1.25; Verden's $1.20; Worthington's $1.20; Mediterranean 25c.

SEED—Clover seed is quiet; quoted at 7¼@8c. Linseed is dull; quoted at $1.85. Timothy has a small demand; quoted at $2.80@2.90. Flax-seed is firm and in demand; quoted at $1.28½@1.30 to arrive.

SUGAR.—Refined is quoted

Cut loaf 10¾c.; crushed 10¾c.; powdered 10¼c.; granulated 9¾c.; mould A 9¾@9¾c.; confectioners' A 9¾@9¾c.; standard A 9¾c.; off A 8¾@9½c; white extra C 8¾@8¾c; yellow extra "C" 7¾@8¼c.; C 7¾@7¾c; yellows 6¾@7½c.

TOBACCO.—Western crop reports are discouraging, and the market for all leaf and seed is tending higher. Some holders have withdrawn their stock from present sale. The demand for consumption is brisk. Hhds are still selling to fill further continental orders.

POULTRY AND GAME.—It has been another favorable week for dressed stock of all kinds, but at the close prices are not running so closely to the extreme. Turkeys scarce and wanted. Spring ducks are a good feature when game is scarce as it is apt to be at this season.

Turkeys, Phila. prime ℔ ℔ 20@21c.: State & Western d. p. 19@20c.; scalded 18@19c. Chickens, Phila. prime 23c; Bucks Co, 22@23; N. J. 20@22: State & W't'n sp'g 18@21c. Fowls, Phila. d. p. 16@17c. Bucks Co. 16@17c: N. J. d. p. 16@16½c; do. scalded 15@16c.; State and Western d.-p. prime 15@16c.; do. scalded 14@15; do. coarse —@—c. Ducks—Spring, Phila. ℔ ℔. 18@20c; J'y & Bucks Co. 18@20c. State 13@14c; old, 12@14c. Squabs, white ℔ doz. $2@2.12; do. dark, $1,50@1.75.

Receipts of cooped stock have run light and the week shows good prices. Fowls and turkeys have done the best, but chickens have ruled very steady.

Chickens, J'y ℔ ℔ 17@18c. State & Pa. 16@17c; Western 15@16c; Southern 15c. Fowls, Jersey, State and Pa. 14@15c; western 13½@14c; southern 13c.; roosters, 6@8c.; turkeys, Jersey & Pa. 16c.; other 15@16c; ducks, Jersey, N. Y. and Pa. ℔ pair 60@87c. Western 50@65c; Southern 45@50c; geese, J'y $1.50@1.75; N. Y. & Pa. $1.25@1.37; Western $1,12@1,25; Southern $1@1,25. pigeons, 25@35c.

Woodcock are plentier but the demand uses them all at good prices.

State quoted $1.37@1,50; Western $1,25@1,37; Eng. snipe & plover $1.75@2 ℔ doz.; no more pigeons expected. Frogs legs 30@40c.

PROVISIONS.—The hog products continue to be controlled by a strong speculative element. A leading prop to the high views of operators is the accepted report of a light crop of hogs, a reduced corn crop also having its influence. Exports are of no account compared with former years.

Pork extra prime, ℔ bbl. $14@14.50; Western mess, new, $18@18 25. Lard, steam West'n ℔ 100 ℔s, $11.70@11.75; prime city, $11 55. Hams, smoked city ℔ ℔ 12½@13c; pickled Western and city 11½@12c; Shoulders: smoked city, 8¼@8¾; pickled, 7½@7¾; rib bellies, pickled, 9¾@10¼. Bacon, long clear, west. 9¾@9¾c. Beef, western mess, ℔ bbl., $11@13.50; India mess tcs. $26@27.50; beef hams bbls, $21@23.

Receipts for week—Beef, bbls and tcs. 930; pork, bbls. 1,550; Cut meats, pkgs. 22,300; lard, do 9,800.

Exports—Beef, bbls and tcs. 2,575; pork, 4,050; cut meats ℔s. 8,601,612; lard, do, 2,633,772.

VEGETABLES.—There is a strong market for prime potatoes: Albany and Troy are sending some, but they do not sell at full prices as L. I. absorbs the demand on account of fine quality: the range is $1.62@2 ℔ bbl. bulk. Garden stuff is active, as there is no surplus of fine produce; prices generally firm—an unusual thing at this season.

Green corn, prime 75c@$1 25; other 40@50c; wax beans L. I., ℔ bag $1.50@2; string beans $1.50@2; Lima beans; potato, $1.25@1,50; flat 75c@$1; cucumbers, ℔ 100 75c@$1.25; do pickles, $2; egg plant ℔ doz. 50@75c; do. Phila. ℔ bbl. $1.50@1.75: Tomatoes L. I. ℔ bush. 20@35c; squash marrow ℔ bbl. $1.25; do. white 75c@$1; do. yellow, $1.25@1,50; cabbages, ℔ 100, $3@5. beets 100 bchs $1.50@2; onions, white ℔ bbl. $3@3 50; yellow $2.50@3; red $2; Chester $1@1,50; carrots ℔ 100 bchs $1@1,50; turnips Russia ℔ bbl, 75@$1; okra ℔ 100 15c.

LIVE STOCK MARKETS.

NEW YORK, Saturday Aug. 20, 1881.

BEEVES.—Receipts for the week 13,769 head; do last week 12,585 do. The offerings have been largely made up of common and medium steers and, prices in the bulk are easier than on Wednesday last. A few car-loads were left over, but it was thought at the close they would be placed before fresh receipts arrived heavily. Texans sold at 7@8¾c, to dress 55 ℔, less 50c. per head; Colorados 7½@8¾c. to dress 55 ℔; poor to prime ranged 8¾c, to dress 55 ℔s. to 12c, to dress 57 ℔s.

MILCH COWS.—Supplies small; prices range $35@60 per head; sales mostly at $35@45.

VEAL CALVES.—All calves have run in light supply this week and prices are firm for every grade, even grassers. Up-river calves have found a place at 12@13.

Live N. J. prime to choice, 8¼@8½c; do, State, 8@8½c.; poor to good 6@7½c.; Mt. Hollys, 7@8c.; buttermilk, 5c.; grassers 4@5c.

SHEEP AND LAMBS.—Receipts for the week 32,066 head; do. last week 32,761 do. Trade has run light but fair, the demand running on best stock. Sheep ranged 4½@5½c. common to prime. Southern lambs 5¾@5½c; N. J. 6¾c. State 6¾@7½c.

SWINE.—Receipts for the week 15,512 head; do. last week 18 838 do. Live quoted $6 75@7 ℔ 100 ℔; steady. N. J. pork, medium to light, 9@9½c; city dressed, heavy to light, 8½@9c.

DIED:

KANE—At Erie, Pa., Aug. 13th, of cholera infantum, EMMA ELSIE, only child of WM. H. and FANNIE REED KANE, aged 15 months.

TERMS FOR 1881.

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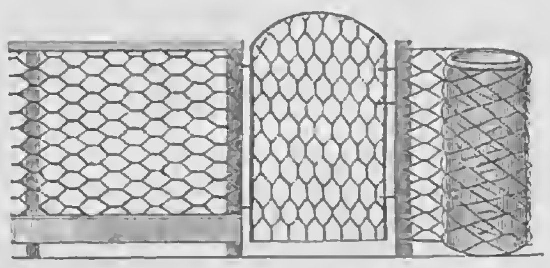

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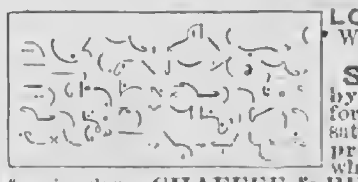

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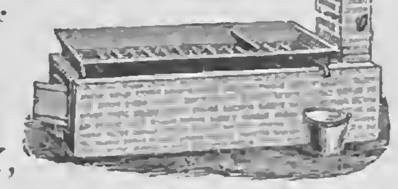

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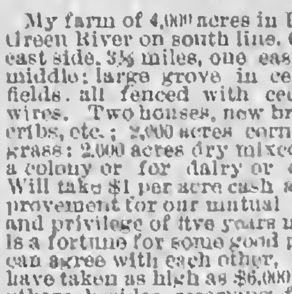

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DAVID LAWTON, Racine, Wis.

Reading for the Young.

LITTLE CHILDREN.

ROUND the cheerful fireside glowing,
When the wintry winds are blowing,
And the cold and dripping rain
Dashes on the window-pane,
Come the little children creeping
Where we still the logs are heaping,
And enrich the ruddy blaze
With the sunshine of their gaze.

Sweet the echoes now are ringing,
From these little children bringing
All their bright and gladsome mirth
To refresh us worn of earth;
All their pretty ways beguiling
Us from sorrow into smiling,
As awhile we bury strife
In the brightness of their life.

Gaily climbing on our knee,
Laughing, talking merrily,
Purest innocence and grace
Beaming from each roguish face;
Capture they with sunny wile
Many a soul-illumined smile,
As they play their tiny parts,
Climbing right into our hearts!

Where shall man discover treasures,
Where shall he enjoy such pleasures,
As those resting on his arm,
In their pure delightful charm?
Or those playing on his knee,
In their sweet simplicity?
They below for comfort given,
Emblems also are of heaven!

FARMING FOR BOYS AND GIRLS—NO. 32.

HENRY STEWART.

Exhaustion of the Soil.

THE business of farming may very easily be so carried on as to soon reduce the soil and its owner to poverty. If a farmer were to keep on year after year in growing wheat, corn, potatoes and hay, and selling these, and putting the money in his pocket he would soon be able to tell precisely the value of the fertility of the soil, for by and by he would not be able to produce anything because the soil would be exhausted. This is a very unwise course to pursue and yet many farmers have done this and are now working hard to bring back to their farms some of the fertility which they once possessed, but which they have taken out of them and sold.

Let us suppose a case. A man owns some cows and feeds them well so that they yield rich milk which he sells for money. With a part of this money he buys food for the cows; with another part he supports and clothes himself and the rest he puts into the bank for use when he is old and unable to work. Another man has the same number of cows, but he kills one of them every month and eats some of the meat and sells the rest of it and spends the money for clothes and other necessaries. Now which of these two men is the wise man and which is the foolish one? And if we put a farm in place of the cows, we may find thousands of farmers who have done just as we have supposed the foolish man had done with his cows. It is true that he has not precisely killed and eaten his land, but he has done what comes to the same thing he has made it useless and unproductive and has consumed the proceeds of his waste.

But the soil cannot be wholly exhausted. Before that can happen the whole of it must be carried away, which is clearly impossible. We may grow crops upon a field for a hundred, nay, a thousand years, and we shall be unable to perceive that any part of the soil has been taken away and yet every year with each crop a part of it has been dissolved and removed. So that while the soil itself remains it will still contain some of the potash, lime, phosphoric acid, soda, magnesia, etc., of which it is made up, but these will not be in such a state that they can be dissolved in water and taken up by the roots of the growing crops except in very small quantities, and these small quantities will be unable to produce such a crop as will pay the farmer for his trouble and labor. This is what we mean by exhaustion of the soil.

Some soils are really inexhaustible. Some rich clay soils may continue to grow crops for hundreds of years and some do so continue; but some poor sandy or gravelly soils are worn out so much in 20 years that they cannot be made to grow wheat or corn with profit, unless they are manured liberally. But the poorest soils will recover from their exhaustion in course of time, because there is a gradual wearing down of the small particles by the rain, and the effects of the air upon them, and the large pieces are broken up by frost and these smaller fragments in their turn become smaller every year and gradually wear down into so fine a condition that they become soluble in water. So that we see the soil cannot really become exhausted completely, for it will be able to produce something, however little that may be. This little is then the natural fertility of the soil which is produced year by year by the action of heat, moisture and air and would always remain the same if the seasons were all alike. But as there are some seasons more or less favorable than others, so this natural fertility of the soil is greater in some years and less in others. The business of the farmer is to treat this soil so that its natural fertility, however much it may have been exhausted, may be restored and increased; and this he does by cultivation.

There is an old story to the effect that an aged man about to die called his sons to him and told them that a quantity of gold was buried somewhere upon the farm, but he would not say where it was hidden; it was their business to dig for it. After the old man had died the sons dug up every foot of the land in search for the hidden gold but found none. They then sowed the land to crops, which after the thorough digging yielded very bountifully, and the young men then discovered that this was the gold which their father declared lay hidden in the soil. This old story has a useful moral. Whether it actually happened or not, we know the lesson it gives is true and that the cultivation of the soil recovers it from its exhaustion, and that by good farming we help this recovery as fast as we exhaust it by taking off crops. For, in fact, all farming is an alternate process of exhaustion and recovery. The course of safety, however, lies in helping the soil to recover before it is too much exhausted and while recovery is easy.

DAIRYING FIFTY YEARS AGO.

BY MRS. E. J. R.

THE milk teams were rolling swiftly over the country roads; some with one can, and others with the milk from many dairies. The creamery and cheese factory, which was the grand objective point of all these people, was just beyond. There the milk of nearly six hundred cows was manufactured into cheese and butter by three people, and the productions were so perfect that all the country round felt a just pride in the "White Clover" creamery.

"Not much like the way we used to work fifty years ago," said Aunt Esther, looking from the window upon the children and old men, who, as it was a busy season, drove the milk teams, thus leaving the strong hands in the harvest fields.

"Did you make butter fifty years ago, Aunt Esther? Please tell us all about it," said one and another of the group gathered around her.

Aunt Esther was a general favorite, a matron of nearly four score years, whose visits to her children and grandchildren were always most welcome, and now the prospect of a story from the trim old lady, who always did all she did so neatly and well, was welcome.

"I suppose you think Aunt Esther couldn't make gilt-edged butter, eh?" she said, smoothing her cap strings, "but I tell you, children, we had nice butter in those days if the cream was raised in wooden tubs and churned by hand."

"Tell us all about it," said a chorus of voices.

"Well, we had a dairy of about fifty cows, and it was some work to take care of it. We had small tubs to set the milk in, and these must be scoured every day, for everything must be kept sweet and clean for butter making. We had a cool cellar to raise the cream in, and churned it as soon as it was sour enough, but the greatest trouble I had was in worrysome neighbors. I washed my butter you see, which very few people did in those days, though every one does now.

"You'll be sure to spoil the butter, you'll wash all the sweetness out," said one and another who came in to give advice.

I paid no attention to them but went quietly on washing my butter. A man came up from Orange County and bought the whole of it in the late Fall at a tip-top price."

"Did you pack your butter in pails as people do now, Aunt Esther?" said one.

"No, we packed it in half barrels, and kept brine over it, and it kept nice and sweet, but deary me, children, there was a sight of hard work and worry about dairying in those days, and we couldn't get our money but once in the year. Often we had to wait till Spring for the whole of it."

"Dear me," said Mrs. Buskett. "How very tiresome it must have been, and then you must have felt anxious all the time. Now, three persons do the work of thirty or forty, and we know the goods will sell, so I don't believe the good old times were any better than these."

"No, children; a good thing is a good thing, let it be made when it will, and I ain't such an old fogy that I can't see that the world is growing wiser as it is growing older. Yet after all, I will stick to it that I made just as sweet, nice butter fifty years ago as is now made in your Creamery."

LETTERS FROM THE COUSINS.

UNCLE MARK.—I wrote a letter a long time ago to Uncle True, which he printed and now I have something to tell you, Uncle Mark, so will write again. Accompanying this letter is a box containing five wheat heads. I asked my uncle if he was intending to send some, but he said he thought he would not. I send these not thinking to gain a prize, but that the RURAL may see some of the Wick's Wheat of which we are very proud, as my uncle is the originator of it. This is not a fair sample really for wheat in this section is a very poor crop this season, and the heads are a trifle green, as I gathered them just before writing. The millers all agree in saying that it makes a better quality of flour than any other variety and will pay more for it for that purpose. The yield may not be greater but for flour it is unsurpassed and is in great demand about here for home use.

I said I had something to tell you. We received our RURAL seeds and the potato. The pinks I sowed in my cold-frame and it seemed to me that every seed grew. When it came time for transplanting I had a large bed of pinks. A lady visiting us one day went to see our flowers and wondered why we were raising celery with them. I, being rather indignant at that, informed her that what she called celery was a very choice variety of pinks, which we had received from the RURAL NEW-YORKER. She told me to taste, which I did. Surely it tasted like celery, but I would not be convinced until I called on a friend who had received seeds also, and found her pinks doing nicely. One glance at them satisfied me that mine were really celery. It would have done you good to hear that lady laugh. But now I have set my celery in trenches and perhaps next Winter, when we are enjoying it, we shall not very much regret the mistake "some one" made. You know the old saying, "there is no great loss without some small gain," though in this case I do not think the gain small, for we have a quantity of celery and also the pinks. Now, Uncle Mark, do not infer from this that I never saw any pinks, but I had so much confidence in the RURAL that I could scarcely believe my own eyes. The other seeds are doing nicely. Yours, ALTIE W. J.

King's Ferry, N. Y.

[Quite a *sell*ery affair, was it not? However, I think the mystery can be explained. Perhaps "Altie W. J." will remember that in connection with other seeds we sent a package of celery seed to each of the cousins, and it is probable that one found its way to her home by this means or it may have been an "extra" in the regular distribution.—U. M.]

DEAR UNCLE MARK.—As I have not acknowledged the receipt of the seeds you so kindly sent me I will do so now with many thanks. The seeds you sent mother all grew and look promising but I am afraid the chintz bugs will get the best of the Washington oats and the Branching Sorgum as soon as the wheat and rye are cut they travel to the cane, corn and to whatever they can find. They have been here eight years. I think we will have to starve them out by raising hay, corn and stock. I would like to tell the cousins what use I made of my first dollar. Well I bought a heifer calf which is now seven years old. She has had four calves, one of which died. We realized 54 dollars besides having a $10 steer left. The dollar that I paid for my calf was gathered in a little savings bank in small bits from a penny to a dime. I am afraid I will worry Uncle Mark's patience so I will close by asking for an agent's outfit I think we can get several subscribers for the RURAL NEW YORKER. Most every one thinks the seeds worth the price of the paper. BERTIE SHINE.

Wankon, Iowa.

DEAR UNCLE MARK.—As it has been a long time since I wrote to you, I thought I would write today. Sister and I are now going to school, and have a long and dusty road to travel. We hav'nt had any rain since the 30th of June. We have to learn pieces, but I don't like to deliver them; but mamma says if I don't learn at school I will never make a public speaker. I told her I believed the garden business was the best any way, and I would only have to learn to talk to my customers. We have the most of our vegetables on bottom land, consequently we are not suffering as much as our neighbors. The mercury stood one day at 110 deg in the shade; it is now cooler, with some appearances of rain. I wish you could see our Caladium bed it is said to be the finest in this country. I wish I could send you some of my watermelons. WILLIE DECKNER.

Atlanta, Ga.

DEAR UNCLE MARK:—I thought I would write and tell you about mamma's pinks. She sowed part of them and they grew very nicely. She has about thirty different kinds in blossom. We have a good many flowers. I guess I sent my name in too late or did not direct my letter right last Spring, as I did not receive any seeds in the Horticultural distribution to the Cousins. We like the RURAL very much. Your nephew,

Lime Hill, Pa. CLARK BRAMHALL.

[The seeds were sent all right to your present address. Am sorry you failed to receive them. U. M.]

DEAR UNCLE MARK:—I am ten years old. My grandpa takes the RURAL and I like to read the cousins letters very much. The seeds that my grandpa received did well, all but the oats, the rust spoiled them. He has 63 pinks and they are all in blossom. He cut the White Elephant potatoes into thirteen pieces, and I will tell you in my next letter how they yield. I go to school and have to walk a mile but I have a little time nights and mornings to attend to flowers in my garden.

Your niece, PHINEY STRAHL.

Polo, Ill.

DEAR UNCLE MARK; I have never written to you before, but I have been reading the Cousins' letters and thought I would like to join your club. My father's farm is two miles from the little village of Hales Eddy, and on it we keep eight cows, one of which I milk every day. The Elephant potato is growing nicely; my sister Helen keeps the bugs off of it, and she gets two cents a day for doing it. K. E. C.

Hales Eddy, N. Y.

AN INDIAN BOY'S LETTER.

BELOW is given a letter written by a Sioux lad, of fifteen years, in which he compares country and city life. Perhaps the Cousins will be interested in his queer manner of expression. It is written to his grandfather.

"Sometimes when one day very warm I am very tired I do not like to a farmer. When I am tired that is not right. Sometime when I want working I take the basket and the ladder and I climb up the trees I pick up the apples. When the basket is full I am walking I take home and again take the other basket again I go round walk and which one tree is good apples again I climb up the tree and now I came back to the new York O very beautiful big city great many people lives in the new York I see great many kind, big sea and I see great many steamboats they in the new York and again this Summer two boys going to the Philadelphia. * * * I think they like to the farmering very good that is best way the work and learning in the School room too. and you try never do not like the tired you try very hard in the farmering never tired when you work do not tired because the farmer is very best way because the farmer is earning money."

(Rural New-Yorker.)

The best people will vote for the best man every time. And we judge by the number of the St. Jacobs Oil constituency, that it is the best remedy for the rheumatism known. Prof. Tice, of St. Louis, among others, says so.—*Adv.*

Sabbath Reading.

I WONDER WHY.

WHY doth my life from year to year
A useless, aimless thing appear?
Why do my daily actions prove
The less of faith, the lack of love?
And still for graces of the mind
The more I seek the less I find,
And often to myself I sigh—
I wonder why, I wonder why.

The friends I love, the true and brave,
Are called to share an early grave,
And those the dearest to my heart
Who live, will soon alas! depart.
Why am I spared amid the strife?
What is the object of my life?
Why live I on while others die?
I cannot tell. I wonder why.

And yet there must some reason be
Why life was granted unto me,
When I my duty can fulfill
With ready hand and yielding will;
When I the daily cross can bear,
And learn the easy yoke to wear;
When I can thus myself deny
I shall not need to wonder why.

When I can feel from sin set free,
When God's own spirit dwells in me,
When I can feel a Saviour's grace
Hath found within my heart a place,
When love doth in perfection bloom,
And hope can rise beyond the tomb,
And faith can lift unwavering eye—
I shall not need to wonder why.

THE BIBLE THE BASIS.

THE Bible is the basis of the truest and best civilization. One of the reasons why is because it includes all ranks and conditions of society, from the highest down to the lowest of the low. No wonder the Lord Jesus should send back to John the Baptist in prison the following message as the climax of his answer to all his queries: "And the poor are having the gospel preached unto them." Every non-Christian civilization has simply gilded the upper crust, but carried heathenism and barbarism in its heart. The old philosopher of Greece and Rome fawned around the rich and powerful, but despised the poor; and would have felt insulted at any suggestions to use their wisdom and talents to teach and instruct them. But Christ came to "seek and to save that which was lost." It is impossible to present to the world the spectacle of a redeemed, restored, and refined humanity without due attention to its less favored and less hopeful class—the "pieces that are lost." This is just what Christianity is doing. It lays the right foundation for a stately and permanent edifice. It aims at cultivating the whole field without leaving any dangerous jungle in which beasts of prey may lodge, and from which they may sally forth to prowl and destroy.—Christian Statesman.

"FORGIVE US OUR TRESPASSES."

A STORY is told of a certain nobleman of Alexandria who complained bitterly to the bishop of that city of his enemies. While in the midst of his tale the bell sounded for prayers, and bishop and nobleman dropped on their knees—the former leading in the Lord's prayer, and the latter leaving for the time his story untold. When the bishop came to the petition, "Forgive us our trespasses," he stopped suddenly, leaving the other to go on alone. The nobleman attempted to continue, but, startled by the sound of his own unaccompanied voice, and recalled by his companion's silence to the significance of the petition, stammered, ceased praying, and rose from his knees, a hopeless man, until he afterwards found hope in a better disposition toward his neighbor. It is an easy thing to say; it is difficult, sometimes, to say it understandingly. If we stop at this petition when we are repeating the Lord's prayer until we have taken in the idea of it, how many of us will go on?—Watchman.

TRAVELING BY COMPASS.—A story is told of an old hunter in Michigan, who, when the country was new, got lost in the woods several times. He was told to buy a pocket-compass, which he did, and a friend explained to him its use. He soon got lost, and lay out as usual. When found he was asked why he did not travel by the compass. He said he did not dare to. He wished to go north, and he tried hard to make the thing point north; but 'twasn't any use. "'Twould shake, shake, right round the point south-east every time."

A great many people fail of the right directions in life for the same reason of the mishap which befell our Wolverine friend—they are afraid to take the Bible and follow just as it points.—*Sunday Magazine.*

WHENEVER the soul comes into a living contact with the fact and truth, whenever it realizes these with more than common vividness, there arises a thrill of joy, a glow of emotion. And the expression of that thrill, that glow is poetry. The nobler the objects, the nobler will be the poetry they awaken when they fall on the hearts of a true poet. —*Prin. Schairp.*

RECLINING upon soft cushioned seats in the house of God, and listening, it may be, to eloquent sermons, is not the highest Christian service. Christ's life was a busy one, and is our example, to be followed as closely as possible.

IT is one great fact that Christ came into the world to save sinners. Another important fact is that we are all sinners and in need of this salvation.

Ice water is rendered harmless and more refreshing with Hop Bitters in each draught.—*Adv.*

PERSONAL ITEMS.

Ralph Waldo Emerson expects to remain at Concord for the remainder of his days. He is too feeble to travel.

General Robert Lowery, the Democratic candidate for Governor of Mississippi, is fifty-five years of age, a lawyer and an ex-Confederate brigadier.

Ex-Governor Washburn has a mill at St. Paul that grinds three thousand barrels of flour a day. The Pillsbury mill grinds five thousand barrels.

Mrs Edson, the President's patient nurse, shows the signs of her long term of watching in the fact that she has lost ten pounds of flesh since the shooting.

Oscar Wilde has expressed his intention of joining a ladies' flower-growing company which is talked of in London, and of growing for it acres of daffodils.

Ex Senator Conkling denies, over his own signature, that he ever uttered the famous saying: "The President has forced me to commit suicide or murder. I prefer murder."

General D. H. Hill, who was one of Lee's division commanders, is now president of the Arkansas University. The school has 440 students and General Hill makes a popular executive.

Thomas A. Edison has found it necessary to establish a training school in New York for his men, in which they can be educated in the elementary principles of wiring buildings for the electric light.

Sitting Bull says that Spotted Tail's death was a fit ending for a fool. S. B. adds that S. T. surrendered when he should have stuck to the warpath. Sitting Bull is the Carlyle of the plains, the scolding philosopher of the Aborigines.

While Generals Grant, Sherman, Sheridan and Rosecrans will attend the reunion of the Army of the Cumberland at Chattanooga next month, the society will also number among its guests Generals Johnston, Gordon, Wheeler, Colquit and Wade.

George W. Cable, the novelist, has bright eyes and a slender form. These are the only characteristic things about his appearance. As neat in his dress as in his work, and unshaven, he is not one who would attract attention. His voice is clear, but not strong, and he does his smiling with his eyes. As gentle in his manners as a woman, he has a quiet humor that fringes all his conversation and occasionally asserts itself strongly enough to become sarcasm.

[Reading, (Pa.) Times and Dispatch.]

Art and Oil.

The Norfolk Virginian of January 16, 1881, refers to the remarkable cure effected by St. Jacobs Oil in the case of Prof Cromwell—known the county over for his magnificent Art Illustrations—who had suffered excruciating torments from rheumatism until he tried the Oil, whose effects he says were magical.—*Adv.*

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☞ Mention the Rural New-Yorker.

Miscellaneous.

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$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

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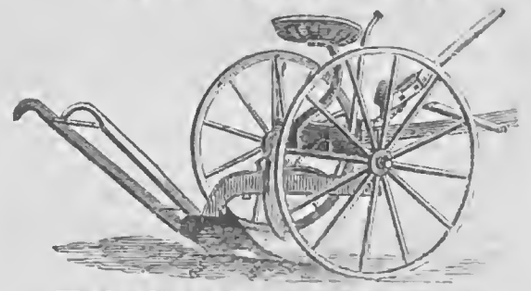

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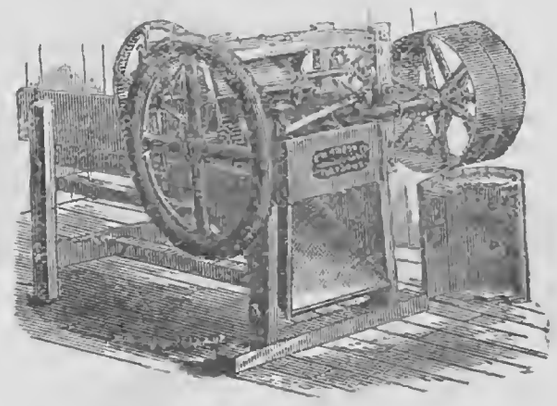

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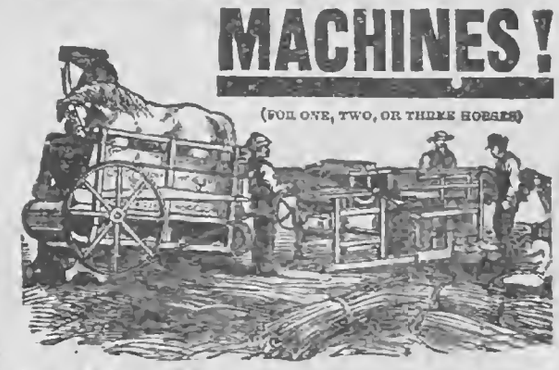

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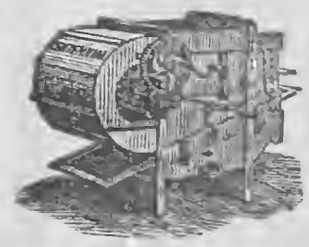

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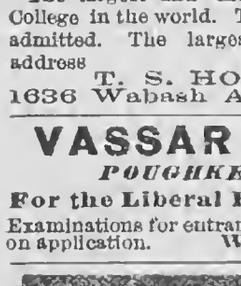

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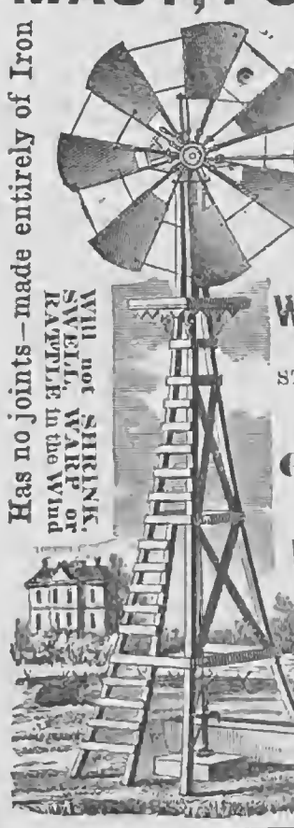

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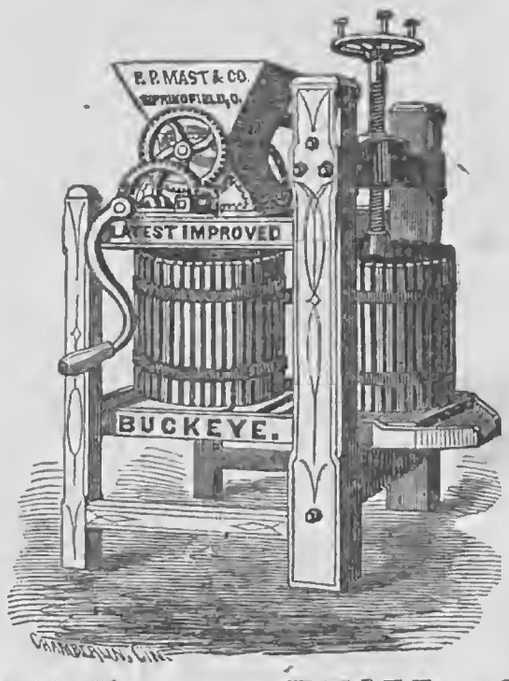

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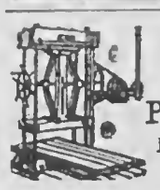

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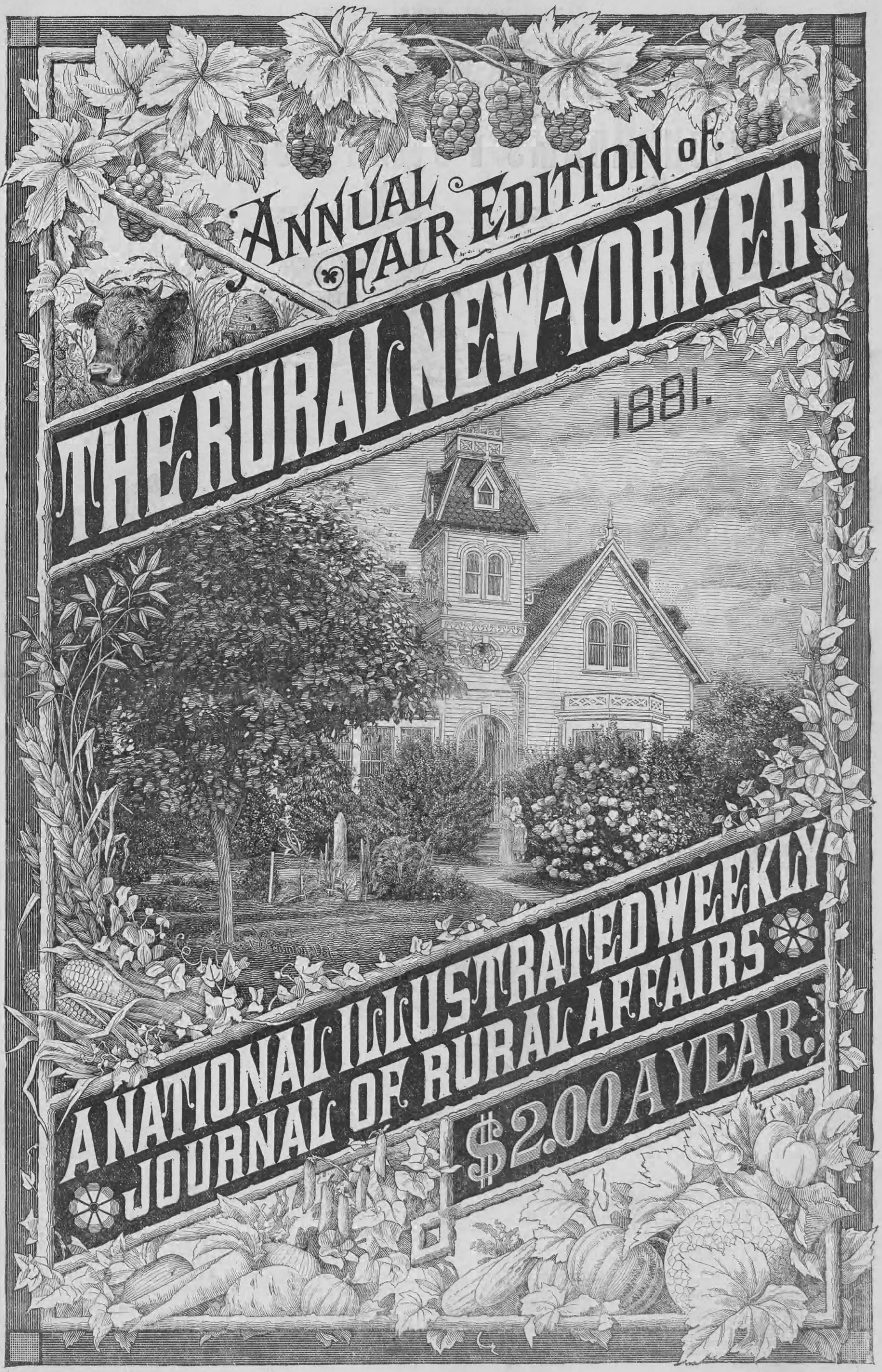
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OF THE

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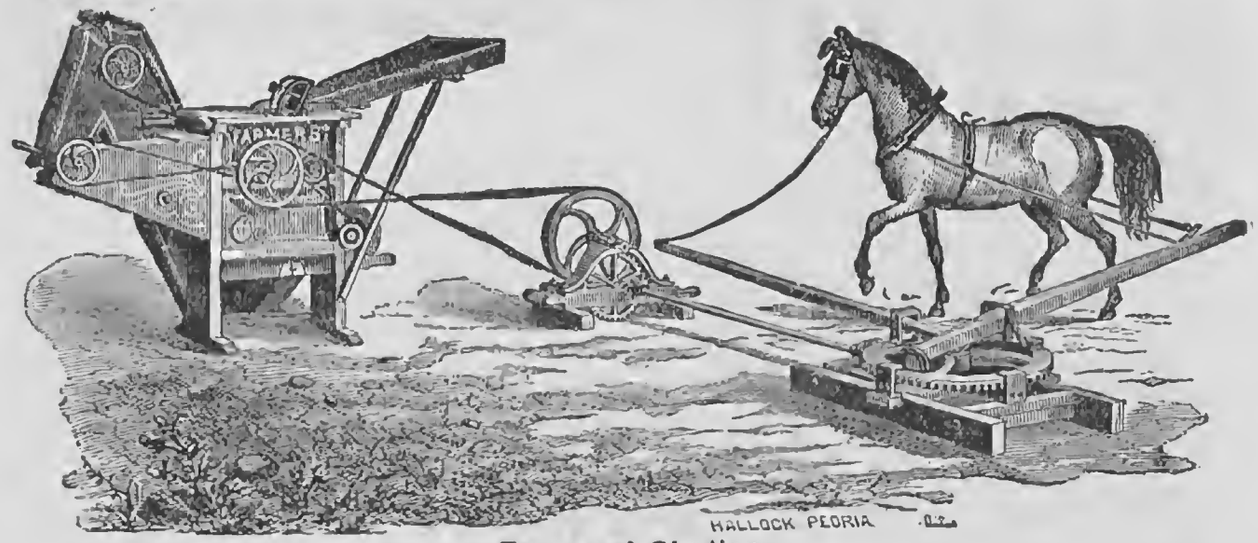
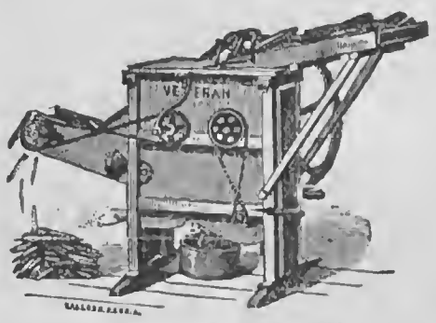


Farmers' Sheller.



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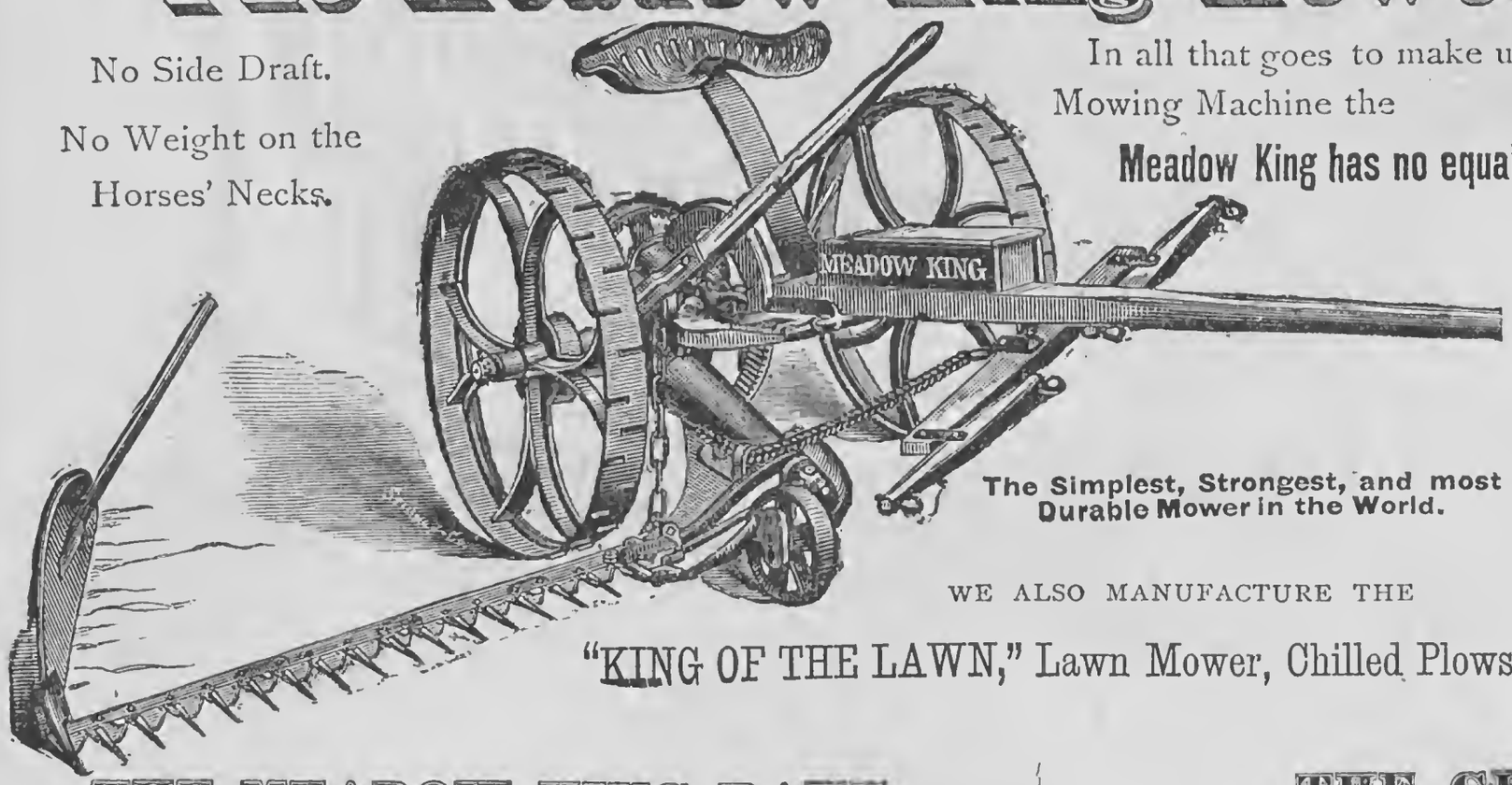

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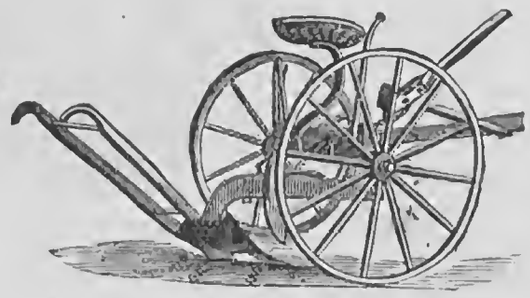
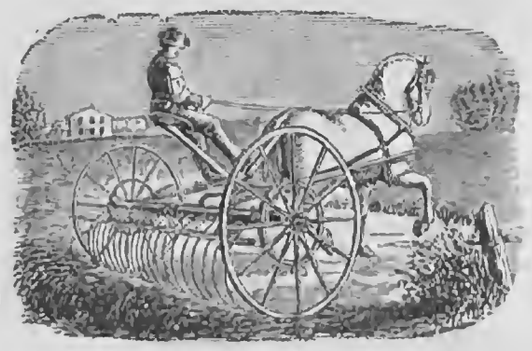


THE OSBORNE PLOW SULKY.



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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Herdsman.

OUR ANIMAL PORTRAITS.

Jersey Bull, Prospect.

THE premium Jersey Bull, Prospect, (2047) was dropped November 7, 1874; color, solid orange-fawn with black points; sire, imported Baltimore Boy (837); dam imported Venus of Oakland (2838). After having taken more first and herd premiums than any bull in Maryland, Prospect is now at the head of the large Jersey herd of the Messrs. Rowe's Co-operative Stock Farm, Fredericksburg, Va. He is six years old, weighs 1,250 pounds, is uncommonly hardy and easy to keep and has no bad habits. Premiums have been awarded to him as follows:—At the Maryland State Fair, held at Westminster, October 1877, he won first premium as the best Jersey bull between two and three years old, and he was also at the head of the herd that carried off the herd premium. At the Maryland State Fair held at Pimlico, September 1878, he again took first premium and once more the herd premium was won by the herd that had him at its head. At the Baltimore County Fair, in September 1880, the herd premium was again awarded to the herd at whose head he was. These were the only occasions on which he was exhibited in Maryland, and every time he bore away the highest honors. At the Virginia State Fair, held in Richmond, in October 1880, no premium was offered for the best herd of Jerseys, but he took all the honors offered to the best of his class by winning the first premium for Jersey bulls over three years old.

Farm Topics.

NOTES FROM THE RURAL FARM.

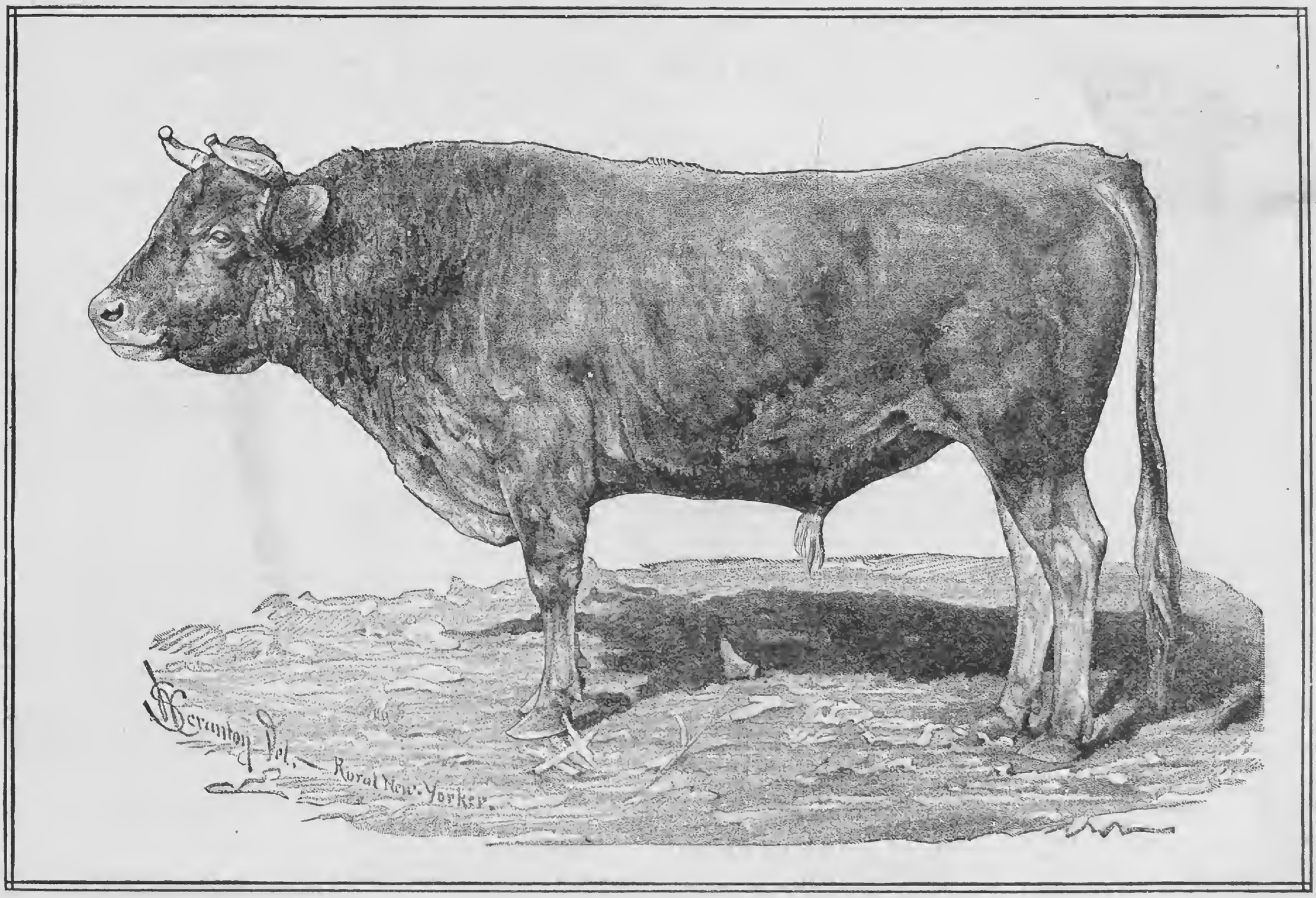
Fertilization of Corn.

AN illustration was given in the RURAL of Jan. 1st (1881), of the tassel of what is variously called the Wild Corn of America, Rocky Mountain Corn, Cow Corn, Corn in Pods, etc. This is by many looked upon as the wild corn from which our cultivated varieties have sprung. August 10, our plants were in bloom, the silk being receptive at the same time that the pollen was ripe. This is not the case with a majority of the stalks of our field corn of the present day, as the tassel generally sheds its pollen before (proterandrous) the silk appears, or, less commonly, *after* it appears (proterogynous). We have found that in the earlier stalks of field corn the tassels and silk often mature at the same time; while later the tassels are generally ripe first. In the different kinds of sweet corn, however, both silk and pollen are, as a rule, mature at the same time. Supposing that all kinds of corn now cultivated had their origin in the "Podded" or "Wild Corn of America," it would appear that sweet corn has changed less respecting the relative maturity of the stigmas and anthers than field corn. It would prove a very interesting experiment to ascertain which seed would prove the more productive, viz., that fertilized by the pollen of its own or another stalk.

Bermuda Grass at the Rural Farm.

Many of our Northern readers have heard of Bermuda Grass, no doubt. It is severally estimated in the South as a curse and a blessing—as a curse where it gets possession of tillable land; as a blessing when it covers lands where scarcely any other herbage will grow. In many parts of Texas, Louisiana and other Southern States it is chiefly depended on for pasture for immense herds of cattle. It delights in a sandy soil, and has been planted as far north as Tennessee, North Carolina and Virginia upon sandy hills. It is in the extreme South the only yard grass, and it makes a sod so tough that it is almost impossible to force a plow through it.

Early in the Summer we received a sod of this Bermuda Grass (Cynodon dactylon), about a foot in length by three inches in width, from Tennessee. It remained in the office until thoroughly dry and apparently dead. It was then taken to this farm and planted in a very dry muck-and-sand soil. In a few days it showed signs of life, and in a few weeks was a mass of green of a bright sea-green color. It soon began to send out its short-jointed, wiry shoots in all directions, which we observed grew, on an average, an inch and a half in twenty-four hours, rooting at each joint as they proceeded along the surface of the ground, easily making their way under stones, pieces of wood and the like, which had been placed to ascertain in how far these would obstruct or in what way change the growth. Thus, from so small a sod a little plot seven feet in diameter had formed by August 25. We receive many questions regarding Bermuda Grass every year, as to its hardiness, where seeds may be obtained, etc. We do not know that it has been ascertained how far north it is hardy, and this is one of our objects in planting it here. We shall protect a part with salt hay, and leave the rest exposed. It has bloomed freely during the entire Summer, and though all other grass was dry and parched, this retained its fresh, pale-green color throughout the drought which was exceptionally long and severe. Its flowers are borne in spikes of from three to five, two inches in length, similar to those of the common Crab Grass—Panicum sanguinale. But it rarely seeds in this country. It is propagated by dropping;



JERSEY BULL, "PROSPECT."--From a Photograph.--Fig. 425.

The Rural New-Yorker is now conceded to be the leading agricultural and horticultural journal of this country. Its Experiment Farm and Grounds of 82 acres are worked in the interests of subscribers, and its Free Plant and Seed Distributions have introduced many of the best farm and garden plants in cultivation. The price is two dollars per year—really a Four-Dollar Paper for half price.

cuttings two inches—more or less—in length in furrows several feet apart. We find that cattle and horses display peculiar fondness for this grass. Mr. Killebrew, in his excellent work "The Grasses of Tennessee," states that "it is used to bind the levees on the banks of the Mississippi and of railroads." Again he says "no other grass will yield such an amount of valuable hay; surpass it in nutritive qualities; support on an acre of pasture such an amount of stock, or so effectively stop and fill up a wash or gully." "But, on the other hand, its *extirpation*, when once well established, is almost impossible." We shall present engravings of this grass in due time, showing its manner of growth, its rigid shoots, and its fine leaves.

Oats.

Of the ten different kinds of oats tried at the Rural Farm the past season Pringle's cross between the Excelsior and Chinese Hulless were the first to ripen. They were headed out June 24, and cut July 15. These oats do not yield very heavily with us, and we fail to see wherein they differ materially from the Chinese Hulless. One pound of seed was drilled on one-fortieth of an acre. The yield was twenty-four quarts of hulless oats, or at the rate of thirty bushels per acre.

The Russian White Oats, so extensively advertised during the early part of the year, were the latest of all and not ready to harvest until July 29. This sort resembles the Black Tartarian Oat, being of a dark color and producing one-sided panicles. From the beginning these oats were behind the Washington growing on one side and a kind of English oat on the other. But while at harvest they yielded, we think, rather less than the others, it may be said in their praise that though the straw is not so thick as that of the other kinds mentioned, they stood up, until they were cut, the best of any. The straw grew to the hight of four feet, the panicles averaging about sixty spikelets. The crop has not yet been measured.

The Washington Oats seem to be merely a selection of the English White Oat. The straw is heavier and taller by half a foot than that of the Russian White, and the field was cut July 20. The panicles averaged seventy-five spikelets.

We received from the Department of Agriculture a package of White Australian Oats—sixteen quarts, which weighed 52 pounds to the bushel, by far the heaviest oats we had ever seen. These were drilled in on a measured plot, one half of which was manured with chemical fertilizer, the other half not at all. On the first the oats grew to the hight of six feet; on the second, about five feet. The straw was very heavy; the panicles when fully headed out were a beautiful sight. All lodged as soon as the oats began to fill, and at harvest were one entangled mass of straw and half-ripened grain.

Mold's Ennobled Oats yielded the heaviest of any in measure though in weight they are light, weighing but 28 pounds per bushel. They ripen with the Russian White. These grew to the hight of five feet and six inches, and yet did not fall, though growing beside the White Australian. The straw is remarkably large and strong, the one-sided panicles often bearing 125 spikelets. Upon one-fortieth of an acre, fertilized with seven and a-half pounds of concentrated fertilizer, the yield was, plump measure, two and a-half bushels, or over one hundred bushels to the acre—the heaviest yield of oats we have ever obtained on this farm. Upon one-twentieth of an acre, *not* manured, the yield was but two and a-half bushels, or *half* as much as on the manured plot.

Upon other measured plots several kinds of oats were sown without manure, which were sent to us for trial by RURAL subscribers. Notable among them were Mammoth Russian Rust-proof and Red Rust-proof, which seem to be nearly alike. The oats are very large, though the panicles bear fewer spikelets than the others mentioned. As there was no rust upon any of our oats the past season, we had no opportunity to try their rust-proof powers.

The Mammoth Russian yielded upon one-fortieth of an acre one bushel and a half—twenty-eight pounds to the bushel. The Red Rust-proof yielded twenty-eight quarts. Of the former two pounds of seed were drilled in; of the latter, one-half pound only.

Bearded and Beardless Wheats.

We believe it is a disputed question whether beardless kinds of wheat do not, or may not, occasionally bear beards, and whether bearded kinds do not sometimes bear beardless heads. It is our impression that well established varieties of wheat rarely, if ever, change in this respect. We should never look for a bearded Clawson or a beardless Black-bearded Centennial. Crosses, however, of recent date may change from the one to the other. We can show bearded and beardless heads from the same seed and every gradation between them.

Our Tests With Green Peas

the present season, as has been stated, show that the English Telephone should take rank among the very choicest peas in cultivation as an intermediate variety. The pods are very large, well filled, and the peas are sweet, tender and delicious, while the vines are abundantly productive. This is said in England to be the same as the Telegraph Pea—still, having tested both kinds, we prefer the Telephone. Day's Early Sunrise is a wrinkled intermediate pea of fair quality. The peas are large, though the pods are only of medium size. We planted one-twentieth of an acre to this pea without manure, and they were given very little cultivation. When the vines were collected, it was difficult to find them, so overgrown with weeds were they. The yield, however, was five pecks of seeds. The vines grow from three to four feet high, and their productive qualities should insure for this pea an extended trial another season.

Progress of Rural Wheats.

In last year's Fair Number of this journal, an account was given of the remarkable change wrought in a Spring wheat four years ago by sowing, in the Fall, seeds so shriveled that it was supposed they would not germinate. In fact, the object of the experiment was to ascertain to what extent wheat might be shriveled and still retain life and germinating power. The result, as then stated, was that, though the land was by no means rich and received no manure, the heads and straw grew to an unusual size, thousands of the former measuring six inches; hundreds, nearly seven. The entire character of the grain seemed to have undergone a change, as it ripened later by ten days than the same wheat from plump seed sown in an adjoining plot, also in the Fall, while the kernels were of a darker color. The longest, heaviest heads were selected for seed and sown last year, and from this crop the head as shown (Fig. 426) is but a fair average of the best. Our engraving in last year's Fair Number was of Defiance, or that which was originally Defiance; the present sketch is of changed Champlain—so changed, indeed, that we are confident that Mr. Pringle himself—the originator—would not recognize it. Both Champlain and Defiance were sown together in the first instance, the seed having been equally shriveled, and both kinds seem to have been changed in the same way. It may be worthy of remark that the kernels of the present crop are heavier—larger than those of last year or the year before. The best heads of each have again been selected for sowing separately, while the main crop will be sown in the usual way so that the effects of selection may be further noted.

FARM NOTES.

WALDO F. BROWN.

WORK FOR A SLACK TIME.—When it gets too dry to plow, as is often the case in early Fall, farmers are sometimes at a loss as to what they had better put the hands and teams to doing. This is the time to attend to little things which are likely to be neglected. In the permanent pasture there are often washes starting, and if in addition there are some loose stones, here are two things that ought to be put together. Make a brush dam occasionally; put a little straw above it—flax straw is the best, and it will pay you to go ten miles for a load of it—and then put your stone on the straw, and you have a barrier that will catch the wash and stop the gully.

SEEDING BARE SPOTS.—Occasionally there is a bare spot in the permanent pasture, or a half-acre patch in the clover field has failed to catch, and how to remedy it is an important question. I have found that to seed with rye and grass seed, about the middle of September, is the best way to manage these spots. If, as is often the case, it is poverty of soil that causes them, I would sow a little bone meal, or scatter some fine manure over them. It will pay to spend ten dollars an acre, or more if necessary, to redeem a barren spot in a permanent pasture; for such places are not only eye-sores, but yield no profit, and the interest on ten dollars is a small amount. In seeding poor spots, always use an extra amount of seed, as it is not as likely to grow as on richer land.

HAVE YOU A GOOD WALK from the house to the barn? Is not this a good time to make one? I think that on a majority of farms, during an open Winter, or a Spring thaw, farmers wade through mud. Try throwing up a walk six or eight feet wide so that the center will be eighteen inches higher than the ditches; then put one thickness of flat stone on the middle of it at least three feet wide, and cover it with fine gravel, and you have a walk that will last as long as you live. If you are near a tannery and can get spent tan-bark, it will pay you to coat the walk with it in the Fall, as it never gets sloppy or tracks into the house in a thaw, and is very easy on sole-leather.

HOW ABOUT STOCK WATER on your farm? Are you short and afraid all the time that if the dry weather continues, you will have to drive the stock a mile or two for drink? If so, now is the time to make a good large cistern or two. You can locate them wherever you want them and fill them with surface water in the Spring, when the water is cold and pure, or even in a wet time in Summer. I have two of these on Highland Farm, and have no trouble in filling them, and have found them a great comfort in times of drought.

PULVERIZE THE WHEAT LAND, whatever you do or fail to do: go on the principle of the woman making gooseberry pie, who sweetened it all she dared—and then shut her eyes and put in a handful more. Work your land till it is fine enough, and then go over it again. If you do not think this will pay, try it on a strip through the field and contrast it with the balance. Lastly—

ATTEND YOUR OWN COUNTY FAIR, and get your neighbors to subscribe for THE RURAL NEW-YORKER—and be happy.

Seven subscriptions at Two Dollars each (our only price) entitle the sender to one copy of the Rural New-Yorker for one year.

Field Crops.

HOPS.

CHARLES A. GREEN.

BILLY BARLOW planted hops. Hops were worth 40 cents per pound, and he figured the income from ten acres, and said to his wife:

"Maria, we've struck a gold mine, and its name is Hops. You can order the piano now, and we will trot the boys off to college."

"But do you know how to grow hops, William?"

"Don't be a fool, Maria; hasn't the old vine in the corner of the garden borne hops since Tom was a baby, with no help but the dead butternut to twine on? Do I know how? Why it is harder to kill a hop vine than a burdock. But just think—*forty cents a pound!*"

Barlow paid a high price for hop roots, for they are always scarce when hops are up. His neighbors sold him hop poles at about their own price; for how could he banter when each individual pole was destined to bear, before the sunshine and the wind, a tasseled banner of hops—otherwise gold. Then he built a big hop kiln, with a gilded fish, six feet long, to keep the ventilator before the wind. Then Barlow sat in the shade and made plans as to what he should do with all the money. Suddenly hops went down, *down*, DOWN. The lower they went the less buyers wanted them, and the more particular they became as to quality—and Barlow's were not above criticism. Then he said to his wife:

"Maria, I am busted on those blamed hops as sure as shooting. If it hadn't been for you and your wanting the piano, and teasing to get the boys off to school, I would have kept out of this miserable pickle."

Barlow's fancy hop house is now a pig-pen and hen-house combined, and Barlow has gone into beans—wiser and sadder but poorer.

Hopkins planted hops. He bought Barlow's hop poles at half price, with all the hop roots he wanted thrown in.

"How is it you plant hops when they are so cheap?" he was asked.

"The price is likely to be better by the time mine are ready for the market," was the reply. "Father and I grew hops years ago Down East; father was never frightened about the price of hops."

Hopkins did not get rich on his first crop—hops recovered slowly, but he kept right on, extending his field, giving the best culture, and producing a first-class article. I pass his place often and my wife and I always notice the beauty of the hops and the careful attention given. The last time we went by, we saw that Hopkins had been painting his house, had put on an addition thereto, with wide cornice and blinds; that he had cut down the windows level with the ground floor, had put in double black-walnut front doors, with copper knobs and bell handle; that he had planted ornamental trees and shrubs on his grounds, and kept the lawn mower whirling. Hopkins drives a nice-looking rig on the street, and is said to carry a savings bank pass-book, into which the hops are entered when converted into hard cash. Hopkins is consulted on important questions of church and State in his community; his boy has married the rich widow's pretty daughter, and all goes as salubriously as strawberries into the small boy's stomach. Whether hops go up, or hops go down, Hopkins plants hops. Barlow knows beans—Hopkins knows hops.

MORAL.—Look before you hop, but, having once considerately hopped, *stay* hopped.

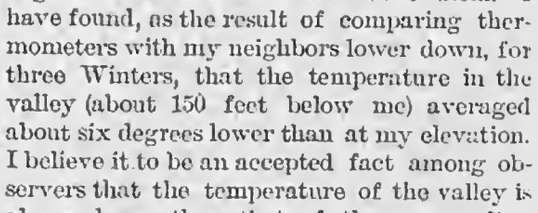
Monroe Co., N. Y.

Salt for Wheat.

THE use of salt to prevent rust cannot be overestimated by the wheat raiser. One bushel to six of salt per acre, sown broad-cast when the wheat is well up and stooling, will almost invariably prevent the ravages of the rust. After the rust has appeared on the leaves, of course, the salt will do no good. Besides being a good preventive of rust, it is a good fertilizer. PROFESSOR A. E. BLOUNT.

State College, Fort Collins, Col.

Horticultural.



MR. PARSONS'S article on the Japanese Maple in a late RURAL is very acceptable and to the point. An article that I had intended to prepare on the subject would have been very much to the same effect. I feel an additional interest in the hardiness of these maples from the fact that a number of friends have planted them on my recommendation. I have therefore made diligent inquiry in regard to their hardiness, besides personal visits, and find the facts to be very much as Mr. Parsons has presented them. In some places they were more or less injured (not killed), and in others not at all; and what is remarkable is, that those forms which were seemingly the most delicate and tender have in reality proved to be the most hardy. There would, therefore, seem to be good reason to hope that these beautiful maples may still prove to be hardy except in Winters of great severity, but probably not on low ground, where the thermometer usually ranges several degrees lower than on those above them. I have found, as the result of comparing thermometers with my neighbors lower down, for three Winters, that the temperature in the valley (about 150 feet below me) averaged about six degrees lower than at my elevation. I believe it to be an accepted fact among observers that the temperature of the valley is always lower than that of the surrounding hills, a fact that is seldom taken into consideration by farmers and gardeners in speaking of the effects of the Winter on vegetation. Anybody who has traveled much at night over the hills, as I have, will remember how cold he has felt on descending into the valleys. These familiar facts, if given their proper place in estimating the hardiness of plants, would no doubt save us many mistakes in planting. I will repeat here what I have more than once said before, that trees and shrubs of doubtful hardiness should be planted in a poor and dry soil, or at least in one that has not been artificially enriched.

HAVE any readers of the RURAL used the Thomas Potato Digger? I saw one at work on the farm of a friend, while riding along the road, and it turned the potatoes out very fast. I had no time to examine it, but asked my friend how he liked it and his reply was, "first-rate." He has since informed me, however, that it bruises the potato badly; and his man, not noticing this, piled them in heaps, and his loss from rot, in consequence, was very considerable. His man, of course, should have thrown the bruised potatoes aside; but it detracts greatly from the value of any digger that it bruises badly a considerable percentage of the crop. It may not, however, have been properly used. How far the fault is inherent in the digger perhaps some of the readers of the RURAL can tell us. It bears some resemblance to a sulky plow, is fitted with a revolver, and is drawn by two horses.

I HAVE often wondered why sea-kale is not more commonly grown. It is surprising, indeed, how few people, aside from professional gardeners, know what the plant is. It is supposed to be difficult to grow, and to involve a good deal of labor; but this really is not so, and even if it were, it is so delicious as to be worth it. Those who have a little glass can easily force it during the Winter.

DR. DUNLEVY makes an earnest appeal to the public authorities and others for the suppression of the ailanthus, on the ground that it is the cause of much sickness among persons of a delicate and nervous constitution. The complaint has often been made by others and is well founded. I have an impression that its planting has been prohibited in Philadelphia. I have known it, when planted near cisterns and wells, to foul the water so as to render it totally unfit for any purpose whatever. Still it is a beautiful tree, possessed of wonderful vitality and will grow generously in sand and on the sea-shore where many other trees will not live at all, and its wood is not without value. It has been suggested that if only the female plant were grown, we should get rid of the sickening odor so generally complained of.

I WOULD state, for the information of Mr.

Parnell, that there is a Gooseberry Society at Paterson, N. J., the members of which grow the English Gooseberry very successfully, as their annual exhibitions abundantly show. I am not familiar with their method of culture, but should be glad to see it described. My own experience with the foreign kinds, like that of most others, has been mildew and failure.

THE strawberries, especially the Sharpless, are giving a woeful account of the drought. By way of experiment I have just been preparing in several ways some young plants with the hope of overcoming the necessity of repeated waterings. It will require several weeks to reach a conclusion. I am satisfied, however, that pot-grown plants have a peculiar value in time of drought, as being better able to sustain themselves than "ground runners." It seems to me unwise to order plants while the drought continues, unless the means for watering are abundant. Anything less than a soaking does but little good under our present scorching sun, which speedily converts the water as it were into steam, and scalds the plants.

IT is quite true, Leon, as every body knows, that the Ox-eye Daisy is a troublesome weed, as are other pretty things. That, however, is quite beside the point I made. Thousands of ladies wore the Ox-eye Daisy last Winter, and seemed to be quite as much pleased with it as with the Paris Daisy. Do you not see the point in that? As to the one being fit to force and the other not, the New York florist seems to have overlooked the fitness of things in this case, and forced the Ox-eye; and, from what I can learn, he will do it still more extensively next Winter. I used to be skeptical; but I have learned that the florist, just so soon as he can see money in a plant, will soon learn how to grow and force it out of season. It may seem stranger still, but I am told that the dandelion will also be forced next Winter, the "prospect," as the florists say, being very good for a demand next Winter, as it was early last Spring. I do not know what next, but am prepared for almost any thing.

HORTICOLA.

TWO NEW BLACK-CAPS.

CHARLES DOWNING.

SKOWHEGAN is a fine, new, early variety which originated in the garden of John A. Carleton, Hillsborough, New Hampshire, and has the reputation of being the hardiest of the Black-caps as well as the earlist to ripen, bearing very abundant crops of large, bright, black berries, without bloom; it also continues longer in bearing than most others. The flesh is moderately firm, juicy, sweet, rich and separates readily from the stem. The canes are strong and vigorous, more or less branching, with many strong, sharp spines.

CENTENNIAL, another quite new variety, was raised by a Mr. Grahill, of Springfield, Missouri, about the time of the Centennial Exhibition, and hence the name. The plant is a strong and vigorous grower, somewhat branching, having a few strong, sharp spines; leaves large, light-green, white beneath, deeply veined. It is very productive of large, jet-black berries, without bloom; flesh moderately firm, juicy, very sweet and rich; it separates freely from the stem and ripens soon after the Skowhegan, being somewhat similar to that variety.

This and the Skowhegan, being hardy and earlier than any of the Black-caps, strong growers, very prolific bearers, of berries of very good quality, are likely, for those who prefer raspberries of this class, to prove valuable additions and acquisitions for home use, and also for a near market, where earliness is an object. These do not sucker but are propagated from the tips. While they are earlier and better for home use and near market, they are not so firm—do not "stand up" so well, in the language of the dealers— as the Gregg and McCormick or Mammoth Cluster, and therefore are not so profitable for a distant general market crop.

THE JERSEY QUEEN STRAWBERRY.

PETER B. MEAD.

IN speaking of strawberries I have heretofore ignored the existence of Mr. Durand's Jersey Queen and Superb, simply because I supposed, for reasons not necessary to name here, that they would never be given to the public. I am very glad to know that I was mistaken, at least in regard to the Queen, now being sent out by Mr. Henderson, and an excellent portrait of which is given on the next page.

The fruit of the Jersey Queen is the nearest approach to the ideal strawberry that I have yet seen. The berry is very large, broadly conical, and the color a fine shade of scarlet. The flesh is firm and melting (like that of the Seckel Pear when ripe), and is full of a rich vinous juice, with a deliciously spicy aroma. It ripens late, is very productive, and a stocky grower. It may be added that the berries run quite uniformly large. I have no hesitation in adding the pomological quality "*best.*" So much I can say of the fruit from personal knowledge. How far the plant will adapt itself to a variety of soils I cannot say personally, but I know enough to warrant me in saying that it promises to do so to a large extent, and I can not help wishing that it may.

Dairy.

PRECAUTIONS AGAINST DROUGHT.

PROFESSOR L. B. ARNOLD.

A PRUDENT business-man eliminates from his business every possible element of uncertainty. He not only secures his capital and investments against loss, but he makes sure that his income shall not fail of being received. Nothing is trusted to chance that can be avoided. He will leave open or unguarded no avenue liable to lead to loss. He would rather pay insurance where there is but one chance in a hundred for him to lose than to take that chance.

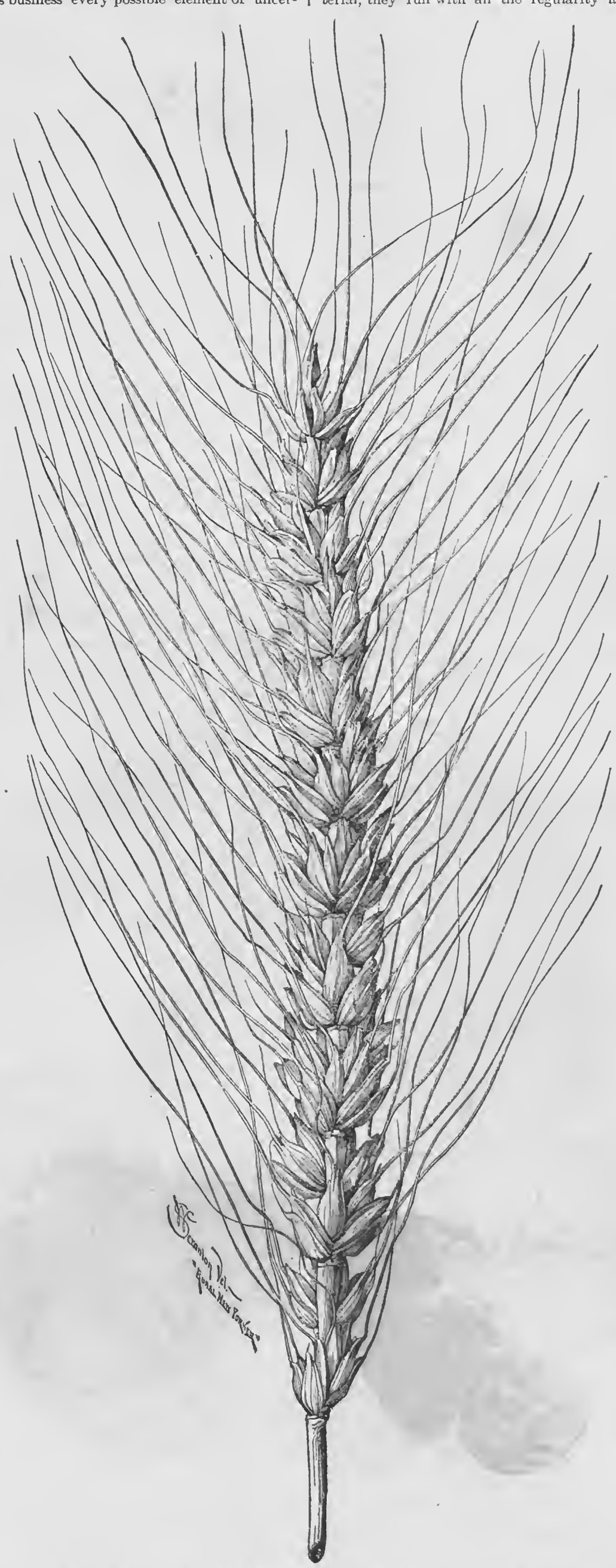
A prudent dairyman should be as cautious. He should insure not only his buildings and other combustible property, but he should effect an insurance on his annual income as well. It happens that unless special precautions are taken, the income of a dairyman is liable to great and frequent fluctuations, but it runs very evenly when properly regulated. A dairyman is said to be a manufacturer, and cattle food his raw material. Milk is his manufactured product, and cows are his machines. They are compound machines, combining both motive power and executive or mechanical apparatus. When properly supplied with material, they run with all the regularity and certainty of any other machines, but, when out of supplies or scantily furnished, both power and product at once diminish.

One of the misfortunes of dairying is that every section is liable every few years to be afflicted with a drought that stops the growth of grass and cuts off the necessary supply, from those especially who depend wholly on grazing; and here is where the security of insurance discloses its importance and merits recognition, but often fails to receive it. Men seem strangely indifferent and dull in appreciating the liabilities of their situation, even after repeated losses have been endured. A man whose house stands but one chance in a thousand of being annually burned will not allow it to go a day without being insured, while the income from his dairy, often worth much more than his house, and which stands about one chance out of five of being cut down every year, will be allowed to run indefinitely without making any effort to secure himself against oft-recurring losses. Where scholars are so inapt and tuition so expensive, experience may well be said to keep a dear school.

The indifference seems all the more strange since it is so easy to insure one's-self against such losses by planting every year a piece of fodder corn, or other green crop, which will be sure to withstand drought and furnish a supply to bridge over a dry time if it comes, but which, if not wanted for such an emergency, will pay more than its cost to lay by for Winter use.

The folly of attempting to go, year after year, risking the profits of a whole year on the uncertainty of the weather, was well illustrated last Winter on the plains in the West. There is a large extent of territory on which cattle can ordinarily squeeze through the Winter without foddering. But every few years an unusually snowy Winter occurs and snow covers the ground so long that stock perish if not provided for. Last Winter was one of this kind, and it swept off hundreds of thousands of cattle by starvation, and millions of dollars were lost which might have been saved by a little precaution in collecting fodder, which would have made grazing a sure and lucrative business. It is the boast of civilization and intelligence that they can control the very elements and mold them to their use; but this risking everything on a turn in the weather, whether on the plains or on a dairy farm, is in the end a costly way of farming, and seems a sort of reversion from the prudence and forecast of civilization back to the uncertainties incident to savage and barbaric life.

These remarks have been suggested by frequent notices in the papers of localities in which the crop of butter or cheese is now being seriously cut short by prolonged dry weather —a circumstance which seems to advertise want of common prudence, we may almost say inexcusable neglect, in failing to provide suitable food for the cows to meet a common emergency, and one to which dairy stock all over the country are always liable. It is a good time now for those who are suffering by such needless losses to consider how easily all their losses might have been prevented: and, when they do so, it is to be hoped they will frankly take the blame home where it belongs, and not wickedly charge it to Providence.



CHANGED CHAMPLAIN. FROM LIFE. SEE PAGE 587—"PROGRESS OF RURAL WHEATS." FIG. 426.

Seventy-seven different kinds of wheat were raised at the Rural Farm the past season. Most of these were new varieties, the best of which are to be cultivated for future Free Seed Distributions.

Poultry.

HOW TO HAVE EGGS IN WINTER.

JUST now the old hens are inclined to brood. A hen is not a perpetual-motion machine for converting corn into eggs, and sometimes she will require a rest. This is absolutely necessary for the production of the ovules in the ovaries, from which the eggs proceed.

It has been said by some persons who profess to know more than they really do know, that a hen has a certain number of these ovules or egg-germs in the ovaries and that she will lay just so many eggs, and if properly fed and kept will keep on laying until the ovaries are exhausted and the original stock of germs is used up. Then her occupation is gone. This is not correct. It might as well be said that all the feathers of a hen, produced during her life and after her annual molts, are existing in the skin at one time, and if the hen should live so long as to exhaust the supply she must wear her last coat continuously or go naked.

The fact is that the egg-germs or ovules are continually produced from the cell substance furnished by the blood, just as the flesh and fat and feathers are formed when new supplies are required. It is a parallel case with a vegetable as with an animal, for as the annual leaves and blossoms and fruit are formed of cell matter furnished by the sap at the right season and under the force of circumstances, so the cell matter for the formation of eggs is constantly

supplied in proportion to the vital force and circumstances of the hen. It has been said that a hen has but 600 ovules in the ovaries and that these are expended during the four or six years in which she is productive. This is mere fancy, and is erroneous. A Brown Leghorn hen has lived 10 years and laid over 2,000 eggs. The writer owns a Plymouth Rock hen that is now seven years old and has laid more than 1,300 eggs, and in her eighth year is laying six eggs weekly. But if the food is reduced the hen will stop laying as surely as a mill without grist will stop paying out flour. In very cold weather, too, and when sick with the roup or the snuffles, this hen stops laying; other cases of similar import are not rare, so that we may be sure that the production of eggs is a matter of management, and not one fixed *ab initio* when the chick was in the shell or, indeed, what is also implied in such a case, when the egg was formed in the ovary of the parent fowl. Indeed one cannot tell how far to go back in such a case.

Well, then, let it be repeated: the old hens are inclined to brood, and if we want eggs next Winter we must let them brood, if it is only upon a chalk egg or a hard-boiled one. We don't want chickens at this late season. But the hen needs a rest, and at this time, when eggs are cheap, she may very well take her vacation and a rest and lay up material for eggs to be laid in the next few months. She must be well fed meanwhile. Put her in a comfortable, clean place with a heap of corn, some gravel, dry sand or ashes, and fresh water every day, and let her rest in peace. Next month she will leave her nest wondering, perhaps, why that chicken did not come, and after a few days will begin to lay, and by November she will be down to her work filling the basket—provided always that the materials are supplied in abundance, as corn, wheat, buckwheat and fresh water.

Apiarian.

PRACTICAL HINTS IN APICULTURE.

PROFESSOR A. J. COOK.

It is the object of this paper to call attention to a few practical questions in apiculture, which in the opinion of the writer are not sufficiently considered even by many of our best bee-keepers.

Poor Queens.—How often do we notice, in reading the reports of bee-keepers, that some colony in the apiary gave results that far eclipsed those given by most of the others; while others seemed to gather but little more than their own needs required. Every attentive apiarist who observes closely, has noted the same fact in his own experience. The conclusion is obvious: some queens are superior, while others are practically worthless. The most successful cattle breeders, even with the best breeds, find that to achieve the best results they must continually weed out from their herds, selling off those that vary from the highest standard of excellence, and valuing above price some members of their herds. Bees are no exception to this law, and that apiarist is most wise who closely watches his bees, killing the poor and worthless queens that are sure to appear, and supplying their places with others reared from queens and, so far as possible, mated to drones, which are the descendants of the choicest queens in his bee-yard. My first advice then is: Don't retain any but the very best queens. Constantly improve, by the most severe selection, the quality of your bees.

Stimulative Feeding.—It is well known to all students of apiculture that have had experience with Italian and German bees, that breeding ceases whenever the bees fail to find honey. But to keep the colonies strong we must secure continuous breeding, which can be secured by feeding a little each day whenever breeding ceases from a failure of the honey harvest. Neglect of a little thoughtful care in this direction takes largely from the pockets of our bee-keepers. With the new Syrian bees this seems unnecessary, as they breed continuously irrespective of the honey harvest.

Strong Colonies.—Another great error consists in tolerating weak colonies in the bee-yard. The heading of this paragraph is the golden rule in apiculture, in Spring, in Autumn, indeed, at all seasons; if neglect has brought weak colonies, unite them, as weak colonies give no returns, and are sure to fall an easy prey to the bee-moth, to robbers, and to the other ills that stand in the way of success.

Increase of Colonies Prevented.—To secure strong colonies, preparatory to a large yield of surplus comb-honey, and not to thwart our own plans by inducing the swarming fever, has been the sore puzzle which has confronted most bee-keepers. True, this is usually accomplished by proper care to ventilate, to shade the hive, and to so increase the space within the hive that the bees shall not become discontented with the old home and essay to move out into a new. Yet who has not found that, despite all these precautions, the bees will sometimes reject all overtures in their mad fury to move into new quarters? In case this inordinate desire to swarm is manifest, there is still a way to satisfy the bees without lessening the working force in the hive. If the bees seem determined to swarm usually there are several cases: if there is one, let the first swarm be placed in a new hive. When the second swarm—I refer to a swarm from some other hive—comes out, it will likely be on the same day; put this in the hive that swarmed first, after having destroyed all the queen cells in that hive. This colony is just as strong now as it was before, in brood and bees, and the bees will be satisfied to settle down to work in the sections. A third swarm can be put in the hive from which came the second swarm; a fourth into the third, etc., etc. We thus have increased but one, have satisfied the bees and still have kept all the colonies strong. If desired, at the last we may unite the swarm that issued first with the young bees and brood left in the hive from which issued the last swarm, in which case we have not increased our number at all. If we now give plenty of room there will be no further attempt to swarm, and we are almost sure to secure the best results in surplus honey.

How to Induce Work in the Sections.—Young bee-keepers are often at a loss how to get the bees to go into the sections. First, all other space except that occupied by the sections, should be filled either with brood or stores. This is usually enough. If not, an arrangement by which we may place the sections in the brood chamber, or above at will, will aid us. If placed below till the bees get well at work in them, and then removed above, the bees will almost always continue to work in them. The bees may often be induced to work in sections above the brood chamber by simply placing a little drone brood in one or two of the sections. As the brood hatches the bees will fill the empty cells with honey and all is well.

Michigan Agr'l Col.

B. Pickman Mann, of Cambridge, Mass., says: "For years I have taken the leading agricultural journals, and they all seem tame when compared with the Rural New-Yorker.

Arboricultural.

THE DIAMOND WILLOW.

EX-GOV. ROBT. W. FURNAS.

A new variety of willow, or rather one of which the merits are of recent discovery, is attracting attention in the West, particularly along the Missouri River Valley. It is popularly known as "Diamond" Willow—sometimes as "Post Oak," getting the first name because of the frequent, peculiar, diamond-shaped indentations in the wood; and the second, on account of its durability, especially under ground. The latter characteristic is certainly new of the willow family, which is noted for soft, perishable wood. The red, or inner wood very much resembles red cedar, and is almost as durable for any purpose—fence posts even. The writer has in his possession specimens of wood with regard to whose use and exposure he has had personal knowledge for twelve years. For seven years it was used as a fence rail; for five it lay in the grass and weeds along the fence row; yet it is now as sound and well preserved as cedar would have been under like conditions. Old settlers in Missouri bottoms say they have used it for many years as fence posts, and find it equal to anything they have tried.

I will not attempt a minute botanical description other than to say that in all respects it very much resembles the Black Willow—Salix nigra. It is not abundant anywhere I know. It is, so to speak, clanish, or gregarious, growing in patches or groups by itself. It is not of rapid or rampant growth, like other willows. The wood is straight, close-grained, and splits as smoothly and nicely as cedar. It grows to the hight of a good-sized tree, eighteen inches to two feet in diameter, and the wood finishes beautifully under the plane and turning-lathe.

We hear of it more in the mountains North and West, warranting the inference that, while seemingly indigenous along the Missouri River, its real home, or habitat, is in the higher altitudes. I know of no specimens growing off the Missouri, on any of its tributaries below Fort Benton or thereabouts. I have specimens growing from cuttings on the high, upland prairie, showing a stand and growth better than those of any other cuttings of the same season on my grounds.

Specimens have been sent both to Prof. Sargent, of the Arnold Arboretum, Cambridge, Mass., and to Dr. J. A. Warder, President of the American Forestry Association, North Bend, Ohio, but neither of them, as yet, has given it a botanical name or habitat. Prof. Sargent says: "It is foreign, and closely allied to Salix alba. It is very interesting and important, from the fact of its being durable under ground." With Prof. Sargent, I regard this willow as "interesting and important," and will watch its future with interest.

To experimental grounds or individuals who will test it, I will be pleased to furnish a few cuttings in season, *gratis*. There is no patent on it. It is Nature's gift. If valuable and worthy, let the public have the benefit of it.

Brownville, Nebraska.

[Gov. Furnas sends a specimen of the willow referred to, ten inches long by nearly two in diameter. The outside is white and close-grained, while 1½ inch of the diameter is of the color of the red wood of the Red Cedar. —Eds.]

Pomological.

IOWA EXPERIENCE WITH ORIENTAL PEARS.

PROFESSOR J. L. BUDD.

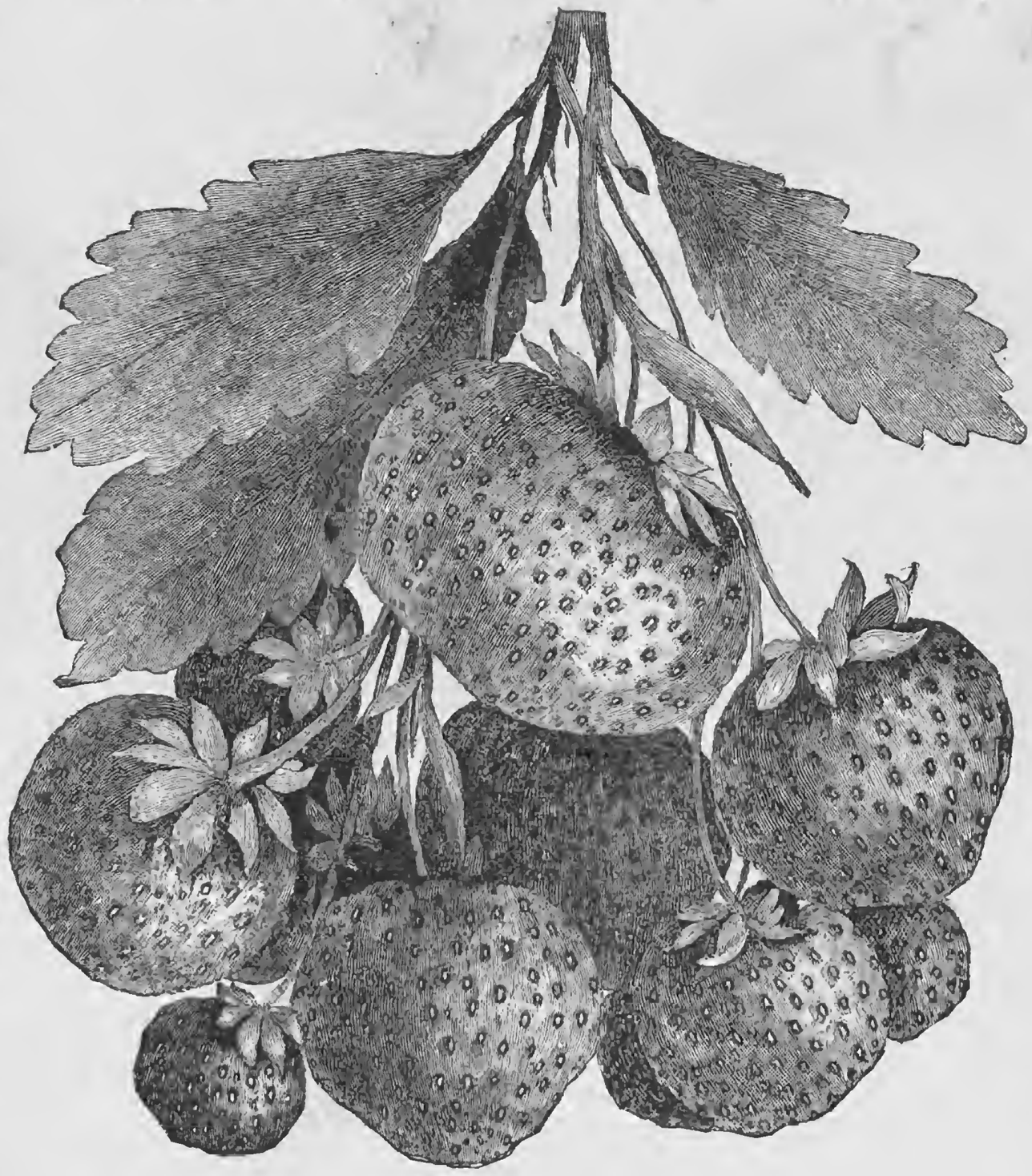
During the past two years I have been experimenting in a small way with quite a large number of Oriental pears. Many of these have been obtained from the grounds of the Agricultural College near Moscow and from the Botanic Gardens at St. Petersburg, Russia, yet I place them under the above head for the reason that recent researches have traced their original home to Northwestern China. Some of them, I am assured, are recent importations from the Province of Shensi, China. My experience is yet limited, but it so happens that our past Winter was one of almost unexampled severity, and it was followed by a Summer exceptionally trying to the foliage of all trees. As an instance, we had in this section a rainfall, in five days, of 17½ inches, about three weeks since, which was followed for three weeks by high temperature and aridity of air such as are never known in the Eastern States. Under such circumstances my observations of two years may have some value. Reserving the privilege of modifying any opinion expressed, as I gain new experience, I will offer a few notes on Chinese pears from my present stand-point.

Leaving out the many confusing names which botanists have given to the Asiatic forms of the pear, I will speak of the races under the names by which they are known in China:

Sha-li, or Sand Pear.—This seems a semi-tropical race. Its ability to endure tropical heat has caused its name—Sand Pear—to follow it from its home in Southern China through India, and to the hot, dry plains of Australia, where Sir Walter Hill states it thrives and fruits where no other known pear can live. In our country the Le Conte and other varieties of the Sand Pear succeed better in Florida than any other sorts yet tried. Our thirty or forty varieties of the Sand Pear, and crosses with the common pear, were models of health during our hot, dry Summer, but the October freeze of the Fall of 1881 caught them napping. At present I do not think that one of them will endure our ordinary Winters with sufficient vigor retained to produce a crop of fruit.

Pei-li, or Snow Pear.—The Hon. S. Wells Williams, of Salem, Mass., and others who have spent several years in Northwestern China, assure us that the varieties of the Snow Pear are globular, white, juicy, and generally regarded as the best fruits of the country. The varieties we have are very upright in growth, and their leaves are nearly as large and thick as those of the Sand Pear, but, unlike the latter's, they are nearly entire, some of them having only a slightly wavy edge covered, in their early stages of growth, with peculiar silky hairs. The surfaces of the young leaves, buds and branches are tomentose, and show traces of the same silken threads or hairs. It has been claimed that William R. Prince grew seedlings of the Snow Pear and disseminated them fifty or more years ago. This may be true, but no specimens I have seen have any resemblance to the true Snow Pear, such as we have from Moscow, and the leaves of which we have received from Peking. I have much faith in this race of the pear, which is common in nearly all parts of Northern Europe and Asia. The plants stand our Summers and Winters about as well as do the Russian apples.

Kuang-li, or Strawberry Pear.—This gets its name from its peculiar flavor, of which Karl Koch says: "The story was told me in the East that its peculiar flavor came from a



JERSEY QUEEN. FROM LIFE. FIG. 427.

cross with the quince. This I do not consider very improbable." As grown around Peking, China, this race is shaped like our Bergamots, and Koch—the highest modern authority on the origin and races of the pear—gives the decided opinion that the Kuang-li of Northern China is the original type from which all the Bergamots have descended. Some of those of this class we have from Moscow have the prefix Bergamot. As an instance, one of our strongest growers, the first year in the nursery, is called Bergamotte Sapieganka. We grew last season plants five feet in hight of this variety from short cions whip-grafted in the cellar on apple roots. Yet every terminal bud was perfect before the advent of the first severe frost. But all the varieties of this class are, to quite an extent, crooked growers in the nursery. Some of them want to go in every direction except up.

These Northern Bergamots seem very hardy when they go into Winter in the right condition. Last year the foliage was healthy, and not a twig was injured. I now notice that our recent trying weather has a tendency to curl the leaves, as it has curled those of the cherry and of most sorts of the apple. It may prove that the foliage will not fully meet our climatic requirements. All things considered, they do not seem as promising as the more globular Snow Pears.

Agricultural College, Ames, Ia.

AGRICULTURAL FAIRS AND POMOLOGY.

PRES. T. T. LYON.

Suggestions for Exhibiting and Judging Fruits, etc.

PROBABLY in no branch of agriculture is the necessity of careful discrimination, and of great accuracy, on the part of both exhibitor and observer, more important than in horticulture and especially in that branch of it known as pomology, not only on account of the immense number of varieties of fruits grown; but equally on account of their disposition to vary under change of soils, difference of seasons and other circumstances. Hence I submit the following suggestions:

1. No general exhibit of fruits should be attempted, except under the superintendence of an expert, or a committee of experts in the nomenclature of fruits.

2. No fruit should be permitted to appear on exhibition under an erroneous name; and, if doubtful, it should be so marked.

3. The exhibition of large and showy but worthless sorts, should be discouraged; and, if shown as a means of education, such worthlessness should in some manner be clearly indicated to visitors.

4. All wormy and imperfect fruits should be excluded from competition for premiums, if not even from exhibition.

5. All names of fruit exhibited should be distinct and clear, and should be so attached to the fruit or dish containing it, as not to be liable to accidental displacement.

6. No person, whether exhibitor or visitor, should in any case be permitted to handle fruits when once placed upon exhibition, except by permission either of the superintendent or the awarding committee in discharge of their duties.

7. Committees should be definitely instructed to base their awards—1st, upon the varieties, only, which have been correctly named by the exhibitors; 2nd, upon the value of the varieties for the required purpose, whether general or special; 3rd, upon the color, size and evenness of the specimens; 4th, upon their freedom from insect marks or other blemishes.

8. The exhibitor should be required to submit a list of the varieties in each entry, arranged in the order of their value for the required purpose, *in his estimation*, and the committee should be required to report the lists to which premiums have been awarded, arranged as estimated by such committee for such purpose.

9. It would seem that, with the growing importance of this whole subject, we have reached a point at which some influential authority, (as by preference, the American Pomological Society) should frame and submit for general adoption, a full set of rules or principles covering this entire subject, as a means of inviting unity and harmony of action thereon.

Every person possessing ground for a tree or a patch of berries should ignore the peripatetic "tree agent," and the nurseryman as well, and should, instead, look over the fruit lists of the societies, or the standard pomological works, or both, and go to the fairs, and make the actual acquaintance of these fruits and of those who have grown them, after which he will be able to choose wisely for his own individual purpose. To such I suggest:—

1. Never choose a variety for your own use upon its popularity alone as a market fruit.

2. Never select a fruit, for your own planting and use, because it is showy or of very large size. Such, as a rule, are undesirable, if not worthless.

3. If your grounds are limited, it will be found better to plant the earlier fruits, and depend upon the markets for the long keepers.

4. Whatever you plant, you can be sure, at the fairs, to find the most successful cultivators who are sure to be able to tell you how best to manage to secure such results as you will find illustrated upon the exhibition tables.

TWO VALUABLE CHERRIES.

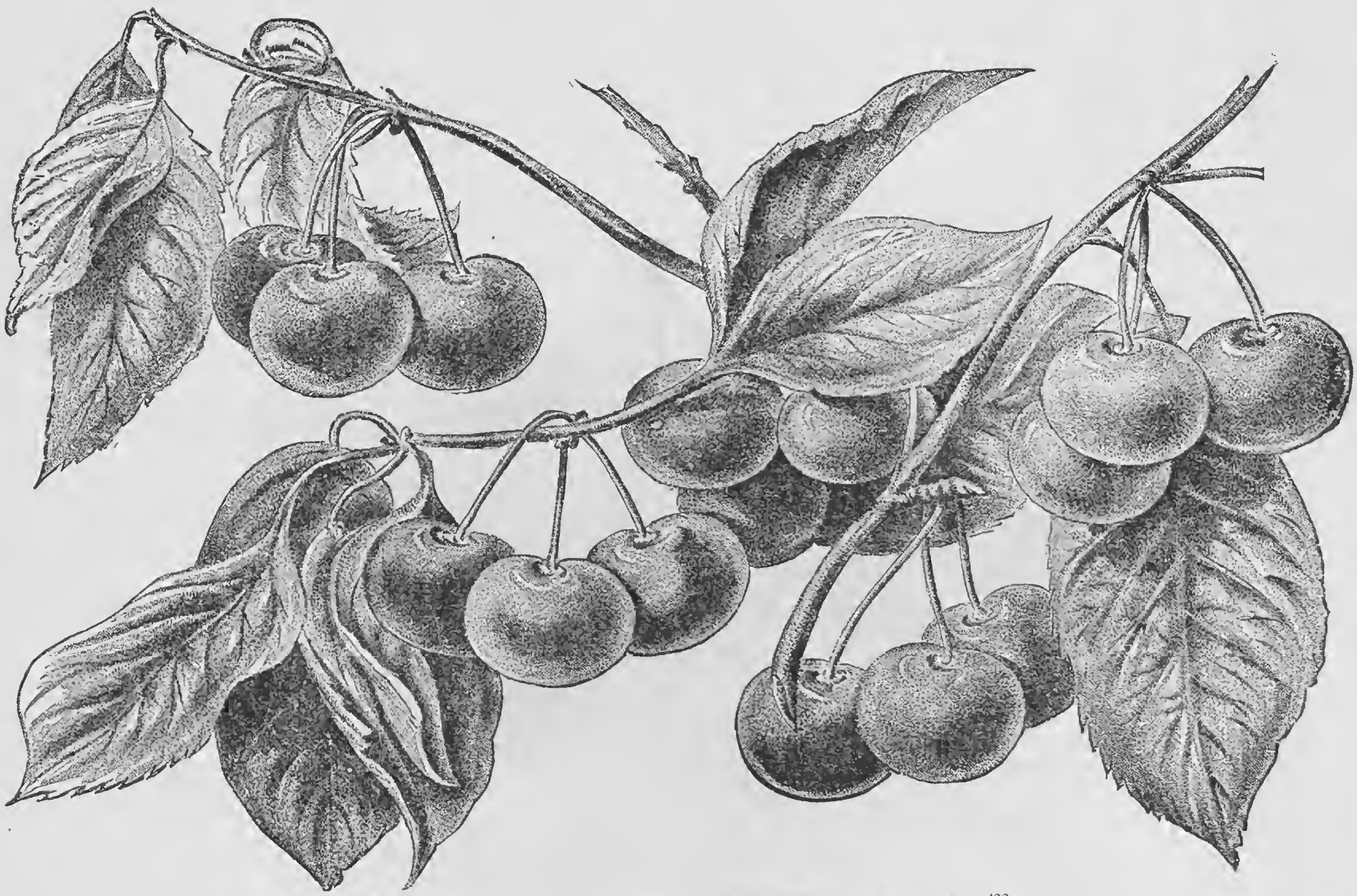
W. C. BARRY.

MOST people consider the so-called sour cherries too acid for dessert or table use, and, although their sprightly, refreshing qualities are enjoyed by some, the number of persons who value such fruit for table use is comparatively small. Among the Duke and Morello varieties there are a few large, fine-flavored sorts, but unfortunately they are mostly shy bearers. This being the case, it is gratifying to be able to draw attention to two Morello cherries which, besides possessing the valuable qualities peculiar to the class, have such fine flavor as to render them suitable for dessert purposes.

The kinds I refer to are Montmorency Ordinaire and Montmorency Large-Fruited. Both were received from France a few years ago, and, after having been tried in the experimental orchards of Ellwanger & Barry, proved to be of high merit. They have also been tested in Illinois, Kansas and New Jersey and have been found to be equally desirable at the East and West. Even where the sweet cherries can be grown successfully they are much esteemed, and people who enjoy acidulous fruits consider them more palatable than the Hearts and Bigarreaus.

Montmorency Ordinaire is of medium size, and of a beautiful light-red color; flesh juicy, melting, with just enough acidity to be peculiarly refreshing. The tree makes a handsome growth, and is extremely hardy and productive. The fruit ripens about a week after that of the Early Richmond. For cooking and canning it is unexcelled.

Montmorency Large-Fruited is larger, of a darker color, richer and in every way a finer cherry than the above-mentioned; but the fruit is not produced so abundantly, though the tree yields what everyone would call a good crop. It is also very hardy. The accompanying illustration, Fig. 428, enables one to form a correct idea of the size and appearance of the fruit. I have watched these varieties closely since their introduction, and I think orchardists and amateurs will find them worthy of attention.



MONTMORENCY LARGE-FRUITED CHERRY. FROM A PAINTING FROM LIFE.—FIG. 428.

Sheep Husbandry.

THE PROFITS OF A SMALL FLOCK OF SHEEP.

LARGE flocks of sheep or poultry are rarely profitable excepting when the sole attention of the owners is given to them. The greater part of the whole number of the sheep in the country is kept in small flocks, and the profit from these is relatively more than that from the large flocks of hundreds or thousands each. A large flock on the plains returns, on the average, a profit of a dollar per head. A small flock kept on a mixed farm usually returns a profit of three to five dollars per head. It is true, the sheep are of better quality, but that is another advantage of the small flock, for it costs no more to raise a good sheep than a poor one, and, indeed, a pure-bred Merino or a good grade sheep is much hardier than the poorly-bred native sheep. The scope for sheep keeping is large and wide. Sheep may be kept as easily as a flock of fowls and, like them, will live on what would otherwise be wasted; they will glean the stubbles, pick over the rough ground, clean a fallow field, range a wood lot, clear the fence rows and corners of the field, and in the Winter will do well on a few turnips and straw. On this feed they will even fatten and be healthier than if fed on corn. If a farmer will count up the cost of a flock of 10 or 20 sheep, and the profit from a few fat lambs and wethers through the Summer, he can easily see a hundred per cent. income from the investment, leaving the fleeces to pay for the keep. There is no other farm stock more profitable when the size of the flock is judiciously proportioned to the conveniences for keeping them. Crowding is as fatal to sheep as it is to fowls. They must have pure air and clean quarters, and as soon as the flock begins to increase too rapidly it comes to grief at once.

Dr. E. Lewis Sturtevant, of Mass., says "The Rural New-Yorker has the best list of contributors of any paper of its class and is doing a noble work."

Swineherd.

DIFFERENT BREEDS OF PIGS.

COL. F. D. CURTIS.

ALL breeds of pigs have merits. Some of them have quite similar ones. The black and red breeds are the least liable to mange or any skin disorder. This peculiarity fits them for any climate better than the white breeds. They also have more lean meat in proportion to the fat than the white ones. The Essex will keep easier than the Berkshire because they are usually smaller and finer-boned. Both of these breeds will fatten at any age. Red hogs, which are an old family of Berkshires, will grow the largest and are remarkable for breeding and the length of body, which makes them the best breed for bacon, as they also possess the same characteristic of more lean meat than white breeds.

White hogs have the advantage of a more pleasing color—more popular—but they are more liable to get sun-burnt and scabby in the Summer and also in the Winter.

Chester-Whites are the coarsest white breed and will attain to a large size. They have a good coat of wavy hair, which fits them for exposure. They are large breeders and well

adapted to districts where hogs range, and are extensively grown.

Poland-Chinas are spotted black-and-white, and are also specially adapted to sections where corn is cheap and large quantities of pork are produced. They are freer from skin disease or trouble than white breeds and are prolific, of large weight, hardy and, with plenty of feed, rapid growers.

The Yorkshires are divided into several families with English names indicating where they originated. The Large Yorkshires make heavy hogs, with flesh of finer grain than other large breeds. They are quiet in habit, which unfits them for field ranging, and they also have thin hair which is unsuited to exposure. They are compact in form and have less offal than other large hogs. The smaller families of Yorkshires are easy to keep, and fatten at any age, the flesh being tender and fine. They are very docile, with only a small per cent. of offal, as the noses are exceedingly short, the ears small and bones very fine. They, with the Suffolk, are the most refined pigs bred, and reach perfection in the proportion of food and growth, as very little food will keep them fat and ready for slaughter. The flesh is fine and tender with an excess of fat.

Victorias are medium between the small Yorkshires and the large, with more hair and activity, which better fits them to take care of themselves.

Cheshires, another white American breed, are not so chunky as the Yorkshires of which they are a cross. These hogs, for a number of years in some parts of the country, led the Yorkshires in popular favor. Their meat is of fine quality.

Neapolitan hogs are rare in this country. They are black, come from Italy and have little hair, but are compact, with fine flesh and bone, and they have been used in England to improve both the Berkshire and Essex. Our native hogs are crosses of all breeds.

BLACK BEAUTY.

WHOEVER keeps a pig, whether for pleasure or profit, should remember that one of the most important considerations in selecting a breed is contentment. The quiet pig is always a fat pig, and however healthy the pig, and however good its appetite, if it is restless and uneasy it will always be a hard keeper. Look into any pen of fattening pigs and you will always find the restless, squealing pig the poorest of the lot. The restless pig is also a great rooter, and as most Eastern farmers are fruit growers as well, they do not want their orchards torn up and the roots broken and destroyed. The fruit grower has two objects in view in keeping pigs; of these the most important is, the eating of all wormy and prematurely fallen fruit, and the destruction of all insects contained in them; the other is the making of a reasonable profit on the growing and fattening of the pig for market, and to him the quiet, peaceable, non-rooting pig is indispensable.

Pigs of no other breed so entirely and fully meet these requirements as do the Essex. They are very peaceable and quiet; scarcely ever attempt to root; are very fond of a grass and vegetable diet, and on a full supply of fallen fruit and grass they will always be fat and growing and at any time fit for the butcher, whether they are old or young. Their skin is thin, ears small and faces short, and they have a very small proportion of waste when slaughtered. Their flesh is fine-grained, with a large proportion of ham and shoulder. Some may object to their color, but their clean, plum-colored skin covers a healthy carcass and the color is only scurf-deep, for they dress as white as the whitest breeds. They are prolific breeders, and good mothers. In fact there are no amiable traits possessed by the swine family, that are lacking in the Essex.

Black Beauty, whose portrait we give, "is of royal blood." She was farrowed October 20th, 1877; sire, "Young Negro"; he by old "Negro" imported. Dam, "Miss Dinah," granddam, "Hestor" by "Black Prince," imported, by Stockwell; great-grand-dam imported "Queen May." This sow is a perfect beauty with fine limbs and ears, and short face. She has taken first premium wherever shown in Canada or New York. She is one of the quietest sows ever seen, always fat and brings fine stock.

J. S. WOODWARD.

ESSEX HOGS.

Less than half a century ago the native hogs of Essex County, England, were coarse and of no particular character or color. Subsequently Lord Western improved them by direct crossing with the Neapolitan, a small black breed, imported from the Peninsula of Italy. Fisher Hobbs, of Essex, afterwards continued the breeding of these cross-bred pigs and established the breed of "Improved Essex." Importations of these pigs were made to America, from which the Essex hogs of this country have descended. They are not numerous, as they are overshadowed by the Berkshires which they closely resemble, and to which they are closely related, as both breeds have been improved by crossing with the Neapolitan. Unlike the Berkshires, the Essex are pure black in color, but both sorts are quite similar in the quality of their flesh. They are finer in the bone and smaller in size. They have the same tendency to lean meat; will fatten at any age, and are very easy keepers. They are excellent to cross on coarser breeds, such crosses making grades profitable to fatten.

F. D. C.

Horseman.

THE CLYDESDALE HORSE.

THE origin of this noble breed of horses is not definitely established, but the fact that for more than 200 years it has been favorably known and highly prized along the valley of the Clyde, in Scotland, is well understood. Tradition asserts that more than two centuries ago one of the Dukes of Hamilton brought to his estate in Lanarkshire, Scotland, from Flanders, six fine black stallions, which were kept at Stratharen Castle. The enterprising and sagacious Scotch tenants and farmers of that district readily saw the rare opportunity within their reach, and improved it. By selecting and crossing their best native mares with these large, fine stallions, a class or family of horses was produced far superior to their ancestors.

About 1715 or 1720 one John Patterson went to England and brought to Scotland a Flemish stallion, and from this date the Clydesdale breed of horses has a distinct history. The introduction of this horse into Scotland seems to have had almost as marked an effect upon the draft horses of that country as the importation of the renowned Messenger did upon the road horses of America. Each of these noted horses proved a source of immense wealth to the country of his adoption. In the descendants of the Patterson horse we find mention of the same marks and characteristics which are indications of purity of blood in the Clydesdale breed of to-day; viz., a white mark in the face, white feet, gray hair in the tail and frequently gray hair on the body.

It may not be extravagant to say that for 200 years there is no one subject that has so completely occupied the attention of the Scotch farmer, in which he has taken such a deep interest as in the improvement of this favorite breed of horses. He never fails to see that his horse has the best of care and attention, and although usually taught to work when two to three years of age, thus developing his muscle with his growth, it is done with such care and judgment that he is very seldom injured. So intimately associated are the master and his horse that they seem to have inherited similar qualities and characteristics—one being as decidedly Scotch as the other.

For many generations these horses have been bred with unusual care, depending, not so much upon carefully studied pedigrees, as upon the selection of perfect specimens for both sire and dam, tracing to those families of ancestors which have been the great prize-winners, not only of Scotland but of the United Kingdom. They have also been reared in the great ship-building districts of the Clyde where immense loads are constantly being hauled, and where only horses of unusual power can do the work required.

The Rev. David Ure, in 1792, in writing concerning this breed of horses and the care exercised by the Scotch breeders, says: "They pay strict attention to every circumstance respecting the color, the softness and hardness of the hair, the length of the body, breast and shoulders of the breeders, both sire and dam. No inducement whatever can lead them to encourage the breed of a horse that is not possessed of the best qualities." It has been by careful breeding, by judicious selections, by good feeding, by intelligent, watchful care in every detail for centuries that the Scotch people have produced a breed of draft horses that has scarcely an equal, and which has been a source of national wealth and an object of national pride.

The course pursued by the various agricultural societies and stock fairs of Scotland has done much to encourage the improvement of draft horses in that country. For at least the last hundred years the exhibition of draft horses has been one of the prominent features of all such shows which are held in almost every district of Scotland. The Highland Agricultural Society has become one of the notable institutions of the country, and to win the first prize, or challenge cup, offered by this society for the best draft horses, corresponds to winning the "Derby" in England or making the best record on the trotting course of America.

The ideal Clydesdale is the one combining the greatest number of strong points, with no weak ones; the one that has the least waste material and the best style and action. He should be low and stocky, with a pleasant countenance; a mild, cheerful eye; a broad, deep chest; good shoulders; short, broad back well coupled; a long, broad rump; heavy stifles and round in the barrel. His limbs, which are of the utmost importance, should be short, broad, flat, hard and cordy, and with plenty of silky hair from the knee and gambrel to the hoof—this being considered an indication of superior quality of bone and good breeding. It also affords a protection to the limbs in inclement, changeable weather and a shield against chafes and bruises while at work. The feet should be solid, of good size, deep and broader than on a road horse, but not flat.

The disposition of these horses is one of their most valuable characteristics. They are almost always kind, gentle and true; never fractious, seldom fretful, but free, cheerful and seeming to work almost from instinct. Usually but a single day is required, when a colt is taken from the pasture, to break him to the harness so that he can be driven with safety, and be put to almost any work. The value of such a disposition in a business horse is seldom fully appreciated. The constantly increasing demands for these horses and the high prices which they command, denote the estimation in which they are held by those most familiar with their good qualities. They are exported to almost every civilized country on the globe, and it may be said that the demand far exceeds the supply.

It is only a few years since this breed of horses has been generally known and introduced into this country; but they seem to be received with almost universal favor. Importers find it impossible to procure a sufficient supply in Scotland to meet the demand. There is a call for them from almost every State and Territory. Until recently we have had, *strictly speaking*, no breed of draft horses in this country. Our marvelous success in developing the "American Trotter" has caused us to run wild over the development of speed, greatly to the detriment of our agricultural and business interests. We have bred for speed until our horses have become so reduced in size as to be almost worthless excepting for light weight upon the road, and for that purpose the supply far exceeds the demand. How often do we see farmers merely skimming over the soil, doing half a day's work in a day, obtaining only half a crop merely because their horses are too light and too delicate to perform the labor required.

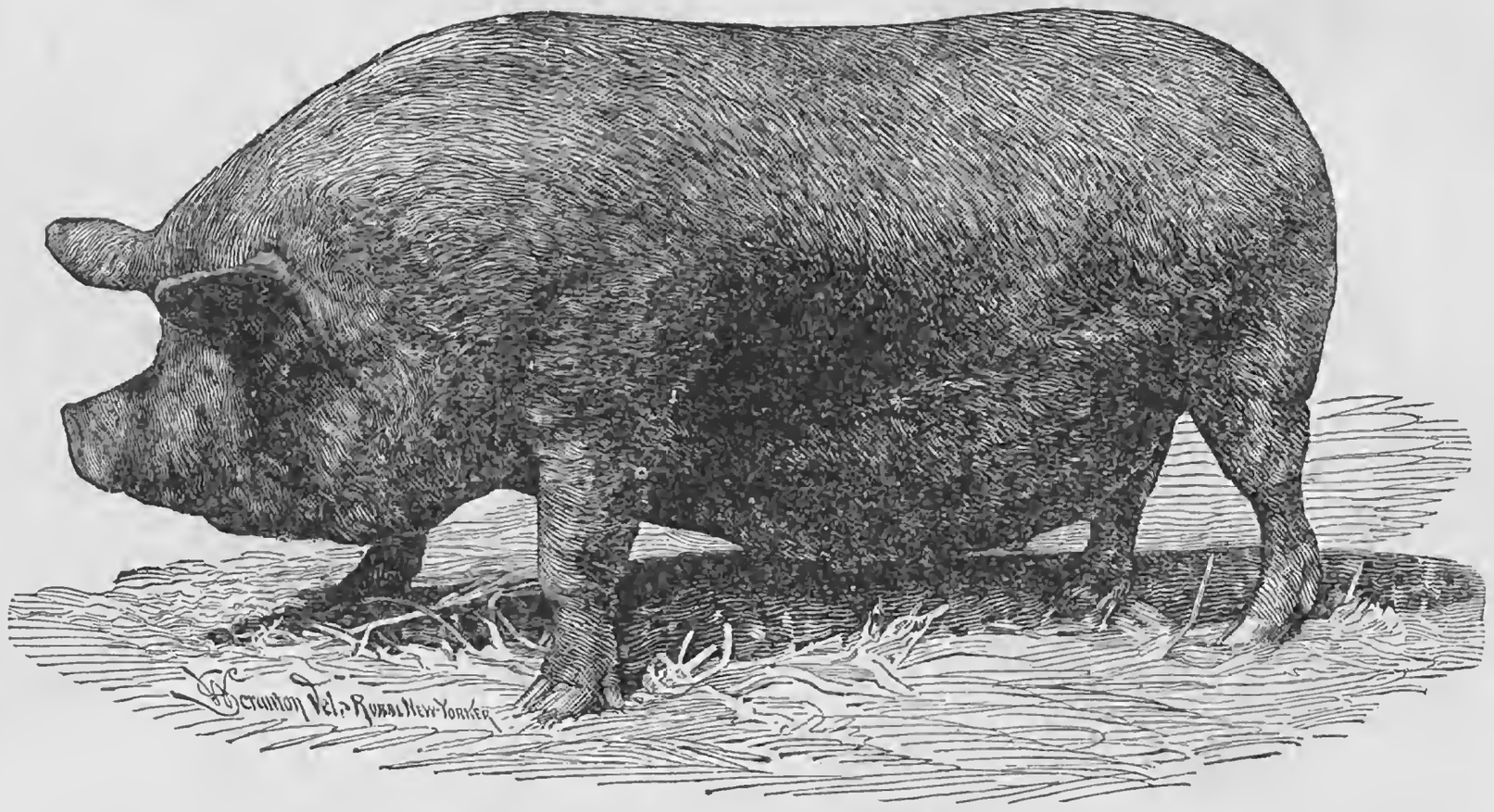
We fully understand and appreciate the fascination, the pleasure and enthusiasm connected with breeding fast horses. We cannot, we would not, dispense with the "American Trotter." The people and the times demand speed—fast trains, fast mails, fast roadsters; but let us not neglect business for pleasure.

We have carried such breeding to too great an extent, greatly to the detriment of the business interests and the wealth of our country. The interests of both agriculture and commerce require an improvement in our general business and draft horses. Every business-man knows how difficult it is to procure a good draft team, a span of horses weighing, 2,800 to 3,200, pounds that can with ease draw a load of three to four tons. The Western States are far in advance of the Eastern in this respect. With a keen eye to the profits of breeding what the public demands, they have at immense cost introduced large numbers of draft stallions to cross on their native mares. It has been a success, and the value of the horses of many sections has thus been at least doubled. The Eastern States should profit by their example and experience. A change must be made before the breeding of horses in the Eastern States will be generally profitable. A few skillful breeders are meeting with marked success in rearing light horses for speed; but a large majority of our farmers find it decidedly unprofitable. To effect the change, no method is so practical and so economical as the introduction of superior draft stallions, and probably no breed is better calculated to cross upon our Eastern, light-boned, spirited dams, than the Clydesdale. The produce is a horse of large size, fine style, excellent carriage, with good head, fine neck, long in the body, round in the barrel, with broad, flat, cordy limbs and good feet. He is a good roadster and adapted to the farm, express, coach, coupe, omnibus; and many of them are superior for the carriage, while all are decidedly business horses, and will command good prices and ready sale.

From large dams the first cross will usually produce horses suitable for the heaviest draft; while almost invariably the second cross will produce such a result. The prevailing color, both in the pure bloods and their crosses, is bay or brown, which is a matter of great importance in business horses. Animals of these colors are durable, always popular, always salable and require less care than any other.

So important did the Highland Agricultural Society of Scotland consider the matter of color that at one time, when they found the grays becoming too prevalent, they made a rule that all horses entered for competition should be either 'black bays or brown bays." Such horses have at all times a ready sale at high figures and pay a handsome profit to the breeder. They require but little attention and care, and are seldom blemished. At three years of age they can, without injury, be put to regular farm work, and at four years to the heaviest labor. They cause no loss of time in breaking and fitting, which usually consumes what otherwise might be profit, in breeding other classes of horses.

The Clydesdale Association of America, an organization composed of the leading importers and breeders of the Clydesdales in this country, is now preparing and will soon pub



BLACK BEAUTY.—FROM LIFE.—FIG. 429.

lish the first American Clydesdale Stud Book which, we think, will be of general interest to the public and of great value to all breeders of draft horses.

The Brown Glancer, No. 1322—Scotch Stud-Book.

This elegant, pure-bred Clydesdale stallion is the property of Messrs. Smiths and Powell, of Syracuse, N. Y., by whom he was imported in October last. He is a bright dapple brown; stands 17 hands high and weighs nearly 1,900 pounds. He was sired by What's Wanted, (913); he by Young Lord Haddo (993); he by Lord Haddo (486); he by Old Clyde (574); he by Scotsman (754). Dam Young Jean, by Brown Glancer (115); he by Strathendrick Tam (823); he by John Anderson My Jo (409); he by Byron (102); he by Clydesdale Jack (172); he by Glancer II (337). What's Wanted's dam, Jess, by Old Clyde (574). Young Lord Haddo's dam, Sally, by Undy Star (888). Brown Glancer's dam, Brisk, by Thane of Fife (854). It will be seen that he is a horse of rare breeding. He is powerfully made, a horse of elegant muscle, with very superior bone, fine finish, and with unusual style and remarkable action. The engraving of Brown Glancer in this issue, was made expressly for the RURAL NEW-YORKER,

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

Smut in Wheat, etc., etc.

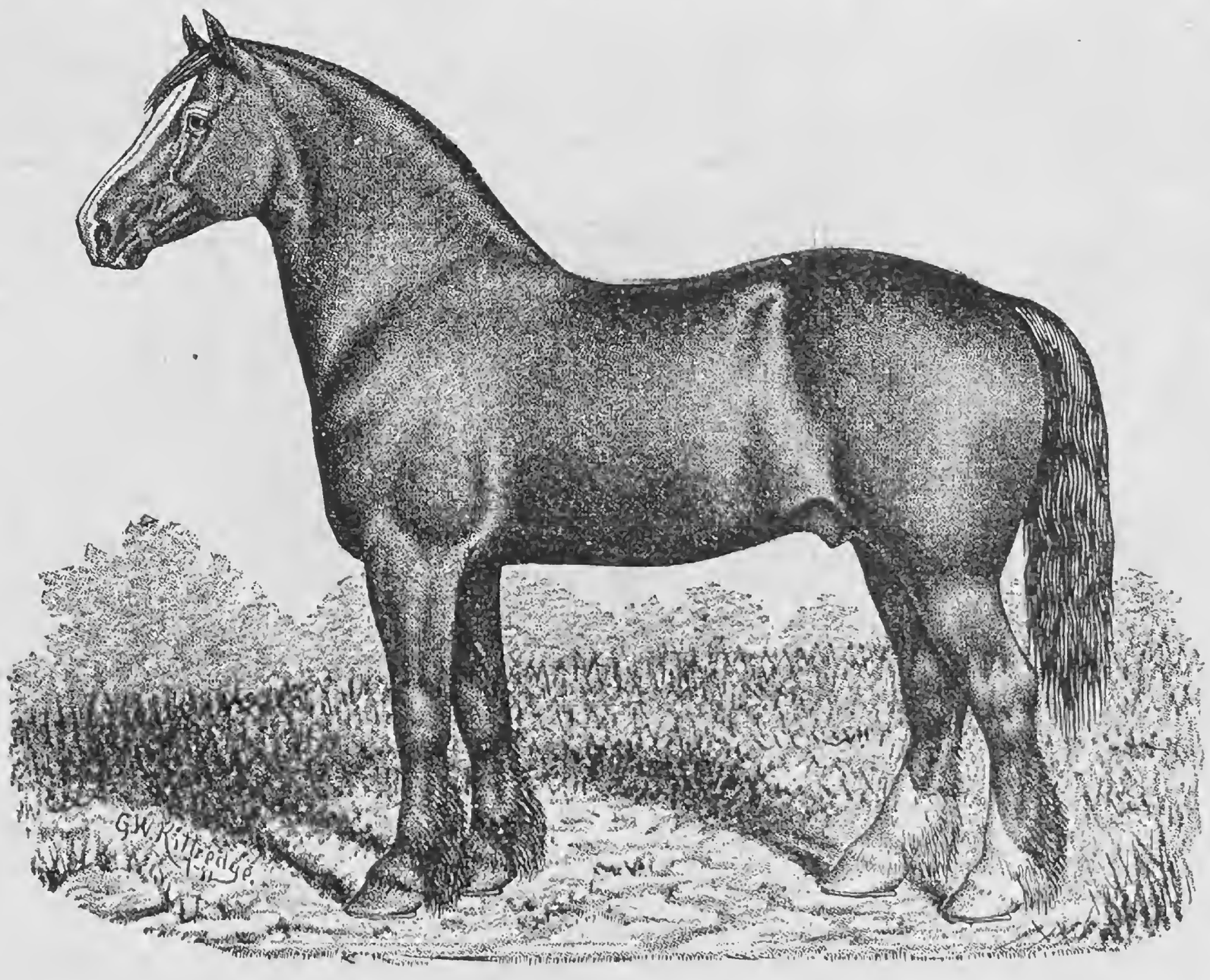
J. G. E., Hood River, Oregon, asks, 1, what causes wheat smut; 2, will "vitrioling" the seed prevent smut, and, if so, why. There, certainly, is no vitality in a grain of smut, he thinks; nor can there be, according to his opinion, any means of transmitting smut that might be on the seed to the head it produces. 3. What grass would be best to choke out fern on a loose, basaltic or granitic soil? 4. Will feeding barley to sheep in Winter cause them to shed their wool in the Spring? 5, Where can Tartarian Buckwheat be obtained for seed?

ANS.—1, Smut consists of the seed spores or fruit of a parasitic fungoid vegetable. These spores are so small that eight millions of them occupy no more than a square inch of surface. Every ear of smutty wheat will probably disperse into the air ten millions of these spores. The enormous number of these seeds—each one of which is ready to reproduce itself millions of times in one growing season—that are floating about in the atmosphere, or are lodged upon the soil, or upon the grains of seed wheat, would therefore make it a very simple matter for a crop of wheat to be affected by smut. These small spores are true seeds, and if moistened and kept warm they can be seen to germinate and produce fruit, under a powerful microscope. 2. There certainly is vitality in a grain of smut, but this is destroyed by several corrosive chemical substances which dissolve and destroy the spores. One of these substances is sulphate of copper or blue vitriol. But there *is* a means of transmitting smut that may be upon the seed to the head it produces, and it is in this way: these very minute spores are small enough to enter the feeding root hairs of the plant and be carried in the circulating sap into any part of it. At least the tissue of the sap may become infested with the fungus whose fine, thread-like mycelium can penetrate through and among the cells, so that "vitrioling" the seed may and will save the plant from any spores that may exist upon the seed and the plant may then have a great chance to escape other infection. 3. Clover would be the best "grass" crop for this purpose. But it would be preferable to clear the soil of the ferns before seeding to grass or clover by thorough plowing and harrowing out the fern roots and sowing buckwheat. 4. Any grain food that is heating in its effect on the blood will cause the shedding of wool. But this trouble is more often due to irritation of the skin from overheating and too great warmth in the Winter, than from any food, unless it is given in excessive quantities. 5. There is no Tartarian Buckwheat in this country so far as we know. A poor variety known as Merino Buckwheat or Indian Wheat sometimes goes under this name, but it belongs to Central Europe, or at least it is grown there upon very poor lands. There are no better kinds of this grain in existence than the common gray and the silver-hulled varieties.

Flax-Seed and Oil-Cake Meal.

T. M. T., Altoona, Ia., asks what is the relative value for feeding purposes of flax-seed and oil-cake meal; 2, would it pay to feed oil-cake meal to dairy cows on pasture at this time, for milk and butter.

ANS.—By the German standard flax-seed is estimated to be worth, as stock feed, $2.47 per 100 pounds, and oil-cake meal $1.61 per 100 pounds. Circumstances, however, might render a certain sum expended for one more beneficial than the same sum spent for the other. For instance, a calf six months old would be more benefited by $5 worth of oil-cake meal than by $5 worth of flax-seed meal, because the former contains a larger proportion of albuminoids and phosphate of lime needed to produce muscle and bone, to enlarge the frame. On the other hand, boiled flax-seed fed with skimmed milk to younger calves fully replaces the cream taken off the milk, and therefore it is more appropriate than oil-meal for calves fed chiefly on milk. Skimmed milk and one pound of boiled flax-seed per day will add greatly to the weight of calves two or three months old and under. Corn, oats and flax-seed ground together, in the proportion of seven and a half bushels each of corn and oats and one bushel of flax-seed would make an excellent mixture for dairy cows, especially in Winter, when the slight excess of oil in it over ordinary food will keep the stomach in good order at a time when so much dry, husky food is consumed. 2, Yes; a ration of a couple of pounds a day would pay well fed to milch cows at pasture.



THE CLYDESDALE STALLION, BROWN GLANCER. FROM LIFE. FIG. 430.

Grass for Wet Fields.

C. N. G., Cairo, N. Y., wishing to seed to grass a field which is wet in Winter and Spring and on which, therefore, it is hard to get a good "catch," as the grass is apt to get frozen out, asks whether Quack Grass or Orchard Grass would be likely to do well on it; and whether it is well to sow any other grass seed or grain with whichever of these may be put in.

ANS—We do not know that Quack Grass seed is offered for sale. Few would sow it on their farms. There is no valuable grass that will thrive well on "wet fields." We would suggest Red-top. Fowl Meadow Grass and Creeping Bent Grass may be mixed with it to advantage. The land might be prepared now and grass seed sown with wheat.—one and a-half bushel per acre. Of course, either grass or grain would do better if sown separately. We are here growing more and more in favor of sowing clover and all kinds of grass very early in the Spring. If sown with wheat, use an inclined-tooth harrow to harrow in. Except for shaded fields, we prefer Timothy or Red-top to Orchard Grass.

Cough in a Horse.

L. R., Lodi, N. Y., asks for a remedy for a three-year-old mare troubled with a bad cough for the last couple of months; there is no discharge from the nostrils, and her condition and appetite are good, except that the glands at the top of the throat are a trifle thick.

ANS.—Give sloppy food and hay well dampened with salt and water. The irritation at the top of the wind-pipe will be much relieved by causing the mare to frequently inhale the vapor from hot water, which may be done in one of the ways lately illustrated in this department, or as good a way as any is to hold her head over a bucket of hot water now and then stirred up by means of a wisp of hay immersed in it. Should the weather prove cold as it lately has, the mare should be blanketed. Apply some stimulating liniment now and then between the jaws and a short distance down the back.

Period of Gestation in Sheep.

W. H., Watertown, N. Y., asks how long is it until lambs are dropped after the sheep is put to the ram, on an average.

ANS.—There is some difference in the period according to the breed; thus Darwin says that kept under the same conditions, Merinos and South Downs differ thus:—Merinos average 150.3 days; South Downs, 144.2 days; half-blood Merino and South Down average 146.3 days; three-fourths South Down blood average 145.5 days. Among 912 ewes M. Tessier found that 140 lambed from the 146th to the 150th day—average, 148 days; 676 between the 150th and the 154th days—average 152 days; 96 lambed between the 154th and the 161st days—average—157 days. Thus the shortest period was 146 days, and the longest 161 days, with this flock, whose breed is not mentioned.

Miscellaneous.

R. M. L., Bedford, Ia., asks for a remedy for grease heels in horses.

ANS.—Keep the feet clean, and for a couple of days apply poultices of equal parts of bran, flaxseed meal and powdered charcoal. Remove all secretions of dry matter and dry scabs and crusts, and then apply, two or three times a day, some oxide of zinc ointment, to be had at the druggist's. Give loosening food, mixed with two drachms of nitrate of potash, mornings and evenings.

R. H. M., Antelope, Kan., asks, 1, how old should a bull be before allowed to serve cows; 2, how many should he serve in a season.

ANS.—1, A bull should be a year old before he is used for service; 2, The number depends a great deal on the age of the bull. When one year old, 10 would be enough; when a year and a half, 20 or even 25 would not be too many; when two years old and over, he should not serve over 50 or 60.

Miscellaneous.

SUCCESS WITH RURAL FREE SEED DISTRIBUTION.

WE have enjoyed our first crop of Cuthbert Raspberries from the plants sent us by the RURAL, and we find them, like others of the RURAL presents, a valuable acquisition. They seem to be perfectly hardy with us; for although standing unprotected in an exposed part of the yard, their growth was unchecked by last Winter's severe cold. We were already growing several varieties of raspberries, but the present prospect is that the Cuthbert will outrank them all. Perhaps I ought to except the Caroline which is a prime favorite with us. We were also greatly pleased with the Laurel-leaved Willows that you sent us last year. They made a wonderful growth; one of the cuttings attained a length of more than seven feet during the Summer, and its rich, glossy foliage was the admiration of every beholder. Being anxious to increase their number so that we may have a supply to set in various places on our premises, we cut the entire growth off, leaving only bare canes, which, by the way, are this Summer growing into finely shaped little trees. The trimmings were all carefully cut into pieces and set in the ground along with grape cuttings and other experiments. Every one of them grew so that now we have an abundant supply for ourselves and perhaps some to spare for friends who will appreciate them. E. K. B.

Sterling Sta., N. Y.

WE copy the following from our Fair Edition of last year: "Of all the wheats we tested last season, 'Fultzo-Clawson' bore the largest, heaviest kernel, though it did not yield as much as many others. We often distrust the reputed parentage of so-called 'hybrid' plants. We are satisfied that the parentage of many new sorts of potatoes is merely guessed at, owing, as we said before, to the extreme difficulty of procuring pollen from the anthers of the flowers. But the Fultzo-Clawson shows a marked likeness to both parents. We hope under continued cultivation it may prove as prolific as the kernels are heavy." This year it ranks in yield among the highest of our 77 different kinds.

THE RURAL DIANTHUS.—I have received from my garden in Madrid, St. Lawrence County, New York, a beautiful blossom from the choice dianthus seeds distributed by the RURAL last Spring, together with the information that there is great promise of many more. I ought to add that circumstances prevented as early and careful a planting as we desired, but the result is quite beyond our expectations and very satisfactory. P. H. W.

COMMUNICATIONS RECEIVED FOR WEEK ENDING SATURDAY, AUG 27.

W. H. R.—C. T. F.—J. B. W.—J. B.—J. W. S.—J. B.—C. W.—E. G. thanks. C. N. G.—J. G. B.—C. H. D.—J. H. M.—J. D. C.—M. C. N.—J. S. B.—J. B.—D. S. M.—A. E. S.—C. W. D.—J. A. W.—thanks.—J. G.—J. W.—N. W.—F. T.—W. M. M.—P. S. C. thanks.—S. S. B.—F. T. C.—G. S. S.—C. W. D.—A. D. M.—Many questions and answers have, of necessity, been held until after the Fair and Wheat Numbers.—J. N. M.—S. C.—H. S.—F. S.—E. J. B.—J. R. B.—G. G. C.—P. M. L.—W. H. S.—J. R. B.—G. G. C. —P. M. L.—W. H. S.—J. W. M.

Dr. T. H. Hoskins says that the Rural New-Yorker is the best agricultural and domestic paper in the world.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, Sept. 3, 1881.

OUR CLUB OFFERS FOR 1881-82.

THE RURAL NEW-YORKER has never until last year clubbed with any other journals. We have, however, for 1881-82, for the benefit of many of our readers, been at great pains to procure the lowest cash rates for the journals mentioned below, so that any of them with the RURAL NEW-YORKER may be subscribed for at very much lower rates than the two separately:

The Inter-Ocean and RURAL NEW-YORKER	$2.75
Detroit Free Press " "	3.00
Weekly World " "	2.75

Any person ordering for one year the RURAL NEW-YORKER and any one of the above Weeklies will receive the Plant and Seed Distribution without application and without charge for postage. All subscriptions for the above journals are promised prompt and careful attention.

THE WHEAT SPECIAL number of the RURAL NEW-YORKER will be next.

PROF BLOUNT (Colorado), in a recent letter, states that he raised Black-bearded Centennial, both as a Winter and a Spring wheat, and finds it succeeds best as a Spring wheat.

THE LONGEST HEAD of wheat raised at the Rural Farm measures precisely eight and one-quarter inches. In due time we hope this kind of wheat will prove worthy of a place in the RURAL'S Distributions.

IN ALL SEEDSMEN'S catalogue descriptions of wheats, it should be stated how many grains there are to a breast or spikelet. Whether the spikelet contains two or three grains, all else being equal, makes a difference of one-third in the yield.

WHEN THE wheat plant is said to be "in bloom," it is really past its bloom, the seed having begun to form. As the anthers shed their pollen or fertilizing dust *before* they appear outside of the chaff or envelopes, it must appear that the widespread belief that rains occurring when wheat is in bloom cause barren heads, is quite erroneous.

PROF. BLOUNT expresses himself in another column that salt applied at a certain time to wheat will prevent rust. The air at the Rural Farm is so impregnated with salt that during cloudy or foggy weather the salty taste is very preceptible upon the lips, and must, of course, impregnate the soil. Nevertheless, of our 77 different kinds of wheat there was not one the leaves of which were not more or less rusted.

THE VALUE AND NUMBER of the gifts which will be presented to those who raise the best crops from the wheat and corn of the present Free Plant and Seed Distribution of the RURAL NEW-YORKER mark a decided deviation from the usual course of agricultural journalism. No doubt it will lead to a settlement of the questions as to whether it is profitable to cultivate wheat and whether flat cultivation of corn—the seed planted in drills—is preferable to the old methods.

MR. J. H. REALL, the secretary of the American Agricultural Association, after a visit to the Rural Farm last July, writes as follows: "My visit to your farm yesterday was a most instructive one, and I do not know where a man could go in this country to get more valuable information on general agriculture. I feel you are doing a great and good work, and its results must be of vast benefit to the whole country. I hope your health will be spared until your fondest hopes are realized in the work you seem to have so much at heart."

IT IS IMMATERIAL to us whether those desiring to avail themselves of the very low rates for the RURAL NEW-YORKER in connection with the other journals elsewhere announced, subscribe through us or them. The rates in either case are the same. We may say, however, that we have made all the necessary arrangements to transact the business promptly and accurately in so far as our part of the transaction is concerned.

MOST FARMERS are careful to shell off the butts and tips of seed corn. They should be just as careful, in the selection of seed wheat, to reject all but the outer seeds of every spikelet, and to cut off the "tip" and "butt," so to speak, of the wheat ear. Those flowers just about the middle of the ear or a little above are the first to bloom and the first to ripen. For a large quantity of seed, of course, any such manipulation would be out of the question. But the RURAL advocates SEED PLOTS for wheat as for corn.

THE CENTRAL PICTURE of the cover is drawn from a photograph of a view in the Rural Ex. Grounds, showing the front of the dwelling and some of the shrubs and trees about. The tree on the left is the beautiful Yellow-wood (Cladrastis tinctoria), planted seven years ago, and one of the most beautiful and in every way satisfactory ornamental trees in cultivation. That on the right, though not distinctly enough shown to be indentified as such, is the Maiden-hair Tree (Salisburia adiantifolia), while between are specimen shrubs of various kinds.

THE FOLLOWING is the most remarkable yield from a single potato we have ever heard of. It comes to us from Mr. W. A. Sanders, the well-known horticulturist, of Sanders, Fresno Co., California, under date of Aug. 1st: "My White Elephant Potato, received from the RURAL NEW-YORKER office, has yielded 130 pounds of the finest potatoes you ever saw—some of them over two pounds in weight. I shall plant the whole of them next week, and shall have by November 25th, two and a half tons of potatoes from the single tuber received in April.

WE ARE INFORMED by one who speaks from his own knowledge and who has no motive for misrepresenting the matter, that certain potato growers around Norfolk, Va., are now sending North for small potatoes (cullings) which they plant at once. These are bought for a dollar or less per barrel. The crop is dug as soon as frost kills the vines, and these half-matured potatoes are kept until February or March and then planted. Now this gentleman assures us that the crop grown in this way is *double* that grown from matured potatoes in the usual way. We merely present the statement as it comes to us.

THE NEW STRAWBERRY, Jersey Queen, illustrated on page 580, has not been tested at the Rural Grounds, and we should hesitate to commend it to our readers, except for trial. It is one of Mr. Durand's seedlings, and most of these, experience has taught us, do not thrive under those ordinary conditions which fit them for general cultivation. We are assured, however, by a friend who, during the past season, saw the vines in fruit at Mr. Durand's, that he never saw more uniformly large berries or vines so laden with fruit. For the rest, we commend the remarks of our well-known contributor, Peter B. Mead.

FOR THE PAST FOUR YEARS we have been endeavoring to establish a new variety of tomato, the peculiarity of which rests in its being half golden and half bright crimson. But this peculiar and pretty marking seems hard to fix, though from year to year we find that there is an increased percentage of those so marked. A golden tomato is a beautiful object—a crimson tomato is beautiful too. The two colors distinctly shown in one, however, would no doubt prove a pleasing acquisition provided the tomato in quality were equal to the best of the well-known kinds of this wholesome fruit. In making our selections for seed, all of the tomatoes so marked are placed together and the seed raised only from the one which is the *last to decay*. Keeping quality, now that we have perfection in form, is the improvement most needed in tomatoes.

IF WE were to suppose that seed-wheat yields but 30-fold, one bushel of seed should produce 30 bushels of crop. But every seed produces more than one head, and every head will produce at the least estimate 25 grains. When therefore two or three bushels of seed are sown, we may see what an immense waste there is. Nevertheless, in all seed-sowing a heavy allowance must be made for waste. For the crop of this season we sowed all the way from half a bushel to three bushels and a-half, and our general impression is that from one bushel and a-half to one bushel and three-quarters for the Rural Farm produces as good a yield as any other quantity—larger or smaller. This, however, is no safe guide for other farms. Each farmer, guided by the productiveness of his soil, its preparation and the crop previously sown, must judge of the quantity of seed to be sown to the acre, for himself. As a rule, it may be said that the richer the soil and the better it is prepared, the less seed will serve.

SILVER CHAFF WHEAT.

WE have spoken both well and disparagingly of Silver Chaff Wheat. We have now again to speak in its favor. Our own field of about five acres has yielded better than Clawson ever did upon our farm; while a neighbor on a trial plot of about half an acre of richer land has raised, at the least estimate, 35 bushels per acre. The wheat averaged five feet in hight, the heads four inches in length, while many heads were over five inches. The spikelets averaged nearly three kernels. It stood the past Winter remarkably well, making a fine stand where, in adjoining fields, Clawson was injured. From all that we have heard, Silver Chaff is not so well adapted to a wide range of territory as Fultz or Clawson; but upon land suited to it, it is capable, we are confident, of yielding heavier than either, while we are told it makes a quality of flour superior to that from either.

DURABILITY OF ENSILAGE.

FROM AN artiele recently published by Dr. Werner, a leading authority on the subject of fodders, it appears that ensilage has been kept for a term of six years in a state of excellent preservation, at the farm of the agricultural school at Altenburg in Hungary. Cattle ate the product readily, in spite of its age. It had been prepared from fodder-corn according to the common Hungarian method, that is to say, the corn was allowed to wilt somewhat, after mowing, and was then trodden firmly into great trenches six or seven feet deep by twelve feet, or more, wide, and of any desired length. When the trench has been filled to the brim, the fodder is piled up, above ground, crowning like a roof, often to a hight of nine or ten feet. The heap is then covered with earth, and when the fermentation has gone far enough so that the mass sinks upon itself, pains are then taken to fill up or beat together, as often as may be necessary, any cracks that may form in the covering of earth. Werner remarks that the upper layers of this ensilage had the color and the agreeable odor of brown-hay (Braunheu), while the lower layers exhibited the characters of sour-fodder more and more clearly the deeper they were. This capital observation on the durability of ensilage is all the more interesting for us Americans since the Hungarian climate, with its hot Summers, is in some respects not unlike our own.

THE FARMER'S OPPORTUNITY.

WITH THE Fair season comes another opportunity for the farmers to select a good agricultural journal for their special study. Things have changed during a few years past. A few hundred years ago the people who made the most noise in the world, the warriors and soldiers and others of that class who considered themselves essentially the "first families" of their countries, scorned the gentle arts of reading and writing as beneath their notice. The power of the pen to form opinion, to lead thought, and to instruct, is greater in the arts of peace than in politics and war. Especially, in these days, is the agricultural journal a vast influence for good. Since it has become common and influential, the art and science of agriculture have made the most wonderful advances. The food and clothing supplies of the world have vastly increased, and have made possible the happy existence of millions that would otherwise have never been born. For abundance of food creates comfort and wealth, and renders subsistence easy for vastly increased numbers. The present enormous immigration of 600,000 persons, with untold millions of property, into this country, the present year, is an outgrowth of our present agricultural prosperity made possible by agricultural journals. For these have advocated, explained and encourged the use of improved methods, better stock, more valuable seeds and crops; and, above all, have educated the farmers, and have created within them the ambition to excel in their art. And yet, a few years ago, the farmer who read an agricultural paper was scornfully termed a "book-farmer." But a wonderful change has come in this respect, and the farmer, who, like those fierce, ignorant old knights of old, gloried in his aversion to reading, has become not only a reader, but a writer, and is telling of what he knows to other interested and eager farmers. Now the first paper that the farmer looks for, and opens when he gets it, on his weekly visit to his post-office, is his agricultural journal. And the farmer who is most respected and consulted by his neighbors, and whose farm and work are models and examples for the neighborhood, is the one who reads and studies the agricultural papers the most carefully.

BREVITIES.

A matter of course—a horse race at "agricultural fairs.

IF our readers do not have a merry time with our next Seed Distribution—surely it will not be the RURAL'S fault.

"ENTER me for a jackass," was the double-barreled dispatch sent by an honest farmer to the secretary of an agricultural fair.

RESPECTABLE agents for the RURAL NEW-YORKER wanted everywhere. Examine the Premium Lists. Anyone sending us seven subscribers at two dollars each (our only price) will secure the RURAL for one year.

THE Rural Branching Sorghum is, without question, a fine success. No doubt, another year, seedsmen in general will supply the seed. As an ensilage plant, it bids fair, in many parts of the country, to take the place of Indian corn.

AN engraving from a specimen head grown at the Rural Farm of the Black-bearded Centennial Wheat will be presented in our SPECIAL WHEAT NUMBER next week. The beards of this grain turn black and fall so that the head becomes quite beardless.

THERE is, as Mr. Killebrew remarks, no other crop that responds more promptly to the application of manure, or that better repays good cultivation, than oats. On poor ground, with slovenly culture, they scarcely yield enough to pay the expenses incurred, take them year after year.

PROBABLY a higher class of advertisements has never been collected together in any one issue of a rural journal than is to be found in this number of the RURAL NEW-YORKER. We would thank our friends for mentioning this journal when corresponding with any of those whose announcements appear.

THE Brinkle's Orange has heretofore found a place in many gardens for its fine quality, nothwithstanding its tenderness and the fact that it thrives well only in comparatively few sections of the country. But the Caroline is as hardy as any raspberry ever grown in the Rural Grounds, and from all accounts, it bids fair to thrive anywhere.

LAST year the Wysor Fultzo-Clawson offered in our present distribution announcement, bore the largest, heaviest grain we have ever seen. This year, owing to long-continued rains and cloudy skies, all of our wheats are more or less shrunken—the Fultzo-Clawson as much as any. When, therefore, our subscribers receive the seeds they will kindly make due allowance.

PROF. Brewer questions if all the money won at agricultural fairs pays more than half the actual expenses of the winners in entering the object exhibited, caring for it there, and getting it home again. It is not the cup won at a boat-race, that incites young men to do so much labor, spend so much time and money, and exercise so much self-denial while training, but its possession is the sign of victory—and so of the prizes won at our fairs.

Many of the specimens of wheat which we have received in competition for the several little premiums offered by the RURAL a few months ago, are simply wonderful as to size, weight and beauty. Except that we have already more than we can well attend to at this season, when both farm and editoral work presses hard, we should be glad to have all of the specimens nicely arranged and labeled and exhibited at some of our principal fairs. It may be doubted whether so many or such perfect specimens have ever before been collected together.

PROF. ARNOLD forcibly remarks in another column (all should read the article), that a man whose house stands but one chance in a thousand of being annually burned, will not allow it to go a day without being insured, while the income from his dairy, often worth much more than his house, and which stands about one chance in five of being cut down every year, will be allowed to run indefinitely without making any effort to insure himself against oft-recurring losses. Where scholars are so inapt and tuition so expensive, experience may well be said to keep a dear school.

THE RURAL NEW-YORKER FREE

PLANT AND SEED DISTRIBUTION AND PREMIUM LIST FOR 1881-82.

THE RURAL DENT CORN.

The heaviest weight of kernel and ear. One hundred and seventeen bushels of shelled corn per acre on 50 acres. So certified to.

The Rural Thoroughbred Flint.

Raised in the Rural family for 26 consecutive years.

Wysor's Cross-Bred Fultzo-Clawson Wheat.

The largest kernel of any wheat in cultivation—so claimed. Hardy, disease-resisting, prolific.

MATCHLESS WHEAT.

Four kernels in a breast. Very prolific and hardy. At the rate of 72 bushels per acre has been produced on small plots.

Shumaker Wheat.

Early. Prolific. Hardy.

CHALLENGER LIMA BEANS.

"Seed selected through three generations," Often six beans to a pod. "Double the yield of any other Lima."

Perfection Golden Heartwell Celery.

Several hearts to a stalk.

The Perfect Gem Squash.

A marvel of productiveness. Fine-grained, sweet, dry, combining the excellencies of both the summer and winter squash.

RURAL CHATER HOLLYHOCK.

A perfection flower. Three feet of brilliantly colored rosettes; white, lemon-buff, rose, red, crimson, maroon and nearly black.

All Except Three Never Offered For Sale.

$2,000 worth of Gifts from Rural Patrons for the Best Yields.

NOTES FROM THE RURAL EXPERIMENT GROUNDS.

For the information of many into whose hands the present number of the RURAL NEW-YORKER may fall, or who see it for the first time during the past four or five years, or since it has been under its present management, it is necessary to repeat that the Experiment Grounds owned by this journal and worked, in so far as this is possible, in the interests of its subscribers, consist of eighty-two acres. Eighty acres, situated in Queens Co., L. I., comprise the farm, where all new agricultural seeds of special promise are tested. During the present season we have tested 77 varieties of wheat; 15 of new seedling potatoes; 16 of corn; 12 of oats; 6 of fodder plants, many new vegetables, roots, etc. Two acres and a fraction, situated in Bergen Co., New Jersey, are devoted to experiments with all sorts of hardy ornamental trees and shrubs, small fruit, grapes, etc., etc. Since we have neither plants nor seeds to SELL, since, indeed, we have no interests to subserve save those of our readers, our reports of the results of our tests are fully accepted as trustworthy, and the true value of hundreds of new and high-priced seeds and plants is made known. When, by such tests, we find that a given plant is more valuable than others of its kind which have been generally cultivated, we, at once if practicable, place it in our next Distribution, and send it without charge to all of our subscribers who apply. These distributions are

ABSOLUTELY FREE,

and their primary object has always been, and is, to promote the interests of agriculture and horticulture everywhere. It is true we thus seek to extend the influence of our journal, but our first aim is as above stated, and we beg to say that the means of the Rural New-Yorker are such, that the cost of our Distributions is not permitted to stand in the way of an introduction of new seeds or plants, which either cannot be procured elsewhere, or if they can, only at a very high price.

POSTAGE.

As all our readers know, we have heretofore borne a part of even the postal expenses of the seeds and plants we have sent out. Our object in not charging the entire postage to those who apply is to prevent the possibility of a suspicion that we receive in *any form* the slightest compensation for our labor or for the heavy cost of these distributions. Besides, these offerings are *not premiums* and they are sometimes made without requiring either an application or *any* payment of postage. We *hold the right to continue them or to discontinue them as we may determine.* The postal cost of our present distribution will be about (we can not determine it positively at this date) 10 CENTS PER COLLECTION. *Of this we shall charge those who apply 6 cents only.* Those who subscribe through us, however, for the "Inter-Ocean," Detroit, "Free Press," or "New York World," are not required either to send any postage or to make any application, as this has been provided for in the clubbing price with the publishers of those journals.

$2,000 FOR THE BEST YIELDS FROM THE RURAL SEED.

The valuable list of gifts to those who succeed in producing the best yields from several kinds of seeds in our present distribution will be found following our description of the kinds so offered. The goodly number of articles will give reasonable grounds of hopes to all who compete for them. The object is not only to awaken the liveliest competitive interest in the growth of the seeds, and to inspire a love of careful, painstaking, systematic culture, but also *to test the value of new methods* of culture. These will be presented in these columns in due time. The RURAL merely dictates as to the number of seeds to be sown and the area upon which they shall be sown, and the kind of culture to be given. The intensity of the culture, the kinds and quantities of manure used will be optional with those who enter for the gifts.

FIG. 430. SIDE VIEW.

FIG. 431. KERNEL OF THE RURAL DENT CORN.

The First Free Distribution for 1881-2.

The Rural Heavy Dent Corn.

The name of the originator of this variety of corn and its history are not presented for excellent reasons which will appear later. The engravings, Figs. 430 to 432, A and B, are from life and the ear is in size merely an average of those sent us for seed. Of this we have about two acres growing at the Rural Farm, which will not have matured until these pages are before our regular readers. We therefore present the letter and description of the very trustworthy farmer who first called the variety to our notice.

Loudoun Co., Va. 4-2, 1881.

Editor RURAL NEW-YORKER:

Dear Sir: Your favor of March 30th, to hand. I am glad the corn reached you safely.

A surveyor measured one acre of standing corn, thought to be an average of ten (10) consecutive acres in a fifty-acre field, which measured acre made 114½ bushels of shelled corn of 56 lbs. to the bushel. The corn was planted about the first of May and husked out the latter part of September. The crop above stated was raised in 1880. Four of the best farmers in my neighborhood husked the above acre while the stalks were still standing, and shelled out as above stated. The same field was in corn in 1878, and the whole 50-acre field made per acre 117 bushels of shelled corn of 56 lbs. to the bushel, which gave the entire yield of the field 5,850 bushels. The corn was planted three feet each way, thinned to two stalks in a hill. It is generally a single eared corn, though often two good ears grow to a stalk.

About 25 years ago I picked out a few of the best ears, the seed of which was planted the next year to itself, and produced a better crop than the other portion of the field. The ears now are double the size they were then.

I have taken a number of State and county premiums for the best sample as well as the largest product. The field on which the above crops were raised is rolling upland and not above the average of my farm of 485 acres.

Very Respectfully,

WM. H. B.

We may add that a peculiarity of this corn is that it shrinks less than any dent corn we know of, while the shape of the ears and of the kernels, and the almost unvarying regularity with which they are placed in the rows are unexceptionable. *The same weight* of corn will be sent to each applicant so that all may have an equal chance.

FOR HIGHER LATITUDES

the Rural Heavy Dent Corn would not be suited. As we desire that all of our subscribers may, as far as possible, interest themselves in this great corn trial, we have been growing a very prolific kind of new hard corn which we shall call

The Rural Thoroughbred Flint.

All who prefer this to the Dent will kindly so designate in their letters of application. These applications, it is requested, will be made out on separate slips of paper, with full name and address given as follows:

"Send seeds. (Dent or Flint, as preferred).

JOHN HARRISON,
Newark, Kent Co.,
Michigan.

Six cents inclosed."

The Rural Thoroughbred Flint is extremely early; in favorable seasons it matures in one hundred days. It grows to the hight of six feet, branching considerably, each branch often bearing an ear and the main stalk two. It has been cultivated in the Rural family for 26 consecutive years.

Wysor's Hybrid Fultzo-Clawson Wheat.

Next we shall offer the above entirely new wheat, which has been grown at the Rural Farm for three years, always yielding heavily. It is extremely hardy and the grains in favorable seasons are probably larger than those of any other variety known. The relative size is shown in the engraving, a grain of Clawson, (A) Fig. 435, having been selected for comparison. The average head, Fig. 433, is 3½ to 4 inches long, with seven breasts to a side and two kernels in a breast. The straw grows to a hight of 4½ feet. It is not heavy but very strong, and never lodges. Mr. Wysor (the originator) gives the history of this wheat as follows:

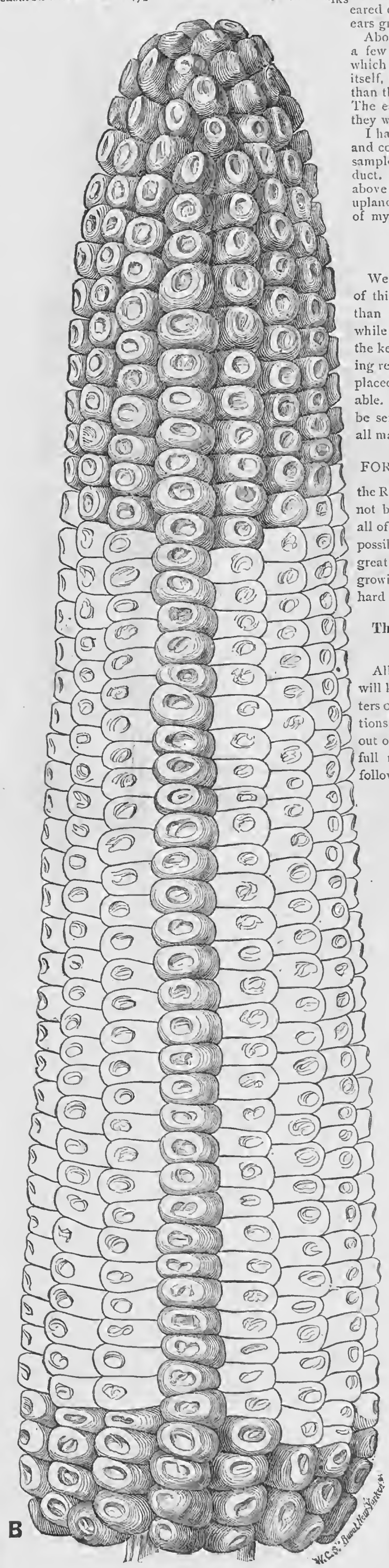


FIG. 432. RURAL DENT CORN.

July 25th, 1881.

I give below the history of F. C. No. 1.

This wheat originated in the year 1877 from a head of Fultz impregnated with pollen from the Clawson. It was one among four or five kinds to which this crop gave rise, and was selected on account of the large size of the kernel. A cut with a short description of it appeared in the Wheat Number of the RURAL for September 13th, 1879. As it had not then been sufficiently tested, no other claim was there made for it beyond that it carried the largest kernel of any of our American wheats. It still maintains its superiority in this respect, being larger than the much lauded "Golden Grains," with which I have compared it this season. It has now been sown long enough to develop other important qualities, not the least among which is its ability to withstand without serious injury the attack of mildew. Till this season, it has been sown on rich alluvial soils, which had never, except in very dry seasons, yielded anything but large crops of rust-eaten straw, containing but little grain. The Fultzo-Clawson has never once been injured, and the quality of the wheat has always been good. I do not believe there is a so-called "rust-proof wheat," but this will come as near being rust-proof as any. It is as hardy and reliable as the Mediterranean, and is, besides, a much greater yielder. It may be always relied upon to produce a fair crop under unfavorable circumstances.

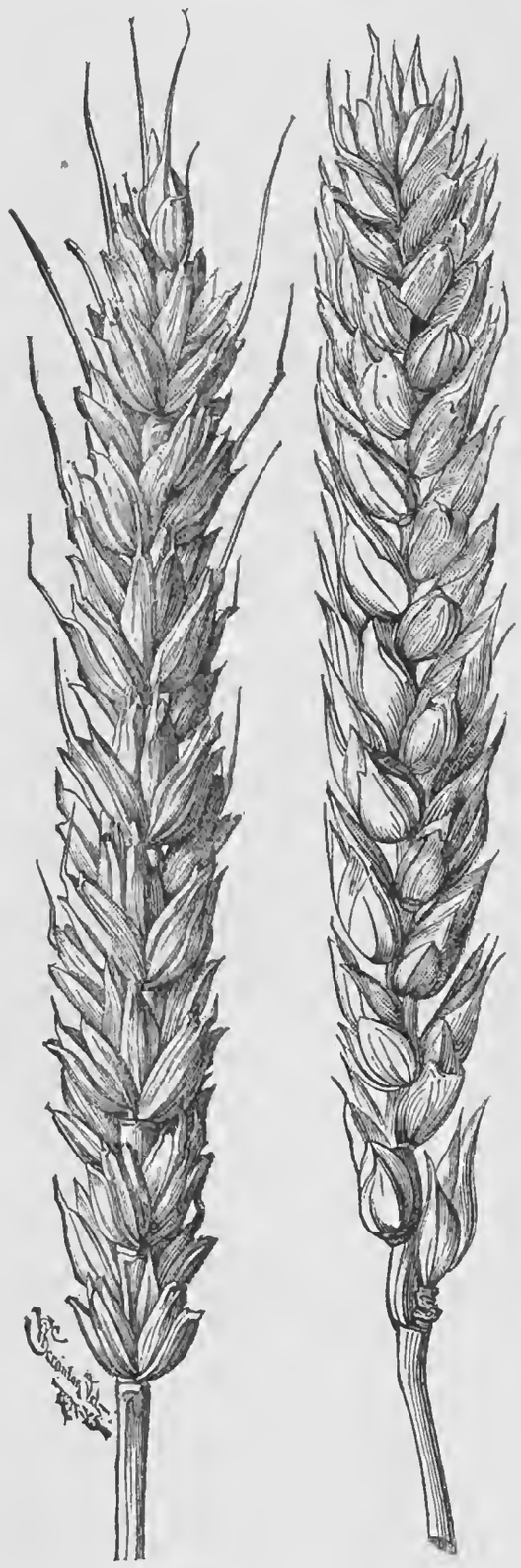


FIG. 433. WYSOR'S FULTZO-CLAWSON.

FIG. 434. SURPRISE.

On small plots, it has yielded at the rate of 60 bushels per acre; on areas exceeding an acre, 28 bushels per acre. Twenty bushels of it were sown for the first time last Fall on 12 acres of thin clay soil with 200 lbs. per acre of bone dust and guano mixed. The yield of the whole field is estimated at 25 bushels per acre in the face of a drought of 8 weeks' continuance, and it is of a quality unsurpassed.

Its time of ripening is from 2 to 4 days later than that of the Fultz: the chaff is of an orange color, and the straw, a golden yellow. The flour made from it is superior to that from either Clawson or Fultz.

FIG. 435.

Yours very truly, H. L. W.

The same quantity of this wheat will be sent to each applicant. The presents, as detailed in the list, apply only to the two kinds of corn above mentioned, and this wheat. Next we offer the

Matchless Wheat,

with a $25.00 cash premium for the five heaviest heads. See Fig. 434, from life.

It was so named by Mr. Wysor, who sent us a few grains for trial several years ago. The past season we raised one-tenth of an acre, the product of which was three bushels one peck. This is all the seed there is of this variety, and the quantity sent to each applicant will, necessarily, be very small. We hasten its distribution in the hope that it may prove among the most prolific varieties known, for the reasons: 1st., that it is extremely

FIG. 436. RURAL CHATER HOLLYHOCK.

hardy; 2d, that the straw is heavy; 3d, that it resists rust, and 4th, finally that each breast matures three and often four grains. The straw averages four feet in hight. The average head is nearly three inches, six breasts to a side. The kernel is white and hard and of medium size. Twenty-five dollars in cash will be given by the RURAL for the five heaviest heads.

This originated at the same time, and from the same ear as Wysor's Fultzo-Clawson. Mr. Wysor says that he believes it to be the most prolific variety of wheat known, and that it will probably succeed wherever Clawson does well. "On small plots," Mr. Wysor writes, "it has yielded at the rate of 72 bushels per acre."

Shumaker Wheat.

Two years ago we received, at our request, two pounds of this from the Michigan Agricultural College, having heard that it had yielded forty bushels to the acre in Michigan. Our experience with it has been most satisfactory. It yields here, and we have not a first-rate climate or soil for wheat, over thirty bushels to the acre. Of our 77 varieties this proves to be the very earliest and one of the hardiest. It takes the lead of all others in vigor of early Spring growth so that it has a better chance of resisting all insects and diseases. The past backward season it was headed out May 22, and ready to cut July 7.

The rather slender straw grows 4½ feet high and is of a reddish color. The narrowly pointed heads average three inches in length. Six breasts or spikelets, two grains each, beardless as shown in the engraving. Fig. 439. The kernel is long, medium-sized, dark amber, hard and it makes, we are told, an excellent flour. The chaff is brown, clean and glossy. We are not aware that this valuable grain has been offered by seedsmen, for which reason it has been deemed desirable to place it as one of the kinds of our present distribution.

Challenger Lima Beans.

Mr. Richard Purdue brought to the RURAL office last year a number of the beans which have been named as above. The pods, of which our engraving shows the average size, contained *six* beans. The following, which we believe to be entirely trustworthy, is all that need be said respecting this variety.

N. J., Jan. 26, 1881.

Editor RURAL NEW-YORKER:

The Lima Beans which I sent you have been kept strictly pure in one family for three generations, being constantly improved by saving seed from the strongest vines that had the largest number of beans in the pod. When green they are very compact in the pod, and will yield almost double the bulk of shelled beans to the bushel of any other Lima, which makes them the best bean for either market or private use. The majority of all the pods contain five beans and occasionally six. Yours respectfully,

RICHARD PURDUE.

We have a large plot of the Challenger Lima growing; but, at this writing, it is too early to speak as to their size or yield.

Seventh, is offered what we believe to be a decided improvement in that choicest of vegetables, celery.

Perfection Golden Heartwell.

This entirely new strain, a sport of the Golden Half Dwarf, is just what its name indicates. The habit is also "half dwarf," but its valuable peculiarity is that each inner stalk, instead of producing one single heart, as in

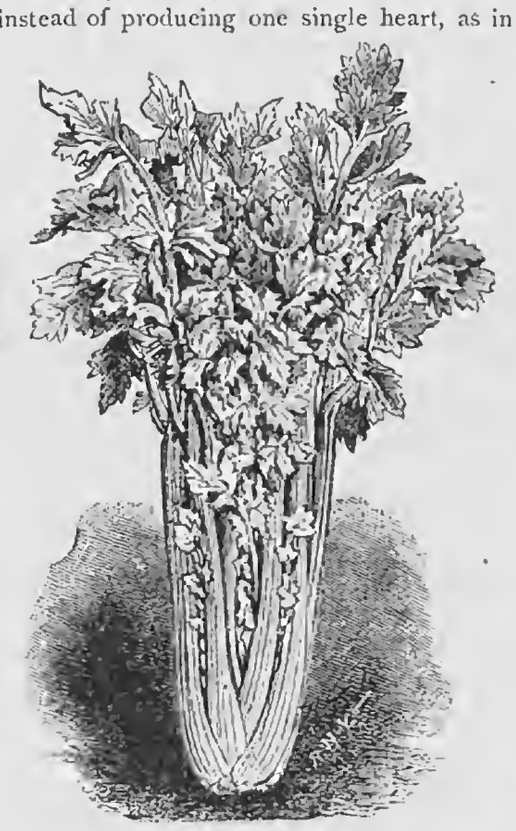


FIG. 437. PERFECTION GOLDEN HEARTWELL.

other kinds, forms several which when mature literally burst through the outer coverings, as shown in the engraving. It fairly promises to take the place of any kind previously introduced. Fig. 437.

The Perfect Gem Squash

was offered last season for the first and its very superior qualities make us wish to place it in the hands of all our subscribers. It is a marvel of productiveness and excellence, while its keeping qualities are scarcely surpassed by those of any other kind. It combines the excellence of both Winter and Summer Squashes. A vine was shown to us by the introducer, that bore 24 perfect squashes within an area of three feet square.

It is probably the sweetest, richest squash in cultivation and we trust our readers may give it a fair trial. Finally for our lady readers we have to offer the

Rural Chater Hollyhock.

The RURAL attempted years ago to distribute Chater's strain of Hollyhock, but owing to the failure of the seed crop in England, which was caused by the hollyhock disease, our effort was a failure or nearly so. Since that time we have, at the Rural Grounds cultivated the best named varieties of Mr. Chater's strains, and we can assure our readers that nothing like them is known in America. The plants are dwarf and the stems are a mass of brilliant rosettes, as double as possible from near the ground to the tip of the flowering stem. The colors are white, buff, lemon, rose, chocolate, crimson, and a very dark purple, nearly *black*. As we can procure no seeds from England, our supply will enable us to send but a very few to each of our readers and we respectfully ask their best attention, offering our assurance that they will be amply repaid therefor. Fig. 436.

FIG. 439. SHUMAKER.

Special Notice.

Only yearly subscribers are entitled to apply for this Distribution.

Two three-cent stamps *must be* inclosed in the letter of application, or we cannot agree to fill the order. Our object in bearing a part of the postal expense is, as before stated, to prevent the possibility of a suspicion that we receive in *any form* the slightest compensation for our labor or for the heavy cost of the undertaking. As stated elsewhere, however, we have made such arrangements with the Chicago Inter-Ocean, Detroit Free Press, N. Y. World, and several others, as will be seen, that those who order those journals *with* the RURAL NEW-YORKER will receive the seeds WITHOUT application and without the postage, that being included in the CLUB PRICE, to simplify matters.

Each letter of application will be NUMBERED when received, and the seeds and plants will be sent in that order.

It will save us trouble, and it will save our subscribers trouble and expense if they will make their application for the seeds and plants in the same letter in which they renew their subscriptions. We would also thank them merely to say: "SEND SEEDS," and to designate which of the two kinds of Indian Corn offered is preferred. Those two words will convey all the instructions we need.

All questions appertaining thereto should be written on *separate slips of paper*, otherwise there is a chance of their being entirely overlooked, or, at least, of not being promptly answered.

Finally, in order to provide against the possibility of mistakes, disappointment or any dissatisfaction, we agree to duplicate all orders that from any cause may have failed to reach their destination at the close of the Distribution, which will be the latter part of next Spring. The most careful details of instruction as to the treatment of the seeds—which will be distributed about the first of February—will be given in future numbers of the RURAL NEW-YORKER.

It will be useless for any persons to apply for our seeds or plants unless they are yearly subscribers. The reasonableness of this restriction will appear without further remark. We might be willing, or even desirous, to supply our seeds to all who read our announcement; indeed we would be glad to do so since there is no more effectual way of promoting the interests which the RURAL has at heart, but this is obviously impossible. Hence we strictly limit our distribution to subscribers.

We desire to make it plain, also, that our seed and plant distributions are in no sense *premiums*. As it is optional with us whether we offer them or not, it is our privilege to state when the distributions shall begin and when they shall be discontinued, so long as we liberally fulfil every obligation to which we commit ourselves.

FIG. 438. CHALLENGER LIMA BEAN. FROM LIFE.

THE RURAL NEW-YORKER PRESENTS

FOR THE

BEST YIELDS OF CORN AND WHEAT FROM THEIR FREE DISTRIBUTION of 1881-82.

$2,000 Worth of Presents.

WHEAT PRESENTS.

For the BEST YIELDS of the new Cross-bred Wheat "Fultzo-Clawson" from the SEED of the RURAL NEW-YORKER FREE DISTRIBUTION. To be sown next Fall, (1882).

One of Walter A. Wood's latest improved Automatic Twine Self-binding Harvesters, presented by the RURAL NEW-YORKER, $300.

One of Higganum's Automatic Corn Planters, presented by the Higganum Mfg. Corporation, Higganum, Conn. $. 75.

One American Fruit Dryer, presented by the American Fruit Dryer Co., Chambersburg, Pa. $ 75.

One Weed Cabinet Sewing Machine, presented by the RURAL NEW-YORKER. $75.

Fertilizers from our stock of complete manures, pure bones &c., to the amount of fifty dollars, or FIFTY DOLLARS IN CASH, as winner may select, presented by Mapes Formula and Peruvian Guano Co., New York City. $50.

Collection of Flower and Vegetable Seeds and Bulbs, presented by J. M. Thorburn & Co., 15 John St., N. Y. $50.

One Cycle Ensilage Cutter, presented by New York Plow Co., 55 Beekman St., New York. $50.

One Silver-plated Tea Set, six pieces, Tea, Coffee and Hot-water Urns, Cream Pitcher, Sugar and Slop Bowls, presented by the RURAL NEW-YORKER. $48.

Victor One-Horse Grain Drill, presented by Ewald Over, Indianapolis, Ind. $25.

One handsome Silver-plated Ice Pitcher, presented by the RURAL NEW-YORKER. $14.

Collection of Flower and Garden Seeds, presented by R. H. Allen & Co., 189 and 191 Water St., N. Y. $10.

100 Skowhegan Raspberry Plants, presented by J. T. Lovett, Little Silver, N. J. $10.

Collection of New Grapes, one vine each, Poeklington, Jefferson, Prentiss, Duchess, Early Dawn, Vergennes, Highland, Lady Washington, Bacchus, presented by J. T. Lovett, Little Silver, N. J. $12.50.

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One Keystone Washing Machine, presented by the RURAL NEW-YORKER. $6.

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One No. 3 Cornell Corn Sheller, presented by Treman, Waterman & Co., Ithaca, N. Y. $18.

Adamant Plow, presented by New York Plow Co., 55 Beekman St. $15.

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Prof. S. W. Johnson, Sheffield Scientific School, Yale College	Conn.	Prof. Elbridge Gale. " "	"	Mrs. B. C. Dunlap	Wis.	Miss Alice Hough	"
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Prest. T. T. Lyon, Pom. Society	"	J. T. Lovett	"	Prof. E. W. Stewart	"	Prof. S. M. Tracy	Mo.
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1882.

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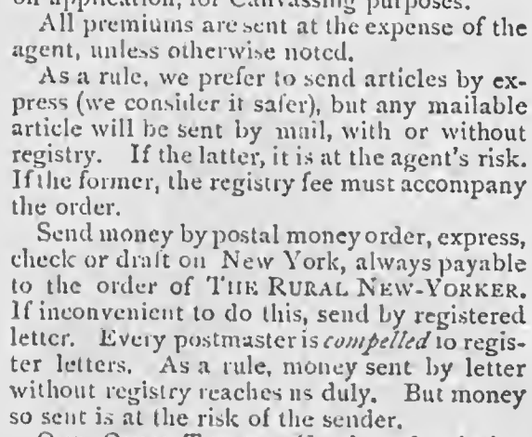
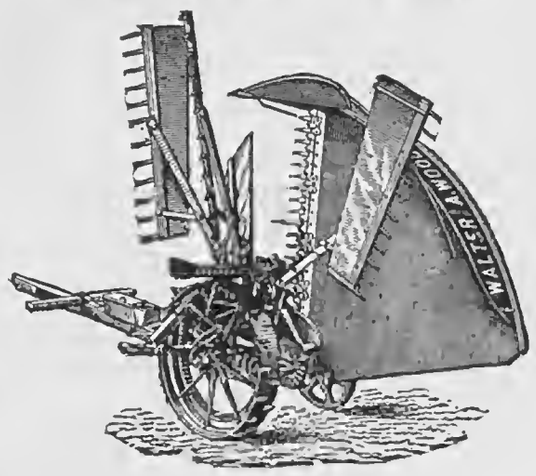


mower. The one represented by the above illustration has a 4 ft. 3 in. cut, and is fully warranted. The manufacturers of this machine have received a great many medals of honor, both in this and foreign countries and all are well deserved and honestly won. Price of the above mower $85. Given for a club of 100 subscribers at $2 each.

No. 2. Walter A. Wood's Junior Sweep-Rake Reaper.

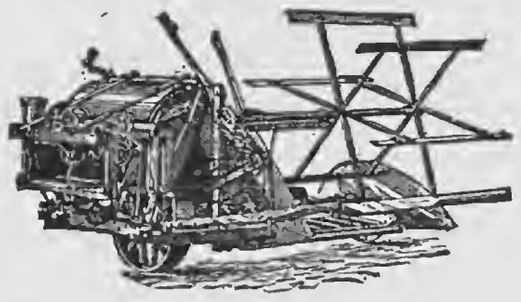
This machine was brought out in Europe in 1872, and in this country in 1875. Since its introduction its success has been rapid and uninterrupted, its sales in that period having reached a very large number, both here and abroad. The steady increase in sales from year to year, and the victory it has won in field contests, demonstrate its merits beyond any encominms of ours. Taught by practical experience in the field, the manufacturers have strengthened this machine from year to year—the most important improvements having been



made in 1878, by adding the fifth rake, and automatic device for completely controlling the rakes. There are many valuable points of excellence about this machine, which space at this time will not permit us to mention; but we confidently believe that whoever is fortunate enough to secure one of these machines will be entirely satisfied with it. We give the Junior with 5 ft. cut; price, $125 for 150 subscribers, at $2 each.

No. 3. Walter A. Wood's Automatic Twine Self-Binding Harvester.

This machine was put upon the market in 1880 to meet a growing demand for a self-binder that uses twine as a material for binding, instead of wire. It has been thoroughly tested on different kinds of grain and has proven itself a machine with superior qualities as a harvesting and binding machine; and the manufacturers, confident of their superior



merits and the demand already for them, have taxed the capacity of their large manufactory in meeting the demand. 4,000 of these machines are already in successful operation and 10,000 are being built for the season of 1881. It certainly would seem that *perfection* was finally reached in this harvester, and in offering it to our friends we feel fully confident that whoever may secure this premium will be fully and entirely satisfied with the prize. Price $300. Given for 300 subscribers.

The above machines (Nos. 1, 2 and 3) are supplied to us by the Walter A. Wood Mower and Reaper Machine Co., Hoosick Falls, N.Y., a firm established in 1853, and to-day one of the largest manufacturers in this country. They have steadily increased in business every year since they started, and have made and sold over 375,000 machines during the past quarter of a century. This fact is sufficient guaranty that we are using nothing but the best machines in the market for our premium list.

No. 4. Matthews' Seed Drill.

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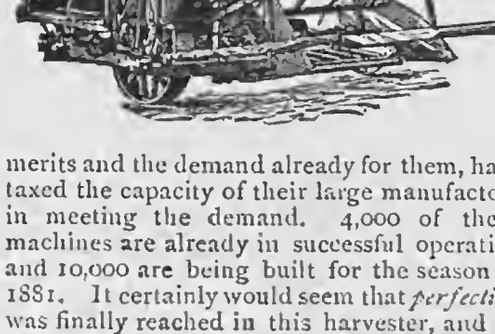
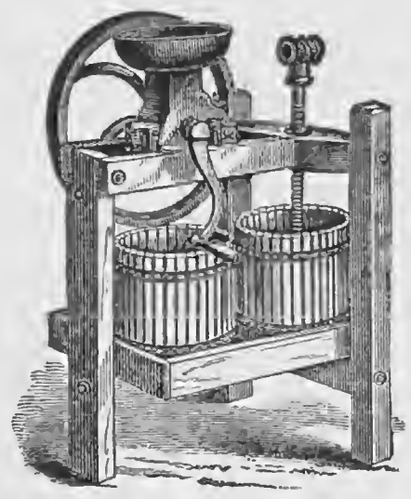


the most skillful hands to do. It will sow all the varieties of beet, carrot, onion, turnip, parsnip, sage, spinach, sorghum, peas, beans, &c. The drill is complete in all its arrangements, and very durable. 28 subscribers, at $2.00 each, will obtain one of these drills. Made by Everett & Small, Boston, Mass.

No. 5. Farmer's Favorite Cider Mill, No. 1.

The cut represents the *family mill*, which has now been on the market for five years past, and is pronounced to be the best, simplest and most perfect mill built. The grinding apparatus is so made that it does not slice and cut the fruit, and leave it in hard lumps, but thoroughly crushes and grates it, so that every cell is broken and a fine pomace produced. Can be taken apart in two minutes, and thoroughly cleaned and



replaced without any trouble, and is capable of grinding ten bushels of apples per hour. Price $22. Given for a club of 44 subscribers. Manufactured by Higganum Manufacturing Corporation, Higganum, Conn.

No. 6. Farmers' Favorite Mill and Press Combined:

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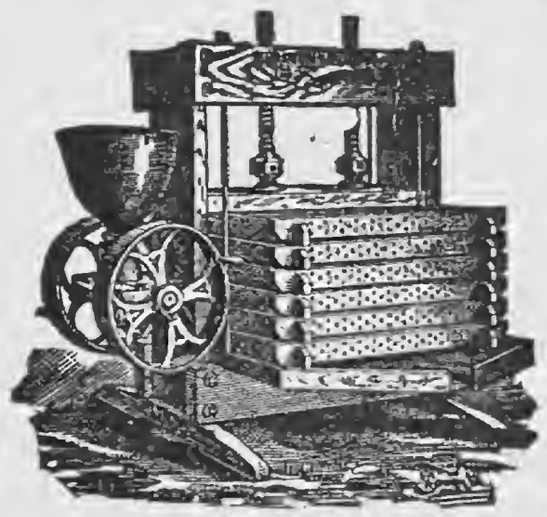
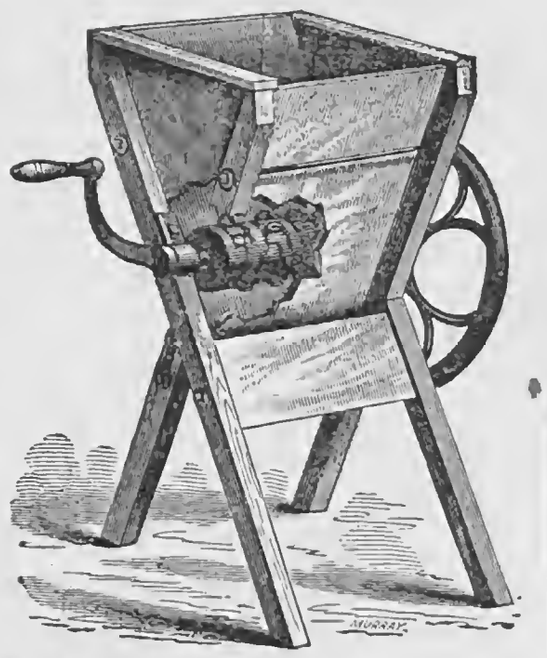


shown by the above cut. Will be given for a club of 125 subscribers. Price $75.

No. 7. Clark's Root Cutter, No. 2.

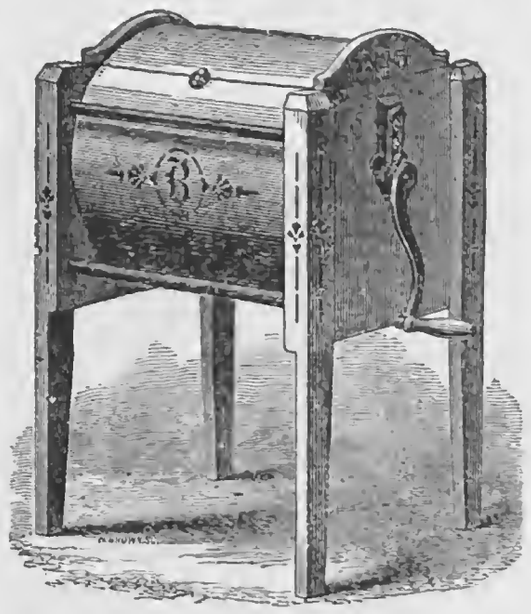
Among stock raisers, this is a very useful and valuable implement. It cuts all kinds of roots in shape for feeding, and is pronounced



by all who have used it to be first-class in every respect. Price of the one here offered, $14. Given for a club of 28 subscribers. Made by same manufacturer as Nos. 5 and 6.

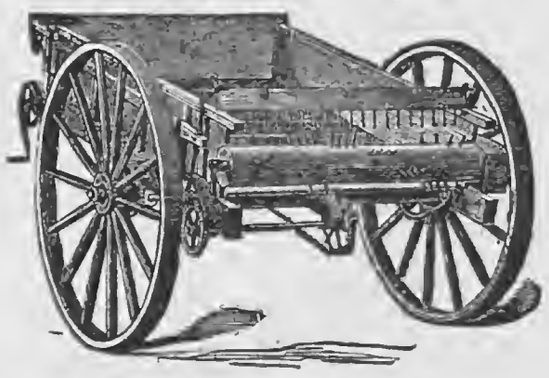
No. 8. The Blanchard Churn.

We take great pleasure in offering this churn to our friends. It is classed among the



leading churns of this country, and the manufacturers are among the most reliable. The father and sons have been engaged in making churns for over 50 years, and during that time have become familiar with all the essential points necessary for the construction of a churn such as will meet with the endorsement of the public. This they have accomplished in the new Blanchard, and all who secure a present so useful and reliable as this, cannot help but be delighted with it. We offer *two* sizes. No. 3 (two gallons) for a club of 10, and No. 5 (eight gallons) for a club of 14. Price $6 and $8. Made by Porter Blanchard's Sons, Concord, N. H.

No. 9. Kemp's Manure Spreader.

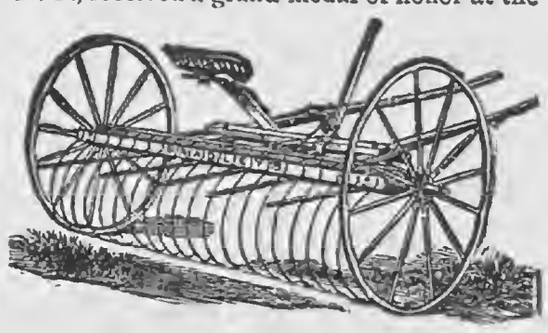


This is a new and valuable implement for the farm, and does its work more efficiently and in less time than it can be done by hand. It spreads equally well all kinds of manure, coarse or fine, as well as lime, ashes, marl, muck, cotton seed, etc., either wet or dry, and in such quantities as may be desired.

The price is $110, and we give it for 240 subscribers. Made by the Kemp & Burpee Manufacturing Co., Syracuse, N. Y.

No. 10. Bradley's Self-Dumping Hay Rake.

This rake, made by Bradley & Co., Syracuse, N. Y., received a grand medal of honor at the



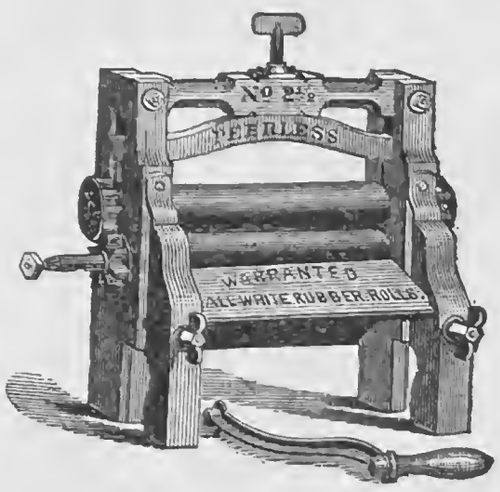
Centennial Exposition. It has many points of excellence. Is made of the best material, and fully guaranteed. Price $38. Given for a club of 70 subscribers at $2.

No. 11. The Aquapult.

A more useful machine than this it would be difficult to find. It can be used as a fire engine

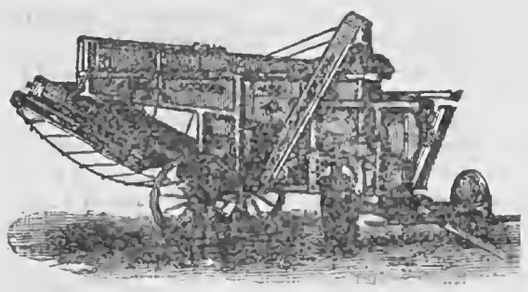
portable force pump, sprinkler, window washer, bug destroyer, etc. The method of using it is shown by the illustration. It will throw water forcibly against a second story window or on roofs that do not exceed that height. It will pay for itself in one season, if used only for sprinkling the garden and lawn, and every one that has not one of these useful machines should set to work at once and secure enough subscribers to entitle him to one. Price $9. Given for a club of 10 subscribers at $2 each. Made by W. & B. Douglas, Middletown, Conn.

No. 12. The Peerless Clothes Wringer



Who can afford to do without a clothes wringer, when one can be obtained so easily? Any competent person, male or female, can secure one of these labor-saving machines by one day's canvassing for the RURAL NEW-YORKER. We have selected size No. 2, believing it to be best adapted to general family use. Its finish is perfect; it has a strong frame, white rubber rolls, metal journals, patent crank and tub fastenings, and everything to make it a first-class wringer in every respect. It is made and sold by the Peerless Wringer Co., of Cincinnati, and costs $3. We give it for a club of 6 subscribers at $2 each.

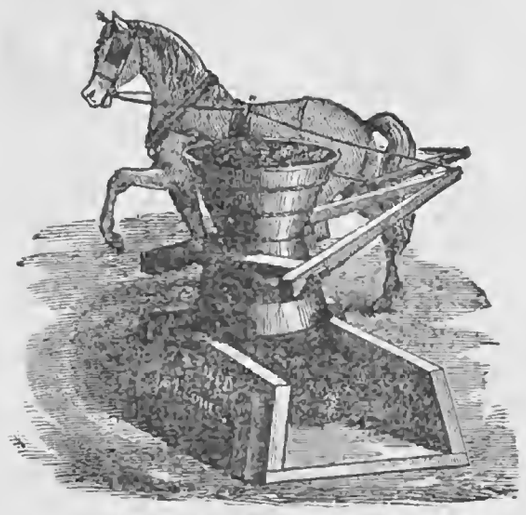
No. 13. The Butterworth Thresher.



Made by the New Jersey Agricultural Works, Trenton, N. J.

This Thresher is made upon honor and is fully warranted by the manufacturers, who claim it will do as *much* and as *good* work as any machine made. It has many superior points which space will not permit mentioning, and we are fully confident that whoever secures one of these Threshers will be entirely satisfied. Price of the one here shown, $375.

Given for 1000 subscribers.



No. 14. Improved Big Giant Feed Mill,

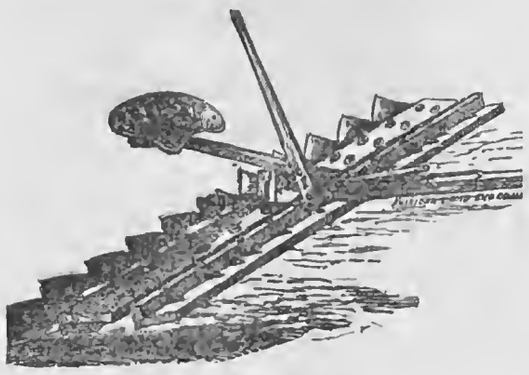
manufactured by J. A. Field & Co., St. Louis, Mo. This mill is especially adapted for grinding all kinds of grain for home and farm use. It grinds corn and cob together or any kind of feed, coarse or fine. We can recommend this mill highly. No farmer who is engaged in stock raising to any extent should be without a mill of this kind. Price $60. Given for 90 subscribers, at $2 each.

No. 15. Mitchell Platform Spring Wagon,

With round corner body, seven feet three inches long, nine inches deep, drop end gate. Patent wheels three feet eight inches, and four feet two inches high. Complete, with pole, whiffletrees and neck-yoke, two seats with enameled duck cushions, lazy-back on back seat. Steps on each side. In order to please a number of our agents who have made so many inquiries about this kind of a wagon, we have arranged with Mitchell, Lewis & Co., Racine, Wisconsin, to supply us with these wagons. Every wagon fully warranted. Price, $120. Given for 200 subscribers.

No. 16. Acme Harrow.

Manufactured by Nash & Bro., 22 College Place, New York, and Harrisburg, Pa. This excellent implement, the invention of a man who is himself a practical farmer as well as mechanic, who had previously invented the revolving disc or wheel harrow, seems destined to win a wide popularity. Its sale during the present season has grown rapidly, and testi-



monials, unsolicited, come from every source, highly commending it and praising the workings of this implement.

It is one that combines a clod-crusher, leveler and harrow all in one. It is invaluable for all purposes where a harrow is needed, and is particularly adapted to *hard, inverted sod,* and to ground which has become packed and baked after plowing, as well as to leveling rough land. We have used one of them on the Rural Farm for two years past, and can fully indorse all the manufacturers claim for it. Price, $22. Given for a club of 40 subscribers, at $2.

Nos. 17, 18, 19. Columbia Bicycle.

Here we have a premium that will please our many friends. Nothing equals it for rapidity and ease of travel. The Bicycle is a peculiar vehicle. Approaches to it had long ago been made in pedimotive and manumotive carriages, and especially in two-wheeled velocipedes. The Bicycle proper has superseded all of them, and stands to-day without a rival as a rapid and easy mode of travel. No horse can compare with it for endurance; no other pastime is half so fascinating, and the exercise is recommended by the medical profession as being the most conducive to health. People have traveled over a common turnpike road a distance of 100 miles in seven hours, and 1,400 miles in six days.

We offer three styles of this popular vehicle, *all* of which are *fully warranted* by the *Pope Manufacturing Co., Boston, Mass.*

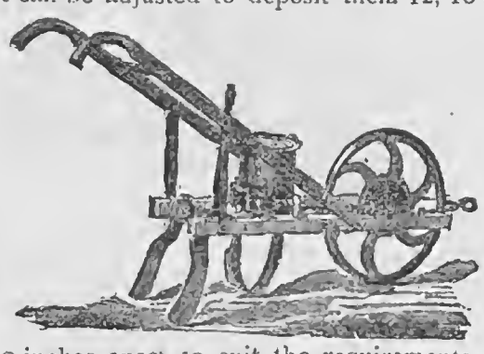
No. 17 is styled the "Standard Columbia," half bright, and painted in two colors; prices from $80 to $100, and any size furnished for 240 subscribers.

No. 18 is styled the "Ordinary Columbia," prices from $60 to $75, and we furnish any size desired for 188 subscribers.

No. 19 is styled the "Mustang," suitable for boys from 9 to 13 years; given for 140 subscribers.

No. 20. Hoosier Corn Drill.

Of the merits of this drill we can safely speak, having used one on the Rural Experiment Farm during the past season, and we are convinced that no corn-grower can afford to be without at least *one* good corn drill. The drill here shown drops with regularity one grain in a place, and is so arranged that it can be adjusted to deposit them 12, 16 or



20 inches apart, to suit the requirements of various kinds of soils. It also at the same operation does the covering uniformly in depth, and its covering shares can be adjusted to cover deep or shallow. There is economy in its use, from the fact that no thinning is necessary and no replanting either, in case good seed is sown. Price $15. Given for a club of 20 subscribers. Hoosier Drill Co., Richmond, Ind.

No. 21. Pearce's Improved Cahoon's Patent Broadcast Seeder.

This seeder sows from four to eight acres per hour at a common walking gait, throwing out wheat about forty feet wide. A saving of four-fifths of the labor and one-third of the seed used in hand-sowing, is effected by using these machines. A person entirely unused to sowing by hand can use them with perfect success. Price $6. Given for 12 subscribers. Made by Goodell Company, Antrim, N. H.

No. 22. The Czar Revolver.

The Czar Revolver, represented by the above cut (which shows ¼ of size) is a decidedly handsome weapon. Its sale has been unprecedented, and it is guaranteed by the manufacturers to be equal in workmanship, material and action to any weapon made. It is 22 calibre, extra long steel barrel. The stock is hard rubber, finely chased and engraved. The frame and barrel are triple

nickel silver plated, and the cylinder and base pin are heavily gold plated. We send this revolver, by registered mail, prepaid, for a club of only 9 subscribers. Made by G. W. Turner & Ross, Boston, Mass.

No. 23. The Cooley Creamer.

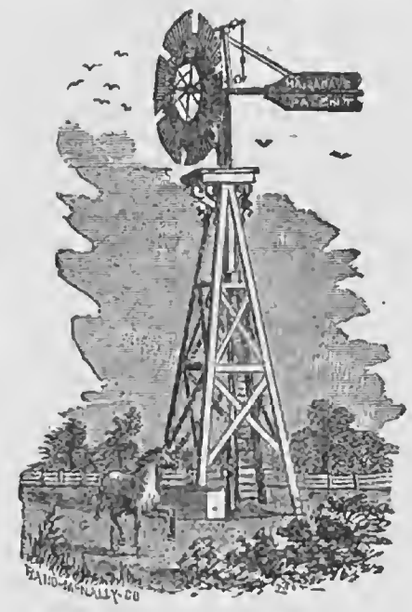
Manufactured by the Vermont Farm Machine Co., Bellows Falls, Vt.

The cut shown represents the "Regular," which has been selected as the style best

adapted to the wants of our patrons. It has been upon the market for four years, and has met with favor wherever used. The use of creamers is becoming so popular, and the results obtained by submerging milk in cold water so far supercedes the old method of separation in shallow pans, that no word of recommendation is necessary from us to prove the utility of this method, and we think our dairy friends will gladly avail themselves of the offer here made. We will send a Creamer same as style shown for 50 subscribers at $2. The price is $35.

No. 24. Halladay Standard Wind-Mill.

Made by the U. S. Wind Engine & Pump Co., Batavia, Ill. The growing popularity



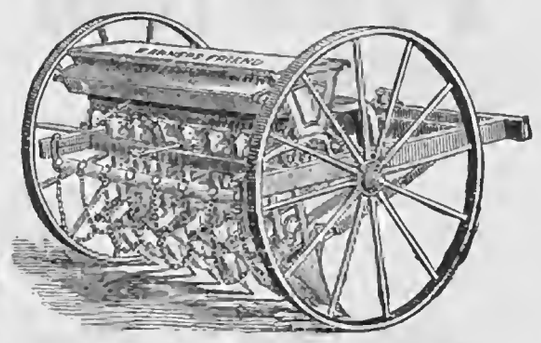
and usefulness of wind-mills, especially among stock-breeders, and their being comparatively inexpensive, with no extra outlay for running them, induce us to offer these mills as premiums. We have chosen the Halladay Standard on account of its many points of excellence, and we believe that whoever is fortunate enough to secure one of these premiums will be fully satisfied. We give No. 2, 10 ft. diameter, weight 450 pounds; price $100, for a club of 160 subscribers.

No. 25. The Planet, Jr., Garden Drill, No. 2.

This drill has a 13-inch wheel and a 7-inch roller. It has a self-cleaning opening plow, adjustable in depth by a thumb-nut, and a marker for rows up to 20 inches. It has a capacity of 2½ quarts. The discharge openings all adjust to the same size at once, and admit of the most minute alteration, instead of restricting the operator to a series of holes, none of which may be the size wanted. The covering is done in the most perfect manner by the rims of the carrying wheels upon which the dirt is first thrown by the plow, and from which, as the

wheels revolve, it is continually returned exactly on top of the seed with regularity and certainty. S. L. Allen & Co., manufacturers, Philadelphia, Pa. Price $12. Given for a club of 24 subscribers.

No. 26 Farmers Friend Grain and Fertilizer Drill.



Made by the Farmers' Friend Manufacturing Co., Dayton, O. For 12 years this drill has been before the public, and its essential features remain to-day as when it was introduced. The manufacturers, after years of careful study, put this drill upon the market, and so nearly perfect was it that the principles of its construction first adopted have been adhered to. The illustration shows the drill in working order.

We offer one of these excellent drills, COMPLETE; that is, a nine hoe, eight inch drill, with spring hoes, fertilizer and grass-seed attachments, rear hoe-shifter, and land-measurer, for 140 subscribers. Price $115.

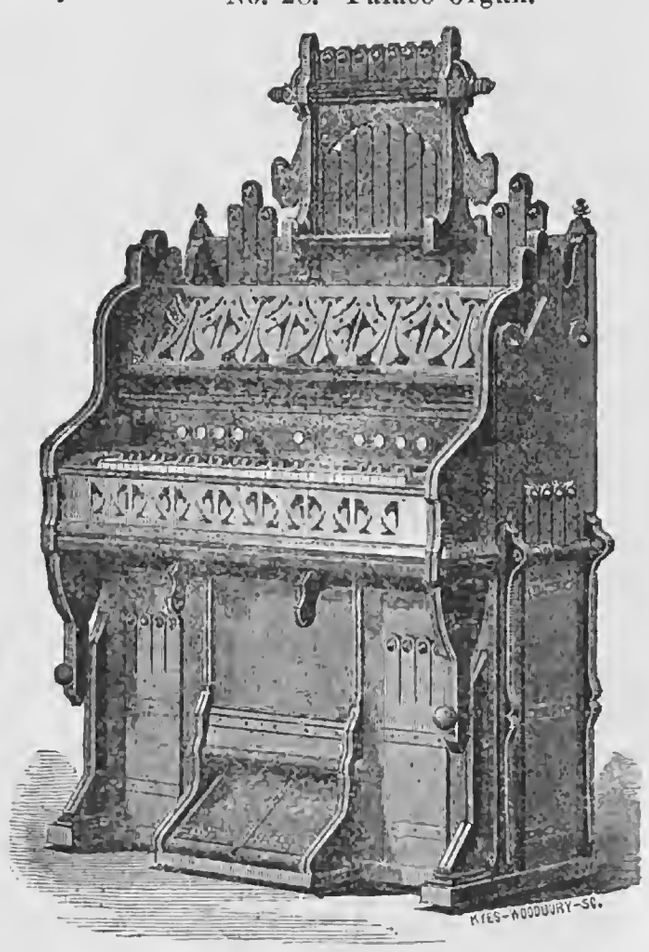
No. 27. The Osborne Plow Sulky.

Probably no implement has ever been invented that is more labor-saving than is a

reliable Plow Sulky. The one here shown has been upon the market since 1870, has been tried in almost every locality and in all kinds of soils, and has never been found deficient or wanting in any of the essential points which make up a good plow.

It received the highest awards at the Centennial Exhibition, and testimonials of reliable and practical farmers from all sections speak of it in the highest terms. We give the plow for a club of 60 subscribers. Price $40. Manufactured by Gregg & Co., Trumansburg, N. Y.

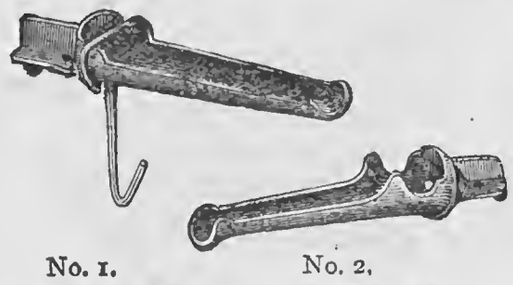
No. 28. Palace Organ.



The Loring & Blake Organ Co., Worcester, Mass., supply us with this organ. In selecting a suitable instrument of this class to offer as a premium, we were guided by the advice of musical friends, and the style we give is thought to be exactly suited to the requirements of the country home. The cut above shows the style of the case used. It is neat in workmanship, and finished in handsomely carved ornaments. The organ is furnished with three sets of reeds—one of twenty-eight notes and two of thirty-three notes each. The power is sufficient to fill any ordinary room completely, and it will lead a fair sized chorus without difficulty. The seven stops—diapason, euphone, eolian, melodia, vox celeste, tremolo and forte, with the patent knee swell, produce a fine combination of musical effects. Price $205. Given for a club of 170 subscribers at $2.00 each.

No. 29. Post's Eureka Sap Spouts.

Made by C. C. Post, Burlington, Vt. These sap spouts have been in use for many years, and have always given the best of satisfaction. They are made from the best quality of iron, and are galvanized. They do not rust or corrode, and will last for generations. They do not injure the tree, and are more quickly adjusted than any others. No sugar maker can afford to do without them. The price of



No. 1. No. 2,

these spouts is $4.50 per hundred (see cuts 1 and 2). It will be observed that No. 1 has a hook for the support of the buckets and No. 2 is designed for buckets that have ears to them, which slip over the end of the spout, and are firmly held by the grooves in the spout. We give 100 of either style of these spouts for a club of 14 subscribers at $2.00 each.

No. 35. Silver Hunting-Case Watches.

The works of these watches are made expressly for us by the Hampden Watch Co., of Springfield, Mass., whose reputation for

making accurate time-keepers is thoroughly established. The works are set in coin silver cases, of our own selection. Price $23, given for 25 subscribers at $2 each.

No. 39. Family Grind-Stone.

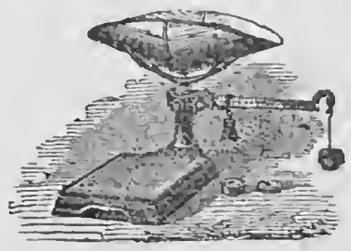
So far as we know, this is the first foot-power machine that is fully adapted to the wants of families for household work, or of mechanics for grinding small tools. The stone is of the best quality, and runs perfectly true. The emery wheel is the same size as the stone, and double-coated on the side and rim with best Wellington Mills emery, and can be taken off when not in use. For grinding carving-knives and all light tools and for polishing cutlery this machine is perfect. Price, including box, $4. Given for club of 8 subscribers. Premiums 39, 42 and 43 are made and supplied to us by the Millers Falls Co., 74 Chambers St., N. Y.

No. 30. Oliver Chilled Plow,

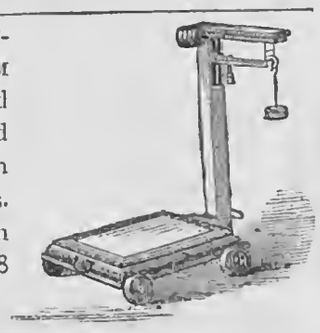
made by the Oliver Chilled Plow Works, South Bend, Ind. For a general-purpose plow we know of none better adapted to the farmers' use than the plow here offered. It is fully warranted by the above firm, whose reliability is unquestioned. There are now more than half a million of these plows in use and the sales this year will aggregate 95,000. We give Nos. 40 or E1, full-rigged; price $16, for a club of only 32 subscribers, at $2 each.

SCALES.

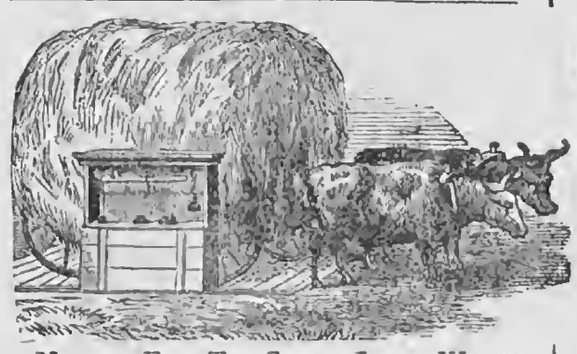
In order to meet the wants of all our friends, we have made a selection of three styles of scales, as shown by the cuts below. All these scales are supplied to us by Jones of Binghamton, Binghamton, N. Y., whose reputation for true and reliable scales is well established.



No. 31 is the "Universal" or Family Scale, and weighs from ½ oz. to 240 lbs., fully warranted. Price $9, given for a club of 16 subscribers.



No. 32. PORTABLE PLATFORM SCALES, furnished with wheels, and has a capacity from ¼ to 400 pounds. Price $18. Given for a club of 48 subscribers.



No. 33. FIVE TON CROWN LEVER WAGON SCALE. Price $60. Given for 90 subscribers.

No. 34. Allen's Firefly Hand Hoe.

A garden that is well kept, is kept so only by the frequent bestowal of hard labor, valuable time and close attention; for many gardens are quite too small and closely planted to admit of horse culture. The Firefly Hand Hoe and Plow

changes this tiresome task into one of comparative ease and pleasure, and at the same time enables the user to complete his work far better and in one-sixth of the usual time. The furrows for beans, corn, peas and potatoes can be opened by it, and afterwards covered neatly. Price $4.00. Given for a club of 7. S. L. Allen & Co., Philadelphia, Pa.

No. 36. The Monitor Clock.

Our illustration is about a quarter of the size of the clock. The Monitor is an accurate time-piece, and an alarm and a daily calendar in addition.

The *white* dial is 3¾ in. in diameter; the clock is wound, set and regulated at the back, and the admirable "movement" is inclosed in a seamless copper case, that is stamped out and heavily nickel-plated. The elegance of the design speaks for itself. A club of 7 secures the "Monitor."

No. 37. The Traveler.

This is a new and elegantly designed clock, with nickel front and back, and the sides of glass, which shows the inside workings of the clock. It has an alarm, and is nicely fitted in a paste-board box. It can be carried in a satchel when traveling, with no danger of disarrangement. It is also a very nice clock for the house. We present it for a club of 10 subscribers.

The above premiums, Nos. 36 and 37 are made and supplied to us by the Waterbury Clock Company, New York, and the RURAL is the sole paper that can use them as premiums.

No. 38. The Weed Sewing Machine.

The cut above shows the style of the machine here offered, and it is useless to speak of this old and valuable household article. We have used them for years as premiums, and have yet to hear of the first complaint. It is noiseless in its operation, light in running, and simple in its construction. We give cabinet style as shown by cut, price $80, for a club of 50 subscribers. Made by the Weed Sewing Machine Co., Hartford, Ct.

No. 40. The Mitchell Farm Wagon.

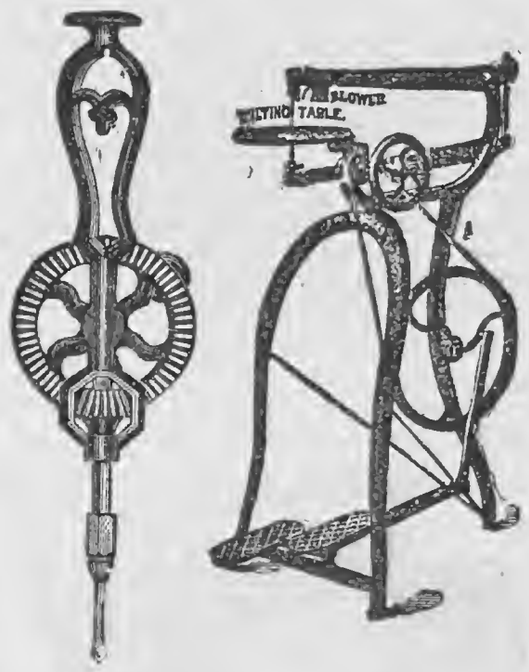
In offering this wagon again this year we hope to please as many of our friends as we did last year. It is certainly a prize worth having, and general satisfaction is expressed by all who have used them. It is made of thoroughly seasoned timber, and of the best iron and steel. The one we offer has a 3¼ x10 inch skein and 1⅝x9-16 and ⅝ inch tire. It is supplied with steel spring seat, Hurlburt patent brake, top-box, whiffletrees, evener, neck yoke and stay chains; in fact, everything in readiness for service. The price has advanced this year to $110, and we present it for a club of 160 subscribers at $2 each. Made by Mitchell, Lewis & Co., Racine, Wis.

No. 41. Ryder's American Fruit Dryer or Pneumatic Evaporator.

In selecting the above drier we have made choice of one which, from personal knowledge, we know to be all that is claimed for it. Its triumphs and first premiums at agricultural societies, its competitive record and indorsement from the leading fruit growers in all sections, are conclusive evidences that whoever secures one of these premiums will not be disappointed in its working. The No. 2, which we offer, is justly styled the Family size, and has been selected as the most desirable for general use among our readers. The trunk is 28 inches wide and eight feet long; there are five lines of trays (22), each 18x26 inches, a galvanized wire-cloth bottom, and it is capable of holding 15 bushels of fruit at one filling. Price $75. Given for a club of 75 subscribers at $2 each. Made by the American Fruit Drier Company, Chambersburg, Pa.

No. 42. Hand Drill, No. 4.

A drill stock eight inches in length, and weighing eight ounces. It is made of iron, with rosewood handle, and brass chuck for holding the drill points. This chuck is made on a new plan and it centres and holds the drill perfectly. With each drill stock we send a box containing six superior drill points of various sizes. A more serviceable tool for the farm or workshop could not be given. Price of stock and drills 50 cents. We send it for a club of 2 subscribers at $2 each.

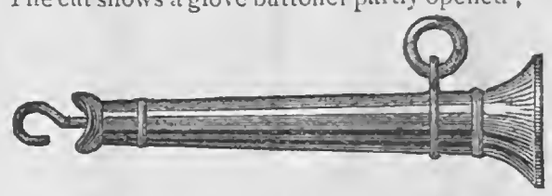


HAND DRILL. NEW ROGERS SAW.

No. 43. The New Rogers Saw.

This saw, with all the improvements that ingenuity can suggest, is without doubt one of the most complete and best saws made for the price asked. The entire framework is made of iron, painted and japanned black, and ornamented with red and gilt stripes. The arbors, etc., are made of steel, and are all carefully gauged and fitted to their bearings. The arms and pitmans are of the best selected *ash*. All parts made to interchange. In fact it is made throughout to *last* and to give entire satisfaction. We have used many of them for premiums and they have given universal satisfaction. Price $4. Given for a club of 10 subscribers.

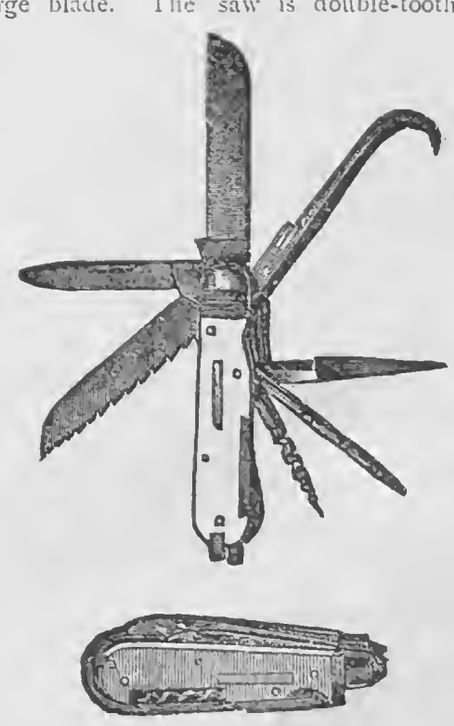
No. 44. This little charm is of gold plate. The cut shows a glove buttoner partly opened;



the same style is made with pencil. Both of these are useful as well as ornamental, and would be suitable as a present. But little exertion is required to secure it as it is given for a club of 3 subscribers. Price $1.50. Supplied by G. S. Clark, 535 Pearl St., N. Y.

No. 45. Multum-in-Parvo Pocket-Knife.

Nothing in the way of knives combines as many conveniences as the one shown in the illustration. Open, it is a magazine of tools; shut, it is as compact and as neat in appearance as could be desired. As its name suggests, it is much in little. The engraving shows the parts of the knife, except the very effective screw-driver hidden by the opened large blade. The saw is double-toothed,



and will cut an inch board, saw off a good-sized stick, cut a notch, etc. The Hook is used to lift a stove-cover, pry open sundry things, clean a horse's hoof, etc. The Punch

makes holes in harness, wood, etc., which can be enlarged by its sharp corners. The Gimlet and Corkscrew are convenient of course. The Tweezers and long Pointer, or Brad-awl, drawn from the end of the handle, often come into use. The back of the Hook makes a good Hammer for tacks and small pounding. The inside of the Hook forms a small Nut-cracker. All inclosed in a compact white handle, the whole weighing only two ounces. Given for a club of 8.

No. 46. The Keystone Washer.

This washer is warranted by the manufacturers to wash clean, if properly used, without rubbing, anything that can be washed by

hand. It is easy in operation, does not wear the clothes, and, if properly used, will last for years. Price $7.00; given for a club of 5 subscribers at $2 each. Made by F. F. Adams & Co., Erie, Pa.

No. 50. No. 49. No. 47.

No. 47. Gent's Double Curb Chain.

Rolled plate; solid gold tips. Price $8. Given for a club of 16 subscribers.

No. 48. Same as 47,

only lighter in weight. Price $6.50. Given for a club of 12 subscribers.

No. 49. Lady's Gold Guard.

Rolled plate front, slide and tip. Price $10. Given for a club of 22 subscribers.

No. 50. Lady's Guard.

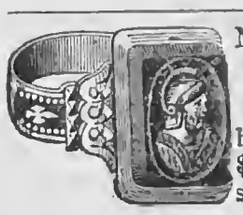
Same as above, only heavier. Price $16. Given for a club of 34 subscribers.

No. 51. Is an Elegant Cameo Ring.

suitable for lady or gentleman. Price $5. Given for a club of 10 subscribers, at $2 each.

No. 52. Cameo and Pearl Ring.

Latest design, very handsome. Price $6, given for a club of 12 subscribers.



No. 53. Gent's Intaglio Seal Ring.

An entirely new and beautiful design. Price $12. Given for 24 subscribers.

We have many statements from subscribers to the effect, that the Free Seed and Plant Distributions of the Rural New-Yorker, have proven of more value to them yearly than the subscription price of the paper.

Read the Free Plant and Seed Distribution Announcement.

No. 54. Lady's Ring.

Two full pearls and ruby. Price $15. Given for a club of 30 subscribers.

No. 55.—One Dozen Celluloid-Handle Table Knives. Price $10.25. For a Club of 18.

No. 56.—One Dozen Celluloid-Handle Dessert Knives. Price $9.25. For a Club of 17.

No. 57.—One Dozen Hard Rubber-Handle Table Knives. Price $8.75. For a Club of 14.

No. 58.—One Dozen Hard Rubber-Handle Dessert Knives. Price $8.25. For a Club of 13.

No. 59.—One Carver, Fork and Steel; Celluloid-Handles and Patent Rest. For a Club of 11.

No. 60.—One Carver, Fork and Steel, Hard Rubber-Handles and Patent Rest. For a Club of 8.

No. 61.—Child's Set in Case, consisting of knife, fork and spoon—all heavily plated and very handsome. Price $3. Given for a Club of 6.

No. 62.—Same as above on card instead of case, and with a lighter plating. Price $1.50. Will be given for a Club of 3 subscribers.

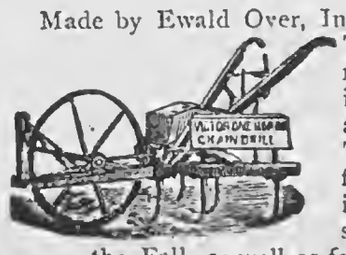
No. 63.—A very nice nut-pick. Price 75c. Given for 2 subscribers at $2 each,

All of this very excellent cutlery (including No. 45) has been selected for us by the Meriden Cutlery Co., and represents the cream of their manufacture in this particular class of goods. Their reputation is not confined to this country alone, and the articles are perfect in every respect. The Celluloid is a substance that resembles, and is an improvement upon ivory, as it does not turn yellow with age, and is nearly indestructible.

The Hard Rubber makes an excellent handle, as it is impervious to heat, and will bear the hardest usage, with the least appearance of wear.

No. 64. Victor Five-Hoed One-Horse Drill.

Made by Ewald Over, Indianapolis, Ind.



These drills are rapidly increasing in demand, and popularity. They are used for sowing wheat intoand between standing corn in the Fall, as well as for sowing wheat, rye, oats, barley, rice, peas, etc., into fallow ground. They are strong, simple in construction, of light draught, and can be expanded and contracted for five different widths, varying from 6¼ to 8½ inches from centre to centre of tooth. It has a splendid force feed, and sows more than half as much as a two horse drill. Price $25. Given for a club of 50 subscribers.

No. 65. Silver-Plated Service

of six pieces, comprising tea, coffee and hot-water urns, cream pitcher, sugar and slop bowls. Price $48. For a club of 48.

No. 66. Tete-a-Tete Service

of four pieces. Price $23. For a club of 23.

No. 67. Ice Pitcher.

Price $14. For a club of 13.

No. 68. Cake Basket.

Price $9. For a club of 8.

No. 69. Pickle Castor.

Price $2. For a club of 5.

No. 70. Butter Dish.

Price $6. For a club of 6.

No. 71. A Set (2) of Flower Vases.

Price $8. For a Club of 8.

No, 72. Drinking Cup.

Price $4. For a club of 5.

No. 73. A half-dozen Napkin Rings.

Price $4. For a club of 5.

No. 74. One Dozen Silver-Plated Table Spoons.

Price $10. For a club of 16.

No. 75. One Dozen Silver-Plated Medium Forks.

Price $10. For a club of 16.

No. 76. One Dozen Silver-Plated Tea Spoons.

Price $6. For a club of 8.

No. 77. Silver-Plated Fruit Knife.

For a club of 5.

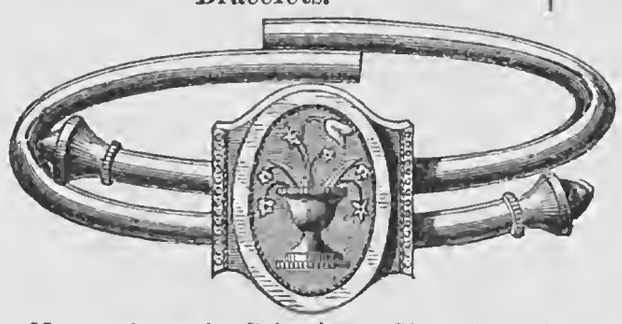
The forks and spoons offered above are especially commendable for beauty of design, (the style illustrated, named the "Niagara," is one of the most recent patterns), and the thorough and *honest* manner in which they are made. Electro-plating, like charity, can be made to cloak any amount of fraud, and it is only in the *reputation* of the manufacturer that the purchaser has any guarrantee that the article is as represented.

The process of electro-plating with silver is quite simple. The articles to be coated with a film are placed in a "bath," which is composed of double cynadide of silver and potassium, held in a wooden vat. The articles are hung by copper wires from brass rods; and then the connection is made with the battery, and after about an hour the process is completed. Almost any kind of metal may be thus coated; hence it may be seen that the worth of the goods depends entirely on the honesty of their maker. We have always been extremely careful to select our silver-ware premiums from those only whose reputation is unblemished, and we have had our reward in the satisfaction expressed by our friends.

No article of this character receives such constant hard usage as forks and spoons, therefore it is of the first importance that the metal *underneath* the silver coating should be thoroughly adapted to its use. These articles are from the well-known house of Hall, Elton & Co., Wallingford, Conn., whose forty years of experience are a substantial guarantee of manufacturing the quality of the premiums above described.

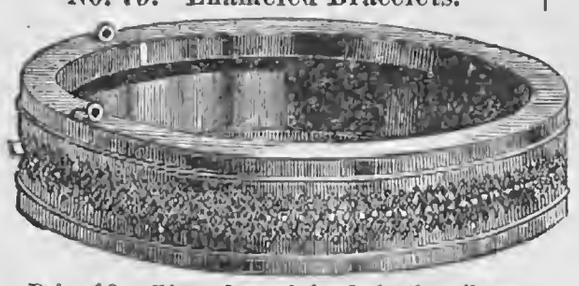
This silver-plated ware is also from the factories of Hall, Elton & Co., [See Nos. 65 to 77.] The designs are unique and strikingly handsome—the tete-a-tete set notably so. The pickle castor contains two fine cut-glass cruets (large) and a pickle fork. The stand is very ornate. The flower vases are painted on a tinted porcelain surface. The subjects are artistically treated and the effect is imposing. In short, the entire selection is one of the finest we have ever offered as premiums, and the articles are given for very small clubs in proportion to the value of the premiums. As serviceable presents nothing can be nicer than this ware.

No. 78. A Pair of Bangle Adjustable Bracelets.



New and novel. Price $15. Given for a club of 30 subscribers.

No. 79. Enameled Bracelets.



Price $8. Given for a club of 16 subscribers.

In the selection of this class of goods we have been particularly careful, and have only chosen those articles that are new and useful. For a holiday present nothing is more beautiful than *good* jewelry, and our friends will find nothing here offered that is not true to the description given, and hence need have no hesitancy in making their selections. The stock is from Henry C. Haskell, 12 John Street, New York.

When ordering rings, send a ring of wire of the size required, or a piece of cardboard with a hole cut in it the size of finger, will do. The cuts show the styles, and the prices here given are the retail prices in New York, and Nos. 51-54 are sent free of postage.

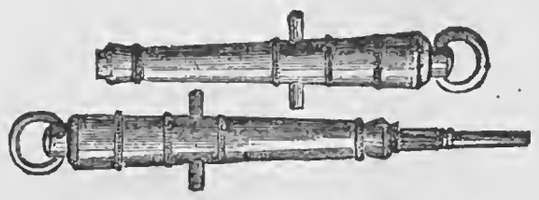
No. 81. Bell-Head Pencil.

Heavy rolled plate. Price $1.50. Given for 3 subscribers.

No. 82. Magic Charm, with Pencil.

Price $1.25. Given for a club of 3 subscribers.

No. 83. Cannon-Charm for Watch-Chains.



Contains pencil. Price $1.25. A club of 3 subscribers will obtain one.

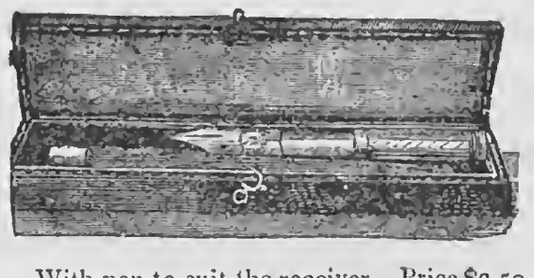
No. 84. Telescopic Pen and Pencil.

Rolled Gold. Very fine. Price $3.00. Given for a club of 7 subscribers.

No. 85. Enameled Charm Pencil.

Price $1.25. Given for 3 subscribers.

No. 86. Gold Pen, Ebony and Gold Holder.



With pen to suit the receiver. Price $2.50. Given for a club of 5 subscribers.

Nos. 81–86 are supplied to us by Messrs. Ludden & Dow, 192 Broadway, New York.

No. 87. Noyes' Hay Carrier.

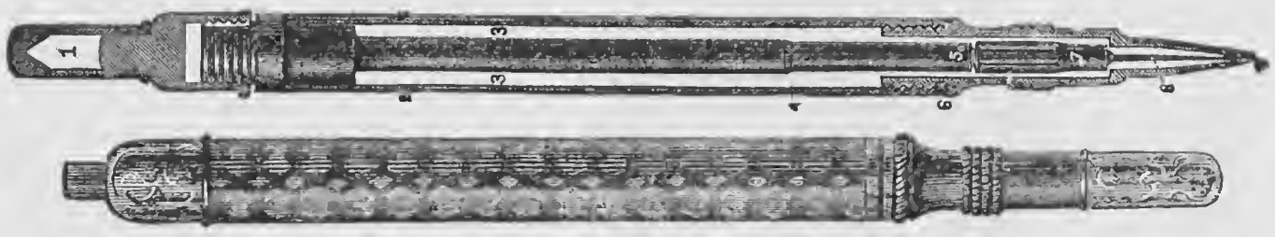
Our farmer friends, we are sure, will be delighted with the offer here made. This carrier has stood the test of many years and has given entire satisfaction. It has been exhibited at a great many fairs and has received many first premiums. It can be used for unloading either within or without the barn, and for removing hay from, as well as putting it into the barn. It can be used equally as well for stacking in the open field, with very little expense for the stacking-frame. A very usefuland practical machine. Price $10. Given for a club of 20 subscribers at $2 each. Made by the U. S. Wind Engine and Pump Co., Batavia, Ill.

SPECIAL NOTICE.

Space will not permit us at this time to enumerate all the books we can furnish, or even to speak of the merits of any of them; and hence we make the following suggestions, and leave our friends to make their own selections.

Our books are furnished us by the old and well established publishing house of Lee & Shepard, Boston, Mass., to whom our subscribers and agents can send for a catalogue, which will be furnished free upon application by postal card to the above address. Any book in their regular list may be chosen and ordered from us at the list price, by counting every subscriber 50 cts. on the price of the book ordered. For instance; if you have twenty subscriptions to your credit, it will entitle you to $10 worth of books. The postage is extra in all cases, and must be forwarded with the order.

This plan will enable our friends to make their selection from the publisher's list and will give them the choice of a great variety of good and valuable literature.



No. 80. The Mackinnon (Reservoir) Pen.

D. Mackinnon & Co., 192 Broadway, New York, makers. For a pen always ready for use this has no equal. It will write 75 pages of foolscap with one filling, and does away with the use of ink-bottles, and the annoyance of frequently dipping the pen in ink, as is the case with an ordinary gold or steel pen. The point is made of iridium, and is guaranteed by the manufacturers to last forty years, and is kept in perfect order for three years free of cost. It may be carried in the pocket without any danger of breaking, as it is furnished in a gutta-percha case and gold mounted chased tops. Price $5.00. We will present it for a club of 6 subscribers.

Literary.

ART IN THE HOUSEHOLD.

MODERN decorators and artists cannot endure *imitations* of any kind; but if those who cannot afford to purchase the genuine articles choose to exercise their ingenuity by making things which are pleasing to the eye and will render their homes more attractive, I do not see that their tastes will be lowered thereby. Even a crude imitation shows an appreciation of the beautiful, and 'tis more to the credit of a farmer's daughter in a remote part of the country to make her rough surroundings as pleasant as her innate taste and love of color and form impel her to do, than for a favorite of fortune and leader of society to influence "the styles" by her fancy for some particular kind of old china, antique furniture or "bric-a-brac."

Amateur artists have employed themselves in imitating the Limoges ware. Vases of simplest form, and without handles, are most suitable for this style of decoration, and, as the surface is to be completely covered it will not be worth while to buy those of the finest grade of terra-cotta. The coarser ware is more frequently made in forms most suitable for this work. A small cylinder jar will be a good thing to experiment on, before more elaborate and ambitious attempts are made.

The jar (or vase) should be rubbed with fine sand-paper, brushed carefully to remove any dust after the rubbing, and then well coated with linseed oil, and allowed to stand until the oil has been absorbed by the porous surface. When it is well "dried in" prepare your colors for painting. White or delicately tinted flowers are most pleasing on these vases, and the general tone or ground color used—and against which the flowers make best contrast—should be slate-grey indigo, or olive shading to darkest brown. The color generally shades darkest towards the base of the vase, and on the upper part. If dark tints are used on those portions where the white or brightest flowers are to be painted, and the lighter shades against the shadowed portions of the flowers and leaves, it will throw out in bold relief, and be very effective. The colors used in this work are the tube oil paints, and they should all be mixed with turpentine instead of oil, as they will dry more quickly and work more easily; and when the vase with the ground color on it has been set away in a warm closet for a day or two, so as to be perfectly dry, it should receive a coat of carriage varnish. Use a flat brush for this, turning the vase and coating it rapidly horizontally so that the varnish will not drip or run down and settle in drops at the base. This varnish should be allowed to dry thoroughly before the flowers are put on, and the flowers should be painted in broad, sketchy style, with strong lights and deep shadows. When the flowers have become quite dry the whole vase should be rubbed with powdered pumice-stone, applied by a soft linen rag, moistened slightly with water, then after wiping it off with clean, soft cloth the bright lights should be touched up again and a coat of copal varnish should be given. Perhaps a second coat of the copal varnish will be found necessary after a few days to produce the effect of a brilliant glaze, such as the Limoges ware has. Articles ornamented in this style will not hold water, as the moisture penetrates, and ruins the painting on the outside.

Transparent paintings produce an excellent effect on lamp shades, on lamp screens, etc, especially under artificial and transmitted light. The appliances, tools, and materials required are oil or moist water-colors in tubes, a set of flat and pointed brushes, gold drawing pens, and pencils of various degrees, of hardness, pieces of strong and evenly woven muslin, and a stretching frame of wood. The further requirements are a supply of the best white gelatine, of powdered gum arabic, and pumice stone.

First the muslin has to be prepared for painting by fixing a piece of the required dimensions in the stretching-frame, and sizing the surface with a solution of gelatine in hot water with the aid of a flat and moderately stiff brush. The first coat of gelatine is then allowed to dry, and the muslin restretched to receive the second coating, which is generally sufficient, although in some cases three or more coatings may be useful. After the coated muslin is perfectly dry the surface may be rubbed gently with a piece of pumice-stone to make the pencil-marks, the pen drawings, and the colors adhere better.

The outlines of the painting can then be drawn with a pencil direct on the muslin, and afterwards traced out with pen and ink. This, however, has to be done very carefully, as mistakes can only with difficulty be erased or corrected. The safer plan, is, therefore, to sketch the outline in ink first on a piece of paper, place the latter under the muslin, and from it trace with pen and ink the sketch or pattern to the woven surface.

The frame is then placed on an easel in a slightly slanting position, and turned against a window or against a source of artificial light, such as a gas or an oil lamp. For judging the effect of the color on a lamp shade, artificial light for working is preferable.

Before using the oil colors they must be diluted with a medium, which can be bought ready prepared, or made of turpentine and siccatif in equal parts. This makes the colors more transparent and prevents their running.

Moist water colors can likewise be employed after having mixed them with gum water, but they are less easy to handle for transparent paintings on muslin than oil colors.

The general rules for transparent painting, are, of course, the same as for any other kind of painting, but the following special hints may be found useful:

Leave untouched those parts of the sketch which are to appear white, or in a strong light.

For laying grounds, skies, and all large, flat tints, use a brush called "dappler," or better, even, a bit of fine sponge.

For mottled tints and pale foliage, the sponge device will answer equally well.

Another expeditious plan to produce the effect of heavy foliage and foreground is to cover the surface with a comparatively thin layer of green, and pick out the lights with a knife or with a pointed piece of wood. The required details can be painted in afterwards with a pointed camel-hair brush.

Balls of cotton wool covered with pieces of soft silk can be likewise used as dabblers instead of sponges, only a separate ball must then be kept for each color, whilst brushes and sponges can, and ought to be cleaned with soap and warm water.

CORRESPONDENT.

A VISIT TO THE ALBANY PENITENTIARY.

I had formed the opinion that prisons were all dark, damp, dirty places, and was therefore pleasantly surprised at the exterior, and interior of this one.

The building stands on a hill, in front of the structure is a beautiful sloping lawn; the grounds are large and well kept. Immediately in front of the building and on either side of the avenue is a number of handsome old trees, and in front of the entrance is some well arranged beds of choice plants.

The building is large and constructed to form a hollow square. It is painted a light yellow, which gives it quite a cheerful appearance. The square or court inside is fresh and green with a fountain playing in the center.

The cells, in spite of light, air and cleanliness, are damp and cold, owing, I presume, to the prevalence of iron and stone in the construction. The walls are all glitteringly white with white-wash and all the wood-work—even in the work-shops—looked clean enough to eat from.

The bedding of the men is of some dark-colored material and during the day hangs up against the wall. In the women's cells, however, the narrow beds are neatly made and covered with a light spread and the pillow-cases looked as smooth and white as if newly put on, although it was Friday. There were many little pictures and ornaments on the walls of the majority of the women's cells, but I noticed that few of the men's cells were so ornamented.

One large room contains twenty bath tubs, with a cold and warm water faucet to each tub, and once a week, every prisoner is required to take a bath.

In the kitchen and bake-shop, order and neatness prevailed. Rows and rows of large, nicely browned loaves of bread that smelled as if delicious, had just been taken from the oven, large tables held stacks of the tin-pans and cups in which the prisoners receive their food. A number of women were sitting on benches paring potatoes. As the immense range was red-hot and the day very warm, I thought it would have been more humane to have allowed them to sit farther back, for they were quite close together and facing the range.

In the work-shops the men were working under contract making shoes; in one shop they were making boxes in which to pack the shoes. We were shown specimens of the convicts' work; the shoes were as handsome, fine and well-made as any I had ever seen. One man does not make an entire shoe, but each one does a certain part of the work. When one part is finished it is passed on to some one else, perhaps into another shop. I have forgotten the exact number of shoes made in a day, but I think it was several thousand.

It was impossible to form an opinion of the prisoners, for they all sat with their backs to us, and the prison rules forbid them looking up, or around when visitors enter. Should a prisoner be at work in a room which you enter, or you should meet one, he will immediately turn his back to you, clasp his hands and bow his head until you have passed out of sight and hearing.

The men's faces are cleanly shaven and their hair closely cut. Their dress consists of a coarse, white cotton shirt, a pair of coarse grey pantaloons, a blue, cloth jacket and a round sailor cap of the same material as the jacket.

The women are allowed to retain their hair and arrange it to suit themselves. Their dress is of dark, red calico, high in the neck, and short in the sleeves for warm weather. Some few wore aprons and some handkerchiefs around their necks. In their workshops they were employed with sewing and various other feminine occupations.

There were few women, compared to the number of men, and I noticed quite a number of colored prisoners of both sexes. Two colored female prisoners had toddling babes with them, and the little things looked healthy and happy.

The gentlemanly official who accompanied us, gave us some interesting statistics of the prisoners and their labor, but I have forgotten most of them, or I might give them here.

In general, the prisoners obey the rules readily, and the officers have very few punishments to inflict, for aside from the fear of punishment, they understand that good behavior and obedience to the rules will shorten their term, and to a man confined in prison, one day off his term is something.

This is a United States Prison, and there are convicts from many states confined here.

Prisoners cannot see any one—outside of the officials—until they have served thirty days; then they may see their friends for a short time. They cannot write but once a month, and then only one letter. Friends may write when they choose, as the prisoner's receive their mail every Sunday morning. Friends may also send anything in the line of eatables once a week.

I had almost forgotten to mention the chapel and hospital. The former is a large well-lighted, and well-ventilated room or hall, with a seating capacity of about a thousand. A large platform held a pulpit and an organ, and when we were there, the room was nicely decorated with flags, etc.

In the hospital the rows of beds were clean and fresh. Only a few beds were occupied. One poor fellow was propped up in a chair, evidently in the last stages of consumption.

In this portion of the prison there is a library from which the inmates of the hospital have free access; others who wish may obtain one or two books once a week.

The work-shops are light and airy, none of the men looked overworked, and altogether we came away well impressed with the strict, yet humane management of this prison.

Not many years ago I visited a prison in a large city in this State, where all of the officers or guards in the workshops carried a small "cat-o'nine-tails," and the men looked sullen and rebellious, but I saw nothing of the kind in Albany. MRS. W. V. A.

JUDGES AT AGRICULTURAL FAIRS.

THE ideas that govern the action of some judges at our fairs are, to say the least, very original. I remember a case where there were two articles of the same kind exhibited; one was the work of an old lady, the other of a young farmer's wife. The old lady's article took the premium, but was so manifestly inferior to the other that the awarding committee felt called upon to explain in this wise: "The other piece ought to have taken the premium, but the exhibitor of this is an old person and probably will never compete again, and we thought it best to give it to her." Yet according to the rules of the society the names of the exhibitors should not be known to the judges. On another occasion a certain committee refused to consider an oil painting exhibited among others because it had no frame. "Very well," said one of them, "I am not acting on picture frames and you can proceed without me." This brought the matter before all in a different light and they went about the duty properly to which they had been assigned.

Exhibitors often lose sight of the real object of a fair. I heard a man remark to his wife once, as she drove up in front of the vegetable room, "Sarah, there are larger beets there than ours and maybe I had better not take ours out at all." Looking at the dollar he expected to get for his beets, he forgot that mutual improvement by the exhibition of one's best specimens is one great object in holding fairs. Many have a jealousy of those who do take premiums and will say: "O, there is no use in taking anything to the fair. This one or that one is always sure to take all the prizes."

Notwithstanding all the small drawbacks nothing ever drew the hard-working farmers into as close good feeling for one another or brought as many congenial people together and brightened as many lives as these same agricultural fairs. About so much humbug will exist in everything, and probably there is as little in a country agricultural fair as will be found in any other institution of its size.

B. C. D.

FASHIONS.

Marigolds are now the fashionable flowers in London. First the daisy, then the sunflower, next the lily and now the marigold. It is time the hollyhock was brought into service; no one seems to have remembered that old-fashioned flower.

Among the newest trifles in jewelry are the microscopic watches attached to the neck by a serpent coiling upon the skin. Grecian necklaces composed of five rows of variegated pearls with diamond clasps, and arrows, which are again worn in the coiffure and corsage.

A decorative and at the same time useful disposition of a painted tile is to insert it in one of the little wooden baskets especially made for the purpose.

Ladies addicted to art embroidery prepare themselves work aprons of pongee silk. A breadth of silk gives sufficient width. The lower edge is embroidered in silks and crewels, with simple flowers, as violets, buttercups and daisies in groups, and fastened down, forming pockets five or six inches deep.

Alligator-skin belts are in style.

Sets of door furniture in Egyptian style—handle, pull-bell, knocker, and letter-plate—are being made for large houses in London.

FIG. 431—THE COMET DRESS.

"It's an ill wind that blows nobody any good," so the oft thought instigator of trouble has benefited the ladies by setting a fashion.

SANITARY NOTES.

IN cases of dysentery be careful that outside air does not reach the body directly. Bind a piece of flannel over the bowels.

BEDROOMS and bedding should be well aired every morning. At night one or more windows should be lowered to allow the fresh air to enter, and foul air which rises, to pass out. Health depends much upon these observances.

A BASIN containing chloride of lime or a solution of carbolic acid (a teaspoonful of acid to a quart of water) should be kept in a room where contagious disease exists, or in fact anywhere that impurity of air may be known to be.

IN the selection of wall paper the subject of health is not as often brought to bear in the matter as the idea of beauty and suitableness. But since the discovery of so much poisonous matter in this article of adornment, it is but right to consider the result of an indiscreet selection.

QUESTIONS

A forcible answer to which will be found by turning over the leaf.

1. What rural paper has no axe of its own to grind?
2. What rural paper has the best contributors in the land?
3. What rural paper gives 500 original illustrations per year?
4. What rural paper conducts an Experimental Farm in the interests of its readers?
5. What rural paper places the interests of its patrons beyond its advertising patronage?
6. What rural paper tests all new seeds and plants, and renders impartial reports thereupon?
7. What rural paper is the farmers' friend and conscientious adviser?
8. What rural paper should all progressive farmers subscribe for?

EXPLANATORY NOTE.

We have decided it best, in this special issue, to waive the usual custom of publishing a story in the literary department, as space is limited. An installment would not be of interest to transient readers, and we feel sure that our continuous patrons will bear with the omission. Magazine, Book Notices, &c., are also omitted. In the issue of Sept. 10 or 17 a serial will be begun entitled "Thorns and Roses."

ITEMS---ALL SORTS.

In the depth of the sea the water is still; the heaviest grief is borne in silence; the deepest love flows through the eyes and touch; the purest joy is unspeakable.

To protect one's-self against the storms of life, marriage with a good woman is a harbor in the tempest; but with a bad woman it proves a tempest in the harbor.

Learning by study must be won,
'Twas ne'er entailed from sire to son.
—Gay.

The British Museum has purchased a vaulted wooden Egyptian coffin, well preserved, and a gilded mask and mummy of a lady named Talmtisa or Thothsi, one of the court or family of the Queen of Amasis I.

There is no place in the wide world like home. It is the dwelling place of our heart's treasure, and the first duty of our lives we owe to it and its inmates. To make it pleasant and attractive should be the aim of every man.

Gifts.—The best thing to give your enemy is forgiveness; to your opponent, tolerance; to a friend, your heart; to your child, a good example; to your father, deference; to your mother, conduct that will make her proud of you; to yourself, respect; to all men, charity.

There is a sound reason why there are bones in our meat and stones in our land. A world where everything was easy would be a nursery for babies, but not at all a fit place for men. Celery is not sweet until it has felt the frost, and men don't come to their perfection till disappointment has dropped a half-hundred weight or two upon their toes. Who would know good horses if there were no heavy loads?—*John Ploughman.*

Many years ago a New Zealander, who had been a cannibal, but who had been brought under the influence of Christianity and become a missionary, was staying in England in order to give an account of his work. He was one day entertained at a public breakfast, and was under the wing of the bishop of the diocese, who thought the distinguished guest surveyed the feast with much indifference if not some contempt. Just as grace had been said there came up to the bishop a sleek and very portly clergyman. With a fine roll of his eye, the converted cannibal turned to his neighbor at table and smacked his lips with the keenest appreciation of the probable flavor of his reverend brother. So true is it that we always come back to our first love.

Curious Statistics of Marriage.—It is found that young men from 15 to 20 years of age marry young women averaging two or three years older than themselves, but if they delay marriage until they are 20 or 25 years old, their spouses average a year younger than themselves; and henceforward this difference steadily increases, till in extreme old age, on the bridegroom's part, it is apt to be enormous. The inclination of octogenarians to wed misses in their teens is an every-day occurrence; but it is amusing to find, in the love-matches of boys, that the statistics bear out the satires of Thackeray and Balzac. Again, the husbands of young women, aged 20 and under, average a little above 25 years; and the inequality of age diminishes henceforward, 'till, for women who have reached 30, the respective ages are equal. After 35 years, women, like men, marry those younger than themselves, the disproportion increasing with age, 'till at 55 averages nine years.

ANSWER.

THE RURAL NEW-YORKER,

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AS A MEASURE OF ECONOMY!

Gossiping.—Tale-bearing and idle gossiping is, under all circumstances and by whomsoever indulged in, a most unprofitable and disreputable business; but when it assumes the form of malicious slander, it at once becomes a crime, even though the poisonous darts are so shaped that the strong arm of the law may be unable to protect or redress the wrongs of the ones thus injured.

Never choose for a friend one who would urge you to pull out a single thread from the warp of character. Never choose a friend that you feel you have lowered your standard of purity and right one single inch to gain. If you cannot step up in your friendships, you need not step down. Raise your standard and stand by it. You need not want for companionship; only see that the society is kept high and pure. Keep a strict watch at all the doors, and what a blessed thing it will be to live even amid outwardly adverse circumstances.

Most people when they cum tew you for advice, says Josh Billings, cum tew have their opinyuns strengthened, not conrekted. Take the selfishness out of this world, and thare would be more happiness than we should kno what to do with. It don't show good judgment to be surprised at enny thing in this world, for thare iz nothing more certain than uncertainty. Every man thinks that hiz nabor iz happier than he iz, but if he swops places with him he will want tew trade back next morning. A coquette in love iz az silly az a mouse in a wire trap; he don't seem tew kno how he iz agoing to get out. All fights to produce enny moral advantage should end in victory tew one side or the other. Yu will always see dorgs renew a drawn battle every time they meet.

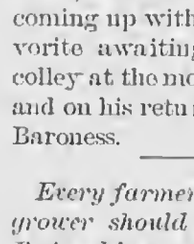
Civility and Ceremony.—Nothing is more honorable and pleasant than civility, and nothing more ridiculous and burdensome than ceremony. Civility teaches us to behave with proportionate respect to everyone, according as their rank requires and their merit demands. In other words, civility is the science of men of the world. A person of good address, who conducts herself with due circumspection, conciliates the love and esteem of society, because everyone finds herself at ease in her company; but a ceremonious woman is the plague of her acquaintance. Such a one requires too much attention to be a pleasant associate; is too seldom satisfied with what is paid her, and every moment feels her pride hurt by the want of some frivolous etiquette. You cannot be too formal to her, nor she dispense with her formalities to others.

Baroness Burdett-Coutts is usually accompanied by a beautiful colley dog, which is a gift from Mr. Henry Irving, and which has a little history. The actor was one day driving over the Braemar moors, when he lost his Skye terrier, which had been trotting along behind his trap. He got down to look for it, directing the driver to go on with the trap. On the moor he met a shepherd with a colley and the man, when told of the actor's loss, offered to find the terrier. At a word from him the colley darted off, and after an absence of ten minutes returned. "Where is he?" asked the shepherd, and the dog, lifting one paw pointed in the direction of the road. "He has gone after the trap," the shepherd said, and Mr. Irving marvelling, and, in truth, incredulous, returned to the road, and coming up with the trap, found his little favorite awaiting his arrival. He bought the colley at the moderate price of fifteen guineas, and on his return to town, presented it to the Baroness.

Every farmer, gardener, stockman or fruit grower should read the Rural New-Yorker. Its teachings are practical, and it employs the best writers in the world. Ask those who know. It is for the North, South, East and West. It is the only National Rural Journal in America—the only journal that conducts experiment grounds in the interests of its subscribers. It has never in any instance sold seeds or plants to its subscribers, and its advice is disinterested. All new seeds and plants are tested as soon as introduced, and impartial reports made of their value without any regard whatever to advertising interests.

For our comic on the last page of this number—illustration of how the small child was misused in consequence of his parents being struck at the same time with different objects of interest at the fair—we express our thanks to Messrs. Harper & Bro's, of this city.

COLUMBIA BICYCLE.



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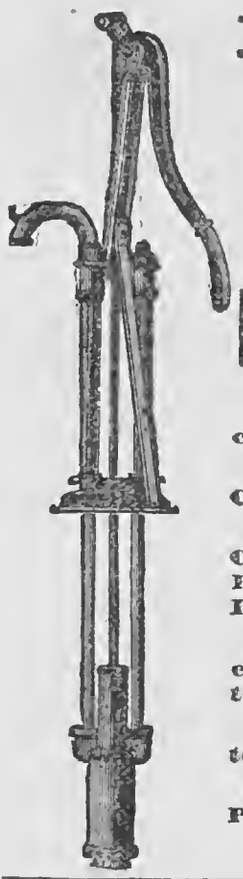

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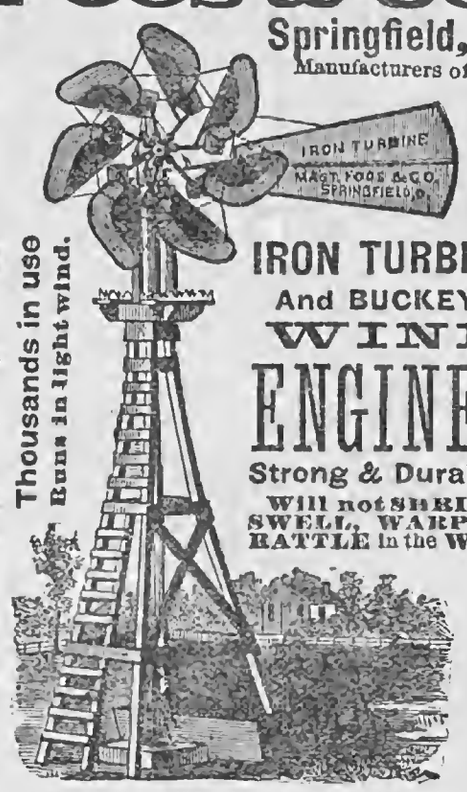

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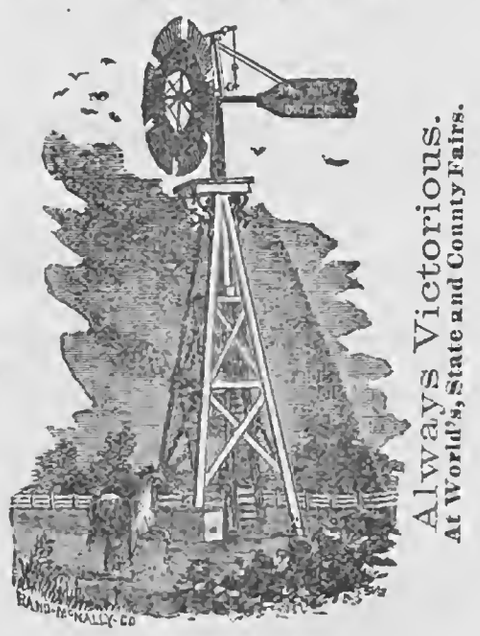

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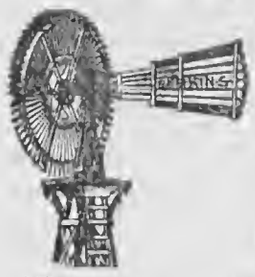

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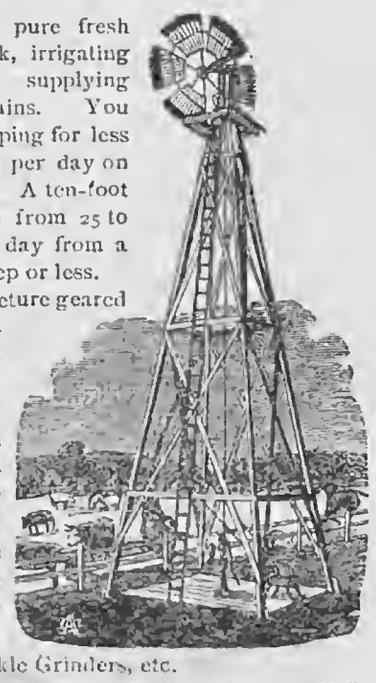

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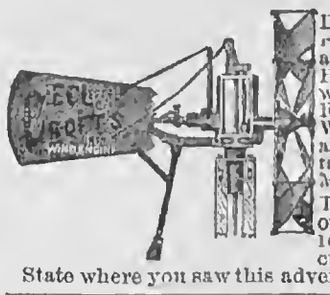

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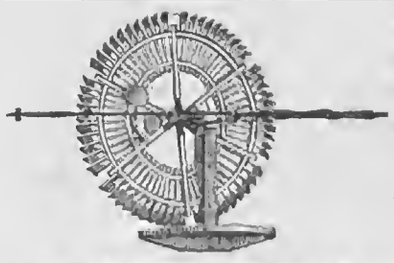

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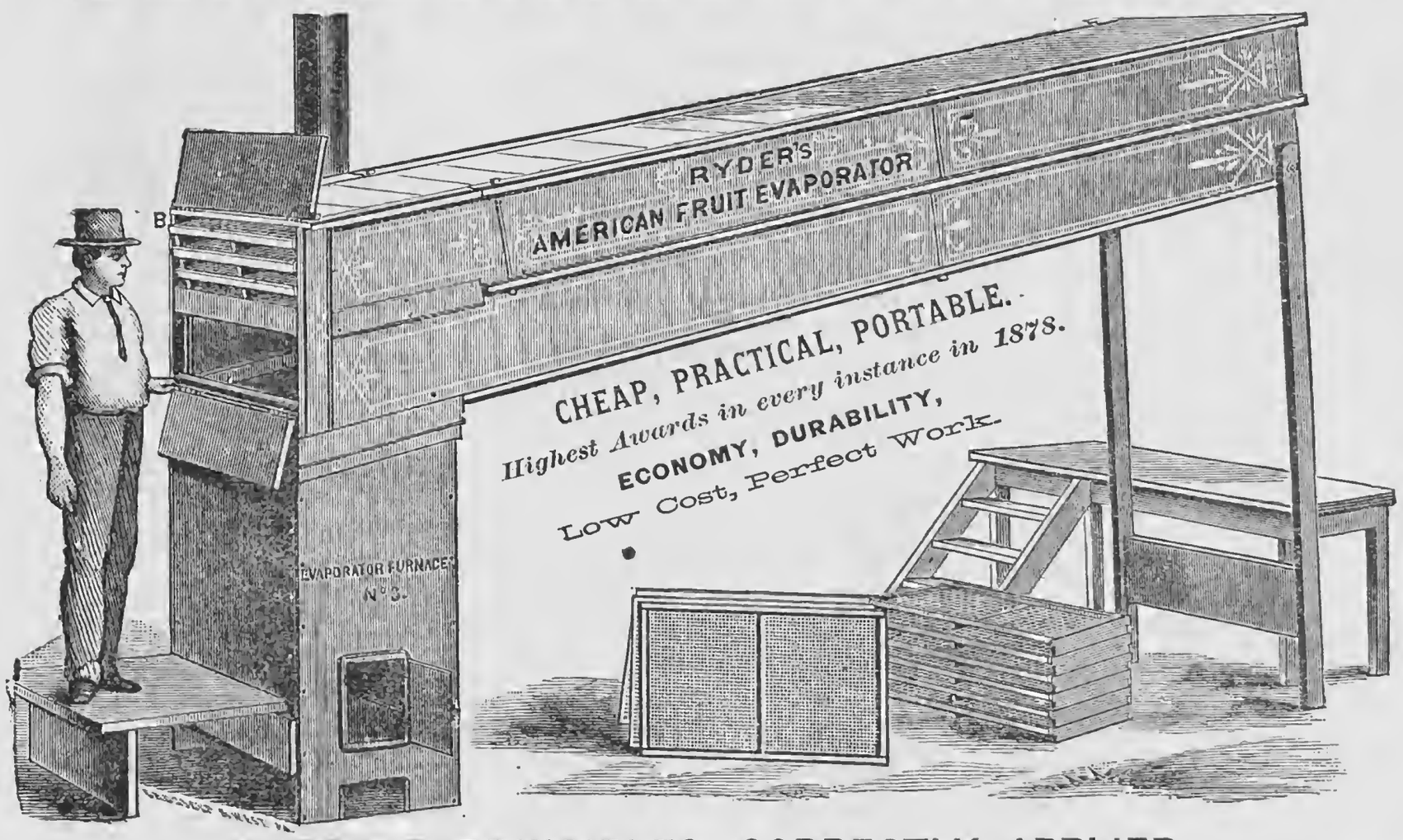

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3d. It is the only original Inclined-Flue Evaporator, thoroughly protected by letters patent, and the only one which can guarantee protection and safety in its use against costly litigation, royalties and damages. See notice in catalogue of our claims.

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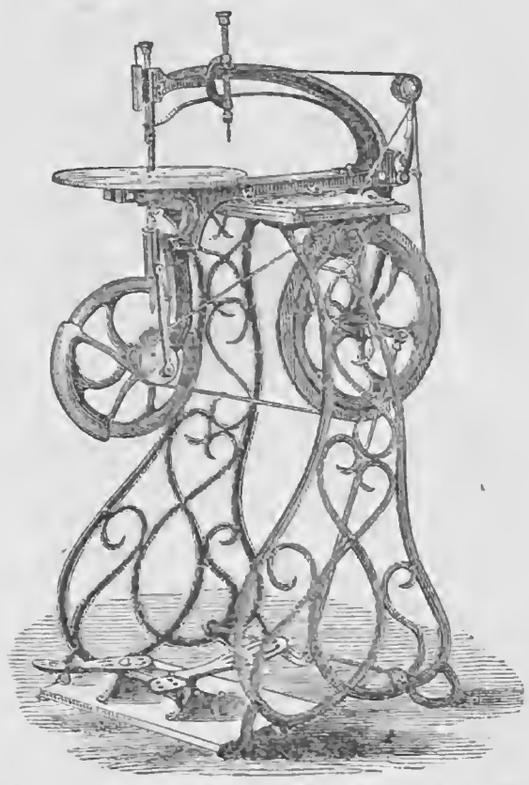

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Miscellaneous.

AN INSURANCE STORY.

JAMES FERGUSON AND DEACON JONES.

An intelligent, quick-witted farmer, about thirty years old, was James Ferguson. He owned a hundred acres of land nearly paid for, and had a snug set of buildings on the farm. Deacon Jones was his neighbor, sixty-five years old, possessed of rare judgment and shrewdness, which qualities had brought him prosperity in the way of broad acres. He owned three good farms beside the one he lived on; a married son and daughter lived on two of them and a tenant worked the third.

The Deacon's judgment was greatly respected by all who knew him, and especially by Mr. Ferguson. The genial old gentleman always welcomed James to his house, and when asked, would discuss any matter of business with him or give such advice as a father would to a son. This kindliness on his part, had already saved James from embarking in two or three bad business ventures. Not three months before the conversation occurred which we are about to relate, James asked him for advice in buying a patent right an agent had recommended in glowing colors. The Deacon soon convinced James that agents only represent one side of a question, and persuaded him to look at the other side of this one for a while. Then he brought out his slate and pencil and set James to figuring expenses and loss of time and cost of patent, and soon showed him that the profits were too visionary to be depended upon.

In truth, the Deacon had a very shrewd way in his discussions. First, he would allow a man to tell his own story to suit himself, and then by a series of questions and suggestions, lead him along until he had involved himself by admitting sufficient to overthrow his own theory. A few words then from the Deacon, clinching all the points that had been made, would usually conclude the discussion, with the man convinced against himself.

At the time of which we write, in the latter part of October, 1879, a good deal of discussion occurred in the neighborhood about fire insurance. A young man from a neighboring town had lately held a meeting at the school-house, and made a speech full of tinkling words and sounding figures, urging the farmers and others to join a Mutual Insurance Company recently organized in the county. He told them of great profits made by stock companies. He pointed to the reports of a few such companies that were rich, and claimed their wealth was made by exorbitant charges for insurance. He figured that the farmers could save many thousand dollars by joining his company, formed on the Mutual plan, and did not conclude until he had shown, in his own estimation, that insurance as conducted by these companies, was little less than downright robbery.

Ferguson and the Deacon were both at the meeting. The former was deeply impressed by what the young man said, and went home about resolved to place his insurance in the proposed company.

The next night he visited the Deacon, to see what he had to say on the subject. After the usual greetings, the discussion of the weather, and the prospect of the prices of wheat, of which both had some to sell, James broached the insurance question, by saying he was a good deal interested in the address of young Jones, and asked the Deacon what he thought about it.

"Well," said the Deacon, "I thought he was pretty wordy and smart, but I was not convinced as to the soundness of his arguments."

"Why," said James, "I thought they were very strong and convincing."

"What arguments, James, struck you so favorably?" asked the Deacon.

"Why, the whole speech," said Ferguson. "He showed how the farmers of this county could save thousands of dollars, by a Mutual Insurance Company. You know he told us that some companies made $20,000 a year, and some make even more. That they report having millions of dollars assets, and they make it all out of us farmers and others. Besides, they pay their officers great salaries for doing almost nothing at all. It is too bad, Deacon, that they should gouge us so, and I feel that we ought not to stand it, don't you?"

"No," replied the Deacon very quietly, "I was not convinced by what he said that I had been much cheated by the companies that insure me. I have never yet paid as much for the insurance of my buildings as I should want to charge another person, if I were to be the insurer. It seemed to me while this young man was talking that he dealt too much in general statements, and did not come down to details. You seem also to be running off in the same way. I guess I will bring out my slate and pencil, for we will want to do some figuring before we get at the bottom of this thing."

Now James knew that the Deacon seldom decided any business question without first consulting his slate and pencil. His discomfiture in the patent right question a few weeks before had all come through those little figures which the Deacon had so carefully made, and added and subtracted on his slate. But he too had brought a memorandum, taken at the speech, of the figures which the young orator had liberally given. They were all large ones, running up into the thousands and even millions of dollars. They wore a very formidable look, and he thought they could not be answered, so he was very glad when the Deacon got up, went to his desk, and getting the slate, drew out a table, put on his spectacles, and asked James to come up and prepare for details.

"Now, James, you say some of these companies have made $20,000 and more a year, out of the farmers and others that they insure."

"Yes, Deacon, their reports say they did, and the lecturer said that these reports are sworn to by the officers."

"Well, that is a good deal of money to make in a year," said the Deacon, "or it would be if one man made it all, or it was all made out of a few men. We will put that down here in this corner, against the companies. Now how many men were insured, out of whom all this money was made?"

This was an unfortunate question for James. The young orator had not told them, and he had not thought of it before; so he was obliged to answer that he did not know.

"You see," the Deacon continued, "if there were 20,000 men insured, then it was only a dollar made from each one, and this was not a very great robbery. If they had 40,000 men insured," said he, after figuring a little, "it would be only fifty cents a year, and I don't believe they ought to take the chances of 40,000 risks at much less profit than this on each. I remember inquiring once at the office of a company that insured farmers in a good many States, and they told me they issued very often 50,000 policies in a year. I suppose some issue more, some less, but anyway, it is evident that when you bring the figures down to each one of us, they will not show such evidences of extortion as they appear to in speech.

"But $20,000 would be a great deal for one man to make, even if he made it from 40,000 people. Now did the young man say whether these companies were any of them owned by one man, or how many were interested in them?"

"No, he did not," said James, very much chagrined that he had not thought to ask.

"Then I do not see," said the Deacon, "as we have got much figuring to do on this part of our subject; he didn't furnish us much data to work from. If, as I suppose, there are one or two hundred stockholders in these companies, it would only give each one a profit of from $75 to $200 apiece, and that will not make them rich very fast, will it?"

James had to assent to this proposition, and felt that his line of argument was being rapidly demolished by the Deacon's mode of coming down to details. So after a few minutes, thought he remembered another point.

"Why, Deacon," said he, "you needn't tell me that these stock companies have not made more money than you talk about. They have got millions and millions of dollars, and they have made it out of the insured, too!"

"Hold on there, James do not go too fast," said the Deacon. "Let us look into that a little. It is true they have in their hands a great deal of money, but it is not true they have made it out of the insured. In the first place, to form one stock company, under the laws of our State, the men interested have to pay in at least $200,000, and some of the companies have one or two millions of dollars thus paid in by the owners. This money is called the Capital Stock, and is all paid in by the stockholders, before a policy is issued. That part of the money owned by the companies, called their capital, has not been made out of the insured, for it was in the company before the insured paid a dollar. Then you will notice another thing; you see we pay our insurance in advance—one, three, or five years. Now the laws of this State say that this money which we pay in, does not belong to the company at all, for the company has not yet earned it. They must hold it in trust until the policies run out, and pay all the losses we may have while they run, before they can call it theirs. All this money is called a liability against the company. It is a debt, just the same as money deposited in a bank is a liability against the bank. This fund, called the unearned premium fund, amounts to many hundred thousand dollars in each company's hands, and if any company should stop issuing policies, so as to stop more of this money coming in, they would at once begin reducing it, by paying the losses as they daily occur, on policies not yet expired. This would continue until every policy ceased by limitation, and I am confident it would use up a large part of this fund.

"Now, if you should add this debt for deposits to the capital paid in by the stockholders, you will see that the companies lack a great many million dollars of having made out of the insured, all the assets they report on hand."

"Why, Deacon," said Ferguson, "do you mean to say that these companies are not rich?"

"Certainly not, James; they are rich, as they should be, to have our confidence. We depend upon them to help us, if calamity befalls us; we pay our money to them for insurance for years to come. The stockholders put their money into the company as they do, to win our confidence so we shall put ours into it also, and thus create a large fund to pay losses with when these occur.

"Now, James, tell me who you think has the first claim on the money these companies possess—is it the stockholders who furnished the capital, or the men who have losses under their contracts or policies?"

"Why, I suppose the losses that occur are debts, and the law will protect the creditor before the stockholders."

"Yes, that is true. If losses should come heavier than the company expected, so as to exhaust all the money we paid for insurance, then we could call upon them for the capital until every dollar of this was exhausted. This has occurred many times, and the result was that the stockholders stood by and saw all their money go to this purpose, leaving them without a dollar of their investment. Would you like to invest any money in this way?"

"Well," said James, after considering a few minutes, "I might, if I got large enough dividends."

"That is well said," replied the Deacon; "now, I notice very few companies pay over ten per cent. dividends on the money or capital they invest—many pay less. As this at the best is only three or four per cent. more than they could get by investing their money in good mortgages where they could not lose it, I do not think it a very tempting business. Business, where a man stands a chance to lose all his money, ought to pay a better profit, or interest, or dividend, than business that has no risks in it.

"Suppose a man came to me, and told me he had five thousand dollars deposited in a bank, and offered to make a contract agreeing that if my property burned up within the next three years, that money should be mine, and that all he would ask in return, was the interest the money itself earned, and three or four per cent. besides? I should consider his offer a very liberal one indeed. More than that, I would not want to change my business for his—would you?"

"No," said James, "but do you mean that is the way insurance companies do?"

"Certainly; only a stock company consists of perhaps some hundreds of men instead of one man, each one putting in such sums as they see fit, and they insure thousands of men, thus taking thousands of risks instead of one only. I don't think it a very safe business."

"I agree with you," replied James. "I have worked hard for fifteen years and made a few hundred dollars. I should hate to put it into such a speculation, even if I were sure of the ten per cent."

"Why not?" the Deacon asked very quietly.

"Oh, because I should worry over the chances in the business. Your house might burn to-night, or John Smith's to-morrow night. Some people are awful careless, and then lightning strikes when any little thunder shower comes up. The uncertainty would make me nervous, and even if I drew a little extra profit two or three years, I should all the time be afraid of losing all I invested."

"Do I understand you, James," said the Deacon, "that you do not think that the chance of making a little money would be any temptation to you to risk losing a good deal?"

"That is just what I mean, Deacon. I am going to take care of my money, and take no chances. Let other men take their chances if they want to—I won't!" and he brought his fist down with a great deal of energy on the table as he said so.

The Deacon dropped his head as if in deep thought, and remained so some minutes. At last Mr. Ferguson, feeling that the conversation had been drawn away from the subject he desired to discuss, said:

"But that has nothing to do with the matter I wanted to discuss with you, Deacon. That is this Mutual Insurance Company. You see we pay a good deal of money to these companies to pay their agents and officers and clerks, &c., and as the danger of fire is very light we ought to save considerable by forming such a company, and then when one of our number has a loss we could all be assessed and pay our proportion, and thus avoid paying more than is absolutely necessary. Now what do you think of it?"

The Deacon did not make any direct reply, but began figuring.

"How much do you pay now, James, to the stock companies to be insured," he asked.

James considered a few minutes and then said:

"I pay $30.00 for every policy."

The Deacon wrote the $30.00 on his paper.

"How long does your policy run, James?"

"Three years."

The Deacon figured a few minutes and then, looking up, said:

"James, my policy runs out day after to-morrow, I can not see the agent until a week from that day to get it renewed. Now I want $3,000 insurance on my property for that week. I will give you five cents each day, if you will agree to pay me $3,000 in case I should lose so much. Will you do it?"

"Why, Deacon, are you crazy? I told you a few minutes ago that I would not take such chances. I don't know what you mean by asking such a question."

"Well, if you can not do that, I will make you another offer. You have got about the same amount of property to be insured that I have on my farm over on the cross-road that John is living on. Now, I will not pay you any money, but we will agree to this—if you burn up in the week, I will pay you your loss, and if I burn up, you shall pay me my loss."

"But, Deacon, I told you I did not want to go into the insurance business at all. Besides, your son has five children, and I have only one; he keeps a hired man and a girl—I keep neither; so that risk is a good deal more than mine. Why then should you ask me to take twice as much risk as you do? Even if I should consent, your own conscience would convict you of getting an advantage over me; I cannot understand, Deacon, what you are driving at."

"Simply this, James," said the Deacon, "I am having you argue your own way through the question you asked me about the Mutual Company. A Mutual Insurance Company is founded upon the principle that my proposition is founded upon, and which you so indignantly denounce. It is a fact that in joining such a company you go into the insurance business; you help insure all your neighbors who belong to the company, as well as every other person who is induced to join. You pledge your property—your farm—to pay a certain portion, not only of my losses, if I belong to the company, but of each and every member of the company. You said you thought ten per cent. dividend, to the stockholders of a stock company, was none too much for them to receive for their risk, and that even that dividend was no temptation to you. Yet here you put your whole farm in the pool and receive nothing in return in the way of dividends, and save but very little money indeed. Your farm is worth $5,000 in cash.

"Now, James, I have figured out a little sum here for you. $30.00 for three years is $10 a year, or 2½ cents a day. That is what you pay a stock company for laying aside $3,000 with which to pay you if your buildings burn any time in the next three years. You have no farther trouble about it—you know that if you burn, in sixty days or less, you will have your money in your hands to rebuild with. You do not feel alarmed about your neighbors' carelessness—you are not uneasy lest some of them burn—there is no lien on your farm; you paid your money and you have got your policy. Don't you think you had better let well enough alone?

"When I was a young man I felt as you do, and I joined a Mutual Insurance Company. We run very nicely for two or three years—we had some little assessments and thought we were saving money. But after a little we had a very dry summer, with a hot, showery August. Two or three dwellings burned during the Summer, and a couple of barns were struck by lightning and burned in August, just after harvest. We met in September to look the ground over, and found that to pay the losses for the Summer, would cost more than to insure in a good company for ten years. We paid our assessments, and went home, sadder but wiser men. We concluded that so long as two or three hundred insurance companies were soliciting our insurance, the competition between them would keep the price down as low as it could be done, and as we could get all the insurance we wanted at a price ranging from one-third of a cent a day for the small property owners, to five cents a day for the wealthiest men in our county, it was nonsense to go into the business ourselves.

"I made up my mind that when I wanted to go into the insurance business, I would buy some stock in some company, paying the cash for it, and let it take the chances. I have never seen the time I wanted to invest that way. I would never put my home or farm into a pool, and say to all the county, 'If you burn, here is my farm to draw on,' for I intend to do a farming business and let some one else do the insuring of all my neighbors.

"Now, James, it is time to go home. You are a farmer—stick to farming. Don't go into insurance or buy patent rights.

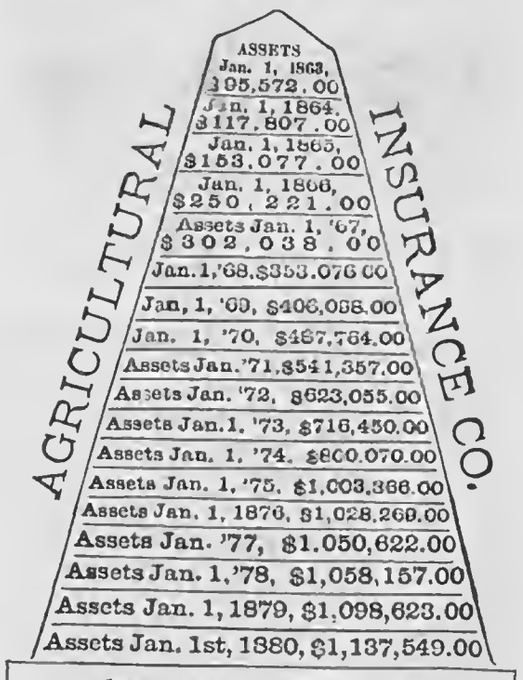
"One thing more, James, don't begrudge to other men, the little profits they may make in any trade you give them. If you want a wagon you had better let a wagon-maker make it for you, and make something on the trade, than try to make it yourself. If you want some sugar, you had better let the railroad bring it and the merchant sell it to you, each making a little profit, than to take your horse and drive to New Orleans after it. The railroad and the merchant will make a dollar or two, on all you will use in a year, but it is infinitely better for you to be digging away on your farm, raising the stuff to sell to get the money to pay them while they are getting it to you, than it would be for you to leave the farm to go after it.

"So with insurance. The companies that insure 40,000 or 50,000 farmers a year, will gladly do it at a profit of a dollar a year from each, and even for less. I am told they often do not make one-third of this. So on the average, all you will save by going into the business yourself, will be the few cents yearly that they make out of each man after paying all the losses that must arise.

"Keep your property insured—keep out of all entangling alliances—pay your debts and you will be happy. Good-bye, James."

And this was how it happened that James Ferguson did not join the Mutual Insurance Company.

PYRAMID
OF ASSETS OF THE



Assets January 1st, 1881,
$1,261,731.00

Capital, $300,000. Net Surplus, $201,092.58.

THE ATTENTION of Owners of farm property and residences is invited to the above Pyramid, showing the uniform and sure growth, during the last eighteen of its 28 years of existence, of a fire insurance company whose charter limits its business to their class of property—the **Agricultural Insurance Company**, of Watertown, N. Y. The figures represent the amount set apart at the dates given for the PROTECTION OF POLICY HOLDERS.

Twenty-eight years of patient toil has made this the strongest and largest Company doing an exclusive Dwelling Business in the United States, if not in the world. It now issues 55,000 polices a year. No other like Company can show such growth and increase.

The history of this Company proves that a LARGE business, well scattered, managed with prudence, *can be done with a very small profit from each risk*, and afford perfect security, which will grow stronger every year.

While nine-tenths of the "Mutual" fire insurance companies, and many of the Stock companies, have failed on account of reckless or extravagant management, or doing too small a business, the OLD AGRICULTURAL, by economy, energy and prudence, has every year added a substantial amount to its Assets, for the indemnity of its patrons, and it now occupies a position in the confidence of the public second to no other Company.

From year to year it spreads the base of its Pyramid and gains strength.

EXTRACT FROM CHARTER.—"*Article 2.* This Company is formed for the purpose of insuring Farmers' Dwellings, Private Residences, Barns and Outbuildings, with their contents, and other property not more hazardous," and is strictly confined to this class of property.

JOHN A. SHERMAN, President.
ISAAC MUNSON, Secretary.

C. PATTERSON, 60 Liberty St., N. Y., General Agent Eastern New York, Connecticut, New Jersey and Eastern Pennsylvania. D. A. CLARK, Baltimore, State Agent Maryland and Southern Pennsylvania. GEO. D. PLEASANTS & SON, Richmond, State Agents Virginia and North Carolina. A. H. DARROW, Chicago, General Manager Western Department. FISHER & FLYNN, Cobourg, Ont., Chief Agents for Canada.

ABOUT WOMEN.

ROSA BONHEUR is 58 years old.

MISS SARAH P. MCLEAN, of Simsbury, Ct., is the author of "Cape Cod Folks."

THE late Countess Montijo, mother of the ex-Empress Eugenie, once kept a millinery store at Brussels.

EIGHT New York ladies, whose husbands are estimated to be worth $300,000,000, aggregate, dined together the other day at a Saratoga hotel.

THE QUEEN is now interesting herself as to the matrimonial future of the Prince of Wales' eldest son and the eldest daughter of the late Princess Alice of Hesse.

MRS. DOMINIS, a sister of King Kalakua, and the wife of an American shipmaster at Hawaii, acts as regent of the kingdom in her brother's absence. Kalakua has chosen her as his successor to the throne.

WHEN women are the advisers, the lords of creation don't take advice until they have persuaded themselves that it is just what they had intended to do; then they act upon it, and if it succeeds they give the weaker vessel half the credit of it; if it fails, they generally give her the whole.—Louisa M. Alcott.

THE marriage of the Duke of Argyll with the daughter of the Right Rev. Thomas Leigh Claughton, D. D., Bishop of St. Albans, at the Episcopal Palace, occurred in London, August 12. The bride is the niece of the Earl of Dudley.

[Wayne Co., (Ohio) Democrat.]

Mr. William E. Snyder of West Lebanon, Ohio, says: For some time past I had been severely afflicted with Rheumatism. Seeing an advertisement of St. Jacobs Oil, I procured a bottle, and I could feel the effect of the Oil upon the first application. I am now entirely well after using one bottle.—*Adv.*

THE OLD RELIABLE
Buckeye Force Feed

GRAIN DRILL.

ALSO

THE NEW BUCKEYE
Combined Force Feed Grain and
FERTILIZER DRILL.
AS IMPROVED FOR 1881.
Over 100,000 Now In Use.

The Buckeye has the largest sale of any Grain Drill in the world, and they are pronounced by all to be the most *perfect* SEEDING MACHINES in the country. No Grain Drill ever made gave such UNIVERSAL SATISFACTION. It is the best force-feed in the market. Our Fertilizer Sower has a positive force-feed and has no equal. Send for our circular giving illustrations of new improvements. Address P. P. MAST & Co.,
Springfield, Ohio.

Branch Offices, 216 N. Broad St., Philadelphia, Pa.
11th St. and Clarke Ave., St. Louis, Mo.

Also manufacturers of Buckeye Broadcast Seeders, Buckeye 11-foot Sowers, Buckeye Riding Cultivators, Buckeye Walking Cultivators, Buckeye Plow Sulky and Buckeye Cider Mill.

NEW BUCKEYE STEEL SPRING TOOTH

WHEEL HARROW AND CULTIVATOR.

Another improvement, another advancement in the right direction, another economical labor-saving implement, something that no farmer can afford to do without

Sold with or without Broadcast Seeding Attachment.

High Wheels, Broad Tire, Light Draft. The pressure on the teeth is regulated by the lever, and they can be set while in motion to run at any required depth. The teeth are made of the best spring steel. The ample space under the frame allows it to pass over obstructions readily. No implement made will so wonderfully work up and pulverize the soil or prepare the ground so admirably for the crops as the Buckeye Spring Tooth Harrow.

The New Buckeye Spring Pressure Grain Drill.

The best and most complete Spring Pressure Drill in the market. It embraces all the latest improvements of the age. Is so arranged with Steel Spring Drag Bars that any amount of pressure can be put on the Hoes with the Lever. It is supplied with guages, so that the grain is deposited at a uniform depth in either hard or soft soil. The Drag Bars arranged with a drop to allow the Hoes to follow the uneveness of the ground. It has the best Force-Feed in the market and a reversible Force-Feed Grass Seed Sower which can be put on to sow either in front or rear. Also

THE BUCKEYE SHOE PRESSURE OR RUNNER DRILL,

constructed on *scientific principles*, and we do not hesitate to recommend it to be the best Drill of the kind in the market. In addition to the improved shoe or runner and lever spring pressure, it has all of the improvements of the regular Buckeye Drill; also the old reliable Buckeye Grain Drill, the Buckeye Combined Grain and Fertilizer Drill and Buckeye Seeders—in other words the most complete line of Grain Drills and Seeders in the world. Send for circulars to

P. P. MAST & COMPANY, Sole Manufacturers, Springfield, Ohio.

Branch Offices, 216 North Broad Street, PHILADELPHIA, PA.; Corner 11th Street and Clark Avenue, ST. LOUIS, MO.

G. WESTINGHOUSE & CO., SCHENECTADY, N. Y.

TRACTION AND PORTABLE ENGINES,

Horse Powers, Grain Threshers,

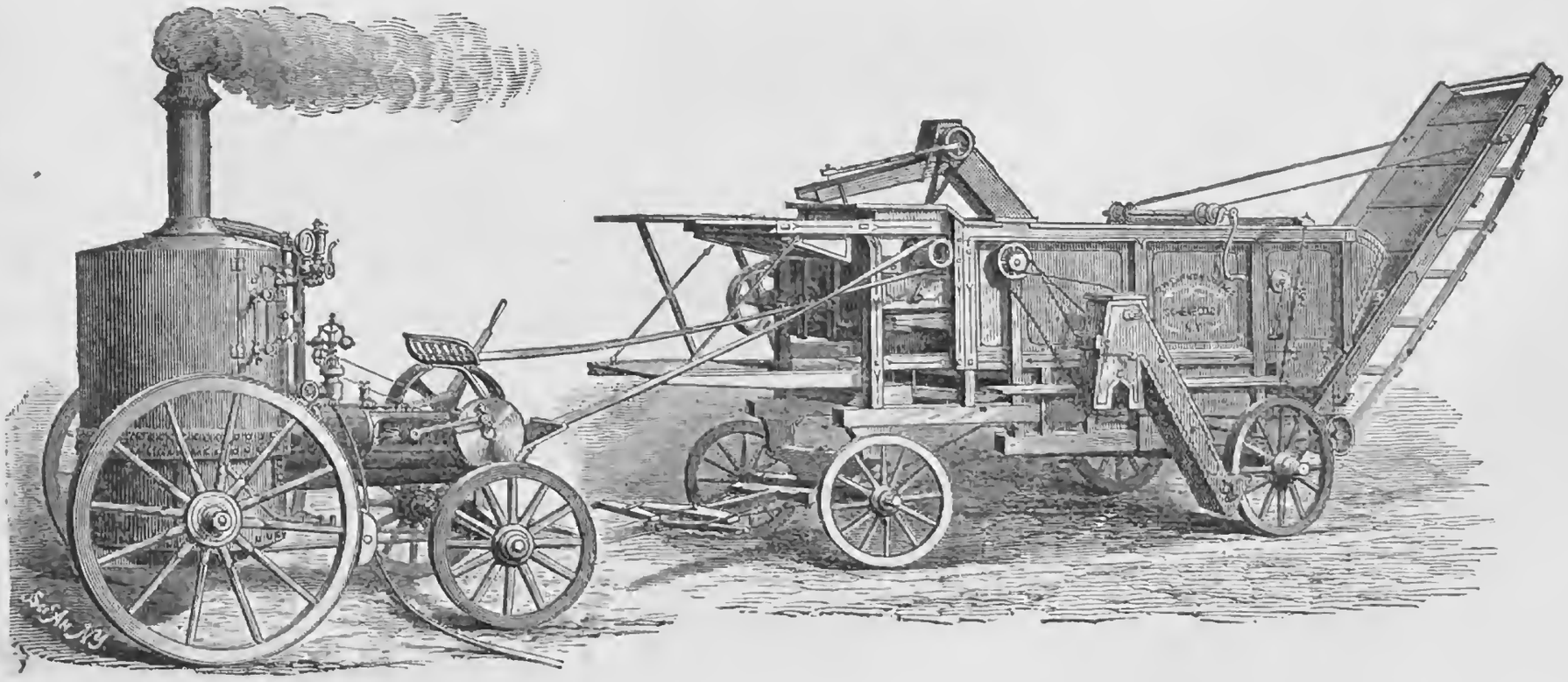
AND

Combined Clover and Grain Threshers.

Grain Threshers, unequalled in capacity for separating and cleaning.

Combined Grain & Clover Threshers, fully equal to regular grain machines on grain, and a genuine ***Clover Huller*** in addition.

Engines, positively the most desirable for Lightness, Economy, Power and Safety. Boiler has horizontal tubes, and is therefore free from the objectionable features of vertical boilers.



AGRICULTURAL NEWS.

The largest importation of pure-breed draft horses ever made into this country arrived here on the steamer City of Limerick, on Aug. 25, amounting to 200 pure-bred Percherons, the property of Mr. M. W. Dunham, of Wayne, DuPage Co., Illinois. One-tenth of all the Percherons that have ever crossed the Atlantic were included in this large shipment. A special train of 30 cars was engaged to carry the horses to their final destination, and on their arrival there Mr. Dunham tells us he will have on his two farms—one of 600 and the other of 2,000 acres—one-fifth of all the Percherons ever brought to this country. In the last 17 months he has imported 360 head of this distinguished breed, aggregating more than all the importations of all other draft horses combined. There is no breed of draft horses that has met with greater favor than Percherons in this country, especially in the West. They are from 15 to 18 hands high and weigh from 1,500 to 1,800 pounds. For heavy farm and road work, the city dray or truck, no horses ever imported have been superior to the larger class of this remarkable breed; while those of medium size are equally admirable for the express wagon, the omnibus or the street car.

The Cal. Silk-Culture Association (San Francisco) is pushing the raising of silk worms by distributing mulberry seeds, pamphlets, etc....The Chilians have just discovered two valuable deposits of guano—one on the Tortugas Islands, estimated at about 60,000 tons; the other in Ferrol Bay, about 40,000 tons; both first-class and worth about $6,000,000.....The Omaha Bee urges the passage of a law prohibiting the killing of prairie chickens for the next ten years. They are now being rapidly exterminated and the enormous increase of noxious insects in the West is doubtless greatly due to reckless pot-hunters.....The Illinois and Mississippi River and Canal Improvement Co., met at Chicago on August 25 and appointed a Committee to memoralize Congress in behalf of the construction of that canal westward from Hennepin, Ill., to the Mississippi. Hearty sympathy was unanimously expresed for the objects of the St. Louis River Improvement Convention which meets Oct., 26....The N. Y. Canal Board purposes so reimpose tolls on West-bound freight—a project that excites bitter opposition from shippers in this city.....Many Portugese laborers have been put to work on Louisiana plantations and a systematic effort is being made to induce immigration from Spain, Portugal and Italy to the Gulf States. Owing to scracity of labor, wages there have already risen and threaten to go much higher unless more laborers can be obtained from somewhere.....The Iowa Farmers' Protective Association, which is contesting the validity of the barbed-wire-fence patents, is encouraged by the discovery of a home-made barbed-wire fence put up, on the farm of Samuel Freeman, six years before the wire fence patents were obtained. They must not be too elated, however, as it has been decided that priority of invention does not invalidate a patent unless the invention has been introduced to public notice.

The recently appointed Treasury Cattle Commission have just issued a circular addressed especially to the governors of the States and Territories west of the Alleghanies, in which they call attention to the danger to which herds in those States and Territories are exposed from the traffic in diary calves brought from the infected district on the Atlantic coast, which the circular states extends from New York south to Washington. Those to whom the circular is addressed are requested to use their influenced in securing legislation forbidding or discouraging traffic in cattle from anywhere near the infected regions.....One of the largest importations of Channel Island Cattle ever made, has just been brought here by Mr. Burnett, Southboro, Mass., consisting of 174 Jerseys and 18 Guernseys.....At the same time Mr. Cooper, of Coopersburg, Pa., brought over 175 Oxford Down Sheep, among which were three pens that took premiums at the Royal show at Derby this year.....William E. Flinn's ranch, near San Diego, Cal., boasts a grape-vine which bore five tons of grapes last year and broke down an oak, two and a-half feet in diameter and sixty feet high, which supported it.

A HEAVY iron roller has been used at the Rural Farm for four years, at first upon sowed grain, but latterly before the grain is sown, the land being fitted for seed when sown broadcast by harrowing after the roller. We are of the opinion that the best use to be made of such rollers is to break up the lumps and pulverize the soil. A roller is a companion implement to a harrow, rendering its work three-fold more effectual. But the harrow should begin and end the work.

THERE can be little doubt that wheat drilled in is less liable to winter-kill than if sown broadcast. The seed is placed deeper and more uniformly so.

"Allow me to congratulate you on your harvest reports. Newspaper men agree that they are more reliable than those of the Department of Agriculture. To think of private enterprise beating Uncle Sam!"

T. H. HOSKINS, M. D.,
Ag. Ed. Vermont Watchman.

APPARATUS & SUPPLIES
FOR
Cheese Factories,
Creameries,
and Dairies.
Send for circular.
JOHN S. CARTER,
Syracuse, N. Y.

LINCOLN PATENT
CHANNEL CAN CREAMERY.
It calls for less than ¼ the Ice!
Deep-setting perfected. Gets all the Cream in less than ten hours with ordinary well water, or with less than one-fourth the ice called for by any other process. ONE TON OF ICE WILL GIVE MORE BUTTER THAN YOU CAN GET WITH FIVE TONS OF ICE in any other Creamery. *Special attention given to fitting up large Creameries.* Agents wanted. Send for circular.
WM. E. LINCOLN, Warren, Mass.

BADGER STATE
Butter Color.
Received the only honorable mention granted to any Butter Color at the International Dairy Fair of 1879. If not for sale by your dealer, send for circular, &c. to the manufacturer, E. SHELDON, Fort Atkinson, Wisconsin.

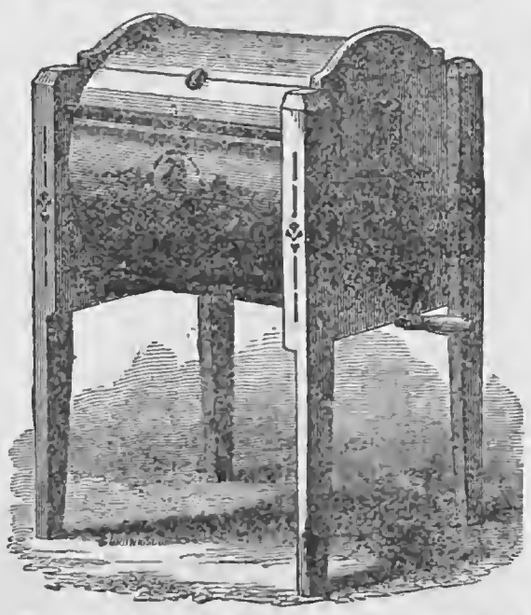
DAIRY ENGINE AND BOILER.
SIMPLE, RELIABLE AND ECONOMICAL.

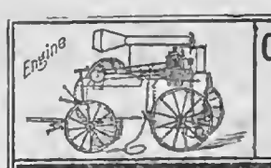
We sell a TWO-HORSE POWER ENGINE AND BOILER, like engraving, for churning pumping water, grinding, cutting or steaming feed, at $195, complete and ready to run. Boiler made entirely of Wrought Iron, and tested to 150 pounds pressure to the square inch. Larger sizes at equally low prices. Send for illustrated price list.
CHAS. P. WILLARD & CO.,
23 LA SALLE ST., CHICAGO.

CHEESE MAKERS' SUPPLIES
AND OUTFITS.
For the best goods and lowest prices, address
CHARLES MILLAR & SON,
Utica, N. Y.

BLESS JONES
FAIRBANKS and his agents do not bless JONES, because JONES sells and warrants for five years a better 5-ton Hay Scale for $60—and JONES he pays the freight—than old "Genuine" ever made. Equally low prices on every size Scale. Send for free book. Address
Jones of Binghamton,
Binghamton, N. Y.

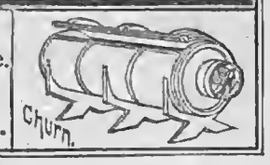
We shall continue to make and furnish the square top and the IMPROVED round top, as may be desired.


Our churns received the HIGHEST PREMIUM at the International Dairy Fair in New York City in 1879, in competition with all the leading churns in the market.
Nine sizes made, churning from one to one hundred gallons. Warranted to be exactly as represented.
Send to any dealer in REALLY first-class Farm and Dairy implements for a descriptive circular of
"The New Blanchard Churn,"
or to the Sole Manufacturers,
Porter Blanchard's Sons,
Concord, N. H.



CHEESE AND BUTTER MAKERS'
SUPPLIES
And Complete Manufacturing Outfits.

HANSEN'S DANISH LIQUID BUTTER COLOR
HANSEN'S LIQUID CHEESE COLOR, LIQUID EXTRACT OF RENNET.
NO MANUFACTURER OR REPACKER OF BUTTER CAN AFFORD TO NEGLECT THESE DANISH PREPARATIONS,—GANG PRESSES, SELF BANDAGING CHEESE HOOPS, ANNATOINE, ANNATTO, RENNETS, SCALE-BOARDS, FAIRBANKS' SCALES, ETC., ETC., ETC.
ANTI-HUFF EXTRACT FINEST SKIM MILK CHEESE

Lapham's Patent Seamless Bandages
Saves Making Bandages, Less Expensive, No Waste. The Best Coolers or Vats for Raising Cream Guaranteed. Illustrated circulars sent free. Address
WHITMAN & BURRELL, Little Falls, N. Y.


MOSELEY'S
CABINET CREAMERY.
"THE STANDARD,"

Awarded by the Pennsylvania State Agricultural Society, at Philadelphia, September, 1880, the only
First Premium
ever given in America as a result of ACTUAL TEST, in which the MILK set ce consumed, and RESULTS obtained, were all carefully WEIGHED and NOTED by the committee making the report.
Send for Circulars to the manufacturers,

"BUY THE BEST."
The Stoddard Churn.
The most popular Churn on the market. No floats or dashers inside. The cover removed in an instant, and replaced as quickly. Cork packing, that never leaks. Highest award, a
SILVER MEDAL,
at Philadelphia, 1880, at the largest exhibition of dairy apparatus ever made in this country, after an actual test with the leading churns manufactured. SIX SIZES made. Pulleys furnished for power if desired.
AGENTS WANTED.

MOSELEY & STODDARD MF'G CO., Poultney, Vermont.

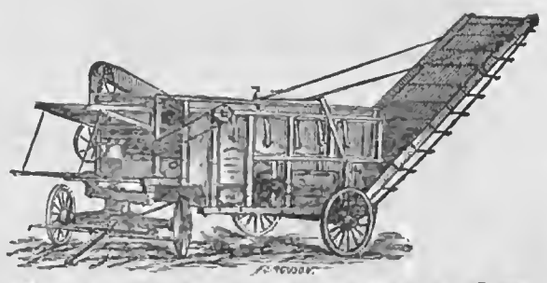
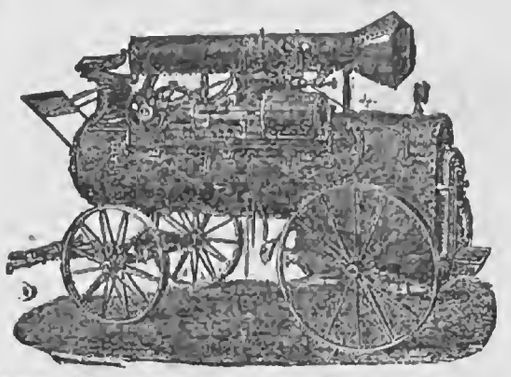
$250.00 CHALLENGE $250.00
We offer above to any color that will excel
Mrs. B. Smith's Butter Color.
What we claim for our BUTTER COLOR is: 1, it has no taste or smell, and is as harmless as water. 2, it is liquid, is easy to handle, and is mixed in the cream before churning. 3, produces a color resembling golden June grass butter. 4, it is the only article that will color the butter and not the buttermilk. 5, it gathers all the butter materials, and increases the weight more than enough to pay for the color used. 6, the color of the butter *never* changes. In short, it is decidedly the best article for the purpose ever offered for sale. For sale by your druggist or country store. Manufactured and for sale by
MRS. B. SMITH,
Chestnut St., Philadelphia, Pa., U.S.A.
Dairymen's receipts free. (P. O. Box 1954.)

CHEESE AND BUTTER
APPARATUS AND SUPPLIES.
Full Outfits furnished. Send for Catalogue.
CHILDS & JONES, SUCCESSORS TO JONES, FAULKNER & CO. UITCA, N. Y.

M. D. CHAPLIN, Poultney, Vt.
Manufacturer of the Wooster Creamery and Surprise Churn.

THE WOOSTER
CREAMERY
is perfect in principle and in operation.
Can be used with LESS ICE and LABOR than any other CREAMERY in the market.

THE
Surprise Churn,
took the Special Prize of $50.00 at the International Dairy Fair, held in N. Y., Dec., 1879. It always takes the
Highest Awards
when on exhibition. Dairymen give this your attention.
FULLY PROTECTED BY LETTERS PATENT. CIRCULARS FREE.

St. Johnsville Agricultural Works,
MANUFACTURERS OF
Tread, Sweep and Steam Threshing Outfits,
with the latest improvements, capacity and ease of running unequaled.


Ample warranty and opportunity for trial given.
FOR FULL PARTICULARS ADDRESS,
ST. JOHNSVILLE AGRICULTURAL WORKS,
ST. JOHNSVILLE, Montgomery Co., N. Y.

ASK FOR
Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say IT IS PERFECT. Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.
USE ONLY THIS THE FIRST AND THE BEST

COOLEY CREAMER, DAVIS SWING CHURN, EUREKA BUTTER WORKER, ETC.

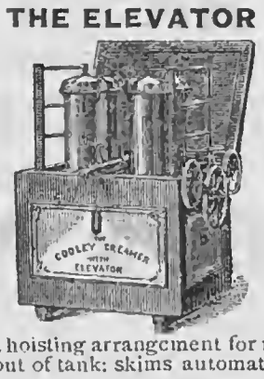
THE REGULAR.

Cans in this, removed to bench for skimming automatically.

THE JUNIOR.

Skims automatically without removing cans

THE ELEVATOR



Has a hoisting arrangement for raising cans out of tank: skims automatically.

THE CABINET.

Has a compartment under water tank, skims without removing cans.

THE COOLEY CREAMER.

Raises all the Cream between the milkings. Saves two-thirds of the labor. Increases the yield of butter. Improves the quality. Quadruples the value of the skim milk. Will pay for itself twice or more every season. The Cooley system is the only uniform Dairy method in existence.

MADE IN FOUR STYLES AND TEN SIZES.

CAUTION.

One of the strongest proofs of the great popularity of the COOLEY CREAMERS, and an undeniable confession of their superiority, is the large number of imitations on the market which claim the same unrivaled perfection of action possessed by these justly celebrated creamers. We therefore caution all persons not to buy or use any of said imitations and infringements, as we shall protect our rights to the full extent of the law.

Highest award at the International Dairy fair at New York, December, 1878.
Gold Medal, Paris, 1879. Gold Medal, London, 1879.
Gold Medal and Sweepstakes, International Dairy Fair, New York, 1878 and 1879.
Silver medals, New England Fair and Vermont State Fair.
Medal and First Premium at Cincinnati Exposition, 1879 and 1880.
Medal and First Premium at National Fair, Washington, 1880.
And First Premium at nearly every State Fair where exhibited, and the largest yield of any factory or dairy in the great Dairy State of Iowa, 1880.

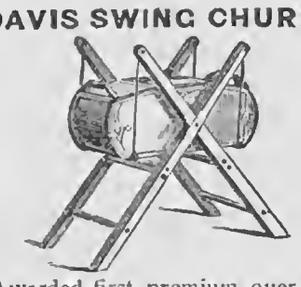
THE Improved Evaporators

MAKE BETTER SYRUP, SUGAR, and JELLY, with less fuel and labor than any other apparatus. Will condense Sorghum Juice faster than any evaporator in use, and consequently make lighter syrup and white sugar. The best apparatus known for making jelly from sweet cider. Send for descriptive circular of Evaporators, Cane Mills, etc.

EUREKA BUTTER WORKER.

Works all portions of the butter equally. Leaves grain of butter in much better condition than workers with corrugated rolls. Is very popular with "gilt edge" butter makers.

DAVIS SWING CHURN.



Awarded first premium over all competitors at only practical test ever held at International Dairy Fair. The box contains no floats or inside gear. This churn needs only to be seen to be appreciated.

For Circulars giving Facts, Figures and Testimonials,
Address, **VERMONT FARM MACHINE COMPANY, Bellows Falls, Vt.**

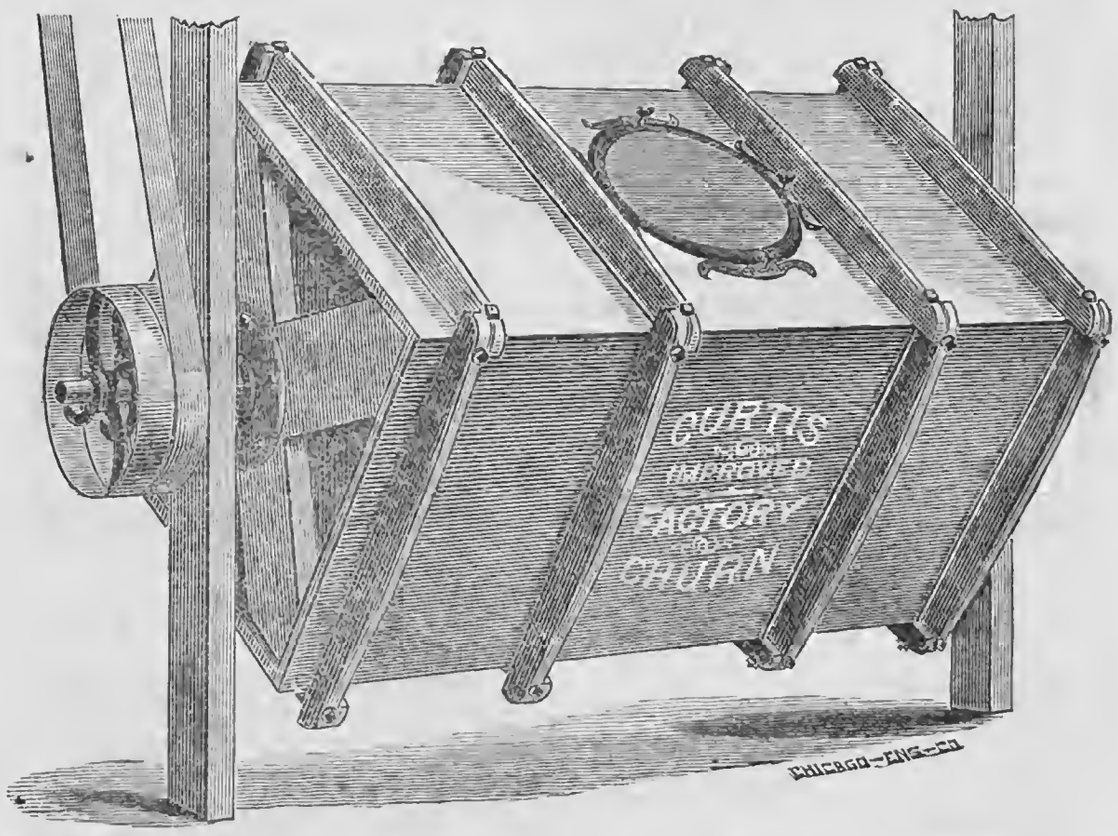
Factory Churns and Power Butter Workers.

USED IN THE BEST CREAMERIES OF WISCONSIN, IOWA AND ILLINOIS.

Unquestioned proof given of their Superiority as to WORKMANSHIP, DURABILITY, EFFICIENCY and ECONOMY, and, what is more to the purpose,

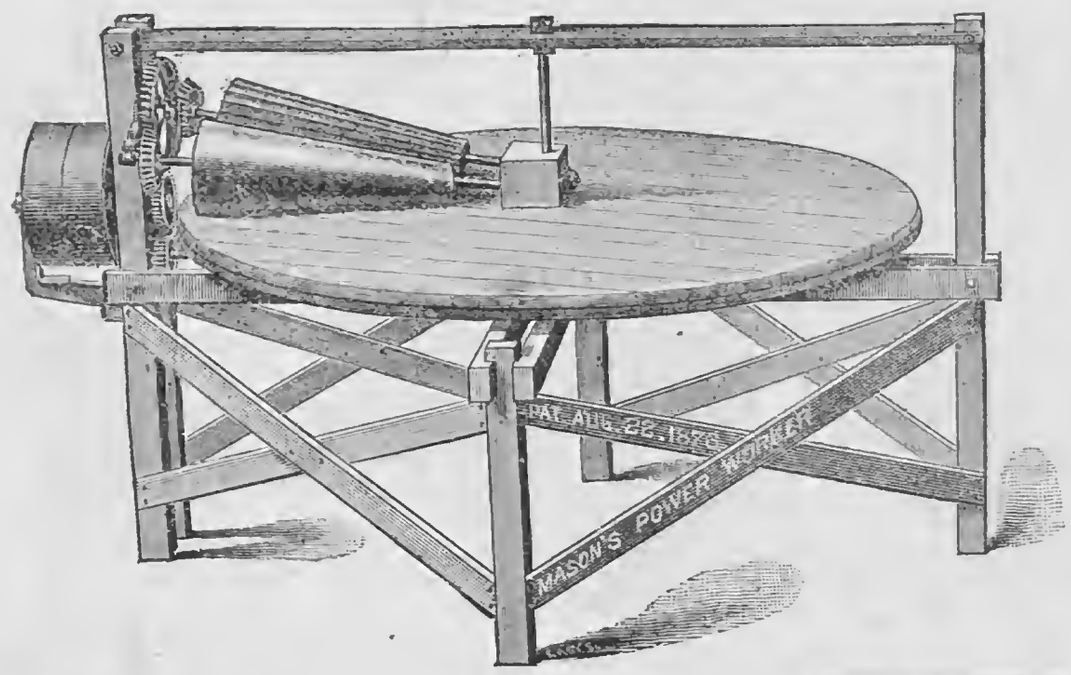
ONE HUNDRED CREAMERIES,

the most prominent in the Northwest, can be referred to, if further proof is necessary. Correspondence solicited.



MASON'S POWER BUTTER WORKER.

The *ne plus ultra* of ALL the Butter Workers, where over 200 pounds of Butter are churned in a day. Capacity of Worker 6,000 pounds per day. Endorsed and used by the best Creameries in the Northwest.



Rectangular and Square Box Churns.

Cheapest and Best. No Inside Fixtures, and ALWAYS RELIABLE.

Seven sizes of each kind made, churning for one cow to fifty. Three sizes *each* of the EUREKA and LEVER BUTTER WORKERS made. Best material used, and every Churn and Butter Worker *warranted exactly as represented.*

No Churn has received so many unqualified endorsements from prominent dairymen, in all parts of the country, since its first appearance seven years ago, as the RECTANGULAR. It is strongly endorsed by the *Rural New-Yorker*, in papers on the "Dairy Cow," by Henry Stewart. The great popularity of the RECTANGULAR is well attested by the fact that, with increased facilities for manufacturing, the demand this season was largely in excess of the supply, one dealer alone selling 500. Orders for next season should be sent early. One Churn at wholesale where we have no agent. Send *postal* for *Dairyman*, giving full particulars free.

CORNISH & CURTIS, Fort Atkinson, Wis.

No Sir! You can't GIVE me your Plow! I have tried them all, and would'nt give the IMPERIAL for all the Plows I ever saw. I toll you, sir, it is

THE BEST PLOW IN THE WORLD

No Mistake! and You Know it.

BUCHER, GIBBS & Co.
Manufacturers of
Gibbs Imperial & Ohio Chilled Plows
Canton, O.

ROLAND CHILLED PLOW

THE BEST PLOW IN AMERICA.

Every Mouldboard guaranteed thoroughly chilled.

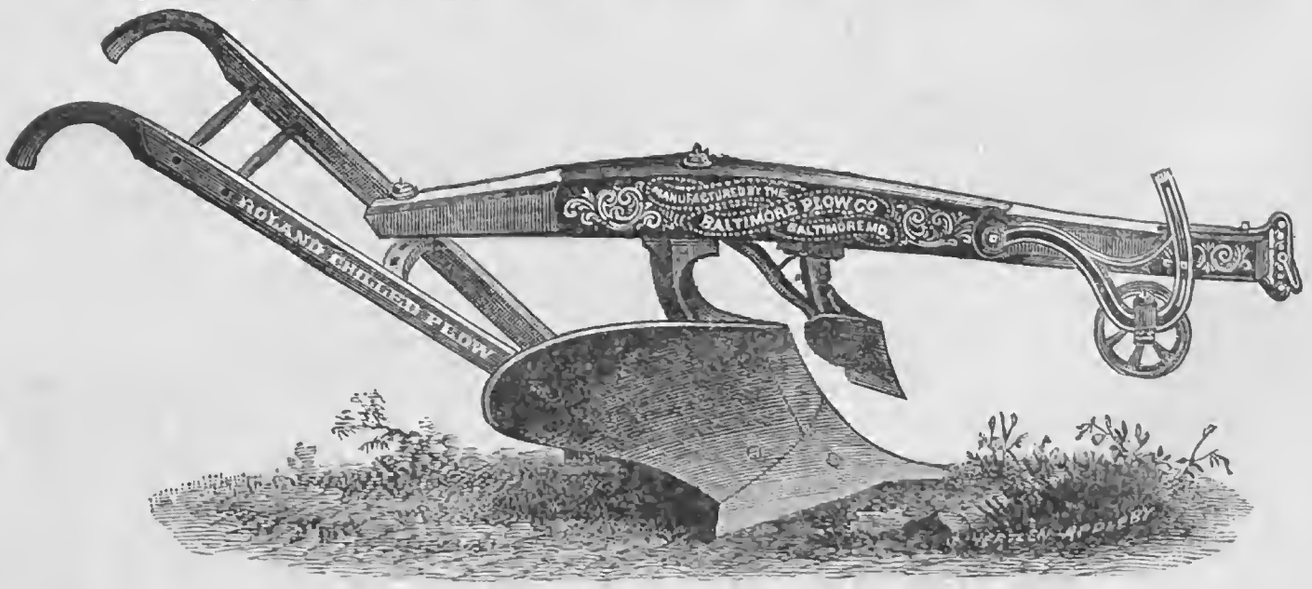
OUR

REVERSIBLE SLIP SHARES

make the expense of repairs less than for any other plow.

THE STRONGEST,
BEST STOCKED
AND BEST FINISHED
CHILLED PLOW
In the Market.

Send for Full Descriptive Circular.



Manufactured by the BALTIMORE PLOW CO., Baltimore, Md.

Domestic.

PITHS.

GOOD breeding is good sense.

A vacant mind takes all the meaning out of the fairest face.

Wildness is a thing which girls cannot afford—delicacy a thing which they cannot lose or find.

A teaspoonful of powdered charcoal in a glass of water often relieves headache.

Lemon juice is recommended in cases of diphtheria. The juice is applied to the affected parts by means of a camel's-hair brush.

We believe the majority of persons having charge of milk allow the cream to become too sour before churning. In fact, we have made better butter and butter that would keep longer, from perfectly sweet cream.

Persons gathering materials for Winter bouquets will appreciate the note by a correspondent in last week's RURAL. The dried tassels of corn are, indeed, an addition to dried grasses, leaves, etc., and are every bit as worthy to be gathered as the plumes of erianthus, eulalia, and the like. But to be pretty they must be cut before they are out of the sheath and while of a greenish hue.

Early last Winter "little year-old" caught a severe cold by kicking the blankets off from him at night. We pinned the blankets to the mattress and tried to sleep with one eye open that we might keep him covered. But to no purpose; he still caught cold. The case was becoming desperate when we hit upon the plan of putting him in a bag. A flannel skirt, a yard long and a yard and a half wide, was sewed up at the bottom and the band made just large enough to draw up over his feet and pin around the waist. The length and width of the bag gave ample room for kicking, and as the flannel was old and soft it did not fret him, but proved an effectual safeguard against colds at night, and we only questioned why we had not thought of it before.

A Fair Lunch.

"WHAT do you want for lunch?" I asked of the household as I stood, basket in hand, one September morning. "Apples," shouted one boy; "Grapes," said another; "Ginger-bread," suggested little four-year-old. And when papa asked for sandwiches and the girls for crullers I thought we had come to the end of our list. But at the last moment Aunt Maria came over with a plate of caraway cookies that were so good I asked the recipe. It was:—

Half a pound of butter and half a pound of sugar rubbed to a cream, three eggs well beaten, one ounce of caraway seed sifted through the flour, with enough flour to roll out pretty stiff. Make into a thin sheet; cut out with a cake-cutter; prick with a sharp fork, and bake in a moderate oven.

Mary made some toast and buttered it lightly, put on a thin layer of cheese and placed it in the oven a few moments to melt; then another slice of toast was placed on the top. It is quite a relish at a pic-nic, and added variety to the very *fair* lunch. A. L. J.

A HYGIENIC PIE, Etc.

E. K. B.

AUNT SARAH, who is our model housekeeper, dislikes so great a use of lard as most people consider necessary, and with the aid of Miss Colman and other hygienic cooks, she is always "conjuring up" something that will take the place of the omnipresent "American pie." On our late visit there she treated us to so delicious a dish that (while our husbands, who have sympathies in common, as enthusiastic fruit-growers, were discussing the comparative merits of some beautiful early Beatrice and Louise peaches), I begged of Aunt Sarah the recipe for the nice pudding we had for dinner. "Not a pudding," she said, "that is hygienic pie, and you make it this way:

"Rub with sweet butter the inside of a pie-tin or dish that is at least two inches in depth; sift into it some Graham flour; then turn the pie-dish bottom up, when most of the flour will drop out, leaving just enough flour adhering to the butter to form the pie-crust, which is now ready for the filling. Beat the yelks of four eggs (seven eggs will make two pies) and add to them two large spoonfuls of sugar, a pint of milk, and any flavoring you choose; turn into the pie-dish and bake in a rather slow oven. Then cover with the whites of the eggs well beaten, with three spoonfuls of sugar. Replace it in the oven and leave until very slightly browned. Set it upon ice until wanted for use.

AN OLD-FASHIONED CEMENT.

Many years ago I saw an old lady tie a broken glass dish together and boil it in milk until it was cemented firmly, but I had forgotten the incident until it was recalled by an experience of my own. I have a favorite granite-ware dish which is constantly in use in a variety of ways—sometimes for stewing fruit, or baking a pudding, or cooking succotash or tomatoes; in fact, it would be hard to tell what it was *not* used for.

One day, last Fall, it was on the stove partly full of milk, of which I intended to make a cornstarch pudding. A friend calling was invited to stay to dinner, and I bethought me to enlarge my pudding by another cup of milk before adding the eggs, etc. The instant I poured the cold into the boiling milk I was startled by a loud snap, and the next moment I saw the milk oozing through a crack that entirely encircled the bottom of the dish. Reproaching myself with carelessness, I hastened to remove it from the stove, fearing that it might come apart and deluge the hot stove with milk, which, you know, would be a catastrophe indeed. The milk dripped almost in a stream as I moved it, but soon after I noticed that the dish had ceased leaking, and upon turning out the milk I found that it was perfectly cemented. Ever since that time, months ago, it has been in constant use as before, until a few days since I found it again leaking. I filled it with milk, set it on the back of the stove, and, to my satisfaction, soon found that it had taken out a new lease for a useful life. There is so much worthless granite-ware of that sort that when a *good piece* is found, that never absorbs fat or odors of any sort, it is really valuable and worth preserving.

Securing the Corks of Bottles for Tomato Catsup.

EVERY year we make from 40 to 50 pints of tomato catsup, putting it into pint champagne bottles. Until last year we simply cemented the corks—once or twice tying them down—inverted the bottles and kept in a cool and dry place. But many disastrous bursts made us feel that unless we could secure the corks in a firmer manner we should give up catsup mak-

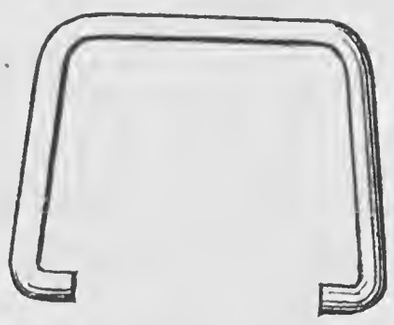


FIG. 432.

ing. Seeing a bottle of California wine charged with carbonic acid, the cork of which was kept in by means of a clamp, as shown in Fig. 432, we wondered why that would not solve the catsup question. Last Fall, after bottling our catsup and driving in the cork, these clamps were put on and the tops dipped into a hot cement of beeswax and resin. The bottles were then put into the cellar and we awaited action. But not one cork flew out and not a bottle burst. The clamps can be bought at hardware stores, and cost about 25 cents per hundred.

FAIR THOUGHTS.

ADELINE E. STORY.

I KNOW there are people who never go to the fair. What a pity. What a good dinner is to the man who is never good-natured till his stomach is well filled, the fair is to the multitude. It is enough to take the care wrinkles out of one's face just to see how everybody unbends, and for one day in the year forgets work and overwork, anxiety and failure, losses and crosses. I do not need to look at the exhibits to know whether the fair is a success, the peoples faces tell me that, and there is always a little more of reliance in the countenances of those men and women who have helped to make it.

Whatever we may think of candy for children as a general thing, do let's give them some of the made-on-the-spot cream and molasses candies at the fair. The day is never quite complete to them without that.

We like to carry our fair dinner with us and picnic with one or two neighbors' families asking those to join us who have children that our little folks may have a good time. To give the dinner a fair-day relish we add fruit bought on the grounds of a kind not to be had at home if possible.

What it Does.

Kidney-Wort moves the bowels regularly, cleanses the blood, and radically cures kidney disease, gravel, piles, bilious headache, and pains which are caused by disordered liver and kidneys. Thousands have been cured—why should you not try it.—Contributor.—*Adv.*

A Pure and Effective Hair Dressing.

COCOAINE, a compound of Cocoanut Oil, beautifies the hair and is sure to allay all itching and irritation of the scalp.

The superiority of BURNETT'S FLAVORING EXTRACTS consists in their perfect purity and strength.—*Adv.*

AN OFFER
—TO—
CONSUMERS
—OF—
TEA & COFFEE.

We have made a specialty during the past five years of GIVING AWAY as PREMIUMS, to those who get up CLUBS for our Teas, DINNER SETS, GOLD BAND TEA SETS, SILVER-PLATED WARE, and other articles both useful and ornamental.

We import and buy direct from manufacturers all the goods we handle, and own them at the *lowest possible price* cash will purchase. During the past five years we have sent from our store over 15,000 of these orders, and they have gone into almost every State in the Union.

We keep in stock *every variety* of Tea known, and at all prices.

Oolong, Japan, Mixed, English Breakfast, Old and Young Hyson, Imperial, 50c., 75c., very finest $1. Gunpowder, Black Japan, Foochow 75c., $1. Orange Pekoe and Assam, 85c and $1.

Below are a *few* of the many Premiums offered:

With a $5 order we send a *Silver-Plated Caster.*

With a $10 order we send an *English China Tea Set of 45 pieces.*

With a $15 order we send a *Silver-Plated Caster, Pickle Dish and Butter Dish* or an *English China Decorated Tea Set of 44 pieces.*

With a $20 order we send a *French China Gold Band Tea Set of 44 pieces,* or an *English China Dinner Set of 106 pieces.*

We have *hundreds* of letters like the following:

WAUKON Iowa, July 7th, 1881.

Gents—Tea and Tea-Set arrived in good order. I am very much pleased with premiums, for which accept thanks. The tea has proved good so far as I have heard. Respectfully, MRS. J. M. DEAN.

TAUNTON, Mass., March 8, 1881.

Gentlemen—I have forwarded eight different orders for Tea, and have received as premiums a tea set, a silver-plated caster, a dinner set, a glass set, a case of silver-plated knives and forks, a pair of French china fruit dishes, and *two ladies' gold watches*, and am now on my ninth order. Both Tea and premiums I am well pleased with, and have found perfect satisfaction with both. Yours truly,

MRS. MARIA C. LYNCH.

NASHUA, N. H., June 10, 1881.

Gentlemen—I am much pleased with my Premium Tea-Set. Accept thanks. The Teas are giving good satisfaction. Hope to send another order soon.

Yours, &c., MISS M. A. BALL.

Orders, with P. O. Order, or money enclosed in registered letter can be sent at our risk. All checks or Post-Office orders should be made payable to F. M. LINNELL.

We also send Teas by mail, without premium, postage paid at list prices, to those who wish for choice goods and are so situated they cannot obtain them at home. For full price and premium list, send us postal, with address PLAINLY WRITTEN. Please mention this Publication.

GREAT LONDON TEA CO.
801 Washington St., Boston, Mass.

POND'S EXTRACT
INFLAMMATIONS
AND HEMORRHAGES
INVALUABLE FOR
Burns, Sunburns, Diarrhea, Chafings, Stings of Insects, Piles, Sore Eyes, Sore Feet, etc, etc.

JUSTIN D. FULTON, D. D., Brooklyn, N. Y.—"Proving itself to be a necessity in our home."

P. A. WESTERVELT, M. D., Nashville, Tenn.—"Have used large quantities of POND'S EXTRACT in my practice."

Mrs. S. B. McCord, Matron Home of Destitute Children.—"We find it most efficacious and useful."

Caution.—POND'S EXTRACT is sold *only* in bottles with the name blown in the glass.

☞ It is unsafe to use other articles with our directions. Insist on having POND'S EXTRACT. Refuse all imitations and substitutes.

SPECIAL PREPARATIONS OF POND'S EXTRACT COMBINED WITH THE PUREST AND MOST DELICATE PERFUMES FOR LADIES' BOUDOIR.

POND'S EXTRACT	50c. - $1 00 and $1.75		
Toilet Cream	1 00	Catarrh Cure	75
Dentrifrice	50	Plaster	25
Lip Salve	25	Inhaler (Glass 50c.)	1 00
Toilet Soap (3 cakes)	50	Nasal Syringe	25
Ointment	50	Medicated Paper	25
Family Syringe	$1 00.		

☞ OUR NEW PAMPHLET WITH HISTORY OF OUR PREPARATIONS, SENT FREE ON APPLICATION TO

POND'S EXTRACT CO.,
14 W. 14th St., New York.

THE LARGEST ASSORTMENT OF
Weather Vanes
IN THE COUNTRY.
MANUFACTURED BY
HARRIS & CO.,
56 BROMFIELD St., Boston, Mass.
☞ *Send for Price List.*

AWARDED HIGHEST PRIZE AND ONLY

MEDAL
PARIS EXPOSITION, 1878.
☞ Beware of imitations.

PILES. SCRATCH NO MORE!
USE SWAYNE'S
ITCHING PILES. OINTMENT.
SYMPTOMS are Moisture, intense itching, increased by scratching most at night. Other parts are sometimes affected. Swayne's Ointment sure cure. Also for Tetter, Blotches, all Skin Diseases.
SOLD BY ALL DRUGGISTS.

GOLD MEDAL, PARIS, 1878.

GERMAN SWEET CHOCOLATE.

The most popular sweet Chocolate in the market. It is nutritious and palatable; a particular favorite with children, and a most excellent article for family use. *The genuine is stamped S. German, Dorchester, Mass. Beware of imitations.*

Sold by Grocers everywhere.

W. BAKER & CO.,
Dorchester, Mass.

Hull Vapor Cook Stove

The only Vapor Cook Stove that has stood the test of years, and gives entire and perfect satisfaction.

50,000

Now in use, and growing in favor wherever used.

For Summer Use they are Indispensable.

Our "Patent Automatic Safety Can" renders the use of our stoves "perfectly safe" in the hands of the most careless or inexperienced.

Send for full descriptive circular and price list. Special inducements to agents in unoccupied territory.

Address HULL VAPOR STOVE CO., CLEVELAND, OHIO.

DANGLER VAPOR COOK STOVE!

The Most Economical, Convenient and Safest Vapor Stove ever made.

It will bake, broil, roast, and heat irons in less time and with less fuel than any other stove in the market. For elegance of design and heating power it has no equal. Send for illustrated catalogue.

Dangler Vapor Stove and Refining Co.,
CLEVELAND, OHIO.

HARP-ETTE
The Great Musical Invention of the Age.

A new instrument which meets a want long felt by the public. The delicious music of the HARP is here produced by any one, even though entirely ignorant of music. The strings are numbered from one to ten, and the music which accompanies the instrument is numbered in like manner, instead of being printed in notes. Thus, if you wish to play "HOME, SWEET HOME," or any other tune, you have only to glance at the music to ascertain the number of the note and pick the string which is correspondingly numbered. With this instrument any one can play all the popular airs of the day, or in fact any music that has ever been published. No training is required. It can be played upon at once. Everybody appreciates the music of the harp. It is the KING of musical instruments, and this is a perfect harp in miniature—the same delicious tones—and should be in every family in the land. Elegantly finished and an ornament to any room. A strong, durable instrument, which will last a lifetime. Cannot get out of order. We also send with it a large lot of music numbered as explained above. Perfect satisfaction guaranteed. Every one who purchases endorses them and recommends them to their neighbors. Think of it—no more tedious months of study to master music. Here is a superb musical instrument all ready for use and requiring no practice to play perfectly. Send at once and in the HARP-ETTE you will have "a thing of beauty and a joy forever." Price, No. 1, 10 strings, $1.25. No. 2, 15 strings, $1.75. Sent PREPAID to any address. Belcher James & Co. 106 Sudbury St. Boston, Mass.

NASAL CATARRH and BRONCHITIS.

Childs Treatment for NASAL and BRONCHIAL CATARRH is the only one that can be relied upon for the **Permanent and Positive CURE** of this disease. **Home Treatment.** Physicians recommend it. For details of method and terms, address **Rev. T. P. CHILDS, Troy, Ohio.**

30 elegant cards, Snowflake, etc., 10c. *Agts. wanted.* 20 samples 5c. List free. C. VICK, Arbela, Mich.

50 All Gold, Chromo & Lit'g. Cards, (No 2 alike,) Name On, 10c. Clinton Bros., Clintonville, Conn.

AGENTS WE WANT YOU | EVERYWHERE. $5.00 to $10 per day. Circulars on application. PAGE MANUFACT'G CO., CLEVELAND, OHIO.

BRIEFLETS.

CANNED PEACHES will be dear next year....

MR. DECKER, of Kentucky, tells Mr. Geo. S. Wales that he is "still of the opinion that the Longfellow is the best large strawberry in the world." He had them four by six inches in circumference. At the Rural Grounds Sharpless is larger and more productive but less regular in shape.....

MAJOR FREAS (Penn.) regards the Gifford Pear as the most desirable variety among early pears, and he thinks it ought to be found upon every farm and in every garden. It is a rampant grower, an early and constant bearer and of excellent quality.....

THERE are men who have so little of earnest ambition in their lives that you are forced to the conclusion that they were born merely for the purpose of digestion.....

NO MAN can go into bad company without suffering for it. The homely old proverb has it very tersely, "A man can't bite the bottom out of a frying-pan without smutting his nose."....

THE Farming World very justly holds that a newspaper publisher has no more right to exact money for *imagining* hundreds or thousands of circulation than a merchant has to sell twelve yards of calico and measure but ten yards.....

MR. CULBERT MURRAY (England) says that an ordinary-sized dairy cow in full profit will consume from 65 to 70 pounds of food per day—say 20 pounds of hay, 40 pounds of roots or other green food, 3 pounds of decorticated cotton cake, 3 pounds of Indian meal, 2 pounds of bran, and 2 pounds of bean meal, at a cost of 84c. per week. In addition, the cow will require from three to four gallons of clean water daily. Prudent managers feed liberally and water sparingly during the early part of the day, increasing the water supply as the day wears on. The solid and liquid excrements will average about 90 pounds per diem, and, if carefully preserved, contain fertilizing elements worth 60 cents per week.....

MR. CRESWEN estimates that out of 60,000 or 70,000 houses built in London 50,000 are not really fit for human habitation.....

THE Gardeners' Chronicle says that if there is nothing in a name then it matters not that the good old English word "Nosegay" has given place to the French word "Bouquet," yet many there are who still cherish the former for the sake of its home associations.....

THE Iowa Chronicle is not in favor of farmers selling corn at 20 cents a bushel and then buying sweet corn at 20 cents per can; or of sending pork and beans to Boston to be cooked and put up in cans and sent back to them labeled "Boston Baked Beans." But we suspect that such complaints are numbered—the West is doing as well as could be expected. The World wasn't made in a day.....

AMONG THE MANUFACTURERS in the West this season none have been more busy than J. E. Porter, of Ottawa, Ill. He has enjoyed a very prosperous year's trade in his Farmers' Hay Carriers, Patent Hay Derricks, Horse Hay Forks, and his New Hay Sweep. Look out for him at the fairs, as he will make exhibits of his machinery in operation, and farmers can learn the new and effective mode of handling hay, and also the saving they can make by having his improved hay tools.—*Adv.*

The Rural New-Yorker has growing at the present time in its Experiment Grounds, 60 different kinds of grapes, 100 of strawberries, 30 of raspberries, all of the different kinds of currants, gooseberries, &c., as well as specimens of all the best kinds of ornamental trees and shrubs which are hardy enough to endure the climate.

FOUTZ'S
HORSE AND CATTLE POWDERS

Will cure or prevent Disease.
No HORSE will die of COLIC, BOTS or LUNG FEVER, if Foutz's Powders are used in time.
Foutz's Powders will cure and prevent HOG CHOLERA
Foutz's Powders will prevent GAPES IN FOWLS.
Foutz's Powders will increase the quantity of milk and cream twenty per cent., and make the butter firm and sweet.
Foutz's Powders will cure or prevent almost EVERY DISEASE to which Horses and Cattle are subject.
FOUTZ'S POWDERS WILL GIVE SATISFACTION.
Sold everywhere.
DAVID E. FOUTZ, Proprietor,
BALTIMORE, Md.

NEW STRAWBERRY—MANCHESTER.
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And a Full Assortment of Nursery Stock.
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THE
Great Strawberry of the Future.
The most productive, the firmest, large, handsome and of the best quality of any productive strawberry yet produced: in fact it is believed to be the
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Hear what the best authorities say of it:
"The Manchester has more good qualities than any other strawberry in cultivation. For shape, color, flavor, beauty, firmness and uniform large berries as well as for productiveness and hardiness of plants combined, it has no equal."—F. M. HEXAMER.
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Also PRENTISS, POCKLINGTON, LADY WASHINGTON, LADY, VERGENNES, JEFFERSON, BRIGHTON, MOORE'S EARLY, DELAWARE, WORDEN, etc. CUTHBERT, GREGG, OHIO, Sharpless, BIDWELL, etc.; Kieffer's Hybrid and other Pear Trees; CHERRY; PLUM; PEACH; CHAMPION QUINCE; Lee's Prolific Black, and other CURRANTS, GOOSEBERRIES, and a general assortment of Fruit and Ornamental Trees, Shrubs, Climbing Vines, ROSES, Seeds, Bulbs, etc., *at low rates.* Descriptive Catalogue and Price-List *free.* Address H. S. ANDERSON,
Successor to FAIR & ANDERSON, Cayuga Lake Nurseries, Union Springs, N. Y.

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15 John Street,
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WILL MAIL TO ALL APPLICANTS THEIR
New Descriptive Catalogue of
Imported Dutch Bulbous Roots
for the Autumn of 1881. Special rates to Florists for
Lily of The Valley Pips
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300 bush. "Red Rogers," a white chaff bald amber wheat of superior milling qualities, and for yield and hardiness equal to the best. Price $2.00 per bushel.
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Also 50 bush. "Emporium Scott." Seed obtained from Can. Agr'l Emporium Seed Merchants, London, Ont., Can. Price $3.00 per bushel.
Delivered free on board cars. Bags 25c. All orders to be accompanied with cash. Address
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DORR'S IOWA SEEDS
I will send 6 packets standard vegetables FREE to any address, on receipt of 6 cents postage.
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Containing complete lists of all the leading VEGETABLE, FIELD and FARM SEEDS, *especially of* Seeds for ROOT AND FODDER CROPS, and of WINTER GRAINS, will be sent to all who apply, inclosing stamp for postage.
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100 ACRES IN SMALL FRUITS.
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OF THE BEST VARIETIES
American Grape-Vines.
Strawberry, Raspberry, Currant, Blackberry and Gooseberry Plants, also General Nursery Stock and Thoroughbred Land and Water Fowls. Prices low and stock unsurpassed.
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GET YOUR VINES & BERRY PLANTS OF
E. & J. C. WILLIAMS,
Try the new grapes Jefferson, $1.50 each; Duchess, $2; Lady Washington, $2; Prentiss, $2; Brighton, 50c. Strong 2-year vines post paid by mail.
Catalogue FREE. Montclair, N. J.

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THE NEW
WHITE GRAPE.
RESPONSIBLE PERSONS in good grape regions will be furnished vines of this best of all purely Native grapes for *Vineyard* planting, on special terms Payment contingent on one-half the receipts for fruit.
C. A. Green says, in Rural New-Yorker: "The Niagara overshadows all other new white grapes as completely as the great falls of the same name overshadow other like natural scenery."
For circulars address
THE NIAGARA GRAPE CO.,
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BLOOMINGTON (Phœnix) NURSERY and GREENHOUSES. Established 18 2, 500 *Acres.* 13 *Greenhouses.* Fruit and ornamental Trees, Shrubs, Evergreens, Grapes, Bulbs, Seedlings, Hedge Plants, Small Fruits, etc. Priced catalogue for Fall of '81 mailed free. SIDNEY TUTTLE, Agt., Bloomington, Ill.

TWENTY YEARS AGO a man bought a Fairbanks Hay Scale, for which he paid two hundred dollars. Having some knowledge of the cost of things, he was surprised at the difference between cost of manufacture and selling price, and came to the conclusion that scales could be sold at a fair profit and the price so reduced that every farmer in the country not only could afford to buy a scale, but could not afford to be without one. He went into the manufacture, and offered scales at such low prices that people were afraid they were not good; but time proved their value, and, notwithstanding the monopolists have a liar at every corner to cry "the Jones Scale ain't good for nothin'," there are many people who have had them in use nearly twenty years and have not found it out yet. Jones of Binghamton has succeeded, and the secret of his success is, satisfaction or no sale; and he has stood square up to it every time without flinching, and the result is that the most popular scale in the world is the JONES Five-Ton Wagon Scale, which is *full, regular*, "genuine" scale, made of Iron, Steel and Brass, equal in quantity and quality of material and skill in workmanship to *any scale ever made by anybody.* This Scale is sold at $60, freight paid by Jones. Any desiring information regarding the price of any size scale should address Jones of Binghamton, Binghamton, N. Y.—*Adv.*

Prof. E. M. Shelton, of the Kansas Agricultural College, says "The Rural New-Yorker has more influence and is more quoted than all the rest put together."

Champion of the World.

THE

CHAMPION GRAIN DRILL.

Positive *force feed* Grain Distributor. Positive *force feed* Grass Seeder, which can be used either in front or rear of the hoes.

The fertilizer Attachment, is unequaled, and is *warranted* to sow easily and evenly any of the various kinds of guanos and phosphates in the market.

The Champion is the only Grain Drill in the market that has a special attachment for planting corn for the crop.

The Champion is simple in construction, easily operated both for team and driver. The materials used and quality of workmanship are the very best.

Do not fail to examine the Champion before purchasing a Grain Drill.

All questions concerning the Champion answered promptly by mail. ☞ Every Drill warranted.

Send for descriptive pamphlet to

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and 81 and 83 Merwin St., Cleveland, Ohio.
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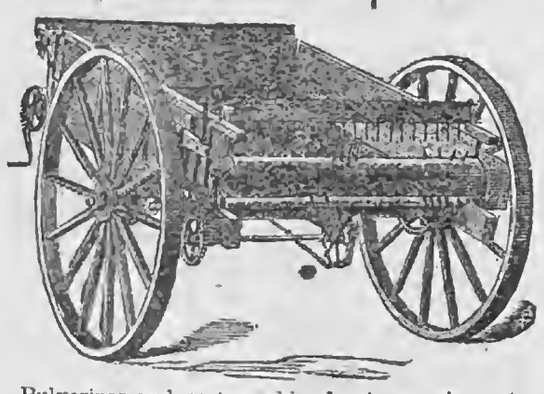
Kemp's Manure Spreader



Pulverizer and cart combined. A new invention equally as valuable as the mowing-machine, and as indispensable. Spreads evenly all kinds of manure of the farm; also lime, ashes, muck, marl, cotton seed, etc., in one-tenth the time done by hand, increasing the value of farm manure 25 per cent. by pulverizing and evenly spreading it, so that not a single square inch of soil is unmanured. For illustrated circulars and full particulars, address the manufacturers.

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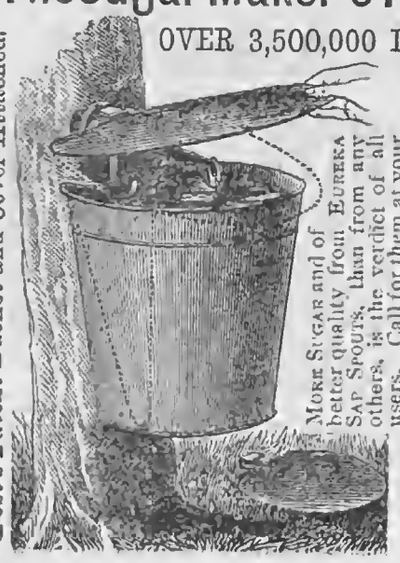
OVER 3,500,000 IN USE.



Post's Patent Bucket and Cover Attached.

MORE SUGAR and of better quality from EUREKA SAP SPOUTS, than from any others, is the verdict of all users. Call for them at your hardware stores. RESPONSIBLE AGENTS WANTED. Samples, circulars and terms sent post-paid on receipt of 20 cents. Address

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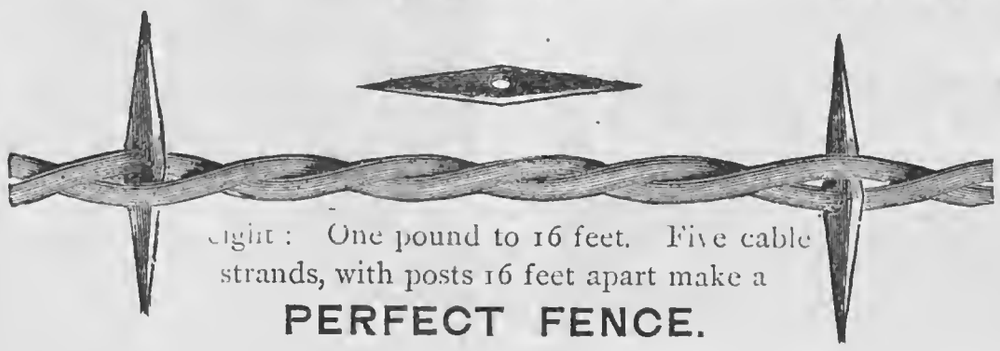
KELLY STEEL BARB WIRE!

An Indestructible Diamond Steel Barb.



Light: One pound to 16 feet. Five cable strands, with posts 16 feet apart make a

PERFECT FENCE.

A Fence for a Lifetime!

THE KELLY STEEL WIRE,
When properly put up, is the
BEST PROTECTION
to growing crops of any material
IN EXISTENCE.

Cattle of the wildest nature will respect it and forever leave it alone. The ***sharp barbs*** serve as an educator to the animal, and give warning to the aggressor upon the first contact.

The Kelly Barb,

Unlike any other make, has a yielding action on the main wire, which, with its bevel shape, can never ***seriously lacerate stock.*** It is therefore preferred and adopted by the leading ***Railroads, Planters, Stock-Raisers and Farmers.***

It is proof against WIND, STORM, FLOOD or FIRE, and costs but little more than half as much as lumber.

DON'T FORGET IT!!

The Kelly Wire is the only one made using an absolutely ***RUST PROOF and FIRE PROOF COVERING, which will not SCALE OFF. Does not need repainting. BUY NO OTHER.*** If your merchant does not keep it, send direct to the manufacturers, for sample, estimate, circulars, etc.

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☞OUR 32-PAGE PAMPHLET ON FENCING, SENT FREE.

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ESTABLISHED 1830.

WHEELER & MELICK CO., Proprietors,

MANUFACTURERS AND PATENTEES OF

Railway and Lever Horse Powers,
Wheeler's Improved
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THRESHERS & CLEANERS,
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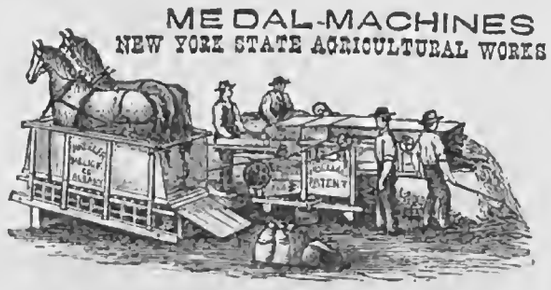
HAY FORKS, FEED CUTTERS.



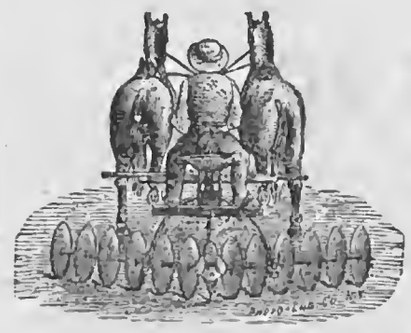
Straw-Preserving Rye Threshers.

We wish to call special attention to our "Straw-Preserving Thresher," the only machine that will thresh and save the straw from being broken. The machine is indispensable, especially in places where the straw is used for making paper, as it brings a higher price, being perfectly straight and unbroken.

SHINGLE MACHINES,
WOOD-SAWING MACHINES,
Tolley's Champion 1 & 2 Horse Cultivators.

EAGLE HORSE OR HAND DUMP RAKE,

Can be operated by a boy or girl 10 years old.

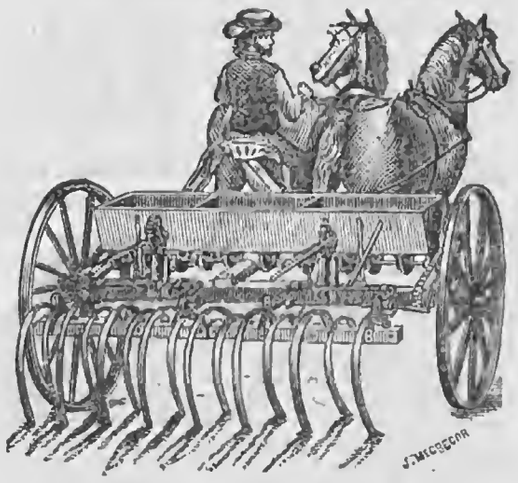


LA DOW'S
Jointed Pulverizing Disc Harrow,

WITH SEEDER ATTACHMENT.

We have added a "Seeder Attachment" to our Disc Harrow, which allows the Seed to be put in the same as with a drill, thus combining a thorough Pulverizer and Seed-Sower, making a perfect working machine, which with one operation pulverizes the ground, sows the seed, and covers the same perfectly.

La Dow's Sulky Spring Tooth Harrow and Broadcast Seeder with Phosphate Attachment.



Sows any desired amount of Grain or Grass Seed per Acre.

SOWS PHOSPHATE
WITHOUT
PASTING OR CLOGGING.

The Spring Teeth cover the grain as deep as desired, much cheaper than a drill,

COMBINING
TWO MACHINES
IN ONE.

NEW SAFETY AGRICULTURAL ENGINE AND STEAM GENERATOR.

Economical, Durable, Light and Efficient.

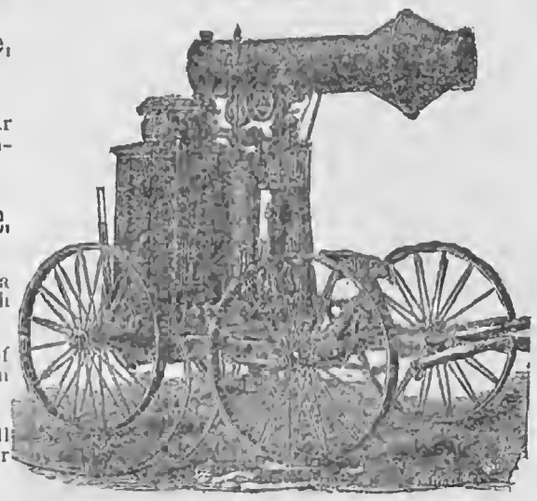
Owing to the peculiar construction of this Generator, it is

Impossible to Explode.

Steam can be raised to a pressure of 100 lbs. with cold water in ten minutes.

A saving of 50 per cent. of fuel over any Boiler now in use.

For full particulars of all our machinery, send for Circulars and Price List.



WHEELER & MELICK CO., Albany, N. Y., U. S. A.

THE RURAL NEW-YORKER'S GREAT CORN YIELD.

Interesting facts for new Readers.

LAST season the farming community were somewhat startled by a statement printed in these columns, from the Rural Experiment Farm, that the yield of corn would reach upwards of 150 bushels of shelled grain per acre. Naturally the statement was discredited, even by the Rural's friends. Some mistake, it was thought, must have been made, especially as this immense yield had been produced on fields that had for six or more previous years received no manure of any kind, and for the corn had received an average of but 400 pounds of concentrated fertilizer.

A number of well-known men were invited to the Rural Farm to examine into, and to confirm or disprove our statement. The following report was signed by Robert J. Dodge, C. E., President Farmers' Club, American Institute; W. N. Habershaw, F. C. S., Chemist, N. Y. State Ag'l. Society, and L. C. Benedict, Ag. Editor of the New York World:

"Report on a field of corn at Hewlett's, Long Island, belonging to the RURAL NEW-YORKER, made Oct. 12th, 1880. Size of plot, 310 ft. by 122.4, or .87 of an acre of corn—"Blount's Dent"—sown by machine in rows four feet three inches apart, and each single kernel intended to be 15 inches from its neighbors. Flat culture, with, as we understand, 300 pounds of special corn fertilizer harrowed in broadcast before planting, 100 pounds of the same when the corn was six inches high, and 100 pounds of potato special when about 18 inches high. From a judicious selection of stooks and careful measurement and weighing, we find the total yield was 227 bushel baskets of corn on the cob, or 261 bushels upon an acre.

We also shelled and weighed a quantity and ascertained the gross weight of three and seven-eighths baskets to be 136 pounds, or 35.1 to one bushel, and further that 35 pounds of corn in the ear gave 28.95 pounds of grain and 6.05 of cob, and measured 17.1 quarts.

This calculation showed that the equivalent of 261 bushels of corn on the cob was 139.4 bushels of grains, and about three bushels or a little more which Mr. Carman had selected from the most prolific stalks, and had already placed in the barn, or a grand total of about 142 bushels of shelled corn per acre.

ROBERT J. DODGE, C. E. Pres't Farmers' Club, American Institute.
W. N. HABERSHAW, F. C. S., Chemist, N. Y. State, Ag'l Society.
L. C. BENEDICT, Ag'l. Ed. N. Y. World.

Other certificates from gentlemen well-known to the country were published afterwards, so that our statements as to the yield were substantially corroborated, and, as the actual measurements afterwards attested, this must stand as the greatest yield of Indian corn ever produced, the cost of production considered.

The Fair Number of the Rural New-Yorker is issued annually. We shall be pleased to send specimen numbers of our regular editions to all who apply, free and post-paid. Thus all may have the opportunity of judging for themselves.

CHAMPION SULKY PLOW

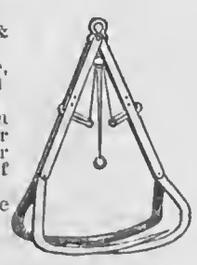
A PLOW OF GREAT STRENGTH.

Simplicity, Durability and Ease of Operation. Adapted for use everywhere. Circulars giving full information free. Address J. LANE REED & CO., (Sole Manufacturers,) DAYTON, OHIO.

NOYES HAYING TOOLS,

FOR STACKING OUT IN FIELDS OR MOWING AWAY IN BARNS.

Save labor & money. Are Simple, durable and cost but little. No trouble in getting over high beams or to the end of deep bays. Hundreds are now in use.



Anti-friction Hay Carrier. Grapple Fork.

Wood Pulleys, Floor Hooks, etc.

Track your barns during Winter when you have plenty of time and the mows are full of hay, thus saving expense of staging.
Send for circular B and designs for tracking barns to

U. S. WIND ENGINE & PUMP CO, Batavia, Kane Co,, Ill.

DEERE & COMPANY, MOLINE, ILLINOIS.

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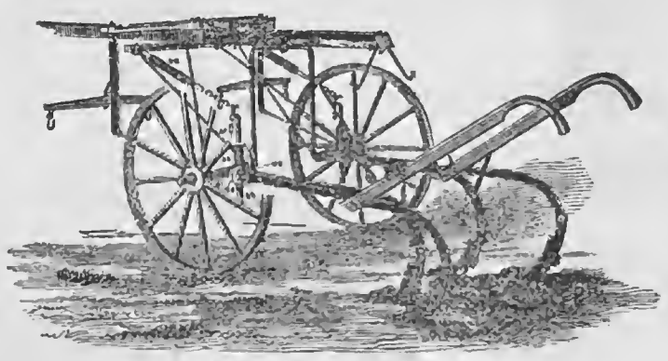


The Deere Spring Cultivator.

The Deere Spring Cultivator

Has had the largest sale of any cultivator ever put upon the market, and in sections where it has been introduced the farmers will use no other make. The weight of shovel-rigs is sustained while at work, so that the operator can move them sideways with the greatest ease, and can cultivate between the hills as well as between the rows of corn. The Springs can be regulated according to the condition of the ground, so as to sustain much or little weight, at the will of the operator by shortening or lengthening the chains.

Farmers must not be deceived

into the belief that every kind of a spring improves a cultivator. Our springs are used to arrest the tendency of the shovels to run too deep, and this is what lightens the draft on the team, and labor to the plowman, transferring, as it does, the weight of shovel-rigs to the wheels. Remember the Deere Spring, and learn its merits before buying and you will buy no other.

The Gilpin Sulky Plow.
40,000 sold in six years.

The Gilpin Sulky Plow

Has been successful in every contest at home and abroad, the first prize having been awarded this plow at the Centennial Exposition in Philadelphia, and also at Paris, France, in 1878, where its great merits secured it the highest premium over fifty competitors from all parts of the world. This plow is made

With only One Lever,

with which all the changes can be made to enable it to do any work that can be done with a hand plow. This is

PECULIAR TO THE GILPIN ALONE,

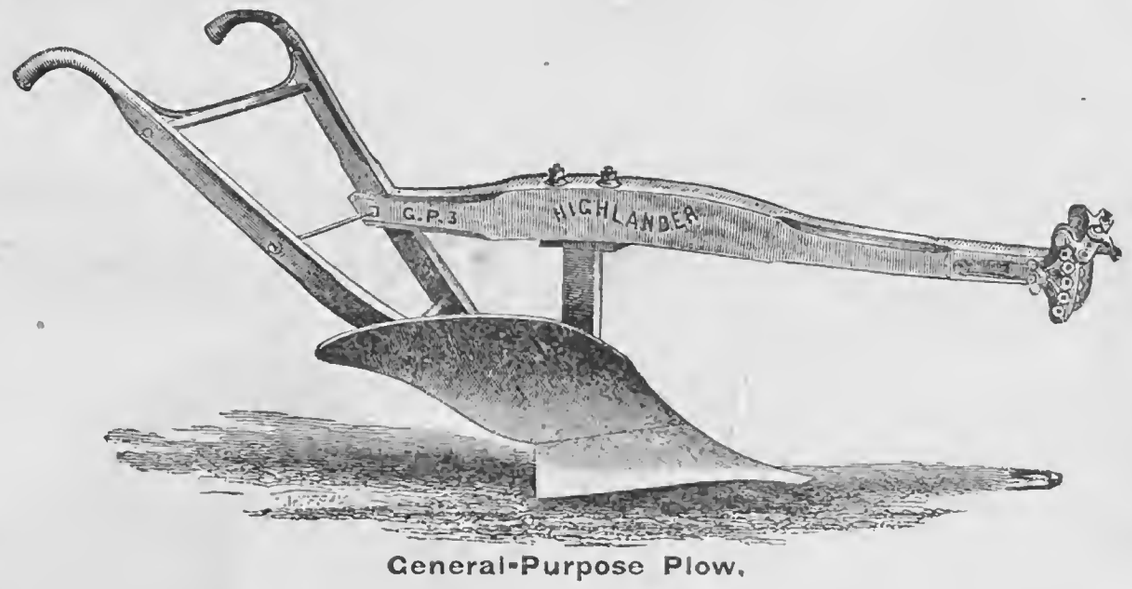
and it will do better work and plow satisfactorily where other makes having two or more levers—thus complicating the machinery and work for the plowman—cannot be made to operate.

The Power Lift

has also been added to this plow for 1881, and its construction is the finest of any in use.

REMEMBER THAT THE COMPLETE SUCCESS OF THE GILPIN SULKY PLOW HAS REVOLUTIONIZED PLOWING, AND NO FARMER WHO HAS USED THE GILPIN CAN BE INDUCED TO USE ANY OTHER KIND.

GENERAL-PURPOSE PLOW.



General-Purpose Plow.

For heavy land, timothy sod and deep tilling, this plow has no equal in the market. It is of long, easy turn of mold, light draft, and inverts stubble completely without "flirting," leaving "readable" furrows to be pulverized by the harrow, and is therefore an especial favorite with old country farmers. It fills a want long felt by farmers who "rotate" their crops and require the same plow for use in both sod and stubble. Capped standard, hardened iron centre steel molds, patent wrought frog, hardened steel shares, double shin, medium steel landside, adjustable for either two or three horses, both right and left hand, patent handle brace.

Circulars regarding prices or any information concerning the above Plows, and anything in the line of Plows, Harrows or Cultivators, can be had by addressing the manufacturers,

Deere & Company Moline Plow Works, Moline, Ills.

☞ SEND POSTAL CARD FOR DIARY ILLUSTRATING GOODS FOR 1881. ☜

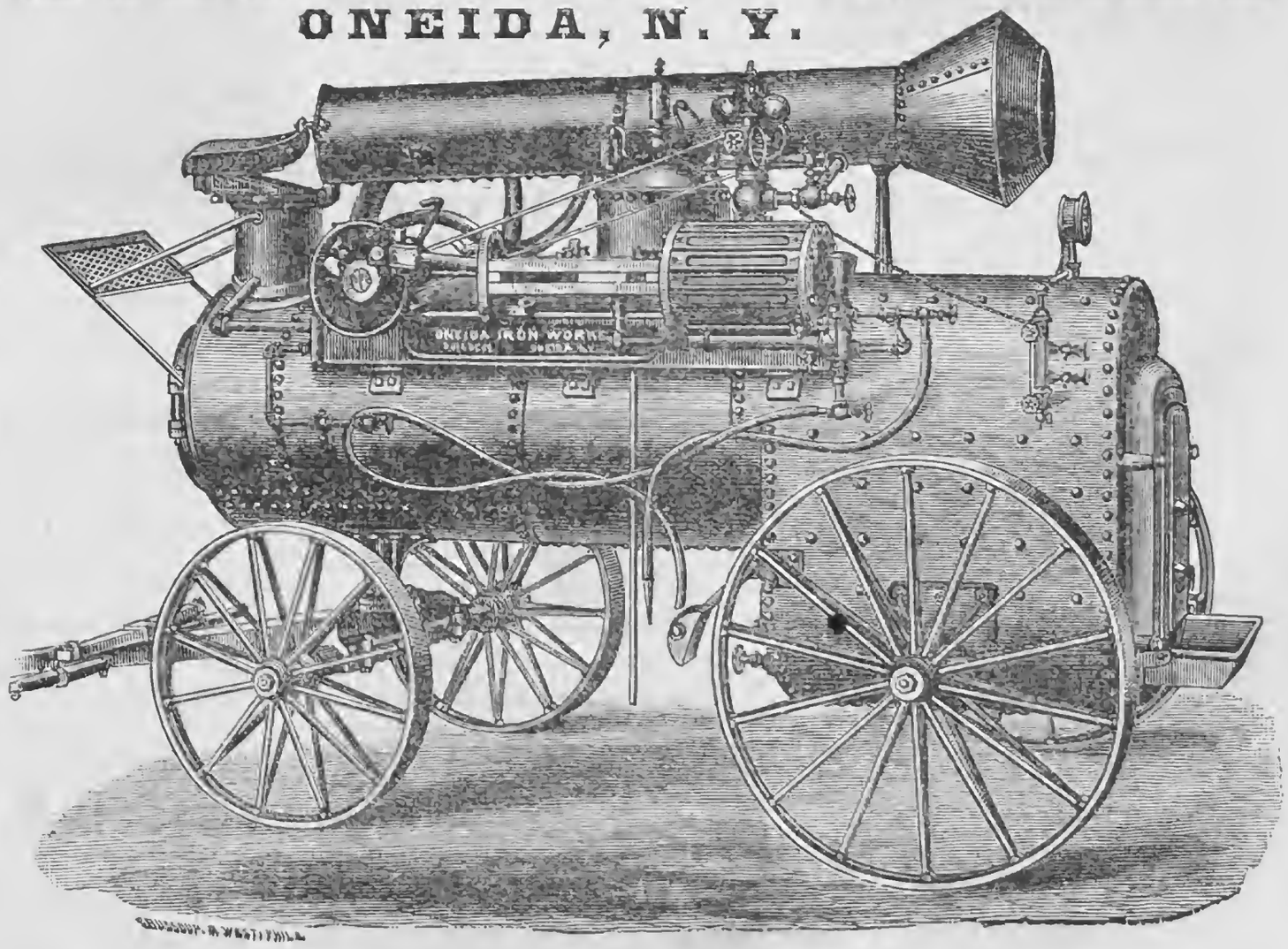
ONEIDA IRON WORKS

ONEIDA, N. Y.

BUILDERS OF

Portable, Stationary and Agricultural Steam Engines.

THE MOST CONVENIENT, SIMPLE AND EFFECTIVE ENGINES MADE. RECORD UNSURPASSED.
DESCRIPTIVE CIRCULARS SENT FREE.



PROF. BREWER says that there are probably 800 or 1,000 exhibitions devoted entirely or in part to the interests of agriculture, held in the United States every year, and probably five or more millions of people see something of them. It would be passing strange if in all these, voluntary gatherings, as they are, and pertaining to such a variety of interests and multitude of details, something did not sometimes creep in that had better be left out; but how very little there is of this compared with all that is meritorious! Taken all in all, their work and their record have been glorious, and they will continue to be a prominent feature in our progressing civilization.

Peter B. Mead, the veteran horticultural editor and writer, says "The Rural New-Yorker is not afraid to tell the truth in the true interests of Agriculture and Horticulture.

[Glen's Falls, (N. Y.) Times.]

A CARD.

GLEN'S FALLS, N. Y., *Dec.* 14, 1880.

REV. MR. L. N. ST. ONGE,

Dear Sir.—Will you please state below what satisfaction St. Jacobs Oil gives you which you got of us some time ago, and oblige LEGGET & BUSH.

Very effective. L. N. ST. ONGE.—*Adv.*

Virginia Co-operative

Stock Farm and Poultry Yards.

CATTLE.—Herd Registered JERSEY (Alderney) Cattle, and Calves from same, always for sale. The largest Herd in Virginia, and bred on three farms.

SHEEP.—Cotswold, Shropshire and South Down Sheep and Lambs. On one farm the pure Maple Shade South Downs only are kept.

SWINE.—Herd Record Berkshire Swine, and Essex, bred from best imported Stock; also the Jersey Red and Poland China breeds. All stock shipped at reduced express rates.

POULTRY.—All the leading varieties of land and water Fowls, and Eggs for hatching from same. Several pairs of Chinese, or Hong Kong Geese, either for sale or exchange.

More premiums have been awarded our Stock at the Va. State Fairs than any other exhibitors, either in or out of the State. We would refer all to the whole community here in which we live, and where our senior has resided for more than half a century, and also to those we have been supplying with stock, both North and South, as we always endeavor to make our stock our best advertisement. Address

A. P. OR M. B. ROWE,
Fredericksburg, Va.

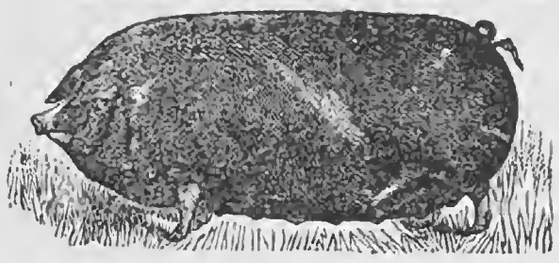
B. C. PLATT,

PROPRIETOR

Pleasant View Herd.

Poland-China Swine

BLACK BEAUTY STRAIN.



IDOL GIRL. DRAWN FROM LIFE.

☞ Send for my circular. BARRE, MASS.

BERKSHIRES

AND

Small YORKSHIRES

THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to

Bagg's Hotel Farm,
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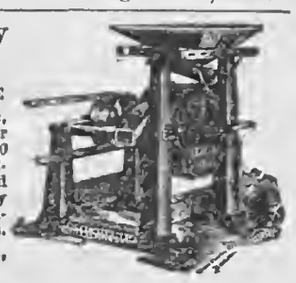
D--N JONES!

BAREFANKS and his agents d—n Jones. Shocking profanity, just because Jones sells and WARRANTS for 15 years a better 5-Ton Hay Scale for $60—and Jones he pays the freight—than old "Genuine" ever made. Equally low prices on all sizes. Send for free book. Address

Jones of Binghamton,
Binghamton, N. Y.

Mill Manufactory
Established 1851,
GRIST MILLS,
OF FRENCH BUHR STONE



Portable Mills for Farmers, Saw Mills etc.; 16 sizes; over 2,000 in use. Price from $30 up. Complete Mill and Sheller, $95. A boy can grind and keep in order. Adapted to any kind of suitable power. Complete Flouring and Corn Mills.

NORDYKE & MARMON CO.,
Indianapolis, Ind.

PORTABLE

BONE & FEED MILL.

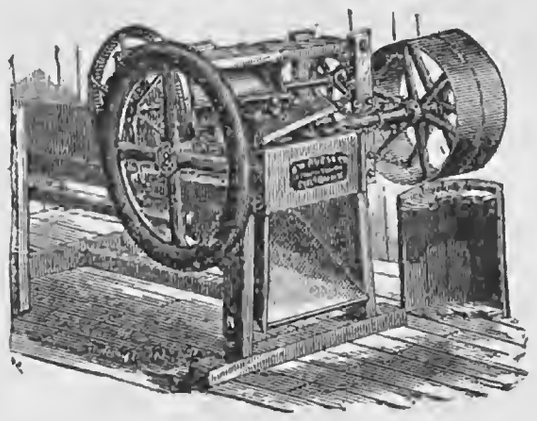
Cheapest and Best in America.

Four horses grind 12 to 15 bu. per hour. The one and two-horse mill grinds from 5 to 8 bu. per hour. Grinds 5000 bu. before the burrs are worn out. Price $70; the small mill $40. Send for circular.

LEWIS STRAYER, York, Pa.

$25 SINGER Style Sewing Machine. Intelligent people ask for it. Simplest, lightest running. Does most work with least fatigue. Winds the bobbins without running the machine. Largest shuttles. Never skips stitches or breaks needles. Always in order. Most durable and best mechanism. Easily learned, easy to work, easy to sell. **Agents Wanted.** Madison Machine Co., 923 Broadway, N.Y.

ENSILAGE.



Ross Giant & Little Giant

CUTTERS.

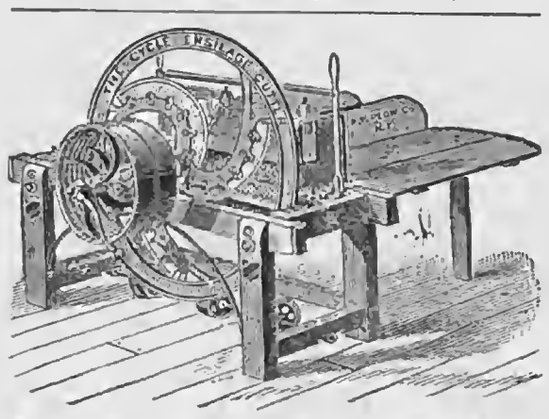
FOR ENSILAGE AND LARGE STOCK RAISERS

Of immense

Size, Weight, Strength & Capacity

Guaranteed the best Cutter for the business. Send for Circulars to

E. W. ROSS & CO., Fulton, N.Y.



The Cycle Ensilage Cutter,

After much experience in manufacturing large cutters, we have found that this principle is the best for cutting large quantities of green crops, especially for Ensilage, for which business ordinary feed cutters are too weak, too slow, dangerous to use, clog and unreliable. This machine puts the crop in the very best shape for this purpose, cuts at any speed without clogging, and without winding on the rollers, Green Maize, Clover even when wet, Cow Pea, Millet, etc., without mashing the green stalks. This cutter is also excellent for cutting Hay, Straw, or Dried Corn-Stalks.

The system of ensilage which we have had the honor of introducing to the farmers of the United States, and which must prevail in all sections of the country, requires such a machine as this to make it profitable and safe, in order that the silo may be filled as fast as two feet per day at least, to prevent heating.

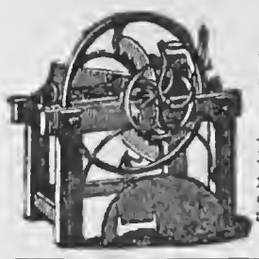
THE CYCLE CUTTERS cut with less power for the result than any other form of machine. They have three knives, with long drawing cut, so leading each other that the cut is continuous, smooth and without jar. The length of cut is easily changed to be either ⅜ or ¾ inch. With these machines a fine cut (¾ inch) can be had as cheaply as 1 inch with cutters made on any other principle. The knives are adjustable by the simplest set-screws and are covered (cover not shown in cut).

There is an aperture for dropping stones before reaching the rollers, so that there is very little danger of any reaching the knives. The cutting-plate is of hardened steel and is simple and easy to replace in case of accident. In this respect the Cutter is an improvement on all others before made in Europe or America. It can be kept in order and repaired at home in case of an accident, which would be impossible in more complicated machines. Stop-levers are on both sides of the cutter by which feed-rolls can be instantly stopped. The *Worm* driving gear is peculiarly simple and durable, and it is apparently impossible that any break down can occur while a silo is being filled, while the smooth *whiz* of the knife is a great contrast to the *chop, chop* of smaller cylinder cutters offered by other manufacturers for this purpose. We make sizes to suit all buyers, from hand power to steam engine, 2 to 10 tons per hour, and with Elevator.

We can refer to such purchasers as Francis Morris, O. B. Potter, C. W. Mills, Whitman & Burrell, R. M. Hoe, who have previously used other machines for the purpose. We also manufacture Horse Powers, Lever and Tread. Circulars of Cutters, and Treatise on Ensilage, free. Goffart's Treatise, translated by J. B. Brown, 30 cts.

The New York Plow Co.,

55 Beekman St., New York.

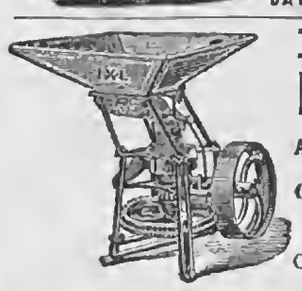


The Belle City

ENSILAGE AND FEED CUTTER

It has no equal for good, rapid work and durability. Can be run by wind power. It suits every time. Send for circular and name this paper.

DAVID LAWTON Racine, Wis



I. X. L. FEED MILL.

All Iron but the Hopper.

Cheap, Effective and Durable.

CAN BE RUN BY ANY POWER.

Capacity from 6 to 30 bushels per hour, according to size. Send for Catalogue and prices.

U. S. WIND ENGINE & PUMP CO.,
Batavia, Kane Co., Ill., U. S. A.

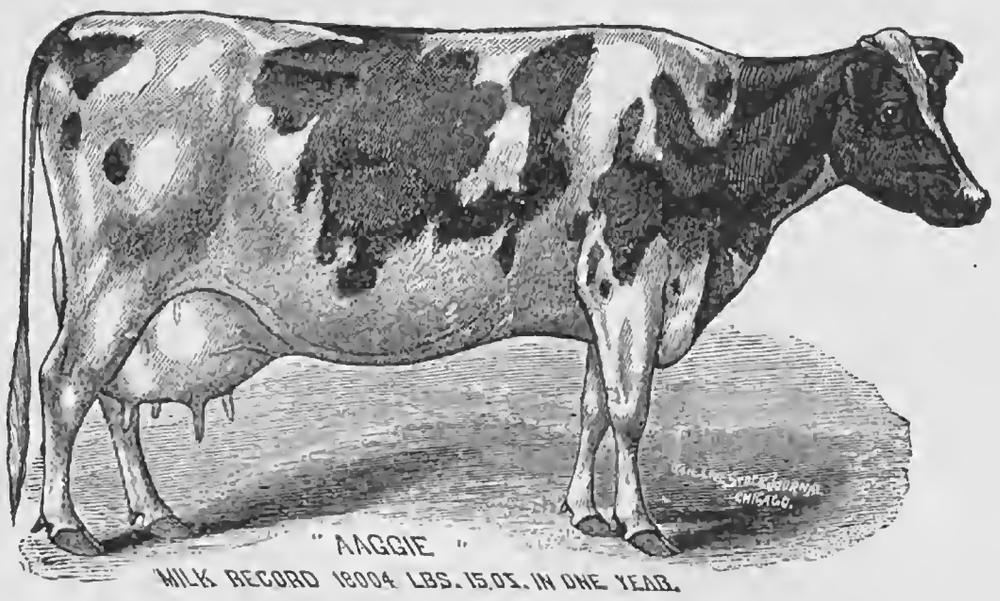
"Lakeside Stock Farm,"

SMITHS & POWELL, SYRACUSE, N. Y.

HOLSTEIN CATTLE.

THE LARGEST HERD IN THE WORLD.

225 pure bred selected animals, nearly all imported, and selected personally by us from the best herds in Holland, regardless of price; and all from the deepest milking families. This herd has made the following unparalleled yearly milk records: Aaggie, 6 year old, record, 18,004 lbs. 15 oz. Aegis, 6 year old, record 16,823 lbs. 10 oz. Netherland Queen, 2 year old, record 13,574 lbs. 3 oz. Lady of the Lake, commencing at 22 months of age, 12,200 lbs. 4 oz. Our entire herd of mature cows averaged, last year, 14,164 lbs. 15 oz., and entire herd



of 2 year old heifers (except two excluded by accidents), 9,711 lbs. Heifers and cows for sale, bred to such bulls as Uncle Tom, winner of first prize at N. Y. State Fair three years in succession; Neptune, out of Aaggie by Jacobs 2d; Netherland Prince, a brother to Netherland Queen; and Prince of Edam, winner of the first prize at the great cattle fair at Leyden, Holland. Prices very low for the quality and breeding of these animals.

CLYDESDALE HORSES.

A large and elegant stud of stallions and mares on hand, and new importations constantly being added. Unusual inducements offered.

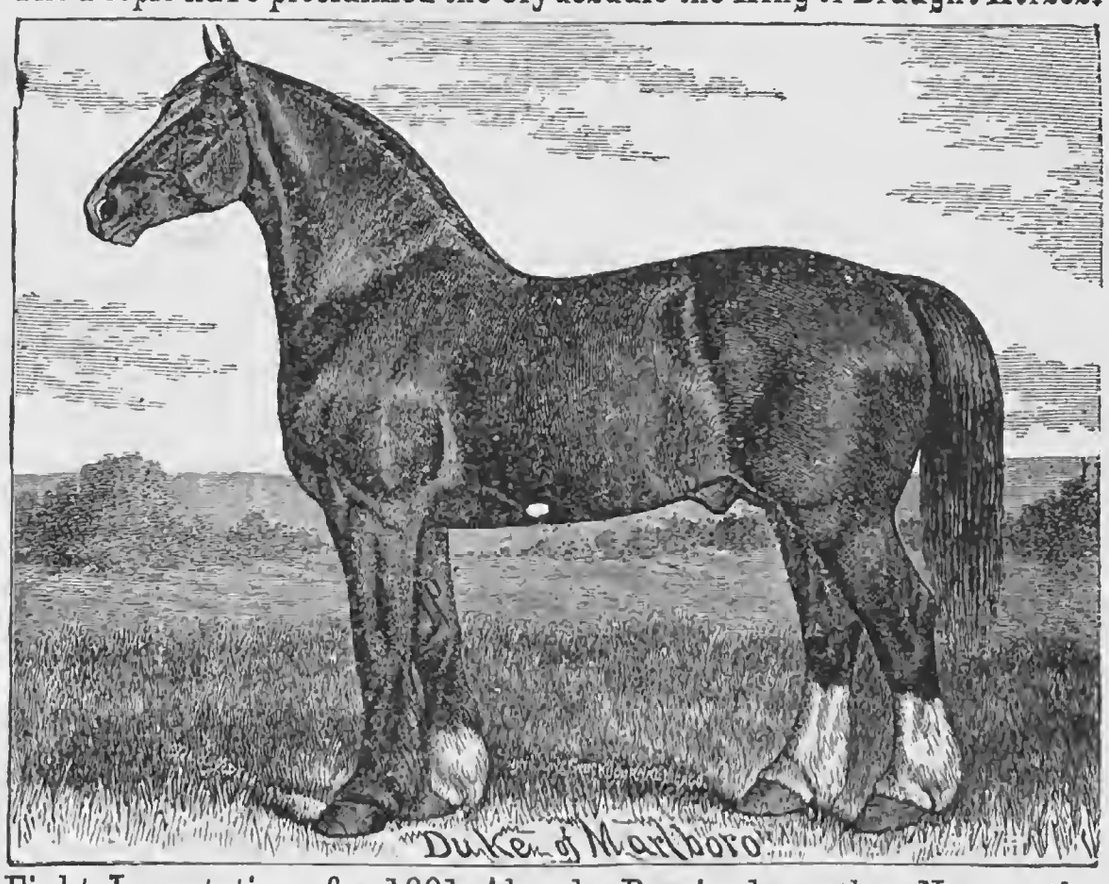
HAMBLETONIAN HORSES.

A magnificent stud, from the best trotting families. A large number of superior young stallions and mares for sale at low figures.

Catalogues of each class of stock sent free on application. Correspondence solicited. Call and satisfy yourself before buying. To breed from, the best is always the cheapest. State that you saw this advertisement in the Rural New-Yorker.

SMITHS & POWELL, SYRACUSE, N. Y.

The People have proclaimed the Clydesdale the King of Draught Horses.



Eight Importations for 1881 Already Received, another Now on the Way, and Still Others Ready to Leave Scotland,

CONSTITUTING BY FAR THE

LARGEST AND FINEST COLLECTION

ever seen on this continent, of the best and most popular strains; including the get and descendants of *the Greatest Prize-Winners of Scotland*, and among the number the *only horse* that ever crossed the Atlantic that ever *WON AND HELD THE CHALLENGE CUP.*

POWELL BROTHERS,

Springboro, Crawford Co., Pa.

The Most Extensive Importers of Clydesdales in America.

Also extensive breeders of *Hambletonians* and other desirable strains of *Trotting Stock*, and importers and breeders of *Holstein* and *Devon Cattle.* They feel justified in saying that their experience, their facilities, and the extent of their business, enable them to offer inducements to any wishing to purchase either class of stock, *not surpassed by any firm in this country.*

Prices Low. Terms Easy. ALL STOCK GUARANTEED AS GOOD AS REPRESENTED. Correspondence solicited. Catalogues sent free. Address as above.

When you write say you saw this advertisement in the RURAL NEW-YORKER.

VICTORIA V. DUROC,

or Red Berkshire Pigs to Subscribers of the Rural, at $6,00. F. D. CURTIS, Charlton, N. Y.

ENSILAGE POWER! Our 2-Horse Eureka Engine and Boiler is just the thing—Safe, Convenient, Durable.

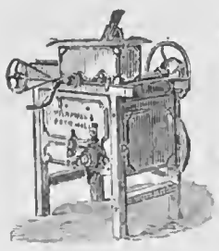
B. W. PAYNE & SONS, CORNING, N. Y.

Grind Your Bone-Meal.

CRUSH your own oyster shells in the $5 HAND MILL. Will crush a peck in 13 minutes. Illustrated circulars and testimonials furnished.

FRANK WILSON,
44 Delaware St., EASTON, Pa.

GUNS Revolvers. Big Bargains. 44-page Catalogue free. *Lowest prices known.* G. H. W. BATES, Boston, Mass

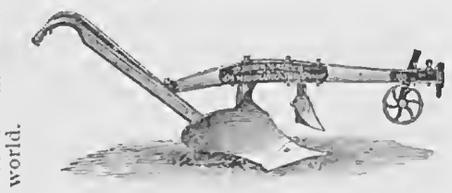


Mishawaka Feed Mills

Combined Sheller and Grinder, - - $65.00
No. 1 Mill, - - - 45.00
No. 2 Mill, - - 35.00

Mishawaka Chilled Plows.

Latest improved and best Chilled Plows in the world.

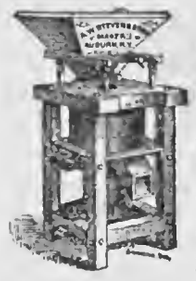


Also the new Mishawaka Sulky Plow, Steel Plows Breaking Cultivators, Double Shovel Plows, Iron and wood

SEND FOR CIRCULARS TO THE

St. Joseph Manufacturing Co.,

SOLE MANUFACTURERS,
MISHAWAKA, IND

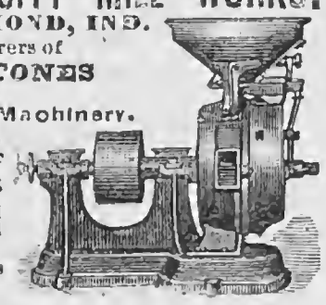


Steven's Improved FRENCH BUHR Feed Mill.

Under runner, steel spindles, with chilled step. Simple, substantial. All de of the best material throughout, and fully warranted. Sizes from 14 in to 24 in. *The cheapest and best Portable Buhr Mill made.* Send for Descriptive Circular and Prices to A. W. STEVENS & SON,
Auburn, N. Y.

RICHMOND CITY MILL WORKS.

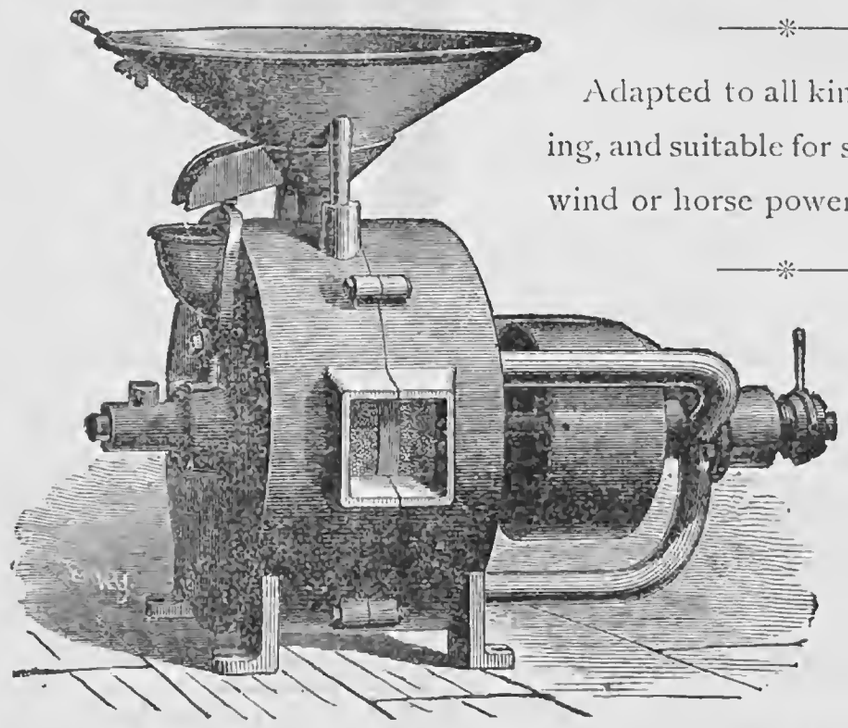
RICHMOND, IND.
Manufacturers of
MILL STONES
and
Flouring Mill Machinery.



We manufacture the best French Buhr CORN AND FEED MILLS in the country. Send for description and prices.

State you saw this in RURAL N.-Y.

HARRISON'S
Standard Buhr-Stone Mills.



Adapted to all kinds of grinding, and suitable for steam, water wind or horse power.

These Mills are built of various sizes and weights, suitable for heavy or light work. The light 20-inch Mill (see cut) has a capacity of six to forty bushels corn per hour, depending upon speed and power. Be sure to inquire into the merits of these Mills before purchasing elsewhere.

☞Send for our Illustrated Catalogue, just issued. Address

ESTATE OF EDWARD HARRISON,
New Haven, Conn.

BIG GIANT CORN AND COB MILL.

Improved with Sifter Attachment.

EVERY MAN HIS OWN MILLER.

A HOME GRIST MILL COMPLETE.

This Mill has an Automatic Sieve of any degree of fineness required, and will grind and bolt or sift the meal ready for use, making about seven-eighths of the product a beautiful, fine grade of family meal, equal to that made on a buhr stone; the other one-eighth is about what you would give for toll, and is ground into good feed; if desired it can be run through the mill again and so reduced to meal.

The sieve can be quickly removed, and the mill used for crushing corn and cob, or small grain.

We put this Sifting Attachment only on our Improved Mills.

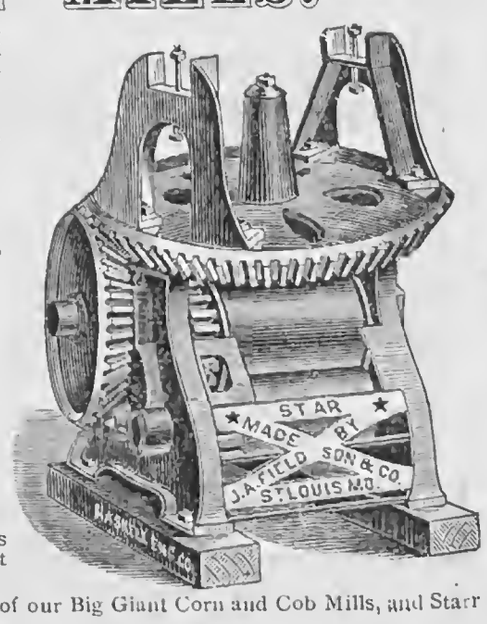
No. 2 Mill, capacity 2 to 3 bushels per hour, $60
" 3 " " 2½ to 4 " " 75

STARR CANE MILLS.

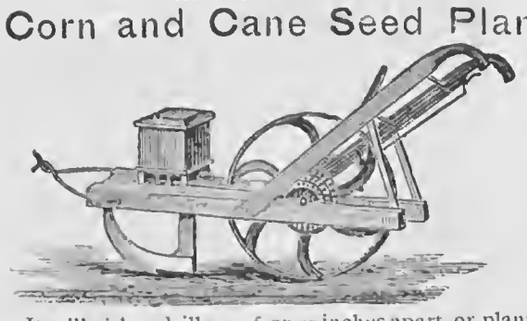
These Mills are very strong and extra heavy, weighing over two hundred pounds more than mills of similar capacity. The rolls are so made as to adapt themselves perfectly to the work to be done.

It is the Cheapest and Best Mill in the Market.

WARRANTED IN EVERY RESPECT.



MOUND CITY
Corn and Cane Seed Planter.

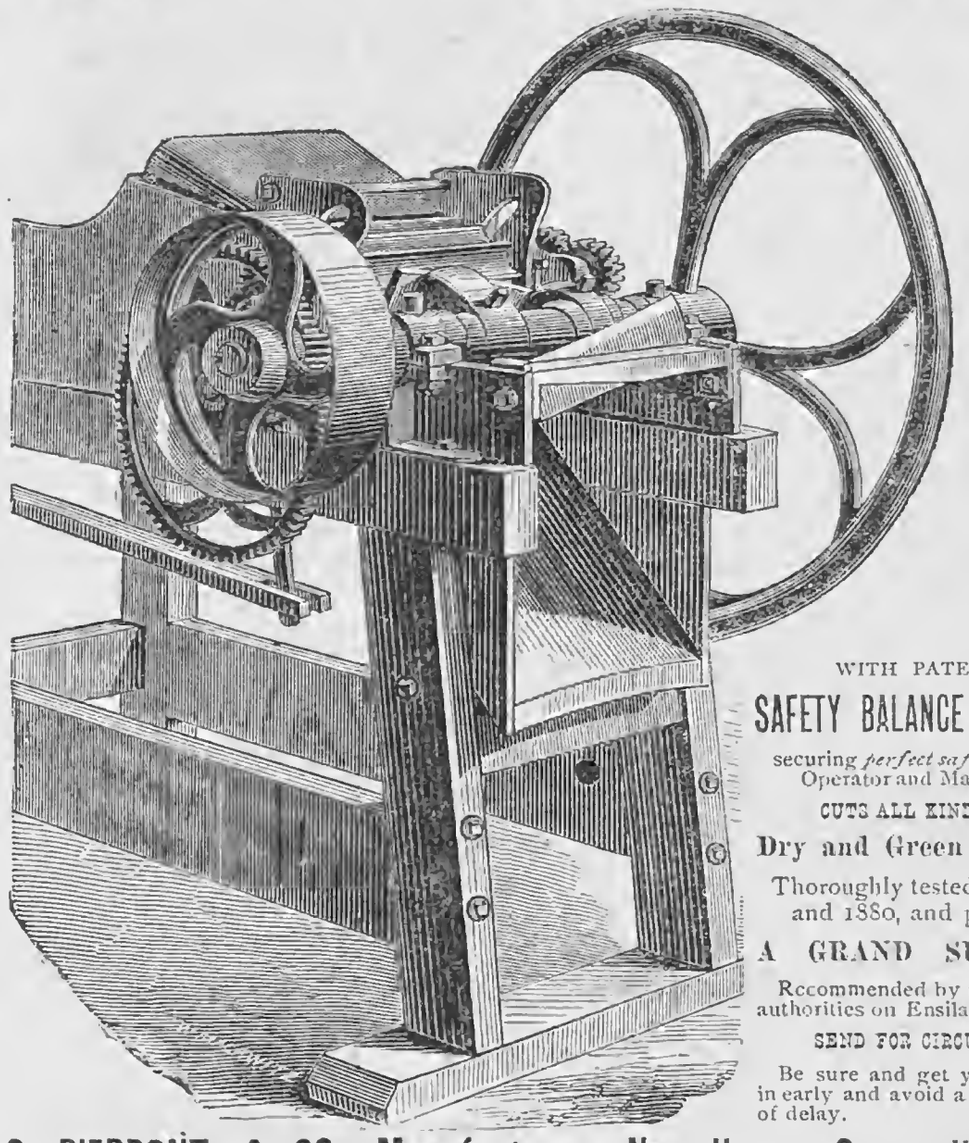


It will either drill 12, 16 or 20 inches apart, or plant in hills any desired distance. A perfect DRILL, and a perfect Check Row Planter.

Send for Illustrated Circulars, giving full description of our Big Giant Corn and Cob Mills, and Starr Cane Mills, to the sole manufacturers,

J. A. FIELD & CO.,
Successors to J. A. FIELD, SON & CO.,
922 North Second Street, St. Louis, Mo., U. S. A.

BALDWIN ENSILGAE CUTTER



WITH PATENT
SAFETY BALANCE WHEEL,
securing *perfect safety* to the Operator and Machine.

CUTS ALL KINDS OF
Dry and Green Fodder.

Thoroughly tested in 1879 and 1880, and proved
A GRAND SUCCESS

Recommended by the highest authorities on Ensilage.

SEND FOR CIRCULAR.

Be sure and get your orders in early and avoid a possibility of delay.

C. PIERPONT & CO., Manufacturers, New Haven, Conn., U. S. A.

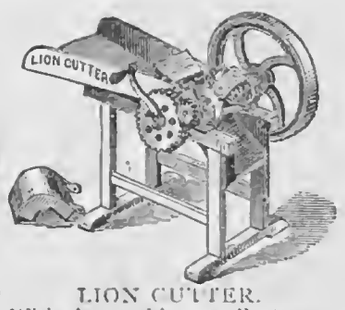
Over *45,000* this kind Sold and in use

Self Sharpener, Price $10 to $80.

THE
Belcher & Taylor Agricultural Tool Company,

Chicopee Falls,
MASS, U. S. A.

The largest Manufacturers of

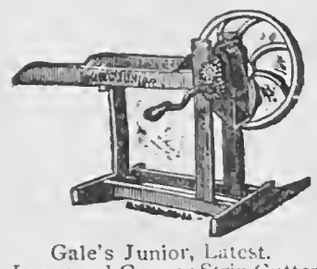


LION CUTTER.
With changeable cut. Best power cutter made for ensilage and other feed. Runs light by hand, and has an immense sale.

HAY, STRAW, CORNSTALK AND ENSILAGE CUTTERS

In the World, also Manufacturers of the

S. R. NYE, BAY STATE RAKE, BULLARD'S HAY TEDDER, ETC.



Gale's Junior, Latest. Improved Copper Strip Cutter $25.

Best Assortment, Best Workmanship
OF AGRICULTURAL IMPLEMENTS
Of Every Description.

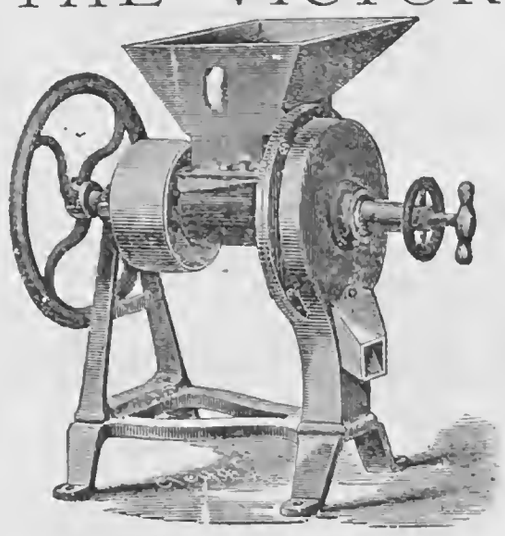
LIBERAL DISCOUNTS TO THE TRADE.

For Illustrated Catalogue with prices and terms, address:

JAMES E. TAYLOR, Sec.,
Chicopee Falls, Mass, U. S. A.

Gale's Lever. The Most Substantial Cheap Cutter made.

THE VICTORY CORN MILL.



The Only Mill that is a Complete Success in Grinding

CORN AND COB TOGETHER.

WE DEFY COMPETITION
IN THIS KIND OF GRINDING

It also grinds Shelled Corn, and all other kinds of grain, coarse or fine, as desired.

Capacity 10 to 20 Bushels per hour.

Self-Sharpening Plates and Warranted in every respect.

Send for Circular. Address,

THOMAS ROBERTS,
Springfield, Ohio, U. S. A'

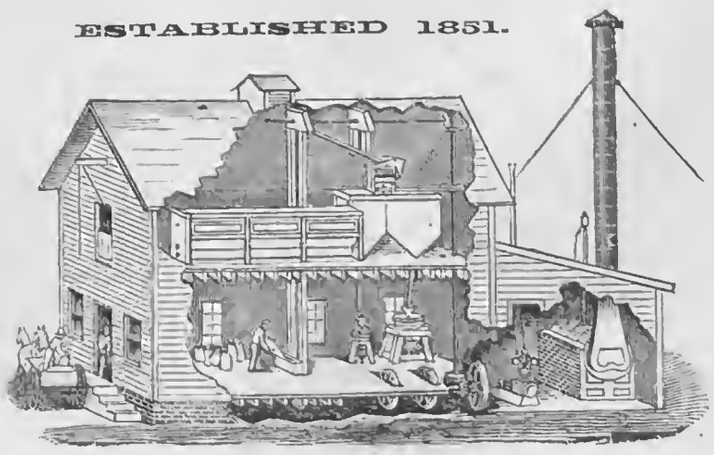
Complete Grist Mills for Flour & Meal.

AWARDED
First Premium
BY THE
MILLERS'
International Exhibition,
Cincinnati, O., 1880, and at St. Louis Fair in 1880.

Portable Mills for Farmers, Saw Mills, etc. **18 Sizes and Styles. Over 2,000 in Use.** $80 and upwards. A boy can grind and keep in order. Adapted to any kind of suitable power. Flouring and Corn Mills, ALL SIZES. Manufacture
Mill Stones and Mill Supplies.
Send for Pamphlet No. 31.

Nordyke & Marmon Co.
Indianaplis, Ind.

ESTABLISHED 1851.



BRIEFLETS.

PEOPLE cannot act well in public a part which they are not in the habit of acting at home.....

PROF. F. W. TUSTIN says, in the American Bee Journal, on the subject of bees puncturing grapes:—

"Our conclusions from observations and from the testimony of others are:—

1. That the bee cannot puncture the skin of the grape with either its tongue or its sting.

2. That it is possible that bees tear open grapes from the fact that they possess the necessary mandibular power.

3. That they rarely, if ever, do this, and that their depredations upon grapes are confined to those whose skin has been ruptured from some other cause.....

IN a recent lecture on the art of butter-making, the noted Dr. Voelcker remarked:—"It has been said, with a good deal of truth, that by over-manuring pasture land we reduce the fine quality of the butter made from the milk of cows fed upon such pasture. My belief is that the finest quality of butter is produced from pasture which contains a great variety of herbs, some of which might even be ranked as weeds.....

THE question is, Can ordinary pasture produce first-quality butter? and to that question I answer, 'Decidedly, if you take proper precautions to prevent the cream turning sour before it is churned.' This sourness, let me repeat, is the great hindrance in making high-class butter. Many persons deem this a small matter, and unconsciously allow the cream to get somewhat sour before making butter; but if you desire to produce good, sweet, keeping butter, you must churn cream as sweet as possible. This, you will be inclined to say, is an extremely simple matter; and I am almost ashamed to speak of such simple matters in the presence of so many experienced persons; but my experience is that simple things are the most difficult to make people learn. With most of us there is a peculiar tendency to aim after some big thing and to neglect the little thing, notwithstanding that it is on the latter that so much of our daily comfort depends....

IF you pour off the butter-milk as soon as the butter comes, you will have butter much more free from the cheesy or curdy envelope which originally encased it in the creamy globule. And you will never make first-rate butter unless you preserve a regular temperature in churning. The temperature should never rise above 60 degrees, it should be rather below than otherwise. I am no advocate of all these beautiful air churns and complicated contrivances. You do not want them. In a good churn you simply require an implement which enables you to churn sufficiently without overdoing it.....

B. C. TAYLOR,

New Horse Hay Rake.

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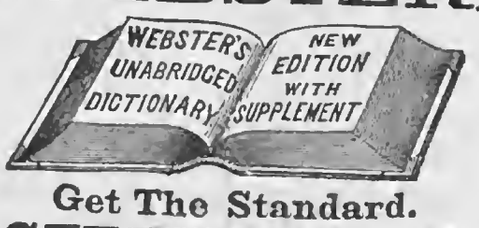

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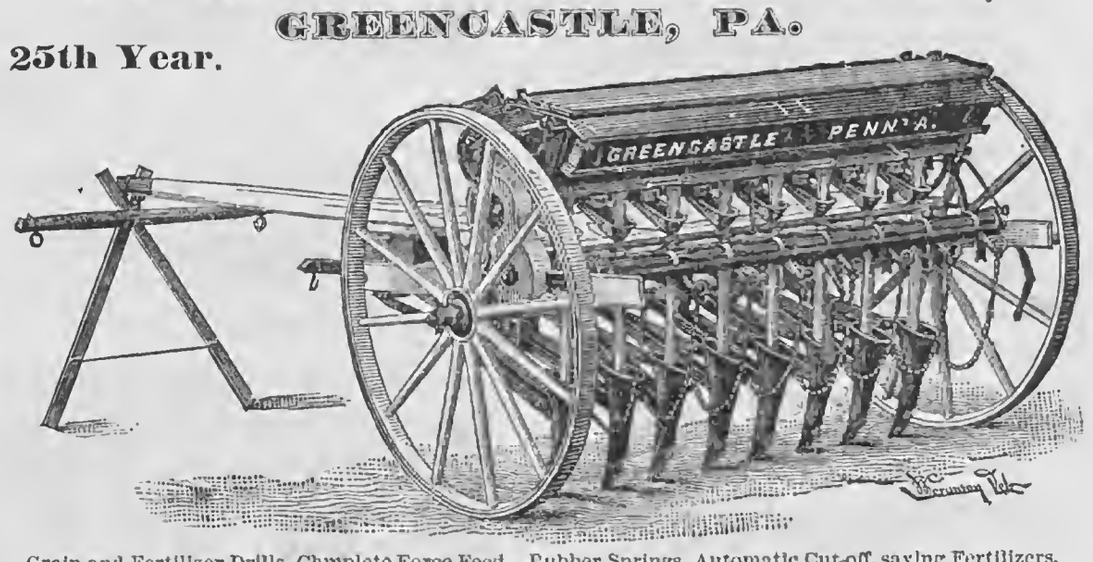

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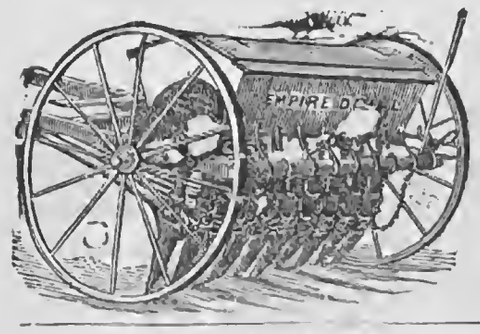

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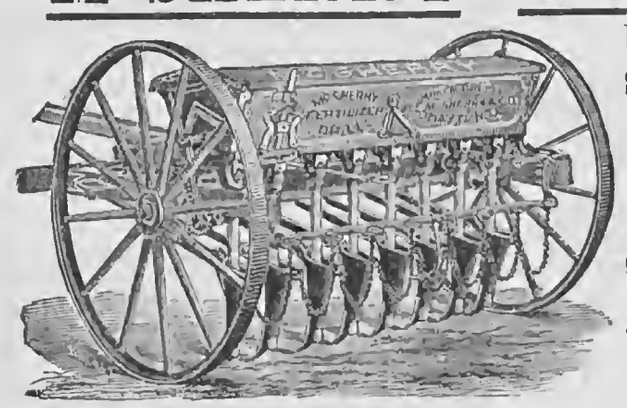

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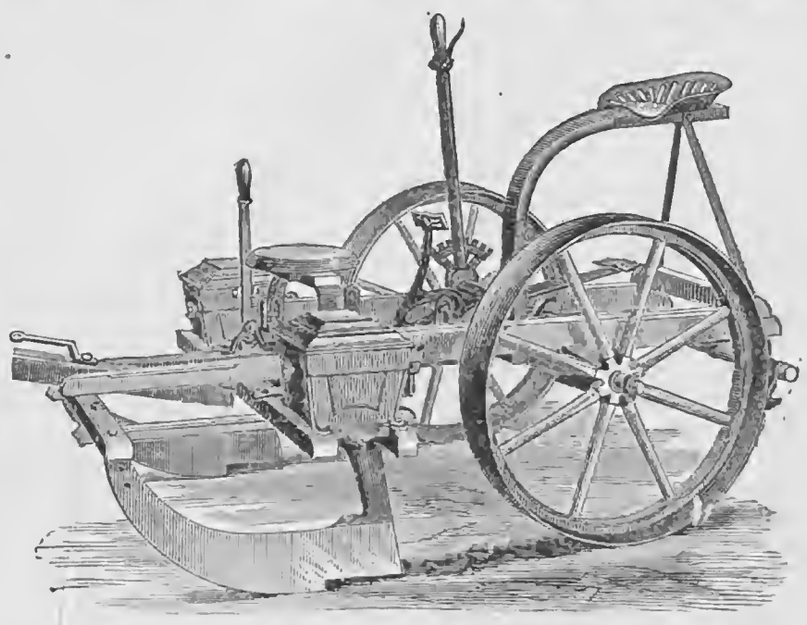

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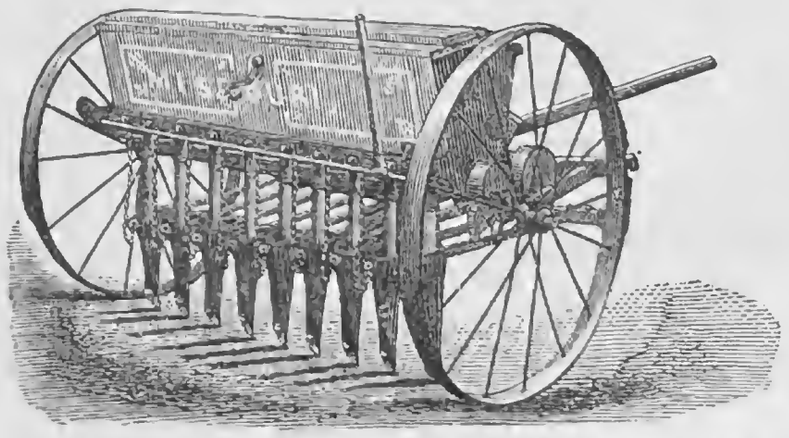

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JOURNALISM is advancing with rapid strides. A first-class newspaper no longer waits for news to come to it; it goes abroad everywhere, even into the highways and byways, as well as into the great haunts of men, and gathers news of all sorts wherewith to supply the public craving. Secular and technical journalism are alike in this positive need. But among the class of newspapers known as agricultural journals a new departure, which is creditable as a mark of enterprise and honest endeavor to secure the most exact and freshest information, has been made by the RURAL NEW-YORKER, which is the first and as yet the only agricultural journal that has a farm as a part and parcel of its editorial office and as a laboratory or work-shop in which the editor can test and experiment on and prove certain important questions which arise, and which require actual demonstration in the field and garden for their accurate solution. The experimental farm is, in fact, as necessary now to an agricultural journal as the telephone and the telegraph are to the ordinary newspaper. The Rural Farm is, in fact, the only experimental farm in complete and successful operation in the State of New York. Its purposes and mode of management may perhaps best be learned from an account of a recent visit to it.

It is located on Long Island, within sight of, and, in fact, bordering upon, the Atlantic Ocean. It is a quite level tract of sandy and gravelly soil, neither rich nor poor, but in such moderate condition of fertility as to show in a very marked manner the action of manures and special fertilizers. The farm is devoted wholly to the experimental growth of plants, vegetables and common farm and garden crops. [It may be well to remark that fruits of all kinds, including grapes, strawberries, raspberries, currants, blackberries, and all ornamental trees and shrubs hardy enough to endure the climate, are tested at the "Rural Grounds," situated in Bergen County, New Jersey, 18 miles from New York. For such purposes the Rural Farm is not well adapted.—EDS.]. New varieties of seeds are sought and tested; promising varieties are crossed in the hope of producing some improved sorts, and new methods of cultivating and fertilizing are tried. All sorts of questions which may arise in the actual practical working of a farm are here encountered and solved so far as the opportunities of time and place and soil will permit. Upon starting on a tour over the farm one might see a crop of millet sown to test its value as a feeding crop or as a green manuring crop, and also its availability for this purpose upon soil in ordinary condition. Then follow strips of different kinds of sorghum; the "Wild Corn of America," the Soja Bean; a row of enormous peas [Telephone.—EDS.]; rows of many kinds of sweet corn to test their earliness and comparative value. Potatoes, cabbages and other garden vegetables were next met with. Large plots of field corn, each under some special condition, which will doubtless soon be described and the results related in the columns of the RURAL, were then examined. Plots of many different kinds of wheat, of oats, of wheats crossed with other varieties to produce new kinds, followed. All this is very easily related, but the time and attention required to give even a cursory notice to all these things are by no means trifling.

But what days and weeks of labor and thought were involved in the actual work done—in the scores of plots, small and large, all staked and numbered to correspond with records made in a book so that every result could be set down without mistake and verified. This work necessarily falls upon the editor, who undertakes to control it; it is his actual hand-work as well as head-work which is necessary for the fulfillment of all the purposes for which the work is done; for experimental work cannot be delegated to a hired man or even to an assistant. It is as much the editorial work of the editor as the writing out of the results when they have been ascertained, or the first conception of the work that is to be done.

It is not difficult to perceive the great practical usefulness of such a work; of the accumulated years of waiting for success or for failure in work which it may save to numbers of individuals who might feel desirous to make the same sorts of experiments and to test and prove the same sorts of questions. It makes the journal, which is intended for "the Farm, and Garden, for the Rural and Suburban Home," a real, practical thing; precisely what it is intended; in fact, a medium for conveying fresh, precise, true and accurate news of events in the farm, garden and orchard as soon as they occur and as they may happen. The readers of the RURAL NEW-YORKER are certainly to be congratulated upon having all the benefits which may accrue from such a farm and such a work in the hands of an intelligent, earnest and most persevering experimenter and careful worker.

The Rural New-Yorker employs special artists and presents portraits from life of farm animals, rural architecture, farm helps, new fruits of all kinds, new grains and garden plants. Six hundred engravings, or thereabouts, are published annually.

International Exhibition.

MELBOURNE, AUSTRALIA. The competition in Sewing Machines proved very keen, and great interest was evinced both by representatives of the makers and the public in the result of the trials.

The machines were removed from the stand and were submitted privately to the Jury, and their various qualifications explained by skilled operators. The Jury then retained possession for some time, and at their leisure examined the workmanship and material, testing the latter for hardness by use of a file.

Among Domestic Machines the highest place was awarded to a machine comparatively new in the Melbourne market, though by no means untried elsewhere, and known as the *Davis Vertical Feed Sewing Machine*.

In this machine the feed apparatus is entirely removed from the usual position beneath the table of the machine, and is attached to the head.

It consists mainly of a vertical bar placed close to the presser foot and which receives suitable vertical and horizontal motion from mechanism contained in the head of the machine.

We find the other points entirely novel.

FIRST. The presser foot, instead of being continuously urged downward upon the work, is lifted slightly at the instant that the forward motion takes place.

SECOND. The feeding is accomplished while the needle is in its lowest position, and the needle partakes of the forward motion of the feed bar, pinning the two plies together and causing both to advance equally.

The machine is also provided with a very complete series of adjustments for counteracting the effect of wear, and an improved automatic bobbin winder, and in all its details is carefully and judiciously worked out.

Owing apparently to its peculiar feed motion the Davis machine possesses an astonishing power of passing over seams and other irregularities, and accomplishes with the greatest ease a remarkable wide range of work.

It is also provided with a very ingenious and novel set of attachments adapted to work in unison with the new feed motion and enabling very complicated operations to be performed with facility, and in many cases dispensing altogether with the necessity of guiding the work by hand.

It was at first supposed by the jury that this excellent performance was in some measure due to the special skill of the operator. This view was, however, entirely negatived by the fact that a change of operators in no way impaired the result.

The Davis machine is made for either foot or hand power, and performed equally well in each case.

To it the Jury awards the first order of merit as being prominent for simplicity, convenience, efficiency and rapidity both as a treadle and hand machine. W. C. KERNOT, Chairman Jury 37.—*Adv.*

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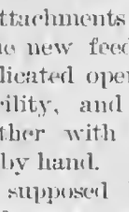

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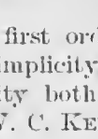

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Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.

In cans. Sold at a reasonable price.

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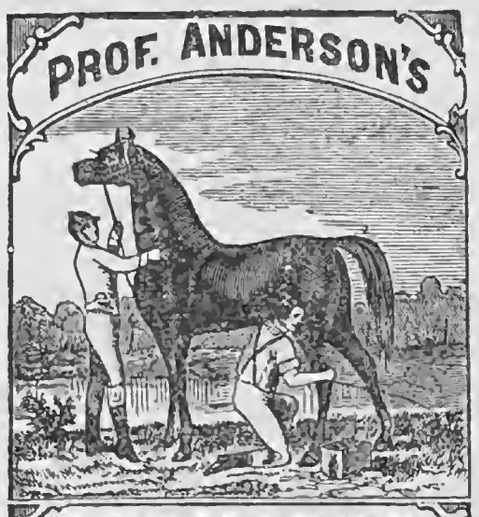

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Inflammation of all kinds. Diphtheria, Wounds, Bruises, Burns, Sprains, Rheumatism, Sore Throat, Swelling of the Glands, Inflammation of the Eyes, Broken Breast, Frost Bites, Chilblains, Piles, Bee Stings and all sores.

GOOD FOR BEAST.

Fresh Wounds, Galls, Sprains, Bruises, Cracked Heel, Ring Bone, Poll Evil, Wind Galls, Spavins, Sweeney, Founder, Lameness, Sand Cracks, Scratches or Grease, Mange, Horse Distempers, etc., etc.

Cures Garget, Sore Teats and Bags and all Sores and Swellings in Cows & Oxen.

For more extended remarks and for a large number of testimonials voluntarily sent to us by the persons whose signatures are attached, we refer you to our Circular Pamphlet around each bottle.

We would say to Livery Stable Keepers, make it a point never to be without this great remedy. It is a cheap, efficient and SURE medicine. With this "Dermador," there is no such word as "FAIL." It never blisters, but cools. Price 25 and 50 cents. Sold by all druggists. D. RANSOM, SON & CO., Buffalo, N. Y.

The Salvator for Invalids and the Aged. An Incomparable Ailment for the Growth and Protection of Infants and Children. A Superior Nutritive in Continued Fevers, and a Reliable Remedial Agent in all Diseases of the Stomach and Intestines.

THIS justly celebrated Dietetic Preparation is, in composition, principally the GLUTEN derived from the WHITE WINTER FLINT WHEAT CEREAL, a solid extract, the invention of an eminent Chemist. It has not only been highly recommended but certified to by a large number of chemists and physicians—representing a very high degree of medical science—as the SAFEST, MOST ACCEPTABLE and RELIABLE FOOD for the GROWTH and PROTECTION of INFANTS and CHILDREN and for Mothers lacking Sufficient Nourishment for their offspring.

Unlike those preparations made from animal or vinous matter, which are liable to stimulate the brain and irritate the digestive organs, it embraces in its elementary composition—

That which makes strong Bone and Muscle. That which makes good Flesh and Blood. That which is easy of Digestion—never constipating. That which is kind and friendly to the Brain, and that which acts as a preventive of those Intestinal Disorders incidental to Childhood.

And, while it would be difficult to conceive of anything in Food or Dessert more Creamy or Delicious, or more Nourishing and Strengthening as an aliment in Fevers, Pulmonary Complaints, Dyspepsia and General Debility, its Rare Medicinal Excellence in all Intestinal Diseases, especially in

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For mending Tin, Brass, Copper, Lead or Iron without acid or soldering iron. Any lady or child can mend with it. Will send one sample plate by mail (with directions) that will cut 192 one-fourth inch patches, on receipt of 25c.; 8 for $1; 100 for $10. Postage stamps received as cash. AGENTS WANTED. Can carry one day's stock in your pocket. Sales yield $3 to $15 per day. Our 61-page illustrated Catalogue of Chromos, Jewelry, Novelties, Stationery, etc., FREE. Address CITY NOVELTY CO., Mention this paper. 108 S. 8th St., Philad'a, Pa.

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Students may enter at any time. For full information apply to the Treasurer.

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SPORTING RIFLES,

Double and Single-Barrel Shot-Guns, Pocket Rifles, Pocket-Pistols, and the noted Hunter's Pet Rifles. Special attention is called to our Double Breech-Loading Guns. They are simple in construction, and manufactured with great care from the very best material. They are pronounced by experts "the best gun in the market for the money." Send for catalogue and REDUCED PRICE LIST. Our Shooting Gallery Rifle is the favorite everywhere. Our new ten-gauge Single-gun; price (reduced list), $15.50 J. STEVENS & CO., Chicopee Falls, Mass.

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THE ONLY MEDICINE

IN EITHER LIQUID OR DRY FORM

That Acts at the same time on

THE LIVER, THE BOWELS, AND THE KIDNEYS.

WHY ARE WE SICK?

Because we allow these great organs to become clogged or torpid, and poisonous humors are therefore forced into the blood that should be expelled naturally.

KIDNEY-WORT

WILL SURELY CURE

KIDNEY DISEASES,

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by causing free action of these organs and restoring their power to throw off disease.

Why suffer Bilious pains and aches?
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Use KIDNEY-WORT *and rejoice in health.*

It is put up in **Dry Vegetable Form**, in tin cans one package of which makes six quarts of medicine. Also in **Liquid Form, very Concentrated**, for those that cannot readily prepare it.

☞ It acts with equal efficiency in either form.

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Plows, Cultivators, Harrows, Scrapers,

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THE IMPLEMENTS manufactured by the Moline Plow Company are noted for strength of construction, superiority of finish, durability, and qualities which insure perfect work in any condition of soil.

THE MOLINE SULKY PLOW maintains its leading position as the simplest, most durable and lightest draft Sulky in use. It has made an unequaled record, which will be sustained by the adoption of every improvement which long experience and constant study may suggest. *THE MOLINE* is so simple and easy to handle that it can be managed by a boy, while it has been proved in the most careful and thorough field trials to be of lighter draft than an ordinary walking plow.

FARMERS who want the *BEST*, and therefore the *CHEAPEST*, will make no mistake when they buy a plow or a cultivator bearing the brand of the Moline Plow Company.

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A Handsome and Valuable Premium for Every Reader of this Paper.

We wish to send evidence of the superiority of our implements to every reliable, practic. farmer in the country. We have published a handsome work of art in the shape of an *ALLEGORICAL FAMILY RECORD*, representing by appropriate scenes the Journey of Life, from the Cradle to the Grave. It will be furnished free to applicants on one condition only: On receipt of a list of names of good reliable farmers, with the full Post Office address of each, we will forward to the person sending the list one copy of the Family Record free of charge.

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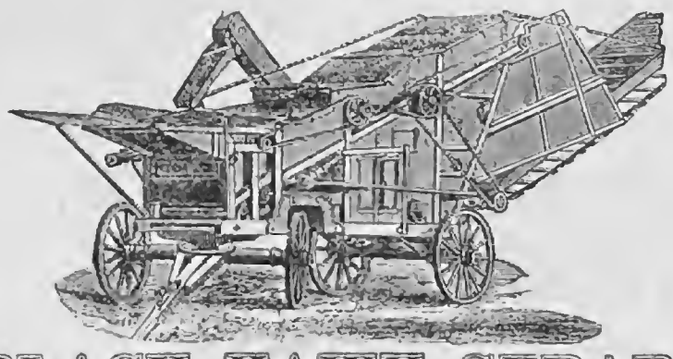
With New Device (Cut-off Sill) for Easy Handling on the Road, in Stack Yards, etc., etc.



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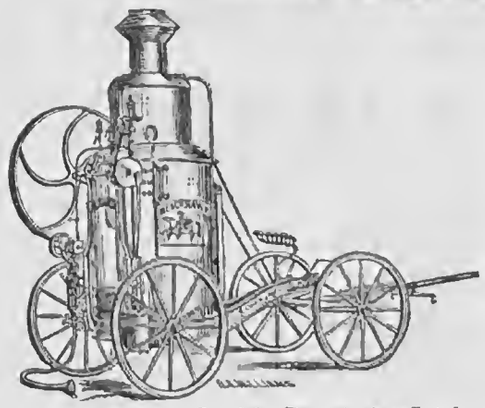

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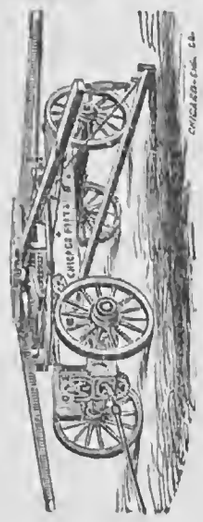

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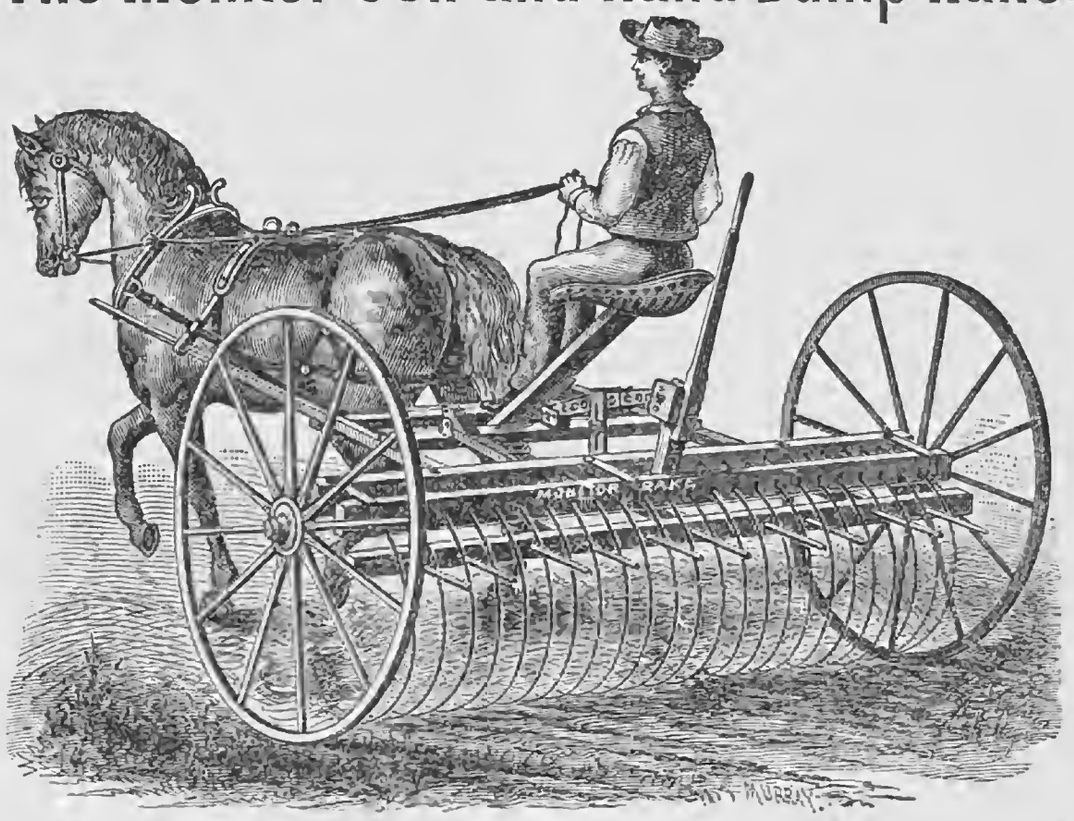
The Monitor Self and Hand Dump Rake.



Without a Peer! Perfection! Ahead of all Competitors!

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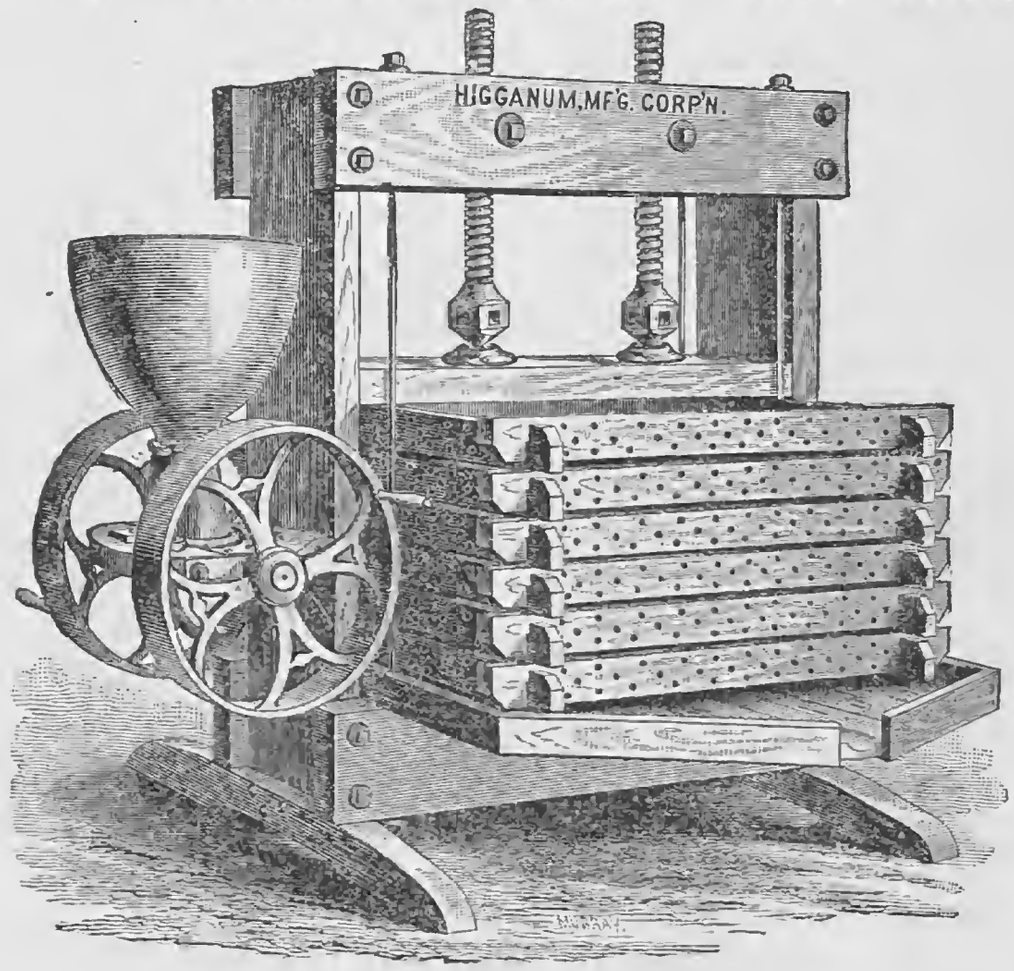
The Farmer's Favorite Cider Mill.



A farmer's mill. It has no equal. Can be run either by hand or power. Will grind 35 to 50 bushels of apples per hour and the Press will press 75 gallons at a pressing. Send for large illustrated list of cider machinery.

THE HUGHES CASTOR TOOTH HARROW.

The best Harrow for seeding down in the market. Do not fail to obtain circular with full description.

CLARK'S IMPROVED ROOT CUTTER.

Perfection Obtained in Cutting Roots.

This Cutter has *received* the First Premiums *at every Fair*, and has no *equal*. Do not fail to examine it.

The Neatest, Strongest, Simplest, Cheapest and most Perfect Root Cutter in the Market.

This Cutter is built with a heavy oak frame, well bolted together; is staunch and strong, neatly finished, handsomely striped and ornamented. The cutting apparatus consists of *twenty-five steel knives* [gouge-shaped], so arranged on a wrought-iron shaft that they are perfectly secure; no chance of becoming loose or breaking. The roots are easily cut in pieces suitable for feeding. No coarse, ungainly pieces are left by this Cutter. A boy can easily cut 35 to 40 bushels per hour, so easily does it do its work. Don't fail to examine it.

We are manufacturing three sizes, designated by numbers,—1, 2 and 3.

Nos. 1 and 2 designed for hand use.

No. 3 is the Power Cutter, and will cut 100 bushels per hour.

Price,	No. 1,	$12.00
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Do not forget one thing; that we are the largest manufacturers of agricultural implements in this country. Plows, Harrows, Cultivators, and in fact everything in this line.

The Higganum Mf'g. Corporation,

HIGGANUM, CONN., U. S. A.

THE SHARPLESS STRAWBERRY.

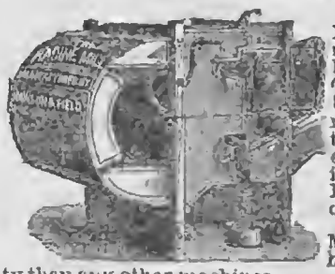
WE are always glad to see first-rate reports respecting the Sharpless Strawberry which the RURAL was among the first to test and recommend to its friends. Mr. A. M. Purdy, of Palmyra, N. Y., says that, *without a single* exception, it is the largest strawberry on his grounds, and he cultivates all sorts. He also says that it is the most solid and luscious to eat out of hand. When nearly all others, except Glendale and Kentucky, were gone, the Sharpless vines had a splendid show of green and ripe fruit, promising to yield for a week or ten days longer. When most other kinds sold for seven or eight cents, the Sharpless sold readily for 10 or 12. Mr. Purdy says that its yield with him is simply enormous, the ground along the rows being literally *covered* with the large, beautiful fruit and the pickers can gather a quart of them more quickly than of any other kind. Ellwanger & Barry, we believe, were the first to offer the Sharpless for sale. It has always done well at the Rural Experiment Grounds, the vines remaining strong and healthy while others in the same plot have proven comparatively feeble and unproductive.

WE presume there are few readers who will not find something to interest them in our new premium list. It will offer valuable presents to all who send us subscribers, whether two, a dozen or a hundred.

Among the forty-five kinds of different plants and seeds introduced or disseminated among our subscribers free, may be mentioned those which have now passed into general cultivation, viz.: The Beauty of Hebron and White Elephant Potatoes; the Cuthbert Raspberry; Blount's White Prolific Corn; Mold's Ennobled and Washington Oats; Clawson Wheat; the Rural Branching Sorghum; Argenteuil and Giant Red Dutch Asparagus; Telephone Pea, Acme Tomato, &c., &c.

The Racine Farm and

Warehouse Fanning Mills.



These Celebrated Mills have long been used by the Most Prominent Millers & Grain Dealers in the United States, who recommend them as the Best Machines ever produced for cleaning Corn, Oats, Wheat, Barley, Grain & Seeds of every Description. They do the Work More Perfectly, and have Greater Capacity than any other machines.

They are Strongly Built, of the very best materials, well finished, and provided with Superior Screens and Sieves. Worked by Hand or Power. Run very easy.

Send for Circular and Price List to

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Manufacturers, - - Racine, Wis.

The A. P. Dickey Farm and Warehouse

FANNING MILLS.

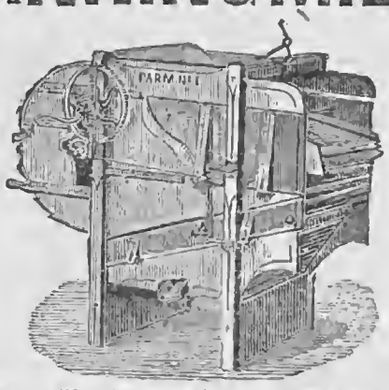
THE BEST IN THE WORLD.

Obtained Centennial Award and Grand Medal, also best award at Paris exposition in 1878. They clean perfectly, Oats, Chess, Cockle, and all foul matter from Wheat and Barley. *They grade and separate for seeding and market*, clean all kinds of small seeds, and are perfect chaffers. They will save any one their cost annually. Lowest freights procured for purchasers.

Address DICKEY & PEASE, Racine, Wis

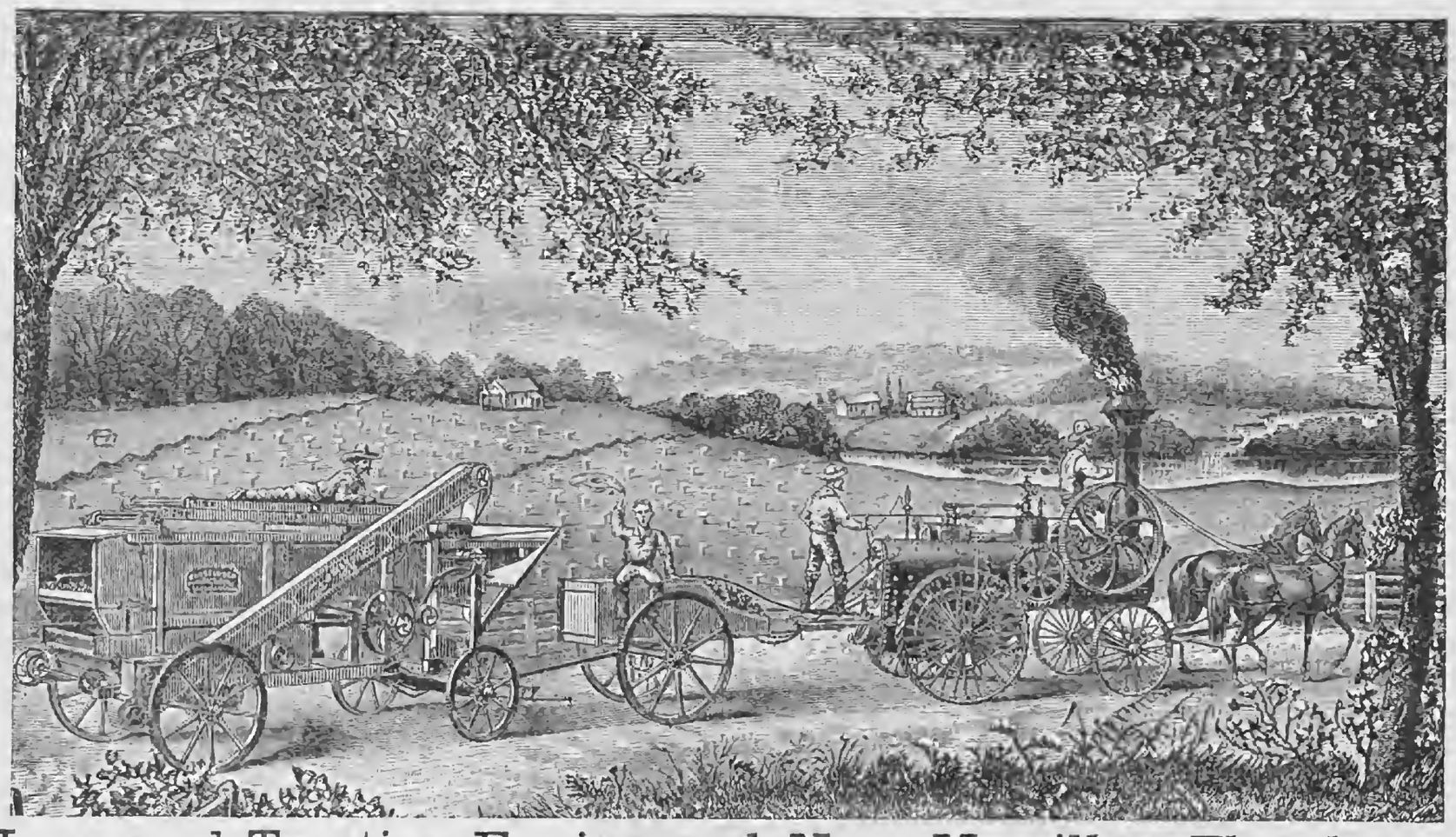
THE "CENTENNIAL"

FANNING MILL.



The BEST mill in the world, has never been beaten. It cleans perfectly Oats, Chess, Cockle and all foul stuff from Wheat and Barley. It is also a perfect cleaner of Flax, Timothy, Clover, Hemp and all kinds of seeds. The Centennial Mill has two shoes and all the modern improvements which have been adapted to fanning mills. It is especially adapted for warehouse use. Dealers in agricultural implements, seed merchants and warehouse-men will do well to write for best discounts. For descriptive circular and price list address

S. FREEMAN & SON'S, Racine, Wis.



Improved Traction Engine and New Massillon Thresher.

Manufactured by RUSSELL & CO., Massillon, Ohio.

Also Improved Pony and Double Pony Saw Mills, Horse Powers, &c.

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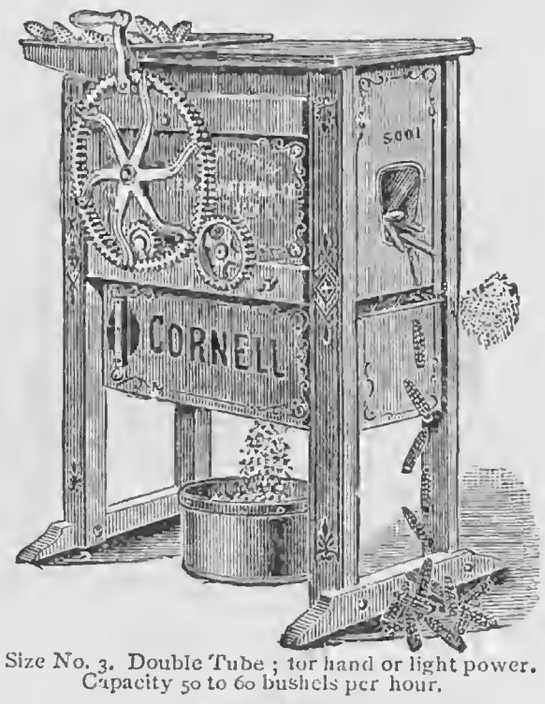
RUSSELL & CO., Massillon, Ohio.

The Cornell Patent and Ithaca Shellers.



Size No. 3. Double Tube; for hand or light power. Capacity 50 to 60 bushels per hour.

Will shell more Corn in the same space of time, with less labor, than any other machines in the market.

THE CORNELL

Is the only Corn Sheller made that uses

Spiral Springs for the Pressure Bar,

THE ADVANTAGES OF WHICH ARE OBVIOUS:

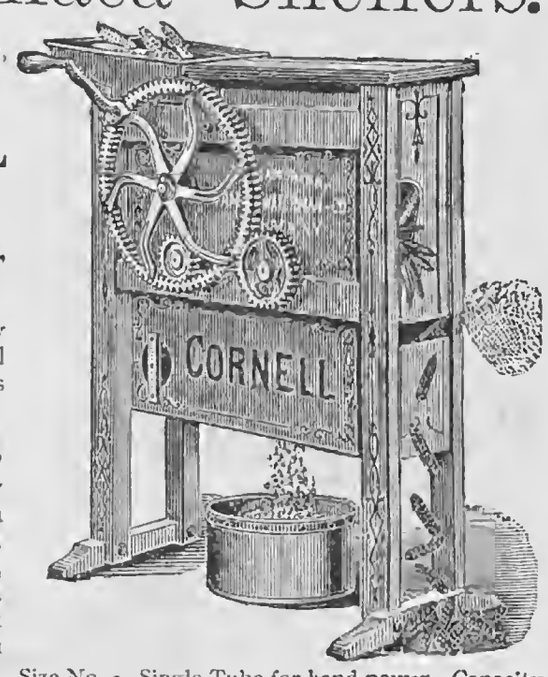
It acts quicker; conforms itself more readily to the shape of the ear; will shell equally well throwing corn in large end as well as small; is very easily and readily adjusted.

Every Machine has an Iron Hopper Attached, which facilitates the feeding. Throat is very large; will take in the largest corn grown; in fact, will shell anything from Pop Corn to Dent.

The Ithaca Sheller is an entirely new machine, and is the best low-priced machine in the market.

These Shellers have been awarded the First Premium at every Fair where they have been exhibited. They are fully warranted.

Be sure and send for Circulars to



Size No. 2. Single Tube for hand-power. Capacity thirty bushels per hour.

TREMAN, WATERMAN & CO., Ithaca, N. Y.

HALL, ELTON & CO.,

Electro-Plated Ware, German Silver and Britannia Spoons,

"EASTLAKE." Patented.

Factories, Wallingford, Conn. Salesroom, 75 Chambers St., New York

THE CHAMPION IMPORTED BREECH-LOADING SHOT GUN.

THE BIGGEST BARGAIN EVER OFFERED.

A $20 BREECH-LOADING GUN FOR $7.00.

NEW, PERFECT, FRESH FROM THE FACTORY AND GUARANTEED IN EVERY RESPECT. EVERY ONE THOROUGHLY TESTED AT FACTORY BEFORE EXPORTATION.

Owing to the failure of the LONDON & LIVERPOOL FIRE ARMS CO., of London, England, we have secured a consignment of their celebrated Breech-loading Shot Guns THE CHAMPION, at thirty-three and one-third cents on the dollar of the actual cost of manufacture. One hundred thousand stand of these Guns have been thrown on the European and American market, only a small portion of which have come to America. These we have secured entire control of and offer them for the purpose of introduction at less than cost of manufacture until NOV. 15th, 1881, when the price will be advanced to the regular rate $20.00 each. This Shot Gun fills the long-felt want for a reliable Breech-loading Shot Gun at a reasonable price. The country has been flooded with cheap, worthless American Fire-arms, made of inferior material miserably put together, and as far as reliability or accuracy are concerned perfectly useless. THE CHAMPION is now and perfect, finely finished, case-hardened and blued, made of very best materials, and by the improved Attachments, as shown in cuts Nos. 1 & 2, are rendered superior to any other English or American Shot Gun. They are too well-known to need extensive description, when we state that they are perfect, and warranted Genuine CHAMPIONS, that is sufficient. Every Man or Boy in this country who needs a Shot Gun should purchase one of THE CHAMPIONS, as they are the Biggest Bargain ever offered in America, and will never be offered again. We GUARANTEE these Shot Guns to be in every respect as represented or Money will be refunded. You cannot let this opportunity slip if you want a Shot Gun, and as a chance for speculation it is well worth your attention. You can at any time sell the Shot Gun for a great deal more than you gave for it. THE CHAMPION is a great favorite with Sportsmen on account of the rapidity and ease with which it can be loaded, and its superior Shooting qualities. That it stands unrivaled, as a first-class Fire-arm, is shown by the thousands of English testimonials on file. The editor of THE ATLAS (N. Y.) says: "*They are the most extraordinary bargains I ever saw. They shoot equal to my* $90 *Scott Gun.*" He has bought two. R. E. Reed, Secretary of the New York Ducking Club, says: "*Your CHAMPION IMPORTED BREECH-LOADING SHOT GUN is an unheard-of Bargain and worth at least* $20.00. *Our Club will have several. I heartily endorse your assertions; this Shot Gun will more than satisfy every purchaser.*" ORDER AT ONCE as our consignment is only ONE THOUSAND and our limit is NOV. 15th, 1881.

TAKE NOTICE—We will send (until Nov. 15th, 1881,) ONE CHAMPION IMPORTED BREECH-LOADING SHOT GUN as described above, carefully boxed, for $7.00, and when Cash accompanies the Order will give Free one of our new Sportsman's Cartridge Belts, as shown in cut, also 50 Reloadable Shells.

Send Money by REGISTERED LETTER or POST-OFFICE ORDER at our Risk. Or we will send the Gun C.O.D. with privilege of Examination upon receipt of $2.00 to cover express charges, or your express agent's guaranty that the Gun will be returned free of all expense to us if not taken by you, but we do not send the Sportsman's Belt or Reloading Shells if sent C.O.D., as this extra inducement is to those who send CASH WITH ORDER. Should you have no acquaintance with our Firm, and desire a reference as to our reliability, we would refer you to any Mercantile Agency, Express Company, Bank or Newspaper Publisher in this City. ORDER NOW, even if you have no use for a Gun for six months; you never will get another such Bargain. Address E. G. RIDEOUT & CO., 10 Barclay Street, New York.

SPECIAL OFFER.—If you will get a Club of Five and send us $35.00 we will send YOU one Gun free for your trouble.

HINTS.

Hanging baskets are the best watered by plunging them in a bucket or tub of water, and allowing them to get thoroughly soaked through.

It will be found that a whisk-broom will materially facilitate the dampening of clothes, which is a matter that should receive careful attention if the ironing is to be well done. This mode of operation may often be seen put into practice by the Chinese—the great laundry-"ites."

THE Marlboro Seedling—a large, red, high-flavored raspberry, and the Skowhegan, a prolific Black-cap, promise to share a part of the public attention in the near future.

ONE ounce of salicylic acid to a barrel (32 gallons) of cider suffices to keep it sweet for a year. The acid should be put in the sweet cider and mixed well. Bung up and it will not ferment.

THE RURAL NEW-YORKER wants agents EVERYWHERE. The work, we think, will be found easy, and an examination of our premium list will show it to be very profitable.

The Rural New-Yorker is for the progressive, thoughtful, industrious farmer and gardener in every part of the country; for the suburban and country home; for the North, South, East and West. It is conscientious, sparkling, original, practical. It will instruct and interest every member of the household. It is conducted in a way that inspires the unqualified trust and respect of its readers. Specimen copies sent post-paid without charge that all may have an opportunity of judging for themselves.

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Call on or write to

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The Dexter Queen PHÆTON

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Easiest Riding and

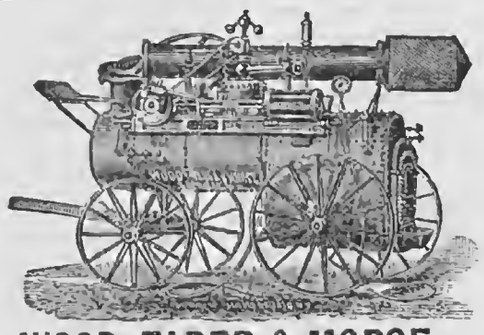
Most Durable Vehicle Known.

Invalids that cannot ride in any other vehicle can ride with pleasure and comfort on a QUEEN PHÆTON. Farmers praise it, doctors think it the best, and the lads and lasses say —— Well, try one, and you will know for yourself what they say.

Send for our pretty pink free circular.

DEXTER SPRING COMPANY,

HULTON, PENN'A.



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Eaton, Madison Co., N. Y.,

MANUFACTURERS OF

PORTABLE AND AGRICULTURAL

Steam Engines

Of the HIGHEST STANDARD, in every respect of materials, and workmanship. Were pioneers in the manufacture of

Practically Portable Steam Engines,

And with determined policy to build only the BEST MACHINERY from the BEST MATERIALS, and in the BEST MANNER OF CONSTRUCTION, and with continued improvements, have attained the HIGHEST STANDARD in excellence of workmanship, simplicity of design and capacity of power. For a quarter of a century have maintained their manufacture, the

Standard Portable and Agricultural Engines

of the world. Descriptive Circulars sent on application. Mention this paper.

CLARK'S HAY CARRIER

Has been in use for the past nine (9) years in barns, sheds, warehouses, and for stacking in the open field, and has always given the best of satisfaction. He guarantees it to do better work and give better satisfaction than any other Carrier made. All farmers wishing one on trial for next year's use will please send us their orders this Fall, so they can put them up while their barns are full of hay and grain. For circulars and terms to agents address

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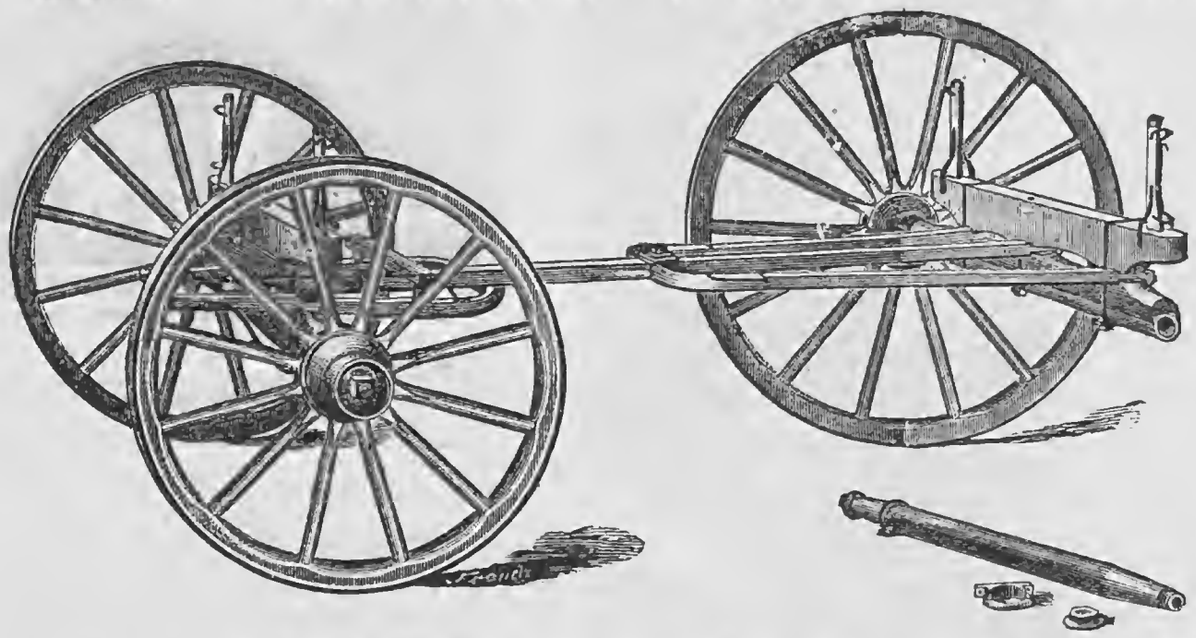

AXLES MADE FROM

Extra thick wrought Iron tubing

THE LIGHTEST DRAUGHT, THE STRONGEST AXLE, THE BEST FINISHED WAGON MADE.

Over 4,000 sold in three years, and not a single Axle broken yet. Send for Circular.

We also manufacture a full line of

Spring Wagons, Buggies, Carriages, Business Wagons, Drays, &c.

WE GIVE MORE VALUE FOR THE MONEY THAN ANY MANUFACTURER IN THE COUNTRY

The Milburn Wagon Co.,

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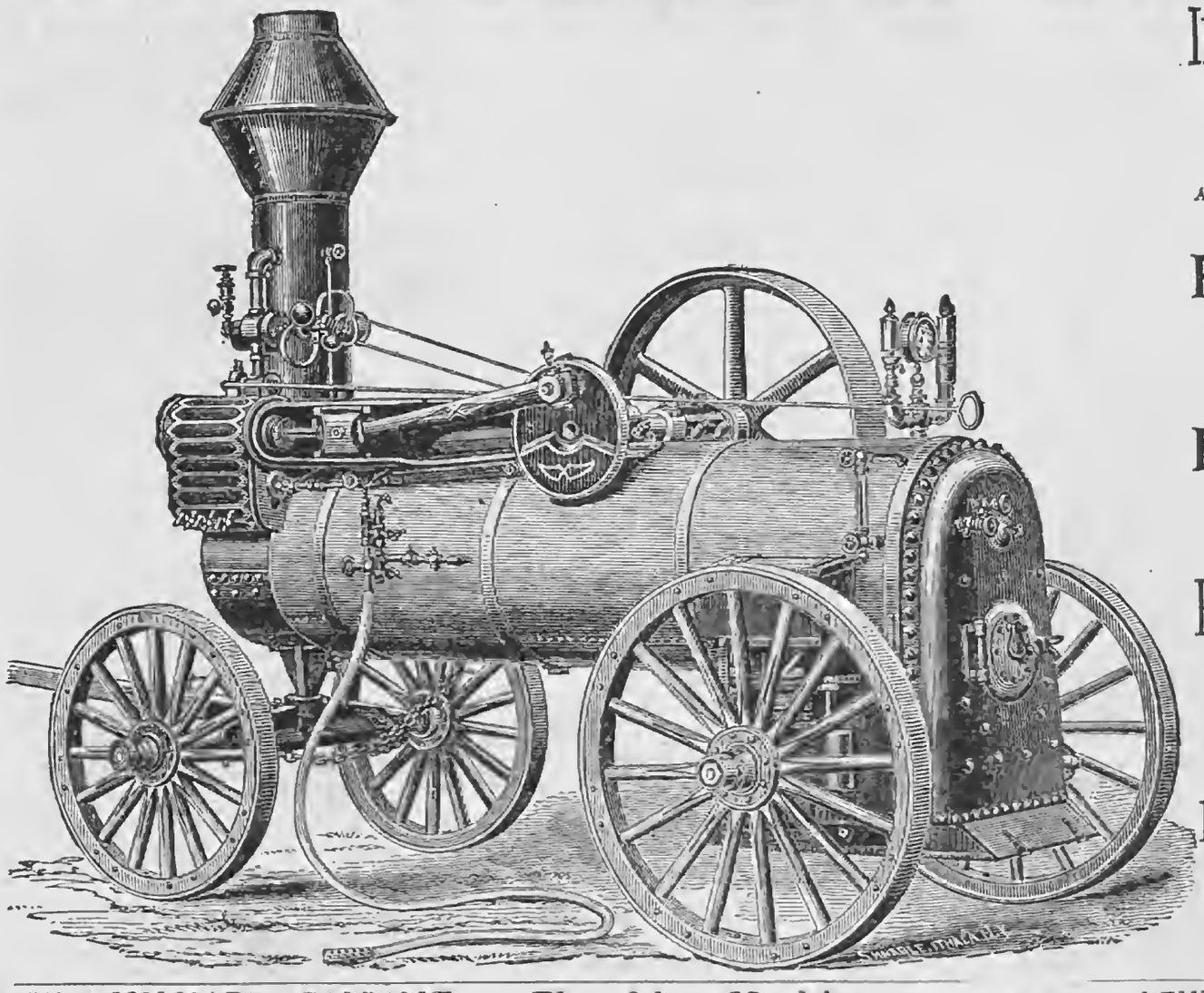

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AND MANUFACTURERS OF

Portable AND Stationary Engines AND Boilers,

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Send for Circulars.

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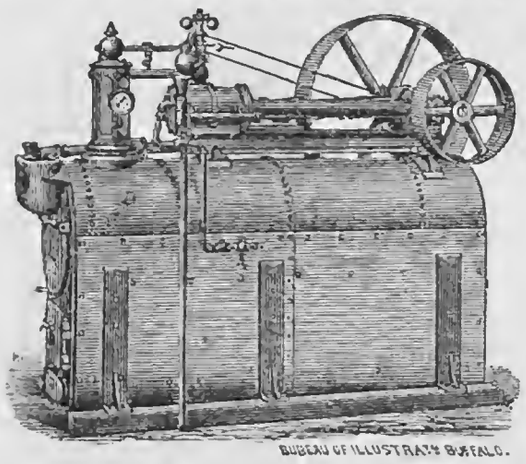

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Over 1,200 in Use.

Return Flue Boiler, large Fire Box, no Sparks, no cast-iron IN boiler, easy to manage and durable. These Engines cannot be excelled for PLANTATION & FARM USE.

BE SURE TO SEND FOR CIRCULARS TO

Skinner & Wood, Erie, Penn.

Mention the Rural New-Yorker U. S. A.

PENNOCK'S PATENT ROAD MACHINE.

KEEPS THE HIGHWAYS FIVE TIMES BETTER FOR HALF THE PRESENT COST IN CITY OR COUNTRY. PARTICULARS FREE. S. PENNOCK & SONS

MACHINES SENT ON TRIAL. KENNETT SQUARE PA

Send for Descriptive Catalogue

UNION RAILWAY Horse Powers, Threshers and Separators.

These Powers are *guaranteed* to produce more Power with *less elevation* than any other Railway Power.

WM. L. BOYER & BRO.

3101 Germantown Ave.

Philadelphia, Pa.

Also Manufacturers of Premium Farm Grist Mill

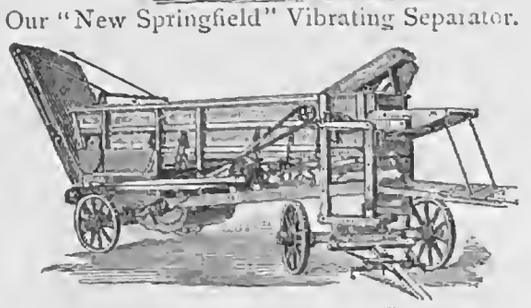
Threshing Machinery.

Reinhart, Ballard & Co.,

SPRINGFIELD, OHIO.

Manufacturers of Separators, Engines, Horse Powers and Grain Registers.

Our "New Springfield" Vibrating Separator.



Our New Double-Belt Apron Separator.

For Illustrated Catalogue, address

REINHART, BALLARD & CO., SPRINGFIELD, O.

Mention this paper.

FISK'S AUTOMATIC SEED PLANTER

The best improvement ever made in Hand Planters. They are fully warranted and satisfaction guaranteed. Circulars with terms to agents sent free.

WALLACE FISK,

South Byron, Genesee Co., N. Y

HAVE YOUR OWN WAY.

But always weigh on a Jones Scale. Address

Jones of Binghamton,

Binghamton, N. Y.

188 . —LEVEL TREAD HORSE POWERS.

Awarded a MEDAL and DIPLOMA OF HONOR at the International Exposition

HEEBNER'S IMPROVED

Level Tread Railway Horse Power and Speed Regulator, Circular and Drag Saws.

We challenge the world to produce a Power Thresher and Cleaner that will do as much work with ' ' ' for the horse than our Patent Level Tread Power and Giant Thresher and Cleaner will do. Send for Illustrated Circular.

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THIS IS THE

VICTOR Double Huller Clover Machine that beat the Birdsells, Monitor, Jr., and the Ashland Clover Hullers in a scientific test at the Toledo, O., Fair, Sept. 15th and 16th, 1880, in the presence of 30,000 Farmers and Threshermen of the West.

Committee's Report mailed free. 284 Victors sold last year.

HAGERSTOWN AGRICULTURAL IMPLEMENT MFG. CO.

State where you saw advertisement. Hagerstown, Md.

PEARCE'S

IMPROVED CAHOON BROADCAST SEED SOWER.

Sows all kinds of Grain and Grass-Seed.

This machine has been sold in every state in this country, and in almost every grain-growing section on the globe, giving entire satisfaction everywhere to every intelligent operator. Price, $6 Does the work of 5 men. Send stamp for circular.

R. H. ALLEN & CO., Agts., 189 & 191 Water St., NEW YORK.

GOODELL CO.,

ANTRIM, N. H., SOLE M'F'RS.

NEW JERSEY STATE AGR'L SOCIETY.

The 23d annual exhibition of the New Jersey State Agricultural Society will be held at Waverly Park, opening Sept. 19th and continue five days. The entry books for cattle will close Sept. 10. For schedule of premiums address P. T. QUINN, Cor. Sec'y's, Newark, N. J.

BLUNDERS AT FAIRS.

A LITTLE incident occured at a fair in Rutland County, Vt., that seems almost too good to be lost, and shows the necessity of appointing judges that know whereof they judge. The facts are these :—A gardener of some notoriety carried several articles to the fair and among them beautiful specimens of the Egg Plant. The judges inspected the articles and very wisely awarded the gardener the first premium on a new variety of turnips, supposing they knew all about the Vegetable Kingdom. Our fairs ought to be so managed that ignorant blunders of this kind can be avoided. A. H. C.

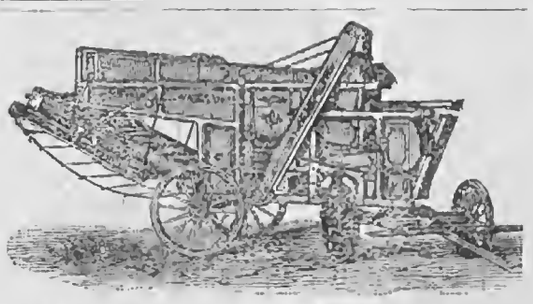
Rutland, Vt.

The above paragraph, clipped from the RURAL of 1879, is a specimen of the vexatious blunders which occasionally occur at our Fairs. I know of one instance where a man entered a colt, but neglected to exhibit him: nevertheless, he received the first premium for the best colt. At our County Fair a man was awarded the first premium for the best "six specimens of the Newtown Pippin", which, upon tasting, proved to be under-sized and poorly colored Pound Sweets. Such blunders, though rare, are very annoying, as they give growlers a pretext for fault-finding.

It is often difficult to find good judges at fairs, as the most competent persons generally desire to compete for the premiums, the doing of which, of course, renders them ineligible to act as judges. Nearly every intelligent fruit grower, cattle breeder, etc., desires to make an exhibit, so that the most competent are effectually ruled out, and the duty devolves upon others less competent. The wonder is, not that so many mistakes are made, but rather that blunders occur no oftener. Another difficulty is, that many persons, when appointed as judges, fail to appear and thus compel the officers to fill their places at so late an hour that the question of fitness cannot well be considered.

If a man is requested to act as a judge, he should forego the pleasure of competing for the premiums (entering his product as an exhibit only), and thus act for the public good. Those appointed should act, if possible, and if impossible, they should notify the Secretary in time to allow him ample opportunity to properly fill their places.

If those who do nothing at our fairs but find fault with what others do, would take hold themselves, everything would probably be satisfactory. NELSON RITTER.

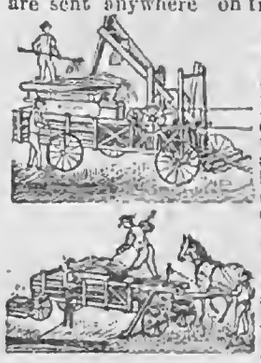


Butterworth Thresher

Is a strictly FIRST-CLASS MACHINE, and the best in the market. It threshes complete, and beats them all in cleaning and saving the grain. Wherever there is threshing to do, an enterprising man with this machine is sure to take the lead and secure a steady run of work. They are made in sizes to suit Steam, Lever or Tread Power. For Circulars address JNO. BUTTERWORTH, Supt. New Jersey Agricultural Works, Trenton, N. J.

DEDERICK'S HAY PRESSES

are sent anywhere on trial to operate against all other Presses, the customer keeping the one that suits best. No one has ever dared show up any other Press, as Dederick's Press is known to be beyond competition, and will bale with twice the rapidity of any other. The only way inferior machines can be sold is to deceive the inexperienced by ridiculously false statements, and thus sell without sight or seeing, and swindle the purchaser. Working any other Press alongside of Dederick's always sells the purchaser a Dederick Press, and all know it too well to show up. Address for circular



P. K. DEDERICK & CO.,
[Or Order through your Merchant.] *Albany, N. Y.*

PHILA. BROADCAST SEED SOWER,

For Sowing all varieties of Grain and Grass Seeds, Phosphates and Fertilizers.

No. 1, or Wagon Machine, price, $30, sows 12 to 15 acres per hour. No. 2, or Hand, price, $6, from 4 to 6. *At the same time sowing better and far more evenly than by hand or any other method.*

SEND FOR CIRCULAR.

BENSON, MAULE & CO., Phila., Pa.

ST. JACOBS OIL
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THE GREAT GERMAN REMEDY.
FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago, Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains, Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents,** and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

A. VOGELER & CO.,
Baltimore, Md., U. S. A.

SOME PEOPLE

are fair-minded; to such we refer the scale question. For many years a great monopoly owned the patent and amassed millions of dollars. When the patent expired the invention became public property, and one has a legal and moral right to make Fairbanks' Scales. There are some dozen companies making "genuine" Fairbanks' Scales, genuine because they are the exact scale invented and patented by Fairbank. The value of a scale should be determined, not by the name of the maker or the price, but by its accuracy and durability, resulting from the use of good material by the skillful mechanic. While this famous patent existed the price of a Five-Ton Wagon Scale was $25, now *as good* a scale is made and sold, at a living profit, for $60, by Jones of Binghamton, Binghamton, N. Y.; and Jones he pays the freight. This is fair competition and should be met in an honorable manner, but instead resort is had to every species of *misrepresentation, outright falsehood, contemptible meanness, bribery and conspiracy* and we hold the head of the Fairbank Co., ex Gov. of Vermont, the high-toned Christian Gentleman, noted for his liberality to Church and Sunday School, responsible for the rascality of his employees, for he pockets the ill-gotten gains. We appeal to any one who has ever had any conversation with a Fairbanks' Scale Agent, relating to the Jones Scale, to substantiate our statement. They have succeeded in deceiving many into paying double price, and no doubt have lied us out of many thousand dollars, but we have prospered simply because we have kept faith with our patrons, sold them a good scale at a fair price, and done just as we agreed every time. The smooth-tongued liar will tell you the Jones' Scale "ain't good for nothin'," but that won't induce any fair-minded person to reject the testimony of many thousands who have used the Jones' Scale—some for nearly twenty years. Jones asks no money till the buyer has had an opportunity to try his scale and see that it is as represented. Every Jones' Scale is warranted for five years, and no man can say that Jones ever failed to make his warrant good. Remember Jones pays the freight and takes all risk of loss or breakage on the way. An attempt is often made to deceive by the claim that a scale is the U. S. Standard, meaning to convey the impression that the government has something to do with it, which is not the fact. Any scale, by whomever made, that is correct according to the weights adopted by the government, is just as much a U. S. Standard as any other. Every one who has any interest in Scales should address JONES OF BINGHAMTON, Binghamton, N. Y., for free Book on Scales, which gives prices of all sizes of Scales and other valuable information.

A GOOD SAW MILL
For $200.

Our No. 1 Plantation Saw Mill is designed to be run by 8, 10 or 12 horse-power Agricultural Engines. With this power from

1,500 to 4,000 Feet

of lumber can be cut in a day—a product 25 to 50 per cent. greater than can be cut with any reciprocating saw mill with the same power. The mills are complete except saw, and will be put on the cars in Cincinnati for the low price of $200, and warranted in every particular. Saw Mills of all sizes. Engines and Boilers, Shafting, Gearing, etc. Illustrated circulars sent free.

LANE & BODLEY CO.,
JOHN AND WATER STS.,
Cincinnati, O.

Patented in Europe, America, Africa, Australia & New Zealand
Dated in U. S. *July 3d, 1877.*

TRADE MARK.
LITTLE'S CHEMICAL FLUID
The New Sheep Dip
NON-POISONOUS, NON-CORROSIVE

MORRIS LITTLE & SON, Prop'rs and Man'f'rs.

A highly concentrated liquid for dipping or washing **Sheep,** cattle, horses, dogs, pigs, fowls, etc., Killing **Ticks,** lice, fleas, maggots, all insects and internal parasites. Curing **Scab,** foot-rot, mange, sores, wounds, etc., preventing scratching and pulling, promoting the growth of wool and flesh, and for other purposes.

One gallon makes "Dip" for 200 Sheep for Ticks, and for at least 50 Sheep for Scab.

Does not require heating or any preparation. Simply add **cold** water, and it is ready for use; is self-mixing, easily applied, and always effective. Usable in full fleece or when shorn, and safely applied in **Winter.** Is of a warm and protective nature, and does not wash off in stormy weather. Makes the skin soft and loose, the wool clean, lustrous and silky, and develops that bright bloom so much prized by flockmasters. Increases flesh. Repays cost four times over. Harmless to animal, person or clothing, and available for internal use, being positively non-poisonous and non-corrosive. Its high concentration renders it easy and cheap to transport. It is superior to any other "Dip" in all respects, having every good quality without any disadvantage whatever, and the cost is less. It is also a "fly" and sown-seed protector, and a fertilizer, etc., etc.

Cheap, Harmless, Clean, Pleasant, Convenient, Rapid, Infallible.

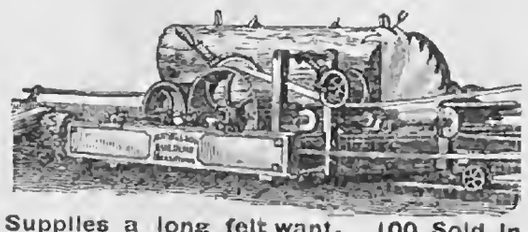
Officially tested by Government analysis. Awarded "Diploma" of "New England Agricultural College" a Diploma for my exhibit at the International Exhibition of Sheep and Lambs, Philadelphia, Sept., 1880. Endorsed by American Agriculturist; sample supplied by me to Dr. Thurber, Sept., 1879, and to R. D. H. Halsted, associate editor, Sept., 1880; Rural New-Yorker, Henry Stewart, Esq., N. J., author of "The Shepherd's Manual," H. J. Chamberlain, Esq., Texas, on samples supplied by me to each of them, and many other leading authorities.

Price $1.80 per gallon; $1,65 for 10 or more gallons. Shipped in Barrels, or boxed Cans.

T. W. LAWFORD, Gen'l Agent, Baltimore, Md., Box 504.

My agency established April, 1879. Prospectus containing U. S. testimonials mailed free. Mention this paper.

THE MASSILLON PONY MILL
STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills.

Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.

Write for Circulars and Price Lists, and address of nearest Agent. [Name this Paper.]

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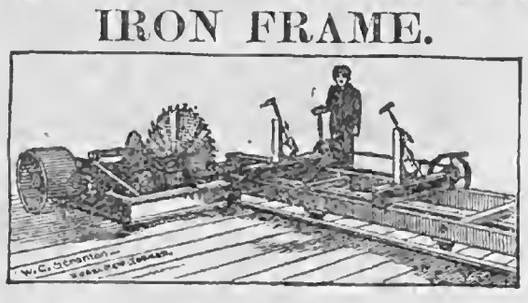
SAW MILL.
IRON FRAME.



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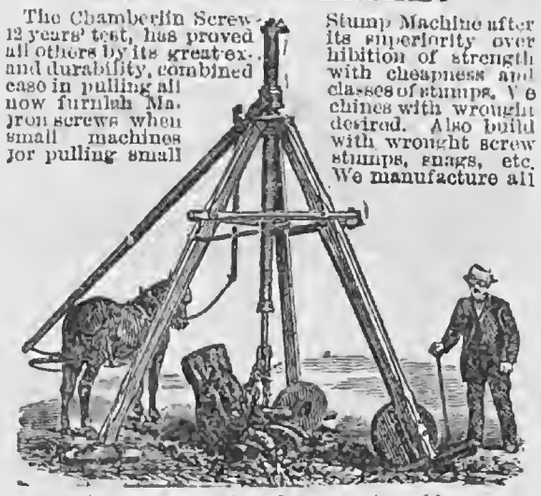
Syracuse, N. Y.

The largest Stump Machine Works IN THE WORLD.

The Chamberlin Screw 12 years' test, has proved all others by its great ease and durability, combined case in pulling all now furnish Malleable iron screws when small machines for pulling small Stump Machine after its superiority over hibition of strength with cheapness and classes of stumps. We chines with wrought desired. Also build with wrought screw stumps, snags, etc. We manufacture all



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THE CHAMBERLAIN M'F'G CO., OLEAN, N. Y.

For Washing Windows, carriages etc Protects Buildings from Fire, & Trees, Vines, etc., from Insects, potatobugs & Canker Worms.

No Dwelling, Country Home or Factory should be without the Fountain Pump. Send for large Illustrated Circular.

J. A. WHITMAN, Patentee and Manufacturer, Providence, Rhode Island.

The Best in the World
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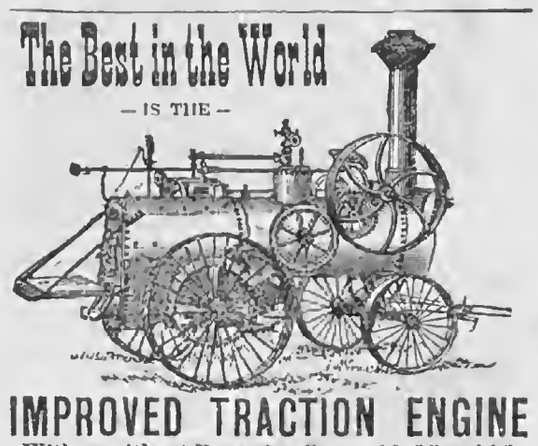

IMPROVED TRACTION ENGINE
With or without Reversing Gear. 10, 13 and 16 Horse Power. Built by
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The only genuine Geiser.

COMMON SENSE ENGINE.

Simple, durable, of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3 horse power, $275; 5-horse power, $320; 7-horse power, $375; 10-horse power, $550. These engines fully guaranteed in every respect. Address Common Sense Engine Co., Springfield, Ohio.

PAYNE'S FARM ENGINES

Established 1840.

Patent spark-arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from **$150** upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to

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Box 841, Corning, N. Y.

CIDER! CIDER!

WANTED—All interested to know that the secret of success in Cider-making consists, first, in using the celebrated **Jersey Apple Grinder** and **Champion Cider Press,** because they make the cleanest, the clearest and the largest quantity possible to obtain. Special attention is also called to our new patent **Stationary Double Platform** which is a great improvement and can be applied to any Press. For Illustrated Circulars, containing information of great value to every cider-maker, apply to

Robert Butterworth,
TRENTON, N. J.

ACME PULVERIZING HARROW,
Clod Crusher and Leveler.

The best tool in the world for preparing seed bed for winter grain.

Especially adapted to hard clay where other Harrows utterly fail.

NASH & BRO., Sole Manufacturers,
Harrisburg, Pa. & 22 College Place, New York

THE VIBRATOR HARROW.

Best Harrow made. Cuts every inch of ground, & adapted to all kinds of soil. Peculiar shape of tooth makes it easy of draft and leaves the ground light and mellow. Relieves itself of all obstructions. Bundled very compact for shipment. 3 sizes cut 6, 8, and 10 ft. Agents wanted. Write for Circulars to

PHELPS & BIGELOW WIND MILL Co.,
Kalamazoo, Michigan.

MATTHEWS' SEED DRILL
The standard of America

Admitted by leading Seedsmen and Market Gardeners everywhere to be the most perfect and reliable Drill in use. Send for circular. Manufactured only by

EVERETT & SMALL, Boston, Mass

PORTER'S WOOD-TRACK HAY CARRIER.

Acknowledged the

STANDARD CARRIER OF AMERICA.

Thousands in use. Made of malleable iron. It is

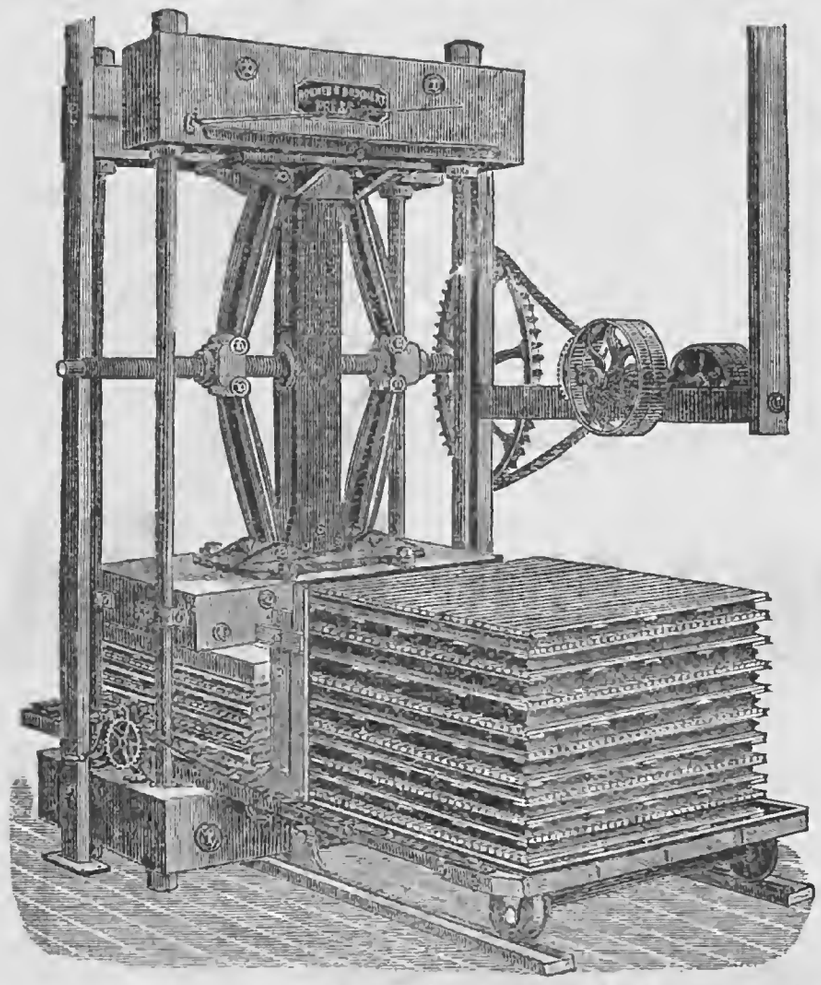
Light, Strong and Durable.

Has no inside gear or springs to get out of order. Positive lock and unlock Travels on 2 or 2 14-x3-4 scantling. Cheap track and easy to put up. No barn complete without one. AWARDED FIRST PREMIUMS AT MINNESOTA, IOWA, MISSOURI AND ILLINOIS STATE FAIRS, AND AT THE GREAT ST. LOUIS EXPOSITION OF 1880, OVER ALL COMPETITORS. Ask your dealers for them or send for descriptive circulars to

J. E. PORTER OTTAWA, ILL.

POWER CIDER PRESS.

CAPACITY 100 BARRELS CIDER PER DAY.



BOOMER & BOSCHERT PRESS CO.,

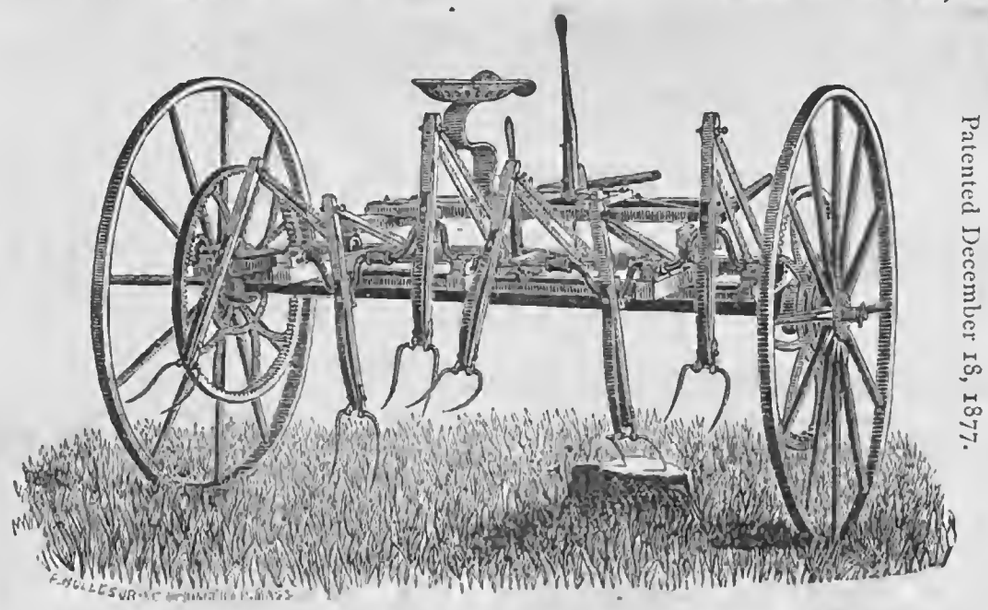
SEND FOR CIRCULAR. **Syracuse, N. Y.**

THE MUDGETT HAY TEDDER,

WITH IMPROVED FORK.

Patented December 18, 1877.

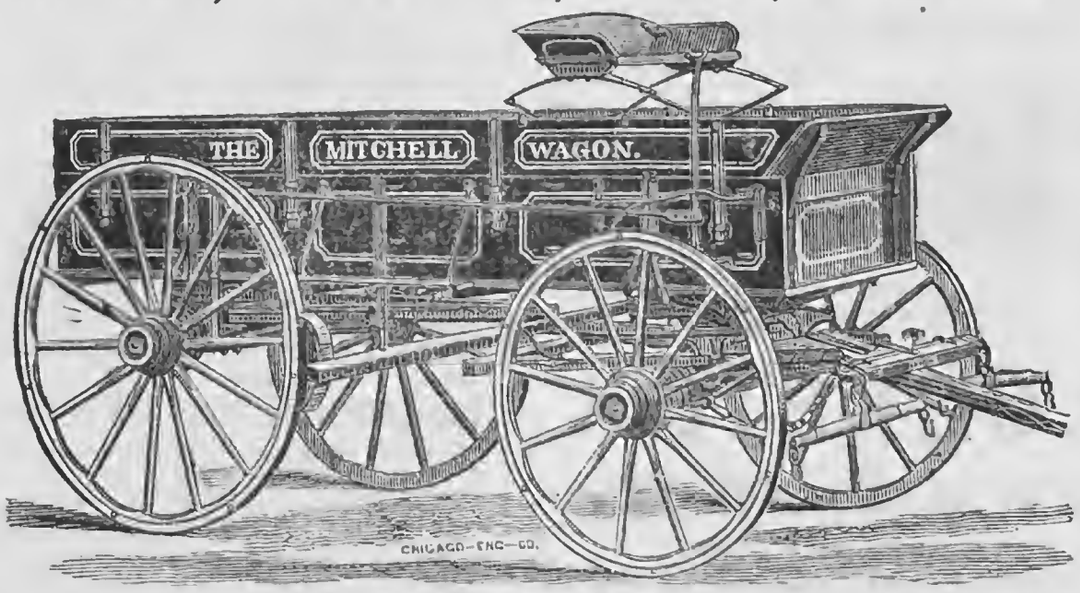
Five Hundred in use and no broken Fork. Undeniably the lightest draft and best working machine in the Market.



The forks are attached to the handles in such a manner as to render breakage almost impossible. The advantages we claim for this machine over all others, are: FIRST, The fork. A careful study of the cut will show the working of it plainer than it can be described. SECOND, On account of the peculiar construction of the fork, it can be run closer to the ground. If it strikes the turf, or an obstruction of any kind, it slides over instead of digging into it. THIRD, For the same reason it will run one-third lighter than any other. FOURTH, Because of running closer to the ground, it will do better work than any other. FIFTH, It will work equally well in heavy or light grass. SIXTH, It has higher wheels than any other.

Circulars free. Address *B. & J. W. BELCHER, Chicopee Falls, Mass.*

Mitchell, Lewis & Co., Racine, Wis. U.S.A.



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FARM AND FREIGHT WAGONS

Platform Spring Wagons, Three Spring Wagons, Four Spring Wagons Open and Top Buggies, Phætons, Sewing Machine Wagons, Buckboards.

The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List.

MITCHELL, LEWIS & CO., Racine, Wis.

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MANUFACTURED BY

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SENIOR AND JUNIOR

"BUCKEYE" LAWN MOWERS

Fully Tested during the seasons of 1879 and 1880.

AND PROVED THE

MOST RELIABLE

MOWERS IN THE MARKET.

Try one and you will Buy It.

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MAST, FOOS & CO., Springfield, Ohio.

The Bookwalter Engine.

These Engines are made of the very best material, by first-class workmen, and are just what we guarantee them to be—safe, simple in arrangement of parts, durable and complete in every particular. Thus they are adapted to the wants of the

Planter for running a Cotton Gin or Corn Mill, the Mechanic for Driving Small Machinery, the Farmer for doing almost anything requiring power.

The simplicity of their construction enables any one with ordinary intelligence to operate one safely. They are made for durability—yet every part liable to get out of repair can be easily replaced by any mechanic, or duplicates can be secured at reasonable rates. We quote the following:

Extra Low Prices for first-class Engines.

3	horse power Engine and Boiler with pump and governor,	$240
4½	" " " " " "	280
6½	" " " " " "	355
8½	" " " " " "	440

Each Engine is warranted to have fully the power given above. We give the purchaser 30 days for a satisfactory trial, or money refunded. Send for a fully illustrated descriptive catalogue.

JAMES LEFFEL & CO., Springfield, Ohio.

VICTOR 3 AND 5-HOED ONE-HORSE DRILLS.

MANUFACTURED BY

EWALD OVER,

Indianapolis, Ind., U. S. A.

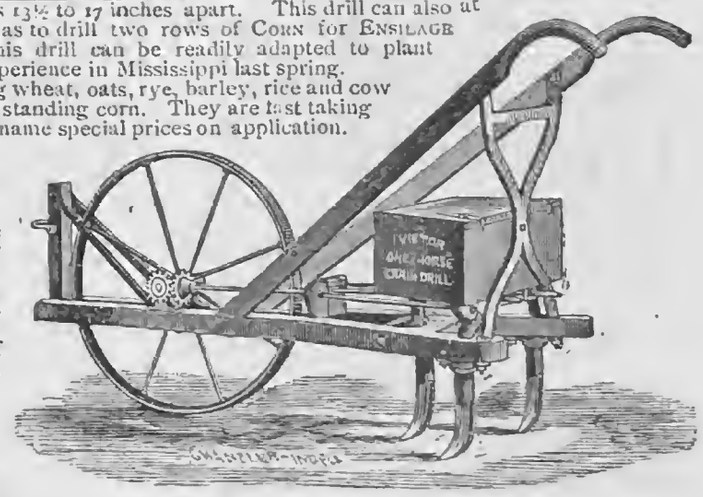
THE VICTOR FIVE-HOED DRILL, is the lightest and strongest one-horse drill in the market, weighing only 125 lbs. It is strong, simple in construction, of light draft, can be expanded and contracted for five different widths, varying from 6¾ to 8½ inches from tooth to tooth. It has a splendid Force Feed and will do more than half the work of a two-horse drill. It is provided with BRAKE-PIN TEETH which are especially adapted for stony or stumpy ground. For sowing Rice the intermediate teeth are removed, making it a three-hoed drill, sowing rice in rows 13½ to 17 inches apart. This drill can also at a very small expense be changed so as to drill two rows of CORN for ENSILAGE purposes, 27 to 34 inches apart. This drill can be readily adapted to plant COTTON, as was shown by actual experience in Mississippi last spring.

Victor Drills are used for sowing wheat, oats, rye, barley, rice and cow peas in fallow ground, or wheat in standing corn. They are fast taking the place of two-horse drills. Will name special prices on application.

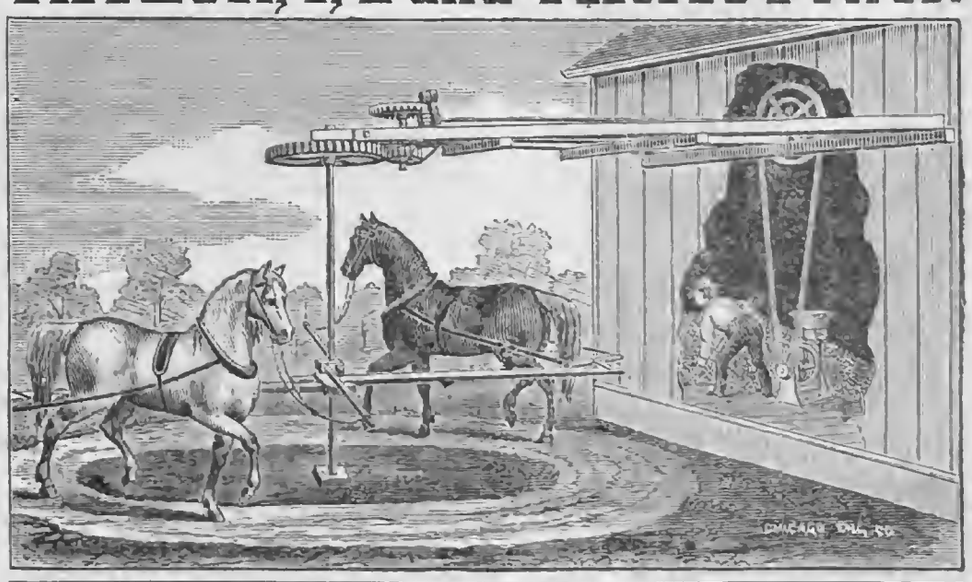
THE THREE-HOED VICTOR is used for the same purposes as the five-hoed, and is better adapted for hilly and rough ground and new land. It weighs only 80 lbs., and teeth are 7½ inches apart. By removing the middle tooth or omitting to put grain into centre partition of seed box, you have a two-hoed drill.

☞ Send for circulars.

AGENTS WANTED EVERYWHERE.



TAYLOR, 1, 2 and 4 Horse Power.



The best Horse Power in the world for running Feed Mills Feed Cutters, Corn Shellers, Saws, Elevators, Churns, Pumps, Cider Mills, Fanning Mills, Meat Choppers, Cotton Gins, Broom Corn Machinery, etc. Send for circulars to the TAYLOR HORSE POWER Co., 23 So. Canal st, Chicago.

THE PLANET JR. COODS.

Let every man, woman, and child whether interested much or little in working the soil, send now for our carefully written Catalogue. We want all farmers who value labor-saving tools to study out our combined Horse Hoe, Cultivator and Coverer; Market Gardeners, who have acres upon acres on each of which our Double Wheel Hoe will save its cost yearly, to examine the merits of our fine garden tools; and every one who has even a small vegetable garden to read closely what the Firefly Hoe and Garden Plow will save them. **S. L. ALLEN & CO., 127, 129, Catherine St., Phila'a, Pa**

HUMOROUS.

A COLORED preacher, in translating to his hearers the sentence, "The harvest is past, the Summer is over, and we are not saved," put it: "De corn has been cribbed, dere ain't any more work, and old Satan is still foolin' wid dis community."

A YOUNG man, pale and visibly agitated, hurriedly entered a drug store late one night and accosting the clerk, said: "Give me an ounce of chlorate of potash, will you, as quick as you can?" Observing his perturbation, the clerk ventured to ask: "What's your hurry?" "Why, I've been kissing our Sunday-school teacher since nine o'clock, and she didn't tell me till ten minutes ago, that she was afraid she had the diphtheria."

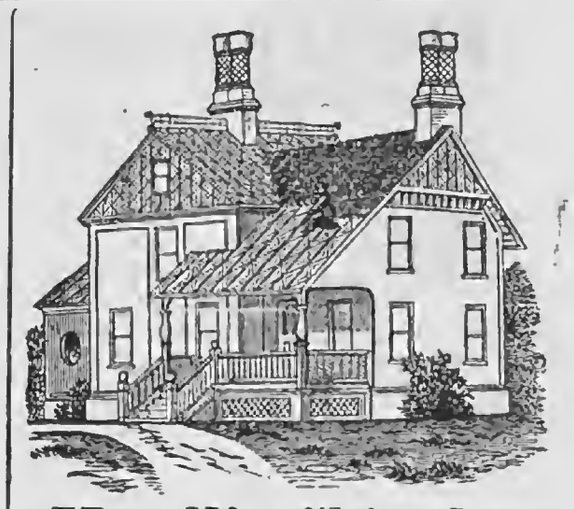
"TOMMY, did you hear your mother call you?" "Corse I did!" "Then why don't you go to her at once?" "Well, yer see she's nervous, and it'd shock her awful 'f I should go too suddent."

A QUEER looking character went into one of our dry goods stores and inquired the price of a yard of ribbon. The clerk informed him that the price was six cents. "Sixteen? I'll give you fifteen." "I did not say sixteen, I said six cents," said the clerk. "Oh! six cents. Well, I'll give you five," was the reply.—Peck's Sun.

THIS notice is found posted up in a Virginia blacksmith shop: "Notis—De copartnership heretofore resisting betwixt me and Mose Skinner is hereby resolved. Dem what owe de firm will settle wid me, and dem what de firm owe will settle wid Mose."

Prof. W. J. Beal, of the Michigan Agricultural College, says "The Rural New-Yorker is now the best paper."

Unhappy predicament of little John at the Fair, when pa and ma are both struck at the same time with different objects of interest.



Metallic Shingles.

Make the most durable and ornamental roofs in the world. One-fourth the weight of slate, and will not break from any cause; cannot blow off, and are absolutely tight. Send for descriptive circular and reduced prices to

Anglo-American Roofing Co.,
22 CLIFF ST., NEW YORK.
153 LEADEN HALL ST., LONDON, ENGLAND.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Maine.

$66 a week in your own town. Terms and $5 outfit free. Address H. Hallett & Co., Portland, Maine

Every Estey Organ
Sold is made
Throughout with
Equal fidelity, and
Years of experience

have proven the wisdom of this rule, for both seller and buyer.

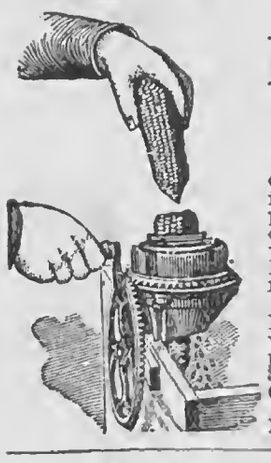
Send for Illustrated Catalogue.

J. ESTEY & CO., Brattleboro, Vermont.

THE IMPROVED
EVAPORATORS

Make better
SYRUP,
SUGAR,
AND
JELLY,

with less fuel and labor than any other apparatus Will condense Sorghum Juice faster than any evaporator in use, and consequently make lighter syrup and whiter sugar. The best apparatus known for making jelly from sweet cider. Send for descriptive circulars of Evaporators, Cane Mills, &c. Agents wanted.
VERMONT FARM MACH. CO., Bellows Falls Vt.



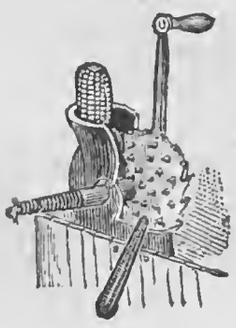
THE
RIGHT SPEEDY
Corn Sheller.

Cheap, Durable and Effective; She ls 12 to 14 bushels per hour. It is the best corn sheller made, and I warrant them for five years. Price $5, or, handsomely nickle-plated, $6.

AGENTS WANTED.

If there is no agent in your vicinity, I will send Sheller prepaid on receipt of price. Send for circular.
CURTIS GODDARD,
ALLIANCE, OHIO.
Mention Rural New-Yorker

THE WOODS CORN SHELLER.



PAT. NOV. 29, 1880.

It is the best, cheapest & simplest machine in the market. It separates the corn and cob, and remember it is warranted for 5 years if used in a proper way. Nearly 1,000 now in use and giving good satisfaction.

AGENTS WANTED

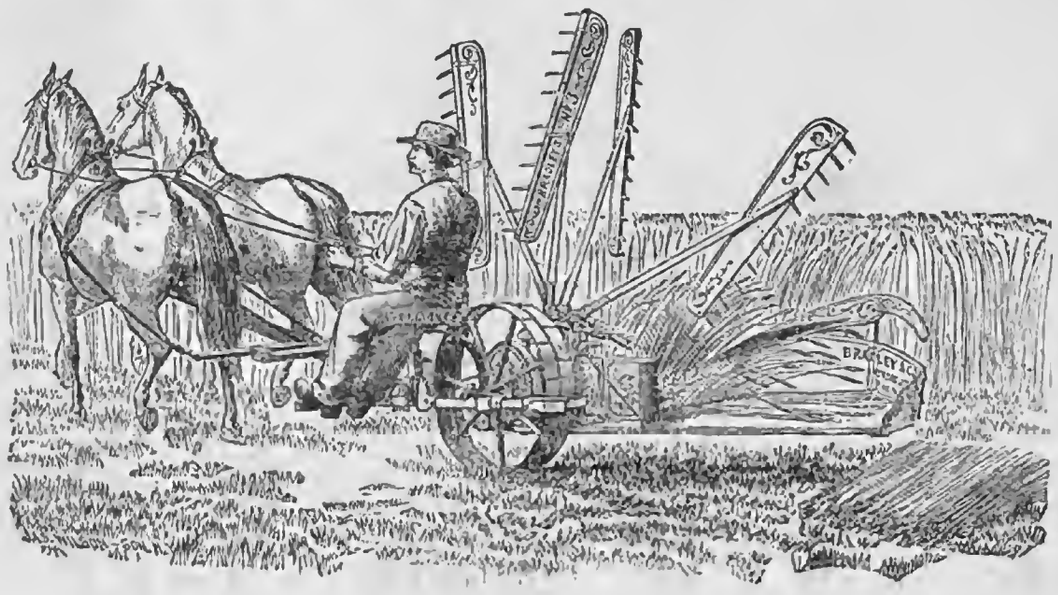
in every county in the United States. For terms and particulars address

J. L. WOODS,
Sole Manufacturer & Patentee
ALLIANCE, OHIO.

Sample Sheller sent on receipt of $3.00.

THE BRADLEY
Reapers, Mowers and Hay Rakes.

THE BEST MADE.



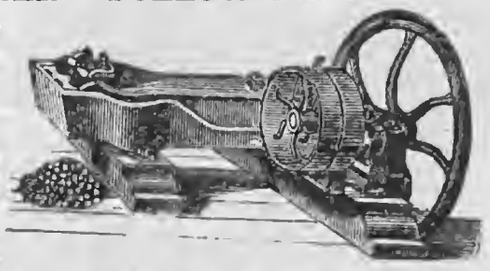
The Easiest Operated.

(ESTABLISHED 1832.)

BRADLEY & CO., SYRACUSE, NEW YORK.

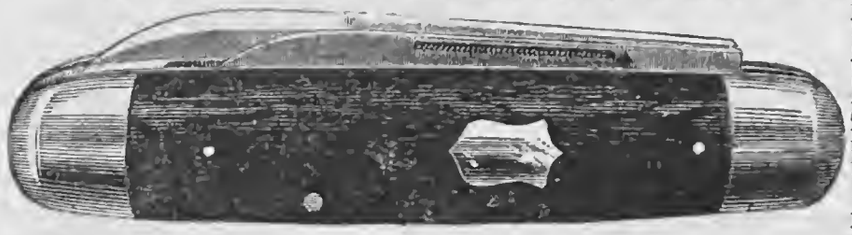
Send for Illustrated Catalogue. Agents Wanted.

CHEAPEST AND BEST FERTILIZER---FOLLOW NATURE.



Which USES GROUND RAW LIMESTONE in MAKING THE SOIL. There were no Lime Kilns around burning lime when the good **Limestone Farming lands** were originally made. Every Farmer can prepare his own Fertilizer with an **ordinary Horse Power** by using **FORSTER'S COMBINED CRUSHER & PULVERIZER**, which takes a lump of Limestone three to five inches square, and Crushes and Pulverizes it in **one operation**, same as flour's. Farmers use the Ground Raw Limestone, and drill and sow it just as it comes from the machine. W. W. Reed, of Erie, has tried it 6 years, and says it shows a profit over Bone Dust of $1.96 per acre; over Phosphate of $6.28 per acre; over Guano of $9 70 per acre; over Salt of $5 9) per acre, **and that it will last twice as long.**"—John G. Bear, of Montgomery, Lycoming Co., says: "I believe it to be the cheapest and best Fertilizer in this country. *It is worth three times as much as Burnt Lime, and with this machine does not cost half as much as Burnt Lime to make.*"—H. C. Falls, New Castle, Pa., says: "I used the Ground Limestone last year with great satisfaction as to results, and cannot too strongly recommend it for farm and garden purposes Where I dropped my corn on top of it, the corn came up first, and was strong and thrifty—the Limestone drawing the moisture to the roots. Used in place of Paris green on Potatoes, it kept the Bugs away and made the plants thrifty and strong; being washed into the ground, it benefited the Potatoes in an astonishing manner. Address only **TOTTEN & CO., Pittsburgh, Pa.** ONLY MAKERS.

OLD FASHIONED HAND FORGED RAZOR STEEL KNIFE.



MAHER & GROSH, 30 Monroe St., Toledo, Ohio, to introduce their brand of cutlery (every blade warranted and replaced **Free** if soft or flawy), will send postpaid, knife 11½ cut, strong blades and ebony handle for 75c.; or with 3 blades $1. We have 1 blade knife, 25c.; extra heavy 1 blade, 50c.; medium 2 blade, 50c.; extra heavy 2 blade made for hard usage, 75 cts.; **Our Best** 2 blade, every blade tested, $1. Boy's 2 blade, 25c. Ladies' 1 blade, 25c.; 2 blade, 50c.; Gents' fine 3 blade $1. **Pruners**, oil temper and tested, $1. Budding knife, 65c.; Hunting knife, $1. Cattle knife, $1.; Sample 6-inch, hand forged, Butcher knife, postpaid, 50c. Illustrated list free. Liberal discount to dealers. Ask our Postmaster about us.

EXCELSIOR
Lawn Mower,

For Hand and Horse.

CROQUET MOWERS, $11.00.

Hand Mowers, 3 Patterns, 10 to 20 inch cut. Horse Mowers, 25 to 40 inch cut.

Our MOWERS are LIGHT, SIMPLE and DURABLE

All our Mowers are Guaranteed.

We Make no Second-Quality Mowers.

SEND FOR ILLUSTRATED CATALOGUE AND PRICE LIST.

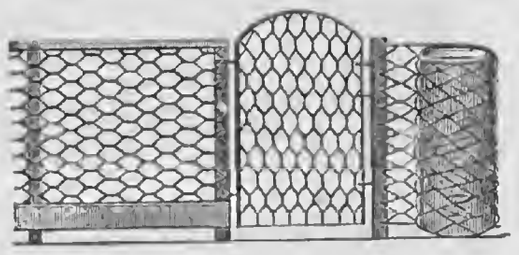
CHADBORN & COLDWELL MFG. CO.
Newburgh N. Y.

BOLSTER SPRINGS FOR FARM WAGONS.
Made of Best Oil Tempered Steel.
The ONLY RELIABLE Bolster Spring in Use.

SIMPLE AND SATISFACTORY.

They save largely from wear and tear in every part of the Wagon. They remove all necessity for a Spring Seat. They convert a common Lumber Wagon into a Spring Wagon, making it equally comfortable for from one to twenty persons. They are admirably adapted to the wants of Fruit and Vegetable Growers. They are suited to all makes and sizes of Farm Wagons, and can be attached by any one. They make the cheapest and easiest riding Spring Wagon in the market. These Springs have been in practical use for over four years, and are a pronounced success. No Teamster or Farmer can afford to be without them. We want Agents everywhere. Send for description and prices, and mention this paper.

SEMPLE & BIRGE MFG. CO., ST. LOUIS, MO.



The Sedgwick Steel Wire Fence

Is the only general purpose wire fence in use. Being a strong net-work without barbs, it will turn dogs, pigs, poultry as well as the most vicious stock, without danger to either fence or stock. It is just the fence for farmers, gardeners, stock-raisers, and railroads; very desirable for lawns, parks or cemeteries. As it is covered with rust-proof paint it will last a lifetime. It is superior to boards in every respect, and far better than barbed wire. We ask for it a fair trial, knowing it will WEAR itself into favor. The SEDGWICK GATES, made of wrought iron pipe and steel wire, defy all competition in neatness, lightness, strength and durability. We also make the BEST and CHEAPEST ALL IRON Automatic or SELF-OPENING GATE. Ask hardware dealers, or for price list and particulars address

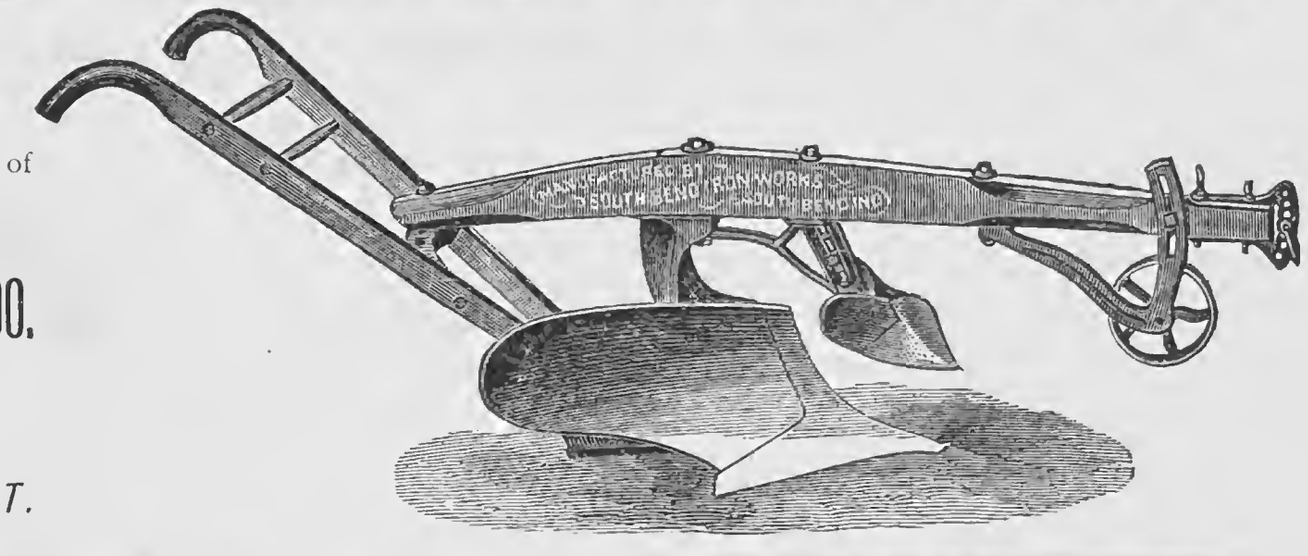
Sedgwick Bros., Richmond, Ind.

Agents wanted. $5 a Day made selling our NEW HOUSEHOLD ARTICLES and FAMILY SCALE. Weighs up to 25 lbs. Sells at $1.50. DOMESTIC SCALE CO., Cincinnati, O.

The Oliver Chilled Plow.

OVER HALF A MILLION NOW IN USE.

With a yearly increasing demand which overtaxes the capacity of the Largest Plow Works in the World.



Sales for the Current Year will Aggregate 90,000.

Quality and Popularity Improving with Age.

WHERE BEST KNOWN ITS SALES ARE LARGEST.

The Casaday Sulky Plow.

Has No Side Draft.

Turns Square Corners without Lifting Out.

Will Turn an Even, Regular Furrow Without a Driver.

Will Run For Miles Without a Neck Yoke.

Has No Land Side.

Carries every Pound of Weight on its Wheels at all Times.

Rides over Stones or Roots Without Disturbing Truck or Driver.

The only Sulky Plow adapted to Rough or Stony Lands.

For Circulars, Terms, &c., address

OLIVER CHILLED PLOW WORKS, South Bend, Ind., U. S. A.

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ROCHESTER, N. Y.
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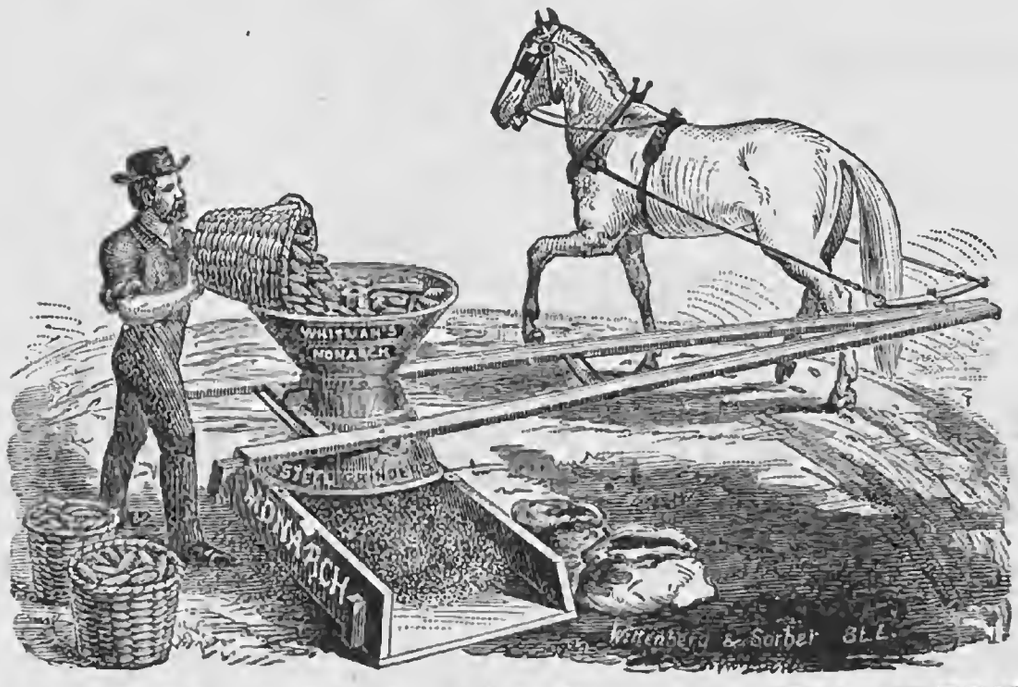
WHITMAN'S MONARCH.



CORN AND COB CRUSHER

Only mills made with Cast Cast Steel Grinders. IN USE IN EVERY STATE IN THE UNION. Will grind faster run easier and wear four times as long as any other. Will grind Shelled Corn, Oats, Rye, Barley, &c.; make fine meal. Warranted superior in all respects to any mill of this class in use.

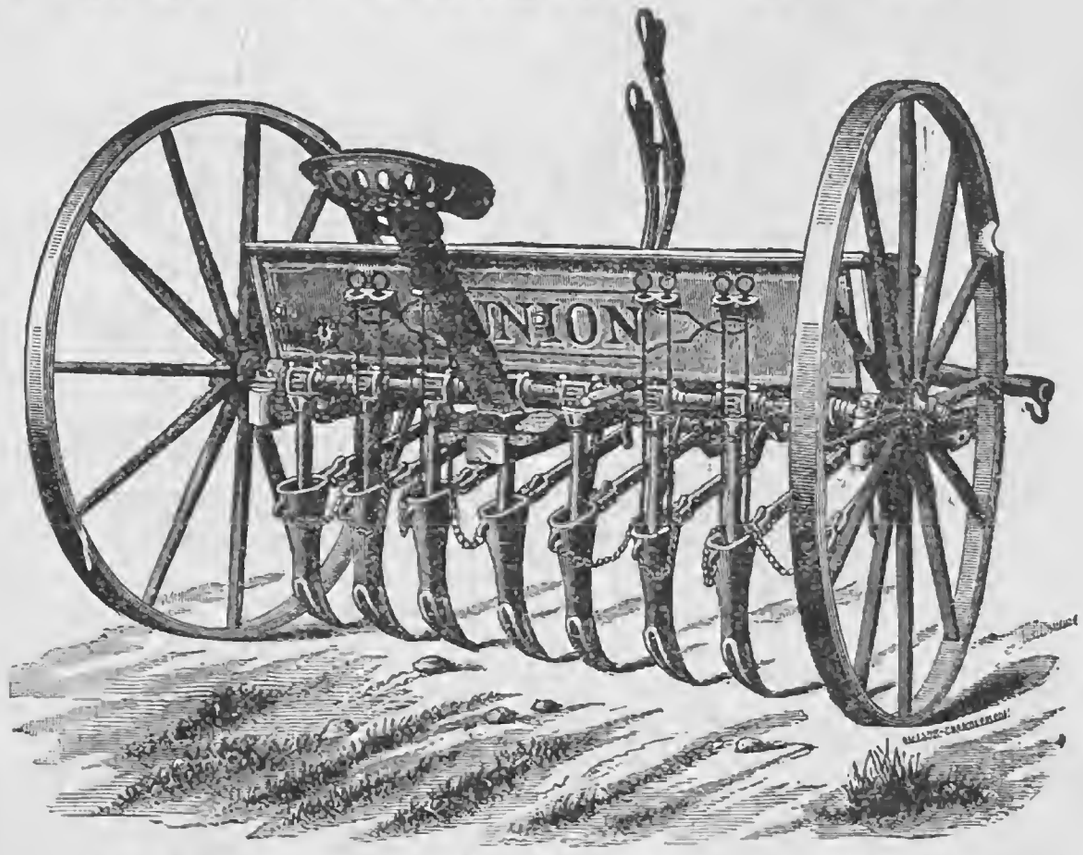
ALSO MANUFACTURE

"Young America" Mill, on legs, (same internal arrangement as Monarch), Cider Mills, Corn Shellers, all sizes Horse Powers, Feed and Ensilage Cutters, Road Scrapers, Barrows, &c. Send for Illustrated circular of Implements wanted.

WHITMAN AGRICULTURAL CO.,

ST. LOUIS, MO.

UNION GRAIN DRILL.



The only drill in the market upon which the operator can ride and control the machine. **No Gear Wheels. Feed is placed directly on the Axle.**

A POSITIVE FORCE FEED FERTILIZER.

The only one in the market that will sow any and all kinds of fertilizing material and not clog. For circulars and prices address the Manufacturers.

S. B. HART & CO.,

Peoria, Ill.

MERWIN, HULBERT & CO'S AUTOMATIC REVOLVERS

38 and 44 Calibre.

CUT SHOWS

Pocket Army, 44 Cal. Win.

We call special attention to our Pocket Army. In its construction the best materials and highest known state of the art have been applied. For precision, penetration, poise, compactness, beauty of outline, and general convenience, IT HAS NO EQUAL. The crested form of the handle permits it to be of less size than any arm of this calibre, the lines of recoil and resistance are closer together, a more firm and natural grasp, and much greater leverage are given to the hand, all of which tends to resist the upward throw of the barrel in firing. To separate the frame, barrel and cylinder, (for cleaning,) and re-assembling them, requires no tool.

Address: Merwin, Hulbert & Co., New York City. U. S. A.

1848. OSGOOD'S PATENT 1881.

COMBINATION SCALES.

FULLY WARRANTED.

5 ton $40. Sent on Trial,

To be Paid for when proved Correct and Satisfactory.

A SPECIAL DISCOUNT

Will be made, and **Freight Paid**, where they are not introduced, (or where we have no agents) so that those who are prejudiced against them can set one up in working order, and know that our "CHEAP SCALES," are *better* for hard use.

MORE ACCURATE AND MORE DURABLE

than any other Scale now manufactured. For Illustrations and references address

OSGOOD & CO., Binghamton, N. Y.

THE MAPES COMPLETE MANURES.

SPECIAL CROP MANURES.

Remarkably LARGE and PROFITABLE crops grown during the past season, without stable manure and with ordinary field culture. Season 1880.

CORN—63, 106, 125, 134 and 159 Bushels shelled Corn per acre, on poor and ordinary lands. For full reports, cost per bushel, etc., see pamphlet, pages 5, 6, 7. Also RURAL NEW-YORKER, Corn Number, Jan. 1st, 1881, pages 1, 2, 3.

These unprecedented crops are established beyond all doubt, by the testimony of many well-known farmers and agriculturists, including the following, who have examined the crops during the harvesting, and have made reports on the same:

Prof. A. B. LEDOUX, Director N. C. State Agricultural Station.
L. C. BENEDICT, Agricultural Editor of the New York World (Weekly).
Dr. WM. M. HABERSHAW, Chemist N. Y. State Agricultural Society.
HENRY STEWART, Agricultural Editor of the New York Times (Weekly).
ROBT. DODGE, Pres. Farmers' Club of the Am. Institute, New York.
E. WILLIAMS, Secretary New Jersey State Horticultural Society.
Dr. F. M. HEXAMER, Editor of the American Garden.
Mr. BRUGGERHOFF, of Thorburn & Co., New York.

See extracts from the RURAL NEW-YORKER, NEW YORK WORLD, NEW YORK TRIBUNE, NEW YORK TIMES AMERICAN GARDEN, COMMERCIAL WORLD, etc., in pamphlet, pages - - - - - - 1 to 4.

POTATOES—200, 300 and 400 bushels Potatoes per acre, see pamphlet, pages - - - - 9 to 11.
SUGAR BEETS, 37,600 pounds per acre, see pamphlet, page - - - - - - - - - 32.

The above crops were all grown EXCLUSIVELY with the Mapes Special Crop Manures.

1,180 1-2 bushels Wheat on 36 acres. Average about 33 bushels per acre. On 19 acres, average 40 bushels per acre.

Report of W. S. COMBS, Freehold, N. J., on 36 acres of Wheat, grown with the Mapes Complete Manure for Heavy Soils.—April 26, 1881.

Acres sown 36, nineteen of which was stubble and seventeen stiff timothy sod; variety sown, *Fultz*, about two bushels per acre; soil a pretty stiff clay.

TREATMENT.—30 acres, 500 lbs. per acre of the Mapes Complete Manure for heavy soils alone, 6 acres dressed with Stable Manure, about ten loads to the acre, and 500 lbs. of the same Complete Manure for Heavy Soils.

RESULT.—1,180 bushels and 37 lbs. of Wheat, and 45 tons of Straw when pressed. The quality of the wheat was good, weighing 62 lbs. to the measured bushel. The weather during and for weeks after sowing, was so exceedingly dry that the grain sown on the sod piece did not come up as evenly as that on the stubble, and as a result the yield from this piece reduced the average yield considerably. The yield from the 19 acres of stubble was (estimated, the two plots not being separated) 40 bushels per acre. The grain from the two pieces was harvested together, and when threshed was accurately measured and weighed. (1,180 bushels and 37 lbs. from the 36 acres, average 33 bushels per acre.)

About three weeks before harvest the army worm entered the field and marched directly across it stripping the leaves from the stalks and cutting off the smaller heads. They did considerable damage, just how much am unable to say.

Have sowed the whole 36 acres again with wheat, without the application of any manure or fertilizer.

QUICK ACTION. PERMANENT EFFECTS.

COMPLETE MANURES FOR FODDER CROPS, SUGAR CANE, FEEDING ROOTS, FRUIT TREES GRASS AND GRAIN CROPS.

☞Send postal for Descriptive Pamphlet.

The Mapes Formula and Peruvian Guano Co.,

158 FRONT STREET, NEW YORK.

☞A FULL ASSORTMENT OF CHEMICALS AT LOWEST WHOLESALE PRICES.

SOLD BY

SUPERIOR TO ALL OTHERS

—In CONVENIENCE,—

DURABILITY, ECONOMY,

—AND—

GENERAL CONSTRUCTION.

BUY THE BEST!

Leading Dealers Everywhere.

Coates' Coil and Independent Tooth, LOCK-LEVER HAY & GRAIN RAKE

82.000, Now in Use

Patented Aug. 1867; Jan., 1875; June, 1875, and Nov., 1876. Twenty Steel Teeth. No complicated ratchet wheels friction bands, nor other horse machinery needed to operate it. Slight touch of the lever and driver's weight dumps it. Best self-dump in market. A small boy rakes easily 20 acres per day with the Coates' Lock Lever Send for Circulars.

A. W. COATES & CO., Alliance, Ohio.

General Agencies.—DEERE, MANSUR & CO., St. Louis, Mo., and Kansas City, Mo. R. W. COATES & CO. Bloomington, Ill. J. T. WEST & CO., Louisville, Ky. JOHN J. MCGAVOCK, Nashville, Tenn. H. B. FREER Detroit, Mich. NASH BROS., 22 College Place, N. Y., and Harrisburgh, Pa.

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209 PERCHERON HORSES

ARRIVED IN NEW YORK AUG. 25. UNDER CUSTOM VALUATION, THIS STOCK WAS

Bonded for $350,000

THE HORSES WERE AT ONCE SHIPPED BY A

Special Train of 30 Cars

At Head of Oaklawn Stud. Season Service, $100.

To Oaklawn the farm of the owner,

M. W. DUNHAM, Wayne, Du Page Co., Ill.

35 miles west of Chicago. THE LARGEST HORSE IMPORTER IN THE WORLD, who now owns

One fifth of all the Imported French Horses now living in America, having imported

360 during the past 17 months, BEING MORE THAN THE COMBINED IMPORTATIONS of all importers of all kinds of draft horses

FROM ALL PARTS OF EUROPE FOR SAME PERIOD. THIS STOCK COMPRISES NEARLY ALL THE

PRIZE WINNERS OF FRANCE.

Come and see

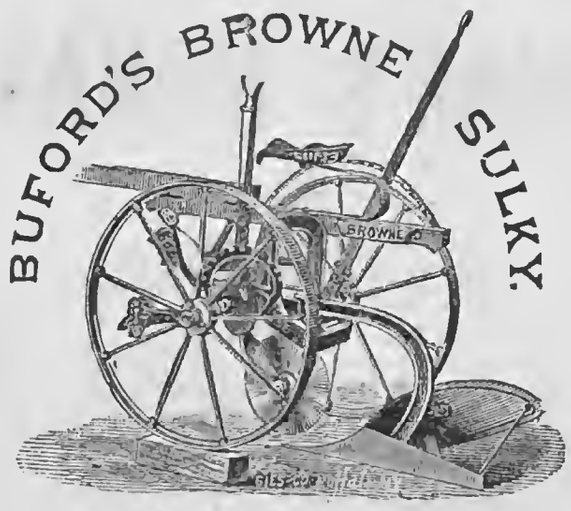
The Greatest Collection of Draft Stock ever brought together,

☞SEND FOR CATALOGUE. MENTION THE RURAL NEW-YORKER.

B. D. Buford & Co.

ROCK ISLAND, Ill., U. S. A.

The most perfect Sulky Plow in the market. Over 6,000 sold every Year.



In Use on Nearly Every Great Farm in the West and Northwest.

MANUFACTURERS OF

SULKY AND GANG PLOWS.

STEEL AND CHILLED PLOWS in great variety. BUFORD'S SPRING WALKING and RIDING CULTIVATORS, COMBINED LISTER and DRILL, HARROWS, &c. Send for Illustrated circulars to

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MAYNARD'S RIFLES AND SHOT-GUNS.

PRICES REDUCED.

For Hunting and Target Practice, at all ranges, the "MAYNARD" more completely supplies the wants of Hunters and Sportsmen generally, than any other Rifle in the world, as many barrels can be used on one stock; and for accuracy, convenience, durability and safety, is not excelled. Send for Illustrated Catalogue describing the new attachment for using rim and centre-fire ammunition.

MASS. ARMS COMPANY, Chicopee Falls, Mass.

THE JOHNSTON HARVESTER COMPANY,

OF BROCKPORT, N. Y.

Manufacturers of Mowers, Reapers and Self-Binders.

THIS COMPANY

Points with Pride to the

GREAT ACHIEVEMENTS

OF THEIR

HARVESTING MACHINES

For many years past, especially to the important fact that they received the

FIRST AND ONLY PRIZE

AGAINST

Thirty-five Competitors.

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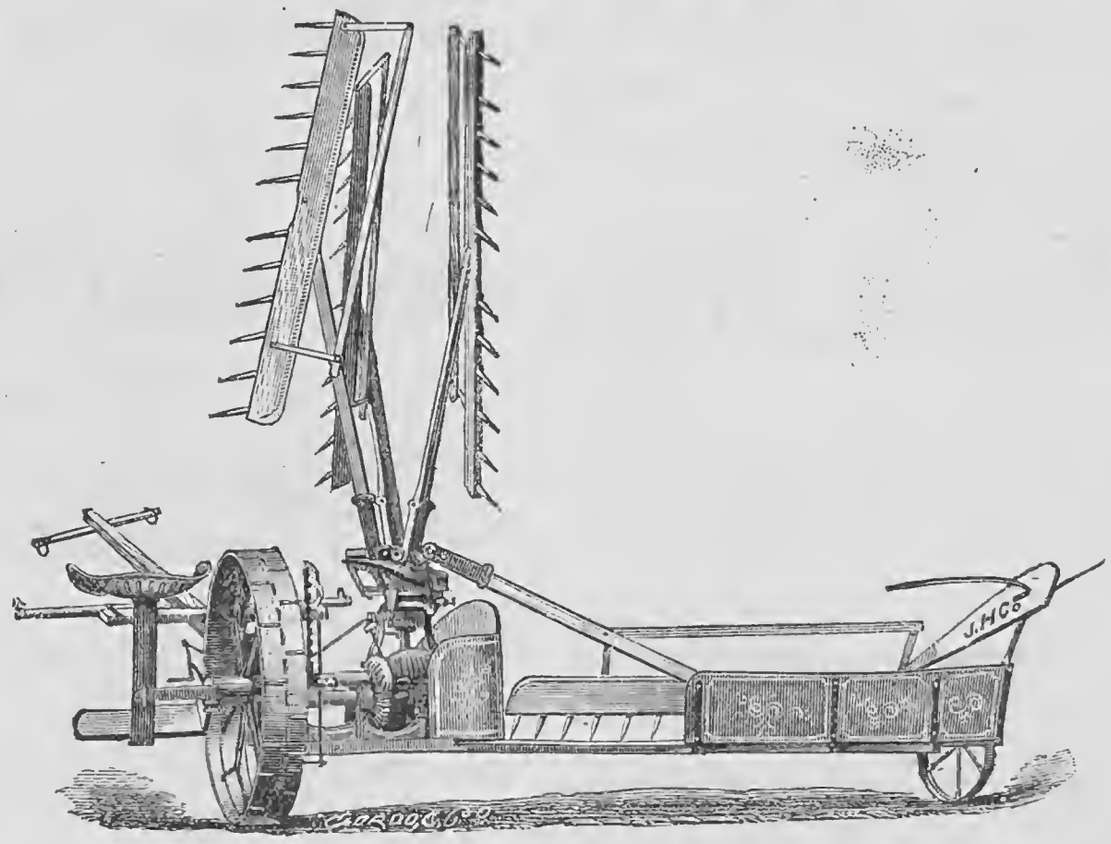

The Johnston Harvester Co.'s Continental Reaper.

On this page are shown cuts of three of their

SUPERB MACHINES.

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Most Successful Light Reaper Made.

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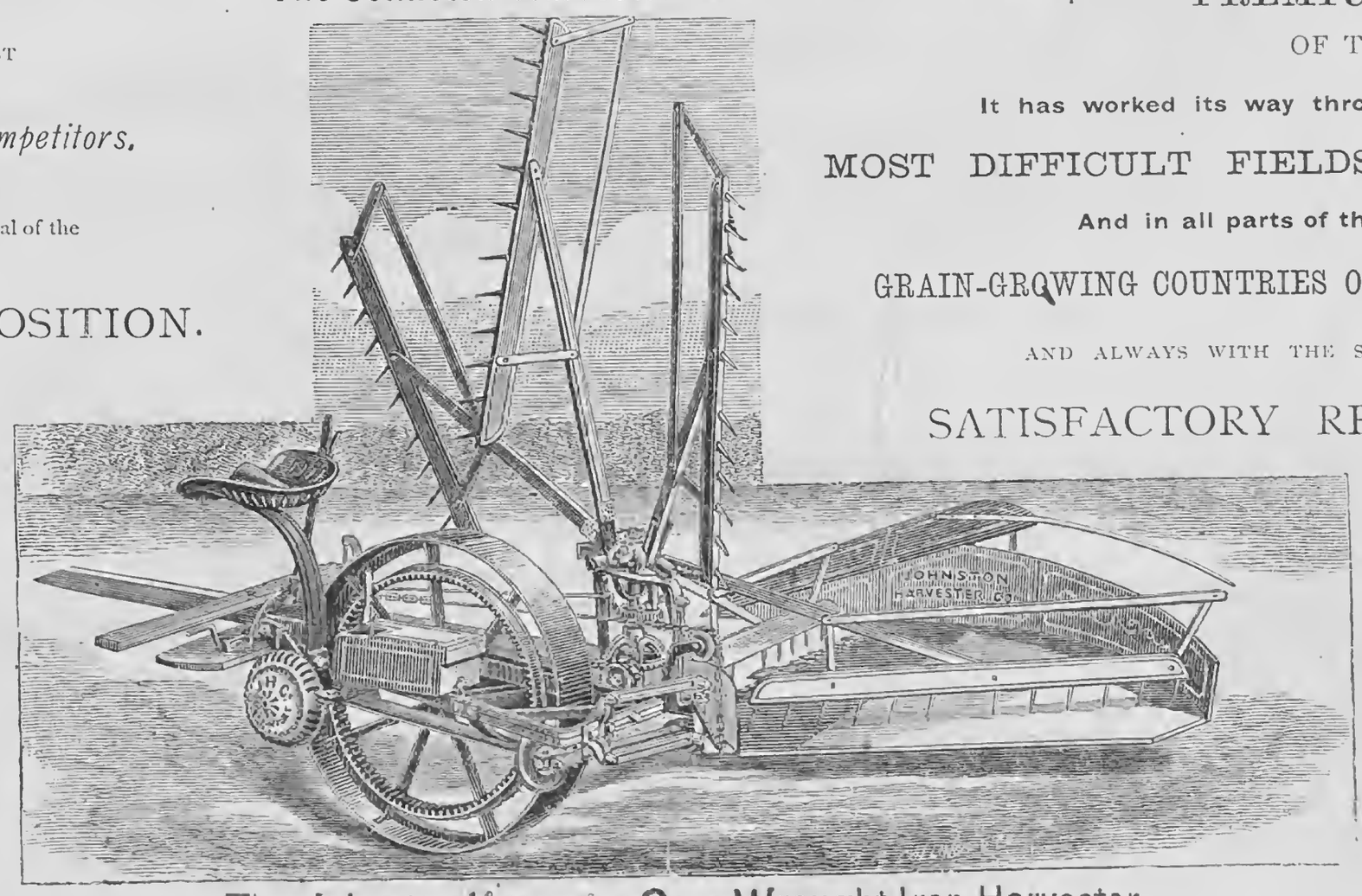

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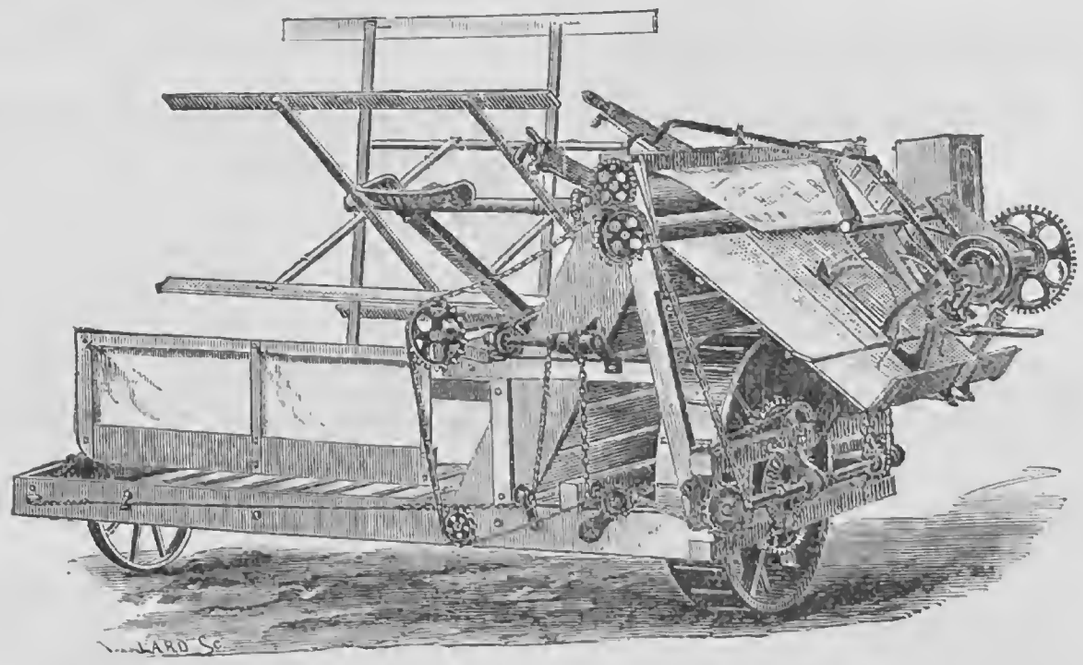

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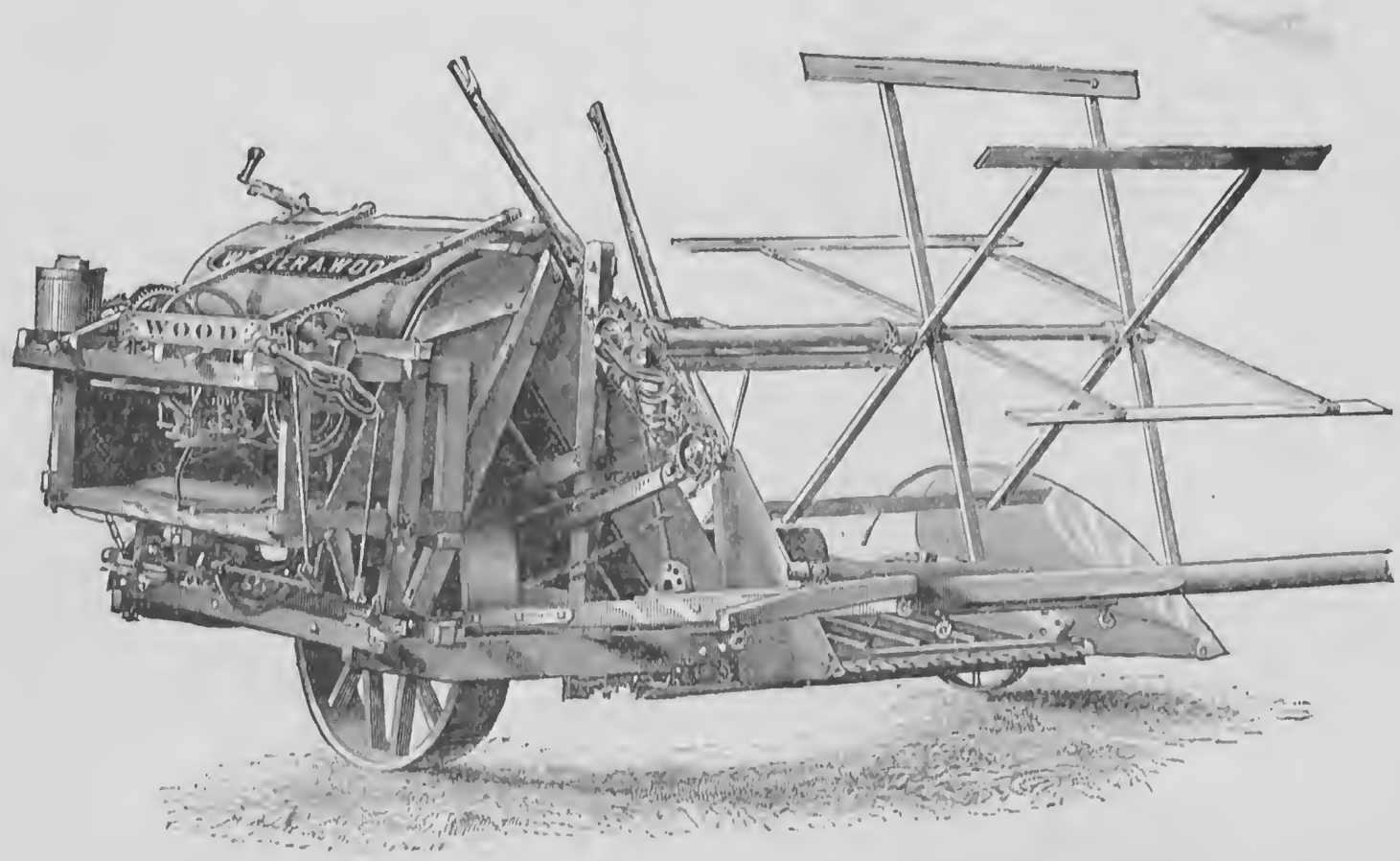

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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WHEATS AT THE RURAL FARM.

HARD AUSTRALIAN.—Raised until last year as a Spring wheat. Sowed Sep. 19. Heavy, golden straw, four feet high. Heads four inches; eight breasts; three kernels to a breast; amber color. This kind we used extensively in crossing, both as a pollen and pistillate parent. Ripe July 14.

CHINA TEA.—Raised generally as Spring grain. Sowed Sep. 20. Short straw. Badly winter-killed owing, as we believe, chiefly to imperfect drainage. Best heads five inches; bearded, tapering, pointed. Eight breasts to a side, generally three kernels; amber, nearly red; of good size.

UNKNOWN.—This appeared in a plot of Defiance the seed of which has been confined to this farm for three years. The heads average three and a half inches; half-bearded; eight or nine breasts to a side, nearly three grains to a breast; of a clear white color half transparent. White chaff, bright straw. Promising. We should estimate the yield at over 30 bushels.

BLOUNT'S No 10.—Spring, a cross between Diehl and Golden Straw. Sowed Sep. 24. Straw heavy; heads average over four inches; eight breasts, and three kernels to a breast. Cut July 16. Kernels shriveled. The heads vary in form, some more resembling the Diehl in being larger at the top, others being pointed. Beardless.

WINTER MINNESOTA HARD FIFE.—Sown Sep. 19; 30 per cent. killed. Short straw. Heads three and a half inches. Beardless, narrow, pointed. Eight breasts to a side; two and a half kernels. Amber. Ripe July 14.

WHITE MEXICAN—(Spring). Sown Sep. 20; 75 per cent. killed.

PRINGLE'S HYBRID No. 6—(Spring). Sown Sep. 20; 85 per cent. killed. Long, narrow heads, slightly bearded, four and a half inches long—eight breasts. Long, white, narrow kernel. Ripe July 15.

NOT KNOWN.—Probably a Russian wheat. Heads three inches, nine breasts. Velvet chaff, shriveled kernel.

LOST NATION.—This was planted Oct. 5, two kernels one foot apart. The seed was selected from last year's Winter Lost Nation. Upon the entire plot but one plant, bearing two heads, survived.

LOST NATION.—Sowed Sep. 20 from Spring seed received from Prof Blount (Colorado.) A few plants only survived.

GOLDEN GLOBE.—Late as a Winter wheat. Straw three and a half feet high—golden. Heads bearded, narrow, pointed, three and a half inches long; seven breasts—two kernels, amber, hard. Ripe July 14.

SAXON FIFE.—(Spring). Drilled Sep 20. Straw four feet. Heads three and a half inches; seven and a half breasts to a side; two and a half grains to a breast. Soft, white. Beardless. Ripe July 15.

SOFT AUSTRALIAN.—(Spring). Drilled (all kinds were drilled, that is, none was broadcasted) Sept. 20. Fifty per cent. killed. Short straw, medium heads, beardless. Ripe July 14.

BLACK-BEARDED CENTENNIAL.—(Spring.) A remarkable grain in many respects and well worthy of trial. We are not aware whether this has or has not been hitherto cultivated as a Winter grain. It was sown here not until Sep. 28 and it passed through the Winter well. The straw was very strong and tall, remaining quite green for days after the heads began to ripen, and curving over—never breaking—under the weight of the heavy heads. Though late, the leaves were less affected with rust than those of most other kinds. While growing this is certainly one of the handsomest of wheats and might—except for its height—easily be mistaken for very tall barley, at a distance. The heads are very uniform in appearance and the spikelets close set and regular, as may be seen by the engraving, which is a true portrait. The beards are often six inches long, often turning black and falling off when ripe, leaving the head quite beardless. The heads average four inches, with ten breasts and nearly three kernels to the breast. The grains are short, fat, white, large and soft. It will appear that this wheat should yield heavily where it thrives. It was ready to cut not until July 26. We are still of the opinion that this is what was advertised last year by Haines & Co., of Philadelphia, as "Golden Grains", though the above firm ridicule our belief. Intent upon ascertaining whether it was or not, we wrote to Haines & Co., asking them if they would favor us with a history of "Golden Grains" etc. Their reply was that should they comply with our request we would then know as much about it as they did. We sowed a small quantity of Golden Grains last Spring. But few seeds germinated and those did not form heads. Hence it is we have called upon our readers to favor us with specimens.

NURSERY.—This is entirely hardy with us. The heads are pointed, three inches long, eight breasts, two and a half grains to a breast, white chaff and golden straw of medium hight and thickness. The grain is of medium size, white, soft. It ripens rather late—July 16.

DOMINION—(Spring.) Drilled in Sept. 20.: 75 per cent. killed. Heads three and a half inches long—eight breasts, three kernels, shriveled, amber color, dark chaff. Strong straw. Ripe July 15.

IMPROVED FIFE—(Spring). Sown Sep. 20. Hardy. Heads three inches; white chaff; six and a half breasts; two and a half kernels; white, hard, medium size. Straw four feet high; strong.

ODESSA.—Sowed Sep. 20. Straw three and a half feet high—variable. Narrow, pointed head, three and a half inches—eight breasts, two and a half kernels; amber color. Late; hardy. Dark chaff. Ripe July 15. Of little promise as to productiveness.

ZIMMERMAN.—Measured yield 21 bushels, one peck. One bushel and 18 quarts seed sown per acre. Straw four feet high, slender and elastic; red. Heads two and a half inches long—five breasts, two grains to breast. This was sent to us by Prof. Tracy of the Missouri State College. The grain is between red and amber and the heads are bearded. We have never before raised Zimmerman, but descriptions speak of it as a beardless variety.

WHITE FIFE.—Sowed Sep. 19. Hardy, late. Straw three and a half feet; strong. Heads three and a half inches—seven breasts, two and a half kernels. Amber kernels; white chaff—somewhat bearded. Ripe July 14.

ELDORADO—(Spring) killed.

CHILI—(Spring) Sowed Sep. 20. Badly winter killed. Heads three inches; two and three-quarter kernels to a breast—six and a half breasts. Kernels white, plump, good size. Ripe July 15.

SQUARE-HEAD.—Heads two inches long—larger at the top. About eight breasts. Grains white, medium size, plump. Three grains to a spikelet. Chaff falls readily.

TOUZELLE.—Sowed Sep. 20. Badly winter-killed. Bearded. Heads two inches long. Grains amber. We do not see that this kind has anything to commend it for cultivation in this climate. Ripe July 14.

OREGON CLUB.—(Spring.) Ninety per cent killed.

RUSSIAN NO. 8.—Same as Russian No. 10. See below.

EGYPTIAN.—See cut and description elsewhere. We have had several specimens of Eldorado sent to us as Egyptian. The former is a single spike, the latter a compound spike—hence the name of "Seven-headed," "Many headed," etc. We should be pleased to hear from our friends many of whom have sent us specimens of the Egyptian, as to its yield, flouring qualities, etc.

RUSSIAN NO. 10.—Sowed Sep. 20. Handsome heads, long beard. Very hardy. Heads four inches—eight breasts; two kernels. Ripens July 20. Dark chaff. Kernel rather long for its thickness; amber color; clean and plump.

RUSSIAN NO. 2. Beardless. White chaff. Short heads. Ripe July 12. There is little about this worthy of note.

WHITE ROGERS.—Drilled Sep. 20. Bearded; white chaff. Hardy. Heads two and a half inches; two and a half kernels, amber color.

OREGON. Two and a quarter bushels of seed were sown to the acre—the measured yield was 30 bushels. It is a bearded kind, with dark chaff and a dull-colored slender straw. Heads average two and a half inches—two and a quarter kernels to a breast and six breasts. Ripe July 12. The grain is very large; of an amber color. It is very hardy.

RUSSIAN No. 12.—Sowed Sep. 20. Straw four feet. Heads average over four inches; velvet chaff; nine breasts; two and a half grains to a spikelet. Very hardy. This promised a heavy yield, the heads being of good size and the breasts closely set. But it did not ripen until July 22 when the kernels were found to be shriveled and the yield not over 15 bushels to the acre. Not one of the ten kinds of beardless wheats with velvet chaff tried here has succeeded.

RUSSIAN No. 3.—Bearded—hardy. Eight breasts; two kernels, amber color. Chaff, light chestnut color; straw strong and of a bright golden color. Estimated yield not over 20 bushels.

SANDOMIRKA.—Twenty quarts of seed sown per acre. Yield (measured) 25 bushels per acre. Straw nearly four and a half feet high, slender but strong—often of a leaden color. Heads average three and a quarter inches; breasts two and a half kernels; six and a half breasts. Grain half transparent, rather small. The milling qualities of this kind of wheat are said to be of the best. Our seed was received from Mr. C. E. Thorne, of the Ohio State Agricultural College.

BROOKS.—(Spring.) Hardy. Sown Sep 20. Golden straw four feet high—slender, strong. Heads long, narrow, loose, about four inches in length, eight breasts, two and a half kernels. Ripe July 14.

GOLDEN STRAW.—Seed from Ohio State University. Three and one-eighth bushels were sown to the acre. Sep. 24. Yield 24 bushels. Straw four feet high, often of a dark color, slender, strong. Heads average two and three-quarters inches in length, six breasts averaging nearly three kernels. Grain white, medium size.

POLISH.—Slender straw. Hardy. Late. Three and a half inch heads; eight breasts, two grains. Chaff a light brown—kernels white, small.

DOTT.—Straw three and a half feet high, golden color, strong. Heads bearded, three and a half inches long, two and a half kernels to a breast—breasts widely separated. Grain amber, good size. Estimated yield over 20 bushels. Ripe July 12.

REMARK.—Silver Chaff Wheat was sent out by the Department of Agriculture several years ago. The seed seems to have been mixed with a bearded kind, not less than 50 specimens of which have been sent to us for identification. We would say that these specimens so closely resemble Dott that we should not hesitate to pronounce them the same.

SONORA.—(Spring) all killed. Spring Mediterranean, 50 per cent. killed. Sherman (Spring) 99 per cent. killed. Judkin (Spring) killed. Canada Club, land not well drained—killed. China Spring passed through the Winter admirably and promises to make a Winter wheat of some value for this climate. Prussian white, killed. Mold's white and red Winter wheats are too late for this climate. Some of the finest heads we have ever had sent to us, however, were of these varieties, raised by Isaac Alter of Lakeport, Cal. As stated last year, many of the spikelets contained five grains and three of the heads bore 102, 95 and 90 grains. We hope next year to speak more definitely as to some of the kinds of wheat which have originated here.

WHEAT NOTES.

SHUMAKER is as early as any of our 77 kinds of wheat. Each head averages seven spikelets and each spikelet averages two and one-eighth grains. It is a tall-growing wheat with rather slender straw and dark chaff. We learn it makes a very good quality of flour though not, perhaps, the best. Of all our wheats the Shumaker (sometimes Shoemaker) was the only one that lodged at all, and this only in one part. It yielded heavily and we should commend its trial to our readers.

MR. WYSOR once stated in this journal that out of a gill of grains of wheat planted four inches apart, not one was lost by winter-killing, while at least one-half of that sown broadcast on the field was so killed.

FROM a trial of Silver Chaff wheat made by 15 farmers, in Ohio chiefly, in 1880, the average yield was 26¼ bushels. Of Velvet Chaff, according to the reports of 11 farmers in Ills., Mo., Kan., Md., N. Y., Pa., Mich., Wis., and Ohio, the average yield was 26 bushels per acre. Arnold's Gold Medal, tried by 12 farmers, mostly in Ohio, yielded 21⅞ bushels. Sandomirka, tried by seven farmers, mostly in Ohio, yielded 24⅛ bushels. These trials were instituted by C. E. Thorne, the Farm Manager of the Ohio State University.

WE BELIEVE that the recommendation persistently urged several years ago to sow wheat late in order to escape the Hessian Fly, has cost the farmers of this country thousands of dollars.

WM. KLIPPART says that Velvet Chaff Wheat was abandoned in Franklin Co., Ky., years ago. It yielded, he says, 40 bushels per acre, but deteriorated, as it was liable to injury from insects, smut and rust. In other parts of the country, this wheat is particularly rust, smut and insect-proof. There are many kinds of Velvet Chaff wheat, however, some bearded, some beardless. The variety best known by that name is shown in another column and succeeds admirably in Ohio as well as at the Rural Farm.

IT IS pretty well known that pistillate strawberries, like the Manchester, are more prolific than those bearing perfect flowers having both stamens and anthers. Does it follow that beardless wheats should be more prolific than bearded wheats? The cases are not quite alike, since the beard is but a part of the palet while the stamens are the male generative organs and may be supposed in their growth and development to require a greater amount of nutriment.

FULTZ.—This ripens early (July 7 the past season); bears a straw of medium hight, which turns reddish before ripening. It is not very thick but strong and is seldom broken or lodged. The heads average rather small; the kernels are of only medium size; but they are close together upon the heads and the average number is greater than that in a head of Clawson. Hence it yields well. But there are scores of kinds, if they were but known, that would yield as well and yet make a flour far better in quality. Fultz is, as we judge from experiment, well adapted to low or ill-drained grounds, if this can be said of any wheat.

IN Japan, it is said, the wheat has been so developed by Japanese farmers, that no matter how much manure is used, the straw will not grow larger, though the length of the ear increases. The hight is rarely more than two feet, and often not more than twenty inches. We should much like to see some of this Japan wheat.

ISIS was supposed to have introduced wheat into Egypt, Demeter into Greece, and the Emperor Chin-Wong into China, about 3,000 B. C. In Europe it was cultivated before the period of history, as samples have been recovered from the lacustrine dwellings of Switzerland.

Crossing Wheats.

Crossing wheats is rather a delicate operation until one has gained dexterity by experience requiring both a steady hand and a deal of patience. The outer husk or covering of the flower is called a glume, see A, Fig. 442, Within this are two similar coverings called pales or palea, the first of which is awned in the bearded kinds and in the beardless kinds merely pointed. Between these two pales are the generative organs—the stamens and pistil, (1). In crossing different varieties the two pales must therefore be separated so the anthers, which bear the pollen or fertilizing dust, may be removed and other anthers inserted in their place—anthers from the kind with which it is desired to make a cross. The latter is called the male parent; while the flower receiving the anthers is called the female parent. After the stamens of the head to be fertilized have all been removed—which is easily effected by the use of a sharp-pointed stick, as shown in the engraving, Fig. 447—and other anthers introduced, it is best to wind a worsted yarn about the spikelets to hold the glumes and pales together and so exclude the possibility of the intrusion of pollen from the same or other spikes. Anthers should be selected of a golden color, just before the pollen has been shed, as when severed green they shrivel up and the pollen grains never mature. Or the dust may be collected by the aid of a camel's-hair brush (see Fig. 447), and applied to the stigmas. We prefer to use the anthers as the simpler method. Twenty-five different heads of wheat were crossed here during the past season. Of these three were destroyed by sparrows and the straws of two were broken so that the heads failed to ripen. Of the 20 heads remaining, 182 perfect grains—or an average of over nine grains to a head—were the results of the work. These we shall, of course, plant separately, cultivating the ground about them and giving them every care. As pollen from different kinds was often used upon the same head, only the pistillate parent is recorded.

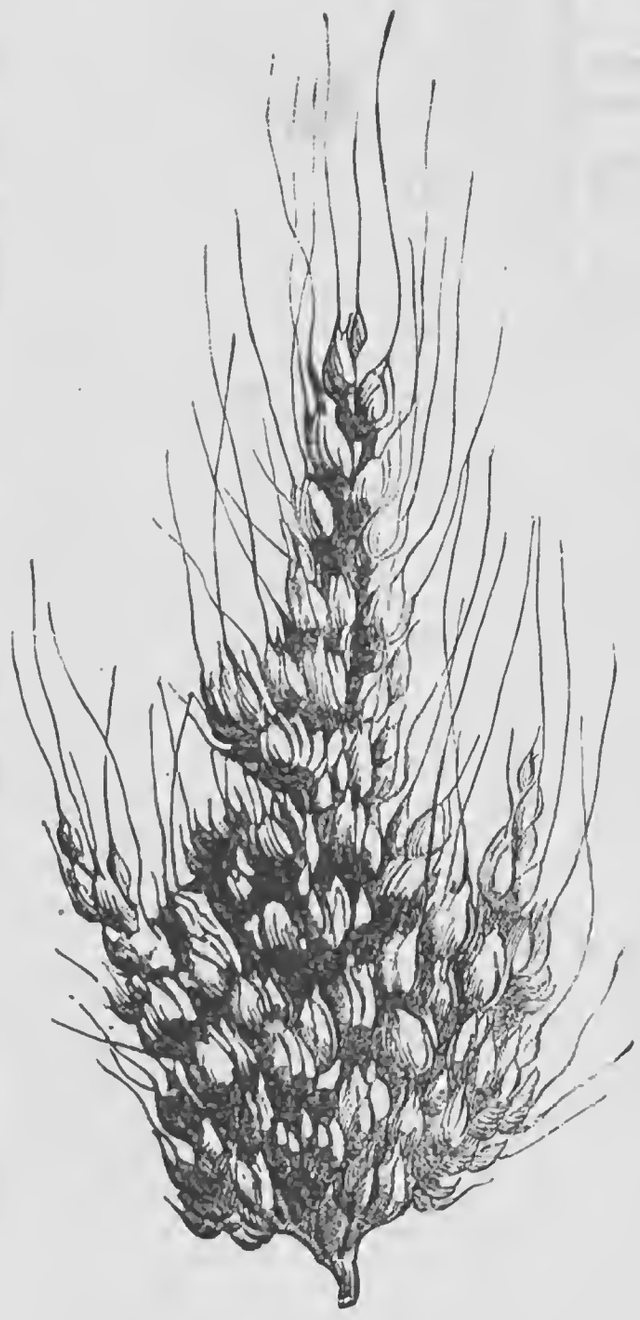
Egyptian Wheat.

This grows to the hight of three feet, bearing a bearded, compound head about four inches long. The secondary heads or spikes vary. Sometimes there are as many as 10—sometimes but two or three. It is simply a branching head the same as a half dozen secondary ears of corn sometimes grow from the main rachis or cob. The kernels are with us of an amber color and small, though the seed planted was white and of a good size. This change may be owing to the fact that this is the first time, we believe, that it has been cultivated in this climate as a Winter wheat. The weight of the head is so great that while ripening it is often bent over to the ground, sometimes breaking the straw. It does not seem worthy of cultivation except, it may be, as a curiosity. We have, however, used some of its pollen in crossing wheats during the past season. The engraving, Fig. 441, was sketched from one of our best heads, which ripened July 25.

Velvet Chaff Wheat.

This wheat orignated in Clinton County, Ohio, where, in 1857 or 1858, Mr. Abram Penquite, while cradling in a field of wheat, noticed three heads of a different variety from the rest of the field. These he saved and propagated, and from them has come the wheat now widely known in Southwestern Ohio as the Velvet Chaff.

The name of "Velvet" or "Velvet Chaff" has been applied to a number of different varieties of wheat. John H. Klippart, in his "Wheat Plant," describes four varieties, all



EGYPTIAN WAEAT.—FIG. 441.

different from the one under consideration which had been cultivated in Ohio previous to 1860, and some of which are still in cultivation. This variety is distinguished by extreme earliness in ripening; a straw of medium length and much stiffer than that of the Mediterranean; a heavily bearded head; a medium-sized, but very plump and heavy grain, of a dark amber color; and a peculiarly heavy brown chaff, which gives the variety its name.

I have caused this wheat to be tested over a considerable extent of country during the past two years, and it seems to be especially adapted to the black soils of the prairies. In an acquaintance of ten years I have never known it to be injuriously affected by either variety of smut. I have never been able to see that rust affected one variety more than another, except that late varieties were more liable to its attacks than early ones. The Ohio millers who are acquainted with both varieties, pronounce the Velvet Chaff equal to Mediterranean as a milling wheat, while farmers generally prefer the former on account of its superior earliness and stiffness of straw.

We are this year testing about 30 varieties, among them a wheat taken from the valley of the Theiss, in Hungary, to Minnesota, in the hope that it would rival the Scotch Fife, but it failed to germinate there. Velvet Chaff will be for sale at simply enough advance over market price to pay for extra handling, when the new crop comes in.

Ohio State University. C. E. THORNE.

MEDITERRANEAN WHEAT.--WHO SHALL IMPROVE IT?

J. S. WOODWARD.

Each year brings to the notice of the wheat-grower some new variety of wheat, highly extolled and sure to take the place of favorite; but as is usually the case, on trial some fatal defect is found and each year as many varieties are discarded as are added of new ones. A hundred different wheats might easily be named, that have thus been the favorite and again thrown by, since my farming experience begun. So far as my acquaintance extends, only one variety now in cultivation has stood the test of a single generation and is to-day as high in the esteem of both grower and miller as when first introduced. That variety is the Red-bearded Mediterranean.

When first introduced, it was coarse and dark; it made a strong healthful flour but very dark; about its only recommendation was its hardiness and earliness, enabling it to stand the Winter and to escape the ravages of the midge. Its introduction was, in fact, not a matter of choice but of necessity. We could grow a small crop of that and we could not grow any other variety then known; but each year it has grown better and better, both in quality and yield, and lighter-colored in grain and flour, until now it is the favorite of the miller and the baker, and they pay from five to seven cents more per bushel for it than for any other grown in this section. If a farmer has a plot of ground less adapted to wheat than another, he surely sows it to Mediterranean and often then secures his best results. About the only defect it has is its liability to lodge and its open, loose head; but, then, it will lodge and fill when another would not, and its loose head will stand more bad weather at harvest time than any other. This present season in Western New York it is the only variety that has entirely escaped the attacks of red rust on the leaves.

I fully believe that any man who will each year constantly sow Mediterranean on a quantity of land equal to that sown to any of the other or newer varieties, will at the end of ten years find the balance of account on the side of this old variety, I do not find fault with this constant desire for something better and more profitable. That is a characteristic of our people; but I do think a great mistake is made by our improvers of wheats, in that they do not take this old reliable stand-by as the variety from which to work up, and secure something that shall be better than any we now have and shall satisfy the wheat grower.

What we want in a wheat is all the hardiness, earliness and freedom from rust of the Mediterranean and, in addition, a closer head and a straw that shall be a little stiffer and less liable to lodge—Who will lead off in this new departure and secure so desirable and happy a result?

Niagara Co., N. Y.

CLEAN SEED.

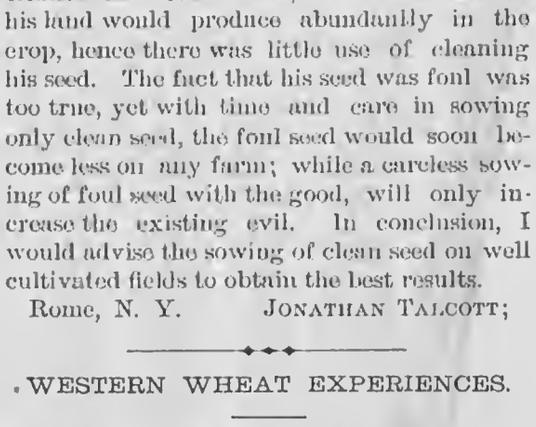
I wish to say, for the benefit of all tillers of the soil that shall read the Wheat Number of the RURAL, that more dollars can be gained by sowing only *clean seed* on well tilled lands than by all other methods combined. Most wheat growers would be surprised if the seed that is sown was thoroughly cleaned and they could see the foul seeds that are yearly sown even by good farmers. One of my neighbors, last year at seeding time, came to my barn to clean his seed wheat, as I had purchased a new mill for that purpose. He brought what he supposed was enough wheat to give him all he wanted when cleaned, and he also remarked that his wheat was very clean as it was. You can hardly imagine his surprise on cleaning the same to find that instead of a few pecks of worthless stuff he had bushels, and so surprised was he that he saved all the foul seed and shrunken wheat to show the farmer of whom he got the seed, who thought it quite clean—fully fit for seed without extra cleaning. The result was a crop of nearly 40 bushels of clean wheat per acre this harvest from six acres of wheat the seed for which had been well cleaned and the soil for which had been well prepared after oats and wheat grown on the ground in 1880. Another neighbor, also, whose seed I cleaned, had about the same amount of land sown and his crop is also nearly, or quite, 40 bushels per acre of clean wheat. Both these crops have been thrashed, so the results are known to be as stated, and both fields were the admiration of all farmers who saw them; yet how few farmers will take the trouble to clean their seed this Fall for the purpose of growing a clean crop next year. One farmer said to the writer, last Fall, that he knew his seed was foul, but his land was also full of foul seeds, and if he cleaned his seed wheat, the foul seed in his land would produce abundantly in the crop, hence there was little use of cleaning his seed. The fact that his seed was foul was too true, yet with time and care in sowing only clean seed, the foul seed would soon become less on any farm; while a careless sowing of foul seed with the good, will only increase the existing evil. In conclusion, I would advise the sowing of clean seed on well cultivated fields to obtain the best results.

Rome, N. Y. JONATHAN TALCOTT;

WESTERN WHEAT EXPERIENCES.

PROFESSOR E. M. SHELTON, KANSAS STATE AGRICULTURAL COLLEGE.

So long as the wheat plant continues to furnish the bread of civilized man, the condition of the crop at different seasons, and all means and methods looking toward its improvement, will be objects of interest to all classes of the community. Indeed, with no other farm crop can the farmer do more essential service to his country and kind, in following Dean Swift's famous advice to make two blades of grass to grow upon a spot of ground where only one grew before, than by furnishing practical methods for profitably increasing the "blades" and ears per acre of our wheat fields.



WHEAT SPIKELET OPEN. FIG. 442. WHEAT SPIKELET CLOSED. FIG. 443.

Nevertheless, I am not an advocate of wheat raising, as it is generally practiced in the West, upon a very large scale, and to the exclusion of all other crops. The exclusive wheat raiser, whether he be a "bonanza" farmer, or a poor homesteader who rakes and scrapes the last cent and ventures it on a wheat crop, is, according to my observation and experience, certain to bring to himself poverty of soil, purse, and spirit. The peculiar mental state of those farmers who grow wheat alone, is a study, albeit a depressing one. They are in an almost constant state of terror or exaltation over the rain or its absence, and scan the heavens like the Chaldeans. Drought, the fly, frost, chinch bugs, grasshoppers rust, hail—all of these terrors of the farmer seem to have a special spite against the wheat farmer. The place for the wheat crop—a position of profit and honor—is in alternation with grass and hoed crops. Here wheat is profitably grown without injury to the soil and with no unusual risks.

A Favorite Sort.

In Kansas, as elsewhere, many sorts of Winter wheat are grown, but those which are the most successful are not generally known, I think, east of the Mississippi outside of some of the Southern States. The weak point of our climate, so far as wheat raising is concerned, is the Spring season. The cold, wet weather which, from the Atlantic to the lakes, occupies so much of the season between the first of March and the middle of May, is all but unknown in Kansas. Our Winter is no sooner past than the Summer is upon us. Con-

sequently our wheat has but little time to tiller and strengthen its hold upon the soil. Almost from the day that the frosts have left the ground, the sun and elements ply whip and spur, driving it to the harvest by the middle of June. The result of these peculiar climatic conditions is that the coarse, slow-growing Eastern sorts, like the Clawson, Silver Chaff, Wicks, and others, as we have shown by repeated trials made on the college farm, are almost certain failures. A wheat to do well in Kansas, must be able to keep step with the season; it must be one of the small, red sorts, early, hardy, and of rapid growth. Such a sort we have in the Early Red May, a universal Western favorite. Other sorts have been found, like the Fultz and Lancaster, which in particular seasons gave a stronger growth of straw, and a larger yield of grain, and a still smaller number, like the Gold Medal, which gave a whiter and better flour than the Early May, but a comparison of this sort during a number of years with any other sort that I have yet seen, has invariably been to the advantage of the Early May.

The past Winter has, I suppose, dealt more severely with the wheat plant than any other Winter since the settlement of the State. It is interesting to notice in the published reports of the condition of the crop during the Spring, that, almost without exception, and from all parts of the State, the Early May was reported in the best condition, having sustained less injury than any other sort. Of twenty-four different sorts of wheat grown upon the college farm, under precisely similar circumstances as to soil and treatment, the old-fashioned Blue Stem alone appears in as good condition as the Early May.

Harrowing Wheat in the Spring.

The advantages of harrowing wheat in the Spring are frequently recited by the agricultural press, and the increased yield resulting I have seen placed all the way from five to ten bushels per acre. Still the practice is not a common one, although those farmers who once begin it rarely give it up, which is itself good evidence of the usefulness of the practice. In the Winter of 1879-80 I selected a portion of a wheat field, very uniform as to soil, situation, and the condition of the crop, and in this laid off six plats, exactly one-fourth of an acre each, with the object of testing the advantages, if any, of harrowing growing wheat. Each alternate plot, beginning with the first, was thoroughly harrowed on Feb. 26th; and on April 15th these plats were again harrowed and immediately afterwards rolled. The intervening plats, of course, received no special treatment. The results of this experiment may be seen in the subjoined table, in which the plats are given in the exact order in which they were placed in the field:

	Yield per Acre. Grain. bush.	Straw. lbs.
Plat A, Harrowed	15.13	17.60
" B, Unharrowed	11.83	11.64
" C, Harrowed	12.40	12.20
" D, Unharrowed	11.86	12.96
" E, Harrowed	16.13	16.72
" F, Unharrowed	14.58	18.28
Average yield of harrowed plats	15.21	15.50
" " unharrowed plats	13.76	14.29
Increased yield of harrowed plats	1.45	1.21

It will be observed that the yield of grain in every case, in the harrowed plats, exceeded the yield of the adjoining "unharrowed" plats, a fact which seems to show, pretty conclusively, that this increased yield was caused by the harrowing and by nothing else. It is true that this increased yield of less than one and one-half bushel of grain and one hundred and twenty-one pounds of straw in the harrowed plats, is not large, but it is enough to give good pay for the labor of running a light harrow twice and a roller once over the field, and at a season when farm labor is not particularly pressing.

How Much Wheat Shrinks in the Bin.

In the Fall of 1879 I prepared a long sack which was filled with exactly 200 lbs. of wheat, and sunk it deeply into a bin containing 150 bushels of Winter wheat. Here the sack remained exactly six months, when it was taken up and again weighed, this second weighing showing a slight fraction over 200⅛ lbs. as the weight of the sack of grain. This seemed to show that wheat does not shrink in the bin. I have just now finished a repetition of this experiment, giving almost precisely the same results as those detailed above. On November 13th, 1880, a similar long sack was sunk in a bin of grain, where it was allowed to remain until June 14th last, or exactly seven months and a day, when it was taken up and again weighed, this second weighing showing a full 201 lbs. of grain. I am not going to offer an explanation of this increased weight of a half pound in the one case and one pound in the other. This fact becomes all the more remarkable when we consider that our Kansas Winters are among the dryest seasons found anywhere. These experiments do seem to show that wheat does not shrink from evaporation in the bin when put up perfectly dry. The loss of weight from wintering over wheat, of which I have heard farmers complain, must then in justice be charged up to the rats and mice or the leaky condition of the granary.

WHEAT CULTURE AND EXPERIMENTS.

PROFESSOR I. P. ROBERTS.

About two-thirds of our experiments are thrashed and the results are given below. The land was stiff, poor, clay soil and has been under constant cultivation for nine years: one year in oats; in 1874 and 1879 it was summer-fallowed; during the remaining six years it has been in wheat. The field selected was about twice as long as wide, and the plats have run the long way of the field until the last year when they were changed to the short way.

BLACK-BEARDED CENTENNIAL — AVERAGE HEAD. — FROM LIFE.—FIG. 344.

The season has been far from good. Cold dry winds in April did much damage, especially where the fields were exposed to their full force. Those fields protected by hills or timber belts suffered least; but many of those that came safely through the Spring suffered to the extent of from five to ten bushels' loss per acre on account of high winds and heavy rains in June. The grain is badly shrunken in the lodged places, but plump and fine where it stood up.

Seneca, one of the great wheat counties of this State, will not have above half an average yield. The ground there was badly run together this Spring, caused by its being fitted when too dry, the soil becoming a bed of dust which ran together like mortar with the first heavy rain.

Cayuga County will have three-fourths as much, and Tompkins—not a good wheat county naturally—at least seven-eighths as much as usual. We have thrashed about one-third of our crop (360 bushels) and the yield, not including the experimental field, is between 37 and 38 bushels per acre, which is far better than we expected, as it was badly lodged.

PLOTS ONE-TENTH OF AN ACRE.

No. of plots.	Experiments in wheat 1880 & 1881.	Yield per acre in bushels. bush.	lbs.
1	1 Bushel seed. Phosphate 200lbs per acre	15	20
2	3 " " " " "	23	50
3	1¼ " " " " "	19	10
4	2 " " " " "	22	30
5	2 " " Broadcast. Phosphate 200lbs per acre	23	10
6	2 " " 400lbs Crocker Superphos	26	30
7	2 " " Nothing	25	10
8	2 " " 400lbs Swift-Sure	25	20
9	2 " " Nothing	14	40
10	2 " " 10 loads of manure	29	05
11	2 " " Nothing	17	20
12	2 " " 600lbs Salt	22	25
13	2 " " 300lbs Crocker Superphos. 100lb Sulphate of Ammonia	24	55
14	2 " " Nothing	23	40
15	2 " " 200lbs Swift-Sure Phos	23	20
16	2 " " 200lbs Crocker Superphos	24	40
17	2 " " Nothing	22	50
18	2 " " 400lbs Pacific Guano Phos	26	20
19	2 " " No manure for six years	15	20

RESULTS.

The results of plots 5, 6, 7, and 8 I do not consider reliable, as the greater part of each was flooded for a short time and some plant food from the adjoining fields was evidently deposited and the yield increased thereby. Drilled seeding has given two bushels and twenty-five pounds per acre as an average of the last five years over broadcast sowing. This year it gives forty pounds less. The explanation above, I think, fully accounts for this.

SUMMARY 1881.

	bush.	lbs.
Manured plot	29	5
Average of all phosphated plots except 6 and 8	24	41¼
Unfertilized plots except 7	19	37½
Salted	22	25
From the above it would appear that the normal yield of this land was	19	37½
600lbs salt produced an increase of	2	47½
Phosphates " "	5	35
Farm manures " "	9	27½
Sixth continuous crop without fertilizers.		
Season moderately fair, 1881	15	30
" " 1880	31	00
" " 1879	31	51
" superior, 1877	34	42
" fair 1876	18	27
" poor, 1875	7	51
Average for six years	23	14

The object of this experiment has been to prove the great value of the thorough preparation of the soil. But the full value of the experiments can be appreciated only by those who have seen the unpromising condition of the ground upon which they have been conducted.

AVERAGE OF SIX YEARS' THICK AND THIN SEEDING.

	bush.	lbs.
3 bushels per acre	25	4 5-6
2 " "	23	30
4 years, 1½ bush. per acre; 2 years, 1½ bush.	23	¼
Comparison of all phosphated plots with a like number of adjoining unfertilized ones for six years:		
Phosphated	32	22
Unfertilized	27	52 4-9
Comparison of salted with unsalted plots for three years:		
Salted	26	28⅓
Unsalted	22	58⅓
Comparison for three years:		
F. Y. manures, 14 loads, about 5 cords	33	33⅓
Unfertilized	20	55

The prices realized for this wheat were as follows: $1.75, $1.06, $1.15, average $1.32; 12 bush. 38⅓ lbs., the extra yield over the unmanured plots, brought $16.68. Fourteen loads of manure (small ones, as the hill is very heavy out of Ithaca) cost $10.50 spread on the field. In several instances the good effect of the manure was quite as conspicious the second year as the first. Our experience and all experiments, both in this country and Europe, show the lasting effect of farmyard manures.

I speak from careful observation and estimates, when I say I believe that over half of the farmyard manure of the United States is wantonly and uselessly wasted; frequently, too, by those who have to purchase phosphates at $30 to $40 per ton to supplement the contents of "Drychaff's dung cart, that creaking hearse that carries to the field the dead body whose spirit has departed."

Tests of varieties: Plots one-twelfth of an acre, land gravelly; had been in Orchard Grass for the two preceding years. Plowed once in July and top-dressed with F. Y. manure and 150lbs. of phosphates per acre drilled in with the wheat.

	yield per acre. bush.	lbs.
Fultz	37	35
Clawson	39	25
South Wales from Agricultural Dep't. D. C.		Failure
Gold Medal	41	26

On the further end of the same field on poor land the following experiments were tried with the Clawson wheat:

	bush.	lbs.
F. Y. manures about 5 cords per acre	22	49¼
F. Y. manures as above, and 150lbs of phosphates	22	00

I would be pleased to receive one-half bushel of any variety of wheat not named in the above experiment, for the purpose of testing its productiveness. If the seed sent is really clean and the shrunken grains have been screened out, one-quarter of a bushel would be sufficient. If senders of samples desire, I will pay for the sack, and a reasonable price for the wheat.

Cornell University, Ithaca, N. Y.

IN THE WHEAT FIELD.

HUGH L. WYSOR.

Bald and Bearded Wheats.

What is the advantage or disadvantage of bearded over beardless varieties of wheat in growing, thrashing and milling? Ought the beardless to yield more than the bearded?—are questions which the Rural has suggested for me to answer. In making a comparison, it must be understood that these remarks apply almost exclusively—so far as bearded varieties are concerned—to those of the Mediterranean type. Note here that the Swamp Wheat, distributed several years ago by the Department of Agriculture and occasionally mentioned in the Rural crop reports, possesses no characteristics to distinguish it from the Mediterranean. They are practically the same. There are other bearded wheats which have a merely local reputation, and are not generally known. Of such is the Jennings, a bearded white flint with a stiff straw.

What, then, are the advantages of bearded wheats? They are hardier, tiller more, and grow on thinner and more exposed soils than the bald. They are seldom attacked by mildew, and if they are so, are never very seriously injured. If they are laid or lodged by storms or other causes, the ears are measurably well filled, which is not the case with the bald kinds. If we leave out the bald white flints, the bearded excel in making a rich yellow flour, which, while not as white, commands fully as high a price in the markets as that made from the bald white flint sorts. In confirmation of this, it may be stated that our Richmond millers pay from 10 to 15 cents more per bushel for the Longberry than they do for Fultz, which is, as they term it, too soft; that is, contains too large a percentage of starch. Finally, I do not remember ever having seen smut in bearded wheats. I have seen fields of Fultz so full of smut that it could be smelt at a distance of 50 yards from the field.

What are the objections to bearded wheats? Their straw is too soft; they are therefore not suited to rich or alluvial soils, on which they frequently lodge or fall flat. The beards, too, retaining water after a rainfall, the straw bends beneath the increased weight, and is laid by the wind. Further, after the wheat is dried in the shock, the chaff falls away from and partly exposes the grain, which wastes considerably in hauling to the stack or barn. [This seems to us a weighty objection.—Eds.] Lastly, the beards make the wheat very disagreeable to handle both in harvesting and in thrashing. In some mysterious way they creep through the clothes and keep the skin in a constant state of irritation, particularly if the weather is hot. They are also probably not the best things in the world to be fed to cattle in the straw.

In answer to the question, "Ought bald to yield more than bearded kinds?" it may be said that, as a matter-of-fact, they do because the latter seldom exhibit more than two kernels to the spikelet. This deficiency, however, is in part made up by the large size of the grain. Still there is no assignable reason why a bearded wheat may not be produced which shall equal in productive capacity any of the bald sorts. I have sent the Rural a new bearded wheat, the origin of which is unknown to me, which shows four, and, in a case or two, five grains to the spikelet.

Smut in Wheat.

Some weeks ago a correspondent of the Rural inquired the cause of black heads appearing in wheat. The answer supposed that he had reference to smut ears, but he probably alluded to the blasted ears which frequently, and sometimes in great numbers, appear in bald wheats. They are more correctly not ears at all, for there is nothing on top of the culm but the blackened rachis without any spikelets. These black heads do not injure the remainder of the wheat in any way whatever. Smut, on the contrary, exhibits nothing to the inexperienced eye to distinguish it from ears of good wheat. In fact, it attracts attention by its unusually bold and flaring appearance. The observer has only to apply an ear of this sort to his nose to satisfy himself of its nature. The kernels of smut are at first green like those of wheat, and turn black when matured. An ear of wheat will sometimes contain both kernels of smut and of sound wheat.

There seems to be no better established fact than that smut is a fungus which grows upon and destroys the grains of wheat which it has attacked, yet I have recently met an intelligent farmer of this county who attri-

butes it to a very small insect which perforates the chaff somewhat in the manner of the pea beetle and deposits an egg. In confirmation of this, he says that if an ear of smut be closely examined while green, a small puncture will be found going through the chaff opposite every kernel. He further states that if smutted wheat be left in the stack for a year or two, when it is opened no whole grains or ears of smut will be found, but there will be a great deal of dust and scales made by the insects in escaping. It may be objected to this theory that it is asserted that wheat is frequently destroyed by this fungus before the ears have appeared from the sheath.

Three Essentials in Wheat Growing.

A successful wheat grower of this section claims that the three things necessary to be done in growing a good crop of wheat are: to sow early; to fertilize liberally; and to pasture closely. I should omit the last, but subscribe to the other two. Yet he contends that the last is absolutely essential, and accordingly acts up to his theory by grazing his wheat off with sheep. His average yield per acre for some years past has been from 20 to 25 bushels. I cannot help believing that his yield would be greater if the grazing were omitted, for it must make the wheat later in ripening, and the tramping done to the land in wet weather is assuredly not beneficial to the crop. I have never observed the effects of grazing except on small patches on which fowls were running during the Winter. In these cases, the plants bloomed ten days later than the rest of the field and never matured their grain at all.

Pulaski Co., Va.

VARIETIES OF WHEAT.

An Experiment Made on the Farm of the Ohio State University.

THIRTY-THREE varieties of wheat were sown in the Fall of 1880 upon a piece of bottom land selected for its apparently uniform quality. The previous crop was Timothy, and the field was plowed in September. On account of the excessive drought, sowing was delayed until October 4th to 6th, but even then the seed lay in the ground until much of it had malted before there came rain enough to start it into vigorous growth. On this account the experiment may not be as reliable as could be wished with regard to the comparative productiveness of the different varieties, although it is believed that all of them were equally exposed to the unfavorable conditions. Other questions—as to comparative weight of grain, quality of grain and straw, etc.—of course were not affected.

One of the varieties, the "Black-bearded, Centennial" proves a total failure, not being adapted to the climate. After harvest samples of each variety were sent to Warder & Barnett, merchant millers, of Springfield, O., with the request that they test the same with reference to their value for milling purposes. This they have kindly done, and their report is given in the following table, together with the agricultural results of the experiment:—

NAME OF VARIETY.	Date of ripening	Yield per acre. Grain, bush.	Straw, lbs.	Pounds straw to 1 bush wheat.	Pounds of grain per bush.	Weight of grain per bush.	Smooth or Bearded.	Character of grain. Color.	Size.	Milling quality.	Character of Straw. Hight, feet.	Stiffness
1. Siberian	July 12	11.69	2,655	180	57		S	A	s	Poor and weak.	3¾	Good.
2. Helge's Prolific	" 2	19.38	* 775	40	61½		S	A	s	Pretty good.	3¼	Good.
3. Mammoth Red	" 7	12.47	1,967	157	57½		S	A	l	Pretty good.	3¾	Good.
4. York White Chaff	" 7	25.83	3,197	123	59		S	W	l	Pretty good.	3½	Good.
5. Rickenbrode	" 5	19.68	3,139	159	58½		S	W	m	Good and strong.	3½	Good.
6. Champion Amber	" 6	22.93	3,212	140	57½		S	A	m	Poor and weak.	3½	Good.
7. McGhee's Red	" 6	21.15	3,188	147	62		S	A	l	Good.	3¾	Good.
8. Grecian	" 8	31.01	2,577	121	58½		S	W	s	Weak.	3¼	Poor.
9. Arnold's Gold Medal	" 7	19.41	2,183	112	60		S	W	m	Weak.	3½	Medium.
10. German Amber	" 2	24.67	2,621	106	62½		S	A	l	Good.	3¾	Good.
11. Red Amber	" 7	25.88	2,809	108	61		B	A	l	Good.	3½	Poor.
12. Sandomirka	" 5	36.85	3,048	113	63		S	W	s	Good.	3½	Poor.
13. Silver Chaff	" 7	36.01	3,024	116	59½		S	W	m	Moderately good.	3¾	Good.
14. Clawson	" 6	23.39	2,769	118	59		S	W	m	Poor.	3¾	Good.
15. Fultz	" 2	21.40	2,701	126	61		S	R	m	Poor.	3½	Medium.
16. Velvet Chaff	" 3	22.83	2,411	102	64		B	A	m	Good and strong.	3½	Good.
17. Egyptian	" 7	22.21	2,607	117	59		B	A	m	Tolerably good.	3½	Good.
18. Michigan Amber	" 6	21.80	2,727	125	59½		B	A	l	Little glitch.	3½	Medium.
19. Yellow Missouri	" 12	12.16	2,967	243	57½		S	A	s	Poor.	3¾	Good.
20. Lancaster	" 3	23.53	2,660	112	59		B	A	l	Choice and strong.	3¼	Poor.
21. American White	" 7	19.30	2,444	126	59½		B	W	l	Pretty strong.	3½	Good.
22. Mediterranean	" 4	21.71	2,219	103	59		B	A	l	Good and strong.	3¼	Poor.
23. Smith's Improved	" 7	16.97	2,490	147	59½		B	W	m	Pretty good.	3½	Medium.
24. Hungarian White Chaff	" 2	21.90	2,042	96	62		B	R	l	Good.	3¾	Medium.
25. Treadwell	" 7	19.62	2,432	121	59		B	W	l	Good.	3½	Good.
26. Tappahannock	" 2	16.52	2,173	131	61		S	W	s	Choice, tolerably strong.	3	Good.
27. Russian No. 2	" 2	17.03	1,101	64	62½		S	W	s	Very good.	2¾	Good.
28. Scott	" 3	26.72	2,111	78	61½		B	R	l	Tolerably good.	3¾	Poor.
29. Swamp	" 3	23.91	2,215	92	61		B	R	l	Tolerably good.	3¼	Poor.
30. Zimmerman	" 2	26.58	2,261	86	61		S	R	l	Very good.	3¾	Good.
31. Theiss	" 5	25.20	2,318	92	62½		B	R	s	Tolerably good.	3¼	Poor.
32. Golden Straw	" 2	19.93	2,592	129	60½		S	W	m	Good.	3¾	Good.
Averages		21 28	2,488	117	60⅝							

EXPLANATION.—A, amber; R, red; W, white; B, bearded; S, smooth; s, small; m, medium; l, large.

* NOTE.—The extremely small proportion of straw to grain in Helge's Prolific may seem improbable; but a still smaller proportion is reported in the tests of the Missouri Agricultural College for 1880.

The average yield and weight of grain of the varieties ripening on successive days are as follows:—

	Av. yield, bushels.	Wt. of grain, pounds.
July 2	21.05	61¾
" 3-4	24.02	60⅝
" 5	23.48	60¾
" 6	22.29	59½
" 7	20.68	59½
" 8-12	15.62	57½

The average yield and weight of grain of the red and amber, as compared with the white wheats, are as follows:—

	Av. yield, bushels.	Wt. of grain, pounds.
Red and amber	21.61	60¾
White	20.80	60

The average yield and weight of grain of the smooth wheats, as compared with the bearded wheats, are as follows:—

	Av. yield, bushels.	Wt. of grain, pounds.
Smooth	20.28	59¾
Bearded	22.56	60¾

In regard to the last two points Warder & Barnett write as follows:—"White wheats are not usually as hardy as red, and smooth are not nearly as hardy as bearded. In an experience of 36 years we have never known a smooth wheat which would stand more than three crops." Our figures point toward the same conclusion, and it would seem worth while to examine this matter further.

Columbus, Ohio. C. E. THORNE.

SELECTING SEED WHEAT AND OTHER GRAINS.

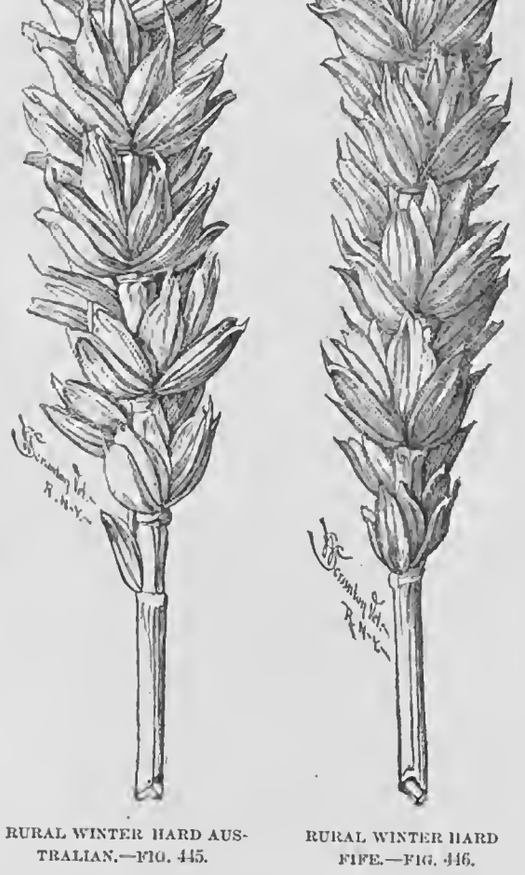
PROFESSOR W. W. TRACY.

THE general history of new varieties of grain has been about as follows. Some one finds a single plant produced by accident, which in certain desirable qualities (generally those of productiveness and hardiness) exceeds the varieties he is familiar with. He carefully saves and plants the grain in carefully prepared soil and, anxious to make the most of his seed, sows it so thin that each plant has a chance to perfectly develop and mature all the grain possible. As the stock increases, it is distributed over the country and the seed, being rare and costly, every one gives it an equally good chance, and the new sort is reputed to exceed any of the old sorts in productiveness. In a few years the seed becomes abundant and is sown like the older varieties and then speedily loses its good reputation and is abandoned for some newer sort.

Let us look for the reason and the remedy for this. No one can go through his wheat field without noticing that each *individual plant* produces, even in a maximum crop, far less grain than the plant would be capable of if it were in the most favorable condition for its most perfect development, and it cannot be otherwise than that the continual using of such plants for seeds must tend to reduce the productiveness of the stock. But let us look farther. If we examine the ripening grains, we will find that many of the plants have been so crowded that they have produced but single short heads; but examine these heads and in many cases you will find they contain but a very few grains, although frequently these few are exceptionally large and fine. So often is this the case, that let anyone attempt to select a few of the largest grains from a given field and he will find he obtains the majority of them from small or poorly filled heads. Much has been written on the desirability of carefully selecting seed grain, but it is usually accompanied with directions for selecting the largest and plumpest kernels, a course which, I think, will surely result in giving seed grain largely obtained from poorly developed plants. Is it any wonder, then, that even the most careful farmers are continually complaining that the wheat which formerly gave them a good yield has to be abandoned because it has become unproductive?

Is there any remedy? I think there is and a very simple one—namely, select your seed grain, as all other choice seed is selected, for the qualities of the plant rather than those of the individual seed. Is it practical to do this? I think so, and in this way: Let each farmer, before cutting his wheat, go into the field and select enough of the best plants—those producing the greatest number of large and well-filled heads—to give him about one quart of seed for each 15 or 20 acres he is to plant; let him thrash and save this seed by itself and sow it across one end or side of his field. On a large farm he can do this accurately enough for practical purposes by putting it into the drill first and carefully leveling it before emptying in the general seed, when the man may be set to work as usual. The next season, just before cutting, let him go into the part of the field where this choice seed was planted, and select a corresponding number of the best plants for the next season's seed stock, and cut and save the remainder of this part of the field to use for general seed that year. He can easily do this by simply cutting and stooking it first and hauling it into the barn last. In this way I think every farmer might not only maintain, but increase the productiveness of the variety best suited to his wants, and not be obliged to send off every few years for some new and better yielding sort.

Columbia, Mo.



RURAL WINTER HARD AUSTRALIAN.—FIG. 445.

RURAL WINTER HARD FIFE.—FIG. 446.

IMPROVING WHEAT.

PROFESSOR W. J. BEAL.

ONE new variety after another comes into prominence, and is extensively raised for a few years. It dwindles and disappears, to be followed by others. This occurs in the best wheat regions of the United States. Is this deterioration necessary? Can it be easily prevented? You asked for something about wheat. I can do little better than call attention to lectures or articles of mine in the past volumes of the Michigan Board of Agriculture. But few copies were printed, and although they have been sent to the editors of agricultural papers, they are seldom quoted.

Of course, the experiments of Frederic F. Hallett, of England, who began by selecting the best head of wheat he could find, paying especial attention to quality, are worth quoting:

Length.	Grains.	No. Ears on Finest Stool
1857, original ear, 4⅜ inches	47	
1858, finest " 6¼ "	49	10
1859, " " 7¾ "	91	22
1860, ears imperfect from wet season		39
1861, finest ear, 8¾ inches	123	52

"Thus," says Mr. Hallett, "by means of repeated selection alone in this short time the length of the ears has been doubled, their *contents* nearly trebled, and the 'tillering' power of the seed increased five-fold." This remarkable change was brought about in the following manner: These seeds were planted, one in a place, nine by nine inches. *The plants were well cultivated.* From seed raised in this way a whole field of ten acres, in a very unfavorable year, yielded 57 bushels to the acre, while with ordinary seeds on previous years the same land yielded from 22 to 40 bushels to the acre. The heads became more uniformly of good size and good quality, and yielded well. Like a well-bred flock of sheep, where the owner had bred toward one standard, they were even and uniformly good.

Here is another idea which is worthy of attention. It is from the Hon. George Geddes, one of the noblemen of the great State of New York: "At or before the time of thrashing set some sheaves on a floor, heads upward, and then draw out the most perfect heads—those of the greatest length and the best filled. Put this selected seed on land in the best condition in every respect; weed the wheat the next Spring. Out of this again, the next year, draw the best heads, and so on for several years—the longer the better. By-and-by whoever does this will have some seed wheat to sell that he may be willing to have bear his name, and he will be a public benefactor."

By this means he will get seed wheat which has had good ancestors for a series of years. Many of our farmers are quite particular to sow good, clean seed wheat, and probably all would prefer such. How are the plump kernels selected? By means of the screens in the fanning-mill the kernels are separated. They come from all sorts of heads, long or short, *large or small*, from those stools producing a few small heads, or from those producing many large ones. The seeds are selected at random from anything that may happen to produce large kernels. In this common practice no attention is paid to pedigree. This plan is good so far as it goes, but it does not go far enough.

Men are numerous in every State of our great country who use better judgment in breeding their animals. We need more men who will patiently, persistently and intelligently give attention to breeding good sorts of grains, fruits and vegetables. There is as great a chance for improvement in one case as in the other.

[Our readers are aware that for two years past, at the Rural Farm we have carefully selected the seed used. The best, heaviest heads of each kind are selected, rubbed out by hand, and sown in small plots in the Fall.—EDS.]

SOME EXPERIMENTS WITH WHEAT.

WALDO F. BROWN.

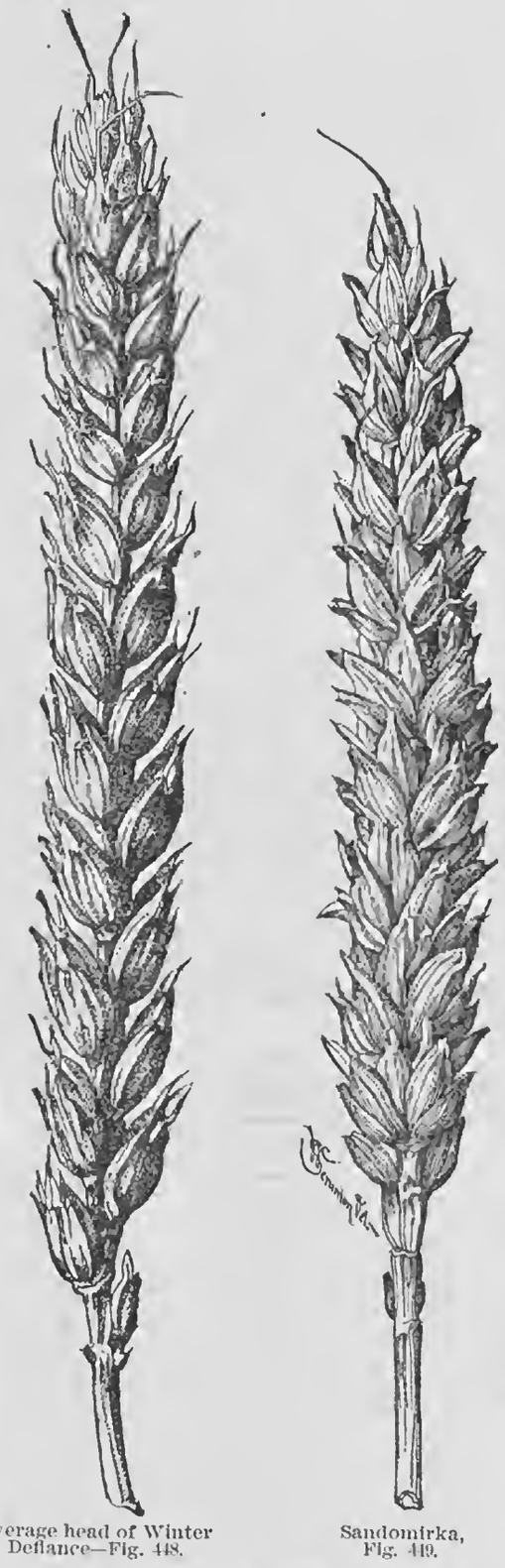
IN the Fall of 1878 I put in two acres of wheat and sowed one bushel of seed on one acre, and one-half bushel on the other. It was sown September 8, and when it first came up there was a marked difference between the two strips. But the Fall was favorable for growth, and before Winter it was difficult to tell which was the thin-seeded part. A neighbor cut it for me, and I told him that one side was seeded with half a bushel and the other with a bushel, and asked him to pay particular attention and see if he could tell which was the heaviest, but he could detect no difference. We had 103 shocks, 51 on one acre, and 52 on the other, and the yield was 35 bushels per acre. The next year I added four acres to the piece and seeded it with three pecks of seed to the acre. The yield was 180 bushels, or 30 bushels per acre. I have grown on picked acres over 40 bushels of wheat from three pecks of seed.

FIG. 447.

In the Fall of 1878 I manured a strip of thin land with bone meal at the rate of about 300 pounds per acre, and left a space one rod wide through the center to test the difference. As soon as the wheat started to grow in the Spring, that on which the bone was used out-grew the other, so that it could be seen from a distance in passing the field, and at harvest the unmanured strip was not worth cutting, while the part "boned," made 15 bushels of excellent wheat to the acre.

In the Fall of 1879 I sowed four acres of wheat on corn land. It was a cold clay, and I had rarely grown a paying crop on it, the corn that year did not make 20 bushels to the acre. I divided it into four equal strips and manured the first with one barrel of sifted hen manure; the second with 12 loads of stable manure; the third with 200 pounds of ground bone

and the fourth with 200 pounds of superphosphate. I left strips 10 feet wide without any manure between the different plots. From a comparison of the unmanured strips I estimate that I doubled the crop by the fertilizers. The four acres yielded 120 bushels, and although I did not thrash the strips separately, I found that the barrel of hen manure made as heavy a crop as the 12 loads of stable manure. Possibly it supplied just what was needed in the soil or gave the wheat just the quick start needed to enable it to find material already there. If a barrel of hen manure, as the experiment indicates, will add 10 or 15 bushels of wheat to the acre, it is time farmers were finding it out.



Average head of Winter Defiance—Fig. 448. Sandomirka, Fig. 449.

I am much in favor of top-dressing wheat land, and from experiments extending over several years, I find one load of manure made fine and spread on the surface, is worth to the wheat crop two plowed under. If used in this way every half cord of manure will make an extra bushel of wheat—and under favorable circumstances it will often double this. I believe that manure from a shed where it has been allowed to accumulate and retain all the liquid, is worth two or three times as much for wheat as that from the barnyard, and I am so situated this year that I can test the matter, as I have several loads of manure in a stable where I have kept a mare and colt all Summer.

I wish every wheat grower who reads the RURAL would try some experiments with this crop. I will suggest a few: 1st. Try one dollar's worth of extra work on an acre in the way of pulverization, and see if it does not give several dollars' worth extra of wheat; 2nd., see if three-quarters of a bushel of seed properly put in will not give a full crop—as much as 1½ bushel; 3rd., try a half cord of manure well "fined" on a tenth of an acre as a top-dressing, and see if it does not give from one to two bushels more wheat than an adjoining plot of the same size unmanured; 4th., try at least a small plot or two with some special manure, such as bone meal, night soil, hen manure, etc., to enable you to determine whether you can use them profitably or not. All such experiments will be of great benefit to you, and will be likely to make you more careful in the future.

Butler Co., Ohio.

SALT ON WHEAT.

PROFESSOR G. C. CALDWELL.

Whether or not to apply salt to wheat, and when to apply it, and how much to apply, and why it is useful, are oft-repeated questions in the agricultural papers. There does not appear, at first thought, to be any good reason why salt should be good for wheat; and yet no one can put together all the testimony about the matter, without being convinced that it does sometimes pay to use it for this crop. One farmer who, on a soil that was too light, hot and dry, got poor crops of Spring wheat, with a top-dressing of three bushels of salt harvested 25 bushels from the same soil, and with four bushels of salt harvested 29 bushels. Another can get fair crops of Winter wheat without salt on the same soil that for Spring wheat requires a liberal dressing of salt, as he thinks, to hold the moisture in time of drought. We are told that so careful and successful a farmer as the late John Johnstou was accustomed to set great value on salt for wheat, for earlier ripening and stronger straw. Again, we find it stated that a bushel of salt is good for an increase of four bushels of grain. A Wisconsin Farmers' Club arrived at the conclusion based, it is to be presumed, on the experience of its members, that salt hastens the maturity of the grain, increases the yield 25 or 30 per cent, stiffens the straw, prevents rust and smut, and at least checks the ravages of the chinch bug—a good deal to claim for salt. A Pennsylvania farmer with refuse salt from the packing houses gets 24 to 30 bushels of wheat to the acre on a soil which without salt would not yield a crop worth cutting.

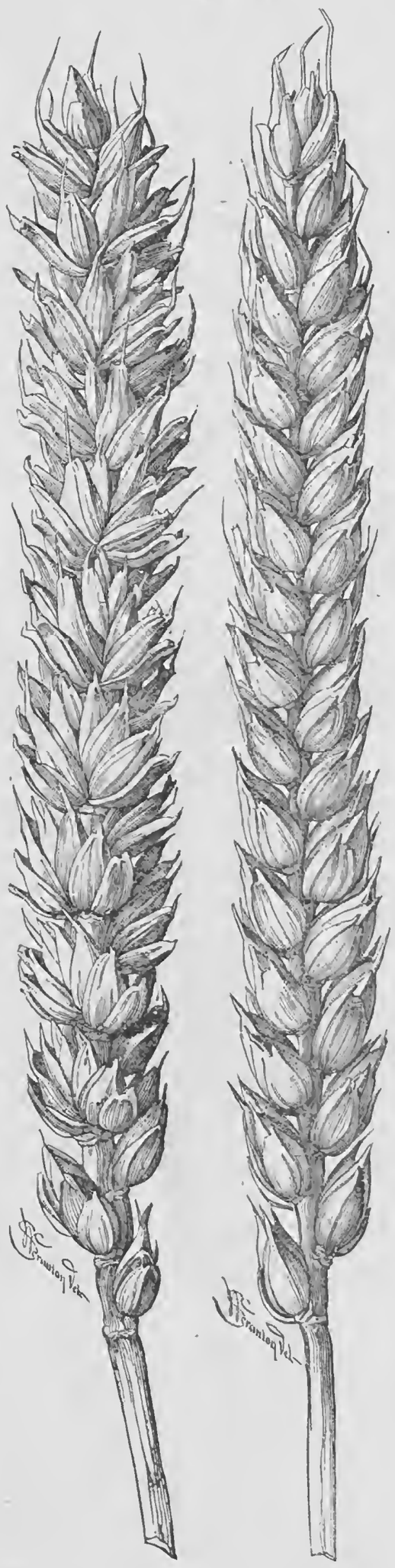
Voelcker speaks of the use of salt as frequent in England as a top-dressing for Spring wheat, mixed with an equal quantity of nitrate of soda, or Chili saltpeter. Bretschneider in Germany found that with nitrate of soda, which used alone gave but little increase of crop, the use of salt might pay, as it gave an increase of 18 per cent. of grain, but used with sulphate of ammonia it gave only ten per cent. increase over the ammonia compound used alone, and with guano it gave no increase over guano alone, except in regard to the straw. Many results of trials of salt on wheat are given in the Journal of the Royal Agricultual Society. Haunan in 1844 found only a slight tendency to increase the yield and weight per bushel. In a prize essay on cropping light land, written in 1853, the use of salt at the rate of two to four cwt. per acre is spoken of as increasing in favor, as it stiffens the straw, and assists in filling out the ear; and it is claimed by one writer, who had used it for many years, that it gives a better result with wheat than with oats or barley—in which respect, however, other writers do not agree with him.

Mr. Lawes in 1864, after mentioning the widely extended use of salt in the British Isles, and expressing doubt as to the reliability of some of the experiments with salt on wheat that had yielded remarkable results, shows that on his own estate it does no good. In the discussion which followed the reading of his paper, some were disposed to insist upon the value of salt, at least on some soils and especially on light lands; and an instance was given where a salted field of four acres yielded 30 bushels per acre of good grain, while on the adjourning unsalted field only 20 bushels of poorer grain were obtained. The straw of the stiffer, salted wheat, that stood upright was found to contain eighty-three per cent. of silica, while that of the unsalted field which was badly lodged, contained but 75 per cent. of silica. This may, however, have had nothing to do with the strength or weakness of the stalk, since experiments have shown that stalks with but traces of silica may be as strong as those containing the usual large proportion.

Against all these favorable results obtained by the application of salt to wheat it would be easy to produce an equal number of unfavorable ones, and probably successes are more likely to be made public than failures. In France, a commission appointed to inquire into the subject reported that salt was of no use as a fertilizer, at least when used alone. Failures to obtain good results seem to be more common on heavy soils than on light lands. On the whole, while the evidence of really accurate experiments on either kind of soil is far from what is needed to establish any conclusion in regard to the matter, as the case stands there is some evident ground for the belief in the usefulness of salt which prevails in some quarters.

Why may salt be useful on wheat? Certainly not because either of its constituents, chlorine or sodium, is required in the food of the plant; that there is no such need, at least beyond what may be supplied by any soil capable of bearing wheat at all, has been fully established. By many farmers salt is believed to be specially useful in times of drought; but it possesses no property, physical or chemical, which enables it to supply water to the crops. It may, however, if present in sufficient quantity, serve practically the same purpose in virtue of its power, when in solution in the sap of plants, of checking the rapidity with which water is transpired through the plant from the soil to the atmosphere; thus in times when water is scarce a given quantity in the soil may, by means of a sufficiently large dose of salt, be made to last longer and go further than it otherwise would. Salt in solution in the soil water may confer on that water an increase of solvent power for substances really needed by the plant, such as potash, lime, magnesia and phosphoric acid, as has been proved by numerous experiments. Salt may also, with the cooperation of the carbonate of lime in the soil, serve to increase the amount of nitrogen in the really valuable form of nitrate at the disposal of the crop. It is also affirmed by Voelcker that salt prolongs the vegetative period, and thus by keeping the crop for a longer period in a growing condition and causing it to feed on the soil for a longer time it may cause the production of a larger crop. I believe that in this capacity of providing in one way or another a larger supply of food for the crop out of the stores of difficultly assimilable material in the soil, the most satisfactory explanation of the effect of salt is to be found where any effect at all is produced. On a poor soil, scantily provided with plant food, it will therefore do no good, as there is no material for it to act upon to increase the quantity of food accessible to the plant.

Shall we use salt on wheat, and if we shall, when and how shall we apply it? The evidence does not justify a very decisive answer to the first question. But where salt can be had cheaply it will be worth while to try it on moderately light soils and Spring wheat. An application of from three to five bushels per acre will cost little, and may yield a fair if not a handsome profit. It is not best to apply it with the seed, but either three or four weeks before or after seeding. If only a small part of the readers of the RURAL would try the experiment this year, and for two or three years following, and report the result, together with a careful statement of the character of the season and of the soil, we might have a satisfactory solution of this as yet unanswered question, whether the use of salt on wheat is generally profitable.



DEFIANCE—FIG. 450. CHILI—FIG. 451.

THE PRIZE HEADS.

(See page 628.)

A BUSHEL FROM EVERY POUND.

One Pound vs. Three to Five.

PROFESSOR A. E. BLOUNT.

THAT a bushel of wheat, on an average all over the country, should be produced from every pound sown ought to be *a fact*, and not an expression in so many words. That a bushel can be raised from every pound of wheat sown under all ordinary circumstances is a fact that farmers should verify every season. So long as they sow 90 to 120 pounds per acre, generally on poor land or on land poorly prepared, there will always be small crops and poor seed. When it takes three to five pounds of seed to raise a bushel, it is, to say the least, a ruinous waste. Enough is wasted in such seeding to supply with bread the whole wheat-producing population the year round; and not only is this direct loss sustained, but another—viz., thick seeding invariably hinders the wheat plant from producing as much as it would were it not cramped and crowded so closely by its sapping neighbors. Farmers mistake the demands of almost all small grain. Generally they think the more seed, the larger yield, when the very reverse is the case. There are seeds that send up but one stalk and require to be sown thick; there are others, like some of the grasses, that do better on sod thickly matted; but wheat, oats, rye and barley show very clearly their repugnance to being sown too thick by their failure to stool out and make many stalks from one grain. When sown broadcast or with a drill, 30 pounds of good seed per acre should be the *maximum all over the country* upon all land that is in any way adapted to its growth.

Many farmers have made extensive experiments in thin sowing, and in no single case where the conditions were favorable and the culture carried out on scientific principles, has there been a failure to produce from 50 to 6000-fold. Well authenticated reports are on record when 40, 30, 15 and even seven and a half pounds sown per acre have produced three, four and even six times as much as any 90 pounds ever did. Every good kernel should make at least 20 good heads and every head at least 40 grains—800-fold. This shows the nature and habits of the wheat plant. I have known one kernel to produce 181 good heads and these turned out on an average 37 kernels each or 6,697 kernels in all. In this county last year 76 kernels of my Hybrid No. 10 (weighing 51 grains, Troy) planted on 76 square feet and cultivated, produced 10¼ pounds avoidupois—nearly 1,400-fold.

On these grounds in small plots well cultivated last year no one of the 67 varieties sown produced less than 56-fold, all without any fertilizer whatever. Then in all the reported experiments that have been made in sowing wheat thin on large as well as small tracts, it has paid twice as much as the extra labor cost.

Agricultural College, Fort Collins, Col.

WHEAT YEARS AGO—SUCCESSES NOW.

COL. F. D. CURTIS.

Thirty-five years ago Eastern farmers generally raised their own breadstuffs. About that time weevils began to increase to such an extent that many farmers gave up raising wheat. We recollect seeing the screen-box nearly full of weevils after cleaning wheat in the fanning-mill. The larvæ fed upon the kernels when in the milk, and if they did not entirely destroy the head they made the grains shrunken and poor. The final stroke to wheat growing, was made by the importation of the Hessian fly which, like the chinch bugs now troubling the Northwest, fed upon the stalk near the root, sucking out its juices, causing it to wither and die. Late sowing, after the flies had deposited their eggs on other plants, helped to prolong the cultivation of wheat for a few years, but the crop was so risky that farmers generally gave it up. With no wheat to feed upon, these pests became exterminated. For nearly a quarter of a century a wheat crop was a rarity. Those were days when rye-bread was fashionable.

Mediterranean Wheat being imported (we believe by the Patent Office at Washington) was gradually disseminated, and although at first it was not much better than rye, it grew in favor, as it made better flour, and on account of its coarse chaff was not attacked by weevils. It was hardy and productive and year by year improved in quality. This variety of wheat doing so well, encouraged farmers to begin wheat raising once more, and now wheat crops in the East are common and

farmers are rapidly getting back to the old practice of raising their own bread. Clawson is the universal variety which, like the old Mediterranean, is hardy and productive but of poor quality as compared with other kinds now grown. It does not seem to improve by continuous growing. When the flour is mixed with that of harder varieties, the bread is more palatable, and the flour also improves with age.

Wheat is such an important crop in domestic economy and fits so nicely in the rotation of crops that "Wheat Numbers" and the discussion of wheat raising are always interesting and must be profitable. Many farmers are deterred from putting in wheat for the want of manure in the Autumn. Experience has taught that a good crop can hardly be hoped for without it. We have succeeded in having an excellent yield by sowing it in good season and drawing the manure upon the field in the Winter and spreading it upon the snow. In the Spring all the lumps were carefully knocked to pieces and scattered evenly over the ground. The after-manuring serves the purpose of protecting the plants during the Spring thawing and freezing better than if it had been harrowed in with the wheat when it was sown. The manure was that which was made during the Winter and was drawn directly from the stables to the field.

The seeding of clover and Timothy sown in the early Spring on this ground was the best we ever had. We like the plan of turning over a clover sod or an old meadow as soon as possible after it has been mown, for wheat. Our forefathers used to think they could not raise wheat without summer-fallowing. They plowed the land early in the Spring, kept the sheep on it to keep the grass and weeds down, and then plowed it two or three times more. Our plan is a kind of semi-summer-fallowing with the advantage of an extra crop. A few days after the ground has been plowed it should be thoroughly harrowed to fill up the spaces between the furrows and to prevent the grass from growing. By the first of September it should be cultivated and the soil pulverized, and by the middle of September cross-plowed. By this time the sods will be rotten and the land can be reduced to a fine tilth and mellowness which fit it for wheat. Wheat should never be harrowed in, but covered either with a drill or cultivator.

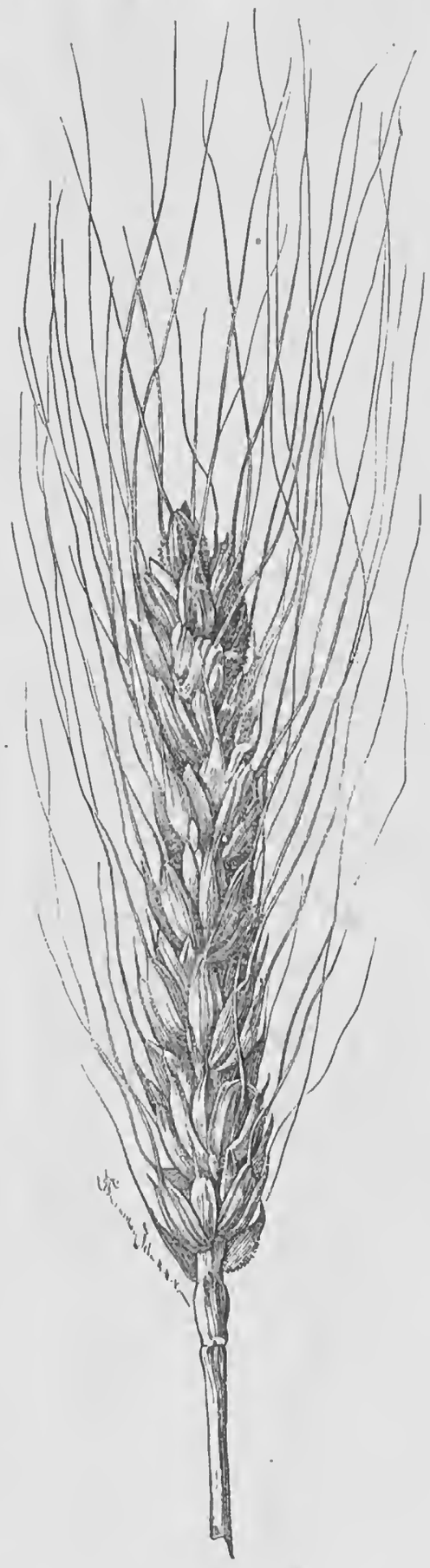
We like and attach importance to the plan of rolling the ground after it has been prepared for the seed and before the seed has been put in. While the soil should be finely pulverized, it should not be left in too light and huffy a condition. The roots will be stronger and the crop will stand the Winter better if the soil is made compact and firm. Thorough drainage is essential, but wheat will do well on moist soil—much better than rye. The bottom lands of the Mohawk River this year have produced an average of thirty-four bushels to the acre without any manure. Under our system of putting wheat on sod, a meadow may be renewed in one year, which is often desirable. The usual practice, however, with our farmers is to make wheat the third crop in rotation, following oats and corn. When this is done, more manure is required than with a sod seed-bed. The oat stubble should be plowed under as soon as possible after the crop is taken off, while the juices are still in the stubble which adds materially to its value in enriching the soil. In all cases, manure should be spread upon the surface for wheat and a liberal application will always pay in strengthening the roots for Winter and causing it to stool more plentifully. Commercial fertilizers pay as well on wheat as on any other crop, if not better, by giving it a good start, which is a great aid in affording more ample protection for Winter.

SOFT WHEAT IN GERMANY.

PROFESSOR F. H. STORER.

THE editorial remarks on "soft wheat" in the RURAL of July 30th, suggest the observation that it is not among American millers only that "there is a growing agitation against soft wheat." I have recently read in one of the agricultural periodicals of Germany a vigorous protest from an association of millers against the growing of soft wheat, and I could not but remark that there must probably be a good deal of truth in a prejudice so widely spread as this one seems to be. The German article was, in fact, couched in terms not unlike the expressions of the American millers to which the RURAL editorial referred. The argument was, briefly, that in recent years certain rough or bearded varieties of white English Winter wheat had been introduced into North Germany and largely grown there, especially in districts where beets are cultivated for sugar making; and that, since these English wheats yield more abundantly than the ordinary native varieties, they have been a good deal sought after and esteemed by the farmers. But the writer urges that, for the community at large, no real advantage is gained by the cultivation of the English wheats, since, when considered as food for the support of human beings, they are vastly less efficient than the ordinary native wheats of the region. The English wheats, he goes on to say, have a preponderance of starch; their gluten is comparatively small in quantity, and poor in quality; and the flour made from them is ill fitted for making bread. Taken by itself, the flour is really not fit for baker's use, being much more suitable for the starch factory. The only way that the baker can use such flour is by mixing small quantities of it with a large proportion of flour prepared from wheats rich in gluten, and, even then, he is apt to complain that the mixture of flours does not bake well. In case it should come to pass that no other variety of wheat beside the rough English were grown in a given locality, it would be absolutely necessary to import hard wheat from abroad in order to make good bread.

But, in fact, the German millers will not buy the English wheat at all after they have once made acquaintance with it; or, if they buy it, they do so at a greatly reduced price. Some of it is, consequently, sold to starch-makers; but for the most part it has hitherto been worked off by mixing it with other kinds of wheat, to be sold to distant markets—to the great detriment, as the writer urges, of solid business and to the positive injury of those farmers who continue to grow the native varieties, since their product shares the doubt which has been cast upon the grain of their neighborhood. This system of admixture had attained such proportions that the directors



VELVET CHAFF—FROM LIFE—FIG. 452.

of the Produce Exchange at Hamburg decided, some months since, to exclude bearded English wheat from their market. Since the first of June last past it can no longer be offered for sale there. The writer concludes by urging his readers to exert their utmost influence to prevent the further spread of the English wheat into other German provinces.

The article in question is interesting as illustrating the feelings of persons looking at the matter from a limited point of view. The small-way millers, and the statesmen even, of a little German Duchy will naturally view the question according to the limitations which hamper them. The American farmer, on the contrary, works in a wider field. His products are sought for by a great variety of consumers, and put to manifold uses. He will naturally continue to grow those varieties of wheat which best suit his royal pleasure. For him, the question is absolutely one of market price—as determined not by the wants of his immediate neighborhood alone but by those of the entire world. If he can find his profit in growing soft wheat he will undoubtedly continue to do so, no matter what millers may say or what the relative proportions of starch and gluten may be. And the miller, for his part, will, of course, buy those kinds of wheat he wishes for, and he will buy them in the places where they can be got most advantageously.

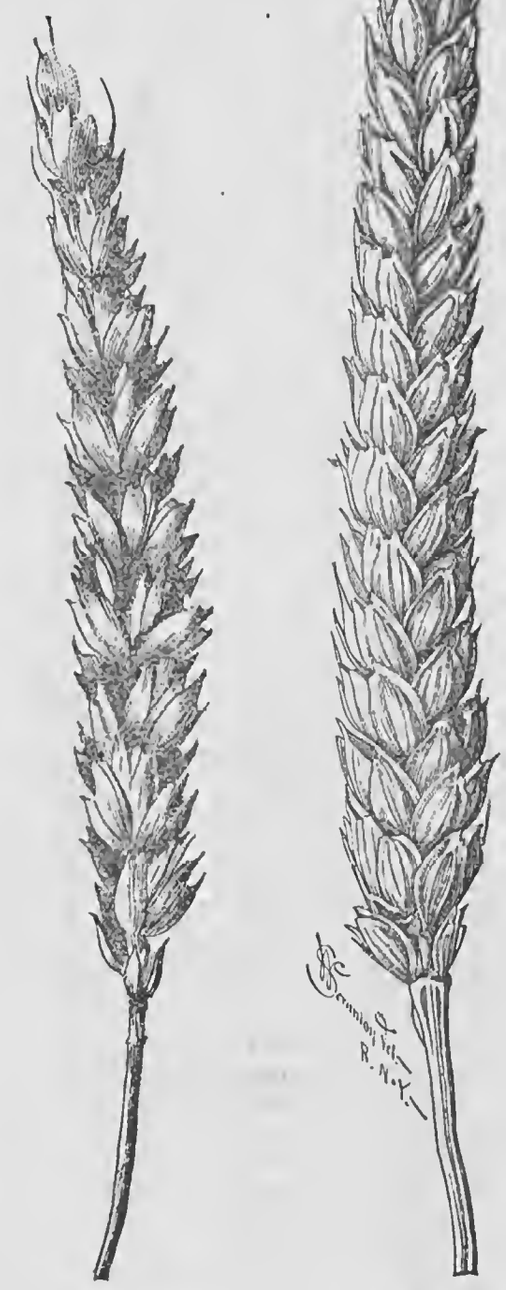
RYE TO THE RESCUE.

B. F. JOHNSON.

A SMALL portion only of the regular readers of the RURAL NEW-YORKER can be brought to understand the magnitude of the drought of this Summer in the West and South; nor would it be easy to afford them a correct conception of the disasters wrought by the combined forces of the Hessian Fly, the chinch bug and drought to Winter and Spring wheat and Indian corn. I suppose five hundred million bushels less for the three would be scarcely too high an estimate. But in the Winter wheat belt, where wheat is the leading cereal and the main crop of the country, the work of destruction of the chinch bug is not at an end for this year; for he will surely continue his ravages on the newly sown wheat just as soon as the green blades appear above ground, unless copious rains fall, which are quite out of the question for months to come. In view of this fact I have thought it advisable to use the columns of the RURAL, which is widely circulated through this region, to state some important facts in respect to Winter rye, and tell how it may be made to come to the rescue and partially supply the place which wheat would fill under ordinary circumstances.

On account of the sun-baked, compact and hardened state of the soil, due to prolonged drought and to the excessive heat, it has been and will be found impossible to do that breaking of the soil and make that fining of its substance, which are among the essentials in preparing the land for wheat. Besides, if after infinite labor the soil is so prepared and the seed sown, there is no security there would be moisture enough to germinate the grain, or at best it would do so only partially, and the seed would be lost. But in case enough rain falls to germinate the grain after seeding and by the first of October—and for the Winter wheat belt, that date is as late as the seeding can be deferred with safety to the crop—the moment the young wheat blades appear above the ground, the chinch bug, which is many-headed and lives over the entire Winter, will fasten upon them and suck the life and juices out of the plants. Moreover, there are almost certain signs in the heavens of a dry Autumn, and if a dry Autumn, a long, dry, cold and very severe Winter is almost a sure event. In that case, the wheat crop if sown early and getting a good start and stand, will run great risk of severe injury, and if sown late and weakened by the chinch bug, the crop will be almost certainly lost. These are fatalities which happened to the Winter wheat crops harvested in 1874, 1875 and 1881, and the crop of 1882 is almost sure to suffer in the same way; for it has been for a long time observed and recently clearly proved and demonstrated by Professor Thomas, State Entomologist of Illinois, that dry seasons and wet ones in the Winter-wheat belt, repeat themselves with more or less regularity every seven years and, therefore, that the coming and going of chinch bugs may be calculated and foretold with accuracy to a month.

But as a compensation in some measure for the failure of Winter wheat, we have a precious resource in Winter rye, which, while less valuable in many respects than wheat, may be justly considered the cereal of greatest importance after wheat and Indian corn. In the first place, in respect to the chinch bug, rye, like oats, is no favorite with it, and it seldom attacks either when there is barley, wheat or corn near. Besides, and here are facts of vast significance, first, the seeding of rye may be deferred in dry seasons with perfect safety to late in October, or a month later than wheat; and, second, it may be harvested from ten days to two weeks earlier and thus escape the ravages of the chinch bug, because he is chilled beyond doing serious damage in the Fall and not yet numerous enough nor yet ready for serious work in the Spring. While rye is impatient of too much moisture and will not stand half as much rainfall, overflow or soaking of the soil as wheat, it appears to be indifferent to Fall and Winter droughts and prolonged cold, and never makes so good crops as in those dry, cold Winters in which the wheat crop is more or less seriously winter-killed. This is what happened in the cold and dry and very snowy Winter of 1874-5, when the wheat crop was very badly hurt, as the same thing is almost sure to happen in the Winter of 1881-2. While only about two-thirds as much rye is required to seed an acre with it as an equal area of wheat, the cost of the former is less than two-thirds of the latter, but at the same time rye has become so scarce that it has risen from 70 cents in 1880 to $1.00 in 1881, and during the year has been higher than wheat, selling for $1.25 at a time the latter sold for 30 cents less.



YELLOW MISSOURI. FIG. 453.

"GOLDEN GRAINS," From life—Fig. 454.

At this juncture when and after both the Winter and Spring wheat crop of 1881 has been reduced one or two if not three hundred million bushels by drought and insects, and when the Fall crop is in very great danger of being largely abandoned by the impoverished farmer and lost if sown, he cares not to risk and lose the seed and labor of another crop, we have the grand resource of rye offered to us, and it seems to be specially the duty of such wide-read and influential papers as the RURAL NEW-YORKER to bring the fact prominently before the farmers of the country and especially those of the valley of the Mississippi. Further, it is the result of twenty-five years' observation in the West, that the farmers under many and various, if not all, circumstances have no such liberal and enlightened friends and advisers as the leading spirited and active agents of the great railroad lines, and, therefore, I ask of you that this matter of sowing rye as a substitute for wheat at this critical time be brought to their attention, that they may, as they surely will when they understand the subject, bring their influence to bear upon the matter in hand.

Champaign Co., Ill.

WHEAT RAISING IN MISSOURI.

This portion of the State can hardly be called a wheat-growing section; still, as a rule, every farmer raises enough for his own family, from 10 to 20 acres being the average wheat area per farm. Care enough, however, is not given to preparing or seeding the ground, to produce good crops—a carelessness that causes many failures. I have seen wheat sown on corn land without any previous preparation except cutting off the corn. Perhaps the last plowing received by the corn would have been about the middle of June, after which the land would remain undisturbed for at least three months; then the wheat would be sown on this ground packed hard by rain and sun, and a slight stirring of the soil, just to cover the seed, would be the only labor bestowed on the seeding. In many cases, I've seen the weeds and Crab Grass so

thick as entirely to hide the ground. Of course, no one could expect a good yield from such a crop. I do not mean that all wheat here is put in, in this way; but the practice is by far too common, and it is those who raise crops in this slip-shod manner who are loudest in their complaints that wheat raising hereabouts doesn't pay—and, most likely, it doesn't when conducted in this fashion. The crop this year has been exceptionally bad even on the best prepared land, for the finest fields of wheat were eaten up by the chinch bugs. So complete was their work that an experiment I had made in applying salt to wheat gave no result, for not a single head was made in the entire field. Nearly the same disastrous fate befell another field with which I had taken special pains, having plowed the ground deeply and thoroughly harrowed and dragged it and drilled in one bushel and an eighth of clean seed to the acre. In spite of my pains, this field will hardly average six bushels per acre, the chinch bug having killed at least half the crop after it had begun to head out. Experience has taught me that wheat requires a finely pulverized seed-bed at least three inches deep, under which the ground should have been previously well stirred and then made thoroughly compact by dragging, harrowing and rolling. The best way I find to prepare the ground for wheat is to plow it deeply and thoroughly at first; then roll and drag it until it is compact, and then pulverize the seed-bed with a good harrow. Good, clean seed drilled in such a seed-bed will, with anything like a favorable season, always yield a profitable crop.

Miller Co., Mo. N. J. SHEPPARD.

California Wheat Notes.

SONORA was always considered our best wheat for poor, dry lands. Six years ago, in a very short and dry season, a note was made of the time it took to mature a crop of grain, and it was found that in 80 days from the day of sowing it ripened. A number of us selected the heads that ripened earliest and sowed the kernels from them and again selected the heads that ripened earliest and sowed the seed from them; and so on, till this year Sonora ripened from *soaked seed in 69 days* from the day it was sowed. We have christened this improved, pedigree, "Sonora," the

RED MEXICAN—the earliest wheat in the world and the best adapted for growth on poor, dry soil.

ITALIAN is a wheat not extensively raised, and why raised at all, I can't see, as there is nothing superior about it.

CHILI is a superior wheat, of large yield, under favorable conditions yielding one-third more than Sonora under like conditions, but under unfavorable conditions of dryness and poor soil, 'twill not make growth enough for hay where Sonora will yield eight to ten bushele per acre.

PROPO is similar to Chili; and requires a season of 90 days at least to make a crop.

CLUB is an old, well known variety, not of superior quality, but having the advantage of stiff straw, not liable to fall even in the heaviest growth: yields well under favorable conditions. W. A. SANDERS.

Fresno Co., Cal.

Wheat Growing in North Carolina.

THE time was when the wheat crop of North Carolina was one of considerable importance. Then a large acreage was planted after tobacco, which, of necessity, received thorough cultivation, and was removed from the land in time to allow of thorough preparation for wheat which almost invariably followed, and almost as invariably was a remunerative crop; but all this is changed now. Since labor has been beyond their control, planters dare not risk the large fields of tobacco of former days, as the lack of help at the critical moment might result in the destruction of the whole by worms. Thus, from having a large surplus of wheat for market, we have come down to little patches here and there, falling far short of enough for home consumption. Formerly Peruvian guano was used for wheat profitably; but since the market has been flooded with adulterated and spurious gumos, we have become discouraged and either depend on cotton seed as a fertilizer for wheat, or use none at all. As a natural consequence, when we cease to look upon any crop as a source of profit, we become careless in the selection of seed as well as in the manner of planting. This is generally done by merely sprinkling (I can't call it sowing) the seed broadcast and plowing it in with a shallow furrow—and the work is done. When we prepare the soil properly and apply 40 to 50 bushels of cotton seed, costing about eight cents per bushel, we are enabled to raise the yield from a paltry three to five bushels per acre to one of 12 to 20 bushels. Under the present tenant system, the tenant having no assurance of his holding except until Christmas, we cannot look for much improvement in the matter of wheat growing, nor in many other respects. Only where the farmer owns the soil he tills, do we see wheat fields worthy of the name. M. B. P.

Cultivation of Wheat.

An experienced farmer who has made the wheat plant and its cultivation a careful study for years writes to us that the expense attending the cultivation of wheat—like corn or vegetables—is much less and its value much greater than farmers are willing to allow. When sown in drills 12 to 18 inches apart, it can be easily cultivated by the drill itself. The value of one cultivation, when all conditions are favorable, is equal to about double and often treble the expense. In large fields as well as on small plots it has been proven beyond a doubt that the farmer makes better grain and more of it by sowing thin and cultivation. The cost of one cultivation is just double the cost of drilling. In each space the drill hoes should run twice when the wheat is half done stooling, or is three or four inches high.

WHEAT PREMIUMS.

IN THE RURAL of May 28, 1881, the following announcement was made:

The RURAL NEW-YORKER begs to offer in articles of its own selection, for the longest and heaviest five heads of wheat from the next crop, $50.00, to be divided into first, second, third, fourth and fifth premiums. The awards will be published in our Special Wheat Number, and drawings presented of the prize heads.

When these premiums were offered, we had but little idea of the very general interest that would be taken in competing for them, but we have now to announce that not less than five hundred specimens of five heads each, have been received. Owing to the fact that many of these specimens were unnamed, and that in many other cases the packages and letters referring to them could not be placed together because there were no names or legible postmarks on the packages which enabled us to do so, we could not enter them upon our list. So, in justice to them, we would say that, in many cases, the difference between their specimens and those to which the premiums have been awarded was but trifling. In fact there were at least fifty specimens which were so nearly alike in size and weight that there was no "best" among them. All were equally entitled to premiums.

As we had already prepared an engraving of Black-bearded Centennial from our own crop of this wheat, it was not deemed necessary to present the prize head, which differs from it only in size.

Prize-Takers.

FIRST PREMIUM.—Prof. A. E. Blount, Fort Collins, Col. Black-bearded Centennial. Number of breasts of average head, 27; number of grains in average head, 104; average number of grains to a breast, 3.8; weight of grains per head, 107 gr.

SECOND PREMIUM.—John H. Kreuse, Portland, Oregon. Chili Club: Number of breasts, 28; number of grains, 131; average number to a breast, 4.6; weight of grains per head, 92 gr.

THIRD PREMIUM.—R. L. Smith, Tangent, Linn Co., Oregon. Clawson: Number of breasts, 22; number of grains, 101; average number of grains per breast, 4.5; weight of grains, 87 gr.

FOURTH PREMIUM.—John Brown, Brownsville, Linn Co., Oregon. Defiance: Number of breasts, 23; number of grains, 96; average number to a breast, 4.1; weight of grains in head, 58 gr.

FIFTH PREMIUM.—Lewis Kesby, Shepardsville, Mich. Clawson: Number of breasts, 20; number of grains, 72; average number to breast, 3.6; weight of grains, 47 gr

The following list is made up from those packages upon which the addresses were written:

1. Clinton Vass, Sussex Co., N. J.: Clawson. Longest head 5½ in.
2. W. S. Brooks, Seneca Co., N. Y.: Clawson, heads well filled, 6 in.
3. D. Rodegab, Seneca Co., O.: Clawson.
4. H. C. Denning, Monroe Co., N. Y.: Clawson, 6½ in.
5. G. A. Goff, Jr., Chemung Co., N. Y.: Clawson.
6. Claude H. Wixom, Yates Co., N. Y.: no name, resembles Clawson, 5 in.
7. Clarence R. Pratt, Wayne Co., N. Y.: Kentucky White, 1¼ in.
8. W. J. Swift, Dane Co., Wis.: Scotch Fife, three and four grains to a breast. Kernel large.
9. M. F. McLoud, Beaver Co., Pa.: several specimens badly damaged.
10. Jesse Owen, Chemung Co., N. Y.: Fultz; Longest 6 in.
11. W. H. Little, Ontario, Canada: Clawson, 6 in.
12. William H. Morrell, Medina Co., O.: received without contents.
13. John Awde, Ontario, Canada: no contents.
14. Oliver H. Waters, Niagara Co., N. Y.: Red Chaff Mediterranean.
15. Isaac Hemstreet, Jr., Erie Co., N. Y., Clawson, 5½ in.
16. Henry L. Bonnell, no address: Eclipse (?) so-called, longest 6¼ in.
17. M. M. Curtis, Vernon Co., Wis.: box broken.
18. Levi Hough Falconer, Chautauqua Co., N. Y.: Wicks, Clawson, Rio Grande Spring, Rio Grande, Winter.
19. W. B. Derrick, Ogle Co., Ill.; North Ill.
20. J. W. Phipps, Grayson Co., Va.: Fultz, 5 in.
21. S. B. Parrolt, Hocker Co., O.: several kinds; no name.
22. G. N. Q. Roberts, Trumbull Co., O.: Democrat (bearded), 4 in.; California, 5 in.
23. T. Shurt, Muskegon Co., Mich.: Clawson, 5½ in.
24. F. Habecker, Niagara Co., N. Y.: Silver Chaff, 6 in.
25. J. H. Jewell, Bradford Co., Pa.: Clawson (probably), 7 in.; in green state.
26. F. B. Russel, Huron Co., O.: Blue Stem or Gipsey Wool.; Clawson, 5½ in.
27. William H. Snyder, Butte Co., Cal.: beautiful specimens.
28. Rev. W. S. Fontaine, Rockingham Co., N. C.: Clawson.
29. Joseph Galbraith, White House, no State: Black-bearded Centennial, Golden Grains; very good specimens.
30. H. A. Andrews, Delaware Co., N. Y.: White Russian Spring, 6 in.
31. Alonzo Allen, Boulder Co., Col.: Defiance, 4½ in.; Siberian Wheat, 6 in.; beautiful specimens.
32. B. F. Linderman, Boone Co., Ill.: Michigan Fife, 6 in.; no name (bearded), 5 in.
33. James Cummings, Otsego Co., N. Y.: White Russian, 5½ in.
34. D. A. Davis, Linn Co., Oregon: French Wheat, 4½ in.; close spikelets; large grains. Also sends fine specimens of oats.
James M. Waters, Ontario, Canada: Scott, 5 in.; Treadwell, 5 in.
35. G. B. Hollingshead, Ontario, Canada: Wild Goose (bearded), 3 in.; beards twice as long as head.
37. R. F. Coffin, Boulder Co., Col.: Egyptian, Siberian 4½ in.
38. M. C. Carr, Cumberland Co., Ill.: Mediterrancan, 5½ in.
39. Edwin Bradt, Cayuga Co., N. Y.: Red Stem, 5 in.
40. H. N. Likely, Fremont Co., Col.: Egyptian (fine specimens), main spike 5 in.
41. J. H. Spafford, Genesee Co., N. Y.: Clawson (probably).
42. Charles J. Bailey, St. Lawrenee Co., N. Y.: Clawson, 5 in.
43. J. D. Hedges, Walla Walla Co., W. T.: No name (beautiful specimens).
44. Lewis Kirby, Clinton Co., Mich.: Clawson, 6 in.
45. Eli Snyder, Rice Co., Minn.: Scotch Fife.
46. W. T. Sitler, Crawford Co., Pa.: Champion Amber, 5 in.
47. G. W. Prebles, Prince George Co., Va.: No name (several specimens).
48. W. W. Corson, Bradford Co., Pa.: Clawson (fine specimens), green, longest 7 in.
49. Jacob Vrooman, Jefferson Co., N. Y.: Clawson 5½ in.
50. Lewis Pooler, Cayuga Co., N. Y.: Log House (bearded), 5½ in.; Lancaster, 4 in.; Clawson, 5 in.; Fultz, 3½ in.
51. J. M. James, Fayette Co., Pa.: No name.
52. A. H. Weld, Pierce Co., Wis.: Rio Grande (bearded), 4½ in.; Defiance, 4 in.; Scotch Fife, 4½ in.; Blue Stem, 4½ in.
53. Caleb Davis, Lane Co., Oregon: Australian Club.
54. T. Allen, St. Lawrence Co., N. Y.: Silver Chaff, 6 in.
55. Alexander Reed, Garret Co., Md.: Red Chaff, Mammoth White Wheat, 6 in.
56. S. Washburn, Susquehanna Co., Pa.: White Russian, 6¼ in.
57. Wm. Moore, Preble Co., O.: Acton, 4 in.; no name 5 in.; Fly-proof, 5½ in.; Camp Ground (bearded), 5 in. [This wheat has come to us under a dozen different names.—EDS.]; Kentucky, 4 in.; Clawson, 5 in.; Michigan Amber (bearded), 4 in.
58. John Butler, Prince Edward Co., Va.: American Eclipse (bearded), a new cross, close spikelets, 3½ in.
59. Jos. Schneeberger, Ingham Co., Mich.: Diehl, 2½ in.
60. David Porlous, St. Lawrence Co., N. Y.: White Winter, 5 in. (resembles Clawson).
61. Jos. Towner, Bradford Co., Pa.: Fultz, 5 in.
63. Jas. A. Clapp, Knox Co., Tenn.: Swamp (bearded), 4 in.; no name, 4½ in.
63. John Klesling, Clinton Co., Mich.: Number samples not named.
64. R. T. Halloway, Yates Co., N. Y.: Clawson, 5 in.; Armstrong, 5 in.
65. J. W. Hastings, Clay Co., Ill.: Rock, 5 in.; Lancaster or Mediterranean, 5 in.
66. C. D. Kneedlers, Madison Co., Ill.: Fultz, four lots average 6 in.
67. G. W. Peebles, Prince George Co., Va.: White Russian, 6½ in.
68. G. W. Thompson, Middlesex Co., N. J.: Defiance (five heads), 6 in.
69. J. V. D. Punyea, Somerset Co., N. J.: Clawson, 5 in.
70. W. C. Marsters, Wicomico Co., Md.: Maryland Blue Stem, 3½ in.
71. M. V. Roaney, Mississippi Co., Mo.: Velvet Chaff, 4½ in. [This is not the Velvet Chaff known in this country as such, but a Russian variety.—EDS.]; Fultz, 5 in.; Red Orange, 4 in.
72. C. L. Towsey, Allegan Co., Mich.; Clawson, 5 in.
73. W. A. Sanders, Fresno Co., Cal.: Club, 2 in.
74. Peter Allen, St. Lawrence Co., N. Y.: Clawson, 5¼ in.
75. J. E. Vanderbilt, Rockland Co., N. Y.: Clawson, 5 in.
76. A. T. Hoyt, Belknap Co., N. H.: Lost Nation (Spring), 6 in.; White Russian, 6 in.
77. A. W. Jennings, Cayuga Co., N. Y.: Wieks (bearded), 5½ in.
78. Peter Sutphen, Somerset Co., N. J.: Clawson, 6 in.; Bearded, 5½ in.
79. A. Sterling, Orleans Co., N. Y.: Clawson, 6 in.
80. F. M. Brown, Berrian Co., Mich.: No name (two varieties).
81. Joel Kluns, Saratoga Co., N. Y.: No name.
82. J. S. McBride, Shiawassee Co., Mich.: Clawson.
83. A. A. Skelton, Crawford Co., Pa.: no name.
84. F. D. Snyder, Tompkins Co., N. Y.: Clawson, 5 in.
85. G. L. Anthony, Guilford Co., N. C.: Yellow Missouri, 4½ in.; Fultz, 5 in.; Baltimore Beauty, 5½ in., Mediterranean (bearded), 5½ in.; Kivet, 5 in.; Kivet, blasted heads.
86. W. S. Hite, Augusta Co., Va.: Amber, early (bearded), 5 in.
87. Martin Stanton, Yates Co., N. Y.: Clawson, 5 in;
88. Robert Rose, Ontario, Canada.: White Lovet, 3½ in.
89. L. Triplett, Jr., Shenandoah Co., Va.; Rocky Mountain, 4 in.
90. Robert Mitchell, Huron, Ont.: Silver Chaff, 6 in. [Damaged by water; we think these would otherwise have taken at least a second premium.—EDS.]
91. N. J. Shepard, Miller Co., Mo.: no name, 5 in.
92. A. M. Sheldon, Sheboygan Co., Wis.: White Russian, 5½ in.
93. F. D. Snyder, Tompkins Co., N. Y.: no name.
94. L. Triplett, Jr., Shenandoah Co., Va.: Keep's Prolific (bearded), 4 in.
95. W. F. Morons, Hillsdale Co., Mich.: Clawson, 6 in.; Fultz, 6 in.; Arnold's Gold Medal; 4 in.
96. Wm. Wolter, Atlanta Co., Mich.: Clawson, 4½ in.
97. S. Sawyer, Niagara Co., N. Y.: no name (three kinds.
98. P. S. Cross, Baltimore Co., Md.: no name [evidently a Russian variety] bearded, 4 in.; Tappahannock, 3 in.
99. C. S. Root, Geauga Co., O.: Fultz, 5 in.
100. E. McMahan, Beaver Co., Pa.: no names; three kinds.
101. O. J. Stevens, Boulder Co., Col.: Clawson, 6 in.; no name, 5½ in., no name (bearded), 5 in.; Club, 4 in.; no name, 6 in.
102. W. A. Sanders, Fresno Co., Cal.: Chili, beautiful specimens, Club grades, 4 in.
103. Otis Ford, Lucas Co., O.: bearded variety, 5½ in.
104. W. A. Johnson, Vernon Co., Wis.: Clawson, 4 in
105. J. H. Ogden, Marathon Co., Wis.: Clawson, 5 in.
106. Henry Young, Jackson Co., Mich.: Club, 3 in. Clawson, 5 in.
107. A. Davis, Westenaw Co., Mich.: Clawson, 6 in.
108. E. E. Vandewark, Laramie Co., Col.: White Australian, 5 in.
109. J. C. Kellogg, Wyoming Co., N. Y.: Clawson, 6 in.
110. W. A. Sanders, Fresno Co., Cal.: Sonora Club, 3½ in.
111. Geo. Campbell, Bradford Co., Pa.: White Russian Spring, 6 in.
112. H. E. Davis, Oneida Co., N. Y.: Treadwell, 5 in.; Clawson, 5 in.
113. Henry Welfare, Shiawassee Co., Mich.: Clawson, 5 in.
114. W. W. Wilkinson, Cerro Gordo Co., Iowa: Unknown (bearded), 3 in.
115. S. W. Smith, Fond du Lac Co., Wis.: Rio Grande, 6 in.
116. Miss D. Depew, no address: Clawson (probably), 6 in.
117. J. C. Webster, Essex Co., N. Y.: Lost Nation, 6 in.
118. Grayson Co., Texas: Mediterranean (bearded), 5½ in.
119. J. S. Dodder, Genesee Co., Mich.: Unknown, 5 in.; Clawson, 5 in.
120. E. P. Carter, Monroe Co., Pa.: Bearded (no name), 5 in.
121. Geo. Bell, Franklin Co., O.: American (bearded), 4 in.; Smith's Improved, 5 in.
122. H. T. Miller, Ontario, Canada: White Russian (Spring), 6½ in.
123. John H. Kruse, Multnomah Co., Oregon: Chili Club, 5½ in. Extra.
124. Jas. A. Partridge, Onondaga Co., N. Y.: Clawson, 6 in.; White Winter, 5 in.
125. W. B. Derrick, Ogle Co., Ill.: Clawson, 5 in.; Silver Chaff, 4 in.
126. B. F. Wright, Niagara Co., N. Y.: Clawson, 5½ in.; bearded variety, unknown.
127. Name lost: Australian Club, 5 in.; Champion (bearded), 6 in.; Defiance, 5 in.
128. E. L. Case, Montgomery Co., N. Y.: Clawson, 4 in.
129. Chas. Edmunds, Chautauqua Co., N. Y.: Clawson, 5½ in.; Russian White Spring, 5½ in.
130. G. W. Crossfield, Wyoming Co., N. Y.: Treadwell (bearded), 5 in.; Clawson, 5½ in.; Log Cabin, 5 in.
131. W. A. Sanders, Fresno Co., Cal.: Propo, 4 in.; Italian Bearded, 5 in.
132. Anna Hayward, St. Lawrenee Co., N. Y.: White Spring, 4½ in.
133. U. W. Wedged, Broome Co., N. Y. China Tea (Spring), 6 in.
134. H. F. Jerden, Fayette Co., Pa.: Gold Medal, 4 in.
135. L. M. Northrop, Kalamazoo Co., Mich.: Clawson, 5 in.
136. John Brown, Lynn Co., Oregon: Defiance, 6½ in.; Golden Chaff, 4½ in.; White Winter, 4½ in.; Champlain, 5½ in.; (bearded) Defiance No. 2, 6 in.
137. H. M. Earle, Allegan Co., Mich.: Armstrong Hybrid, 5½ in.
138. C. E. Colby, Oakland Co., Mich.: Clawson, 6½ in.
139. Frank Walker, Winnebago Co., Wis.: Red Fern (Spring), 5 in.; Red Mediterranean, 6 in., Velvet Chaff, 5 in.
140. Nixon Moore, Boone Co., Ind.: Fultz, 4½ in.; Clawson, 5 in.
141. M. S. Coe, Oswego Co., N. Y.: Clawson, 5 in.
142. Twenty-five heads of fine kind of wheat, no name or address.
143. S. Slater, La Grange Co., Ind.: three varieties, average 4 in.
144. Abel Hoyt & Son, Saratoga Co., N. Y.: Clawson 4 in.; Velvet Chaff, 5 in.; Russian variety, bearded, 3½ in.
145. B. D. Niles, Chenango Co., N. Y.: Clawson 5 in. Silver Chaff, 5 in.; Bearded Russian, 4 in.
146. C. P. Smith, Orleans Co., N. Y.: Clawson, 5½ in.
147. Miles Wells, Chemung Co., N. Y.: Clawson, 4 in.
148. H. M. Clark, Alleghany Co., N. Y.: Clawson, 5 in.
149. Stryker & Jones, Oneida Co., N. Y.: Lancaster bearded, 6 in.
150. W. C. Roberts, De Kalb Co., N. Y.: bearded, 5 in
151. Joseph I. Bertram, Ontario Co., Ind.: China Tea, 6 in. (good specimens).
152. W. K. Emmons, Kent Co., Mich.: Clawson, 5½ in.; Armstrong, 6 in.; Fultz, 4½ in.; Silver Chaff, 5½ in.; Treadwell, 6 in.; unknown (resembles Treadwell) 5 in.
153. S. B. Fillson, Somerset Co., Pa.: Clawson, 5 in.; Longberry, 5½ in.
154. W. K. Bates, Winona Co., Minn.: Blue Stem, 5½ in.
155. S. H. Powell, Queens Co., N. Y.: Clawson, 5 in.
156. John H. Knapp, Broome Co., N. Y.: White Wicks (bearded), 5 in.
157. M. J. Spencer, Oakland Co., Mich.: Clawson, 5 in.; bearded, 5 in.
158. Wm. Driesbach, Livingstone Co., N. Y.: Bald Wicks, 5 in.
159. J. J. Hoster, Seneca Co., N. Y.: Michigan White, 5 in.; Clawson, 5 in.
160. D. C. McPherson, Monroe Co., N. Y.: Silver Chaff 5 in.
161. Geo. H. Manville, Saratoga Co., N. Y.: Clawson, 5½ in.
162. H. C. Aekley, Licking Co., O.: Bearded, 4 in.
163. David Petry, Crawford Co., O.: Charleston, 4 in.
164. F. S. Beekwith, St. Joseph Co., Mich.: Diehl, 8 in.; Clawson, 5 in.
165. Myron Kingsley, Bradford Co., Pa.: Club, 3 in., Bearded, 4 in.; Bearded, 5 in.
166. Prof. A. E. Blount, Larimer Co., Col.: Blount's Hybrid No. 10, 5 in.; Defiance, 5½ in.; Black-bearded Centennial, 5 in.; White Fountain, 6 in.; Illinois First Premium, 5½ in.; White Fountain, 5 in.; Clawson, 7 in.; Blount's Hybrid No. 10, 4 in.; Red Siberian, 7 in.; Fultz, 5 in.; Hay's Prolific, 5 in.; Pringle's Hybrid No. 6, 5 in.
167. H. T. Wessells, Burlington Co., N. J.: Fultz, 6 in. Clawson, 5½ in.
168. F. G. Larimore, Licking Co., O.: Bearded (no name), 5½ in.
169. Jas. Culbertson, Switzerland Co., Ind.: Russian variety (bearded), 6 in.
170. J. H. Burdin, Franklin Co., Ky.: Beardless (no name), 4½ in.; bearded (no name), 4½ in.
171. R. L. Smith, Linn Co., Oregon: Egyptian (no name), 6 in.
172. John C. Mohr, Alameda Co., Cal.: bearded and beardless.
173. Wm. Sharp, Jr., Crawford Co., Iowa: South Sea, Mammoth.
174. A. K. Black, Marion Co., Oregon: Folsey, French Little Club.
175. J. B. Falconer, Spokane Co., Wash Ter.: Club (fine specimens).
176. Jesse Owen & Co., N. Y.: Clawson, 6½ in.

THE
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ELBERT S. CARMAN.

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TO OUR SUBSCRIBERS.

During the same length of time we have never before received so many words of appreciation and good will from our readers as during the present year.

We hope this has been merited. Whether it has or not, it has been gratifying to us beyond measure, and we are moved to return our sincerest thanks to our patrons. The wish still further to improve this journal is sincere and constant. But we beg to say that the margin between our receipts and expenses is but narrow. It may be said without arrogance or exaggeration, we hope, that there is no other rural journal that pays more for original illustrations; no other that is printed upon better paper; no other whose pages are filled with a higher class of original matter. The changes in our present number will be apparent to our readers without further remark. It is designed to maintain the Rural New-Yorker during 1882 as it now appears, without change in the subscription price, whether our future increase in circulation shall justify it or not. We respectfully ask from our readers what we have often asked before, viz., that they will mention the Rural New-Yorker to their friends in such terms as in their estimation it seems to deserve.

Under notes from the Rural Farm, the yield of many kinds of wheat spoken of is merely estimated. The exact yield of all the kinds will not be known for several months.

The inner kernels of wheat spikelets are always smaller than the outer ones, and they are later in ripening. In establishing any new variety of wheat from cross-breeding, the outer kernels should alone be saved for seed.

We beg again to call the attention of farmers to the fact that whether a variety of wheat bears two or three grains in a breast makes a difference of one-third in the yield, all else being equal—a fact which, apparent as it is, we believe the Rural New-Yorker has been the first to call special attention to.

As a character by which to distinguish wheat, the color of the chaff should never be mentioned. For example, in Colorado, the chaff of Clawson is white; in certain parts of New York and Pennsylvania a light buff-brown; in other parts of the same States, a dark brown. And the same may be said of most other varieties.

Mr. Klippart states, in his book on the Wheat Plant, that the middle kernel of a breast or spikelet is larger than the outer ones, and he gives illustrations showing the difference. Now, in the generality of wheats the middle floret proves sterile, or rather most of them do, and when fertile the grain is, as a rule, as much smaller than the outer grains as Mr. Klippart makes it larger.

The beards of bearded kinds of wheat add materially to the weight of the heads. Given the weight of kernels to be the same, and the strength and hight of straw, as between bearded and beardless kinds it is plain the bearded will lodge before the beardless. Beards are of no known value. Hence, all other things being equal, it is desirable to cultivate beardless kinds.

Fig. 447 on page 621 shows the instrument used at the Rural Farm for crossing wheats. It answers the purpose nicely. The blade is made of cigar box sharpened at one end and receiving a camel's-hair brush at the other. The brush end is used for collecting the pollen—the other (pointed) end for opening the palets and removing the anthers.

Clawson Wheat is so well known that it was not deemed worth while to have a sketch made of one of the premium heads. The engraving of Black-bearded Centennial on page 619, is not of Prof. Blount's, but a fair average of those raised at the Rural Farm. So far as can be seen, the head of the so-called "Golden Grains" is merely the Black-bearded Centennial, minus the beards which, as is elsewhere stated, fall off when fully ripe and dry.

Our older readers will remember that we succeeded in carrying the Lost Nation (Spring) Wheat through the Winter of '79 and '80. Of last year's crop we selected the largest heads for seed and planted them Oct. 5, ten inches apart each way, in a plot carefully prepared. Nearly every plant was killed, the entire yield being only two heads. We may therefore consider our effort to change this to a Winter wheat a failure.

It seems to be generally conceded that wheat needs a mellow surface and a greater or less degree of compactness underneath. In one of our trial plots the western part was used for men and teams to pass to and from the other parts of the field. The ground therefore became hard. The surface was somewhat mellowed by the harrow, and the seed drilled in. The wheat on this part of the plot was at least as heavy as on the eastern portion, which was not used as a thoroughfare.

Of all our wheats, many of which were sown as Winter wheats for the first time, very few would have been appreciably winter-killed had the land in all parts been so drained or leveled, that the water could not have long remained on the surface, or beds of ice have formed. There is no wheat hardy enough to grow under such conditions, and it is of the first importance, therefore, that in fitting our lands for wheat, hollows should be filled in or thoroughly drained.

Those of our readers who are raising the Rural Branching Sorghum would oblige us if they would cut some of their plants just above the ground—say six inches. The value of this plant can never be known until the rapidity and luxuriance of the second growth are ascertained. The question as to whether it will seed here or there seems to us unimportant. A small quantity of seed serves for a considerable area, and plants enough to yield a sufficient amount of seed may be started in frames, hot-beds, or in the house as explained in previous numbers.

Fultz is unquestionably one of our hardiest wheats, and it has been said that it is of all wheats the best adapted to ill-drained land. To test this we sowed (drilled), on a poorly-drained plot of half an acre, three-and-a-half pecks of seed. Missouri Yellow was raised upon the same plot last season. The land was plowed and harrowed Aug. 15. Again, Sept. 23, it was harrowed with a disc harrow both ways; then with an iron tooth; then rolled. Concentrated fertilizers, 250 lbs. (raw bone), were sown, and the seed then drilled in as above. The yield will not exceed six bushels. The lesson we learn is that it is better not to sow wheat at all than to sow it on poorly-drained land—no matter how well it is prepared or what kind is sown.

Productive Wheat from Dr. J. B. Lawes.—As we do not always get the greatest yields from those kinds of Indian corn which bear the largest ears, so we must not necessarily look to varieties of of wheat which bear the largest heads for our heaviest wheat yields. A letter received from Dr. Lawes (Rothamsted, England) a few days ago, incloses a single head of wheat which is barely three inches in length. Of this he says: "I inclose a head of one of the varieties which has proved to be very productive in this country. What it will yield this season I do not know—possibly fifty bushels per acre." Again he says: "I generally sow two bushels per acre the end of October." The kernel of the head sent by Dr. Lawes is only of medium size, of an amber color. But there are twenty spikelets on both sides, most of which have four grains.

IMPROVED VARIETIES OF WHEAT.

While great and successful efforts have been made to improve most of our ornamental plants as well as those cultivated for their seed or fruit, is it not surprising that the wheat plant, which stands foremost among the agricultural crops of the country—of the world, should have been so overlooked, so neglected? Recognizing this, the Rural Farm years ago by selection; by changing Spring varieties into Winter varieties; by testing every kind it could procure from whatsoever source; and, of late, by cross-breeding, has obtained a great number of varieties, many of which seem, as thus grown at the Rural Farm, to be notably superior to those in general cultivation. Those who visit us express surprise, as they examine our wheats, at seeing among them heads and kernels of a size larger than any which they had deemed it possible to raise in our soil and climate. These wheats may not thrive as well elsewhere as with us. Only a comprehensive test could determine this, and it will be two or three years before we can distribute any of them among our subscribers. But we shall cultivate them with that object always in view. Such work is one of the many pleasures of earnest, liberal-minded agricultural journalism.

THIN SEEDING OF WHEAT.

Captain Jared Abrams last year raised the largest quantity of Clawson wheat to the acre of any of the farmers in the neighborhood of the "Rural Farm." We interviewed the Captain as follows:

"How much wheat did you raise per acre?"

"Thirty-four bushels."

"How much manure did you use?"

"None," he replied. "The land was in onions last year and well manured then."

"How much and what kind of manure did you then use?"

"Twenty-five loads of farm manure."

"Did you then drill in the seed or sow it broadcast?"

"I drilled at the rate of one and three-quarters bushel per acre."

"If with your present experience you were to set about producing a greater yield of wheat, would you use more or less seed?"

"I should not use more."

"Are we to undersand you would use less?"

"I should rather sow less than more," the Captain laughingly and somewhat evasively replied.

It should be stated that this farmer some years ago strenuously advocated two bushels and over to the acre, and that of late years he has been reducing the quantity.

THE FIRST GREAT GRAIN BLOCKADE.

Several times we have called attention to the evils of the grain blockade which of late years occurs every Fall at the termini of most of the great Northern railroad trunk lines. This blockade is injurious alike to the trade of the place where it impedes traffic and to the farmers and grain dealers along the line of the railroad whose terminal storage capacity is insufficient. Last year the worst blockade of this sort was at Baltimore, and in spite of the notice then given of the need of greater storage room there, a similar blockade has, thus early in the season, already demoralized the Baltimore grain trade. Warned by the trouble last year, the Baltimore and Ohio Railroad has built a new elevator which will be ready to receive grain to-day, so that no embarrasment will be felt with reference to that line; but the Northern Central's elevators, capable of holding only about 1,000,000 bushels, are already overflowing, while about 2,500 grain-loaded cars now blocking up all sidings as far north as Harrisburgh, Pa., contain about 1,500,000 bushels—more than enough to repack all the storage room were its present contents at once removed. The railroad company lays the blame on the produce speculators, who, instead of shipping the grain within a reasonable time, are holding it back for higher prices; while the grain dealers insist that it is the duty of the railroad company to provide ample storage room for all the freight it brings. The railroad threatens to raise the storage fees on grain now in the elevators unless at least half a million bushels are at once removed; and the grain dealers threaten litigation in case such an increase is made. The merits of these recriminations interest us but little; but for the interests of the farming community, we trust their outcome will compel a better management of the grain received at the chief collecting points.

THE DROUGHT AND THE CROPS.

From nearly all parts of the country the mail and telegraph have lately been bringing news of a disastrous drought of exceptional length and severity. Its severity and long continuance may be estimated from the fact that from August 1st to September 2nd the rainfall amounted to only 1.55 inch in New York, 1.16 inch in Buffalo; 2.03 inches in Albany; 1.85 inch in Montreal, 1.18 inch in Philadelphia; 0.57 inch in Oswego; 0.50 inch in Lynchburg and a still smaller precipitation in most other sections, except in the Northwest, where 3.20 inches fell at St. Paul, Minn., and 3.82 inches at Des Moines, Iowa.

Corn, which even before the drought was in much poorer condition than last year, has been still further damaged, probably to the extent of a couple of million bushels; cotton, which promised an exceptional yield, will most likely prove a smaller crop than that of last year; tobacco, according to the latest advices from Virginia, North Carolina, Kentucky and Connecticut, will be a very short crop; pastures have been literally burnt up, and stock have had to be fed or struggle along in a half-starved condition on the scantiest sort of herbage; streams everywhere have been extraordinarly low; wells have dried up, and all industries depending on water for motive power, have been more or less paralyzed, and in most sections water for stock and even for household purposes has been scarce. Over most of the West this terrible drought was partially broken up last week, over three inches of rain having fallen at Springfield, Ill., in less than an hour on August 31, and two-and-a-half inches at Des Moines, Iowa, in three hours. According to a report of the Signal Service sent here on Friday evening last, the rainfall during the preceding week at 23 stations in the South was 0.95 inch, against 1.41 inch dur- the corresponding week last year, and 0.16 inch during the week before, the heaviest precipitations having been 6.04 inches at Charleston, S. C.; 3.42 inches at Smithville, N. C. and 1.20 inch at Montgomery, Alabama. Everywhere, however, the rainfall came too late to prevent a world of damage and was insufficient to satisfy the needs of the thirsty earth and of the parched vegetation.

BREVITIES.

Does any one of our farmer readers recall that he ever prepared a field for wheat too carefully?

A farmer remarked to us while looking at a red-strawed wheat that he preferred red to yellow straw, having found it stronger.

The season for wheat at the Rural Farm was not favorable to a heavy yield. Rains and cloudy skies prevailed from first to last, and the grain of all kinds was shrunken.

A letter just received from Dr. J. B. Lawes, of Rothamsted, England, dated Aug. 27, says: "I am sorry to say our harvest is in a very critical state. I began to cut wheat on the 1st of August and it is not carried in yet."

If an acre be laid off in ten-inch squares it will take, in round numbers, 67,500 grains to plant it. Suppose that every grain were to produce 20 heads and every head 20 grains. Allowing 600,000 grains to the bushel, we have a crop of 45 bushels to the acre.

It will be seen by reference to Prof. Shelton's interesting article on "Western Wheat Experiences" that wheat does not shrink from evaporation in the bin when put up perfectly dry. Two careful tests which he made showed there was a slight increase in weight.

The Genesee Valley was once famous as the wheat region *par excellence* of the United States. Other and wider wheat areas "carry the belt" now, but not owing to any wearing out of the Genesee lands if the account given by Mr. J. L. Lyons of that region, at an Eastern Farmers' Club, be correct. He said that 56 bushels of Fultz wheat to the acre had been raised there, and that Mediterranean yielded 30 to 45 bushels per acre last year.

A *breast* or *spikelet* of wheat is the same thing. Some breasts or spikelets bear three; others five flowers. In the three-flowered, the middle one is often abortive, as in Clawson, which usually, therefore, bears but two grains. In the five-flowered, two are usually abortive, so that the breast bears but three kernels. These differences make, of course, a great difference in the yield, and we should by selection endeavor to establish and to cultivate those varieties which bear three or four grains in a breast. The outside sheaths (chaff) of the breast are *glumes* and correspond to the calyx of other flowers. Immediately within a glume or external chaff are two other sheaths which are called pales, palets or paleæ. The outer of these alone, in bearded kinds, is bearded, while in beardless varieties, merely the rudiment of a beard or awn appears. Between these two palets, as elsewhere stated, are to be found the reproductive organs—the stamens, pistil and ovary.

WHEAT RAISING IN SOUTHERN WIS.

In Southern Wisconsin since the advent of the chinch bug and other enemies of the wheat plant, farmers have practiced sowing oats with their Spring wheat. They call the mixture succotash. They mix one peck of oats with seven of wheat to the acre: that is, two bushels of grain to the acre, and they ordinarily get 10 bushels of wheat and 20 or 25 of oats to the acre, and the wheat is more plump and better in every way than wheat sown by itself. The theory is that the growth of the oats is so luxuriant that the insects can eat their fill and yet make no impression on the crop. We do not have snow enough here to sow much Winter wheat, as it is likely to be winter-killed, and Spring wheat sown by itself is, of late, an uncertain crop. There are mills to separate the oats from the wheat. The flour is not always as white as the best "superfine," because a few oats will be left in the wheat, but it makes a very good quality of bread, and growing succotash is much more economical for a farmer than to buy his bread. The use of salt on wheat in Spring is coming into great favor. It stiffens the straw, and the wheat is said to fill better. More benefit is derived from the use of it in a dry than in a wet season. A VOLUNTEER.

Walworth Co., Wis.

COMMUNICATIONS RECEIVED FOR WEEK ENDING SATURDAY, SEPT. 3.

A. S. S.—C. W. H.—G. O. W., thanks for careful test with potatoes.—E. W.—C. E. P.—P. B. M.—M. R. S.—J. G. B.—A. L. J.—C. W. D., thanks—D. R.—C. J. R.—W. A.—W. H. C.—E. J. B.—J. B. (Union, Broome Co., N. Y.), thanks.—E. G. S.—J. W. W.—C. A. G.—B. F. D.—M. E. M.—F. U. S.—E. D. M.—W. M.—F. D. C.—R. E. P.—W. S.—P. R. L.—J. A. S.—R. R.—D. W. S., thanks.—C. C. D., thanks for specimen oats.—B. F. J.—W. M. K.—H. N. D.—H. R. R.—F. & R. S.—M. A. O. N., (Kansas) please write us about flax'—J. S. W.—J. P. W.—J. S. W.—J. B. (Tioga Co., Penn.), We should be glad to receive a potato to test—G. W. Peebles—thanks for oats. Should you kindly send us a quart of the White Z., please write your name and address on the package, that we may enter them upon our records. "Golden Grains" is simply Black-bearded Centennial as we think we can show.—H. McC.—J. S. B.—M. N. C.—We shall try—J. O. & Co.,—D. D.—F.—W. E. G.—R. T. L.—D. L.—P. B. P. thanks for candid report—we want to get at the truth in every instance.—N. L. A.—H. C. B.

Miscellaneous.

TRUTHS FROM KANSAS.

Statistical Information of Crops and Stock.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

"DROUGHTY KANSAS," forsooth! It had not that appearance to the writer as he picked his way through the muddy streets of the capital city of this great Western commonwealth, on the 26th day of July, clad in a suit of water-proof, and further sheltered from a pouring rain by a Paragon umbrella. Nor was this rain which welcomed us at Topeka merely a local shower; for in the Land Department of the Atchison, Topeka and Santa Fe Railroad we saw a budget of telegrams from points all along the line, reporting abundant rains even to the western border of the State. Western Kansas has really had a greater rainfall this season than the eastern part of the State; both sections would have had enough for the crops, had it been a little more uniformly distributed, but the unequal distribution has here, as in most of the Central and Western States, worked great damage both to wheat and corn. A good, generous rain throughout Kansas two weeks before wheat harvest would have doubled the gathered crop; and if the present copious showers had fallen only a fortnight earlier, the corn crop would be 25 per cent. larger; as it is, the State has no occasion to be ashamed of her aggregate cereal products for the year 1881.

Kansas has the best method of gathering and recording agricultural statistics of any State in the Union. The origin and perfection of the system are due to the late Secretary of the State Board of Agriculture, Alfred Gray, whose death was a national loss; for he would undoubtedly have been chosen as Le Duc's successor in the office of Commissioner of Agriculture—a position he would have filled with rare distinction and ability. Mr. Gray's excellent system is faithfully carried out in Kansas by his successor, Mr. J. K. Hudson, and is now closely imitated in the Agricultural Departments of Ohio, Illinois and one or two other States.

26,000,000 BUSHELS OF WHEAT.

FROM the May and June reports to the Kansas Board of Agriculture, we cull and compile the following interesting statistics; the figures are official, and not the mere estimates of your correspondents. After deducting the number of acres of wheat which were winter-killed, and those destroyed by noxious insects, the acreage harvested this season was 2,217,000, or about 225,000 acres less than in 1880; but the average yield throughout the State will fall little short of twelve bushels to the acre, whereas in 1880 it was only ten bushels; thus the total wheat crop of Kansas for 1881 will exceed 25,500,000 bushels, nearly a million more than last season, though produced upon an acreage ten per cent. smaller. As late as the 10th of May a practical farmer and good guesser going among the wheat fields of Kansas, would have estimated the yield as high as 22 to 24 bushels per acre; the promise was magnificent. Just prior to that date there had been frequent rains, and the growth of the wheat was rank and rapid. Then followed three weeks of dry weather and intense heat, which in the soft condition of the grain, scorched and shriveled without ripening it. The wheat, however, of early planting, did well, neither the heat nor chinch bugs affecting it seriously, and the wheat on the uplands of the Arkansas Valley, where, as a rule, the ground had been carefully prepared, yielded better results than other portions of the State. The Mennonites in Harvey, Marion, and McPherson Counties are probably the most extensive wheat growers in Kansas, and in many instances they harvested 20 bushels to the acre. They have had the best success with a species of bearded wheat, which they call "Crim Wheat"; the name being derived from the Crimea, in Southern Russia, whence the seed was imported. Other excellent wheat counties are Sumner, Sedgwick, Reno, Rice, Barton, Stafford and Pawnee. We saw a 40-acre tract of wheat in Pawnee County, that would thrash 35 bushels to the acre. The leading wheat county in the State is McPherson both in acreage and average yield to the acre.

120,000,000 BUSHELS OF CORN.

In the production of corn Kansas will be one of the foremost States this season. In view of the unfavorable reports from Illinois, Indiana and Ohio, we look to see Kansas take fourth rank among the States: Illinois, Missouri, and Iowa alone will probably exceed her crop. Two weeks ago our estimate of the total crop was 150,000,000 bushels, but the prolonged heat will cut this down at least 20 per cent. We think the reviving rains have come in time to prevent greater loss than this; 120,000,000 bushels from 4,000,000 acres gives an average yield of 30 bushels per acre, which is low for Kansas. Her rich bottom lands often produce 75 to 80 bushels, and in a very favorable season the State at large, has averaged 40 bushels. The population of Kansas is, in round numbers, 1,000,000; the foregoing figuses give 120 bushels of corn and 25½ bushels of wheat grown for every inhabitant. Let us add to this the live stock statistics, and we find that Kansas will not suffer at present for lack of bread or meat. The people will not only be able to meet the home demand bountifully, but to export largely both east and west.

In point of numbers there is little difference in cattle, swine, or sheep in Kansas at the present time. Sheep number about 1,000,000 or one for each inhabitant; this is an increase of 66⅔ per cent. over the number here in 1880. There are 100,000 more swine than sheep, and 100,000 more cattle than swine. All of these stock interests are daily increasing in magnitude, but the sheep interest is growing far more rapidly than the others. The partial failure of the grain crops in 1879 and '80 taught the farmers of Kansas, especially those of the Western half, a lesson which most of them have wisely heeded: that was the insane policy of confining their farming to field crops of whatever sort. They began at once to diversify their crops and to purchase stock, so that all the "eggs should not be carried in one basket." They recognized what they should have seen before—that they were living in the most favorable climate for stock raising in the United States, the very place of all places for flocks and herds. South Central and Southwestern Kansas have a latitude which insures exemption from prolonged and excessive heat in Summer, and from the rigors of a Northern Winter. Ordinarily sheep and cattle can graze the year round. This is made possible, not by the climate alone, but by the character of the prairie grasses. The nutritious Buffalo and Gramma Grasses afford pasturage in Winter as well as in Summer, and it is but rarely that the snow prevents grazing for a week at a time. Last Winter was exceptionally cold in Kansas, as all over the country, and much longer feeding of stock was required than is usual.

A PROFITABLE EXPERIMENT.

But a single instance of success in sheep raising during the past year will show that, notwithstanding the few extra weeks of feeding and shelter, this industry was more profitable than any other species of farming in the same locality. A number of Topeka gentlemen last Fall invested $3,500 in 1,000 grade Merino ewes and 10 thoroughbred Merino rams, and contracted with a practical sheep-raiser in Pawnee County to take charge of the flock. The sheep were simply loaned to the man for a term of three years, he to bear all expenses of keeping and feeding, and to be responsible for all losses in the original flock, as well as for all the increase that should reach maturity. His compensation for the labor and risk was to be one-half the wool clip each year and one-half the total increase at the end of three years.

It was our good fortune to see the first season's balance-sheet of this enterprise, and we think the items will be of interest to many readers of the RURAL NEW-YORKER. It should have been stated that 300 of the original ewes were yearlings that did not breed; the increase from the remaining 700 was 600 lambs; the wool clip from the flock was 5,698 pounds, which netted 20 cents per pound, or $1,140; one-half of this sum equals $570, which is more than 16 per cent. on the investment of $3,500. Then there are the lambs, which in the Fall (one year from the time of investment) will, at a fair estimation, add at least 24 per cent., making 40 per cent. in all for the first year. The increase of the second year, at 80 per cent., would be 800 lambs, and of the third year 1,040 lambs; the wool clip will increase in an equal ratio, and it is hardly likely that the price will decline, so that at the expiration of the contract, after giving the keeper his share of the flock, the company will have more than double the number of sheep they commenced with, and will have received an average yearly dividend of over 50 per cent., less, of course, deduction for any losses beyond human foresight to guard against.

What branch of business will pay equal to this? And our illustration is by no means an unusual case. If putting out sheep *on shares* is thus profitable, how much more profitable cannot a practical sheep farmer with a little capital make the raising of his own flock. The climate, the soil and the pasturage of the Arkansas Valley are all admirably adapted to promote the health of sheep; foot-rot there is unknown, and scab is rarely met with. Thousands of Kansas farmers are going into this profitable industry, and many sheep men from other States, and especially from Western New York, are bringing in large flocks; at the present rate of increase the number of sheep in Kansas next year will be 150 per cent. greater than now.

KANSAS STATE FAIR.

No State fair has been held in Kansas since 1874; but this year a new and vigorous association has been formed which promises to get up an exhibition of the agricultural resources of the State, that will be creditable and truly representative. The fair will be held at Topeka from Sept. 12th to 17th inclusive: great interest has been awakened in every county and the display promises to be one of the finest ever made in the West. The Fair Association offers liberal premiums for the exhibition of fine stock, and some of the leading stock-raisers in Missouri, Illinois, Ohio, Pennsylvania and New York have made application for entries of their best blooded animals. The Atchison, Topeka and Santa Fe Railroad will make a magnificent display of productions, agricultural, mineralogical and industrial, from along their various lines. The preparations of this company for the State Fair indicate a much more extensive and more artistic exhibit than they gave at the "Centennial," which many of our readers will remember as one of the attractive features of that great world's fair. After the State Fair the "Santa Fe" Company will transfer their entire exhibit to the Grand International Cotton Exposition at Atlanta, Ga.

This sort of enterprise by the railroads of Kansas has done more to stimulate immigration to the State than all other instrumentalities. Recently a tendency on the part of the better class of white people in the South to migrate North and West, has been noticed by the shrewd observers in this section; and it is a wise policy on the part of extensive land-owners to foster and encourage this movement. Two years ago Kansas was the goal of the colored "Exodusters" from the South, although the number of negroes who came was not nearly so great as has been represented by the press. This new exodus is more desirable, and will, it is hoped, assume large proportions. The Prohibitory Law is seriously affecting foreign immigration, but proves an inducement to an excellent class of American farmers and tradesmen to locate where their sons are not subject to the temptations of open saloons and liquor domination.

Literary.

THORNS AND ROSES.

CHAPTER I.

ON a hot Summer afternoon, when not a breath of air is stirring, it is possible to find a more agreeable seat than in a close railway carriage; or at least I thought so, as I gazed through the window at the ever-changing scene. For the last hour I had been alone, and had made myself as comfortable as possible under the circumstances. I could not, I thought, be very far from Stanton, and I tried to think the way was becoming familiar, though there was no reason why it should, as a child can scarcely retain a very vivid recollection of railroad landscape; and as a child I had last beheld the pictures along this route.

I began to dream about my past life—a very unromantic life it was, and that was singular as my name had long been linked with romance; how many Lovels were there left on earth now, I wondered. Myself, Kate Lovel, my aunt Dorothy, an unknown cousin, and a distant relative alone remained.

Of my father I had only a dim recollection; he had been an only son idolized by his parents and sisters: he had died a true gentleman, a gallant soldier; I could well remember listening to his praises, mingled with stories of Lovel glory, from my father's elder sister, aunt Dorothy, at that time established as mistress in my dear mother's place. Besides aunt Dorothy, I had another aunt, but had never seen her. I had caught whispers of a quarrel between her and my father; and as I grew up, I could guess pretty clearly what Barbara Lovel's story had been; and that she had robbed her sister of the lover for whose sake aunt Dorothy was still Miss Lovel; as my only playmate, I recollected a dark-faced boy who was often at our home, and to whom I used to run at any time, for we had been as brother and sister.

On my father's death, I, a child, was his sole heiress; he had left instructions as to my education, and desired that his house should still be his sister's home. I had been sent to school and had remained there until this day when I was returning home.

My school life was happy and tranquil; I grew up there, outstaying my first friends, until masters and mistresses might have regarded me as a fixture. I do not know that the fact of my being a Lovel helped me in my studies, or solved more easily the problems of decimals; but I was proud of my name and its historical glories.

I was called proud also; yet I won the love of mistresses and fellow pupils, and they had parted from me with tears. It was good to remember that I had won some affection and scattered seeds of kindness by the way-side of my life. School days ended, I had had a brief sojourn in Paris with a friend; and at last—at last—I was grown up, tolerably accomplished, and, best of all, free as air in heart and mind.

I began to speculate on what I should find at the end of my journey—if all would be strange, or would come back to me as well known and familiar. To aunt, who had received my mother when a bride—who had stood beside my dying father—my heart was drawn strongly.

My other aunt had died when I was at school; she had married a Mr. Hays, who, by my father's desire, had assumed the family name.

The sisters had met but seldom after the marriage, Barbara having deserted our quiet country for gaiety and society elsewhere. She had left one daughter, Edith, the cousin whom I had never seen yet; and Mr. Hays had married again very soon after the death of his first wife. In the kind letters aunt Dorothy had written me she told me that Edith and her father's new wife did not agree, through whose fault it was she did not know; and this was almost all that I knew of my cousin, Miss Edith Lovel-Hays.

There was one face which I longed to see—the face of my little playmate and kinsman, Brandon. Little he would be no longer, as he was older than myself; and must be greatly changed. He had been frequently mentioned in aunt's letters; Brandon, she told me, had been brought home from school long ere, in her eyes, his education could be properly begun; but he was more like a man than a boy. Then, Brandon's father had died very suddenly; and the child is like you, Kate, an orphan; though in calling him child I err, for he is a young man, already master in the house. I don't wonder at this, for his father was a merely nominal master; and, but for Brandon, I verily believe the property would have been lost.

What Mr. Brandon Lovel's relationship to myself or family was I did not know, nor, I am sure, did aunt Dorothy; he was not brother or cousin, and I suspect his relationship to us consisted in the fact of his bearing the same name and belonging to the same county

as we did; he and his predecessors were our "kinsman;" a sufficiently vague description.

Brandon's mother had died whilst he was an infant; and he had been neglected by his father. Knowing something of the gentleman's character, aunt's remark, that the property might have been lost, did not seem to me without grounds. Mr. Lovel was supposed to have sown whole acres of wild oats; his name and the names of his bosom friends were synonymous with wildness and folly, and he had gloried in this.

Brandon's life, thus far, could not have been happy: and it was not strange that he was grave and quiet; the wonder to me was that he had not followed the example of those who surrounded his father, but he seemed to have shrunk away from the atmosphere of dissipation to the quiet, sanctuary of his study and the loved companionship of his books.

As my playmate, the man's nature had been visible in the child's—for then, as now, he was a student. His greatest delight had been to lie before the old-fashioned fireplaces, finding out the meaning of the pictures on the tiles, and relating stories to me, whilst aunt Dorothy smiled on us.

Kingston and the Brandon estate was not very far from our own, which, in extent and wealth, sank into insignificance beside the other. Perhaps we had a little more pedigree and bygone glory than had the Brandon-Lovels.

I was near Stanton now—there was the spire of its church. I could picture the quaint building, the stained windows, the low porch, the green hedge and creaking gate. I looked out at the little station with its white railings, and beheld a rosy-faced groom clad in the livory of the Lovels. Ere many moments I was standing on the platform, rather faint after my long journey, my heart beating fast; but as there was no reason why I should burst into tears on being plunged at by the groom, I drove them back, soon recovering my habitual calmness, and descended the steps, followed by my luggage.

The air, as we drove along was cool and sweet. I gazed at white cottages, farms, fields and pastures; then came green trees, with a gleam of water beyond their shadowy clusters, until I saw my home. There was the dear old house, gray and worn; the velvet lawn, with peacocks strutting on it as of old; the garden filled with red roses, clove-pinks, and lavender—sweet old-fashioned blossoms, in which aunt delighted.

The door was open, one or two of the servants waiting; but I replied hurriedly to their welcomes, having caught sight of her dear face, and I hastened to greet her.

She would scarcely let me say a word until I had gone to my room and refreshed myself after the journey; and I ran up stairs, feeling that this indeed was home. I had guessed that aunt Dorothy would give me my own old room, and I could have remained examining the treasures in it, musing on the past for hours; but aunt was waiting, and I left the room. As I crossed the hall and saw the armorial bearings on the high stained window, a vision of my mother standing there, with the colors tinting her dress—of my father beside her—rose before my eyes and seemed to me like a welcome home.

Aunt Dorothy's parlor was a queer little room, with queer little ornaments—Queen Anne teapots, eggshell cups and porcelain dogs; a Dresden vase of rose leaves; a basket of lilies; and drawn near the window was a round table with a spotless cloth; purple-blue and gold china; whilst as the principal figure in the picture was a tall old lady, whose white hair was veiled by a high cap, whose eyes were soft and gentle, and whose delicate hands were half hidden by matchless lace. Such was aunt Dorothy.

"I am surprised, Kate," she said, her hands hovering over the teacups; "I expected that you would still be a school-girl, but like Brandon, you are old—in manner, I mean, You are very like your father; the same dark hair and eyes, the same frank expression; but all we Lovels are 'frank and fearless.' We shall be very happy, I think. Your mother, Edward and myself never had an angry word, though people say pride and hot temper are our family failings."

I glanced for a moment at the face of him whom I had known all too slightly, who had not lived to bid his child welcome; opposite was my mother's pure face; her image, too, was faint and indistinct.

"They were very fond of each other," said aunt. "Her room up stairs is just as she left it, Kate, for Edward would not have it disturbed; he did not long survive her; duty called him away and when he returned, it was only to die. We shall never see another like him, for the world and its ways are changed now, and what its future will be I know not. That other picture represents myself and Barbara. You don't remember her?"

Only once or twice had I seen her.

"She had some slight difference with Edward, and did not care for Stanton. Mr. Hays is living, as you know, but we see nothing of him."

Her hands trembled a little, and I thought of her love-story; she did not allude to it, for she was one who never spoke unkindly of the living, and would have thought it a sin to speak of the dead save roverently and tenderly.

"Edith is very like her father in some things; but she resembles Barbara very much indeed. You will see her to-morrow."

"To-morrow? I echoed.

"Yes. She comes here when she pleases. It will be more pleasant for her now that you are here, for it was dull, I'm afraid, for her. She is so like her mother!"

From this I began to form my own opinion of Miss Edith Lovel's character.

"I hope you won't be dull, Kate. There is but little society; Brandon comes, and sometimes Nevil Verner."

"Nevil Verner, aunt?"

"Ah! the Verners are strange to you, dear. They came to live at Newville, and, discovering that Mrs. Verner was an old friend of mine, I called to see her. I found her a confirmed invalid; she is a widow, Nevil her only son. As I am too old to go so far often, and she cannot come, we correspond very pleasantly through Nevil. He brings messages from her, and carries back mine. Edith and he did not agree, which was a pity, as he is so kind. I have much to be thankful for, though you would smile, perhaps, if you saw me, with Nevil reading for me or giving me the latest news."

I was not a little touched by her simple pride in this; and a feeling of gratitude towards the unknown Nevil Verner awoke in my heart.

"He took your portrait to show Mrs. Verner, Kate. You see I have my friends; best of all, I have Brandon."

Involuntarily I glanced at the blue and white tiles, and aunt Dorothy smiled.

"He is my right hand, Kate. He often talks about you, and calls this his other home. He gives me his arm round the garden, reads to me for hours, and always sends me something on my birthday. It is something for one so old to say that her birthday has never been forgotten. Though the world has sadly degenerated, the good and true still remain. King's Rest is lonely for him, I fear; but he and Nevil are good friends."

"And Edith?"

"Edith and Brandon are excellent friends, though she teases him sometimes. He will never marry."

Aunt said this so solemnly, that I looked up, expecting a story.

"You know the prophecy—that one of our houses, in every generation, will remain unmarried, and it has always come true. My uncle Sydney was never married, though his wedding-day was chosen. I am not married; and in the present generation the lot will fall on Brandon."

"It may fall on me, aunt."

"You are the last of the Lovels, for Brandon's family is but a branch; Edith is scarcely a Lovel; the race will not die out, so the lot must fall on Brandon."

"I would like to see Brandon, only I dread meeting him as a stranger."

"You will meet as though you had not parted."

In this strain she continued for some time; then rising, led the way to a second parlor; a new piano, somewhat out of keeping with the old furniture, she told me belonged to Edith.

Long after aunt Dorothy was, I hope, asleep, I wandered through the rooms in the light of a Summer moon: a strange occupation, but it suited my mood. No sound disturbed the silence of night; I gazed out at a sky whose color melted into the tenderest emerald tints where it seemed to touch the earth, and straining my eyes, I fancied I even saw the trees surrounding Kingston; there was peace and repose here, and I laid my head on my pillow, feeling calm and tranquil as the night itself, with no foreshadowing of sleepless hours, of bitter tears, of sorrowful vigils, though they were indeed to be mine.

(To be continued.)

BRIC-A-BRAC.

At Cambridge, General Washington had heard that the colored soldiers were not to be depended upon for sentries. So one night when the pass-word was "Cambridge," he went outside the camp, put on an overcoat, and approached the colored sentinel. "Who goes there?" cried the sentinel. "A friend," replied Washington. "Friend, advance unarmed and give the countersign," said the colored man. "Roxbury." "No, sar!" was the response. "Medford," said Washington. "No, sar!" returned the colored soldier. "Charlestown," said Washington. The colored man immediately exclaimed, "I tell you what, sar, no man go by here 'out he say 'Cambridge.'" Washington said "Cambridge" and went by, and the next day the colored gentleman was relieved of all further necessity for attending to that branch of military duty.

Improving on Shakespeare.—One day as I was coming from the Lyceum, where I had been witnessing Booth's "Hamlet," I got into a car with a rustic young lady and her swain, who had been present at the same performance. "Oh, William," said she, "it was perfectly lovely, but so sad. I think it was an awful shame to drown 'Ophelia' and kill 'Hamlet.' They ought to have been married." The swain heaved a sigh, drew close to his love, and said: "I ain't great on tragedy, but I guess that's how I'd a-fixed it."

How an Arab Poetess was Inspired.—Many very good jokes are found in Arabic poetry, but these also for the most part depend upon some ingenious turn of a word, and are therefore untranslatable. The Arabs were very fond of the exercise of capping each other's rhymes. Akil ibn Ullafeh, a poet of the Koreish, one of whose daughters married the Caliph Yesid II., thus amused himself while on a journey with his son and daughter. When it came to the young lady's turn to improvise a verse she sang as follows:—

"All giddy then with sleep were they,
As though with Sarkhads liquor strong,
That through the veins doth find its way,
And course through back and feet along."

"By Allah!" exclaimed the father, "thou couldst not have described it so unless thou hadst drunk thereof," and proceeded to administer corporal punishment. The son remonstrated by shooting at his father with an arrow. "Never mind," said the old man, quoting a proverb, "his temper is like Akhzam's;" that is to say, "he is a regular chip of the old block."—Temple Bar.

If it be true that one man in twenty-five is color-blind, the cause of a great many heart-burnings and alleged practical jokes has been discovered. There is the color-blind lover who said to his lady-love, who was a brunette, and wore maroon, "Yon dear little strawberry blonde, what a nice green dress you wear; it just becomes your blue hair and yellow eyes." He was merely color-blind.

A chemist, expatiating on the late discoveries in chemical science, observed that snow had been found to possess a considerable degree of heat, whereupon an old lady observed, "that truly chemistry was a valuable science," and, anxious that the discovery might be made profitable, inquired of the professor what number of snow-balls would be sufficient to boil a tea-kettle.

"What kind of a house do you want?" asked the architect. "Oh," replied the citizen, wearily, "I don't want a house at all. I just want you to build me three tiers of closets, like jail cells; one hundred and thirty closets in a tier, and put a roof over the top tier. I want to put up a house that will contain enough closets to satisfy my wife. But the architect, who was a man of broad experience, told him he would have to put a thousand closets in a tier and make the edifice six stories high, and then his wife would say when completed that there wasn't a closet in the house big enough for a cat to turn round in.—Burlington Hawkeye.

Philological Contrarieties.—A gentleman having an appointment with another, who very seldom kept his time, to his great surprise, found him waiting, and thus addressed him—"Why, I see you are here *first at last*; you were always *behind before*, but I am happy to find that you have come *early of late*."

"We had Some Words and Parted."—A reverend gentleman horrified a small company a few evenings ago by telling that he and his wife had separated. "Not parted?" inquiringly exclaimed three or four in a breath. "Yes," said the gentleman, with a sigh; we had some words, and parted." A shudder went round the room, when some one inquired: "For good?"—"Oh, no!" said the divine. "She has only gone to the country, and will be back in a day or two."—"But," said one of the bolder ones, after a while, "Did you really have any words with her?"—"Oh, yes! she said, 'Good-bye, dear;' and so did I."

The Dark Side of Matrimony.—A slave in the West Indies, who had been married to another slave by one of the missionaries, at the end of three weeks brought his wife back to the clergyman, and desired him to take her again. The clergyman asked what was the matter with her?—"Why, massa, she no good. The book says she obey me. She no wash my clothes. She no do what I want her to do." The minister: "But the book says you were to take her for better or for worse."—"Yes, massa, but she all worse and no better. She hab too much worse, and no good at all."

In a murder trial in Nevada a citizen was being questioned as to his qualifications to sit in the jury-box. One query was:—"What would you do if you were on the jury, and the case was," etc. "Sure I'd do whatever was plazin' to the rest of the company," said he. He was excused. The local comment is that this teaches us that politeness is not always to be encouraged.

Village Postmaster to His Wife:—"Here is a postal card to Mr. Jones, saying that his brother and five children will be here on Saturday. Now keep that card back till then and I will be at the depot, and when they find no one to meet them I will take them all over for $3.

The best periodical for ladies to take monthly, and from which they will receive the greatest benefit is Hop Bitters.—*Adv.*

For Women.

CONDUCTED BY MISS RAY CLARK.

FANCY WORK.

CARRIE V. SWEET.

Much has been written in regard to fancy work; and many articles have been wrought from printed instructions that have brightened many an otherwise plainly furnished room. Still much more may be written, even a repetition might be made with no detriment resulting therefrom.

And now as the time for our annual fairs is at hand an agitation of the subject may result in some good. Some one may be incited to contribute a specimen of hand-i-work to the women's special department. This department, possibly not strictly one of the essential ones, is in itself as great an educator to certain classes as the "cattle show" and "horse racing" are to other certain classes. Unbiased people have admitted that a fine display of women's work adds much to a good fair and is in no way detrimental to it.

The taste of most individuals is modified by their surroundings, and whatever is new and pleasing to them has a tendency to soften and refine the coarse side of their natures. These are facts well worth remembering; facts that can be quite fully developed by the general tone of exhibitions at the county fairs. The most of us have probably made some articles for home purposes that "tell their own story" of neatness, industry and ability. If so send them to the fair, allow them to tell the story to five hundred homes some of which will profit thereby. The larger the collection and the greater variety exhibited the better the people will be pleased and the greater the inducement to attend "our fair."

If the ladies of the Rural New-Yorker will set themselves about contributing descriptions of how to make various articles of fancy work they will supply a much needed want in our rural homes. A want that is felt most by those that have the least chance to see such exhibits because of the distance from the city and inconvenience of going to town.

A friend once said some mats would save her best table cloth. Handing her instructions she soon made a complete set of table mats. Another wished some edgings, giving her instructions her busy hands soon made several yards of knit edging. This tends to prove that many an article would be made and exhibited if a little of the right instruction was timely given. Therefore my plea to "Rural" women is to exhibit all such articles at the county fairs.

[Accompanying this article was a drawing for illustration of a figure for outline embroidery, a pattern for applique, one for table mat, another for knit edging. The descriptions for the latter two are given below. The illustrations we are unable to insert—limited time and press of work will not allow of their reproduction. Any one familiar with crochet and knitting work will be able to use the descriptions without illustration in making mats and lace.]

KNIT EDGINGS.

Cast on 5 stitches, knit across plain. 1st row knit 1, throw thread over, knit 2 together throw thread over twice, knit 2. 2d row knit 2, knit 1 loop, purl 1 loop, knit 3. 3d row knit 1, throw thread over, knit 2 together, knit 4. 4th row bind off 2, knit 4.

TABLE MATS.

Use German cotton No. 4. Begin at the center and crochet a chain of several stitches. Turn and crochet back, once into every stitch around to starting place, then turn the work and crochet around again thus forming a rib. At each of the lines widen one, stitch every time round, that is, crochet two stitches in one so as to keep the mat flat and good shape as it grows in size. Crochet as many ribs in each mat as there are center stitches. Hence if you make six stitches in the center chain, crochet six ribs for the mat. In crocheting around each time to starting point observe a little loop in-

to which fasten the work before turning so as to preserve each rib separate and unbroken at this place. The turning is to form the ribs.

The border is simply three rows of common shell crocheting.

To complete the set there should be a mat for meat platter, for gravy boat, vegetable dishes, tea-pot and hot water pitcher. Each mat to vary in size to suit the dish placed upon it.

[The above article was written for our "Fair Edition," but, like other matter, was unavoidably crowded out. As the Fairs are not yet over, it will still be timely, although we regret its non-appearance in former issue.—R. C.]

DRESS.

THERE is nothing in this age and country that yields a more potent influence over people in general, than dress, and for that reason, if no other, should neatness and taste be exercised in the selection and "make up" of our clothing.

Although many go to extremes in dress, there are those who keep the extreme in an opposite direction. Not that they don't wear enough clothing, but they are so fearful lest some one should think they are trying to "keep in the fashion," that they make of themselves oddities and subjects of ridicule. There is no necessity for following every whim of fashion; neither is there any excuse for a person persisting in having his or her clothes cut "just so," and being of just such a quality for all occasions, regardless of their ill-fit or unbecomingness.

I have seen mothers with grown-up daughters who were refined ladies, persist in dressing in a style that attracted attention and ridicule, and was a source of mortification to the daughters. And such people are often quick to accuse their children of being ashamed of them.

We all love to see the dear old lady, who, in spite of being old-fashioned, is neatly and becomingly attired. It is better to wear a fresh, neat handkerchief around one's neck than cheap, coarse lace, or a soiled, crumpled ruche, because lace or ruching is fashionable.

There is a great tendency with the younger people to ape every fashion, without regard to expense, good taste, or becomingness; this is greatly to be deplored, as it is apt to make a strong impression, either favorable or unfavorable. How important it is that one should be careful, tasty and neat in the arrangement of the toilet. It matters not if one is poor and cannot afford to buy expensive clothing, keep the coat or dress carefully brushed and repaired, and if a woman, don't put a lot of trimming on a cheap dress, that will attract attention to its cheapness. The more severely plain the better, taking care that it fits well, and is of some quiet, modest color.

It is to be wondered at that some mothers think it necessary to make their little girls' dresses so short; when they sit down, the little things vainly endeavor to pull their scant skirts down over their knees, and when they run or jump around in their play, one has a full view of their underclothing, to the belt.

We hear a good deal of ridicule of women's dress from the masculines; one tells us how absurdly long or short some women wear their dresses; another points out the bad taste of some fleshy or thin woman in the fit or style of her garments. But did it ever occur to any of my sisters how equally absurd some men dress?

Walking through one of the fashionable thoroughfares of the city, not long ago, I could not but observe some of the masculine costumes. About nine-tenths of all the men I met wore pantaloons that touched the pavement behind with every step, and in many cases they were frayed and soiled, just as some women's dresses are. A very few that I met wore pantaloons that were really quite short, and caused their feet to look just as large and clumsy as some women's do, with short dresses on.

I observed quite a number who were rather fleshy, and they invariably wore pantaloons that were "skin-tight," with exceedingly short coats that did not add to their appearance from a rear view; these were open in front, displaying a huge watch chain dangling on the expansive vest-front. Surmounting this was a high "stove-pipe hat," than which a more absurd hat was never worn by a woman.

Another class was exceedingly thin, and invariably wore pantaloons—one leg of which contained cloth enough to comfortably cover both legs of the wearer, and they wore, as a rule, ulster or long overcoats that were open from a little below the belt behind, causing the coat-tails to flap around equally as ungracefully as a woman's illy-draped or tight skirts. And then, how their shoulders were padded! One has to smile, to see the arm moving from the real shoulder so far back under the pad, and imagine the kind of a figure there is hidden under all that cloth and padding. With this costume is worn a large Derby hat, and the hair is cut so short that the scalp shines through, and the ears stand out, with a strong resemblance to a—well, what the little girl called—"a long-eared horse."

For another class I refer you to a humorous cut on the last page of a late RURAL:

"Fact,"

"Solomon in all his glory was not arrayed as one of these."

ALLINE RAY.

A POOR TRAVELING DRESS.

WHAT would one think of a mother who provided for her daughter's traveling outfit, over a very long, rough journey, where she was to meet all vicissitudes of climate and weather, only a flimsy ball dress? It might be very beautiful in fabric, and adorned with abundance of the choicest flowers and sparkling gems, but it would be a miserable failure as a traveling dress, and we should almost think the woman deficient in sound sense who should provide it for such a purpose.

But is it any more sensible to send our girls out over the rough journey of life with only a stock of accomplishments to meet the wants of this every-day working world? How many dear girls marry without the slightest preparation in the way of domestic knowledge and self-reliance in managing home affairs. It is fondly hoped that skill will come to them and that they will manage somehow to keep a house in respectability and comfort; but O that ball-dress traveling suit! How poorly it answers in the wear and tear of the road.

Don't buy everything for the girls. Trust them with the money after giving them as much good advice as you please. Let them learn how to buy by actual experience. If they make some mistakes let them abide by them just as you have to. Said a boy of a brother skater who had met with a tumble: "Let him fall down. That's the way to learn." It is the way we all learn a great many things. If Jenny's pretty blue cambric fades out white, let her bleach it and make the best of it; but learn the lesson also of avoiding that alluring, deceitful shade in the future.

Let her learn to make bread from the beginning to the end of the process, and teach her the most thrifty, excellent short-cuts to perfection in all departments of cookery.

It is not needful to go through the tedious processes our grandmothers used to beating eggs to a froth with a knife, waiting all day for bread to rise, and so on, in a world where egg beaters are to be had, and Vienna yeast-cakes which will answer the purpose of rising in an hour or two.

Let her eschew cream-of-tartar and soda when good baking powder is to be had, and adopt all similar improvements. Life and time are too precious to be needlessly wasted on these old-time crudities. Housekeeping need not and should not be half so hard to the girls at the present time as it was for us, if they only will take hold and fit themselves for the business before actually in the whirl of it. What merchant would send out a ship under a captain who knew nothing of navigation? Would not there be likely to come disaster and distress enough in such a case? Should not the home pilot be equally qualified? OLIVE.

THE FUND FOR MRS. GARFIELD.

MARY WAGER-FISHER..

THE gift of a quarter of a million of dollars to Mrs. Garfield is one of those spontaneous movements of a people as beautiful as it is generous, and has its value and significance in its spontaneity. Every such national movement tends to allay factional strife and to cement, strengthen and sweeten national union, while in this instance it at the same time forms an avenue for popular expression of admiration and love for a brave little woman whose heroic behavior during a time of intense time has elicited the highest praise from all the civilized world. The objections raised by some parties (there are people who always object to everything noble and generous) to the inexpediency or inappropriateness of making this gift to Mrs. Garfield, except in case of the death of the president, possess nothing justly tenable. Mrs. Garfield, ever since the nomination of her husband to the presidency, and especially since his election, has been constrained by force of circumstances to give her time and her strength to the public, and such was the demand made upon her, that for weeks she hovered, on the verge of the grave, brought there by the tremendous strain upon her nervous system, aggravated by the unwholesome sanitary environments of the executive mansion. Then came the terrible second of July! The President's life hung on so slender a thread, that a million breaths were bated for fear that precious hold would break. Everything seemed to depend upon how the loving wife would take it. The wounded sovereign was harrowed with anxiety, until hour after hour sped by, and at last she came, still weak from her long illness, but strong in her woman's faith. With quiet manner and tearless eyes, she entered the president's room, and when she emerged with pallid but calm face she had spoken the healing word "LIVE." "*He will live*" she said, and through all the trying hours and days that have followed, her glowing faith has never seemed to waver. It has given the president what no surgical skill could give, and its continual ministration is beyond the remedial power of all medicines. It was that rare and thrilling spectacle of a woman made great by suffering and answering with unflinching heroism to the demands of a supreme moment. All honor to her, she richly merits all that the people have in their hearts to give her. And if the President lives—as all true hearts pray he may, regardless of political bias, will not the nation owe—under the providence of the great Giver of Life—the saving of its most precious life to the heroism of Lucretia Garfield?

FASHIONS.

Young children are wearing indoors shoes of untanned leather.

Shirring is the leading feature in the making of dresses.

Ladies new dressing-mirrors, framed in plush, painted by hand, have the following appropriate quotation:

Plush covers for small tables are made up of small scraps of several shades, each with its own or a fanciful edge embroidered upon it.

Evening shawls in rich colors come so cheap this year that there seems to be no excuse for wearing knit breakfast shawls.

Pocket-handkerchiefs for day use have a narrow hem of porcelain or of dark red, and sometimes the entire center is in small blocks of ecru with white.

A fancy prevailing to some extent in bracelets is to wear one set with a stone corresponding to the month. A bracelet for January has a garnet; one worn in February, an amethyst; March, has jasper; April, sapphire; May, agate; June, emerald; July, onyx; August, carnelian; September, chrysolite; October, aquamarine; November, topaz; December, ruby.

MRS. MYRA BRADWELL, the editor of the Chicago *Legal News*, demonstrates what a quick-witted, energetic woman can accomplish in business. Not only does she edit and publish one of the most valuable and successful periodicals devoted to the interests of the legal fraternity, but as soon as the Illinois Legislature adjourns, she goes to Springfield personally, and makes a careful copy of all the enactments of the session, and publishes them in a well-bound volume. She has done this at the close of the last four sessions of the Illinois Legislature. The Legislature could not do a handsomer thing than to authorize Mrs. Bradwell to print the laws officially hereafter, and pay her the money for so doing, which is now paid to others for doing the same work much later and not more perfectly than she does it.—Woman's Journal.

THE corner stone of the new building of Lasell Seminary, Auburndale, Mass., was laid June 9, with a poem by Florence, daughter of Louise Chandler Moulton.

CORRESPONDENTS' CORNER.

IN reply to inquirer for information in regard to silk worms we say: That we do not recall or find by referring to several previous issues any description, but the one by Mary Wager-Fisher in April 2nd number. Address as there stated, Women's Silk Culture Association, 1,328 Chestnut St., Philadelphia, Pa. By sending a three-cent postage stamp your communication will be recognized and we hope to your benefit.

How can I succeed in removing warts from my hands? Having tried remedies unsuccessfully. B. A. R.

ANS.—The best remedy that we know of is to touch them with caustic; this, of course produces an unsightly black spot but it is preferable to endure this for a short time than to suffer the coustant annoyances occasioned by these excrescences.

WILL you please tell me where I can get the best and finest steel needles for hand and sewing machine-work. A. S.

For hand sewing the "Milward" needles are a good make, and probably the best that can be obtained at any first-class fancy goods store. Sewing machine needles are for sale at all machine stores, and are often to be found in dry or fancy goods stores. The nearest city or town will no doubt have what you require.

Mothers with sickly, fretful, nursing children, will cure the child and benefit themselves by taking Hop Bitters daily.—*Adv.*

Miscellaneous.

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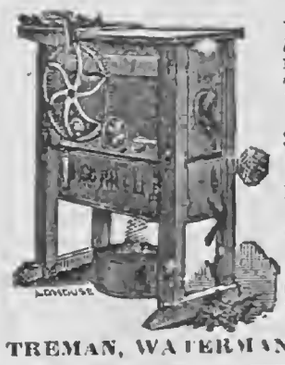

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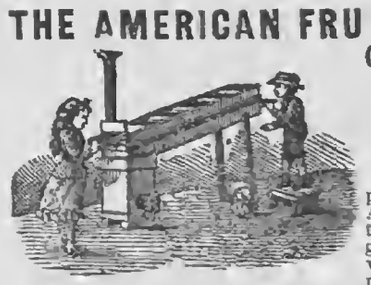

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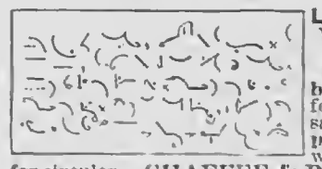

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THE CLYDESDALE
The King of Draft Horses.

Nine Importations For 1881 Already Received

Others on the way from Scotland.

POWELL BROTHERS,
SPRINGBORO, CRAWFORD CO., PA., the most extensive importers in America of CLYDESDALES, the best breed of Draft Horses in the World. Largest and finest collection on the American Continent.
Also breeders of Trotting-Bred Roadsters, and Importers and Breeders of Holstein and Devon Cattle. Catalogues sent free. Correspondence solicited.
☞ Mention the Rural New-Yorker.

News of the Week.

HOME NEWS.

MONDAY, Sep. 5, 1881.

The President's condition is still exceedingly critical. Since our last news concerning him, August 27, he has been "at death's door" several times; but hitherto good nursing, medical attention and a splendid constitution have kept him from crossing the threshold. For nearly two months he has been able to take but very little nourishment and he is therefore extremely feeble and emaciated—so much so that his greatest danger is from death by exhaustion—starvation. Even before the attack on him, his digestive organs frequently troubled him and of late he has had to be supported for days by injections of beef tea, etc., the stomach refusing to bear any food. The original wound appears to be healing moderately well, but the wound caused by the glandular trouble in the neck is still very annoying and dangerous. Matter is discharged from this outward through an incision in the neck and through two openings in the cheek, and inward through an opening near the top of the gullet. Moreover, he is said to be suffering from malaria due to the miasma arising from Potomac flats just back of the White House. On this account the doctors think that the only chance for life depends on his removal, and it has been decided to take him to Long Branch. If his condition is good enough, the transfer will be made to-morrow, but this morning's telegrams say he was a trifle worse yesterday than the day before.

A disaster only a trifle less than the Custer massacre, is reported to have befallen our troops near Fort Apache, Arizona, where Gen. Carr and two companies of cavalry, numbering about 78 men, are reported to have been ambushed and killed by the White Mountain Apache Indians. Gen. Carr, with the two cavalry companies left the fort to arrest a turbulent "medicine man." Lieut. Cruse tried to make the arrest and was shot dead by the medicine man's brother. The enlisted Indian scouts who were close to the troops, at once poured in their fire upon them, killing most of the officers and a great many men. Then all the Indians began to massacre the survivors, only two of whom are said to have escaped to Fort Apache. This place, containing a handful of infantry and the women and children, was at once fiercely attacked by the savages, but by the last accounts they had been gallantly repulsed with a loss of seven or eight men killed among the besieged. Troops are being hurried forward as rapidly as possible from all the neighboring country. Another Indian war seems inevitable.

Preparations are being rapidly pushed ahead for the great international Cotton Exposition at Atlanta. It will well repay manufacturers to make a grand display there and pay visitors well to go and see that display as well the ten thousand and one others.

At Galveston, Tex., a general strike occurred, Thursday, of 'longshoremen, car drivers and laborers at the oil mills, cotton pickers, etc. The demands of the 'longshoremen were alone acceded to. Large crowds prevented the attempts to run the street cars.

Preparations for the centennial celebration at Yorktown, Va., are rapidly progressing. The ill-health of the President and the inadequacy of the Congressional appropriation of $20,000 toward the expenses of the undertaking had at first a depressing effect; but activity and interest have increased and the display will doubtless be very fine. More than 25,000 troops and 5,000 Masons will be under tents there and a vast concourse of visitors is expected.

A committee has been appointed to gather contributions for the relief of sufferers by the tornado that lately destroyed New Ulm, Minn. Mr. Ed. Uhl, Sec., *Staats Zeitung* office, this city, will receive any contributions our readers may like to make.

Henry G. Vennor, on Wednesday last, Aug. 31, writes: "Cooler weather by Saturday and Sunday, with probably frosts in New York State. Some heavy rain-storms during the early part of the week following."

Sitting Bull and his 200 followers are soon to be removed to Fort Randall, at the mouth of the Niobara River, above Yankton, where they will be held as prisoners of war and not as pensioners of the Interior Department.

The value of the taxable property in the State of Michigan has been fixed by the Board of Equalization at $810,000,000.

The assessed valuation of the Territory of Dakota, not including railroad property, is $30,000,000, an increase of 50 per cent. in one year.

Nothing better illustrates the remarkable prosperity of this country than the stupendous increase in the ratio of railroad mileage. In 1879 there were 2,777 miles of new road constructed—a very respectable amount; but in 1880 the number of miles completed rose to 7,174.

W. P. Andrus of Detroit, Mich., an ex-State Senator, became insane from a wound received during the war, and while being taken to the asylum, recently, escaped and has not been heard of since.

A meeting of the joint committee representing the Yorktown Centennial Commission and the citizens of Washington and Baltimore was held recently and it was decided to entertain the guests of the occasion in Baltimore on October 10, 11 and 12, and in Washington on October 13, 14 and 15. It is expected that there will be twenty guests from the French government, and that France will send over one or two of her large war vessels with troops. They will arrive about the 5th of October.

An encampment reunion of the soldiers and sailors of the Northwest is to be held at Lafayette, Ind., on the 21st, 22d and 23d of September next. The exercises will consist of regimental reunions, the organization of detachments, "stragglers," drills and reviews of the posts of the Grand Army of the Republic, prize drills, dress parades, camp-fire chats and songs, a sham battle, addresses, etc.

"Could Not Have Lived a Year Longer."

A clergymen in Mississippi says in a recent letter: "I feel so much improved in health that I think it my duty to inform you of the great benefit your Compound Oxygen has been to me. *I was very low and suffering greatly. I could not have lived a year longer without receiving relief in some quarter.* I am now going about my ministerial duties, and last Sabbath, while officiating at a funeral, a storm overtook me, and I was drenched in rain; but no serious consequences followed, as I had reason to expect from past experience." Our Treatise on Compound Oxygen, containing large reports of cases and full information *sent free*. DRS. STARKEY & PALEN, 1109 and 1111 Girard St., Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

THE Society for the Promotion of Agricultural Science, which lately held a meeting in Cincinnati, consists as yet of only 22 members and the rules for the admission of new ones are very strict. Among its present members are most of the notable men in the country connected with agricultural science, including Professors S. W. Johnson, W. J. Beal, L. B. Arnold, C. V. Riley, James Law, Hilgard, Brewer, Farlow, etc.....The following officers of the N. Y. Farmers' Alliance were elected for the ensuing year at the annual meeting held at Watertown, on Aug. 24: Pres., A. S. Deven, Elmira; Treas., Lyman Crowell, Seneca Falls; Sec., W. J. Fowler, Henrietta; Executive Com., J. C. Shepherd, Harris Lewis, W. G. Wayne. The next annual meeting will be held next year at Utica, on the fourth Wednesday of August.....Among the many estimates of the cotton crop this year one of the best supported is that owing to unfavorable weather it will be half a million bales less than last year's crop, making only 5,800,000 bales. This is about a million less than good estimates early in the season.....It is estimated that there is ten times as much fencing in Illinois as in the whole of Germany—far too much in Ill.....Corn three years old is coming into the Chicago market. There is nothing like high prices to bring out long hidden supplies.....There are 4,348,301 bushels more grain in store in Chicago than there was a year ago. The increase is mainly in wheat and oats.....The cotton presses of New Orleans, which usually open on the first day of September, are confronted by a demand of 13,000 laborers for an advance of 25 cents per bale in handling. The cotton factors have raised $250,000 to maintain the old rates, and are hunting laborers in all the Southern States.....The Mark Lane Express, of Aug. 29, in its review of the grain trade for the past week, says; "The past week brought general disaster and ruin to the harvest. A series of intermittent storms culminated Thursday in a general thunder storm with a deluging rainfall. To adequately estimate the damage we must remember that the downpour of rain was on the sheaves which had been repeatedly wetted and dried, or on standing grain, which is literally eaten up by mildew. In flooded districts the disaster is complete. Unthatched ricks have everywhere suffered from Thursday's deluge. The position of the harvest has materially affected trade, and rates improved one shilling Wednesday and a further shilling Friday. The advance, which would have amounted to several shillings had Thursday's weather continued, was checked by Friday's sunshine. The advance in the provinces was one shilling beyond that in London. Of the few samples of the new crop offering nearly all had sprouted. Early parcels are the best. Foreign wheat is 2s, and flour 1s. to 1s. 6d. better. The English markets are very bare of foreign flour. The supply of native grain in provincial markets is almost out. Port markets are therefore greatly strained. Stocks on both sides of the Atlantic being in strong hands, the supply here cannot exceed the demand until growers in America forward the new crop in sufficient bulk to overpower Atlantic speculators."....,The flaxseed crop for the current year is estimated at 7,500,000 bushels, against 8,750,000 bushels in 1880. The thrashing shows a yield of from four to eight bushels per acre, where ten to twelve bushels were anticipated before harvest.....The New York Grape-Sugar Company has been incorporated by ex-Senator Thomas C. Platt and others, and will have a capital of $1,000,000. It will have a branch establishment at Des Moines, Ia.....During the last fifteen years of slavery the South raised 46,675,591 bales of cotton. During the first fifteen years of freedom, that is, from 1865 to 1880, the number of bales produced was 56,438,335.....The following table, compiled from the most trusthworthy British sources, shows the area under the named crops in the years mentioned.

	—Acreage sown in Great Britain.—			
	Wheat, acres.	Barley, acres.	Oats, acres.	Potatoes. acres.
1872	3,571,894	2,385,783	2,715,707	627,691
1875	3,342,481	2,589,701	2,661,009	522,653
1876	2,905,957	2,543,109	2,798,430	502,719
1877	3,168,510	2,117,588	2,754,179	512,471
1878	3,218,417	2,469,052	2,698,907	508,431
1879	2,800,244	2,667,176	2,656,628	511,314
1880	2,909,238	2,467,141	2,796,905	550,932
1881	2,806,057	2,442,405	2,901,135	579,431

These figures do not include Ireland, but then Ireland is scarcely a wheat growing country. .....The Buffalo Commercial Advertiser says that the eastward movement of flour and grain from the West through that city for the month of August; 1881, shows a decrease of 51,126 barrels in the receipts of flour, and a decrease of 4,951,458 bushels in the receipts of grain, estimating flour as wheat, as compared with the same month last year.....All over the Northwest, and as far South as Southern Illinois, the drought was broken up on the night of Aug. 31. Heavy rainfalls greatly benefited corn where the crop had not been injured beyond recovery. At Springfield, Ill., over three inches of rain fell in less than an hour. At Des Moines, Ia., 2¼ inches fell in three hours, and everywhere heard from the rain was quite heavy enough to soak the parched earth.....Severe forest fires are reported from Ottawa, Canada; Olean, N. Y.; Milford, Pa.; Halifax, Nova Scotia, Northern Michigan, and quite a large number of places in Ontario, Canada. Immense losses of timber, fencing and farm crops are announced. .....A Dairymen's Protective Association, composed of the dairymen of Northern Illinois, and of Wisconsin, was formed at Milwaukee on August 26: President, Hon. Hiram Smith, Sheboygan Falls; Secretary, C. P. Crossfield, Fort Atkinson. Its object is to contest the claims to royalty on cheese hoops, bandages and fillers made by J. Hubbell, of this State, and his backers.....The enormous pork-packing establishment known as Ricker's, but run by J. C. Wately, at Chicago, was burned on August 26; loss on ments and buildings between $750,000 and $1,000,000.....In the anti-barbed-wire-monopoly contest now raging at the West, Jacob Haish, who was contesting Washburn, Moen & Co.'s patent in Illinois, has yielded to the monopoly and withdrawn his appeal before the United States Supreme Court. In 1870 the Court decreed that, pending his appeal, he must deposit with it a royalty of three-fourths of a cent a pound for all the fence he should make till the case should be decided. This amounts now to about $250,000, and it is alleged that he gains this sum by "caving in," as Washburn & Co., do not ask for back royalty from those who yield. The Iowa Farmers' Protective Association is still resolved to fight the monopoly, and their case will be argued next October.

Mr. W. H. Wilkinson, of Holyoke, Mass., has nearly completed 11 silos in a row, each 12 by 15 feet "square," and 24 feet deep. Ten of them will hold 90 tons apiece, and the eleventh, 100 tons, making, in all, 1,000 tons of ensilage—as it is intended to fill all "chock-full." "Saur-kraut," is said to be especially well relished by Dutch cattle; probably W. H. W. intends to invest heavily in that fine breed.

The rail freights on Grain from Chicago to New York are now two dollars per ton of 2,000 lbs. The freight by water via the Lakes and the Erie Canal and Hudson River from Chicago to New York, are now $2.92 to $3.00 per ton of 2,000 lbs. The rail rates are about one dollar per ton less than the rates by water.

Prof. Horsford's Baking Powder.

F. H. Atkins, A. A. Surgeon U. S. Army, says: "In this Powder an acid phosphate of lime takes the place of cream tartar or alum, and while the whitest and most delectable biscuit can be made with it that I have ever seen or tasted, it furnishes a food rich in phosphates, so much needed in animal economy and so largely discarded in our finely sifted flour. Prof. Horsford's high reputation is adequate surety for the absence of alum or any other deleterious or make-weight ingredient."

Don't Wait.

Sediment or mucus in the urine is a sure indication of disease. Take Kidney-Wort and be cured before it is too late. It is always effectual and has cured thousands. Druggists sell both the dry and liquid.

Write to Mrs. Lydia E. Pinkham, No. 233 Western Avenue, Lynn, Mass., for names of ladies that have been restored to perfect health by the use of her Vegetable Compound. It is a positive cure for the most stubborn cases of female weakness.

Thousands die annually from some form of kidney disease, that might have been prevented by a timely use of Hop Bitters.

The People's World-wide Verdict.

BURNETT'S COCOAINE has been sold in every civilized country, and the public have rendered the verdict that it is the cheapest and best Hair Dressing in the world.

BURNETT'S FLAVORING EXTRACTS are invariably acknowledged the purest and the best.

The Markets.

CROPS AND MARKETS.

MONDAY, Sept. 5.—The following were the prices of cereals, etc., in the New York market last Saturday and at the corresponding date last year.

		1881	1880
Wheat.	No. 1 White	$1.41½	1.08¼
"	No. 2 Red	1.44	1.08
Corn.	No. 2 "	.70¾	.51½
Oats.	No. 1 White	.51	.41
Rye.	"	.88	1.08
Cotton.	Low Middling	.11 13-16	.11 7-16
and other grades proportionately.			
Mess Pork		$18.75	$15.75

Earlier in the week the prices were still higher, for on Friday evening there was a fall of 1½a2½c. per bushel on Winter wheat, and from 5a9½c. on all Spring grades. Corn also declined ½a1c. per bushel; while rye, which stood at an advance on Thursday of from 4a6c., also dropped on Friday, the speculative need having been provided for: oats alone went up 1½a3c. a bushel. "Options," too, fell from ½a1c. on the favorite grades of grain. Flour rose during the week from 10 to 15c. per barrel, and feed advanced materially on a very limited offering and a good demand. Seeds, too, were quoted dearer, and 85,500 bushels of flax were sold within a range of $1.40a1.50, closing at $1.45 bid, per bushel.

The notable glut of grain at Baltimore and the accumulation of grain at the seaboard were the chief causes of the decline in cereals towards the end of the week. The following table shows the receipts of breadstuffs at the seven ports on the Atlantic seaboard:—

	Past week.	Preceding week.	Corresp'g week 1880.
Flour, barrels	226,650	236,800	258,400
Wheat, bushels	3,410,250	2,654,700	4,951,800
Corn, "	1,485,800	1,702,450	2,022,200
Rye, "	8,800	8,500	229,200
Barley, "	.....	1,725	1,000
Oats, "	686,100	957,100	481,600

Thus it is seen that although the receipts have largely increased since last week, yet they aggregate much less than those of the corresponding week last year. Moreover, the exports were less than those of either the week before or the corresponding week in 1880, as will be seen by the following table:—

EXPORTS OF BREADSTUFFS FROM THE ATLANTIC PORTS TO

	—The United Kingdom—		
	Flour, barrels.	Wheat, bushels.	Corn, bushels.
Past week	85,350	1,948,700	591,100
Preceding week	103,000	1,213,000	1,175,600
Two weeks ago	10,950	855,900	1,299,400
	—The Continent—		
	Flour, barrels.	Wheat, bushels.	Corn, bushels.
Past week	2,300	988,800	249,000
Preceding week	3,600	1,252,500	259,275
Two weeks ago	5,000	1,662,850	226,100
Grand total to Europe past four weeks	321,900	10,109,700	6,129,800

This accumulation of breadstuffs here is enough to partly account for the fall in prices; but the close of the August deal in cereals here and at Chicago, also had a depressing effect.

From all the information we have been lately accumulating, it appears highly probable that wheat will be considerably higher before the present harvest is all marketed. An esteemed Illinois correspondent who for years has made crop statistics and prices a special study, writes us; "If the drought continues and its killing effects are not soon over, I should not be surprised if wheat, in course of a year, went up to $1.75 and corn to 75c. per bushel." We hardly think wheat will go so high, though corn may; but there is little doubt but wheat will go higher than it is now, and considerably higher, too. The latest reports of the crop from all sections in this country fully confirm our prophecy that the aggregate yield will be about 100,000,000 bushels less than last year's crop. Some think it will be 150,000,000 bushels less, while others still insist it will be about the same—an estimate made by nearly all our contemporaries at the date of our prediction. The latest advices

from Minnesota put the crop of that State at 3,500,000 less than the yield in '80, though five weeks ago it was put at 3,000,000 bushels more. Dalrymple, the great bonanza farmer of Dakota, says his yield was 18 bushels of thrashed grain per acre, against 20 bushels per acre last year——a falling-off of 10 per cent., although a few weeks ago we were assured that his crop and that of Dakota generally would be the heaviest per acre that had ever been obtained. Almost all accounts from the Spring wheat region are of a like nature—nearly all say the crop is fair, but not so good as that of last year.

From present indications the crops in Great Britain have been so terribly damaged or rather ruined, by late heavy rains, that the United Kingdom will need fully as much imported wheat this year as last. French crops are only moderate, and France will be likely to import as much cereals as she exports. Germany and the rest of Europe will have little if any to spare, except Russia. In Russia, however, the crops are unusually fine, and the exports will be much heavier than they have been of late years; how much heavier, however, no one seems to know yet.

From India, Australia and New Zealand the cereal exports are pretty sure to be less this year than last, and they cannot be much heavier from Egypt and Chili. On the whole there appears a certainty that we shall find a high market for all the wheat we can spare.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, Sept. 3.

CHICAGO, Ill.—WHEAT very unsettled and active, and fluctuating rapidly and heavily; No. 2 Red Winter, $1.31; No. 2 Chicago Spring, $1.21a1.23, cash; $1.26⅜a1.26½, October; $128⅝a1.28¾, November; $1.29¾, December; $1.21, all the year; sales, October, as follows: $1.26¾, $1.27¼, $1.26¾, $1.27¼, $1.25⅞, $1.26⅜, $1.25¾, $1.26⅜, $1.26½, and $1.26⅝; sales at $1.19a1.23½, September; $1.27¾a1.29½, November; $1.29a1.31½, December; No. 3 do., $1.16; Rejected, 80a90c. CORN unsettled, at 62c., cash; 63¾a 63⅞c., October; 65⅞c., November; 61⅞c., all the year; Rejected, 58¾c. OATS unsettled at 37c., cash; 36¾c., September; 38½c., October; 39⅝c., November; 36¾c., all the year. RYE easy at $1.03. BARLEY firm at $1.03. PORK fairly active at $18a$18.05, cash; $17.95a18, September; $18.25, October; $18.30a18.35, November; $17.80a17.85, all the year. LARD strong and higher at $11-45, cash; $11.47½, September; $11.62½a11.65, October; $11.75, November; $11.90, December; $11.47½, all the year. BULK-MEATS fairly active and a shade higher; Shoulders, 7¼c.; Short Rib, $9.60; Short Clear, $9.90. SEEDS.—Timothy firm at $2.35a2.65, in store: $2.50, September; $2.50, October. Clover firm at $5.50a6.15. Flax steady at $1.33. BUTTER in fair demand; Creameries, 24a31c.; Dairy, 18a27c.; ladle-packed, 14a17c.; packing, 11½a13c. EGGS in fair demand at 14½a15c. CHEESE firm: full cream, 10½a11¼c.; part skim Cheddar, choice, 9½a10c.; part skim, flat, choice, 10a10½c.; part skim, common to good, 7½a8½c.; low grades, 3a4¼c. HOGS.—Market generally steady; mixed packing, $5.90a6.30; light, $6.30a6.70; choice heavy, $6.50a6.75; culls and grassers, $4.50a6.75; quality good; packers buy freely. CATTLE good, active, and strong; exports, $6.20a6.75; sales, 10 cars at $6.50a 6.75; good to choice shipping, $5.60a6; common to fair, $4a5.50; butchers, $2.25a2.95; stockers and feeders, $2.90a3.90; Texans, $3a 4,12½; half-breeds and natives, $4a4.60. SHEEP.—Market dull, weak and easier; poor to choice, $3.25a4.50.

CINCINNATI.—Wheat active, firm and higher than yesterday; No. 2 Red Winter, $1.37a 1.38. CORN strong; No. 2 mixed 67a67½c. OATS dull; No. 2 mixed, 43½c. RYE quiet at $1.12a1.14. BARLEY quiet; No. 2 Fall held at $1.12. PORK dull and nominal at $20. Lard strong and higher at $11.30. Bulk meats firm and unchanged. Bacon firm: Shoulders, 8¾c.; Clear Rib, 10⅞c.; Clear Sides, 11½c. HOGS quiet; common and light, $4.85a6.70; packing and butcher's $6.25a7. BUTTER—The market quiet, but the supply is not excessive and prices are well sustained. Fancy creamery sells at 30c.; prime do. at 28a29c.; choice dairy at 24c.; prime to choice Western Reserve at 23a24c.; medium do. at 20a21c.; prime to choice Central Ohio at 18a20c.; and common at 14a16c. per lb. CHEESE.—There has been a fair demand most of the week and the market rules stronger for prime to choice factory at 11¾a12c. per lb. HEMP.—There is not much demand, but the supply is light and the market firm. Rough Kentucky sells at $130 per ton from store. Single dressed sells at 8a8¾c. and double do. at 9a10c. per lb. from store. HOPS.—There is a good demand for the new crop of New York seedlings at 28a30c. Old hops are dull at 20a22c. per lb. for prime to choice. SEED.—There has been considerable speculative demand for clover, with liberal sales spot and to arrive at 10c. per lb. Timothy is more freely offered at $2.75 per bushel.

ST. LOUIS, WHEAT, active, but unsettled; broke at the close; No. 2 Red Fall, $1.48, cash; $1.48¼, September; $1.49¼, October; $1.51, November; $1.52¾, December; No. 3 do., $1.39; No. 4 do., $1.29. Corn higher at opening, but declined to 62¾c., cash; 63c., September; 66½c., October; 68c., November; 68½c., December; 75c., May. OATS higher at opening, but declined to 40½c., cash; 42¾c., September; 44c., October. RYE easy at $1.09. BARLEY in good demand. PORK, $19. Bulk-meats-Shoulders, $7.20; Clear Rib, $9.70; Clear Sides, $10. Bacon higher; Shoulders, 8½c., Clear Rib, $10.80a10.87½; Clear Sides, 11½c. LARD firm at $11.40. BUTTER dairy, 20.a28c.; creamery, 28.a33c. EGGS steady at 12.a15c.

HOGS— Light grades lower; Yorkers, $6.30 a6.45; mixed packing, $6.25a6.55; choice to fancy heavy. $6.60a6.85. CATTLE—good demand for shipping grades and good grass Texans; prices firm but supply scant; export Steers would bring $6a6.20; heavy fat Steers, $5.40a6; light do., $4.75a5.30; grass native Steers, $3.50a4.50; native butcher Steers, $3a4; good Cows and Heifers, $3a3.50; common, $2.25a2.75; good grass Texans $3a365; common, $2.25a2.75; stockers and feeders slow. SHEEP—market slow and weak; fair to fancy Muttons, $3a4.40.

At the change of life nothing equals Hop Bitters to allay all troubles incident thereto.—*Adv.*

PRODUCE AND PROVISIONSi

NEW YORK, Saturday, Sept. 3, 1881.

BEANS AND PEAS.—There is a sharp advance in the standard grades of beans. The supply of mediums is very light and a portion of the home trade is forced to use narrows, and the stock is consequently running out faster than was anticipated. A good crop of new is assured if September rains do not interfere with curing. The uncertainty of well-cured early offerings is one reason why certain buyers are now anxious to secure stock. Red kidneys are doing something better. Green peas are quoted steady with small sales.

Marrow beans, prime, $2.60@2.65; other, $2.47@2.55; mediums, prime, $2.70; other, $2.55@2.65; pea, $2.75@3; white kidney, $2.10@2.60; red kidney, $1.50@1.95; black or turtle soup, $1.10.

Receipts of beans for the week, 2,688 bush.
Exports do. 657 pkgs.

BUTTER.—Events are shaping decidedly in favor of the speculative side of the market. Supplies have sold down extremely close, especially for the month of August, and prices have kept in a stiff line—another unusual thing for the period. We do not mean to intimate that there is any new business in a speculative way at prices where they now point; but what is akin to it is the fact that farmers and owners of any lots right in quality are holding on their goods in anticipation of good Fall quotations. The weather is dry and adverse to a liberal Fall yield at many producing places, and farmers report some pretty hard dairying. Receipts are probably smaller than they might be, as harvesting has called off a good deal of attention that could have been directed to shipments. And, then, in the situation of the market, agents are not searching for lots industriously, because, as an old dealer here expresses it, "It's no use to try to negotiate when the dairyman's pleas jump up with the New York market." The demand is mainly for fine creamery, and in several instances dealers have had to piece each other out in supply. Fine dairy goods have had a good call and participate in the high quotations, especially if selected city stored Western butter is reported to have largely fallen to a grade that deprives it of any but a future shipping outlet. The outlook for choice stock has seldom been so encouraging, for in the estimation of many dealers, and they are not noted for willingness to accord farmers the best of a deal, every package of butter sold last month has added to the value of stock in hand in the interior. This, of course, is based upon Fall pasture as being as far beyond recovery as reports now indicate.

Creamery, finest tubs, 30@31c.; good to prime, 26@ 29c.; poor quality, 23@25c.; sweet cream, 28c.; creamery firkins, 24@29c.; State dairy do. 23@26c.; do. half tubs, choice, 27@28c.; do. fair to prime, 25@27c.; Welsh tubs, 21@27c.; poor State, 22@23c.; Western imitation creamery, 19@25c.; dairy, choice, 25c.; other, 15@22c.; factory or ladle-packed June, 19c.; other, 14½@18c.; common Western, 12@13c.

Receipts for the week, 20,070 pkgs.
Exports do. 6,333 do.
Cold storage on steamer to G. B., 908.

CHEESE.—The market was very quiet early in the week, but with light receipts and sudden orders from abroad prices made a turn in sellers' favor and close firm. A good feature is the fact that buyers seem willing to include under-grade stock in their purchases; this has not been the case for several weeks. Western cheese is scarce and not largely inquired for.

State factory, fine colored, 11¾c.; fine white, 11¾c.; good to prime, 10¾@11¾c.; fair to good, 10@10¾c.; poor to fair, 9@10c.; Wisconsin factory, good to prime, 10¾@11¾c.; fair to good, 10@10¾c.; Ohio factory, cheddar, fine, 10½c.; fair to prime, 9½@10c.; flat, fine, mild, 11@ 11½c.; good to prime, 9½@10½c.; fair to good, 9@9½c.; poor, 7½@8½c.; Creamery, partly skimmed, 4@6½c.; fully skimmed, 2½@3c.; full skimmed factory, 2½@3c.

Receipts for the week, 50,350 bxs.
Exports do. 66,622 do.
Liverpool cable, 59s.
Steam to Liverpool, 25@30s.

COTTON.—The market was in the hands of speculators most of August and in the adjustment of optional deliveries for that month prices ran away from all classes of spot purchasers. Spinners and exporters could well afford to wait when prices were 2½c. above September's delivery.

Quotations are based on American standard of classification, and on cotton lustore running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 13-16	9 1-16	9 1-16
Strict ordinary	9 7-16	9 11-16	9 11-16
Good ordinary	10⅜	10⅝	10⅝
Strict good ordinary	10 15-16	11 3-16	11 3-16
Low middling	11 11-16	11 15-16	11 15-16
Strict low middling	12 1-16	12 5-16	12 5-16
Middling	12¼	12½	12½
Good Middling	12⅜	12⅝	12⅝
Strict good middling	12⅝	13⅛	13⅛
Middling fair	13⅜	13⅞	13⅝
Fair	14⅜	14⅝	14⅝

STAINED.

Good ordinary	7 7-16	Low Middling	10 5-16
Strict good ordinary	8 9-16	Middling	11⅜

Future prices.—September, 11.61c.; October, 11.36c.; November, 11.21c.; December, 11.27c.; January, 11.13c.; February, 11.55c.; March, 11.66c.; April, 11.76c.; May, 11.88c.; June, 11.95c.

DRIED FRUITS.—Beyond noting the fact that a firm feeling prevails in nearly every item there is little to remark. No buyers are out in force; they will be apt to wait until the weather is cool and stocks are more decided in quantity.

Apples, evaporated 1880 rings, choice, 12c.; prime, 11 @11½c.; fair to good, 10½@11c.; N. C. 1881, sliced, fancy, 9@10c.; choice, 8@9c.; Southern, in bbls. 6¾@7c.; do. 1880, in bags, 6¾@7c.; fine cut, choice, 6½c.; quarters, choice, 6¼@6½c.; State, small lots, 6c.; Ohio and Mich. choice, 6@6¼c.; Western, fair to good, 5½@5¾c. Peaches, evaporated, peeled, 35c.; unpeeled, 20c.; N.C. peeled, 1881, choice, 25c.; do. 1880, 21@23c.; peeled, good, 18@20c.; Ga. peeled, 1881, choice, 22@23c.; peeled, 1880, 17@20c.; unpeeled halves, Tenn. 7½@8c.; quarters, do. 7¼@7¾c. Plums, State, 17@18c. Blackberries, 13½@ 14c. Cherries, Southern, dry, 21@22c. Raspberries, 29c. Huckleberries, 12½@13c.

EGGS.—Receipts for the week, 8,478 bbls.; do. last week, 7,852 do. Buyers have been a little shy of stock owing to severe weather of one or two days of the week, and prices most of the time have ruled weak. There is a better feeling at the close and all prime lots sell readily at full rates. Receipts are light and there was no surplus to work down.

Near points, ₰ doz. 22@23c.; State and Penn. 20½@ 21c.; Canadian, 19½@20c.; Western, fresh, 19½c.; other useful grades, 18@19c.

FLOUR.—The market for flour has never before responded so promptly to an advance in wheat as it did during the late excitement in the latter. Buyers seem to feel confident that a high season menaces them. Wheat has eased up in prices, but flour holds its late advance, especially in the desirable grades, of which the offering is scanty. Rye flour is very firm.

No. 2, $4.20@5; State and Western, superfine, $5.20@6; city mills, extra, $7@7.40; Spring wheat, extra, $6@ 6.30; Spring XX@XXX, $6.40@7.50; patents, $7@9; Ohio round hoop shipping, $6.30@6.75; trade brands, $6.85@ 7.25; St. Louis extra, $6.40@6.55; do. double extra, $6.75 @7.15; do. family, $7@7.50; Southern extra shipping, $6.50@6.85; do. XX and family, $7@7.75. Rye flour, $6.00@6.10. Corn-meal, Brandywine, $3.80@3.90; do. Western, $3.25@3.75.

Receipts of flour for the week, 111,876 bbls.
Exports do. 62,302 do.
Receipts of corn-meal for the week, 3,235 do.
Exports do. 3,281 do.

FRESH FRUITS.—Market generally active. Pears favor buyers. Plums scarce.

Apples, Golden Sweet, Western New York, ₱ bbl., 50c.@$1; Gravenstein, $1.75@2.25; Codling, $1.50@1.75; 20 oz., $1.50@2; Malden Blush, $1.75@2.25; Nyack Pippin, $1.75@2.25; Fall Pippin, $1.50@2; Orange Pippin, $1.25@ 1.75; Apples, poor to fair, 75c.@$1.25. Pears, Bartlett, Jersey, ₱ bbl., $1.50@2.50; up river, $3@3.50; Howell, $1.75@2; Flemish Beauty, up river, $1.75@2; Seckle, choice, @$1.50; fair to good, $3.50@4; Cooking, ₱ bbl., $1@1.50. Peaches, up river choice, ₱ basket, $2@2.25; fair to good, $1@1.50; Jersey, extra, $2@2.50; fair to good, $1@1.50; Md. & Del. Crawford, ₱ crate, $2@3; Stump, $1.75@2.25; Culls, ₱ basket, 50c.@60c. Plums, Damson, Southern, ₱ qt., 6c.; Quackenbush, State, ₱ bbl., $6@8; Green Gage, $6@7; Reine Claude, $6.50@7; Egg, $6@7; Blue Gage and Boston Gage, $4; Damson, $1; common plums, $2@3. Grapes, Del., State, case of 24 2lb bxs., $3.50; baskets, ₱ lb, 12c.@14c.; Va. case of 18 2lb boxes, $5; Concord, Va., case of 18 3lb boxes, $3@ 3.25; Del. & Md., ₱ lb, 1c.@3c.; Jersey case of 24 2lb bxs, $2.50@3; Hartford, Jersey, loose, ₱ lb, 2c.@3c.; up river, 2c.@3c. Huckleberries ₱ box, 75c.@$1. Watermelons, Maryland selected, ₱ 100, $15@25; seconds, $12@15; Jersey, Black Spanish, $12@16; Culls, $6@8. Nutmeg Melons, $2@3.50. Nuts—Peanuts are again decidedly higher and held with great confidence. The serious drouth has greatly injured the growing crop in Virginia and a very light yield is anticipated. Pecans steady. Peanuts, Va., hand-picked, ₱ lb, 6½c.@6¾c.; fancy, 6c.@6¼c.; extra prime, 5¾c.@6c.; good to prime, 5¼c.@5½c.; shelled, screened, 5c.@5¾c.; unscreened, 4½c.@5c.; pecan nuts, 8c.@10c.

GRAIN.—Since the settlement of August wheat contracts there has been considerable disposition manifested to realize and the booming tone of a week ago has become quite faint. Exporters have been doing a heavy business under enforced reports of diminished crops abroad, but, although the cable still quotes favorably they now seem inclined to wait for some of the speculative froth to blow off prices and at the moment the form of the market points to an easier buying week. Corn has ruled very strong, a light crop now being one of the settled events. Prices have been supported by both speculation and exportation, though in the latter way trade is not so sharp at the new prices. These quotations have an unlooked for sudden turn and consequently do not obtain the ready response across the Atlantic that attends wheat. The movement in oats is fair one, but prices are well up considering new crop is due. This market has to be in a great degree regulated to suit current wants. Rye shows scarcity both here and at the West. The demand for this grain rather outgrows it production. Barley nominal; a late sale of good Canadian was made at $1 to arrive. Crop reported good.

Wheat, Spring, $1.20@1.69; Spring No. 2, $1.35@1.37; red Winter No. 2, $1.14@1.41½; red Winter, $1.25@1.47; white Western and State, $1.35@1.43. Rye, $1.07@1.12. Oats, white No. 1, 50@51c.; No. 2, 48c.; No. 3, 46@47c.; mixed, No. 1, 43c.; No. 2, 42½@43c.; No. 3, 41@42c. Corn, Western mixed, 69@72c.; No. 2, 70@71½c.; yellow 70@73c.; white, 72@79½c.

Receipts for the week, wheat, 1,750,000 bush.; corn, 642,265 do.; oats, 313,235 do.; rye, 11,181 do.; malt, 72,900 do.; rice, 919 pkgs.

Exports for the week, wheat, 1,199,357 bush.; corn, 315,388 do.; oats, 2,123 do.; rice, 90 pkgs.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes and on Mississippi River:

	1881. Aug. 27. bush.	1880. Aug. 28. bush.	1879. Aug. 30. bush.
Wheat	18,427,808	14,405,380	15,718,775
Corn	19,620,137	19,183,312	13,161,598
Oats	6,917,205	1,591,960	2,492,897
Barley	155,811	235,896	355,222
Rye	348,354	665,741	761,262
Total	15,469,545	36,072,382	32,522,654

Inland freights—The rail freights on grain from Chicago to New York are now two dollars per ton of 2,000 lbs. The freight by water via the lakes and the Erie Canal and Hudson River from Chicago to New York are now $2.92 to $3 ₱ ton of 2,000 lbs. The rail rates are about one dollar per ton less than the rates by water.

HAY AND STRAW.—Exports of hay for the week 3,201 bales; since Jan. 1st, 53,821 do., same time last year, 82,371. There is a demand for prime retailing Timothy at 90c. but few lots are right in quality. Low grades of old hay weak; new does not come in freely, selections of it do as well as old. Straw is lower though prime is scarce.

Prime Timothy hay, ₱ 100 lbs., 85@90c.; fair to good, 55@70c.; shipping qualities, 45@55c.; clover mixed, 50@ 55c.; pure, 40@45c.; long rye straw, old to new, 60@80c.; Short, 50@60c.; oat and wheat, 40@45c.

At the close shipping hay has become quite active.

HOPS.—There has been a very liberal trade in brewers during the past fortnight, and in the urgency to close out the remnant of old stock prices have been put in buyers' favor in some leading instances. New crops will be marketed early as the weather has been forcing, but it is not known if the hurry has been detrimental to quality. The distribution of last year's crop has been about equally divided in foreign markets and home wants.

State Choice, 20@21c.; prime, 18@19c.; poor to good, 12@ 15c.; Eastern, 14@16c.; Wisconsin, 14@20c.; 1879, 12@16c.; olds, 4@10c.; Pacific Coast, new, 19@21c.

Receipts for week, 367 bales.
Exports for the week, 9 do.

MILK.—Plenty of milk arrives, but hot weather and scanty cooling facilities owing to the drought lands much of it sour. Commission cans on the platform, sweet and useful, have sold at $1.35 ₱ 40 qts.

POULTRY AND GAME.—A weak feeling has prevailed in dressed poultry for several days, but with small receipts at the close prices are picking up. Young turkeys quoted 18@20c.

Turkeys, Phila. prime, 15@16c.; State and Western dry-picked, 14@15c.; scalded, 13@14c. Chickens, Phila. 14@16c.; Bucks Co. 14@15c.; Jersey, 12@14c.; State, 12@ 12½c.; Western, 11@12c. Fowls, Phila. dry-picked, 14c.; Bucks Co. 13@13½c.; Jersey, dry-picked, prime, 12½@13c.; scalded, prime, 11@12c. Ducks, Spring, Phila. 15@16c.; Jersey and Bucks Co. 14@15c.; State, 14@15c.; mixed State, 12@13c.; old, fair to good, 11@12c. Squabs white, ₱ doz. $1.75; dark, $1.25.

Supplies of cooped stock are plenty and prices for chickens and fowls are low. Turkeys have sold well, but begin to droop.

Chickens, Jersey, Spring, ₱ lb, 12½@13c.; State and Penn. 12c.; Western, 11@12c.; Southern, 11c. Fowls, Jersey, State and Penn. 11@13c.; Western, 11c.; Southern, 11c. Roosters, old, 5@6c. Turkeys, Jersey and Penn. 13c.; Western, 12@13c. Ducks, Jersey, N. Y. and Penn. ₱ pair, 50@65c.; Western, 45@55c.; Southern, 40 @45c. Geese, Jersey, $1.50@1.75; N. Y. and Penn. $1.25 @1.37; Western mixed and Southern, $1@1.25. Pigeons, large, strong birds, 35c.; young, 20c.

New items of game are here, but the weather has been against quality and sales do not open briskly. Grouse quoted 75c.; partridges, $1.25@1.50; woodcock, 75@85c., which is lower; English snipe and plover, $1.75@2; blackbirds, 18c.; reed-birds, 25c. A Western correspondent informs us that grouse will be fairly plenty, but it will be a light season for quail.

PROVISIONS.—A desirable feature of the week is the revival of an export demand, which extends liberally to all kinds of hog products. Pork is taken steadily for the West Indies and the Provinces, high prices forming no restriction. The long lock-up in lard has been loosened and a full legitimate business is noted. Bacon and cut-meats are in good demand; hams and shoulders stiffened by the active local wants of warm weather.

Pork, extra prime, ₱ bbl. $17.50@18; Western mess, new, $18.75@19. Lard, steam Western, ₱ 100 lbs. $11.70; prime city, $11.60. Hams, smoked city, ₱ lb, 12½@ 12¾c.; pickled Western and city, 11¾@12c. Shoulders, smoked city, 8½c.; pickled, 7¾@7¾c. Rib bellies, pickled, 9¾@10¾c. Bacon, long clear and Western, 10c. Beef, India mess, tcs. 22@23c. Beef hams, bbls. $24.25@22.50.

Receipts for the week—Beef, bbls. and tcs. 909; pork, bbls. 71; cut-meats, pkgs, 25 748 lard do 8,095

Exports for the week—Beef, bbls. and tcs. 955; pork bbls. 1,148; cut-meats, lbs. 5,481,881; lard do. 2,996,400.

RICE.—There is an increased activity in the domestic orts. The reports from the Atlantic coast confirm the large damage claimed to have been done the new crop by the gale last week. In some instances whole crops were swept away. The destruction on the coast has caused a sharp advance in New Orleans. Prices here are unchanged, as the stock is sufficient for several weeks to come. We quote Rangoon to fair Carolina and Louisiana at 4½@5¼c.; good at 5¾@ 5¾c.; good to prime (new crop) at 6¼@6¾c.; fancy at 7½@7¾c..

SALT.—Quotations are: Ashton's at $2.50; Higgins's at $2.40; Holmes's extra sifted, $2.40; Deakin's at $1.25; Evans's at $1.30; Washington's at $1.25; Marshall's at $1.25; Virden's at $1.20; Worthington's at $1.30; Mediterranean at 25c.

SEEDS.—There is a fair demand for clover and prices strong. The range is 9@10c. for '79 to '80 growth in car lots on track. Timothy in fair demand at $2.60@3. Domestic rough flax, $1.15.

Exports of grass seed for week, 1,751 bags.

SUGAR.—Refined is firm and in good demand.

Cut loaf, 10¾c.; crushed, 10¼c.; powdered, 10¼c.; granulated, 9⅝@9¾c.; mould A, 9¾c.; confectioners' A, 9¼c.; standard A, 9⅜; off A, 8⅝@9⅛c.; white extra C, 8⅝@8⅞c.; yellow extra C, 8@8⅛; C, 7½@7¾; yellows 6⅞@7⅛.

VEGETABLES.—Exports of potatoes, 6,551 bbls. A good many new points are drawing supplies from this city, and with the regular Southern call the market is firm.

Early Rose, L. I. extra, bulk, ₱ bbl., $1.87@2; L. I., fair to good, $1.75@1.87; Jersey, $1.62@2; up river, $1.75@1.87; Snowflake, $1.75; Burbank, $1.62@1.75; Peerless, Jersey, $1.62@1.75; sweet potatoes, Va. yellow, $3.25@3.50; Del. river, $3.75.

Garden stuff sells well. Tomatoes did not hold their advance long. Onions plenty and dull.

Sweet corn, July, prime ₱ 100, 75c.@$1; inferior, 50@60c.; wax beans, L. I., ₱ bag, $1.50@2; string beans, L. I., $1.50@2; Lima beans, potato, $1.50@1.75; Lima beans, flat, $1@1.25; cucumbers, L. I., ₱ 100, 75c.@$1; cucumber pickles, $2; egg plant, L. I., ₱ bbl., $1@1.25; tomatoes, ₱ bush., 20@25; Squash Marrow, ₱ bbl., $1.50 @1.75; cabbage ₱ 100, $6@7 beets, L. I., ₱ bbl., $1@1.25; white onions, $2@2.50; yellow, prime, $2@2.25; red, eastern, $1.75@1.87; Chester, $1.50@1.75; carrots, $1@ 1.50; turnips, Russia, 50c.@$1; okra, ₱ 100, 15c.

WOOL.—Sales are light, as holders seem unwilling to make concessions for fine lots. The market is not in a position for comprehensive quotations, but it is possible that a scale can be arranged by next week. Low-grade wools are neglected.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Sept. 3, 1881.

BEEVES.—Receipts for the week, 8,689 head; do. last week, 12,312 do. Cattle sold quickly at some advance over Wednesday, and strong markets are looked for next week. Some very coarse Colorados sold down to 7c. to dress 51 lbs, but the general sales of Colorados were at 7½@8¼c., with a few car-loads of prime up to 9@9½c. Texans brought 7¼@7¾c. About 140 head of Illinois half-breeds from Kansas and Southwestern Mo. were sold at 7@7½c. to dress 54@55 lbs. Very common native steers sold down to 8c. to dress 55 lbs., and strictly choice do. up to 11¾c. to dress 57 lbs, but the bulk of the sales were from 8¾ to 10c. to dress 55@56 lbs. Bulls continue in buyers' favor; small Statd grassers sell as low as 2½c. live weight, and it takes a good lot of corn-fed bulls to bring 3¾c.

COWS AND CALVES.—Receipts have run light and prices at the moment are strong. Very common cows have sold at $30@35 ₱ head; good, $50@60 do., and extras at $65@70 do. It should be remembered, however, that supplies may enlarge suddenly, as diminished pastures hereabouts will tend to send the surplus of herds to market, and quotations would decline with stock forced on the market.

SHEEP AND LAMBS.—Receipts for the week, 22,686 head; do last week, 28,702 do. Moderate offerings were none too favorable for trade, as a number remained unsold. Poor to really prime sheep, 5@5¼c.; do. lambs, 5@6¾c.

SWINE.—Receipts for the week, 14,887 head; do. last week, 13,850 do. Live steady at 6½@6¾c. for corn; Ky. grass quoted 5c.; N. J. pork, 8½@9½c.; city-dressed, 8¾@8¾c.

VEAL CALVES.—A fair demand prevails for prime live, but between them and under-grade the range is wide. Market fairly steady.

Live calves, prime N. J., 8c.; do. State, 7¾@8c.; poor to good, 6@7½c.; Mount Hollys, 8½@8¾; buttermilks, 4@4½c.; grassers, 3@3½c.; up-river dressed, 11@11¾c.

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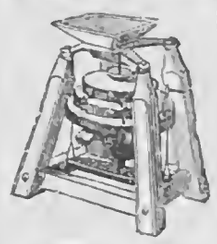

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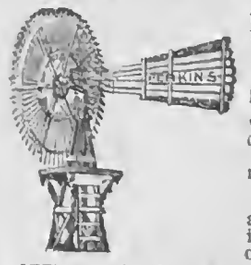

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Farm Crops. Wheat.

WHEAT is the most important crop grown on farms. It is not the most valuable, but it is that which the world could least spare, because it is the world's bread. It is a farm plant; none is known to grow wild; we do not know its origin, or when it was first introduced into cultivation; but it is probable that it has been grown by men from the earliest ages and has never been able to exist except by the careful attention of the farmer. It requires the best cultivation and only the best farmers can grow large crops of it. Usually the yield is very small as compared with what is grown under good culture and even less than 12 bushels per acre is produced, while a full crop may be more than 60 bushels, and a fair crop may reach 40 bushels.

Wheat requires a good soil and that the soil should be very well prepared by plowing, harrowing, and rolling; if necessary. The best soil for wheat is a limestone clay and the soil is in the best condition where it is fine and mellow and well packed in under the surface and somewhat rough on the top. There is but one species of wheat, but there are many varieties. There are Spring and Fall wheat; white, amber and red wheats, so called from the color of the husk; but each kind may be changed, by varying the manner of cultivation for a few years from one kind to another.

Wheat is one of the grasses. The plant has a root, a stem or straw, long, narrow leaves which clasp the stem and a head or spike. The spike consists of a number of spikelets arranged alternately upon each side of the stem, which is bent from side to side to receive the spikelets. The spikelet consists of three pairs of glume, which are the chaff of the wheat, and which inclose the grain; but it is rare that any one of these spikelets contains more than two grains, the middle glumes being nearly always empty. This of course lessens the yield of the crop and so does the smaller number of the spikelets produced when the cultivation is inferior. A head of wheat may contain but 20 or 24 grains, and it may contain more than a hundred when it has been well grown upon good soil, and a good variety has been chosen for the seed. When grown upon good soil there are several stems proceeding from each root, and it is not unusual for a root to have from 10 to 20 or even more stems and heads growing from it.

These facts go to show how important it is in growing wheat for the farmer to procure good seed; to have the soil in good condition; and to put the crop in the ground in the best manner. For with a poor crop the grains in the spike are few, the spikes from each root are few or but one or two only, and the yield is very small. But with a good crop the grains in each spike may easily be multiplied three or four times, and the spikes increased four or five times above the yield of a poor crop; and thus the whole increase will amount to several times the quantity of the smaller yield. This gain is of the greatest importance not only to the farmer who grows the wheat, but to those persons who consume it, for the better and larger the crop the cheaper will be the grain, and yet the greater will be the farmers' profits.

Wheat is a very exhausting crop to the soil. It therefore requires the soil to be rich in all the elements of fertility, viz., nitrogen, phosphoric acid, potash, magnesia, lime, soda and some others; so that the best farmers find it profitable not only to apply abundance of good manure, but to use also some artificial fertilizers with it as a help. The fertilizers commonly used are lime, superphosphate of lime, ashes or salt and sometimes all of them may be used with advantage.

PET BIRDS.

Parrots, Macaws and Cockatoos.

PRETTY POLLY is always a favorite. The grey bird is the most docile and intelligent, and the best talker, as well as the largest—measuring from ten to twelve inches in length. The bill is black, strong, and much hooked, and the orbit and space between them and the eyes is covered with a bald and white skin. The entire body is of a combined pearl-grey and slate color, and the feathers of the head, neck and under part of the body are edged with a greyish white. The toes are grey, tinged with red, and the tail is of a deep, light scarlet. The grey parrot is healthy and long-lived, sixty or seventy years being the average.

The Green Parrot, from the regions of the Amazon, South America, is nearly as large as the grey bird; the prevailing color of the plumage is brilliant green, but the back and under parts are tinted yellow. The fore part of the head is of a blue tint, and the throat-feathers are edged with a bluish green. This parrot talks well. A green parrot of an inferior kind comes from the West Indies. The pinion feathers are red and blue, and the head yellowish red.

Parrakeets are smaller birds, and the prominent peculiarity is the length of the tail, generally exceeding that of the body. The Yellow-bellied Parrakeet, from Tasmania, is hardy and well adapted for a caged life. The Rose-bill Parrakeet, from Australia and Tasmania, is one of the most beautiful birds of the Parrot family. Including the fine tail, it measures about thirteen inches. The head, sides of the face, back of the neck, and breast, are of glowing scarlet, and a scarlet band passes over the shoulders; the upper part of the throat is of pure white; the feathers of the back are black-green, edged with light and very bright green. In the wings lilac-color is mixed with black. The lower part of the breast is yellow, changing into light green on the abdomen. The Ground, Ringed (the latter with a very long tail), and Grass Parrakeets, are also pretty birds. Little Love Birds, so named from the affectionate manner in which a pair sit together, are pretty little creatures, scarcely six inches long.

Cockatoos come from the Eastern Archipelago and Australia. They are large and powerful birds, and the crest, composed of a number of feathers which lie along the neck, except when the bird is angry, and then they are erected, and opened and closed quickly, like a fan. The Great White and Sulphur crested Cockatoos are the best known in England. Most of these birds can be taught to utter simple words and phrases.

The magnificent Macaws, with their splendid blue and yellow, or green and scarlet plumage, are well known.

Bread and milk is the staple food of all birds of the Parrot kind. Lay a slice of stale bread in a pan, and soak it in warm water for a quarter of an hour, and then pour enough scalding milk on it to moisten it, without making it pappy. Cleanliness of the cage, and plenty of dry gravel are essential to the health of the bird.

THE CHILDREN'S PLOT.

I WONDER how many of the young readers of the RURAL have a little plot of land set apart for their own special working-ground? Surely, out of almost a thousand young people who are members of the Horticultural Club, there ought to be a large number who have a "little farm" which is under their own care and cultivation, and in which they may pass many hours much more profitably than in idle sport.

Now, methinks, some far off Western boy is saying to himself, "I guess Uncle Mark has forgotten that all work and no play makes Jack a dull boy;" but not so! It's a proper combination, or relation of work and play that is most beneficial, and most to be desired for the young. There are many hours in the course of a week as for instance before school time in the morning and after school in the afternoon, or on Saturdays when there generally is no school in the country, when it would be "nothing but fun" to work in the little garden or whatever it might be called. The plot need not be a large one, the size will depend somewhat on the way "father feels" when the request for it is made. Remember one thing which older farmers often forget, that the largest farms do not always produce most. Thorough cultivation goes far in the production of large crops, so even if you are allowed but little ground you *can* make that little pay a good interest.

I am sure that a great deal of pleasure and satisfaction would come from raising "big things" for the fair, and competing, then, with father or the neighbors for the premium. But how very seldom we hear of a little boy or girl who takes any thing to the fair—but a lunch. Yet, if "Master Johnny Gray" has the finest basket of potatoes or largest pumpkin there, he is entitled to the premium just as much as if he were "John Gray, Esq." Nothing would please me better to read in some of the many letters that will be received this Fall, that the members of the Horticultural Club had really taken premiums at their local fair, for this would denote an interest, on their part, in agricultural and horticultural affairs, and I should almost want to "jump out of my boots" if the premium articles were raised on their own plot of ground by their own cultivation. UNCLE MARK.

YOUNG QUERIST.

Ella F., New Alexandria, Pa., asks, 1, where roots or seeds of the Water Lily may be purchased, and, 2, the name of a vine, for a piazza, that will stand the sun well.

ANS.—1, Of almost any nurseryman. 2, The Wistaria (Wistaria frutescens); Hall's Honeysuckle (Lonicera holliana); Virginia Creeper (Ampelopsis quinquefolia); Clematis (Clematis vilicella); and Dutchman's Pipe (Aristolochia sipho.)

Flora M., Cross Creek Village, Pa., asks how to keep the worms from working on the cabbage, not only the green worms, but the big, striped, brown ones.

ANS.—An application of dry, unleached wood ashes has been effective. Drenching with hot water, decoctions of elder and dog-fennel, or dusting with powdered hellebore, lime, and ashes are recommended.

Willie M., Ilion, N. Y., asks for a description of the plum curculio and its entomological name.

ANS.—It is a dark brown, plump beetle, about one-fourth of an inch in length. Its wing covers are speckled with black and white and roughened by little lumps. It has a short, curved snout. It is known to entomologists as Conotrachelus nenuphar.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—I would have written sooner but have been very busy, and I wish to tell you what I have been doing. To begin at the first, please go back with me to the cold, snowy days of Winter when I got the first RURAL and looked over the advertisements to see what nursery to send to for the seeds and plants that I wanted. I selected three, and to each one I sent a postal card asking for their catalogues, which came in due time. Then came the fun, there were so many pretty flowers and plants that I could scarcely make a selection, but after examining all the books I concluded to send an order to each, and I am well pleased with the results. Those who have seen our garden say it is the best in this vicinity. Uncle Mark would be sure to throw this in the waste basket if I even commenced to tell what kind of seed I got, for there were two kinds of nearly every garden vegetable, besides many flower seeds. My brothers got several kinds of watermelon seed, also popcorn, both of which are doing very well. The prettiest flowers in the whole lot are the China pinks sent by Uncle Mark. I started my tomato and cabbage plants in a hot-bed early in the Spring, but the worms are beginning to work on the cabbage plants. However, some of the early kinds of cabbage have heads large enough to eat. Your niece,

HATTIE BELL PRIMROSE.

Cross Creek Village, Pa.

UMCLE MARK:—From the seed of the Crimson Dwarf Celery, that you so kindly sent me, I have raised five hundred and fifty plants. Three hundred of which I have transplanted into rows in the garden, and of the balance I have sold 75 cents worth, and given away the remainder. The Pyrethum Roseum seed came up finely, and was transplanted to the garden. The dry weather was too much for some of it, yet I have four plants now growing. You said you desired the Cousins to save the seed. My plants show no signs of flowers as yet. Of the Judas tree, or Red Bud, but one seed has thus far germinated. It has grown into a nice plant about seven inches high—large heart-shaped leaves, and seems very thrifty. It is still in the pot and I shall take it into the house and Winter it. If my celery does well, (the weather is very dry), I expect to realize about ten dollars from its sale—enough to pay the subscription cost of the RURAL for the next five years. Your nephew, HARRY R. FRENCH.

Elmira, N. Y.

DEAR UNCLE MARK:—I should have written to you before to thank you for the beautiful present you sent to reward me for my efforts to take the prize for mathematical drawing. It is a splendid engraving and I shall some day have it framed, to remember your kindness in sending it. Most of the corn about here was planted the first of June or thereabouts, and unless Jack Frost keeps off pretty late it cannot mature. Many farmers are not cutting their wheat, the scab and blight destroying most of it. Oats are the only good crop this season. My flowers are large and handsome. I have a fine show of lilies. I sowed but few flower seed this Spring, but depended entirely on the plants that came up from last season's seeds. The plants thus obtained are doing well. I have a handsome show of phlox and pinks from them, also a number of plants of the pinks and carnations from the RURAL. The celery did not grow and the Red Bud does not come up yet.

Purple Cane, Neb. W. J. MASON.

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PERSONALS.

Archbishop Purcell now has to be fed by an attendant, so weak has he grown.

Banker George W. Riggs of Washington, D. C., died at his country home at Greenbrier, Md., Wednesday week.

Whittaker, the colored cadet, wants to exhibit his ears—what's left of 'em—on the lecture platform for $3,000 a season.

Ex-Congressman Martin F. Conway, of Kansas, who shot Senator Pomeroy, has been released from an asylum for the insane.

"Uncle John" Stewart, of Shelby County, Alabama, is the oldest man in that State. He was born 102 years ago and has about 200 living descendants.

Johnny Skae, formerly a leading San Francisco millionaire and at one time the owner of $10,000,000 of Comstock mining stock, went to the station-house the other night because he could not give $5 bail—drink.

The Duke of Argyll, who re-married the other day, passed his honeymoon at his father-in-law's, the Bishop of Rochester's palace Only one of his sons appears to have attended the marriage. The new Duchess will find a large ready-made family, by all accounts not too delighted to see her. The Princess Louise was not at the marriage.

With an earldom, $750,000 a year, youth, health, a pleasing wife, a taste for sport, and four of the choicest homes in the world, Lord Roseberry, to whom Mr. Gladstone owes his seat for Midlothian, puts his nose to the grindstone in a government office under that not particularly agreeable man Sir William Harcourt. England may be congratulated on her Roseberries.

Brother Knowiden's polygamy is of a kind that even Mormons do not approve. He has a wife in each of seven Utah towns, so that in his travels he is provided with convenient lodgings free of cost, for he lets the wives support themselves. One of them became so poor that she nearly starved to death, and Knowiden was mobbed the next time he visited her.

[La Fayette (Ind.) Sunday Times]

Our city Druggist reports an immense sale of St. Jacobs Oil, saying the demand is based upon the popularity of its success. Wherever it has been used, it has proved its value a thousand fold, and receives its best encomiums from those who have tried it.

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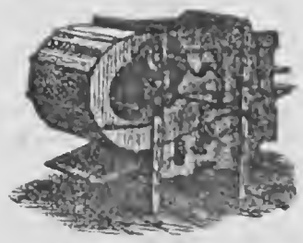
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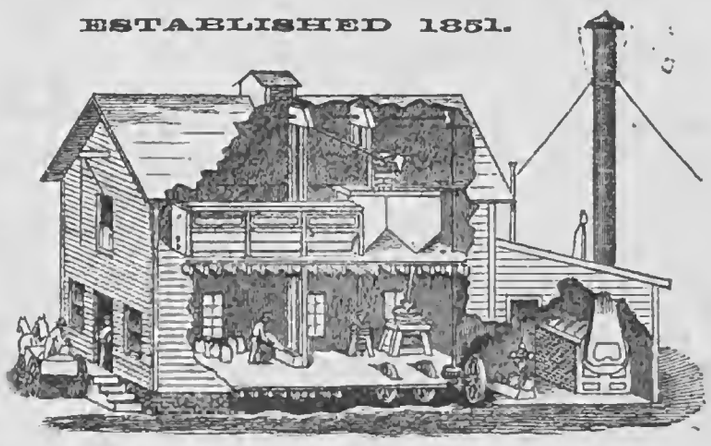

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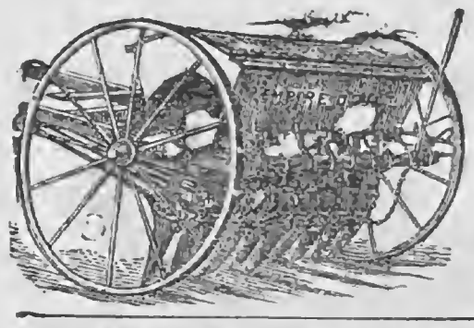
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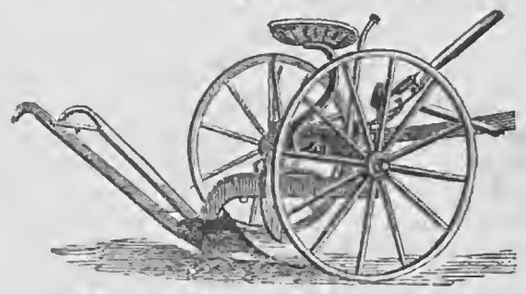
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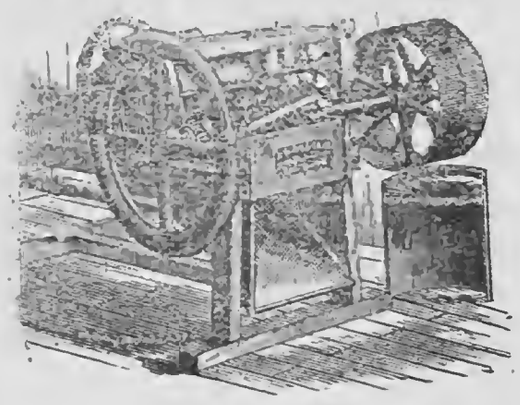
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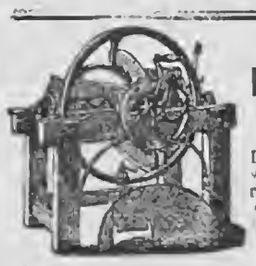
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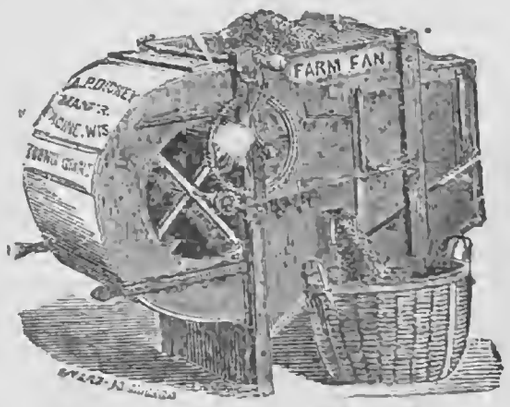

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"WHAT a beautiful thing, my dear, is a rosy cheek!" "Yes, husband, but how great the contrast when the blush settles on the nose."

IN Russia "hello" is rendered "Tzijakanfitkranjanzski," hence the telephone can never be introduced into that country.—Modern Argo.

A LITTLE boy, disputing with his sister on some subject, exclaimed: "It's true, for ma *says* so: and if *ma* says so, it is so, whether it is so or not!"

"LONGFELLOW wears his frock coat buttoned to the chin." The question now is, who sewed that button on the poet's facial extremity.—Courier Journal.

A NEW book asks: "Can she atone?" A more important question to the marrying men is: "Can she bake?" or can she sew on shirt buttons?"—Norristown Herald.

A NEWLY-ACQUIRED HABIT.—"Look heah, Uncle Mose, you fooled me wid dat ar hoss I buyed from yer last week. He jest drapt dead in his tracks." He nebber drapt dead in his tracks or anywhar else as long as I had him, goin' on twenty years."

A SCOTCH preacher, who found his congregation going to sleep one Sunday before he had fairly begun, suddenly stopped and exclaimed:—"Brethern, it's nae fair. Wait till I get alang, and then, if I'm nae worth listening to, gang to sleep; but dinna gang before I get commenced. Gie a mon a chance."

[Cleveland Leader.]

Mr. Orlando Weatherbee, says an exchange of ours, proprietor "The Spencer Pharmacy," Spencer, Mass., reports: My customers speak very highly of the Great German Remedy, St. Jacobs Oil, it having always given excellent satisfaction. One of them, Mr. Henry Belcher, has been greatly benefited by its use in a case of severe rheumatism, and he refers to it in terms of highest praise.—*Adv.*

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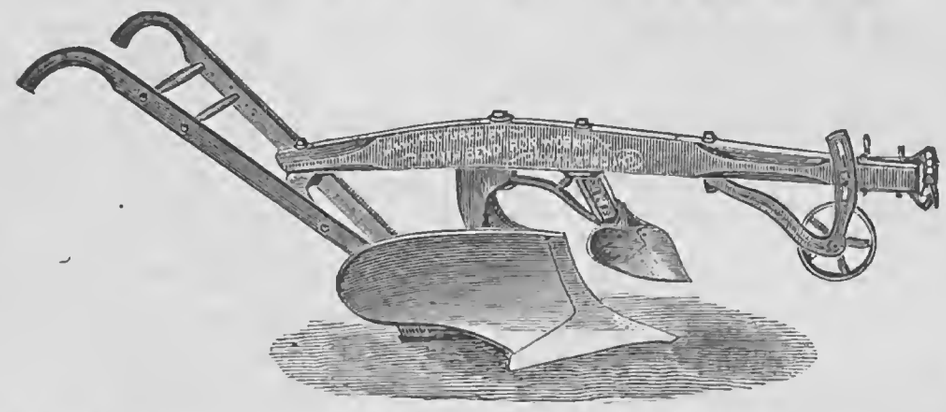

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Sales steadily increasing, and showing the largest ratio of gain where it is best known.

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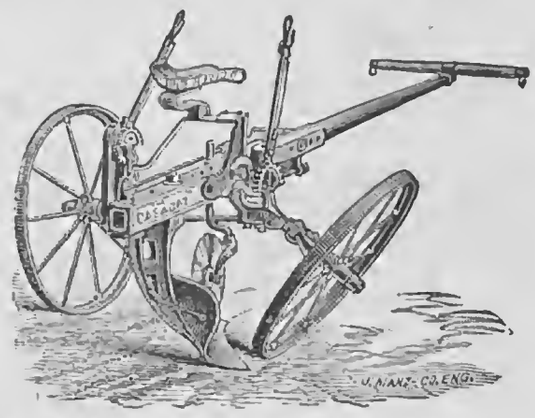

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W. S. COMBS, FREEHOLD, MONMOUTH CO., N. J., April 26th, 1881, reports—

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About three weeks before harvest the army worm entered the field and marched directly across it, stripping the leaves from the stalks and cutting off the smaller heads. They did considerable damage, just how much I am unable to say.

Have sown the whole 36 acres again with wheat, without the application of any manure or fertilizer."

W. S. COMBS writes again July 19th, 1881—

"You ask an estimate of this year's yield of wheat. I do not think much of *estimates*, so I will give you what facts I can. The piece of ground is the same as that sown with wheat in 1879—and of the treatment, yield, etc., you have already had my report. Last year it was again sown with wheat (Fultz), about two bushels to the acre, no manure or fertilizer of any kind or description was applied to the ground. The crop has been gathered by the same men and put in the same buildings; a self-binding machine was used this year. The crop this year occupies just four-fifths as much space in the buildings as did the crop of last year.

I can only say that I am extremely well pleased with the result, and will forward you the exact figures as soon as I can get them.

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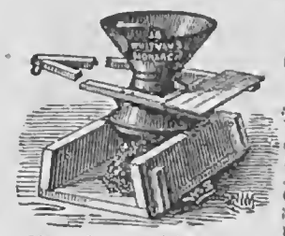

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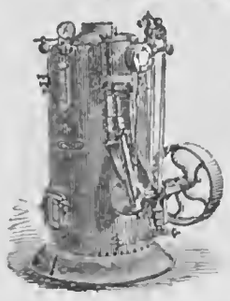

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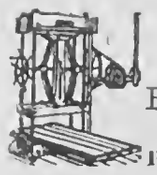

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Ralph Evans

VOL. XL. No. 1651.} NEW YORK, SEPT. 17, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

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Arboricultural.

THE WEEPING SOPHORA.

Sophora Japonica Pendula.

SAMUEL PARSONS, JR.

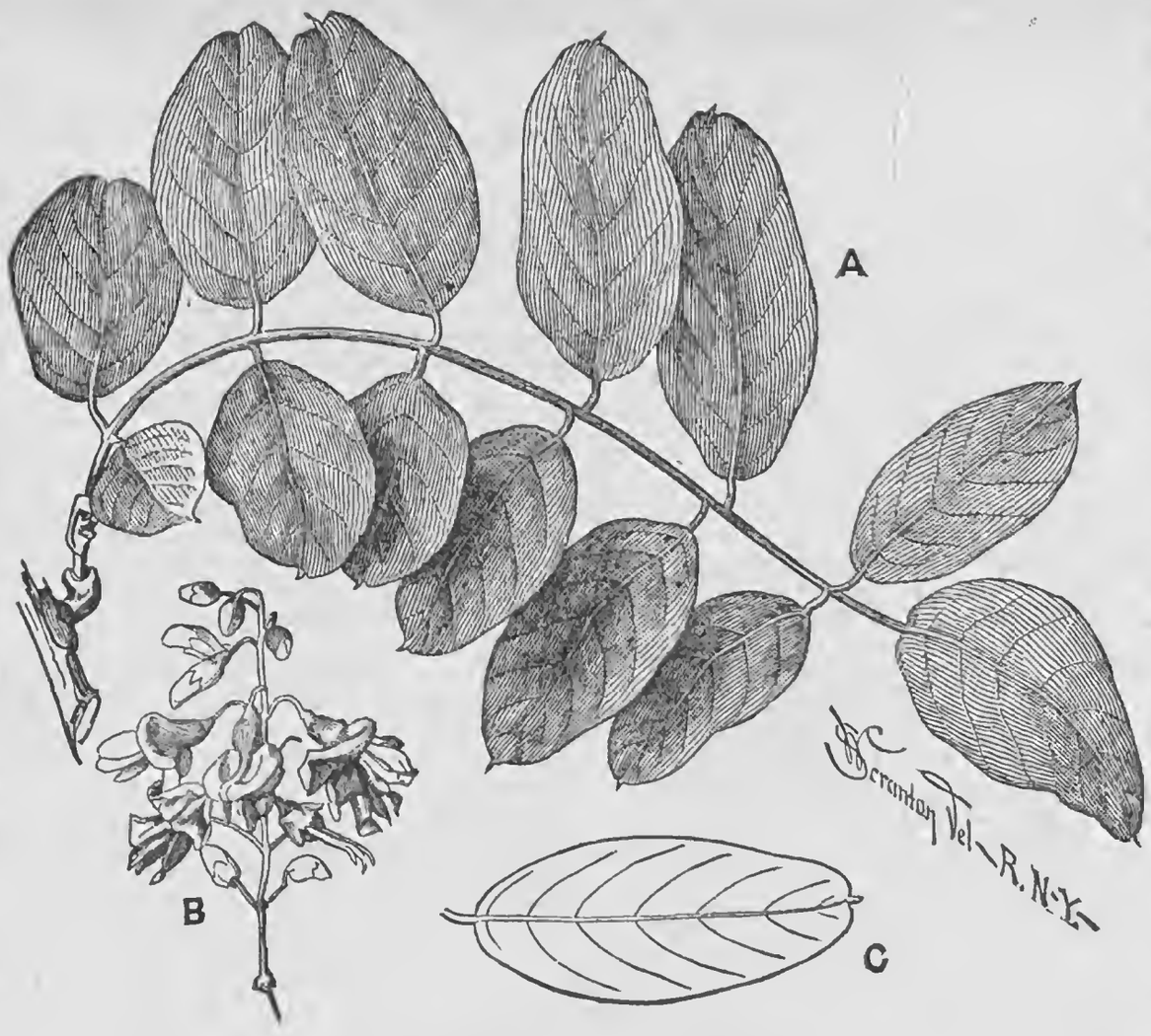
WEEPING is a misnomer—it should be drooping. Pendulous, the Latin word being *pendula*, expresses a tendency shown by some trees to extend their branches out and down in more or less definite curves. This habit is, in the first place, an accidental sport or freak of some particular specimen. The branches or twigs, of such a tree are cut off and grafted on a plant of the ordinary parent type, thus perpetuating the desirable peculiarity. There are two kinds of weeping or drooping trees: one, like the Weeping Beech, tosses and droops its branches now here, now there, with the most charming abandon and beautiful picturesqueness of effect; the other is rounded, symmetrical, dignified and more or less parasol-like in form.

To the last belongs in the most definite manner the subject of our sketch. The illustration serves only to show the character of the foliage and flowers. Few trees have foliage more positively beautiful than that of the Sophora Japonica pendula. The leaf itself is small, scarcely an inch long, with a perfectly oval outline and smooth, delicate surface. Its color is rich green, darker than that of the Virgilia lutea, which, however, it resembles in size and outline of leaf and flower and other characteristics more difficult to define. The flowers are white or yellowish-white, small and of a decidedly leguminous appearance, hanging during August in loose panicles sometimes a foot long. This summer-blooming quality is valuable because limited to a few trees and shrubs. A Drooping Sophora, seldom, if ever, blooms until it is old, and then sparsely and by no means every year. When in bloom, however, a large Drooping Sophora is a sight to behold, all embroidered with cream-colored blossoms on a ground-work of gracefully arranged masses or folds of dainty, exquisite leaves. The trunk of this, as well as of other sophoras, is light, somewhat rough and corrugated, but the bark of the branches and twigs is smooth and of a rich green color. These branches and twigs have a curious fashion of bending suddenly in short, grotesque curves—a peculiarity which serves to give the tree a perfectly parasol-like form, and arbor-like umbrageousness.

The Weeping Sophora grows slowly and lives long. One sees now and then a specimen in perfect health and vigor at least 30 years old and not over eight or nine feet high. There are very few Sophoras to be seen anywhere in this country. If there were more we should have many long-lived, perfect specimens; for the Weeping Sophora is singularly perfect during late life. As a tree it is not generally considered quite as hardy as the Weeping Beech and other drooping trees. This applies, however, to its young state, and to conditions induced by recent transplanting. The bark, too, of the stem or trunk is liable to suffer from American extremes of heat and cold. It is a good plan to bind the bark with moss for two or three years after transplanting. When fairly established in the soil, the Weeping Sophora seems as hardy as most other ornamental trees. It does not transplant readily unless it has been moved repeatedly; or what amounts to the same thing, unless thus transplanted the roots are apt to be bare prongs without fiber.

Propagators find this tree a difficult subject to handle. In the first place, to graft it high, a straight, clean-barked seedling of Sophora Japonica is required, and this can be most surely obtained by allowing the seedlings to stand close together in the row surrounded by other rows of large growing deciduous trees. The shaded seedlings thus naturally shoot upward clean and straight in search of more light. Then, the grafting is no easy operation. The mechanical process of inserting the graft and waxing and covering it with oil-paper is not so difficult, but the protection of the fresh union throughout the following Winter is an undertaking subject to many accidents. The low-grafted form of the tree has its advantages. Its short, protected stem needs little, if any, shelter from the cracking effects of sun and wind. Altogether it is hardier than the high-grafted form and specially adapted, from its dwarf and somewhat irregular habit, to the nooks and corners of rock-work. The Weeping Sophora needs no pruning, except now and then to remove a bit of dead wood; its growth is invariably slow and well regulated. On the lawn it should occupy distinguished and isolated positions; far enough away to be seen with effect from a porch or window and yet not too far for a due consideration of charms that bear, and are worthy of, the closest examination.

There are several good specimens of Weeping Sophoras in the Boston Public Gardens, in Flushing and a few other places in the country, but it is a rare tree. Yet it should not, and need not, be rare. If the public insisted upon having it, the demand would be met sooner or later. An enlightened public interest is all that is necessary to secure with a little patience, a moderate supply of any ornamental tree or shrub.



THE WEEPING SOPHORA.—FIG. 555.

THE WEEPING SOPHORA.—Our engraving was drawn from a specimen kindly furnished us by Mr. Parsons. The compound leaf is marked A.; the flower raceme B. and the leaf of natural size C. Several years ago, a specimen of this attractive tree was planted at the Rural Grounds in the Fall; but it did not survive the severe Winter which followed. We have always, however, in the trying climate of the Rural Grounds met with better success in Spring than in Fall transplanting, let the kind of tree be fruit or ornamental. At the Rural Farm, on the other hand, where the soil is more sandy and susceptible to dry weather, Fall transplanting has always proved successful.

Horticultural.

RURALISMS.

IN a recent letter to me Mr. Downing says: "The New Rochelle is, as you say, very productive, but the color is against it as a market fruit, and I think one of a better color and better flavor will take its place some day." That is well said, I add my own hope to Mr. Downing's. A New Rochelle with a bright color and acceptable flavor would be decidedly the greatest acquisition that has yet been made to the whole tribe of raspberries; and we shall have it yet if originators of fruit will only turn their attention in that direction. Let any man who has a plant or two of the New Rochelle study its habit thoughtfully for a single season, and I think he will reach the conclusion that, aside from the color and flavor of the fruit, the plant has more desirable points than any other raspberry in cultivation. Here is a good starting point and a rare opportunity for some man to make himself famous. May I live to make a grateful record of his success!

I HAVE before, in this column, made allusion to the discreditable manner in which some parties pack apples for the English market. Since then the complaints have grown louder and more frequent, and always coupled with the statement that our Canadian neighbors thus far pack fairly. Investigation, I am sorry to say, shows these complaints to be, in many cases, well founded. All, of course, do not resort to this reprehensible method, but all should feel an interest in exposing and correcting the evil as far as may be, for the sake of our common reputation. It will only result in hurting the trade, and this trade is already of such dimensions as to be worth preserving, apples now forming an important item among our exports. It is officially stated that 1,203,670 barrels of apples were received in England from the United States during the year 1880. These figures will surprise many, but there can be no doubt that they may be greatly increased if some regard be paid to the much neglected "golden rule," which is just as good in trade as anywhere else.

I NOW remember seeing the Skowhegan Raspberry at Mr. Force's, but without, at the time, knowing its name. Mr. Downing saw it there during the past season, and says of it: "It is a week earlier than any other Black-cap, is of large size, jet black color, very productive, sweet, juicy, and rich. I think it an acquisition among the Black-caps." He further says: "I was at E. P. Roe's, and saw the Centennial, another Black-cap, equally as good as the Skowhegan in all respects; if there is any difference, it is in favor of the Centennial. As to quality, they are both superior to the Gregg or the Mammoth Cluster, but not quite as firm in texture." The Black-caps, it will be seen, are coming to the front, and this is only the beginning of the end. Their hidden capabilities have hardly been suspected yet. But wait.

CAN anybody tell me why some of our best fruit trees should not be used as ornamental trees on the lawn? I mean any good and sufficient reason outside of the domain of prejudice and sentiment? For example, my friend, who is a gentleman of culture and refined taste, has bought a small place in the country, and wants fruits, flowers, vegetables, ornamental trees and shrubs, and a small lawn; that is, a real lawn, and not a sham. Apples, pears, peaches, etc., he cannot have in useful quantity unless they are used as accessories to the lawn. Then why may he not use them in this way for the purpose of ornamentation, not exclusively, but in combination with what are called ornamental trees? I have told him he may. Is it anything deeper than prejudice which prevents the judicious use of fruit trees on the lawn? I have so employed them several times where fruit could not otherwise be grown, and am by no means dissatisfied with the result. Pleasing effects can in this way be generally produced even on a limited scale. A peach, a cherry, a plum, etc., with double flowers, are ornamental trees; with single flowers they are not. But why? What can be more beautiful than an apple, a pear, or a peach tree in full bloom? Where a man has the choice of an orchard, that is the better place for his fruit trees, as he can cultivate them there as he cannot on the lawn, and secure better fruit; but by top-dressing the lawn he can be pretty sure of fair crops of very good fruit. Therefore I say that, rather than be without fruit, I would plant fruit trees on my lawn.

THE seed catalogues still continue to say that the Dwarf Golden Wax Bean is eight to ten days earlier than the Black Wax, and I still continue to prove that it is not. I have tried them again this year, with the same results as heretofore, that there is less than a day's difference between them. I imagine it will be a long time before the Black Wax is much beaten in the race for earliness; yet our seedsmen still say it is eight or ten days behind, and will not be convinced to the contrary. They mean well, and I think well of them, so I shall continue to pray for the horticultural sinners till they repent. The reader should know that these Wax Beans are among the earliest and best of beans.

ARE Agricultural Societies and similar institutions as careful of their reputation for consistency and justice in their awards as they should be? In 1879, at a certain fair, a committee of experts reported a certain article as having no special merit, and as being a foreign invention, which latter of itself barred it from

competition under the charter of the institution before which it was exhibited. In 1880 the same article was exhibited again, and a committee of two only, who were not only not experts, but quite ignorant of the use of the article as well as of its principles of construction, recommended it for a certificate of merit, thus stultifying the institution, depreciating the value of its awards, and lessening its influence among the public at large. Does not something like this take place occasionally at some other of our State and county fairs? I fear so. Again, can any real estimate be formed of the value of a new implement without, in most cases, an actual trial in the field, under the eyes of experienced men? I have seen a new and untried seed-sower rolled a few times over some boards, and then awarded a first-class prize. This is one case of many. A prize so awarded may do the inventor or the manufacturer much good; but how about the society and the public? Should they not be thought of, too? The subject is full of embarrassments, I know, but would anything be lost to the parties most interested if the president and the managers should look a little deeper into the working of their own machinery, and not leave it to go so much alone?

A MORE or less common village scene. Mrs. A. has a good many household cares, but is fond of her plants, and has come out to do a little weeding. Mrs. B. is a neighbor, and one of those selfish or unfortunate beings who do nothing themselves, except gossip, and make it the business of their lives to prevent others from doing anything. Mrs. A. no sooner begins weeding than Mrs. B. is through the gate and at her side. In a few moments a peculiar chord seems to be struck, weeding is suspended and an animated talk begins, and goes on for an hour or so. Mrs. B. then, for some reason not apparent, goes home; Mrs. A. begins weeding again, and I walk off. I have become interested, however, and in about half an hour return for observation, and as sure as I live, there they are at it again, and, to look at them, you would think by their actions that they had not seen each other for twenty years. And this I saw repeated three or four times during the day. Now how is Mrs. A. ever to get her weeding or anything else done with such a neighbor at hand? And of what use to the world is Mrs. B. anyhow? And what do they talk about all this time? I am greatly puzzled. Is there any rational explanation for it? I am only telling what I have more than once seen, and what others also have probably seen. If Mrs. B. can find nothing useful to do, she should at least remember that there are others who can, and want to do it, too. The Mrs. B's. are certainly not honey bees, who are workers, though they do sometimes sting.

HORTICOLA.

The Rotting of the Tomato.

The RURAL may be, and no doubt is, correct so far as its observation extends, in attributing the rotting of tomatoes to the tomato worm, but could the editor see mine, he must agree with me that such is not always the case. So far as I can discern, the tomato worm is the Carolina Sphynx, or tobacco worm. [No, ours is the Five-spotted Sphinx—S. quinquemaculata.—EDS.] It appears on tomatoes before tobacco is sufficiently grown to receive much injury from its depredations—in June, or sometimes in May—whereas the fight on tobacco does not become serious until August, at which time no worms are to be found on the tomato plants. This year I have been unable to find one since about July 1, and yet the fruit decayed and is still decaying when nearly or quite matured, with no indications of being injured by worms or any other cause. Furthermore, I have noticed green specimens with perhaps a tenth part eaten away (I suppose by the worms; I did not see them do it), yet the wound has dried over, healed, and the portion remaining has ripened sound and perfect. As the cause cannot be assigned, of course no remedy is recommended.

Warren Co., N. C. M. B. PRINCE.

Practical Use for Yucca Filamentosa.

When the RURAL presented its readers with seeds of "Yucca filamentosa," known also as "Strong Grass," "Bear Grass," and "Thready Eucre"—the latter probably a corruption of the real name—the editor said nothing of the useful properties of the leaves, no doubt believing, as all must, that the flowers would repay the care and trouble of growing. Yucca grows spontaneously in many parts of the South, where it is made practically useful, of which fact many at the North who now have it growing in their gardens, are entirely ignorant. We pull away the leaves as every pie maker knows how to gather pie-plant. In almost every garden in this State is found a thrifty bunch of Strong Grass, to which the whole family resort whenever a short, strong tying material is required. The meat is hung up with it; bags are tied with it; and this year having used the last of some inferior twine, I tried the Yucca leaves for tying grape-vines, and find them superior to anything ever used except wire.

M. B. P.

Farm Topics.

SOME EXCELLENT HINTS TO EXHIBITORS OF FARM PRODUCTS AT FAIRS.

THE most seasonable topic at this season of the year for the consideration of the farming community is our agricultural exhibitions. Outside of the professional stock-breeders, gardeners and mechanics who have wares which they consider necessary to be kept before the public at all times, there are very few who give agricultural shows a thought until a few short weeks before the date of exhibiting. Those who exhibit year after year always pay some little attention to such things and know how to excel. This class I do not presume to advise. To the other and greater class who only exhibit some choice article occasionally, a few practical hints may be of great value.

Now, although no one pretends to exhibit for the sake of winning the premiums offered, but only to gratify the pride of succeeding in an honorable competition, still it is necessary to procure a copy of the premium list offered by the society in order to see what avenues are open to honorable competition, and, incidentally, to see what amount in money is to reward the successful, honorable competitor. If, as is sometimes the case, the exhibitor intends to fill all the entries in any particular class, it is demoralizing to compute the amount of premiums for that class—at least before the judges make their awards known, for judges are after all only human. Very few farmers in preparing for the fair forget their pumpkins and turnips, their potatoes, corn and smaller grain. Now, in all the premium lists that I have ever seen, in the class of vegetables occurs this note:

"All the above to be field culture and to be a fair sample of the crop. Potatoes and roots to be shown as dug, not sorted."

Now, I fear that an amateur exhibitor might be misled by this note. Some inexperienced farmer might show a basket of potatoes in which there were some small and a good many medium-sized tubers. Such a foolish exhibitor would meet his merited reward: his potatoes would be unnoticed by the judges among the great quantities of tubers neatly washed and sorted. Potatoes as well as other vegetables should be a fair sample of the whole crop. Webster defines "fair" to be, 1st., free from spots, dirt, and imperfections, spotless, pure; 2nd., handsome, beautiful. Now, with this brief explanation no one can be so stupid as to think it necessary that a sample exhibited should be an *average* rather than a "fair" sample. To sustain my position I have only to cite the well known fact that judges, time out of mind, have persisted in giving this requirement the same meaning which I have here ascribed to it. To comply with it, the sample of potatoes exhibited should not be procured until after the entire crop has been dug and properly sorted. During this process a "fair, handsome, beautiful" sample of the crop may be obtained. After the necessary quantity has been selected, they should be carefully washed, for they must be also free from spots, dirt, or imperfections. The exhibitor should be on hand when the committee goes around to make awards, and insist that he has complied with the letter and spirit of the requirement. Another hint may be also worth considering: If Mr. A. has a sample inferior to Mr. B.'s, then Mr. A. should suggest to some member of the committee that Mr. B.'s potatoes have evidently been sorted, and that therefore the competition is unfair. A careful attention to these few crude suggestions will probably be rewarded with success. They apply with equal force to preparing other vegetables for exhibitions. Another foolish requirement is that samples exhibited should be grown by the exhibitor. It works hardship in many cases, as, for instance, some worthy farmer has only three or four of the necessary half dozen enormous pumpkins for exhibition; he is, under this rule, debarred from exhibiting unless he can borrow from his neighbor. Now, the only way out of this dilemma is to borrow enough from some neighbor to make up the necessary number. But by no means lend the few enormous squashes or pumpkins you may have to any one. The spirit of this rule prohibits your growing vegetables of any sort to be exhibited by another. This practice of borrowing for exhibitions works charmingly in the class for fruit. I have known an exhibitor to scour a whole town to procure samples of different varieties of fruit for exhibition.

In all other classes there are numerous methods of excelling. Sheep to be exhibited should have been "stubble-sheared" months ago; lambs should be shown with ewes that have not suckled them. Ewes, to show to good advantage, should not have produced lambs during the year they are exhibited. Some little advantage will accrue from being on hand at the time the judges are making their awards and inducing them to believe that your sheep were shorn at least two months later than was the case, that the lambs shorn are twins and are two months younger than is the fact, and that the ewes exhibited all suckled twins and that said twins were weaned only a few days before the fair. At least two out of three judges will know nothing about sheep; and this is an honorable competition, and the honor consists in succeeding. Your calves and pigs should be younger than the stock of other competitors, and it is well to state this fact to the committee and also that your stock have had no extra care, and that you did not think of showing until the day before the fair. It will do no harm to be friendly with the judges. Milch cows, to show to good advantage, should have come in profit but a few days before the exhibition, and should not be milked the morning of the day on which the awards are to be made.

To the fair sex who aspire to become successful exhibitors, I would say, briefly, do not make anything for exhibition that can be bought. Why make preserves, pickles, biscuits and bread when better samples can be purchased. Some articles of fancy-work can be exhibited year after year, and thus become quite a source of profit. By a successful exhibition you establish a sort of prestige that may be useful in other exhibitions and in succeeding years.

By a close attention to these few hints and the careful elaboration of other ideas that suggest themselves to the exhibitor, a certain degree of success may be attained and a certain amount of money acquired. The one thing above all others that should be remembered is, that the honor of an honorable competition consists solely in succeeding.

St. Lawrence Co., N. Y. F. K. MORELAND.

THE EVAPORATION OF FRUIT.—NO. 4

J. G. BINGHAM.

Its Profits.

IT is characteristic of the business Yankee, previous to any investment, to make the pertinent inquiry: "Will it pay?" This question has been repeatedly asked of me in regard to the evaporation of fruits.

Before I can answer satisfactorily I must assume, first, that you have fruit-bearing orchards or can purchase fruit at reasonable prices: second, that you will with reasonable industry keep your evaporator at work; third, that your products shall be first-class and command full market prices. With these conditions, so far as relates to fruit, evaporator, product and market, I answer emphatically, "Yes." The business is now recognized as a legitimate farm industry. Rarely will any investment on the farm, or indeed in any legitimate business, pay handsomer or quicker returns. For example, 1,000 bushels of apples will yield 5,000 pounds of evaporated fruit, which is quoted in the last number of the RURAL—September 10—as worth 11 to 11½ cents per pound. The actual market value of the product of the 1,000 bushels is $550, while the value of the 1,000 bushels of green fruit at 20 cents per bushel, is $200. The value of the time occupied in paring, drying, fuel for the evaporator, etc., will not exceed $100, leaving a balance for profit of $250.

From actual tests given certain quantities of fruits, I have gathered the following: 7,000 bushels of apples evaporated by a well known fruit grower, yielded 41,645 pounds of dried fruit, which sold for 10 cents per pound, or $4,164.50: 500 bushels of Black-cap raspberries evaporated by the "Fredonia Fruit Drying Co.", of Fredonia, N. Y., made 5,000 pounds of dried fruit, which readily sold for 30 cents per pound.

Two acres of sweet corn yielded 1,800 pounds of dried corn which sold for $180; time occupied in drying, 19 days; cost of labor and fuel, $43: 1740 baskets of peeled peaches (⅝ bushel per basket) yielded, when cured, 6,090 pounds, and sold for 30 cents per pound, or $1,827. The cost of the peaches at 25 cents per basket, and of peeling and evaporating them at 16 cents a basket, was $713.40, leaving the handsome profit of $1,113.60. From practical experience in the dessication and evaporation of fruits, I am convinced that the foregoing tests are by no means exaggerated, but are about an average in quantities and prices received.

As to the important problem who manufactures the best evaporators as regards general principles and correct methods of construction, material used in them, perfection of work, etc., there is a diversity of opinion. The Zimmerman and the American Dryers, both of which are advertised in the RURAL, I have thoroughly tested by actual use, and, moreover, I have seen them used by many orchardists, and they commend themselves to the general observer in preference to large and costly evaporators, for their low price, portability, rapid and continuous evaporation, and bright, perfectly cured fruit. An evaporator costing from $50 to $75 will thoroughly evaporate from five to twelve bushels of apples per day. One costing from $100 to $200 will evaporate from 15 to 40 bushels, and larger sizes, costing $400 to $650, will evaporate from 100 to 150 bushels per day of 24 hours' continuous work. It is to be hoped that the thousands of bushels of fruits that yearly go to waste or that are converted into cider, wines and other intoxicants, etc., may, instead, be evaporated and thus yield a handsome revenue in place of loss to our orchardists and agriculturists.

In conclusion, I would most earnestly impress upon the minds of the readers of the RURAL the importance, economy and satisfactory results of this branch of farm industry. The proper utilization of the waste of fruits it would indeed be difficult to overestimate; happily the apathy of years past is giving way, and the recent progress in evaporating our surplus fruits, if continued, will place evaporated fruit among the largest items in the lists of our exports, and thus American fruit will hold a foremost place in all the markets of the world.

McGrawville, N. Y.

CRUSHED GRAIN.

THE description of a grain crusher on page 531 of the RURAL, opens up a matter I think of great importance to all classes of farmers, especially to those who feed ground food to stock, and to the other class who feed whole grain. While the former gain probably 25 per cent. by having their grain ground, they lose in another way quite as much—in the time occupied in going to mill, the charge for grinding, a little loss here, and a trifle there, that goes quite a way in balancing the gain by grinding: the other class lose their 25 per cent. outright, and probably some more.

This brings me to my query, which I trust may be discussed by other correspondents of the RURAL—why do not more farmers have farm mills, and grind their own corn, crush their oats, and, besides, "fine" the beans, peas and barley, that are fed upon the farm? To me such a machine would seem to be a great economy, not only in dollars and cents, but also in time, and would also furnish a way to prepare other kinds of feed than corn, that are not usually ground at the grist mills.

I have no experience with the crusher described, nor with steel burr mills for the farm, but for 25 years I have had an Excelsior farm mill—a huge coffee-mill, the principle being a double cone, the inside one stationary, the outer one revolving about it by means of a sweep. For all of that time I have "cheated the miller" out of his toll by grinding all my grain for stock, the sum total some years approaching 2,000 bushels; and there has been no expense in all that time, save for a pair or two of new "rings" or burrs. The speed is from 10 to 20 bushels of corn (in the ear) per hour. With this mill I grind when I wish, and always have my meal fresh. I have no three-mile journey to make to the grist mill, and often weary delays there waiting "my turn," and the "grist" is usually well ground—and no toll to pay. Crushed grains are, I am satisfied, as conducive to good results in feeding, as the fine, dust-like meal that many insist upon, and many years of rather close observation fail to shake my opinion that a kernel of corn crushed into twenty pieces is fully as nutritious as the same kernel ground into dust-like flour, so that I have, for a number of years, turned the "set" of my mill back a couple of notches and ground somewhat coarser than in the beginning. Mills adapted for farm use are not particularly expensive, and if they are used with care, they will last a lifetime. Twenty-five years' service has not detracted a dollar from the working value of my old mill; and should any of my readers chance upon my farm in 1906, he will probably see the veritable old mill grinding, slowly perhaps, but none the less fine.

JOHN GOULD.

Ohio X Roads, O.

COVERING WEEDS WITH A PLOW.

IN the RURAL of Aug. 20, I find an illustrated description of a plow arranged for covering weeds, tall grass, rye, etc. In examining it, I observed that one important part was omitted—that of having a short chain or small rope extending from the drag-chain to the plow-rung. In order to do good work, the chain should be *heavy* from the plow-beam to a short distance in front of the furrow-slice, and the links should be short, with as small spaces as possible, as the weeds and grass will not be as liable to become entangled in the chain. This invention has been patented, as may be observed by reference to the Report of the Commissioner of Agriculture for 1866, p. 244, in which is a very clear illustration.

Southold, N. Y. S. T. T.

Combined Drill and Lister.

For the last five years or more the practice of "listing" corn has been extending rapidly in the Far West, especially in Kansas, Western Missouri and Nebraska. According to Professor Sheldon, of the Kansas State Agricul-

tural College, the advantages claimed for the method are three-fold: 1, by it the crop may be made at one-fourth less cost than by the old method; 2, the yield per acre is considerably increased, and, 3, the "listed" corn stands drought better than that planted in the ordinary way. The lister, as seen in the accompanying engraving, Fig. 556, is simply a double-mold-board plow which throws the earth equally to right and left. It is usually worked by three horses, and in the furrows made by the plow the corn is drilled either by an ordinary corn drill or by a drill attached to the lister, as represented in the cut. By the use of the ordinary lister and drill a man and three-horse team can put in from eight to ten acres of corn a day, and with the drill attachment to the lister it is claimed that from 10 to 12 acres can be planted with equal ease. After the corn is planted, the harrow is used on the field till the corn is from eight to ten inches high, and then the cultivator finishes the job.

Field Crops.

TOBACCO GROWING NOTES.

The dry weather which has prevailed to a serious extent during the present Summer throughout many of the tobacco-growing sections, has led to much discouragement among tobacco growers. It has, however, served as a useful lesson to many in the way of teaching them the importance of giving soil upon which this crop is to be grown very thorough preparation. It has been generally found that upon soil highly manured and thoroughly pulverized to a considerable depth, the crop has suffered comparatively little damage, while soil improperly fertilized and otherwise poorly prepared, has failed to produce a paying crop. Another important lesson taught by the drought is the advantage gained from early setting. I fail to find an inferior growth of plants where the soil was properly prepared and the seedlings transplanted early. The early setting of plants usually secures a fair growth before mid-summer, when the excessive heat and dry weather do not so seriously affect the growth of the crop. Late tobacco, on the other hand, that does not have time to become well rooted and started by mid-summer, cannot fail to become seriously impaired during times of drought.

Tobacco growers who have found their crops greatly curtailed in growth by the drought, may do much in the way of making their product more salable by careful management. Early and low "topping" is highly important with late tobacco, as it hastens the plants to maturity, and adds greatly to the size of the leaves. In all cases, when it is possible, let such tobacco become ripe before harvesting, by allowing it to stand at least two weeks after it is "topped." In the meantime no suckers should be allowed to grow and a diligent search should be kept up for worms. It can not be expected that a small, late crop will mature as many leaves per plant as early tobacco; hence the importance of topping it low. While with seed-leaf or cigar-making tobacco, a large leaf is usually most desirable, a small leaf, if fully matured and properly handled and cured, may make a product of very fair quality.

One of the most difficult points to learn in tobacco culture is to tell when the plants are fit to be harvested. The most experienced growers are frequently unable to tell definitely when the best period of maturity is reached. It is pretty generally considered that a fully matured plant will yield a greater weight of cured leaf than one not wholly ripe, but the difficulty lies in determining the exact point at which the quality begins to deteriorate, if the crop is left uncut. I have this season allowed my plants to stand four weeks after "topping," which is longer than seed-leaf tobacco is usually allowed to ripen. I hope by the experiment to be able to demonstrate the advisability or unadvisability of allowing tobacco to become fully ripe.

A valuable property in tobacco is the resinous gum which the leaf freely exudes during the process of ripening, and which, being soluble in water, may be washed off by a heavy rainfall. For this reason tobacco should not be cut immediately after a rain. If the work is postponed for a few days after a rainfall, the leaf has time to again secrete the necessary supply of gum. Neither should tobacco be cut when wet, for if laid upon the ground in this condition, dirt will adhere to the leaves, causing damage to the crop.

It should be remembered that tobacco will dry much more rapidly in the upper portion of the curing barn than in the lower parts of the building. For this reason, and to prevent too rapid drying, which causes unfavorable results, it is advisable to hang the plants thicker in the top than in the bottom of the curing barn, decreasing the number of plants to a given space as the lower tiers are reached.

Chemung Co., N. Y. G. A. H. Jr.

RAISING WHEAT IN NEW YORK.

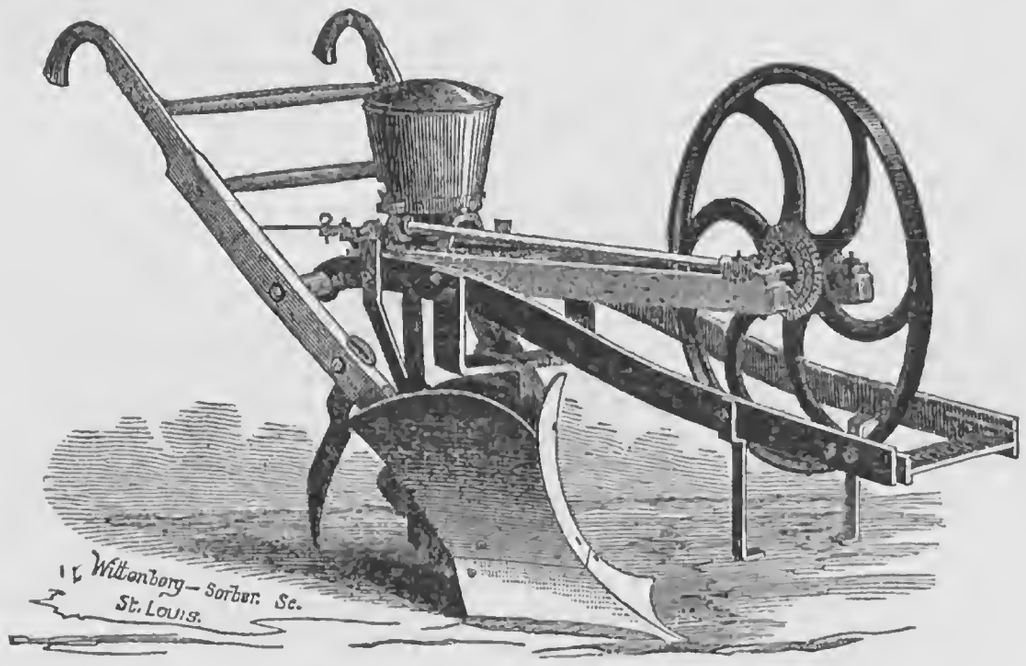
Having had 30 years experience in raising Winter wheat, I propose to give, for the benefit of RURAL readers, a few of the conditions my experience has taught me to be necessary for the production of a profitable crop. The first—and a very important one—is the thorough preparation of the soil; second, the location or situation of the field; third, the proper manner of sowing the seed. In addition to the above material points, due attention to many minor ones will aid greatly in producing a good yield.

Preparing the soil implies plowing, manuring and all work preparatory to putting in the seed. He that would reasonably expect a good return in bushels, must not expect to cheat the crop by a hurried tillage of the soil, for in so doing he is sure to cheat himself. Plow the land not to exceed six inches in depth; turn a narrow furrow from eight to ten inches in width, lapping the furrows, laying them at an angle of about 30 degrees, leaving the vegetable mold, or surface soil, exposed between each furrow. If you wish to sow broadcast, and your land is well plowed, sow the seed on the furrows and harrow it in. It will come up in drills the width of the furrows, striking the roots directly into the best part of the soil between the furrows. I prefer plowing and harrowing the land thoroughly before sowing the seed, leaving the ground smooth for a seed-bed, and covering the seed with a two-horse cultivator, going once thoroughly over it, leaving it rough. Covering it deep furnishes a better protection for Winter. One material point in Otsego County is to cover the seed to a good depth—say two inches, and sow early in order to obtain a strong root the better to withstand the hard Winters.

Now we arrive at the point of location or situation of the field. Select a dry piece of upland where snow—nature's protection for Winter—lies as it falls as nearly as may be, avoiding heavy drifting or blowing off, leaving the crop exposed to Winter's severity. Let us now examine the manner of sowing the seed, with a view to overcoming disastrous results. Shall we sow broadcast in the old style? that is, half-plow, smooth down with a harrow and sow the seed; then harrow again, leaving a good deal of the seed uncovered, and some more barely covered, to be washed out by the first shower, and at harvest time wonder why our crop is so uneven? The Western farmer says use the drill. All right; but I prefer using the cultivator—as hinted above—after having tried both, as the grain then comes up in the ridges, whereas by the use of the drill the reverse is true. It winters better in the ridges than in the hollows made by the drill teeth. I have raised 45 bushels of Diehl to the acre by operating as above, with the addition of 18 or 20 loads of manure to the acre, and think there is no more risk in a crop of wheat than in one of oats.

W. B. NEARING.

Otsego Co., N. Y.



COMBINED DRILL AND LISTER.—FIG. 556.

WHEAT RAISING IN NEW JERSEY.

We are permitted to publish the following letter addressed to a friend:—

In reply to your inquiry as to my wheat crops of last year, I sowed 36 acres—19 of which were stubble and 17 Timothy sod; variety sown, "Fultz"—about two bushels to the acre. Soil, a pretty stiff clay. Treatment: 30 acres had 500 pounds per acre of concentrated wheat fertilizer alone; 6 acres were dressed with stable manure—about ten loads to the acre, and about 500 pounds of the concentrated fertilizer. Result, 1,180 bushels and 37 pounds of wheat, and 45 tons of straw when pressed. The weather during, and for some time after, sowing was so exceedingly dry that the grain sown on the sod did not come up as evenly as that on the stubble. About three weeks before harvest the Army-worm entered the field and marched directly across it, stripping the leaves from the stalks and cutting off the smaller heads. The quality of the wheat was good, weighing 62 pounds to the measured bushel. The Army-worm did considerable damage—just how much I am unable to say. The yield from the 19 acres of stubble was estimated—the two plots not being separated—40 bushels to the acre. The wheat on the sod piece came up unevenly, and, as a result, the yield from this piece reduced the average yield considerably. The grain from the two pieces was harvested together, and when thrashed was accurately measured and weighed.

W. S. Combs.

Monmouth Co., N. J.

Every farmer with whom we have conversed, that has tried both Fultz and Clawson and *measured the yields*, prefers the Fultz. It is not surprising that those who have *not* measured the yield should hold that Clawson is the heavier yielder. The reason is that the grain is larger, the heads more spreading, presenting a heavier, fuller appearance. The truth is, however, that though the single grain of Clawson is heavier than the single grain of Fultz, the average head of Fultz is heavier than the average head of Clawson, owing to the fact, which we have several times alluded to, that the spikelet of Fultz bears one more grain that the spikelet of Clawson.

WASHINGTON AND GHALLENGE OATS.

In the RURAL of August 6, G. C. asks in regard to oats, "What's in a name?" and referring to the Washington Oats, says: "I have grown the Washington Oats, and about half the yield is smut." G. C. also says, "I have grown the same oats for years, having got them from the Department of Agriculture first, and afterwards I bought a bushel from B. K. Bliss & Co., of N. Y. City, under the name of English Challenge Oats. Having compared all, I know they are identical." I would like to ask G. C. if the Challenge Oats were about half smut as grown by him, also if he has grown the Washington Oats for years, as he says he has, and they were about half smut, why does he keep on growing them? I have grown the Washington Oats the past year, also for two years past the English Challenge Oats, purchased of Messrs. B. K. Bliss & Sons, and both myself and my son think them different varieties. We thought so soon after they came up, and, though both sorts were sown with a drill in the same field, at the same time, yet the appearance was decidedly different to our eyes at, and since, harvesting. The Challenge Oats, too, were the earliest to show their heads and first to ripen. They were also entirely free from smut this year as well as last, while there was some smut in the Washington; but these were not nearly so badly affected as G. C. represents his to have been.

Either G. C. is mistaken in saying, "he knows they are identical," or myself and my son are not observant enough, or perhaps one of us may not have the genuine Washington Oats. Who can decide the question correctly? We had the Washington, White Russian, White Schœnen, and Challenge Oats, all growing in drills about 40 rods long, in the same field. The difference was very perceptible in the appearance of each sort; the Challenge were the first to ripen; the Washington and Schœnen ripened about the same time, and the Russian last. What say other cultivators? Are the Washington and Challenge identical? If so, I did not get these varieties true to name, or have not watched them closely enough; for my observations of them this season very decidedly prevent me from believing that they are one and the same variety under different names.

Rome, N. Y., Johnathan Talcott.

Entomological.

THE LOCUST SAW-FLY.

There are many reasons why the Locust or Black Locust, as it is sometimes called (Robinia Pseudacacia), would make a desirable shade tree. The graceful foliage forms, when the tree is healthy, a symmetrical top, and in the Spring this is covered with a profusion of

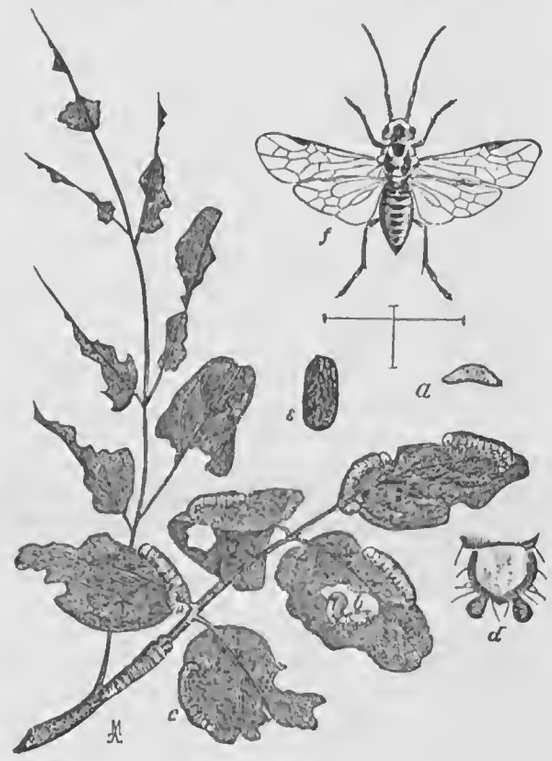


FIG. 557.

flowers that may be admired for their fragrance as well as their beauty. But we have, perhaps, no tree that is more subject to the attacks of insects. The trunks and large limbs are yearly channeled by the larvæ of the Hylentes Robiniæ, a moth, and Clytus Robiniæ, a beetle, which render the trunk unsightly and cause the death of many of the limbs, and perhaps a premature dropping of the leaves.

Besides these, the leaves are eaten by the larvæ of a butterfly and a moth. The recent investigations of Prof. Comstock, late Entomologist to the Department of Agriculture, add one more to the list of insects that seem to conspire against the life of this tree. This is a saw-fly or hymenopterous insect related to the imported currant worm or saw-fly, the raspberry slug and many others that might be mentioned. One feature of the work of this group of insects is that they multiply rapidly, so that they soon swarm on the plant that constitutes their food. I have seen clumps of willows perfectly denuded of their leaves by another species of Nematus, the stems being as bare as though it were Winter. The accompanying cut, Fig. 557, will give an idea of the manner in which these insects work.

The Locust Saw-fly (Nematus simelaris) is a small, four-winged fly, the body being nearly a quarter of an inch long and the wings expanding a little more than half an inch. The body is of a dirty yellow color, with black spots on top of the head, and on the thorax and abdomen; but the wings are transparent. This insect deposits an egg in a crescent-shaped slit made in the under surface of the leaf, and the egg is secured in its place by fastening together the cut edges. When it hatches, the young larva at first feeds upon the portions of the leaf where it finds itself; but it soon leaves the center of the leaf, going to the outside, where it eats the tissue of each leaflet from the edge to the mid-rib. The young larva is pale, greenish-white, with a brownish head, but the mature one is a more distinct green, with the head yellowish-green and the eyes black, with pale centers. The only other markings that are prominent are dusky spots below the stigmata or breathing pores on the first six joints.

These pests grow to be about two-thirds of an inch long, and may readily be known from caterpillars or the larvæ of butterflies and moths, by their having ten pairs of legs, while caterpillars never have more than eight pairs. Also, they have a habit of curving the hind part of the body round when walking. There are said by Mr. Comstock to be two if not three broods in a season, the first pupating in loose cocoons hid among leaves, grass or other rubbish; but it is probable that the last brood pass the Winter in the ground in their cocoons, as this seems to be the habit of several other species of Nematus, and, like the apple worm, or larva of the codling moth, they, or the species I have observed, seem to remain larvæ until Spring; then they change to pupæ a short time before the fly emerges.

Prof. Comstock says he has bred a parasite from them, which shows that nature has pro-

vided a means of partially, at least, checkiug their ravages. Paris-green put into water, and thrown on the tree with a garden syringe, would be the most effectual remedy, though it is possible that dusting the tree with lime while the dew is on would destroy them. G. H. FRENCH.

Carbondale, Ill.

Societies, &c.

THE NORTHERN OHIO FAIR.

Cleveland, Ohio, Sept. 7-81.

The Northern Ohio Fair opened Monday, Sept. 5th, with one of the hottest spells that it has been my lot to endure. Monday the thermometer stood at 98° in the shade: Tuesday at 102°: Wednesday at 97°—and then I left. The display was probably put back somewhat by the great heat. In the cattle depatment there was not much more than one-half of what former years had brought forth, and the cattle shown appeared to a great disadvantage on account of the extreme heat. Good herds of Devons, Shorthorns and Holsteins were exhibited, but they suffered so much from the torrid weather that they did not attract the attention they otherwise would have done. The exhibits not only of cattle, but of sheep, swine and poultry were unusually light. The display of cut flowers was fair, but that of foliage plants was the best feature of the show, the residents of Euclid and other Avenues having thrown open their handsome grounds to help along the exhibition. All the principal general species and varieties of flowers were shown, flanked by a splendid assortment of plants put in by the nursery-men of the vicinity. I do not remember to have ever seen a handsomer exhibit in this line. Domestic Hall was fairly supplied, but the range of exhibits was limited. The display of vegetable and garden products, though fine, included nothing very rare or novel.

In agricultural implements the display was about medium. Right here could be noted one of the effects of the disastrously droughty season—only one or two steam thrashers and engines could be seen, the light harvest having driven these exhibits out of market in this region. Self-binders from all sections, were displayed, as these implements from being strictly Far-West machines, are gradually finding their way into all of our Eastern grain-raising sections. I particularly noticed the Walter A. Wood, Osborne, Esterly and others in full operation, showing the farmers the relative values of twine and wire-binders, and also the ease with which both kinds can be operated. Here also could be seen all the principal grain drills, plows and other labor-saving implements, although not in such a great variety as might be seen if the short-sighted policy of the Northern Ohio Fair Association had not discouraged agricultural exhibits. This Society still continues to make a point of collecting a crowd by means of horse racing, ball matches, bicycle races, etc., all of which distractions, of course, tend to draw the farmer and his family from the legitimate exhibits of an agricultural fair, and thus to disincline exhibitors to incur the labor and outlay needed to make a fine display. The moment the bell rings for a race, off goes every one and, so far as I can see, and I have studied the matter thoroughly, this demoralizing feature of agricultural shows serves as an excuse for the otherwise religiously inclined farmer, to attend a horse race without running the risk of hurting his conscientions scruples or of being read out of church or meeting-house.

The Eureka Mower Company, Towanda, Pa., in addition to their general line of well known mowing machines, showed their new eight-foot mower. This machine was placed in the field for the first time last season, cutting a swath of eight feet with ease. It is now the widest-cut mower made, and, as it can be used with an ordinary team of horses, it promises to be a very popular addition to the labor-saving implements of the country. I met W. I. Chamberlain on the grounds, and he says that he still holds to his oft-repeated indorsments of the Eureka.

W. H. K.

Miscellaneous.

RURAL BRIEFLETS.

F. D. S., Ithaca, N. Y. asks if Fultz ought no to receive a special premium. "While the heads may not be as large, it out-yields all other kinds and is fast displacing them."....

THOSE of our readers who may have thought the RURAL severe upon the New-Dispensation-Ensilage-Winning-Billerica man should have read some of Sec. Chamberlain's articles respecting him and his book printed in the Ohio Farmer. We hoped Mr. Chamberlain would have touched upon his appropriation of our cut of Blount's Corn as *his* Ensilage Corn. But this escaped Mr. Chamberlain.....

MANY thanks to our friend Mr. Garber who sends us by mail a head of the Rural Branching Sorghum (Aug 12). It is eight inches long and the seeds are large and fully ripened. So it will appear that by following Mr. Garber's instruction (sowing a few seeds early in pots and keeping them under glass) it is easy to raise all the seeds needed for sowing.....

AMONG our wheat specimens we found two panicles of oats sent to us from a subscriber in Colorado, whose name does not appear. The larger of these panicles measures 18 inches in length and bears 320 spikelets, many of the spikelets containing three grains. This is the heaviest panicle of oats we have ever seen. Should this note meet the eye of the sender, he will kindly state the variety of oats and oblige us with a statement of the yield per acre.....

THE Ag. Ed., of the Sun says that "under favorable conditions the roots of Red Clover live for many years" as he has *often* proved by practical experiment? Might we ask *how* often?.....

IN another part of his reply to the editor of the N. Y. Times, he says that all who have had experience with Red Clover will coincide with Dr. Gray, viz., that it is a "short-lived perennial!" Therefore we must conclude that "a short-lived perennial" is a plant that "lives for many years." It would have been more manly had the Sun editor frankly acknowledged that his attack upon the Times editor was a blunder, instead of attempting to smooth it over by an evasion of the exact question at issue, in a feeble defence.....

EVEN Quack has yielded to the drought and is now brown. But one kind of grass on our uplaud fields is yet green, and that is Bermuda Grass. This is just as green as when there was plenty of rain, and is growing at a rapid rate: from one-and-a-half to two inches every 24 hours—we mean horizontally; it grows in hight only from six to ten inches....

OUR Alfalfa which was sown with oats, germinated freely and reached a hight of six inches before it was overshadowed by the oats. Then the leaves turned yellow, and when the drought commenced only the slender stems remained, which we supposed were dead. After the oats were cut the stems put forth new leaves, and at this time (Sept. 3rd), notwithstanding the almost unprecedented drought, the Alfalfa plants are still alive Seed at the rate of 120 pounds to the acre was sown. Upon another plot Orchard Grass (at the rate of 80 pounds to the acre) and Alfalfa (at the rate of 20 pounds to the acre) were sown with oats. The Orchard Grass now forms a mat of dry leaves; but the Alfalfa plants are to be seen here and there with slender stems and scanty foliage.....

THE Achania malvaviscus is a plant that we can heartily commend to all, especially to those farmers' wives who have only a sunny window in which to keep their plants during the cold months. We have trained it up the side of our conservatory as if it were a vine, and its brilliant, scarlet flowers are constantly blooming. As a bedding plant it is also pleasing, though it needs a considerable space, as its growth is rapid. This plant may be especially commended for its endurance of dry weather, and it is, therefore, well suited to rock-works or beds in close proximity to the dwelling, exposed to a southern sun. We have never known it to be infested with insects, and in every way it renders a full return for the little care it requires.....

MR. STONE, from Cuba, N. Y., sends us several heads of Russian White Oats, which are among the finest we have seen. He says: "The oats are a decided success in this section. There was no rust or smut whatever on them, while other sorts rusted and "smutted" badly; of the Washington Oats, one-third of the heads were smut."....

WE have received the following instructive letter from Mr. J. B. Garber, Columbia Co., Pa., alluded to above:

"I mail you a small package of heads of the Rural Branching Sorghum. My object in sending them is simply to show how easily the seed can be grown. As I stated to you once before, I started a few seeds in a pot early in March, and planted out three plants after danger of frost was over. These three plants each shot up three stems about five feet high, with seed heads now ripe. Then sprouts or suckers grew up, some six to eight from the roots of each plant. These suckers are now about four feet high, and all are pushing out seed heads which will also ripen their seeds, unless an early frost should cut them down. Thus you see I am pretty sure of having a quart of seed, and if the suckers ripen their seed, I may have half a peck of good seed — perhaps more. Now I might just as well have grown 100 or 1,000 plants in the same way, had I desired to do so, as three plants only, by starting the seeds early."....

WE have the ordinary Lima growing in one part of the Rural Farm and the Challenger in another. The latter will bear twice as many beans as the former and of a larger size. This bean will, we are confident, be found a valuable acquisition.....

THE engraving of the Rural Dent in the Fair Number is from life, and only an average of the best ears.....

WE have an ear of the Rural Thoroughbred Flint that measures precisely 15 inches in length.....

THIN SEEDING OF WHEAT.—At a recent meeting of the Elmira Farmers' Club, Mr. G. W. Hoffman remarked that he had cut part of his wheat and thought it revealed a lesson worthy of thought. He drilled one bushel of Heiges's wheat at the rate of three pecks to the acre, and then set the drill to distribute four pecks, and drilled another acre alongside. He said he would be glad to have members of the Club visit the field and show him any difference in the crops of the two plats, and to say whether they thought the stand thick enough or not. Mr. Hoffman thought the wheat as thick as could be desired. Close alongside he drilled Clawson wheat at the rate of three pecks to the acre, then one acre with four pecks, another with five, and the difference was not perceptible.

"I DON'T advocate thin seeding as the general rule," says a writer in the Husbandman, "because I know that not one field in ten is well fitted. Get that condition and anything beyond three pecks is thrown away. I want it understood that when I recommend thin seeding it comes after thorough fitting. Got that fact well in mind—attend to the fitting—and there is no earthly use of distributing seed that won't have room to grow. But it's of no use to talk about it, for nine farmers out of ten think they know better. They will go on sowing two bushels of wheat, or three of oats, because they can't persuade themselves that any less may bring a full crop. I have seen wheat this year as thick as I want to see it, and only three pecks of seed were used on an acre. But, mind you, the land was in good order.

SCIENCE AND THE FARMER.—Macmillan's Magazine says that there is an urgent need in England, as in other countries, of scientific investigation as distinguished from mere empiric trials, of sustained inquiry as distinguished from scattered and fitful experiments into the relation of soil and crops, of beasts and food, in order that the tillage of the land may, like the practice of other professions in which man has to struggle against nature, expand with increasing insight into the laws of nature instead of being hampered by blind obedience to traditions and narrowed by timid experience. There is no less urgent need that the practical farmer should be so far trained in science as to be able to make an intelligent use of the advantages which science offers him, as well as to be able to avoid the snares which false science continually spreads for him.

WHEN TO CUT WHEAT.—Mr. Henry Stewart says in the N. Y. Times, that there is a difference of opinion in regard to the best time. Some advocate cutting early and when the grain is still soft; others would leave it until the grain is fully ripe. As usual in such cases, the truth lies between the two extremes. If the wheat is cut before the grain solidifies and the starch is fully formed, it will undoubtedly shrink; if it is left until the grain is hard, there will be loss by shelling. If the wheat is cut when the grain is solid, but yet soft enough to be crushed between the thumb nails, there will be neither shrinking nor shelling. It is supposed that as soon as the straw turns yellow no more substance is derived from the roots, and that the crop may be cut without disadvantage, as what is in the straw will go into the grain. This is easily seen to be erroneous, because as soon as the straw is cut, when it is not ripe and dry, the absorption of moisture from the roots required to replace any that the grain may take from the straw is arrested; the straw itself dries and is likely to draw something from the ear, and so cause shrinking of the grain in either case.

"AN English farmer reports cutting three lots of wheat at different stages of maturity—in the milk, in the dough, and fully ripe. He thrashed separately, and had one hundred pounds of each carefully ground and the results weighed. The one hundred pounds of wheat, cut in the milk, made seventy-five pounds of flour, eleven pounds shorts, twelve pounds bran; that cut in the dough made eighty pounds flour, five pounds shorts, thirteen pounds bran; that cut fully ripe made seventy-two pounds flour, eleven pounds shorts, fifteen pounds bran; two pounds lost by milling in each case. This shows the dough state made most flour, and the ripest made the least flour and most bran." Bran is made at the expense of flour, by standing late.

MR. Curtiss, in his pamphlet on wheat culture, favors early cutting except for seed. He mentions several important advantages, and several minor ones, to be secured by cutting wheat when it is passing from the milk to the dough state, viz.: It largely prevents injury by rust, as rust ceases to affect the grain as soon as cut. It gives more and heavier grain. It gives more and better flour to the bushel, as all the time the grain stands after the dough state, it makes bran at the expense of starch and flour. It causes less waste by shelling and scattering while harvesting and handling. And last, the straw is tougher and softer to handle.

THE Ohio Farmer, remarking upon the above, says that while some of the reasons are well founded, the statement that early-cut wheat makes *better* flour than that cut later, is a hasty one, made without examining both sides of the question. Whiter flour does not mean better flour. Mr. Curtiss may not intend to convey the idea that the starch in wheat is no part of the flour, but his language means that, when he says that all the time the grain stands after the dough state, it makes bran at the expense of starch and flour. The statement is not altogether true, for gluten, the material needed, forms largely after the milk stage. If rust strikes wheat, it is useless to wait for it to ripen; the sooner cut the better.

EXPERIMENTS at the Ohio State University go to prove that the practice of cutting wheat before it hardens reduces the quality. It appears that the gluten is two or three days slower in forming than the starch, and when cut in the milk stage, the amount of gluten is materially diminished. The grain may be plumper, and the flour whiter, of this early-cut wheat, but it will be deficient in bread-making quality, and in the kind of nutrition a farmer most needs. This is especially true, the Ohio Farmer goes on to say, of the soft wheats, like Clawson, and hence, for home use at least, such should be left standing as long as possible to secure it without shelling. Prof. Townshend, in one of his lectures, says the old Mediterranean is the best wheat for bread that he has any knowledge of. It does not make as white bread as some others, but quality is above mere color. He suggests that, as it has a larger kernel and does not tiller as much as some others, more seed should be sown than usually is. In his own experience he found that sowing two or three pecks to the acre more than usual, secured a substantial increase in the yield. He also suggested that a dry, sandy soil, and the use of phosphates, increased the per cent. of gluten. The drier the soil and climate the more gluten will wheat contain.

A BLOW AT SOFT WHEATS.—The Pioneer-Press of Minnesota says that a farmer living in Anoka, brought down to the Minneapolis mills the other day, a load of Lost Nation wheat for sale. To his surprise he could find no purchasers, and after going around among the different mills, he was obliged to haul it back home. This statement which was published in one of the Minneapolis papers, shows that the millers mean business in their declarations against soft wheat. If they cannot control the actions of the soft wheat growers, they can at least refuse to buy their wheat. But we opine that if the present healthy agitation is kept up, buyers in other places will not be so ready to handle it as they have been. A few years since the milling interest required soft wheats: but the patent middlings process has entirely changed the relative values of hard and soft wheats. It is wise for the farmer to note the difference.

CRANBERRY RAISING.—We commend the following, from the transactions of the Mass. Hort. Society, to everyone intending to cultivate cranberries: John B. Moore said that he once thought of going into cranberry culture, but before doing so he went down on Cape Cod and looked into the subject thoroughly, traveling over the Cape on foot. The conditions for this crop are not right in one meadow out of 200. There are two insects which are very injurious to it; one eats the vines in June; the other gets into the fruit in August. Neither of them can be destroyed except by flooding. If the water stands on the vines in a warm day in Summer, the fruit rots, and therefore the water must be let on and drawn off very quickly. Away from the sea-coast, cranberries are liable to injury by frosts in Autumn, from which they can be protected only by flooding, and the water must be drawn off the next day. Mr. Moore said that he came back from the Cape wiser than he went.

SELECTING SEED WHEAT.—We are gratified to see that other journals are beginning to place before their readers the importance of selecting wheats which bear three instead of two grains to a spikelet. We have long been of the opinion that there is room here for a great increase in the yields of wheats, and it seems a matter to which little if any consideration had previously been given. We find the following in the N. Y. Times, the agricultural editor of which carefully examined our many varieties during the past season: "There is wheat and wheat. Two fields alike in every respect may vary greatly in yield by reason of the kind of wheat grown. One may be very short in the head and the other twice as long; in one the spikelets may be very loosely placed on the rachis or stem, and the other may have them more crowded. In some kinds of wheat the spikelet has three grains, frequently the central floret is empty, and instead of three grains there are but two in each spikelet. This makes a difference of one-third in the yield of the crop in favor of the completely filled spikelet. But let us go further. We find in one head, which is short or loosely put together, but six or seven spikelets on each side, and in another as many as twelve or even more. This makes another great difference in favor of the better variety of wheat. We then count up the grains, and in the one head we find 24 or 28 grains and in the other 72, or even as many as 90 in extra-large and well-filled spikes. If one, then, yields 15 bushels of grain per acre, the other would yield 45. And this cause of difference is extremely common, and any farmer can know how it is himself by merely examining the wheat in different fields, or the different heads in the same field. We take time and space only to observe here the importance of making this characteristic of the wheat plant the principal basis in selecting seed rather than the size of the grain, although this is also an element not to be ignored. Let the seed be selected in the field from the longest, most compact, and best-filled heads, and let this method be pursued each year. It will lead to a great improvement in varieties of wheat."

OHIO BUTTER INSPECTION.—Robert Orr, Superintendent of the newly-created office of butter and cheese inspectors in Ohio, in a circular to his subordinates, says: "When butter is properly churned, both as to time and temperature, it becomes firm with very little working and is tenacious; but its most desirable state is waxy, when it is easily molded into any shape, and may be drawn out to considerable length without breaking. It is then styled gilt-edged. It is only in this state that butter possesses that rich nutty flavor and smell, and shows up the rich golden yellow color, which impart so high a degree of pleasure in eating it, and which increase its value manifold. It is not always necessary, when it smells fresh and sweet, to taste butter in judging it. The smooth, unctous feel, in rubbing a little between the finger and thumb, expresses at once its rich quality; the nutty smell and rich aroma indicate a similar taste, and the bright, golden, glistening, cream-colored surface shows its high state of cleanliness. It may be necessary at times to use the trier, or even use it until you become an expert in testing by taste, smell and rubbing." The bill which created these inspectors is part of the movement against adulterants. It provides for the inspection of butter and cheese, "and all the substances having the semblance of butter and cheese," and of dairies and other places where milk is sold or butter and cheese manufactured; this is to be done by inspectors appointed by the State Board of Health.

MR. D. S. CURTISS says: The object of the farmer should be to increase the product, improve the quality, and decrease the cost per bushel.

IF a farmer has ten acres of land it is so much invested capital, and if by judicious culture he obtains from it three hundred bushels of wheat each year, instead of only one hundred and fifty bushels, it is so much increased income for the capital invested.

FARMERS would, in the long run, be the gainers if they would each year gather with the grain cradle and thrash by hand with flail on a clean barn floor, sufficient wheat for seed, selecting the best growth in their fields, and letting it stand until perfectly ripe, taking that which seems to be earliest in ripening. When ready to plant, soak the seed six to ten hours in brine, and roll in plaster to dry it for the drill.

LUCK.—The gifts that luck is supposed to shower, sensibly remarks the Herald, are always to be found in possession of people who have strong arms, clear heads or busy fingers, and he who can combine all of these desirable qualities is among the luckiest of men. The man or woman who is always unlucky is the one who always is blundering, either stupidly or lazily. The best "luck" that can fall upon any impecunious young man is a determination to go to work, even if his only chance is to handle a shovel on a railroad track, and the young woman who is sighing for a rich husband will strike luck when she makes up her mind to use exercise and fresh air as cosmetics, try a new cooking recipe every day and read something sensible in some of her spare moments. Luck, as usually worshipped, is the god of the lazy and but little, if any, more respectable than Mercury, the god of thieves.

THE Pall Mall Gazette says: "Now, as to the fact that America is outstripping England in wealth, who will be at pains to deny it? It is so, and it must be so. Not the maddest commercial policy on her part or the wisest on ours could in the long run outbalance the immense preponderance of natural resources on the side of America."

SALT ON WHEAT.—As we learn from the Indiana Farmer, Mr. James McMurray, of Hendricks Co. Indiana. made careful experiments to ascertain the effect of salt on his wheat land, sowing 500 pounds per acre on the poorest part of the field and leaving the rest and better portion without this or any other dressing. The result was that the wheat on the salt-sown land was slightly plumper than that on the rest of the field, making a difference of about two bushels to the acre in weight in favor of the salted portion. The salt-dressed crop matured five days sooner than the other and no weeds were found in the stubble.

ROSES AND CULTURE.—Thus, concludes the Gardeners' Chronicle, of London, the trade in roses is sure to prove a growing one, and to keep pace with the growth of wealth, intelligence and culture. In regard to the latter the rose is likely to exert a powerful influence, for if it be true—and it is—that men become assimilated to the objects of their pursuits and affections, surely close companionship with the rose will form a center of sweetness, a source of light, to many, and a refined and ennobling pleasure to all.

TOMATOES.—A clever writer has declared that in the eating of tomatoes lies the hope of the human race for deliverance from liver complaints. This should be good news alike to unfortunate sufferers from the ills to which the liver is heir and also to growers of the tomato. We (London Journal) may be pardoned for thinking that this assurance is a little exaggerated, and that, further, it is not probable that because of the discovery medical men will have to shut up shop. If but one tithe of the virtues found or said to be found in various fruits or compounds were genuine, death should long since have become unknown to us, and the human race should be enjoying the felicity of living in perfect health and beauty forever.

OPINIONS upon practical agriculture should never be formed from books and papers alone. They are excellent for suggesting ideas, and for comparing notes with our own practice. We may be able to indorse the opinions at sight, but, generally speaking, new practices should be verified upon our own lands before we either adopt or indorse them.—[Credit lost.—EDS.] . . . . . "IS IT at all to be wondered at," asks the Telegraph, "that the exhibits of farm products at our Agricultural Fairs should show a falling off year after year, as is clearly perceptible, when the premiums upon them bear no proportion to those given for horses, trials of speed, foot-races, bicycle races, and other things that have next to nothing to do with farming and are of a nature to draw public attention from the real purposes for which these exhibitions are ostensibly established? A majority of farmers cannot afford, or are at least unwilling to spend, money and labor in preparing for these fairs their choicest products and samples of their leading crops, with no chance, from the meager premiums offered, to repay them even in a very moderate degree." . . . . . MRS. HENRY WARD BEECHER, a good authority on domestic economy, says that ten pounds of the toughest kind of meat may be made very tender by soaking seven hours in three quarts of water acidulated with a little more than half a pint of vinegar. Then wash, wipe dry, and cook as desired.—N. Y. TRIBUNE. . . . . Our friend, the Detroit Free Press, wonders why colored ladies do not wear bits of white court plaster on their faces and become perfectly bewitching. . . . . An old gentleman at a horticultural meeting in New York rose and left during the reading of an essay on the causes of pear blight. He said the essayist admitted that he had nothing new to offer and he had heard the old fifty times before. Professional essayists do greatly detract from the life of such societies. . . . . "No part of the earth, no matter how rich it may be, is available for plant use unless it is finely pulverized."

A YOUNG bride, being asked how her husband turned out, replied that he turned out very late in the morning, and turned in very late at night. . . . . .

THE editor who saw a lady making for the only empty seat in the car, found himself "crowded out to make room for more interesting matter." . . . . . .

THE Burlington Hawkeye makes the following important prediction:—

If the corn husks are very thick, the Winter will be colder than the Summer.

If the corn husks are very thin, the Summer will be warmer than the Winter.

If the corn husks are neither too thick nor too thin, the Winter will be cold and the Summer will be warm. . . . . .

WHEN we are sick we are willing to be very religious, but when we are well we prefer to do as we please. . . . . .

YOU can't get peace of mind out of evil doing, or, as the old proverb runs, you can't take a cow from a man who dosen't own one. . . . . .

To talk about virtue when you are not virtuous yourself is like giving a man a check when you have no money in the bank. . . . . .

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

POTEAU, Scott Co., Sept. 1.—We are having the longest and severest drought since '73. Crops in some parts of the State will be nearly a total failure. Here, on the "Nation" line, they are the best—about half the average. Prices are about as follows:—Wheat, none in the market; oats, 50c.; corn, 50c.; bacon, 10c.; flour, $3.50 per cwt.; butter, 10c.; eggs, 10c. per dozen. H. C. B.

GREENWOOD, Sebastian Co.—Wheat did well this season on the bottoms; a light crop on the uplands. The yield on the former was from 20 to 30 bushels to the acre, and on the latter from 5 to 10 bushels per acre. The varieties chiefly sown are Blue Stem and Mediterranean. Oats were an entire failure. The common red and black oats are usually raised. Corn is nearly an average crop. Blount's Prolific takes the lead and yields from 50 to 80 bushels per acre without manure, and with common cultivation. The outlook for orchard and small fruits is unfavorable. The Spring was too cold and backward for any reasonable chance for any kind of fruit. Such a failure in fruit was never before known in all Western Arkansas. The Summer has been very dry and hot, water *very* scarce, causing a diminution of stock, especially hogs. Cotton will not be one-half a crop. New bales are selling from 13c. to 22c. Splendid time for digging wells and gathering corn and peanuts. R. R.

Michigan.

BIG RAPIDS, Mecosta Co., Aug. 31.—Wheat has turned out better than was expected; average yield about 11 bushels per acre, and oats about 35 bushels per acre. Potatoes will be about half a crop; corn ditto. This shortage is owing to the hot, dry weather through the latter part of July and first half of August. Fruit, as a general thing, is scarce, though I shall have a good crop of apples. All the seeds I received from the Free Distribution have done well. My wife is highly pleased with the carnations and pinks. The asparagus is doing finely. The R. B. Sorghum goes beyond all expectations; it is 10 feet high and there are from six to eight branches from a single seed. The W. Oats rusted, but made a big growth. What I am more pleased with than all else is the W. E. Potato. The tuber received weighed about two ounces. It was cut into 14 pieces and planted, May 2, an eye in a hill. It had the same culture as my other potatoes. I dug them on August 16; the yield was 68 large tubers and five small ones: weight of the whole 38½ pounds. The Cuthbert Raspberry fruited this season; I consider it a splendid variety. I. W. C.

Illinois.

CHAMPAIGN, Champaign, Co., Ill., Aug. 25—A drought beginning early in July, and extending later from the Rocky Mountains to the Alleghanies, holds now its dread dominion over us. In North Illinois the drought makes things uncomfortable; in the central part of the State it has reduced a small corn crop one half, and cut pastures short, so there will be six or seven months' feeding, instead of four or five, while in the Southern counties everything has been almost literally burned up, the people having little or nothing to fall back upon but less than an average crop of oats or hay. In towns more than half the wells have given out, and in the country, in some ill watered counties, half the farm force has to be expended in digging new wells or clearing out old ones. Compared with this time last year, potatoes are $1 per bushel, against 35c.; and apples 75c.@$1—against 20@25c. Last year wheat sold for 83@85c.; corn, 31@33c.; oats, 20@22c.; and rye 60@63c. This year wheat is $1.20@$1.25; corn, 52@55c.; oats, 33@35c.; and rye 90@95c. There is almost no fruit crop, and as for vegetables, there scarcely is shame in the price of potatoes. Very good cattle are worth from 6 to 6½c., and hogs only half a cent less. While there are to-day some signs of rain, and we may and probably shall have a fall of three or four inches in course of this month or the first half of September, the Fall is pretty sure to be a dry and long one, and a very severely cold and snowy Winter is pretty sure to follow. B. F. J.

CRUB ORCHARD, Williamson Co.—The Washington Oats were sown March 18th in drills. The seed all germinated and without any extra cultivation yielded nine-and-a-half pounds of clean oats; and with the exception of the smut heads they were the finest oats ever raised in this community. The Rural Branching Sorghum was sown April 12; the seed germinated well and the stalks made a rapid growth when once started. They grew to a hight of upwards of seven feet, although damaged somewhat by a drought. [It seems to us best to cut this to the ground when five or six feet high—the second growth seems more rapid than the first. Eds.] I do not believe seed will mature in this climate; this is the only objection against it here. I have several hills with 12 to 15 stalks in a hill and in none is there less than five. The White Elephant Potato was cut into 14 pieces with an eye to a piece; 12 of the pieces germinated: but the yield will not be large on account of the dry weather. The asparagus was planted April 12; the seed did not germinate well; but about half came up. The picotees and carnations I planted too early and therefore they did not do as well as they might if planted at the proper time. B. F. D.

Iowa.

ATLANTIC, Cass Co.—Weather hot and dry. Many days the mercury is 102 ° in the shade. No rain for over two months, only one little shower that barely laid the dust. Crops badly dried up. Much wheat not cut because it was so poor, and potatoes very scarce at $1.50 per bushel. H. R. R.

CHARITON, Lucas County.—So far as I have been able to ascertain from observation and inquiry, the present crop prospects are about as follows, with slight variations in the different parts of the county:—Spring wheat almost an entire failure, with the exception of an occasional good field. The rye crop was good and is yielding well. Rye affords splendid pasture for cattle in the Winter and Spring, and then will make a splendid crop besides. The oat crop was generally good, but does not yield as many bushels per acre as was expected. But little Fall wheat was sown, and that little proved comparatively a poor crop. The flax crop heretofore in favorable seasons has done splendidly, but this season it only promises to be fair to middling. Corn which in the past for many years has been the farmers main crop, will certainly be light, owing to the protracted dry weather, which still continues with little or no prospect of rain. It is 36 days since a good heavy rain visited this immediate locality. On August 20 quite a respectable shower fell which was better than none. The water in sloughs, branches, and ponds has mostly evaporated, and in many instances these reservoirs are entirely dry, so that stock not unfrequently suffers in consequence. Timothy, millet, Hungarian, etc., are good this year, so there will be no scarcity of hay, as was the case last year. The apple crop will be very light in this section, while grapes and other small fruits have been, are, or will be good. Lucas County is composed of 12 townships, making an area of 384 square miles. Each township is well watered by one or more of the many streams by which the county is traversed; in fact, it is one of the best watered counties in Iowa. It is also well drained, being situated upon what is called the great water-shed of the State. Coal is found here in abundance, Lucas Station and Cleveland being the two largest banks. J. W. W.

Kentucky.

CARLISLE, Nicholas Co.—The weather here is very dry. The ground has been too wet to plow only once since May. Stock water is very scarce. Wheat is of good quality; average about the same as last year, mostly Fultz. Corn will not make half a crop; there will not be over five bushels to the acre, I should think. Very few oats, and of rye still less. Hay cut short owing to dry weather. There are a good many apples, but they are of poor quality. Very few peaches and plums. Vegetables are very scarce: potatoes not over half a crop. This has been a bad year for the Rural seeds. I planted half a dozen hills of the W. E. Potato in rich, red soil; dug them July 29; they weighed 3½ pounds. I gave a portion of R. B. Sorghum to a friend and planted the remainder in the same soil as the potatoes, and I have nine hills with nine stalks to the hill. The flower seeds all did well. The carnations and picotees all bloomed nicely. C. W. R.

OSHTEMO, Kalamazoo Co., Aug. 31.—The drought holds with us unbroken save local showers of not much extent or value. Feed dried up. Potatoes ditto, with a prospect of high prices for that esculent the coming year. Apples and pears scarce and poor in quality. Wheat in thrashing yields about half a crop, and now brings $1.25 to $1.28; potatoes, 50c. to 60c.; corn, 55c. Early-planted corn is good; late-planted, very poor. The White Elephant Potatoes are looking fine, considering the intensity of the dry weather. From one small tuber with 15 eyes I have the same number of hills, which are stocky and look very promising; but unless we get rain soon they must dry up with poor results. The Branching Sorghum came up late. Washington Oats were much "smutted" and but indifferently good. T. P. D.

Nebraska.

NEBRASKA CITY, Otoe Co., Sept. 1.—From the seed of the Rural Branching Sorghum I succeeded in getting my 12 hills. The stalks are now higher than I can reach. I have cut back one hill as an experiment to see how it will grow. It has already started several thrifty branches per stalk. The rest I shall leave to seed. My W. E. Potato has not had a first-rate chance, as the bugs have been numerous and hungry. Two of my neighbors get rid of the bugs by shaking them off the vines and either plowing them under or digging a hole between each lot of four hills and burying the pests. The vines of both are quite green. J. H. M.

New Jersey.

LAMBETVILLE, Hunterdon, Co.—My experience with the White Elephant Potato is somewhat different from that of your Florida correspondent. Mine was cut in three pieces—the potato; not the skin,—and planted in ground not manured for more than two years, and behold the "gratitude" of my Elephant—18 big potatoes, weighing 1¼ pound apiece, seven medium potatoes weighing each four ounces: that was 25 potatoes from one—which we thought a big yield, when the ground was not specially prepared for it. F. T.

New York.

AMENIA, Dutchess Co.—The White Elephant Potato weighed 2½ ounces. It was cut to single eyes and planted one eye in a place, making 11 hills. I have dug the potatoes and obtained 44½ pounds of nice tubers—some quite large. The Washington Oats made a large growth of straw, but were rusty, smutty and light. The R. B. Sorghum seed came up pretty well, but the stalks have made but a slender growth. The sorghum has branched considerably, and at the end of August was only 2½ feet high. It was planted on soil of moderate richness and without manure. Asparagus plants doing nicely. I have ten carnations, and a fine show of pinks. P. B. P.

BLODGETT MILLS, Cortland Co.—My Washington Oats yielded 14½ pounds; the White Elephant Potatoes, eight pounds; the Argenteuil Asparagus is 17 inches high; it is larger than the Giant Dutch. The pinks are very handsome. The Rural Branching Sorghum is about four feet high and has ten to twelve stalks from one seed. H. C. K.

CANAAN, Columbia Co., Sept. 3.—Farmers are now busily engaged in plowing and sowing. No wheat is raised in this vicinity, but rye is extensively grown. The average yield of the latter will be somewhat larger than last year. The oat crop was exceedingly good this Summer: hay ditto. Corn will be below the average, owing to late Spring and grubs, and what few potatoes are dug as yet show signs of rotting. My W. E. Potato gave 24 pounds of average-sized potatoes, but they rotted badly. Some farmers in this vicinity raise large quantities of sweet corn for the Shakers at Mt. Lebanon, N. Y., who put it up in cans for the New York markets. Sweet corn unhusked, and delivered at Lebanon, brings from $10 to $15 per ton, this Fall. Prices for almost all farm products are good. Rye is worth about $1.05 at home markets: oats .45c. for new: rye straw $12.00: hay, not much in market yet, but it will probably start at about $12 per ton. We had considerable dry weather during August, but a fine rain on Sept. 1 has refreshed things. D. D.

ELMIRA, Chemung Co.—The Washington Oats produced grain of good quality, though planted upon garden soil, too rich for oats. The straw grew as high as my chin, yet to my surprise it did not lodge. A fair percentage of the Rural Branching Sorghum seed germinated, and the branching stalks have grown finely, indicating a heavy yield of fodder for the amount of seed that grew. Mrs. G. desires me to extend her thanks for the pinks, picotees and the carnations which have blossomed profusely with flowers which, she says, are the most beautiful she has ever seen of the kind. G. A. G. JR.

LAKE GROVE, Suffolk Co., Sept. 2.—I planted the White Elephant Potato on April 15, and top-dressed the ground with manure from the barn-yard and pig-pen. In the drill I used the Stockbridge Potato fertilizer at the rate of 800 pounds to the acre and on digging the potatoes on August 1, I got 14 pounds of tubers. I planted a single specimen of the Pride of America potato at the same time, gave it the same treatment, dug it on the same day and got 13 pounds of tubers, but they were all much finer and larger than the Elephant. Two of them weighed, together, 1¼ pound and many of the others were quite as large. W. E. S.

LOCKPORT, Niagara Co.—It is awfully dry here. Corn is burning badly and farmers can hardly fit land for seeding. The potato crop is nearly a failure. Wheat, barley and oats were all remarkably good. My wheat yielded 40 bushels and one field of eight acres went over 50 bushels. Clover seed is a poor crop, as it is everywhere. J. S. W.

SOUTHOLD, Suffolk Co., Sept. 6.—Farmers have commenced digging potatoes, and the crop generally, so far as I have learned, in this immediate locality, is rather light and somewhat grubbed. Prices range from 45c. to 60c., according to variety and quality, at the boat or depot. Potato beetles are very few in number, notwithstanding the great numbers in July, when I found it necessary to poison twice in one week. I now kill all that I find as I dig. The excessively dry weather will make a short corn crop. Those who failed to plant corn for fodder now see their mistake. The Branching Sorghum made a poor stand and does not promise to amount to very much. The crops of oats and barley are heavy. The Washington Oats did well. Tomatoes have not done well and ripen slowly, with a scant supply. The Acme holds first place. S. T. T.

North Carolina.

HENDERSON, Vance Co.,—Our drought has come to be a fearful one. Corn is dried dead, not more than half the fodder will be worth saving. Neither corn nor cotton can possibly be half a crop. Cattle are getting thin. Crab Grass of which we usually have abundance on our wheat stubbles, has not put in an appearance. The prospect looks gloomy indeed, and farmers who work on the plan of "eat a crop before you make it," have good reason for putting on long faces. M. B. P.

Ohio.

VAN WERT, Van Wert Co., Sept. 3.—The yield of wheat hereabouts was two-thirds of a crop, though some fields turned out a little better. Fife and Fultz are our leading varieties. Oats will average two-thirds of a crop; but the straw was short on account of dry weather. Washington Oats are the leading sort. I am experimenting with 13 different kinds of potatoes in my garden, and the White Elephant promises to take a front rank. The St. Patrick I find a splendid sort on sandy soils, but it does not do well on clay land. Genessee County King, Chicago Market, Early Rose, Burbank, Early Vermont and Snowflake will be good crops if we get any rain by September 10. Corn was never better—this being a low flat country a dry spell is good for corn. The acreage under it is larger than last year, and its condition is much better. Flax and buckwheat are both grown here to a considerable extent and promise to turn out well. The apple crop will be one-half, and pears a full crop. The Rural Branching Sorghum is all that it is bragged up to be, and promises to be the coming fodder plant. Garden crops of all kinds look very fair. The Paragon, Acme, Trophy and Perfection Tomatoes are our leading varieties. Henderson's Early Summer Cabbage excels all other kinds for market purposes. J. A. S.

Oregon.

OSWEGO, Clacamas Co.,—Wheat and oats average crops. Chili Club and White Winter Wheats; Side Oats. Barley and rye not much sown. Corn looks well. Orchard fruits are under an average; small fruits good. The White Elephant Potato promises well. The Washington Oats are growing finely. The R. B. Sorghum is nearly a failure in this climate. J. K.

Pennsylvania.

BADEN, Beaver Co., Sept. 1. Along with the RURAL I take three other agricultural papers. They are all good, but the RURAL is more trustworthy in forecasting prices of grain and produce. That alone makes it of great value to the farmer in regard to holding or selling his products. I believe any man with capital, could safely make money by acting on the RURAL'S predictions. The wheat crop in this county is below an average; for in thrashing it is found the grain is shriveled. Corn has been almost destroyed by the dry weather. Oats are a good average crop. Hay is good. Potatoes half a crop. Apples about a quarter of a crop. No peaches or pears. F. W. S.

HOSENSACK, Lehigh Co., Sept. 2. We have a very dry spell at present; grass is all dried up in the fields, plowing is hardly possible and there is a poor outlook for fall seeding. Winter wheat was a full crop. Oats were heavy in the straw, but light in the grain. Second-crop grass was light and some farmers turned their cattle into their meadows. My White Elephant Potatoes yielded 15 pounds with ordinary field culture—the same given to my other potatoes. The Washington Oats were good. The Sorghum sprouted well, but on account of the drought it was only about three feet high when I let the cattle in who ate it down to the ground. The outlook for the dairy is not very promising as corn has failed and pastures are so poor that early stable feeding is probable. H. E. E. R.

MIDDLEBURG, Snyder Co., Aug. 26.—The Washington Oats did really well, but the Sorghum failed, only a few stalks came up. The flower seeds I think I planted too soon, and we had a wet spell that spoiled them, and the White Elephant Potato did not amount to any thing, like the other late potatoes. Most people hereabouts will not get enough potatoes for their own use, except from the early ones. They were growing well till the dry weather set in. Corn is a failure also; some people will not get enough to fatten one hog. What is on high ground is especially bad. I have 10 acres that is pretty good, but, taking it on an average, there is not half a crop in Snyder County. Oats are good—never better. Wheat does not yield well. The straw lodged too soon and the ears would not fill. It gives about 14 bushels to the acre here; but, take it on an average, I don't think it will yield nine bushels to the acre. The weather is still so dry that we can't plow at all throughout the whole county. J. S.

WEST NEWTON, Westmoreland Co.—Sept. 1st. Wheat is moderately good in this section. Corn was not generally well set on the ground, and owing to the dry weather since earing time, the crop will fall considerably below the average. The pastures are about scorched up; we have so much hot sun that things dry up very fast. Oats were a good crop. Hay was very good—better than usual. Clover seed has to some extent not filled well: many fields are being pastured: there are too many grasshoppers and, perhaps, the hot sun had something to do with it, too. From the White Elephant Potato I got, without any special effort, 26 pounds. The Washington Oats I put in too strong ground. They broke down before they headed. However, I had over a peck of nice, clean oats. The asparagus seed is all right. The China Pinks are blooming very beautifully. The R. B. Sorghum came up very poor and what did come up is trying to die. I can see no value in it. Fruit is not plentiful. Some will have to live on the remembrance of what they let go to waste last Fall. Potatoes are a slim crop. Wheat, $1.32 per bushel. L. D.

Utah.

OGDEN CITY, Weber Co., Aug. 18.—Crops generally have been very good. Fruit is abundant and good. New wheat is selling at 60c. per bushel. Of barley and oats not much has been thrashed yet. Butter, 35c. per lb.; beef, 8c. to 10c.; mutton, the same. I did not have much success with the R. B. S., as I have only five hills growing; but I hope to see it mature. The same ill-luck attended some of the flower seed; my W. E. Potato had twelve eyes or setts, and from these I dug 28 lbs. of nice large potatoes. They were planted on April 25th and dug on August 15th, fully ripe. I treated them with the same attention I gave the others in my garden. The Beauty of Hebron is a fine potato also. I have grown a nice lot of them this season from the seed the RURAL sent. I have distributed quite a number of pounds among my friends and they are all well pleased with them. I find that these potatoes are hard to beat for cooking qualities, being so dry and floury. W. J. H.

Vermont.

FACTORY POINT, Bennington Co., Sept. 4.—This is the driest season known here for years, and on this account potatoes will most likely be a light crop. The RURAL plants and seeds are all doing well, especially the White Elephant Potato. E. W. B.

Virginia.

DISPUTANTA, Prince George Co.—The seeds obtained from the Seed Distribution all came up well and are growing finely. I have a fine lot of young White Elephants; can supply Barnum if he needs any for his show. The Rural Branching Sorghum has eight to fourteen stalks from a single seed, and though the rows are four feet wide, the foliage has met in the row and is a perfect wilderness. Washington Oats did well. Asparagus growing rapidly. The flower seeds I turned over to my "better half;" they came up well; some are in bloom and are beautiful. Permit me to return thanks for the seeds. I am much pleased with the RURAL. I take several agricultural papers, but think the RURAL the best. Consider me a subscriber as long as I can raise $2 to renew. [Long life to you!—Eds.] G. W. P.

PAINEVILLE, Amelia Co.—The White Elephant Potato I cut to single eyes and planted in good land, three feet one way by fifteen inches the other. I cultivated them well, and had it not been for the very dry bad season, and moles, I think I should have made an immense crop. I dug them on August 15—result, twelve pounds of small to fair tubers. The Branching Sorghum seed germinated well, and the plants by the middle of August were from three to five feet high, and there were from seven to twenty-two branches to the hill. All the other seeds did well, except the Washington Oats; they were looking fine, but the cows got to them and harvested them prematurely. Wheat is from half to two-thirds of a full crop; oats, a fine crop; corn and tobacco, except on low lands, are looking poor; vegetables are a failure in consequence of drought following very heavy rains in the Spring and early Summer. J. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

TREATMENT OF MARE AND FOAL.

G. M. K., Norwich, asks what is the proper treatment of a brood mare and colt from weaning time all through Winter.

ANS.--A moderate-sized volume might be profitably written for the purpose of giving full and minute directions as to the management of brood mares and their foals, but we will now simply answer the above question by stating briefly the most important course to pursue:—As soon as the colt is taken from the mare she should be put to gentle work and kept at it daily, and fed moderately only, in order to enable her milk to dry up quickly. At first she should be milked by hand three or four times per day for several days; then, as her milk decreases, this should be done only twice a day, and finally only once, and then every two or three days, according to the quantity in her bag, till fully dried. In milking do not strip her entirely clean, for if this is not done she will dry up faster than if the last drop is drawn.

At weaning, place the mare and colt where they cannot see each other, for two weeks or more. It is best to let the colt run in a pasture with other colts if there are any, for the sake of company; if there are no other colts, then let it run with calves, or even sheep. In this case the mare must be kept up in the stable, otherwise, on hearing the colt neigh, she might endeavor to get to it, and be likely to hurt herself against the fence, and the colt also would do the same on hearing her answering neigh. If the colt is shut up in the stable and the mare turned to pasture, it ought to be rather scant until she is dried off, and then she may be better fed according to the work required of her.

In weaning a colt some prefer to put it and the mare in a stable alongside of each other, separated only by a partition not high enough to prevent the dam from reaching over it and touching the foal with her nose. Then let the colt suck about two-thirds of the milk, at first thrice per day, then twice, then only once, and so on till the mare is dried up, being careful to milk her by hand a little every time after sucking, so long as the bag is left moderately full. It is contended that both colt and mare worry less if thus weaned than if separated at once altogether, and kept apart till the colt has lost the desire to suck; but this depends a good deal on the disposition of the animals. In some cases the first method given above is the best, in other cases, the second.

Previous to weaning, the colt must be taught to eat grass or hay and grain or meal also with the dam, otherwise on being taken from her it might pine away and die. It may be weaned at from five to seven months of age, according as it has learned to eat by itself, and its growth and vigor. If the pasture is very good the colt will do well enough on that; but at first, in order to prevent scouring, it should have a half to a pint, according to its size, of oil meal or cotton-seed meal, with one to two quarts of oats night and morning, or the same quantity of a mixture of oats and flax-seed ground together at the rate of four quarts of the latter to 28 of the former.

If the colt is kept up and fed upon hay, then it might become costive. In that case feed two quarts, or a little more, according to size, of wheat bran night and morning with a half to a pint of oil meal, or, in place of these, one or two quarts of the mixed provender of oats and flax-seed. All these form good muscle and bone and give the colt an even, steady growth. Some feed corn or Indian meal to colts, but this is too fattening, and liable to bring on colic. Aged horses only should have corn, although we know it is fed with impunity at the West and South. But the corn there is not so hearty nor so oily, we believe, as that grown at the North; though we are assured that some chemists in their analyses find no particular difference in the elements of the two sorts; still they may be incorrect in this.

During the first Winter colts should not be allowed to stand on a plank, concrete, paved

or, indeed, on any hard floor; if they do it is very liable to form ring-bones or otherwise injure their feet or legs. Dry sand or fine gravel is the best for them to stand on, either in stable or exercising yard; yet if these cannot be had, and the flooring is sufficiently adhesive to keep it damp and, above all, muddy, then it should be so well littered with straw or marsh hay as to keep it dry.

If the mare is not worked after weaning her foal, she will do well enough in fair pasture or on good hay. If worked, she must have more or less grain morning, noon and night, according to the labor she does. If in foal, she ought not to be used except under the saddle or harnessed to a light wagon and driven on dry, smooth ground. If jerked roughly about, or obliged to give a hard, sudden pull, she is liable to slink her foal, which might cause her death, and in any event greatly injure her.

VARIOUS FRUITS.

R. J. P., Iowa City, Ia., was visited some time ago by a tree peddler representing an Illinois nursery concern, and having in jars specimens of various fruits, most of which he claimed were originated by the firm he was canvassing for, and our friend inquires about the following sorts which he offered for sale.

ANS.—APPLES—Red Bietigheimer. A German apple. Fruit large, yellow, with crimson; flesh white, sub-acid and pleasant. Early Fall. Said to be an abundant bearer. It is a large, handsome apple. Stump, originated near Rochester, N. Y., of medium size; yellow, striped with red. Flesh juicy, tender, sub-acid. September and October. Very prolific. Mann. Medium size, very fair quality. Winter. Lady (Pomme d' api), small, flat, with a fine red cheek on yellow ground. Flesh tender, sub-acid, good. It is a fancy apple and brings high prices in the market. Henicher—do not know of it.

PLUMS—Weaver. This is a new plum—one of our wild plums—of good size and flavor, and very productive. Tree hardy. Glass is a new plum which originated in Canada. Large, purple. We know nothing further about it.

PEARS—Kieffer's Hybrid is a new pear of good quality, raised from seed of the Sand Pear, supposed to be crossed with Beurré d' Anjou. Large, glossy leaves. Fruit large and borne early. Ripens in October and November.

STRAWBERRIES—Sharpless. Large fruit, prolific, good quality.

RASPBERRIES—Grapevine. We know nothing of this. It may be the Purple-flowering Raspberry, Rubus odoratus. This has a grape-vine-looking leaf, but the fruit is worthless. It is used as an ornamental shrub.

GOOSEBERRIES—Downing—good.

CURRANTS—L. B. Holland. Do not know it.

CUTTING ANTS.

R. T. J., Austin, Texas, is very much troubled by the cutting ants, which come out of their hiding-place at night and strip a tree of all its leaves, and he asks for some safeguard against the pests.

ANS.—This is Œcodoma Mexicana, one of the strangest species of this strange tribe of creatures. The ants build large nests several square yards in extent and more than a yard deep. These nests are provided with drains for carrying off the water from occasional rains, and with many store-rooms with spacious passages (for ants), which are one to three inches in diameter leading to the chambers where the eggs and larvæ are kept and cared for. The leaves are cut from the trees and carried by a regularly ordered army in columns, into the nests, but for what purpose this is done, whether for food or for building material, is not clearly ascertained. These ants are found on the shores of the Gulf of Mexico and in the interior. They are a great scourge and pest to agriculture, but any remedy against their depredations must depend upon the habits of the animals to a great extent. War should be made upon them at their nests. They can be easily traced to these, and the nest should be destroyed. We would suggest the use of an explosive, as blasting powder, run down into the nest through the main opening, and a piece of fuse put down to the powder. After laying a few logs on top of the nest to confine the blast, the fuse should be fired and the nest would be destroyed. Or dry rubbish might be piled over the nest and burned. It may be made a special study, but there is a way no doubt to manage it.

RENEWING AN ORCHARD.

J. D. C., Westchester Co., N. Y., asks how to renew the sod on an old orchard. If it should be plowed, when? And what crops should be raised in the orchard.

ANS.—We would plow the orchard in the Fall and then either cross-plow it in the Spring or cultivate it thoroughly, according to its condition. Thorough working the ground will help the orchard and also the crop. It should be plowed shallow, especially under the trees, and care should be taken, not to break off or mutilate the roots. Much damage is done to orchards by careless plowing. Corn is the best hoed crop for an orchard, and beans the next best. Potatoes should never be planted in an orchard, as they exhaust the potash from the soil and this is just what the apple trees require. Barley, or Spring rye is the best adapted to be sown for the seeding. Under the apple trees, the grain should be thinly scattered, for much seed would only be wasted on account of the shade, but the grass seed should be put on thickly. The least exhaustive crops should always be grown in an orchard, or else the trees will be robbed of needed sustenance—hence it is always best to pasture the ground rather than mow it; nothing will run an orchard down so fast as to make it a meadow, as it is a double robbery. The ground may be plowed in the Spring, but for an orchard we would prefer turning it over in the early Autumn in order that the trees may have the full benefit of the decayed sod and the more mellow soil.

APPLYING FERTILIZERS TO WHEAT, ETC.

F. W. S., Baden, Pa., says he can get, at the kilns, at a low price, lime that has been exposed to the weather since Spring, and he asks, 1, whether it is of any use; 2, would it be well to apply to wheat a mixture of hen manure and lime; 3, is there any danger that either of these would injure wheat if, mixed with other substances or not, they were drilled in with the seed; 4, how should ground bone be applied to wheat; 5, are apples likely to be high-priced this year—are they scarce or plentiful.

ANS.—1. Such lime is not worth as much as fresh lime, but as it is sold at a lower price it is frequently used for agricultural purposes, and goes by the name of agricultural lime. 2. Hen manure or other fertilizers containing ammonia should *never* be mixed with lime, because the contact sets free the ammonia and wastes it. 3. There is no need to mix the hen manure with anything; reduce it to a fine powder and drill 150 lbs. per acre with the wheat. It will not hurt the wheat in the least. Lime should be spread on the soil after the wheat is drilled; 20 or 30 bushels per acre may be used. 4. Finely ground bone is generally used with benefit, and may be drilled at the rate of 500 lbs. per acre without any harm. 5. Apples are the most abundant of orchard crops this year; yet, as it is the "off" year generally, the crop is short, and prices therefore should, as a rule, be fairly high—considerably higher, however, in some parts of the country than in others, according to the relation of local demand and supply and the cost of transportation to higher-priced markets.

QUERIES ABOUT CREAM.

H. T. P., Wilton, N. Y., asks, 1, does cream rise more quickly when exposed to the air than when covered; 2, does exposed milk absorb any of the impurities in the air; 3, what is the best temperature for the separation of the cream.

ANS.—1, The cream is thicker when the milk is set in shallow pans and the cream is exposed to the atmosphere. Cream rises more quickly in deep pans at a low temperature, than in shallow pans at a higher temperature. Exposure to air makes no difference in the time of the cream's rising. 2, Milk quickly absorbs odors arising from any impure or decomposing substances. The genus of mold or mildew produce fermentation and acidity in milk, therefore moldy cellars are quite unfit for keeping milk in, and so are cellars in which vegetables are kept. As the cream lies upon the surface, this is, of course, the most exposed to impurities in the air, and we usually find these concentrated in the cream. 3, When milk is set in deep pails, 45 to 50 degrees is the best temperature, when in shallow pans, a temperature of 60 degrees is preferable.

RAISING RICE IN VIRGINIA.

J. E. S., Wellsville, Nottaway Co., Va., asks how to raise rice, as he wishes to cultivate it there.

ANS.—No rice is at present raised in Virginia, and it is probable that the conditions for the profitable production of this crop do not exist in the State; or if they do it is to a very limited extent. In 1860, something more than 8,000 lbs. were raised. No report of any production since that period has been made. It had already at that time declined one-half from 1850. If J. E. S. lives on some large water-course, from which his lands can be flooded, he might succeed in raising rice, but it would require considerable capital and outlay in building canals, dams and flood-gates. The rice area is confined principally to a few counties in South Carolina and Georgia, and a few parishes in Louisiana. A little is raised on the tide-water lands of North Carolina, and a still smaller amount in Florida, Mississippi, Alabama, Arkansas, Texas and Tennessee. Raising up-land rice has been tried in several States, but it hasn't proved profitable.

APPLYING LIME AND HEN MANURE TO WHEAT.

T. P. D., Oshtemo, Mich. asks whether it would be safe to drill in air-slaked lime with wheat alone or in combination with unleached ashes; also whether hen manure mixed with road dust might be safely so drilled in with wheat.

ANS.—It would be safe enough; but it would be of little effect, because lime so applied must be deficient in quantity; 25 bushels of lime per acre are little enough to produce any marked effect. It is not safe to apply ashes with the seed, as the caustic effect would be injurious to the young germ if not to the seed. Hen manure beaten fine with a flail and mixed with an equal part of fine gypsum might be safely and usefully drilled with wheat. It would be an effective fertilizer to start the growth, but not to maintain it in vigorous condition. The best way to apply lime is to scatter it broadcast before the final harrowing and the drilling of the seed.

MEASURING HAY IN A MOW.

J. R. B., Reitman, Ohio, asks, how to measure hay in the stack or mow.

ANS.—400 cubic feet of hard-packed, clear Timothy hay will make a ton; so will 500 cubic feet of mixed clover and Timothy hard packed. Clover alone requires 600 to 700 cubic feet for a ton, and common mixed meadow hay, including a large proportion of Red Top and June Grass, will require 700 to 800 feet. The weight depends somewhat upon the ripeness of the hay; ripe hay is heavier than that made from early cut grass. No rule can therefore be given that will give accurately correct results; but the general rule is: Multiply the length in yards by the hight in yards and the product by the width in yards and divide the product by 15; the quotient will be approximately the number of tons.

Miscellaneous.

C. H. D., Occoquan, Va. 1, has some land which is now under corn for the second year, and wishing to seed it down to clover and wheat this Fall in the following manner, he asks whether we approve of it:—After cutting and removing the corn he intends to use the shovel-plow, sow the wheat broadcast with at least 300 pounds of fertilizer; and harrow it in, then sow the clover and brush it in. One part of the land he wishes to seed to Alsike, and the rest to Red Clover. 2, Wishing to put two acres of upland in Alfalfa, our friend asks whether it is likely to thrive in that part of the country and whether it should be sown in Fall or Spring.

ANS.—1, The plan proposed for sowing Alsike and Red Clover will answer provided the clover is sown not later, at furthest, than Sept. 20th. Earlier than that would be still better. 2, No reliable tests of Alfalfa have been made in Virginia. It is doubtful whether it would succeed on upland, unless the latter were turned to a depth of twelve inches at least. Not being as hardy as Red Clover, the seed of Alfalfa should be sown in the Spring—in the latter part of March or 1st of April. It should be sown alone without any protecting crop.

E. W. K., Glens Falls, N. Y., sends for name specimens of a plant the tubers of which are quite eatable when boiled or baked, tasting somewhat like a sweet potato. The vine climbs up 20 to 30 feet and dies down to the ground every Fall.

ANS.—Botanically it is Apios tuberosa—Ground-nut. The tubers are nutritious, and would perhaps be cultivated had we not the other tuberosum (Solanum), otherwise known as the Irish potato. It is a pea vine, something like the popular Wistaria. It blooms in July and grows wild from the Eastern States to South Carolina.

M. C. N., Springboro,' Pa. asks, 1, at what age should peaches be budded; 2, should the operation be done in Fall or Spring; 3, should the buds be taken from the main or lateral branches, from the ends of the branch, or from some other part.

ANS.—1, The first or second Summer is the best time; in the latter case they should be cut down the previous year and only one shoot should be permitted to grow. A strong shoot for the bud will thus be insured. 2, Now. 3, Select the buds from the strongest shoots. The terminal buds of the peach are often the hardiest.

S. T. E., Setauket, N. Y., wishes a remedy for pea weevils.

ANS.—The eggs of the weevil are deposited on the pods, so that the young grubs become fully grown about the time the peas ripen, and in the peas they remain and change to beetles during the Autumn. As they remain in the peas during the Winter, all peas saved for seed should be kept in air-tight boxes or cans, and a little benzine be poured in on the bottom of the box. The vapor arising from it will kill the weevils. Persian Insect Powder may be sprinkled in the box with good effect.

A Constant Reader, Chadwick, Mich., says:—"Several weeks ago I saw in the RURAL an inquiry from Mr. J. R. Livingstone, as to where he could get Quack Grass seed, and having seen no reply in the paper, I suppose the answers were sent directly to him, as his full address was given. As there are two or three fools of just the same stripe anxious to sow Quack seed in this neighborhood, I should be obliged to Mr. Livingstone if he would let us know whether he has obtained the seed and from whom."

W. M. K., Washington, D. C., referring to an item in a late RURAL, telling of the new Californian method of preserving grapes by packing them in wheat bran reduced to charcoal, asks how to reduce the bran to charcoal.

ANS.—The bran must be charred in a close vessel. A large cast-iron caldron may be used, with a cover fastened down with clamps and luted with clay. An opening must be left to allow the gases of combustion to escape. Fire is made under the caldron and around it, but the cooling must be very slow or the caldron will be apt to crack and the charcoal to inflame.

J. A. S., VanWert, Ohio, asks, 1, what is the best way to propagate the Calla Lily; 2, is cold well water applied to plants bedded out injurous at this season; 3, would it be too early to lift bedded-out house plants now and would they do better if cut close; 4, what is the best means to make celery grow faster.

ANS.—1, By offsets grown in small pots. 2, We should prefer to let it stand awhile. 3, No. Some would and some would not. 4, Manure water. The other questions will be answered later on.

J. B., Union, Broome Co., N. Y. asks, 1, whether Quack Grass will grow from seed; he has tried to get a "catch" for two years but failed, although the land would produce good crops of corn, oats, rye and potatoes; 2, is there any other grass that will produce as much feed per acre as Quack and do it as early.

ANS'—We have never sown Quack seed, but believe that good seed will germinate freely—as freely as wheat. Kentucky Blue Grass is early, but it will not "make as much feed."

S. L. S., Onaquaga, N. Y., having lately lost several hens, asks what ailed them, and how to cure others similarly affected. On opening the defunct ones their livers were found to be very large and the fowls very fat.

ANS.—This is the result of over-feeding which engorges the liver and causes it to increase very much in size. Give them a dose of starvation for a week or two; let them pick their own food.

W. H. C., St. Joseph, Mich., says that Golden Grains or Palestine Mammoth Wheat is being sold thereabouts, in 50-cent packages, at the rate of $120 per bushel, and he asks what we think of it.

ANS.—We believe it to be Black-bearded Centennial. It is too late, as we believe, for your climate. See Wheat Number.

W. M., McGraweville, N. Y., asks, how to root the tips of Black-cap raspberry canes, and when it should be done.

ANS.—The tips of the bent-down branches root *very* readily when covered with earth or even when merely in contact with the ground. August or September.

NOTE.—Several specimens of quince have been sent us affected with a reddish-yellow fungus which causes the fruit to shrivel up and fall. The fungus is Rœstelia aurantiaca and the only remedy suggested by those of whom we have made inquiries, is to destroy the infested parts by burning, so as to prevent the dissemination of the spores.

J. B. C., Factoryville, Pa., sends for name specimens of a caterpillar found on apple trees.

ANS.—It is commonly known as the Red-humped caterpillar, so named from the red hump on the third ring of the body. Different broods make their appearance during August and September.

T. D. E., Terminus Ranch, M. T., sends for name specimens of a grass he finds growing in his meadows and in low places.

ANS.—It seems to be Kentucky Blue Grass—Poa pratensis.

A. A. G., Brantford, Canada, asks, whether it would be advisable to sow salt on Fall-sown wheat.

ANS.—Only as an experiment. Spring is the best time to sow salt on wheat.

COMMUNICATIONS RECEIVED FOR WEEK ENDING SATURDAY, SEPT. 10.

We have received two apples from W. H. Atkins, Westfield, Mass., unaccompanied by any note of explanation or inquiry.—C. E. P.—R. T. I., (Austin, Texas.) We may do so next year.—J. S. C.—H. A.—J. F. H.—N. R.—W. S. H.—W. F. B.—W. A. S.—W. O. R.—I. J. B.—M. W.-F.—W. F.—E. B. P., (Amenia.) Thanks for Dianthus specimens.—George Archard. This is one of the finest panicles of oats we have ever seen. Thanks—Scott Montgomery. Many thanks for your excellent specimens.—E. Gould—One of the pinks (single) is different from any we have seen. Thanks.—J. W. B.—F. M.—W. S. Jr.—Mrs. E. A. N.—The Fair Number goes to all subscribers.J. H. S.—J. M. W.—O. W. D.—J. H. (Delta, York Co., Pa,) Please do so.—S. T. T.—L. A. R.—E. A.—J. N. C.—R. E.—

THE
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SATURDAY, SEPT. 17, 1881.

Our correspondent Mr. B. F. Johnson of Illinois, has through many years proven himself a wise weather profit. As may be seen in another column he predicts that "a very cold and snowy Winter is pretty sure to follow our long, dry Fall."

We are afraid that some of our friends will fail to realize the true value of the Rural Branching Sorghum until they follow directions more closely. We recently saw two or three plots in Columbia Co., N. Y., which though doing finely were not producing as much fodder as they might if the stalks had been cut off and new shoots allowed to start out.

We may call this a "catch-up" number of the Rural. Readers who have asked questions or sent us specimens of fruits or insects for name will kindly bear with us. The special work of the season both at the Farm and in this office is and has been for several weeks, such that we have been obliged to neglect the requests of friends whom we would gladly have served.

Education in the South.—According to Educational Commissioner Eaton who spoke on "Education at the South" at the late meeting of the Social Science Association at Saratoga, the outlook for educating the negro at the South and thus raising him to a higher rank in citizenship, is very promising. Per capita taxes are now levied on all for the support of schools; normal schools and departments are being established rapidly; school and college endowments are being increased; libraries are being established and there is a growing belief among the whites that education is a good thing for the South. One of the most encouraging features is the number of young men and women who are fitting themselves for the position of teachers.

A Commission for the purpose of "procuring data touching the agricultural needs of that portion of the United States lying west of the Rocky Mountains and the arid regions," has recently been appointed by Commissioner Loring. It consists of our esteemed contributor, Ex-Governor Robert Furnas, of Nebraska; Professor Hilgard, of the Agricultural College of California, and the Hon. T. C. Jones, of Ohio. The Commission is soon to meet at San Francisco to begin operations. From the character of these gentleman we have high hopes that their labors will redound greatly to the public advantage. Governor Furnas from his wide acquaintance with the resources of the Far West and his long experience in the best methods of developing them, is especially well fitted for the proposed investigations.

The success of the Atlanta Cotton Exposition is likely to be due to Northern capital, liberality and enterprise as much as to Southern products; for already the North has subscribed $100,000 towards making it a success against $50,000, the aggregate contributions from the entire South. Though the chief city in Georgia is likely to be the greatest gainer by it, still the legislature of that State has, by an overwhelming majority, defeated a bill appropriating the paltry sum of $10,000 to its support. The principal argument against the grant was that the exhibition was a private, money-making concern originating outside the State. Notwithstanding this cold Georgian shoulder turned towards the undertaking, it is very likely to prove a brilliant success, as Northern exhibitors are engaging lots of space and Southern merchants, railroads, manufacturers and producers seem to be heartily co-operating.

The Hulbert Canning and Drying Co., of California, engaged to take and pay for, at the uniform rate of five-eighths of a cent per pound, all the fruit raised by Francis Veerkamp and delivered at the Company's works at Upper Placerville, excepting Mission grapes, "and to furnish boxes for picking and hauling the fruit," Veerkamp engaging to deliver the fruit in good condition and when suitably ripe and to "sell no fruit to other parties except one load early." The fruit was duly delivered as it became ripe, but before the whole crop was ripe Veerkamp demanded pay for the fruit delivered; but this was refused until the entire crop should be sent in. Thereupon Veerkamp refused to send more fruit, sued for pay for what had been sent, and recovered judgment. The Company appealed and the Supreme Court of California has affirmed the judgment. In his opinion Judge Rose said: "In the nature of things the fruit ripened at different times, and had to be delivered at different times. The contract fixed the rate per pound at which the company was to pay for it, and as each lot was delivered there became due and payable for it to the plaintiff the value thereof at the rate per pound fixed by the contract."

STOCK FEED FOR FALL AND WINTER.

In view of the certainty of the scarcity of corn and of high prices for all sorts of food for live stock during the coming Fall and Winter, farmers cannot be too careful of the supply on hand. Straw and corn fodder are sure to be much more largely used as supplementary feed than heretofore, especially at the West where straw and even corn-stalks have hitherto been lightly esteemed for feeding purposes in many places. During the terrible drought on the Pacific Coast a couple of years ago, when thousands of stock starved to death, loud regrets were heard on all sides at the foolish waste and destruction of straw at thrashing time; for had it been stacked so as to keep well, it would have been a godsend to cattle and their owners in those days and months of famine. Rather than over-economize by reducing the feed of stock too much, however, would it not be better to weed out one's herds and flocks and dispose of all inferior animals early—before they have diminished the feed supply of those it will pay to keep? With animals intended for market it is more economical to give them full feed so as to have them ready for sale as soon as possible, rather than to reduce their rations and be forced to keep them longer. Now is a good time to lay plans for economizing feed during the coming Winter, which nearly all the weather prophets predict will be a long and very severe one; and in this connection it must be borne in mind that shelter for stock from its severity is equivalent to a large saving in their feed.

THE REMOVAL OF THE PRESIDENT.

On Tuesday morning Sept. 6. the removal of President Garfield to a little cottage at Long Branch was successfully accomplished. It would have been a bold step to take, were it not that every possible arrangement had been made for his convenience, and that the risk arising from accompanying circumstances had been reduced to a minimum by his thoughtful attendants. The fact is noteworthy that a patient who has been so greatly reduced in strength as he, and so liable to sudden relapses from various, and, perhaps, unforeseen causes, has been removed so far by rail without any positive injury, and without materially retarding his progress toward recovery. The malarial atmosphere of Washington made it unwise, and even dangerous, to keep the President longer at the White House, and it was evident that quite as much risk would be run in leaving him there as in removing him to a more healthful location. Much credit is reflected upon those who had the matter in charge, for the very quiet and unostentatious manner in which they accomplished his removal, and though the scene at the departure from the Presidential Mansion brought tears to many eyes that beheld it, the fact that the journey was successfully made, brought gladness to many hearts, though at this writing his general condition is less favorable than during the earlier days spent at his ocean home. With the pure, invigorating sea-air to lend its genial influence in bringing health to body, and the grandeur of the ocean, to relieve the mind, we shall still have faith in the recovery of our President.

THE MICHIGAN HORROR.

Woful indeed is the cry of bereavement, agony and desolation that from the fire-scourged districts of Michigan appeals to the sympathy and generosity of the entire country. Whole counties, notably Huron, Tuscola and Senilac, have been blackened, ravaged and made desolate by the all-devouring flames. Everywhere throughout the fire-swept region, farm buildings, fences, standing and stacked crops, stock, farm implements and all other property have been utterly destroyed or irremediably ruined. But sadder than all is the disastrous loss of human lives estimated to have amounted to fully 500. Nearly 300 deaths are positively ascertained to have taken place, and a great deal of the burnt district is still to be heard from. Along the roads on which they were fleeing from destruction, in wells in which they sought refuge, in the fields, the woods, the by-ways, amid the ruins of their homes and outbuildings have been found the charred or suffocated bodies of the victims of this awful calamity—men, women and little ones. Nor is the plight of those who escaped death much less sad. In an hour the results of the labors of a life-time have been swept away. Wretchedness and penury have succeeded to comfort and competence. Discouraged by disaster and by lack of means, the struggle for a livelihood has to begin again, while even for the present seeding, at least 50,000 bushels of wheat, and other seed in proportion, will be needed. Already the magnificent charity of the country is coming to the aid of the afflicted. Here a committee of our most prominent merchants has been appointed to collect subscriptions for the relief of the sufferers, and upwards of $7,000 were contributed in a few hours. Other cities are following this excellent example. The burnt district was eminently agricultural. The sufferers are almost exclusively farmers. We trust that the farmers of the country will generously contribute to the relief of their co-workers in the day of their distress.

BREVITIES.

It appears from a note from Mr. Wysor, of Virginia, that Silver Chaff has been tried there and in a measure fails. It winter-kills and is too late.

With what pride does not the American "patriot" look upon the census returns that give to his country 50,000,000 inhabitants, entirely oblivious of the fact that India, a mere dependency of the British crown, has 250,000,000 of 'em—but, thank Heaven, Americans are not East Indians.

Mr. Joseph Galbraith writes us that he has frequently experimented with different varieties and finds that wheat raised in New York, Michigan, Canada or any far Northern State, will come to perfection and yield much better than any varieties of Southern wheat. His farm is in Cumberland Co., Pa.

We much prize the following compliment from Pres. Marshall P. Wilder who, we believe, has as many earnest friends and as deservedly as any other horticulturist of our time:

"The 'Rural' is one of the best of 20 papers that I read. It is wide-awake, practical and judicious."

The Commissioner of Agriculture of Va. suggests that every person in the State over 10 years old, should celebrate the Yorktown Centennial (Oct. 5) by planting a tree in the yard, field, roadside or forest. Black walnut is recommended. We make the same recommendation to all of our readers; and if it is adopted the Yorktown Centennial of 1881 will be gratefully remembered by thousands of those who will see that of 1981.

Prof. Brewer questions if all the money won at agricultural fairs pays more than half the actual expenses of the winners in entering the object exhibited, caring for it there, and getting it home again. It is not the cup won at a boat-race, that incites young men to do so much labor, spend so much time and money, and exercise so much self-denial while training, but its possession is the sign of victory—and so of the prizes won at our fairs.

Two or three months ago the Legislature of Illinois passed a law relating to cattle and other live stock, and among other things it provided for the appointment of a State veterinarian to aid in enforcing the provisions of the law. Governor Cullum has lately conferred this appointment on Dr. N. H. Paaren, of Chicago, a gentleman very favorably known throughout the West, and indeed all over the country, by his valuable contributions to the agricultural press, and by twenty years of earnest labor in his profession.

Delegates from all parts of the State attended an important meeting of the California Growers' Association in San Francisco, on Sept. 5, to consider what policy the farmers should pursue in view of the quiet condition of the wheat market consequent upon the heavy freights charged by vessels and the unwillingness of buyers to pay satisfactory prices. It was decided that as the English wheat crop is a failure and California had only one-fourth of last year's yield it would be best for farmers to hold their wheat till after another meeting on the 14th inst. and that meanwhile every farmer should send in an exact statement of the wheat grown in his neighborhood.

Many of the specimens of wheat which we have received in competition for the several little premiums offered by the Rural a few months ago, are simply wonderful as to size, weight and beauty. Except that we have already more than we can well attend to at this season, when both farm and editoral work presses hard, we should be glad to have all of the specimens nicely arranged and labeled and exhibited at some of our principal fairs. It may be doubted whether so many or such perfect specimens have ever before been collected together.

The present drought is the most severe on Long Island that has been experienced for 10 years, and we can fully sympathize with our Western readers who are similarly afflicted. Early field corn will prove a light crop, and late corn is so damaged that rain, should it fall at once, can do no good. At the Rural Farm upland corn was literally burnt up while yet the ears were in the milk. That on lowlands is still looking very well and will yield fairly even though the drought continue. Our fields, which usually at this season afford an abundance of pasture, are now so dried that we are cutting corn and feeding it as needed to our cows.

In view of the growing scarcity of black walnut, black birch is largely taking its place, as well as that of cherry which is also becoming very scarce. Birch has much the same color as cherry, and is just as easy to work as black walnut and as suitable for nearly all the purposes for which that wood is used. When properly stained it is nearly impossible to distinguish it from walnut, and it is susceptible of a beautiful polish equal to that of any wood used in the manufacture of furniture. Large quantities of it are imported from Canada in some parts of which it is very plentiful and cheap, costing only about a dollar per hundred feet at the saw-mills.

The latest returns of live stock landed at Liverpool from this country and Canada show large increases. In a single week the importations amounted to 1,808 cattle; 2,800 sheep; 4,748 quarters of beef, and 453 carcasses of mutton. In the four weeks from August 6 to August 27 there were shipped from this port 3,748 head of cattle; 17,651 quarters of beef; 729 sheep, and 3,299 carcasses of mutton. The shipment of hogs has stopped; but more hogs were raised in England last year than in any previous year, the number now in the country being 2,048,000, an increase of 47,192 over 1880 and 43,527 over 1879. There is a decrease, however, in the number of sheep and lambs of 2,036,806 less than in '80, and of 3,574,926 less than in 1879. Our exports of mutton and sheep, therefore, are likely to increase.

The Royal Agricultural Society of England seldom "makes expenses" from its great annual shows. Out of the 42 fairs it has held in various parts of the Kingdom, from 10 only has any profit been realized, and up to the present year its net losses have aggregated $225,369, the wet, muddy Kilburn show of 1879 having contributed $68,031 towards this deficit. This year's sunshiny Derby show has diminished the loss by some $15,000, although the premiums were large and the outlay liberal. Unlike American agricultural societies, whose chief or only revenues come from the gate money and other receipts at fairs, the Royal is mainly supported by the regular subscriptions and occasional donations of its members, each of whom—and they number from 6,000 to 10,000—subscribes five dollars a year.

Speculation in farm products seems greater now than at any time within our remembrance. It is not confined to regular speculators or dealers or to large cities or good-sized towns, but it pervades villages, hamlets and farm-houses like the lottery craze, and with equally demoralizing effects. All over the country, but especially at the West, farmers are speculating, not only in the products they have raised themselves, but also in the regular markets, in which they run a double risk—that from the inevitable fluctuations of prices and that from the trickery or absolute dishonesty of the agents to whom they confide their money for such gambling purposes. Very earnestly indeed do we beg our readers to refrain from this pernicious practice, in which the chances are so mightily against them, and in which even success itself has a demoralizing tendency.

On August 18, E. W. Morcord, of Watertown, N. Y., bought from S. R. Ford, of the Produce Exchange, of this city, 20,000 bushels of barley for October delivery, depositing a margin of $4,000. Since the purchase the price of barley has risen, and a couple of weeks ago Ford refused to keep his agreement. The matter was referred to an arbitrator, who dismissed the case because Ford claimed that the contract was made after 'Change hours and therefore was not good. The attention of the Board of Managers of the Produce Exchange having been directed to this decision, it was unanimously resolved that the attention of the grain trade should be called to the rule which ordains that trade in grain for future delivery—options—must take place between the hours of 10 A. M. to 4 P. M. It was agreed at a meeting of the grain trade that in future all trade after 4 P. M.—the hour for closing the Exchange—must be discontinued. A contract for the sale and purchase of grain made after that hour cannot be enforced.

For some years reports have been circulated, from time to time, of the ravages of a mysterious disease among the cattle of Nova Scotia, and of late—since the trouble about pleuro-pneumonia began—these reports have attracted more attention than formerly. Dr. E. F. Thayer, of the newly appointed Cattle Commission, having visited the infected region, has made a report of the results of his investigations to Assistant Secretary H. F. French, of the Treasury Department. In his researches he was aided by Dr. McEachran, the well known Canadian veterinarian, and from all accounts of the disease obtainable and a post-mortem examination of a couple of infected beasts, it had been concluded that the disease is probably not contagious, and that it is very likely due to the eating of a plant or weed known locally as "Stinking Willie," which was imported from Scotland "many years ago" in the soil with which a vessel was ballasted, and which since then has "become thoroughly mixed with the grass for many miles in extent."

For Women.

CONDUCTED BY MISS RAY CLARK.

AT MILKING TIME.

EDGERTON.

BLUE-EYED Mary at the gate,
How patiently the lass can wait
While all the cows, who've had their fill,
Move slowly, at their own sweet will;
One by one, in single file,
Cropping by the way, the while,
Down the well-worn path they move,
From the pasture-field above.

"Ca-sook! ca-sook!" sweetly and clear,
Falls softly, on the listening ear,
At intervals too long between
To indicate the restless mien
Of Mary in her business mood—
The marvel of that neighborhood,
And pattern girl through all those parts
For business in domestic arts.

Ordinarily, at the gate,
She cannot bide to stand and wait
The lazy movement of the cows,
But goes to meet them—she and "Towse,"
Claps her brown hands to make them run,
While Towser, eager for the fun,
Barks, frisks and plays round every one
'Till all the cows come scampering home.

But now, with other thoughts at play,
She kindly lets them take their way,
Stares out a-field with vacant look
And calls out dreamily, "ca-sook,"
While Towser, with his great brown eyes,
Looks up at her in dumb surprise,
Wags coaxingly his bushy tail,
Then glances at the empty pail.

But blue-eyed Mary heeds him not—
Her canine friend is quite forgot—
Nor wakes she from her reverie,
'Till Farmer Jones steps out to see
What's keeping Mary at the gap,
And wonders who can be that chap
Off through the gloaming in the lane—
"Surely that can't be neighbor Payne?"

"Mary, my girl, where have you been?
And why are not the cows turned in?
You loiter pet, this is not right,
Your milking will be late to-night;
It's time that we were all in bed
And I've not had my milk and bread;
Come, Towser, fly about, my chap,
And bring your cattle to the gap!

"They say the country's full of tramps—
The thieving, good-for-nothing scamps—
And, if my eye-sight served me right,
I caught a glimpse of one to-night
A sculking yonder in the road—
I'd hoped they'd miss *this* neighborhood;
I'll go and loose old Bull and Jack,
And put them on the rascal's track."

"Why, father, that was only Fred,
Who just ran over here, he said,
To bring the news, and let me know
That Sallie Cooper had a beau;
They're going over Wednesday
To see the circus-actors play;
Fred says the acting 's real fine
And Sallie 'll have a grand good time."

"I'd think old Cooper 'd be ashamed—
At least, he's greatly to be blamed—
To let his daughter traipse and go
To every passing monkey-show;
My daughter nev— what is it pet?
You're suffering from the headache yet;
Poor child! you're in a sorry plight,
We'll let the milking go to-night."

"Why, father, Fred would like to come
And bring his two-horse rig along
To fetch me over to the show,
If you'll consent and let me go."
"Why, yes, my child, why should you stay?
I'll not be mean and say you nay.
Where neighbor Cooper gives consent
Must surely be quite innocent."

DESCRIPTION OF CUTS.

FIG. 459.—CHILD'S PETTICOAT: KNITTING.

Materials Required: Berlin or Lady Betty wool, the latter is very soft, and two bone pins, No. 12 gauge.

The petticoat is knitted in three pieces. Cast on any number of stitches divisible by nine according to the size you require the petticoat. There will be twelve stitches to the inch.

1st Row: Purl eight, knit one, repeat. End the row with knit two.

2nd Row: Purl two, knit seven, repeat. End the row with knit eight.

3d Row: Purl six, knit three, repeat. End the row with knit four.

4th Row: Purl five, knit four, repeat. End the row with knit five.

5th Row: Purl four, knit five, repeat. End the row with knit six.

6th Row: Purl six, knit three, repeat. End with knit four.

7th Row: Purl two, knit seven, repeat. End with knit eight.

8th Row: Purl eight, knit one, repeat. End with knit two.

Then repeat from the first row. Each pattern measures three quarters of an inch, so that you may easily calculate how many patterns are required for the length of the petticoat. After having finished the last pattern, work a row thus, for the waist: Make one, knit two together, knit one. Repeat. Knit three plain rows. The three breadths are joined together on the wrong side with a needle and wool. For the crochet edge round the bottom of the petticoat, one double into the first stitch that is knitted throughout, pass over three stitches, three trebles, three double trebles, and three trebles into the next, pass over three stitches and repeat. A tape is run through the holes made in the row after the last pattern; the petticoat can then be drawn up to fit the waist.

FIG. 458.

FIG. 458.—ARTIST'S BAG, FOR PENCIL, BRUSHES, &c.

The material used for the foundation of the embroidery is striped linen, measuring eighteen inches long and ten inches wide, ornamented with a design worked with colored crewels. The lining is of oil silk; it is covered with the embroidered linen. The ends are drawn together by scarlet cord, and a strap of embroidered braid is fixed to the top. The tassels may be made by turning wool round two fingers, tying it at the top, and cutting it at the bottom.

FIG. 461.—CHEVAL FIRE-SCREEN.

THIS screen is of common deal, and can, of course, be made by any carpenter of the required size; the frame is entirely covered with plush, which is sewn on as neatly as possible, the seam coming at one of the inner edges of the frame. The centre of the screen may be on a foundation of satin, plush, or velvet. Plush has the prettiest effect. For design personal taste must be the guide for selection. Sew the center to the corners of the covered frame.

FIG. 460.—CHAIR BOLSTER.

The bolster, as shown in Fig. 460, is covered with dark blue satin over a cushion twenty inches in length and sixteen in circumference. The satin is gathered, and fastened at each end under a rosette of ribbon, from which emerges

FIG. 459.

the ribbon that passes over the back of the chair; two bands of crochet lace and insertion are placed over the satin; the insertion and lace are worked separately, and joined when finished by a needle and thread. The insertion shown is worked as follows:

1st Row: Take a length of braid, and work three trebles into a picot, keep the top loops on the hook, pass over two picots, and work three trebles into the next, keep the top loops on the hook, and draw through all together, four chain, one single into the same picot, one single, separated by three chain, into each of three successive picots, four chain. Repeat from the beginning of the row.

2d Row: One single into a picot of another length of braid, three trebles into the top of trebles of last row (see design), four chain, pass over two picots, one single into the next, three trebles into the same loop the last trebles were worked into, one single, separated by three chain, into each of three successive picots. Repeat from the beginning of the row.

FIG. 460.

For the lace, take a length of mignardise, and work one single into each of three successive picots, drawing through the top picot of heading mignardise, six chain, draw through the centre picot on next scallop of heading, seven chain, pass over one picot, one single into the next, four chain, three trebles into the same picot, pass over two picots, three trebles into the next; keep the top loops of all the trebles on the hook, and draw through all together, four chain, one single into each of ten

FIG. 461.

successive picots, three trebles between the four trebles of last row, four chain, one single into the same place, four chain, pass over two picots, one single into the next, three trebles into the place the last were worked into, four chain, one single into the same picot, seven chain, one single into picot of heading, six chain, pass over one picot, and repeat from the beginning of the row.

For the heading:

Wave a length of mignardise as shown in the design, and draw the picots together with a needle and thread, passing the thread at the back of the work. This is joined to the edging on the other side of the heading; work one single into the centre picot of a scallop, six chain. Repeat.

FIG. 462.—BASKET FOR SOILED COLLARS CUFFS, &c.

The basket, which is in the shape of a barrel, is of wicker, on a stand of black bamboo. It is lined with blue cambric, and ornamented with bands of art-canvas, embroidered with crewels in cross-stitch. The top of the basket is ornamented with a quilled ruche and bows of blue ribbon.

FIG. 464.—INSERTION: CROCHET AND FANCY BRAID.

This pattern is suitable to be used as a stripe for antimacassars, &c., inserted between other stripes of embroidery, ribbon, &c.

For the centre; One treble into the second, third, and fourth picots on a medallion of braid (keep the top loop of each treble on the hook), one treble into the fifth picot and second picot on the next medallion together, one treble into each of three next picots; take another length of braid and work in the same way as described on two medallions, keep all the loops on the hooks (see design), and draw through altogether; fasten the cotton firmly at the back of the cluster; the picots in the centre of the bar of mignardise must be joined with a needle and cotton.

2nd Row: For the stars: On the other side of braid work two double trebles into the fifth picot on a medallion, keep the top loop of each on the hook, and draw through both together (as all the double trebles are worked in this way we shall not repeat the directions); pass over two picots, two double trebles into the next, four chain, one single into each of ten successive picots, three trebles between the four trebles of last row, four chain, one single into the same place, four chain, pass over two picots, one single into the next, three trebles into the place the last were worked into, four chain, one single into the same picot, seven chain, one single into picot of heading, six chain, pass over one picot, and repeat from the beginning of the row.

For the heading:

Wave a length of mignardise as shown in the design, and draw the picots together with a needle and thread, passing the thread at the back of the work. This is joined to the edging on the other side of the heading; work one single into the centre picot of a scallop, six chain. Repeat.

FIG. 462.—BASKET FOR SOILED COLLARS CUFFS, &c.

The basket, which is in the shape of a barrel, is of wicker, on a stand of black bamboo. It is lined with blue cambric, and ornamented with bands of art-canvas, embroidered with crewels in cross-stitch. The top of the basket is ornamented with a quilled ruche and bows of blue ribbon.

FIG. 464.—INSERTION: CROCHET AND FANCY BRAID.

This pattern is suitable to be used as a stripe for antimacassars, &c., inserted between other stripes of embroidery, ribbon, &c.

For the centre; One treble into the second, third, and fourth picots on a medallion of braid (keep the top loop of each treble on the hook), one treble into the fifth picot and second picot on the next medallion together, one treble into each of three next picots; take another length of braid and work in the same way as described on two medallions, keep all the loops on the hooks (see design), and draw through altogether; fasten the cotton firmly at the back of the cluster; the picots in the centre of the bar of mignardise must be joined with a needle and cotton.

2nd Row: For the stars: On the other side of braid work two double trebles into the fifth picot on a medallion, keep the top loop of each on the hook, and draw through both together (as all the double trebles are worked in this way we shall not repeat the directions); pass over two picots, two double trebles into the next, four chain, one single into each of ten

FIG. 461.

successive picots, three trebles between the four trebles of last row, four chain, one single into the same place, four chain, pass over two picots, one single into the next, three trebles into the place the last were worked into, four chain, one single into the same picot, seven chain, one single into picot of heading, six chain, pass over one picot, and repeat from the beginning of the row.

For the heading:

Wave a length of mignardise as shown in the design, and draw the picots together with a needle and thread, passing the thread at the back of the work. This is joined to the edging on the other side of the heading; work one single into the centre picot of a scallop, six chain. Repeat.

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For the centre; One treble into the second, third, and fourth picots on a medallion of braid (keep the top loop of each treble on the hook), one treble into the fifth picot and second picot on the next medallion together, one treble into each of three next picots; take another length of braid and work in the same way as described on two medallions, keep all the loops on the hooks (see design), and draw through altogether; fasten the cotton firmly at the back of the cluster; the picots in the centre of the bar of mignardise must be joined with a needle and cotton.

2nd Row: For the stars: On the other side of braid work two double trebles into the fifth picot on a medallion, keep the top loop of each on the hook, and draw through both together (as all the double trebles are worked in this way we shall not repeat the directions); pass over two picots, two double trebles into the next, four chain, one single into each of ten

FIG. 461.

successive picots, three trebles between the four trebles of last row, four chain, one single into the same place, four chain, pass over two picots, one single into the next, three trebles into the place the last were worked into, four chain, one single into the same picot, seven chain, one single into picot of heading, six chain, pass over one picot, and repeat from the beginning of the row.

For the heading:

Wave a length of mignardise as shown in the design, and draw the picots together with a needle and thread, passing the thread at the back of the work. This is joined to the edging on the other side of the heading; work one single into the centre picot of a scallop, six chain. Repeat.

FIG. 462.—BASKET FOR SOILED COLLARS CUFFS, &c.

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FIG. 464.—INSERTION: CROCHET AND FANCY BRAID.

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2nd Row: For the stars: On the other side of braid work two double trebles into the fifth picot on a medallion, keep the top loop of each on the hook, and draw through both together (as all the double trebles are worked in this way we shall not repeat the directions); pass over two picots, two double trebles into the

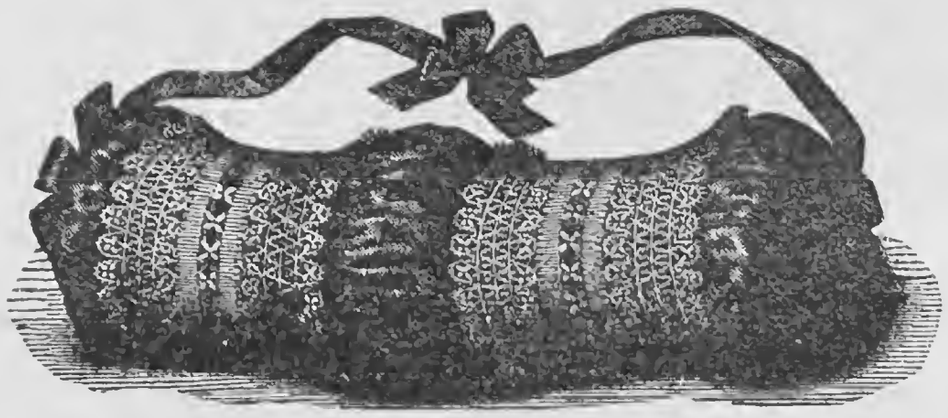


FIG. 460.

For the lace, take a length of mignardise, and work one single into each of three successive picots, drawing through the top picot of heading mignardise, six chain, draw through the centre picot on next scallop of heading, seven chain, pass over one picot, one single into the next, pass over four picots, two double treble into the next, pass over two picots, two double trebles into the next; take another length of braid, and work upon it the second half of star as directed for the first; fasten the cotton off at the back of the work; fasten the two short bars between the medallions together with a needle and cotton.

For the edge:—

1st Row: One double into two picots together over the short bar (see design), three chain, pass over one picot, one double into the next, four chain, pass over one picot, one double into the next, five chain, pass over two picots, one double into the next, four chain pass over one picot, one double into the next, four chain, pass over one picot, one double into the next, five chain, pass over two picots, one double into the next, four chain, pass over one picot, one double into the next, four chain. Repeat from the beginning of the row.

2d Row: One double treble into the first four chain of last row, two chain, one treble into the centre of next four chain, three chain, one half treble into the centre of next four chain, three chain, one half treble into centre of next four chain, three chain, one treble into centre of next chain, two chain, one double treble into centre of next chain, three chain. Repeat from the beginning of the row.

3d Row: One treble separated by one chain into every other stitch of last row.

The other side is worked the same way.

FIG. 463.—CLEMATIS PANEL.

This design for panel decoration shows an artistic arrangement of this pretty vine and flower, and is here given to aid nature's imitators when such work is contemplated.

Much skill is required in reproducting to exactness the fine stamens of the flowers, consequently, there is a lesson in the correct accomplishment of this representation.

A Table Cover.

Material, one yard old gold momie cloth 1-2 yd "oat meal" momie cloth, and 4 1-2 yds. black velvet ribbon, 1 1-2 inches wide. The oat meal cloth is used for the borders; it is fringed at the lower part as deep as you please. The velvet is put on over the seam with invisible stitches, and is crossed at the corners reaching the edge of the cloth where it is folded to a point and finished with an old gold tassel made of ravelings of the cloth.

FIG. 462.

Cut a pattern of a clover leaf and mark it, or stamp it around the cloth, putting the designs an inch and a half apart on the "oat meal" border with a long stem extending upon the velvet. Work it in clouded yellow or green silk, "satin stitch," or if you wish it less expensive use worsted, and from the point of the middle leaf of every second clover suspend a tassel of the old gold ravelings.

Finish the centre of the cloth with a monogram.

Having finished it, you will know that the cover has cost labor, but you will be sure to think it has paid. O. W. D.

HAND-SHAKING.

The following method of shaking hands is from the pen of Charles Lamb who describes the observances in a humorous way.

"The *pump-handle* shake is the first which deserves notice. It is executed by taking a friend's hand, and working it up and down, through an arc of fifty degrees, for about a minute and a-half. To have its native force and character, this shake should be performed with a fair and steady motion. No attempt should be made to give it grace, and still less variety.

"The *pendulum* shake may be mentioned next, as being somewhat similar in character, but moving as the name indicates, in a horizontal instead of a perpendicular direction. It is executed by sweeping your arm horizontally towards your friend's, and, after a junct-

ion has been effected, rowing with it from one side to the other, according to the pleasure of the parties.

"The *tourniquet* is next in importance. It is preformed by clasping the hand of your friend as far as you can in your own, and then contracting the muscles of your thumb, fingers, and palm, till you have induced any degree of compression you may propose in the hand of your friend.

"The *cordial grapple* is a shake of some interest. It is a hearty, boisterous shake of your friend's hand, accompanied with moderate pressure and loud acclamations of welcome. It is an excellent traveling shake, and well adopted to make friends. It is indiscriminately performed.

The *Peter Grievous* is opposite to the *cordial grapple*. It is a pensive, tranquil junction, followed by a subsultory motion, a cast-down look, and an inarticulate inquiry after your friend's health.

The *prude major* and *prude minor* are nearly monopolized by ladies. They cannot be accurately described, but are constantly to be noticed in practice; they never extend beyond the fingers; and the *prude major* allows you to touch them only down to the second joint. The *prude minor* allows you the whole finger. Considerable skill may be shown in preforming them with nice variations; such as extending the left hand instead of the right, or stretching a new glossy kid glove over the finger you extend.

MY INDEX.

About the year 1860, after going through work after work, and volume after volume, to find authorities which I knew that I possessed but could not locate, I conceived the idea of an alphabetical index naming the subjects in their order and referring to the volume and page for a description or for authority. Consequently I purchased a blank book of 280 six by fifteen inch pages, lettered each page at its head, writing the subject on the left hand and the reference on the right. The subjects are mainly agriculture, entomology and climatology with a sprinkling of all other subjects. Thus under the head of Worms there are 24 entries, naming some 15 kinds and referring to as many works for descriptions.

It often occurs that I wish to preserve something that I find in a newspaper that I do not intend to keep. The latter part of the book is devoted to this use and the article cut out and pasted in or its main part written and its page referred to in the index. Thus I have stored up a mass of most valuable information at little expense of time or labor.

At the time of getting up this work I had never heard of such a thing but I subsequently learned that it is somewhat common and that blank books are published under the head of *Index Rerum* for this very purpose and my object in speaking of this matter here is to recommend their use to my fellow readers as being something which they will find of great convenience and value. S. B. P.

USEFUL HINTS.

Black silk is restored to its deep black color by sponging it with a decoction of common cheap black tea, which contains all the ingredients of a black dye, viz., tannin and iron, with usually some logwood to add to the flavor. The silk is then ironed with a moderately hot iron on the wrong side or placed between two sheets.

To Perfume Linen.

Rose leaves dried in the shade, cloves beaten to a powder, mace scraped. Mix them together, and put the composition into bags.

Bran on carpets.—Take a pint of any coarse bran—a pint is sufficient for an average room—dampen with as much water as it will hold without dripping, being wet enough to make "splashes" on the carpet, sprinkle it over one-half the carpet, then commence next to the wall and sweep the bran over the other half. Keep your shoes off the bran. When the sweeping is finished the bran, if rightly operated, will have absorbed the dust, and the furniture will be easily rubbed over. This applies to ingrain, rag, or other than Brussels, and will not soil the finest fabric, wall or paper.

September is the month for gathering ferns. Take an old book with you to the places where they are gathered as they must be pressed directly after picking to preserve perfectly. In selecting do not pass the "baby" ferns as they will be found to be as effective for decoration as the larger ones.

A pretty little device for window decoration, is a spouge suspended by a fancy cord. Dampen the sponge and sprinkle flax, mustard and other seed over it, this seed will germinate and the result will be a mass of beautiful green. Flax seed is the best to use. The sponge can be washed and replenished with seed when decay takes place.

It is the small leaks that impoverish a house-hold. It is the small economies that lead to affluence.

When, from sedentary habits, the muscles are emaciated and the digestive system disordered, an excellent method for restoring the patient to health and full weight is for him to be charged with electricity, applied through the handle of a spade, a hoe, an axe, or some similar instrument. Apply it daily, and for some hours at a time.

To make the colors stand in washing lisle thread and delicate cotton hose.—Turn the stockings right side out, and wash in a lather of lukewarm water and white Castile soap; then wash the wrong side. If very much soiled two waters will be required. Rinse in lukewarm and then in cold water; dry as soon as possible by heat, not by sun. It is better not to iron them, but when nearly dry, smooth and pull them into shape by hand.

Never ask a sick person what he will have to eat. Give a variety if possible, and by all means serve the food, if only tea and toast in the very daintiest manner.

Ferns, well pressed and dried, and then painted thickly with liquid gold paint, are sometimes applied with good effect to the doors of a cabinet. One who has tried the experiment and succeeded says: "After gumming the backs, I arranged them on the panels of the door, pressing them with an old soft cloth. Where the gold paint moved off, I painted it again when dry. Lastly, I carefully laid on a wash of clear varnish, doing it as quickly as possible. This preserves the ferns and gilding, and improves their appearance."—Art Amateur.

A recent improved receipt for preserving plants with their natural colors is to dissolve 1 part of salicylic acid in 600 parts of alcohol. heat the solution up to boiling point in an evaporating vessel, and draw the plants slowly through it. Shake them to get rid of any superfluous moisture, and then dry between sheets of blotting-paper, under pressure, in the ordinary manner. Too prolonged immer-

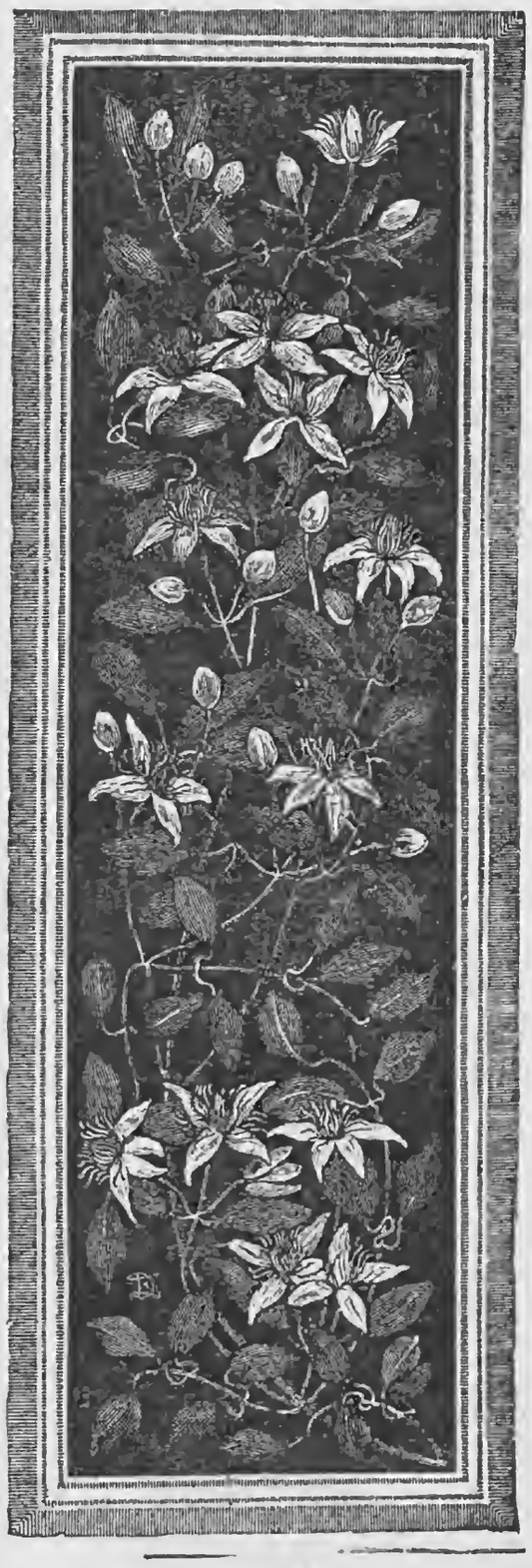


FIG. 463.

sion discolors violet flowers ,and in all cases the blotting-paper must be frequently renewed. The novelty appears to be the salicylic acid.—Art Amateur.

An excellent remedy when the finger or part of the flesh is burned, is to wrap it in raw cotton. The effect is severe for a short time, but is effectual. Sweet oil is often used with the cotton, but the latter is all that is necessary to remove the fire.

Ditman's Sea Salt is very beneficial for bathing, also for strengthening weak spots. Take a large handful and dissolve in about one quart of water; bathe with it, or saturate a cloth with the solution and bind on the affected part. A quantity put in the tub when taking a bath is good. There may be other preparations of the article but the above is the only one recalled.

ABOUT WOMEN.

Benjamin Asbury Goodridge, of Boston University is elected Instructor in Latin and Greek at Lasell Seminary for women.

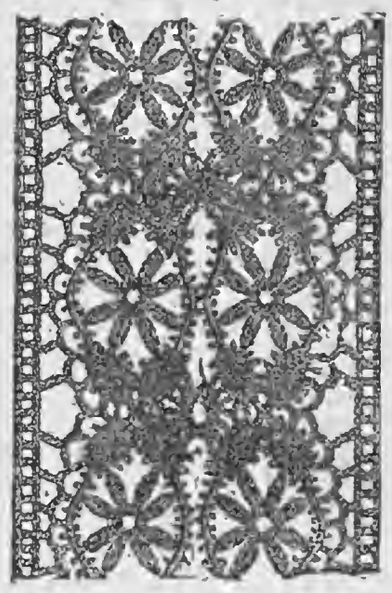


FIG. 464.

The late deceased preacher, E. H. Chapin bequeathed his entire estate to his wife. It is but a short time since the will was proved, and now that wife is laid by his side.

Mrs. Williams, of Norwich, Connecticut, has left a fund for the building and endowing of a school for young ladies in New London, which is now valued at $100,000 in personal property, and $25,000 in real estate, besides the site, which is worth $10,000.

The lecture of Mrs. Hathaway, of Chicago, before the School of Philosophy at Concord, upon "Schopenhauer," was a clear and concise exposition of this German philosopher's theories. Mrs. Hathaway is a German by birth, and has a strong analytical mind and a mastery of German thought which places her on a level with the other thinkers of the Concord school. The ladies who attended her lecture were proud of their representative.—*Transcript.*

Literary.

MORAL COSMETICS.

Ye who would save your features florid,
Lithe limbs, bright eyes, unwrinkled forehead,
From age's devastation horrid,
Adopt this plan:
'Twill make, in climates cold or torrid,
A hale old man.

Avoid in youth luxurious diet,
Restrain the passions' lawless riot;
Devoted to domestic quiet,
Be wisely gay:
So shall ye, spite of age's flat,
Resist decay.

Seek not in Mammon-worship pleasure,
But find your richest, dearest treasure,
In books, friends, music, polish'd leisure;—
The mind, not sense,
Made the sole scale by which ye measure
Your opulence.

This is the solace, this the science,
Life's purest, sweetest, best appliance,
That disappoints not man's reliance,
Whate'er his state;
But challenges, with calm defiance,
Time, fortune, fate.

THORNS AND ROSES.

(Continued from page 626.)

CHAPTER II.

The morning after my arrival I visited the garden, delighting in the cool air, the roses were heavy with dew, and flowers and leaves glittered with the same diamond-drops. I returned to the house, to find aunt Dorothy waiting breakfast for me, and I inquired when my cousin would arrive.

"About noon, I think. I shall send someone to meet her, unless you would like to do so? You could manage the pony-phaeton perhaps, and in Stanton no one makes disagreeable comments on what *we* do."

"I can't say that I mind conventionality, aunt, anywhere, and I love riding and driving. You will come?"

Aunt Dorothy declined; Edith and I should get on better without her at first, she thought, but to console me for the disappointment, she asked me to go to the garden with her, as there was something she wished to show me. We went out, but instead of lingering among her flowers, she led the way to the stables, where I was at once attracted by a beautiful black horse.

"That is yours, Kate; see how well I know your tastes! Brandon selected him, and we named him Black Diamond.

It was useless to try to thank aunt Dorothy; to all expressions of gratitude she turned a deaf ear, saying, "I am thanked if you are pleased;" but she understood me, I am sure.

We returned to the flowers, and gathered a fresh bouquet; and then entered the house, it being aunt's custom to dust her china, too precious to be entrusted to a servant; and this done, she had to consult on preserves and pickles with her old housekeeper, so I was left to myself. The morning passed quickly, and soon I was prepared to meet my cousin. I drove away merrily through the lanes, receiving stray curtseys, and hearing sentences to the effect that "Yon was Miss Lovel." Everything had an attraction for me, from the thatched cottages to the noisy ducks on the wayside ponds. I drove through the village until once more I saw the white railings of the station; and leaving my equipage in charge of a flaxen-haired laddie ascended the steps.

The train was in; among the homely-faced women, bearing great baskets, and sunburnt laborers with red bundles, I certainly did not look for my cousin. One lady was arguing with a porter; another stood laughing and talking with a gentleman slight and young; and as I could not see the face of either, I hesitated. But my doubts were soon solved; the latter-mentioned lady turned away, and seeing me, gave a long stare, then crossed the platform quickly. At once I recognized Edith Lovel from the likeness to her mother. She was of medium hight, and slender in figure: her eyes were bright, under straight, delicate brows, her hair fair:

"Coral on coral her lips did meet,
Or parted, to show the gleam o' the pearl;"

Altogether she was very pretty, very graceful, and attired in the hight of fashion; she advanced, surveying me from head to foot as she came, and greeted me without ceremony.

"You are cousin Kate! I thought so. Did aunt send you? Do let us get off this stupid station."

I explained my fondness for driving, and hoped the journey had been pleasant, as we descended the steps, soon discovering that my cousin was gifted with peculiar frankness.

"I hope we shall like each other," she said; "I don't know whether you go in for dignity or ceremony, but it is so absurd for cousins to meet stiffly, that I'm going to be as though I had known you all my life. You're a model, aunt tells me, and you will soon find me out. Do you agree to my proposal?"

"Willingly," I replied, charmed by her fresh, off-hand manner.

"That's settled," she cried, as I gathered up the reins. "Don't drive straight home, because I want to talk to you; and I shall fall into boredom's clutches if we go home."

Thus commanded, I went in an opposite direction, Edith rattling on with wonderful vivacity.

"What kind of a girl did you expect to see, Kate? Edith would lead you to imagine some one dark and dignified, I suppose. Everyone says my name does not suit me, but it is a thousand times better than these hideous, old-fashioned Dorothys, Barbaras, and Catherines—I beg your pardon—in which the Lovel ladies rejoice. What do you think of our home?"

"I like it; it is only natural that I should."

"Are you what aunt Dora would call a genuine Lovel? The place is horribly dull, and I speak from experience. I should not have come now, only I wanted to see what kind of a girl Kate Lovel was."

"And now that you do see her, what is your opinion?" I asked, much amused.

"You have not seen as much of the world as I have, for really I have knocked about. I daresay you know that I can't live at home. Papa is kind enough, but his wife is very religious, and it is as much as I can do to be civil for a week. There are ever so many little ones, and I can't amuse them—children are such a nuisance—so papa always seems glad when I am invited anywhere, because, he says, there will be peace. He spoiled me until he got someone else, so I go my own way."

"I wonder that you don't live here."

"Thanks—it is too quiet. Aunt is a dear old body, but don't you think she gives one too much Lovel? I generally fall asleep in the midst of those tremendous legends. Papa says that if I play my cards well, she will leave me her money. But people tell me that I am the image of mamma, so I think aunt must dislike me."

"I don't think aunt could dislike anyone," I replied, and Edith laughed.

"How bluntly you speak! I'll stay awhile and see if there's any amusement to be had. I am sorry there is no society."

"Is there not Brandon?" I asked.

"Brandon! What amusement, my dear girl, could anyone have with Brandon, a melancholy, grave-faced old man, buried alive in books and musti-fusti papers, always reading, writing, and studying?"

"I thought you liked him?" I said.

"Oh! he's kind enough; but he seems to

look on me as a baby. Once I spent my birthday at aunt Dorothy's, and I expected that he would send me a doll. But, really, he is a marvel of patience with aunt; when I used to sleep in the summer-house, he would mope indoors, winding her knitting-silk, perhaps. What do you think of that?"

"I think very highly of Brandon," I replied; "and some day he will be rewarded for his reverence to age."

"What a queer girl you are, to be sure! What do you think of him personally? Would you call him handsome?"

"I have not seen him since I returned."

"Nor Nevil Verner, I suppose, the 'king of men,' who makes the second in our limited circle?"

"Could you not visit his home if you were so dull, Edith?"

"Why should I? My dear Kate, if there is a man on earth whom I detest, that man is Nevil Verner! Don't look shocked; we all have a pet aversion, and he is mine. I did visit his mother, but I can't stand a sick-room, and I quarreled with Nevil. I can't bear him, for he is the most selfish creature on earth."

"Your likes and dislikes are very vigorous, Edith. Are you as candid in Mr. Verner's presence?"

"Certainly; he likes flattery, so I never give him any. His chief feature, mentally, is selfishness."

I ventured to say that he was at least unselfish in visiting Aunt Dorothy and reading to her, at which my cousin laughed scornfully.

"You have had aunt's tale, I see. How often does he condescend to visit her, and would he do so if she were not the rich Miss Lovel? He will read to her for five minutes, then look at his watch, and remembers either that he has an appointment or that Mrs. Verner will be anxious; he leaves a book if he doesn't want it himself. And to hear aunt thank him does exasperate me, because I know he would not do it if it cost him anything. His mother thinks him wonderful. Of course, he is the best of sons; if he is not reading, shooting, driving, or visiting, he will go to his mother's room for a few moments, and if the poor lady asks him to remain, will do so with such a martyred face, and such sweet resignation, that she believes herself exacting and selfish."

"You do more than he does for aunt?"

"A cruel question, Kate," she laughed, "but I do not affect benevolence. I admit that I am lazy and selfish; I'm not good, but I am not hypocritical. You'll find Nevil out for yourself though, as his visits will become frequent when he knows there's a new face here. Be warned in time; he's one who will value anything very highly until he gets it."

I looked at her and she answered the look.

"Your suspicions are right. When first I came here, I thought I might do worse than take Nevil Towers and rent-roll, and we two, both 'tall and fair and slender,' commenced a mild flirtation, which, was nipped in the bud by myself. I took an intense dislike to him and quarreled with him, so ever since a dreary sea has rolled between; if I had engaged myself to him then, he would at once have tired of me."

"You have drawn flattering portraits of Mr. Verner and Brandon, so don't spare me."

"I have only said what I think, and I have not decried Brandon, though papa thinks he has too much influence over aunt. By-the-way, how did she like resigning the chair of state to you, for you are mistress?"

The property is certainly mine, but aunt Dorothy is its mistress now, as she always has been."

"Queer girl! If I had a house like that, everyone should acknowledge me as mistress."

"If you were in my place, you would do as I do. Nothing will tempt me to usurp her place."

"She'll think house, lands and money her own."

"I hope so," was my answer, and with a dry cough, Edith turned the conversation.

"Did you wonder who my railway hero was? We got into conversation *en route*, and he was deeply interested in the history of the Lovels. I excelled even aunt Dorothy in some of my legends."

I began to remonstrate, but she laughed.

"You would have stared through the window, deaf and dumb, I suppose; but I did not, and my companion was very agreeable. He ——home at last, Kate."

We drove on rapidly to the entrance, Edith alighting first, and making a frantic rush at aunt Dorothy, who stood awaiting us.

"Don't look at me, aunt!" she cried, with a passing embrace; "because I am not fit to be seen. I hope you didn't give Kate the blue room?"

"No, it is ready for you as usual."

Whereupon Edith left me alone with aunt.

"Edith is in good spirits," she said, looking pleased; "I do hope you will like each other!"

A dainty luncheon was ready, but we had to wait some time ere Edith reappeared. She came at length, with a costume exquisite in make and material, setting off her graceful figure and fresh beauty; in her glance even there was an undefinable charm, and I looked at her with admiration.

"Like my dress?" she said, calmly. "Don't think I waste these lovely costumes. I scatter bread on the waters, and some day it will return to me in the shape of a rich husband."

"My dear, you know I dislike that style of conversation," said aunt, gravely, and Edith was silent.

She had a bright, shrewd face, and I thought could be very pleasing when she deemed it worth her while; and from the fact of her being almost perpetually in society was never embarrassed or at a disadvantage.

From her school-days until now she had lived in gaiety and excitement; and it was not hard to see that she had been taught to regard marrying well as the sole aim of existence; when I remembered that her home was not home, that she had no mother's love to help her. I might have pitied her, but her bright vivacity forbade it; when she yawned over aunt's stories, I might have been annoyed with her, but her serene good temper forbade it; whether she was shallow or the contrary I could not tell, but undeniably she was fair, graceful and clever.—To be continued.

If "the proof of the pudding is in the eating," where shall we look for the proof of a printers pie?—Philadelphia Bulletin.

No good health with thin impure blood. Hop Bitters makes rich blood, good health and strength.—*Adv.*

Domestic Economy

CONDUCTED BY EMILY MAPLE.

A SOUTHERN HOUSEHOLD.

MARY WAGER-FISHER.

I LATELY spent a fortnight in the house of some friends in Maryland, and was particularly impressed—as I am always when with them—with the peculiar happiness of the household—the merry light-heartedness of each and all, their genial, kindly ways, and the every-day "religion" of their lives. The house itself, a spacious building with wide piazzas extending around both the first and second stories, bespeaks true Southern hospitality, and I wondered, as I always do when in such a house, that so few country houses have an up-stairs piazza, which is both a great delight and a great convenience in many ways. The great kitchen, with shelves, closets and store-room, was separate from the main building, being connected with it by a covered hall or passage-way, and none of the flavors or fumes from it were perceptible in any part of the building. The house-work, of which there must be considerable in a family of nine or ten with much company, seemed to do itself, so far as any friction or trouble from it was visible.

This was, in large part, due to my hostess, who for faculty might well have laid claim to be a Yankee of the Yankees. I knew that the delicious bread, and that most of the prepared delicacies of the table were the work of her hands, but when she spent an hour in the kitchen was always a mystery. Her perfect tact, her great good humor, her sense of the ludicrous, acted like oil on the wheels of the kitchen machinery, and when work dragged, things went wrong, and the cook worried, her merry laugh and some witty speech set everything running lightly again. How much a spirit of fun, and a bit of cheery, hearty laughter sometimes will mend broken places and heal a chafed disposition.

What seemed to be one great source of the cheerfulness and joy of the household, was its faith in the goodness of our over-ruling Providence. A dear little daughter who died two years ago, was often talked of, her childhood sayings quoted, but there was no spirit of repining or sorrow that Rosebud had left them. "Before Rosebud went to heaven" was spoken of as a date, in the same way as, "before last Christmas." In the afternoon, every member of the family at home retired to her chamber for a two hour's rest, and the house was quiet. At five or six o'clock all convened on one of the great piazzas where each recited a Scriptural verse, and then all repeated the Lord's Prayer in concert. That was all of the little evening service. At table, one of the children usually said a little form of grace in which the others joined. In this way a spirit of thankfulness and of trust was as much a part of their daily living as their daily bread. What came was for the best, or would work out something for the best. The mother, a woman of remarkable charm and attractiveness, as well as a woman of great wit, made use of her Bible in every emergency of her life—if troubled, or in doubt, she would fly to its pages and whatsoever her eye sighted upon, she usually found to be applicable to her case, and she accepted it as a guide for her actions. She has the grace and the faculty to extract the sweetness and beauty out of any and every surrounding in which she might be placed. With her, life is more than meat and the body more than raiment, although her own raiment is "purple and fine linen," and I wished more and more as the days went by, that all tired, worried and perplexed housewives in the country could see her and be with her long enough to learn "Wisdom," or at least to trust something to Providence, enough to secure a little peace and serenity for themselves.

ON RENOVATING.

ANNIE L. JACK.

I STOOD looking, one morning, at a table cover that had seen service in the sitting-room for many years. I have an affection for old though inanimate household goods, and this cover was one of my favorites. But it was unmistakably soiled, and I saw marks of sperm grease from stray candles and other discolorations. The colors were red and green, and I decided that what was to be done must be done quickly. So I made a suds of the best of soap and *warm* water (not hot); gave it one good washing, and a rinse in cool water into which was dissolved a small piece of alum. It was not ironed, but well shaken, and great pains were taken to pull it into shape, two of us taking it from the cord when partly dry and gently holding the selvedges into shape. The result was satisfactory—the cover retains its color and is the better for its washing.

A day or two later I had cause to attempt another renovation. The girls of the household going to a new church but lately dedicated for worship, found that their dresses of white mull stuck to the varnished seats one sultry July day. Water would not move the yellow stuff, and I caused the soiled part of the dress to be dipped in turpentine, then well soaped and soaked in warm water. The result was that every mark disappeared. A black silk was cleaned with benzine; but a pale-colored silk, though cautiously sponged, lost some of its color and luster. Baby took it into her head to explore the hub of a carriage wheel, and smeared her white dress; this stain was also removed by the turpentine, and fruit stains by chlorine water, while stains of mildew were removed by soaking in buttermilk before washing.

OUR WAY OF PACKING SMALL QUANTITIES OF BUTTER.

MAY MAPLE.

"ISN'T it a shame to sell butter for ten cents a pound?" said a neighbor, upon whom I had called.

"Yes! it does seem a pity to put in so much labor for so small a price; but why do you do so?"

"Why; what else can I do? we only keep three cows; but then we cannot use all the butter we make."

"Can't you pack it down in jars and keep it till Fall or Winter? You know good butter always brings good prices then."

"Will it keep?" said she earnestly.

"I never have any trouble to keep it till people know I have it to sell. Then I often wish I had a great many pounds more; for it is like the old lady's new bread, it goes like the dew, and it is just as sweet in Spring as when first made."

"Do tell me how you manage, and I'll try it."

"In the first place I am careful not to pack any but sweet, firm butter; no soft, oily, frothy stuff, such as one sometimes makes when the mercury ranges up to 93 deg. or 96 deg. in the shade; that will not keep, and a few pounds will soon spoil really fine butter that may be put with it. When it is taken from the churn, it is thoroughly rinsed in pure, cold water direct from the well, then salted, and slightly worked. It then stands an hour or two, in a cool place for the salt to dissolve when it receives its final working, or pressing, to extract the last drop of butter-milk. Still I do not work the butter till it is perfectly dry as that often spoils the grain. I like to have it sweat when the brine will stand out over it in tiny drops as clear as crystal. A handful of nice, fine salt, such as I use for salting the butter, is strewn over the bottom of the jar, and the butter packed in as solid as possible. A cloth wet in cold water, is spread over the butter, and a layer of salt on the wet cloth. When the jar is filled rounding full, I take a fresh cloth wet as before, and fit it nicely over the top of the butter and cover it thick with salt; over this I turn a plate and press it down close, so it will be as nearly air-tight as possible; now a dry cloth and paper are tied over all to keep out dust, and it is put into the cool, dark cellar and kept till the Winter or Spring following, when it is greedily snatched at by customers, who are willing to pay the highest market price for it. This has been our way for years."

Canning Tomatoes.

I have had the same experience with my canned tomatoes that Mrs. Fisher wrote of, until the past two years. A niece staying with me at that time told me that the tomatoes had soured before they were canned. Pick the fruit before it is fully ripe—there should be a small spot of green around the stem—and can at once. They should not stand an hour after picking. Cook thoroughly. It makes but little difference what you put them in so long as they are air-tight. I have put them into gallon jugs, using corks or corn-cobs that would fit tight. Cover the tops with a cement of resin and beeswax—three parts resin and one part wax or tallow. I have also kept them as well in gallon jars, covering the tops with cloth and cement. SUBSCRIBER.

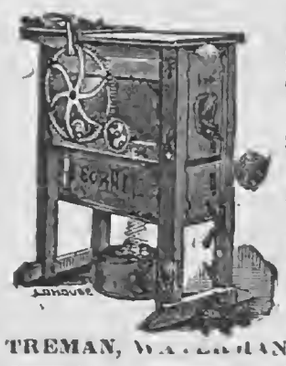
Indigestion, weak stomach, irregularities of the bowels, cannot exist when Hop Bitters are used.—*Adv.*

Miscellaneous.

PROFESSOR HORSFORD'S PHOSPHATIC BAKING POWDER

Made from Professor Horsford's Acid Phosphate.
Recommended by leading physicians.
Makes lighter biscuit, cakes, etc., and is healthier than ordinary Baking Powder.
In cans. Sold at a reasonable price.
The Horsford Almanac and Cook Book sent free.
Rumford Chemical Works, Providence, R. I.

Improved Cornell Corn Sheller.



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THAT USES
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THE BEST. SEND FOR CATALOGUE, containing List of Premiums, to
Bagg's Hotel Farm,
UTICA, N. Y.

News of the Week.

HOME NEWS.

MONDAY, Sept. 12, 1881.

On Tuesday the 2d., the President was successfully removed to Long Branch. The accommodations for his removal were most complete and he stood the journey remarkably well. On Saturday the 10th., an affection of the right lung was discovered, which it is thought may prove to be an abscess. The parotid gland is doing well, but there is much fear, as we go to press, as to the effects of the lung difficulty. Mr. Blaine's cablegram to Minister Lowell at 10.30 last night was far from encouraging.

The Governors of most of the States of the Union issued proclamations that Thursday, the 8th inst., be observed as a day of prayer for the President's recovery. In some places Tuesday and Friday were set apart as days for special prayer. These days were very generally observed throughout the country.

The universal, omnipresent Smiths have had a reunion at Peapack, N. J., about 3,000 descendants of the original John Schmidt being on the ground.

An aerial voyage in a balloon will be made this week by Prof. Samuel A. King, Winslow Upton, of the U. S. Signal Service, and several representatives of the press. The voyage will be from Minneapolis, Minnesota, to the Atlantic seaboard. Useful scientific results are expected from experiments to be made.

Michigan has suffered terribly from forest fires the past week. It is reported that 20 townships have been burned out, over 2,000 families made destitute of a home and 300 lives lost. The greatest suffering is in the vicinity of East Saginaw. An appeal to the people of the United States has been issued and material aid has been rendered the unfortunate people.

An express train on the Chicago and Alton R. R. was stopped and robbed by 16 masked men, on the night of the 7th. They forced the express messenger to open the safe, and with a guard stationed on either side of the train five or six of the robbers went through the train demanding the passengers money and other valuables. Seven of the robbers have been arrested up to this writing. The entire country is aroused and under arms, searching for the desperadoes. The exact amount of money and valuables taken cannot yet be stated.

Drs. Reyburn, Woodward and Barnes and Mrs. Edson who have been in attendance on the President have retired, leaving Drs. Bliss, Agnew and Hamilton in charge. The cause for this action was the President's belief that three medical attendants would be sufficient.

Gen. Wm. T Sherman was in Worcester, Mass. on the 7th. inst. by invitation of the Agricultural Society. He delivered an address at the annual Fair.

New London Conn. has been celebrating the one-hundredth anniversary of the battle of Groton Hights. Edward Everett Hale delivered an address fitting to the occasion.

The hottest day known in this city this year was Wednesday the 7th inst. when the thermometer marked 108° in the shade. There were several cases of sun-stroke. In Baltimore and Philadelphia the temperature was 100° Pittsburg 99°: St. Louis 97°: Boston and Albany 96°.

The Social Science Association, lately in session at Saratoga, has elected Prof. Francis Wayland, of New Haven, President for the ensuing year.

The White House is now closed for repairs and presents a deserted appearance.

Another land mark in the Metropolis will soon disappear, to make way for the "march of progress." Cyrus W. Field has bought the property at Broadway and Battery Place, long known as the Washington Hotel. It has historical interest as the oldest building now standing in this city. Mr. Field will erect a building ten stories high, of Milwaukee brick, with stone trimmings. It is to be fire-proof throughout. The old house, which will have to give way to this modern improvement, was built in 1742, and is locally famous as having been Washington's head-quarters while the Father of his Country resided here.

A curious phenomenon was noticed, on the 5th, in various middle and New England States. The sun was obscured and the atmosphere glowed with a yellow glare. Artificial light was in demand in some portions of this State in the afternoon. In Boston a base ball game was stopped at 4 o'clock in the afternoon, on account of darkness, and in Providence, R. I., the factories quit work at 2 o'clock, because of the unnatural gloom for which the gas companies had made no preparation. In Utica, N. Y. the phenomenon began Monday night, when the moon, altho' nearly full and obscured by no clouds, cast no perceptible shadow, having the appearance nearly of a copper disk. The street lamps not being lit, it was difficult to see five feet ahead, when there were no store lights shining on the sidewalk. The unusual darkness continued almost up to sunrise, and there was a lack of light for some hours afterwards.

William Martin, a Rondout, N. Y. mechanic, has just fallen heir to an English estate valued at $7,850,000, left him by James McDermott whom he befriended two years ago when a poor immigrant. McDermott acquired the property thro' an uncle's death a short time ago.

Elias Champlain, Supervisor of the Town of Liberty, Sullivan County, N. Y., while engaged in burning brush, was burned to death by his clothing taking fire. The body when found was almost unrecognizable. He was 65 years of age.

Second Assistant Postmaster General Elmer reports a net reduction in star-route and steamboat mail service during August amounting to $98,337, and that the total amount of reductions and discontinuances since March is $1,479,779.

The steamer Wyoming, from Liverpool, on the 2d. instant, for New York, brought 550 Mormons for Great Salt Lake, from Great Britain, Switzerland and Germany, the latter two countries contributing over 200. Including the foregoing more than 2000 Mormons have left Liverpool this Summer. Another contingent will come before the season closes.

The entire length of Chestnut Street, Philaphia, is to be illuminated by electricity. It is the largest contract of the kind that has yet been entered into in this country.

Mr. Rudolph, brother of Mrs. Garfield, says that his sister's faith has always been strong regarding the President's recovery, and she expresses implicit confidence in Dr. Bliss and his treatment of the case.

W. H. Vanderbilt has presented the Railroad Young Men's association of Troy with $500 towards defraying the cost of a new building to be erected for the use of the association.

The enormous increase in the freight business on the western division of the Central Railroad in the past four years is shown by the following figures: The number of freight cars moved over the division during August last was 130,655, comprising 2,689 trains both ways. The number of cars in 1877 over the same division was 72,003, comprising 1,817 trains.

Protection from Disease.

The following, which we take from a letter received from one of our old patients at the South, dated June 5th, 1880, shows the effect of Compound Oxygen in keeping up vitality under circumstances of great fatigue, loss of rest, exposure to fever, and all the depressing influences attending on the sickness and death of near and dear relatives. "For ten weeks my sister and I nursed our father (the late Judge) constantly, day and night, she losing one-half and I the other of each night. I took the Oxygen regularly twice a day, and though feeble and much exhausted did not have any symptoms of fever; while my sister who did not use the Oxygen at all, took the fever and died. She too was very delicate, but I do not believe she would have had the fever if she had been using the Oxygen. We used every precautionary measure in the way of cleanliness, pure air, wholesome food, etc." Our Treatise on Compound Oxygen, containing large reports of cases and full information sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

CONTRIBUTIONS FOR THE RELIEF OF THE MICHIGAN SUFFERERS may be sent either to the Michigan Relief Commission, William Doud, Treas., Bank of North America, New York City; or to Waldo M. Johnson, Joseph Stanard, Henry Newland, Gen. G. S. Wormer, or James Buttenshaw, who act as Relief Committee in Detroit, Mich..... By Friday's and Saturday's telegrams to the N. Y. papers we learn the following: At Portland, Me. half a million cans of corn have been already put up.....The wool market at Boston is excited and the sales for the week ending Friday footed up 5,751,500 pounds—nearly twice as much as the largest previous week's business during the year. Domestic fleeces are firmer and a shade higher..... In Providence, R. I., Cotton is strong— middling upland 12½c.; middling gulfs, 12¾.... In Buffalo, N. Y., the fruit trade, owing to dry weather, is greatly reduced and prices are higher than last year. Prices of wheat are tending upward. Canal freight on wheat 4½c. per bushel to this city: on corn, 4c..... Prices of grain in Philadelphia are unsettled owing to impending advances in storage rates by the Elevator Company. About 1,500,000 bushels cram the elevators and there are 600,000 bushels more on the tracks. The R. R. Co's., demand the release of the cars or a demurrage of $2 to $3 a day, and the Elevator Company demands from the merchants 1½c. per month over present rates for storing the grain in barges. Wool is active and advancing, many lots having been withdrawn for higher prices—Week's sales 1,000,000 pounds.....From Detroit, Mich. comes news that rain is wanted everywhere, but it will be too late to materially benefit corn, potatoes and fruit. Grain markets fluctuating. The production of salt during the last three months has been the heaviest in the history of the State.....In Chicago provisions are stronger on report of a light hog crop and a short corn crop. Grain unsettled but stronger than early in the week.....Peoria, Ill.: welcome rains. Grain receipts good..... Cleveland, Ohio. Large forest fires near-by; weather hot; drought. No. 2 Red Winter wheat $1.40.....Evansville, Ind. Drought continues. Tobacco prospects poor. Grain scarce; prices going up.....Milwaukee Wis. Much needed rains late in the week. Feed going up on account of scorched pastures. A little new wheat coming forward; millers busy. Prices unsettled.

St. Paul, Minn.—A steady downpour for the last three days. Brisk demand for lumber. Wheat trade heavy. Labor scarce.... ....Omaha, Neb.—Abundant rains during the week. Crop prospects brightening. Corn, 50 cents per bushel. Hogs, $6.50 per hundred .....Louisville, Ky.—Weather hot. Scattered rains last week; but some districts without an appreciable shower for 70 days. Provisions buoyant. Grain and flour stationary but firm. Tobacco receipts light; prices firm: total advance in manufactured tobacco 4@6c. Heavy transactions in wool have exhausted stock. Medium unwashed, 27½c.....St. Louis.—Provisions strong and advancing: stock nearly exhausted. From 300 to 500 bales of cotton arriving per day. Speculators prepared to warehouse every bale for an advance. Middling, 11⅜ with an upward tendency. Horses and mules active; supply small. Hot, *hot*, HOT.....Kansas City, Mo.—Demand for cattle brisk. Hogs sell readily for $6.10@ $6.50.....San Francisco, Cal.—Freights heavy. Holders reluctant to sell grain. Trade in agricultural implements brisk. Australian advices say the export to England of frozen meat and fresh fruit promises to become an important business.....Baltimore, Md.— The R. R. Co.'s advance in storage charges is 1⅜c. per bushel for first five days after the 12th, and 2⅜c. for every five days thereafter. Export of grain impossible at current prices. A tumble of 6@7c. per bushel early in the week, but orders from the West and New York have brought up prices again to top figures. Great activity in canned goods; prices advancing rapidly on a short supply of vegetables and fruits. Provisions higher and firmer.....Norfolk, Va.—Drought unbroken; heat excessive; corn probably half to two-thirds of a crop on low grounds of Eastern Virginia and N. C. Cotton arriving freely.....Richmond, Va.—Breadstuffs and meats exceedingly active. Tobacco high and active in all grades. Probably 19,000,000 to 20,000,000 pounds will be manufactured here instead of 16,000,000 pounds in 1880. No rain; great water famine.....Wilmington, N. C.—Rain much needed: hot. All grain crops as well as cotton suffering from drought. Corn scarce and wanted. Provisions bring full prices.....Charleston, S. C.—A sharp advance in price of cotton during the week; prospect for a late Fall and good picking season. All cotton in market promptly taken; four British steamers with capacity of 20,000 bales waiting for cargoes .....Savannah, Ga.—Cotton coming in rapidly; labor in great demand.....Atlanta, Ga.—Dry and hot: nothing encouraging to report of cotton crop.....New Orleans, La.—Drought of a month just broken up by a heavy shower with prospect of more. Too late to help corn and cotton; but if enough, will assist sugar. Labor strike still continues. Rice crop mostly harvested—altogether satisfactory. Good white corn $1 per bushel. Provisions active and high..... Little Rock, Ark.—Hot; no rain. Reports of crops, poor. All cotton is open; picking progressing; labor scarce.....Nashville, Tenn.—Wheat light receipts; millers take all Corn in demand. Light rains here and there —enough to lay the dust. Drought will bring down corn, cotton and tobacco to half crops.

SOME 30,000 cattle were carried over the Pennsylvania Railroad during the late heated term in the new cattle cars, and not one of them, it is said, died during transportation... .....A telegram from Chicago on Sept. 6, says that in view of the enormous flour shipments to the seaboard from Minneapolis, Minn., freight rates are being cut exceedingly low from Chicago to this city, flour being transported for 16c. per barrel.....A squirrel plague is reported to be destroying a great deal of cotton in the uplands of Arkansas. The pests are starving, and pick the unripe cotton to get the seeds.....One of the latest inventions is the manufacture of lumber from straw. A recent experiment showed it capable of the highest polish, waterproof, and it held a nail as well as a piece of oak..... Vermont has suffered a loss, an irreparable loss, in the sale, to an Illinois breeder, of the largest herd of pure-bred Bates Short-horn cattle on this continent and, perhaps, on the globe. Col. Le Grand B. Cannon early last month completed the sale of his entire herd to Mr. Rigdon Huston, of Blandinwell, Ill., already widely known as one of the most successful breeders of Short-horns in that State. This fresh acquisition will give him a commanding position among the breeders of Short-horns on this side of the water and an enviable distinction wherever the famous Bates blood is known—and where is it not? The following is a list of the animals sold:—Sixth Duchess of Hillhurst and c. calf, Seventh Duchess of Hillhurst and bull calf, Eighth Duchess of Hillhurst, Duchess of Overlake, Twenty-second Duke of Airdrie, Kirklevington Duchess XVIII., and bull calf; Kirklevington Rose, Kirklevington Rose, II.; Kirklevington Le Grand, III.; Marchioness of Barrington, II., and bull calf; Marjory Barrington, Ursuline, III., and bull calf; Una, Lady Hilpa, Oxford Loo, Azalea II., Azalea III., Rose (of Sharon) V., May Rose IV., May Rose of Shelburn, Cordelia XVIII. and b. c., Lord Winchester III., Lord Winchester IV., Earl of Burlington, (Wild Eyes,) Moss Rose IX. and c. c., Jacqueline, Jessemine II., Moss Rose IX. and b. c., Constance of Lyndale VI., Constance of Lyndale, IX., Constantia III., Constantia IV. Lady Bell Bates and b. c., Louan of Shelburn and c. c. With them were sold the cows: Grace III., Marian II. and b. c., Edith II., Sophronia II., Lady Shelburn, Louisa and b. c., making a total of 50 animals.....Our Norfolk, Va., advices are that the peanut crop is not as promising as last reported. Some localities in which it was thought there would be a two-thirds crop will not average one-half, and it is believed to be too late for rain to be of much benefit now..... The phylloxera is doing great injury to the vineyards of Sicily.....The dry spells that have become historic were in the summer of 1630, 24 days; 1635, 41 days; 1637, 75 days; 1662, 80 days; 1663, 45 days; 1668, 81 days; 1694. 92 days; 1704, 40 days; 1715, 46 days; 1718, 61 days; 1730, 92 days; 1731, 72 days; 1749, 123 days; 1772, 80 days; 1791, 82 days; 1812, 28 days; 1856, 26 days; 1871, 42 days; 1876, 26 days.....Greece has a fine currant crop—a very momentous matter to her.....

Says one of our humorous Dailies: The ordinary country house in Arkansas is a log cabin; in Kansas, a dugout in the prairie; and in Nebraska, a sod house, built of square pieces of sod." How?.....While small proprietors are to be the salvation of Ireland, in Bavaria 3,739 farms were sold last year because the small proprietors could not keep their heads above water.....Scotch farmers are said to be very discontented, and no wonder, for the weather is bleak and cold, the wheat a thin crop, oats are under avegage, turnips a failure, and barley scarcely up to average.....So hard is it to get good tenants now in England that Lord Lytton lately let for ten years his home farm, 220 acres, four-fifths arable, for $1,400. The tenant, a Scotchman, receives house, outbuildings, and fences in good order, and when they need repair the landlord is to furnish material. During the last three years of the lease the landlord is to pay for half the artificial feeding stuffs, and at the end of the lease the tenant is to receive compensation for improvements .....The sheep clip of Michigan is officially put at 10,975,163, from over 2,000,000 sheep, averaging 5½ lbs. apiece.....If all the creameries talked of are put in operation in Iowa, this year, that State will soon rank with Illinois in the dairy business. They are building creameries all over the State and are making an immense amount of butter.....A shipper of cheese in this city has turned round and is selling cheese to the trade for future delivery; last week he sold 1,000 boxes of August cheese in this way.....Russian butter is being imported into England in considerable quantities, handsomely put up in white oak tubs and very much like Canadian butter.....

From Australia we learn, under date of the middle of July, that in South Australia rains were abundant and the weather was favorable to farmers.....In Victoria the weather was severe and cold, causing a slow growth of grass and other crops in the southern district. In the western district a large number of stock had perished from a long drought, and though rains had just fallen, they came too late to do much good: season the most unfavorable for years. Cheering reports of rain and weather from the northern district.....At Cape Colony heavy rains and snow had fallen August 2, and the prospect for the next harvest was considered very favorable.....Morrocco is suffering from insupportable heat.... ....The amount of money which the Peruvian Government has received from the sale of guano is estimated at twenty-four hundred millions of dollars.....The imports into Germany during the six months ended June 30, 1881, have been, from the official returns:—

	Bushels.
Wheat	6,284,000
Rye	9,857,600
Barley	5,186,4 0
Oats	5,580,000
Maize	7,462,000

The exports of the foregoing articles during the same period have been, in the aggregate, 2,800,000 bushels. Still larger exports are expected during the last half of the year..... In Egypt the condition of the Nile gives promise of good crops.

A Protective Duty.

The person subject to derangement of the kidneys or liver has a protective duty to perform in purchasing a package of Kidney-Wort. It invigorates these organs and by its cathartic and diuretic effect, cleanses the whole system of all bad humors.—Herald.

Write to Mrs. Lydia E. Pinkham, No. 233 Western Avenue, Lynn, Mass., for names of ladies that have been restored to perfect health by the use of her Vegetable Compound. It is a positive cure for the most stubborn cases of female weakness.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

No hospital needed for patieuts that use Hop Bitters, as they cure so speedily at home.

BURNETT'S COCOAINE
Has Received Universal Endorsement.

No other preparation possesses such remarkable properties for embellishing and strengthening the hair and rendering it dark and glossy. It cures baldness and eradicates dandruff.

BURNETT'S FLAVORING EXTRACTS are the best.

The Markets.

CROPS AND MARKETS.

OH the pity of it, that high prices of farm products so seldom go along with fine harvests. With present prices and an abundant harvest there would be little need for non-agricultural wiseacres to tell us "how to make farming pay." Prices of wheat have been very fluctuating during the week. News from the European harvests tend to strengthen them. In England the weather has been good enough to permit the ingathering of crops; but the only point that now seems undecided is whether the present harvest is as bad as that of '79 or that of '80. In France the harvest has turned out much poorer than expected, and about as much foreign wheat will be required as last year. Corn here is going up on wide reports of great injury to the crop from drought and other causes. It will doubtless soon reach the figure of 75c per bushel predicted by our Ill., correspondent last week. Here it is 71½c. now and upwards of 74½c. at St. Louis for May delivery. Cotton is steadily but gradually advancing. The closing quotations of uplands in the New York market compared with those of last year at same date are:

	Last Friday.	Last year.
Ordinary	9¼c.	8 16-16c
Good ordinary	10⅜	10 5-16
Low middling	12 3-16	11 3-16
Middling	12¾	11 11-16
Good middling	13⅛	12 1-16
Fair	14¾	13 8-16

Orleans cottons, as usual, are quoted ¼c. higher. Stained cottons leave off, good ordinary, at 10⅜c.; low middling, 12c.; middling, 12½c.

CLOSING PRICES OF FUTURES IN NEW YORK.

	This week.	Last week.	Last week.
September	12.28c.	11.63c.	11.19c.
October	12.06	11.29	10.78
November	12.05	11.24	10.65
December	12.14	11.28	10.66
January	12.30	11.43	10.77
February	12.41	11.56	10.49
March	12.51	11.70	11.03
April	12.64	11.81	11.17
May	12.73	12.90	11.28

The Southern markets have been active, at higher prices, during the week. They are generally firm at the close.

The following are the sales for the week and closing quotations at five leadiug ports, as compared with last year's quotations:

	Week's sales.	To-day	Last year.
Galveston	10,418	11⅜c.	10⅝c.
New Orleans	11,600	11⅝	11⅛
Mobile	3,550	11¼	10¾
Savaunah	12,700	11⅜	10⅞
Charleston	7,000	11⅛	10⅝

According to the meteorological report telegraphed to this city last Friday evening, the weather throughout the Cotton Belt was excessively dry during the preceding week, the total rainfall at 25 stations having averaged only 0.09 of an inch against 1.58 inch for the corresponding week last year, and 0.77 inch for the preceding week. Since then a severe wind and rain storm has swept along the coast as far north as Maryland, and the rain has extended far inland, as we learn by this morning's telegrams. Indeed, from reports coming from various points of the country far apart, it seems that the rainfall has extended over nearly the entire country east of the Rocky Mountains, varying in severity from a light shower to a soaking downpour. Doubtless in some places it will have hurt some crops; but although it is late, it must have been a general blessing.

Tobacco is advancing steadily in view of very unfavorable reports from the tobacco-growing districts of Virginia, North Carolina, and Kentucky, where it is said the crop has been very severely injured by the drought. The effects of this are already felt in the tobacco stores of this city, the New York agents of the various manufacturers having been notified by their principals that the increased price of seed leaf tobacco compels them to charge more for their goods. Accordingly the prices of the various brands of chewing and smoking tobacco and cigarettes have nearly all been raised, and cigar makers say they, too, must increase their prices at an early day. Tobacco growers should see to it that they, also, partake in this advance.

The wool market at Boston, New York, Philadelphia and the other chief centers of the trade has been excited during the week, and unusually large sales have been made at an advance of prices on the close of August. It is difficult, however, to specify the exact advance in the general market, owing to the previous irregularity of prices. It may be said, however, that sales are generally on a basis of 42@43c. per pound for desirable Ohio fleeces and 45@47c. for medium Michigan and Ohio, while the best lots of Michigan combing and delaine fleeces now command 48@50c., against 47@49c. about 10 days ago. Manufacturers are buying freely to satisfy present needs, without stocking up for future requirements. There is also a pretty strong speculative feeling that prices must go still higher, and accordingly many Western consignors have ordered their goods to be temporarily withdrawn from sale, in expectation of better figures hereafter.

SPECIAL FROM THE CHIEF CENTERS.

Until Saturday, Sept. 10.

CINCINNATI.—Wheat steady; No. 2 Red Winter, $1.42. CORN firm at 68c. for No. 2 mixed. OATS strong at 43¼c. for No. 2 mixed. RYE firm; No. 2 at $1.14. BARLEY dull and nominal; No. 2 Fall, $1.10. PORK firm at $20.50@21. LARD firmer at $11.90. BULK-MEATS quiet; Shoulders, 9⅜c.; Clear Rib, 12c.; Clear Sides, 12½c. HOGS quiet; common and light, $4.90@6.70; packing and butcher's $6.25@7.

CHICAGO, WHEAT active and firm. No. 2, Red Winter, $1.31½; No. 2 Chicago Springs, $1.24a1.25⅝, cash; $1.28. October; $1.31¾, November; $1.33⅜, December; $1.24, all the year; No. 3 do., $1.16; Rejected, 80a90c. CORN active, firm, at 63c.. cash; 64¾a64⅝c., October; 66a66½c., November; 63c., all the year; Rejected, 59¾c. OATS strong at 38¾a39c., cash. FLAX-SEED higher at $1.35a1.36, delivered. PORK steady, with a fair demand, at $19. 25a19,50, cash; LARD fairly active and a shade higher at $12,12½, cash; BUTTER, Creamery, 28a30c., for choice; ordinary, 22a25c.; fair to choice dairy, 17a26c.; fresh made ladle, packed, 13a17c; packing stock, 12a13c; grease, 6a8c. CHEESE, fair to prime full creams, 8a11½c. do., part skimmed cheddars, 7a10c; do, flats, 7a10c; sour and off flavor, 3-a5c. POTATOES, Early Rose, 70c. per bush. on train, and $2a3,50 per barrel from store. APPLES range from 75c. to $1.50 per barrel for common to choice. HAY—No. 1 timothy at $13.75a14.75; No. 2 do. $12.50a13; mixed do. $11.00a12.00; upland prairie, $11.00a14.00; No. 1 prairie, $8.00a8.50; No. 2 do., $6.00a7.00. HOGS—market steady; mixed packing, $6a6.-50; light, $6.45a6.85; choice heavy, $6.70a7.15; culls and grassers, $4.a6.20. CATTLE—exports, $6.10a6.40; common to fair shipping, $4.25a5.-20; good to choice do., $5.40a6; native butchers' active and firm at $2.40a4.25; stockers and feeders, $2.60a4; dairy calves, $9a14 per head; rangers steady, with a fair demand; Texans, $2.65a4.25, mainly at $3.20a37.0; half-breeds and Americans, $3.00a4.40. SHEEP—choice in good demand; common to choice, $3.35a4.50.

ST. LOUIS, MO.—Wheat opened lower, advanced, and closed strong; No. 2 Red Fall, $1.-41¼, cash; $1 40⅝, October; $1 48¾, November; $1 50½, December; No. 3 do., $1 32⅛; No. 4 do., $1 24. CORN opened lower, but advanced to 62½c., cash and September; 64½c., October; 67⅝c., November; 69c., December; 64½c., May. OATS slow at 45c., cash; 44c., October; 44⅞c., November; 46c., December; 50c., May. POTATOES—Near-by growth at 75c. to 95c. and Northern 90c. to $1. BUTTER—Creamery selections at 28@30c., fair 7@8c., off stock at best Dairy price: Dairy—selections 28c., choice 25@27c., medium to prime 20c. to 21c.; common to fair 14 to 16c.; store-packed or country in pails at 12 1-2c. to 18c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Sept. 10, 1881.

BEANS AND PEAS.—Old beans have nearly run out of, quotable quantities, and the market is strong and rather excited for new; in fact, there is hardly a supply sufficient for current wants of exporters and the home trade.

New marrows, $2.90; do. mediums, $2.80; pea, $2.90; old white kidney, $2.40@2.60; do. prime red kidneys, $2; other, 1.70@1.85. Green peas, $1.45@1.50 for Wisconsin. New Southern B. E. next week.

Receipts of beans for the week 3,124 bush.
Exports do. 584 bbls.

BEESWAX.—Market dull at 22@23c. for good Western to prime Southern yellow.

BUTTER.—Supplies have been very moderate, and with apparent increased wants prices have worked up sharply on the buyer. All fine fresh State goods will make our new figures readily; the best goods showing an advance of fully 3c. ₱ ₯. The market has not reached the point expected by holders; there are many lots limited to 35c. and at one time it appeared as if there would be still stronger instructions given. One or two good counties intimate that there has been no very noted suffering from drought, but a "short-pasture" cry comes from points enough to render a high butter season this year unquestioned.

Creamery, finest tubs, 32@33c.; good to prime, 30@32c.; poor quality, 24@26c.; sweet cream, 27@30c.; creamery firkins, 27@28c.; State dairy do. 24@27c.; do. half tubs, choice, 30c.; do. fair to prime, 26@29c.; Welsh tubs, 25@29c.; poor State, 24@25c.; Western imitation creamery, 20@25c.; dairy, choice, 26c.; other, 17@24c.; factory or ladle-packed June, 19c.; other, 15@18c.; common Western, 12@15c.

Receipts for the week, 27,110 pkgs.
Exports do. 5,288 do.
Cold storage on steamer to G. B., 90s.

CHEESE.—The market had a good run most of the week and prices have worked up to very satisfactory figures. Towards the close, however, unusual hot weather and enlarged receipts caused some depression, and the feeling is tame at the close. There seems to be no pressure to sell fine State factory; in fact some fine late Augusts are held at a shade above quoted extreme.

State factory, fine colored, 12¼@12½c.; fine white, 12¾@12¾c.; good to prime, 11¾@12c.; fair to good, 10½@11½c.; poor to fair, 9½@10½c.; Wisconsin factory, good to prime, 11¾@12c.; fair to good, 10¾@11¼c.; Ohio factory, cheddar, fine, 11@11¾c.; fair to prime, 10@11c.; factory, flat, fine, mild, 12c.; good to prime, 10¾@11c.; fair to good, 10@10¾c.; poor, 8½@9¾c.; Creamery, partly skimmed, 4@5c.; fully skimmed, 3@4c.; full-skimmed factory, 3@4c.

Receipts for the week, 77,904 bxs.
Exports do. 47,397 do.
Liverpool cable, 62s.
Steam to Liverpool, 22s. 6d.@30s.

COTTON.—The history of the cotton trade has never before pointed to such an excited week as the past. Speculative orders have come from all points. News from the South is adverse for the crop. Sales have been very large, closing with an advance of ¾@⅞c.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 5-16	9 9-16	9 9-16
Strict ordinary	9 15-16	10 3-16	10 3-16
Good ordinary	10⅝	11¼	11¼
Strict good ordinary	11 7-16	11 11-16	11 11-16
Low middling	12 3-16	12 7-16	13 7-16
Strict low middling	12 9-16	12 13-16	12 13-16
Middling	12¾	13	13
Good Middling	13⅛	13⅜	13⅜
Strict good middling	13⅜	13⅝	13⅝
Middling fair	14⅛	14⅜	14⅜
Fair	14⅞	15⅛	15⅛

STAINED.

Good ordinary	8 15-16	Low Middling	10 13-16
Strict good ordinary	10 1-16	Middling	12⅛

The averages of Wednesday's forward deliveries as officially reported on the bulletin were as follows: September, 12.10c.; October, 11.97c.; November, 11.94c.; December, 12.03c.; January, 12.23c.; February, 12.35c.; March, 12.49c.; April, 12.57c.; May, 12.62c.; June, 12.73c.

Receipts for week, 7,967 bales.
Exports do 7,923 do

DRIED FRUITS.—Evaporated apples are firm. For sun-dried the ranges are a little variable while stocks are forming, but we notice no weakness in prime or good stock. Peaches and small fruits hold full former figures.

Apples, evaporated 1880 rings, choice, 12c.; prime, 11@11½c.; fair to good, 10¼@11c.; N. C. 1881, sliced, fancy, 9@10c.; choice, 8@9c.; Southern, in bbls. 6¾@7c.; do. 1880, in bags, 6¾@7c.; fine cut, choice, 6½c.; quarters, choice, 6¾@6¾c.; State, small lots, 6c.; Ohio and Mich. choice, 6@6½c.; Western, fair to good, 5¼@5¾c. Peaches, evaporated, peeled, 35c.; unpeeled, 20c.; N.C. peeled, 1881, choice, 25c.; do. 1880, 21@23c.; peeled, good, 18@20c.; Ga. peeled, 1881, choice, 22@23c.; peeled, 1880, 17@20c.; unpeeled halves, Tenn. 7½@8c.; quarters, do. 7¼@7¾c. Plums, State, 17@18c. Blackberries, 13½@14c. Cherries, Southern, dry, 21@22c. Raspberries, 29c. Huckleberries, 13c.

EGGS.—Receipts for the week, 6,786 bbls.; do. last week, 8,478 do. The weather has been adverse to the sale of eggs. A number of Western pkgs arrived in poor condition and buyers at once became suspicious. There is a better demand at the close, as the supply is light and there does not seem to be any wholesale damage showing in general quality.

Near points, ₱ doz. 22½@22c.; State and Penn. 21@21½c.; Canadian, 20½c.; Western, fresh, 20½c.; other useful grades, 18½@19½c.

FLOUR.—Supplies are coming forward with more freedom and buyers' wants are not so urgent. Prices are strong, but for a large business holders might shade a trifle. Compared with last week prices are off, except for the high grades that hold local attention.

No. 2, $4.35@5; State and Western, superfine, $5.30@5.60; city mills, extra, $7@7.35; Spring wheat, extra, $6@6.30; Spring XX and XXX, $6.40@7.50; patents, $7.25@9; Ohio round hoop shipping, $6.15@6.60; trade brands $6.75@7.25; St. Louis extra, $6.40@6.65; do. double extra, $6.75@7.15; do. family, $7@7.50; Southern extra shipping, $6.50@6.85; do. XX and family, $7@7.75. Rye flour, superfine, $5.90@6.40. Corn-meal, Brandywine, $3.80@3.90; do. Western, $3.25@3.75.

Receipts of flour for the week, 85,912 bbls.; corn-meal 2,175 do.
Exports of flour for the week, 60,737 bbls.; corn-meal 3,750 do.

FRESH FRUITS.—Exports of apples for week, 937 bbls. Good apples are firm; but common river and over-ripe lots are more or less at buyers' option. Pears continue abundant and cheap. Wagon venders are peddling fine pears about the streets of New York. The top for Bartletts is $3. Sickle pears dull. Peaches are abundant for the season and short crop, and for the past two days have been quoted comparatively cheap. Grades begin to run common. Plums scarce and firm. Grapes are in large supply and lower. Melons in good demand. Peanuts firmly held at higher prices.

Apples, Golden Sweet, Western New York, ₱ bbl., 70c.@$1; Gravensteins, $2@2.25; Codling, $1.50@1.75; 30 oz., $1.50@2; Malden Blush, $1.75@2.25; Fall Pippin, $1.50@2; poor to fair, 75c.@$1.25. Pears, Bartlett, Jersey, ₱ bbl., $1.50@2.50; up river, $2@3; Western New York, ₱ keg, $1@1.50; Sour Bell, ₱ bbl., $1@1.50; Flemish Beauty up river, $1@1.50; Seckel, choice, $3@3.50; fair to good, $2@3.50@4; Cooking, $1@1.50. Peaches, Jersey and up river extra, ₱ basket, $1.25; prime, 90c.@$1; culls, 40@60c.; Md. and Del. ₱ crate, 50c.@$1.25. Plums, German Prune, State, ₱ 30 ₯ bskt, $2.50; Quackenbush, State, ₱ ½ bush bskt, $1.25@1.50; Reine Claude, ₱ bbl., $7@8; Golden Drop, $5@5; Blue Gage and Boston Gage, $1@4.50; Damson, $1@5; common $2.50@3. Grapes, Del., State, case of 18 3₯ bxs, $1@1.50; bskts, ₱ ₯, 8c.; Concord, State, in bskt, 4c.; Jersey case of 24 2₯ bxs. $1.75@2; up river, loose, ₱ ₯, 3@4c.; Hartford, Jersey, loose, 2½@3c.; up river, 2@3c.; Ives, Jersey, case of 24 2₯ bxs, $1.50@1.75. Huckleberries ₱ box, $1@1.25. Watermelons, Maryland selected, ₱ 100, $30@35; seconds, $10@16; Jersey, Black Spanish, $15@18; Culls, $6@10. Nutmeg Melons, Hackensack choice, ₱ bbl., $2.50@3.50; Key port, choice, $1.50@2; culls, 50c.@$1. Peanuts, Va., hand-picked, ₱ ₯, 7½c.; fancy, 7c.; extra prime, 6¾c.; good to prime, 6¾c.@6½c.; shelled, screened, 5c.@5½c.; shelled, unscreened, 5@5½c; pecan nuts, ₱ ₯ 8@10c.

GRAIN.—The entire market is working under a strong speculative agitation. Operators make the most of the drought influence and the falling off in exports for an important period. Compared with the corresponding eight weeks of last year to date, the decrease in this way is 22,750,000 bush.; of that quantity 17,000,000 is wheat. The export interest seems checked by the strong rule of quotations from week to week, but sellers seem to feel confident that they hold the knotted end of the line. Rye easier. A large exportation of oats is a note for the week.

Wheat, Spring, $1.23@1.38; Spring No. 2, $1,36@1.37; red Winter No. 2, $1.46; red Winter, $1.25@1.48; white Western and State, $1.32@1.42. Rye, $1@1.05. Oats, white No. 1, 51c.; No. 2, 49@49½c.; No. 3, 48c.; mixed, No. 1, 42c.; No. 2, 41@41½c.; No. 3, 39@40c. Corn, Western mixed, 62@72c.; No. 2, 70¼@71½c.; yellow 70@73c.; white, 68@72c.

Receipts for the week, wheat, 1,382,032 bush.; corn, 864,800 do.; oats, 272,700 do.; rye, 21,300 do.; malt, 47,450 do.; rice, 316 pkgs

Exports for the week, wheat, 1,204,800 bush.; corn, 960,828 do.; oats, 75,004 do. rice 1,003 pkgs.

HAY AND STRAW.—Receipts of hay have been decidedly lighter this week and stock in the sheds has been greatly reduced by a steady demand. Prices have favored sellers, and show some advance. Prospects for the remainder of the month appear favorable. Straw easier.

Prime Timothy hay, ₱ 100 ₯s., 90c.; medium Timothy, 85@90c.; shipping grades, 50@55c.; clover mixed, 55@60c.; clover, 45@50c.; long rye straw, 60@65c.; short, 30@35c.; but and wheat, 35@40c.

Exports for week, 1,424 bales.

HOPS.—The market ruling is very quiet. The stock of yearling hops is very small, and of only fair quality. Brewers buy only small lots for immediate use, awaiting the arrival of the new crop. A few small lots of new of the main crop arrive, but have had no sales to establish a reliable quotation. Some transactions are reported in the interior at 18@21c. The lots so far arriving are of irregular quality; some show very careful picking and handling, but are thought to lack strength by being picked too early. Estimates of yield in this State are still various, but generally smaller than heretofore.

Crop of 1881, Early Seedlings, 20@25c.; 1880, choice, 19@20c.; 1880, good to prime, 15@18c.; 1880, fair to good, 13@15c.; 1880, poor to fair, 10@13c.; 1880, eastern, 10@18c.; 1879, fair to prime, 12@14c.; 1878, 5@8c.

Receipts for week, 367 bales.
Exports for the week, 9 do.

MILK.—There has been a scarcity and a high average is quoted: $2.39½ ₱ can of 40 qts. at commission platforms; range, $1.25@3.

POULTRY AND GAME.—Supplies of dressed have run light and prices have improved for all items. Some of the State stock arrived in poor order owing to the hot weather, but none has turned out too bad to sell.

Turkeys, Phila. prime, 16@18c.; State and Western dry-picked, 15@17c.; scalded, 14@16c. Chickens, Phila. 18@20c.; Bucks Co. 16@18c.; Jersey, 16@17c.; State, 14@16c.; Western, 14@15c. Fowls, Phila. dry-picked, 15@16c.; Bucks Co. 15c.; Jersey, dry-picked, prime, 14@15c.; do. scalded, 14@14½c.; State and Western, dry picked, prime, 14@15c.; scalded, prime, 13@14c.; inferior, 12@12½c. Ducks, Spring, Phila. ₱ ₯, 16@18c.; Jersey and Bucks Co. 15@17c.; State, 14@16c.; mixed State, 12@14c.; old, fair to good, 10@13c. Squabs, white, ₱ doz. $1.75@2; dark, $1.25@1.50.

Live poultry is scarce and prices are strong and in sellers' favor. Coops have lost in count badly during the hot week. One shipment of 24 coops showed a loss of 139 fowls that were smothered.

Chickens, Jersey, Spring, ₱ ₯, 15@16c.; State and Penn. 14@15c.; Western, 12½@14c.; Southern, 12@14c. Fowls, Jersey, State and Penn. 13@14c.; Western, 13c.; Southern, 12@13c. Roosters, old, 5@7c. Turkeys, Jersey and Penn. 14c.; Western, 13@14c. Ducks, Jersey, extra-large, ₱ pair, 90c.@$1; Jersey, New York and Penn. 35@75c.; Western, 40@50c.; Southern, 40@45c. Geese, Jersey, $1.62@1.87; N. Y. and Penn. $1.25@1.50; Western mixed and Southern, $1@1.25. Pigeons, large, strong birds, 25c.; young, 20c.

Good game has a fair demand, but most of the game reaches here in an unsalable condition.

Grouse, prime, 80c.@$1; partridges, $1.25@1.50; woodcock, State, 80@90c.; do. Western, 75@85c.; English snipe, ₱ doz. $1.25@1.50; plover, $1.25@1.50.

PROVISIONS.—The market for hog products holds its strong upward tendency and a steady, large export call supports the frequent advances which have occurred during the week. Stocks light; operators make a strong point of a short corn crop.

Pork, extra prime, ₱ bbl. $15.25@15.50; Western mess, new, $19.25@19.50. Lard, steam Western, ₱ 100 ₯s. $12.35; prime city, $12.27½. Hams, smoked city, ₱ ₯, 13½@14c.; pickled Western and city, 12½@13c. Shoulders, smoked city, 8¾@9c.; pickled, 8@8½c. Rib bellies, pickled, 10½@11½c. Bacon, long clear and Western, 10¾c. Beef, Western mess, ₱ bbl. $12@13; packet, $13@14; India mess, ₱ tce. $22@24. Beef hams, ₱ bbl. $22@22.50.

Receipts for the week—Beef, bbls. and tcs. 577; pork, bbls. 537; cut meats pkgs 13,561; lard, do. 84 8.

Exports for the week—Beef, bbls. and tcs. 2,160; pork bbls. 2,170; cut-meats, ₯s. 2,125,179; lard do. 4,575,462.

RICE.—Demand fair. We quote:—

Carolina and Louisiana common to fair at 4¾@5⅜c.; good to prime at 5¾@6½c.; choice at 6¾@7¼c.

SALT.—Quotations are: Ashton's at $2.50; Higgins's at $2.40; Holmes's extra sifted, $2.40; Deakin's at $1.25; Evans's at $1.30; Washington's at $1.25; Marshall's at $1.25; Virden's at $1.30; Worthington's at $1.20; Mediterranean at 25c.

SEEDS.—Clover is ruling quiet and firm. Timothy in active home trade demand at a further advance. Rough flax-seed not salable above $1.45; some lots held at $1.50.

Clover, Western, 1880, job lots from store, 10½@11c.; do. in car lots on track, is 9¾@10c. 1879, do. 8@9¼c. Timothy, job lots in store, $2.90@3.25. Flax-seed, American rough, $1.45.

SUGAR.—Refined has advanced; quotations are for: Cut loaf, 10¾c.; crushed, 10¾c.; powdered, 10¾c.; granulated, 10c.; mould A, 9¾c.; confectioners' A, 9¾c.; standard A, 9⅝; off A, 9⅝@9¾c.; white extra C, 8⅞@9c.; yellow extra C, 8¼@8⅝c.; C, 7⅝@8¼c.; yellows, 7@7¼c.

VEGETABLES.—Exports of potatoes, 1,743 bbls. Potatoes show a strong advance. Near point producers have a firm position, as few lots arrive from the West. Shipping demand brisk. Prime sweets are firm.

Early Rose, L. I., ₱ bbl., $2.50@2.75; Jersey, $2.25@2.50; up river, $2.25@2.50; Snowflake, up-river, $2.25@2.50; Burbank, up-river, $2.25@2.50; Peerless, Jersey, $2@2.25; sweet potatoes, Va. yellow, $2.75@3.25; Del. river, $3.25@3.50.

Garden truck is fairly active. Onions are turning in buyers' favor.

Sweet corn, Jersey, prime ₱ 100, 90c.@$1; inferior, 50@60c.; wax beans, L. I., ₱ bag, $1.50@2; string beans, L. I., $1.50@1.75; Lima beans, potato, $2.50@2.75; flat, $2@2.25; cucumbers, L. I., ₱ 100, $1@1.25; pickles, ₱ 1,000, $2@2.50; egg plant, L. I., ₱ bbl., $1@1.50; tomatoes, L. I., ₱ bush., 20@25; Squash Marrow, ₱ bbl., $1.75@2; cabbage ₱ 100, $3@7 beets, L. I., ₱ bbl., $1.25@1.50; white onions, $2@2.50; yellow, prime, $2@2.25; red, eastern, $1.87@2; Chester, $1.50@1.75; carrots, $1.25@1.50; turnips, Russia, $1.25@1.50; okra, ₱ 100, 15c.

WOOL.—An active turn to the market; all points mention a good business and Boston reports the largest trade of the season. The demand is mainly for fine and good grades of wool.

Ohio, Penn. and West Va. XXX and picklock, 43@45c.; X to XX, 41@42c.; No. 2 to No. 1, 38@45c.; coarse, 33@36c.; combing, 42@46c. State and Western X to XX, 38@40c.; No. 2 to No. 1, 36@41c.; coarse, 32@34c.; combing, 38@45c.; combing unwashed, 28@34c. Virginia, West Va. and Md. unwashed, medium, 27@29c. Ga. and Lake unwashed, medium, 26@30c.; coarse, 22@24c.; burry and slightly burry, 18@20c. California, Spring, Northern, free, 32@35c.; middle counties, free, 27@30c.; Southern, 22@26c.; low grade and burry, 19@22c.; Fall, low grade and burry, 16@20c. Texas, choice, free, 28@30c.; fair to good, 21@26c.; low grade and burry, 16@20c. Pulled, super, 38@41c.; extra, 35@38c.; No. 1, 30@33c.; combing, 35@40c.; lambs', 40@42c. Tub-washed, fair to choice, 35@44c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Sept. 10, 1881.

BEEVES.—Receipts for the week, 13,722 head; do. last week, 11,200 do. The week has been a severe one on ments of all kinds. Trade has fallen off for consumption during the very hot days, and butchers' wants have run small. The few reported transactions were at 8@8¼c. for Texans and Colorados; 8@10¾c. for common to fair native steers, and 10¼@10¾c. to dress 56@57 ₯. for good to prime. Light State bulls, grassers, changed hands at 3c. live weight.

SHEEP AND LAMBS.—Receipts for the week, 37,615 head; do last week, 31,329 do. The demand is moderate; butchers have not made daily visits. Poor to fair sheep, 3¾@5c.; good to prime, 5¼@5¾c. Poor to medium lambs, 4@5¼c.; fair to prime, 5¾@6½c.

MILCH COWS.—Trade continues fair at a range of $30@60, with moderate receipts.

SWINE.—Receipts for the week, 23,869 head; do. last week, 18,734 do. State corn hogs, 6¼@6¾c.; Western, 6¾@6¾c.; grass hogs slow at 8½c. N. J. pork, 8¼@8¾c.; city-dressed, corn, 8¼@8¾c.; do grass, 7½c.

VEAL CALVES.—Supplies have run light and prices ruled strong, State doing as well as N. J.

Live calves, prime N. J., 8@8½c.; do. State, 8@8½c.; poor to good, 6@7¾c.; Mount Hollys, 7@8½c.; buttermilks, 4½@5c.; grassers, 3½@4c.

E. & O. WARD, PRODUCE Commission Merchants.

(ESTABLISHED 1845.)

Send for Circular of Great Value, giving full instructions for shipping

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No. 279 Washington St., N. Y.

Ref., *Irving National Bank*, New York

For the Young.

FARMING FOR BOYS AND GIRLS. No. 34.

HENRY STEWART.

Corn.

CORN is our greatest feeding crop; and if wheat is *the* human food crop of the world, corn is *the* food of our domestic animals. Its importance may be seen when we consider that corn is the chief food of our working horses and mules: our beef, mutton, pork and poultry are fattened upon it; it is the chief supply of the dairymen who produce butter from it, and the owner of a flock of hens supplies them with corn in exchange for eggs. Nearly all our starch is made from corn, and a vast quantity of other products is used in different arts and manufactures. Besides this, the fodder is of very great value. The quantity grown every year would fill more than 3,000,000 freight cars, which would reach from New York completely around the world and lap over nearly enough to reach from New York to Chicago. The carrying of this vast quantity of corn to the various markets where it is sold employs thousands of men, and the cars, engines, elevators and ships needed to transport and store it employ still more thousands of workmen and mechanics in their construction. So that if it were not for corn a large part of the work and industry of the world must stop. We see in all this what a great service the farmer performs in finding work for the world, as well as in producing food for it.

Corn is a species of grass. There is but one species of it, but there are many varieties. There are white, yellow, black, blue, red and brown kinds, and some are striped and variegated with several of these colors. The plant has a strong, stiff stem, broad, long leaves, a spike of flowers on the top of the stalk, which we call the tassel, and another or others on the stem at the joints, which we call the ear. Its manner of growth and flowering is remarkable and is sometimes irregular. The young plant appears as a straight, smooth spire, in which the leaves are tightly rolled up, presenting only a sharp point as it emerges from the soil. Then the leaf unrolls, and by-and-by other leaves unroll until the plant shoots up and grows from four to sixteen or even twenty feet in hight. The stem has several joints; from each of these a broad leaf starts, clasping the stem at its base. These leaves are arranged alternately upon opposite sides of the stem, and each is closely wrapped around the stem to the joint below it, where it becomes a a part of the substance of the stalk, the stalk gradually increasing in thickness from the top leaf to the bottom. From the lowest joint a number of strong root-like stems often proceed and enter the ground; these are called aerial roots. The true roots are spreading and reach several feet from the stem, both sidewise and in depth.

The center of the stem, within the layers formed by the leaf substance, consists of a stalk formed of pith and a stout covering. This is the flower stalk which bears the tassel. The tassel, or panicle, consists of a number of spikes arranged in pairs, each pair spreading on opposite sides of the stalk and in a crosswise direction from that of the next pair. The spike contains a number of spikelets, each consisting of two small greenish flowers. The flowers consists of three chaffy scales, and out of the center of these come three slender threads or stamens. At the end of each stamen are the anthers, which appear as small scales, and these contain the pollen or fertilizing material, which appears as fine dust when the ripe tassel is shaken. The tassel thus bears only staminate or male flowers, as a rule, but sometimes the pistillate or female flowers appear on the branches of the tassel and produce grain. The pith of the central stem and flower stalk is very sweet and contains a good deal of sugar. The fertile or pistillate flowers are borne upon a stem which proceeds from a joint. Frequently there are several of these fertile flower stems, which we call cobs. Sometimes the cobs branch near the base and produce two or more smaller cobs. Sometimes a stalk has several cobs, each proceeding from a joint; this is common in what is known as "pop corn."

The flowers are arranged upon the cob in several rows, but these are always in pairs, usually 8, 12, 16, 24 or 32 in number. Eight and 12 rowed corn is most common. Each flower consists of six chaffy scales: in the center is the ovary, from which proceeds a long, silken thread, which is the filament and stigma of the flower. The ovary, filament and stigma together are the pistil and the flower containing the pistil is termed pistillate, and is the productive part of the plant, from which the seed is produced. It is common to call pistillate flowers, female flowers, because there is a similar distinction in these flowers corresponding to sex in animals. One silk proceeds from each flower and there are sev-hundred of them upon each cob. The cob or flower stalk, the flowers and the long delicate silks or filaments with the stigmas at the end, are protected by a number of leaves folded around them, which are called the husk. The silk projects from the point of the ear and as the pollen is shaken from the tassel above by the wind, or as it gently falls from it by its own weight it drops upon the ends of the silk (the stigmas) and fertilizes them and enables the minute germ in the ovary at the other end of the silk to form a grain. For every grain there must be a "silk" and this silk must be fertilized by pollen from a flower of the tassel. Every silk has a germ attached to it, but if the silk receives no pollen it withers and the germ dies. As soon as the germ is fertilized the silk dries and is of no more service.

Sometimes, tassel or staminate flowers are found on the ear mixed with pistillate flowers. This is one of those strange occurrences which, however, appear to be very simple when the cause is understood; and the student of botany, remembering that flowers and fruit, and even the thorns of the prickly plants, are only changed leaves, will be no longer surprised that the changes may even change their manner of changing, and may cause variations in the manner of growth.

Corn is a very productive plant. A seed produces a stalk and the stalk may bear an ear having 500 grains, or several ears having in all more than a thousand grains. It is very easily grown and if it is well cultivated and given space for light and air it will produce a fair crop upon soil too poor to produce any other kind of grain. But when grown upon good soil it will produce a very abundant crop. Some crops recently grown by boys who competed for a prize both in New York and Vermont produced over a hundred bushels of shelled corn per acre. This shows what a clever, industrious boy can do when he tries to do his best.

NOTES.

ALTHOUGH the Horticultural Club has been organized some time, and its members are numerous, yet the original plans have not been fully carried out, for various reasons. However, we now propose, with the aid of the cousins, to organize a series of "Horticultural Club Discussions," somewhat as follows: A topic for discussion will be given this week which I wish *all* the cousins, if possible, to consider, and upon which they are to gain the best information they can, and then, by postal or letter, send me their views upon the subject as soon as possible. The best of these will be published under the heading, "Horticultural Club Discussions," in the second or third issues following the announcement of the topic. Thus a "meeting" of the club will be held every two or three weeks. It will be seen that the success of these discussions will depend almost wholly upon the interest which the members of the Club take in them, and as it is for their benefit we shall expect them to respond heartily. It is our desire to make this a lively, practical department, and with the co-operation of the members of the Club, it can be done.

We shall also, as often as once a year, publish the names of all the active members of the Club, and shall drop from the list all who do not correspond for this department, and who seem to lack interest in it. During the Fall and Winter, we shall call upon certain of our best writers for brief essays on topics to be suggested, to alternate with our "Discussions," stories, etc.

The topic for the first meeting of the Club, to be reported in the RURAL for Oct. 1, if possible, will be "Grapes—their culture, best varieties, etc." Now, let's see how interesting we can make our first meeting!

I WISH to acknowledge, with thanks, the receipt of a little box of fruit from M. C., St. Paul, Minn.

WE are always glad to receive letters from the older "Cousins," and hope they will write us whenever they have anything of interest, to the young people, to communicate.

HEREAFTER the names of those who wish to join the Horticultural Club will be published each week. We do this so that they may know that their applications have been received. UNCLE MARK.

New Members of the Club for the Week Ending September 10.

H. R. Roberts, Atlantic, Iowa; Maggie Belle Lash, West Newton, Pa.; Sarah E. Shisler, Williams Ville, N. Y.; Jennie W. Pherrin, Springville, Iowa; Mary E. Bohn, Dallas Center, Iowa; Minnie Schlepegrell, Wellville, Va.

A timely use of Hop Bitters will keep a whole family in robust health a year with but little cost.—*Adv.*

Sabbath Reading.

HELP OF GOD.

"That which I see not, teach Thou me." Job xxxiv 32.

It is Elihu who said these words, not as his own prayer, but as one which he recommends as "meet to be said unto God."

It is a humble prayer, for it will only be used by those who feel their own ignorance.

We are not humble by nature. Very soon we outgrow the teachable spirit which is seen in very little children; yet this is one main feature of childhood which our Lord says must belong to all who would "enter the kingdom of heaven".

But the true believer, who has been taught by the Holy Spirit that is, in himself, poor and miserable, and blind and naked," will ever be ready to acknowledge that he stands in continual need of teaching.

God has set limits to what man is to know and understand in his present state. "We know in part," says St. Paul, and the same truth was asserted by Moses when he taught that there are "secret things" which "belong to the Lord our God," as well as "things revealed to us."

It is good to use this short prayer often. We know not day by day what need we may have of special teaching.

When once we have passed early youth, and have ceased to have parents or guardians who think for us, and tell us what to do, we are all likely to come, now and then, to some turning-point in our life, some occasion on which we pause and consider which of two, or it may be more, courses of action, we shall follow.

We see, perhaps, advantages and disadvantages in each line of conduct, and they appear so evenly balanced that we feel a painful degree of indecision as to what is really best and wisest for us to do.

Perhaps we consult with friends, and this is a good thing to do. "In the multitude of counsellors there is safety," as we find it said twice in the book of Proverbs. But it is possible that we may not get from our friends any very clear or positive direction. Or we feel, on further reflection, that we have not been able to state our case so clearly as to enable them to see all the reasons for advising either one course or another which even our own judgment has preceived.

And now we turn to God. We lay the case before him. We try to tell Him all our thoughts and perplexities, but even as we pray, we feel there are half-formed wishes or fears that we can hardly put into words. We feel so ignorant of what the future may prove. We think we could decide better, if we only just knew what the consequences of one step might be. And yet we must take that one step immediately, and risk all the consequences.

Now is the very time for this prayer. God "sees the end from the beginning." He knows exactly what is the very best and wisest thing for us to do, and He has graciously said that if any one lack wisdom, he may come and ask for it, and he shall certainly receive it.

At such a time of perplexity then use this prayer, and let it be a guide to you, a "model prayer;" which shall help you to come in a right spirit to the throne of grace.

But there is another occasion on which this prayer may be the very one we need. It is when we come to special difficulties in reading the Word of God.

No one denies that there are difficulties. The best and holiest men have granted that it is so. Does not even one Apostle say of the writings of another that there are in them "some things hard to be understood?"

How often, too, as we read some sayings of our own blessed Lord and Master, do we feel that we are like the earthly disciples, who "understood not the sayings that He spake unto them."

Doubtless it may be that to the end of our days we shall have to leave some passages unexplained. Is it surprising that a book inspired by God should not be absolutely and always intelligible to the finite understanding of man? But one of the very first lessons to learn in reading the word of God, is to ask for the holy spirit's teaching while we read. No one who does not do this can imagine what a different book the Bible becomes, when the Lord opens the understanding to "understand the Scriptures." What better words can we use, every time we read the Word of God, than those of the short prayer we are considering?

Reader, whatever point there may be that perplexes you, and makes you unable to reconcile different parts of the Word of God with one another, or, it may be, to reconcile some parts with your own preconceived notions, kneel down and pray from your heart, "Lord, that which I see not, teach Thou me, for Jesus Christ's sake, and you will assuredly receive, sooner or later, the teaching you ask, and be ready to exclaim with Elihu; "Who teacheth like Him?"

Wind Mills.

MIX'S BANNER WIND MILL
Best made. Runs with less wind and has more power than any other. Never blows down. Ten ft. Mill $55. Warranted for 5 years. Full description free. N. P. Mix, Avenue, O.

CHALLENGE WIND MILLS
Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.
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ENTERPRISE WIND MILL.
Known and sold throughout the world and acknowledged The Best. Simple Durable, Strong. Few Joints. Frictionless Turn Table. Multiplying Ball Governor. All sizes for Rail Road, City and Farm purposes. Every Mill Warranted.
Enterprise Feed Mills
New and startling. For Wind, Horse, Steam or Water Power. Climax Corn and Cotton Cultivators. Pumps, Tanks, &c. Send for *brown* Catalogue
SANDWICH ENTERPRISE CO., Sandwich, Ill.

IMPROVED CALIFORNIA WIND MILL.
Simple, Strong, Durable. Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

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A QUINTETTE OF NEW MUSIC BOOKS.
Ditson & Co. *have ready for the Fall Trade, and for the use of Music Teachers, Choirs and Singing Classes, the following books, of unapproachable excellence in their special departments.*

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Full of things which every housekeeper wants to know. Fine paper. Clear type. Beautiful bindings. Low price.
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LEADING NEW & OLD VARIETIES

Layer Plants at lowest prices. Send for descriptive Circular. Address
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Chambersburg, Penn'a.

PERSONALS.

Longfellow has in his time declined three embassies.

Senator-elect Lapham, of New York, is a cousin of Miss Susan B. Anthony.

General Fitzhugh Lee will marshal three thousand Virginia militiamen at Yorktown.

Minister Christiancy has returned from Peru and is in this city. He is a good-looking old man, very gray, but of a hearty manner.

Highwaymen in California tried to wreck a train the other day, for the purpose of capturing millionaire Fair, whom they expected to hold as a hostage until heavy ransom should be paid.

The will of the widow of ex-President Millard, Fillmore who died the other day, leaves public bequests to the amount of $50,000, among which is one of $20,000 to the University of Rochester.

Farmer Dalrymple, the great wheat-raiser of the Northwest, is a slender, quiet-looking man, of clerical appearance. He is more accustomed to the book and pen than the plow, and his fingers are as soft and white as those of a girl.

Charles O'Conor's residence and fire-proof library, two distinct buildings, which he is erecting at Nantucket, will cost about $35,000. They are on a cliff on the north shore of the island. He intends to leave them to some Roman Catholic institution as a sanitarium.

James G. Fargo, who has been elected president of the American Express Company, is a brother of the former president, the late William G. Fargo. The new head of the company has been in the express business since 1844 and he is reported to be a man of large wealth.

Knocking down a man who said he hoped President Garfield would die and getting fined for it has proved a very profitable investment for Capt. Charles A. Cook of Brownville, O. Nearly $800 has been collected by subscriptions for him. Of this $175 has been invested in a testimonial gold watch, and he will receive the rest in cash and bonds. He has been proposed for several offices but declines to run.

[Detroit Free Press.]

Mrs. C. Whipple, 371 Croghan Street, presents these facts: For six years I had suffered beyond all expression with Sciatic Rheumatism and tried every known remedy, but all to no purpose. At last I saw in the Free Press an advertisement of the St. Jacobs Oil, tried it and am well. I can walk without limping and sleep free from any pain.—*Adv.*

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FOR HOMES & REALTIES IN VIRGINIA
WRITE TO
BUREAU OF IMMIGRATION,
RICHMOND, VA.

FOR SALE--CHEAP FOR CASH,
In tracts to suit purchasers, 100,000 Acres of valuable Timber (abundance of Walnut and Stave Oak), Coal, Iron Ore, Lead, Antimony and Salt Mines, Farming and Grazing Lands, in Southwestern Virginia. Climate, soil and water unsurpassed. Really the richest country in natural resources on this continent. For further particulars address J. PETTEBONE,
214 Mosher St., Baltimore, Md

Miscellaneous.

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New and Rare Winter Flowering Plants.--New Fruits, Dutch Bulbs, &c.

New Pears, new Peaches, new Cherries, new Grapes, new Strawberries, &c., with a large stock of all kinds of Fruit Trees, Shrubs, &c.
DUTCH BULBS.—Large importations direct from the leading growers in Holland. First quality Bulbs. Beautiful Hot-house plants, Dracænas, Crotons, Orchids, Winter Flowering Plants, Roses, &c., well grown. Cheap.
Catalogue mailed to applicants.
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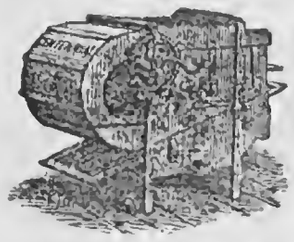
The "Centennial" Fanning Mill.



The best mill in the world. It separates Oats, Cockle, and all foul stuff from wheat. Is also a perfect cleaner of Flax, Timothy, Clover and all kinds of seeds. The great improvement over other mills is that it has two shoes. It is especially adapted for warehouse use. Send for Descriptive Circular and Price List.
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FOR
RHEUMATISM,
Neuralgia, Sciatica, Lumbago,
Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,
Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents,** and every one suffering with pain can have cheap and positive proof of its claims.
Directions in Eleven Languages.
SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.
A. VOGELER & CO.,
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30 elegant cards, Snowflake, etc., 10c. *Agts. wanted.* 20 samples 3c. List free. C. VICK, Arbela, Mich.

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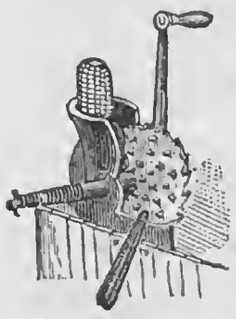

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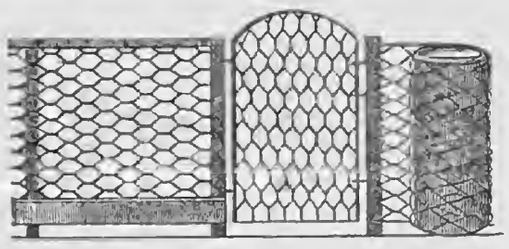

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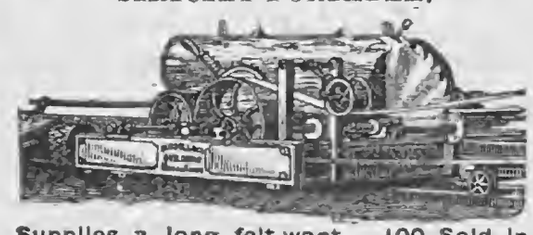

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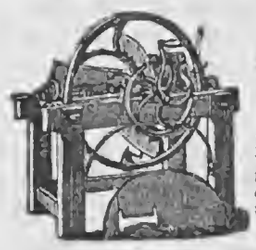

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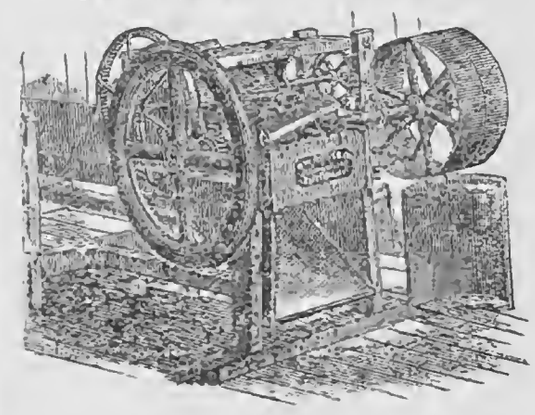

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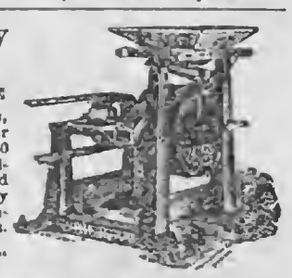

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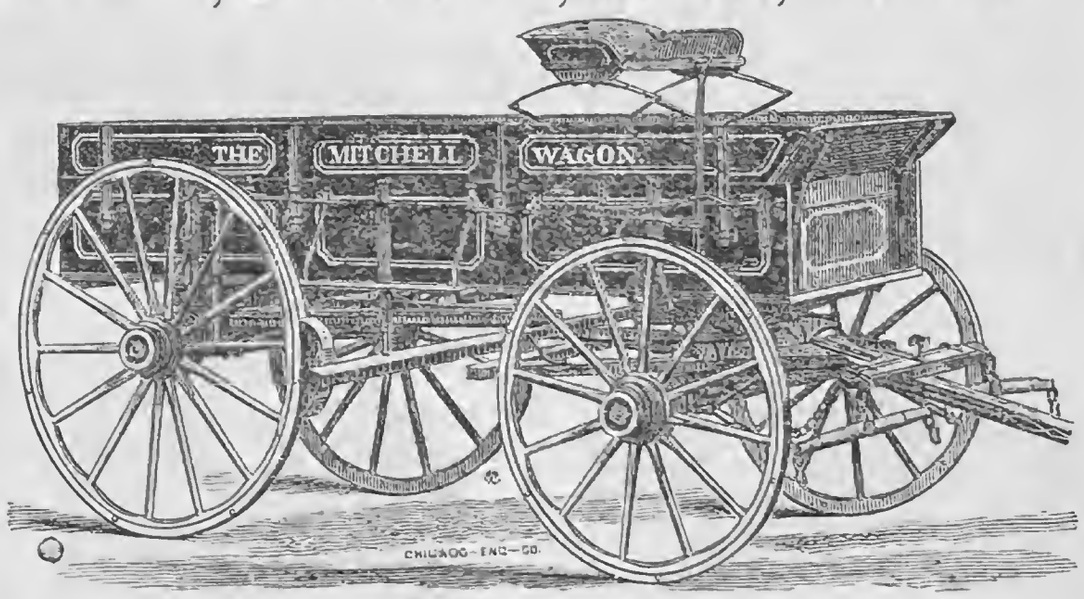

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USE ONLY THIS THE FIRST AND THE BEST

Humorous.

A CELEBRATED lawyer once said that the three most troublesome clients he ever had were a young lady who wanted to be married, a married woman who wanted a divorce, and an old maid who didn't know what she wanted.

TEXAS people do not exert themselves on epitaphs, no matter how much display they make at funerals. Down on the Rio Grande, a plain board at the head of a mound tells the public that "13 of them Mexican Greasers are planted here."

HE came into the office and said. "You see, my brothers are shoemakers, and they mended my shoes. Now, why am I like Joseph of the biblical history?" We gave it up. "Why, because I was soled by my brothers." The inquest on him will be held to-day.—Puck.

A LITTLE two-year old girl came one morning into a half darkened room where her baby cousin was kicking up his heels on the rug in front of the fire. On the hearth near by lay a pile of cigar ashes dropped there by one of the family the night before. The little girl saw the baby and the ashes and rushed out crying in tones of terror, "Oh, auntie, come quick. The sawdust is all coming out of your baby's legs!"

A BIG, fat colored woman went to the Galveston Chief of Police, and told him that her step son had run away, and she wanted to know where he was. "It bodders me to know why he left. He had everything he needed to make him cumfable. I done all I could for him," she observed. "Has he any marks by which he may be recognized?" "Well, I don't reckon all de marks I made on him with a bed slat, while de old man was holdin' him, has faded out yit."—*Texas Siftings.*

[Albany, (N. Y.) Daily Press and Knickerbocker.]

Abandoned.

We perceive by one of our Massachusetts exchanges that Dr. Lorenzo Waite, of Westfield, an eminent physician of Berkshire Co., strongly indorses St. Jacobs Oil. With it he cured a case of Sciatica that resisted all regular professional treatment, and that had in fact been abandoned as incurable.—*Adv.*

WHAT THE HARVEST WILL BE.

The Long Island farmer, (not of the Rural Farm), gathering his crops.

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PEACH and APPLE TREES,

and other fruits, among which can be found varieties suited to all sections. A large list of long-keeping Apples,—Kieffer and Leconte Pears, Grapes, Raspberries and Strawberries in large or small lots. I also offer a full line of Nursery Stock at low rates. Apples, Peaches, Kieffer and Leconte Pears, sent by mail. Special rates given where large lots are wanted. Catalogue showing how and what to plant, with much valuable information, mailed gratis to all who apply for them. RANDOLPH PETERS,
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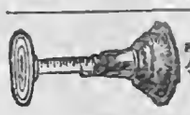
WM. PARRY, Parry P. O., N. J.



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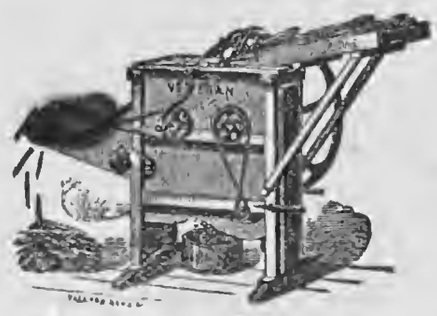

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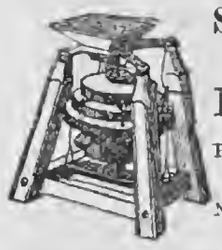

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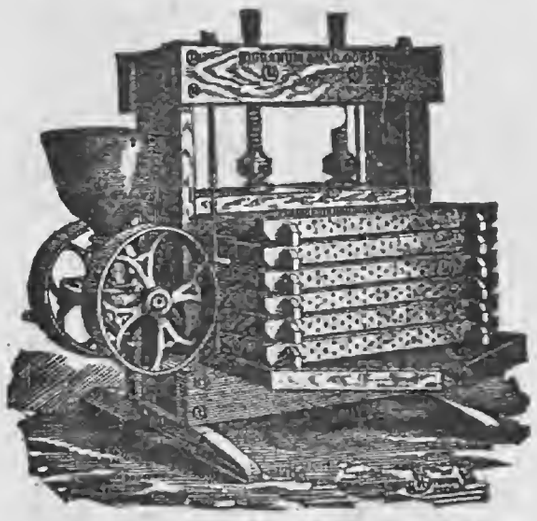

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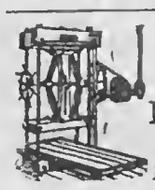
Dr. Peck's Artificial Ear Drums
PERFECTLY RESTORE THE HEARING and perform the work of the Natural Drum. Always in position, but invisible to others. All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address, H. P. K. PECK & CO., 853 Broadway, New York.



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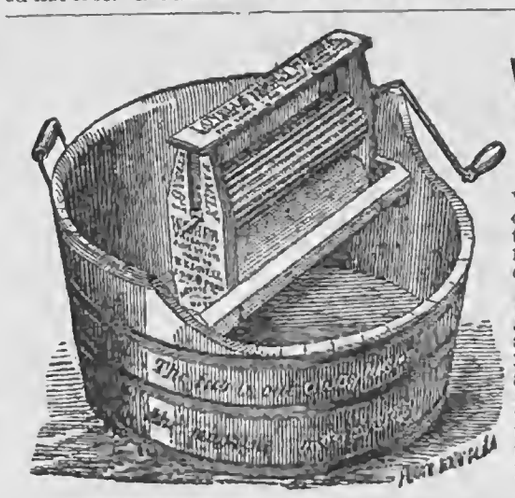

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

Vol. XL. No. 1652.} NEW YORK, SEPT. 24, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

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Farm Topics.

THE NITROGEN SUPPLY.

J. B. LAWES, L. L. D., F. R. S.

At Rothamsted, in the middle of May of the present year, I planted a few seeds of corn, which I had received from a gentleman living in Baltimore, upon that portion of my land which has grown a permanent wheat crop for 40 years without the application of any manure.

In the adjoining field, which is under experiment with permanent barley, potatoes, and leguminous crops, I planted about 100 seeds, placing three together, and allowing them the space of a square yard or more from which to collect their food.

The plot of ground upon which they were planted is outside the portion of the field under experiment; it certainly has received no dung for the last 30 years, and may be described as a piece of waste land which has been plowed with the rest of the field, but has not been cropped, though vegetation has sprung up principally in the form of thistles or annual weeds.

My object in sowing the corn was a very imple one. I wished to ascertain whether the color of the plant under different foods corresponded with that of the various cereal crops which we have under experiment.

At the period at which I am writing—August 22—the corn upon the unmanured wheat land is only one foot high; there is no leaf that is one inch in width, and the color is yellow, or a yellowish-green.

In the adjoining field some of the plants are between four and five feet high, while the leaves are three-and-a-quarter inches wide, and of a very dark rich green; other plants, although growing and luxuriant, are much paler in color. In this field I have used mineral manures alone, and mineral manures with nitrates.

In the same field, with the corn and close to it, there are 15 different sorts of leguminous crops growing; they are all manured with (1) various mineral manures alone, and (2) with the same minerals, and in addition nitrates or salts of ammonia.

Here we have no changes in the color of the plants due to the influence of the various manures; there are none of those varieties of tint from a yellowish-green to a greenish-blue, which in the evening appears almost black, that we find in some of our graminaceous crops under experiment. A practiced eye might detect in some cases a brighter and more healthy green, but that is all.

So far as the corn is concerned, by a comparison of the produce grown on the permanently unmanured land, and that grown on the field supplied with minerals and nitrates or salts of ammonia, it is evident that the plant has profited largely by the application of the manures. At the same time, while I think that corn, in common with the other cereal crops, is dependent upon a liberal supply of nitric acid *in the soil*, I must not in saying this be supposed to advocate its application artificially. I quite agree with Mr. Stewart in thinking that mineral manures alone should be used, or mineral manures with the addition of a small quantity of nitrogen, so long as they enabled the farmer to grow 100 bushels of corn or even a much smaller crop than that per acre.

The only difference between Mr. Stewart and myself is this: I think that it is to the soil rather than to the atmosphere that we must look for the supply of nitrogen; while Mr. Stewart's view is that the poverty of his soil does not admit of so large a supply being yielded.

This question can only be set at rest by the continuous growth of corn under mineral manures alone; and even under such circumstances many years might elapse before satisfactory conclusions could be drawn. I have more than once, when writing upon American agriculture, pointed out the immense advantage which United States farmers possess over ourselves and others who live in climates not suitable for the growth of cereal crops.

It is quite true that the United States farmer is fully aware of this advantage, and does not require to have it pointed out by me; but, at the same time, I may possibly, by the aid of science, help him to understand why it is that he can grow a much larger crop of corn, than he can of any of the other grain crops; and, further, when his land is more or less exhausted, why mineral manures will be more effectual when applied to the corn than when applied to other grain crops.

At Rothamsted we are now engaged in writing upon the subject of rain water and drainage, and in the Journal of our Royal Agricultural Society, now being printed, will be found an account of the composition of rain water passing through an uncropped soil.

The article is well worth the study of those who wish to know what is taking place in our soils; but I will here refer only to one result, by way of illustrating my present subject.

The month of July, 1880, was exceedingly wet, and for the season of the year, an unusual amount of water passed through our drain gauge soils. At the beginning of August the soils had lost the greater part of the nitric acid.

August was a very dry month and hardly any water passed through the soil; September was excessively wet, nearly six inches of rain having fallen, of which four inches passed through the soil.

What was the result?

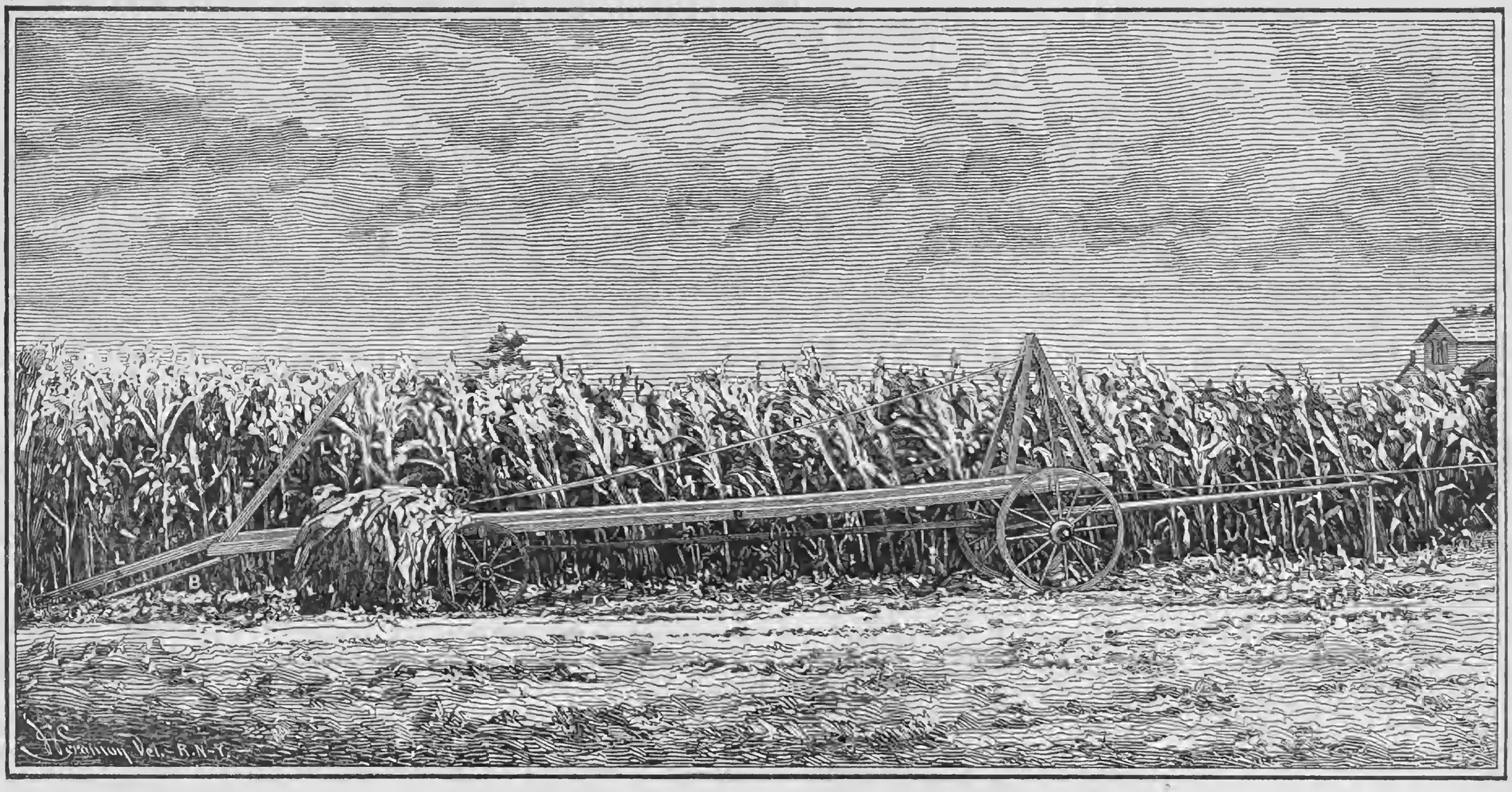
We find, by analysis of the drainage waters, that the nitrogen as nitric acid washed out of the soil, if calculated upon an area of an acre, would amount to 16 pounds, which is equal to the amount contained in 100 pounds of nitrate of soda, and not much less than what would be contained in 2,000 pounds of ripe corn as it stands in the field!

This formation of nitric acid has taken place upon a plot of the ordinary arable soil of my farm, which has been kept free from vegetation, and has been washed by the rainfall for the last 10 years.

If such a formation of nitric acid takes place in the Rothamsted soil during one short month, what must be the amount liberated in the United States soils in the interval between the time when the wheat is ripe, and the time when the corn ceases to collect food from the soil.

In these facts we have surely a very simple explanation of the reason why more benefit is derived from the application of mineral manures to corn than to other grain crops.

I abstain from entering upon any question with regard to the *source* of the nitrogen which we find in our drainage water, and will merely point out that it could not have been obtained from the atmosphere by plants, as the soil was kept free from vegetation.



ENSILAGE WAGON.—Fig. 465.

SILOS AND ENSILAGE WAGONS.

PROFESSOR I. P. ROBERTS.

The Silo.—After visiting Whitman & Burrel's silo last Winter, I decided to build a small one for experimental purposes. It is located in an angle just outside the barn, the base-

ment walls of the latter being used to form the silo walls on two sides, ten feet high; the other ten feet were formed by laying a four-inch wall of brick against the double boarding of the barn, and driving 30d nails half way in, and 16 inches apart between every fifth and sixth course. The outside and cross walls are built of large and small field stones, and Fayetteville water-lime laid in movable boxes. The outside walls are 24 inches thick; the cross wall, 18 inches. The divisions of the silo are respectively 11 by 16 feet and 10 by 16 feet and 19 feet in depth. Over all is a wooden structure nine feet high, with flat roof covered with tin. Both compartments are arranged to get pressure by a rod anchored about five feet below the bottom of the silo. Their capacity, by filling five feet above the stone wall (it will settle about one foot in five), will be not far from 150 tons. Fig. 467 shows how the anchor is secured. I, anchor plate, one-and-a-half foot long, six inches broad and one-and-a-quarter inch thick; R, R, pieces of railroad iron 10 inches long; C, railroad iron pieces three feet long; O, rod one-and-a-quarter inch square in three sections. The top section has a thread cut for five feet; nut five inches square and three deep. Wrench handle 30 inches long. In case the silo is filled only half-full the middle section of the rod can be taken out.

ENSILAGE WAGON.—As it appeared to me to be far too much labor to get pressure by handling so many stones four times a year, (we shall fill semi-annually), the same objection was found to loading and unloading 300 tons of green material annually. The accompanying cut Fig. 465—from a photograph—and the description below will, I think, make my invention (*not patented*) intelligible to all.

P, two poles 25 feet nine inches long, of chestnut, pine, elm or basswood; diameter of front end seven-and-a-half inches, of rear end, five-and-a-half inches. Use the front part of a common wagon and place it two feet from the front end of the poles. Use trucks in the rear, wheel two-and-a-half feet in diameter, with bolster three-and-three-fourths feet long and place seven feet three inches from the rear end of the poles. L. L. loading skids of hard wood, six feet long, three-and-a-half by one-and-a-half inch, attached to rear of poles by slot and pin. One is shown down, as in loading; one up, as in going to the silo. B. board one-and-a-quarter inch by ten inches, five-and-a-half feet long, loosely bolted on to last cross-piece between skids for a walk-way for the loader, and also to prevent the fodder from falling between the skids. Seven hard-wood cross-pieces one-and-a-half by three inches, bolted to the under-side of the poles, form the foundation for the matched floor which may be six inches narrower than the distance between the poles; this leaves an opening on either side for any dirt to pass through. The poles or sills should be placed as wide apart as possible, especially at the rear end (four feet), where they will not interfere in turning, in order that a wide channel or chute may be formed by the sills and floor, preventing the bundles from swerving to either side. S. a standard to support the pulley, is made, of four pieces, two by two-and-a-half inches, five feet three inches long. Two, two-inch auger holes are bored, with the proper slant, in each pole—one, one foot from the end; the other, two feet ten inches from it. The four upper ends are bolted together, and a pulley (five inches in diameter) is placed well up in the apex and secured by a bolt. A pulley is also tied to the rear end of the tongue at the point where the rod fastens it to the hounds; it is kept upright in position with a wire passed through the top end and secured to each pole.

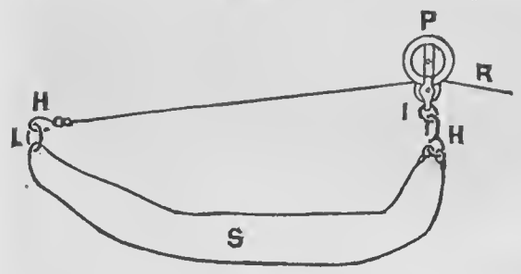
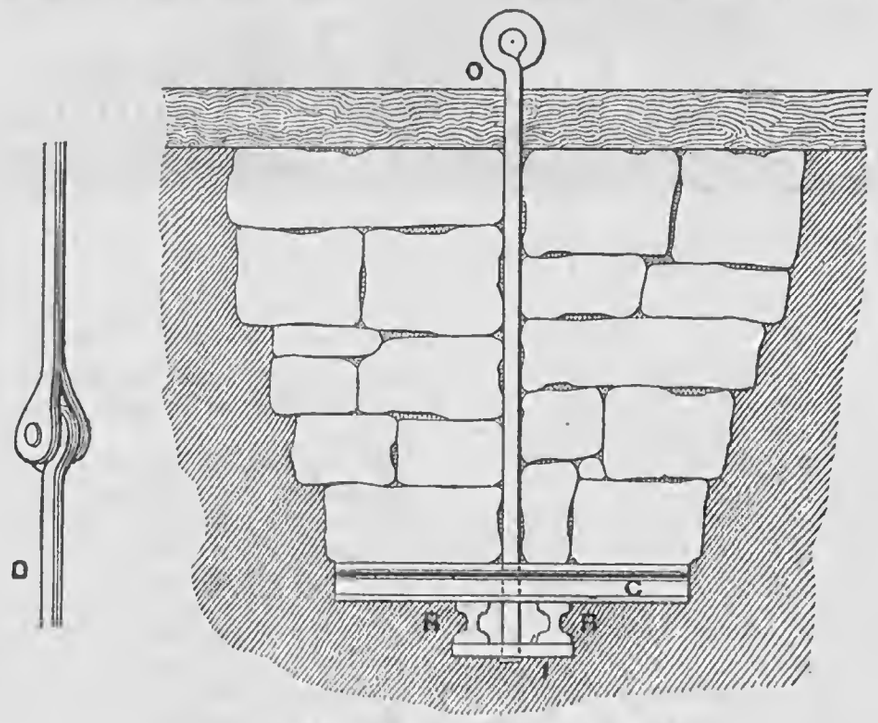


FIG. 466.

SLING ROPES.—Fig. 466. For one horse they should be about 17 feet long and five-eighths of an inch in diameter; the two ends splice into a ring-hook H. H.. In the middle a link, L two-and-a-quarter inches long and five-eighths of an inch broad inside, is secured by tying the doubled rope together with a cord. This rack was tested by loading and unloading a bundle of white Southern corn about eight feet high and as yet showing no signs of tassels. A 17-foot sling rope (doubled) easily encircled the bundle of 630 pounds, and one horse had no difficulty in drawing it on to the wagon. The corn is drilled three feet four inches apart and it took two rows 100 feet long to produce the bundle. It occupied, when loaded, a horizontal space of three feet eight inches. This would give six bundles to a load or 3,780 pounds, which is far more than one team should handle on soft ground, so I propose to diminish the number, and increase the size of the bundles, and use two horses to draw them on to the rack, and also use the same team to help the wheel horses to draw the load to the silo where they will be needed to do the unloading. The number of sling ropes should be at least twice as great as the number of bundles it is proposed to put on one load, as the cutters will want half the slings to lay on the ground to place the corn on for the next load. After the bundle is cut the hook-ring to which the two ends of the sling rope are made fast, is hooked into the link in the middle of the sling rope in order that the teams and wagon in passing over it may not disturb it.



MODE OF SECURING ANCHOR.—FIG. 467.

R. is a pulling rope, three-quarters of an inch in diameter and about 54 feet long. This is spliced into the ring hook (H). The ring-hook must be small enough to pass through pulley (P). The pulling rope is passed under the first pulley at the rear of the tongue, over the one in the standard (S) and to the ground at the rear end of the wagon, and then passed through another five-inch pulley in the hands of the loader.

The ring-hook, H. H, is hooked into the eye (I) of the pulley (P). The ring-hook (H) is hooked into the link L. The head team is started, the sling (S) shirrs and rolls the bundle half over into the skids. The loader follows the bundle, and when it is in position unhooks the pulling rope from the sling rope, and also the pulley; hooks the sling-hook of the sling into the link of the sling; starts the wheel horses and passes to the rear of the wagon and ground, carrying with him the end of the pulling rope and pulley (P).

I have experimented enough to *know* that two men can load a bundle each minute, including driving between bundles, be it 500 or 800 pounds. I think I can unload two bundles per minute or two at a time, as they will draw down the incline easily.

Cornell University, Ithaca, N. Y.

SCREW POWER PRESSURE FOR ENSILAGE.

WE recently examined a new silo-barn which has just been erected by Mr. George T. Powell, Agricultural Editor of the Chatham Courier, Chatham, N. Y., and for durability and convenience we have yet to find its equal. The barn and silo walls are built of concrete, in the proportion of 12 barrels of sand to one each of lime and cement, with the necessary filling of small stones. Along the entire length of the barn (75 feet) is a silo, divided into three compartments, answering essentially to three distinct silos. The first of these is 19½x16x20 feet, with a capacity of about 150 tons; the second is 32x16x20 feet, with a capacity of 200 tons, and the third has the same dimensions as the first.

A novel feature of the silos, and the one in which we were most interested, was the comparatively new method of obtaining the requisite pressure for the ensilage, by which Mr. Powell proposes to do away with the laborious and inconvenient method of weighting with stones or earth. In the top of each of the side walls of the end silos, half way between the cross walls, a screw an inch and a-half in diameter and projecting four feet above the walls, is firmly imbedded. After the fodder is put in, a sufficient number of planks to cover it will be laid crosswise of the silo, and upon the ends of these planks two timbers will be laid to receive the pressure from a single cross-timber, through the ends of which the screws pass. In case the fodder does not extend above the walls of the silo so as to allow the cross-timber to be acted on directly by the screw-nut, blocking will be used. In each of the side walls of the middle silo two screws will be set equidistant from the cross walls and from each other. A wrench with long leverage will be used in turning down the nuts. Mr. Powell thinks that extremely heavy pressure is not necessary, and has no doubt that a sufficient pressure can be given the ensilage in this way. This phase of the experiment will be watched with interest.

One of the end silos is already partially filled with 25 tons of clover, upon which, as an experiment, several loads of rye in the sheaf have been placed to act as a weight and to economize space; but it is a matter of doubt if the ensilage comes out in good condition. The other end silo will be filled with millet, while 15 acres of drilled Chester County Mammoth Corn will be ensilaged in the middle apartment.

The ensilage will be taken from the silos through doors opening from below directly into the cattle and sheep stables, and be conveyed around to the different stalls by a hand-car or barrow. It will be fed mostly to sheep (about 400 in number), which is another phase of the ensilage-fodder question which farmers will be interested in, inasmuch as cattle have heretofore been chiefly the subjects of experiment with the new fodder. Mr. Powell is a progressive farmer and does not propose to confine himself to old methods simply because they are old, but, on the other hand, unlike many neighboring farmers, he feels assured of success in his new undertaking, and in the "new fodder dispensation" in general.

THE SORGHUM SUGAR INDUSTRY IN KANSAS.

I have been spending the last six weeks in traveling over a good share of this State. I have visited the county seats of 42 counties, and being deeply interested in the welfare of the Amber Sugar-cane industry, I have endeavored to learn what was being done in that line. I find that so far this season about half a million dollars have been expended for buildings, machinery, etc, to work up the crop of Kansas. On account of the very dry weather and the chinch bugs, the cane in some sections has been entirely destroyed, and much injured all over the State. Still in the counties of Pawnee, Barton, Ellsworth, Rice and Reno, there is some very good cane, as well as some very large mills, the two largest being at Stirling and Ellsworth. I am under many obligations to the Editor of the Ellsworth Reporter, who is also secretary of the Ellsworth Sugar Works, for his kindness in showing me the works and the surrounding country. The cost of the mill and buildings when completed, will be about $75,000. The cane crusher was built by Geo. L. Squier and Bro., of Buffalo, N. Y. It is the largest ever sent into the Western States. The three rollers and spur-wheel alone weigh 38,000 pounds. This season they have only 1200 acres of cane to work; but next year they expect to have the produce of 6,000 acres, the company intending to put in a large share of it themselves. The mill at Sterling is nearly as large, and this season will crush something over 1,800 acres of cane, I was told. There are also at Sterling, Raymond, Roxbury, Prosper, and Bavaria, large steam mills running for molasses. It is pleasing to hear the farmers tell of the great improvements that have been made in the machinery for working up the cane, and how much superior the product is now to the old-style bitter sorghum of the past 50 years. I visited Mr. E. M. Rugg, and found he had just completed setting up his ninth outfit this season. He says the cane is unusually rich owing to the dry weather. I found on testing it in different places, that it would show from 8 to 11 Baumé. Mr. Rugg's first trial batch for sugar in 24 hours swung off five pounds of sugar to the gallon. This I consider unusually good. From August 19 to 22 there was a general rain throughout the State, which helped the cane and corn crops very much. In my opinion there is no State in the Union better adapted to growing the small sugar-canes than Kansas, and the farmers say that if the mills now up prove that they can make sugar in paying quantities, there will be more Sorghum planted next season than of any other crop. In a few days, I shall go East and look through the mills and prospects of other Western States; and then see what I can do in New York.

Topeka, Kansas. C. J. REYNOLDS.

Field Crops.

TOBACCO GROWING NOTES.

THERE is little doubt but that tobacco can dry too fast during the process of curing. For this reason a tobacco-barn should be constructed so that it can be tightly closed in times of dry weather, when too rapid drying—which invariably causes undesirable colors in the leaf when cured—is likely to occur. During dry, windy weather it is also advisable to keep the ground or floor of the curing barn wet by sprinkling it with water, which slightly moistens the air in the building and causes the tobacco to cure less rapidly.

THE danger of damage to tobacco, while curing, from "pole sweat," is only during times of damp or muggy weather, accompanied with extreme heat. At such times the tobacco should be given thorough ventilation by opening the ventilating doors, which should be constructed in the sides of the building, beneath the sills, and upon the roof or in the gable ends. Careful watch should be kept of the tobacco hanging on the lower tiers, and if damage to the crop is likely to occur with all possible natural ventilation given, some artificial means should be adopted. Small, smouldering fires kept up in various parts of the curing room, will cause upward currents in the air and secure the necessary ventilation to prevent "pole sweat."

AMONG the first things which the farmer who contemplates tobacco raising should attend to is a place to raise the young plants or the plant-bed. The beds should be prepared during the Summer or Fall previous to the Spring when they are needed for use. A few loads of rich muck or garden soil, free from stones and rubbish, drawn to some warm exposure and inclosed in a frame, will constitute the present necessary requirements. A liberal coating of well-rotted stable manure should be spread over the bed, to remain there until the following Spring, by which time it will have imparted its strength to the soil of the bed. For early plants a covering of glass is necessary to exclude cold storms and winds in early spring-time.

THE importance of securing early an abundant supply of good plants has been fully realized during the past dry Summer. Reports from the various tobacco-growing sections of the country are unanimously in favor of early tobacco. The best crops are grown by farmers who raise enough plants for themselves and for their neighbors also, reserving, of course, the earliest and best for their own use. Thus they secure enough of the best and strongest of the plants to meet their own requirements early in the season, which gives the plants time to become well established in the soil before the approach of the dry term, which has this season proved destructive to late tobacco generally. There have been a few instances during my tobacco-growing experience when late tobacco has been better than early, owing to storms of wind or hail, which injured the early and larger growths most; yet I think I am safe in saying that in eight seasons out of ten the outcome of early-planted tobacco has been most satisfactory to both grower and purchaser. G. A. G., JR.

Chemung Co., N. Y.

GROWING WHEAT ON CORN LAND.

WALDO F. BROWN.

I LIVE in one of the largest hog-producing counties of Ohio, and corn is, of course, extensively grown, and as we are too far south for oats to do well, and much of our upland is unsuited to bear barley—and thanks to the growth of temperance sentiments many of our farmers will not grow the latter crop—it comes to pass that every year there is a large breadth of wheat sown on corn land. Probably the majority of the poorest wheat grown in the county, and that which cuts down our average yield in the statistical reports, is from that sown *among* corn. I emphasize the word *among*, for I make a broad distinction between sowing on corn land, and sowing *in* the corn. What I mean by this is, that I always cut up the corn before sowing the wheat, even though I must wait till October to put in the crop; but it is rarely that the corn crop is so late as to make this necessary.

The way the light crops of wheat are grown on corn land is usually this: The corn fields are allowed to become grassy, and when it is

time to sow the wheat, it is either sown broadcast and scratched in with cultivators, or else it is drilled in between the rows with a one-horse drill. In an hour's ride I could show hundreds of acres that were put in in this way last Fall among the standing corn, and which cut from ten down to three bushels to the acre. I am satisfied that the reduced yield from wheat sown in standing corn, is not altogether due to the fact that the land cannot be put in as good condition as that from which the corn has been removed. Whether it is the shade which makes the wheat grow spindling, or something else that hurts it, I cannot tell, but I have experimented in the matter until I know that the standing corn injures the wheat.

In the Fall of 1879 Mr. L. N. Bonham sowed a field of wheat on rich bottom land, near where I live. One half of it was sown *in* the corn and the other half a little later after the corn was cut up. The part sown in the corn yielded 14 bushels to the acre, and the other half of the field 28 bushels. Mr. B. assured me that the land was put in excellent condition for the entire crop. The next year he grew 38 bushels to the acre on a field where the corn was cut up. My crop of 1879 was all sown on corn land. I had two fields of six and twelve acres respectively, and the yield was 30 bushels to the acre on the smaller, and 22 on the larger field. My crop of 1880 was 30 acres and only four acres of it were corn land, but the yield on those four acres was above the average of the crop, although it was not sown until October 8.

The first thing to be done when you are intending to seed corn land, is to keep it clean; then when you cut up the corn make the shock rows from 16 to 20 rows apart. *Do not break up the land*, but with a good harrow or the cultivator and roller, make the surface fine and mellow and drill in your wheat. This preparation gives just the right kind of a seed-bed, but if the land is plowed and the corn roots turned under, the seed-bed is not compact enough, and the wheat is likely to freeze out. I can usually put in my wheat with less labor on corn land than on stubble or sod. As I have been uniformly successful in growing profitable crops on corn land, and there are many who have made repeated failures, and it is very desirable to seed corn land in order to bring about a proper rotation, I have thought best to give my experience condensed into a nut-shell—it is this: Keep your corn land clean; cut up the corn as early as possible; make a fine, mellow surface, and drill in your wheat, and you may reasonably expect a good average crop.

Butler Co., Ohio.

NOTES FROM THE RURAL FARM.

We have now to report the exact yields of the Fultzo-Clawson and Shumaker Wheats, both of which are offered in our next distribution. The first was drilled in on a plot measuring 150 x 55 feet or, let us say nineteen-one-hundredths or a little less than one-fifth of an acre. The yield was seven bushels or at the rate of a fraction less than 37 bushels to the acre. The Shumaker was drilled in upon a plot measuring 109 x 150 feet, or three-eighths of an acre. The yield was 12 bushels, or at the rate of 32 bushels per acre. The soil is poor—a sandy loam. Five tons of farm-yard manure were spread upon the wheat stubble Sept. 20. The disc harrow was used twice and 200 pounds of pure bone flour were sown. It was then again well harrowed, the seed of both kinds drilled at the rate of one-and-three-fourths bushel per acre on Sept. 23, and the field was finally rolled. It will be seen that the land received no special fitting and but a moderate quantity of manure—that is farm manure at the rate of about 10 loads to the acre and bone at the rate of about 400 pounds to the acre. The Fultzo-Clawson is the heaviest yield we have ever raised upon this farm, unless upon specially prepared plots of smaller size. The grain owing, doubtless, to rainy and cloudy weather during its Spring growth, is not so plump or large as it was last year. We have no doubt whatever that in more favored wheat-growing sections, Mr. Wysor's claim that it yields the largest grain of any early-ripening, hardy wheat in cultivation, will be supported.

CORN IN SEPTEMBER.

As late as it is in September, if a one-horse cultivator can be run through corn by a small boy, there will be an earlier ripening, a last crack at the weeds, and a loosening of the hard-baked crust, which will be repaid by sounder corn for early use or market either. This course is equally valuable for all crops (garden as well as field) which will admit the horse between the rows. Don't let any crop go into winter-quarters with a hard, hide-bound soil. Try a stack of corn fodder built up in alternate layers of fresh new hay and the corn, and let the cows give their opinion of it during the coming Winter, or the calves either; the cows will reply through the milk pail, the calves by their improving condition *while the stack lasts*. Dig potatoes early; cover them in a pile in the field till after the first sharp frost, then take them in.

Go to all the fairs within your reach, note the animals; look around for a change of seed for the better; let the female part of the family inspect the cookery from an economical point of view, and the patchwork from an artistic platform. Give them money enough to spend for all they see worth buying, and so shall your farm and its products for the future be fair to see. A live fair is one to which everybody goes determined to learn something, and to apply the new ideas at home. Now, to wind up with corn, as I began: corn is your mainstay, so put your faculties to work to grow it and house it in the very best manner.

Dodge Co., Neb. S. R. M.

SUCCESS WITH RURAL SEEDS.

I have this year a half acre of Blount Corn from seed of my own raising. The seed proved to be well ripened in 1880; but this poor corn year will perfect but a small proportion of ears. For fodder, however, the Blount is worth one-third more than any other variety I ever tested. It stands eleven feet high. I planted it quite too close for a corn of such immense leafage; and am as a consequence going through and cutting out the weaker stalks. By the time this cutting is finished I can cut the remainder as ripe corn. I consider the Rural has done us an inestimable favor in introducing so generally this corn. I feel confident of ripening it thoroughly in this section except in such exceedingly bad years as the present.

The Rural Branching Sorghum is a curiosity, at least, for it grows faster for being cut down. Its value as fodder I do not feel sure of. But the cow pea the Rural sent me last year I shall not willingly let go. It is the most astonishing grower, and the delight of my sheep. For soiling sheep it is admirable. It ripens perfectly here.

The Ovoid Beet is another real treasure. It is a grand cropper and is harvested with as much ease as Rutabagas. From flower and shrub seeds I have only moderate results and in the flower line nothing first-class. The willow is fine. The White Elephant stands the drought better than the most of my varieties of potatoes; but I am inclined to think the Burbank is so far the people's potato; while for early the Early Rose has not been surpassed. I believe that the Blount Corn will prove as great a revolution in the fodder as in the ear. By carefully selecting the earliest ears to ripen, we shall soon shorten its season ten or fifteen days. E. P. Powell.

Oneida Co., N. Y.

Keeping Irish Potatoes in the South

A querist lately asked how to keep Irish potatoes in the South. We have some now, Sept. 5th, that were dug last March. I don't think we have lost a peck by decay through the whole Summer. In the first place they must be dug as soon as ripe: it will not do to wait for the tops to die, for they do not die down, as they do at the North. Ours were perfectly green and in bloom when the tubers were dug. Our house stands up four feet from the ground and we have kept our potatoes by simply putting them in boxes under the house, and leaving the covers open a little to admit the air.

Bradford Co., Florida. Mrs. I. Sumner

"Golden Grains" Wheat.—Early in the Spring I received a small sample of what purported to be Golden Grains or Palestine Mammoth Wheat; also a circular requesting me to take an agency for it. I concluded to test the wheat before investing. Besides being very badly used up with rust, its growth was very short and it did not head. G. S.

Carrol, Ia.,

[This was precisely our experience with the sample of seed kindly sent to us at our request, by Mr. Haines. Eds.]

Sheep Husbandry.

COTSWOLD-MERINO SHEEP.

The Cotswold, a very old and long-established breed of sheep, has been extensively used for crossing and improving other breeds. It has given stamina and constitution to the highly and closely bred Leicester; it has helped to give size and weight and length of fleece to all the cross-bred Down breeds; one-half of the Shropshire blood is Cotswold; a fourth of the Oxfordshire is the same; the Hampshire owes some of its excellence to it, and as a sire for half-bred mutton sheep from the common native ewes of the United States and Canada, it is unsurpassed by any other race. Of late years it has been used to cross upon the Merino and the cross-bred race has been found to possess remarkably valuable points. In fact, there is no race of sheep with whose blood that of the Cotswold has been mixed, without producing a progeny better than the inferior parent, and in some cases the sire itself has been surpassed.

Perhaps the Cotswold-Merino cross is the best of all. The Merino has an iron constitution, possesses a most valuable fleece and flesh of the sweetest flavor. But its wool is short and fine and useful only for the finer, softer fabrics and the more expensive goods, while its carcass is too light and its lamb, although extremely fat and rich of flesh, is too small for profit. Crossed with the Cotswold, a lamb is produced which at six months weighs more than its dam; and a sheep which ranks with the sire in weight and with the dam in quality of meat, and has a fleece which is worth more for coarse clothing fabrics and shawls than the pure dam's wool, and is equally valuable as that of the sire. Such a sheep is essentially the farmer's sheep; for it is marketable from the age of three months, as a choice fat lamb which brings the top price, up to the age of three years, when it is a ripe wether, reaching a weight, when fully fatted, of 250 pounds. In the mean time its fleece of combing wool—the basis of the worsted and bunting goods, and the extensively used small woolen wares, fringes, braids, and trimmings—is always salable at a fourth more than double or treble X fine wools.

Mr. Joseph Harris, of Rochester, N. Y., was the first breeder to make an extensive business of crossing Cotswolds upon Merinos. The Gerrish Brothers, of Webster, N. H., have also been engaged in this pursuit for some years past. Mr. Harris has been successful in raising some fine sheep and his success has led many others to follow his example. The Gerrish Brothers have also achieved success in the same way. As an example of what they have done, we give the accompanying portrait of one of the cross-bred rams as it appeared when eleven months old. It then weighed 101 pounds and its fleece 11 pounds and five ounces. The Merino parentage is visible in its face and fore-quarters, but its general make-up and its hind-quarters are decidedly like those of its Cotswold grandsire, which was a well-bred Cotswold from Canada. This ram is the produce of a curious crossed crossing, if we may so express it. The sire was the product of a pure Hammond Merino ram and a Cotswold ewe; the dam was from a Hammond ewe nearly pure and a pure Cotswold ram. The sire and dam being each half-bred, the produce of these is half-bred also and the owners of the young ram, being well contented with the result of their experiment, have named it "Golden Mean." Just now when sheep rearing is attracting much attention as a promising pursuit, it is interesting to notice this cross which certainly offers unusual opportunities of success with materials which can be obtained at small cost and with the greatest ease. A flock of well selected grade Merinos which can be procured for three dollars per head and a vigorous young Cotswold ram at $25, will lay the foundation for a flock one of which may easily double the value of the dam before it is four months old.

GOLDEN MEAN.—FROM AN INDISTINCT PHOTOGRAPH.—FIG. 168.

Dairy Husbandry.

THE DAIRY COW.

HENRY STEWART.

Indications of Disease.

Cows are usually healthy and robust. The exceptions are the high-bred and high-fed animals kept by breeders who force their stock by every possible means to undue production. Life and vigor cannot be drawn upon so excessively, and last to the end of the common period of usefulness. The stock of these is something like a fixed quantity from which one may take small or large drafts; the larger these are the sooner will the supply be exhausted; and this is very much the case with high-kept dairy stock. The common dairy cow, moderately fed, never pushed beyond the natural period and capability for milking, lasts for 20 years without an ailment or an accident, except as the result of some carelessness or neglect. On the other hand, the high-bred Jersey cow, valued at thousands of dollars because she responds liberally to a system of forcing and makes a remarkable product of butter from high-feeding, is constantly suffering from garget or threatened with serious disease, and finally dies of milk fever. And yet the Jersey cow, notwithstanding her occasional want of constitution, will always be the favorite family cow and the "butter-machine" of the dairyman. It is therefore necessary that precautions should be used both to avoid accidental disturbances with common cows and to avert threatened dangers from those which are more subject to disorder.

The owner of a cow should know when his animal is doing well and be able to recognize at once the first approach of trouble. A healthy animal exhibits certain unmistakable signs of its condition: the appetite is regular and vigorous, the muzzle is moist and covered with drops of perspiration, the eye is bright and active, the coat is smooth, the horns are moderately warm, the milk is given in full quantity, the respiration is easy, the pulse is regular, and the process of rumination is constant soon after eating. When an animal is ailing the first effect of the disturbance is more or less fever, and this is indicated by the dryness and heat of the muzzle, uneasy or rapid breathing, coldness or excessive heat of the horns, falling-off of the appetite, rise of temperature and increase of the pulse. The frequency of the respiration and of the pulse varies in different animals, but in health the respiration is always easy and the pulse never more than 50 in a minute in adult cows. The pulse may be felt most conveniently on the jaw near the large, flat muscle which closes the jaws. Here the sub-maxillary artery comes from the inside and passes over the edge of the bone and up the side of the face in front of this large muscle. The artery may be felt by placing the first and second fingers of the right hand on the left jaw towards the inner side of the bone, and the thumb on the outside to keep a steady pressure. The brachial artery may be felt on the inner side of the fore-arm, below the shoulder, level with the elbow joint, and in advance of it. A little practice with moderate pressure of the fingers will soon fix the places where these arteries can be found and the pulse examined.

The next usual symptom of disorder is the suspension of rumination, or "loss of cud." This is generally accompanied by roughness of the skin, dullness of the eyes, and apparent lassitude, the cow moping and standing apart with the head down and occasionally grinding the teeth. When these symptoms are noticed, it is time to be on the alert to discover the cause of the trouble and apply an immediate remedy. Usually some circumstance may be recalled, which will account for the disturbance—some over-feeding, some exposure, or neglect, or even some change of feeding, which is often sufficient to disarrange the system and

cause sickness. Neglect of timely precautions may in such cases bring on serious disease of the blood and a general inflammatory condition which will subject the animal to danger of infection by means of germs of disease which are always present in the atmosphere, waiting for a favorable opportunity of becoming sown, in a suitable soil, so to speak, where all the requisite conditions for their immediate growth may be presented. The first approaches of disease are usually silent and inconspicuous. Some little changes may be noted, but these seem so insignificant that they are passed over without any serious thought, and are forgotten. Here is the greatest mistake that is made. It is far easier to prevent mischief than to cure or avert it when it has arrived. The lower animals, with dull nervous systems, patient and uncomplaining, exhibit no signals of distress until the strength fails and disease has taken a strong hold upon them. Too often remedies are then too late, which at the outset might have successfully prevented a serious attack.

When cows are kept under good sanitary regulations, in clean, well-ventilated stables, they rarely suffer from any other disorders than those of the digestive organs, and there are no diseases more easily remedied, or that at the same time, if neglected, more effectually poison the blood and result disastrously, than these, so that immediate measures should be taken to remedy the trouble. These are fortunately very simple. A dose of a pint, or a quart, of linseed oil, or even melted lard, will usually restore the functions of the stomach and remove the difficulty; or 12 to 16 ounces of Epsom salts may be substituted, dissolved in a quart of warm water, and followed by copious draughts of warm linseed gruel or bran slop. Even the common and popular remedy of a salt mackerel freed from bone and crushed in the hands and put down the throat, is a reasonably effective one, because the mackerel contains considerable oil and fat, and the salt excites the stomach, both together having the desired effect.

When these simple remedies with a concurrent change of food and the use of soft, nutritious mashes or gruels, fail to arrest the disorder, a very complete and patient examination should be made, and the peculiar symptoms noticed written down, that they may be more accurately considered. A labored respiration with short, hasty, catching breathings, or heavings of the sides, redness of the eyes, cough or rustling of the breath, indicates disorder of the lungs. Dark, discolored and fetid dung, streaked with blood and mucous; dark-colored, hot urine which smells strongly; arched back, and head stretched out low, are indications of blood disorders or intestinal disturbances, or both, for the latter is a usual effect of the former, and the contrary even happens at times. General weakness, with tumors, swellings, lameness and eruptions on the skin signifies constitutional disorders, such as tuberculosis, and other similar hereditary diseases of the blood, which are not inflammatory in type, but show in their action an effort of nature to throw out the offensive matter. Usually other diseases than these, local in their character, indicate themselves so clearly that it is unnecessary to specify particularly in regard to them. When the most conspicuous symptoms have been noted and written down, reference should then be made to the list of symptoms to be given hereafter, which will greatly help to fix the nature of the disease; and, when that is known, to choose the treatment proper for each special case will not be difficult for any person of common intelligence.

Horticultural.

RURALISMS.

I VERY much incline to the opinion that the practice of letting the old wood remain in raspberries and blackberries till Spring is much too common. The reasons given for it do not seem to me to be altogether well founded. It is said by those who practice it that the old wood affords a good Winter protection for the new. I have not been able to convince myself that this is really so; on the contrary, there is good reason to believe that it makes the new wood more tender, and hence more liable to be winter-killed. Wood that is grown fully exposed to the sun and weather ripens more thoroughly and becomes tougher than wood that is shaded, and is consequently better prepared to endure the rigor of Winter. Besides, we usually have more time to cut out now than we do in the Spring, when it is too commonly the case that, instead of "pushing things," things generally push us. Therefore I conclude that it is wise to begin to cut out the old canes from the raspberries and blackberries immediately after the fruit has been picked, and to continue it till the work is done.

IT may not generally be known that the so-called fancy caladiums (Chantinii, argyrites, etc.) can be easily grown in pans or tubs of water, and it greatly lessens the labor of taking care of them, while it is in accordance with their natural habits. I saw them doing finely in the basin of a fountain at Mr. Brooks's, a trifle shaded. The pots were plunged in the basin, and only the blades of the leaves, with a short length of stem, appeared above the surface of the water. When the pots are placed in pans, the latter should be deep enough to hold an inch or two of water. The caladium is one of the comparatively few plants which may be safely grown with the plants standing in saucers. Water, and an abundance of it, is a necessity with these, and without it they soon lose their freshness and beauty. Even a single wilting, in the early stages of growth, will often mar a plant for the season, and sometimes kill it. Too large a percentage of these charming plants die within a few weeks after being bought, and there is no doubt in my mind that this is simply because beginners (and even some "old hands") are not familiar with the craving of these plants for water. It will be safe, therefore, for beginners to set their pots of caladiums in saucers, and keep the saucers well supplied with water. Where there is a gardener about to water regularly the necessity for this may not exist; still, all plants will do best when their natural wants are freely supplied.

MIGNONETTE and Sweet Alyssum have long been among the most popular of winter-flowering annuals, and deservedly so. There are many amateurs, however, especially among the ladies, who do not seem to know that the seeds of these annuals may be sown at any time during the month of September for Winter flowers. The seed of the Sweet Alyssum may be sown in a shallow box, or pan, or pot, and transplanted as soon as out of the seed leaf. If plants have been grown in the border, seedlings in abundance will be found around them at this season of the year, and may be transplanted into pots. The double and variegated varieties may be grown from cuttings, or the old plants may be cut in close, and then transferred to pots. Tom Thumb is a very dwarf, compact, free-flowering variety, and desirable for winter blooming. Mignonette is difficult to transplant, and the seed should therefore be sown in small pots. The proper way is to put four or five seeds in the middle of each pot, and thin out from two to three plants as soon as they are out of the seed leaf. Repot them as soon as the ball of earth has become filled with roots. Mignonette is not a first-class room plant, but may be grown tolerably well if kept near the glass in a cool room, and regularly watered. Its grateful fragrance, however, makes it worth almost any trouble.

THE early part of September is a good time to prepare room plants generally for their Winter work, the production of flowers. The abutilon is an excellent plant for room culture, being easy to grow, generous in bloom, and adapting itself very well to the changeable conditions always to be found in the best of rooms. There is often, however, too much heat for this class of plants. The best and most satisfactory of the abutilons for room culture is the Abutilon Mesopotamicum (Megaponticum, Mauritanicum, etc.), and the variegated form is much the most striking, and blooms abundantly. Old plants I cut in freely, and either shift into a larger pot, or, if already in a large pot, pare off an inch or so of the roots and soil, and return to the same pot. In this case manure water must be used occasionally during the Winter. I prefer to grow the abutilon as a standard for the room. Cuttings will strike readily if put in now, and make good little winter-blooming plants, coming in, however, a little late. The best yellow I have grown is William Fowler, and the best dwarf white, Snowstorm. Of the dark-colored kinds, Santana is the best for rooms. I must say here, however, that the abutilon does not enjoy an immunity from insects, though it has been so stated. The scale and the green fly are the principal enemies to contend with, and will make trouble unless watched.

HORTICOLA.

LOST RUBIES RASPBERRY.

I SEND the RURAL a cut of this berry, plants of which were sent to it last Spring for testing. It appears to have some foreign blood, yet endures from 10° to 20° below zero without injury, unprotected, in various parts of the country. With me it has proved more vigorous and productive than the Cuthbert, and it is also larger and firmer. I have found no red raspberry equally productive if planted near some other variety; if planted in an isolated position the fruit is apt to be imperfect. Lost Rubies appears to be a new variety, but I have no evidence that it is, and recommend it solely on the merits of hardiness, productiveness, fine quality, beauty and vigor. I have fruited it six years, during which time it has never failed to yield large crops, and it has ever been the favorite with the pickers, on account of the rapidity with which it fills their

FIG. 469.

baskets. Last Winter was a severe test on the hardiness of plants, but the canes of Lost Rubies, standing often six feet high, uncovered, in the open fields where blackberries and peach buds were ruined, were entirely uninjured. Secretary, P. C. Reynolds, of our Western N. Y. Horticultural Society, says it is as large and handsome as the Franconia.

Clifton, N. Y. CHAS. A. GREEN.

[Mr. Green states, in a private note, that the cut of "Lost Rubies" exaggerates the size of the berry, though it is naturally large.—EDS.]

Rural and other Seeds.

I give results of some experiments with "RURAL" and other seeds.

Branching Sorghum: only a few seeds vegetated; after getting a start the plants grew well, but the drought damaged them seriously. It certainly branches freely.

White Elephant Potato: yield of fine potatoes only some 20 or 30-fold I think. The plants were injured much by fowls.

Dianthus: quite a number of plants giving exquisitely beautiful double and single flowers.

Washington Oats: I received, I suppose, about one ounce; drilled them in fairly good land and gathered about half a peck: handsome grains.

Asparagus: I have plants of both varieties sent, but of course cannot yet judge of their value. So much for the "RURAL" seeds. I will now give results with some procured from other sources.

Blount's Prolific Corn—(from Peter Henderson): I planted about an acre and a half. It is not yet gathered, but I estimate the yield at about 40 bushels per acre, though the season has been bad and the corn stands too thick. I think the crop at least 25 per cent. greater than it would have been if our native corn had been planted. My neighbors are asking me to reserve seeds for them.

Of muskmelons of half a dozen kinds, Bay View (seeds from the Agricultural Department, U. S. Government) proved best and is the only sort of which I saved seed.

Perfect Gem Squash—(seed bought of Thorburn & Co.), I had several flourishing vines and many blossoms, but *not a single specimen of fruit*. I cannot imagine why.

Beans: Of the Black Wax, Golden Wax and Ivory Pod—all snap beans—the first appears to me still the best.

Sugar Corn: Stowell's Evergreen and Egyptian are both very fine—better than any others that I planted. W. R. G.

A Very Pertinent Inquiry and Good Suggestion.

WHY does not some person (or persons) tackle and solve the question how best to destroy the aphis or plant louse pest? The only cures I have ever heard of are, 1, a strong tobacco decoction, or, 2, one from quassia chips into which aphis-infested shoots are to be dipped. These, more especially the quassia decoction, will kill the lice without injury to the foliage. But we want something cheaper and more easily applied. Is it the bitter of the quassia that kills the aphis? Might not the weeds boneset (thoroughwort) or burdock or tansy or wormwood, poplar or willow-bark in decoction also kill them—or, better still, is there not some dust as effectual and practical as Paris-green with plaster for the potato bug? Will not lime, salt or soda or some other cheap mineral combination do it? For one, I am heartily ashamed that I have not more widely experimented on this wretched pest. And, for one, I mean to do better in the future, beginning if possible to-morrow as to-day is Sunday. Will not many of your noble army of correspondents, agricultural college professors and amateur horticulturists as well as professional nurserymen and fruit growers unite at once in the good work of removing this opprobrium of this latter day from our horticultural escutcheon? Think of it—fifty million live Americans so irremediably nuisanced and damaged in their horticulture by this insignificant aphis or green-fly! Who will first discover and publish a cure? F.

The Vineyard.

THE CREVELING GRAPE.

SOMEBODY has blundered in the botanical classification of this grape. The books place it in our Labrusca class; but it is really a hybrid between Vitis Labrusca, and Vitis Cordifolia. The proof of this is demonstrated in growing seedlings from it. Some three or four years ago I fertilized a cluster of Creveling with pollen from Iona, and have now grown 20 or 30 seedlings from the cluster. Most of them are strongly marked Labrusca grapes; others seem like hybrids; but several of them are clearly, and unmistakably of Cordifolia origin. Where did these Cordifolia vines come from? Surely not from Iona, for I have often grown Iona seedlings, and have never seen any evidence of a cross in that grape. Some of them look exactly like Catawba, showing clearly Iona origin. I think growing seedlings the surest test of classification. I have always thought the Creveling a hybrid; but supposed from the appearance of the panicles, that it was between Labrusca and Æstivalis, but I was mistaken. If some of our botanists would revise the botanical classification of our native grapes, it would be a genuine and much-needed contribution to our horticulture. D. S. MARVIN.

Miscellaneous.

Espaliers.

The figures of these as trained and exhibited at the Paris Exposition of 1878, and copied into the RURAL of Aug. 6th, are very pretty to look at, and in the northern climate of Europe—particularly in the moist, cloudy and rainy districts—the trees grow well and produce abundantly. In Great Britian some kinds of fruit cannot be ripened in open ground except by training the trees espalier-fashion against a wall or plank fence. But in the United States, even as far north as Massachusetts, I have rarely seen good results from espalier-trained trees. The trunks of the trees being left bare of any shading by the branches, seem to suffer from our hot suns, produce inferior fruit, and soon die. In the American, hotter and drier Summer climate, the shade and moisture of the branches drooping over the stem of the tree, seem necessary for its healthy growth and a good production of fruit. Standards therefore are much to be preferred.

A.

CATALOGUES, ETC.

J. CHURCHMAN, Burlington, N. J. Circular of the new raspberry, the "Superb."

GEO. S. JOSSELYN, Fredonia, N. Y. A Colored plate of "Fay's New Prolific Red Currant," life size.

H. E. HOOKER, Rochester, N. Y. Wholesale price list of fruit and ornamental trees, grape-vines, roses and clematis.

GOULD BROTHERS, Rochester, N. Y. Wholesale catalogue or trade list of the Monroe Co. Nurseries.

TRANSACTIONS of the Massachusetts Horticultural Society for 1880. Part II, Robert Manning, Sec'y., Salem, Mass.

CATALOGUE OF JARDINE HERD OF AYRSHIRES—Vine Vale Farm, Hamilton P. O., Canada.

T. S. HUBBARD, Fredonia, N. Y. Wholesale price-list of grape-vines, small fruits for the Autumn of '81. The noted Prentiss Grape a specialty.

JAMES M. THORBURN & CO., 15 John St., New York. Descriptive Catalogue of Bulbs and other flowering roots—with simple and full directions for their culture and management. Sent to applicants without charge.

WILLIAM RENNIE, Toronto, Ont., Canada. Circular of seed wheat.

WE HAVE received from the Kansas State Board of Agriculture its Second Biennial Report for 1879-80. It is a volume of 640 pages; is full of agricultural information, and reflects much credit upon its compilers. The first 108 pages are devoted to colored outline maps showing the railroads, water-courses, post offices and school-houses in each county, and at the end is a map of the State. A statistical table, or summary by counties, showing number of acres, product in and value of the several crops for 1879, occupies pages 109 to 226. "Kansas Topography, her timber, coal and building stone resources," "Taxable pro-

perty" of Kansas, her churches, newspaper press, railroads, etc., make up the balance of this interesting report. It is worthy of imitation by many other States that now seem to think "the less said about agricultural matters, the better." J. K. HUDSON, Secretary.
Topeka, Kansas.

R. H. ALLEN & Co's., Catalogue of Agricultural Implements, Seeds, Fertilizers, etc. Office 189 & 191 Water St., N. Y.

CATALOGUE AND PRICE LIST of Edward Harrison's Standard Grinding Mills manufactured at 135 Howard Avenue, New Haven, Conn.

OHIO CROP AND STOCK REPORTS for July and August 1881, comprising reports from every county in the State, together with a paper on values and valuations of Fertilizors, also one on the Ohio Fertilizer Law, by W. I. Chamberlain, Secretary of the State Board of Agriculturo.

TARIFF TRACTS, Nos. one and two, on the American Policy of Protection to Home Industry, published by the American Iron and Steel Association, 265 South Fourth Street, Phil.

VETERINARY MEDICAL REGISTER of the U. S. compiled for the Journal of Co-operative Medicine, W. L. Hyde & Co., Publishors, 22 Union Square; N. Y.

THIRTEENTH QUARTERLY REPORT of the Penn. Board of Agriculture for June, July and August 1881. Thos. J. Edge, Sec.

SECOND QUARTERLY REPORT of the Georgia Department of Agriculture, for the quarter ending July 31, 1881. J. T. Henderson Commissioner.

RURAL BRIEFLETS.

A COMMUNICATION from a correspondent in Washington, Ga., states as follows: "A carload, (a little over 300 bushels) of wheat was shipped from this depot on August 30, to the Department of Agriculture at Washington, D. C. The price paid for it was $2.50 per bushel. It is known as the Bill Dallas Wheat, and has been raised successfully for about half a century in the neighborhood where this shipment was purchased."

We have never before heard of this wheat. The price considered, it should prove something extraordinary.....

FROM a subscriber who has shown his friendship towards the RURAL NEW-YORKER in many ways we print the following note:

"IN reply to your letter of Aug. 12, making inquiries in regard to Golden Grains Wheat losing its beard. I would say that it does not lose its beard until a few days before ripening. In answer to your next inquiry "Do not they fall off as in the Centennial?" I would say that they do not; that the Centennial does not lose its beard with me. It does seem a hard matter to convince you of the merits of Centennial and Golden Grains. I have raised them both and find a wide difference between them. The Golden Grains is similar to the Centennial; the difference is in the wheat; the Golden Grains is much the larger in kernel. In order to convince you that you are wrong—if you desire to be fully acquainted with the two varieties—I can send you samples of each; sow them side by side and carefully note their growth. It does seem to me that you among all others should be fully posted in regard to the different varieties of wheat, as your Wheat Special is an interesting paper; but it should on all matters pertaining to growth and culture be in advance of the times, not behind."....

THE Black-bearded Centennial loses its beards just as the grain ripens, first turning black. That is just what the so-called Golden Grains does, in so far as we are advised. We have shown heads of both to good judges of wheat, and they have been unable to determine which was which. We have compared the kernels also of both kinds, and no difference either in size or appearance (even under a magnifying glass) presents itself. It is true, as our friend states, that the RURAL should be in advance rather than behind the times in such matters. We have been the first to remark upon the similarity (identity as we believe) of the Black-bearded Centennial and Golden Grains, and the evidence we have accumulated in proof surely does not justify our friend's reproach.....

IT should be worth something to the public to be informed that they have been paying from $60 to $100 per bushel (or at that rate) for a grain disguised as new by a well selected, ingenious name; though under its true name it could have been purchased for a small part of such prices.....

SEVERAL of our leading seedsmen were induced to buy and sell the "Golden Grains" Wheat from the claims made for it by Haines & Co., of Philadelphia, who were supposed to control it. We have the assurances of two of those leading seedsmen that they believe it to be Black-bearded Centennial, and that they will henceforth sell it under that name.....

OF all our roses this year Antoine Mouton and Mad. Charles Wood are the freest late bloomers. Both are what is called Hybrid Perpetuals—the first of a lively red color, large and finely shaped; the second of a brilliant crimson, large and as double as it well can be.
.....

THE watermelon seed from Mr. B. F. Rogers, of Orville, Ala., ripened fruit Aug. 25. They are large, long, dark-green with darker stripes, thin-skinned, crisp and sweet. The flesh is pink—seeds white. The largest weighed 21 pounds. All melons in the neighborhood of the Rural Grounds this season are small and scarce.....

WE print the following letter because it pithily presents a subject respecting which many have written us:

"I am sure you do the patrons of your excellent paper great injustice by omitting to furnish an index of the principal matters in each number. Often, very often, one wishes to refer to back numbers for some information on a particular subject, and the time, trouble and difficulty in finding it renders the attempt often fruitless and always annoying. This would be and ought to be remedied by an index of the principal subjects in each number. I had rather add 25 per cent. to my subscription than to be without the index; indeed I think the index referred to would add that amount to the value of the paper."
Mt. Lebanon, N. H. E. H. K.

A comprehensive index to each number of the RURAL would fill the better part of one column. The paper is already so crowded that we find it impossible to do justice to our contributors and to the several departments which it is desirable should be fully treated. A weekly index costs us nothing, and we are very willing that their wishes should be deferred to. It is not easy, however, to determine whether a majority of our readers do or do not prefer the index. It should be borne in mind that our annual index is prepared with great care, and that that fully serves for reference to all except the numbers of the current year. It seems to us that the weekly index is not worth the space it would take.....

WE have received from Messrs. Holmes and Sweetland a sample of Scotch Fife Wheat weighing 61 pounds to the bushel, yielding 35 bushels to the acre and harvested Aug. 7 to 12 of this year. It was raised by Mr. Nels. Overbee, of Moorhead, Clay Co., Minn.....

What Others Say

WHAT IS A POLLED ABERDEEN?—We make the following extracts from an interesting article in the Ag. Gazette (England) discussing this question: Herodotus, in his Fourth Book dedicated to Melpomene, notes the existence of polled or hornless cattle among the herd of the ancient Scythians. Possibly this is the earliest notice of polled animals of the bovine species. . . . . One of the earliest notices of polled cattle in Scotland is made by Hector Boece—educated at Aberdeen University, in his work published early in the sixteenth century. Captain Birt, 1725, in one of his noted "Letters," describes the singular appearance, "like so many Lincolnshire calves," presented by 50 cows that "had no horns," in swimming across a ferry. Sir Walter Scott in his Old Mortality (the scene of which, however, is laid about 1670) mentions a "humble-cow—the best in the byre," of Niel Blaine. Dr. Norman Macleod in his Reminiscences of a Higland Parish, gives a beautiful legend, the "Spirit of Eild," in which "three dun, hornless cows" figure as the embodiment, apparently, of ideal bovine beauty and purity, and it is interesting to note these dual characteristics of the Highlander's "fairy cattle" The last three references must allude to Galoways, which however, it should be noted, were previous to 1750 universally horned.

There are six words we are acquainted with applied to hornless cattle—"hummlio," "doddie," "cowie," "maol," "nat," "poll." We have seen that there are at least three varieties of the first. Dr. Johnson thought it allied to humble (the same, he thought, as its use in that in the stingless "humble bee"). But Jamieson differs from the great lexicographer, and shows it has no affinity, but is derived through "homyl," from a root signifying mutilation, and allied to "hummelled," as applied to barley.

Any visitor to the Birmingham or Smithfield fat stock exhibitions at Christmas, or the great London Christmas market at Islington, will not long remain in doubt as to "What is a Polled Aberdeen?" In the many circles connected with the manufacture of meat—of all the now highly wrought beef-producing machines, the Polled Aberdeen is the acme—the very term is the world-wide current superlative of perfection. The Aberdeens, as seen densely lining the rails of Copenhagen Fields, display their characteristics grandly. They have a fine expression of countenance—mild, serene, and expressive. Fine in the bone, with clean muzzle; a tail like a rat, and not ewe necked; short on the legs; a small, well-put-on head, a prominent eye; a skin not too thick or too thin, covered with fine silky hair to the touch like a lady's glove; a straight-backed, well ribbed up, and well ribbed home: hook bones not too wide apart—level from the hook to the tail; well set in at the tail—free from patchiness there and all over; deep thighs, with a good purse below him; well fleshed in the fore breast, with equal covering of fine flesh all over his carcass. Such an animal he is, that when standing behind you can see all his points at once, and altogether with the appearance of his perfect "meatiness" bursting out of his seal-skin, smooth, and glistening covering.

As to early maturity we need not say much. The Editor of the North British Agriculturist, some years ago, declared he could produce evidence on this point so abundant that "he would not be able to find room for it in one whole issue of the Agriculturist." Partisans of other breeds have since the Paris exhibition had this very thoroughly, we think, impressed on them. . . . . A great deal is written and spoken about "Aberdeenshire crosses;" Short-horn men indeed seem to find in this a never-failing text to advance the praises of their own favorites. So they well may, for in how many reports of English Christmas exhibitions do we read "the Polled Scots and Aberdeenshire crosses continue to be the backbone of the exhibition." . . . . . For some time back the use of the Short-horn sire has rapidly given place in the north to the use of the Polled Aberdeen sire on Short-horn and cross cows. This method is giving the greatest satisfaction, and the best crosses we have ever seen have been so manufactured. The result of such is that such cross is at least three-fourths Aberdeen. These facts are highly important to owners of other breeds who are turning their thoughts to the "all round" Aberdeens.

As to the milking properties of the Polls, if they have been supposed to be naturally inferior milkers it is a misrepresentation of facts. The old Aberdeens early in the century were traditionally famed as dairy stock. Youatt records them to have been great milkers and butter cows, and states that among the best dairies they yielded up to seven gallons per day. Such were their capabilities that they compared fully with the Ayrshires, and were introduced into the northern counties on account of their dairy fame.

A WORD or two as to the relative positions of the Polled and Short-horn breeds in the North. During the last few years the Polled have turned the tables on the latter in every possible way. The Polled have increased in favor day by day, obtaining every day new and more favorable supporters, making better and better appearances at shows, and extending far beyond its boundaries in every direction, with a greater demand for animals for the south of Scotland, England, America, and the colonies. These results are easily traceable to the enormous advantage and prestige gained for the breed at the Paris Exhibition of 1878, the fame of which has penetrated the remotest corners of the earth.

WE have often had occasion to admire the shrubby Magnolia Halleana or stellata, a specimen of which thrives finely in the Rural Grounds. Mr. Samuel Parsons, Jr., in his prize essay read before the Mass. Hort. Society, says that it is the most compact and slow-growing of its race. It has been introduced from Japan for many years, but has not until recently been received with anything like the attention it deserves. The leaves are dark-green, somewhat small for a magnolia, and given to disposing themselves in very picturesque masses. If it is the most dwarf of Asiatic magnolias, it is also the hardiest and most readily transplanted. Its prime charm consists in its flowers. They are more than creamy-white, they are snow-white, with a peculiar brilliance of texture; but, more than all, they are delicately fragrant, more fragrant than any other hardy magnolia. When open, these flowers, which come earlier than the bloom of any other magnolia, and before the leaves, remind one of the star-shaped clematis, but in their loveliest form, half-opened, their graceful curves are like those of white water-lilies. The earliness and beauty of this flower, and the sudden manner in which it bursts into bloom, indicate a capacity for producing early forced flowers of the finest quality.

WHEN TO CASTRATE FOALS.—Farmer Miles, the American veterinary surgeon, advised a writer in the London Agricultural Gazette that foals should be castrated when about four months old, *i. e.*, as soon as the parts are sufficiently developed. The humanity of the practice is undoubted, for a foal is easily thrown; he seems scarcely to suffer from the operation, as immediately he is released he gets up and runs to his mother as if nothing had happened; there is little or no swelling, merely a slight stiffness for a few days, and there is no trouble in keeping him by himself for the first Spring.

BROAD TIRES.—A writer in the Times says that a year's experience with broad wagon-wheels is conclusive as to their value. A four-inch tire will carry two tons over soft ground with greater ease to the team than a two-and-a-half inch tire will carry one ton. The wheels are not so much strained by stones and rough tracks on the road and the road is not cut up, but, on the contrary, is packed down and keeps smooth. The prevalent idea that the draft is increased by widening the tire is altogether baseless; on the contrary, a wide tire reduces the draft. The extra cost of the tire is repaid many times over every year in the extra work that can be done by a team.

THE MUCK DELUSION, remarks the Editor of the excellent Journal of Chemistry, which prevailed twenty or more years ago, regarding the manural value of what is known as *muck*, has lost some of its force, but it still exists among farmers, especially those new in the industry. . . . . The fallacy of muck consists in the error of regarding it as manure, or a substance which turns spontaneously into manure without cost to the farmer. The term "muck" is usually applied to the dark, wet, unctuous product of low meadows, and the black mud from the bed of marshy lakes and frog ponds. . . . . If it had absolute or potential value as manure, the wet mud from meadows cannot be hauled long distances with profit, but it has not under any circumstances manurial value. The peat of bogs, as freshly taken out, averages of water fully 90 per cent., and a load of this of 2,000 pounds gives but a couple of hundred pounds of dry humus at the barn. If through inexperience or want of close observation a farmer backs up his cart to a mud hole, dry in Summer, he loads into it a substance which is usually valueless. . . . . The true value of muck is well understood among chemists, or at least it ought to be. It really holds no available plant food, although it contains some nitrogen and carbonaceous elements. These do not exist in it in available forms, and cannot be brought into that state at a cost which will under ordinary conditions warrant transportation and manipulation. Muck has a certain value as an absorbent of liquid manure, and it may pay to procure and dry it for such purposes; but to meet this want it must be convenient to the barn, and of good quality.

PETROLEUM ON TREES AND BUSHES.—Dr. H. Gibbons, at a recent meeting of the California Academy of Sciences, said that since he put petroleum on the trees in his garden they had grown better and faster than ever before, and given better roses than before. The petroleum seems to kill the scale insect. The handsomest rose he exhibited was from a bush which looked nearly dead a short time before. The petroleum was mixed with castor-oil. It is applied sparingly, and great care is taken that it does not run down the roots. Perhaps in a crude state the petroleum would be bad, even on the stalks; but mixed with the castor-oil it appears to be advantageous to the plant.

AS REGARDS the distinction, nutritively considered, between the whole grain of wheat and the white flour of the interior parts, there is no room for doubt or dispute, says the Journal of Chemistry. It is the whole grain which constitutes perfect food; the white flour is incapable of affording complete and healthful support under all conditions of human existence. The white loaf is very beautiful and fashionable, but it does not contain the phosphates of magnesia, lime and soda which are found in the brown loaf. These salts are stored for some wise reason, doubtless, in the bran or outer covering of the grain, and they are certainly lost to a large extent in the bolting process.

BERMUDA GRASS ON THE LEVEES.—General Bidwell, of Chico, says the Pacific Rural Press, who has tested Bermuda Grass on the levees and as stock feed, says that he regards it as a very successful protection to levees; that it quickly forms an almost indestructible turf against the action of water, and as far as spreading is concerned, the more it spreads and covers the ground in that dry country the better. All kinds of stock eat it with great eagerness, and it furnishes an excellent and abundant supply of green feed during the dry and wet seasons alike, except when killed down a short time by frost in Winter.

MILK DIET.—From a first-rate article in the Christian Union we take the following:—"Let me feed a sick patient, and who will may give the medicine. In an illness far more depends upon the proper feeding of the sick per-

son than is generally believed. If the strength is sustained from the beginning by nourishment, given judiciously, there is better prospect of its being equal to the demand that must be made upon it later. Begin, then, from the first to give liquid nourishment in small quantities frequently. It is more easily swallowed and digested than anything solid, however delicately prepared, and as there is generally thirst, it is, as a rule, readily taken. The chief reliance must be placed on milk. One pint is equal to a full-sized mutton chop, and it is incomparably more nourishing than any animal broth, not excepting beef-tea, which has too long held a rank to which its merits are far from entitling it. . . . . Boiling meat coagulates the albumen, the principal nutritive element, converting it into a solid which is carefully eliminated when the broth is strained, leaving behind a mass of shreds floating in water. Milk, on the contrary, contains 14 per cent. of solid matter, and is rich in the constituents necessary to supply the wants of the system. One-eighth part lime-water added to the milk will prevent it from disagreeing with the most fastidious stomach. . . . . When the yelk of an egg cannot be borne, the white may be given with perfect impunity. Albumenized milk is prepared by shaking in a wide-mouthed bottle or jar one pint of milk with the whites of two eggs. These are so thoroughly incorporated by this process that few would suspect their presence, and the mixture is much more nourishing than the milk alone. . . . . Albumenized water is a refreshing and at the same time a nourishing drink. It is prepared like the milk, by shaking together the whites of two eggs and a pint of cold water, and flavored with lemon juice, a slice of lemon being left floating in the glass. Cold toast water can be used to make it.

DR. NICHOLS says that there is not a function of the body that cannot be sustained upon the principles stored up in the wheat berry; and there is not a nerve or tissue that cannot be nourished and fed by it alone. . . . . Virginia proposes to have an industrial exposition of her own. Good luck to her! If the world knew her resources she would not be troubled about how to pay her debts.—Herald. . . . . For every tree cut down at least two should be planted. . . . . The Emperor of Germany has, by imperial decree dated June 1, 1881, awarded the gold medal of merit for agriculture to Mr. Lawes and Dr. Gilbert jointly, in recognition of their services for the development of scientific and practical agriculture. . . . . The over-feeding of exhibition cattle was the theme of the Earl of Lathom's remarks at a late show in England. The noble lord said it might be asked why he did not exhibit, and his answer was a very simple one—because he did not like spoiling his animals by getting them fat for show. . . . . An Iowa paper, the Cherokee Times, thinks that the large increase of wire fences in that State may be responsible for the unusual slaughter this year of live stock by lightning.—N. Y. Tribune. . . . . FIGARO:—"Un très vieux général vient d'épouser une jeune fille de dix-neuf ans. Tout heureux, il demande à son ami intime, un médecin. 'Crois-tu que je peux espérer d'avoir des enfants?' 'Espérer,' réspond le médecin, 'Oh! non! craindre, c'est une autre affaire.'"

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

BEEBE, White Co.—Have had an extremely dry spell of hot, dry weather that has burnt up all vegetation. Corn has been cut short and no fodder has been saved. Cotton opened prematurely and the bolls are very small; the yield won't be half as large as that of last year; so say my neighbors who have been raising cotton, and little else all their lives. Everything is suffering for want of water, even the leaves of the trees are "browned" as if by frost. I live near the road and never saw so much travel in this section. Some say they are from Texas going North and West, because they cannot see how folks can live in their part of the Lone Star State, as there was nothing to live on when they left; others come from nearly all parts of this State, all seeming to be disgusted with their own sections and seeking some better place. My crops are poor enough; but every one of the wayfarers envies me, as mine, they say, are much better than those they have seen in their wanderings. A neighbor of mine has just returned from a visit to Monroe and Woodruff Counties and he says people there are miserably off; most of them having mortgaged their crops and those who had land having given trust-deeds on it to the merchants. Many renters have moved away leaving uncut small crops to pay big debts. Many hogs are dying hereabouts, more I think from want of food and drink than from any disease. Even the people here have only corn bread, pork and now and then a little wheaten flour. Folks complain of lack of vegetables, but I fear many will be sorely stinted in their present diet before next harvest. Merchants in the towns are refusing to give any more credit—and the Lord help those that need it. H. B.

DAYTON, Sebastian Co., Sept. 5.—A two months' drought still continues. Stock are suffering for water. The wheat crop almost a total failure. Oats fair. Corn hardly half a crop. All Winter wheat. Cotton runs from 250 to 450 pounds per acre—mostly the former. Fruit and vegetables a total failure. Very few peach trees stood the hard Winter. Most of the apple trees are dead. So are most of the small fruits. G. W. R.

California.

SANDERS, Fresno Co.—The RURAL's Florida correspondent's experience with his "flayed elephant" is so in contrast with mine that I cannot forbear sending a statement of the facts in my case. I cut mine into single eyes, and planted them in my best potato land, on a ridge between deep furrows: the furrows were filled to heaping with stable manure which was kept saturated with water admitted through a bamboo stalk from my irrigating ditch. On Aug. 10th. I dug them,—130 pounds from the single tuber. These are planted and being cared for in like manner, and from their appearance I have contracted to deliver two-and-a-half tons of their product in November at five cents per pound, and shall have quite a stock of Elephants still on hand. W. A. S.

Canada.

TORONTO, Ontario Co.—Winter wheat which was sown early averages 35 bushels to the acre, but that which was sown late is a failure. Barley averages 36 bushels to the acre. Oats are very heavy and average 55 bushels. Peas look well and promise to be an excellent crop, but we are obliged to sow them late in order to escape the pea weevil. No clover seed. The apple crop is very deficient. No cherries, and very little small fruit of any kind, with the exception of grapes. The Washington Oats far exceeded my expectations. From the small package received there is the enormous yield of 18 pounds. A. R.

Connecticut.

BLOOMFIELD, Hartford Co., Sept. 13.—The people of this section have cause for rejoicing in that abundant crops are the reward of their labors. The cold and plentiful rains in early Spring, that served to delay the season, making it at least two weeks later than usual, aided in producing a plentiful crop of grass, a product of the first importance in this vicinity. The late season, however, somewhat interfered with the usual routine of farmers' work, and at the time when haying is usually completed, tobacco demanded attention, and the result was that grass was in the meadows later than in any previous year since the advent of mowing machines. Tobacco started late, but has grown rapidly during the past four weeks, promising a fair crop, some of which is already housed. Corn is looking well, and potatoes promise a good yield; but I hear fears expressed that they may rot. Some "White Elephants" that found their way here in consequence of the notices in the RURAL, have given satisfaction; but it is believed they have not done themselves justice so far as size is concerned. The tops which were luxuriant, measuring between four and five feet, after a heavy rain suddenly stopped growing. The potatoes are large when compared with other varieties, but have not as a whole attained the size expected. I think I have never seen the fields greener or the forests more luxuriant at this season. The frequent rains have kept everything in growing order, and while we read of the terrible droughts in other sections, we feel thankful that this is not so afflicted, and it seems to me to be fortunately situated in this respect, for during the past 40 years I do not remember more than two or three instances where any crop has been materially injured by drought. Occasionally a well will be exhausted or a pasture stream become dry, giving a little inconvenience; but such droughts as frequently visit other sections are here unknown. Regarding fruit: This is an "off" year for apples, and the supply is scarce and quality poor. Pears are abundant, but not so fair, or good in quality as in some years. A few peach trees I have seen are giving evidence of the return of what may be called the peach cycle—of which I spoke last year, being laden with fruit. Who can give a reason for the fact that in this county peach trees will for a few years flourish and bear well, then all die out, and for another term of years it will be as impossible to raise peaches here as oranges. Since my remembrance there have been at least three of these cycles. An old farmer told me a few days since how he killed Canada thistles which I will add in closing. He said "I cut 'em close, put on a lot of brine, and sprinkle with salt beside. Then turn in sheep, and they, to get the salt, eat the thistles so close I never see more of 'em." L. A. R.

WATERBURY, New Haven Co., Sept. 8.—The W. E. Potato I received weighed about 2⅛ ounces. It had 14 eyes and I planted them 10 inches apart on May 1. When dug on Aug. 22, I had 64 tubers which weighed 16½ pounds. I never saw nicer-looking potatoes, and shall keep them for seed. I have already been offered for my potatoes more than the cost of the RURAL for two years. I picked off from that one potato 451 potato bugs—a good crop I think. M. D.

Florida.

STARKE, Bradford Co., Sept. 5.—The outlook for crops in this section of the "flowery land" is very poor. During the months of May and June we had scarcely any rain at all: through July, in this immediate locality, we had just about enough. The first half of August we had very little, and since then have had none, and the result is we are getting very dry. There are places within ten miles of us where the ground has not been thoroughly wet all Summer. Corn is mostly harvested, and is generally a very light crop. With a little more rain cotton would have been fine; now it is rusting badly and the crop will be materially shortened. Of course, rice and sugar-cane are each suffering a great deal, and so are sweet potatoes. Plenty of rain soon would help the two latter, but it is too late to do cotton or rice any good. We have had a visitation from a species of Army-worm; they ate the grass in some places all up and injured the early rice so that it had to be cut for fodder. The old farmers say it is the worst year for crops "since the Surrender." Young orange trees never made a finer growth, and are looking remarkably well; you would never suspect they were so severely nipped last Winter, but the old trees still show the effects of the cold and do not look half as well as last year at this time. I. S.

Illinois.

CHAMPAIGN, Champaign Co., Sept. 12.—Saturday we got a couple of showers and since it has been cool—though at this time of writing the wind is blowing strong from the Southeast and the mercury is rising fast. The sky is as blue and clear as a sapphire, but the barometer says a change is coming and we shall probably have more rain in the course of 36 hours. The rains of the tenth together with a previous one on the fourth, have partially broken the drought in this section; but over the South part of this State the drought reigns supreme. There is almost no pasture, except dried grass; and nothing good to feed except it be corn planted for the purpose. Prices have risen nearly 100 per cent. within a year, and corn now sells for 55@58c., Oats, 36@40c.; wheat, $1.25@1.35.; hay; $10@12 per ton; sweet potatoes five cents per pound; potatoes and apples a dollar a bushel each, while most other vegetables are brought from abroad. More than half the wells in Central Illinois are dry; half the labor of the country is employed in digging new ones; farmers, in some cases, daily drive their stock miles for water; in fact, we are suffering all the evils of a protracted drought. Little plowing and less seeding done for wheat on account of the refractory character of the soil and fear of the chinch bugs which swarm in the corn. Another good rain or two, would allow of land being broken with comparative ease, and then plows would be set to work in a very lively style. There is no doubt of a very much enlarged seeding to rye and of a great deal of land to be broken for Spring crops between this and December if the weather admits. Notwithstanding local pride reports great things of the county fairs this year, they are in most cases miserable failures and very fully represent the general failure of crops along the whole line. B. F. J.

PRAIRIE CENTER, La Salle Co.—The Argenteuil Asparagus came up well and is growing nicely; so are the pinks and oats. The Rural Branching Sorghum was a failure, and the White Elephant suffered too much from lack of water to do well—its progeny weighed only nine-and-a-half pounds. From one pound of Chicago Market I got 40 pounds, and from a pound of Mammoth Pearl, 42½. J. P. W.

RANKIN, Vermillion Co.—Owing to a very long dry spell, the late potato crop to all appearances is a complete failure. The same may be said of the corn that was planted very late. Early planted corn, especially that on fall-plowing, will, some of it, husk out 25 to 30 bushels per acre. There are but very few apples here; almost any kind of a cooking apple will sell for $1 per bushel. No peaches; a few grapes. The pastures are dried up, and almost every one is feeding his stock to keep them from starving. I have been in this State 15 years, and it is the severest drought I have seen to commence so early. Hay, oats and flax were pretty fair crops, and that helps the matter a little. Many of the renters will have rather hard times till another crop is raised; but they are much worse off in the Southern part of this State. Down in Clay Co. the report is that everything is burnt up, and some are selling their stock for anything they can get for them to keep them from starving and to get something to live on or to get away from there. H. MCC.

Indiana.

BISHOP CREEK, Mono Co.—Yield of Washington Oats, from six to seven quarts; badly smutted. White Elephant doing extremely well, from present appearances many of them will weigh one pound each; planted in dark loamy soil. R. B. Sorghum from six to seven feet high in full seed. Asparagus not doing well. We are having an abundant harvest in this county. J. B. S.

KINGSBURY, La Porte Co., Sept. 8.—The R. B. Sorghum seeds grew fairly, but owing to a poor season the plants have not done well. The flower seeds grew well, and for beauty are all that could be desired. The asparagus is doing well. The W. E. Potato weighing three ounces, yielded, when dug yesterday, 16½ pounds of good-sized tubers. The largest yield from one eye was two-and-one-half pounds. We have had no rain of any consequence since July. Corn not more than half a crop. Potatoes poor; late varieties a total failure. They are selling from store for 40 cents per peck. Farmers are ready for seeding Fall wheat, but are waiting anxiously for rain. W. E. H.

Iowa.

CRAWFORDSVILLE, Washington Co.—The White Elephant I received measured around it 4 by 4¼ inches. Having 17 eyes, it was cut into 17 pieces, some being very small. They were planted in a box in the house, and transplanted to the garden when the plants were from half an inch to four inches high. The smallest one died. The rest were dug August 31, and yielded 13¾ pounds. They had been somewhat wilted in the ground owing to the dry weather since June; about 80 were as large as, or larger than, the one received, and, counting all down to those one-third of an inch, there were 125, or about one-third of a bushel. The weight shows less, from their being so dry. The W. Oats fell down and so I nearly lost them. We planted the asparagus in a box also, as we did not wish to plant it till next Spring. It looks well. J. H. M.

TIPTON, Cedar Co.—Corn greatly damaged by drought. Potatoes also dried up—a short crop. From the single W. E. Potato I have obtained 69 pounds of nice, clean medium sized tubers. They stood the drought well without watering. The Washington Oats yielded 3¾ pounds. The R. B. S. has made a heavy crop, but I think it wont take in the Northwest. The pinks are beauties. Wheat hereabouts a failure; oats yield from 20 to 30 bushels per acre. E. A.

Kentucky.

ELKTON, Todd Co.—We are having the most severe drought known for a good many years: no rain of consequence since the last of June. Tobacco late and very small. Corn dried up; will not yield more than one-fourth of a crop. Wheat very light. Oats fair. Potatoes did not mature on account of the bugs, which came early and still hang on. No fruit worth naming. Pastures completely dried up. Stock water very scarce. Everything looks gloomy and indicates "hard times" in the truest sense of the word. E. D. M.

Maryland.

RAYVILLE, Baltimore Co., Sept. 8.—I planted the Rural Branching Sorghum May 14. About nine-tenths of seeds failed to germinate and what few did come up made but very little progress until July 1, when it began to grow rapidly and is now about six feet high, with from five to eleven stalks from each seed. On the 19th of July, when it was 2½ feet high, I cut two hills—one containing 11 and the other seven stalks—about 2½ inches above the ground. On the 4th of August, the same hills were cut again about five inches above the ground and the stalks measured 2½ feet after being cut. On the 31st of August the same hills were cut the third time about seven inches above the ground, the stalks being over 2½ feet high when cut. These same hills have since the last cutting grown eight inches. This I consider a remarkable growth for such a dry season as we have had in this section. There have been but three showers since the 21st of June, and neither of them wet the ground to the depth of three inches. The White Elephant Potato was cut into 10 pieces and one piece planted in each hill on April 26; but owing to the drought they were almost a failure. They were dug September 2, and yielded 4½ pounds of very small potatoes. The "Washington Oats" yielded well, but it seems to me that it is the same variety of oats that was distributed by the Department of Agriculture, as the "White Schoenen" Oats and which I have been raising for 15 years past. In this section the crops are about as follows: Wheat and oats about the regular average; rye better than for several years; corn, about half a crop; buckwheat, a total failure; pasture, burnt up.

Streams failing; prospects for rain—none. Vennor—a false prophet. The flower seed came up well, and among them are some beautiful varieties: the asparagus seed I gave to a friend, it being a plant that I take no stock in. P. S.

Missouri.

GLASCOW, Howard Co.—The R. B. Sorghum has made a splendid growth and withstood the drought better than anything in my garden. The asparagus came up very well, but the White Elephant Potato was a failure. I had it planted with great care, the vines grew very strong and large, but when I had them dug I found a mole had passed the entire length of the row, and I got less than half a gallon of tubers. These I will preserve with great care for next year. H. Q. B.

Nebraska.

DELOIT, Holt Co.—Crops generally are good, but wheat was very nearly a failure, the yield not averaging over five bushels per acre. Oats are much better than last year, and barley as well as rye is a fair crop. The Rural Branching Sorghum is just as it was recommended. The W. E. Potato is doing exceedingly well, and were it not for there being some smut, the Washington Oats would have been fine. The flower seeds did not all grow, and those that came up didn't do well, as they were planted too late. Small fruits good. D. E. H.

WAHOO, Saunders Co.,—I dug the White Elephant Potatoes Aug., 25th. I had 30½ pounds in actual weight—25 extra large, 50 medium, and 40 very small tubers. I think this a very good yield under the circumstances, as the bugs and drought killed the vines before they matured. I shall save every potato for seed. We had no Spring here this year, for severe cold immediately succeeded hot weather. Wheat a total failure; hundreds of acres were never cut; what was cut is making from three pecks to ten bushels per acre. Flax over an average crop. Oats light—about 27 bushels per acre. Late corn has been hurt by drought, but I think there will be over half a crop. Hay plenty. Wheat worth $1; oats, 25c.; potatoes, $1; corn, 35 to 40c.; hogs, $5 to 5.25 per 100 gross. I think the Rural the best agricultural paper I ever read. I I could not farm without some paper of the kind. "A SUBSCRIBER."

New Jersey.

TITUSVILLE, Mercer Co.—Corn will probably be one-half of an average crop—not half of last year's crop, as that was above an average one. In this township there are many acres that will not give one bushel each. Oats were 30 per cent. better than the average. Wheat the usual yield. Not ono field of green pasture to my knowledge in this section; most of the farmers are feeding and foddering the cattle. There are some who take no paper and do not know that cattle get hungry and neither grow nor give milk when starved. There are a great many unruly cattle, and an empty stomach makes fences poor. But little is being done toward seeding, the ground is so dry. The trees in the forests are, many of them, turning dry, and, what is worse, apple-tree leaves are turning as though the Autumn frosts had come and chill November were here. In many cases the fruit hangs on the bare limbs and will probably wilt up and die. We had a large crop of Bartlett Pears, or, rather, we would have had if they had grown to the usual size. Some of them wilted and hang on the tree, while the leaves are on the ground. The leaves of the Vicars are dropping; in fact, we can see the effect of two months' dry weather in the hottest part of the year. What effect rain would have on the trees is a question of conjecture; some are doubtless dead, and I think it now too late for most of them to leave out; even the evergreens are dying. I. J. B.

New York.

ANDOVER, Alleghany Co.—The Summer that ended with the last day of August was the hottest I can remember. On Sept. 1 a thunder storm did a great deal of damage, injuring buildings and burning eight barns and one house in this neighborhood. Potatoes the lightest crop we have ever had. I planted the White Elephant June 28 and dug up its offspring on Sept. 2, and got 20¼ pounds. I wouldn't take five dollars for what I have for seed. The Washington Oats were sown alongside of the Russian White, and the R. W. O. came out ahead. I think the W. O. are what we call the White English Oats. The R. B. S. was a failure. The asparagus looks well; so do the flowers from the RURAL seeds. Wheat, a good crop. Oats and hay, ditto. Oats, 40c.; wheat, $1.50; potatoes, 50c. C. Z. H.

EDDYTOWN, Yates Co.—I took a little run among the vineyards of Seneca and West Keuka Lakes. The vines are in good order, but the crop will be a little less than last year. On account of a rain at the time of blossoming the fruit did not set as full as usual. This was true to a small extent of Delaware, and of Rogers's Hybrids almost entirely. There is some rot in Catawbas, in a few places it is quite bad, but generally it is not of much account. W. H.

LOUDONVILLE, Albany Co.—Very little rain fell here during August, and but a fair amount during July. It is very hot, dry, dusty and smoky here now, and many crops and some trees and shrubbery, including large lilac bushes are literally drying up. Many families are out of water. I have some beautiful pinks raised from seed you sent out last Spring. A yucca plant on my brother's lawn raised from seed which the RURAL sent out several years ago, bloomed finely this Summer. Being the only plant of the kind in this vicinity, it attracted considerable attention. F. E. A.

Pennsylvania.

DAGGETT'S MILLS, Tioga Co. — I planted the White Elephant Potato on May 25 and dug them on August 20. In planting I divided some of the largest of the eyes, and planted one piece in a hill, making 17 hills. The largest of the tubers obtained weighed one pound each, and I had 65 lbs.—a very good lot. I shall save them all for seed. Last year I raised two bushels from one potato that I had raised from the seed of a potato ball, and I have named it Bly's Superior. I had one tuber that weighed 2¾ pounds. Last season was much better for potatoes than this. The White Elephant is a splendid potato. The Washington Oats have done well and are heavy. The R. B. Sorghum doesn't mature seed. The asparagus all came up well. I have about 100 hills of potatoes from the seed of the potato balls. They look well and are now getting ripe. J. B.

UNION CITY, Erie Co., Sept. 11.—My W. E. was cut into 12 pieces all of which sprouted well; but during the wet spell early in Summer six were drowned out. From the remainder I dug on Sept. 1, 24½ pounds of nice tubers. The pinks are in blossom and they are beauties. W. Oats and R. B. Sorghum I didn't sow. J. W. B.

Texas.

UVALDE, Uvalde Co., Texas.—Since May 10 there has not been rain enough in this county to wet the ground two inches; yet stock look well. Wheat averaged 13 bushels per acre—the best yield in the seven years I have lived here. To my knowledge there have been only two corn crops in this county. For myself I have been doing little or nothing except raising sheep since I came here, and in my opinion this is the only business that pays. H. N. D.

Virginia.

JUNCTION. P. O., Hanover Co.—Washington Oats planted April 1; harvested July 5; yield two pounds ten ounces—at the rate of about 38 bushels per acre. The White Elephant Potato had seven eye sets, and I was compelled to plant it as an early potato on March 25 as it was sprouting. Dug, August 15, a crop equal to that from Early Rose. The Elephant, however, is undoubtedly a late potato and the yield suffered from its having been planted too early. Shall try to keep the present crop for replanting next year, by packing the tubers in charcoal in a dark cellar. Germination of seed and growth of Rural Branching very satisfactory, considering the season. Treated as ordinary farm crop and dreadfully curtailed by the drought that dried up the region for many weeks. Asparagus came up badly, no doubt because not treated as Mr. Goodell suggested in the RURAL weeks ago. C. W. D.

Wisconsin.

COTTAGE GROVE, Dane Co., Wis., Sept. 10.—Some of the R. B. S. has been headed out about ten days. Think seed will mature enough to grow. May 6 I planted W. E. Potato weighing about four ounces, cut into ten pieces, with one eye in a piece and one piece in a hill. Dug 37 pounds yesterday—ripe more than a week ago. Heaviest hill, 5¼ pounds; heaviest tuber, just one pound. They were planted in good soil by the side of other potatoes, and received no better care than the rest of the field. S. O. Y. G.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

POULTRY QUERIES, ETC.

A. S. S., Waco, Texas, asks, 1, for a plan of a portable picket fence for a poultry yard; 2, are the Langshans hardy and profitable fowls; 3, are the American Sebrights pure-bred or only a cross; 4, the address of a trustworthy breeder of the above sorts of fowls; 5, is there an importer of poultry in the Southwest; 7, the name of a good market variety of watermelon.

ANS.—1. A convenient portable fence is made as shown at Fig. 470. Two or three strips of 2x1¼-inch timber form the rails, and the pickets are common sawed laths sharpened at the upper end. The laths are nailed to the rails or bars two inches apart. The bars project at the ends of the panel about three inches. Stakes are driven in the ground and the panels are fastened to them by pieces of fence wire, the end of one bar being placed over the end of the corresponding bar of the next panel and one wire fastening both to the stake. The

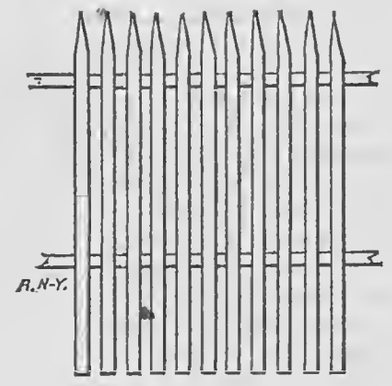


FIG. 470.

panels may be 12 feet long, and will then need a center stake, to which the bars are wired. The fence may be made six feet high by using three bars and two lengths of lath. 2. The Langshans are only Black Cochins under another name, and as yet have done nothing to merit popularity among those who keep fowls for profit, excluding those, of course, who breed them and sell them to fanciers for $20 to $50 a trio. 3. The Golden and the Silver Sebright Bantams are admitted to entry in the "American Standard of Excellence," and that secures them the distinction of thoroughbred. They have been bred long enough and closely enough to reproduce themselves accurately enough to be considered pure-breds. 4. G. S. Josslyn, Fredonia, N. Y. 5. We know of no importer of fowls in the South. There is not much importing done now, as American fowls are as good as any in the world. 6. The common Southern Rattlesnake Watermelon is a good market melon. Try the Cuban Queen.

WATER PIPES.

J. N. C., Emporium, Pa., asks where can he get pipe to convey water to his buildings.

ANS.—A few years ago there were two stores in Emporium that supplied wrought-iron and lead pipe as well as wooden pipe for this purpose—a stove and a hardware store. Doubtless either these or successors to them will supply what is wanted in this line. If not, there is a large number of dealers in these goods at Williamsport. Three-quarter-inch lead pipe weighs from one pound per foot upwards, but the lightest will be safe where there is not more than 30 feet head. Lead pipe is the best when the water is always flowing, but is not safe when the water stands in it. A very good pipe for leading water may be made of common one-inch drain tiles laid in cement to close the joints. This is clean, safe and durable. Another good kind is hemlock strips three inches square bored with an inch-and-a-quarter hole in the center with a long-handled auger. Lead pipe costs 12 cents a pound; iron pipe costs as much, and it rusts and gives a bad flavor to the water; drain tile costs about a cent-and-a-half per foot, and the cement will cost very little. Wrought-iron pipe, one inch inside diameter, costs, wholesale, 19 cents per foot; 1¼-inch, 27 cents; 1½-inch, 33 cents; and, as the retailer gets 50 per cent. discount, he can generally afford to sell it at these figures, unless he happens to be a plumber; for a plumber, like a druggist, wants heavy profits.

PINK WATER LILIES, ETC.

A. L. J., Quebec, Canada, asks, whether a pink water lily is sold by florists, and, if so, what is its name; 2, whether seeds of pyrethrum will grow in a green house, and whether it would be any protection against the aphis infesting rose bushes, if grown beside them in pots.

ANS.—There is a pink variety of our common water lily known as Nymphæa odorata var. rosea; it is fragrant, beautiful, scarce and dear; it costs about $10 a root. There is also a variety faintly tinged with pink, but the coloring is not deep enough to be satisfactory. It costs $1.50. Of the common European water lily a pretty pink form, discovered in a lake in Sweden, is also being disseminated by florists, under the name of N. sphærocarpa, but it is likewise exceedingly rare and expensive. The above are perfectly hardy. But the grandest of all red water lilies is N. Devoniensis, a hybrid raised in England several years ago. It requires very warm green-house care, and costs about $5 a root. 2. Pyrethrum will grow in pots in a cool, airy green-house, but its presence there would be no protection to the roses from aphis.

Miscellaneous.

S. T. T., Southold, N. Y., asks what kinds of white and red wheat are suitable for Long Island, N. Y.

ANS.—It is a hard question to answer, because one should sow a wheat several years in order to judge of its several qualities. We are inclined to think that Fultz (white) will yield heavily on Long Island as well as in many different parts of the country. Shumaker (amber—nearly red) has done well at the Rural Farm, yielding 32 bushels the past season without heavy manuring. Besides, it is one of the earliest. We doubt not also that our "Distribution" wheat, Fultzo-Clawson, will be found well adapted to Long Island soils in general. This has given us the heaviest yield of any wheat we have ever raised—nearly 37 bushels. Clawson, as our friend probably knows, is a favorite white wheat.

R. E., Ravenna, Ohio, says that his White Elephant Potatoes were green on August 30, while he saw by the reports in the RURAL that others had already dug theirs, and he asks whether it is not probable that he got the wrong sort, as his is certainly a late potato.

ANS.—They are late potatoes, but the season has to do with their maturity, of course. Last year, ours were not dug until late in September this year the vines were dead on Sep. 2, owing to heat and drought. You may rest assured that you have the genuine White Elephant. There can have been no mistake.

M. D., no address, asks, 1, how to increase his Snyder and Wilson Blackberry vines; 2, the price of air-slaked lime for the garden.

ANS.—1. By the suckers or by making cuttings of the roots. Cut them into small pieces and plant them in drills two feet apart the same as you would peas. Cover with light soil and press it firmly upon the cuttings. A dressing of fine manure as a mulch to preserve moisture is desirable. 2, Air-slaked lime is merely ordinary caustic lime slaked by exposure to the air, which anybody can do for himself.

D. D., Bucyrus, Ohio, asks a recipe for the cure of Chicken cholera.

ANS.—Prevention is the best "cure." All infected fowls should be killed at once, and the bodies buried, as the disease spreads rapidly. However, cures have been effected by feeding cooked meal, red pepper, gun-powder and turpentine mixed together; also dissolve one ounce bi-sulphate of soda in a gallon of water and place the solution where the fowls can drink it.

A. R. G., Akron, Neb., sends for name, 1, a kind of clover with the query whether it is a perennial or a biennial, and whether it is good for honey bees; 2, a prairie plant with a very pretty pink flower.

ANS.—1. It is the white-flowered melilotus or Tree or Bokhara Clover—Melilotus alba. The root is probably biennial. It is valuable as a forage plant, though we have no practical knowledge of it. It is a good honey plant. 2. This is Gerardia purpurea, var. fasciculata.

E. S. B., Factory Point, Vt., says some of the magnolias sent him last year by the RURAL have come up, and he asks how to treat them during the coming Winter.

ANS.—We do not think they will require any special care if growing in well-drained soil. A slight mulch of straw, salt hay or something of the kind may prove serviceable.

F. K. M., Pingree Grove, Ill., asks how to save the seeds of the Red Hawthorne, and when to plant them.

ANS.—It is best to gather the seed as soon as ripe; place them in sand in a box and bury the box, planting the seed as early as may be next Spring.

D. W. S., Bayard, Ohio, asks, 1, where can Fife wheat be had; 2, will a low, mucky piece of land suit wheat.

ANS.—1, We should think the Cincinnati seedsmen could furnish it. 2, No. Better not sow wheat there at all.

H. C. K., Blodgett, N. Y., says he wishes to sow sorghum next year, and wants to know where he can get the seed.

ANS.—We have little doubt that all progressive seedsmen will have it for sale.

J. H. M., Nebraska City, Neb., asks what will a dozen Bidwell Strawberries cost him by mail.

ANS.—Layer plants, 75 cents.

M. V. R., Charleston, Mo.—We cannot name this wheat. It has been sent to us under many different names. The Velvet Chaff, as generally known, is a heavily bearded variety.

H. M. Priest, Steuben, Ohio, asks for information about land in Jennings and Pulaski Counties, Indiana, with a view to settling in the more eligible of the two counties.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, SEPT. 17, 1881.

M. W. V.—D. C. A.—J. W. C.—E. A.—G. L.—H. T, B.—J. C. M.—P. G. Kansas, thanks—S. P. B., thanks.—H. C. S,—thanks—E. A. P.—F. —W. F. B.—R. F. M.—H. D. W.—H. S.—E. S. K.—T. C. C.—E. W. K.—J. L.—W. D. H.—S. M. B.—J. T. H.—Ohsener—A. T. B.—H. P. S.—E. J. D.—E. M. S.—E O. B.—E. E., the pinks are the finest we have ever seen.—J. F.—R. D. B.—J. B L.—J. B.—J. C. D.—D. M. Newton, thank for specimens of grain.—W. K. A.—H. S.—R. G. B—S.—G. M. D.—I. S.—Many thanks for the sample of Florida tea—E. P. P.—M. D.—G. W. R.—G. W. R.—W. R. G.—P. S. C.—L. B.—W. M.—W. T. B.—W. E. H.—J. H. C., thanks.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, SEPT. 24, 1881.

DURING several days past we have planted 11,200 grains of wheat. The land was marked both ways nine inches apart, and a single grain placed two inches deep in the intersections.

THE Inter-Ocean, Detroit Free Press, and New York World are the only papers with which we club for 1881-2. The prices of these clubbing combinations are as low as they can possibly be made, and the postage of the free-seed distribution is included. We promise to give our prompt attention to subscriptions for any one or more of the above journals in connection with the RURAL NEW-YORKER, and have made ample provisions for doing so.

THE RAILROAD WAR.—The strife of the great lines to the West is getting warmer and warmer. Mr. Vanderbilt is found to be a "hard man to beat," his latest statement being that he is prepared to sacrifice $10,000,000 in support of his position. The reason for this is said to be his desire to "choke off" financial aid for the New York, Chicago and St. Louis road which is being built in close proximity to the New York Central and Lake Shore, whose securities are now on the market. It is a "scare-'em-out" policy, in other words. It is thought the war will last until after the close of navigation on the lakes: at any rate, there are no signs of peace as yet. In the meanwhile business men and tourists will continue to enjoy this era of low rates without a murmur.

AN OLD STORY.—Yes, its an old story; but some good farmers seem to have never heard it! If your machinery looks old, rusty and out of order when harvest comes, it is a pretty sure sign that it has been exposed to the elements too much, and that, instead of caring for it, the "hired man" left it where last used, and there the sunshine, rain and, possibly, snow have worked a "marvelous change" in its appearance. A thrifty farmer gives his farm implements good care, and is well paid therefor. We have now in mind a man who bought a mowing machine in 1862, and has used it until this season to do the mowing on a farm of about 100 acres, which has been largely devoted to grass, but that machine was stowed in the implement shed as soon as haying was done each year; Farmers, it pays!

TO BUTTER from cream, "butter" from caul fat, and "butter" from lard, must now be added "butter" from cotton-seed oil. Very appropriately the manufacture of this new product has hitherto been confined to New Orleans, where the small amount of home-made butter is so wretched in color, consistency and flavor, that bogus "butter" that cannot excel it must be abominable stuff indeed. Like all other well-wishers of the South, we are strong advocates of home manufactures there, but this advocacy certainly does not extend to the production of bogus "butter." Cow butter, bullock butter, hog butter and vegetable butter—surely every palate and pocket should now be suited in the way of butter. The new product boasts of being higher in quality than genuine butter, and lower in price than any of the other spurious concoctions.

THE eighteenth session of the American Pomological Society was held at Boston, Mass., on September 14th, 15th and 16th, under the presidency of Marshall P. Wilder, the venerable President of the Society. For more than thirty years he has been elected to this position, and there is not to-day on this continent or elsewhere a name more honored among pomologists, or a man who by earnest effort for a life-time has done so much to advance the art to its present high position in this country and to open the way for its further development. At the age of four-score and three his address was full of congratulation for past achievements, and of hope and encouragement for still brighter successes in the future. Long may he live to see his prediction fulfilled, and to spare to his thousands of friends, all the world over, the sorrow that must await upon the departure of so great a benefactor to his race, however full of years and honors his life may have been. We shall present a full report of the proceedings of the meeting at an early date.

THE MICHIGAN DISTRESS.—Later accounts from the burnt districts of Michigan only increase the extent and appalling nature of the calamity. Fresh discoveries of the corpses of victims are daily occuring; hundreds of the survivors wander miserably about, or writhe groaning in temporary hospitals scorched, wounded, blinded or crazed. The suffering and devastation are widespread and terrible. At a low estimate 12,000 people have been rendered homeless, foodless, penniless by the disaster—and Winter, a long, bleak Michigan Winter, will soon add to their sufferings. Among the black, smouldering desolation of a lately cheerful country, the voice of mourning everywhere arises for fathers, mothers, children, husbands, wives and relatives lost in the whirlwind of smoke and flame. Governor Jerome of Michigan has appealed to the generosity of the other States to co-operate in relieving the dire distress which is too great for his own State to meet alone. As usual, this city heads the long list of towns that have grandly responded to his appeal, having already contributed nearly $45,000 for the relief of the afflicted. Other places, notably Boston, Philadelphia, Chicago, and St. Louis, are nobly emulating the liberality of New York. Shall the country, the rural districts, alone remain hard-hearted in the presence of such suffering and tight-fisted before such generosity? Out upon so base a supposition!

THE SOUTH AND THE ATLANTA SHOW.

APART from Texas, the Southern States have hitherto benefited very little from the mighty stream of immigration pouring into the country, scarcely a tiny rill having meandered from it in that direction. Many of the new-comers have doubtless been deterred from going to that section through dislike to come into competition with negro labor; but the great majority of those who might otherwise settle there are kept away through ignorance of its many great advantages in the way of climate, soil, mineral riches, and varied natural and artificial products. Many, also, having heard of the unwholesome climate of the region exposed to the visits of yellow fever, confound this limited, low-lying area with the vast upland South, in which the climate is as wholesome as that in any other part of the country. The attention drawn to that section by the International Atlanta Exposition, affords a fine opportunity for laying before the world the great resources of the country, the genial character of its climate, and the wide field there offered for the profitable investment of labor and capital. In most of the Southern States vast tracts of fertile land suitable for every form of agricultural industry, can be purchased at low prices. The Southern railroad system has, of late years, been greatly improved and extended, thus affording ready communication with the world, and prompt transportation to profitable domestic and foreign markets. The prejudices born of the war and of slavery, the incitement to it, are fast dying out, and a judicious show of its resources and advantages at this season would be very likely to attract to it a fair share of the labor and capital now seeking an opening in other parts of the country.

FRENCH IMPORT DUTIES.

GREATLY to the dislike of French manufacturers, and, indeed, of a majority of the French people, Napoleon the III. at the hight of his fame formed a free-trade treaty with Great Britain, in 1860; but as Gladstone said in 1866, there was not a man that breathed on the earth who could have effected such a measure except Richard Cobden, the apostle of Free Trade, and the negotiator of the treaty. Cobden in the flush of his popularity "joined the majority" in 1865, and Napolean, shorn of fame and empire, followed him, in 1873, having lived to see his free-trade policy abandoned by Republican France, in 1872, when a mild protective policy was adopted in its place. Since then public opinion in France has become still more outspoken in favor of heavier duties on importations of most foreign products, and in obedience to its dominant demands, a stronger protective tariff has just been adopted. In American weights and money, the following are the duties imposed by the new tariff on the principal live stock and agricultural products imported into France from this country, and the same duties are applicable to other countries also:—

OXEN, $2.90 per head, instead of 72c. under the tariff of 1872; cows, $1,55 each, instead of 24c.; fresh butchers' meat pays a new duty of 25c. per cwt., and the duties on preserved meats and "extracts" are also raised. The duties on the various sorts of cheese are doubled, and a new duty of $1.25 per cwt. is imposed on fresh butter, and that on salt butter, too, has been increased. The duty on hops has been raised from $1.21 to $1.50 per cwt. The small duties of six cents per cwt. on wheat, and twelve cents per cwt. on flour, remain unaltered, while other cereals are free. Wool, skins and horse-hair are also free, and a small reduction has been made in the duty on horses, and a large one on mules. There also are a number of other agricultural products the duties on which have been altered; but as we export little or none at all of any of them, the tariff on them can be of no importance to American farmers.

A PROPOSED WESTERN EMBARGO ON EASTERN CATTLE.

THE Treasury Cattle Commission, in an official communication to Gov. Cullum of Ill., calls attention to the great danger, directly to the cattle interests of that State and the West generally and indirectly to those of the whole country, by the westward transportation of calves from the Eastern States some parts of which are now infected with contagious pleuro-pneumonia. It seems that Eastern calves to the value of $1,500,000 have been sold in the Chicago stock-yard, in the last fifteen months, and that although the trade is almost entirely confined to the Fall months, 7,000 head have been there disposed of the present season. Large numbers are also sold in East St. Louis, and considerable numbers elsewhere in the West. A very large proportion of these consist of pure-bred stock which are scattered among breeders and farmers throughout Ohio, Indiana, Illinois, Minnesota, Iowa, Missouri, Kansas, and Nebraska, thus endangering the herds of all these States. They are largely purchased by thrifty, poor persons who have often to mortgage them to secure the purchase money, and therefore shrink from promptly reporting the disease should it be developed, thus concealing its existence until it has obtained a dangerous foothold. Accordingly the Commissioners strongly urge the Governor to prohibit at once the importation of all cattle from New York, New Jersey, Pennsylvania, Maryland, Delaware, and Virginia, or "if it can be legally done," from "so much of these States as lies east of the Alleghany Mountains." In order to prevent the hardship that would be caused by interference with the sale of calves of Eastern pure-bred herds, it is proposed that cattle from infected States may be admitted on the certificate of the State Veterinarian that the herd and district from which they came, have been free from contagious pleuro-pneumonia for at least the last six months. Governor Cullum has the subject under consideration, and it is to be hoped he will investigate the matter thoroughly before adopting a measure of so much importance. The great risk to the public interests from a Special Commission lies in the fact that it feels bound to justify its existence by exaggerating the danger it was appointed to investigate. All reports of past investigations of pleuro-pneumonia in the above infected States go to prove that when most prevalent it was confined to very limited districts; that its area has been greatly restricted, and that it has not been nearly so contagious as the European type. While very anxious—as our record amply demonstrates—that all needed measures should be taken to prevent danger from this fatal disease to the vast herds of the West; it seems to us that the proposed measure is a trifle two sweeping in its nature. Before the appointment of the Commission we would have made no objection to its adoption; but we had hopes that the investigations of this body would have discovered some less sweeping means of effecting the object.

BREVITIES.

DR. LAWES'S article on the first page will bear reading at least twice over.

THE Cuban Queen watermelon succeeds well with us and is, the present season, of excellent quality.

AN interesting article on "Tree Trunks as Water-conductors," by Professor Storer, will be found on page 662.

PROFESSOR I. P. ROBERTS'S article discusses a device that saves a great deal of labor and half the expense of hauling fodder corn from the field to the silo.

IT has been nearly 10 weeks since rain has fallen at the Rural Grounds, though showers have occurred here and there within a few miles.

THE grape crop this year promises to be an unusually good one. Along the Hudson thousands of tons will be marketed, a very large proportion of which will be taken from Concord vines. The reports from other grape-growing sections are also very favorable.

ELPHICK sold Barnes, in England, a horse on trial of eight days; the animal died within that time through no fault of either party and the seller sued for the price agreed on; but the Court of Queen's Bench decided that the plaintiff could not recover, since the sale was conditional not absolute. English legal precedents are good here.

THE Cincinnati Chamber of Commerce has agreed that henceforth a car-load of grain shall be 28,000 pounds in all sales made for future delivery, unless otherwise stated. Thus if a sale is made of a "car-load" to arrive, it shall mean 28,000 pounds; any excess or deficiency must be settled at the market price ruling on the day, not of sale, but of delivery.

IN the case of the Georgia Railroad Company *vs* Beatie, the Supreme Court of Georgia has decided that for a consideration a railroad company can make a contract with a shipper of live stock whereby it shall be released from all liability for damages to stock, not resulting from mismanagement in the running of the trains, such as for over-loading, suffocation, heat, etc.

MONS. LEON CHOTTEAU, the French free trade missionary, has just returned to his native land from his abortive proselyting tour through this country. How little do we hear now, or have we since heard, of those enormously wealthy French commercial and transportation companies that were to do such heavy business in our agricultural products, and about which M. Chotteau bragged so loudly on his arrival among us on his recent visit! According to cablegrams of the 15th, he is now "demanding" from the French Government the abrogation of its February decree against the importation of American hog products, and proposes to organize public meetings in favor of the repeal of the decree. We heartily wish him better luck in his present wise efforts than he met in his late "otherwise" one.

THREE HUNDRED TONS of human bones, many of them complete limbs, and the hair still attached to some of the skulls, were landed during the past week at Bristol, England, to the order of a local firm for the manufacture of ground bone and superphosphate for agricultural use. They were shipped from Constantinople, and are supposed to belong principally to the heroes who fell at Plevna during the Turko-Russian war. The venerable Peter Cooper, who is as famous among farmers for his fertilizers as he is among cabinet-makers for his glue, and among the general public for his philanthropy and India-rubber cushion, says that human bones are often made into manure when they can be obtained quietly and abundantly, and that they make a strictly first-class fertilizer. After all, since the bodies have furnished food for worms, why shouldn't the bones furnish food for —— Man? No—plants.

THE time appointed for receiving applications for space in the Atlanta Cotton Exhibition expired on Saturday, the 10th inst. The Director-General announces that since then he has been overwhelmed by letters and telegrams asking for room, but he has been compelled to refuse all such requests. To afford space enough for all the applications already accepted will require several acres more of floor room than the capacity of the buildings already erected, and accordingly to supply ample space, several annexes are being built. As the Exhibition will open on October 5, and all exhibits should then be arranged in order, expedition seems necessary to secure a creditable display on the opening day. During October, November and December excursion railroad tickets to the Exhibition will be sold from this city for $36, good to return within 30 days from the date of purchase.

THE California Wheat Growers' Association met at San Francisco on the 14th and resolved to hold wheat for two cents a pound, or $2 per cental. On the Pacific Coast grain is sold by the cental of 100 pounds as it is here by the bushel. The Association estimates the exportable surplus of the State at 950,000 tons or nearly 30,000,000 bushels, exclusive of the quantity on shipboard in the harbor. Grain dealers think this estimate too low. They say the season's wheat surplus approximates 640,000 tons. Just 622,124 tons of old wheat were on hand July 1; since then there have been exported 183,911 tons, leaving a balance for shipment of 1,078,302 tons or 34,783,935 bushels. Thus it will be seen there is a difference of about four-and-three-quarter million bushels between the dealers' and the farmers' estimates—a mere bagatelle when it is considered that it is to the interest of the former to exaggerate the stock in order to cheapen the product, and that of the latter to belittle the amount in order to raise the price.

DRESSED beef lately transported in a Tiffany refrigerator car from Chicago to Boston in six days, arrived in as fresh and bright a condition as if bought at the neighboring slaughter houses at Brighton. The meat was shipped when the outside temperature was 80°, while that inside the car ranged during the journey from 42° to 44°. A large proportion of the meat used in the East is obtained from Western stock, and if the meat killed at Chicago or St. Louis can be brought to the seaboard in prime condition, just as good as that killed here, the price of meat here must be lowered, as the freight on it must be considerably less than on live cattle. As meat is taken from here to Great Britain in excellent order after 10 to 12 days, why cannot it be brought hither from the West in a condition equally good in half that time? The low prices would be a boon to consumers; but stock owners could hardly consider them an unmixed blessing.

Societies, &c.

THE PENNSYLVANIA STATE FAIR.

[Rural Special Report.]

PITTSBURGH, Sept. 12.

THE 28th annual fair of the Pennsylvania State Agricultural Society opened here on September 5, to continue two weeks. It is held in connection with the Pittsburgh Exhibition, a circumstance that detracts very much from its value; for the agricultural part of the show is very much too widely scattered for the convenience of visitors, the proper display of the exhibits, and reasonable welfare of the exhibitors. Here as in other cases in which agricultural fairs are held in large cities in conjunction with other exhibitions, the interests of the country are sacrificed to those of the city and all the best efforts of the managers are concentrated upon attracting large crowds of city folks.

The live stock show is outside the exhibition building. In the cattle department are 142 entries of the various pure breeds, including 48 of Short-horns; 27 of Jerseys; 26 of Ayrshires; 22 of Devons, and 19 of Holsteins. While the number of animals on exhibition is not very large, they make up in quality what is lacking in quantity. Herd premiums have been carried off as follows: Short-horns.—1st, Jas. R. Anderson, Ohio; 2nd, David Selser, Ohio. Devons—1st, J. M. Miller, Washington Co., Pa.; 2nd, J. B. Longnecker, Dauphin Co., Pa. Holsteins—1st, D. D. Tracy, Erie Co., Pa.; 2nd, J. L. Henderson, Washington Co., Pa. Ayrshires—1st, Wm. Fairweather. Jerseys—1st, C. P. Marcle & Son, Pa.

Of sheep, 224 are exhibited, principally Cotswolds, Black Top and Spanish Merinos, South Downs and Oxford Downs. The largest exhibitors are the following—all Pennsylvanians: Edward Hicks, Goshenville; J. R. Anderson and Berry & Son, Houstonville; John M. Miller, Hickory; G. J. Haggerty & Son and T. P. Dickson, Mercer Co. J. M. Miller has carried off the sweepstake premium on Merinos; G. J. Haggerty & Son that on South Downs. The Cotswolds had not been judged when I left.

The swine show is small, the white breeds making the largest display. E. B. Ashbridge carried off the herd prize on Chester Whites, and A. E. Slaughter on Poland-Chinas. W. H. Cole, of Clinton, N. J., exhibited a fine herd of Small Yorkshires. There are only a few Berkshires and Jersey Reds and no Essex.

The horse show is about an average, 153 being on exhibition. Of these 38 are Clydesdales. Messrs. Powell Bros. were expected to send down some fine specimens of this breed, but up to the time of my leaving they had not arrived. Presumably they were not ent on account of the heat, for stock here, as Cleveland, have suffered severely from the tense warmth.

The Dairy show, like that of fruits and vegetables, I found, after many inquiries, stowed away in a corner of the second story of the building, where not more than one in ten who wanted to see it could find it. There is, however, a very creditable display—a fine lot of home and factory made cheese and dairy and creamery butter.

The agricultural implements, if they were grouped together, would have made a very handsome display, but some of them are with the live stock outside the building, and the others are scattered all through the show. This makes exhibitors complain, as they much prefer to have their exhibits grouped together, especially at a fair where they give premiums on so many different varieties of agricultural implements.

The attendance of farmers and their families up to the present time, Sept. 12, has been very meager, plainly showing that the holding of an agricultural fair during two weeks does not meet with favor either from the exhibitors or visitors. Farmers do not know when to attend, and their visit is put off from day to day, so that they generally fail to come at all. Then again, exhibitors have to stay with their goods for two weeks at a heavy expense for help and hotel bills, and when for a whole week the entire attendance of farmers would not fill one car, they begin to get disgusted with the management. It is all well enough for the societies to get into the large cities and make money out of the city patronage, but this does not pay the stock, implement and other exhibitors who go to a great expense to attend these fairs and make fine shows especially for the examination of the agricultural community, who fail to come. Farmers, too, do not like to find the agricultural part of the fair, which they have come a great distance to see, so scattered that they do not have the time to hunt up the points of interest. The weather has been intensely warm, which may have had something to do with the attendance, the thermometer having gone over 95° every day since the fair was opened.

The machines that could get into Power Hall are shown in full operation, self-binders as usual attracting the most attention. There is a full exhibition of grain drills and mowers and reapers; but very few plows. Thrashers and portable engines are shown outside on the grounds, as are portable saw-mills, sulky cultivators, two-horse corn-planters, etc. A large number of Western manufacturers had their machines on exhibition, but up to Saturday, the 10th, exhibitors had either got disgusted with the weather or the lack of attendance, and this part of the exhibition presented a very dead appearance.

A new sulky harrow, exhibited by the Reiner Harrow Co., Line Lexington, Montgomery Co., Pa., attracted a great deal of attention. It is a combination machine, and in addition to a sulky harrow, it can, with its attachments, be used as a cultivator, corn marker and broadcast seeder. The harrow is adjustable, and has a reversible tooth that makes it either a scratching or a smoothing harrow at will; or, by attaching a cultivator tooth, it makes a complete cultivator. It folds up for transportation and has an automatic lift to chain it without the driver leaving his seat. I cannot here give as full a description of this new implement as it deserves, but it will be illustrated in the RURAL during the coming Winter, when its points will be enumerated. Farmers should look into its merits, as it will prove a great labor-saving implement. It is compact, simple, and its construction insures durability and freedom from outlay for repairs.

Messrs. Nash Bros., Harrisburg, Pa., and 22 College Place, New York, exhibit a full line of their Acme Harrows, including pony, two, three and four-horse harrows. The four-horse harrow cuts 12 feet and is two complete 6-foot harrows, that can be taken apart and used separately. Implements of this sort are made to meet the demand for these harrows on the large Western farms. It is well known that thorough pulverization pays, and without doubt the Acme will pay for itself on any ten-acre field. There is one in use on the RURAL farm and the RURAL can highly recommend it.

W. H. K.

THE NEW YORK STATE FAIR.

ELMIRA, N. Y., SEPT. 16-17-1881.

[Rural Special Report.]

THE 42nd annual meeting of the New York State Agricultural Society was held upon the grounds of the Society at Elmira, N. Y., commencing Sept. 13.

The attendance throughout was unusually large, and the receipts far in excess of those of former years. Wednesday and Thursday were the days of largest attendance; the receipts for admission on the former were upwards of $5,000, and on the latter day the gate receipts ran up to over $7,000. It was estimated that at least 20,000 people were on the grounds on Thursday. The efficient officers of the Society, however, with their many years of experience, were fully equal to the work imposed upon them, and everything moved off as smoothly as it would if the crowd had not been over half as large.

The grounds of the Society are situated about 2½ miles from Elmira, and are accessible by steam and street cars. They are well laid out with ample and commodious buildings, well adapted to the wants of the Society.

Entering them by the south entrance, the tent of the RURAL NEW-YORKER is situated immediately in front of the officers' headquarters, in "Newspaper Row," and beyond this is the beginning of one of the largest and most varied displays of agricultural implements ever seen at a N. Y. State Fair, occupying, as they do, fully six acres.

Dairy Hall, situated to the right of the south entrance, is well filled with dairy implements, cereals and vegetables. We noticed a barrel of Mold's Ennobled Oats and also the Washington Oats, both of which were first popularized by the RURAL NEW-YORKER, and each weighed 40 pounds to the bushel; both received first premiums. Here, too, was a new variety of wheat originated by Mr. Heiges of York, Pa., and mentioned more than once in the RURAL Wheat Special. Fifty-eight quarts of this wheat drilled Sept. 3, 1880, upon 1.9 acre of ground, yielded 79 bushels of grain, or at the rate of 41.58 bushels per acre.

Machinery Hall, just north of Dairy Hall, is not perhaps so full as in former years; but altogether it presents a fine display of implements. The Husbandman of Elmira has its headquarters in this hall, and the managers of this right-worthy journal, with their accustomed enterprise, are issuing a daily during the fair, and making a free distribution of it upon the grounds.

Passing on to the Stove Department, a building set apart for this purpose solely, one is almost bewildered by the variety and magnificence of the display. It would seem that the stove manufacturers had sent their entire stock for exhibition.

A large tent is set apart for the Floral display and here the lovers of floriculture are treated to a fine and varied exhibition of cut flowers. Noticeable among the exhibitors was James Vick, of Rochester, N. Y., to whom was awarded first premium on all his exhibits. His collection of gladioli, dahlias, verbenas, asters, phloxes, etc., was fine and was attractively displayed. The exhibits of Mr. Rawson and Mrs. Wells, of Elmira, were also excellent, and each has shown much interest in making the Floral Hall a success.

The display of fruit was not equal to that of former years, either in quality or quantity, owing, of course, to the scarcity of fruit throughout the State. The most prominent display was made by Ellwanger & Barry, of Rochester, N. Y. Their collections of 100 varieties of pears, 30 of plums, 30 of peaches and 36 of grapes was extra-fine for this season's growth. John Van Doran of Ithica, N. Y., was given first premium for the best collection of apples. Some very fine specimens of foreign grapes grown under glass, were shown by Gen. Diven of Elmira, N. Y.

The Poultry Department, as usual, was well filled, with birds of pure and well-bred varieties. Light and Dark Brahmas; Buff, Lemon, or Cinnamon Cochins; Partridge or Grouse Cochins; Dorkings, Dominiques, Plymouth Rocks, Hamburghs, Leghorns, Houdans, Bantams, Toulouse Geese, Rouen, Cayuga, Muscovy and Pekin Ducks, were among the most noticeable breeds. This department also had in full operation an incubator made by the Perfect Hatcher Co., of Elmira. We shall in a few weeks speak more definitely of this and illustrate the hatcher in full.

The cattle show was particularly fine and large, containing 342 entries. For the Short-horns Benjamin Fellows carried off the herd prize with his bull Benjamin F. and cows Lily of the Valley, Niobe 1st, Niobe 2d, Niobe 3d, and heifer Una. The show of this breed was not as large as usual, Wm. S. Moore, G. H. Bell and B. Fellows being the principal exhibitors. The show of Devons was very fine. Wm. H. Jones carried off the herd prize with his bull Prince of Wales, and cows Pet, Pride 3d, Rose of May, Pauline, and heifer Leva. Several very fine Devon herds were shown, and the exhibit in this class was specially noticeable. For Herefords, Erastus Corning carried off the herd premium with his bull Comus and cows Marchioness 2d, Victoria 6th, and heifers Edna and Echo. John Merryman, of Maryland, made a very fine exhibit in this class. For Ayrshires, Armiston Bros., of Cuba, N. Y., carried off the first premium with bull Joe Mars, and cows Bowment Maid, Duchess of Vineland, and heifers Clara B. Mars, Lady Bruce, and Princess 6th. There was a very fine exhibit in this class. In Holsteins Messrs. Smiths and Powell got the herd premium with their fine herd, consisting of the bull Uncle Tom and the cows Neilson, Ægis, Netherland Queen, Dutchess of Friesland and Topaz. We have illustrated several of this herd. Of Jerseys the show was particularly fine and large, and after quite a fight the herd prize was awarded to William Simpson. The question of "finishing up" cattle for the fairs was pretty thoroughly handled in this class and a number of protests filed against this award. In Guernseys, L. W. Ledyard, Cazenovia, N. Y., was awarded the herd premium for his fine herd consisting of the bull Fernwood and the cows Old Comfortable, Clementina, Elegante, Fernwood Fancy and Maiden Hair. We will illustrate some of this herd later in the season. G. F. Faber, Patterson, N. Y., exhibited part of his fine Polled Norfolk herd, and carried off all the premiums in that class.

The horse show was immense, and the draft and agricultural horses made a fine display. The Clydesdale, Brown Glancer, whose portrait appeared in our Fair Number, was exhibited by Messrs. Smiths and Powell, Syracuse, N. Y., and took the first stallion premium and also the grand stallion sweepstakes prize. This firm got over 20 first premiums.

Of all the attractions at the fair none was more eagerly and inquisitively examined into than were the ensilage cutters. The agitation that has been created and the articles that have appeared in this and other agricultural journals have aroused such an interest among farmers that any information or knowledge to be gained in the best and most useful appliances for filling silos, cutting ensilage etc., is largely sought for, and while a good ensilage cutter must, of necessity, be also a good fodder cutter, of course nearly every one is more or less interested in this class of machinery The crowd that was constantly gathered in front of the Belle City feed-cutter, manufactured by David Lawton, of Racine, Wis., and exhibited by A. M. Forrester, convinced the most skeptical that this machine possessed merits. This cutter is made with a carrier which elevates the ensilage or fodder to any desired hight and the workings of the cutter were both perfect and practical.

MESSRS DANIELS & Co., Odessa, N. Y. exhibited for the first time at this fair Daniels's plow sulky, and met with great success, taking the first premium in the plow trial that took place on the grounds Thursday. For 19 years Mr. Daniels has made a specialty of plow sulkies, and this, his latest invention, promises to give entire satisfaction.

JOHNSON, GERE & TRUMAN, Oswego, N. Y., exhibited their Champion Grain Drill with fertilizer, grass-seeder, hoe shifter, land measure and corn-planting attachments. The exhibit attracted a great deal of attention and many sales were made on the grounds. This drill has a special corn-planting wheel by which corn can be drilled, single kernels being dropped at equal distances, and fertilizers applied in the row.

THE KEMP & BURPEE Manufacturing Co., Syracuse, N. Y., made a large exhibit of their Kemp Manure Spreaders, as improved for this season. We saw a large exhibit of this company at Cleveland, and there, as here, they showed their machine in full operation spreading manure on the grounds. The effect of making a practical exhibit in this way was shown in the sales made at the fairs, they having sold 22 on the grounds at Columbus, and 12 at Cleveland, and the prospects are that their sales will amount to more than that on these grounds. When a farmer can be shown just what a machine will do, and is allowed to work it himself in his own way, it does not take much talk to convince him, if the implement really has the merits the manufacturers claim for it, and the Kemp & Burpee Co., have taken advantage of this plan. One of the principal improvements made in the spreader this year is a changeable gear, changing the amount to be spread by simply unscrewing one nut, which can be done in a minute.

MESSRS. REYNOLDS & LANG, of Ithaca, N. Y., exhibited in working order one of their steam engines, which received the highest award of merit. The engine was of the most approved pattern, the wearing surfaces of which are made extra large; the main box is lined with the best Babbitt-metal; the cross-head boxes, crank pin boxes, and cross-head gibs are made of the best gun-metal and furnished with ready means of adjustment in case of wear. There is little waste of power by friction, etc., in running, and therefore it furnishes a large per cent. of available power. These engines have been upon the market for many years, and have invariably given very excellent satisfaction both to the purchasers and their customers. The reliability of the firm and their reputation for turning out first-class work, backed by thousands of testimonials of merit, are evidences that the award was not undeserved, for that the committee had not faithfully performed their duties.

A CHEAP, practical and durable potato-digger is something nearly every farmer in the country has been looking for for many years. Judging from the work done at the field trial on Thursday, it seems almost certain that the problem has been successfully solved by W. D. Robinson of Kanona, N. Y. His digger is the result of nine years of experiment and study by one of the most practical farmers in Steuben Co., and one of the largest growers of potatoes in the State. It has dug 150 bushels per hour. It was patented in August last, and the inventor expects to be able to supply the trade with diggers in any quantity desired, next year.

THE hay press exhibited by D. W. Seeley of Albany, N. Y., was shown in operation, and met with universal approval. For durability, efficient working qualities and construction, this press bids fair to take a first rank. It is made in sizes for one horse or more according to size and solidity of bale required, and it will bale everything "balable." The horse traversing a half circle in either direction, once, forces the piston to its extent of pressure and also withdraws it again, leaving the press open, so that the feeding is done while the horse is being turned, and thus no time is lost. The bales are tied while being forced through the press and this can be done without stopping, and either with or without slats. The machine throughout is a model of workmanship, and received in 1880 a certificate of highest merit. At the fair it received a like certificate of merit, and, in addition, a silver medal.

MESSRS. FOWLER & WOODWORTH, of Tanghannock Falls, N. Y., exhibited Fowler's Pitching Apparatus. This apparatus consists of a carrier, fork and pulleys so admirably arranged that it can be changed from one direction to another without climbing or removing bolts or keys. The working parts are positive in their operation; the stops are adjustable, and it is secured to rails without the use of bolt or screws. It has been in use for a number of years and thoroughly tested, and has never failed to give satisfaction. In fact, the proprietors, sufficiently confident of its merits, guarantee satisfaction to every purchaser.

J. WESTINGHOUSE & Co., Schenectady, N. Y., displayed a fine selection of thrashers

(Continued on page 660.)

Miscellaneous.

"HAWK-EYE HIVE."

Lucas County Agriculture; Thoroughbreds; Creameries; Coal Mines; County Fairs, etc.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

THE Hawk-Eye State, as a whole, has acquired the reputation of being a hive of workers, with a minimum of drones in all departments of its industry; and the traveler East or abroad, who hails from Iowa, feels a conscious pride in the recognition he receives as such. In many respects the State acknowledges no peer; in some it has equals; in few a superior; but none has made more rapid strides along the path of healthy, substantial prosperity, in which it is rapidly verifying the prediction of T. J. Potter, General Manager of the Chicago, Burlington and Quincy R. R., in saying; "The time is not far off when Iowa, with its rich soil, immense coal fields and the thrifty character of its people, will be capable of sustaining parallel lines of railway, twelve or fifteen miles apart, across the State. People do not yet comprehend the immense possibilities of this wonderful State."

Lucas County, situated in the second tier north of the Missouri State line, midway between the Mississippi and Missouri Rivers, with a population at the time of the last census, of 14,530 (now certainly over 16,000) possesses superior inducements to the home-seeker. It is a miniature hive in itself, where the diversity in the pursuits of life is so great as to furnish profitable employment to the farmer in all departments of agriculture, while the artisan, the professional man and the laboring man are all assured of satisfactory remuneration for their labor.

The soil is alluvial, deep, dark and fertile containing that modicum of sand which promotes rapid vegetation, resists drought, and yet provides good drainage without surface washing to any extent worthy of mention. There is some difference in the soil in the several townships in the county, which we have not space to mention in detail; but a letter addressed to any of the gentlemen we may happen to name will receive courteous attention, or we would venture to suggest specially, as well informed, the names of Dr. James D. Wright, agent at Chariton for the lands of the Chicago, Burlington and Quincy Railroad, or Colonel W. S. Dungan, attorney and member of the State Legislature, both old residents and reliable authorities.

All crops indigenous to this latitude do well here, and fruit-growing, both in orchards and vineyards, is successful, as it will be remembered that at the Centennial, Iowa presented 350 varieties, and received the first premium; yet the topography of this county—beautifully undulating; soil, as stated; amply supplied with timber not only for fuel, but for shade and shelter; with a healthful climate; pure water, and nutritious grazing—is peculiarly adapted to stock raising and dairy product, in which the profit, carefully estimated by competent, practical authority, is placed at an average of 25 per cent. per annum. To get this, let every farmer raise sufficient wheat, oats, etc., for the necessities of his family, just as he raises potatoes enough, making corn his principal grain crop, and devoting most of his land to pasture and meadow, condensing these into beef, pork, mutton, wool, butter and cheese for market. Thus will be insured to the producer the maximum of profit upon his investment and labor. To prove the truth of this, and the further fact that there is more money to be made from the best than from the poorer varieties and grades of either horses, cattle, sheep or hogs, we note our observations among several of the stock growers of the county, that the readers of the RURAL may the better appreciate what is being done here.

S. H. Mallory, President of the First National Bank at Chariton, has two large farms near the town, devoted almost exclusively to stock raising, having about 50 head of pure-bred Short-horns, with "Jacques 25,387"—a six-year-old-bull, large-boned and well developed, at the head of his herd; he by "Ben," and tracing back to "Louan Duchess" and "Duke of Moscow," a fine strain. Among his stock are also the Short-horn Lovely's Wiley, 27,136, a four-year-old, having four Duke crosses, a clear red; and Moses, a full-blood Jersey, three years old, a fine animal; and cows of the Wiley, Medora and Louan families. His grades are all high, and nice, large, thrifty animals. At one of these farms—the "Maple-wild Stock Farm"—he has also two full-blooded Clydesdale stallions, weighing respectively 1,600 and 1,750 pounds, both well-formed and active; also two very fine, highly-bred trotting stallions, Ben-Wade, a descendant of Rysdyk's Hambletonian, the sire of Dexter and St. Julien; and Lucknow Jr., grandson of Lakeland Abdallah, a full brother to Harold, the sire of Maud S. sold to W. H. Vanderbilt for $21,000.

D. Wormley, proprietor of the Chicago Burlington and Quincy Eating-house, mentioned elsewhere, has a farm of 200 acres near town, and is devoting his attention to thoroughbred Holsteins and grades from select crosses, believing them better, both for quantity and quality of milk, than other breeds, and equal for beef.

Robert Barnett, with a farm of 1,200 acres, has a herd of 125 Short-horn grades, which he is building up and strengthening for ultimate profits; he also turns off about 100 Berkshire and Poland-China hogs every year.

S. L. Bestow, on a farm of 160 acres, has about 60 head of three-quarter grades, with a fine pure-bred Short-horn bull at the head of his herd. His yearlings average 1,200 pounds and his two-year-olds, sold last season, averaged about 1,600 pounds.

Lewis Bonnett has a farm of 3,000 acres, with about 300 head of cattle grading in to improved stock of the Short-horn families; but his principal interest is his flock of 3,500 sheep. At the heads of his several fields he has American Merino, Cotswold and South Down bucks of the best blood in the respective breeds. He pronounces in favor of the finer wool sheep as the most profitable. He sheared this year some 500 quarter-blood Merino grades, which yielded an average of seven pounds to the fleece; 300 fourth-blood Cotswald grades, averaging six pounds; while his South Downs of the same grades averaged five pounds; but the latter were acknowledged to be the best mutton. He turns off 600 to 700 head yearly—this year probably 1,000. His average net per head is about $6. No foot-rot or scab has developed in his flocks.

Closely allied to the stock interest is that of The Creameries.

Of these we found: The Chariton Creamery owned by Marshall & Son, was established last June, with a capacity for making 1,500 pounds of butter daily, their present average being about 250 pounds; they work on the Fairlamb system, or cream-gathering plan, collecting the cream with six teams from some 500 cows, within a radius of 22 miles. They use the Davis & Fairlamb patent cans, and three other styles, and churn by steam power with a six-horse-power engine. They buy the cream of the farmers on the basis of the price of creamery butter in the market, from week to week; manufacture their own tubs of uniform size, each holding 45 pounds, and ship to Boston and Denver.

The Benton Creamery, Braden & Walton, proprietors, commenced business July 5, '81; capacity 2,000 pounds daily; present average, about 250 pounds; they too work on the same plan or system, but use Clark's Revolution Milk Pan for setting; gather cream from a radius of 26 miles, by six teams, from about 500 cows. They are now using horse-power for churning, but expect to put in a steam engine this Fall; they pack in the "Welsh" tub 56 pounds, uniform size, and ship to New York. This creamery is on the co-operative plan; they do not buy the cream of the farmers; but gather the cream, manufacture, pack and sell the butter, and turn over the proceeds to the farmers, retaining an agreed percentage per pound for these services.

Both creameries require the milk to be set 24 hours and skimmed sweet, and each has ample refrigerator and ice facilities. Mr. Marshall and Mr. Walton both told us that their best patrons and the most prosperous farmers were the readers of agricultural journals.

From Mr. W. B. Penick of the Chariton Bank, an extensive stock dealer, we learned that the average weight of beeves shipped from the county is 1,300 pounds for 2½-year-old steers, and 1,400 pounds for 3½-year-olds, and the prices for seven years past average, on foot, from 4c. to 4½c. per pound—this year 5½c. Hogs range at about the same figures, and from inquiry we learned that the First National and Chariton Banks paid out for stock dealers, last year, close to $1,000,000; and there are several other towns in the county. Will this suffice to verify the claim of Lucas County to be a profitable one in stock-raising.

The Lucas County Agricultural Society have their present grounds of 10 acres three-quarters of a mile west of Chariton. Their buildings are inadequate, as well as the grounds, and after this year they will hold their annual fairs on the new grounds belonging to the Lucas County Driving Park Association, half a mile Northwest from the depot, containing 59 acres, and possessing a decidedly better class of buildings; G. C. Boggs is president, and Captain A. U. McCormick, secretary, both of whom are laboring assiduously to insure a good exhibition this Fall; but the farmers of Lucas County should remember that it requires their individual and hearty co-operation to assure success.

Coal.

An important interest in this county and one upon which columns could be profitably used, had we the space, is the abundance of bituminous coal-beds which underlie its fertile soil. The White Breast Coal and Mining Company, with a capital stock of $150,000, own about 1,500 acres of land, have two shafts with ample ventilation, and extensive drives, amounting in the aggregate to several miles. They employ some 450 men, and after September 1 can produce about 1,400 tons daily. Their coal is shipped nearly 450 miles from the mines and retailed at $6.50 per ton as a maximum price. The Lucas Mine owned and operated by the Chariton Coal and Mining Company, Thomas A. Francis, Superintendent, has sunk a shaft 340 feet deep, and is driving entries preparatory to opening a main shaft—using the former as an air shaft. They will be ready for competing trade in 1882.

There is no county indebtedness, but a surplus of funds. The assessable real and personal property is nearly $4,000,000, upon about one-third valuation. The market facilities may be estimated from the statement that nine of the twelve townships in the county are traversed by the C. B. and Q. R. R.

Nearly 40,000 bushels is the estimated quantity of flax-seed for the crop of 1881 in this county, which item we mention in connection with the flax statistics we have previously contributed as showing the adaptability of the soil to flax culture.

CHARITON—the county seat, with a population at last census, of 2,020, amounting now probably to 2,300, has a pretty site being upon rolling ground, skirted with groves, dotted with farms, and beautified with lawns, trees, shrubbery and flowers. There are several brick buildings neat in architectural design, and others in progress of completion which are taking the places of "old-timers," as some of the antiquated frame structures are called.

There are two fine, substantial brick school buildings, an excellent system of graded schools with twelve to fifteen departments and teachers, and eight religious organizations and church edifices. There are also three newspapers: the Patriot, published both daily and weekly, nearly a quarter of a century in the service of City and County, is newsy, ably-edited, neat in its mechanical department, with liberal advertising patronage and large circulation. G. H. Ragsdale is the editor and proprietor; though the editorial mantle now rests upon the shoulders of J. H. Campbell, in the temporary absence of Mr. R. We are under many obligations to both these gentlemen for numerous courtesies. The Leader, by Best and Braumer, is democratic in politics, and though younger, is entitled to many of the encomiums bestowed on the former. The Times, by R. B. Cooley, "greenback" in its proclivities, is young but promising. In addition to these newspapers there is a well regulated public library stocked with choice books, magazines, and agricultural and political papers. The various civic societies. A. F. and A. M.; I. O. O. F.; K. P.; and V. A. S. have lodges well attended. A new building has been nearly completed for the two first-mentioned societies.

For public entertainments Mallory's Opera Hall is centrally located and convenient in its appointments. The city is creditably supplied with hotels. The Bates House is "up-town," a good brick structure, well managed by B. Anderson; and at the depot is the C., B. & Q. Depot Hotel, the largest, best and most convenient building of the kind between Chicago and Council Bluffs, 40x200 feet; two stories high, with a dining-room capacity for 200 guests, furnishing meals for four regular trains; D. Wormley, lessee.

The manufacturing interests, yet in their infancy, have the promise of prosperity with the future growth of the city. There are large elevators and lumber yards, well-stocked as well as assorted stores in different departments of trade. Tributary to the towns is a rich country, while the citizens are enterprising and energetic. A fire department and three good brass bands added to the interests above mentioned, contribute largely to the general attractions of this pretty place and its excellent reputation abroad. The Bankers' Life Association, which is acquiring extensive and popular recognition, had its inception in Chariton by E. A. Temple, cashier of the First National Bank.

LUCAS, with a population of about 1,200 and CLEVELAND one mile East, with 450, are about eight miles west of Chariton. RUSSEL'S seven miles east of Chariton, numbers some 450. All three are on the main line of the C. B. and Q. R. R. and have creditable religious, educational, social, and commercial advantages. All are growing rapidly from the same inherent sources already enumerated.

DURBY, with over 200 inhabitants, is some eleven miles southeast of Chariton, on a branch of the C. B. and Q. and possesses the same elements of thrift; moreover, they were boring and prospecting for coal at the time of our visit. The main business interests of the towns of Lucas and Cleveland, are, of course, largely connected with the immense coal traffic which gives employment to hundreds and thereby renders the business interests of the places unusually brisk. The gentlemen in trade are of the thorough-going class of Western merchants, and to a person seeking a home and employment this locality offers a desirable choice. R. Daily at Lucas, has kindly consented to reply to correspondence of the RURAL readers regarding local or general interests.

REMARKS ON THE WHEAT NUMBER

HENRY STEWART.

HUGH L. WYSOR, in his article on page 619, makes a mistake in his reference to smut in wheat. There is smut, Uredo segetum, and bunt, stinking smut, or Uredo fœtida. The former is the black or blasted ear in which no grain has been formed, but a black powder fills the place of the ear; while the latter consists of a black mess of spores which fills the chaff and replaces the grains (or some of them) while the ear retains its usual outward form. When these grains are burst, the black bunt has a stinking odor, whence its specific name. Whether it is a varying form or not of Uredo segetum, is not certain; the spores of both are similar in appearance, although differing in the fetid odor of the latter. Both of these uredos affect the plant before the ear emerges from the sheath, and have been found in the ovary before full inflorescence. There are other peculiarities common to each of these species, which would strengthen the suspicion that they are merely different developments of the same diseased condition. As regards the opinions of the intelligent farmer mentioned by Mr. Wysor, I have found these unsound grains pierced by the midge, and its larva present in them in the same ear in which sound grains have been pierced and infested with larvæ. The small insect (or worm or grub) lives equally well on sound and unsound grains and will eat out the heart of one as readily as that of the other and leave the husk empty, excepting as the pupa of the midge may occupy it. I have seen a dozen of these midge pupæ in one husk thus dried and otherwise empty.

This midge (Cecidomyia tritici) is the insect which Col. Curtis calls (by a lapsus linguæ, if I may be permitted to make such a bull) the weevil, in his communication page 621. The wheat weevil (Calandria granaria), and the wheat moth (Tinea granella) attack wheat only in the granary or barn and after harvest. Here the former, which is a beetle, punctures the grain and deposits an egg in it; the grub burrows into the kernel and eats out all but the husk, leaving this light and chaffy so that at thrashing it is blown out from the fanning mill, along with the shriveled grain blasted by the midge. The latter (Tinea granella) lays its eggs on the grain, and the larvæ eat out the heart, and when hungry for more, attack an adjoining grain and cover it, with the first, by a fine web, thus connecting several grains or husks together. These are also blown out of the fanning mill as are the others. When in Central New York about 30 years ago, at the time when wheat growing was abandoned on account of the Hessian fly and the midge, I saw myriads of the midge pupæ gathered from the screenings of wheat and burned, and the farmers called them weevils. From the similarity of the habits of these grain-eating insects and their presence in the grain, this confusion of name was by no means surprising, and at that time, too, very little was popularly known about them anyhow. Col. Curtis refers to the coarse-chaff wheat being free from attack from weevils (midges). The midge cannot penetrate a thick, hard chaff with her ovipositor, and therefore the soft, white wheats cannot be grown where these midges abound, but the harder amber and red wheats are saved by their thick chaff, and have been commonly known as "midge-proof." I have visited my wheat field at night years ago, with a lantern and have seen myriads of midges, very small orange-yellow flies, busy trying to lay eggs in the wheat, which, however, being a very midge-proof kind (Treadwell), was not injured in the least, although every chaff was marked with several small spots where the burglar had made attempt to penetrate.

Spanish Chestnuts.

In regard to the hardiness of the Spanish chestnut I have a bit of experience for the readers of the RURAL.

Nine years ago, Josiah Macy, Jr., Rye, Westchester Co., N. Y., presented me with some Spanish chestnuts grown on his farm, the seeds of which he had planted eight years before. These nuts were planted on various parts of Kirby Homestead, so as, if possible, to secure a favorable location in order that some of the trees might come to maturity. The nuts all grew, and none of the trees has ever been injured by the cold, although some of them stand in exposed places. When five years old, some of these, growing in a slaty, rough hillside without any cultivation, blossomed and bore burrs but no fruit. This year a number of them growing on different soils and places on the farm have fruited quite extensively, with large, plump burrs. This is in latitude 43° north, and I have full confidence that they will do well. The branches are allowed to grow out near the ground. The largest tree is 13½ inches in circumference and 14 feet high. F. D. CURTIS.

Literary.

THORNS AND ROSES.

(Continued from page 642.)

In the afternoon aunt and I went outside; Edith remained indoors, lest the sun should spoil her complexion. When I returned to her, books lay on the table, music on the floor; and as I entered, she threw aside some embroidery, declaring that she was bored to death—that she could discover nothing very original about me—and that she wished Brandon or Nevil would come.

"I shall go and see Brandon to-morrow. Really—I feel inclined for a battle with Nevil now; I wish he would come and give you a few of his airs and graces, or even Brandon would enliven us, for there's a decided want of something new here."

"There is a want of something new in your conversation," I returned; "couldn't you praise someone, or speak contentedly, just for a change?"

She stared at me as if astonished, though I did not know why, as I certainly thought she might act on my suggestion.

Neither Mr. Verner nor Brandon came; and aunt said that Brandon might not wish to disturb us, and might think himself rather in the way, so I determined to go and see him myself, exercising Diamond for the first time. Brandon was as a brother to me; at least he had been so in the past, and I did not think that his affection would have changed.

Edith came into my room that night to show me how long her hair was out of its plaits, and asked why on earth I sat staring out at the sky instead of going to bed. I could not have told why; I was musing on the past and present, and on the occurrences of the day: towards the future my waking thoughts had not traveled, yet my dreams were all of it, and it seemed full of pain, whilst I groped vainly in its shadows for my lost peace.

CHAPTER III.

Aunt Dorothy's china dusted, and the fresh flowers duly gathered, I gave directions for Diamond to be saddled and prepared for me, aunt giving me directions as to how I must go to Kingston, mingled with messages for Brandon, and cautions against losing myself. Having seen my gallant steed in readiness, I went in search of Edith, half hoping that she would accompany me; and found her in the summer-house, its seat converted into a sofa, her hat on the floor, her eyes closed as though in slumber.

"Art thou sleeping, maiden?" I asked.

"Whither away, cousin?" she said, merrily.

"I am going to see Brandon."

She opened her gray eyes to their utmost width, giving a faint, languid smile, as she said:

"Don't you think you might as well run on to Newville and see Mr. Verner?"

"Unfortunately, I do not know him."

"You are really going to Brandon?"

"Is it so very wonderful for me to visit my oldest friend—my almost brother—my kinsman?"

"If it were kinswoman, I would say nothing. No matter; you don't care for Madame Grundy."

"Certainly not. I was only trying to tease you, Kate. Remember me to Brandon, and tell him to come and see me."

"Will you not go with me?"

"No thanks! I went once, and by way of entertainment, Brandon brought me a lot of old relics to examine, until I felt bored to death."

"I suppose he did his best," I returned. "I am going now, unless you will change your mind."

"No: but I'll see you mount."

She drew her arm through mine, singing as we walked to my patient horse. She waved farewell laughing, whilst Black Diamond cantered away.

Drooping boughs of oak and chestnut touched me as I rode along the lane, to the intense admiration of the curly-headed urchins returning from school. Rising beside a stream was a black windmill, its huge arms motionless; the miller's cottage, with tall hollyhocks and lupins beside; and this being one of my landmarks, Diamond swept past, cleared the hedge in splendid style, and bounded over a breezy common as though he enjoyed the freshness of the air as much as I did. We cantered through a village street, and then, as we reached a white dusty high road, Diamond relapsed into his steady canter, and I caught a glimpse of the turrets of my brother's home. Very soon I had passed through the park, and drew rein as I reached the lodge and iron gates of the more private grounds.

A man came out to my assistance, and after glancing at the horse, remarked that I was Miss Lovel, for he knew Diamond, Mr. Brandon having broken him. Leaving Diamond, I went slowly towards the house, until among the trees I heard the sound of a voice. A clear tenor broke the silence, and I listened, motionless, whilst the unseen sang on:

"There was something the season wanted,
Though the ways and the woods were sweet—
The breath at your lips that panted,
The pulse of the grass at your feet."

Was it Brandon? My heart beat as I waited for the "singing pilgrim" to draw nearer.

"I waited to watch you linger
With foot drawn back from the dew——'"

There was the rustle of branches pushed aside by a strong arm, and the next moment I had clasped my old playmate's hands.

"Welcome home, dear sister!" he cried—"Welcome home at last! How glad I am to see my little companion of bygone days—my first friend!"

I turned aside, half crying, because I felt so happy that he was glad, and suspected there were tears in his eyes too.

Ah, me! no vision of how I should stand before him, a humbled, sorrowful woman, in these very woods, threw its shadow on me then! I was happy.

"You came to see me, Kate? That was kind; it was like you. Not the first time you have come to Kingston, and many a castle have we built together; but you are changed since then."

"Changed?" I repeated,

"Changed from the little one of my childhood. We all change with time, we parted children, and we meet—one a man, the other almost a woman."

There was a ring of sadness in his voice that in a moment recalled to me his neglected youth, his many trials, and his lonely life.

"Dear Brandon," I said, "whatever outward change has come, I am to you the old Kate. Could I forget you, brother? Does a sister's love fail?"

If there had been restraint on either side it has passed away now, and bygone days might have returned. We were yet lingering in the forest-shelter, and I looked at his face. What had I expected to see?—the child with whom I had played—or a bent, worn man? Edith's phrases had misled me, and I saw a Brandon I had not pictured. Grave and quiet he was indeed, and there was a strange shade of melancholy in his face; but there was power in the compressed lip, intellect in the lofty brow, truth and honor in the dark eyes; he was like a bygone Lovel, pictured at home, with his fine face, his clear-cut features and tall form. Of his character as a man I scarcely thought; for to me he was the Brandon of early days; he had, I knew, the pride that keeps us from speaking falsely or unkindly, from being mean or untrue—a different pride from that which we usually accept as such, and which is mere arrogance. Perhaps, looking on him by the warm light of old affection, I made him all too faultless; but I know as we stood together in the quiet forest, I believed that there were none on earth more noble than my brother Brandon.

"Shall we go to the house?" he said presently, and we left the woods, he holding aside stray branches for me to pass.

"How did you know where I was?" I asked, watching a broken blossom float down the tide as we paused on the bridge.

"I saw my friend Diamond, and knew you must have come. Something guided me to the forest; perhaps a bird to the right sang *Here*."

"And you had not forgotten me?"

"You left Aunt Dorothy well?" he asked, and then I was sorry I had asked him had he forgotten me.

"Yes, she is well. Edith arrived yesterday, and wants you to see her. Oh Brandon, how good you have been to Aunt Dorothy! She has told me of your kindness, and I know what you have been, and are, to her."

He looked at me wonderingly.

"Is it so much to visit one so kind and gentle? And you don't see the selfishness of it either!"

We had reached the house, and he opened one of the long windows, leading the way into a strange, quaint apartment, with oak ceiling and tapestried walls skins of animals, bronze statues, an inlaid table supporting a rapier and an ivory casket with jewelled clasps.

"This is my reception-room," said Brandon.

"Are you not very lonely?"

"Sometimes; but it can't be helped. I have no relations; and Aunt Dorothy has settled my future for me."

Thus lightly could he dismiss his own who pitied so deeply the loneliness of others.

"My other room is all books," he said, "and very few care to enter it; my old housekeeper shuns it, because of a skull I once showed her."

"And you like to live quite among books?"

"It runs in the family, Kate. There was a Brandon Lovel in the good old times, and I follow in his footsteps. But tell me about yourself." I spoke of my school-life, and he listened with a faint smile; of himself he said but little, and I could not speak of his father: it was a subject too painful, though I caught myself contrasting the revels of the past with the perfect repose of the present.

"You will come and see us, Brandon, and find out the pictures on the tiles for me!"

His whole face brightened, and he laughed.

"You remember even that? Oh! yes, I will come."

We walked out together, and Brandon assisted me to mount. I looked back just before the trees hid him from sight; he was standing where I had left him, a lonely figure, looking after me as I rode away.

On arriving home, I found Edith in very low spirits, and aunt was endeavoring to cheer her.

[To be continued]

A great many persons become insane from sleepless nights that Hop Bitters would have prevented.—*Adv.*

Domestic Economy

CONDUCTED BY EMILY MAPLE.

LITTLE HELPS.

MAY MAPLE.

Not long ago Mrs. M. Wager-Fisher recommended the assistance of men as hired help in the house—when it was inconvenient to find girls, or women to aid in the work of the household. This was a good suggestion, and works well in some localities. But I believe in most country places it would be quite as difficult to find men or boys to go into the house to earn a living as it would be to find capable girls. In fact, I think it would be easier to hire girls to go out upon the farm to plant corn, dig potatoes, etc.

Occasionly one will "come down" to the work if his wages are likely to be a little more than he can get at anything else, or a little more than double what girls would receive. But there is a certain class among farmers, at least, who have not yet reached the middle round of the ladder that leads to "comfortable circumstances," and these are scarcely able to hire a domestic, and yet they need some assistance.

"Oh!" says the young housekeeper, with little three-year-old hanging to her skirts and a baby of three or six months in her arms, "if I could only have some one to take some care of baby and amuse Madie, bring in wood, and an occasional pail of water, and feed the chickens"—for who ever saw a farm-house without its groups of chickens—"and do a hundred other little odds and ends of chores that do not amount to much taken singly, but when added to numerous other cares, become really burdensome." And the young farmer frequently feels that the barn chores are a heavy tax upon his strength when he has followed the plow or harrow from early morning till set of sun, but as yet he feels unable to pay a man $15 or $20 dollars a month and board; so he plods on as best he may.

Now in almost every State there is an orphans' asylum, and these houses or State public schools, as they are often called, are frequently filled with friendless children of both sexes whose ages range from infancy to fifteen or sixteen years. They are not children who have been sent to the institution for bad behavior, though we do not doubt there may be now and then one who has somewhat the disposition of a street Arab, but they are homeless and friendless, and need parental training, that they may make noble specimens of manhood and womanhood. Now, if these farmers, who are overtaxing their strength, both indoors and out, knowing their inability to hire, and having no children large enough to assist about the "chores," would each take one of the friendless ones into their family and patiently teach him or her what would be required from day to day, the burden would, much of it, slip from the shoulders of those so much overtaxed. And any healthy child of 12 or 13 years can earn its board and clothes and not be overworked either. And if the child is treated as a son or daughter, he or she will very soon take an interest in the work, that no hireling would ever think of doing. And very soon you will find your little assistant will grow into just the truly efficient help that you so much need. Let us help the helpless, and in so doing help ourselves.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

It is pleasant to read in the pages of the Rural such kind little words of encouragement as those given by "Olive." "Every-Day House" is a *real home*, where live a large and happy family, each busy with whatever his or her hands find to do. The boys help the girls in many a task that would be otherwise disagreeable, and the girls, in turn, help their brothers over many a rough place. It is a busy home, yet, withal, there is rest there, and among the trees and fruits and flowers of that quiet hillside, strangers, after a few days' visit, generally say: "How restful this home is!" To be busy and helpful is one of the greatest charms life can have, and yet how few understand it. I do not mean a life of drudgery, but of earnest work, varied by recreation that will keep the mind as well as the body employed.

Just now to the ruralist it is a time of comparative leisure, and let us hope that every reader will take advantage of the many excursions to visit, if but for a short time, other and new scenes. The contact with kindred spirits, the rubbing against each other, and the interchange of ideas are calculated to do good to all of us, and let the weary wife and mother leave her charge if but for a week—the work would go on, dear friend, if you were dead. Let the loved ones miss you for a few days while you see the beauties of Nature and of Art. We cannot all visit the Yosemite Valley, but we may see Niagara at little cost, and hear the wind and see the prospect from some mountain top. Or, if not, go to the nearest town, *not* on a shopping errand, but to see anything that has been collected for your instruction. Visit museum or art gallery, or attend some good concert or lecture. It will brighten your life, and be long remembered in your future.

DOMESTIC RECIPES.

PICKLED ONIONS.

Select the small white onions, remove with a knife all the outer skin so that each onion will be perfectly white and clean. Make a strong brine (one that will float an egg), put the onions in and let remain three days. Take out and cover with hot spiced vinegar.

WHIPPED-CREAM PIE.

Sweeten a teacupful of very thick, sweet cream and make as cold as possible without freezing. Line two small pie-tins with moderately rich crusts prick in several places to prevent blistering and bake in a quick oven. Flavor the cold cream and whip as you would eggs for frosting. When the crusts are cold, spread on the cream and if you like to add a finish, put bits of jelly on top.

FRICASSEED CHICKEN.

Cut up and put on to boil in a small quantity of water. Season with salt, pepper and an onion if liked. Stew very slowly until tender, then add a half pint of rich milk or cream and thicken with butter and flour rubbed together, add a little chopped parsley just before serving. Have toasted some thin slices of bread, arrange on a platter and pour over the chicken. LONG ISLAND.

WILD GRAPE JELLY.

In the matter of jelly the wild grape is to the housewife of the Western plains what the currant is to her sisters of the East. The jelly is nicest when about one-third of the grapes are still green. Put them, stems and all, into a preserving kettle and add sufficient water to cook soft, stirring occasionally. When done, strain and boil a few minutes or till the water is boiled out; then add sugar, a pound to a pint of the juice. If rightly done a few minutes will make it. MRS. A. E. S.

Preserving Blue Fish, etc., for Winter Use.

A friend calling upon us was asked his method of salting down fish, which he gave as follows: Know that your fish are just out of the water. Split open, remove entrails, and cut out the back-bone so that every particle of blood is soaked out in the brine. *Do not scale.* Put the fish into a weak brine and let stand over-night. In the morning pour off the water and cover with another brine. After a few hours take out the fish very carefully and lay on a board to drain—tipping up the board so that all of the brine runs off. Now put a layer of clean coarse salt in the bottom of the cask you are to pack the fish in, then a layer of fish, then one of salt, and so on, until all are in. The last layer should be salt. In a few days you will find the fish covered with a *clear* brine. Keep in a cool place. The fish must of course be kept under the brine. One essential thing is to handle the fish as little as possible from first to last.

QUESTIONS ANSWERED.

CHIPPED BEEF.

Please give directions for cooking chipped beef. S. G.

Ans.—The beef should be first covered with boiling water to freshen, then pour it off, frizzle in a spoonful or more of butter, dredge with a little flour, add new milk, from a half pint to a pint according to the quantity of beef, and simmer 10 minutes. Just before taking from the fire stir in the beaten yelk of an egg.

Paralytic, nervous, tremulous old ladies are made perfectly quiet and sprightly by using Hop Bitters, daily.—*Adv.*

(Continued from page 657.)

and engines that attracted a great deal of attention. Their new traction engine which they had in operation, with its guiding attachment, drew a large crowd of visitors, and met with universal commendation. This device is put on all their traction engines. In operation it is very simple and can be operated with ease. A reversible gear, worked by a reversing lever, enables the operator to turn the engine in either direction, or change its direction, making it run either forward or backward, as desired, and all is accomplished with ease and rapidity. The company has thoroughly tested the engine under all conditions, and is fully satisfied that it will meet the wants of all. The best workmanship is employed in its manufacture and it is put upon the market solely upon its merits.

ONE of the largest displays on the grounds was that made by Messrs. Gregg & Co., of Trumansburg, N. Y.: they exhibited their full line, including the Meadow King Mower, Osborne Plow Sulky, Gregg & Meadow King Sulky Rakes, and their new Gregg Self-delivery Reaper. At the great plow trial at the New England Fair at Worcester, Mass., last week, the Osborne Plow Sulky with the Gregg Chilled Plow attached, carried off the first premium after a stubborn contest with most of the principal sulky plows. The test was made thorough, and the committee put the plows to the hardest kind of work. The new Gregg Reaper promises to be a good addition to the line of goods sold by this company; it is an entirely new machine, and has already made a successful record. As soon as we can get cuts ready we will illustrate and describe it.

THE new model direct-draft Eureka Mower, manufactured by the Eureka Mower Company, of Towanda, Pa., attracted the attention of the farmers during the entire fair. The company showed a six-foot and an eight-foot cut mower, both of which were model machines. The demand for these mowers during the past season has been very great, and the company have been unable to supply their constantly increasing orders. With increased facilities for turning out their work they will be able to build at least 2,000 machines for next year's trade. Testimonials from leading farmers in all sections speak in the highest terms of the merits of this mower, in every instance entire satisfaction being expressed. The workmanship is of the best, the material used is first-class, and all machines are fully warranted.

THE St. Johnsville Agricultural Works, Mr. Williams proprietor, at Johnsville, N. Y., showed a full line of their tread powers and separators in operation. They have had a very successful year, and the machines on exhibition had to be made at the last moment for this purpose. They now have a full line of powers to suit all their different sizes of thrashers, from a one-horse tread to a ten or twelve-horse portable engine. To meet the growing demand in some sections for steam thrashers, Mr. Williams now supplies one of the best thrashing engines in the country with his largest-sized separator, and he will be fully prepared to supply all orders on short notice.

GEO. WHITBECK—headquarters Rochester, N. Y.—general agent for the Gale & Albion M'f'g Co., of Albion, Mich., made a fine display of Gale Chilled Plows and Albion Sulky Spring-tooth Harrows, with broadcast seeder attachment. The new series and styles of Gale Plows made a very handsome exhibit, and their fine polish and elegant finish showed that the best of metal and workmanship must have been used in their manufacture. The Albion Sulky Spring-tooth Harrow is comparatively a new machine; it created quite a sensation on the grounds. It has been thoroughly tested the past season and meets with general favor. It is a practical implement and sells at sight. We have one at the Rural Farm and will illustrate and describe it as soon as we have tested it.

THE WALTER A. WOOD Self-binding Harvester, the Dederick Hay Press, the Ross Giant Feed Cutter, the Bradley Mowers and Reapers, the Acme Harrow, Payne & Son's portable engine, Chandler & Taylor Mnlay Saw Mill and Farquhar Birdsell's engines and others were among the exhibits in the classes to which they belonged. The Reiner's combined harrow, cultivator and broadcast seeder is a new and meritorious implement. Plows were exhibited by the Clipper, Daniels, Ames Plow Co., N. Y. Plow Co., Wiard, Oliver, Gregg & Remington. Thrashers made by Williams & Co., the Victor, and Roberts, Throp & Co., of Three Rivers, Mich., made an excellent show. Grain drills were on exhibition made by the Empire Grain Drill Co., Farmers' Friend M'f'g Co., the Missouri, and Union, Hagerstown, Champion, etc. Short & Smith, Cortland Wagon Co., and Moyer, Fish Bros., Milburn Wagon Co., exhibited their wagons. Those of Davis and Auburn occupied a large space, and were of the most modern and stylish patterns.

The creameries made by M. D. Chapin, the Vermont Farm Machine Co., Moseley & Stoddard, Lincoln, Brown & Rosa, were very fine and attracted special attention.

Altogether this is one of the most successful fairs ever held in Elmira, and the Society feels under many obligations to the many exhibitors and visitors for the interest manifested in the success of the Fair G. B. B.

News of the Week.

HOME NEWS.

MONDAY, Sept. 19, 1881.

On Saturday the President had another relapse from which but a partial recovery has been made up to this writing. He was attacked with chills, his pulse rose to 137, there was much nausea and, a part of the time, the patient was delirious. There has been no real improvement in his condition since yesterday morning. Attorney Gen. MacVeagh, who has been with the President almost continually, summoned the cabinet last night for consultation with the doctors. The cabinet were informed that at no period has the President's case been so serious as now, and that if the surgeons cannot control the rigors (chills) his death will be a question of a very short time. Secretary Blaine has telegraphed that he will come at once. At midnight the febrile rise was reported to have subsided.

LATER.—9.15 A. M. The condition of the President remains unfavorable. At 8.30 this morning he had another rigor on account of which the usual dressing of the wound was postponed.

LATEST. 5:00 P. M.:—The President is growing weaker continually, and the most hopeful concede that his condition is critical in the extreme.

New York has contributed about $45,000 to the Michigan sufferers; Boston, with one-fourth the population has given $25,000 to the same fund; or more than half as much as New York. About the same proportionate amount was contributed to the sufferers from the Chicago fire in 1872. Comments are unnecessary!

A fire broke out in the Kansas City (Mo.) fair grounds, on the 14th, which did much damage. The main hall was the first to succumb, and a panic seized upon the people who were in it. Though the confusion was great, no loss of life was reported. The damage to buildings, etc., is laid at $50,000.

Ex-Governor Dingley, of Maine, has been elected to fill the vacancy in the House caused by Mr. Frye's elevation to the Senate. His majority was 5,173.

The balloon voyage which Prof. King and others were to make to the seaboard from St. Paul, Minnesota, has, like the balloon itself, collapsed. The several reporters for the press will now have to take their vacation on *terra firma*.

About 100 Chinamen of this city rejoiced in a clam-bake on Staten Island, Thursday. The "Heathen Chinee" is fast becoming civilized.

Mrs. Susan May Bonaparte, widow of the late Jerome Napoleon, died on the 15th inst., at Baltimore, Md.

The Rev. Dr. Darling began his work as president of Hamilton College, Clinton, N. Y., on the 15th inst.

Battery P, Third Artillery, by command of Major Gen. Hancock, marched from Fort Hamilton, New York Harbor, to Yorktown. The route of the "army" is via Trenton, Philadelphia, Baltimore, Washington, and as far as practicable it will follow the route taken by Washington in 1781.

Major Gen. McDowell reports that 11 officers and men were killed or died from their wounds at the recent fight with the Apaches in Arizona. Gen. Carr was not killed as first reported.

Secretaries Hunt and Windom, Postmaster-General James, and others of the Cabinet party who have been taking a trip to the White Mountains, returned to Long Branch Saturday, owing to the unfavorable condition of the President.

From the first to the middle of the present month 15,273 immigrants have been landed in this City, an increase of 2,122 over the number of arrivals during the same period in 1880.

Owing to the drought, in Ottawa, Canada, where the water works do not reach, water has been sold for a dollar a barrel. Twenty-five cents have been given for a pailful.

Forest and brush fires are raging in Marin County Cal., near the foot of Mount Samalpais. It is reported that houses, out-buildings, fences, etc., are being swept away. Dense clouds of smoke are hanging over San Francisco, driven across the bay by the north wind.

Gen. A. E. Burnside died suddenly on the 13th at his residence in Bristol, R. I. The immediate cause of his death was spasms of the heart. His funeral took place on the 16th at Providence.

Two agents, one from the Texas and the other from the New Mexico Railroad companies, have been in China contracting for labor on those roads, and the steamer Oceanic, which is due in ten days, will have a thousand coolies for them. These will receive $1.25 per day and transportation to the scene of their work.

Catering succeeded very well under the late Lorenzo Delmonico. His will disposes of property exceeding $2,000,000 in value. It divides the estate among relatives, with the exception of $5,000, which are given to the St. Vincent de Paul orphan asylum of New York.

The Selectmen of the town of Franconia, N. H., have officially rechristened the mountain which has heretofore been known as "Haystack Mountain" situated in that town, and it will hereafter be known as "Mount Garfield."

Commander K. Randolph Breese, of the United States navy, died at his residence in Newport, R. I., Tuesday, after a long illness. He commanded the marines in the attack on Fort Fisher.

It is alleged that Mr. Vanderbilt is willing to spend $10,000,000 to carry his point in the railroad fight in which he is now engaged. He is determined to choke off financial aid to parties desiring to build new trunk lines from the Atlantic coast westward.

Mrs. Hayes's portrait, presented by the women of the United States, cost $3,000. It was painted by Daniel Huntington, of New York.

Arresting the Progress of Consumption.

The action of "COMPOUND OXYGEN" in arresting the progress of pulmonary consumption has been so marked and constant in our administration of this new Treatment that we are warranted in saying that, if taken in the early stages, eight out of every ten persons affected with this disease might be cured. In this disease, as every one is aware, the only hope of the patient lies in the establishment of a higher vital condition. Now Compound Oxygen is an agent that gives directly this new and higher vitality. But we cannot too earnestly urge the necessity of using this Treatment in the very commencement of pulmonary trouble, and before the disease has made any serious inroads upon the system and reduced its power to contend with so dangerous an enemy. Too many of the cases which come to us are of long standing, and the chances for a radical and permanent cure just so far remote. That Compound Oxygen benefits, or cures, so large a proportion of these, is often as much a surprise to ourselves as to our patients. Our Treatise on Compound Oxygen, containing large reports of cases and full information sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

Monday, Sept. 19.

The following agricultural items are condensed from telegrams received in this city from the various points from Friday afternoon, Sept. 16, to date:—Portland, Me.: crops of fruit and other produce find ready markets elsewhere: prices firm.....Boston, Mass.: Another very active week in wool; sales foot up 5,072,000 pounds, making nearly 11,000,000 pounds in two weeks. An advance of 1@1½c. per pound in fleeces. Hides dull. General tendency of prices in food products and raw materials is upward.....Providence, R. I. Cotton, middling uplands held at 12⅝c.: middling Gulfs, 12⅞c.: prices firmer.....Buffalo, N. Y.: Flour and wheat active and higher. Little doing in other grains. Lake and canal freights higher. Wheat to N. Y. 5c.; corn, 4½c.....Philadelphia, Pa.: Wool fairly active and very firm: a good many lots are held off the markets for an expected advance. Week's sales, 75,000 pounds. Cotton dull and weak. Dairy produce scarce and firm. Receipts of flour 1,000 to 1,500 barrels per day less than consumption. Grain opened strong and higher, but advance has been nearly within the last two days Storage question settled by resort to barges at old rates for first ten days, then at an advance of ¼c. per bushel for each succeeding ten..... Detroit, Mich. Dairy products firm and going up: choice packages scarce. Fruits not overabundant. Wheat accumulating, speculation obstructing logitimate business. Light stocks of flour.....Chicago, Ill: Inter-State Exposition and Chicago Fair attracting large crowds of farmers. Grain trade active; heaviest "deals" for October and November deliveries. Hot wheat being removed from warehouses and taken to millers. Heaviest "provision" trade is for January and February deliveries.....Peoria, Ill; Receipts of grain light; market strong.....

Cleveland, O. Great scarcity of potatoes at $1@1.10 per bushel by car-load on track. Wheat No. 2 red winter, $1.44.....Toledo O. Recent heavy rains have improved crop prospects. Prices of grain firm with an upward tendency.....Evansville, Ind. Heavy rains all over the country from Indianapolis, brightening crop prospects somewhat. Corn too much damaged to be much helped. Other uncut cereals and tobacco will be benefited .....Milwaukee Wis. Heavy rainfalls here and there have put a stop to thrashing and delivery of grain, and considerably damaged that not stacked. City mills running to their full capacity. Nothing special about grain.....St. Paul Minn. Rain still stops thrashing and keeps wheat back.....Minneapolis, Minn. Four clear days in two weeks: much rainfall. Considerable wheat not in stack, mainly of large farmers, all more or less damaged. Little thrashing done. Millers running short of dry milling grain. Grade will be reduced by rain with some loss in quantity. Crop of Minn., from 38,000,000 to 40,000,000 bushels. High river endangers 40,000,000 feet of logs.....Louisville, Ky. Good rains, apparently general ended two months' drought on Wednesday, and if too late to improve crops will put ground in good condition for planting.....St. Louis, Mo. Grain, provision and flour markets very excited; prices constantly changing. Sheep have been in fair supply; but are now held back to grow wool. Good steers held back for an advance, Canned fruits and vegetables very much higher..... Denver, Col. Fair week; town thronged. Fruit and vegetable market fair. Meats firm: supply of grain and flour small, trade brisk. .....San Francisco, Barley advanced the past week 5c@10 per cental. Wheat fell 2½c, but recovered. Buyers holding back..... Baltimore, Md. Prices for wheat and corn, spot and options, have advanced so surprisingly that export business is practically killed, as the figures here are higher than those in Europe. Ocean freights therefore demoralized and low. Feeling very bitter against Elevator Company. Oats quiet, rye dull but firm. Provisions unsettled but firm. Cotton heavy with a downward tendency.....Washington D. C. General E. A. Carman, Acting Com. of Agriculture, has directed 100 bushels of wheat and 50 of rye to be distributed for seeding purposes among the farmers of the Michigan fire-devastated districts—a drop in a bucket. In a bucket?—in a barrel.....Norfolk Va., cotton coming in at the rate of 2,000 bales a day.....Richmond, Va. Good rains. Tobacco men say the rains are so late they will do tobacco more harm than good, causing the leaf to "green" when nearly ready to cut. Tobacco market decidedly firm; prices still up; wrappers advancing.....Wilmington, N. C. Late storms did much damage. Corn very scarce: all provisions advancing. Labor Unions demanding higher pay..... Charleston, S, C. First arrival of new crop of rice. Receipts of cotton since Sept., 1, 18,088 bales, against 30,015 for some period last year: falling-off owing to direct shipments from interior to northern ports. Crop opening well.....Savannah, Ga. Owing to expected shortness of cotton crop, season will be shorter and prices more firm and uniform than last year.....Atlanta, Ga. Cotton coming in rapidly. Fine rain on Thursday.....New Orleans. Labor strike over after embarrassing business for two weeks. In sympathy with decline in Liverpool, cotton has weakened—spots ⅛c. and futures for the near months 24 to 30 points. Showers for last two days may benefit cane and late vegetables, but not cotton. Rice coming in freely and sells as fast as milled. Pork and corn scarce and higher..... ....Little Rock, Ark. Slight rainfall on Saturday. Farmers are putting in a good amount of wheat.....Nashville, Tenn. Wheat steady; millers taking all offered. Corn quiet but firm. Provisions active and higher. All produce light and prices full..... ....Montreal, Canada. Crops are turning out well and the farmers' outlook is generally satisfactory.....St. Johns, N. B. Cereal crops are scarcely an average. Vegetables and small fruits good.....

THE Galveston News estimates that three-fourths of the good black walnut of this country has been used up within the last ten years. Recalling the fact that good black walnut is worth $150 per 1,000 feet, and that it requires 100 years to grow a good black walnut tree, the question is asked whether it is not about time to give some attention to forestry as a popular science.....The mails bring favorable reports about the prospects of the supply of Australian wool.....Within a few weeks 32,000 acres of United States lands at $1.25 per acre, and 20,000 acres of swamp and overflowed lands at 25 cents per acre, have been purchased at Jackson, Miss. These lands, which are all uncultivated, lay in Southeast Mississippi, and have been purchased by railroad companies for the purpose of locating immigrants.....The rice crop in Beaufort Co., N. C., has been reduced to one-third of a crop by the dry weather. It is added that some farmers there, who went largely into rice, will do well if they make expenses. Fortunately, however, very few trusted to rice alone. The expectations as to cotton and corn will not be fulfilled; but, notwithstanding, the cotton crop thereabout, it is said, will be a fair one, owing to the swampy character of the land in that section.....In England and Wales it has generally been supposed that large farms were the rule, but recent statistics show upwards of 346,000 out of the total of 473,638 holdings are of 50 acres each or under. The farms above 1,000 acres number 506. In Scotland out of 80,101 holdings 55,280 are of 50 acres or under, and 79 only exceed 1000....

....The wines in the Champagne country are reported to be exceptionally abundant, but inferior in quality. This year the Burgundy district will yield a small but rich vintage. The same may be said of the Bordeaux valley .....About 1,500 bushels of potatoes are shipped by boat from Albany, N. Y., daily. The prices received vary from $1.75 to $2.12. The supply comes from the counties immediately surrounding Albany County.....The amount to be given in premiums at the Western New York fair, to be held in Rochester, beginning on the 27th of this month, is $13,000.....The following report of the condition of the crops was issued by the Department of Agriculture on Sept. 15:

COTTON.

The reports of September 1 to this department show a very heavy decline in the condition of cotton since the last report, owing to a protracted drought which has prevailed in all sections of the cotton belt. The condition as reported is 72, a decrease of 16 per cent. during the month of August, and as compared with the returns at the same date last year, is 19 per cent. less. The reports are from 330 counties of the cotton section and are somewhat less in number than usually received. The number of counties and States averages are as follows: North Carolina, forty-two counties, reporting average 72. South Carolina, twenty-two counties; average, 68. Georgia, fifty-five counties; average, 71. Florida, fourteen counties; average, 87. Alabama, thirty-three counties; average 80. Mississippi, thirty-seven counties; average, 74. Louisiana, fifteen counties; average, 76. Texas, sixty counties; average, 65. Arkansas, thirty-one counties; averag, 55. Tennessee, twenty-one counties; average 62.

CORN.

The general average condition of the corn crop on September 1 was 60, being 17 per cent. lower than the month previous and 31 per cent. lower than a year ago at the same date. The cause of the low condition existing in almost every section of the country is drought. New England is less affected by it than any other section east of the Mississippi, and reports an average of 90. In Wisconsin, Minnesota and most of the Territories there has been more seasonable weather, and the condition of the crop is correspondingly better, but in all other sections the reports show the effects of an unusually dry season. From Illinois, Missouri and Kansas come serious complaints of ravages by the chinch bug, added to the prevailing drought, and the injury to the crop prospect is shown by the State averages, which are 58, 42 and 65 respectively.

TOBACCO.

The returns from correspondents give a very serious decline in the prospect for the tobacco crop, being some 20 per cent. less than a month since. With the exceptions of the States north of the Delaware River and Wisconsin in the West the universal complaint is drought. Kentucky and Illinois each report but little over half a crop, while Tennessee and Missouri report less than two-thirds. The average for the whole country is only 65, against 85 last month and 84 at this same date last year:

E. A. CARMAN, Acting Commissioner.

There is a talk of holding a national convention of sorghum cane-growers in Chicago at the end of the season, and of their organizing a National Association of Cane-growers, with the object of still more vigorously pushing the industry.....Australia and New Zealand take nearly all the surplus hops of the Pacific Coast.....Potatoes are rotting very badly in New Jersey.....John B. Raymond, of Fargo, Dakota, says that he has harvested this season $50,000 worth of wheat from a farm that cost him only $59,000 two years ago. There shouldn't be a rush of farmers to buy such little farms there, though.....Early last week a dispatch from St. Louis announced that the two chief barge lines between that city and New Orleans had been definitely sold to the river transportation company organized by Jim Keene; that its present capital was $2,000,000, and that it intended to control the carrying of all the grain on the Mississippi to the Gulf.....The Earl of Dunraven owns 30,000 acres in Colorado, and visits his place frequently for "sport."....The owner of a large cranberry farm at Berlin, Wis., who employs hundreds of girls, promises to marry the one that picks the most berries this season—providing she'll have him. She won't be the prettiest or sweetest-tempered, sure; that sort are seldom the best workers.....Delaware turns out 300,000 baskets of peaches this year, against 4,000,000 last year.....B. B. Allen, of Reading, Pa., last Winter agreed to give a horse and sleigh, valued at $150, for half of the crop which George Thompson's peach orchard was expected to produce this Summer. The crop amounted to just two peaches, one of which was handed to Mr. Allen—a dear peach for $150.....The Southern States possess a chicken syndicate. Six firms virtually control the poultry market. The combined capital is $50,000. Their agents receive five per cent. for purchases not only of poultry, but eggs, butter and sausages. The headquarters are at New Orleans, Savannah, Charleston, and three places in Tennessee.

The area under wheat in India, according to the report of John B. Conner, Chief of the Bureau of statistics for India, issued Sept. 2, 1881, is this year 3,191,323 acres, against 2,517,719 last year, showing an increase of 673,605 acres, or nearly 27 per cent. The area under corn, as per same report, is this year, 3,145,411 acres, against 3,421,509 acres last year, being a decrease of 276,098 acres, or a trifle over 8 per cent.....The reports from Kustendeji, under date of 27th ultimo, state that the Danubian maize crop will be only half an average; and Galatz advices of 22d August state that the weather had been hot, causing serious damage from drought to the maize crop of Roumania.

You Must Try It.

Do not despair even if you have suffered for years from weak kidneys and torpid bowels. Kidney-Wort has cured hundreds of cases of from five to thirty years' standing. This remedy is prepared both dry and liquid.

Lydia E. Pinkham's Vegetable Compound revives the drooping spirits; invigorates and harmonizes the organic functions; gives elasticity and firmness to the step, restores the natural lustre to the eye, and plants on the pale cheek of beauty the fresh roses of life's Spring and early Summer time.

To produce real genuine sleep and childlike repose all night, take a little Hop Bitters on retiring.

A Fine Hair Dressing.

COCOAINE dresses the hair perfectly, and is also a preparation unequalled for the eradication of dandruff.

The superiority of BURNETT'S FLAVORING EXTRACTS consists in their purity and great strength.

The Markets.

CROPS AND MARKETS.

COPIOUS rains all over the country during the past week. Unstacked grain has been more or less injured in may places. Telegrams from Minn., this morning, say the reports of injury from this cause in that State were exaggerated. The wheat coming in grades well. Up to Friday evening the rain-fall at 24 Signal Service stations in the Cotton Belt averaged 2.09 inches, against 1.26 inches for the corresponding month last year, 0.01 inch last week. Last week's Washington telegram gave the rainfall at 0.09 instead of 0.01; but it was only a a mere trifle whichever is correct. There have been wide fluctuations in breadstuffs during the week, but the markets have, on the whole, been favorable to holders and to an advance in price. Advices from Europe tend to strengthen prices for grain, for while they confirm previous advices of the surplusages of grain in some countries, they intimate that the needs of others will be larger than hitherto counted upon. As yet no really trustworthy estimate can be formed of the deficiency or surplusage of grain in various countries, but the following table shows the matter approximately.

IMPORTING COUNTRIES.

	Bushels.
United Kingdom	128,000,000
France	48,000,000
Belgium, Holland and Germany	16,000,000
All other importing countries	20,000,000
Total	212,000,000

EXPORTING COUNTRIES.

United States	75,000,000
Russia	50,000,000
Austria-Hungary	8,000,000
Egypt	400,000
Chili and Australia	16,000,000
British India	4,800,000
All other countries	6,000,000
Total	160,200,000
Apparent deficiency	51,800,000

Probably this will have to be considerably modified on receipt of later detailed information, but it is the best we can offer just now.

Up to Friday evening, wheat flour had gained, for the week, in New York market, 10@20c. per barrel: wheat, for prompt delivery, 2¼@4c.; the several grades and qualities of corn other than No. 2 (which left off steady), 1@2c.; rye, 2@3c., and oats, 2½@3½c. per bushel. On the option list, the alterations up to Friday evening had placed No. 1 white wheat at an advance of 1½@2.; No. 2 red do., 1¾@2¾c.; No. 2 oats, 1@1½c. per bushel. In other large receiving centers the advance in prices varied slightly from this in accordance with local receipts of grain, storage room, nature of speculation, etc., etc.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Sept. 17, 1881.

BEANS AND PEAS.—New beans have arrived freely and have sold quite up to the receipts, making a strong market. There is very little of any old brands on the market. Red kidneys are expected to open well. Wisconsin green peas are in better demand and higher; $1.60@1.65. There is no stock rate for So. II. E. peas.

Marrow beans, new, $3.05@3.10; mediums, $3@3.05; pea, $3.05@3.10; white kidney, old, $2.80@2.70; red kidneys, $1.75@2.10; black or turtle soup, 1.70@1.75.

Receipts of beans for the week, 9,076 bush.

Exports do. 625 bbls.

BUTTER.—There has been considerable lull in the demand and the tone of the market is easier except for faultless styles of table. Creamery now has a strong competitor in the way of the State lines and dairies and a good deal of the best trade is running upon them. The under class of trade is turned to Western, for which there is no change in prices. Elgin creamery has made State figures in some cases, but that grade of butter requires cold weather in order to hold its full prominence. Many of our correspondents intimate that the show for fall butter is not as unfavorable as it was at one time thought to be, and some assert that they have nothing to fear except early frost.

Creamery, finest tubs, 34c.; good to prime, 28@30c.; poor quality, 24@25c.; sweet cream, 27@29c.; creamery firkins, 28@31c.; State dairy do. 26@28c.; do. half tubs, choice, 30c.; do. fair to prime, 26@29c.; Welsh tubs, 25@29c.; poor State, 23@26c.; Western imitation creamery, 25@26c.; dairy, choice, 26c.; other, 17@24c.; factory or ladle-packed June, 18@19c.; other, 16@17c.; common Western, 15@16c.

Receipts for the week, 37,609 pkgs.

Exports do. 8,779 do.

Cold storage on steamer to G. B., 90s.

CHEESE.—The market has ruled quiet all the week and some of the receipts have held over. Dealers have named prices rather stiffly in sympathy with interior rates, but shippers have not been urged to purchase and it will require assured light receipts next week to support present views of holders. The home trade is fair. Average quality has rolled off, but the fact is cheese has turned out so finely this season that a very little difference is soon noted.

State factory, fine colored, 12½@12¾c.; fine white, 12½@12¾c.; good to prime, 11¾@12¼c.; fair to good, 10¾@11¾c.; poor to fair, 9½@10½c.; Ohio factory, cheddar, fine 11@11½c.; fair to prime, 10@10¾c.; factory, flat, fine ½bbl, 12@12½c.; good to prime, 10½@11c.; fair to good, 9½@10½c.; poor, 8½@9¼c.; Creamery, partly skimmed, 4@9c.; fully skimmed, 3@4c.; full-skimmed factory, 3@4c.

Receipts for the week, 85,225 bxs.

Exports do. 53,522 do.

Liverpool cable, 62s.

Steam to Liverpool, 29s. 6d.@30s.

COTTON.—The market has had a quiet rule. Out-of-town representative orders are few, but the new and lower rates have revived considerable spot buying. Crop reports more encouraging for consumers,

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 11 16	8 15-16	8 15-16
Strict ordinary	9 15-16	9 9-16	9 9-16
Good ordinary	10¼	10⅝	10⅝
Strict good ordinary	10 13-16	11 1-16	11 1-16
Low middling	11 9-16	11 13-16	11 13-16
Strict low middling	11 15-16	12 3-16	12 3-16
Middling	12¼	12⅜	12⅜
Good Middling	12½	12¾	12¾
Strict good middling	12¾	13	13
Middling fair	13⅛	13⅜	13⅜
Fair	14¼	14½	14½

STAINED.

Good ordinary	8 5-16	Low Middling	10 3-16
Strict good ordinary	9 7-16	Middling	11½

Futures fairly active at irregular prices, closing steady at a decline of 21 to 30 points.

September, 11.65@11.87c.; October, 11.70@11.82c.; November, 11.63@11.82c.; December, 11.70@11.93c.; January, 11.85@12.12c.; February, 11.98@12.22c.; March, 12.14@12.36c.; April, 12.21@12.45c.; May, 12.34@12.57c.; June, 12.47@12.69c.; July, 12.57@12.66.

Receipts for week, 15,312 bales.

Exports do. 21,500 do.

EGGS.—Receipts for the week, 9,010 bbls.; do. last week, 6,786 do. An increased grocery demand has made a place for the addition to receipts. Prices are running quite close together, which is an advantage for Western lots.

Near points, ₰ doz. 23½c.; State and Penn. 22@22½c.; Canadian, 21½@22c.; Western, fresh, 21½@22c.; other useful grades, 19½@20½c.

FLOUR.—The market holds the advanced prices and circumstances are in favor of the seller. The stock of sorts suitable for the high wants of home use is very scarce and all old stock is firmly held. Exporters' orders will be limited until lines are of more commercial bulk. Rye flour and corn meal firm.

No. 2, $4.90@5.10; State and Western, superfine, $5.40@6.10; city mills, extra, $7.25@7.50; Spring wheat, extra, $6.15@6.40; Spring XX and XXX, $6.50@7.50; patents, $7.25@9.25; Ohio round hoop shipping, $6.30@6.65; trade brands, $6.75@7.25; St. Louis extra, $6.50@6.75; do. double extra, $6.80@7.15; do. family, $7.25@7.75; Southern extra shipping, $6.60@7; do. XX and family, $7.25@8. Rye flour, superfine, $5.90@6.30. Corn-meal, Brandywine, $3.90@4; do. Western, $3.80@3.90.

Receipts of flour for the week, 115,910 bbls.; corn-meal 4,353 do.

Exports of flour for the week, 62,430 bbls.; corn-meal 3,113 do.

FRESH FRUITS.—A strong upward feeling prevails in all fruits, pears showing the most important advance. Cranberries are uselessly seeking a market.

Apples, Golden Sweet, Western New York, ₰ bbl., 75c.@$1; Western New York, prime Fall, $2@2.25; do. Fall, fair, $1.50@1.75; Gravenstein, near-by, $2.25@2.50; 20-oz. near-by, $2@2.25; Malden Blush, near-by, $2.25@2.50; Fall Pippin, near-by, $1.75@2.25; Baldwin, Jersey, ₰ d.-h. bbl. $2@2.25; Greening, do. $1.75@2; poor to fair, ₰ bbl. $1@1.25. Pears, Bartlett, up river, ₰ bbl. $5@6.50; Western New York, ₰ keg, $2@3; Louise Bonne, Western New York, $3@4; Sheldon, do. $3@4; Sour Bell, $1.50@2; Seckle, choice, $1@3; fair to good, $2@3.50; Swan's Orange, $3@4; Cooking, $1.50@2. Peaches, Jersey and up river select, fancy, ₰ basket, $2.50@3; choice lines, $1.50, good, $1@1.25; common, 60@70c.; culls, 40@50c. Plums, Quackenbush, State, ₰ qt. 10@15c.; Reine Claude, ₰ bbl., $3@10; Copper, $7.50@8; Damson, ₰ bbl. $6@7; do. ₰ ½ bush. crate, $1.25@1.50; common, ₰ crate, 75c.@$1. Grapes, Del., State, case of 18 3lb bxs, $4; bskts, ₰ lb, 6@7c.; Concord, State, case 18 3lb bxs, $2.50@2.75; do. in bskt, ₰ lb, 3½@4½c.; Jersey case of 24 2lb bxs. $1.75@2; up river, loose, ₰ lb, 3@4c. Watermelons, Maryland selected, ₰ 100, $30@3*; seconds, $15@20; Jersey, Black Spanish, $10@20; Culls, $5@8. Nutmeg Melons, Hackensack choice, ₰ bbl., $3.50@4; Keyport, choice, $2; culls, $1@1.25. Nuts—Peanuts held with confidence; demand fair. Pecans quiet but firm. Peanuts, Va., hand-picked, ₰ lb, 7½c.; fancy, 7c.; extra prime, 6½c.; good to prime, 6¼c.@6½c.; shelled, screened, 6@6½c.; shelled, unscreened, 5½@6c; pecan nuts, ₰ lb 8@10c.

GRAIN.—The market has had no noted periods of excitement. The enlarged visible supply of grain, with prices where they are, tends to cool the ardor of wild speculation. This more particularly applies to wheat; corn still supports the outlook given it a few weeks ago.

Wheat, Spring, $1.35@1.39; Spring No. 2, $1.37@1.38; red Winter No. 2, $1.16¾@1.17; red Winter, $1.25@1.19; white Western and State, $1.35@1.45. Rye, $1@1.09. Oats, white No. 1, 53c.; No. 2, 52c.; No. 3, 50@50½c.; mixed, No. 1, 44c.; No. 2, 43@43½c.; No. 3, 41@42c. Corn, Western mixed, 68@72c.; No. 2, 70@71½c.; yellow, 70@74c.; white, 79@81c.

Receipts for the week, wheat, 18,578,900 bush.; corn, 1,554,300 do.; oats, 285,200 do.; rye, 23,191 do.; malt, 34,300 do.

Exports for the week, wheat, 1,360,850 bush.; corn, 251,833 do.; oats, 2,877 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes and on Mississippi River:

	1881. Sept. 10. bush.	1880. Sept. 11. bush.	1879. Sept. 13. bush.
Wheat	19,848,526	14,117,013	17,927,079
Corn	24,083,101	18,500,809	12,040,962
Oats	6,789,859	1,513,361	2,461,082
Barley	358,752	331,215	825,156
Rye	645,389	1,31,672	950,771
Total	51,725,427	35,347,570	31,205,080

HAY AND STRAW.—Receipts of hay have become light. Prime and medium grades are in best demand and favor sellers; a few lots of strictly fancy Timothy reach $1.05. Straw quiet and unchanged.

Prime Timothy hay, ₰ 100 lbs., $1; medium Timothy, 80@90c.; shipping grades, 55@60c.; clover mixed, 55@60c.; clover, 50@55c.; long rye straw, 65@70c.; short, 50@55c.; oat and wheat, 35@40c.

Exports for week, 1,362 bales.

HOPS.—Receipts of new are moderate, but the demand is not calling for large lots in any way. Most of this year's picking shows very irregular quality, and buyers will not operate until grades are more decided.

Crop of 1881, Early Seedlings, 18@23c.; 1880, choice, 19@20c.; 1880, good to prime, 15@17c.; 1880, fair to good, 13@15c.; 1880, poor to fair, 10@12c.; 1880, eastern, 10@18c.; 1879, fair to prime, 12@14c.; 1878, 5@8c.

Receipts for week, 367 bales.

Exports for the week, 9 do.

MILK.—Lack of cooling facilities are still complained of. Springs are low and well-water is scarce in most of the dairy districts that ship milk to New York and many cans sour on the way. Prices for perfect have averaged $2.51 for commission cans of 40 quarts, and have been up to $3.

POULTRY AND GAME.—Dressed poultry begins to feel the pressure; receipts and supplies are likely to keep prices easy from this time onward. Dealers do not, however, look for the swamping supplies that have attended the markets for several years past, and in truth we can get along with less. Prime turkeys have a good demand; a feature of the poultry trade is the fairly steady sale that has attended them during the Summer.

Turkeys, Phila. prime, 18@19c.; State and Western dry-picked, 16@17c.; scalded, 17@18c. Chickens, Phila. 16@18c., Bucks Co. 20@21c.; Jersey, 19@20c.; State, 16@17c.; Western, 15@16c. Fowls, Phila. dry-picked, 16c.; Bucks Co. 15½@16c.; Jersey, dry-picked, prime, 15@16c.; do. scalded, 15@16c.; State and Western, dry picked, prime, 15c.; scalded, prime, 14@15c.; inferior, 12@13c. Ducks, Spring, Phila. ₰ lb, 16@18c.; Jersey and Bucks Co. 16@17c.; State, 14@16c.; mixed State, 12@14c.; old, fair to good, 10@12c. Squabs, white, ₰ doz. $2.25; dark, $1.50.

The broods of prime heavy chickens seem to have been very much depleted; very few crops that can be rated fine now arrive, particularly of Western stock. Fowls easier. Turkeys steady. Ducks and geese quiet.

Chickens, New York, ₰ lb. 16@17c.; State and Penn. 15@16c.; Western, 14c.; Southern, 13@14c.; Fowls, Jersey, State and Penn. 14c.; Western, 14c.; Southern, 13@14c. Roosters, old, 6@7c. Turkeys, Jersey and Penn. 14@15c.; Western, 13@14c. Ducks, Jersey, extra-large, ₰ pair, 90c.@$1; Jersey, New York and Penn. 55@70c.; Western, 40@50c.; Southern, 40@45c. Geese, Jersey, N. Y. and Penn. $1.62@1.87; Western mixed and Southern, $1@1.25. Pigeons, full-grown, 25c.; young, 20c.

Grouse arrive in better order and have a readier sale. Other game birds are firm. Venison is quotable in a small way at 15@20c. for Minn. Wild ducks will not be wanted until next month.

Grouse, prime, 75@80c.; partridges, $1.25@1.50; woodcock, Stnte, 75c.@$1.12; English snipe, ₰ doz. $1.50@1.75; plover, $1.12@1.75; reed-birds, $1; blackbirds, 20c.

PROVISIONS.—There is an easier feeling anticipated as a controlling speculative interest is working for a cheaper phase. For spot goods, however, prices are fairly strong.

Pork, extra prime, ₰ bbl. $15.50@16; Western mess, new, $20. Lard, steam Western, ₰ 100 lbs., $13.35@13.40; prime city, $12.25@12.30. Hams, smoked city, ₰ lb. 13½@14c.; pickled Western and city, 12@13c.; Shoulders, smoked city, 8¾@9c.; pickled, 8@8½c. Rib bellies, pickled, 10½@11¾c. Bacon, long clear and Western, 11@11½c. Beef, Western mess, ₰ bbl. $12@13; packet, $13@14; India mess, ₰ tce. $22@24. Beef hams, ₰ bbl. $22@22.50.

Receipts for the week—Beef, bbls. and tcs. 550; pork, bbls 4,600; cut-meats, pkgs 24,200; lard, do. 19 250.

Exports for the week—Beef, bbls. and tcs, 2,650; pork bbls. 3,325; cut-meats, lbs. 1,531,780; lard do. 1,517,400.

SEEDS.—Clover seed quiet and unchanged. Timothy in continued active demand and firm. Rough flaxseed quiet.

Clover, Western, 1880, job lots from store, 10½@11c.; do. in car lots on track, 9½@10c.; 1879, do. 9@9½c. Timothy, job lots in store, $2.90@3.25. Flax-seed, American rough, $1.42½@1.45.

Receipts for the week, 3,670 bush.

Exports do. 1,489 bush.

TOBACCO.—Buyers of leaf are not operating so promptly as an impression has gained that the next turn in price will be in their favor. Some late prices are as follows: Kentucky quiet but very firm; hhds., $6¾@15. Seed leaf fairly active; cases 1880 Pennsylvania, 11¾@20c.; 1880 New England, 12½@35c.; Wisconsin, 5@15c.; 1880 State, private terms, Ohio Wrappers, 10@15c.

VEGETABLES.—Prices hold up well even under larger supplies. Some lots of fine State are held with a view to better prices when Long Islands fall off in receipts. Exports fair for prices: for the week, 2,775 bbls. Sweet potatoes higher.

Potatoes—Early Rose, L. I., ₰ bbl., $2.62@2.75; State and up-river, $2.37@2.50; Snowflake, $2.50; Burbank, $2.50; Peerless, Jersey, $3.50; sweet potatoes, Va. yellow, $3.50@3.75; Del. river, $4.

There is a general feeling of firmness in garden truck; cabbages show a large advance; onions firmer than for several weeks past.

Sweet corn, Jersey, prime ₰ 100, 75c.@$1; poor, 50@60c.; wax beans, L. I., ₰ bag, $1.50; string beans, $1.50; Lima beans, potato, $2.50@3; flat, $2.25@2.50; cucumbers, L. I., ₰ 100, $1.25; pickles, ₰ 1,000, $2.25@2.50; egg plant, ₰ bbl., $1.25@1.50; tomatoes, ₰ bush., 30@40c.; squash, Marrow, ₰ bbl., $1.50@2; cabbage ₰ 100, $1@10; beets, L. I., ₰ bbl., $1.50@2; white onions, $2@2.50; yellow, $2@2.25; red, $1.75@2; Chester, $1.75@2; carrots, $1.50@2; turnips, Russia, $1.25@1.75; okra, ₰ 100, 15c.

WOOL.—Market active at the three leading distributing points. Fine wools show an advance of 2@3c.; outlook for business. California and Texas Spring grades are moving rather better than heretofore and rule in sellers' favor. Pulled wool in good demand and firm.

Ohio, Penn. and West Va. XXX and picklock, 43@45c.; X to XX, 41@42c.; No. 2 to No. 1, 38@45c.; coarse, 38@39c.; combing, 42@48c. State and Western X to XX, 38@40c.; No. 2 to No. 1, 36@41c.; coarse, 32@34c.; combing, 38@45c.; combing unwashed, 28@31c. Virginia, West Va. and Md. unwashed, medium, 27@29c. Ga. and Lake unwashed, medium, 24@30c.; coarse, 22@24c.; burry and slightly burry, 16@21c. California, Spring, Northern, free, 35@36c.; middle counties, free, 26@30c.; Southern, 20@26c.; low grade and burry, 19@22c.; Fall, low grade and burry, 16@20c. Texas, choice, free, 25@31c.; fair to good, 21@26c.; low grade and burry, 16@20c. Pulled, super, 38@41c.; extra, 35@38c.; No. 1, 30@32c.; combing, 35@40c.; lambs', 40@42c. Tub-washed, fair to choice, 35@41c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Sept. 17, 1881.

BEEVES.—Receipts for the week, 14,130 head; do. last week, 13,722 do. Early receipts sold pretty well, but the late arrivals lost the cream of the market. Generally, prices were rated a shade lower for common to medium natives and about steady for the better grades. Texans and Coloradas were not quite so good as on Wednesday and brought about the same prices, selling within the range of 7¾@8¾c. to dress 55 lbs. Poor natives sold down to 5c. to dress 55 lbs, and choice do. up to 12c. to dress 57 lbs and 59c. ₰ head, but 9@11¾c. to dress 55@57 lbs covers most of the sales.

MILCH COWS.—There is a demand for fine cows and $60 has been readily quoted for fine animals. For extras $65 and perhaps $70 might be named. Decent to common cows rate from $30 to $50; but low styles are neglected.

SHEEP AND LAMBS.—Receipts for the week, 37,194 head; do last week, 36,615 do. Butchers wanted all the offerings and paid full yesterday's prices for all grades. Common to good sheep were sold at 4@5½c., and poor to choice lambs at 5@7c.

SWINE.—Receipts for the week, 22,561 head; do. last week, 23,069 do. There was a sharp demand for live hogs to-day, and several car-loads could have been sold at high prices. Slaughterers wanted more than they could get. Some rather common Kentucky hogs sold at 6¼c., and some light pigs at 5½c. Prime corn-fed hogs would have brought 7c. New Jersey pork, 9@9¾c.; city killed, 8½@9c.

VEAL CALVES.—Live fed calves have sold well all the week, and good stock brings the extreme readily at the close. Buttermilks and grassers are doing very well.

Live calves, prime N. J., 8¾@8¾c.; do. State, 8½c.; poor to good, 6½@8c.; Mount Hollys, 7½@8¾c.; buttermilks, 4@5c.; grassers, 3@4c.

FARM IMPLEMENTS & SEEDS.

Call on or write to R. H. ALLEN & CO., New York, for whatever you want of the above.

Address 189 & 191 Water St

SOMETHING NEW FOR AGENTS.

RAMBLES *THROUGH OUR COUNTRY.*

A new, fascinating, and exceedingly instructive GEOGRAPHICAL GAME, that entertains both old and young.

Agents Wanted, Ladies or Gentlemen.

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AMERICAN PUBLISHING CO., Hartford, Conn.

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Husking Gloves and Husking Pins.

No. 18, Riveted Husking Gloves Extra Shielded, complete protection from wear, per pair	$1.79
No. 50, Laced Husking Gloves, Shielded	1.50
No. 52, " " " not Shielded	1.25
No. 54, Boys " " " "	1.00
No. 60, Husking Pins, 15 cts., or 2 for	.25
No. 65, " " and Finger Cot	.30
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Any of above described will be sent by mail on receipt of price to any address. Ask your merchant for them or send to

HALL & ROSS HUSKING GLOVE CO.,
145 South Clinton St., Chicago.

For the Young.

FARMING FOR BOYS AND GIRLS. NO. 35.

HENRY STEWART.

The Cultivation of Corn.

THERE is no other plant that can be cultivated with so much interest or with such useful results as corn. The mere fact that one can nurse his crop, so to speak, day by day, hoeing it and weeding it and watching its rapid growth which is sometimes so fast that it can be seen in progress hour by hour, gives to this plant more than common interest. The past few years much attention has been given to this plant as a farm crop, and hundreds of farmers' boys have engaged in growing it for a premium. I hope next year the editor of the RURAL will send a few seeds of the Rural Corn to the boys and girls of the Rural family and permit them to compete for a prize as well as their fathers and big brothers. To help them in their efforts to succeed in growing some good corn, the following directions for cultivating this crop are given:—

First, the soil should be well plowed. It is very necessary that the soil should be very mellow and fine and deep.

Second, the soil should be enriched with manure or good fertilizers, or both, and these should be well mingled with the soil by thorough harrowing.

Third, the seed should be planted early and not less than four inches deep, and when the seed is valuable, or the produce from a certain quantity of seed is to be measured, it should be protected from crows, blackbirds and cutworms by broad rims of stiff paper set up in the soil around the hill.

Fourth, the soil should be kept entirely free from weeds, and loose and mellow by frequent stirring and loosening, up to the time when the ears are fully formed and the grain is set.

Fifth, the tassel of every stalk of corn that has no ear or silk should be cut off as soon as it appears. Such stalks may be called male stalks, and are as useless in the corn-field as a lot of roosters would be in the poultry-yard when eggs are wanted, or as wethers would be in a flock of sheep when we expect lambs. For such stalks produce no ears, and encourage those that do to yield seed that will produce only barren stalks like themselves. And this should be done, because in growing a crop of corn it should be made one step at least towards procuring seed that would produce a better crop next year; for there is no grain that we grow that has been more improved, or can be more improved by careful cultivation, than corn.

As the object of every intelligent farmer, be he young or old, should be to learn something more than he now knows, from his observation and experience, it is advisable that in each field of corn there should be a few rows kept for experimenting in regard to the manner of cultivation and fertilizing, so that the best method for each soil or locality can be found. It must not be forgotten that what is good practice upon a light, dry soil may be very bad upon a wet clay soil, and we must learn to distinguish the needs of a soil before we can decide what particular method of cultivation should be used upon it.

Corn is usually grown upon sod ground, but equally good crops may be produced upon stubble. The soil should be freshly plowed, moist and mellow, and when the weather is warm the seed germinates and the plants grow with great rapidity. The manure given to this crop need not be so old and well rotted as is necessary for wheat, for corn is what is known as a rank feeder, that is, it will do well with fresh manure, or newly-plowed sod, which answers the same purpose as manure.

Of artificial manures or fertilizers corn needs mostly phosphoric acid and potash. An excellent home-made fertilizer is composed of hen manure, wood ashes and plaster in equal parts, mixed only when it is to be used, or kept dry until it is used, to prevent loss from the mixture of the ashes with the hen manure. It is not well to use too much manure for corn, or there will be too much stalk and too little grain. Twenty loads per acre of manure and a good handful of mixed fertilizer in the hill will be sufficient, with good cultivation, for a large yield.

YOUNG QUERIST.

Minnie F., Durand, Ill., wishes to know if Japan Red Bud, raised from the Rural seed, must be kept in the house this Winter.

ANS.—If well mulched with a little fine straw or leaves it will stand the Winter out of doors.

Harry F., Elmira, N. Y., sends a flower for name, and also asks if the Pyrethrum roseum blossoms and bears seed the first year.

ANS.—The flower was so wilted as to be unrecognizable. The Pyrethrum did not produce seed the first year with us.

"Will," Shelburne, Vt., asks 1, if we have cultivated the Perfection tomato; and, if so, how we like it; 2, is the Crystal City strawberry as early as it is represented to be in the various catalogues.

ANS.—1. Yes; its quality is very good. 2. It is an early berry, and said, by some of our best small-fruit growers, to be the earliest of all.

Susan M., Argyle, N. Y., asks if we think a woman can make money keeping bees.

ANS.—Yes, we think so. But to any new beginner a word of caution is necessary. Do not be misled by fanciful reports from apiaries long established. Begin with a few hives first and gradually work up to a larger number, and thoroughly prepare yourself by study and conversation with experienced bee-keepers, for your work. We think it can be made a profitable employment for women.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—As I had a few leisure moments, I thought I would write to let you know how I am getting along with my garden. The young "Elephants" are growing finely, and we expect a large yield. I am testing several kinds of melons this year, among them are the Bay View, Surprise, and Jenny Lind muskmelons, and the Golden Flushed, Excelsior and Japanese watermelons. When they ripen I will let you know as to their quality, etc. I have six varieties of strawberries: Wilson, Chas. Downing, Black Defiance, Glendale, Duchess, and Crescent Seedling. The Black Defiance is the best of them all with us. I am testing the Perfection tomato this year, but as the plants were not set till late, they have not ripened yet. Why don't the cousins write and tell about their gardens, etc. Yours, WILL.

UNCLE MARK:—I received the seeds of the pinks and Judas tree. The pinks are nearly all in bloom and are growing finely. They are very pretty, one of them was over two inches in diameter. Only one plant of the Japan Red Bud came up. I do not see any letters from this part of the country. I guess the people around hear don't know anything about the RURAL. If they took it one year they would be sure to take it again. I wonder if any of the cousins are going to raise silk worms, I think I shall! MINNIE FRITZ.

Durand, Ills.

DEAR UNCLE MARK:—I would like to join your club. My father began taking the RURAL NEW-YORKER last year. I am 13 years old. My sister has over fifty different kinds of pinks, which were raised from the seed you sent. The Sorghum is doing as well as can be expected for the drought. The Washington oats did well and so did the Elephant. Your niece, N. L. ARTERS.

Freehold, Pa.

New Members of the Club for Week Ending Sept. 17.

Lizzie Reese, Mt. Eaton, O.; N. L. Arters, Freehold, Pa.; "Rosebud," Crawford, Mich.; L. B. Ruddock, Buckland, Mass.

That indigestion or stomach gas at night preventing rest and sleep, will disappear by using Hop Bitters.—*Adv.*

Scientific.

TREE TRUNKS AS WATER-CONDUCTORS.

PROFESSOR F. H. STORER.

IT is manifest that with trees, in respect to rain—much the same way as with the different agricultural crops as regards dew—there must necessarily be considerable difference in the amounts of water which can reach the ground by way of their trunks. I was myself a good deal impressed a few days since on noticing how large a quantity of water must evidently have come down the stem of a Virgilia tree (Cladrastis tinctoria) near my study window, during a heavy thunder shower, inasmuch as a deep rill or water-course had been worn in the soft soil from the trunk to the adjacent road-way. In this particular tree the conditions were all specially favorable for the descent of water by the trunk; for the tree, having recently been transplanted, was not in full leaf, while the position of the branches as regards the trunk, and the smoothness of both the stem and the branches are well-fitted to insure a rapid and constant flow of the liquid. It was noticeable, moreover, that in this individual tree nearly all the boughs point rather sharply upward—and the more so since the weight of leaves they bear is small—much more indeed than is the case with other Virgilias not far from this one, which are in full leaf. (Professor Storer may have noticed that this tree is somewhat drooping early in the season, becoming more upright later as the wood hardens. Of course, this may be said somewhat of all trees—but notably of the Yellow-wood—EDS.) It is plain, in short, that the relations of this tree to rain-water must be very different from that of trees whose boughs are horizontal or drooping. While such trees must necessarily shed most of the rain which falls upon them directly from their leaves and twigs to the ground, a good part of the water that falls upon trees whose branches turn upward will be carried down their trunks to the earth.

It seems that the matter was studied a year or two ago, in Europe, by Dr. Riegler. He fitted to a number of trees appropriate vessels for catching the water that came down their trunks, as well as that which fell from their leaves, and he set up a rain-guage in an open field in the vicinity. He then noted continually, from the middle of April to the middle of July, the quantities of water that were collected in the several receptacles. His trials were upon a beech tree, an oak, a maple, and a spruce; and the tops of these trees screened spaces of 64⅘, 60¼, 91½, and 30 square metres* respectively. Of all the water that fell during the stated period upon the beech 13 per cent. reached the ground by way of the stem; 65 per cent. dropped from or through the top, and 22 per cent. evaporated. In the case of the oak less than six per cent. of the rain-fall came down the trunk, 74 per cent. fell through the top, and rather more than 20 per cent. evaporated. With the maple 6¼ per cent. of the rain-fall ran down the stem, 71 per cent. fell through the top, and 22½ per cent. evaporated. In the case of the spruce only 1/16 per cent. of the rain-fall came down the stem and 40 per cent. fell through the top. As regards the spruce, however, it was found to be impracticable to distinguish between "evaporation" and the water which was lost by dropping from the ends of the drooping branches.

Out of 32 separate rains observed, it was noticed that water flowed down the stem of the beech 25 times, down the stem of the oak 16 times, down the stem of the maple 15 times, and down the stem of the spruce (with its hanging branches) only nine times. The influence of few or abundant leaves was indicated by contrasting the results obtained on special days in Spring and Summer. On the 12th of May, for example, at a time of copious and continuous rain, when the buds of the oak and beech were wholly or nearly closed while those of the maple were half opened, 24 per cent., 12 per cent., 3 per cent., and 3½ per cent. of the total rain-fall flowed down the trunks of the beech, oak, maple, and spruce respectively. On the 16th of June there was a short rain and the percentage amounts of it which flowed down the trunks of the several trees were 7½, 6⅜, 4¼, and one. On the 15th of July there was a heavy thunder shower of several hours' duration and the quantities of water that flowed down the trunks were, respectively, 13 per cent., eight per cent., six-and-a-half and three per cent. On the 9th of June, on the occasion of a short thunder shower, described as a "cloud-burst," nearly five per cent. of the total rain-fall ran down the beech stem while about three per cent. of it ran down the stems of each of the other trees.

Not to occupy space with the other figures, which are given by Dr. Riegler in detail, it will be enough to say that the amounts of water lost by evaporation from the tree tops were small in May, when the trees were not yet in leaf, and large in Summer. At the time of the short but emphatic rain of June 16th, the evaporation amounted to more than a third of the total rain-fall. On the other hand, at the time of the particularly heavy rain of June 9th, more than 80 per cent. (86 per cent. in the case of the oak) of the water that fell upon the tops came through to the earth and only some 10 or 12 per cent. was lost by evaporation.

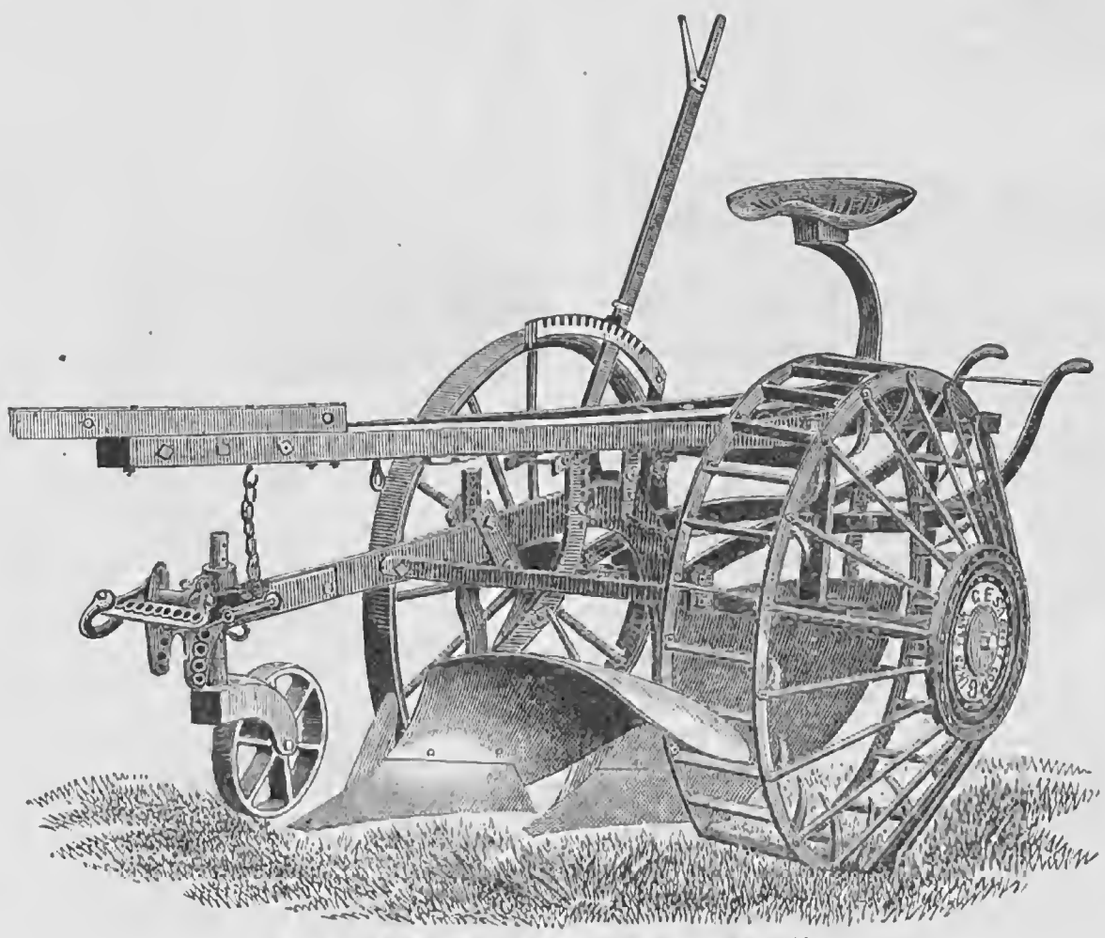
*One metre equals 39.37 English inches.

Implements, &c.

ANOTHER ADVANCE IN MECHANICAL INVENTION.

FROM earliest history there has been some method of scratching, turning, mixing or loosening the soil by animal power in olden times and by steam or animal power in recent days. True, the crooked stick of the Egyptians and the Greeks did very satisfactory work for the agriculturists of ancient days, though it resembled a plow about as much as a flail does a steam thrashing machine; but advanced civilization and a general desire to do the best kind of work in the easiest and quickest manner demanded improved machinery, and this demand has always been well met by our inventors.

Hitherto plowing and harrowing have been two distinct operations, requiring two passages, at least, over the field; but at a recent trial held on the Experiment Farm of Rutgers College, at New Brunswick, N. J., an implement invented by Mr. Charles Sackett, of this city, was exhibited, which performs the operation of plowing and pulverizing the soil at a single passage over the field, thus saving time and labor.



COMBINED PLOW AND PULVERIZER.—FIG. 471.

The implement, Fig. 471, consists of an ordinary iron-beam plow, which is attached to the axle at right angles, in front of which is a smaller plow for inverting sods, weeds, etc. The plows may be set at any desired depth, and are adjusted with ease. The pulverizing wheel runs in the furrow, and is formed by a series of cross-bars connecting two parallel rims or tires, supported by iron spokes. These cross-bars may be set at any desired distance apart, according to the condition of the soil, The rear plow, being set directly opposite the pulverizing wheel, throws the earth into the wheel, which, in revolving, breaks up the lumps, and the soil, thus aerated, falls through the wheel in the rear upon the sod or weeds which the forward plow has inverted, and is then ready for the seeding.

Mr. Sackett has also invented and patented a seed-drill, which is to be attached, so that the operations of plowing, pulverizing and sowing may be performed at one and the same time. The plows are handled either from the ground or from the seat, with equal ease. The wheels constitute the running-gear of the implement on the road or in the field, hence its transportation is convenient. No skill, beyond common-sense, is required, to manage the implement; time and labor are saved, and the soil is left in a loose, friable condition. We were agreeably surprised at the very creditable performance of this implement in a field where the soil was hard, lumpy and quite stony, yet its pulverization was complete.

This combined plow and pulverizer is now on the market, and the company will take pleasure in answering any inquiries about it which may be sent to 198 Broadway, N. Y.

PERSONALS.

Ex-President Hayes says that Guiteau "is just crazy enough to hang."

Hon. Lionel Sackville West, the new British Minister to Washington, will start for his post at the end of October.

Senator Williams, of Kentucky, has sold his tobacco crop of this year for $21,419.06. It was the product of 75 acres.

Intimations come from Georgia that General Gordon, having made considerable money since his resignation from the United States Senate, is disposed to enter politics again, and may make the race for Governor.

The Duke of Sutherland and a company of Englishmen have purchased 60 square miles of land 60 miles east of Sioux City, on the St. Paul and Omaha Railroad for the purpose of founding a colony. They have a capital of $12,500,000.

Garabaldi's face is described by a recent visitor as absolutely livid, the yellow-white of a corpse, and his hair and beard perfectly white. His eyes, however, retain fire and move about from side to side, following people around the room, without, however, his changing his attitude in the least degree.

Mr. Alexander Stavely Hill, Q. C., member of the British Parliament for West Staffordshire, is at Winnipeg. He is making a trip to Manitoba and the Northwest with the object of placing before his constituents a report of what advantages the country possesses as a place of immigration for the laboring and agricultural population in his crowded district.

W. W. Dickey, one of the wealthiest cattle dealers of the West, met Mollie Carter in Kansas City. He fell suddenly in love with her, for she is a beauty, and she said "Yes" to his offer of marriage, for she knew of his wealth. She broke a previous engagement in so doing, and when Dickey found that out he refused to make her his wife. She sued for $25,000, damages, and has just compromised for $10,000.

Stock.

The People have Proclaimed

THE CLYDESDALE

The King of Draft Horses.

Eleven Importations For 1881 Already Received

Others on the way from Scotland.

POWELL BROTHERS,

SPRINGBORO, CRAWFORD CO., PA., the most extensive importers in America of CLYDESDALES, the best breed of Draft Horses in the World. Largest and finest collection on the American Continent.

Also breeders of Trotting-Bred Roadsters, and Importers and Breeders of Holstein and Devon Cattle. Catalogues sent free. Correspondence solicited.

☞ Mention the Rural New-Yorker.

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FOR SALE--CHEAP FOR CASH,

In tracts to suit purchasers, 100,000 Acres of valuable Timber (abundance of Walnut and Stave Oak), Coal, Iron Ore, Lead, Antimony and Salt Mines, Farming and Grazing Lands, in Southwestern Virginia. Climate, soil and water unsurpassed. Really the richest country in natural resources on this continent. For further particulars address J. PETTEBONE, 274 Fisher St., Baltimore, Md

Trees, Seeds, Plants, &c.

LARGE STOCK OF

PEACH and APPLE TREES,

and other fruits, among which can be found varieties suited to all sections. A large list of long-keeping Apples,—Kieffer and Leconte Pears, Grapes, Raspberries and Strawberries in large or small lots. I also offer a full line of Nursery Stock at low rates. Apples, Peaches, Kieffer and Leconte Pears, sent by mail. Special rates given where large lots are wanted. Catalogue showing how and what to plant, with much valuable information, mailed gratis to all who apply for them. RANDOLPH PETERS, Great Northern and Southern Nurseries, WILMINGTON, DELAWARE.

Peach, Plum, Apple, TREES!

And a Full Assortment of Nursery Stock.

GEORGE ACHELIS, West Chester, Pa.

160 acres of good unimproved land for sale in Kansas, at $5.50 per acre.

NURSERYMEN AND DEALERS, send for terms of The DUCHESS GRAPE for Fall and Spring. A. J. CAYWOOD & SON, Marlboro, N. Y.

20 Gold and Silver Chromo Cards, with name, 10c. post paid. GEO. I. REED & Co., Nassau, N. Y.

Miscellaneous.

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TRADE MARK.

THE GREAT GERMAN REMEDY.

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RHEUMATISM,

Neuralgia, Sciatica, Lumbago,

Backache, Soreness of the Chest, Gout, Quinsy, Sore Throat, Swellings and Sprains, Burns and Scalds, General Bodily Pains,

Tooth, Ear and Headache, Frosted Feet and Ears, and all other Pains and Aches.

No Preparation on earth equals ST. JACOBS OIL as a *safe, sure, simple* and *cheap* External Remedy. A trial entails but the comparatively trifling outlay of **50 Cents,** and every one suffering with pain can have cheap and positive proof of its claims.

Directions in Eleven Languages.

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A. VOGELER & CO.,

Baltimore, Md., U. S. A.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.**, 163 Tremont Street, Boston, Mass.

$5 to $20 per day at home. Samples worth $5 free. Address Stinson & Co., Portland, Me.

IT PAYS to sell our Rubber printing stamps. Samples free. J. M. MITTEN & CO., Cleveland, O.

KNOW THYSELF. GOLD MEDAL AWARDED the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25, sent by mail; illustrated sample, 6 cents; send now Address Peabody Medical Institute or Dr. W. H. PARKER, 4 Bulfinch St., Boston.

$777 a Year and expenses to agents. Outfit free. Address P. O. VICKERY, Augusta, Me.

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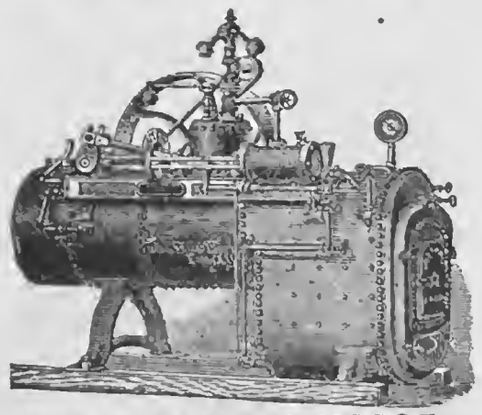

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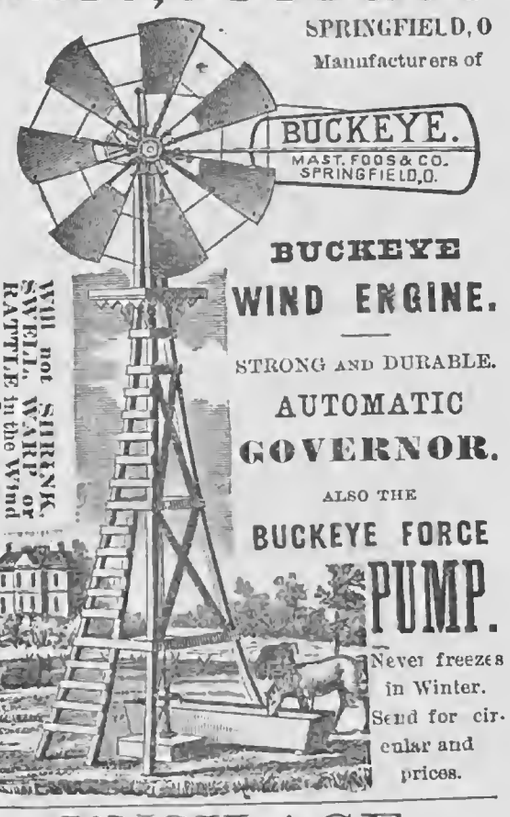

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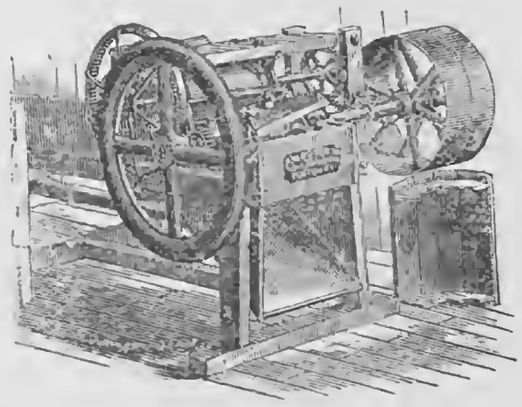

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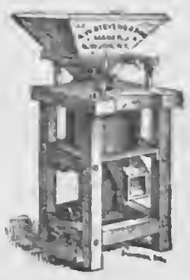

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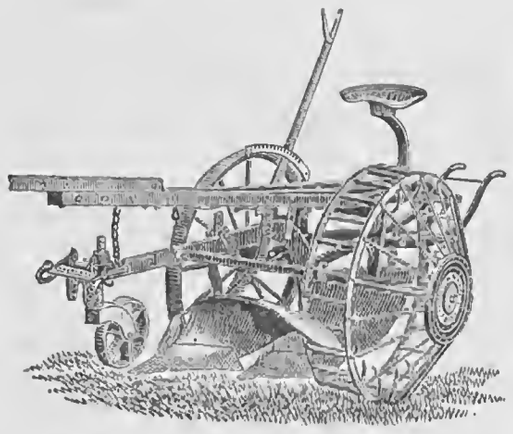

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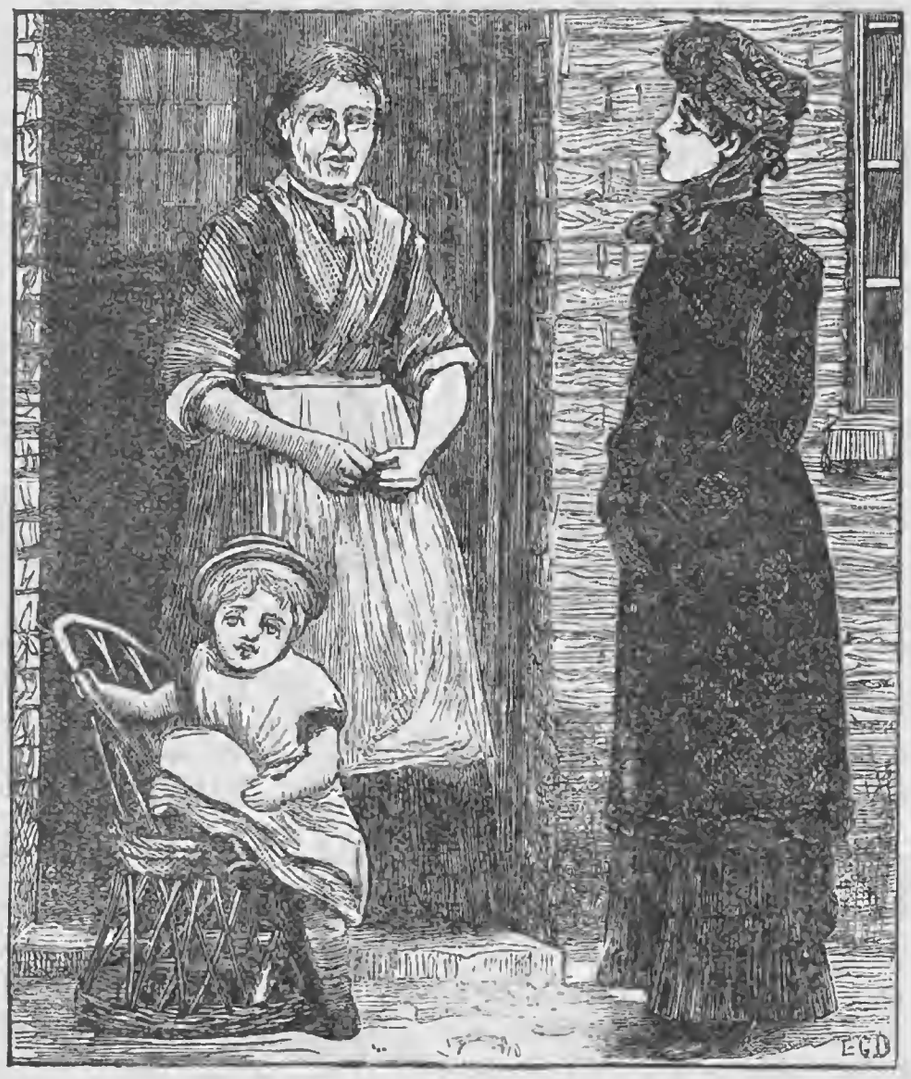

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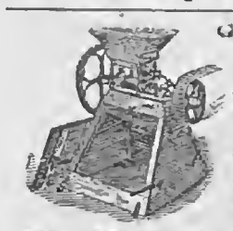

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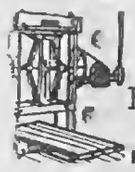

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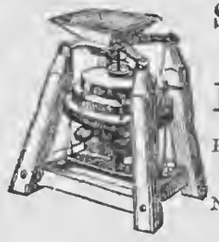

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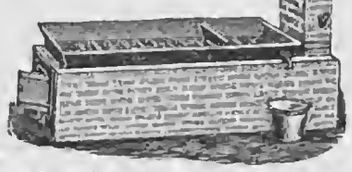

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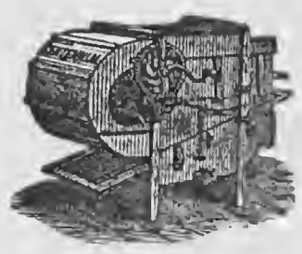

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL. No. 1653.} NEW YORK, OCT. 1, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

MARLBORO SEEDLING.

ON July 29 we received from A. J. Caywood a second specimen branch of the Marlboro Seedling. We know nothing of this from tests at the Rural Grounds, but the branch sent to us was laden with berries as large and bright as any we have ever seen. Many of these measured seven-eighths of an inch in diameter and were of a roundish-conical shape with rather small grains, quite hairy and of a beautifully bright red color. The berries did not seem to be very firm, though of this it is not fair to judge from specimens sent a considerable distance by express. They were very juicy, and of a quality that to our taste is not surpassed by any hardy raspberry in cultivation.

The following is Mr. Caywood's history and description of the Marlboro Seedling: "Fifteen years ago I crossed a variety known as the Globe with the Hudson River Antwerp, and produced a seedling of many good qualities: it was large, fine-flavored, prolific and hardy; but it would each year produce a few imperfect berries. I crossed this with the Highland Hardy or Native and produced the variety which I have named "Marlboro Seedling." The bush is an unparalleled grower and perfectly hardy, not having been buried for the last three Winters, but remaining tied to the stake, yet it is now producing fruit from the terminal buds, while Cuthbert and Highland Hardy suffered considerably from Winter. The arms are very large. Even when the hill is unusually large the fruit is all on the outside. The berry is of the largest size: specimens measured to-day one inch in length and over three-quarters of an inch across the shoulder. Color, light red, approaching scarlet, leaves the peduncle easily, is firm and carries well. The leaf is unusually large and the wood thornless."

MARLBORO SEEDLING.--Fig. 472.

RAYS.

PASSING along that handsome avenue, Prospect Street in Cleveland, I observed a lot of hanging baskets suspended in the veranda of a pretentious mansion. Some were mixed with various plants, but those that pleased me most were filled with but one kind of plant; thus one basket was hidden in English ivy; another in fuchsias; another in the fuchia-like begonia, and a fourth in nephrolepis ferns. The plants—several in each basket—were so arranged that not a particle of the body of the baskets could be seen for leaves or leaves and flowers.

* *

SOME 10 to 20 years ago the prairie farmers of Illinois must have had a mania for planting Lombardy Poplars. Here they stand in belts or hollow squares around their homes, some dead, some dying, some living, some growing, but living trees over twenty years planted are a rarity; indeed, whole belts stand here grim in death. As shade trees they are useless; for fencing, firewood or timber, worthless; they are too weak for shelter belts. You may have planted them provisionally for effect's sake, but now those that are dead, for decency's sake cut them down and burn them.

* *

MIMULUS cardinalis, a native of California and Oregon, where its grows alongside of the water-courses, is one of our very best garden plants. It is a hardy (or nearly so) herbaceous perennial, of bushy growth, some 2 to 2½ feet high, and from mid-summer till destroyed by frost, it is gayly and copiously furnished with cardinal blossoms. It propagates very readily from cuttings or ground-sprouts, and seeds germinate easily; the seedlings raised in spring blossom the same season. One peculiarity about it is, that although its natural habitat is along water-courses, with me it grows and flowers quite as satisfactorily in a dry, sunny border as in the moist ground by the spring. I have had it growing in both places for the past three years. With a handful of litter or leaves thrown over the crowns as a winter-mulch, they survive quite well, but the searing winds of Spring hurt them so badly that I approve of raising a fresh stock from seeds or cuttings every Spring. One stock plant will yield hundreds of cuttings.

* *

FRIEND Boardman lives in one of the prettiest streets of a suburban city, and many folks who do not know him personally are familiar enough with him as the petunia man. The street is an open one with handsome houses, well-cared for lawns, gay beds, and young but comely trees. There are no fences to separate the lots from one another or the street, and a pleasant rivalry exists about who shall keep his place the neatest. Besides some choicer flowers nearer his house, Mr. B. has oblong beds between the side-walk and the street opposite his lot, and the little circles that surround the young maple trees along and half way down the street, he also cares for in a garden way and plants petunias in them every year. These little flower circles set near the outside of the brick side-walk, so novel in themselves, inspire a happy homely feeling; all who pass by appreciate them, no one despoils them.

* *

ONE of my neighbors has a fine stand of sweet peas, which are now, September 2, and have been for several weeks past, loaded with blossoms. She is a careful gardener, gives them rich soil, shelter and lots of water, but she attributes her success more to keeping the seed-pods picked off as they appear. She sowed the seeds some eight inches deep, but whether or not that has anything to do with the luxuriant and lasting condition of the plants in flower I am not prepared to say.

* *

THE same lady has a bed of geraniums (speaking properly I should say pelargoniums) that has disappointed her; the plants have grown well enough, but they have not blossomed sufficiently. They were raised from seed last Spring. Raising seedling pelargoniums may be interesting work, but it doesn't pay. Perhaps not out of a thousand plants can we get one that will equal, let alone supersede, the better kinds already in circulation. But the raiser's seedlings may be like the mother's children—prettier in her estimation than anybody else's. Unless our seedlings are decidedly superior to the standard kinds, we should not disseminate them, no matter how pretty they may be. But how are we to compare them with older sorts? Visit the trial grounds of some of our great florists and seedsmen, Vick's at Rochester, N. Y., for instance, and behold them there in all their glory, a few plants of a kind, all together, and all named or numbered; if your seedlings are better than any in these trial grounds, then go ahead and send them out; but if not, then don't. [As our older readers are aware, several years ago we raised 1,500 pelargoniums from seed, the result of the carefulest crossing of the best known kinds. There were not one dozen plants that were equal to the best kinds in cultivation. One of these we gave to Mr. Peter Henderson, who, under the name of "Rural" offers it in his catalogue.—EDS.]

* *

TALKING of Vick reminds me of his lilies. On both sides of that handsome street, East Avenue, are fields of Japanese lilies, gladioli, zinnias, verbenas, double portulacas and many other pretty things. They are not excluded from the public, but growing right up to the street side—in an open field without a fence, a hedge or a gate. All may see them, walk beside them and enjoy them. Nor are they planted there in patterns or geometrical

style; they are a crop as corn is, set out in rows and cultivated with a horse-cultivator as if they were corn or cotton, pear or apple trees. The smaller plants, as verbenas, carnations and bouvardias, are hoed, not "cultivated."

* *

I HOPE RURAL readers have not fallen in love with the French style of fruit tree training illustrated on pages 515, 516 and 517! Such styles may be good enough and useful in France, but they are nonsense in America. Here our Summers are long and warm enough to ripen our apples, pears and peaches on standard trees; therefore, unless for fancy's sake we have no excuse for such contortions. But many a hundred trees have I knifed and coaxed and tied into those and other kindred styles; but never, no, not even there, could I believe it good—that work my hands had done. Why, the time in labor, painstaking and precision requisite to get those trees into that shape, and the years that must elapse before they yield a crop of fruit, would drive a Yankee crazy! We want remuneration for our pains, and that right quickly; hence our prosperity.

* *

BUT as some readers of the RURAL may be curious to know the why and the how of this training, I will say a few a words more regarding it. Some deem it ornamental, but if such an unnatural contortion is to them ornamental, I pity their taste. It is considered useful in bringing the limbs and fruit more directly under the influence of the sun, and thus hastening maturity and bettering flavor in the fruit, and extra ripening the wood. By this means, too, tender trees may be more easily protected from inclement weather than were they in the form of standards; and peach and other very early-blooming trees may, with little trouble, be protected from frosts, cold winds and rains, when they are in blossom, and thus their fruit crop be rendered doubly certain. Stone-fruit trees are usually grown against walls: pears and apples as espaliers and cordons in the open garden. The accuracy with which the branches are disposed on either side is quite as perfect as the illustrations show, but to have them so demands great care. By foresight and pruning the balance of the tree is maintained, and where a bud fails to grow or a defect exists it is rectified by introducing a bud or graft. And it is a common sight to see a row of espaliers whose branches when they meet are "worked" together. Cordons are trees having but one shoot, and which are bent over a foot above the ground, so that that shoot runs horizontally; or it may be a double cordon, which means that it is has two shoots extending in opposite directions. These cordons are used as edgings to garden plots, and are often "worked" together so as to represent an unbroken belt for any length you please. Examples of fan and palm training may be seen in Eastern greenhouses, where peaches, plums or apricots are grown—out-door espaliers, in the garden of Henry Winthrop Sargent, Esq., at Fishkill, N. Y.; and cordon training at Elwanger & Barry's nurseries at Rochester, N. Y.

* *

BUT I am quite sanguine regarding the pot grape-vines—see Fig's. 384, 385 and 386. Of course only the varieties of the foreign, or Vitis vinifera grapes, are worth fruiting in pots, as it is an expensive process. In fruiting vines in pots the three ends mostly in view are: 1, convenience or economy of space, for we can grow them in any house that is moist, light, airy and warm; 2, earliness, as by having the canes early and well ripened in the Fall we can start them much earlier than would be advisable in the case of a permanent grapery, and have a fruit crop proportionately early; 3, one of the rarest and most tempting dessert dishes you can set upon a banquet table is a laden grape-vine growing in a pot. Grape-vines for this purpose are grown in seven-inch pots, placed within others that are 10 to 12 inches in diameter, so that when the fruits are matured the larger pot, together with the earth and roots contained within it, is removed and only the smaller one, left. But after this operation the vines are practically useless for further pot use.

* *

THIS reminds me that, early last July, on the occasion of a city dinner, a Boston gardener sent in an Early Crawford peach tree growing in a pot and with some thirty ripe peaches on it. The hotel-keeper set the tree upon the table, so the guests might pluck the fruit for themselves. Next day the gardener received back his tree and $15 for its fruit. The earliness of the season was the occasion of the high price paid, but the compliments of the guests and the press notices expressed the appreciation of the novel dish.

LEON.

REMARKS AND COMMENTS.

IN the RURAL for July 30, page 498, I offered a few remarks on the Early Alpha Potato. The editor inquired, "Did they yield well?" In reply I would say, two bushels to 120 feet of row.

MY experience with commercial or artificial fertilizers agrees with "Horticola's," given on page 498. In a dry season they are of comparatively little value, while during a wet season they produce very satisfactory results. However, where they are applied the crop is several days earlier than that on which barnyard manure is used.

HORTICOLA, on the same page, says that excellent early pea, the Alpha, has been uncommonly sweet this season. I have noticed that the Champion of England has been very much sweeter than usual. I have never tried the Alpha, but would say that for a second-early I prefer the Champion to any other variety.

WHILE speaking of peas I would like to inquire whether any of the readers of the RURAL have ever been so successful as to obtain a good crop of green peas in the Fall months. I have often heard of its being done, but with what success I could not say. If any of the RURAL's readers can give us any information on this subject it would be of interest and profit to many. What we want to know is the name of the variety best adapted for this purpose and about what time to plant it.

ON page 501 of the RURAL is an extract from the London Garden relating to Rosa rugosa and its varieties. Are there more than two varieties? I am only acquainted with the rosy-pink and the white varieties.

ON August 8 I gathered my Bloodgood Pears and carried them into the house to ripen, as the fruit of all early pears is so much better if ripened in the house. From my one tree, which is of medium size, I obtained one bushel of pears. The fruit is of medium size, the thick, yellow skin being spotted with russet dots. On account of these the fruit is not very attractive, but, nevertheless, it is of a rich, sugary flavor. The tree is of moderate growth and is an early and regular bearer. When the fruit is about half grown, thin severely, or else most of it will be rendered small and worthless.

THIS is what is termed by some an "off year" for apples; but I notice that where the trees are properly taken care of, some varieties are producing very fair crops. Among them the Large Yellow Bough is one that is deserving of attention. I presume it is well known to all pomologists, but to those who are not acquainted with it I would say that it is in season from the middle of July to the 10th of August. The tree is of vigorous but moderate growth and a profuse bearer. The fruit is large, of a rich golden color, with very tender flesh and a sweet, sprightly flavor, and on this account is much valued for the table.

WHILE speaking of apples I desire to call attention to that very pretty and excellent dessert variety, the Summer Rose. The fruit is of medium size and of a rich yellow streaked and striped with red. The tree is of moderate growth, but is remarkably productive, and in order to obtain fruit of the first quality it is necessary that one-half of the crop should be removed when it is about half-grown.

I NOTICE that in some catalogues that beautiful dessert pear, Manning's Elizabeth, is described as ripening about the end of August. With me it always ripens from the 5th to the 10th. The fruit of this variety is of medium size, of a bright yellow color, with a lively red cheek; it has a very sprightly, sugary, aromatic flavor. The tree is of slow growth, but is remarkably productive.

HORTICOLA, on page 546, remarks that melons are very backward and might ripen a good crop next Summer, and the same remarks are applicable to Lima beans, in this locality, at least. It would be of interest to know how these crops are at the Rural Farm. [Our vines are filled with fruit; but few of them will ripen early enough to be of any value. Cold nights and sweet watermelons do not go together. We shall have a good crop of Limas.—EDS.]

THE Lawton Blackberry canes were all killed to the ground during the last severe Winter, and those of the Kittatinny were severely injured, over half of them having been killed. The surviving canes set a fair crop of fruit this Spring, but instead of the berries ripening perfectly, a few colored black, the remainder turned red, and all shriveled and dried up about the 10th of July. Have any of the RURAL'S readers had any experience similar to mine? Now, were the canes so injured by the past cold Winter that the severe drought of this Summer rendered them incapable of ripening their fruit, or was it the Winter alone that caused the injury? I noticed this Spring that the canes appeared to be much injured. Have the Taylor and Snyder been tried at the Rural Farm, and, if so, with what result? [Both. They are hardy and productive, though the berries are small compared with those of Kittaninny.—EDS.]

WHILE speaking of blackberries I desire to remark that I have abandoned the cultivation of the Dorchester. With me it was anything but satisfactory. The vines grew to an immense size and produced very small crops of small berries. CHAS. E. PARNELL.

Queens Co., N. Y.

NOTES FROM THE RURAL FARM.

The Tomato Rot.

SEVERAL of our correspondents seem confident that it is not the tomato worm which causes the rot in their tomatoes. We do not say that it is. *But* we *do* say that it is this caterpillar that has caused every case of rot in our own tomatoes. We have watched it closely through the season; have seen it move from the leaves to the young tomatoes and nibble out small pieces, generally near the stigma end (or that opposite the stem), and then return to the leaf. Sometimes the pest would remain upon the tomatoes, eating a part—half or more—of the green tomato before leaving it. The injured portions in a few days turn black; rot begins and spreads, involving more or less the entire tomato. In some cases the wound heals, leaving a patch of brown, rough skin. We ask the question of those whose tomatoes have rotted:—Have your plants been infested with these caterpillars? It is quite possible that if not numerous, they may not have been observed. The caterpillar is so nearly the color of the stems that it is often hard to find it, even though directly in front of one's eyes. The leaves which have disappeared from the stems and the droppings underneath, however, afford a sure indication of its whereabouts.

It would be hasty for us to conclude that this or other allied insects are the sole cause of the tomato rot; but we are positive that it is a cause and at the Rural Farm the *sole* cause during the present season.

This insect is known entomologically as Sphinx quinquemaculatus or Five-spotted Sphinx. It is sometimes called the potato worm, though with us it prefers the foliage of tomatoes. It reaches its full length—three or four inches—and the size of one's little finger by the latter part of August or early in September, and then buries itself in the ground where, in a few days, it sheds its skin and becomes a chrysalis. Here it remains until the following Summer when a moth, as shown, (Fig. 475), crawls out and flies in search of food. Our illustrations, from Harris, (see page 668), show the larva, the chrysalis and the moth.

ROTTING OF TOMATOES.

THE TOMATO WORM is no doubt deserving of reproach for his ravages in the garden, but he should not be charged with crimes of which he is innocent. He is clearly not guilty of causing rot in tomatoes, which has of late years been so troublesome, and I think I can convince any fair jury of his innocence of this charge. It has been said of that notorious tyrant, the cruel Judge Jeffries, noted in English history as a most unjust judge who condemned scores of good men and some bad ones to undeserved punishment, that, on being assured of the injustice of a sentence pronounced upon a prisoner, he declared, "Never mind, let him hang; the scoundrel deserves it." So with the tomato worm; he deserves death, no doubt, although not upon this charge.

Last year was the first season in which my tomatoes rotted. I grew then only the Acme. Three years before I grew Trophy, Hathaway's Excelsior, Little Gem, Canada Victor and Arlington. In those years I had no case of this rot, but scores of tomato worms. Last year I don't remember seeing a worm on my tomatoes, and the present season there have been none previous to two or three weeks back. But of the early tomatoes I had not a sound one, and since a few worms have appeared there are but a few rotten ones. But this is circumstantial evidence only, and an *alibi* is but a poor defence unless it is a perfect one, and in this case it is incomplete. But I have more evidence to corroborate it. I have several times examined the rotted tomatoes under a microscope of a power of 400 diameters. Viewed thus, the cause of the rot is very clear. It is evidently of fungoid origin. I have traced it from the beginning, where it appears as a mere speck, and where the teeth-marks of the beast should be visible if he were the cause of it. On the contrary, the skin is not even touched, or even diseased, but the disease is within it, in the under part of the epidermis. There the white threads of the fungus can be seen among the cells of the skin and penetrating down the core of the fruit. Another specimen is affected on one side and the spot on the skin here is covered with well-defined cluster cups of an oval form and a cream color. A section of the skin shows abundant threads of mycelium penetrating between the cells and growing so rapidly that their increase can be plainly viewed on the field of the microscope. A more advanced specimen shows cavities *under* the skin, with dark lining of decayed tissue and filled with mycelium; the core of the tomato is diseased for a quarter of an inch, visibly to the eye, and wholly under the microscope. The appearance of the skin is much like that of a potato affected with rot in its first stages, when it appears as black spots upon the skin. From this I am convinced that the disease is one akin to the potato rot, which we all know had been charged to worms until the real cause was discovered, and I hold the worm guiltless of this crime. H. STEWART.

Farm Topics.

LASTING EFFECTS OF POTASH AND PHOSPHORIC ACID IN THE SOIL.

J. B. LAWES, L. L. D., F. R. S.

As regards the lasting effect of potash and phosphoric acid when applied to the soil, we are in possession of a great deal of interesting evidence. For illustration I will select two experiments from the field under permanent wheat. In 1844, two plots adjoining each other, and containing about two-thirds of an acre each, were manured with salts of potash, soda, magnesia, and superphosphate of lime. In 1845, and every succeeding year up to the present date, one of the plots, which is described as 10 A in the table of my experiments, received an application of ammonia salts.

The other plot, described as 10 B, received the same amount of minerals as 10 A in 1844; and also received the same amounts of salts of ammonia between 1844 and 1850, except on two occasions, in 1848 and 1850, when plot 10 B received minerals without ammonia. The only distinction therefore between the two experiments was that plot 10 A received one application of minerals, and six of salts of ammonia; while plot 10 B received three applications of minerals and four of ammonia. From 1851 to the present time 10 A and B have received every year the amount of ammonia.

The produce of the crop of 1851 was as follows:

	Bushels.	Straw lb lbs.
10 A	23¾	3070
10 B	28¾	3048

It is quite evident therefore that at that date, the single application of minerals, and the soil itself furnished the crop of 10 A with all the potash and phosphate it required.

In the following year, 10 B showed a superiority over 10 A, and this superiority, although a decreasing one, has been maintained up to the present time.

In order to prove that this superiority is due to the two applications of potash and phosphoric acid, which this plot received in 1848 and 1850, we must have recourse to the aid of analyses. Here I may say that, for special purposes, seperate analyses of the ash of each year's crop are essential, but for statistical purposes we mix together the ash of the crops of 10 years. In the present instance I only possess the analyses up to 1871, those of the last ten years not being yet completed; the two periods of ten years from 1852 to 1861; and from 1862 to 1871 will, however, furnish all the necessary information. The amount of potash taken away in the corn and straw from 10 A in 28 years was 700 pounds, of which 56 pounds were supplied in the manure, leaving 644 pounds to be furnished by the soil.

On plot 10 B, 812 pounds of potash were taken off in 28 years, of which 356 pounds were supplied in manure, leaving 456 pounds to be furnished by the soil. I do not, of course, know what will be the result of the 10 years' analyses from 1871 to 1880, but from evidence furnished by the previous analyses, it would appear probable that at the present time the soil of plot 10 B contains about 150 pounds more potash than plot 10 A, and should the experiment continue in its present form, a very long period must elapse before the potash in the two soils can be equalized.

A question here may naturally occur to some of your readers, as to how we know that the wheat crop in these two experiments requires more potash than it can obtain from the soil.

The answer is supplied by another experiment, plot 13 B, to which potash is applied every year, and the result is shown very clearly in the following table:

POTASH REMOVED PER ACRE PER ANNUM.

	10 years 1852-1861. pounds	10 years 1862-1871 pounds
10 A Potash applied once	27	23
10 B Potash applied three times	33	25
13 B Potash applied every year	53	57

It will be seen therefore that while the potash removed annually from plots 10 A and B is rapidly decreasing, in plot 13 B where it is applied every year it is increasing.

As all the experiments receive the same quantity of salts of ammonia every year, it is, I think, evident that the difference in the produce shown in the following table is due to the amount of potash.

AVERAGE OF 28 YEARS, BUSHELS OF WHEAT.

10 A	21
10 B	24
13 B	31½

I may here mention incidentally another very interesting fact, that although in plot 10 A, the amount of potash taken up is being reduced every year, still, more is taken up, and the crop is larger than on another plot where potash and phosphates are applied every year without ammonia.

The limits of this paper will not allow me to follow the results which relate to phosphoric acid; they are very similar, however, in character to those obtained with potash, with this exception that the amounts taken off in the crops are considerably less.

We may learn from these experiments that both potash and phosphoric acid enter into very insoluble combinations with the soil. The salts of potash generally used are soluble in water, and when they are first placed in the soil, if the crop is in want of potash, it can then take it up more readily than at any other time.

In some of our experiments upon permanent pasture nearly the whole of the application of 150 pounds of potash is taken up by the herbage grown upon one acre; if, however, more potash is applied than is required by the crop, then some considerable time may elapse before it can be recovered.

An erroneous application of potash or of phosphoric acid to the soil—by which I mean an application which produces no increase in the crop—is like sending goods to an overstocked market: your manures are in the soil and will be of value some day, but at the moment they are not required; you have, in fact, placed them in an overstocked market.

An erroneous application of ammonia or nitric acid is attended with much more serious results: it is a far more costly substance, and while, under favorable circumstances, one pound of nitrogen may add more than 100 pounds of dry weight to the crop, it is, on the other hand, possible that under the least favorable circumstances the whole may be lost. In my early days the fixing of ammonia in the soil was considered a great discovery; if it be an error to say that an application of ammonia or of nitric acid to the soil, not taken up by the crop during the year of its application, is lost, at all events it is an error on the safe side.

Some time ago I was accused of having ammonia on the brain; it is, at all events, quite true that my experiments show the influence of ammonia on vegetation to be very great. I think, however, that if I were a farmer in the United States I should be disposed to try what the less costly phosphoric acid or potash could do for me; if they failed to produce the desired effect, at all events they would remain in the soil, and instead of adding to the growth of sea-weed in the Atlantic or Pacific Ocean, they could always be made available for vegetation by the application of ammonia or nitrate whenever the existing stock of nitrogen in the soil was exhausted.

Rothamsted, Eng.

Field Crops.

RURAL SEEDS.

BEAUTY OF HEBRON.—While in conversation with a gentleman recently, as to the relative value of different varieties of potatoes, it occurred to me, on hearing the Beauty of Hebron spoken of in such high terms of praise, that it must be a source of especial gratification to the proprietors of the RURAL NEW-YORKER to have been instrumental in bringing this variety so prominently before the public, in so short a time after its introduction, as they did by placing it in their free seed distribution. Should the White Elephant prove equally desirable as a late potato, it will surely be a great acquisition. Speaking of the

WHITE ELEPHANT I must give a brief history of my experience with it this year. I received last Fall, one medium-sized tuber, and it came through the Winter in splendid condition. Well, last Spring I sprouted it in the house, and broke off the sprouts carefully, and planted them out in boxes, to get them ready for transplanting in the open ground. Then I cut the potato to single-eye pieces, and from the one potato I planted 22 hills by this means. I planted them in a field at some distance from the house, thinking they would be safer there than in the garden. They all started finely, and, "Now," said I to myself, "I will have a fine lot of them for seed next year." Just a week later I visited them when, behold! not a vestige of the White Elephant remained except three or four of the larger stalks entirely stripped of the leaves, all having been eaten up by the Colorado beetle. Five or six of the larger pieces I planted sprouted again, but they made a feeble growth, and I got, in all, less than 20 small tubers from them. I hope for better luck next year.

THE RURAL DIANTHUS.—A word of thanks is due for the pleasure we have derived from the magnificent display of flowers from the dianthus seed sent in the last Free Seed Distribution. We have already had about 20 different kinds in blossom, ranging in color from nearly white to very dark, and from single to semi-double, and from that to double, and some of them are pronounced by all who see them to be simply magnificent.

Croton, N. Y. "TREBLE."

Flax Culture in Kansas.

I HAVE raised flax ever since its first introduction into this country and think it yields best on our high prairie soils. It should only be sown on land well plowed, thoroughly pulverized and comparatively free from weed seeds. Three pecks of seed per acre, sown broadcast, have given me the best results, and if carefully sowed broadcast and well covered with a smoothing harrow, it is a reasonably sure crop—at least more so than any other we raise. When the leaves have mostly fallen off, is the proper time to harvest it, and for cutting the Champion Self-rake No. 4, surpasses any machine I have seen operating. I prefer thrashing it as soon as cured; but if not convenient I stack and cover well. The Vibrator Thrasher seems to be the best machine for thrashing flax. The product has been ten to 18 bushels per acre, at an expense of four dollars, and a return of $12 per acre. When cut at the right time the straw is better feed for cattle than prairie hay. The stubble I do not burn, but plow it under. I have found no natural obstacle to flax culture in this State. This year has been an exception to this rule, however, in consequence of extremely dry weather the crop not being more than one-third as good as it has been heretofore.

At ·ison Co., Kansas. H. C. SNYDER.

SOFT WHEAT.

THE RURAL says this is unsalable, quoting from the Pioneer Press, of Minnesota, since "the patent middlings process has entirely changed the values of hard and soft wheats."

I have seen it asserted by a writer on the wheat fields of Manitoba that all sorts of wheat grown there become hard, and make flour worth $2.00 per barrel more than any other sorts grown in a more southern latitude. The reason of this is, that Manitoba wheat contains a larger percentage of gluten, and a less percentage of starch. It is the climate, the

FIG. 474.

writer asserts, which makes this great difference in the quality of the wheat.

The climate of Minnesota, Dacotah, and a part of Montana north of the line of the Pacific Railroad—say at about 48 degrees of north latitude and beyond—must be nearly the same as that of Southern Manitoba. Why then should not all the wheats grown there be hard and contain as large a percentage of gluten? Will the wheat growers and millers of that region enlighten the readers of the RURAL as to this, for the truth of the case ought to be known? A.

WILD RYE OR LYME GRASS.—FIG. 473.

Wild Rye, Lyme-Grass—Elymus Canadensis

This is a coarse perennial grass, found on river banks. The stems grow two to five feet high and bear at the top a gracefully nodding spike five to eight inches long. The flowers bear long awns. The leaves are broad, linear, flat and six to twelve inches long. It flowers in August. At the North, I have never known any domestic animal to eat it; but at the South cattle are said to be fond of it in Winter and Spring. I know of no species of bromus which makes nutritious hay or pasture. As an agricultural grass it is of "no account," but in suitable places in the garden near a pond or brook it is a choice plant which well deserves a place. Especially the glaucous variety is worthy of such a position.

PROFESSOR W. J. BEAL.

Pomological.

NEW FRUITS.

PROBABLY a greater number of new strawberries have been introduced during the past three years than during any previous ten years in the history of this delicious fruit. Of all the new kinds, probably the Sharpless stands first, while Triple Crown, Primo, Shirts, Glendale, Cumberland Triumph, Bidwell and, latest of all, Manchester and Jersey Queen are among those of "great expectations." Of raspberries, the Gregg stands first among Black-caps, the Caroline among the buff-colored, and the Cuthbert and Montclair among the reds. Among plums, nothing particularly striking in the way of new varieties has of late years appeared. Among pears, Kieffer's Hybrid, which is thought to be a hybrid between the Chinese Sand Pear and Beurré d'Anjou, and to be blight-proof, is of very good quality, ripening in October and November. Hoosic is a Mass. pear of good quality ripening in October. The tree is productive and vigorous. Among peaches the Wheatland is a chance seedling on the grounds of E. Rogers, Scottsville, N. Y. The tree is healthy, resembling Crawford's Late, but more vigorous. It bears heavy crops. The peach is of large size and handsome. Mr. Downing pronounces it a very promising late variety for market, being firm, enduring distant shipment and valuable for all purposes of the family. It is a free-stone.

Mr. Downing tells us, speaking of the many early varieties of peaches that have been introduced within the past 10 years, that it is thought that most of these early kinds are reproductions of Hale's Early and Alexander, and so nearly alike that the distinction of name is not worth retaining. Our effort should be directed to obtaining a fruit as early as the Alexander and of as good color, size and quality, free from rot.

Of grapes we have many kinds that certainly promise to eclipse the old favorites. We may name the best as Lady Washington, Brighton, Duchess, Niagara, Jefferson, Prentiss, Pocklington, Quassaick and Rochester. Of many kinds of new apples, the following may be mentioned as promising to be the most valuable: Blue Bloom (September); Brewington Pippin (February); Canada Baldwin (January–April); Decarie (September); Famense Sucree (October); Highland Beauty (January–March); Johnson (December–March); Kinkead (Summer); Peasgood's Nonesuch (September); Snepps (December–February); Stearn's Greening (December–April); Wolf River (October–November). Most of the above fruits have been illustrated in these columns.

PLUM CULTURE IN NORTHERN MICHIGAN.

T. T. LYON.

IN Southern Michigan, the European plum is subject to the depredations of the curculio; and many of the more delicate and desirable varieties are also frequently so far subject to the rotting of the fruit, before maturity, as to be very unreliable. Besides these drawbacks, the foliage often ripens and drops before the fruit is fully grown, leaving the tree to go into the Winter in an enfeebled condition, and hence unprepared to withstand the severe cold.

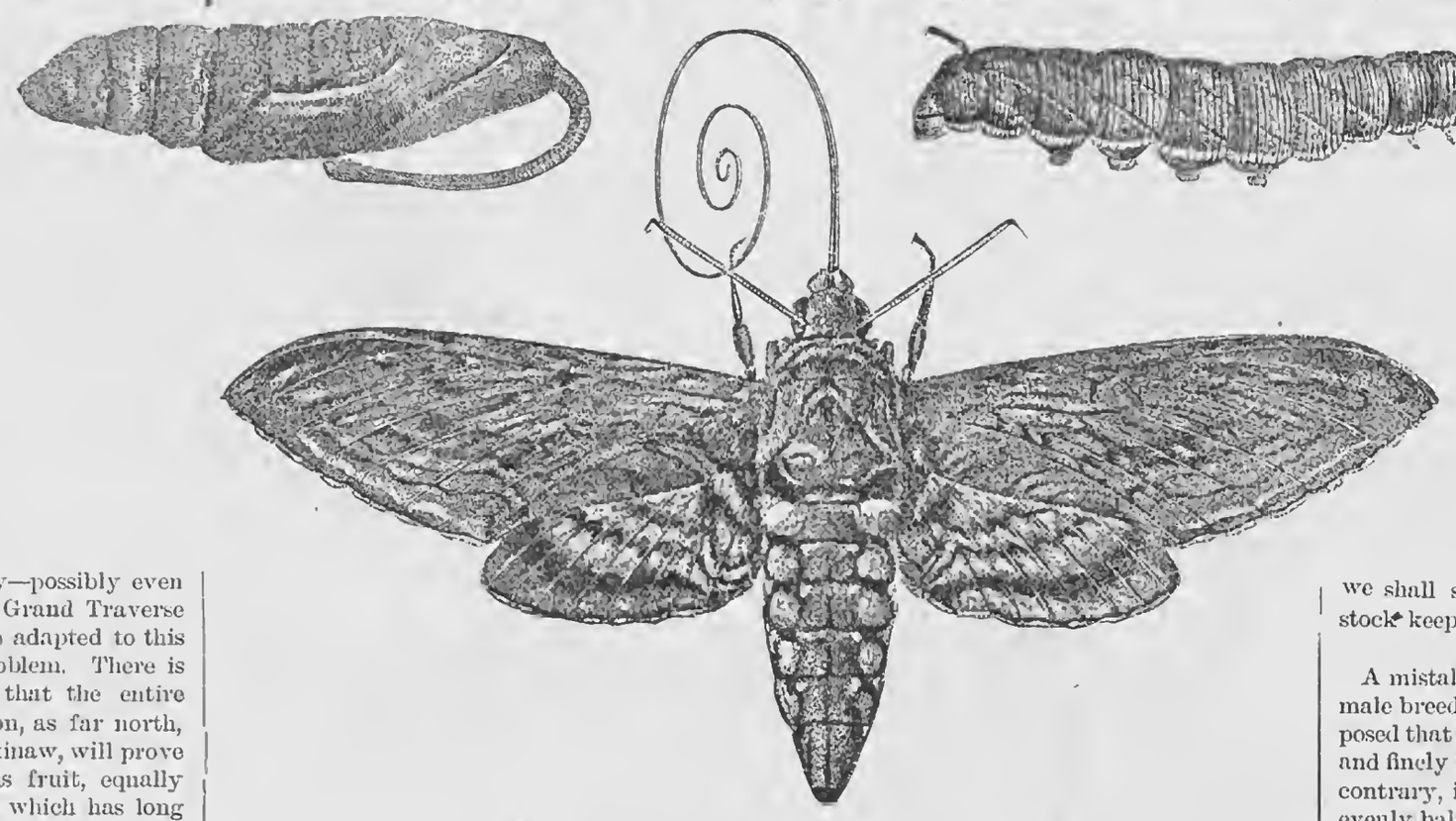
North of Muskegon County, and, so far as I am aware, north of the same parallel on the eastern shore of the State, this fruit is mainly, if not wholly, exempt from these drawbacks. As might reasonably be expected, when we come to learn that (as far north as latitude 45°) the range of the thermometer is rarely if ever lower near the great lakes than in similar situations at the southern line of the State, the most delicate and luscious varieties of this fruit are fully hardy and healthy; nearly or quite free from the depredations of the curculio; and I may add, even more productive than could reasonably be desired.

At Traverse City (at latitude about 44½°) may be seen one of the largest and most successful plum orchards in the State, if not even in the entire Northwest. This orchard, which has now been several years in full bearing, has been exceedingly productive, showing the highest evidence of vigorous health, and has

been but slightly troubled by the curculio, although, contrary to usual practice further south, it is located on exceedingly light, porous sand of such depth as to forbid the assumption that the roots may reach a stronger subsoil. It should, however, be remarked that the ground was originally timbered with beech, sugar maple and basswood, which were occasionally of very large size, and that a microscope reveals the fact that the soil is largely composed of minute fragments of shells, affording an abundant supply of lime to vegetation. It must, however, by no means be supposed that the success of the plum here is confined to such soils. At Manistee, a little farther up the shore of Lake Michigan, one or more of the oldest plum orchards in Northern Michigan stand upon a plateau of the most retentive "hard-pan," with but a very few inches of covering of lighter soil. This also has proved eminently satisfactory. The land is on a gentle slope, and, when last I saw it (in 1874 or '75), it had little or no under-drainage.

This immunity of the plum from the usual drawbacks is found effective as far south as Oceana County—possibly even farther. How far north of Grand Traverse Bay the climate may prove adapted to this fruit, is yet an unsolved problem. There is abundant reason to believe that the entire western shore of Lake Huron, as far north, at least, as the Straits of Mackinaw, will prove adapted to the growth of this fruit, equally with the Dominion opposite, which has long been known as a fine plum region.

The recent pushing forward of railroads into these noted haunts of the lumberman and hunter, is rapidly bringing them to public notice, and farming and fruit-growing are beginning to usurp the place of the logging camp and the lumber mill.



CHRYSALIS, MOTH AND LARVA OF THE "POTATO WORM."—FIG. 475.

The Vineyard.

THE NIAGARA GRAPE.

Reply to Mr. A. A. Bensel.

THE frantic efforts made by Mr. A. A. Bensel, in RURAL NEW-YORKER of August 6th, to bring discredit upon some of the newer white grapes, and especially upon the Niagara, only too plainly show that he has a pet which he thinks is in extreme danger. His efforts would be amusing only they show the extreme jealousy felt by some of the friends of some of the newer grapes towards others of the same class. It is passing strange how he could be so bitter and berate and deride the Niagara so much, and in the same paper commend the previous article by Mr. Green, which certainly was very favorable to the Niagara. We, too, with him, would like to see Mr. Green's article have a wide circulation, and will contribute to so worthy an object. That there has been much systematic swindling done in the dissemination of new grapes even Mr. B. must know, and some of the very worst and most barefaced cases ever known originated on, and were put forth from, the banks of the Hudson River; in fact, it would be hard to name any grape that originated in that fruitful section, which has not proved to be worthless in every other place.

The course pursued by the originators of new grapes there has been one calculated to breed and foster these great humbugs. They would place a few vines here and there to be tested, as they said, but *nine-tenths* of these went into the hands of interested parties, who planted one or two and petted and pampered them to make them show their best, while they were propagating a stock of vines and puffing the variety, so as to be able to sell a few thousands at high prices to a confiding public, to have them found on further trial *entirely* worthless. In proof of this I cite the fact that to-day to the public "new grape" is synonymous with "humbug."

The course adopted by the Niagara Grape Company to test the Niagara is entirely new and different. They place no vines except in vineyards, to be treated only as other vineyards are, and the planter has no right to propagate a single vine, and, of course, he has no interest in anything but the fruit, and no reason to pet the vines or make them "show off," or to misrepresent the grape in any way; and, of course, the people can see the vines and fruit growing in their own neighborhood before any vines will be offered for general sale. This course evidently does not please Mr. Bensel, who is, no doubt, a propagator; but it seems an eminently fair one, and certainly, so far as the public is concerned, *it has no humbug in it.*

Since Mr. Bensel seems to feel so bad over the *imaginary notion* that the Niagara has "*hung fire* too long," and declares that it is "not before the public by being tested in different soils and climates," to cheer his drooping spirits, and to show that he does not know whereof he affirms, I will simply state that today there are more Niagaras growing in Virginia, Delaware, New Jersey, Pennsylvania, New York, Massachusetts, Quebec, Ontario, Ohio, Michigan, Indiana, Illinois and Iowa than of all other new *white grapes* combined; and one vineyard not far from New York City has more Niagaras growing than there are of Lady Washingtons in existence, that are one year old or over. I make this statement only to show facts, and not because I wish to say aught against any other grape. I am only glad that there are so many and such good new grapes, white and colored, and I only hope that many more, and those much better than the Niagara even, may be originated.

I can't see why this jealousy as between the friends of new fruits—it is all wrong, and Mr. Bensel would do much better to use his surplus energies in trying to originate something new and good. This is a great country of ours, and there are a great many people to eat grapes, and there is room for more than all the good grapes we can grow. As to the beauty, quality, hardiness, productiveness and any and all other points of the Niagara, we enter into no controversy; the people must judge of these for themselves, and we are perfectly willing to leave the matter in their hands, assured that they will do it full justice. However much interested parties may sneer at its "unattractiveness" and "disgusting" qualities, and ridicule and run it down, those who know the most of it, and who have seen its broad, thick, dark-green, health-giving leaves, call it *beautiful* and *good*, and the general public have faith in it, and are planting and are going to plant it largely; and we leave it with them and with time to fully vindicate it.

J. S. WOODWARD.
Sec'y Niagara Grape Co.

HOW OPINIONS DIFFER.

The Lindley Grape.

I HAVE before me a slip cut from Green's Fruit Grower, speaking in the highest terms of this fruit, giving not only the writer's opinion, but quoting in its praise from several prominent vintners and pomologists to the effect that it is "one of the best, if not *the* best of Rogers's Hybrids. As to the quality of the grape when you get it fairly in your hand, I can speak only in its praise; but I have six other varieties of Rogers's, any one of which I prefer to the Lindley, not so much on account of flavor or hardiness, in both of which the Salem excels it, but any one of the six has been with me more productive and of more agreeable habit of growth of vine and fruit. The Lindley is long-jointed, with stems very long and large, and bunches long and loose. The canes want all the room you can give them, and do not branch much or turn out much fruit. In the amount of fruit the Merrimac, Wilder and Aminia excel it among the blacks, and Massassoit, Requa, Salem and No. 5, among the reds, and, furthermore, as to flavor, I have more than once placed samples of these eight varieties of Rogers's before a family of old and young persons, and in all cases the Salem got the most votes, and generally the Requa the next highest number. Still there is little difference in quality or beauty between the Massasoit, Requa and Lindley: either of them brings me in our home market more than three times the price of the Concord, and there being but few of these large red grapes in our market, the only question is who shall have them. S. B. PECK.

MINER'S SEEDLING GRAPES.

IN 1878 I bought of T. B. Miner three of his seedling grapes, named by him Linden (black) and Belinda and Antoinette (both white). Owing to late frosts the two past years, this is the first year they have fruited. The Linden is rather small in body and cluster, of good quality, but not particularly desirable as we have plenty of good black grapes. The Belinda and Antoinette are both ripe at this date—Sept. 3d—and are of the finest quality; in fact, to my taste, they are the best in flavor of any white grapes I have ever eaten. They resemble each other so closely that I am unable to distinguish any difference, and judge that Mr. Miner must have made a mistake and sent only one variety instead of two.

A good, early white grape is very desirable for our market, and should these prove as good in the years to come as they now encourage me to hope, they will be a valuable acquisition.

Does any one know whether or not these grapes bear the same names given them in 1878? I fail to find anything relating to grapes by the above names in any of the agricultural papers, but should be happy to hear from others who have had any experience with them. For our market we must have something besides black grapes to sell well, as the "*nasty*" Talman (Champion) has nearly ruined the demand for grapes of that color.

In reading over Mr. Miner's letter I find that he claims there is no essential difference between the Belinda and Antoinette except that the latter is a week or ten days later than the former, and is sometimes shouldered.

NELSON RITTER.

The Herdsman.

NOTES BY A STOCKMAN.

LET us figure up a little. The average value of farm land from the Atlantic to the Missouri may be reasonably estimated at $50 per acre and the taxes at 50 cents per acre. The interest, at six per cent. on the land and taxes would amount to $3.50 per acre. Five acres of pasture and two acres of hay and other Winter feed are required, on an average, to support a cow. The cost then of her feed will be $24.50 yearly. The cost of labor of feeding, milking, and attention, will amount to ten dollars more. The total is $34.50. At two cents a quart for the milk, this will require 1735 quarts in the year, or an average daily yield of eight quarts per 215 days or six quarts daily for about ten months. This is above the average of all cows, including good, bad, and indifferent, and far above the average of the worse half of all the dairy cows.

If the owner of a cow will realize the fact that unless she pays him in clear cash $34.50 yearly, she is kept at a loss, he will soon become interested in the subject of the improvement of dairy cows.

But how will this matter stand when those farms are considered which cost their owners $100 per acre. The cost of keeping a cow on such land will average $59 yearly, and yet we may see constantly in the reports of creameries and cheese factories that the average yield of whole dairies for the season varies from a little more than $30 up to about $40.

It is curious to take the amount of figuring that is done in regard to fowls and sheep, and the absurd and extravagant hopes thus held out delude hundreds of persons into losses and disappointment. A person recently figured so as to show the yearly income from 300 hens to be $1,500. "Each hen lays 250 eggs, which, at two cents each, make $5 per hen." Now there never was a hen that laid 250 eggs in 365 days, which would be equivalent to four eggs and a fraction every six days without any stopping for holidays and brooding spells and molting. It is a good hen that lays 150 eggs in a year, but your poultry hobbyist and sheep enthusiast are not amenable to reason.

It is generally supposed that a ewe brings a lamb and a fleece every year. But in a well kept flock there will always be a number of ewes, perhaps a fourth, that will fail to become in lamb, or that will lose their lambs, and in estimating the yield of wool it is safe to deduct 50 per cent. from the rose-colored estimates of persons who think they know all about it before they have heard the bleat of a sheep.

Co-operative stock keeping is probably the safest form in which associated capital can be employed in agriculture. It has several advantages. A large tract of cheap land can be procured; fencing is unnecessary; the labor and cost of caring for the stock are reduced to the lowest point, and the produce can be disposed of on the best terms and at the least expense. Doubtless in the near future we shall see several ventures of this kind in stock keeping.

A mistaken notion in regard to the size of male breeding animals is prevalent. It is supposed that a large animal must produce large and finely developed progeny. But, on the contrary, it is the small and finely formed and evenly balanced sire that is most valuable for breeding. Some of the most successful sires have been small animals, and, in general, size is of very inferior importance in selecting males for breeding purposes.

It seems that some time ago the fashionable breeders in Jersey took means to close the Herd Book and stop registrations, whereupon fabulous prices were obtained for their recorded animals and they were quickly sold out to American speculators. The breeders, or rather dealers, in Jersey then stocked themselves with cheap unregistered animals, and are now having the Herd Book opened again. The recent boom in imported Jersey cattle is all explained when we discover this hitherto hidden motive power, by which it has been put in operation. It shows very clearly the farcical and ludicrous character of this Herd Book business, and how it is made a means of "milking and shearing" the public just as they are milked and fleeced in Wall Street.

The Jerseys are not making their way into popular use as they should do; and every year that this sort of business lasts, will add to the deterioration of the race. A few sensible breeders are confining themselves to native-bred stock and the rearing of useful cows for high-class dairy purposes; and are letting these imported, fancy cattle alone. An excellent bull or cow of good honest lineage and high quality can be procured from these breeders for one-tenth the price asked by the foreign dealers, whose business is not breeding but buying and selling and going through the farce of "hippodroming," and "rigging the market" by means of their Herd Books.

FARMERS should learn that the pure stock is not the most profitable for them. The cows for profit are grade cows, half and three-quarter-bred, which, as a rule, exceed the pure-bred even in yield very often. Now, we cannot have grades without pure-bred stock and here the benefit of the breeder to the farmer comes in. Let the breeders make their first business to improve their stock and show its real value at the fairs to teach the farmers how much money can be made by using a pure-bred bull in their herds.

This is the great point. The use of Short-horn and Hereford bulls in the great Western pastures has more than doubled the value of the herds for beef, and when a farmer is inclined to scorn a Short-horn cow because she is no milker, he must remember that her business in the world is to produce beef. And so the lean, light, bony, eat-hummed Jersey's business is to make the best of butter, and that of the bulls to cross on our common cows and double the value of every heifer calf.

PROFITABLE CATTLE FEEDING.

WALDO F. BROWN.

Advantages of Spring over Fall and Winter Feeding.

IN a former article I spoke of the comparative profits of Winter and Spring feeding of cattle, and now by request of the editor I will

give some facts and figures showing what my Illinois friend has done. But, first, let me repeat the points which I claim in favor of Spring feeding, for they are of so much importance that they will bear repetition. 1st. The feeder who buys cattle the first of March for feeding, can usually buy as low (often lower) than if he bought three or four months earlier. 2nd. Cattle bought at this season will not shrink in weight at all, but will at once begin to gain, while cattle bought in early Fall will often lose 100 pounds or more in the transition from grass to dry feed. 3rd. Cattle fed at this season of the year will come into market ahead of grass beef, when good cattle are scarce, and the price high, two or three weeks often making a difference of from 50 cents to $1 per hundred in price. 4th, and most important of all, cattle that have been fed before going on grass long enough to give them a thrifty start, will make the greatest possible gain, as all the conditions are favorable—water is abundant and pure; there are no flies; the pasture is fresh and abundant, and if the cattle are to be sold in June, the pasture may be stocked twice as heavily as if they are to be fed all Summer.

But I will give the experience of Mr. Deal, of McLean Co., Ill. He had been feeding cattle through the Winter, and selling them before grass time in the Spring and found no profit in it, and in the Spring of 1877 he concluded to try a new plan. He put 55 steers in the feed lots on the 17th of February, and began light feeding, but got them on full feed before the end of March. He fed a peck of corn to each per day after they were turned to pasture, and sold them in 129 days from the beginning of feeding. His cattle averaged 1,010 pounds when put up to feed, and 1,429 pounds when sold, making a gain of 419 pounds each, or about 3¼ pounds per day each. These cattle ate 1,500 bushels of corn, or about 27 bushels apiece, and, although I have now mislaid the figures, I think they paid over 60 cents per bushel for the corn.

The next year Mr. Deal fed 64 head of steers. He began feeding in February with cattle that were quite thin in flesh and averaged 1,000 pounds. They were worth $3.50 per 100, or $35 each. They were fed lightly till the first of April, and from that time till put on grass they were fed all the shock corn they would eat clean. When turned on pasture feed boxes were provided and they were fed one peck of ear corn each per day. These cattle were kept until August, as they continued to gain well, and when sold averaged 1,536 pounds, and brought $4.50 per 100 or $69.12 per head. After allowing $1.25 per month for pasture and corn—the regular price at which it could be bought—and eight per cent. interest on the money invested, it leaves for labor and as profit on the money invested, $1,115.68.

My own experience in feeding cattle, although limited, fully confirms Mr. Deal's idea that Spring feeding will give a profit when Fall and Winter feeding will result in loss, for it seems that Spring is the natural period of growth in the animal as well as in the vegetable world, and it is by careful watching and taking advantage of these favoring circumstances that we get the greatest profit. It is absolutely necessary that the stock should be fed grain long enough before going on grass so as to give them a start. I should be very much pleased if many of the readers of the RURAL would try this plan next Spring, if only with a single animal. Weigh your animal the first or middle of March, when you begin feeding grain, and make a note of its condition, as to whether it is in low or moderate flesh. Weigh again when you turn it to grass, and a third time in a month. Measure or—what is better—weigh, all grain or meal fed and then send us the report. It will be read by all farmers with interest and profit.

Butler Co., Ohio.

The Swine-Herd.

SWINE JOTTINGS AT KIRBY HOMESTEAD.

THERE is nothing like a pasture for breeding sows to run in. All of our sows which lost their pigs last Spring while confined in pens, have had large litters of fine, strong pigs. They had nothing to eat but Orchard Grass and clover, and helped themselves to spring water in the field. They slept under the trees and by the side of the fences, and were let alone until a few days before pigging, when they were put into a pen and given a little straw for a bed. One had her little family under a tree, and did well. If the field was large enough and the weather was good, sows might safely be left out for the young to be born.

THE hot sun is injurious to young pigs and blisters their delicate skin. This gives them a stunt and is apt to make them grow crooked. A rain-storm and a damp bed are liable to give the mother a cold and milk fever; hence we prefer to house the mothers before the young ones are born. A young pig would make a good meal for a fox, and when safely indoors they can be looked after with less trouble.

A SUDDEN change from grass to solid food is not healthful. It will make fever just at a time when it must be avoided. On this account we make the change gradually, and give the sows green corn-stalks, apples, or some sort of vegetables with the solid food. Avoid corn and corn-meal as much as possible, as they are the worst food a sow with young pigs can have. Wheat middlings is the best.

THE udders and nipples should be examined before yeaning, and if they are dirty they should be washed clean. If the sow is tame

SHROPSHIRE RAM, DUDMASTON HERO—FIG. 476.

this can be done with a sponge; and if not, with a broom dipped in a pail of water. If any of the nipples are cracked or sore—and this is often the case—they should be smeared with oil and healed up before the young pigs are put to nurse, or else the sow will be restless and either lie on them or tread on them. When the nipples are sore, a sow may be ferocious and attack the young ones and eat them up, as she imagines that they are the cause of the pain. Briars will scratch the udders and make them sore, and lying in the mud will poison them and cause them to crack.

WHEN there is a scanty supply of milk from the mother, little pigs may be taught to go into a separate pen and drink milk from a shallow vessel. They should be put by the vessel with their fore-feet in it, when they will smell the milk and soon begin to drink. The vessel and milk should be warmed before the experiment is tried. If the sow is cross or irritable, the pigs can be quietly pushed into the adjoining pen with a long stick, and so avoid any excitement. They can also be moved around and into the vessel in the same manner without being frightened, when they will be more likely to drink. A seared pig won't drink, neither will it if the mother is making a fuss.

PIGS are scarce and high all over the country. Care will pay. F. D. CURTIS.

Farm Economy.

THE MASSACHUSETTS LAW OF TRESPASS.

PROFESSOR F. H. STORER.

THE remarks on page 488 of the RURAL, as to the necessity of legislation for the protection of farmers living near towns and cities from the depredations of excursionists, are borne out by the Massachusetts act, which declares that:

"Whoever, between the first day of April and the first day of December wilfully enters on or passes over or remains on any orchard, garden, mowing land, or other improved or inclosed land of another, after being forbidden by the owner or occupant thereof, or by the authorized agent of said owner or occupant, either personally or by notice posted conspicuously on the premises, shall be guilty of trespass, and shall be punished by fine not exceeding twenty dollars; and such fine shall not be less than five dollars, if the offence is committed on the Lord's Day.

A person found in the act of committing the trespass described in the preceding section, may be apprehended by the Sheriff, Deputy Sheriff, Constable, Watchman, or Police officer, without a written warrant, and kept in custody in a convenient place not more than 24 hours, Sundays excepted; at or before the expiration of which time he shall be brought before a trial justice, police, municipal, or district court and proceeded against according to law, or discharged as the magistrate or court shall determine."

It has been sufficiently illustrated by European experience that in proportion as a country becomes densely populated, special pains must be taken to insure to the owners of crops, cattle and lands some small share of the privacy and quiet which are essential to their happiness and success. The Massachusetts law is manifestly a step in the right direction, and it is important as evincing a just recognition of some of the rights of landholders. But it is extremely doubtful whether the difficulties which the act seeks to do away with can be cured by legislative enactments alone, since no inconsiderable part of the annoyance and even of the actual loss to which suburban farmers are exposed, depends upon pure ignorance and not upon malice. The average city child, or adult, even, has absolutely no conception that it is wrong to walk through standing grass, for example, and it is not at all easy to convince him that "shooing" at cows is an act at which anyone may justly take offence. The notion that animals may be disturbed by crossing their pastures would, of itself, never have occurred to him, for he does not reflect that actual molestations by previous visitors may have made the animals fearful and uneasy. He is, in general, blissfully unconscious of the fact that his movements and those of his fellows are of the same order as the constant dropping which wears the stone, and he fails to realize that the "harmless" thing he may be doing has been already done over and over again, with manifold variations, by others; and that it will not fail to be continued by his successors. Still, the general diffusion of the knowledge that there is a $20 fine for trespassing must work powerfully to hinder unconscious as well as conscious faults.

It is probable anyway, that it will be easier for the farmer to keep city children out of his mowing fields than for the suburban resident to guard his little lawn and borders against the over-grown boys "from up country" who have come down to serve his grocer, his milkman, and his provision dealer. Ten to one that each new grocer's boy, on his appearance, will drive over or walk over some cherished bit of grass, with as little compunction as if he were in his father's dooryard, and that he will continue to offend for a considerable season. Incessant expostulation—judicious and injudicious, in season and out of season—seems to be the only known palliative for this most unnecessary annoyance. No certain cure for it has yet been discovered; and it is noticeable that the country-bred boy has even a fainter conception than his city cousin of the difficulty of making anything grow that is exposed to constant contact with humanity.

It would be well, undoubtedly, in populous neighborhoods, if people could acquire the habit of keeping off private land on all occasions. But, in the vicinity of Boston, at least, there is one circumstance well calculated to hinder this most desirable consummation. According to the Massachusetts system, the farm lands in a township, as well as the shops and dwellings at the centers of business, are taxed for the creation and support of water-works, systems of sewerage, police, the sweeping, paving and lighting of streets, and all the multifarious necessities which are incident to the crowded population which exists at the central city, town, or village. At the same time, the farms are "valued," not on a basis of what they produce, but on some more or less wild estimate of what the land could be sold for to speculative builders. There is apt to be considerable uncertainty, withal, as to how rapidly the rates of taxation and of valuation may be increased. In consequence of this most absurd condition of things, few people can afford to cultivate mediocre land in the vicinity of the city, and it happens that very considerable masses of land are left idle; or, at the best, the standing grass, such as can grow without any care or manure, is sold once a year at auction. But the existence of such uncared-for land, over which anyone may, practically, roam at his pleasure, tends naturally to bring all landed property into contempt; and it will not be easy to teach people to respect mowing fields and pastures in Massachusetts until this particular anomaly has been done away with. The example of Connecticut, which has sought to protect farmlands from unjust and burdensome taxation, might well be followed in the parent State.

Sheep Husbandry.

OUR ANIMAL PORTRAITS.

Dudmaston Hero.

FOR years the Shropshire Sheep have held a very high position in England both for the excellence of their fleeces and the superior quality of their meat which in some flocks, notably that of the late Marquis of Anglesea is more like venison than mutton. However, their popularity has been rapidly growing and the present high value set upon the best of them may be inferred from the fact that last year the subject of the accompanying illustration, Dudmaston Hero, was hired for 160, guineas or $813, while a couple of weeks ago he was sold, as a two-shear, at 200 guineas, or $1,016. With him his late owner, Mr. Mansell, won the first premium at the late Royal Show at Derby.

THE SHROPSHIRE SHEEP.

HENRY STEWART.

ONE of the most successful instances of cross-breeding sheep is the Shropshire. It presents itself just now in a pertinent and timely manner to those shepherds who are looking out for an excellent ram for breeding lambs or grade sheep for mutton and medium wool. For early market lambs there is no better stock ram than the Shropshire, for its lambs are stocky, hardy, fat, good feeders, of good size, and carry the so-much-desired smutty faces and legs. For mutton for domestic use or for the butcher, the half-bred Shropshire equals the South Down cross in quality, and it excels it in size and early maturity; while the fleece is heavier and of longer wool than that of the South Down, and equally available and desirable for the country carding mill or for the wool buyer. It rivals the South Down and the Cotswold, and for the farmer's use it surpasses either. This quality, which is by no means inconsiderable, it derives from its parentage, which is made up of both of these excellent breeds, with a foundation of a hardy, long-established breed, known as "Morfe-Common" sheep.

This original parent was a fine, short-wool sheep, horned and black-faced, which was kept on a large tract of land known as Morfe Common in England. It was very hardy and thrifty, and as long ago as 1792 became the chosen material upon which to found a series of improvements, by some of the shrewdest and most enterprising breeders of that enterprising period. The Cotswold was the first improved breed used, and after a good mixture had been procured the South Down was used. In fact, the original sheep was about bred out entirely, being used chiefly as a vehicle for combining the blood of the Cotswold and South Down, and the result was the Shropshire, which is for all purposes and to all appearance a cross of these two breeds. It is an enlarged South Down with longer and heavier fleece, retaining the fineness, compactness and rotundity of this breed, mingled with the larger frame, and longer, looser and more open fleece of the Cotswold.

The Shropshire has been very carefully bred and continually improved during the long period which has elapsed since its foundation; and, notwithstanding that fashions change and the exigencies of the business of breeding require a constant accession of novelties, it has retained its position in England as a popular farmer's sheep. The "rent-payer" is a frequent title given it to distinguish it as a safe and trustworthy source of the most important part of the profits of a mixed farm, in which the production of mutton and lambs has a very large share.

But we have far more to do with the question of its adaptability for American agriculture than with its popularity in other countries. It is well that a breed of sheep should come to us with "the highest references" and most encouraging testimonials. But we want to know what place it will fill upon our farms. This question has fortunately been satisfactorily settled. The Shropshire has been tried from the Atlantic to the Pacific shores, in Canada, in Georgia, in Tennessee, in Mississippi and in Texas, and has failed nowhere. Upon mountains and upon plains; in the most luxuriant pastures, and with but sparse and scanty vegetation: with the wealthy amateur, and the working, practical farmer, it has never gone back upon its friends. The appearance of the sheep is good and even attractive. They have the look of solid, hearty, contented sheep, and with only moderately good care have proved hardy and easily acclimated. As a rule, our sheep have to rough it, and are never—or hardly ever—coddled and petted; and on this account the less hardy kinds usually come to grief in a short time. The Shropshire, however, holds its own with the Merino and the "iron-clad" natives. But no American farmer will find money in or out of a flock of pure Shropshires, and few will do so even with our own native American Merino. These sheep are profitable, first, to the breeder who raises rams for the supply of the farmers, and second, to the farmers for the production of grade lambs and mutton sheep only, and this is a profitable and secure business. It is not an El Dorado exactly, but it pays better than money in bonds and mortgages and is equally

as safe, always providing that the owner of the flock will give as much care to his sheep as he would to his bonds. For at three months old a half-bred Shropshire will easily weigh 50 pounds, and at two years it will yield to the butcher a carcass of 100 to 120 pounds, and to the owner a yearly fleece of seven pounds of easily marketable wool. Its close fleece enables it to resist storms and rain and snow, and its thrifty habits and good feeding qualities make it easily kept and cheaply fed. And what more can a sheep do for its owner than this?

Miscellaneous.

What Others Say.

THE English Live Stock Journal says the most unfortunate thing about wool, in respect to the farmer, is that it will keep. It thinks a time's price the best in the long run, and that there's a great deal of truth in the old country-side saying, "A man seldom regrets selling." Two years' wool crops are thought to be held now in England; but that matters comparatively little with markets, for as America rules the wheat markets of the world, so does Australia rule its wool markets. . . . . Owing to the lateness of harvest weather many English farmers have made "Australian oat hay" of their oat crop—a splendid feed for horses, who relish it exceedingly, as all the nutriment is retained in the straw. . . . . Sewer farming, on which the late Mr. Mechi used to wax eloquent, is again attracting considerable attention in England, nearly half of which could be amply fertilized by the sewage of London alone, if properly distributed. The great danger, Dr. Gabb says, is over-sewage of the land to which it is possible to conduct the sewage under present arrangements. Precipitation is the system advocated as being the only effective one.

PLANTING HARDY CATALPAS.—C. speciosa.—Speaking of the hardy catalpa, C. speciosa, that accomplished young horticulturist, William Falconer, says in the Cultivator (Albany) that they should be planted very thickly and thinned out in after years as they begin to crowd one another. They may grow one to four feet high the first year after being set out, but here do not let your ambition curb your common sense. Instead of letting them remain as they have grown, cut them down to within an inch or two of the ground. This you can do easily (as the young wood is soft and pithy) with a scythe as you would a field of thistles. Next year they will shoot up young rods doubly strong and long. Again, in succeeding years, fail not to cut back unscrupulously such plants as show a weakly growth. The reason is this: If you let them grow from the beginning unchecked, the second season, instead of throwing out a strong, straight shoot, they will branch out, and thus destroy their value as clean, straight-stemmed timber trees. And here, too, thick planting becomes reasonable. If planted thinly, a branchy disposition will be natural: if thickly, they are compelled to grow up straight. As they advance in years and growth, chop out the scraggy plants and those that overcrowd their better neighbors, and with a keen-edged knife remove all wayward branches.

RAMIE FIBER MACHINE.—The New Orleans Democrat announces the successful operation of a new machine for extracting ramie fiber. Says the Sun: The ramie plant can be raised in almost unlimited quantities in the Southern States, but heretofore the difficulty of extracting the fiber has been a serious impediment to its extensive culture, and if, as has been announced, machinery can be successfully employed for this purpose, ramie cultivation may become even more profitable than cotton culture. We can only hope that the above announcement will be fully substantiated.

DR. LEADY of Philadelphia believes that the Mosaic prohibition of pork was due to the danger of trichinosis in a country where fuel was scanty, and therefore the food seldom well cooked. He also thinks that millions may have died of trichinosis in centuries before the true source of the danger was discovered, and that many of the deaths which occurred in the army during our civil war were due to the frequent use of raw and badly cooked pork, although ascribed to typhoid, rheumatic, or malarial fevers.

The father of the cereals is Pop Corn.—Vanity Fair relic. . . . . "Bull Run" Russell, who has been traveling through the country with the Duke of Sutherland's party, was asked the other day what impression he had formed of America, and replied very frankly: "Where you can't raise wheat you raise gold, and where you can't raise gold you raise lead, and where you can't raise lead you raise silver. It's something everywhere—a country of wonderful resources." . . . . . The universal heart of a man blesses flowers. He has wreathed them around the cradle, the marriage altar, and the tomb. . . . . Even if a man has two lawns, he generally wants a lawn mower.—Detroit Chaff.

A SKULL is a natural receptacle for brains, but there are men who make you feel that Nature made the hole and then forgot to fill it up.—N. Y. Herald. . . . . The following remarks from Popular Science Monthly, are particularly commended to farmers who read much by candle light: A book of 500 pages, 40 lines to the page and 50 letters to the line, contains 1,000,000 letters, all of which the eye has to take in, identify, and combine each with its neighbor. Yet many a reader will go through such a book in a day. The task is one he would shrink from if he should measure it beforehand. The best position and light, clear type, plain inks, with the best paper of yellowish tints, and abundant space between the lines, afford the best safeguards against harm.

Everywhere.

RURAL SPECIAL REPORTS.

California.

NORWALK, Los Angeles Co., Sept. 8.—The resources of this county are many. Wheat, barley and corn are grown, the two first extensively. Fruit of all kinds does well, including many tropical varieties. I planted the White Elephant Potato, which weighed two ounces, and have just dug 33 pounds of fine tubers, 25 of them weighing 20 pounds. Washington Oats came too late for this climate. Crops of all kinds fair to good; fruit, very good. H. P. S.

Connecticut.

STRATFORD, Fairfield Co., Sept. 12.—I send you some specimens of the pinks raised from the RURAL seeds, and they are considered very fine by parties that have seen them. My Sorghum is nine feet high. Will the Rural Dent Corn ripen with me, or is the season long enough for it here? X.—[We are greatly obliged to our friend for the bouquet, which, for out-of-door pinks is the prettiest and most varied of any we have ever seen. There are several flowers so beautifully marked that the seeds should be carefully saved. We are a little surprised that the Rural Branching Sorghum should grow to such a hight in Connecticut. We hope that some of the plants have been cut back and that we shall be favored with a report as to the second growth. We cannot say positively, but we *think* that the Rural Dent would ripen with you unless the season should prove unfavorable.—EDS.]

Illinois.

KANKAKEE, Kankakee Co., Sept. 16.—A drought beginning early in July and extending through August cut our crops short. Spring wheat very little sown in this county; Winter wheat, about 15 bushels per acre; rye, 15 to 25; oats, 35 to 50. Grass a fair crop; but corn and potatoes light—late potatoes a failure. I experimented with six varieties this season: the White Elephant I cut to ten eyes, planted in five hills and had five pounds of good-sized tubers. The Beauty of Hebron, Snowflake and Burbank's Seedling yielded well for the season—about the same in quality and quantity. Patent Office No. 2, is also a very good potato and yielded about the same as the three other named varieties: it has a deeper eye than either of the others. I also planted the White Peachblow, but it being a late potato, the drought with the bugs completely ruined it. The Washington Oats I planted on garden soil that was too rich; they lodged before heading out and were a failure. Corn is selling here for 55 cents per bushel; oats, 35c.; wheat, $1.20; rye, $1; hay, Timothy, $10; prairie, $6; potatoes, $1.20. J. M.

Michigan.

HILLSDALE, Hillsdale Co., Sept. 14.—The White Elephant Potato weighed four ounces. It was cut into 16 pieces and one eye dropped in a place 18 inches apart in the row—Sept. 1, we dug 30 pounds of clean, good looking potatoes—mostly above average size. The seed was planted on rather heavy, loamy garden soil without fertilizer except plaster with Paris-green once. The ground was hoed four times. The tops grew strong and thrifty and seemed little disturbed by the bugs. Only about one-third of the Sorghum seed grew. It is just ready to tassel and about nine feet high. The average of stalks to the plant is eight or ten. The Washington Oats grew rank straw but were so smutty as to be scarcely worth harvesting. The wheat crop in this locality was not much better than one-third of the average. Corn is good, but it is being hurt by the dry weather. It is probably over half cut up. Potatoes light. Oats middling. Hay, ditto. Clover seed promises very well; reports are current of eight bushels per acre of the large kind. Stock of all kinds is high—sheep, $3.00 to $3.50; calves, $8 to $10—large shipments of both going West. C. L. B.

PONTIAC, Oakland Co., September 16.—The W. E. was cut into nine pieces with an eye in each, and planted in a loamy soil. Seven pieces grew and yielded 19½ pounds. The W. Oats were drilled on clay; no tending except with the cultivator; yield 9½ pounds. R. B. Sorghum has not done well owing to the dry weather. No rain in four months to amount to anything. I am well pleased with the seeds, etc., and would not take five dollars for the seed I have had from the W. E. and W. Oats. Am quite interested in the strife for excellence with plants and seeds, and think the RURAL the best farm paper I ever read. C.

Minnesota.

ST. PAUL, Ramsey Co., Sept. 13.—The culture of flax for seed alone is getting to be an important interest in this State. The acreage for 1881 is 90,494, against 40,004 in 1880, and 12,966 in 1879. The number of bushels raised in 1880 was 397,190, against 99,378 in 1879. The returns of production for 1881 have not yet come in. This Chamber (Chamber of Commerce) is endeavoring to put the farmers in the way of utilizing the fiber now wasted. F. A. F.

New York.

AUBURN, Cayuga Co., Sept. 12.—On May 1, I received by mail a battered and ragged package, which, on opening, I found to consist of a broken paper box, a handbill with great letters, "White Elephant," and in the midst of all one little potato about as large as a Bantam hen's egg. I put it on my P. O. scale and found it brought down just three half ounces; the postage on potato, box, handbill and all was two cents, or pay for two ounces. Surely, thinks I, Barnum has not got the only "Baby Elephant" in this country. On examination I discovered three well-marked, distinct eyes, and one little depression or blind eye. I cut the potato into four pieces with an eye on each. They were about as large as a good-sized acorn each. I spaded up at good depth a space in my garden, and mixing thoroughly with the earth about a tablespoonful of soluble Pacific Guano for each piece, I planted them in a square of about 12 inches, one piece in each corner. The three good eyes soon came up and grew 8 or 10 inches in hight before the blind eye appeared, but they all grew and flourished with a great wealth of haulm. Now as to result—I dug them a few days ago and I have 12 fine, full-sized tubers, smooth, white and fair. On my P. O. scale they weigh as follows: One weighs 11 ounces; one 10 ounces; two, nine ounces each; two, eight ounces each, and so on, the the whole crop from three half ounces is plump weight of 80 ounces, or five pounds. This is pretty good—don't you think so? H. D. W.

CARTHAGE, Jefferson Co., Sept. 10.—The counties of Jefferson and Lewis are the scene of terrible devastation by fire. A circuit of 20 miles is desolated; crops, houses, barns, implements and nearly everything have fallen before the flames. The earnings of a long lifetime are swept away in an instant from many who were lately rejoicing in them. Apples are roasted upon the trees, potatoes are baked in the ground, cattle are panting for breath, and everything seems to be going up in smoke. The corduroy roads are burning and bridges are smouldering in ruins; skeletons of wagons may be seen along the roads, the flames coming so rapidly as not to give time even for the removal of wagons and carriages. Almost the whole population has been out fighting fire, but their efforts availed but little. There has been no rain in this region for over two months, and still the parched skies withhold their blessings. As yet no correct estimate of the losses can be given, but it is thought that the damage to forests and woodlands alone will be over $200,000, and much soil will be rendered absolutely worthless by reason of burning down to the rock beneath. Add to this the damage done to buildings, crops, stock, etc., and the amount will be enormous. The insurance on property is very slight. Some lives have been lost. We are in sore distress and much aid will be needed by the suffering people. H. R. T.

GLENS FALLS, Warren Co., Sept. 10.—The apple crop is a complete failure. There is a medium amount of fruit, but it is riddled through and through by a little semi-transparent worm scarcely visible to the naked eye; also many kinds are affected with small, dry rot specks. They are mostly near the outer portion of the apple, though some penetrate to the core. Pears are better, but more affected with the rot than usual, and are rather tasteless. Plums are plenty, but ripen unevenly and are insipid. Grapes made a fair show, but as they begin to ripen we find that they have not their usual sprightly taste. E. W. K.

OAKFIELD, Genesee Co., Sept. 15.—To-day I mail to the RURAL office one head of the Washington Oats which, I think, will beat anything of the kind ever seen there. It is one of five that grew from one seed on land that has been cultivated over 40 years without any manure except what a clover sod has made. They grew about five feet high and there were from four to eleven stalks from one seed. I counted the oats from one seed, they numbered 922. After being thrashed and cleaned they filled a half bushel even full and weighed 20½ pounds. [We count upon the panicle 255 spikelets. The oats are unusually large.—EDS.] From eleven White Elephant eyes I obtained 61 good-sized potatoes. I think they will yield better than any I have ever raised. There is but little of the R. B. Sorghum that is over three feet high; it appears to stand the drought well, but requires too much weeding to make it a profitable crop for fodder. J. F.

Ohio.

CHIPPEWA LAKE, Medina Co., Sept. 12.—I raised 20½ pounds of tubers from the White Elephant, and five pounds of W. Oats. The RURAL is the best paper in world. J. E. K.

NEW LONDON, Huron Co., Sept. 12.—We have had quite a drought and pastures in some places are bare and dry. Our heavy rains the first of June prevented working corn when it should have been done; but, notwithstanding this and the dry weather, there is much more good fair corn than we thought possible for a while. Potatoes are the shortest crop of all. The White Elephant started out finely but the dry weather and intense heat caused them to wither and ripen prematurely. I have dug all but one hill which is green and trying to come out ahead. It did not start with the other six hills which accounts for its yet being green. I had rather over a peck of medium-sized tubers. Hope to get a fair showing another year. This makes the third year my Beauty of Hebron has had "*up hill*" work, but I know enough of it to believe I may say it is among the best potatoes raised. The Washington Oats were badly eaten back by my turkeys, so were late and rusted badly, but I have saved what there was and shall give them another trial. The Ennobled Oats are cast aside as nothing more or less than the old Norway, or at least a complete counterpart of them. The Sorghum we did not try, as we have that which we value much higher—a large sugar-maple orchard. I raised the Golden Mangel last year from the seed sent and must say they would grow enormous crops here in our soil, but I have my doubts if they would pay where we can raise such good crops of corn, oats and hay for our stock, yet I have raised seed this year and think of trying them another season. In conclusion, I must say I think the readers of the progressive old RURAL owe it a debt of *heartfelt* gratitude, but like all spoiled children, we clamor for more. BUCKEYE.

Pennsylvania.

SHEAKLEYVILLE, Mercer Co., Sept. 17.—The Washington Oats—about one ounce—I drilled in rows about 14 inches apart and had ten of those rows 42 feet long, or one continuous row of 420 feet. I harvested 21 pounds or rather I saved that amount, as the birds began to cut them off as soon as they began to color, and when I cut from one to two quarts were lying on the ground and how many the birds carried away I can't tell. The soil was of medium quality; they grew about 4¼ feet high and the stalks were very heavy. The White Elephant Potato I cut into nine pieces, planted and cultivated them in the usual way and dug 75 averaged-sized tubers. It has been very dry in this section and the potato crop and also corn and buckwheat have been nearly a failure. The asparagus is growing and doing well, considering the season. The Sorghum was a complete failure; it did not grow. The flower seeds my wife took charge of as she is a lover of flowers and they grew nicely and are beautiful. H. C. C.

SPARTANSBURG, Crawford Co., Sept. 12.—From the White Elephant Potato I obtained 30 nice potatoes and 15 small ones—a large yield. The Washington Oats were sown late. Something ate some of them; we had left three quarts. The straw was heavier than that of our English oats. The Rural Branching Sorghum is nice and green yet, while the corn is drying; it measures six feet four inches; no sign of seed. The asparagus came up and is doing well. The pinks I sowed in a hot-bed and tended carefully. They are nothing uncommon, but they are pretty and in blossom yet. We have had terribly dry weather here. E. A. B.

Vermont.

MONTPELIER, Washington Co., Sept. 11.—The White Elephant Potato I planted May 5, and had 10 hills. I dug them Sept. 7 and had 108 tubers, weighing 43½ pounds. Six of them weighed 6¾ pounds, and would [illegible] inches in length. The ground was manured with barnyard manure, and then I mixed a handful of plaster with the soil in each hill before planting, and after the vines were four or five inches tall I mixed another handful around the top of each hill. I hoed them twice, and kept the bugs off by hand-picking.

All my neighbors who have seen the potato say it is the biggest yielder they have ever heard of. The other seeds did not do well. The R. B. Sorghum did not come up, and the Washington Oats rusted badly. The asparagus seed came up well and is doing middling well now. I would not take twice what the paper cost me for the potatoes. The RURAL is the best agricultural paper that I have ever read. W. D. H.

WALLINGFORD, Rutland Co.—The White Elephant I planted May 12, cut into 15 pieces, making 15 hills, which were dug September 3, and yielded by actual weight 64 pounds. Some tubers weighed two pounds each. We find them to be of excellent quality. The mammoth asparagus now stands two feet high. The Branching Sorghum seed did not germinate. The Washington Oats proved to be no better than my old variety. H. H.

West Virginia.

SHEPHERDSTOWN, Jefferson Co.—Owing to an arctic Winter, wheat will not average over half a crop in the county, and there has not been rain to the amount of a good dew since August 7. Corn will not make half a crop. There is a prospect of the market starting at $1 per bushel for the new crop. Apples a fair crop. No peaches. J. T. H.

Wisconsin.

ELROY, Juneau Co., Sept. 10.—I have this day dug the White Elephant Potato planted May 16, in 15 hills, one eye to the hill. White Elephant yield 57 pounds; Burbank's (same manner, 15 hills), 53 pounds; Snowflake (same manner, 15 hills), 49 pounds; Early Ohio (same manner, 15 hills), 23 pounds. I am fully convinced that one or two eyes to the hill will yield larger potatoes and more pounds than whole potatoes. E. E. B.

The Queries.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

GRASS FOR A SMALL DAIRY.

R. D. B., Danbury, Conn., asks what kind of grass can he sow this Fall, that he can mow several times next Spring and Summer for cows in the stable. Would Orchard Grass or Alfalfa be suitable? The drought thereabouts has been very severe, and cows have fallen off greatly in their yield of milk which is therefore in great demand; some farmers have fodder corn, but few have enough and our friend says that it would be a great advantage if ensilage could be put up in silos small enough to hold a supply for only half a dozen cows.

ANS.—There is no meadow grass, so called, that our correspondent can sow this Fall to be cut several times next Spring and Summer; but he can sow a member of the grass family—winter rye, which he may cut several times as green food for his cows. Rye is a soiling crop much used. His land would probably bear a strong crop of rye, and it furnishes the earliest cutting in Spring. It cannot be cut several times unless care is taken to cut before the head appears. If it makes a strong growth in the Fall, it may be lightly pastured to prevent smothering under snow. If the ground is dry and an early cutting is not desired, it may be lightly pastured early in Spring, and it will thicken up at bottom and yield a heavier cutting. In Germany, sheep have sometimes been passed over it between the hurdles five and six times during the season, and it has then matured a crop the following year. In this case it is eaten off when six or eight inches high and before the seed head has commenced, and it springs up again at once like clover.

Orchard Grass is very valuable when once established, may be cut several times in a season with sufficient rainfall, and is one of the best grasses for springing up at once after cutting. The writer has measured a growth of one-and-a-half inch the first 24 hours after cutting. But this grass often starts poorly the first year, and takes two years to get well established, but then we have known it to produce good crops for 20 years in a stiff clay loam. Two bushels of seed are required per acre, and it may be sown upon the Winter rye early in Spring. The price is about $2.75 per bushel, weight about 14 pounds per bushel.

Lucerne or Alfalfa also does well on fine, rich loams; it is feeble for a year or so, but when well established, it yields large crops. It roots deep, and in California is very highly esteemed as a dairy food—in fact, it is the great reliance for butter production in some parts of the State. It is somewhat richer in albuminoids than Orchard Grass. It has been grown but little in the Eastern and Middle States. It requires a deep, rich soil. About 15 pounds are sown to the acre, and it costs here 15 cents per pound. All these seeds can be had from seedsmen who advertise in the RURAL.

Such a sweeping drought as we have had over almost the whole country cannot well be provided for in green crops to be cut as wanted. But R. D. B., if he chooses, may adopt the ensilage system with an assurance of providing for any drought that may come. This system may be used for large or small operations. It is quite as applicable for six cows as for fifty. A silo for six cows would require to be 12 feet wide, 20 feet long and 14 feet deep, holding, under proper presure, about 72 tons of green corn, grass or any green fodder crop. This silo may be built for $100, including the roof, if the farmer does some of the work himself. A silo of this size will keep the ensilage as well as a larger one, and its whole cost might be paid in the extra milk produced in a season like this. But let every one abandon the idea of adopting ensilage simply to preserve green corn. Give the system its true significance—a method of preserving for future use all our grasses and other succulent forage crops. The silo should turn out as great a variety of grasses as an old meadow. Practical ensilage which shall ever establish itself in this intensely utilitarian country, must furnish as complete a ration for all purposes of animal growth, and the production of milk, as can be had in pasturage. A variety of grasses may be ensilaged as well as a variety of grasses cured and put in mow. A silo may be filled early in June with Winter rye and Red Clover. A little later it may be filled with all the varieties of meadow grasses. In September it may be filled with green corn, second-crop clover, millet or Hungarian Grass. The early ensilage will carry the stock through the Summer and through drought, and the later ensilage will rejoice the cows in Winter.

DRILLING WITH THREE HORSES ABREAST.

G. S. S., address mislaid, asks, 1, for a diagram showing how to hitch three horses abreast to a drill for sowing fertilizers; the tongue he says is the bother; 2, would it hurt wheat if one of the horses tramp on it when sown.

ANS.—S. cannot drive three horses abreast on a tongue. The tongue on the drill must be replaced with two tongues, or a pair of thils. The middle horse must be in the thills and two neck yokes should be used instead of one. The middle horse takes one end of both neck yokes. Take two light tongues; place them 16 inches on each side of the center of the present tongue-frame on a crossbar between the two tongues where the bolt for the evener comes in the drill tongue. These thills or tongues are easily fastened to the cross-pieces of the drill in the same way as the tongue now is. Let the thills be about six inches longer than the tongue, to provide for the extra room for the the three-horse whiffletrees. The diagram, Fig. 477, will illustrate the whiffletrees. The writer has used them for some fifteen years, and regards them as, perhaps, the most completely balanced form yet devised. The horses are exactly on a line or abreast of each other. The three single whiffletrees hang as evenly as do the two single whiffletrees for two horses. The singletrees are 26 inches long. It will be seen how the middle, or balancing, trees operate to place each horse on an equality. This form of three-horse trees is appropriate for plowing, hauling logs or stones, drawing loads upon a wagon, or for any purpose for which the strength of three horses may be required. The use of the third horse is a great economy in draft. Three horses well balanced and drawing evenly together, will draw as large a load as four horses in two pairs, one placed ahead of the other. A double tongue or thills on a wagon and a three-horse team is an economical power for hauling heavy loads to market. Two tons may be hauled with such a team as easily as one ton by two horses. The third horse may be considered as drawing altogether on the load. But we do not think more than two horses, of fair strength, are required on a drill even when using the fertilizer attachment, unless the drill sows wider than usual. A twelve-tube drill would require three horses to draw it comfortably. 2. It would not injure the wheat for the off horse to travel on the sown part. Wheat is the better for rolling or compressing the soil over the seed.

GROUND LIMESTONE AND LIME.

W. S. H., Ursina, Pa., and G. L., La Salle, Ill., both inquire as to the fertilizing value of ground limestone, and how best to utilize it for enriching good land in one case and poor land in the other.

ANS.—Raw limestone, ground or unground, is carbonate of lime, consisting of lime and carbonic acid. In the process of burning the carbonic acid is expelled and the oxide of lime remains. The change in composition causes also a change in properties. Limestone, or carbonate of lime, is *mild* in its alkaline properties, while burnt lime is *caustic*. When exposed to the air it absorbs moisture and crumbles, and is then called air-slaked lime; when mixed with water it absorbs about one-third its own weight and becomes hydrate of lime or the ordinary slaked lime of builders, etc. If exposed to the air for a long time, however, it again becomes carbonate of lime after it has absorbed its full supply of carbonic acid. Applied to the soil, it is a powerful agent in decomposing the inert and inactive vegetable matter in it, making them available for plant food. Moreover, it also acts on the compound silicates of the soil, such as silicates of potash and so on, liberating the potash, an essential element of plant food and one that is seldom found in large quantities in the soil in a soluble form, and is therefore soon exhausted. On poor soils, especially those poor in vegetable matter, the good effects of lime are small; it is on rich soils that its action is most beneficial, because it is in these that the materials for it to act upon are most abundant. Its activity is vastly greater than that of carbonate of lime, or raw limestone, however finely ground this may be. Powdered limestone is of very little value to the soil beyond furnishing one of the essential elements of plant food, which is generally abundant in the soil naturally. If applied in large quantities it may, too, alter the soil physically, but its action is slow and feeble. We would not, therefore, advise the use of ground limestone except where the soil is destitute of lime in sufficient quantity to supply what is needed for plant food, and this is very rarely the case. The finer it is then divided the better, but even then lime would generally be more efficacious. On poor, sandy soil its application has been found beneficial.

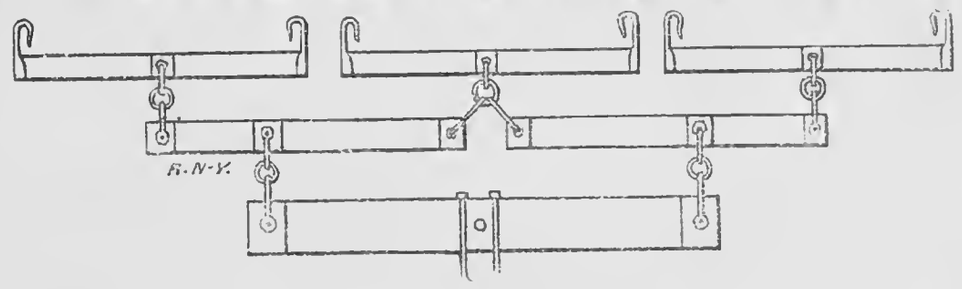


FIG. 477.

FRUITS FOR KANSAS.

J. E. P., Blue Mound, Kan., asks, 1, how to grow chestnuts and English walnuts, and whether the nuts sold in stores will do for seed; 2, what varieties of apples and grapes will thrive best in that section.

ANSWER BY PROF. E. A. POPENOE, KANSAS AGR'L. COLLEGE.

1, To grow these nuts successfully, seeds known to be fresh and in good germinating condition should be procured in Autumn and bedded out through the Winter under a few inches of soil in a well drained situation; or, better, they should be packed in a box in layers alternating with layers of sand, and the box be buried in a place where no water stands. In the following Spring the nuts will probably be found in first-rate condition for early planting. They should be placed where they are to remain if possible. It is not safe to trust seeds purchased in the grocery stores, as it is uncertain whether even a small proportion of those obtained in such places will germinate. 2, The fruit list of the Kansas State Horticultural Society recommends the planting of the following varieties of apples in this State. For Summer: Early Harvest, Red June, Red Astrachan, Early Pennock, American Summer Pearmain. For Autumn: Maiden's Blush, Rambo, Lowell, Fameuse, Fall Wine. For Winter: Winesap, Ben Davis, Jonathan, Rawle's Janet and White Winter Pearmain, among others. For grapes the list names, first, the Concord, Ives, Dracut Amber, Clinton and Delaware, although other and newer varieties are fast coming into favor, which J. E. P. should try. I would also suggest to him and to other Kansans with horticultural tastes, that the annual reports of our State Horticultural Society contain a fund of valuable information upon the topic suggested by the questions asked, and many other points. Such persons will find these reports cheap at the price of annual membership ($1.00) entitling them to a copy.

AN ANTI-KICKING DEVICE.

Subscriber, Cincinnati, Ohio, says he lately saw in the advertising columns of an agricultural paper a picture of a man safely and cheerfully milking what was called a kicking cow to whose leg was tied a machine for keeping the beast quiet and harmless during the operation, and he asks what we think of the efficacy of the device.

ANS.—This so-called machine is merely a contrivance which is strapped to the cow's leg in the expectation that she will quietly submit to such an exceptional proceeding. We have tried it. Instead of making the cow quiet, she kicked still more furiously until the contrivance flew off with a velocity that would have been dangerous to any person in its way. After several trials, we lent it to neighbors, but it was always returned very quickly as a failure. If the cow would only stand quietly with it on, it would be excellent; but a kicking cow is always a nervous or cross beast, and such a one resents, or becomes frightened or furious, when this thing is strapped to her leg, and it does not prevent her from kicking in the least. At least this is our experience; others may have been more fortunate, as the man who is milking in the picture referred to, for instance.

THE BLACK BLISTER BEETLE.

J. A. S., Van Wert, Ohio sends specimens of a bug that has lately appeared thereabouts and which is eating up all the leaves of the pinks, carnations, asters, zinnias, etc., and asks its name and how to get rid of it without injuring the plants.

ANSWER BY G. H. FRENCH.

The specimens of beetles sent and reported as injuring the flowering plants, are Epicanta Pennsylvanica or the Black or Pennsylvania Blister Beetle. They are related to the striped potato beetle, and, like that species, they eat not only potatoes but a great many other plants. There are several species of these blister beetles that may often be found feeding together, and they are usually found in such numbers that whatever they attack is soon destroyed unless means are taken to prevent it. Often they may be driven from the place when they are found eating, but probably the best plan in the present instance would be to brush them with the hand or a stick from the plants into a vessel containing some liquid that will kill them. After a little vigorous catching among a drove of them, those that escape will generally fly away not to return.

THE OIL IN OIL MEAL.

W. H. B., Ann Arbor, Mich., asks whether the feeding value of oil meal given lately in some analyses in the RURAL refers to the meal before or after the oil has been extracted and how much difference is there in its feeding value after the oil has been pressed out.

ANS.—The values of oil meal given, refer to the meal of the oil-cake left after the larger part of the oil has been pressed out; that which remains cannot be removed by pressure and is about one-fourth of the oil originally contained in the meal. If the whole seed were used it would be too rich a food and the oil would be wasted and in fact injurious. The difference in values consists only in the oil which is extracted from the whole seed, but this has never been taken into account when considering the value of oil meal.

Miscellaneous.

H. A. B., Glasgow, Mo., asks what are the distinguishing characteristics of the Jersey and Alderney cows.

ANS.—The names Jersey and Alderney are now commonly used in this country to designate the same breed—the Jersey. Very few cattle are raised on the little island of Alderney and hardly any are imported by us from there, while a great many are brought every year from the larger island of Jersey. The term Alderney, therefore, is a misnomer used by some through sheer ignorance, by some through an assumption of greater knowledge than is possessed by their neighbors, and by some because it was employed to designate all the Channel Island cattle in the Dark Ages, 15 to 25 years ago.

F. A. F., St. Paul, Minn., asks who manufactures the flax breaking and scutching machine described in the article on Flax Culture and Handling published in the RURAL last November.

ANS.—It is made by the American Vegetable Fiber Co., J. F. Dunton, Manager, 213 South Front St., Philadelphia, Pa.

E. F. B., Cobden Ill., ask from whom can he obtain the Jersey Queen and Bidwell Strawberries.

ANS.—The Jersey Queen from Peter Henderson, 35 Cortland St., N. Y. The Bidwell is offered by all small fruit growers.

NOTE.—To "F." let us say that a full article on asparagus culture from the veteran horticulturist, Peter B. Mead, will appear in a short time. As to Dandelions we think not.

Horticola—P. B. M.,—Subscriber—J. M.—A. B.—E. E. B.—W. W. H.—A. E. C.—E. F. B.—E. J. B., yes.—O. A. H., Lewiston, Maine. We do not exactly understand the question as to planting tips of raspberries.—H. H. L.—A. B. A.—G. H. F., thanks.—C. L. B.—C. W. G.—F. D. C.—E. W. H., insects destroying the Rural Sorghum not as yet received.—N. H.—W. G. W. S.—A. P.—L. S. B.—P. R. G. &.—I. N. C.—J. W. M.—Mr and Mrs. L. B. T.—S. C. G.—A. B. A.—J. D.—I. W. Y.—W. J. E.—D. W. C., thanks.—C. E. P.—W. J. H.—W. A. P.—

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SATURDAY, OCT. 1, 1881.

DIED.

PRESIDENT GARFIELD died on September 19. The poor, brave, patient sufferer has gone at last to rest. We have no words to express our regret, our sorrow. Would that the prayers of this Nation, of the World, indeed, might have been granted. It is hard to say: "Oh, God, Thy will be done."

ALL interested in such matters should read our report of the late session of the American Pomological Society. It has been carefully prepared by one of the most distinguished members.

THE FUND FOR MRS. GARFIELD.—Up to the present writing $306,800 have been subscribed to this fund. While the President lived there was some doubt in the minds of many as to the propriety of establishing such a fund, but now those doubts are removed, and the most practical way of showing respect for our honored dead is in doing a kindness to his bereaved family, and in such a spirit should our contributions be made. In a few days the woman who, by her noble nature and heroic bearing, has won the affections of a nation, will retire to the seclusion of the old home in Mentor—a widow, deprived now of that strong arm of support. No more fitting tribute to the memory of her dead and ours could be paid than this substantial means of support which will place her and her family beyond want as long as she shall live, and it is with the highest gratification that we are to-day enabled to announce that more than the proposed fund of $250,000 has been raised, and still the people pour in their gifts. If Americans are noted for their money-getting proclivities, events have more than once shown that they can be magnanimous when the occasion demands.

BUSINESS ACTIVITY.

WHILE complaints of short crops come more or less loudly from all parts of the country, the volume of general business seems to be unusually great this year. Here extraordinary activity is noted in all leading lines of goods, and the same is the case in Philadelphia and Boston. In all, the distributions of clothing, dry goods, boots and shoes, and, indeed, of all forms of merchandise, is unusually large. In all wholesale lines Chicago reports very great activity, and trade is extremely brisk in St. Louis. From Detroit comes word that the country demand for goods is unprecedented. Louisville declares that trade is far ahead of expectations; and St. Paul and Minneapolis assert that bad weather alone retards exceptionally active dealings in all kinds of merchandise. In Augusta, Ga., Fall business is reported a trifle backward, but wholesale merchants have laid in heavy stocks in anticipation of a large trade. New Orleans is doing a heavy business and expects to do a still heavier one when the river rises. Wholesale houses and retail firms report large sales and brisk business to our mercantile agencies, not only in the large towns, but also in small towns, villages and even cross-road stores. Either the farmers of the country, as a whole, are doing very well despite short crops, or their credit is remarkably good. All manufacturing industries are "booming," and industrious men need not look far for bread or work.

COTTON AS KING.

Cotton is not likely to lose its present position as King of American Commerce just yet. Among the leading items of export we find that cotton, in value, ranks almost as high as wheat, corn and flour together. The valuation of cotton exports for the fiscal year 1881 was, in round numbers $260,000,000, while that of wheat was $168.000.000, corn $51.000.000 and flour $45.000.000. The crop of this year is estimated at about 6,000,000 bales of 400 pounds each which is the second largest crop on record, and tends to show that cotton will be perhaps, for many years yet, our most valuable export.

Although the crop is now a large one, those who are competent to say have expressed the opinion that one-tenth part of the State of Texas *can* produce more cotton than is now raised in the whole country. Indeed, Mr. Hilgard, who has charge of the cotton statistics for the census report, has said that the "Yazoo bottom" in Mississippi can, with proper cultivation and reasonable protection from the river's overflow, be made to produce as much as is now grown by the whole South, and this comprises only an ellipitical area extending from Vicksburg north to the Tennessee line, and is about 50 miles wide in the central portion. Now since the "Yazoo bottom" grows about one-fourth the crop of Mississippi and that State grows about one-fifth or thereabouts of the total cotton crop, the amount now raised can be increased 20-fold by giving the Yazoo district the necessary attention. Then, with equal care for all the cotton raising districts, to what extent could the production of cotton not be increased, and its commercial value enhanced!

IMPURE MILK IN CITIES.

LATELY the Board of Health of this city has been unusually active in preventing the importation of skimmed or adulterated milk. Within the last four days 9,000 gallons have been turned into the Hudson River at the ferries from New Jersey alone; and equally energetic measures are to be taken against importations from Long Island, Connecticut and Westchester and the neighboring counties in this State. Of course, there can be no objection to the introduction of skimmed milk on the score of its healthfulness, the great objection to it is the strong temptation it presents to dishonest dealers to sell it as full milk. Swill milk, however, is far more dangerous, especially to infants, than even what is ordinarily termed "adulterated" milk, and against swill milk we do not notice that any efficient precautions have been taken. Indeed, the only large city which seems to have obtained relief from the swill milk evil is St. Louis, where the Humane Society vigorously prosecutes the owners of stables containing swill-fed cows, for cruelty to animals. Deprived of all opportunity for exercise, shut up in dark, foul, ill-ventilated stables, and fed almost exclusively on distillery swill, such poor beasts soon become diseased and so weak that they could not stand were it not that they are generally kept in stalls so narrow that they are supported by the sides. These pestiferous stables at the East are the hot-beds of pluero-pneumonia and the other kindred diseases that threaten the cattle of the country and are therefore as dangerous to our herds as to our children. They should therefore at once be either radically reformed or abated as so many nuisances.

HIGH PRICES AND GREAT DEMAND FOR MUTTON SHEEP.

SHEEP of the Down breeds are bringing extraordinarily high prices now in England, whether of the South Down, Hampshire, Oxfordshire or Shropshire. A ram of the latter sort from Mr. Mansell's flock, illustrated in this issue, recently brought the astounding price of 200 guineas—$1,016;—and several others realized from 60 to 100 guineas—($305 to $508.) Other sales of the other Down breeds have commanded nearly the above prices for their choicest, and scarcely anything of a good breeding quality seems to fetch less than 10 guineas—($50.) Now here is great encouragement to those who have been importing these kinds of sheep so freely into the United States during the past few months, and also for all who are breeding them here. They are sure of obtaining high prices for their produce for years to come, and a quick sale for all they can multiply. Great Britain is very bare of sheep at present, having lost so many by disease during the past three years. They are said to be nearly four millions less than six years ago. The people there are large consumers of mutton, and all we can send to them of the right quality, they will gladly take from us. Sheep being so much smaller animals than cattle, they are more easily transported comfortably by land or sea, and are greatly less liable to loss by death or disease. England imported about $120,000,000 worth of wool the past year. Thus after we have been able to supply our own manufacturers, we have a British market open for this, as well as for very large and continually increasing quantities of mutton.

SOUTHERN FARMERS.

A NEW way to pay old debts is being tried by the farmers in some parts of South Carolina, especially by those in the northern counties. For instance, at a meeting in Anderson County, the other day, it was resolved that, whereas corn was estimated at only 31 per cent. and cotton at only 25 per cent. of an average crop; and, whereas, this fraction of a cotton crop was the only means in the hands of the planters "for paying their debts and supporting their families;" therefore their first duty was to preserve unsullied their honesty, their integrity and their self-respect. After which preamble, their creditors—the merchants and dealers in fertilizers—were called upon to consent to a *pro rata* settlement of the debts incurred in making the present short crops. In all this there is nothing noticeably novel, except, perhaps, that the farmers should, like traders, co-operate in calling a meeting of creditors. But, in connection with the preamble, there is a good deal that is novel in the final resolution adopted, to "regard as a public enemy any man who attempts to enforce by the law the collection of debts from any farmer who complies with the agreement" to pay all he can of his indebtedness *pro rata*. The movement is spreading rapidly nearly all over the State and is specially directed against dealers in commercial fertilizers. The condition of a great many Southern farmers this year is certainly hard. The partial failure of their two staple products, corn and cotton, increases their need of food supplies from the North while decreasing their means for purchasing them at the same time that the shortage in Northern crops raises the price of everything they have to buy for consumption. The distress that is more than probable in a great part of the Cotton Belt will add another to the many previous lessons as to the advantages of devoting to the production of several crops for food a large share of the capital and labor now almost exclusively employed in the production of a single crop for clothing. Food is more than raiment.

A NEW MODE OF BAITING CATTLE IN TRANSIT.

PROPER transportation of live stock on railroads is still an unsolved problem, despite the introduction of "Palace Cattle Cars" by way of experiment on one line, the multitude of patents, every one of which professes to be able to accomplish the desired object, and the urgent need of some means of carriage at once humane and economical. By the existing system the Western producer suffers a serious loss by the falling-off in weight of animals in transit; the Eastern consumer incurs a grave risk from the unwholesome condition of the flesh likely to be engendered by the hardships of travel, and our exports of living and slaughtered cattle are greatly endangered, depending, as they do, on the delivery of sound living or dead meat abroad. The great objection to all present devices for baiting stock on the cars lies in the fact that all necessitate more or less expensive changes in the rolling stock, whereas success in the traffic turns upon extremely close management, which puts expensive adaptations out of the question. Seven years ago Congress passed an act requiring cattle in transit to be fed and watered at least once in 24 hours; but the law has remained nearly a dead letter owing to the practical difficulties of either unloading the cattle or baiting them on the cars. The Humane Live Stock Express Company of this city proposes to overcome the latter difficulty by erecting feeding stations from which stock in cars can be fed out of buckets supplied by a pipe inserted in the cars by removing a single board at the proper hight. It is claimed that this method requires no change in the cars; involves no delay, and that both food and water can be economically and expeditiously supplied at the same time. Apart from hygienic and humane considerations, any economical system which delivers stock at the end of their journey as heavy as they were at its commencement, is a boon to stock owners and the public at large, and is certain of ultimate adoption. The proposed plan of the H. L. E. Co. seems likely to effect this object.

BREVITIES.

WE learn from Westchester Co., N. Y., that water is selling for one dollar per barrel, and that one man paid $20 for 18 barrels.

THE Supreme Court of Wisconsin has lately decided, in the case of Hoffman vs. Junk, that a conveyance of "real" property, made to escape paying a judgment in an existing suit, is fraudulent and can be set aside.

THAT the purchaser of real estate is entitled to a perfect title and cannot be compelled to take a deed therefor and pay the consideration if there is a mortgage on the land, has recently been decided by the Supreme Court of California, in Hoeckel vs. Reese.

IN his little treatise on Wheat Culture, published by the Judd Company, page 49, Mr. D. S. Curtiss gives a picture of Defiance Spring Wheat. Opposite, on the same page, is another engraving, printed a little *heavier*, of Russian Spring Wheat. Both engravings are precisely the same.

THE National Dairy Fair which was held in this city twice, but which was held nowhere last year mainly on account of the bickerings of its two chief promoters, Messrs. Thurber and Moulton, will be held this year at Cedar Rapids, Iowa, in November and already arrangements are being made to make it a brilliant success.

IN the case of Hart vs. the Pennsylvania Railroad Company a bill of lading of live stock was made in which the value of the stock was stated, the bill being signed both by the carrier and the consignor. The animals were lost through the fault of the R. R. Company and an action was brought by Hart to recover damages which he put at a higher figure than the amount in the bill of lading. In the United States Circuit Court of St. Louis, Mo., Judge McCrary lately decided against the plaintiff, on the ground that the price fixed bound the consignor and limited the liability of the carrier for the value of the stock, to the stipulated amount.

TWO of our large industries are troubled by the high price of corn. The glucose factories all over the country are either diminishing or, more commonly, altogether suspending operations. With corn at 25 to 30c., per bushel they could make a very satisfactory profit by converting it into "sugar," but with corn at 60c. to 70c., per bushel, they could probably make a profit by reversing the transmutation, were such a feat possible. The Kentucky distillers are also worried by the advance in price of this cereal, and are said to be debating whether, in view of the low price of whisky and high price of corn, it would not be advisable to make no more whisky at present. Few are the unmixed evils in the world.

THE MICHIGAN RELIEF FUND. The grand total of the contributions to the above fund in this city to-day, September 26, amounts to $72,892,52 in money, besides a considerable quantity of clothing. Other large cities have also been liberal in their donations, yet the aggregate of all the contributions will go only a small way to relieve the widespread distress. The absence of small donations is very noticeable; yet modest contributions from the multitude who can afford to give little sums, would aggregate more than the total of the checks of the few charitable millionaires. Even if each of our subscribers were to present a bushel of wheat, what a magnificent aid would be afforded!—while if each of our adult readers were to do the same, the result would be far more helpful than the total contributions from this city. No need of sending the grain itself, thus multiplying freight and other expenses. Sell the Michigan bushel and forward the price to the Michigan Relief Association, Detroit, Michigan. Remember that in doing so you are helping unfortunate brother farmers.

THE total cotton crop handled during the year ending September 1 last was 6,589,329 bales, according to the statement of the Financial Chronicle, long recognized as one of the most careful and trustworthy authorities with regard to cotton. This crop was an increase of 14½ per cent. over the previous crop, and by all odds the largest ever raised. Of this total Northern manufacturers took 1,686,809 bales—an increase of 50,000 bales over the amount taken by them during the year ending September 1, 1880, and an increase of 400,000 bales in five years. Southern manufacturers took 205,000 bales—eight and one-fifth times less than the quantity taken by the North, but an increase of 60,000 bales in six years. But as the Northern increase amounted to 400,000 bales in four years and the Southern to only 60,000 bales in six years, it will be a long time until the latter catches up with the former at this rate. The total domestic consumption of the crop, therefore, was, in round numbers, 1,891,000 bales, leaving 4,597,000 for exportation. Both the home and foreign consumption of cotton is increasing, and we believe that the world has now entered on another progressive era in cotton-spinning.

"CORNERS" in financial securities and in produce are doubtless as old, in a mild way, as dealings in both; but it is only of comparatively late years that they have attained such vast proportions as to have attracted nation-wide or even world-wide attention. Hitherto vast "corners" in agricultural produce have, been the special productions of this country; for the governments of "effete Europe" have, most of them, a habit of interfering with the free progress of such speculative operations. A "corner" in cotton at present in Liverpool, England, however, appears to dwarf by contrast all "corners" of the kind that had ever been formed here. Some forty of the chief operators in the staple control all or nearly all, the American cotton in the market, and have raised the price so high that the cotton mills cannot buy it without a strong probability of heavy losses so soon as the price goes down on the termination of the "deal." Having worked up all the American cotton on hand, the millers have, as a final resource, resolved to suspend work on American cotton for a week in the hope that the manipulators of the corner will not be able to hold control of the market for that time. Unless the corner shall have then collapsed, operations will probably be suspended for a second week, after an interval of a week for the filling of urgent orders. Scarcity of any particular product is always suggestive of a "corner" in it, to hazard-loving, moneyed speculators.

Societies, &c.

THE SESSION OF THE AMERICAN POMOLOGICAL SOCIETY AT BOSTON.

[Special report to the RURAL NEW-YORKER.]

THE eighteenth session of the American Pomological Society opened in the Hawthorne Rooms on Park Street, Boston, Mass., on Wednesday, September 14, at 10 o'clock A. M., with its venerable President, Marshall P. Wilder, in the chair, and a large attendance of members and delegates, representing a very large portion of the States and Territories, together with the British Provinces.

The exhibition is held at Boston upon the invitation of the Massachusetts Horticultural Society, and the two societies hold a joint exhibition of fruits in the upper hall of the Horticultural Society, while the vegetables and a portion of the fruits occupy the lower and larger hall, constituting an exceedingly fine exhibit. Flowers and plants occupy Music Hall, filling the entire ground floor together with the broad platform in front of the immense organ, which, with its grand music, constitutes one of the prominent features of the occasion. A large display of cut flowers, apparently crowded out of the space below, occupies the front of the gallery. The whole constitutes an array of gorgeous coloring and beautiful foliage, supplying ample material for a study of days and even weeks, and including many grand and magnificently-grown plants, such as only the houses of wealthy, tasteful and painstaking amateurs can supply.

Recurring to the exhibit of the American Pomological Society:—

The largest exhibit of pears is made by the President of the Society, Col. Marshall P. Wilder, comprising 164 varieties. The exhibit of Hovey & Co. is nearly as large; while Warren Fenno and Benjamin Smith have each contributed to the exhibition over 60 varieties —all pears.

Of apples, a small but very beautiful collection is contributed by Mr. Charles Gibb, of Quebec, which has attracted much attention from the fact that the fruits were more fully colored than many similar sorts grown considerably farther south.

An extensive and quite attractive collection of fruits comes from Maine. The largest and most attractive general collection, however, comes from Michigan, comprising apples, pears, peaches, plums, grapes, and, in addition, a very interesting collection of wild fruits and nuts indigenous to that State. This exhibit is supplemented by a collection of fruits from the farm of Judge Ramsdell, of Traverse City (latitude 44.40 north), showing that apples, pears, plums and peaches are successful in that latitude, even in a year as unfavorable as the present one. These Michigan collections came in charge of a delegation chosen by the Governor of the State, including T. T. Lyon, President of the State Horticultural Society, as chairman of the delegation, and Judge J. G. Ramsdell, Prof. W. J. Beal, Hon. W. K. Gibson and E. H. Scott, all of whom are more or less prominently associated with the horticulture of the State. Along with this collection was shown a map of the State, about five feet by six or seven, on which were indicated the classes of fruits more generally grown and the localities more especially devoted to each; also the localities in which local pomological or horticultural societies exist, showing that organizations of this character are quite generally distributed throughout the lower or southern portions of the State. Along with the map above described, copies of a pamphlet prepared by C. W. Garfield, Secretary of the State Horticultural Society, giving a concise account of the present condition of fruit culture in the State, were placed upon the tables for free distribution among those visiting the exhibition.

We give the above somewhat extended notice of this exhibit as the only one shown under the sanction of State authority; and for the reason that, in its make-up, it seems to illustrate well and fully the varied capacity of the State for the pursuit of several branches of this specialty. It was awarded the Wilder Silver Medal as the best general collection of fruits by a society—the collection having been made, for the State, by the Horticultural Society.

Only seven Wilder Medals were awarded on this occasion, as follows:—To Marshall P. Wilder, for the largest and best collection of pears: —Silver Medal. To C. M. Hovey, for collection of pears:—Bronze Medal. To Benjamin Smith, for collection of pears:—Bronze Medal. To Montreal Horticultural society, for miscellaneous collection of apples:—Silver Medal. To James H. Ricketts, for the best collection of grapes:—Silver Medal. To Michigan State Horticultural Society, for best miscellaneous collection of fruits, composed of apples, pears, peaches, plums, grapes, wild fruits and nuts:—Silver Medal. To B. S. Fox, San Jose, Cal., for collection of seedling pears:—Silver Medal.

The session of the Society was opened in the forenoon of Wednesday, with the transaction of some preliminary business, and the naming of committees on list of delegates, on fruits exhibited, and on nomination of officers for the ensuing biennial term. Owing to the pre-occupation of Secretary Manning (who is also Secretary of the Mass. Hort., Society), Prof. W. J. Beal, of the Michigan Agricultural College, was appointed Secretary *pro tem*. The address of welcome was delivered by President Francis B. Hayes, of the Mass. Hort. Society, in a short but felicitous speech; and was very happily responded to by President Wilder. On reassembling at three P. M. the first business was the delivery of the biennial address of President Wilder, which gave a very interesting resumé of the progress of American Pomology. He referred to the importance of a wider dissemination of the proceedings of the Society, and announced that the Mass. Hort. Society had donated $500 for such purpose: also that he had the prospect of adding $1,000, or more, for the purpose from Boston friends.

The committee on nomination of officers was then called upon, and reported as follows:

For President, Marshall P. Wilder of Boston. Mass. First Vice-President, Patrick Barry, Rochester, N. Y., with a Vice-President for each State and Territory, including the District of Columbia and the British Provinces. For Secretary, Prof. W. J. Beal, of Michigan; Executive Committee, J. E. Mitchell, Philadelphia; George Thurber, N. Y.: J. F. C. Hyde, Mass.; P. J. Berckmans, Ga.; J. H. Masters, Nebraska. The Committees on Native Fruits; Foreign Fruits; Synomyous and Rejected Fruits; and Revision of Catalogue were designated. Also the general Fruit Committee. The Secretary was directed to notify the incoming officers, both elected and appointed, and to request their acceptance.

T. T. Lyon, of Michigan, offered the following preamble and resolutions, which were read and referred to the Committee on Native Fruits with instructions to report at the present meeting.

"Whereas, the American Pomological Society recognizes the establishment of a correct and appropriate nomenclature as one of the first and most essential steps toward the general dissemination of correct pomological knowledge: and, Whereas our State and local agricultural, horticultural and pomological societies now are, and seem likely ever to be, the chief means through which desirable improvements of this character are to be brought home to the great mass of our people; and, Whereas, there is, at present, little apparent harmony of action, on this subject, on the part of such societies, generally, so far as the naming, displaying, and examinations of fruits, as well as the principles upon which awards should be made are concerned; and, Whereas, such lack of harmonious action may reasonably be, in a great measure, attributed to the want of a well digested and generally recognized set of ideas, principles or rules of universal application:

Therefore, Resolved, that a committee be appointed, charged with the duty of framing a set of such principles or rules, to be put forth and recommended by this Society, for the adoption and use of all, whether individuals or societies, who may have to do with the naming, classifying, arranging, exhibiting or judging of fruits, including also the naming of new or newly introduced varieties.

Resolved, That when such schedule of principles or rules shall have been framed and adopted by this Society, its committees shall be required to govern their action thereby; and that it be the special duty of the Committee on Native Fruits to report any departures from such rules, in the nomenclature of native fruits, that shall come to their knowledge, in order that the Society may be enabled to conform its own practice to the same.

Resolved, That measures be taken to give to the rules so adopted a wide publicity, accompanying the same with the suggestion, to all societies and individuals in charge of exhibitions of fruits, that they be embodied in their premium lists and in the rules governing their exhibitions and awards.

Resolved, That, in pursuance of such purpose, it be made the duty of the President of this society, at the opening of each biennial session, to appoint a Committee on Nomenclature, whose duty it shall be to supervise the nomenclature of the fruits placed upon its tables for exhibition, and to correct the same whenever needful.

Invitations for the holding of the next meeting were extended to the society from Missouri, Michigan and Philadelphia, the last receiving its acceptance. This acceptance is supposed to be due to a hope that President Wilder may be able to be present at the meeting there, even should he find himself unable, owing to age and infirmity, to attend at a more remote point.

The reports of the retiring Treasurer, and of Mr. P. Barry, as Chairman of the Committee on Revision of Catalogue, were also submitted and adopted. * * * *

(To be continued.)

NEW JERSEY STATE FAIR.

[RURAL Special Report.]

WAVERLY, N. J., SEPT. 19-23, 1881.

THE 23rd annual fair of the N. J. State Agricultural Society was held upon the grounds of the Society at Waverly Park, N. J., commencing Sept. 19. The weather was fine, the attendance large and the exhibition, in our judgment, superior to any of former years. We were gratified to see less of the "side show" and games of chance business upon the grounds than there was last year, and if this Society would bar out every outside matter and conduct its fair strictly as an agricultural show, it would soon find farmers more interested, their attendance larger, and exhibitors more numerous.

The cattle department was unusually well represented, Jerseys outnumbering any other breed. Ayrshires, Devons, Short-horns, Herefords, Holsteins, Guernseys, and grades were also on exhibition.

The poultry department was inferior in the birds shown, for they lacked some of the most important points of breeding. One coop of Asiatics, a few Plymouth Rocks and a coop of white Leghorns, were specimens that were particularly noticeable. The arrangements for exhibiting poultry is very bad. The light is poor, and some of the coops with first-premium tags could hardly be seen on account of their being so low. The display was not abundant in fine birds.

The pomological display was good, considering the extremely drouthy season, but the arrangements were such that it could not be seen to advantage, and those who were most interested in this department, were obliged to forego a close examination.

The agricultural implements show was one of the largest we ever saw on the grounds.

THE DIRECT-DRAFT EUREKA MOWER, manufactured by the Eureka Mower Co., Towanda, Pa., was conspicious among others. This mower attracted the attention of many farmers, and its many points of excellence were especially noticed. The wheels are large and set directly back of the ends of the cutter-bar, thus bringing the cutter-bar directly in front of the whole machine. It can be set to cut any required hight. It is attached to a floating frame and readily adapts itself to the unevenness of the ground, and can be raised with perfect ease by the driver, and folded and fastened for transportation on the road without the driver leaving his seat. It does not require a very close observer to see at once that this machine has an absolute direct draft, and that if direct-draft machines have merits, this one certainly possesses them. Another great advantage in using this is that it does away with the use of a tedder, as none of the grass is trodden upon by the horses or run over by the drive wheels, and it works equally well upon hill-sides as on flat lands, cutting backward and forward, lengthwise along the slope without driving the team up hill.

THE WARRIOR MOWER CO., of Little Falls, N. Y., exhibited the Warrior Mower, the Bramer Reaper, Randall Harrow, and the Bramer two-horse disc cultivator, implements of their own manufacture. Its lightness in draft, superior cutting qualities, simplicity of construction and ease of operation have gained for the Warrior Mower many first premiums at field trials, and the sales have far exceeded the capacity of the manufactory. The Bramer Reaper which was put upon the market during the past year, has met with universal approval wherever used, and bids fair to take a first rank among the leading reapers of the country. The merits of the Randall Harrow are too well known to need an extended notice from us, and the manufacturers are confident that purchasers, like users, will be perfectly satisfied with its workings. The Bramer two-horse disc cultivator has been strongly approved by all who have used it, and the sales during the past year have been so great that the demand could not be met. As a single illustration of this point, we are informed that in Burlington Co., N. J., alone, 116 of these cultivators were sold during the past year.

The Kemp & Burpee Man'f'g. Co., Syracuse, N. Y., exhibited through their Mr. Kemp, the patentee, several of their manure spreaders. One of these machines was shown in operation, spreading with great uniformity manure (fully nine-tenths of which was clean straw), lime, ashes, and in fact any kind or class of fertilizers necessary for plant food. Its merits being self-evident to a farmer of ordinary intelligence, it is no wonder the company has been unable to supply the demand. A carload of these machines was shipped to this fair, and every one was sold on the grounds.

G. B. E.

P. S.—We have just received a telegram from the Fair grounds at Waverly, N. J., stating that the William Anson Wood Mower and Reaper, exhibited by F. Porter Thayer, manager, 79-81 Reade street, New York City, had each received a first premium.

The Apiarian.

CARE OF COMB HONEY.

G. M. DOOLITTLE.

MUCH has been written in regard to the best methods of securing large yields of honey, the hives best adapted to secure such a yield, etc, while but little has been said in regard to caring for such honey after it has been obtained. It is said that Mr. Durand, the strawberry propagator of New Jersey, obtains more money from his few rows of strawberries carefully tended, and put upon the market in fine condition, than is obtained from as many acres grown and sent to market by shiftless parties. We find the same thing occurring in regard to much produce which is sent to market and honey is no exception to the rule. To place our honey upon the market in the best possible shape therefore should be the aim of every bee-keeper in the land.

If honey is left on the hives but a few days after being sealed over, its snowy whiteness will be changed to a yellowish white, by the bees running over it, thus spoiling it for a really fancy article. Hence he that wishes to get the first price for his honey will remove it from the hives as soon as sealed, and not leave it on, till the end of the season, to save the trouble of going over the apiary more than once, as the custom of some is. I go over my yard once a week, removing all sealed boxes, and placing empty ones in their places, and consider this none too often. After taking the honey from the hives there are two more things to be looked after, or we may have but a second-rate article, no matter how white and nice it may be when first taken off. If stored in a damp and cool room, honey will take on dampness; and if left there long enough, it will become unsalable. How often we see honey becoming transparent and standing in drops on the surface of the combs, ready to leak on being handled the least bit, which not only hurts the looks of it very much but makes it liable to sour unless consumed very soon. While in New York in 1877 I saw in a damp cellar several hundredweights that had became so damp as to burst the cells and run over the crates, floor, etc. It smelt very bad, and was unsightly to behold.

To avoid a mishap like this honey should be stored in a very warm, dry room as soon as taken from the hives and left there for a month or more before it is crated preparatory to sending it to market. For this purpose I use a room seven by ten feet in the southwest corner of my shop, having the outside painted a dark color so that the sun will make the room as warm as possible. The mercury in this room will stand from 90 to 100° most of the time, thus ripening the honey so that in a month's time it can be handled and turned over as much as I please, and not a drop will leak out, even from the uncapped cells at the edges of the box.

If kept thus warm, as nearly all practical apiarists of the present time claim it should be kept, the second trouble is quite likely soon to appear, which comes in the shape of the larvæ of the wax moth. Worms in the boxes an inch long and nearly as large as a pipe stem are not very tempting to a customer who is in search of a nice box of honey for his family, or perchance for a select party. These have been seen by the writer while looking over honey at different markets. To prevent such a state of affairs, the honey, when taken from the hive, should be placed on scantlings which should be raised a foot or more from the floor to permit the placing of burning sulphur underneath the pile, if the moth worm should be troublesome. Examine the honey every few days, and if you see many boxes with little white places resembling flour on the combs, you may know that the little worms have commenced to work and will eventually eat the sealing off, unless either they are killed by burning sulphur or their work is arrested by cold-weather. To sulphur, get a pan of coals and set them in a kettle or fix them in some way to prevent danger from fire, and when they are burning pour on them three-quarters of a pound of sulphur for every 200 cubic feet contained in the room. Sulphur the last thing before crating, and you may be sure your honey will not depreciate while staying in the market. Just how the eggs of the moth gets in the boxes is not known. Some suppose the bees carry them there on their feet from walking over places where the miller has deposited them, while others think the miller get access to the interior of the hive at certain times.

When thoroughly ripened and sulphured as above, the honey should be stored in crates made of nice white wood, holding about 25 pounds each, with the gross weight and the weight of the crate plainly marked on each as well as the net weight. When honey is thus put up it will always bring the highest price in the market. If there is any difference in the honey it should be graded. I make three grades, putting none but that which is nice and white in No 1. For No. 2 that which is mixed with buckwheat honey is used as well as that built on old combs from which it is always darker than that from new. Buckwheat, golden rod and other Fall honey goes as No. 3, as well as all combs which have once been occupied with brood. When all box honey in the United States is placed upon the market in the above-described condition, we shall have made a long stride toward a settled market value for our product, as there now is for most other productions.

Borodino, N. Y.

Miscellaneous.

STATEMENTS SUBSTANTIATED.

Advantages of Southwestern Minnesota and Northwestern Iowa for Stock Raising and Dairy Products.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

WE are always endeavoring to exhibit commendable diligence in gleaning information for the RURAL NEW-YORKER, by reading, observing, investigating, studying, interviewing, and in a general way probing for facts in all departments of agriculture for the edification and instruction of its readers; and in this way incidentally we came across a star-emblazoned folder from the pen of Mr. J. H. Drake, Land Commissioner of the St. Paul and Sioux City Railroad Co., with the pretentious caption—"Something Better than Government Bonds at Four Per Cent." Being somewhat familiar with the magnetic and persuasive style of the writer, curiosity induced us to glance it over and see what kind of sermon he could produce from so unique a text, and what we read subsequently prompted us to visit a number of points and apply the inquisitorial pump to numerous individuals; believing the picture overdrawn, and intending to ventilate what we thought the sophistry of Mr. Drake. Finding, however, that the statements made were fully substantiated, and in some respects were really deficient in detail, and having, in our researches, garnered some valuable information, we will give the salient points of the folder, and the results of our investigations.

"Something Better than Government Bonds at Four Per Cent." asserts that in this country and Europe there is a vast amount of idle capital seeking investment: it challenges the attention of the owners of this unemployed wealth, who are seeking safe and remunerative use for it; and, for brevity, it styles this class "A." It then reviews the inexhaustible amount of brain and muscle in strong, active and energetic, noble-spirited fellows who lack an opportunity in the battle of life and the necessary means to gratify their ambition or develop their enterprise, and these it denominates class "B." It next refers to the counties of Jackson, Cottonwood, Watonwan, Martin, Nobles and Rock in Southwestern Minnesota "as beautiful in surface and fertile in soil as may be found," and says that they are not on the frontier with the hardships and deprivations to the settler incident to pioneering, but are traversed by competing railroads eager for business, with numerous thriving cities and towns; that this country abounds in beautiful lakes, pure streams and rivers, and illimitable meadows of nutritious Blue-joint Grass. The pamphlet says "there are 500 square miles awaiting the alliance of "A" and "B" in the great enterprise," the details of which it leaves them to arrange from the figures and results given, taken from the books and cash accounts in the experience of an English gentleman who has thoroughly demonstrated them. Before quoting the figures "A" and "B" are reminded that no part of God's universe is an unfailing Utopia or earthly Elysium; and both classes are warned of the possibilities of calamity by the elements, snow blockades, grasshoppers and droughts, but the fear of all these is lessened by reference to the fact that figures are based upon the experience of the grasshopper years, 1875 to 1878 inclusive, and that any injury from the recurrence of the unprecedented snow blockade of last Winter could be avoided by timely preparation, while the destruction of the hay crop in Southwestern Minnesota and Northwestern Iowa by drought is unknown. The work then refers to the salubrious climate for both man and beast.

Based upon the experience of Messrs Close Bros., & Co., the English Colonists and extensive farmers of this section, it assumes that "A," having purchased three sections of land, gives "B" sufficient means to build a house and barns and to buy 50 heifers, one bull, 50 sows, 25 young pigs, 500 ewes and 15 rams; then with a moderate knowledge of farming, fair business ability and good common sense, "B" hires three foreman, one for each department, all being practical farmers, and the outcome is that A realizes from the total investment of something like $20,000, fully 22 per cent. interest per annum, from which to pay "B" and reimburse himself: in addition to which the elaborate and exact statement of Mr. Close makes large allowances for disease and other contingencies.

The most surprising item among the accounts of the Messrs. Close, is that of $117.20 for cutting and stacking 200 tons of hay, being about 60 cents per ton. Then comes an imaginary catechism. "But why does this section offer inducements for such investments superior to those of many other portions of the far West?" To which the answer is made, "In its freedom from disease, the cheapness of lumber here, its natural protection for stock, nearness to markets and cheapness of railway transportation, together with its schools, churches, and society where the daily papers of St. Paul and Sioux City are delivered before sunset on the day of their publication, to say nothing of the larger and more rapid rise of landed values"—"But cattle must be fed through Winter?" "Yes," responds Mr. Drake "and the protection from storms assists in fattening and wards off disease, while the small cost of feed is far more than counter-balanced in the surety of the results."

FROM PERUSAL TO PROOF.

A pleasant ride over a portion of the Chicago, St. Paul, Minneapolis and Omaha Railroad, brought us through several thriving towns into the territory under consideration, the topography of which is undulating prairie, interspersed with groves and farms, and dotted with beautiful lakes abounding in fish. The climate is invigorating and healthful; the soil deep, rich and fertile; the farmers, as a rule, thrifty and happy, and the towns seemingly enjoying substantial prosperity. One of these, Heron Lake, a stopping-place with us, is in the midst of the fishing and sporting region of Southwestern Minnesota, and the Chapman Hotel here is a favorite resort for sportsmen, who are hunting the ducks and prairie chickens which abound in the locality.

This is certainly one of the finest grass regions in the Northwest, the grazing being of the best quality, and unlimited in extent. Hay is cut and stacked at a cost of 60 cents to one dollar per ton; and corn can be raised at a cost of 15 cents per bushel, while in the Eastern States it costs from double in corn to ten or 20 times in hay. Moreover, the lands on which cattle are grazed cost only from five to seven dollars and-a-half per acre, compared with Eastern lands at from $50 to $100 per acre.

Calves can be raised to three-year-old steers at a cost of from $17.50 to $23 per head; in fact wintering for cattle is contracted at $4.50 to $5 per head, including feed and care. We asked one party extensively engaged in stock-raising if he was not too far from market to render it profitable. He replied, "No, there is now no point in Southern Minnesota, or in extreme Northwestern Iowa, that is over 20 miles from a railroad. To send to the Chicago market costs one half a cent per pound, so that our beef which sells there at $6 per cwt., nets us here $5.50." And he added: "I know of one drove of 200 head of cattle sold in Chicago by a neighbor of mine (over the line of Iowa), which averaged 1,455 pounds, at $6.25 per hundred, or an average of $90.93 per head, and these cattle were fed on $1 hay and fifteen-cent corn.

Col. G. H. Campbell, of Boston, who was private secretary to Alexander H. Rice when Governor of Massachusetts, has over 3,000 acres, and is preparing for extended operations in cattle and sheep. A number of active hard-working young Englishmen are also located in this section, and they all attest the truth of the statements in "Something Better Than Government Bonds at Four per Cent. Heron Lake, of which we spoke, is a great hay shipping point: one merchant here, Mr. J. T. Smith, is cutting 6,000 tons of hay this year, and will press and bale it for shipment. We quote further, as good evidence, from the Sioux City Daily Journal:—"Alex. Elliot, of Woodbury County, is a splendid example of the successful stock-raiser. In 1863 he began operations by purchasing four cows, ten sheep, and a plug team of horses. This absorbed his capital, and he was in debt for his quarter-section of land. He never raised wheat, but set himself resolutely to the care of his little lot of stock. Time has elapsed, and he now has a flock of 1,700 sheep, 170 head of cattle and 31 horses, all his own; his land is paid for, and he has 1,300 fleeces still to market. He lives in a house that cost him $1,500, and has a barn of about the same value. He is to-day worth not a cent less than $20,000—every cent of it made directly from his stock. Comment on this is not needed."

We confess to some surprise that neither Messrs. Close Brothers & Co., nor Mr. Drake have presented us with statistics, or elaborated the possibilities of butter and cheese making in this region. The dairy industry is left out of the calculation, while it is evident to us that it is one of the most promising. The creamery butter of the Northwest has acquired a reputation, not only in Chicago, New York, Philadelphia and Boston markets, but also in Liverpool, London, Glasgow, and Edinburgh, which commands for it the highest quotations and promptest sales; and assuredly no section affords better advantages for creameries than this. The feed, water, atmosphere, climate and cows are all here; and if the requisite skill is wanting, it should be secured at once. In fact we heard of several creameries in process of establishment, but there should be from one to five in each county, one being at farthest within 15 miles of every farmer. In accordance with the conditions of the country these should be conducted on the Fairlamb, or cream-gathering system, the details of which we have repeatedly given in our correspondence. In our travels we have found many farmers who are receiving from $25 to $30 per cow per annum, for their cream, delivered at their own doors, besides the calves raised upon the milk and grass, and the sour milk fed to their pigs. There are many instances where cows return their purchase money in a single year. Taking this into consideration, with the price of lands sold by the Saint Paul and Sioux City Railroad Company; or leased to desirable tenants by Messrs. Close Brothers & Co.; or Alex. Peddie, on exceedingly favorable terms; and the farmers of Europe or our own Eastern States in drawing comparisons with their present surroundings, cannot fail to be convinced of the superior advantages afforded here for grass and corn culture, stock-raising and dairy products.

We met another gentleman in this section, strictly reliable and thorough-going, whose address we could give if necessary, who told us that he bought 30 head of yearlings and 30 head of two-year-olds, and without doing any work himself, simply as an experiment, hired their herding in Summer and their feeding and attendance in Winter, kept them until they were three-and-a-half years old, and realized a net profit of 33 per cent. per annum on his investment. We doff our *chapeaux* therefore to Mr. Drake, and are prepared to admit that we are convinced that here is something better than Government bonds at four per cent.

Southwestern Minnesota and extreme Northwestern Iowa surely are for beauty, richness of soil, accessibility, pure water, and healthful climate, exceptionally inviting, and the entire section would to-day be a shining example of Western prosperity had its early settlers adopted the theory so abundantly elucidated in this little document; and here is now a golden opportunity for the "A's" and "B's" to invest jointly their money, brains and brawn for a successful life-work which will pay an average of over twenty per cent. per annum.

Messrs. Close Bros. & Co. of Lemars and Sibley, Iowa, are backed by a vast amount of English capital and are preparing still more extensively for tenant farming, erecting houses and barns upon moderate-sized farms and offering advantages to tenant farmers who have not capital with which to start successfully. They controlled the breaking of 27,000 acres in this region the present year, and had the Spring been early and favorable they would have increased the area to 40,000 acres. They now have about 45,000 acres of tenant farms, with some 350 tenants, and we learned that so equitable is their dealing that a tenant seldom leaves them until he has accumulated sufficient to enable him to purchase land and commence farming for himself. They built 270 tenant houses, and with each a stable, granary and cribs, this season, and by one year from now will have approximately 500 tenant houses, farms and farmers.

The Scottish American Land Company (limited) with $500,000. capital, represented by Mr. Alex. Peddie, of Emmetsburg, Iowa, own some 40,000 acres within the limits of our investigation, which they, too, are placing under tenants upon plans and terms similar to those of Messrs. Close Bros. & Co. Both also aid the tenant where desired in procuring stock and getting a nice herd of cattle and hogs, or a good flock of sheep started for future growth and development. Tenant farmers who contemplate immigrating to the Northwest might advantageously correspond with these gentlemen. As the "A's" and "B's" cannot gainsay the statements made by Mr. Drake, and revealed by us herewith, we see for the future of this district a grand success in the combination of capital and labor.

The wheat crop here the present year has been almost a failure, but the flax crop is immense, while rye and barley have yielded well, and corn (unlike that in Illinois and the Middle States), promises to be the most bountiful yield ever known in the history of Southwestern Minnesota. At the advanced prices for farm product, Southern Minnesota will this year, despite the partial failure of her wheat crop, have more money distributed among her farmers than ever before known in her history.

CATALOGUES, ETC.

THOMAS MEEHAN, Germantown, near Philadelphia, Pa. Catalogue of the Germantown Nurseries. All kinds of deciduous and evergreen trees and shrubs, vines and climbers; fruits, hedge plants, hardy herbaceous and greenhouse plants, etc. Also seeds of trees, shrubs and fruits. This catalogue will be furnished free to those of our subscribers who apply. Mr. Meehan is well known as one of our most experienced horticulturists.

Literary.

BE CAREFUL WHAT YOU SAY.

Is speaking of a persons faults,
Pray don't forget your own;
Remember those in houses glass
Should never throw a stone.
If we have nothing else to do,
But talk of those who sin,
'Tis better we commence at home,
And from that point begin.

We have no right to judge a man,
Until he's fairly tried;
Should we not like his company,
We know the world is wide.
Some may have faults—and who has not?
The old as well as young;
We may perhaps, for ought we know,
Have fifty to their one.

I'll tell you of a better plan,
And find it works full well:
To try my own defects to cure
Before of others tell;
And though I sometimes hope to be
No worse than some I know,
My own shortcomings bid me let
The faults of others go.

Then let us all, when we commence
To slander friend or foe,
Think of the harm one word may do
To those we little know;
Remember, curses sometimes, like
Our chickens, "roost at home;"
Don't speak of other's faults until
We have none of our own.

THORNS AND ROSES.

CHAPTER III.

(Continued from page 659.)

I would have been content to pass the remainder of the evening in talking of Brandon and Kingston, but the day was not ended yet.

We were sitting by the window, admiring the glorious sunset, when a shadow crossed the window; and hearing a ring, I glanced at Edith, but she apparently was too lazy to speak.

The door opened, to admit a strange gentleman—strange, that is, to me only—for aunt greeted him cordially: Edith vouchsafing a distant bow.

"Mr. Nevil Verner," said aunt Dorothy, "my niece—Kate. Will you ring for lights. Edith!"

"Please don't bring lights for me," said Mr. Verner, in a clear, high voice, "this light, it seems to me, could not be improved."

He was standing by the window, speaking to aunt, when I glanced at him, rather curious as to the personal appearance of the man whom Edith hated. Though not so tall as Brandon, he was upright and broad-shouldered; his eyes calm, his face rather pale, its features small and regular; without approaching to dandyism, he had the air of being perfectly dressed, and he was handsome to effeminacy; but as Edith afterwards said, "that was his misfortune, not his fault." In manner he was courteously kind, and, on the whole, I liked him.

We sat down in the twilight, aunt at the table, with its old china and a vase of damask roses in the centre; Mr. Verner faced me, whilst Edith had buried herself in an arm-chair in the shadows. From my point of view it was a pretty scene—the glimmer of silver and Sèvres; faces indistinctly seen in the dying light: a glow of crimson on the opposite wall; the dusky garden and glorious sky; whilst through all stole the sweet scent of roses.

"Your 'twilight tea' has become an institution," said Mr. Verner, addressing aunt; "my mother envies me when I describe this room. I trust Miss Lovel"—turning to me—"that you will honor us by a visit to Newville? Not that I can offer any attraction, but I ask it on behalf of my mother, who is quite isolated through sickness."

I replied that I intended to call with aunt Dorothy, and we fell into a conversation on riding and driving and walking, aunt chiming in with approvals; and but for Edith we should have been in perfect harmony. When Mr. Verner addressed her, she replied provokingly, and struck in on our conversation with cool sarcasms and irony too subtle for my simple aunt to perceive.

CHAPTER IV.

I felt rather annoyed with Edith; she might dislike Nevil Verner, but it was unkind to show her dislike in this way; and I thought him very agreeable, pleasing, and kind.

"I am glad you came this evening," said aunt.

"It is always a pleasure to see Miss Lovel," he replied.

And then a monosyllable fell from Edith.

"Which?"

"I beg your pardon?" said Mr. Verner.

"There are three 'Miss Lovels' present, which one did you mean?"

"Suppose I say Miss Edith Lovel?"

"Miss Edith Lovel would believe you—oh, quite!"

He spoke about sports and some shooting he

had had on the moors last season, and Edith began:

"Do you read Wendell Holmes, Mr. Verner?

"'Poor gentle guest, by nature kindly cherished,
A little world grows dark with thee in blinding death;
One little gasp—thy universe hath perished—'

"I forget the rest, but do you ever think of the 'poor gentle' bird when you sally forth to waste powder—as you say?"

Fearing hostilities, I interposed with a casual remark; but before long, Mr. Verner took leave of us, and I then remonstrated with my cousin.

"Don't bother!" she said, crossly. "It was as much as I could do to keep from throwing my teacup at him!"

"You misjudge him, Edith. I don't think him so very faulty."

"Nor did I at first, but I know him well now. He wanted to see what you were like; seeing, he approves, and your pride piques him. Beware for constancy is unknown to Nevil Verner!"

"You think me in great danger?" I said, calmly.

"I like you, cousin," she said, quickly, looking at me. "Nevil is attracted by you, and you will be everything until——or possibly he is the paragon that others say, and I only ridicule him because my own ambitious views have faded away."

I recalled all that had passed to-day, from my visit to Kingston to Nevil Verner's visit here. Edith had made me picture Brandon almost a misanthrope, and she had misled me about Nevil, for I liked him, and looked forward with pleasure to the intended visit to his home.

When the day appointed for it arrived, Edith decided to accompany us—I riding, she with Aunt Dorothy in the phæton.

On the way we passed Kingston, and I half hoped Brandon would appear; but save a deer bounding through the park, there were no signs of life. The drive, though long, was very pleasant, aunt said.

We were received by our host with graceful cordiality, though I thought he seemed surprised, and not altogether pleased, on beholding Edith.

"You didn't expect me," she said, coolly; "but I must have something to do, or I should die."

Aunt gave her a warning look, which had not the slightest effect on the wilful young lady, save further rousing the spirit of mischief. We—or rather—I was introduced to Mrs. Verner, a pale, thin lady, whose beauty had wasted away in sickness, and whose face was marked with lines of pain; but she gave us no long discourses on her suffering, not even hinting at her infirmity; and though compelled to remain indoors day and night, her world reduced to two rooms, she was the kindest and most gentle of women; and her sweet influence sobered even Edith. That Nevil was a beloved son it was easy to see; the worn face brightened when he spoke, and the dim eye kindled with loving admiration.

When, at length, we thought it time to go, she thanked us for the visit, and turning to me with a smile, asked me to ride over without ceremony often, and I gladly promised. I was left the last with her, and Mr. Verner looked back smilingly. We descended the stairs; and then he addressed me with a laughing apology for having monopolized the conversation.

"Like me, Kate didn't think of you," said Edith. "May we see your improvements?"

We all went out to the garden, and aunt, taking Edith's arm, administered a mild rebuke, so that Mr. Verner and I were left together, strolling along the smooth paths.

"You are fond of flowers, Miss Lovel? Ah! that is a peculiarity of my own. This fountain is one of the improvements, and I selected this spot because it is just under my mother's window, and she can see it, for we call this part her garden.

We entered the hothouse, which contained some rare exotics, that called forth my admiration.

"I am rather proud of my collection," said Mr. Verner, presenting me with a scarlet spray, which I fastened in my habit.

Returning home I mentally decided that I had enjoyed the visit, and liked Mrs. Verner; when we entered the house Edith touched my arm.

"You look very nice, Kate, and some one besides myself admired you to-day——Oh! Brandon, where did you spring from?"

For Mr. Lovel appeared with extended hand.

"I have been waiting here a little while."

"To see me, I hope?" said Edith, to which he replied, that that surely went without saying.

After changing my habit I ran down stairs to find Brandon and aunt deep in chess, whilst unlike the other night, Edith joined amiably in the conversation, leaning on aunt's chair, until languor suddenly overtook her. I asked her to play; after a long mental struggle she complied; and, her somewhat erratic performance ended, called on Brandon to sing.

Oh! those happy, quiet evenings! to me always associated with pearly twilight skies and rosy sunsets, with snatches of quaint old ballads, with blossoms drooping and fading as day died!

More than a month had elapsed since I returned home; the time had passed in a routine which Edith called dull, but which to me was pleasant. In my daily rides I became acquainted with the villagers, and by all was kindly received; in fact, my appearance was the signal for a jubilee amongst the little folks, with whom my black horse was a favorite. There were some queer characters among our tenants, and I was altogether in a new world. Thanks to my father and aunt Dorothy, there was little poverty; but she had pensioners among the old people, and these I often visited, and read for them, so that I was soon well known, and I may say, without vanity, well liked. Among Brandon's tenants I ventured several times; they were much more numerous than ours, and some were poor, but on every side I heard stories of his goodness, and remarks that he was so much kinder than old Mr. Lovel.—[To be continued.

All monthly prostration and suffering by ladies is avoided by using Hop Bitters a few days in advance.—*Adv.*

For Women.

CONDUCTED BY MISS RAY CLARK.

THE SPELLIN' SCHOOL.

See that crevice in the floor—
Slender line from door to door,
First meridian of the school—
Which all the scholars toe by rule.
Ranged along in rigid row,
Inky, golden, brown and tow,
Are heads of spellers high and low,
Like notes in music sweet as June,
Dotting off a dancing tune.

Boy of Bashan takes the lead—
Roughly thatched his bullet-head.
At the foot an eight-year-old
Stands with head of trembling gold;
Watch her when the word is missed!
Her eyes are like an amethyst,
Her fingers dove-tailed, lips apart;
She knows that very word by heart
And swings like any pendulum,
Trembling lest it fail to come.

Runs the word along the line,
Like the running of a vine,
Blossoms out from lip to lip,
Till the girl in azure slip
Catches breath and spells the word,
Flits up the class like any bird;
Cheeks in bloom with honest blood,
And proudly stands where Bashan stood!

—B. N. Taylor, in Home Life in Song.

MRS. GARFIELD.

Our country and, in fact, the whole world is pouring out its sympathy to Mrs. Garfield, and it is but fitting that we make special allusion to our indorsement of such sentiment.

The vocabulary would seem to have been exhausted in giving expressions to feelings of sorrow from the heart's deepest recesses, but some suggestive words are ever at hand; hackneyed they may be, but none the less genuine. As to the martyred one, now that his victory is won, we should say: "Well done, thou good and faithful servant," and recognize his gain in our loss, and leaving him in the hands of the God he loved, pass to the living.

Sympathy has, as it were, been gathered from the ends of the earth into an immense cauldron and there condensed by fever heat into the purest compassion.

This the offering we give to the woman who is now deserving of more than tongue can utter, and who, in coming days, will need the greatest consideration. Her sons and daughter are not forgotten, but their lives partake so much of the future that the hand of time will in a measure alleviate their sorrow. A work is before them, to uphold the loving parent who must look to them for the inner comfort that only a family can impart.

FASHIONS.

The fashion for stripes is lengthwise.

Bustles have a modernized name—crinolets.

Shoulder capes and fichus are still to be much worn.

The dolman in varied shape will take the lead in Fall wraps.

Flowers are used with evening toilets to a great extent.

The fashion in sleeves will meet the requirements of a multitude of tastes. They may be long, demi-long or three-quarter lengths; tight, shirred or puffed.

The most fashionable way of dressing the hair is low and close to the head; but women with large faces and necks should avoid this style and wear it high or off the neck.

Plush is still in vogue and very much used. The trimming plushes are of different lengths of pile; they are shaded, plaided, striped—Bayadere and Roman—and mottled in color.

Ostrich feathers in every form will be in as much demand this season as they were last.

The combination fever still rages. There is a satisfaction in this for the many of limited means, as two partly worn suits may be combined and reproduced in a pleasing costume; or a few yards of new material will freshen an old style dress. Entire new fabrics are made up in this way.

Wraps of chenille net are in favor, and as the season advances these will be lined with silk and possibly a heavier intermediate lining.

English straws and heavy rough-and-ready black and white straws prevail for Fall. Shapes are large and eccentric.

Cloth dresses are to be the thing for street wear. Early in the season they will be trimmed with velvet or plush, and later on with bands of fur, with muff and hat to match the fur trimming. Dark green, dark blue and browns of all shades from wood color to seal will figure in these suits, together with the pretty cheviot patterns which have had such a run of late.

Shepherd's plaid dresses of soft all-wool fabrics, in black and white, blue and gold, ruby and cream color, or gray and brown, will be one of the materials for ordinary street costumes this Fall. A few of the dresses made of these goods are combined with velvet, but they are usually made of kiltings or frills of the same, and adorned with handsome buttons of blue or gray steel, or silver.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

CONCERNING CLOSET PESTS.

Ants, Silver Fish, Roaches, Etc.

MARY WAGER-FISHER.

To begin, stop up all cracks and cranies with plaster-of- Paris or thick paint. After this is dry, wash the closet shelves with salt and water, *never using soap*. At the most, use as little water in cleaning closets as possible, as roaches in particular are fond of dampness. Silver fish feed largely upon paper, and the foremost thing to keep out of closets which they infest is that article. Glass jars that have been cracked or whole ones are capital vessels in which to put tea, coffee, tapioca, rice, sago, spices, sugar, raisins, etc., which are not otherwise provided for in the way of tin caddies. Allow nothing to remain in paper in the closets.

Red ants I have never been troubled with, but I have had legions of black ones, that have been attracted by sugar or sweetmeats. A bit of cake or sweets of any sort are sure to draw them, as well as are fruit jars that have been put in closets without being wiped clean. In order to catch ants, saturate a sponge with large pores, with sweetened water. When the sponge is filled with ants, immerse it in water. I greatly dislike to kill ants, as they are the most intelligent creatures in the universe, and I find that the best way to keep rid of them is to make the closets so far as possible insect-proof, and then to keep them free from enticing tidbits. I was visiting in a house lately—a most cleanly kept dwelling—where silver fish were making very annoying depredations. Both the ceiling and the walls of the drawing-room were papered, and in the corners of the room, and along the border, in every spot where the paper was not firmly attached to the plaster, the silver fish were eating it. The mistress of the house was at her wits end to know what to do, and there seemed nothing better to do than to strip off the paper and have the walls painted, a most tiresome task, but one that should have been done at the outset. But the house, which was of stone and over-grown with English ivy, was 80 years old, and paper had been used on the walls for years and years. I was particularly glad to see that all the old-time architecture of the room had not been torn out. There was the high, narrow mantel-piece with beautifully grooved and checked ornamentation—rather high and narrow for convenience to be sure; but a wide one could have been placed beneath it, if desired. On the dinner table were old china dessert plates and saucers, beautifully decorated, that had been nearly half a century in use, and were still free from flaw or fleck. Apropos of old walls—I would never paper them, as I most assuredly would never hang paper on new ones. Instead, I would have them thoroughly cleaned, and all the cracks and broken places mended with suitable plaster; then paint thoroughly. There is nothing so clean and renovating as fresh paint. Many of the neutral shades are pretty for walls, while for halls that are large, bright red paint is charming for the walls. Have the ceiling white, and for a cornice or border put up a molding of gilt or of wood that has simply been oiled, especially if the interior woodwork of the house has been oiled instead of painted—as it should have been.

As to old homesteads, with their small panes of glass, low ceilings and wooden shutters—leave them untouched. These things are fashionable now in the finest of houses. What are inconvenient and unhealthful should alone be remodeled, and, above all, don't tear out anything that is quaint or genuinely "old-fashioned." You say, "*that* is delicious," and guard it accordingly.

A VEGETABLE TALK.

ANNIE L. JACK.

We got tired of beans and beets, cucumbers and corn, and our thoughts went back regretfully to the days of green peas and asparagus, when the amateur cook brought on the table a (to us) new dish. It was from a recipe in "Practical Cooking," and as follows: "To stew oyster plants:—Scrape and throw (I suppose one *can* be gentle, not to splash; the word *throw* is suggestive) into a bowl of cold water in which is mixed a tablespoonful of vinegar. When all are scraped, cut into half-inch lengths, *throw* them into boiling water in which are half a teaspoonful of salt and one-third of a teaspoonful of sugar to one quart of water. When done, drain and mix them with white sauce drawn butter." We enjoyed the change and uncovered another dish, in which we found parsnips. They had been parboiled then cut lengthwise and fried in hot butter. As some of the children, though very fond of corn, objected to gnawing it from the cob through fear of the toothache, we tried the following recipe from the same book with success: Mix into a pint of grated green corn three tablespoonfuls of milk, one tea-cup of flour, a piece of butter the size of a hickory nut, one teaspoonful of salt, half a teaspoonful of pepper and one egg. Drop it by dessert spoonfuls into a little hot butter and cook on both sides. It resembles, and has the flavor of fried oysters, and is a good tea or lunch dish. Serve hot on a warm platter. Of course, this is some trouble, but this the change amply repays. We have boiled our corn in the husks this season. This it is said is practiced at the Saratoga Lake House, and it certainly tastes sweeter, though requiring more room to boil.

FLOWERS FOR THE DINING TABLE.

Of all the flowers we have ever made into bouquets for the dining table, Plumbago Capensis has pleased us most. The delicate trumpet-shaped flowers of azure blue, mingled with the pedate fronds of the Maiden-hair Fern—Adiantum pedatum—found in all damp, rocky woods, form a combination not excelled. We successfully transplanted several clumps of this fern to a "rockery" years ago, and its fronds have aided us in many a floral decoration.

PICKLED PEACHES.

Pare freestone peaches; place in a stone jar. Make a sirup in the proportion of one quart of best cider vinegar to three pints of white sugar; boil, skim and pour over the fruit boiling hot. Pour off the sirup the next day, heat and again pour over. Do this every day until the fruit is the same color to the center. Any kind of spice may be added to the sirup that is liked. MARY B.

HOME-GROWN TEA.

We received from Florida a sample of tea grown and prepared by Mrs. I. Sumner. That lady writes:—

"Inclosed find a small sample of my first crop of tea. I am disappointed that I could not make it look more like the imported article, but as it is the *flavor* we want, I suppose the looks do not matter much, and I hope to improve by practice. My plants were three years old last Spring. After this year I expect to make all we want for use in our own family. I only used the five upper leaves, which were very tender and succulent."

The tea was tested at the Rural Farm and pronounced of very good quality. We know of several Rural subscribers who are making tea enough for their own use, thus demonstrating that tea culture in some of the Southern States is not the impracticable industry it was once held to be.

ANOTHER SIDE TO THE THRICE-TOLD STORY.

Who would not like to give the woman a stirring up, who, as soon as her husband comes in from his own work, sets him doing hers? And what a pity it is that the patient victim of the woman "born tired" should not, once in a while at least, assert himself and oblige her to make a little use of her own hands and feet. The name of such women is Legion; and, more's the pity, every Gill among them has her Jack. A. E. S.

These old people whose blood has become thin and steps feeble are praising Hop Bitters for the good it has done them.—*Adv.*

News of the Week.

HOME NEWS.

MONDAY, Sept. 26, 1881.

At midnight on the 19th, the long suspense in which a nation had been waiting for many days, was broken by the death of our illustrious President. It was a grand struggle that he waged with death, but the great enemy overcame him at last, in that final onslaught which wrung from those pale lips the last cry "O I how it pains me!" Though Garfield is dead, the sublime influence of his life; the noble qualities of his manhood; his exemplary Christian character; his ideal statesmanship—all will be long cherished by a loving nation.

On Tuesday morning at 10 o'clock the President's remains, after having been viewed by hundreds of people at Elberon, were transferred to the train which was to bear them to Washington. On the foot of the black coffin lay two large and beautiful leaves of the cypress palm, typifying heroism. There was no other floral decoration. The train consisted of four cars: the first for the baggage, the second for the remains, the third for Mrs. Garfield, her children and attendants, the fourth for the members of the Cabinet and other notable personages. No demonstrations were made by the people along the route except at Princeton where the college students strewed the track for several hundred yards with choice flowers. On arriving at Washington the remains were received by a military escort and conveyed to the Capitol where they were lying in state until Friday afternoon. At that time the funeral train left Washington for Cleveland where it arrived Saturday at about 1:30 P. M. The body is to be interred to-day in Lake View Cemetery, near Cleveland, according to the expressed wish of the late President. The funeral services begin at 10 A. M. to-day.

A post-mortem examination of the body disclosed the fact that the ball, after fracturing the right eleventh rib, had passed through the spinal column and lodged about two and a half inches to the left of the spine, near the first lumbar vertebra, and there had become encysted. The immediate cause of death was internal hemorrhage, nearly a pint of blood having escaped into the abdominal cavity. The lungs were affected with bronchitis, but contained no abscesses; the liver was enlarged and fatty, and in the left kidney there was a small abscess. The weight in the body at death was 120 pounds, showing a loss of weight since he was shot of about 100 pounds.

On receiving notice from the Cabinet, Vice-President Arthur took the oath of office in this city, at 2 o'clock on Tuesday morning, September 20, and thus became President of the United States.

President Arthur again took the oath of office at noon on the 22nd in the Capitol at Washington. The oath was administered by Chief-Justice Waite in the presence of the Cabinet officers, Ex-Presidents Grant and Hayes, several senators and representatives and others. The new President delivered a brief inaugural address, in which he said that no extra session of Congress would now be called and that he should endeavor to profit by the example of his illustrious predecessor. A number of the Cabinet handed in their resignations in writing, but the President requested them to retain their positions for the present.

The deep grief in which the nation has been plunged struggles for expression. Everywhere the ominous black and white intertwined and the national colors at half-mast may be seen, and the American people can truly unite with Queen Victoria in her message of condolence to Mrs. Garfield: "Words cannot express the deep sympathy I feel with you at this terrible moment. May God support and comfort you, as He alone can." The grief is not only national but world-wide in its extent!

The late President's mother was not informed of her illustrious son's death until 8 o'clock Tuesday morning, when the sad news was broken to her. She could not realize the truthfulness of the telegram. The morning paper she read with eagerness. "It cannot be that James is dead," she murmured. "I cannot understand it. I have no further wish to live, and I cannot live if it is so." Although her general health is good at present, many fear that her words are prophetic, and Mrs. Larrabee, her daughter, does not think otherwise herself. The dead President's children wept bitterly when they heard the sad news. Two of the Garfield boys were at Williams College, Massachusetts. Harry came on to Long Branch at once, but James A., Jr., was detained by sickness. He attends the funeral at Cleveland, however.

The wretch Guiteau is closely guarded, fears of mob violence being at one time entertained. He seemed greatly affected when he heard of his victim's death, and said: "Well, I am glad the President is out of pain." According to a statute of New Jersey, where Garfield died, the criminal must be tried where the victim dies, but District Attorney Corkhill of Washington says that Guiteau will be indicted, convicted of homicide, and executed in Washington.

Notwithstanding the announcement made by President Arthur in his brief address on taking the oath of office, he, on the 23rd inst., issued a proclamation, convening the Senate on Oct., 10.

The fund for Mrs. Garfield at this writing amounts to $306,800. It is suggested that the subscription lists be kept open until the fund becomes $500,000.

"Improvement Has Been Wonderful."

A gentleman makes the following report of his wife's case: "Mrs. J——'s improvement has been wonderful since she commenced taking the Oxygen Treatment. Her digestion and appetite are good, and her strength very much restored; so much so that she has for the past month been going down a flight of steps to the dining-room to her meals, and she seemed revitalized and brighter and more cheerful than I have seen her for years." Our Treatise on Compound Oxygen, containing large reports of cases, and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Phila. Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Sept. 26, 1881.

Our weekly summary of agricultural news from all the chief points in the country, condensed from telegrams received in this city at the close of each week, should be both of interest and importance to our readers. The reports are made by people who are quite trustworthy and thoroughly posted in the matters of which they speak. They do not concern merely the points from which they come, but also the entire country commercially tributary to those centers. They nearly all reach this city on Saturday morning and all describe matters at the several points just as they are as late as Friday or still later. Thus our readers can get at one glance a fair idea of the condition of crops and markets all over the country on precisely the same day. There is no better possible way of helping our friends to form a just conclusion as to the advisability of selling or retaining produce, etc., than to show them in this way what is being done all over the country. In this as in other departments of the paper we expect to make still further improvements, so soon as we can learn in what way to do so from the expressed wishes of our friends. This news is thoroughly "live," wholly practical and entirely trustworthy.....Here are some condensed items of agricultural news telgraphed to this city between Friday noon, September 23, and date: Boston, Mass.—Hides still dull with a weak tendency. A good demand for wool and recent advance in price well sustained; sales 3,464,800 lbs.—considerably less than in the two previous weeks.....Providence, R. I.—Cotton market strong; middling uplands 12½c; middling gulfs, 12¾c. Dealers say outlook is good for Fall trade.....Buffalo, N. Y.—Breadstuff's markets active and higher. Grain rates on lakes and canal have not altered within the week, but freights tend upward.....Philadelphia, Pa.—Wool ¼@1c higher than a week ago; sales the largest ever made in the market, aggregating nearly 1,500,000 pounds for the week. Cotton moves slowly. Flour scarce and wanted at higher prices. Grains active and higher under speculative influences; but exports dull. Stocks accumulating; there are now in elevators 725,000 bushels of wheat; 1,068,000, of corn and 189,000 of oats. Dairy produce continues scarce and firm. Fruits active and strong. Provisions in brisk jobbing demand and very firm .....Detroit, Mich.—The speculative drift in grain which early in the week was "bearish," is now "bullish" with grain offerings greedily taken. Receipts of wheat decreasing owing to the acceptance by farmers of the higher prices offered for "futures" over "spot." Were the differences between prices in the different months less, the movement of wheat would be greater. Stored 840,000 bushels against 153,000 at the same time last year.....Louisville, Ky.—Grain strong and advancing. Wheat is moving slowly owing to seeding and farmers' expectations of higher prices. No reliable estimates of growing corn crop—it is so very irregular; Kentucky, however, may produce enough for bread and feed. Last week's rains enabled farmers to plow for wheat and the indications are for an increase of 20 per cent. more than last year. Late rains throughout the State have greatly helped tobacco.....St. Louis, Mo.—Renewed activity in wheat and corn, with advancing prices in both. Stock of grain accumulating; elevators reported full; preparations for further heavy speculations. Cotton steady; 10,735 bales in compress against 7,239 at same time last year; increase due chiefly to early maturing of present crop.....Kansas City, Mo.—Grain market unsettled, with a downward tendency. Cattle active; but 10@15c lower on shipping grades. Hogs steady and firm. Fruits and other produce fairly active; prices good.....Omaha, Neb.—Reports from the Republican Valley show a great falling off on the corn crop; but two-thirds of the State will have a fair yield. Corn is being held at 45c, and higher prices are expected.....San Francisco, Cal.—Last week's estimate of wheat unaltered. Considerable wheat has been cut for hay. Wheat dull with a decline of 2½ per cental from last week. Buyers holding back; $1.65@$1.67½ per cental is paid for No. 1; $1.75 asked for prime shipping. Choice yellow corn $1.55 per cental on a rising market. Barley ru.....Denver, Col.—Produce scarce and high; wheat firm. California potatoes bring good prices; Salt Lake slightly lower. Eggs scarce and high. Poultry in great demand.....Portland, Oregon.—In Oregon and Washington Territory the wheat crop of 1881 is estimated at 305,000 tons (9,838,709 bushels) of which 135,000 tons are in the Willamette Valley, 100,000 tons in East Oregon and Washington Territory. Fall wheat in the Valley not as good as expected. Eastern Washington average ought to be 25 bushels per acre; it is often from 40 to 60 bushels. The census average for Oregon last year was 17 bushels per acre.....Baltimore, Md.—Grain markets strong during the week; but little exported; freights therefore low. Oats and rye in this market unimportant. Cotton steady. Provisions jobbing trade pretty good at fair figures. Intense indignation still over elevator extra charges. These removed from Canton elevator after grain blockade ceased; but suits threatened for recovery of fees paid under protest.....Chicago, Ill.; Light receipts and heavy shipments of wheat and oats have reduced the stock of both: receipts for the week, 236,948 bushels of wheat, 2,590,844 bushels of corn; 370,837 bushels of oats. Shipments 692,081 bushels of wheat; 2,340,199 bushels of corn: and 619,583 bushel of oats. There are in elevators 11,000,000 bushels of grain, of which about 6,000,000 bushels are corn. Many believe there is a "corner" in corn for October delivery, one feature of the scheme being to put off settlement until the supply of corn is beyond the capacity of the elevators. Grain markets active with an upward tendency.....Peoria, Ill.: Receipts of grain fairly regular; market quiet and somewhat unsettled.....Cincinnati, Ohio. Wheat has a fair local demand and prices have advanced 2c. but are closing easier. Corn 1c. higher, selling at 70c. Oats, rye and barley all in good demand at higher figures. Provisions scarce and with a decided upward tendency. Leaf tobacco easy under better prospects for the growing crop.....Milwaukee, Wis: Continuous rainfall has delayed thrashing to such an extent that the mills are at a stand-still unable to get grain enough to continue running. The idea that the President's death would cause a decline in prices caused a quantity of wheat to be thrown on the market early in the week, producing a decline in prices which has been recovered.....Minneapolis, Minn; Continued wet weather throughout the Northwest has damaged wheat in the field fully 25 per cent in lowering the grade and in loss of grain. This will apply at least to 2,000,000 or 3,000,000 bushels, mostly belonging to large farmers. Very little thrashing done; grain deliveries not half enough even to supply the mills. Shipments of flour for the week 28,964 barrels—very firm and advancing.....Richmond, Va.: Late rains in this State and North Carolina have improved tobacco considerably, and the quality, too, of the short crop will not be so bad as at one time expected. Tobacco quiet now. .....Wilmington, N, C.: much complaint of crops. Loss of cotton about one third. Turpentine trees damaged 10 to 20 per cent. by late storms. Corn in demand..... Charleston, S. C., The best grade of cotton brings 11½c. and of turpentine 50c.-the highest points in this market for a year. Receipts of cotton for the week 13,807—about half the receipts for corresponding week last year. New rice coming in freely at 6¾@7½c. per pound for clean Carolina. Five steamers waiting for freight, one of them nearly loaded.....Savannah, Ga.: Cotton on Monday was higher, but since then striking 'longshoreman have embarrassed all business. The military are now under arms and more troubled is expected.....Augusta, Ga.: Weather still favorable for cotton picking. From dry weather most of the bolls are open; considerable cotton has therefore been blown to the ground, and was injured by late rains.....New Orleans, La.: A large business is being done in cotton for "spot" and "future," the latter for December showing an advance of 10 to 20 points. Rice sells rapidly. Corn firm at $1 for white and 85c. for yellow. Provisions firm. Potatoes and onions $3.25@3.50 per barrel. Bulk grain coming in slowly owing to low water in the river.....Little Rock, Ark.: Corn reports very discouraging. Highest estimate of cotton for the State is five-eighths of a crop: grain less than one-half. No bolling; no fruiting; no rainfall.....Memphis, Tenn.: Receipt of cotton unprecented; more than double that of last season, and increase of general business therefore remarkably great.....Nashville, Tenn.: Grain quiet but firm. Provisions stronger. Peanuts held one-half cent higher: stocks very light; large sales during the week at full prices. Wool firmer, with but little coming in.....

LAND has been sold in London at the rate of $5,000,000 an acre, in New York at $8,000,000, a floating paragraph says, and in Paris at $2,810,000 in a sale in August.....Wine growing is being successfully pursued in Virginia, and is rapidly assuming large dimensions. It was first introduced by Germans, but others are now taking a hand in it. One firm, with thirty-seven acres of land, has produced 3,500 gallons of wine in a season. It is reported that the yield of two counties this year will be 50,000 to 60,000 gallons. There is a ready market for all that can be produced..... Two heirs of a Virginia farm quarreled over thirty-seven cents. They went to court, and at the end of six years, when a settlement was made, the heirs received nothing, the farm being sold to pay legal expenses.....The hog products of last year in the United States aggregated 38,000,000 of which number 7,000,000 were handled at the Union Stock-Yards, Chicago..... From careful inquiries made of the guilds and labor societies it is found that the range of wages in Switzerland is $80 a year for gardeners, $50 to $60 for adult male farm laborers, and $14 to $20 for adult females, with lodging and board for all; young men on farms $20, with clothes added to board and lodging.....Complaints come from the corn-field in some sections of North Carolina that great injury is being done by thousands of squirrels that have appeared in them..... Crops in India vary widely in various districts. From Mysore it is reported that, owing to a scarcity of rain, plants are withering, prices are rising, and the outlook on the whole is gloomy. From Coorg intelligence of a similar kind has been received, but from other parts of the country the accounts are fairly satisfying. So far as Bengal and Behar are concerned, the output of Indigo is likely to be unusually short; but in the Northwest the prospects are better. The quality of the tea is said to be excellent, but it is not expected that the quantity available for exportation will reach what it was thought that it would. Compared with the first three months of last year, the imports this year have been slightly increased and the exports have slightly fallen off. Compared with the year 1879, however, the returns thus far are better.....On September 14 the Illinois Condensing Company at Elgin made its offering for milk for the six weeks ending Oct. 30. It was 13 cents per gallon, or $1.56 per 100 pounds. This was refused by all its patrons, who ask 15 cents—what is offered by Chicago milkmen. Mr. H. L. Borden, the manager, announced that the factory would close Nov. 1. This will throw 70 hands out of employment. The factory is an institution, and fixes the price for the district. It uses 3,500 gallons of milk per day....

Lydia E. Pinkham's Vegetable Compound revives the drooping spirits; invigorates and harmonizes the organic functions; gives elasticity and firmness to the step, restores the natural lustre to the eye, and plants on the pale cheek of beauty the fresh roses of life's Spring and early Summer time.

AG'L DEP'T., CORNELL UNIVERSITY, ITHACA, N. Y., Sept. 8, 1881.

MR. DAVID LAWTON—*My Dear Sir*:—I have just finished filling our Silo, using one of your Belle City Feed Cutters (No. A. 1). It did its work to my entire satisfaction, cutting the four acres as fast as two men could feed it without breakage or hindrance, and without even once sharpening the knives. I take great pleasure in recommending so good a machine.

Very respectfully, I. P. ROBERTS.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

Liver Coughs often taken for Consumption are cured almost instantly with Hop Bitters.

BURNETT'S COCOAINE

The Best of All Hair Dressings.

It allays irritation, removes all tendency to dandruff, and invigorates the action of the capillaries in the highest degree, thus promoting a vigorous and healthy growth of hair. Its effects upon the glossiness and richness of the hair is such as cannot be surpassed.

BURNETT'S FLAVORING EXTRACTS are the best.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Sept. 24, 1881.

NEVER in the annals of New York's trade has there been shown such a lifeless interest in the course of business as has been exhibited the past week. Every commercial pursuit has been reduced to the limits of mere absolute wants in the unanimous eagerness of our citizens to express their respect for the departed chief of the nation. Time and profit have been made subservient to sorrow, and the sound of traffic is muffled. Mournful manifestations profusely drape the Exchange, markets and storehouses, but beyond these sympathetic displays there is a still stronger sentiment of solemnity pervading the entire merchant community, which is significant of unfeigned love for our unfortunate late President and sincere grief for the untimely close of what promised to be a marked career in American history. Business is not likely to assume any regular movement until after the funeral of President Garfield, and it may be safely remarked that there seems to be no want of confidence as to the future among owners of goods, capitalists and speculators.

BEANS AND PEAS.—Trade supports the strong and higher figures quoted for new beans. Receipts large but well out of receivers' hands. A few Southern B. E. peas quoted $3.50 ₱ 2 bush. bag. Wisconsin green peas firm at $1.75@1.85, the latter for '81.

Marrow beans, new, $3.25; mediums, $3.20; peas, $3.20@3.25; white kidney, $2.75@3.20; red kidneys, $1 90 @2.30; black or turtle soup, 1.75.

Receipts of beans for the week, 10,536 bush.
Exports do. 583 bbls.

BEESWAX—Dull at 21½@23c., the latter for Southern.

BUTTER.—Fancy creamery is about the only grade that shows a steady sale, and as receipts of nice fresh flavored lots are small full list prices are obtainable. Stock that depends upon a wholesale trade is dull and at the moment in buyers favor, though not enough so to note a positive decline. Western butter holds up well in price as receipts of grades suitable for the market and common table use have noticeably fallen off during the week. This, however, is no test week for any item of produce.

Creamery, finest tubs, 34@35c.; good to prime, 31@33c.; other quality, 24@29c.; sweet cream, 28@30c.; State dairy tin. 24@27c.; do, half tubs, choice, 30c.; do. fair to prime, 26@28c.; Welsh tubs, 25@29c.; poor State, 23@24c.; Western imitation creamery, 20@26c.; do. dairy, choice, 24@26c.; other, 17@22c.; factory or ladle-packed June in Iowa, 18@18½c.; other, 15@17c.; common Western, 14c.

Receipts for the week, 32,534 pkgs.
Exports do. 4,700 do.
Cold storage to G. B., 90s.

CHEESE.—There is little doing; New York prices are supported by interior figures. Some of the supply goes over, but that does not matter much when it is composed of fine August make. Advices from England are adverse to free export sales. The home trade is fairly active, but a good grade of creamery skimmed calls a good deal of the demand. Heavy hard skims dull and lower. Western cheese not plenty.

State factory, fine colored, 13c.; fine white, 13c.; good to prime, 12¾@12¾c.; fair to good, 11¾@12¾c.; poor to fair, 10@11¾c.; Ohio factory, cheddar, fine 11¾@12c.; fair to prime, 10¾@11¾c.; factory, flat, fine mild, 12¾@12¾c.; good to prime, 10¾@11¾c.; fair to good, 10@10¾c.; poor, 8@9¾c.; Creamery, partly skimmed, 7@9c.; fully skimmed, 4@6c.; full-skimmed factory, 2@3c.

Receipts for the week, 85,857 bxs.
Exports do. 37,251 do.
Liverpool cable, 61s.
Steam to Liverpool, 20@22s. 6d.

COTTON.—There has been a good steady business for use. One of the features of the week is the fact that English spinners have begun to run full time again, which makes an outlet for a large consumption. Speculation has been interrupted by the calamity of the week.

Quotations are based on American standard of classification, and on cotton in store running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8⅝	8⅞	8⅞
Strict ordinary	9¼	9⅜	9⅜
Good ordinary	10⅜	10⅜	10⅜
Strict good ordinary	10 11-16	10 15-16	10 15-16
Low middling	11⅜	11⅝	11⅝
Strict low middling	11 11-16	11 15-16	11 15-16
Middling	11¾	12⅛	12⅛
Good Middling	12⅛	12⅜	12⅜
Strict good middling	12⅜	12⅝	12⅝
Middling fair	13⅛	13⅝	13⅝
Fair	13⅞	14⅜	14⅜

STAINED.

Good ordinary	8¼	Low Middling	10 1-16
Strict good ordinary	9⅜	Middling	11 5-16

Receipts for week, 15,312 bales.
Exports do. 21,209 do.

DRIED FRUITS.—Apples are quiet but firmly held. A little home call may be quoted at the extreme for evaporated or sun-dried. Peaches quiet but not offered to any extent. Small fruits firm with some help from the known scarcity of other sorts.

Apples, evaporated, new, 10½@ 12½c.; do. old, rings, choice, 12c.; do. fair to prime, 10¾@11¾c.; N. C. new, sliced, extra fancy, 9½@9c.; choice, 7½@8c.; fair to good, 6½@7c.; Southern, new quarters, choice, 6@7c.; fair to prime, 5¾@6c.; inferior, 5@5½c.; State, old, fine-cut, choice, 6½@7c.; quarters, do. 6¼@6¾c.; small lots, 6½c.; Ohio and Mich. choice, 6@6¾c.; Western, fair to good, 5½@6c. Peaches, evaporated, peeled, 1880, 33c.; unpeeled, 22c.; N. C. peeled, new, fancy, 23@24c.; choice, 22@23cc.; Ga. peeled, choice, 22@23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 9@9½c.; halves, Tenn. 9c. Plums, State, black, 17c.; Southern Damson, 14½@15c. Blackberries, 13@13½c. Cherries, Southern, dry, 19@20c. Raspberries, 22c. Huckleberries, 15c.

FLOUR.—Supplies are unusually small and holders have a firm position, especially in the high brands, as there is still a good stocking-up call. Exports light, but at the moment it looks as if some shipping grades will have to be met.

No. 2, $1.60@5.25; State and Western, superfine, $5.05@6.55; city mills, extra, $7@7.75; Spring wheat, extra, $6.40@6.85; Spring XX and XXX, $7@7.75; patents, $7.75@9.50; Ohio round hoop shipping, $6.60@—; trade brands, $7.20@7.75; St. Louis extra, $6.75@7.50; do. double extra, $7.25@7.50; do. family, $7.00@8.00; Southern extra shipping, $6.75@7.65; do. XX and family, $7.50 @8.25. Rye flour, superfine, $5.90@6.25. Corn-meal, Brandywine, $3.90; do. Western, $3.60@3.85.

Receipts of flour for the week, 94,115 bbls.; corn-meal 3,467 do.

Exports of flour for the week, 51,800 bbls.; corn-meal 3,375 do.

FRESH FRUITS.—Exports of apples, 1,808 bbls. Sweet apples dull; other standard varieties steady at full prices, with a demand for more red than are here. Pears have begun to arrive freely again and prices have eased up considerably. A fine class of stock is now coming forward. Peaches have fallen off in quality and must be in fine order to make the extreme. Plums were forced up too high for buyers; quotations have been reduced within a day or so. Grapes sell fairly; basket fruit abundant and quoted at popular prices. Cranberries are in stock, but there are few orders. The West is expected to soon bid for supplies. Peanuts dull at the advance; large buyers decline to operate.

Apples, Western New York, prime mixed lots, ₱ bbl. $2@2.25; fair do. $1.75@2; Sweet, 75c.@$1.25; Gravenstein, $2.50@3; 20-oz. near-by, $2.25@2.50; Maiden Blush, near by, $2.25@2.50; Fall Pippin, near-by, $2@2.25; Baldwin, Jersey, ₱ d.-h. bbl. $1.75@2; Greening, do. $1.75@2. Pears, Bartlett, up-river, ₱ bbl. $5@6; Western New York, prime, ₱ keg, $2.50@3; do. Inferior, $1.50@2; Boston, ₱ bush. box, $1.50@2.50; Louise Bonne, Western New York, ₱ bbl. $2.50@3; Sheldon, do. $2.50@3; Beurre Bosc, $2.50@3; Duchess, $2.50@3; Beurre d'Anjou, $3@4; Seckle, choice, $3.50@4; fair to good, $2@3; Swan's Orange, $2@2.50; cooking, $1.50@2. Peaches, New Jersey and up-river select, fancy, ₱ bskt, $2@2.50; choice lines, $1.50; good, $1@1.25; common, 60@70c.; culls, 40@60c. Plums, Reine Claude, ₱ bbl., $10; ₱ crate, $1.75@2.25; Golden Drop, $2@2.25; Copper, ₱ bbl. $8@8.50; Damson, $5.50@6; do. ₱ ½ bush. crate, $1@1.25; Grapes, Del., State, case of 18 3-lb bxs, $1@1.50; bskts, ₱ lb, 7@8c.; Catawba, State, bskts, ₱ lb, 6½@7c.; Concord, State, case 18 3lb bxs, $2@2.25; do. in bskt, ₱ lb, 3@4c.; Jersey case of 24 2-lb bxs. $1.75; up-river, loose, ₱ lb, 2½@3½c. Cranberries, Cape Cod, choice, ₱ bbl. $8; do. fair to good, $6.50@7.50; do. poor to fair, $6@6.50; do. prime, ₱ crate, $2@2.25; Jersey, do. $1.75@2; do. poor to fair, $1@1.50. Watermelons, Maryland, ₱ 100, $12@15; Jersey, Black Spanish, $12@16; culls, $3@6. Nutmeg Melons, Hackensack, choice, ₱ bbl. $2.50@3.50; Keyport, choice, $1.50@2; culls, 50c.@$1.25. Peanuts, Va., hand-picked, ₱ lb, 7½@7¾c.; fancy, 7c.; extra prime, 6¾c.; good to prime, 6¼@6½c.; shelled, screened, 6@6½c.; shelled, unscreened, 5½@6c; pecan nuts, ₱ lb 8@11c.

GRAIN.—The market generally shows a settled position. Foreign wants for wheat seem to be more urgent, and if trans-atlantic advices continue good a revival of enlarged exportation is expected. Corn has had a fair business considering the high quotations. Oats active. Buckwheat quoted 80@90c. nominally. Canada barley, $1.15@1.20. Rye not so firm as it was.

Wheat, Spring, $1.26@1.42; Spring No. 2, $1.40@1.41; red Winter No. 2, $1.40@1.43½; red Winter, $1.32@1.50; white Western and State, $1.30@1.48. Rye, $1.03@1.08. Oats, white No. 1, 52c.; No. 2, 50½@51c.; No. 3, 49c.; mixed, No. 1, 43c.; No. 2, 43½@43¾c.; No. 3, 41c. Corn, Western mixed, 65@75c.; No. 2, 73@74½c.; yellow, 72@75c.; white, 77@87c.

Receipts for the week, wheat, 1,255,542 bush.; corn, 992,700 do.; oats, 536,200 do.; rye, 1,109 do.; malt, 84,200 do.

Exports for the week, wheat, 972,930 bush.; corn, 403,224 do.; oats, 17,066 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes and on Mississippi River:

	1881, Sept. 17. bush.	1880, Sept. 10. bush.	1879, Sept. 18. bush.
Wheat	20,146,548	19,848,516	15,419,985
Corn	21,488,970	24,083,101	17,303,970
Oats	6,720,368	6,789,859	1,484,594
Barley	522,721	338,732	524,950
Rye	727,384	645,309	627,026

HAY AND STRAW.—Receipts continue light and the market is circumstantially higher. Straw steady and favoring buyers.

Prime Timothy hay, ₱ 100 lbs., $1.10@1.15; medium Timothy, 90c.@$1; shipping grades, 50@80c.; clover 55@70c. Straw, No. 1 ryr, 70@75c.; short rye, 50@55c.; oat and wheat, 40c.

Exports for week, 773 bales.

HOPS.—There is a fair arrival of new hops, but brewers are using old, as a rule yet. Exports represent interior-bought stock. The market has a good, wholesome, firm tone.

Crop of 1881, choice, 22@23c.; fair to prime, 18@21c.; 1880, good to choice, 18@20c.; 1880, fair to prime, 13@17c.; 1880, poor to fair, 10@13c.; 1880, eastern, 10@18c.; 1879 fair to prime, 12@14c.; 1878, 5@8c.

Receipts for week, 1,010 bales.
Exports for the week, 321 do.

HONEY.—New is here but nominal in price.

White clover, 2-lb bxs, choice, ₱ lb, 17@18c.; fair to good, 14@16c.; buckwheat, 12@13c.

LEATHER.—Quotations are:—

HEMLOCK SOLE.

	Buenos Ayres.	California.	Com. hide.
Light	22½@23	22 @22½	22 @—
Middle	23½@26	21 @21½	23 @24
Heavy	24 @26½	21 @25	23 @25
Good damaged	22 @23½	22 @22½	21 @22
Poor damaged, all kinds			18 @20
Export and jobbing leather			26 @27½

UNION TANNED.
Slaughter.

Light backs	35@36	Middle crop	33@34
Middle backs	36@37½	Heavy crop	33@34
Light crop	31@32	Bellies	15@16

Calcutta buffalo—

Light	20@21
Middle	20@21
Heavy	20@—
Damaged	17@18

MILK.—The average price for commission milk is lower, as supplies are not wasting so badly by heat as they were; cans of 40 qts. average $1.79.

POULTRY AND GAME.—There is a fair demand for good dressed poultry and prices are now within the reach of several classes of buyers. This will give animation to trade. Turkeys are steady; a good many young and poor arrive. Geese scarce. Shippers had better continue to pack in ice; it is to early for straw packing.

Turkeys, Phila. prime, 17@18c.; State and Western dry-picked, 15@17c.; scalded, 14@16c.; young turkeys, 10@16c. Chickens, Phila. 17@19c.; Bucks Co. 16@18c.; Jersey, 16@17c.; State, 16@17c.; Western, 13@16c. Fowls, Phila. dry-picked, 16@16½c.; Bucks Co. 15½@16c.; Jersey, dry-picked, prime, 15@16c.; do. scalded, 1 @15½c.; State and Western, dry-picked, prime, 15@15½c; scalded, prime, 14@14½c.; inferior, 12@13c. Ducks, Spring, Phila. ₱ lb, 16@18c.; Jersey and Bucks Co. 17@18c.; State, 14@16c.; mixed State, 13@15c.; old, fair to good, 12@14c. Squabs, white, ₱ doz. $2.75@3; dark, $1.75@2.

It has been a low week for prices, as the market has had a daily over-stock of chickens and fowls.

Chickens, New York, ₱ lb. 12½@13c.; State and Penn. 12@12½c.; Western, 11½@12c.; Southern, 11@11½c.; Fowls, Jersey, State and Penn. 13c.; Western, 12½@13c.; Southern, 12@12½c. Roosters, old, 5@6c. Turkeys, Jersey and Penn. 14@15c.; Western, 13@14c. Ducks, Jersey, extra-large, ₱ pair, 87c.@$1; Jersey, New York and Penn. 60@75c.; Western, 45@55c.; Southern, 45@50c. Geese, Jersey, N. Y. and Penn. $1.20@1.75; Western mixed and Southern, 75c@$1.12. Pigeons, full-grown, 25@30c.; young, 20@25c.

The demand is good for good game birds, but much of it turns bad or poor in appearance, which amounts to the same, and prices have a wide range. Venison lower with large receipts.

Grouse, prime, 80@90c.; soft, 50@75c.; partridges, prime, $1.25@1.50; soft, 75c@$1; woodcock, 80c.@$1.25; English snipe and plover, fresh-killed, $1.75; venison, Minn. short saddles, 18@20c.; Western, 15@18c.

PROVISIONS.—A strong corn market has supported hog products in price, but the export trade is not of seasonable magnitude. Market closes firm.

Pork, extra prime, ₱ bbl. $15@15.50; Western mess, new, $19.50@20. Lard, steam Western, ₱ 100 lbs., $11.35@12.10; prime city, $12.30. Hams, smoked city, ₱ lb. 14@14½c.; pickled Western and city, 12@12½c.; Shoulders, smoked city, 8¾@9c.; pickled, 8½c. Rib bellies, pickled, 10½@11¾c. Bacon, long clear and Western, 10½@11c. Beef, Western mess, ₱ bbl. $12@13; prime, $13@14; India mess, ₱ tce. $21.50@23.50. Beef hams, ₱ bbl., $22@23.

Receipts for the week—Beef bbls. and tcs. 630; pork, bbls 1,275; cut-meats, pkgs 24,930; lard, do. 12 200.

Exports for the week—Beef, bbls. and tcs. 2,660; pork bbls. 1,429; cut meats, lbs. 4,142,131; lard do. 5,031,988.

RICE.—Fair activity prevails in the domestic sorts, and prices are firm. Receipts of the new crop have been less than anticipated, and are sold in every instance prior to arrival.

Carolina and Louisiana, common to fair, 5½@6c., good to prime, 6¾@7¼c.; choice, 7¾@8c.

SALT.—Quotations are: Ashton's at $2.50; Higgins's at $2.40; Holmes's extra sifted, $3.40; Deakin's at $1.25; Evans's at $1.20; Washington's at $1.25; Marshall's at $1.25; Virden's at $1.20; Worthington's at $1.20; Mediterranean at 25c.

SEEDS.—Clover quiet and offered in buyers' favor Timothy in fair demand for use.

Clover, Western, 1880, job lots from store, 10½@11c.; do. in car lots on track, 9¾@10c.; 1879, do. 9@9½c. Timothy, job lots in store, $2.90@3.25. Flax-seed, American rough, $1.41½@1.50.

Receipts for the week, 3,800 bush.
Exports do. 1,427 bush.

SUGAR.—Quotations are for:

Cut loaf, 10¾c.; crushed, 10¾c.; powdered, 10¼@10¾c.; granulated, 10¼c.; mould A, 10c.; confectioners' A, 9¾c.; standard A, 9¾; off A, 9¼@9½c.; white extra C, 9@9¼c.; yellow extra C, 8½@8¾c.; C, 7¾@8)gc.; yellows, 7@7¼c.

TOBACCO.—There are no new features.

VEGETABLES.—Exports of potatoes for week, 4,100 bbls. A good many low-grade potatoes arrive, but are neglected, and prime lots of Rose and Peerless are firm. Nova Scotia begins to come, selling at $2@2.50, the former for mixed lots. Garden truck is in light supply and firm; though onions are plenty and easier. Potatoes: Early Rose and Burbank, L. I., ₱ bbl., $2.50@2.75; State and up-river, $2.25@2.50; Snowflake, $2.25@2.50; Burbank, $2@2.37; Peerless, Jersey, $2@2.12; sweet potatoes, Va. yellow, $3.25@3.50; Del. River, $3.25. Sweet corn, Jersey, prime ₱ 100, 75c.@$1; wax beans, L. I., ₱ bag, $1.25@1.50; string beans, $1.25@1.50; Lima beans, potato, $3@3.25; flat, $2.50; cucumbers, L. I., ₱ 100, $1.25@1.50; pickles, ₱ 1,000, $2.50@3; egg plant, ₱ bbl., $1.75@2; tomatoes, ₱ bush., 70@80c.; squash, Marrow, ₱ bbl., $1.50; cabbage, red and other, ₱ 100, $7@10; beets, L. I., ₱ bbl., $1.50@2; white onions, $2.25@2.50; yellow, $2; red, $2.25; Chester' $2; carrots, $1.50@2; turnips, Russia, $1.75; pumpkins, ₱ 100, $5@8.

WOOL.—The market is temporarily quiet; sellers are assured of a good demand by Oct. Last prices still holding, viz.:—

Ohio, Penn. and West Va, XXX and picklock, 43@45c.; X to XX, 41@42c.; No. 2 to No. 1, 38@45c.; coarse, 33@36c.; combing, 42@48c. State and Western X to XX 38@40c.; No. 2 to No. 1, 36@44c.; coarse, 32@34c.; combing, 38@45c.; combing unwashed, 28@34c. Virginia, West Va. and Md. unwashed, medium, 27@29c. Ga. and Lake unwashed, medium, 28@30c.; coarse, 22@24c.; burry and slightly burry, 16@20c. California, Spring, Northern, free, 35@36c.; middle counties, free, 26@30c.; Southern, 20@26c.; low grade and burry, 19@22c.; Fall, low grade and burry, 16@20c. Texas, choice, free, 28@30c.; fair to good, 24@26c.; low grade and burry, 16@20c. Pulled, super, 38@41c.; extra, 35@38c.; No. 1, 20@23c.; combing, 35@40c.; lambs', 40@42c. Tub-washed, fair to choice, 35@44c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Sept. 24, 1881.

BEEVES.—Receipts for the week, 14,218 head; do. last week, 14,180 head. Trade was uncommonly dull and depressed at both market places. The demand for dressed beef is expected to be light to-morrow, and with Monday a national holiday, slaughterers were not disposed to buy ahead. In fact, buyers who not unfrequently purchase a half dozen or more car loads of cattle in every market were content with one or two loads to-day. A few lots of Texans and Coloradoes were sold at 7¾c. to 9c., to dress 55 lbs., and the reported sales of natives ranged from 8 to 11¾c., to dress 55@57c.

MILCH COWS—Active at $30@60 per head, cows fit for private sale will make $55@70.

VEAL CALVES.—With small supplies the market is firm and strong. Extra right sizes have sold above best rates. Up river dressed, 12½@13½c.

Live calves, prime N. J., 9c.; do. State, 8¾@9c.; poor to good, 7@8¼c.; Mount Hollys, 7¾@9c.; buttermilks, 4½@6c.; grassers, 3½@4c.

SHEEP AND LAMBS.—Receipts for the week, 37,844 head; do. last week, 37,191 do. There is every prospect of a light run on Monday, and butchers were induced to take the offerings at barely steady prices. Some Virginia store ewes sold at 3½c., but ordinary to prime sheep ranged from 4 to 5¾c., with lambs selling at 5½@6¾c.

SWINE.—Receipts for the week, 28,267 head; do. last week, 22,564 do. Common to prime corn-fed, $6.75@7.10 ₱ 100. Grass hogs have no quotable price. New Jersey pork, 8¾@9¼c.; city dressed, 8¾@9c.

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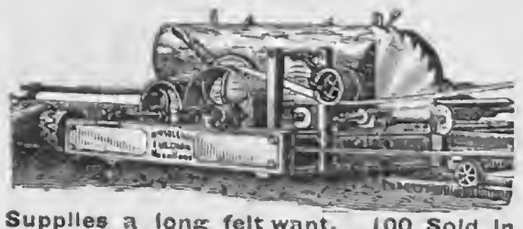

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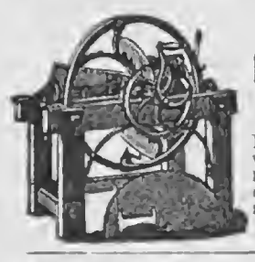

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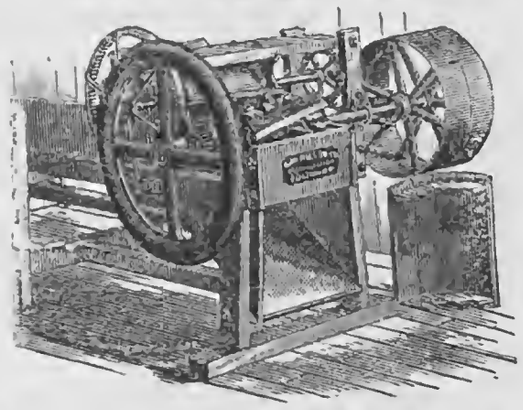

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For the Young.

WHAT SHALL IT BE?

RAY CLARK.

SOME time since Uncle Mark succeeded in obtaining my consent to write something for his numerous relatives.

I had not the remotest idea of how to fulfill my promise creditably, but feeling a *little* compassion for him in view of his great charge —his army of cousins—I felt that my mite should not be withheld.

I have said a *little* compassion, for I happen to know Uncle Mark's wife and am anxious to keep in her good graces; besides he once accused me of indulging in a curtain lecture; for this I have scarcely forgiven him, as my reprimand was merited.

"Then came the tug of war." What shall it be? This thought at last photographed itself upon paper and relieved me of further necessity for waste of brain material in selecting a subject.

This title is suggestive, and may be applied just now to writer and reader. What shall I write? What can you do?

Children—most of Uncle Mark's nieces and nephews I guess are registered in this class of the Census Report—I wonder if you often or ever think what you can do to make your life of use. Do you ever say, "O, I'm too small, what can I do?" If you have ever allowed yourself to think you can do nothing drive such notions away and decide to try to make yourself felt in the world; your world you know is just where you may happen to be. You need not travel, commence where you are. You may eventually need or wish to change your field of labor. Do not wait, however, but commence at once.

Now understand me, don't say, "She's some staid old maid who wants to make Jack a dull boy by giving him all work and no play," You'll not be generous if you do. As to the old maid I've nothing to say, but do not accuse me of wishing to make you old before you have been young—no, take all the enjoyment you can in life, at the same time remember that if God spares you a life work is before you. Boys and girls will be men and women, and what is needed in the land is good and useful inhabitants.

In Cincinnati two boys by their energy raised $15 for the Garfield fund, the amount, though small, was as much in proportion as many of the hundreds of dollars that have been given. Two Summers ago three little girls visited the "Five Points House of Industry" in this city, New York. First of all they attended the service in the chapel, then visited the dining room and saw how the little boys and girls partook of meals, then they were shown the sleeping and play rooms, etc. It was a pleasing sight and gave them much happiness to feel that the needy children had been provided for.

On reaching home the visit was discussed, and as they talked the idea dawned upon them that they might also give a little aid to this charity, so other companions were advised of their intention, and soon six or more little girls were seen working with a will, making articles for a fair, the proceeds to be given to the home before mentioned. Older heads conjectured failure but were agreeably disappointed. The "Busy Bees" so named, worked on, and at last held their fair and realized over $40. How proud they felt when the day came for presenting the gift! and how much better had their time been spent than if all had been passed in play. Happiness made the labor light.

What these little folks did you can all do. Let the spirit be the same although the work may be different.

I have given the girls more space in my examples of usefulness; I hope the boys will not be offended; if they are they will have to "grin and bear it," as they always have plenty of opportunities to prevail. It is to be hoped that all the cousins possess magnanimity.

Let your mind and body receive equal consideration, do not despise manual labor, but let it be governed by the intellect.

The waste basket has come into my mind—suppose Uncle Mark should say, "Too long, I meant a short article," what a disappointment it would be after so great an exertion, so I will finish by asking you to think, what shall it be?

New Members of the Club for Week Ending Sept. 24.

Mertie Talbott, Union City, Mich. Roy A. Taylor, Eddy R. Taylor, Grace C. Taylor, Rushford, N. Y. Mary T. Gwinnette, White River, W. T. Nellie McIntyre, Millbrook, Mich. Jennie McGregor, St. Albans, Vt. Willie P. Abrams, Glastonbury, Conn.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK AND COUSINS:—It is such a beautiful morning I thought I could spend it best in writing to you, i. e., if you will excuse all the mistakes I make, which I am afraid will be a good many, as this is my first attempt at writing for the RURAL. My home used to be in the country, but my father moved into the city of Erie last Spring. I am now visiting at my grandpa's in the country, and am having just a splendid time playing croquet, picking berries, hunting eggs and feeding chickens. I went to the woods yesterday and gathered ever so many wintergreens and had such a nice time rambling about. Grandpa has been buying a pony for Aunt Emma, and she has named it Draxy. Isn't it a funny name? I have the promise of a ride as soon as it is trained for riding. I must tell you before I close how many brothers and sisters I have. I have one brother three years old, and three sisters, one fourteen, one eight and one six. I am ten years old. I must now say good-bye, hoping Uncle Mark will not think this too poorly written to print.

Your cousin, ALICE J. LEWIS.
West Mill Creek, Pa.

DEAR UNCLE MARK:—Papa wrote to The RURAL NEW-YORKER, to ask how I could become a member of the Horticultural club, and I find the question answered in a late issue, so I have hastened to send you my name and address that I may be enrolled as a member. I am fifteen years old. I love flowers, but until lately have not been able to cultivate them, having lived in London, England till about a year ago. London is such a large city and so full of houses that there is no room for gardens, except public gardens, but now I am in America and papa has a garden and a small greenhouse, he has given me a little patch of ground for my own use to cultivate as I please. I am, also learning the botanical names of the plants in the garden. Of course I do not know much about horticulture at present but I hope by reading the RURAL to learn more.

Your niece, NELLIE F. COLLIS.

[We are very glad to welcome Nellie to our Club, especially since she is so desirous to learn all about flowers. Anything that we can do to assist her, will be done most willingly. She has carried out my wishes, I see, in regard to the little garden plot mentioned in a late RURAL. U. M.]

DEAR UNCLE MARK:—I am a little girl ten years old and have never been to school. My mamma has taught me at home. My papa takes the RURAL, which we all like very much. I love to read the letters from the cousins, and have wanted to join the Club for a long time, but have waited until I could write myself. This is my first letter; I hope it will be accepted. The seeds you sent came up well and were doing nicely when the dry weather set in. The pinks looked nicely when an old rooster and two of his wives went in and scratched them nearly all up. What they left, all except two, have died. They are blooming and are very pretty. I have one little brother (Johnnie). We are going to have a garden next year and we would like to have you put our names on your list.

KATIE AND JOHNNIE MOBLEY.
Elkton, Todd Co., Ky.

UNCLE MARK:—We see by a late RURAL that any farmer's boys or girls can join the Horticultural Club, so my sister and I would like to become members of it. We enjoy reading the cousins' letters. We just came from the East to the northern wilds of Wisconsin. We live near two beautiful lakes full of nice fish. There are a great many deer running in the woods, and some bears in the swamps, eating up the blueberries. We found this Spring thousands of wild flowers, a good many we never saw before; we find beautiful flowers and Princess Pine. We are growing the cranberry vine and pitcher plant as pot plants From our yard we can see hundreds of fragrant white water lilies, and we row around in our boat so as to enjoy them.

Your nieces, KATE AND FANNIE METZGAR.
Butternut, Wis.

Lazy, drowsy feelings are precursors of sickness which Hop Bitters will instantly banish.—*Adv.*

Miscellaneous.

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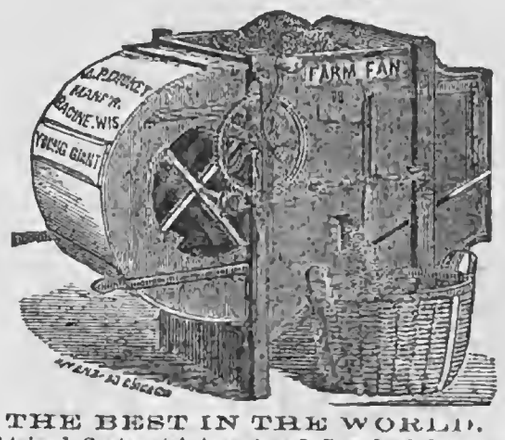

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"You're not worth your salt" said an Illinois farmer a few years ago to his daughter. "Yes I am" replied the damsel, and she insisted that henceforth her services must be paid for at the rate paid a servant for doing the same duties. The farmer had forgotten the contract when the daughter the other day, produced it and demanded $500, the balance due her—and got it, too, as she threatened to sue for it.

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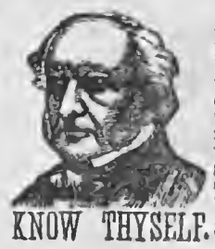
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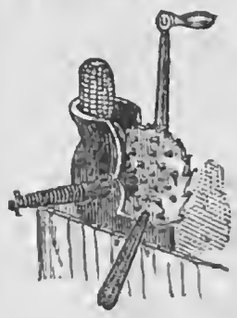
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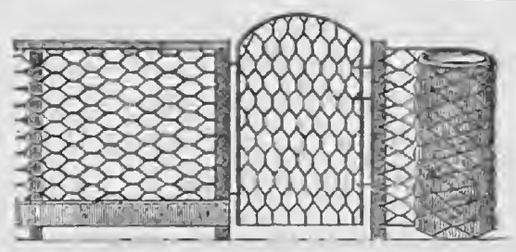
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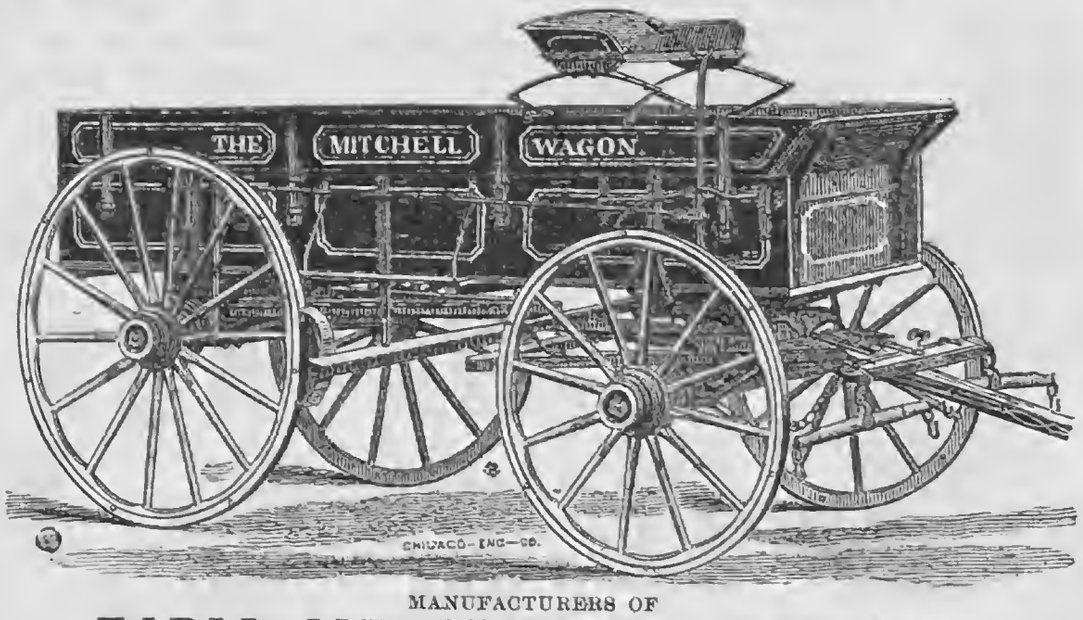

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Humorous.

"How is your business?" asked one tailor of another. "Only so so," was the reply. "How is yours?" "Mine is mending."—Phila. Sun.

SOME of our Cambridge milkmen ought to be crem-ated for vending such poor milk. It is a cow-ardly kine of business and ought to be stopped. Heifer man can't sell good milk he ought to give up business.—Wm Wurtle.

THEY were at a dinner party, and remarked that he supposed she was fond of ethnology. She said she was not very well, and the doctor had told her not to eat any thing for dessert but oranges.—Clinton Republican.

"YOU do not find any flies in the butter which I put on my table," said a Boston boarding mistress, proudly. "No," replied a boarder, "it's too strong for them." That boarder was given immediate notice to quit.—Somerville Journal.

"And did your late husband die in the hope of a blessed immortality, Sister Stiggings?" inquired the new minister, who was making his first call on a fair widow of his congregation. "Bless you, no!" was the response; "he died in Chicago."—Center Democrat.

A GROUP of young attorneys were discussing a certain legal decision, made some time ago, and one of them ejaculated: "Oh, yes, you refer to the time Judge Necessity was on the bench." "Judge Necessity—what do you call him that for?" queried one of the other lawyers. "Oh," dryly responded the first speaker, "merely because they say 'Necessity knows no law.'"—Cleveland Sunday Sun.

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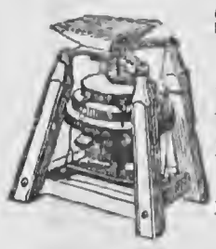

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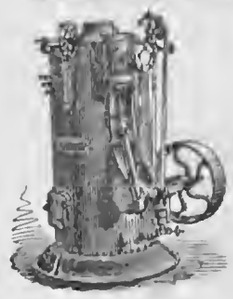

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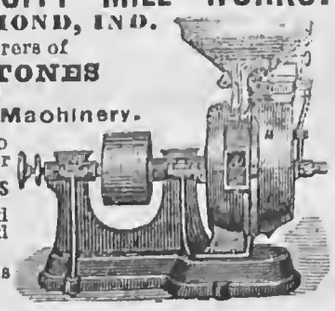

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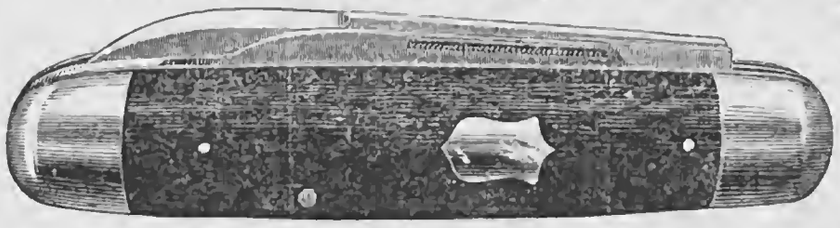

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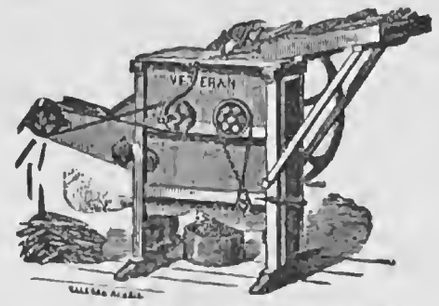

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Biographical.

OUR PORTRAIT GALLERY.

Joseph Henry Gilbert, Ph. D., F. R. S., etc.

JOSEPH HENRY GILBERT, whose name, in conjunction with that of Dr. J. B. Lawes, is familiar to all students of agricultural chemistry, was born at Hull, Yorkshire, August 1, 1817. His father, the Rev. Joseph Gilbert, was the author of several theological works, and his mother, Ann Gilbert, who survived until 1866, was also well known as an authoress, writing before her marriage under the name of Ann Taylor, of Ongar. During his school-days he met with a gun-shot accident which greatly impaired his health for a considerable time and caused the loss of the sight of one eye. His college courses were begun at the University of Glasgow, and there, as elsewhere, he devoted special attention to chemistry, analytical and theoretical, under the late Professor Thomas Thomson. He next studied at the University College, London, where he had the benefit of Professor Graham's able lectures, besides working in the laboratory of the late Dr. Anthony Todd Thomson, then Professor of Materia Medica, Therapeutics and Toxology. To finish his course of chemical studies he next visited Germany, and spent some time in the laboratory of Liebig at Giessen, where he took his degree of Doctor of Philosophy. Returning to University College, London, he became class and laboratory assistant to Professor A. T. Thomson in the Winter and Summer sessions of 1840-41, and at the same time attended other courses at the college. On leaving the college, he devoted himself for a time to the chemistry of calico printing, etc., holding appointments in the neighborhood of Manchester.

It was in 1843, when in his twenty-sixth year, that he became associated with Mr. J. B. Lawes, of Rothamsted, then also a young man of twenty-nine, who had already been engaged for nine years in agricultural experiments—ever since he took possession of his entailed estate at Rothamsted in 1834. During the 38 years since then the two have been harmoniously engaged in a systematic series of researches in agricultural chemistry and physiology. The first of a long series of papers giving the results of their experiments appeared in 1847. These reports have been published from time to time in the Journal of the Royal Agricultural Society of England, the Reports of the British Association for the Advancement of Science, the Journal of the Chemical Society of London, the Proceedings and Transactions of the Royal Society of London, the Journal of the Society of Arts, the Journal of the Horticultural Society of London, the Journal of the Royal Dublin Society, the Edinburg Veterinary Review, the Philosophical Magazine, the Farmers' Gazette, the RURAL NEW-YORKER, and in several other agricultural papers, as well as in some official Government Reports, and elsewhere. For some years past there have been annually published memoranda of the origin, plan and results of the field and other experiments of Drs. Lawes and Gilbert, and in the issue for 1880 is given a list of 39 lengthy papers on field experiments, vegetation, etc., by both, one paper by Dr. Gilbert and Dr. Masters, and four papers, "On the Occurrence of Fairy Rings," "On Some Points in Connection with Vegetation," "On Rainfall, Evaporation and Percolation," and "On the Composition of Potatoes," by Dr. Gilbert alone. The experiments on feeding animals, and sewage illustrations, etc., comprise 20 papers by Dr. Lawes and Dr. Gilbert, and four papers by Dr. Gilbert alone.

In 1860 Dr. Gilbert was elected a Fellow of the Royal Society, and in 1867 the Council of the Society showed its appreciation of his work by awarding him, in conjunction with Dr. Lawes, the highest honor in its gift—one of the Royal Medals. He has been a Fellow of the Chemical Society of London since 1841, and is at the present time one of its Vice-Presidents. There is no branch of agricultural chemistry or physiology which the joint researches of Dr. Gilbert and Dr. Lawes have not enriched; nor is there any single laborer in the broad field of agricultural research, or, indeed, any society or association of workers in that field, to whom agricultural progress owes so much as it does to Dr. Gilbert and Dr. Lawes, whose honored names are inseparably associated in the grateful remembrance of agriculturists throughout the civilized world.

JOSEPH HENRY GILBERT--From a Photograph--Fig. 478.

Field Crops.

NOTES FROM THE RURAL FARM.

THE dry weather continues, and although this is the time generally preferred for sowing wheat, none in this locality save our own fields, has been sown and few fields have been plowed. We availed ourselves of a short rain, ten days ago, that wet the ground of our oat field two to three inches in depth, and dropping all other work, plowed the best way we could. The oat stubble had scarcely rotted; so that, though well harrowed and rolled, the surface was full of rubbish that rendered nice work in drilling in the seed an impossibility, the drill tubes clogging up continually and leaving frequent balks in spite of the attendance of a second man to free them. Whether it were wiser to have sown as we have done or to have waited, as other farmers are doing, for rain is a question which the weather of the next ten days will answer. The wheats sown in this field were: first, Oregon which, because of its hardiness, its large kernel and the strength of its straw, has been selected as one of the wheats which we shall continue to sow; second, Fultzo-Clawson of which our readers are likely to hear enough in the course of the next two or three years; third, Shumaker; fourth, Silver Chaff, and finally, Fultz which, for Long Island farmers promises to become as great a favorite as it is with our Western friends, as to yield at any rate, if not as to its flouring qualities. There is plenty of room for improvements in wheats, and it is our belief that ten years hence the kinds popular now will have had their day.

Already our wheat planted nine by nine inches apart is up far enough to mark the squares. RURAL readers will remember that we experimented with the cultivation of wheat planted (by hand) a foot apart either way, several years ago. The results were not very decisive one way or the other, and so we shall now have the opportunity of testing the system upon a more extended scale, should the season prove favorable and the dreaded Hessian fly not appear in formidable numbers.

Our experiment corn field! Are not our readers interested to know what has become of it? Let them bear in mind that the season of 1881 will long be remembered by the farmers of this part of the country as the most disastrous to corn that has occurred during the past 12 years at least. There is nowhere more than half a crop. Upon many farms, the corn was close upon an entire failure. Our readers will bear in mind also that the soil of the experiment field was very poor and except upon the fertilized acre, our sole hopes of a large yield were based upon (1) the varieties sown; (2) our peculiar system of cultivation and, last, though not least, upon a fitting of the land. Well, we are not yet ready to talk about this field, and the results of the several experiments attempted. But they are very interesting to us and, we trust, will prove instructive to those of our readers who cultivate this noblest of the cereals of America. One remark however we would make because it differs from opinions we have often seen expressed. It is that all of our upland corn, whether in or out of the experiment field, which was manured either with farm manure or concentrated fertilizers, was the first to suffer by the drought and the first to succumb. It seems natural enough that this should be so, since the more luxuriant the growth the greater is the need of water to sustain it.

Work of all kinds so presses upon us that it is difficult to do anything in a thorough manner and we feel like quarreling with those agricultural editors who at such a time can serenely talk of "forehandedness"—"keeping

everything in its place"—"destroying weeds"—"keeping things tidy" and are liberal with other well-meant advice of the same kind while stock is suffering and the crops of another year are in jeopardy for want of labor and time to give them immediate attention.

FLAX CULTURE.

PUSEY GRAVES.

In my experience in flax culture generally, but more particularly in Kansas, in order to render a crop profitable I have found it necessary to utilize both seed and fiber.

Preparation of Soil.—Plow in the Fall if possible; then, without stirring, harrow in the Spring before sowing as soon as the ground is dry enough. Sow broadcast, if for seed, one bushel of seed per acre; if for fiber only two bushels per acre; if for both seed and fiber one-and-a-half bushel per acre. Harrow well both ways or until the seed is well covered, and then roll. Any soil that will produce a good crop of corn will grow flax; but it must not be foul with weed-seed, as flax cannot be cultivated profitably if weeds are permitted to grow.

The Seed must be clean—free from rape, cockle and mustard, if one wishes to grow a marketable article of seed or a profitable crop of lint.

Harvesting.—In order to make the best fiber the crop must be harvested about the time the bloom falls; it will then possess a soft, oily feeling; but if the seed be allowed to ripen, it takes up the oil and leaves the fiber dry and harsh and more brittle, and lighter in bulk. When I wish to save the fiber and seed both, I allow one-fourth of the bolls to ripen. Competition in the market with jute-butts has to a great extent rendered the growing of flax fiber unprofitable in the West. Harvesting the crop must be attended to promptly when begun, if the weather be uncertain. It is easily damaged in wet weather. The old methods of harvesting with the cradle, the scythe and hand-pulling have passed away, and John and Mary as partners at the flax-pulling have gone to return no more. The Champion or Buckeye sickle is set close to the ground, and the rake and pitchfork do the work of 40 hand pullers.

The Value of the Crop.—It is safe to count on twelve bushels of seed per acre; it has often yielded 18 to 20 bushels here in Kansas, and its average value for the past five years has been for the whole State $1 per bushel. It has always been a surer crop and better yielder than wheat. When raised for the seed and fiber, the value of the crop is enhanced, as an average yield of fiber is 1,000 pounds per acre, which is worth $75 per ton, or $100 in St. Louis.

The experiences of farmers here have led to the opinion that the crop is exhaustive; that it leaves the soil colder and heavier and unfit to be followed by a crop of corn or oats, and hence to a great extent with many farmers the crop has been abandoned entirely. Flax stubble plowed under is a good preparation for wheat, and I have known the crop grown in Ohio preparatory to a wheat crop. Of late years we grow it here principally for the seed when grown at all, and feed the straw for hay, which is better than the prairie hay of the country and preferred by cattle. An average yield of flax straw per acre is half a ton.

The old water and dew rotting and breaking and scutching processes have all disappeared together with the hand loom and spinning wheel, that used to cheer the fire-side of the pioneer log cabins of the West. We have outgrown them all; but that we are more happy or more contented or more independent I very much doubt. The power loom and the ginny have taken the fiber from the distaff and given it back to the housewife in starched linen at rates with which she cannot compete. And unless the flax straw can be taken from the thrashing machine and the lint prepared for the manufacturer to compete with hemp and jute, the main object of the crop must depend upon the profit derived from the amount of seed that can be grown.

I have compared the reports to the Agricultural Society of this State, from 27 different counties, and the average yield per acre of seed is 12½ bushels, and the average market value $1 per bushel. The average cost in growing the crop, including the seed, is $5 per acre, leaving a net profit of $7.50 per acre. Nearly all the reporters agree that the flax straw is as good as Timothy hay for feed, and is to them valuable only for that purpose. Nearly all sold their crops as soon as thrashed, not having safe storage. My own observation has been, that clean seed in the Spring has been in active demand at from $1.25 to $1.40 per bushel for a number of years. I conclude, therefore, that the crop may be made profitable if made a specialty, and it is attended with far less hard labor than a crop of corn. An average crop of corn is 40 bushels per acre, and an average price in the West is 25 cents. The cost of growing and harvesting it is equal to that for flax; so that there are $2.50 per acre in favor of the flax. I am satisfied that if the rules I have given be followed, a good crop of flax may be grown almost anywhere in the temperate zone.

TOBACCO-GROWING NOTES.

My experiments with commercial manures for tobacco have not been satisfactory during the past dry Summer. As previously stated, I used a small quantity of the Swift-sure Superphosphate, Maryland Tobacco Food and Alkaline Bone Dust, applying them on a clay loam soil previously manured with barnyard manure in the drill over which the plants were to be set. From each of the three fertilizers a decided gain was noticeable, particularly from the Maryland Tobacco Food early in the season. But as the season advanced the difference in the appearance of the rows, where the application had been made and where none was used, was less visible until at last, when the crop was harvested, no effects from any of the several manures were clearly visible. I am not prepared, however, to lay aside all commercial fertilizers as of no value from the simple and unsatisfactory test I have given them. Had the season been a wet one, the results might have been very different.

Ordinarily about nine weeks are required for tobacco to cure properly. The leaves may be cured in a less time than this, it is true, but where the drying is rapid the quality of the product is inevitably injured. The more slowly tobacco can cure and yet escape poleburn, the better will be the quality of the leaf when cured. This fact may be proven by hanging a few plants in a cellar, or a very close, dark outhouse, as an ice-house. Here the leaves will cure very slowly, but when at last the natural juices from them and the stalk have escaped, the color and general quality of the leaves will be found admirable. This method of curing tobacco on a large scale is, of course, not practicable, but the nearer the approach to it the better.

There are very few farm crops that will stand a severe drought with less injury than tobacco, if the soil on which it is grown is in proper condition as regards fertility and tilth. The past dry Summer has proven that upon a well prepared soil a good crop is almost certain, provided the necessary care is exercised in setting the plants, and in the cultivation during the growing season. Our best tobacco farmers are, as a rule, gainers by severe droughts which shorten the crop over a large extent of country, because by obtaining large yields themselves, they reap the benefit from the advanced prices that are always paid for a good product in such seasons.

It is an excellent plan, after a crop of tobacco has been removed from a field, to run a harrow over the stubble or hills one or more times, which effectually destroys the second or after-growth of the plants, which undoubtedly draws from the soil valuable fertilizing elements, all of which are not returned to it again when the after-growth is killed by frost. The harrowing also destroys many weeds that would otherwise mature and scatter their seeds to the detriment of next year's cultivation.

It is advisable to seed a field after three successive crops of tobacco have been taken from it. A seeding to clover then is of great advantage, to be left a full year or more, after which, with the usual manuring, of course, tobacco may again be planted. The clover improves the condition of the soil, by enriching it, making it more mellow and more easily "worked," and leaves it in excellent condition again for tobacco. I have rarely seen a poor crop of tobacco grow upon a clover sod.

The danger of loss from "pole-burn" to tobacco is not confined to the first two or three weeks after the plants are hung up in the curing barn, as many suppose. The "burn" is caused by a peculiar condition of the weather, and may occur to tobacco after it is half cured. It is well to watch the weather, and tend to ventilation, so long as the plants contain any of their natural juices. G. A. G., JR.

Chemung Co., N. Y.

THE RURAL BRANCHING SORGHUM.

It is two months to-day since I first cut the above fodder plant; and the second growth is again cut, and fed to stock. It measured 10 feet in hight, and numbered from 25 to 30 stalks to the hill. The growth seems to me to be marvelous and will, I have no doubt, be discredited by many. But I can honestly say I have no interest in the matter except the good of agriculturists, who are fairly entitled to the benefit of everything that Mother Nature sends forth. The stalks of the second growth are not as thick as those of the first; they are about the thickness of a strong man's thumb, and the cattle relish them greatly. I ought to have weighed both cuttings, so as to show what could be grown on an acre, but I thought of it only when it was too late.

Our Summer has been a very dry one, and we have had only one rain for nearly two months. The Rural Branching Sorghum that I left for seed is *sixteen* feet high to the top of the seed spikes, and is one mass of seed. It still remains a deep green, and has been the admiration of everyone who has passed along the road. I have often wished that a perambulating photographer would come along, so that I could let you see how well it has done in Texas. It looks as pretty as any picture that ever appeared in the Rural, and that is certainly saying a great deal. It is certainly likely to prove a great boon down South. Mine has not been petted or pampered in the least. It received no sort of manure, liquid or solid, yet it has made so wonderfully luxurious a growth in a very dry Summer. In my opinion it deserves to be spread broadcast through the land, or at any rate through that large part of it adapted to its growth.

Our corn will not be over half an average crop; but cotton is doing well. The first "norther" of the season is blowing and the sorghum is bending like the masts of a ship in a gale.

Dayton, Liberty Co., Texas. G. G.

Specimens of Wheat Received Since the Special Wheat Number.

Scott Montgomery, Whitman Co., Wy., T.—Chili Club (heavy heads) five inches; Little Club, three inches.

G. N. Bradford, Mont, Co., O.—Bearded wheat, five inches.

A. J. Bishop, El Paso Co., Col.—26 Heads (unnamed) six inches.

John LaDow, Cedar Creek, W. T.—Little Club, 3½ inches; White Winter, Velvet Chaff, 4½ inches.

Thomas K. Donnelly, Jersey Co., Ill.—Unnamed, five inches.

M. N. Clark, Westmoreland Co., Pa.—Specimens look like the wheat sent out by the Agricultural Department, called Swamp and Yellow Missouri, 3½ inches.

D. Newton, Chehalis Co., W. T.—Blue Stem, six inches. Beautiful heavy heads with three and four grains in a spikelet.

Mrs. Leah Bean, Wabash Co., Ind.—No name, 4¼ inches.

H. E. Martin, Hardin Co., O.—Fultz, four inches; Clawson, five inches.

A. Y. Barclay, Lexington, Va.—Key's Prolific, 5¼ inches.

J. Dunlap, North Co., Pa.—Silver Chaff, six inches: Lancaster, five inches.

B. F. Davis, Williamson Co., Ill.—Patent Office Wheat, Swamp Wheat. [The former looks to us like the Silver Chaff.—Eds.]

C. M. Taylor. Address lost. Several specimens.

Delia M. Newton, Chehalis, W. T.—Beautiful heads of wheat of various kinds, also fine specimens of oats.

Yield of Various Potatoes.

Potatoes planted April 22, 1881, cut to single eyes:—

			Pieces.	Large.	Small.	Yield.
				oz.	lbs.	lbs.	lbs.
White Elephant.....	1 potato—		19	23	3½	26
Excelsior.....	1 "	—4	13	15½	5½	21
Snowflake.....	1 "	—4	12	10¾	4½	15¼
Beauty of Hebron....	1 "	—4	12	10¾	1½	12⅜
White Chester.....	1 "	—4	15	17	3½	20½

The above potatoes were planted in rows 18 feet long, three and a-half feet apart, each kind occupying one row. The ground was given a medium coat of barnyard manure last Fall. The soil was gravelly with a clay subsoil; had been cultivated five years. Those designated large are good-sized, merchantable potatoes. The yield of White Elephants would be at the rate of 269 4-5 bushels of merchantable potatoes per acre. They received flat culture: the soil was loosened up between the rows once with spading fork. The Beauty of Hebron and Snowflake were dug July 29; the White Elephant and Excelsior, August 22; the White Chester, August 26. The tops were about half dead when dug. There was an apple tree in the row of Snowflakes, which probably lessened the yield of them and the Beauty of Hebron in the next row.

Sussex Co., N. J. G. O. Wilson.

Who is Peabody and What is His Corn?

A short time ago there was some little conflict of idea expressed in the Rural as to whether a certain corn, which had the habit of multiple earing, grown in Ohio, was Peabody Corn or Blount's Corn. A correspondent of the Rural, if I remember aright, supposed the corn to be the Peabody Corn and so expressed himself, but afterwards submitted to correction. But, after all, it may be that this correspondent was right and that this Peabody Corn is a distinct variety. For I find it mentioned in Flint's Grasses and Forage Crops, which was published in May 1874, as an established variety at that time under the name of Peabody's Prolific. This corn I have observed is largely grown in Ohio and Kentucky where it is said to be an exceedingly productive variety. Now it would be interesting to know who Peabody was, and how his corn was produced and introduced. Can any one tell us? S.

Flax Raising in Kansas.

Flax will do well on almost any Kansas soil, but it prefers a heavy, black, sandy loam, which while new will produce a crop of from five to fifteen bushels. It can be sown any time in Spring, but on older ground it should be sown as early as frost is over, else the weeds or grass are apt to get started, which would be fatal to a crop. We cut it with a self-rake machine, leave it in the sun in gavels for one day, pick up with a barley fork, and stack; thrash at pleasure with wheat thrasher and separator. The seed is worth an average of $1 per bushel. Total cost of an acre, $5. Stock eat the straw and thrive on it. With mills or machinery for working up the lint the profit would be increased 100 per cent.; but we have no such convenience here yet.

Reno Co., Kansas. W. R. Austin.

Horticultural.

STRAWBERRIES AND RASPBERRIES.

Stray Notes from Connecticut.

Another season's experience with some 20 of our new and well-known varieties of strawberries confirms my belief that

The Crescent Seedling is the most profitable berry for near market of any in general cultivation. What wonders the Manchester will do I have yet to learn. The only objections I have to the Crescent variety are, that it is a pistillate variety and yields fruit of inferior quality. But I think its good qualities more than make up for these two objections. In the first place, it will thrive well on almost any soil. Then, being such a rampant grower, I think it stands a better chance than most other varieties where the white grub is troublesome. Its enormous productiveness is another feature in its favor. It ripens with the earliest, and is of good shape and size. Then its bright scarlet color, together with its bright green calyx, makes it a very showy and attractive berry in the markets, and appearance goes a great way with the general customer. My first picking of Crescent this year was on June 8 and the last on July 2, and it maintained a good size throughout.

The Duncan, as an early berry of fine quality, I think stands without a rival. It is puffed but little by fruit-growers, for it is hardly firm enough to be called a good market berry; but I would recommend it more particularly as a berry for the family. It is an easy grower, and ripens a day or two in advance of the Crescent. The fruit is large, smooth and of delicious flavor.

The President Lincoln I am much disappointed with, as with me it is of little value after the first year.

Miner's Prolific promises well indeed. It yields profusely of large, deep, rich, red-colored berries, of good quality and sufficiently firm for near market.

The Sharpless does not come up to the standard I had hoped for it. True, it yields enormous berries of fine quality, but it fails to perform all it promises in the way of productiveness. Then the neck of the berry becomes over-ripe and soft while the tip is still white, making it, when fully ripe, wholly unfit for shipping. Mulching may, however, help about its ripening more evenly; but wherever I saw the Sharpless in market this season it was invariably with a half-ripe appearance.

The Forest Rose is of no value with me, as both plant and fruit have scalded badly the past season.

The Marvin is a weak grower on light soil, and too uncertain for general cultivation.

Hart's Seedling is an excellent variety for the home garden, being moderately productive and of first quality. The fruit is large, glossy, of deep-red color, very attractive, and sufficiently firm for near market.

Durand's Beauty, for a handsome berry, beats them all. It is, however, a shy bearer, and should be grown in hills.

The Glendale is a valuable market berry, but does not hold out as late as Kentucky or Kerr's Late.

Raspberries.

The Cuthbert I have fruited only in a small way, and am therefore able to give only a short experience with it; but from what I have seen of it I think it a most valuable variety and one that should be largely in every collection. Though not quite so hardy as the Turner, yet in size and quality it is far superior.

The Caroline is a variety that improves

steadily on acquaintance, and I think if its good qualities were better known it would be more largely planted as a market berry. From the first year's growth of canes one might think it a weak and tender variety, but it came through the severe weather of last Winter uninjured, while the Turner was somewhat damaged. Then, too, the Caroline is immensely productive of fair-sized, good-quality berries, firm enough to ship well. Although in flavor it is not quite equal to its parent—the Brinckle's Orange—yet, on account of its hardiness and productiveness, it is superior for general cultivation to any other yellow variety.

A NEW EARLY BLACK-CAP.—On the 12th of May of last year I received from Messrs. Hale Brothers, of South Glastonbury, Conn., three plants of a new early Black-cap to test. The plants were set in ordinary soil and only received ordinary attention. Though on an unsheltered spot of ground, and in no way protected through the Winter, not a cane was injured, while nearly all my other Black-caps were killed to the ground. When they came to fruiting I found them not only very early, but enormously productive. Such a quantity of berries I never saw before on year-old Black-cap raspberry bushes. If they yield proportionately as the plant attains age, a full-grown bush must be a wonder to behold. The berries are of good size, fair quality, firm and solid, and black as jet. With me it certainly promises much better than the celebrated Gregg of the same age. W. M. NASH.

Fairfield Co., Conn.

I AM really glad to learn that the Sharpless has not burned up at the Rural Grounds. I shall know where to come for a few plants, for mine are all gone, and I am sorry, for it is one of my favorites. I am afraid, however, that the editor did not quite understand me. I referred to the terrible drought rather than the liability of the plant to burn. The facts are now as follows:—First went the Sharpless, then the Red Jacket, next the Lincoln, and in quick succession the Shirts, Hervey Davis, Triple Crown, Bidwell, and so on to the end, the Downing enduring the heat the longest of all—a few plants still alive, but looking very melancholy. "Why didn't you water your plants?" Well, so I did as long as anything that looked like water was to be had; but even water got to be so dry at last that it did no good; and, in fact, we have been glad to get enough to make a show of clean hands and faces. I am trying to look at the facts from the cheerful side, but the truth is I am very sad. If I had been a woman instead of a man I might have kept my plants alive with my tears. Both my experimental plots look deplorable, even raspberries dropping their leaves. Blackberries look better, but have not grown an inch in a month. If I have ever seen anything like this before it was so long ago that I cannot remember it. I have saved a few untried things by dint of mulching and a little water, and that is all. These are cremation days.

MY experiments in preparing strawberry plants for planting came to an end weeks ago. The drought was too much for them, though not without its lesson in this direction.

THE drought and its effects have been about the only things talked of lately, the drift of conversation being in the direction of preparing for such a contingency in the future, and this certainly is wise. Farmers here and elsewhere began to cut corn to feed to stock about the middle of August, and in passing through the State of New Jersey to the Delaware River and over into a portion of Pennsylvania, during the second week in September, I scarcely saw a field of corn that was not either cut and stacked or being cut, the ears being about half formed. If there is half as much merit in the silo as is claimed for it, what an amount of fodder might now be saved that will go to waste. As far as I can learn, however, the silo, as at present constructed, is so costly as to cast serious doubts upon its economy, or at least to put it beyond the reach of the ordinary farmer. Is there no member of the RURAL family who has experimented with the silo in this direction, and who can give us reliable data as to the least cost? Every thoughtful man must see the wisdom of discussing the best means for preserving green fodder under such deplorable conditions as are now upon us. "In time of rain prepare for drought" must hereafter be an axiom in agriculture.

IT may be useful to those who have but limited space for wintering plants to know that most, if not all, of the tuberous-rooted begonias may be kept in a dormant state during the Winter. The set I use for summer-blooming I gradually dry off late in the Fall, and put in the cellar for the Winter, where they keep in fine condition, with a little water not more than two or three times. They will keep without any, but not so well. They must be brought to the light as soon as growth begins in the Spring. They bloom stronger for the rest. If the plants have been grown in the bed or the border, they may be lifted on the appearance of cold weather and placed in boxes. If cuttings be put in pots during the Fall they will make small tubers, varying in size from a pea to a hazelnut, and these, when well formed, may also be stored away till Spring, when they will make strong plants for Summer use.

SOME interesting and useful notes might be made on trees and shrubs in reference to their ability to bear a prolonged drought. In the midst of trees and shrubs going into "the sere and yellow leaf" almost before half their growth is completed, it is cheerful to see one here and there which preserves its freshness and color, like a gleam of sunshine lingering on a scene of desolation. Such plants preëminently are the Cercis Japonica, Styrax Japonica, the Wistaria and the Ailanthus, all growing in a soil even lighter than that of the Rural Farm, and yet with their greenness undiminished by three months of drought. A few others could be added to the list, but these deserve to be specially mentioned, preserving, as they do, the spirit of life and greenness where almost everything else seems dead or dying. HORTICOLA.

Pokeweed Destructive to Apple Trees.

From observing and experimenting I am convinced that poke, pokeweed, scoke or garget (Phytolacca decandra) is highly poisonous to the apple tree. The result of my observations and limited experiments may be the means of saving many valuable trees. In not a single instance where poke was allowed to grow within the rootspread of an apple tree did the tree survive. Apple trees in stages of decay having poke growing within their rootspread, have been saved from further decay and often rejuvenated, by the destruction of the weed. I think that most apple trees, once fairly grown, that die in this locality do so from the effects of poke growing near them. The time of an apple tree's life after poke is once established beneath its foliage, is limited in proportion to the number of poke plants that become established—the greater the growth of poke the shorter the life of the tree. I think pear trees are also destroyed by poke. C. W. GOOD.

Farm Topics.

FAIRS AND THEIR USES.

R. GOODMAN.

AUTUMN and the harvest turn men's thoughts toward country occupation and sports in England, and it is considered a great hardship if even Parliament continues in session after the shooting season commences. It would be a greater grievance if there was not an adjournment of the National Legislature so as to allow the members to be present at the "Derby," where "all the world and his wife" have gone from time immemorial. Our ancestors who settled in this country on the shores of New England came over before the great revolution in public sentiment, effected by the Restoration of 1660, when the Royalists came back as the party of reaction; when virtue was a public laughing-stock; when the "heroic age of England had passed away, not by gradual decay, by imperceptible degeneration, but in a year, in a single day, like the Winter's snow in Greece." They came during the long-continued struggle for constitutional rights with an arbitrary king, and only desired a home where they could "glorify God and enjoy the presence of their dearest friends" without hindrance or persecution. The bulk of these emigrants were farmers from Lincolnshire and the eastern counties of England, and they had been so harried under the Stuarts by the enforcement of games, bull-baiting and other harsh sports at unseasonable times, and even pastimes on Sunday—every minister on certain occasions being ordered to read the royal declaration in favor of such pastimes from the pulpit, under the penalty of being deprived of his living if he refused—that our Puritan forefathers naturally passed to the other extreme and avoided all those festive scenes so common at home. "Thanksgiving" was established very early as a season of prayer, church-going and moderate feasting, but the country had got well settled before the inauguration of "fairs."

Elkanah Watson, a merchant of Albany, N. Y., was the real author of the present system of fairs and cattle shows sustained and directed by agricultural societies, and the first one was held under his direction at Pittsfield, Mass., where he had a farm, in the year 1810. This was such a success that Watson soon after proceeded to organize agricultural societies and to establish fairs and cattle shows in other places, and now in every State of the Union there are more or less of them, and many are supported in part by legislative aid.

The word "fair," kindred to the Latin *feria*, a "holiday," has resumed with us its original meaning, and does not mean in the United States a mere temporary market for the sale of goods and merchandise, but a grand turn-out, for one or more days, of the agricultural population and their neighbors to exhibit and be exhibited, to eat, drink and be merry; to scan everything new in the way of implements, vegetables and household goods; bring their own and examine others' cattle, sheep, pigs and hens; try the speed of their own and their neighbors' horses, and at the end hear from some selected orator somewhat too fulsome praises of agriculture and its operations. With most, even of the farmers themselves, this is about the beginning and end of the Autumn festival, and aside from the premiums they may obtain, the gratification of a reasonable curiosity, the excitement attendant upon all large assemblages, and the enjoyment of the wives and children at this annual outing, they return to their farms content to delve again until another twelvemonth brings round a repetition of the show.

Allowing that the main purpose of these gatherings is, as it should be, the recreation of the hard-working class which composes one-half the population of the country and is the main-stay of its prosperity, the earnest farmer, the young, progressive man will find in them something more than mere amusement and leave them with a store of information which he will put to good and profitable uses. The farmer is not an inventive person—every implement he uses has been created for him, and generally by those outside of his calling, and even the continued improvements in the machines adapted to his business are suggested by the inventors or machinists who construct them. But the intelligent farmer can at these "fairs" not only learn something about the growth of crops of every kind, the varieties and improved breeds of cattle, but he can discern the value of the newly-invented machines and tools adapted to his business, which will not only make his personal labor easier, but obviate the necessity, in part, of that costliest of all of the expenditures on the farm—laborers' wages. The farmer who in this age does not in this way take advantage of these annual fairs to improve his condition is behind it—is one of the old fogies whose succulence is diminishing, and he will soon be but a dried and poor stick compared with those about him, whose eyes and ears are open and who can catch fortune as it flies. Aside from the advantages above set forth, there is not much to be gained at fairs in the way of inciting to intensive agriculture.

The efforts to make experimental stations of them have proved a failure; the men who conduct them have not the scientific education needed to carry out any system of chemical tests, hardly the ability to weigh and measure the crops upon which premiums are bestowed. On the other hand, the indiscriminate bestowal of premiums has a universal and somewhat degrading tendency, causing such slight jockeying as removing the best stalks of corn from different parts of a field and replanting them in the acre to be reviewed; denuding the rest of the farm of its proper proportion of manure so that the premium acres should be enriched even beyond their good; bestowing unnecessary time and attention upon the crops and articles to be entered for prizes, and making the acquisition of "spoons" the leading motive of the year's work.

But the crying evil of the combined fairs and cattle shows is the improper selection of judges, especially in the cattle departments. The New England Agricultural Society, which holds an annual fair in one of the Eastern States, and solicits contributions from the whole country, has always had a pernicious system of appointing judges from among its own members, and most of them upon the grounds on the opening day of the fair, when men are got in who may be more or less interested, and are usually incompetent, instead of selecting from States outside of New England breeders especially acquainted with the cattle they are to judge. The New York State Agricultural Society, on the other hand, is very particular in the selection of good judges from outside of the State to examine and award premiums upon thoroughbred stock, and consequently such awards have a value which exhibitors appreciate and purchasers rely on. At the local fairs in every State this evil of ill-selected judges is always prominent; but since the great increase of valuable neat stock there is a movement for its eradication, and farmers of influence cannot better subserve the interests of their sections than by inaugurating reforms in their societies, which will classify the cattle exhibited, apportion them in sheds, and provide judges for each breed competent to pass upon their merits. Horse-racing at fairs will continue to be a prominent and attractive feature; but the horses should be owned within the jurisdiction of the fair and a stop be thus put to the practice of allowing a vagrant, bony, leather-covered animal to come in at the last moment and carry off all the money, to the general disgust of competitors and exhibitors.

Our agricultural fairs are necessities—good safety valves for the whole population—and only need intelligent management to make them instructive as well as interesting, and the farmer who fails to reap some advantage from them to himself and his occupation is wanting in intelligence and enterprise.

Lenox, Mass.

Covering Weeds with a Plow.

The remarks of "S. T. T." upon this subject (page 634) require some explanation. I have used this device nearly every year since 1850, and although it was patented in 1866, "S. T. T." should have coupled with his statement to this effect that the Commissioner declared the granting of the patent to be an ignorant and egregious blunder of the Commissioner of Patents, in view of the fact that the device was then an old one in common use. Farmers need have no fears of claims for royalty growing out of this fraudulent patent-right after this statement of the Commissioner of Agriculture in the very year the device was patented. The short drag chain mentioned by "S. T. T." is totally useless. A trace chain with a piece of rope for the forward part of the loop is heavy enough unless the weeds are very stout, when two trace chains or a light ox-chain will be more than heavy enough. In the illustration in the Agricultural Report the chain is fastened too far forward on the plow-beam. If it be attached to the plow standard as described in the RURAL of August 20, it is just right. In fact, the RURAL'S description is correct in every way, as "S. T. T." will find if he will try it and not mind the so-called invention in the Agricultural Report. H. S.

Societies, &c.

MICHIGAN STATE FAIR.

[Special Report for the RURAL NEW-YORKER.]

THE 33d annual fair of the Michigan State Agricultural Society was held at Jackson, Mich., Sept. 19 to 24 inclusive. The weather was all that could be desired and brought out large crowds, the attendance being over 15,000 on Wednesday, and over 25,000 on Saturday. The receipts for the week ran up to over $28,000, leaving a handsome balance in the hands of the Treasurer. The show in all the departments was very large, and the fair in every way a success. Against the wishes of a large number of the members of this Society, side-shows, chariot races, etc., were allowed, and it is to be hoped that at the annual meeting in January, enough members will turn out and protest against this so that another year this nuisance will be for ever banished. The constitution of this society does not allow such exhibitions and a protest, if put in, can be enforced.

The horse element has a pretty strong hold and real agricultural horse trots took place every day; but as the premiums were what might be called breeders' premiums, style and action in some cases offsetting speed. The show in this department was very large, there being 548 entries, and the stock, especially the heavy draft animals, were good.

In cattle there were 510 entries, including no less than 34 herd entries. The Short-horns made the largest showing, there being 10 herds and a large number of single entries as well as some remarkably fine Short-horn grades. Here they breed more for beef than milk and many fine, large animals were shown. Messrs. Wood, Brooks, Phelps Bros.; Mixon and Shaw were the largest exhibitors. Most of the herds were headed by young bulls, and I noticed a lack of fine aged bulls not only in this but in other classes. There were only two herds of Devons, the show not being nearly as large in this class as at Elmira. Messrs. Leich and Burrows were the exhibitors. Holsteins showed up finely, five herds being entered and on the grounds were a number of smaller entries. The Holstein is growing in favor in this section. Messrs. Phelps, Underwood and Smalley were the largest exhibitors. Messrs. White and Col. Rodgers showed fine herds of Ayrshires and the entries in this class footed up well. The show of Jerseys was remarkably fine, but not as numerous as at Elmira. I hope to be able to furnish the RURAL with a photograph for a picture of the Jersey bull Spiræa's Lennox that carried off the first premium at the head of the Clover Lawn Herd. Messrs. Dean, Bates, King, and Kingman, were the

largest exhibitors in this class. There were seven herds of Herefords on exhibition and they made an excellent showing. Messrs. Burleigh and Bodwell, of Maine, carried off the first premium on herds and also 23 other premiums on their other exhibits of Herefords and Polled Angus, amply repaying them for their long trip. The Herefords are more popular in this State than in New York, and the breeders here show marked improvements in their exhibits over previous years. The Maine exhibit numbered 23 head and the next largest exhibitors were Messrs. Phelps and Seeley's and Parsons of Ohio. Two fine herds of Polled Angus (or Galloway's as they are here miscalled) were exhibited by Messrs. Burleigh and Bodwell of Maine, and R. B. Caruss of St. John, Mich. These cattle have been talked of considerably in the RURAL and I heard more than one prominent breeder on the grounds here say that they promised to be the coming breed in this country. They improve with acquaintance and it seems highly probable that in time they will turn out to be in this country all that the RURAL has claimed for them. The Maine herd had at its head the fine yearling bull Highlander, and carried off first premium. The Michigan herd was headed by the four-year old bull Lord Lochienor. I hope to see both of these bulls pictured in the RURAL later on.

The show of sheep was simply immense, 414 entries competing. The Merino exhibit was very fine, some of the best sheep in the State being present. The show in middle and long-wools was large but not up to that of the fine-wools in quality.

There were 160 pens of swine—not as many as I expected to see here, but the quality made up for the lack in quantity. It was difficult to get names of breeders in these classes; and I would recommend the society to adopt the N. Y. State Ag'l Society's plan of numbering and cataloguing the exhibits as a great assistance to visitors.

The poultry show was in a building adjoining one of the side-shows, and the noise of the two was sufficient to satisfy the most enthusiastic amateur. The display was not large, but good, and would have attracted more attention if it were not for the side-show band.

The fruit, flower and vegetable hall was well filled. Fruit looked better here than at Cleveland, Pittsburgh or Elmira. Apples, pears and grapes showed the effect of the long-continued drought, but not as badly as at the places above mentioned. The RURAL'S correspondent, J. S. Woodward, made a handsome display of Niagaras that looked as though there had been no drought in his section of New York. The vegetable and cereal exhibits were very large, showing that the Michigan farmers must either pay more attention, as a rule, to farm gardening than the farmers of other States, or that they think enough of their farmer friends and their State Agricultural Society to bring forth the best of their products and show what can be done. This department would put to shame all the Eastern fairs that I have yet seen or heard from. Among the large wheat and grain exhibits I noticed a handsome display made by Chas. Grant, Thornbury, Ont., Canada. Right here I think that Golden Grains or Black-bearded Centennial is coming in again at 25 cents for a small package under a new name—viz.: "French Spring." Several heads of this would-be new sort were placed alongside the illustration of the Black-bearded Centennial in the RURAL Wheat Special, and the general opinion was that they were identical.

Domestic Hall, as usual, was well filled.

The agricultural implement show was the largest I have ever seen on a fair ground outside of St. Louis. There must have been at least 20 acres filled with all the latest improved machinery. There were over 20 portable and traction farm engines in operation. Right here I must protest against the running of self-propelling engines around the grounds indiscriminately. If there is any use for a track on the grounds of an agricultural fair this is what it should be used for. After two or three people have been run over and killed, the present reckless practice may be stopped—*better stop it now.* There were acres of thrashing machines and clover hullers in full operation with steam or horse power. Twine and Wire self-binding harvesters of all descriptions, were in full force; while grain drills, cultivators, plows etc., were there by the hundreds. Although a number of great improvements were shown in different machines, I noticed only one new one. It was a combination Spring Tooth harrow and drill on broadcast seeder principle, made by B. S. Williams & Co., at Kalamazoo, Mich. The displays of the large mower and reaper concerns, such as Walter A. Wood, Bradley, Johnstons, Gregg & Co., and others, were run by shaftin so that farmers could see the principal points of the different machines. The large plow concerns made some elegant exhibits, their plows being finished and polished in the most skillful and artistic manner. The Gale M'f'g. Co.; the Oliver Chilled Plow Co.; the South Bend Plow Works were particularly noticeable in this respect. This is the country of spring tooth harrows and there must have been an acre of them. One of the pleasant incidents of the fair was the presentation to Superintendent Hanford of a handsome gold watch and chain: he has been General Superintendent of Machinery Department for 12 years.

The old reliable house of P. P. Mast & Co., Springfield, Ohio, who have a larger business in their line in this State, than any other manufacturer, and claim to have sold more drills in Michigan during the past season than all their competitors combined, made the largest and most varied exhibition of drills on the grounds. Recognizing the fact that no drill is adapted to all kinds, and conditions of soil, and having a trade that covers every State and Territory in the Union and also nearly every country where wheat is grown, this enterprising firm is now building and had on exhibition here Buckeye spring pressure drills for hard ground; Buckeye shoe drills for sandy and mellow soil; Buckeye fertilizer drills for soils that need enriching; three and five-hoe Buckeye drills for drilling wheat among standing corn and the old reliable Buckeye force-feed hoe drill which for the past 20 years has been well known to our readers. Another great improvement shown by them was their new Buckeye spring tooth harrow, which was lately illustrated in the RURAL, and which promises to meet with a large sale, as it fills a want long felt for some thing that would work the ground finer than a cultivator in preparing for wheat and do away with the annoyance of breaking pins or straining cultivators on stony or rough ground. By a lever at the side of the driver's seat, the teeth can be forced into the hardest ground and kept from running too deep if the ground is mellow, or made perfectly adjustable to follow the surface. A seeder can be attached for such as are in favor of broadcast seeding. They also exhibited a full line of Buckeye broadcast seeders, cultivators, plow sulkies, cider mills, etc.

The Albion M'f'g. Co., Albion, Mich., made a fine display of their new Albion spring tooth sulky harrow and cultivator with broadcast seeder attachment. The advantages claimed for this over ordinary dragging harrows are lightness of draft, adjustability of frame by which pitch of teeth is governed, and the perfect manner in which it follows the surface of the ground. A simple device governs the depth to which the teeth penetrate, and any boy old enough to manage a team can work it either from the seat or on the ground while the harrow is in motion, and hold the teeth in hard ground or regulate their depth in mellow or soft soil with perfect ease. By simply removing two teeth the harrow is convertible into a corn cultivator. It is provided with a pole adjustable for either two or three horses, and always follows the line of draft and the teeth will not track on sod ground or hill-side. When desired, an excellent broadcast seeder attachment is combined with it, making three perfect implements in one. A large number of these machines are now in use both East and West and are giving complete satisfaction.

W. H. K.

40th Exhibition of the Queens Co. Agricultural Society.

FIRST PRIZES ALL AROUND TO THE RURAL FARM EXHIBITS.

FIRST PRIZE TO THE

RURAL HEAVY DENT

AS THE BEST WHITE CORN.

First Prizes to Wheat and Oats.

[RURAL Special Report.]

NEXT only in general importance to the State Fair of New York is this of the above Society. The almost unprecedented drought which has injured or destroyed all late crops, and especially corn, on most parts of Long Island, would naturally have the effect to discourage farmers from entering products which there was reason to fear could neither reflect much credit upon themselves nor prove objects of interest to visitors. Nevertheless, the entire display, though inferior in quality, less in quantity, and far less varied than in the average of previous years, was remarkably full and excellent to the eyes of those whose lands have suffered the full extent of the drought. The products from the Rural Farm were viewed with notable favor and many were the complimentary remarks passed upon them. Every entry received a first premium. The awards were as follows:—

1st. For the heaviest and most perfect 12 ears, any number of rows, of white corn. Awarded to the RURAL HEAVY DENT.

2nd. For the heaviest and most perfect 12 ears, any number of rows, of yellow corn. Awarded to the Chester County Mammoth.

3rd. For the greatest number of best varieties of wheat exhibited in the straw. Awarded to the RURAL collection of 60 different kinds.

4th. For best sample of wheat, 50 heads, in the straw. The premium card was displaced so that we did not ascertain to which of our varieties this first premium was awarded.

5th. For the greatest number of grains and best varieties from one exhibitor. Awarded to the RURAL'S entire exhibit of corn, oats and wheat.

6th. For greatest number of grains to a head, bald and cultivated. This was awarded to one of the RURAL wheats originating upon the Rural Farm and not yet named.

7th. For the largest number of grains to a head, bearded and cultivated, in straw. This was awarded to another of the RURAL wheats not yet named.

8th. For the greatest number of varieties of oats. This was awarded to the RURAL collection of oats.

9th. For the best sample of oats, 100 heads, in the straw. This was awarded to Mold's Ennobled Oats.

10th. The best sample of hulless oats. This was awarded to Pringle's hybrid hulless Excelsior Oats.

The field from which the prize ears of the Chester County Mammoth were selected was manured with 400 pounds to the acre of Bowker's corn fertilizer. It is the same field upon which the great yield of Blount's Corn was harvested last year.

The field from which the prize ears of the Rural Heavy Dent were selected was manured with 600 pounds (upon one acre) of Mapes' corn manure. It is the corn experiment field of the present season. The rest of the field—save the special plots of one-twentieth of an acre each—received no manure of any kind, as our readers will remember.

Mr. Aaron A. De Graw in the cattle department exhibited some splendid Jerseys. He received the first premium for Jersey bull, "Pride of the Island," two years and four months old, a portrait of which noble animal we hope to present in a future number.

Mr. Davison took the first prize for Jersey bull (Ben Nevis) one year old: W. J. H. Kenyon for a fine Guernsey bull two years old, "Stuben Forest;" David Carll for a three-year-old Ayrshire bull, also for several Ayrshire cows and calves. Of thoroughbreds only Guernseys, Jerseys and Ayrshires were entered, though premiums were offered also for Short-horns, Holsteins and Devons.

In the implement department we saw nothing that has not frequently been alluded to in these columns.

Contrary to all reasonable expectations, the attendance was large. But the management of this fair is so complete, the grounds so ample and well suited to exhibition purposes, that visitors find plenty of enjoyment and more than enough to engage their attention for a single day. "MAJOR."

KANSAS STATE FAIR.

[Special Correspondence of RURAL NEW-YORKER.]

TOPEKA, Kansas, Sept. 22, 1881.

THE first annual fair of Kansas was opened on Monday, the 12th, under the most favorable auspices. The buildings were nearly all new and built without regard to expense, probably being as good as can be found in the West. The building for sheep was especially good, and might well be copied by older States. In the Stock Department there was a fair exhibit. There were several herds of Short-horns that would compare favorably with the Short-horns found in older States. The exhibit of Jerseys was small, and hardly up to the standard of that popular breed. In Holsteins one herd of ten head was exhibited, which were good.

In the Swine Department there was a large exhibit, mostly of the Poland-China breed, though several pens of the Berkshire and Jersey Reds were on exhibition. The exhibit of horses and sheep was small, though there were some fine animals shown, notably the imported Clydesdale stallions.

In the Horticultural Department the display of fruit was in all respects very fine, comprising over 1,800 plates, and the fruit appeared to be of the best quality. Douglas Co. exhibited 115 varieties of apples and 10 varieties of pears and as many of peaches. Leavenworth Co. exhibited 125 varieties of apples, 30 of grapes, 30 of pears, besides many samples of small fruits. Abner Allen, of Riley Co., exhibited 80 varieties of apples, besides many varieties of grapes, pears and peaches. Washington Co. exhibited 30 varieties of apples.

The State Grange of Kansas offered for the largest and finest collection and display of farm products, including the garden and orchard, $300 for first premium, $200 for second, and $100 for the third. Four Granges competed for these premiums, and the exhibit from each Grange was especially fine. Capitol Grange, of Shawnee Co., won the first premium. In fruit they exhibited 100 varieties of apples, 15 of grapes, 10 of peaches, and 8 of pears. Neosha Grange, of Lyon Co., won second premium, and Lone Elm Grange, of Johnson Co., third premium. The Lone Elm Grange exhibited 97 varieties of apples, 15 of grapes, 14 of pears, and 6 of peaches. The Atchison and Santa Fé Railway Company made an exhibit of fruits and products of ten counties in which their road runs, which was simply grand, and no one could leave the building with any doubts as to the future of Kansas.

On Thursday 25,000 people attended the fair. The Secretary said there would be money enough to pay all expenses and leave some in the treasury. The first annual State fair of Kansas may be set down as a great success. D. W. C.

Dairy Husbandry.

SKIM CHEESE AND "ANTI-HUFF."

L. S. HARDIN.

THE line of demarkation between an honest imitation and an adulteration of our food products is not always easily drawn, and the manufacturers of the genuine article are claiming that the imitation is a fraud and a great injury to them. In the process of butter making there is a large residuum—butter-milk and skim-milk—that in the private dairy can be profitably disposed of on the table or in cooking and feeding to fowls, pigs and other domestic animals. Thus the loss, if there is one, is not felt so long as butter making is confined to the farm. The erection of creameries or butter factories, bringing together thousands of gallons of milk daily to be made into butter, left, of course, an immense quantity of skim-milk and butter-milk on the hands of the factory owners. It became necessary that they should devise some means for making a profit out of this material. At first hogs in large numbers were purchased to consume it, but the immediate proximity of a large pig-pen to a butter factory is not a desirable state of affairs. Milk and cream are too sensitive to bad smells to remain unpolluted when exposed to a breeze from the direction of the pens.

Pipes a half mile long were often used to carry the milk to the pens, but without removing the trouble. After pigs had proved a poor shift, calves were tried with somewhat better results, so far as the quality of the butter was concerned, but not always with equal profit, as it is much more difficult to handle and raise calves than pigs in large droves and upon one article of diet. Later came the art of making the factory skimmed cheese hard and leathery as it was, and there has generally been more profit in it than in any other method of disposing of the skim-milk. Then, to give it a reputation to start on, only one-half the milk—the night's or morning's supply—was skimmed, thus leaving one-half the cream in the cheese. This was what the Sunday School books call the first step in a downward course. As the price of butter would rise, the creamery hands would skim closer and closer until the dealers either absolutely refused to accept the cheeses or prices for them fell below the cost of transportation.

In the competition between factories to declare the largest dividends to their patrons or owners, invention was called upon to supply the oil taken off with the cream, and this caused the first use of oleomargarine and for a time it was thought this oil would entirely supersede the use of cream even in making the finest quality of cheese. That bubble burst, however, and a new substitute has been devised called "anti-huff," it seems that when this hard, skimmed cheese is subjected to a high temperature it swells, puffs, or, as it is called in the vernacular of the cheese monger, "huffs." So to speak, it gets its back up, and looks not unlike a baked dumpling. Then it rapidly becomes too high-flavored until absolute putridity sets in. The flavor follows these changes with rapid steps from off flavor to sharp, sour and bitter, when the whole article is usually dumped into the sea. Worms have nothing to do with these changes—they do not like skim cheese. The whole trouble comes from the formation of acids and gases due to age without ripening. A cheese properly made will go on ripening almost indefinitely, but if not correctly made, decay takes the place of ripening. To prevent this puffing in cheese made of skim-milk and butter-milk several parties have within the last two or three years been putting upon the market a compound for allaying this tendency. It is generally supposed to have for a base some alkali, as potash, which by chemical action holds in subjection the gases that cause the cheese to huff.

These chemicals rarely stand still but generally insist upon forming one gas or acid or another. Their presence utterly precludes any

idea of ripening in the cheese. The alkali, however, holds the cheese in apparently good condition long enough for it to get fairly launched upon the market and well out of the hands of the manufacturer. But as evil doings are said to be not unlike to chickens that come home to roost, the maker is very apt to hear from his cheese if it should not be consumed at an early day. This has brought about some hard feeling between makers and dealers. I noticed some months since that a dealer in the Elgin Board of Trade had sold 250 of these anti-huff cheeses and then had them returned on his hands at a total loss. Another, we are told, exhibited in the Board of Trade an anti-huff cheese which was in such a demoralized condition that its maker couldn't possibly have recognized it. The alkali used in it caused it to smell like three soap factories consolidated. That one cheese should convince all factory-men that anti-huff is worthless and a trifle risky to use not only so far as the preservation of the cheese goes but for healthfulness. In support of this last point Dr. Teft at the same Board some weeks before the above occurrence, displayed a part of a stomach that he had subjected to this alkali, and it was nearly eaten away, a condition highly suggestive of its effect upon the human stomach, when used as an article of food. This anti-huff has taken for one of its fields of operation the Northwestern dairy section and it has played such havoc with the Chicago cheese dealers that we find them in arms against it.

On the other hand, Messrs. Whitman & Burrell, who are owners of one of these anti-huff patents and therefore not altogether disinterested witnesses, claim that the mixture was not the Simon Pure article; that the latter is meeting with complete success at their own factory and in those of their neighbors; that a cheap food supply demands that this skim-milk and butter-milk should be utilized; and that when properly made the genuine anti-huff contains no more potash than many other good and wholesome articles of diet. Between these claims I suppose one must let the quality of the cheese decide, which it in time will certainly do, but, in keeping with the practice announced in the war on oleomargarine, I can see no reason why this doctored cheese should not be sold for just what it is, and, for the matter of that, so should buttermilk and skim cheeses. All of them should bear upon their faces a plain and legible brand honestly designating what they are. The workers in anti-huff have formed an alliance with lard cheese, and one being about as good and honest as the other, I can see no legitimate objection to the union; but it looks advisable for dealers in honest goods to leave the whole thing alone.

The Herdsman.

GOATS.

THAT estimable lady the Baroness Burdett Coutts, now, by her marriage with an American gentlemen, Mrs. Ashmead Bartlett, is well known to be a most benevolent and philanthropic person. In pursuit of her benevolence she has of late made some persevering efforts to induce people to keep goats for the furnishing of private family dairies. Under her patronage and aided by some of the English aristocracy a British Goat Association has been formed, every member of which is pledged not only to think and speak well of the goat, but to keep one of these animals and to induce others, especially the poorer persons who are unable to keep cows, to procure goats and keep them for the sake of their milk. Not only is this idea prevailing in England and the goat under this fashionable patronage, holding up its head, so to speak, but some persons here in America are taking pains to make the goat popular. A leading daily newspaper recently in a conspicuous manner, made an attempt to palm off the goat upon us by giving it false and mistaken credit for being a valuable dairy animal. It even went so far as to state among other particular claims to this unwarranted merit, that the well known and delicious Roequefort cheese was made from goat's milk, and suggested in a somewhat indefinite manner that to the goat we owe the Neufchatel and the Brié cheeses. Now the goat by no means deserves this high credit, for as a dairy animal it is a delusion and a fraud, and there is no particular cheese that owes its existence or character to the milk of the goat. The Roequefort cheese is the product of ewe's milk and not of that of goats. A few goats are kept among the flocks of sheep at Roequefort; but among the four or five hundred thousand ewes kept there, there are but a dozen or two of goats, and the popular Neufchatel and Brié cheeses are made of cow's milk, so that the goat is given a credit that does not belong to it and the truth should be told lest the public should be led astray.

In fact there is nothing about the goat that is to its credit as a domestic animal except its voracity in regard to waste paper and rubbish which it disposes of greedily and is thus cheaply fed; but, on the other hand, there is much to be said to its discredit for its destructive habits. A report comes from Cyprus that this unfortunate island is desolated by the Cyprian goats, which have utterly destroyed the groves and woods and now prevent the growth of any more by their avidity for bark and browse. We know something of the goat here already, but so far there is nothing lovely or desirable about it, and all the service it has done has been to give a small quantity of milk in return for a hundred times its value in damage to gardens and shade trees and a thousand times the value in annoyance to the neighbors of the owners.

Breaking in Heifers to the Milk-pail.

The following is my method of breaking a heifer to be milked, etc.—After the calf has drawn the first milk from the udder, I secure the heifer by tying the head close to the manger. Then I have ready a strap about seven feet long, with a buckle on one end and holes made one-third of the length from the other. If the heifer is wild, never having been handled much before—which is frequently the case here in the West—I use a small forked stick to catch the end of the strap under the heifer, the other end being gently laid across her back just in front of the hips. The strap is then gently drawn tight—pretty tight if the animal is wild. She will probably abominate the arrangement the first time, and will very likely not be in love with it the second, but I have yet to meet the heifer that was not broken in, and that thoroughly, by this means. No heifer so girt can kick, nor get away, and if one is kind to her she quickly and quietly "accepts the situation." Although I have invariably used the strap, I have never seen any ill effects from it, and would strongly recommend it. H. T. BURRIS.

The Poultry Yard.

POULTRY FOR THE MARKET.

A LITTLE extra care and attention in preparing poultry for market will be well repaid, in the end. It is quite essential that the birds should reach their destination with a good appearance and in good condition, if fair prices are expected; hence it is for the shipper's interest to take every precaution to have these two requirements fulfilled.

The practice of "stuffing" the fowls with cooked meal or anything else in fact, for a day or so preceding their shipment, is unwise. If the food is not well digested before the fowls are killed, fermentation and putrefaction take place, and the result is that a greenish, putrid look is given the dressed fowl, and it becomes unfit for the table. It is not a good plan to let fowls run at large just before they are marketed, as the unwholesome food they are liable to pick up may taint the flesh, unless it has time to become thoroughly digested and assimilated. Moreover, they should have no food whatever for ten or twelve hours before killing.

Much depends on the manner of killing fowls to have them marketable. The best method undoubtedly is to make an incision well back in the roof of the mouth with a sharp-pointed knife, and divide the vertebræ or touch the brain. This causes instant death. The head and legs should be left on and the entrails not be "drawn." If the legs and necks of turkeys and chickens are dry-picked immediately after killing, they are not as apt to become discolored when exposed to the air. Very fat poultry may be dry-picked to advantage, as it sells a little higher and will carry a little better from distant points, but it does not improve the appearance of somewhat lean fowls.

In scalding, the water should be boiling-hot, and all pin-feathers should be carefully removed without breaking the skin. If ducks and geese, after scalding, are wrapped in a cloth for a couple of minutes, the down will then come off easily with the feathers. "Plumping," as it is called, is accomplished by dipping the fowl, after picking, in boiling-hot water for about two minutes, then placing it in cold water for ten or twelve minutes more. This gives a much brighter and fairer appearance to the flesh.

As to packing for shipment, boxes holding about 200 pounds are the best for turkeys and geese and, in fact, for all poultry, though smaller "game" may be shipped in barrels. In the bottom of the box or barrel put a layer of clean, dry straw, then alternate with poultry and straw until the package is so full that the cover will keep the contents from moving about, thus lessening the risk of bruising. Pack with the backs up, legs outstretched and the head bent under.

Now, a word concerning the marking of the package. "It's a terrible bother," said a commission merchant in our hearing the other day, "not to have packages properly marked and advised. We received a lot of pears recently without the consignor's name or address, and, some time afterwards, a postal card informed us that such a lot had been sent. But a good sale was lost." Every shipper, if he does much in that line, should have a brand or mark of his own, so as to establish a reputation for his goods, and this brand will be looked after by the consumer. Each package should bear the name of the consignor, number and variety of contents and the name of the consignee, and thus much annoyance may be averted. This is true of all shipments on commission—poultry included.

Miscellaneous.

CATALOGUES, ETC.

THE EARLY VICTOR GRAPE. We have received a descriptive circular and price-list of the new Kansas grape, "Early Victor," from Mr. John Burr, of Leavenworth, Kansas. Of this Mr. Geo. W. Campbell, the originator of the "Lady," and an excellent grape authority says:

"I regard the Early Victor, as far as tested, as the best and most promising early black grape that I have ever seen. I have grown it four years and fruited it twice. It has always made a good and perfectly healthy growth, with strong, thick, native foliage of the Labrusca type; in quality rich, pleasant and sprightly, with small seeds and very little pulp; fine flavored, without astringency or coarseness; it shows no tendency to fall from the cluster when over-ripe. It is very early in ripening, I believe earlier than the Hartford, or Moore's Early or any other black variety I have grown."

DESCRIPTIVE CATALOGUE of Fruit and Ornamental trees and plants cultivated at the Great Northern and Southern Garden and Nursery, Wilmington, Delaware, Randolph Peters, Proprietor. A catalogue of 65 pages with a colored plate of the Gibbs and Langford's Seedling Apple, and explicit details as to transplanting and culture. Free to applicants.

What Others Say.

THE POCKLINGTON GRAPE.—Green's Fruit Grower comments upon an article in the Gardeners' Monthly, which compares the Pocklington with other white grapes. The article as we find it in the Fruit Grower concludes as follows: The Pocklington is a seedling of the Concord, just as strong and vigorous a grower, fully as hardy to withstand the Winter's cold and Summer's fluctuations in temperature, or to resist mildew as its parent, the Concord. Last Fall I kept a bunch each of Lady Washington, Niagara and Pocklington till near the middle of December, on a plate in a close room. To my surprise, the Lady Washington, although the thinnest-skinned, was apparently the best keeper. I have no doubt, with a little care, either of these grapes may be kept to January 15th in good condition. To my taste the Lady Washington is entirely the best as to quality. The Pocklington is the next best, and while we are in doubt as to whether we can grow the Lady Washington successfully, it being a hybrid, I think there is no doubt whatever that the Pocklington will thrive and do well over a longer and wider extent of country than any other good grape, not excepting the Concord; for where the Concord will do well, I believe the Pocklington will do better because of its earliness. While I cannot agree with my friends who think the Pocklington grape better in quality than the best hot-house grapes, I do think it will prove the best and most valuable purely American Grape we may have for years. And on purely American and of the Labrusca species, I think we shall have to rely for our crops of market and wine grapes in most localities of this latitude east of the Rocky Mountains. I consider the Pocklington Grape, the *white* "grape for the million." We have had scores of white grapes introduced, tested, proved wanting, and discarded within the last thirty years, but the Pocklington has come to stay. It is of the largest size both in bunch and berry and the most successful white grape in taking premiums at fairs. It is seen above all others, it attracts more attention, and recommends itself—the grape-men cannot let it alone.

DAIRY PATENTS.—We find an article on "Dairy Patents and Royalties" in the enterprising Western Rural by our respected friend Mr. X. A. Willard. He says that the dairy business is now pretty well covered over with patent rights. Nearly every implement and appliance, besides some of the processes of manufacture, are loaded down with patents. A dairyman must now "look sharp" how he makes his cheese and butter, and uses his butter-milk, or he will be fastened with a royalty. Town people who enjoy a "bite of good cheese" have little idea of the manifold patents now employed in the production of this simple article of food. Let us enumerate some of them: The patent milking stool patent pail for milking: patented strainer for straining the milk; patented carrying cans; patented scales for weighing the milk: patented dumping cans: patented milk vats and patented heaters; patented agitators and patented coolers; patented rennet and coloring extracts; patented curd knives for cutting the curd; patented curd mills for grinding the curd; patented hoops and patented press, patented bandages and a patented appliance for putting them on the cheese. These are a part, and there are also innumerable patents surrounding the butter maker.

AMBER CANE IN MINNESOTA.—In a letter from Mr. Kenny of Morristown, Minn., to the Pioneer Press, he claims that Minnesota has the best climate in the United States for the production of sugar from the Amber Cane. The cane deteriorates very rapidly in warm weather after ripening or being topped and stripped. It soon begins to turn red, which means souring. But at a temperature of 60 deg. it will keep a great while, and it is easily secured from frost by being piled, but in the warmer South this treatment does not succeed. The cane, up to Sept. 15, should be ground immediately on being cut. The different cane mills vary in yield of juice. The vacuum-pan, by which the sirup can be boiled at nearly 100° below the ordinary boiling point, is much safer and better than the open pans in which the boiling must be done as rapidly as possible for best results, and the high heat burns up a portion of the sugar. There is better knowledge about clarifying, and the industry, Mr. Kenny says, is fast coming to the front.

A. W. PEARSON describes, in the Country Gentleman, an epidemic which has befallen the Wilson Blackberry in Cumberland County, New Jersey, and which threatens other sorts. It first appeared about six years ago, and is called "the double blossom," from its effect in multiplying blossoms when there should be but one, and producing small amorphic flowers in clusters, usually having no stamens and often no pistils, and therefore barren. Mr. Pearson says that he at first naturally supposed this to be a consequence of extra culture, the influence of which is generally supposed to be the primal cause of double flowering. But observations do not warrant this conclusion, as the affection is found to spread from points where it has first broken out, although not evenly, some plants remaining healthy and fruitful while all around are the reverse. It has invaded other cultivated varieties, and even, to some extent, the wild blackberry bushes of the woods.

SOLDER AND SICKNESS.—The Government of the United States, says the Inter-Ocean, might with good reason follow the example set by France, through a decree that has just gone into effect, ordering that all the cans which are to contain meats, fruit, etc., be soldered outside instead of inside, and that the cans themselves must be of plate made of or covered with pure tin instead of any of the alloys often used. The public frequently hears of families that have been poisoned by canned meats, tomatoes or fruit, but it never hears of the tens of thousands of people whose health is temporarily and painfully deranged by the same cause. Few persons realize how great the consumption of canned fruit is in the United States. All the year round these goods are used in the almost countless camps of miners, soldiers, hunters and excursionists, while in Winter they find their way into nearly every family in the land. The lead pipe scare, in connection with drinking water, has good enough reason, but in the can there not only is lead, but generally an acid to take it up far more rapidly than water could do.

FROM the Report of the Ingham Hort. Society, as reported in the Michigan Farmer, we take the following: Dr. Marshall gave his experience of several years in raising plums. He was satisfied that the only remedy for the curculio is to shake the pests on to a sheet. This is sure, and by adopting it he secures a full crop. He thought people failed in the matter by not doing the work thoroughly. It should be commenced before the trees are quite out of blossom.

"BARN-STORMING," says the N. Y. Herald, is the theatrical term for a country tour where the "combination" stops but one night in a place, and that a small place, and then moves on—if the landlord does not evince a fondness for trunks and other little articles for which landlords are strangely inclined to show an attachment at times. Time was—oh! golden happy days of rustic innocence—when our country cousins would greedily accept whatever came their way and ask for "more." But they have learned a thing or two, and now when a manager, with a worthless combination, a lot of three-sheet posters and samples of emasculated New York press criti-

cisms, reaches a moderately large town the wise ones quietly take him aside and advise him to "move on to some small village where they don't know much." So the manager goes "barn-storming" to the small towns. We do not hesitate to warn our country readers that it is best to inquire carefully into "attractions" arriving in their towns the coming Winter claiming patronage because of fictitious indorsements from New York.

THE good man bears with the faults of others very patiently; the bad man bears with his own in the same way. . . . . The man who plans a barn with modern improvements should be careful that his wife has modern improvements in her kitchen.—Iowa Homestead. . . . . If you wish to be happy you must learn to be just deaf enough not to hear some things and just blind enough not to see others. . . . . The difference between infidelity and true religion is this:—The infidel tries to make the world useful to himself, while the Christian tries to make himself useful to the world.

Everywhere.

SEARCHING FOR APIS DORSATA.

[WE have received the following communication from Mr. Frank Benton, the eminent apiculturist, who lately explored the primitive forests and tangled jungles of Java and Ceylon, in search for the famous *Apis dorsata*, which he intends to introduce into this country. He is doing a great work, and deserves the encouragement and gratitude of all who are interested in apiculture.—EDS.]

LARNACA, Island of Cyprus, Mediterranean Sea, Aug. 6, 1881.

After having passed some days in the beautiful city of Singapore (Further India) and the vicinity, a land of great palms and ever-verdant hills clothed to the summits with strange forms of vegetation, I sailed across the southern point of the China Sea, passing Britang, Lingen and a thousand other equally beautiful islands, into the Strait of Banca. We crossed the equator near the island of Lingen, but I was not fortunate enough to catch sight of that very ancient and respectable Great Circle.

Crossing the Java Sea, our good ship cast anchor before the harbor of Batavia, the great Handelsstadt of the Dutch East Indies and in size the second city of Malaysia. A portion of this city (the older part) looks much like some town in Holland—red tile roofs, a canal, etc., making the representation natural. The other part is quite East Indian, with its luxurious gardens. I traveled pretty well all over the wonderfully rich and beautiful island of Java, whose length is 600 miles, and whose population is over 22,000,000. I have some acquaintance with the Dutch language, but I found that most of the Dutch residents could speak English, French or German, so I got along very well with them in making myself understood. But my work took me into the forests and among the natives of remote villages, where there were no Europeans. No interpreters can be obtained, the European residents all having employment, and also all those natives who know anything of Dutch. Few of the natives learn the difficult Dutch language, but the Dutch all learn Malay. The Superintendent of Public Instruction for the Dutch East Indies detailed a Malay student who had learned some Dutch at the Government Agricultural School, to accompany me, but only for a few days, since his examinations were coming on. Thus with but a few weeks before me to spend in Java, I saw myself obliged to learn the Malay tongue, or enough of it to serve my purpose for the time being, so I sat down with a book and studied two or three days; then I went into the bazaars and out into the villages and talked all the while. In two weeks I could get along very well, for the Malay language is the easiest tongue I ever met with. It is called "the Italian of the East," and is, in fact, largely composed of soft vowel-sounds, and its pronunciation presents no difficulties.

By rail, coach and on foot I reached the very center of this mountain-land several times, made many excursions up the forest-covered mountains, and once reached the summit of an ever-active volcano, the Gedé, or "The Great" volcano, and gazed down into its awful, seething, steaming and thundering crater. The ground all about me was hot, and steam issued from every crevice. Acres of lava and scoria covered the plateau about the crater. Looking about I could count 50 huge mountain peaks, and far away on either hand were fertile plains stretching to the sea. Surely this was a glorious mountain land. I felt well repaid for my toilsome journey up the mountain—up, up, all night long, through the tangled, dripping vegetation of a luxurint tropical forest, through the water and over the rocks of the steep mountain path. An hour or two after sunrise this great volcano shrouds itself in clouds and only comes forth in its majesty when another day breaks. The descent took us until late in the day. I cannot stop to enumerate the twentieth part of the wonderful forms of vegetable life that met my gaze. Giant tree-ferns, sometimes reaching a hight of fifty feet, and beautiful begonias were numerous, while honeysuckles, violets, St. John's-wort, and the Royal Cowslip were strewn along the way. The beautiful flower last mentioned is said to be found nowhere else in the world.

In Ceylon I passed a month on my way home, and met with many adventures while securing the Great East Indian bees in the jungles of that island, second only to Java in richness. I brought with me some colonies of the far-famed bees, Apis dorsata, but a severe attack of East Indian jungle fever, which I had just before leaving India, and which accompanied me much of the way on my return journey, obliged me to neglect these bees, and many of them died after my arrival in Beyrout, Syria.

My work in this search for the Apis dorsata in a distant land is the first of the kind that has been attempted, and I am very grateful for the words of encouragement from eminent American and European bee-culturists.

FRANK BENTON.

RURAL SPECIAL REPORTS.

Arkansas.

BEEBE, White Co., Sept. 25.—We have had two fine rains in September, and it is cooler. They came too late for cotton, but they started the grass which the stock is rejoicing over. Some have picked corn so as to get the good of the grass. Cotton is going to be short. A neighbor has 32 acres and will make four bales. I have 26 acres and will make five bales. My rust-proof oats were the best and heaviest. The Brown Oats were not so good. New Zealand Oats were very good. The Washington Oats I did not get in time to give them a fair trial; the others were up about three inches when I sowed the Washington. The Hulless Barley did very well. White Russian Spring Wheat and Champlain both mildewed. I planted three rows of corn and fertilized one with chicken manure and two rows with sheep manure and some with unleached ashes. I dropped a handful to a hill and could soon tell the difference in the rows. The chicken manure was best, ashes next. The rows were all in the same field. My Blount's Corn did very well and I am pleased with it. In a good season it will yield well here. It is a good fodder plant also. My Elephant Potato came up well, but while in blossom the drought came and just cooked the potato tops, and some navy beans right along side were totally burned up, while the Branching Sorghum stood still but was green all the time. My Egyptian Corn was planted very late and I could not work it at all. It kept green all the dry time and I shall get quite a little amount of it. I think this dry season has injured the fruit to some extent. The buds are just beginning to swell and the strawberries are more than half killed. I had 4,000 bearing plants and a neighbor had an acre and a half, but he will not have 1,000 living plants this Fall, and many of mine have also perished. Now if J. A. J., of Grand Prairie, who lately wrote to the RURAL in contradiction of my statements, still doubts my words, if he will come to my house I will keep him and I will prove their truth to him and it shall not cost him anything while he stays. The people at Beebe Station told me a year ago if I stayed three years I could not get away unless I had friends to help me, and I believe that if I do not get away this Winter I will have to stay. I cannot say anything more about the country than I have said. J. A. J. said there were four rivers in the State, but everybody cannot live where the rivers are. Cotton is 11c. per lb.; flour, $9@9.50 per bbl.: cornmeal, shipped from the North, $1.25 per bushel of 40 lbs.; meal, made here, $1 per bushel of 50 lbs., not bolted; potatoes, Irish, 4c. per lb.; pork, shipped here, 15c. per lb.; corn, $1 per bushel. Farmers are in a dilemma on the bread question; if they feed their corn to make meat they say they will have to do without bread, and if they keep the corn they will have to do without meat. H. B.

HOT SPRINGS, Garland Co., Sept. 23.—This has been a fearfully dry Summer, a few nubbins of corn, a few bolls of cotton; no vegetables; and the only full harvest we gather is that from our hot water; but for that we'd be "gone up." Of the RURAL seeds I sowed my dianthus in full hope of enjoying their surpassing beauty, but alas for my hopes! the elements have conspired to blast them. The White Elephant produced tubers about the size of the seed. I planted for a second crop, watered thoroughly and rested in hope of rain, but it has not come. I have a half peck of very poor Washington Oats. The Branching Sorghum and asparagus have done no better, nor could they. With perfect propriety we may adopt for this section the description given by a Beebe, Arkansas, correspondent some time ago, so far as farming is concerned. But our thermal waters can beat the world in miracles and our mines will yet show up. T. J. B.

Connecticut.

WOODMONT, New Haven Co., Sept. 24.—From the seeds of the Washington Oats I obtained seven pounds; should have had more, but cows got into the field and destroyed over one-half. From the seed of White Elephant sent me I dug 70½ pounds of potatoes, very few of which were too small for market. I inclose specimens of two of the largest, though they run very uniform in size. G. A.

[The two referred to weigh one pound two ounces each.—EDS.]

Illinois.

DOVER, Bureau Co., Sept. 21.—The season here is dry and warm so far. Wheat light; oats a fair crop; corn two-thirds of a crop; grass light. My Rural Branching Sorghum came up well and branches wonderfully, but I am afraid it will not ripen here; it is just beginning to head out. The Washington Oats were drilled and I have one-half bushel by measure, but rather light; they rusted badly. The White Elephant Potatoes were nice, considering the dry weather. I had 24¾ pounds of smooth potatoes, besides some small ones I did not weigh. I am well pleased with them. My asparagus grew finely, both French and Dutch, and I will have enough to plant quite a good plot of it in the Spring. The flower seeds I gave to one of my neighbors. The Surprise Muskmelons, from seed received last year, were all destroyed but one, but I saved the seed and planted it this year and have a nice crop of fine melons, rich and good. The Beauty of Hebron Potatoes are the best I have. They ripen with the Early Rose, but the yield is one-fourth greater. Both were planted the same day, side by side, and the cultivation was the same. Only one Cuthbert Raspberry grew and that did not show any fruit this year; but there are a number of suckers from the roots, so I shall have plenty in a year or two; but I think they will not suit our prairie soil. I have tried several kinds of red raspberries here, but have not succeeded very well, though the Black-caps do well. I mean to give them a fair trial and if they do not suit me I will dig and burn them. J. B.

Iowa.

LYNN, Dallas Co.—My asparagus has done finely and the R. B. Sorghum also; but the hail and bugs took the W. E. Potato, and the hail and rust ruined the oats. S. W.

Maine.

EAST MACHIAS, Washington Co., Sept. 23.—The White Elephant Potato sent to me last Spring weighed six ounces. It was planted May 10. On Sept. 18, I dug from it 17 pounds. Some were very large and quite a number of small size. The season for potatoes has been very poor and the crop light. One of the W. E. Potatoes was boiled, and as Eastern Maine is the *habitat* of the potato, and the locality where it reaches perfection, it was found to be of most excellent flavor and as fine as flour. J. C. T.

LEWISTON, Androscoggin Co., Sept. 24.—Some six or eight weeks ago I wrote to you to know at what time and in what manner to plant out the tips of Black-caps, not the time to layer them. I have not had very good success in the planting of them. In 1880 I planted 50 Greggs and 22 lived. In 1881 I planted out 175 plants and five or six only lived out of that set. I did not do the work myself; I had to leave it for the hired men to do, as I had to be absent from the farm. I want to know if I should buy plants six months old, and if tips transplanted last Spring would not be better and surer to live than tips planted in the Spring. [We do not exactly understand the question.—EDS.] I have the Clark, Herstine, Turner, Cuthbert and Pride of the Hudson. The Hudson was the best of them all. It is one year old and has borne a crop of large, nice-flavored berries. The next is Cuthbert, large and good. There was very little difference in the hardiness of the different varieties on my grounds. Clark is a very nice, large berry and hardy, but it suffered most from the climate. Of grapes, Adirondac is as good as any with me, but a very slow grower, and mildews some; but, on the whole, it is the best I have. The Rogers's No. 3 is next. Eumelan stands third. I am inclined to think that the Whitehall would be a good grape, as I understand it is the same, or about the same, as Adirondac. The Concord is called early in your State, but it is late with us. It ripens about one year in five here. Delaware is good and ripens a little earlier with me than the Concord. I want some very early grapes that are good. The Moore's Early has proved a very slow grower with me; how is it with you? [A rapid and vigorous grower.—EDS.] I had thought of four Moore's Early, three Whitehall, three Telegraph, one Eumelan, one Prentiss, the last one trained on the south side of the house under the piazza, so that when the piazza is glassed in I can keep them warm from the sitting-room stove, and yet expose the vine to the full rays of the sun all day. I would like to know more of the Niagara, Duchess, Prentiss and Lady Washington, and which is best for me to plant, the Lady Washington or the Prentiss or Pocklington. [All are good. You can only ascertain which would be "best" in your soil and climate by making the trial.—EDS.] C. A. H.

Michigan.

PLATTE, Benzie Co., Sept. 21.—I would like to let you know how we are doing in the woods of Michigan. Hay is very good; wheat middling; rye and oats very fair; early-planted potatoes good, and corn yields about 10 bushels per acre. We have plenty of strawberries, and all the other small fruits grow wild here. We raise a good many grapes and make wine from them. I have a seedling which ripens its fruit two weeks earlier than the Hartford Prolific. This grape is excellent for the table and for wine, and the vine is a very rampant grower. No one here knows its right name. I like to read your paper very much, and I always find something to learn from it. A. G.

SHERMAN, Wexford Co., Sept. 24.—The season here has been, taking all things into consideration, very favorable for the farmers. This is a new county; it is only 18 years since the first settler moved into it. The soil is mostly of a sandy loam heavily timbered with elm, maple, beech, basswood and some hemlock, except along the Manistee River and its tributaries where there are pine, cedar and hemlock. It is well watered with clear pure water; all the streams are cold and clear, the water running over gravelly beds. This season opened up later than usual with us. Winter wheat was killed out somewhat by smothering. We had too much snow and the wheat was thin on the ground, but of most excellent quality. The yield is from eight to thirty-two bushels per acre as far as heard from. There has been no thrashing in this neighborhood yet. I think the average per acre of wheat will be about 12 bushels in this township. Oats about 30 bushels. Corn is about two-thirds of a crop. The weather was a little too dry and scorching in the latter part of July and first of August. Potatoes will be about an average crop. Not much fruit; very few orchards have yet come into bearing and this is an "off" year for apples. From the Rural Branching Sorghum I succeeded in getting only a few hills and the stalks have made but a slender growth, being only about three feet high. The White Elephant I received weighed two ounces. I cut it into nine pieces and planted one piece in a hill. I have dug them and they weigh 14 pounds of fair-sized tubers. My Washington Oats were all eaten up by grasshoppers. The flower seeds were an entire failure. There is a larger acreage of wheat sown this Fall than ever before here, and most of it is up and looking first-rate. Wheat is $1@1.10 per bush.; oats, 40@45c.; potatoes, 50@60c.; hay, $18@22 per ton; cows, $25@45 each; work oxen from $110@175 per yoke; sheep, $4@5 per head; calves, $5@10 per head; hogs, 5c. per lb., live weight; pork, fresh, 12c. per lb.; beef, 8@12c. per lb. for fresh. I. N. C.

UNION CITY, Branch Co., Sept. 29.—I wish much to thank you for the seeds sent us in the last seed distribution. We have a goodly number of asparagus plants and some beautiful pinks (wish you could see them). Planted only a few hills of Sorghum but am well pleased with it. Cut one hill down as you suggested and am convinced it is one of the best fodder plants—better than corn on account of second growth and standing the dry weather splendidly. The oats were good and so were the Elephant potatoes. I had fifteen hills (one eye to a hill) and had 37 pounds of tubers. The Pentstemons you sent in 1879 have failed to blossom as yet, though I watched them carefully. L. B. T.

Minnesota.

NEW YORK MILLS, Otter Tail Co., Sept. 19.—I have dug the White Elephant Potatoes and find they weigh 85 pounds, from 13 eyes planted one eye in a hill. One potato weighed a pound and three-quarters. My asparagus looks splendid. The sorghum did not amount to much. Washington Oats yielded well. I saved one peck; birds destroyed some. A. P.

WINNEBAGO, Faribault Co., Sept. 20.—The present season has been one of the wettest ever known hereabouts. All small grains are scarcely paying for the labor of harvesting them. The corn crop, however, is promising a fair return, but owing to the backward Spring not more than a quarter of the usual number of acres was planted. Hay, or, rather, the grass crop, is excellent; hundreds of tons, however, are rotting on the ground for lack of fine weather to cure it. The Blue Earth River, which flows from north to south through this county, never was known to be as high at this season of the year. Now it is causing back-water to many of the grist mills on its banks. Not much thrashing done yet.

Wheat on the best fields yields ten bushels per acre; on poor fields from three to four bushels, and that of very poor quality. A larger area of flax was sown than in previous years. Its appearance is very poor, as it is mixed with weeds and grass, resembling a marsh more than a cultivated field. We have hundreds of acres of unplowed land lying worse than waste, being a complete nursery of weed seeds, heavy rains preventing farmers from summer-fallowing. And yet I wish to state right here that we are not discouraged, believing this wet season is just what the country needed. Our wells were very low and and many of them dry last Summer, and a fresh supply of water was needed at the fountain-head. The potato crop was never better with me. I dug over a half bushel of good-sized ones from 13 eyes planted of the White Elephant. The Washington Oats stood the season splendidly—I never saw better oats. The flower seeds, which still keep in bloom, gave a fine display, too. In fact, all the seeds received from the RURAL grew finely. The Cuthbert Raspberry proves equal to our climate and bore excellently this season. My White Elephant Potatoes measured seven and a-half inches in length many of them. H. F. S.

Missouri.

PLEASANT MOUNT, Miller Co., Sept. 24.—We have had two or three good rains in the last ten days, which though doing crops no good, have helped to start pastures and enabled farmers to plow for wheat. There will not be as large an acreage sown this Fall as last. A great number of farmers are afraid of chinch bugs another year. Stock hogs, cattle and sheep are selling at very low prices, while fat stock bring good figures. The failuro of corn and the high prices of all kinds of feed are the causes. Such a general failure of all kinds of crops has not been seen for many a year. N. J. S.

New York.

GALWAY, Saratoga Co., Sept. 22.—The RURAL pinks are lovely, but I lost some of them before I learned that they could not bear strong sunlight. The asparagus seeds came up well; I have 63 plants. The oats were sown in a drill and grew from five to six feet in hight. We saved three pounds and nine ounces of fine oats. The White Elephant I got was small; weight about two ounces, I should think. It had 12 eyes. I raised 32½ pounds of fine tubers from it, the largest weighing 17 ounces. The Rural Branching Sorghum came up well. I sowed it at three different times, but the earliest sowing did far the best here. Cattle and hogs are very fond of it, and we think it cannot fail to prove a valuable forage plant. The second growth is over two feet high. I should like to test a few plants of Pyrethrum, or Persian Insect Powder, if you think it would grow as far north as we are. [We have no seeds on hand.—EDS.] I wish you every success in your noble efforts. G. M. C.

OGDENSBURG, St. Lawrence Co., Sept. 23.—We had a very severe thunder storm here last night and this morning, accompanied by a heavy rainfall. This rain makes it safe to sow Winter wheat. Stock had also commenced to suffer for want of water. F. K. M.

STERLING STATION, Cayuga Co., Sept. 22.—While nearly every species of vegetation on our premises is turning brown and desolate-looking from the fearful drought, our little patch of Rural Branching Sorghum gives the eye something cheerful to look upon. In spite of the lack of moisture, which has destroyed every vestige of green color near it, it still keeps up a sturdy and vigorous growth. Corn about here is scarcely half a crop; potatoes the same. Apples, prematurely ripe, are dropping from the trees, a slight wind bringing them down in showers. Peaches and pears are an abundant crop. Farmers mostly are waiting for rain before sowing their wheat; some have sown, and the seed either lies dormant or has rotted. I have heard of but one successful seeding. Upon our own farm a summer-fallow of 12 acres was sown the last of August. It has made a splendid growth; so far the drought does not seem to have affected it in the least. The land has been thoroughly tilled at various times throughout the Summer. Our forest fires are still raging fearfully, and if rain does not soon come the best timber land in this vicinity will lie in ashes. Miles of fences have been burnt and a few farm buildings. In some places the buildings have been saved only by constant vigilance. Ordinary farm work remains undone while whole neighborhoods work night and day fighting fire. Wheat is worth $1.45; potatoes, 75c., and advancing; onions, 75c., and a large crop; eggs, 18@20c.; butter, 30c., and very scarce; Fall apples, $1.25 per bbl.; windfalls, do., 25c. per bush.; pears, 75c@$1; peaches, $1.50 per bush. E. K. B.

Pennsylvania.

UNION CITY, Erie Co., Sept. 20.—Wheat is yielding about 10 bushels per acre—a middling fair yield. Oats a full crop. Corn nearly a failure—won't average more than five bushels on account of drought. Hay was never better. Potatoes are not more than one-third of a crop. My W. Elephant did remarkably well. It was cut into eight pieces each of which was planted separately a foot apart. They received good care and have yielded just an even half bushel of tubers as handsome as any I ever saw. I wouldn't take $5 for them. The W. Oats grew well till they headed out; then the rust struck them and they broke down. The pinks are very handsome. J. D.

Virginia.

MOUNT JACKSON, Shenandoah Co., Sept. 20.—The extreme drought has burnt up nearly everything in this country. I am happy to say that the White Elephant Potato did well—much better than any other variety I planted. The potato I received from the RURAL weighed three and a-quarter ounces, and I dug one peck of nice tubers. Yet I feel a delicacy in reporting this yield when I see the report of the California man who got 130 pounds. L. T.

WILLIAMSBURG, James City Co., Sept. 22.—The drought beginning here about August 1 and continuing to September 8, has seriously shortened the crops. Corn will not be more than half a crop and potatoes will be still worse. The peanut crop will not be more than half. The Rural Branching Sorghum I consider valuable for a green fodder crop. I planted it about May 5; it gave five to eight stalks from a seed. I cut it about four weeks since, six inches above the ground, when it was seven feet high. It then branched out again four and five stalks from each of the old ones, and is now about three feet high. I left some stalks for seed; they are now 11 feet high, the seed eight inches out at the top—perhaps too late to ripen. I could have planted safely a month earlier, which I think would have ripened the seed. From the White Elephant Potato I got 19 hills, giving 18 pounds. I planted another potato alongside of them, which, with the same treatment, yielded twice as much. W. P.

West Virginia.

NEW CUMBERLAND, Hancock Co., Sept. 27.—I planted the White Elephant Potato about the first of May. It weighed four ounces and had 17 eyes. I cut it into 17 parts and planted one to a hill in a moderately rich soil without any manure of any kind. I gave it the same cultivation that I gave Early Rose and Burbank's Seedling. The weather was very wet in the fore part of the season and very dry in the latter part. I dug them September 6, and there were 120 White Elephants, weighing 25 pounds, the largest one weighing 17 ounces. The Burbank's Seedling did not produce one-half what the White Elephant did, though they were planted side by side. The Washington Oats I consider a failure. But few seeds of the sorghum germinated; I have about 20 stalks; the dry weather has injured it very much; still I think it will prove a valuable fodder plant. L. S. B.

Washington Territory.

SPANGLE, Spokane Co., Sept. 20.—We received all of our seeds except the potato. They did not do very well this season. It is too cold here for the sorghum. The oats nearly all went to smut. M. B. L.

WAITSBURG, Walla Walla Co., Sept. 17.—We have not had a very warm Summer. August has been particularly cool; one could readily have mistaken the month for September. We have had an occasional shower, which kept the temperature even. Harvesting nearly over. Our Spring wheat only yielded 23 bushels to the acre. Fall-sown would have gone 28 or 30 bushels on the same ground. I have just sold 4,000 bushels for 60 cents per bushel, delivered at our new depot one mile from here. Our soil is just an average one. Near the foot-hills of the Blue Mountains the yield goes from 35 to 60 bushels, for the soil is more moist; but ours is good enough. We can raise all cereals and our vegetables are equal to those grown anywhere. We have about 50 plants of the best sort of tobacco, which are now becoming mottled and nearly ripe. Our potatoes are ripe, but undug, so I cannot give the yield, but it is good, for we often get more than a peck from one hill. We have several varieties, such as the Snowflake, Beauty of Hebron, Peerless, Goodrich, Improved Peachblow and others. I never hear of any complaints of potato rot or bugs or any other pests. Apples and plums are plentiful and bring one cent per pound; peaches in abundance and worth five cents per pound. M. A. R.

The Queries.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

"WOLF TEETH" IN HORSES, ETC.

S. H., Lowell, Mich., asks, 1, what are "wolf teeth" in horses, and what harm do they do; 2, he has a three-year-old horse to which a child lately gave too much corn, so that he became badly "foundered," but has since recovered, and our friend says he learnt of the mischief within an hour after the corn had been eaten; but he did not know what to do, and he inquires what treatment should have been adopted—should he have given the animal water to drink, and if not, why not.

ANS.—"Wolf teeth" in horses are two small supernumerary teeth which make their appearance on each side immediately in front of the first molar or double teeth on the upper jaw. The germs of these teeth will be found in the jaw of the developed foal, and they are fully formed in the yearling, ready to work their way through the gums, after which, as a general rule, they soon fall out. Sometimes, however, they remain till an advanced period of life, during which time they undergo a change in form, and become more closely like the incisor teeth in man. Among horsemen and especially among farmers there is a very strong impression that these teeth are injurious to the eyes, frequently causing blindness unless they are removed in time. Veterinarians, however, say that such a result is contrary to veterinary experience, and that if the belief were correct all horses would go blind, as all horses have these supernumerary teeth at some period of their lives, generally from the first to the fifth year. So strong and widespread is the belief in the blinding effect of these teeth that whenever a horse has an attack of specific opthalmia, these teeth are pretty certain to be looked for, and if found, they are supposed to be the cause of the disease and are at once knocked out by means of punch and hammer, or in some other equally cruel way. This process bruises the gums, causing considerable local inflammation in the parts, which, acting as a counter-irritant, attracts the inflammation from the eye, just as a blister might have done if applied at some other place, and straightway the belief grows stronger that the "wolf teeth" were the cause of the eye trouble. If one will insist on removing these teeth, he should get a common pair of dentist's forceps and pull them out. 2. The colt should not have water till it had dunged freely, as it would have the effect of swelling the corn in the stomach, and hindering digestion. Walking him gently a short distance every half hour or hour during the day, might be beneficial. After his intestines were pretty well cleared by dunging, he might have a small feed of grass or hay, with a quart or two of bran according to his size and age, to which a gill of oil meal should be added, if any were on hand. If not, the same quantity of jelly made of boiled flaxseed should have been given. This feed, with tepid water to drink two or three times per day, might have been continued till the corn was digested and discharged, and then the colt could be safely turned out to his usual feed. In such a case if physic is necessary to purge the colt, one of the safest and most effectual remedies is aloes. Try to get the pure Barbadoes, but as this drug is so often badly adulterated it is almost impossible to get it pure at ordinary druggists'. If pure, two or three drachms would be enough for a dose; if not pure, it would require more. Consult a druggist as to this, and the best way to administer it. One of the best and most simple things for foot founder if in the Summer, is to turn a horse out to a smooth grass pasture free from stones and let him remain there till well; if in Winter keep him in a dry, sandy yard or on a dry earth stable floor.

TREATMENT OF A FRACTIOUS HORSE.

S. B., Cardington, O., wishes to know the best method of breaking a horse of kicking. He has a beautiful dappled grey, seven years old, that has been worked from a colt, and always seemed gentle and kind until within a few weeks; it is now unwilling to be harnessed or even patted. Can assign no cause for it; would like to know if there is a humane treatment for such a habit.

ANS.—Some person or some animal, unknown to the owner of the horse, has undoubtedly been plaguing or injuring him in such a way as to make him afraid to let any one touch him lest he should be again hurt. Or the animal has met with some accident which has given him great pain, and he fears to be touched by any one lest this be increased. The only way to overcome this is to treat the horse with perfect gentleness, speak low and kindly, and, above all, never strike or threaten him. If when approached he is fed with a lump of sugar from a dish, or anything he particularly likes, he may permit the giver to gently pat and rub his head, then his neck, and finally his body; but in doing the latter, be careful to keep in such a position by his side that if he kicks he cannot hit you. If not vicious to other horses, it might be well to turn him out to pasture with them and the association would cure him of the trick. If this cannot be done, then let him run with young cattle that have not horns long and sharp enough to gore him. Or, if perfectly sound and well, hard, steady work with moderate feed might cure him, especially if he previously had been fed high and kept idle, for these sometimes make a horse vicious, or so playful and high-spirited that it amounts to the same thing.

PACKING FOR AN ICE-HOUSE.

H. F. B., Clinton, Mo., last year packed his ice-house with flax straw because he could not get sawdust, and in May the ice began to melt at the bottom and he lost a great deal of it on account of the flax-straw packing, he thinks. He now asks whether ice will keep well if packed with sawdust all round it, the ice to be on boards two feet from the ground with a layer of sawdust to protect it from the air.

ANS.—The trouble in this case was not so much the packing as the probable access of air to the bottom of the mass of ice. One cannot keep ice and get cold air and drippings from it. It might as well be expected to keep money in a bank when a little is drawn out every day. The drippings and cold air are merely drafts upon the stock of ice. Flax straw would make a good packing if it were cut up into chaff. The bottom of an ice-house cannot be made tight if there is a space under it. Air would pass through the seams of the floor with the greatest facility. The best bottom is the earth dug out about four feet, but it should be such as would let the moisture from the ice pass off easily. Perfect drainage for water, and yet an air-tight bottom are required to keep ice. A foot of packing should be put under the ice. The arrangement of the walls mentioned would be judicious. Sawdust is the best packing, but there are several others nearly as good, as tanbark, charcoal-dust and chaff.

Miscellaneous.

J. A. H., Kearneysville, W. Va., sends beetles for name, etc.

ANS.—They belong to the Cetoniadæ, or Cetonian family of beetles, and are known scientifically as Osmoderma scaber, or the rough Osmoderma. French naturalists gave them this name, which means scented-skin, suggested by their strong odor. Prof. Riley writes us: "Judging from the habits of the European Osmoderma eremita, and from observations made in this country on O. eremicola, it is safe to say that the species of this genus are not injurious, the larvæ living on rotton wood of deciduous trees and the beetles also feeding on decaying wood. Some Cetonians are, however, known to be injurious, *e. g.*, our common Allorhina nitida, the larva of which feeds on the roots of grasses, and Euphoria inda, which, as a perfect insect, injures peaches, apples, cotton bolls, corn, etc."

H. H. H., Iowa, asks, 1, the name of the best work on gardening, especially vegetable gardening: 2, the best on poultry: 3, the best and quickest-growing shade trees to plant along the street in front of a residence.

ANS.—1. Peter Henderson's Gardening for Profit is the best work we know of. 2. Lewis's Practical Poultry Book, $1.50, and Wright's Practical Poultry Keeper, $2, are both good. Wright's Illustrated Poultry Book, $17.50, is better still, however. These, as well as Henderson's work, can be had through the American News Co., New York. 3. The Silver-leaf Maple is a rapid grower. The Norway, Red and Sugar Maples are handsome, but of less rapid growth. The catalpa, if properly treated while young, is both rapid-growing and ornamental.

C. E. De G., Egan, D. T., having subscribed late last Spring, asks "whether he will have to subscribe again before his name is enrolled for the F. S. Distribution; 2, can the three kinds of wheat included in it be all sown in Spring, for Spring wheat is the only sort raised there: 3, where can he get a specimen of the Black-bearded Centennial Wheat.

ANS.—1. No. Any application made by any person whose name is on our subscription list is valid. 2. Yes, as well in the Spring as in the Fall, though they may not thrive as Spring wheats. 3. Some of the Chicago seedsmen should have it.

W. M., Camden, Ohio, asks whether the wheat for the RURAL'S next Free Distribution will be sent out this Fall.

ANS.—No. It would have been impossible for us to have got it ready for this season's sowing.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 1, 1881.

G. L.—E. K. B.—A. P.—H. B.—Wm. Strong, thanks.—M. A. R., glad to hear from you again.—G. A. G., Jr.—H. H. H.—W. M.—G. G.—C. W. C.—J. C. T.—W. I. R.—H. F. S.—G. N. K.—J. B.—N. J. S.—J. H. H.—P. B. M.—W. V. W.—C. W.—J. H. M.—N. P.—W. H. L., thanks.—M. W.—N. P. S.—H. D. A.—G. C.—F. L. A.—J. N.—E. E. H.—C. A. A.—J. H.—W. B. S.—S. C.—F. T.—I. N. H. W. B.—C. A. H.—N. K.—A. S.—H. Y.—C. B.—P. J;—C. M. R.—D. Y.—C. P. C.—H. T.—J. H. D.—R. D. L.—M. D.—H. N. Y.—W. H. F.—P. H.—F. U.—H. J.—W. L—D. G.—J. V.—F. C.—E. C. R.—C. T.—H. S.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, OCT. 8, 1881.

THIS has been in drought-visited regions a bad year for budding. There has not been enough sap to form a cambium layer so that the bark would not peel from the wood.

CONSIDERING the drought which has prevailed at the Rural Farm—the severest within our remembrance—it was very gratifying to have received the first premium at the Queens County Agricultural Fair for the Rural Heavy Dent Corn.

OUR first-page portrait of the distinguished agricultural chemist, Dr. J. H. Gilbert, the associate of Dr. Lawes, of Rothamsted, England, is from a photograph furnished at the solicitation of the RURAL NEW-YORKER.

IT IS surely worthy of note that while a plot of corn within 50 feet of the Rural Branching Sorghum has been destroyed by the drought, the latter is now (Sept. 28) as green as when it was but six inches high, and it is still growing rapidly. Our "Everywhere" columns have furnished many similar reports. During seasons of drought, we deem this Sorghum invaluable.

IT IS no easy matter for us to improve the RURAL unless we know in what respects our readers desire a change. It will soon be time for the great majority of our subscribers to renew. Would they kindly make their preferences known? Let them freely state what departments they prize most—what least. We should then have a guide as to our future course, which we should follow without misgiving that we were marching away from instead of towards our readers.

WHY shouldn't the Southern States that are anxious to obtain immigrants follow the example of Texas or Missouri? The former State has energetic agents in Europe whose business it is to explain by lectures, pamphlets, and other means, the great advantages and resources of the Lone Star State, and consequently the immigration to it from Europe is far greater than that to any other Southern State—greater, indeed, than to all the other Gulf States. The Missouri Immigration Society has recently sent to Germany 40,000 additional copies of its hand-book descriptive of the resources of that State, making a total of 100,000 distributed by its agents in Prussia alone. Like Texas, it has sub-agencies in nearly all the principal cities of Europe, and offers to emigrants very flattering inducements to settle in that State. Accordingly a large number of new-comers have lately gone thither. Few are the earthly blessings that come spontaneously to those sitting supinely with folded hands.

A SPECIMEN RAILROAD EXACTION.—We have in this city on a small scale an excellent specimen of one of the methods by which the railroad corporations fleece the public. The two railroad companies that in the last few years have constructed elevated railroads through our streets, leased them some time back to a bogus corporation under the name of the Manhattan Company, whereupon the stock was "watered" to the amount of some thirteen million dollars. The Manhattan being unable to fulfill its contract with the original companies, a Receiver was appointed about nine weeks ago, and now the President of the Company and the Receiver declare the roads cannot be made to pay expenses at the present rates of fare. It is therefore proposed to raise the rates, thus taxing the people of this city to pay interest on some thirteen million dollars of mere paper capital. In other words, New Yorkers are asked to overlook, first, the confiscation of private property or the injury to it rendered necessary by the construction of the roads; second, the extravagant cost of the roads and running stock, owing to the manipulation of a "construction company" and other gambling devices; and third, the enormous addition of "water" to the already shamefully inflated stock.

SUFFERING MICHIGAN.

RIGHT in the track of dire desolation by fire comes wasting disease to the afflicted inhabitants of the burnt districts. Pneumonia, malarial fever, and other diseases induced by long exposure are adding death to destruction. It could hardly have been otherwise! How can women and children, aye, even robust men, long endure such extremes of suffering and exposure as those poor people have been obliged to submit to! Homeless, they have been driven to seek shelter in huts of brush; hungry, they have been forced to eat the charred remains of burnt corn and wheat, or the imperfectly cooked flesh of their domestic animals; heart-broken, they have poor consolation in viewing their ruined homes and desolated fields! It is no wonder that disease finds them easy victims, and that death seems a happy relief.

The Secretary of the Michigan Relief Committee in this city has been traveling through the burnt district, and he reports that the extent of the calamity has not been exaggerated, and that the total loss may be put down at $7,500,000. It is asserted that fully 20,000 persons are now suffering there, and that no less than $2,500,000 will be required to place them in a self-sustaining condition. Up to the present time $260,000 have been subscribed for their relief, of which New York has contributed over $85,000. Besides this, clothing is being forwarded from many of the larger cities and towns. It seems as if the hand of Fate was against these people; snow, floods, droughts, fire, disease, have followed each other in quick succession, and it now remains for the more favored portions of the country to alleviate the hardships of the Michigan people by generous gifts.

How many of our farmer readers have yet forwarded the proceeds of that "Michigan bushel" of wheat?

AUSTRALIAN MEAT FOR ENGLAND.

As previously mentioned by us, several cargoes of meat have within the past year been brought from Australia in fine condition to England, where they met with a ready sale. The French steamer Frigorifique, specially constructed for the purpose, also transported a cargo or two of mutton and beef from South America to France without deterioration, the meat being preserved by means of artificially dried and cooled air, the power for making the ice for cooling purposes being furnished by the vessel's engines. The South American meat trade, however, has not grown, probably because the South American meat is poor, stringy stuff at the best; and the Australian meat trade has been suspended owing to the impossibility of carrying on a paying trade by means of steamers, because such vessels can spare no power for refrigerators and can carry barely enough coals to take them to the end of their long voyage. The experiment with the Frigorifique proved that with a sufficiency of dried, cold air, the time the voyage consumed was of no consequence, and it has therefore been determined to attempt to carry dead meat from Australia to Great Britain by sailing vessels. An engine of 100 horse power will work the refrigerating machine. To supply such an engine with coal will be vastly easier than to keep up steam for the four or five thousand horse power engines of a large ocean steamer. The sailing vessel selected for an experimental voyage is the Dunedin, of the Albion line, which left Glasgow a few weeks ago and is expected back in May, 1882, with the first cargo of Australian mutton and beef transported by sail. If she is successful, she will be the pioneer of a trade whose vast extent may be estimated from the fact that the Australasian English colonies have 60,000,000 sheep—almost as many as the United States and the United Kingdom together.

THE BOOM IN CEREALS.

DURING the past week there has been intense excitement in the cereal markets at all the chief centers, but especially at Chicago. There a "boom" in wheat set in last Tuesday, and during the day prices advanced no less than seven cents per bushel. The prices of all descriptions of produce rose in sympathy and the "bulls" had things all their own way. Wheat for October delivery opened fairly firm at $1.34, and by noon had risen to $1.36, from which point it advanced steadily without a break to $1.41 per bushel, the highest point of the day, and the highest for several years. In this city prices, rising steadily, had advanced by Thursday evening 20 to 23 cents per barrel for flour; and four to five cents per bushel for Spring and Winter wheat for prompt delivery. Corn advanced from one to two-and-a-quarter cents per bushel; oats one-and-a-quarter cent to one-and-a-half cent; rye one to two cents; and barley three to five cents per bushel. Prices for future delivery rose correspondingly. On Thursday very heavy trading was done in this line, the reported sales having amounted to 2,860,000 bushels of wheat; 2,208,000 bushels of corn and 690,000 bushels of oats. The favorite grades were: of wheat, No. 2 red; of corn, No. 2; and of oats, No. 2. November options attracted most interest, but December options are rapidly gaining in favor. In spite of low ocean freights the high prices here greatly checked exportation, as our transatlantic customers were unwilling to pay our figures. On Friday and Saturday, however, heavy European orders are reported to have been received in this city, Philadelphia and Baltimore, so that it seems likely that both in England and on the Continent the conviction is growing that the supply of breadstuffs this year is certain to be below the demand. The latest French estimate of the deficiency in wheat—that of the Paris Bulletin des Halles of September 4—puts it in at 9,000,000 hectolitres, equal to about 25,000,000 bushels. Other trustworthy accounts, however, make the deficiency much higher.

THE SUGAR BEET INDUSTRY.

WITH regard to the sugar beet industry in this country, we learn that a French gentleman, named Meyer, intends to start a sugar beet factory in one of the northern counties of this State, with a capital of $200,000. The machinery is to be made in this country, and the outfit will cost $59,000. It is expected that the beet crop will average 25 tons to the acre, cost the manufacturer $5 per ton, and yield a profit of $27 per acre, and a product of five to six per cent. of sugar. The Mohawk Valley Beet Sugar Company, that was to begin operations this Fall near Schenectady, N. Y., has been forced to delay a year, because its offered price for the machinery of the Franklin, Mass., factory having been refused, it was too late to order other machinery from Europe so as to have it in operation before next Fall. The contracts made for beets with neighboring farmers were canceled. The Delaware Beet Sugar Company, of Wilmington, Del., takes a great deal of the beets raised for the Mohawk Valley Company, paying for them at the rate of $4 per ton. The entire factory and machinery of the above Franklin Beet Sugar Company is to be sold at auction for what it will bring. Lack of ample capital is assigned for its repeated collapses. The Delaware Beet Sugar Company has made arrangements for enlarging its factory with a view to working up 150 to 200 tons in 24 hours, and has already obtained the requisite filter, presses and battery. Mr. Kerbs, the Superintendent, feels more confident than ever of success. The 400 acres of land on which the beets for the factory are grown, are rented from farmers who do the plowing, cultivating, etc. The total cost per acre is estimated at about $40, and the yield at from 10 to 20 tons. On the basis of 10 tons to the acre it is estimated that the beets will cost $4 per ton at the factory. In Los Angeles Co., California, experiments in drying beets have resulted in considerable loss of money. It is thought that unless the roots are dried by some new and more economical process the business can never be made profitable. In Canada, the machinery for the beet sugar factory at Berthier arrived last June, and the factories at Choaticooke and West Farnham are also ready. There is talk of starting beet sugar factories at Rochester, Elmira, Middletown and Wurtsborough in this State.

BREVITIES.

"THE Fair at Jackson, Mich., was simply immense," says our special correspondent.

THE price of the Hoosier Drill should read $20, instead of $15, as it does in our Premium List.

THE tomatoes from which we are saving seeds keep perfectly sound from 12 to 17 days..

THE grubs are unusually troublesome this Fall, and are killing many of our strawberry plants.

WE were pleased to receive a call, a few days since, from the distinguished pomologist, Dr. John A. Warder, of Ohio.

WE commend the letter of G. G. of Liberty Co., Texas, to our readers as showing what the Rural Branching Sorghum will do in some regions.

HENRIETTA Raspberry (Belle de Fontenay?) is now ripening a good second crop at the Rural Grounds without any rain since it bore the first crop.

THE new Champion Quince of which we have one specimen, bears two quinces this year not yet ripe (October 3). The others rot as fast as they ripen.

THE idea is getting abroad in England that the usual harvest "thanksgiving" services are peculiarly absurd this year, in view of the poor yield and quality of the crops.

ONE of the best specimens of wheat which we have received this season was sent by Prof. Ingersoll, late of Mich. Ag. Coll., now of Perdue University, Illinois. It is a cross between Lancaster and Armstrong.

DESMODIUM penduliflorum (figured in RURAL, p. 433 has not been affected by the drought in the least. It is still blooming freely and is at this time the showiest blooming shrub in the Rural Grounds. It is a very desirable little plant.

IN consequence of the short supply of milk, due to the drought and the necessity of feeding cows on winter feed, the price of milk in this city has been raised from eight to ten cents a quart by retailers. From our "exchanges" we also learn that the farmers who supply other large cities are, as a rule, raising the price of the product.

THE Liverpool cotton "corner" has triumphed, the cotton spinners having all resumed work with no intention of again suspending it in the hopes of breaking the corner. Speculators who sold cotton "short;" that is sold what they hadn't got, in expectation of a fall in prices before the date of delivery, are settling up as best they can. The chief engineer of the corner is, it seems, after all an American named Ranger.

A SPECIAL meeting of the Board of Managers of the International Dairy Fair Association and of the butter and cheese trade of New York, was held here last Friday to arrange for a grand display of dairy products at the Atlanta Exposition. A resolution was passed urging merchants, manufacturers and dairymen to contribute liberally, and the following committee was appointed to secure representation and attend the exposition:—G. B. B. Douglass, M. Folsom, W. E. Smith, L. D. D. Hunter, J. H. Goolt, B. F. Van Volkenbergh, T. H. Newman, Daniel E. Manton and Washington Winsor.

IN Herrman vs. Adriatic Insurance Company, Judge Folger, of the New York Court of Appeals, has decided that leaving a dwelling-house unoccupied during the Winter will render a fire policy void, which provides that "if the premises should become vacant or unoccupied and so remain for more than thirty days, the policy shall become void." In delivering the opinion—with regard to a country house—Judge Folger said "that an inspection of the house every fortnight by the owners and every week by a neighboring farmer would not avoid the conditions, neither would the occupation of some of the other buildings on the place and included in the same policy, avoid the condition as to the dwelling-house and the out-houses appertaining thereto."

THE latest estimates of this year's cotton crop are as follows: Latham, Alexander & Co. of this city, from sixty telegraphic reports, put the yield at 32 per cent less than that of last year's crop with four per cent. increase of acreage. The aggregate possible yield they figure out at 6,188,000 bales. A prominent New Orleans cotton house estimates the shortage of this year's crop at 30 per cent. and expects a grand total of 5,500,000 bales. Bradstreet has received reports from 839 correspondents in 500 counties in the Cotton Belt and after careful figuring concludes that the crop is 34.5 per cent. short of last year's yield; though with favorable weather henceforth there will be a slight improvement. The staple is somewhat better but the yield of lint cotton from the seed cotton is held to be smaller than usual.

IT seems likely that the continued dry weather will prevent the seeding of as large an acreage as usual to wheat this Fall, so that the unfavorable conditions of this year are likely to lessen next year's crop. Wherever timely rains have enabled farmers to put in a crop, however, the area has been considerably increased; but reports from many sections show that the seed has either entirely failed to germinate or, having done so, has been "burnt up." The potato crop throughout the country is fully thirty per cent. under the average, and thirty-two per cent. in New York, Pennsylvania, Ohio, Michigan, Illinois, Wisconsin and Iowa, which together produce three-fifths of the entire crop. The scarcity of fodder is forcing stock heavily on the market, especially the poorer sort, which has a depressing effect on prices, but will probably ultimately prove advantageous by weeding out unprofitable animals from the herds.

OWING to one of the mysteries of railroad transportation cotton can be carried from Memphis to Boston at lower rates than from Memphis to New Orleans. Says the New Orleans Democrat: "There is no visible reason why rail freights from Memphis should be cheaper to Boston than to New Orleans. The proposition is on the face an absurdity." As if, in sooth, there were not hundreds of things in railroad management that cannot be explained by visible reasons. On the face of it it is an absurdity that freight can be carried from this city to Chicago cheaper than from this city to Utica. It is an absurdity that passengers can be carried from Boston to Chicago for eight dollars when more than that must be paid to go one-fourth of the distance over the same line. It is an absurdity that the public should be required to pay heavy interest on fictitious capital created by "watering" stock. It is an absurdity—but merely to enumerate the "absurdities" of railroad management would require a whole page instead of the few lines that should be the limit of a "Brevity."

For Women.

CONDUCTED BY MISS RAY CLARK.

MOTHER'S HUCKLEBERRY PIES.

How oft goes memory back to childhood,
When picking berries on the hill,
With pail in hand I'd strip the bushes
Along with little brother Will!
What cared we for the heats of Summer
With broad straw hats tipped o'er our eyes?
For, with those very huckleberries
Our mother made those famous pies!

I see her now, dear cherished mother,
With apron on as white as snow,
Her plump arms bare up to the elbow,
And on her cheeks a rosy glow:
I seem to see her roll the pie crust,
And fill the plates of largest size;
For well she knew how hungry children
Enjoyed her huckleberry pies.

And father, he'd come in from haying,
And stand by mother very near,
And say: "Now, wife, in all the township
None make such pies as you do, dear,
Except, perhaps, my dear old mother;
Why, at the fair, you'd take the prize.
Come, children, now we'll all to dinner,
And have a feast of mother's pies."

Those dinners now I well remember,
Within the kitchen large and cool;
Those summer days of our vacation,
When we were free of books and school.
Ah! can it be of years full thirty?
And yet it must be! how time flies!
Since we sat in that farmhouse kitchen
And ate in childhood, mother's pies.

Within our modest home is sitting
An aged lady, saintly fair;
While at her side my lad and lassie
Are looking up with earnest air.
"Grandma," they say, "we picked these berries,
We meant it for a great surprise."
And Grandma smiles and says, "My darlings,
I'm not too old to make good pies."

—MAUD MILLER.

DESCRIPTION OF CUTS.

FIG. 479.—MARCHIONESS OF BLANDFORD.

FIG. 480.—COUNTESS OF CLARENDON.

FIG. 481.—MISS SINCLAIR.

FIG. 482.—MRS. CAVENDISH BENTINCK.

These cuts represent the costume of ladies at the "Olde English Fayre" held in England

FIG. 479.

in June last. The object of these reproductions is not to give portraits, but to show the style of dress. They will serve as guides for costumes for participants in fancy dress entertainments, the time of which is drawing near.

FIGS. 483, 486.—MONOGRAM IN SATIN STITCH.

FIG. 485.—CORNERS: EMBROIDERY.

FIG. 484.—MONOGRAM FOR EMBROIDERING PILLOW SHAMS, ETC.

These corners are suitable to be worked in white or colored cotton upon collars, handkerchiefs, tidies, etc.; the designs are in satin, cording, or knot stitches.

FIG. 487.—DESIGN FOR LAMBREQUIN OR OTHER DRAPE.

SUMMERING.

R. B.

AMONG the crowd of those who went from home, seeking rest for mind and body, during the Summer months, I for one have come back with a feeling of delicious refreshment, and with many pleasant memories.

I will give you just a glimpse of where and how I went—or rather we, for I did not go alone. We were a feminine trio, exhausted mentally and physically. We decided to try the Catskills as the field for our recuperation.

"Girls," said Miranda, as she folded a pitl of examination papers, "we haven't a fortune to squander this Summer, and we do not want to be bothered much about clothes; we do not

FIG. 480.

want to meet crowds of people, nor to have to be dignified and proper. Let us hunt up a farm-house somewhere, where the people are ignorant of the last new agony of style, where we can do just as we please without shocking anybody. I want to live out-of-doors, to swing in a hammock and lie on the grass, to ramble over the hills and climb the steep places and wear out my old dresses and shoes."

"That's my view of the case exactly," said Abigal. "I haven't time to get ready; all I want is to be off."

We looked up advertisements and wrote letters of inquiry at once, in answer to which we received several epistles, some of which were assurance enough that the writers had never even heard of Boston, so that we were on the right track if we wanted quiet, unconventional places.

One letter was so especially unique that its very lack of literary merit attracted us. It was written with an utter disregard of rhetorical rules, capitals were thrown in promiscuously, and it was guiltless of punctuation, except a period here and there in the wrong place. Yet there was a heartiness about it, in spite of an extravagance in announcement, that savored of impressions received from the studied perusal of the periodic circus bill. "A quarter of an aker of crokay ground and home Priveliges very long Piazza and eggs. fresh Fish and my daughter has had Musick lessons which she will exhibit to them staying here and is perfectly Grand. I'll garanty you that yewl always be sorry if you Miss Coming for were moren able to make you happy and only charge reasonable."

"If we do not like it we can change. Let us go to this private heaven. A quarter of an acre of home privileges, long eggs and fish reasonable! What more could we ask?" said Miranda.

So we went. Our journey was part of the way by boat up the Hudson, and then a veritable stage ride to our destination. We began to look out for the house with some misgivings when we found ourselves nearly there, and we fairly shrieked with laughter when the stage stopped and we caught sight of that piazza. It was indeed long, but it was undeniably narrow.

"He did not mention the width because there was not enough of it to mention," whispered Abigal. We found a typical country home, with no sign of ceramic craze or any touch of art insanity. Some framed certificates graced (?) the walls, with a sampler nearly a hundred years old. There was a cabinet organ in one corner of the sitting-room and and some wide old rocking-chairs stood invitingly about. All was severely neat and the most of the appointments were very primitive, but there was an unmistakably homey look about it all. Our hostess had a fresh, smiling face that won our hearts at once, and she was very kind and anxious to please. When we had refreshed ourselves and went down to tea we found the table all that was desired.

There was fresh, nice bread, butter that was beyond the faintest suspicion of oleo.! dried fish, cottage cheese, milk, good tea, and a large glass dish of luscious wild strawberries buried in delicious cream. We ate as we never ate before, it seemed to me, and then, after unpacking, we went to our rest in very comfortable beds.

I will not attempt to tell of the quiet, restful days that followed, how we wandered out into the little grove to read and talk, or swung in a hammock, or over in the old swing in the lane; how we betook ourselves to the cool ravine on hot days, though we did not suffer much with heat up there; how we explored the country for miles around; how we took off our dignity and our shoes and crossed the brooks on stepping-stones; how we laughed and grew brown and too large for our clothes. We pitied our friends who had gone to more fashionable places, who had to spend time and thought on toilettes, and who could not indulge in that abandon that was giving us new life and vigor.

When the time came to leave we wished we could stay longer, but visits to old friends called us in different directions; but these were really only variations of our blessed idleness.

We decided to return by a different route, so that we might have a fuller view of the mountain scenery. We therefore engaged a neighboring farmer, who kept a team and covered vehicle for such trips, to take us to a town thirty-five miles across the hills.

We started in fine spirits. The morning was a little cloudy, but all the more pleasant for that. "I never stop for cloudy weather," said Mr. Q. "My step-father always used to watch the weather, and I've known him to put off a trip for two weeks and then get a rainy day after all. When I get ready I go."

Mr. Q. was a big man with a broad, comfortable back, which rounded over in that particular shape on which the coat always rides up in ridges across from under the arms. He had a fine team and a good brake on the stage and was a model driver. He soon established quite fatherly relations, inquiring our given names, and discovered that two of ours were those of his wife and daughter and the third that of a former "spark." He entertained us with information about the "mountings" and the "mountainous region," the method of harnessing and driving "tantrum," etc., in a style and pronunciation entirely his own. We visited the Mountain House, taking in, on our way up the mountain, the Rip Van Winkle Notch. The House faces a cliff in the rocks, through which one gets a glimpse of the Hudson and the far stretch beyond. We spent a little time at the Mountain House enjoying the fine view from its elevated site, and then went on to Laurel Hill. The hotel was filled with Summer guests, who could hardly have chosen a more picturesque spot. There are the Canterskill Falls, to see which visitors pay twenty-five cents. A good path has been made and fenced above the dangerous precipice, while many flights have steps leading down to the second fall. It detracted slightly from the beautiful scene to find that the slender stream which runs constantly is increased by machinery, is literally turned on, when people go to see it. It comes then with a rush and roar, and as it falls from a great hight it descends in mist and spray, whence comes its name—The Bridal Veil.

(To be Continued.)

"J. W." ANSWERED.

As "J. W." suggests, I *am* a very busy woman, though not so overworked, day in and day out as to disgust me with labor, physical or mental. Still if he has laid that

FIG. 481.

chip on his shoulder, I think I have time to knock it off. He—of course, it is a man—seems to be in doubt whether the quotation "In the sweat of thy face shalt thou eat bread" is Shakespeare or Bible. When he has occasion to take a journey again, if he will use the Bible, the Y. M. C. A. provides for the use of the public in the cars he will find in Gen. III, 19, that labor was meant emphatically as a curse. If it was a pleasure, the boy would not have to be *taught* to labor. He would take to it as naturally as to marbles or fishing.

Intemperance is a pleasure—gambling is not labor. Very few vices have to be taught. They come naturally. All the same they are curses to humanity. The sole refuge that God gave in the beginning to stay the vast flood of turgid vice that his Omniscience saw would sweep the world through, was the necessary *curse* of labor. When the world through the eyes of Adam and Eve saw vice, "become as gods knowing good and evil," chose the evil, they could not be left idle longer. "Thorns and thistles, potato bugs, army worms, murrain, pleuro pneumonia," for the former to keep him busy. Physical suffering for the physician, hard won cases for the lawyer. The "Devil and all his works" for the preacher to fight, and dust and disorder for the good housekeeper, makes a laboring world, while the "last enemy" lies in wait at the end that we all labor to escape and circumvent.

FIG. 482.

We all try to escape the *penalty* for transgression, and calling labor a blessing only shows how demoralized the whole of humanity has become, when we "hug our chains," and do not realize our degradation. Only when the pressure is removed, and the curse lifted, will we be able to see that life without labor, and under different conditions is, the perfect life.

Meanwhile I intend to take my share of the curse cheerfully if I can, and not slide it to the man's shoulders, though originally it was not intended for the woman. O. W. D.

ABOUT WOMEN.

MARIAN HARLAND, the novelist, is the wife of a Doctor of Divinity.

THE late czar was the first sovereign under whom women were freely allowed to practice medicine in Europe.

SIGNORA RISTORI is said to be quite an English scholar. She is very anxious to play Lady Macbeth in London.

MISS LOUISA BIRD, the great traveler, the lady who has explored by herself the Sandwich Islands, ascended the Rocky Mountains, and visited the untrodden parts of Assam, is going to be married.

POOR Lady Mountmorres has had three relapses of pleurisy, now followed by an abscess. Lady Mountmorres has never recovered the shock of her husband's cruel murder in Ireland a few months ago.

THE visit of Her Majesty to the Palace of Holyrood has been looked forward to with great delight by the loyal-hearted Scots, who rejoice in the idea that those long-silent halls will again echo the tread of royal footsteps.

THE mother and wife of our late President are now at their home in Mentor, Ohio. It must be a satisfaction to them, shrouded though it is in the deepest gloom, to feel that public scrutiny is at an end and that they can mourn in secrecy yet knowing that the sympathy of all stretches out to them.

A WEALTHY lady occupying a cottage at Mt. Desert had a jewel case made in imitation of a Bible. A burglar visited her premises, of course, avoiding the Bible as the devil would holy water, he carried off the silver-

ware, but left the diamonds and their fellow jewels safely in their meek retreat.—The Rural West.

THE Princess Louise will return to Canada this month. Her Royal Highness has lent her beautiful studio in Kensington Palace to Miss Hilda Montalba. This lady, who has lately returned from Venice with her sister, Clara Montalba, is busy completing a picture began in the city of canals and palaces. It shows three Venetian girls hurrying home through the rain. Misty tints envelope the distant dome of San Marco and shroud the vistas of water and buildings, throwing into relief the brilliant tints of the Italian maidens' costumes, and their bright faces.

Literary.

THE POPPY.

THE man who roams by wild-flower'd ditch or hedge
Skirting the mead,
Or treads the cornfield path—along its edge
May mark a weed,
Whose ragged scarlet gear might well denote
A roadside beggar in a soldier's coat.

Hence! terms misplaced, and thoughts disparaging!
Oh, Poppy-flower!
Thou art a Crœsus of the field—its king—
A mystic power,
With emblems deep and secret blessings fraught,
And potent properties that baffle thought.

When thy hues catch, amid the growing corn,
The traveler's eye,
"Weeds! weeds!" he cries, and shakes his head in scorn;
But when on high
The grain uplifts its harvest-bearing crest,
The Poppy's hidden, and the taunt suppress'd.

So, when our early state is poor and mean,
Our portion small,
Our scarlet-blushing moral weeds are seen,
And blamed by all;
But as we rise in rank we win repute,
Our faults gold-hidden, our accusers mute.

THORNS AND ROSES.

CHAPTER III.

(Continued from page 675.)

Sometimes, when I was in the cottage of some friend, he would enter, meeting with a reception that showed that he was perfectly at home with poor and humble, and that they were at ease with him.

FIG. 483.

I saw him often when he did not see me, thus gaining an insight to his character, though he puzzled me much. He led a good life, I was sure, but his melancholy was seldom lifted; his gravity was undisturbed.

I had once or twice visited Newville, and Mrs. Verner was always pleased to see me, I being her favorite, as her son assured me. We saw a good deal of him, and for his selfishness I looked in vain.

Edith laughed at his visits in his absence; and once in his presence said, with affected innocence, that he must have much more time on his hands now than he had in former days; to which he replied that by his mother's desire he had given up shooting.

Edith retorted that this was scarcely the shooting season; he answered that he trusted his visits were not unwelcome, and Miss Edith might remember that in giving up the idea of shooting, he had given up many calls.

Of my cousin's character I could form no clear idea; she seemed all contradictions—now wild and sarcastic, now dull and weary; now all mercenary and cold, and then showing me glimpses of true affection.

She had a good heart spoiled by her education; a high nature unfortunately perverted; her faults might have been eradicated by careful training and a mother's love. She disliked me, yet she delighted in teasing me; she liked aunt, yet loved to play tricks on her and utter sentiments that shocked the good, unworldly lady. Nevil she treated with contempt; Brandon as she treated me.

Nevil and Brandon came in the evenings, and we four played croquet: despite Ethel's declaration that it was hideously old fashioned, and as much out of date as powder and patches; but aunt was opposed to such innovation as tennis or skittles, the very name of the latter grating on her ear.

I was very happy—happy in a new joy which I did not then understand—which I could not define but which was one day to become clear.

CHAPTER V.

The change of Summer to Autumn had brought few changes to us, not interfering with our pleasant life; the woods, though their fresh green color had gone, were yet beautiful in the changing hues of Autumn, a few late roses were in the garden, and the days of the Indian Summer were as bright to me as those gone by. Edith was still with us; she had vacillated for two days between going and staying, on receipt of an invitation elsewhere, but finally decided in favor of our home, saying that she would like to see how it ended, though what "it" was she did not explain.

Those about me seemed unchanged, but in myself I was conscious of a new feeling, only lately roused, against which my struggles had been vain. I knew that Nevil loved me, though he had never said it in words; but deeds are often more eloquent, and it was in act that he showed his love. Why, then, should I strive to crush my own love for him? Perhaps my pride caused it, and made me distant and reserved; he must often have thought me cold and haughty, but it was not in my nature to be very demonstrative in affection, nor could I give love or friendship easily, though the last kindness woke my gratitude. My world had had a limited horizon; it was limited now; and my friends had been few but faithful.

Looking back on the Summer months and Autumn weeks, I remember for how short a time I had known Nevil, and felt that we could not possibly understand each other, and was angry with myself; but I had kept my secret well; even he could not know that I loved him. That his visits were principally to me everyone seemed to understand, and as far as aunt Dorothy was concerned he was favored. I had not forgotten my cousin's words, but I did not think him selfish; a little vain he might be, yet who is without a blemish? These, when Autumn days were passing, were my feelings; and whether Edith or I read Nevil Verner rightly, time would try.

A lovely Autumn evening—calm, clear, and still—and Edith and I were walking to and fro in the garden, she, as usual, speaking against Nevil Verner.

"Oh! Kate," she said, "I wish you were not so obstinately blind to people's faults! Nevil's very conversation might show you what he is; but you are all disagreeable people here—you with your pride, Nevil with his conceit, and Brandon with his gloom! Why is he so dismal?"

"Is dismal the word, Edith? I don't think it applies to Brandon. He may have reasons for his gravity."

"I did hear that his father was unkind to him; but in that case, Brandon ought to have been relieved by his death. I saw him a little while after it, and he looked miserable; though, if his father were unkind and all the rest, there is no reason why he should break his heart for the loss of such a parent."

"He was grave as a child," I returned, little thinking how her words would come back to me. "It is his nature. He has never spoken of his father, and I don't like to do so."

"I never heard Brandon speak of him either. I suppose he died suddenly. My impression is that Brandon has had a disappointment long ago, and it has soured him.

As she spoke Braudon appeared, but not alone, for Nevil Verner followed him, at the

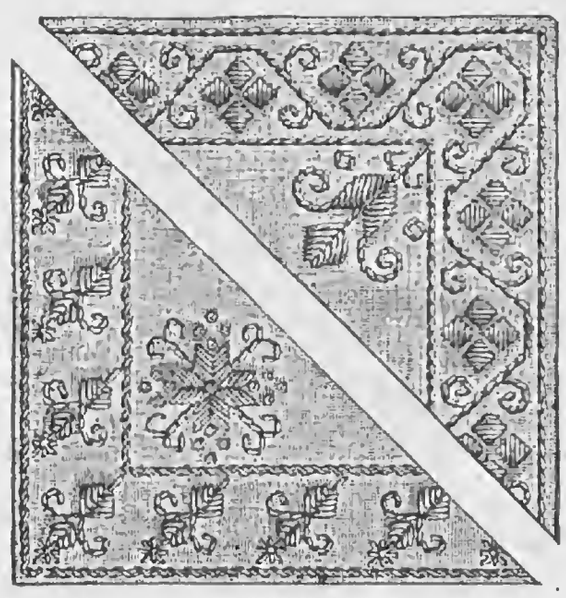

FIG. 484.

sight of whom Edith tossed her head.

"What a lovely evening, Brandon!" she said, drawing him away, after extending two fingers to Mr. Vernor.

Nevil and I followed slowly, and though I felt rather nervous, I wrapped myself in calmness as with a mantle, for I was too proud to make myself absurd.

"You have not been to see us lately, Miss Lovell. My mother missed you very much."

"I intend to call soon with Edith."

"With Edith!" he repeated, glancing towards that lady, who was devoting herself to Brandon. "How very unlike each other you two are; and I must say that you are my mother's favorite. She knows, of course, that Miss Edith is pleased to dislike me, and that influences her—her love for me being one of her faults."

"Is it a fault, Mr. Verner?"

"Some think so. A mother is blind to one's imperfections, friends are not; you are amongst them, Miss Lovell?"

"Amongst the friends or the fault-finders?"

"The friends, I pray. You are very proud, Miss Lovell, and your esteem is hard to win; I have tried to win it, and if I have succeeded, I may gain what I value still more—your love."

"Just at this moment Aunt Dorothy called us in, and Edith came running to us. We returned to the dusky parlor, and how the evening passed, what I said or sung, I do not know, for I felt as one in a dream.

Tenderly and lovingly did Nevil take leave of me, and that night my sleep was unbroken, for he loved me, and he had revealed it.

Autumn went by, and chilly winds and gray skies foreshadowed the Winter.

I persuaded Edith one day to ride with me to Mrs. Verner's, and after prophesying that we should be overtaken by a snowstorm, she consented, and we set out together. As we cantered over the common, I saw a man slowly crossing it, and wondered if he were

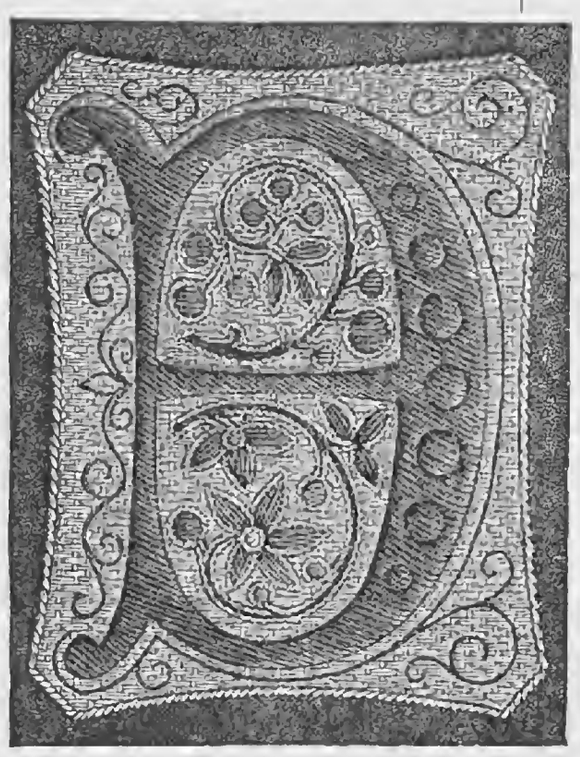

FIG. 485.

Brandon. Hearing the sound of horse-hoofs, he looked round, and stood aside to watch us go by; he was, as I saw at once, a stranger, and as such I would have passed him, but he raised his hat, and Edith bowed.

"Who is your friend?" I asked, as we rode on.

"I have seen his face somewhere," she replied.

"Why did you bow?"

"He bowed to me. Oh, I remember! he's the gentleman who traveled down to Royton with me, I know his smile, because it reminded me of aunt's gray cat."

"He claims acquaintance with you because he chanced to be your railway companion once?"

"I don't know. Perhaps he is a book-agent waiting orders. What a fuss you make!"

I was not making a fuss, only her bow had struck me as being very cordial to a stranger. On arriving at Newville, we found Mrs. Verner alone, and Edith seated herself at the piano.

We two had spoken together under cover of my cousin's music, Mrs. Verner suddenly seized my hands, looking earnestly at me and speaking softly.

"Kate, you know that my son loves you—he does indeed! From the first he admired you. He is the best of sons, and will you not think well of him.

What could I answer to the mother pleading for her son? I could not say, "I love him," for woman's pride forbade it.

"Are you angry, Kate? He tells me you are proud—that he scarcely dare speak of love to you. You must not tell him that I said this. I could not help it, because you hold his happiness in your hands."

"We have known each other so short a time," I urged.

"It is many months since you met, and you surely don't doubt him? His goodness, his upright life, his kind heart, may surely plead—"

She broke off, for Edith, rising, declared she was tired of playing, and joined in the conversation.

When our visit came to a close Mrs. Verner gave me a kind smile; but her eyes were sad, for she did not see that I loved her son, and perhaps thought with him that I was cold-hearted.

Riding home, Edith asked me if I were not tired of hearing Mrs. Verner sing her son's praises?

"It is provoking to see anyone so blind," she said; "and how meekly she worships Narcissus!"

"I wish you would talk of anything save people's faults?" I said. "You often say you are bored. Did it ever strike you that you might be boring?"

FIG. 486.

"That's like a Lovel!" she said, with perfect good humor.

But it was one of her virtues not to be easily offended.

We passed Kingston and curiously enough the stranger to whom Edith had bowed was gazing through the park gates, as though lost in admiration; but as we passed he looked round, and Edith dropped her whip. He hastened to restore it, and she smilingly thanked him, then inquired if he were going to see Mr. Lovel, for that was his residence; but the stranger was merely admiring the ground and had not the pleasure of knowing Mr. Lovel.

"Nothing but meetings, Kate!" said Edith, as we rode on. "I dropped my whip purposely; but you need not look shocked! I want amusement.

"Edith, do you think this right?"

"Don't get excited, love; calm yourself. He may be a prince in disguise, for love tales often begin on the railway; it's the fashion now-a-days."

There was a light in her eye, a smile on her lips that puzzled me: but of the stranger we said no more.

I thought often of Mrs. Verner's words and of Nevil's love, which was now apparent to us all, and, seeing it, Edith refrained from speaking against him, though she provoked him as much as ever. Why did she dislike him? He was so kind and gentle, and "the best of sons."

Was I obstinately blind to his faults, as Edith said? Was I mistaking for gold mere false, glittering metal? It could not be. I loved him because he was good, because he was kind; but who can tell why they love? "Is human love the growth of human will?"

Brandon often came to see us, and we spoke of bygone days together, to aunt's delight, and even Edith's, as she liked our grave kinsman though she ridiculed his gravity. One evening in particular of those many Autumn evenings I remember, when he came earlier than usual, feeling, he said, dull and looking very pale and weary.

"You study too much," aunt said, "and it is not good for you, because it makes you sad and absent minded. You'll lose your memory soon."

"I wish I could," he replied, in a tone that struck me and fixed the words in my mind, whilst Edith laughed and stared.

"Don't study too much," I said, when he was going, and we stood in the porch.

"Oh, no! But my books are my friends. Good night."

FIG. 487.

"Good night," I echoed, and he was gone.

* * * * *

Brandon Lovel rode home rapidly through the lane, carpeted with fallen leaves, over the bleak common, through the quiet village; until he reached home. Crossing the hall, he entered a room lighted by the flame of an antique lamp, and the red glow of the fire, and throwing down whip and gloves, he stood gazing before him in reverie, until his glance fell on an open book lying on the table; some passage attracted him, or perhaps from mere force of habit he sat down, and, leaning his head on his hand, began to read.

[To be continued]

NEW PUBLICATIONS.

THE LEGEND OF THOMAS DIDYMUS, THE JEWISH SKEPTIC. By James Freeman Clarke. Boston: Lee & Shepard.

The above-named book is a brief commentary on the life and times of Jesus Christ, depicting the belief, opinions and prejudices of the Jews. Our Lord is represented not in an ideal form, but personal, as he appeared to the people of his own day. Thomas relates much of what transpired when he accompanied the Saviour in his work of doing good, and, as it is written in an easy, fluent style, the reader is at once interested and, as it were, is made a participant in the happy scenes. We commend it to all for thoughtful perusal.

JOURNAL OF A FARMER'S DAUGHTER. By Elaine Goodale. New York: G. P. Putnam's Sons. Price $1.00.

This is a charming little work from the pen of one of the "Sky Farm Poets," and is the first prose work they have written. It is a journal of farm life, and in the first paragraph the young authoress declares that it is a pleasant, aye, and a profitable thing to be a farmer's daughter! Elaine has succeeded in relating some experiences at "Sky Farm" in a very pleasing style. It is a book which will be perused with delight.

REVISED ODDFELLOWSHIP ILLUSTRATED. By Professor Blanchard of Wheaton College, Chicago: Ezra A. Cook, Publisher.

This is a book of 281 pages, devoted to an exposition of the secrets of Oddfellowship which the author says "is a false religion and therefore utterly at variance with the religion of the Bible." It is on the same plan as "Freemasonry Illustrated" and "Knight Templarism Illustrated." It is a book which will be read with interest, as its statements are said to be made on facts.

DYSPEPSIA: HOW TO AVOID IT. By Jos. F. Edwards, M. D. Philadelphia, Presley Blakiston. Price 75 cents.

The author in this little work of 87 pages discusses a subject which many would like to know more about than they do in order to avoid the disease. There are four chapters on "Food," "Digestion," "How to cook Food" and "How and what we ought to eat." It will repay a careful perusal.

FIRST LESSONS IN GREEK. By Wm. S. Scarborough, A. M. New York: A. S. Barnes & Co., publishers. Price $1 25.

This little work for beginners in the study of the Greek language is on the plan of Jones' First Lessons in Latin. A cursory glance leads us to think it well adapted to its purpose.

THE GEORGIANS. A Novel. Published by Jas. R. Osgood & Co., Boston. Price $1.00.

This is the third of the Round Robin series, and a book in which is strikingly depicted some of the original types of Southern life and character. It is full of interest.

SINNER AND SAINT. A Story of the Women's Crusade. By A. A. Hopkins. Boston: D. Lothrop & Co. Price $1.25.

This is a notable addition to temperance literature, and, although it is written in the novel style, in it the author touches some of the vital elements of the temperance reform.

FRIENDS: A Duet. By Elizabeth Stuart Phelps. Boston: Houghton, Mifflin & Co.

Anything from the pen of the well-known authoress of "Gates Ajar" will find a hearty reception with the reading public.

ROCKLAND CEMETERY. Illustrated. By William Wales. New York: Randolph & Co.

A very nicely gotten-up book, descriptive of this beautiful cemetery in Rockland, N. Y. It contains 20 illustrations.

HAND-BOOK OF USEFUL TABLES. Finch & Apgar, publishers.

This is a handy reference book for the farmer and mechanic, and should meet with ready sale among them.

DIARY OF A MINISTER'S WIFE. By Ahuedia M. Brown. J. S. Ogilvie & Co., 29 Rose Street, New York. Issued in two parts. Price 10 cents each.

THE SCHOLAR IN A REPUBLIC. Wendell Phillips. An address at the Centennial Anniversary of the Phi Beta Kappa of Harvard College, June 30, 1881.

BRIC-A-BRAC.

THE BANGING MANIA.

O see the young girl,
In beauty rare,
Sans kink, sans curl—
Banging her hair.

And hear the young man
At the piano there,
Hard as he can—
Banging his air!

A young mother stands
Oppressed with care,
With slipper in hands,
Banging her heir.

A BOSTONIAN MISTAKE.—At a late Boston party the host said to a guest: "I beg you to entertain Mr. Blank a little; he looks utterly forlorn and bored to death. I will introduce him and you must interest him. By the way, his strong point is butter, on which he has written a book." The lady guest graciously undertook the task of entertaining the man, inwardly wondering that he should be so much interested in butter (of which she knew very little), when his face indicated a mind given to much profound thinking. However, with butter in view, she began on the weather, gradually got to the country, then onto a farm, from that to cows, and at last to butter. The man looked more bored than ever, the magic word producing not the slightest effect, and he somewhat abruptly left her, and soon withdrew from the house. "I did my best," she explained to the hostess; "I went through agonies to prove that I was deeply interested in butter, but it was all in vain." "Butter!" exclaimed the hostess, "What possessed you to talk to that man of all men on *butter?* I told you he had just written a book on Buddha, and I knew how deeply you, too, were interested in the same subject." And they said in chorus, "Gracious!"—Boston Transcript.

THE RHYME OF THE REPORTER.

With fingers blackened with ink,
With eye-lids heavy and red,
The local editor sat in his chair,
Writing for daily bread.
The small boy was by his side,
The foreman grumbled and swore,
And the office boy like an "Oliver Twist,"
Constantly cried for "more."
He had hold of a broken leg
That had never been broken at all;
He had killed off the nearest friend he had
And tore up the house in a squall,
And now he was at an end, he hadn't an item left;
And he bowed his head to the small boy's scorn,
Like a fellow of hope bereft.
They found him a corpse that night
In streets so drear and sloppy,
With the foreman whispering into his ear
And the small boy waiting for copy.—Gate City.

RECIPE TO SUBDUE A HUSBAND.—Mr. and Mrs. Topnoody were getting ready to go out to call on a friend the other evening, and Mrs. T. desiring to look well was arranging herself in a great variety of colors. Topnoody noticed it, and began to comment. Said he, "Mrs. Topnoody, I think a woman of your age ought to wear more subdued colors." "Oh, do you?" was the response. "What would you suggest as becoming to your angel wife?" "I think a black dress is simple, tasteful and always becoming." "Indeed?" "Yes, indeed." "Well, then, Topnoody, suppose you die and leave me a widow, so that I can wear the color you think most becoming to me. Of course you can't see me in it, but it would be such a pleasure and comfort to me to know that I was pleasing my poor, dear, dead husband." Then Mrs. Topnoody smiled in such a very satisfied way that Topnoody concluded his suggestions were possibly too previous, and he busied himself in tying his necktie while Mrs. T. distributed the rainbow tints as she pleased.—Steubenville Herald.

THE BOSTON GIRL.

I told her of a maid whose mind
Was filled with tender thoughts and fancies,
A lovely being of the kind
They write about in old romances.
"Knowest thou," said I, "this maiden,
Whose beauty doth my thoughts beguile?"
She answered with a dreamy air—
"Well, I should smile!"

"Her cheeks possess the rose's hue,
No form is daintier or completer,
No hair so brown no eyes so blue,
No mouth is tenderer or sweeter.
The favored youth who gains the hand
Of this fair girl, will ne'er regret it.
With modest grace she added: "And
Don't you forget it."

"O thou dear mistress of my heart!
My angel! let me kneel before thee
And say how heavenly sweet thou art,
And how devoutly I adore thee."
She turned away her lovely head,
And with a languid look that fired
My soul, in murmured accents said,—
"You make me tired."

—David S. Foster, in Scribner's for June.

EVEN the philosophers often have the laugh turned on them. A little boy said in the presence of Herbert Spencer: "What an awful lot of crows!" The philosopher corrected the youth by saying: "I have yet to learn, little master that there is anything to inspire awe in such a bird as the crow." For once the author of first principles met his match. The boy replied: "But I didn't say there was. I didn't say, what a lot of awful crows! but what an awful lot of crows!" Sound for the boy.

A merchant possessed a fine yacht
Had money, a house and a yacht;
In business he trusted,
And therefore he busted
And now it is all "gone to nacht."

A LOST OPPORTUNITY.—A Clevelander who had put in two weeks at the Flats, came down on the boat on his way home. Among his traps he had something in a box which claimed considerable attention, and a man finally approached him and said: "I see you caught one." "Yes." "Going to take him home?" "Yes." "Was it the largest one you saw up there?" "Oh, no; this is only a young one." "Going to tame him I presume?" "Well, I guess so." Did he bite you?" "Bite me? Why, they never bite. You know what sort of a bird this is, don't you?" "Of course I do. That's a St. Clair Flats mosquito, isn't it?" It was a splendid opportunity, and the temptation was great; but the Buckeye was a truthful man, and he sighed as he replied: "N-no, sir. That is a St. Clair Flats mud-hen. I didn't see a 'skeeter over half as large as this."—Det. Free Press.

CAULIFLOWER.

Oh cauliflower! thy blossom sweet
Makes most delicious food to eat,
And when I see thee float in cream
I'm awful glad you are not a dream.

It must be enough to provoke a saint,
To dream of thee and awaking, faint,
With strong desire to swallow thee down
Discover that you are not—in—town.

"HAUGHTY-CULTURE-ISM."—Lady: "Wish to leave, Parkins? But you only came yesterday!" Parkins: "Yes marm. Hin engaging I thought you was sparrergrass gentry; but when I 'ears from the cook last night that you eat pertaters and cabbige, carrots and sich-like second-hand vegetables, I ses there ain't nothing hesthetic in it, and I resigns my staff of horfice, so to speak."

FUN AND FANCY.

A plate of hash and a brindle cat
A sailing on the sea:
For your sister's beau a pink cravat,
To climb a hickory tree.

For thee a stick of taffy sweet,
(Onions are strong in the onion bed!)
A blue-eyed pug for me to greet,
(Still, oh, still are the entombed dead.)

An oyster stew or two for you,
(Oh clams are fifty cents a peck!)
For me a schooner of Mountain Dew,
(Two glasses for a ten-cent check!)

For you a stroll upon the sand,
(Red is the nose of he who drinks!)
For me three pairs in a poker hand,
(Bologna sausage is sold in links!)

—The Wild(e) poet of the Norristown Herald.

BY nature the smaller strawberries are so modest and shrinking that they crawl down to the bottom of the boxes, leaving their large brethren on top, greatly to the chagrin of the venders of the fruit, who are so self-conscious as to entertain the foolish idea that buyers will suspect them of having placed the big berries on the top for the mercenary purpose of tempting them to invest.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

DOMESTIC RECIPES.

Rolls, Rusk, Etc.

HOME-MADE ROLLS.

Put two quarts of sifted flour into a deep dish, rub a half tablespoonful each of butter and lard into the flour, make a well in the center and pour in a pint of cold, boiled milk, stir in enough flour to make a thin batter, then mix in a half cup of good, home-made yeast, a half cup of sugar and a little salt. Let become light, knead down, let rise again, then mold, roll a fourth inch thick, cut into rounds with a cake cutter, put a little melted butter on one-half and lap nearly over on the other. Place on the pan nearly an inch apart.

RUSK.

Two cups of dough, one tea cup of sugar, half a cup of butter, two well-beaten eggs, flour enough to make a stiff dough. Set to rise and when light make into high and rather narrow biscuit. When again light sift sugar and cinnamon over the top and bake.

GRAHAM GEMS.

Beat up an egg, put with it a quart of buttermilk, make a stiff batter with Graham flour, add a little salt and a heaping teaspoonful of soda. Have the gem-pan hot and greased, put the batter in and bake in a quick oven half an hour.

RAISED WAFFLES.

A quart of sifted flour, a pint of new, lukewarm milk, two thoroughly beaten eggs, a tablespoonful of melted butter, a teaspoonful of salt, and a half teacupful of home-made yeast. Let get very light and bake in a hot, greased waffle-iron.

Cakes.

ICE-CREAM CAKE NO. 1.

Two cups of sugar, one of butter, whites of eight eggs, a fourth cup of sweet milk, three and a fourth cups of sifted flour, two teaspoonfuls of baking powder, flavor and bake in jelly tins. Boil two cups of powdered sugar in a half teacup of water stirring constantly. When thick and clear, pour boiling hot over the whipped whites of two eggs. Beat until almost cold. Flavor and spread between the layers.

ICE-CREAM CAKE NO. 2.

Make good sponge-cake, bake half an inch thick in jelly pans and let get cold. Whip a pint of thick, sweet cream, until it looks like ice cream, sweeten and flavor with vanilla. Blanch and chop a pound of almonds, stir into the cream and spread very thick between the cakes.

CREAM ROSE CAKE.

Cream three cups of powdered sugar with a cup of butter, add a small cup of sweet cream, beat five minutes, flavor with vanilla, add by degrees the whites of 10 eggs beaten stiff, and four and three-quarter cups of sifted flour with two teaspoonfuls of baking powder sifted with it. Color pink with cochineal and bake in four jelly-cake tins. The cochineal can be had of any druggist, who will prepare it for you when told for what it is wanted. He will give it to you either in liquid form when a very few drops will answer, or as a powder and you can add to a pinch of it a few drops of water. Strain and stir in drop by drop until you have the right color. For the

CREAM.

Pare and grate one cocoanut, whip stiff the whites of four eggs, stir in a cup and half of powdered sugar and flavor with rose-water. Put the cake together with this cream and stir a little more sugar into that you spread over the top.

Puddings.

PLAIN STEAMED PUDDING.

Two cupfuls of sour milk with *some* cream in it, three cupfuls of sifted flour, one-half cupful of finely chopped suet, a little salt and a large teaspoonful of soda dissolved in a little hot water. Stir the milk into the flour, beat until free from lumps, add the suet and salt and at the last moment beat in the soda. Steam two hours. Eat at once with a hard sance—sugar and butter beaten together and flavored.

APPLE BAKED PUDDING.

Pare and core six tart cooking apples and place in a buttered baking dish. Pour over the following batter: a pint of milk, two beaten eggs, a little salt, two teaspoonfuls of baking powder sifted with flour enough to make a batter thicker than for pancakes.

DELMONICO PUDDING.

A quart of new milk, three even tablespoonfuls of corn-starch dissolved in a little cold milk, the yelks of four eggs, six tablespoonfuls of sugar. Heat the milk, add the sugar, then the starch, and last the beaten yelks. Flavor, pour into a pudding dish and bake in a slow oven (the top must not brown) 30 minutes. Have the whites beaten stiff, sweeten, flavor and spread over the pudding. Return to the oven and let it just brown.

Preserves.

PLUM PRESERVES.

Allow equal weights of sugar and plums. Add only enough water to the sugar to make a thick sirup, boil and skim. Wash the plums, prick in several places and place in a stone jar. Pour over the sirup and cover with a dish that will keep the fruit under the sirup. The next day drain off the sirup, heat, skim and again pour over the fruit. Repeat this for four days. Then place plums and sirup in the preserving kettle and boil very gently half an hour. Excellent!

QUINCE PRESERVES.

Take equal weights of quinces pared and quartered and sugar. Boil the fruit until tender in water just to cover. Carefully take out the pieces, add the sugar to the water, boil, skim, replace fruit and boil very slowly until clear. Place in jars and pour the sirup over.

Miscellaneous.

FLY POISON.

Boil one-fourth ounce of small quassia chips in a pint of water for 10 minutes, strain and sweeten.

IVY POISONING.

Bathe the affected parts freely with sweet spirits of nitre.

STAINS OF ANALINE DYES.

Wash the hands in a solution of common sodium sulphite.

MILDEW

is best removed by dipping the goods into a very weak solution of chloride of lime—a heaping teaspoonful to a quart of water. If the stains do not at once disappear, place in the sun for a few minutes, after which rinse thoroughly.

MIXTURE FOR SANDWICHES.

Chop fine cold boiled ham, tongue and chicken, mix with one pint of the mixture half a cup of melted butter, a tablespoonful of salad oil, one of mustard if liked, the yelk of an egg and a dash of pepper.

News of the Week.

HOME NEWS.

MONDAY, Oct. 3, 1881.

Swarthmore College was burned on the 26th ult. Damage estimated at $300,000. The fire originated from an explosion of chemicals in the physical laboratory. The Trustees on the 27th ult. decided to continue the session in the Chestnut Grove House at Media, Pa. They also decided to rebuild the college as soon as the losses are adjusted with the insurance companies.

The Presidential mourning decorations on the public buildings alone in Brooklyn, N. Y. cost $10,000.

At Council Bluffs, Iowa, a carload of gunpowder exploded recently, shaking the city to its center and demolishing the Rock Island railroad round house, repair shops, freight house and fifty freight cars. The explosion dug a hole in the ground 15 feet deep and 45 in diameter. Large windows in all parts of the city were shattered and the plaster torn from the houses. Windows were broken in Omaha, on the opposite side of the river, and up the Missouri Valley, 20 miles north. The loss will reach hundreds of thousands of dollars. It is reported that the car in front of the car containing the explosives was set on fire by a passing locomotive. This in turn ignited the next car and the explosion followed.

General Robert Patterson, of Philadelphia, left an estate of $970,333, of which $186 covers the value of the books in his family residence and $1,772 his choice wines.

The Chinese Educational Commission Home established in Hartford, Ct., several years ago, finally closed its doors on the 26th inst. The last party of students, 27 in number, have started for China, in charge of Commissioner Wood and one of the teachers and servants. The fine building, erected there by the Chinese government two years ago, will be sold. Mr. Yung Wing, attached to the Chinese Legation and who has fostered this educational enterprise since its inception, remains in this country for the present, but it is expected will return to China next Winter, after the arrival at Washington of the Chinese Minister who has been recently appointed.

Recent reductions on three notorious star routes in Oregon will save the government about $120,000 yearly. Let the good work go on.

At noon on the 29th ult. all the sub-committees of the Committee of Twenty-eight, engaged upon the consideration of the World's Fair project, met at the rooms of the Boston Board of Trade. Reports upon the site, expenses and income, co-operation of other New England cities, management and result of the Philadelphia Exposition and permanent organization were presented and carefully considered, but no decision was reached which can be given to the public at present. Two weeks will be taken for the consideration of these reports and all possible information as to the popular support will be gathered by the committee. In two weeks the Committee of 28 will meet again, and a final decision will be reached as to the expediency of holding a World's Fair.

A wind and rain storm in Guthrie, Green and Kossuth Counties, Iowa, has inflicted serious damage. Half a dozen farm houses in Guthrie were blown over, and several persons seriously injured. In Guthrie Center several business blocks were unroofed and residences moved from their foundations. The Baptist church and other buildings were damaged. A train on the Fort Dodge road was blown from the track near Ripley. Three cars were demolished and eight persons injured, two seriously.

The programme of the ceremonies at the opening of the Atlanta Exposition, on Wednesday, October 5, has been completed. The ceremonies will be exceedingly impressive. Many representative citizens from every part of the United States have accepted invitations to participate. Most of the buildings are finished and exhibitors are rapidly putting their displays in shape. The city is fast filling with visitors. Thursday, October 27, has been decided upon as Governors' Day and all the State Executives are expected, at the conclusion of the Yorktown celebration, to visit the Exposition before returning to their homes. The 1st Connecticut Regiment and other military organizations are expected to take part in the exercises of that occasion.

Typho-malarial fever, bilious colic and pneumonia are playing sad havoc among the persons rendered homeless by the recent forest fires. Many deaths have already occurred, and several of the sufferers are now lying at the point of death.

G. A. Zahn, a farmer living near Baton Rouge, La., while watching a corn-field with a gun, shot and killed Hardy Price, whom he saw stealing corn. Zahn surrendered and was acquitted by the coroner.

The depot at Irvington Station, a few miles north of Fort Dodge, Iowa, was struck by lightning on Thursday, prostrating 18 men. The first one to recover, finding the others apparently dead, dragged them out into the air. All recovered except one. Some had their clothing torn entirely from their bodies. The building was nearly destroyed. Mechanics' tools were strewn in all directions, as if there had been a powder explosion.

California papers print a report that 35 families from the Oneida Community, New York, have purchased lands near Santa Anna, Cal.

The order detailing a court-martial to try Sergeant Mason, who attempted to shoot Guiteau, will be suspended for the present by order of Gen. Hancock.

On an average, $200,000 in gold coin, bullion or jewelry is sent every day as third-class mail matter through the San Francisco Post Office. Half of this is shipped by the Government; the rest is private remittances.

The forest fires which lately devastated Eastern Michigan were not without compensation. While they destroyed many human lives and much valuable property, they also swept clean of brush and scrub growth thousands of acres of good soil, which would otherwise have remained a wilderness, but which is now ready for cultivation. Poor consolation!

Several memorials of the late President are about to be established. At Long Branch a memorial window of richly stained glass is to be put in the Episcopal church; a gold medal is soon to be issued from the U. S. mint bearing on one side a medallion of Gen. Garfield, on the other, one of Lincoln; a fund to establish a Garfield Memorial Professorship at Williams College will be raised; and a monument will be erected to his memory in Cleveland.

At Spartanburg, S. C., on the 30th ult., B. W. Hicks was hanged for murdering his wife in May last. A large number of people witnessed the death scene.

The Republican State convention meets in this city on Wednesday the 5th inst. for the nomination of State officers.

A dispatch from Wautoma, Wis., says that a terrible tornado swept a valley a short distance west of that town on Thursday, completely devastating a space 80 rods wide and five or six miles in length. Many houses, barns and outbuildings, and one grist mill were demolished. About a dozen persons were seriously injured, but nobody was killed outright.

The extra session of the Senate on the 14th inst., will be called to order by the Sergeant-at-Arms, there being no clerk to perform that duty. It is generally conceded that the Democrats will elect a President *pro tem.* The newly elected Senators will then probably be admitted and participate in the further organization of the Senate. After the new Senators are sworn in, the Senate will then stand 37 to 37, besides Davis and Mahone, and the chances therefore are it will stand for organization 38 to 38, with no one to give the casting vote.

General Garfield first met Dr. Bliss when they were both young men. Garfield, when trudging to college lost his pocket-book, containing all his worldly wealth, and Bliss found it and returned it to him.

According to the request of Queen Victoria, asking of Mrs. Garfield a photograph of her late husband, the picture has been forwarded to her Majesty, by Mr. J. F. Ryder, the photographer. It is the same size as the one that hangs in catafalque, is silver tinted and elegantly framed. The photograph sent to the Queen is considered by Mrs. Garfield the best photograph ever taken of her husband.

Mr. E. G. Booth, a wealthy Philadelphian, and a native of Virginia, is erecting a handsome villa on the bluff at Yorktown, Va., at a cost of $1,000, for the use of President Arthur at the coming centennial celebration. He has also offered to erect such stands along the bluff for the benefit of prominent visitors as might be required.

It is announced that Lieut.-Gov. Tabor, of Colorado, will next Winter found an extensive public library in Denver. The building is to cost $200,000, and will open with 100,000 volumes.

Mr. Orlando B. Potter gives $2,000 toward the publication, in form suitable for public circulation, of the late President Garfield's opinions and utterances upon the importance and necessity of reform in the civil service of the country. Mr. Potter hopes that others will contribute, and names George Wm. Curtis as custodian of the fund.

The law library of the late Judge Clifford, of Maine, is valued at $30,000.

The dome for the new Observatory at West Point Military Academy, now being constructed, of paper, is expected to have scientific uses besides that of a mere covering. It will act as a non-conductor of heat and electricity, and maintain a uniform temperature within the building, thus preventing an electrical disturbance of the instruments used.

The amateur Cabinet makers are busy assisting (?) President Arthur in appointing a new Cabinet. It seems to be the general opinion that there will be a complete overhauling of the Cabinet, which is, of course, the privilege of the new President. Attorney General McVeagh has urged the President to accept his resignation before the special meeting of Congress on Oct. 14, and Secretary of the Treasury Windom wishes to vacate his position in order to become a candidate for re-election to Congress from Minnesota. George S. Boutwell of Massachusetts, is mentioned for Treasurer. Mr. Blaine will probably insist on the acceptance of his resignation at an early day, but who will be his successor is very uncertain. Hamilton Fish, of N. Y., is mentioned for the place. If any man, now a member of the Cabinet, remains there it will be Secretary of War Lincoln. However, we are not Cabinet makers.

The physicians who attended the late President are being hauled over the coals on account of their autopsy of the remains. Dr. Hamilton reviews the case in this month's Medical Gazette, and soon the whole thing will be thoroughly aired in the cientific papers. It seems that the doctors were all at sea as to the nature of the wound, and that the case was a more desperate one than they had given out.

A Washington rumor has it that ex-Governor Dingley, elected to succeed Mr. Frye, of Maine, in the House of Representatives, will decline in favor of Mr. Blaine, who, back again in his old field, won't object to his old place of Speaker.

There are strong indications that the question of a bankruptcy law will be a prominent subject before the next Congress. The Senate committee is considering the matter and has received a large number of communications bearing on the subject.

"Better Health than for Forty Years."

A patient who has been using Compound Oxygen writes: "I am enjoying better health than I have done for forty years, and I attribute my restoration entirely to the use of your Compound Oxygen. My average weight was never over 109 pounds. I now weigh 125 pounds, and have renewed vitality, and my friends say I am looking ten years younger than when I commenced the use of the Oxygen. Our Treatise on Compound Oxygen, containing large reports of cases, and full particulars, *sent free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Phila. Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Oct. 3, 1881.

THE following is a condensation of agricultural news telegraphed from all the principal points in the country between noon on Friday, Sept. 30, and date: EASTERN STATES. Portland, Me.: Food products strong and active. Dairy and farm products firm, with decreased supplies, indicating much higher prices. Continued fine weather has assured an abundant harvest to corn packers and the ripening of all the crops in this section.....Boston, Mass.: Wool still firm; but sales falling off as compared with previous weeks in Sept., amounting during the week to only 2,568,850 lbs. Hides dull and weak. General business very brisk.....Providence, R. I., and Fall River, Mass.: Cotton steady and scarce: Middling uplands, 12½; middling gulfs, 12¾. MIDDLE STATES.—Buffalo, N. Y.: Suspension of grain shipments from Chicago due to the corner in October corn has demoralized lake trade. Steamers have left there for this place with corn at ½c. per bushel, entailing a loss of ¼c. on every bushel carried. Ordinary canal shipments of grain are light, at 4½c. on wheat and 4c. on corn to New York.....Philadelphia, Pa.: Wool quieter; sales, 850,000 lbs. against 1,500,000 lbs. last week; but market very strong, and outlook favorable to sellers. Cotton quiet; stock here, 4,560 bales. Grains active on speculative account: prices higher all round. Exporters are doing nothing in wheat, as prices here are above those in foreign markets; but there is a good demand for corn. On Thursday 250,000 bushels were sold for export, and prospect good for larger exports..... WESTERN STATES. Detroit, Mich.—Movement in grain light; farmers holding back against contracts for future delivery. Great danger that land in the burnt district will be sold for much less than its value owing to the great distress of the burnt-out owners. Owing to rise in prices, the laboring classes find it difficult to obtain more than bare necessaries.....Chicago, Ill.—Grain markets active, excited and higher, the result mainly of a speculative flurry during the week. Wheat has advanced 10c to 12c per bushel, sales for November delivery being made on Thursday as high as $1.44⅛. Corn has advanced, during the week, 7c per bushel, and oats 4c. The grain is now in the hands of the Chicago clique who are pushing the Cincinnati corner to the wall. In store 6,851,475 bushels of corn, and 3,330,000 bushels of wheat. All lake freights have been as low as 1c per bushel for corn to Buffalo; for grain is higher here than there, and higher in Milwaukee than here whither 20,000 bushels of corn have just been sent. Cattle receipts are unusually heavy, those of Wednesday (10,200 head) being the heaviest on record.....Peoria, Ill.—Grain receipts very good. Weather warm. Fair in progress.....Cleveland, Ohio—No. 2 red winter wheat, $1.47; corn, 75c; high mixed No. 2 oats, 51c.....Cincinnati, Ohio.—Wheat advanced steadily till Thursday, when it dropped 1½c. Corn scarce and firm. Flour ditto, with a speculative demand. Oats, rye and barley firm. Little doing in hog products.....Indianapolis, Ind.—Wheat firm and advancing rapidly. Indications with regard to corn crop are more favorable. Fair just over.....Milwaukee, Wis.—Weather has been unsettled, with more or less rain every day, causing considerable damage to unthrashed grain. Receipts of cereals still light, owing to unfavorable weather. Contrary to expectation, there has been a sharp advance of 6@8c. per bushel in wheat. Flour in good demand; local mills taxed to their fullest capacity.....St. Paul, Minn.: Poor crops in Southern Minnesota. Bad weather still demoralizing trade. .....Louisville, Ky.: Rains are improving the tobacco crop; but Kentucky yield is not expected to be over half of last year's. Leaf market stationary at last week's prices. As compared with last week's prices, lugs are ½@¾c.; dark leaf, ¾@1½c., and good cutting leaf, 1@2c. lower.....St. Louis, Mo.: Butter and cheese in small supply, of poor quality, and advancing. Provisions dull and weakening. Horses and mules are arriving now at the rate of 250 to 300 head per day and are selling nearly as fast at good figures. Several heavy general rains during the week have tended to check speculation in grain, though wheat, corn and oats are strong and buoyant.....Kansas City, Mo.: Cattle market weak—10@15c. lower. Hogs fairly active; prices firm with an advancing tendency.....SOUTHERN STATES. Baltimore, Md.—Very large dealings in grain and considerable excitement; prices higher than at any time this season. No shipments during the week, but increased inquiry for charters on Thursday and Friday, it being understood that the "shorts" in England and the Continent are becoming alarmed and are sending orders. Provisions quiet but steady with a firm and active jobbing trade. Cotton steady with a constant demand from spinners..... Richmond, Va.—Weather excessively hot all the week. Leaf tobacco is flat. Though the markets for all bright grades is firm, the dark grades have declined 75c per 100 pounds, owing to rains two weeks since in N. C. where most of the bright wrappers are grown. The outlook for leaf of good quality is very gloomy, while in Virginia the dark crop will be considerably better than was at one time expected. Grain receipts light.....Wilmington, N. C.—Weather hot. Cotton, grain and turpentine crop reports still unfavorable. A British steamer of 1,500 tons, the largest here for years, is loading with cotton..... Charleston, S. C.—Cotton continues to come in slowly; receipts for the week, 15,888 bales, against 32,015 for corresponding week last year. Rice comes in slowly and all prices are up. Rainfall this week 0.31 inch against 1.72 inch last week.....Savannah, Ga.—Weather hot and dry. Cotton market weakened to a basis of 11⅛c@11c, owing to large sales by two "bull" houses. A light stock of rice on hand; good demand and full rates.....Rainfall, 0.20 inch against 2.17 inches last week.....Augusta, Ga.—All kinds of produce, meats, breadstuffs, etc., have advanced, and have a firm upward tendency. Cotton coming in rapidly; receipts since September 1, 22,000 bales against 32,088 at same date last year. Weather still favorable for picking, and farmers are busy gathering crop. In some places the fields are white with cotton—not sufficient labor to pick it, but generally labor is plentiful and efficient..... .....Atlanta, Ga.—Cotton crop generally short. Rainfall 0.53 inch against 0.63 inch last week .....New Orleans, La.—Cotton strong; prices advanced and operations large. Since Thursday-all grades are marked up—low ordinary from 7c to 7⅞c; good ordinary from 9¾c to 10⅛c; middling from 10¼c to 11⅜c, fair firm 12¼c to 12⅜c. Grain active and easier. Heavy rains through this and adjacent States will benefit Fall crops, particularly cane. General estimate of sugar crop 25 per cent. less than last year..... Memphis, Tenn.: Flour higher. Weather favorable for cotton picking, which is progressing rapidly. Labor plentiful and good; receipts greatly over those of last year. Average weight per bale is found to be 30 pounds less than the average weight of bales marked during same season last year. Rainfall, 0.72 inch, against 0.02 inch last week.....Nashville, Tenn.: Wheat slow in movement; sup-

ply light. Corn firm with an upward tendency. Peanuts quiet but very firm. Dealers say receipts of crop will not exceed 5,000 bushels. Cotton quiet and lower. Receipts double those of former years, owing to early ripening; the whole amount to be handled here is expected to be 25 per cent. less than last year.....

The Signal Office at Washington telegraphed here on Friday evening that the average rainfall during the previous week at its 25 stations in the Cotton Belt was 0.77 inch against 1.58 inch for the corresponding week last year .....CANADA—Quebec: Wool very firm. Dairy products have ruled dull, and close with an easy tendency. Grain trade active, and prices of wheat and coarser grains are higher. .....TORONTO—The Grand Trunk Railroad authorities, in their annual crop report, say that along their line in Canada, hay, maize and fruits of all kinds have proved failures this year; but, taken altogether, the harvest has proved a very satisfactory one, wheat, oats and barley each exceeding an average crop.

The British Board of Customs is endeavoring to prevent the introduction of the Colorado beetle into England. A fright has been caused by the rumor that Irishmen in the West were gathering potato beetles and securing them in small boxes for transportation to England.....A special from Union City, Tenn., says squirrels are crossing the Mississippi River, 50 miles south of Hickman, in fabulous numbers. They are caught by the dozens by men in skiffs. They enter and pass through corn-fields, destroying as they go. They are bearing up the country, and hundreds are seen crossing east over the Tennessee River, below Point Macon. They are from the interior of Arkansas..... Pink-eye is the name of a horse disease—said to be new—that is spreading disastrously at Chicago. Nearly every stable in the city is said to be suffering from its ravages. It has also visited St. Louis, where it is doing a great deal of damage. A few cases are reported in this city, but there is some doubt as to whether ours is the real "pink-eye," which gets its name from the color assumed by the eye in affected animals. It has doubtless appeared widely in smaller Western towns, villages and country places, of which the telegraph makes no mention.....A telegram from Quebec on Sept. 27, says: During the last few days a number of horses and calves have succumbed to a strange disease, supposed by veterinary surgeons to be a species of blood poisoning. A man who skinned one of the dead calves died himself the next day—probably some form of malignant anthrax.....

The census puts the total consumption of cotton in all branches of textile manufacture during the year ending August 31, 1880, at 1,736,326 bales, of which the Northern mills took 1,539,722 bales and the Southern mills 196,604 bales. Compare this with the Editorial Brevity in our last issue, and allow for the increase during the year, and it will seem that the Financial Chronicle's *estimate* for the year ending September 1, 1881, must be very close indeed to correctness.....Here is Bradstreet's estimate of the condition of the growing cotton crop:—

Per cent. of acreage in each State on which the crop is better, equal to or worse than at corresponding time last year.

	Better, per ct.	Equal, per ct.	Worse, per ct.
North Carolina and Virginia	1	1⅛	97⅛
South Carolina	0	0	100
Georgia and Florida	0	5⅛	94⅛
Alabama	5½	7½	87
Mississippi	5½	6⅛	88
Louisiana	9	0	91
Texas	2⅛	6⅛	91
Arkansas	¼	¾	99
Tennessee	0	0	100
Average for cotton belt	2.8	4.3	92.9

The condition and prospect of the crop based on yield are shown more forcibly in the following table. This gives the actual average condition of the cotton crop, as compared with that of last year at the same time, as indicated by the reports from each State and the average for the whole country:

	Below last year, per cent.
North Carolina and Virginia	37.9
South Carolina	39.8
Georgia and Florida	28.8
Alabama	21.7
Mississippi	28.6
Louisiana	30.6
Texas	39.1
Arkansas	51.8
Tennessee	46.2
Average for cotton belt	31.5

Bradstreet's reports show that it takes 3½ pounds of seed to give one pound of lint in Mississippi and Arkansas, 3⅛ pounds in North Carolina, Alabama, Louisiana, Texas and Tennessee, and 3¼ pounds in South Carolina and Georgia. This light yield also helps to reduce the crop. The reports indicate that a favorable Fall and late frost will improve the present condition and prospect of plants in each State, as follows: In North Carolina and Virginia, 2 per cent.; South Carolina, 3 per cent.; Georgia and Florida, 2.6 per cent.; Alabama, 1.2 per cent.; Mississippi, 1½ per cent.; Louisiana, 3½ per cent.; Texas, 4.4 per cent.; Arkansas, ¼ per cent., and Tenn., 2.3 per cent.

No More Nitre or Buchu.

After the sufferer from a trouble of the kidneys has been drenched with buchu, nitre and all sorts of diuretics, he or she will find a certain cure in Kidney-Wort. It is tonic and purifying in its action, and always effectual.—Journal of Education.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

Thousands of ladies have found sudden relief from all their woes by the use of Lydia E. Pinkham's Vegetable Compound, the great remedy for diseases peculiar to females. Send to Mrs. Lydia E. Pinkham, 233 Western Ave., Lynn, Mass., for pamphlets.

BURNETT'S COCOAINE

Will Save the Hair,

And keep it in a strong and healthy condition, because it will stimulate the roots of the hair, and restore the natural action upon which its growth depends.

Burnett's Flavoring Extracts are absolutely pure.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, October 1.

CHICAGO.—WHEAT strong and higher; No. 2 red Winter at $1.41@1 42; No. Chicago Spring, $1.39½@1.40; cash, $1.39⅛; October, $1.43¾@1.43⅜; November, $1.40; December, $1.39¼, all the year. CORN strong and higher, active and firm at 74@74¼c., cash; 74⅛@74¼c.; October; 73⅝@74c., November; 72c. December; 76⅛c. May; sales at 73⅝@74⅜c. October; 73⅝@74¼c. November; 75¼@76¾c. May. OATS moderately active and higher at 45¾c., cash; 45¼@45⅝c. October; 45⅞@46c. November; 46½c, December; 45½c. all the year. BARLEY, $1.10½@1.11. FLAXSEED firmer at $1.42@1.43½. PORK active and a shade higher at $19 cash; $18.90@18.92½ October; $19.20@19.22½, November; $20.60, January. Lard fairly active and a shade higher at $12.15 cash; $12.17½@12.20, October; $12,35@12.37½ November, $12.50, December; $12.80@12.82½, January. Bulkmeats easier; shoulders, 8c.; short rib. 10¼c.; short clear $10.85. HOGS—market quiet and weaker and 5@10c. lower than on Friday; very poor quality; mixed packing $6.20@6.65; choice heavy packing and shipping $6.75@7.30; light or bacon $6.30@6.75; culls and grassers $3.90@6; Western hogs freely offered, but slow at $5.50. CATTLE—total receipts for the week 40,800 head—the largest on record; exports scarce and in good demand; selling at $6.20@6.90; good to choice shipping, $5.50@6; common to medium and grassy natives weak at $3.70@5.20; butchers' weak at $2.20@4.50; stockers and feeders more active, but quite low at $2.50@3.75; Texans $2.75@3.05; half breeds and natives $3.60@4.50. SHEEP—offerings mostly inferior; thin sheep $2.50@3.50; fair to good $3.25@3.75; choice $4@4.40.

CINCINNATI, Ohio.—WHEAT firmer; No. 2 red Winter, $1.49. CORN stronger; No. 2 mixed, 73½c. OATS strong; No. 2 mixed, 45½c. RYE stronger at $1.16. PORK nominally unchanged at $21. Lard firm. Bulkmeats dull and nominal; shoulders, 8¾c.; clear rib, 10¾c. Bacon steady; shoulders, 9½c.; clear rib, 11¾c.; clear sides, 12¼c. BUTTER—Fancy creamery sells at 38c.; prime do. at 36@37c.; choice dairy at 30c.; prime to choice Western Reserve at 28@30c.; medium do. at 23@25c.; prime to choice Central Ohio at 20@23c., and common at 15@18c. per lb. CHEESE.—The market has been strong all the week and some choice mild factory is arriving which is selling at 14@14¼c. per lb.; prime but rather sharp do. sells at 12½@13½c.

ST. LOUIS.—WHEAT excited and higher, but unsettled; No. 2 red Fall, $1.47¼ cash; $1.47 October; $1.52¼ November; $1.55⅛ December; $1.58¼ January; No. 3 do. $1.37½; No. 4 do. $1.29 bid. CORN excited and higher at 66½c. cash; 66⅜c. October; 70c. November; 71⅛c. December; 72⅛c. January; 78c. May. OATS higher at 46c. cash; 46¼c. October; 48½c. November; 49¼c. December. RYE higher at $1.12¾@1.13.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 1, 1881.

BEANS AND PEAS.—Receipts of beans are large but with the crops admitted to be moderate sellers keep adding on to prices and a free demand supports them. Marrows are selling for home use as well as for export, their usual outlet. No new red kidney showing yet, they would bring $2.75 if choice; old, $2. Green peas range at $1.90@2.15 for Wisconsin, the latter for new. Southern B. E. selling in a small way at $3.5 per 2-bu. bag.

Marrow beans, new, $3.45; mediums, $3.35@3.40; peas, $3.35@3.40; white kidney, $3.25@3.40; black or turtle soup, $2.

Receipts of beans for the week, 18,712 bush.

Exports do. 317 bbls.

BEESWAX—Dull at 21@22c., the latter for Southern.

BUTTER.—There is a strong market for high grades of table stock, as they are scarce. Other styles of State are quoted well up, but trade is stock, as quotations have struck a point that reduces consumption especially as all other good items are high. Western fresh sells upon arrival; held lots are mostly nominal; they cannot be placed here and shippers do not seem to be in urgent want of the cheaper grades; choice butter is out of the reach of exporters.

Creamery, finest tubs, 35@36c.; good to prime, 32@34c.; other quality, 24@26c.; sweet cream, 28@31c.; State dairy do. 23@26c.; do. half tubs, choice, 33c.; do. fair to prime, 25@29c.; Welsh tubs, 25@29c.; poor State, 20@25c.; Western imitation creamery, 20@27c.; do. dairy, choice, 24@25c.; other, 17@22c.; factory or ladle-packed June and Iowa, 18@19c.; other, 15@17½c.; common Western, 15c.

Receipts for the week, 19,867 pkgs.

Exports do. 1,363 do.

Cold storage to G. B., 90s.

CHEESE.—The week has ruled very quiet. Most of the stock has been regarded off in quality on account of the severe weather and fine desirable lines of factory are held above shippers' views. Fine August is quoted at 13c, and a few September have made 13¼c. The lines that exporters have worked moderately in have been useful sorts at 11½@12c. Home trade fair; skims have a good share of the trade at low prices.

State factory, fine, 12¾@13c.; good to prime, 12@12¼c.; fair to good, 11@12c.; poor to fair, 10@11c; Ohio factory, cheddar, fine 11¾@12c.; fair to prime, 10½@11¾c.; factory, flat, fine mild, 12¼@13¾c.; good to prime, 11@12c.; fair to good, 10@11c.; creamery, partly skimmed, 4@11c.; fully skimmed, 1@3c.; full-skimmed factory, 1@3c.

Receipts for the week, 52,435 bxs.

Exports do. 33,473 do.

Liverpool cable, 61s.

Steam to Liverpool, 16s. 3d.@20s.

COTTON.—In a speculative way the market has alternately shifted ¼c. New crop begins to arrive in quantities and there is not likely to be any extra heavy trade in spot until stocks are in better form of estimation.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 9-16	8 13-16	8 13-16
Strict ordinary	9 3-16	9 7-16	9 7-16
Good ordinary	10 1-16	10 5-16	10 5-16
Strict good ordinary	10⅝	10¾	10¾
Low middling	11 5-16	11 9-16	11 9-16
Strict low middling	11⅜	11⅞	11⅞
Middling	11 13-16	12 1-16	12 1-16
Good Middling	12 1-16	12 5-16	12 5-16
Strict good middling	12 5-16	12 9-16	12 9-16
Middling fair	13 1-17	13 5-16	13 5-16
Fair	13 13-16	13 13-16	13 13-16

DRIED FRUITS.—Evaporated apples scarce and higher. Sun-dried steady and firm; peaches scarce; small fruits quiet but firm.

Apples, evaporated, new, 11@12c.; do. old, rings, choice, 15c.; do. fair to prime, 10½@11½c.; N. C. new, sliced, extra fancy, 8½@9c.; choice, 7½@8c.; fair to good, 6½@7c.; Southern, new quarters, choice, 6@7c.; fair to prime, 5¾@6c.; inferior, 5@5½c.; State, old, fine-cut, choice, 6½@7c.; quarters, do. 5¼@6½c.; small lots, 6½c.; Ohio and Mich. choice, 6@6¾c.; Western, fair to good, 5¾@6c. Peaches, evaporated, peeled, 1880, 33c.; unpeeled, 26c.; N. C. peeled, new, fancy, 23@24c.; choice, 22@23c.; Ga. peeled, choice, 22@23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 9@9½c.; halves, Tenn. 9c. Plums, State, black, 17c.; Southern Damson, 11½@15c. Blackberries, 13@13½c. Cherries, Southern, dry, 19@20c. Raspberries, 28c. Huckleberries, 15c.

EGGS.—Receipts for the week, 7,357 bbls.; do. last week, 8,800 do. Hot weather has caused a pressure to sell, but with prospective light receipts prices are named strong. A good many losses are noted in count for the week; in Western only choice Mich. and Ohio make the extreme.

Near polnts, 25c.; State and Pa. 22@23c.; Canadian, 21½c.; Western, fresh, 21½@22c.. other useful sorts, 20@21c.

FLOUR.—Prices have advanced 40@50c. ₱ bbl on all the attractive grades, and regardless of the stiff figures there has been an active demand for home and export purposes.

No. 2, $4.00@5.25; State and Western, superfine, $5.65@6.25; city mills, extra, $7.00@7.85; Spring wheat, extra, $6.50@6.90; Spring XX and XXX, $7@8; patents, $8@9.50; Ohio round hoop shipping, $6.00@7.50; trade brands, $7.25@7.75; St. Louis extra, $6.75@7.25; do. double extra, $7.40@7.85; do. family, $8@8.25; Southern extra shipping, $7@7.50; do. XX and family, $7.75@8.50. Rye flour, superfine, $6@6.90. Corn-meal, Brandywine, $3.85@4; do. Western, $3.60@3.90.

Receipts of flour for the week, 99,400 bbls.; corn-meal 2,050 do.

Exports of flour for the week, 51,525 bbls.; corn-meal 3,375 do.

FRESH FRUITS.—Apples are of irregular quality and a lot must be straight and of right shipping order to make the extreme. Exporters took last week 5,100 bbls. Pears are abundant and as a rule easy as a good many varieties are here. During the glut many Bartletts were put into cold storage; they turn out badly as they meet almost as hot weather now as when they were put away. The remnant of peaches are winding up high. Recent arrivals of grapes have turned out poor and have often sold at a loss. Plums almost out. Cranberries are lower as supplies have accumulated. First class picklngs, however, are not yet here. A few Western orders have been filled at $7.

Apples, Western New York, prime mixed lots, ₱ bbl. $1.75@2; fair do. $1.25@2.50. Sweet, 50c.@$1; Gravenstein, $2.50@2.75; 20-oz. $2.25@2.50; Maiden Blush, $2.25@2.50; Fall Pippin, $2@2.25; Baldwin, Jersey, ₱ 4-h. bbl. $1.50@2; Greening, do. $1.50@2. Baldwin, Jersey, bulk per bbl. $1@1.25. Pears, Bartlett, ice-house, prime ₱ bbl. $3.50@5.50; prime to good $3@5; rime, ₱ keg, $2.50@3; do. inferior, $1.50@1.75; Boston, ₱ bush. box, $2@3.50; Louise Bonne, ₱ bbl. $2@2.50; Sheldon, $2@3; Beurre Rose, $2.50@3; Duchess, $2@2.25; Virgalieu, $2@3; Beurre d'Anjou, $2.50@3; Seckle, choice, $3.50; fair to good, $2@3; Swan's Orange, $2@2.50; cooking, $1.50@2. Peaches, New Jersey and up-river select, fancy, ₱ bskt, $2.50@3.50; choice lines, $1.75@2; fair $1.25@1.50; common, $1@1.25; culls, 62@75c. Plums, Copper, ₱ crate $1.75@2; Damson, ₱ ½ bush. crate, $1.25. Grapes, Del., State, case of 12 ℔ bxs, $1@1.75; bskts, choice, ₱ ℔, 7@8c.; poor to fair, 4@5c.; Catawba, State, bskts, ₱ ℔, 4@5c.; Concord, State, case 18 ℔ bxs, $1.75@2; do. in bskt, ₱ ℔, 2@3½c.; up-river, loose, ₱ ℔, 2@3c. Cranberries, Cape Cod, choice, ₱ bbl. $7; do. fair to good, $5.50@6.50; do. poor to fair, $4@5; ₱ crate, $1.50@2.37; Eastern, round hoop barrels $4@5; Jersey, prime, ₱ crate, $1.50@1.75; do. poor to fair, $1@1.25. Watermelons, Maryland, ₱ 100, $12@15; Jersey, Black Spanish, $12@15; culls, $3@5.

Peanuts quiet and about steady as quoted. The crop of 1881 is estimated at about one-half the average yield. Hickory nuts are in fair supply and very dull; good lots of new offered in a wholesale way at $1.75 without selling; a few small sales of choice reported a shade higher. Chestnuts in light supply; any considerable quantity could not be placed at present extreme prices.

Peanuts, Va., hand-picked, ₱ ℔, 7¼@7½c.; fancy, 6½@7c., extra prime, 6¾@6¾c.; good to prime, 5½@6¼c.; shelled, screened, 6@6½c.; shelled, unscreened, 5½@6c; pecan nuts, ₱ ℔ 8@11c.; hickory nuts, shell-bark, ₱ bu. $1.75.

GRAIN.—A strong speculative want has shown every day since our last for wheat and firm prices are ruling for spot and future dealings. It has been more than an excited market, because a wholesome high-price tone has run the list of other grains, with actual operations.

Wheat, Spring, $1.20@1.47; Spring No. 2, $1.44@1.46¼; red Winter No. 2, $1.53@1.53¾; red Winter, $1.40@1.55; white Western and State, $1.40@1.52. Rye, $1.05@1.10. Oats, white No. 1, 53½c.; No. 2, 52½@52¾c.; No. 3, 51c.; mixed, No. 1 46c.; No. 2, 45½@46c.; No. 3, 42@44c. Corn, Western mixed, 70@76½c.; No. 2, 75@76c.; yellow, 75@80c.; white, 80@90c. Barley, Canada, No. 1, $1.15@1.20; do. bright, $1.20@1.25.

Receipts for the week, wheat, 862,170 bush.; corn, 1,558,385 do.; oats, 253,000 do.; rye, 15,050 do.; malt, 70,200 do.; barley, 29,500 do.

Exports for the week, wheat, 1,081,087 bush.; corn, 515,716 do.; oats, 35,651 do.

HAY AND STRAW.—Exports for the week, 1,780 bales. Since Jan. '81, 62,400; do. '80, 90,050 do. The market is weaker for hay, as supplies are larger. Quality as a rule unattractive.

Prime Timothy hay, ₱ 100 ℔s., $1.05@1.10; medium Timothy, 90@95c.; shipping grades, 70@75c.; clover mixed, 75@85c.; clover 65@70c.; Straw, long rye, 70@75c.; short rye, 45@55c. oat and wheat straw, 30@40c.

HONEY—Offering at 17½@18c. white clover comb, choice; 14@16c. fair to good; 13@14c. buckwheat.

HOPS.—Receipts of new are larger; most lots coming to dealers who have recently bought them in the State. We see few lots coming on commission. Brewers still buy sparingly, seldom bidding above 30c. for any samples. Exporters make few inquiries in this market. The tone, however, is stronger under advices of free transactions in the interior and reports and bids have been made there above recent prices. Some parties claim that such higher bids have been made to stimulate the views of country holders and give dealers an opportunity to sell their early purchases at a profit. Exporters continue to send over a few lots recently bought in the interior. Yearlings are in small supply, good demand and firm.

Crop of 1881, choice, 22@23c.; good to prime, 20@21c.; fair to good 18@20c.; 1880, choice, 19@20c.; fair to prime, 14@18c.; poor to fair, 10@14c.; eastern, 10@15c.; 1879 fair to prime, 12@14c.

Receipts for week, 3,023 bales.

Exports for the week, 554 do.

MILK.—The average price of commission milk was $2.43, the range being $2@3. Sweet milk is scarce and sells readily. Farmers still complain of poor cooling facilities.

POULTRY AND GAME.—There is an easy feeling in dressed poultry, the weather is adverse to trade.

Turkeys, Phila. prime, 15@16c.; State and Western dry-picked, 14@15c.; scalded, 13@14c.; young turkeys, 11@13c. Chickens, Phila. 18@19c.; Bucks Co. 17@18c.; Jersey, 16@18c.; State, 16@17c.; Western, 15@16c. Fowls, Phila. dry-picked, 16@17c.; Bucks Co. 15@16c.; Jersey, dry-picked, prime, 15@16c.; do. scalded, 14@15c.; State and Western, dry-picked, prime, 15@16c; scalded, prime, 14@15c.; inferior, 12@13c. Ducks, Spring, Phila. ₱ ℔, 18@20c.; Jersey and Bucks Co. 16@18c.; State, 15@16c.; mixed State, 14@15c.; old, fair to good, 12@14c. Squabs, white, ₱ doz. $2.75@3; dark, $1.75@2.

Live is in good demand at satisfactory prices.

Chickens, New Jersey, ₱ ℔. 15@16c.; State and Penn. 15c.; Western, 13@14c.; Southern, 13@14c.; Fowls, Jersey, State & Penn. 15@16c.; Western, 13@14c.; Southern, 13@14c. Roosters, old, 6@7c. Turkeys, Jersey and Penn. 13@14c.; Western, 13c. Ducks, Jersey, extra-large, ₱ pair, 87c.@$1; Jersey, New York and Penn. 60@75c.; Western, 50@60c.; Southern, 50@55c. Geese, Jersey, N. Y. and Penn. $1.50@1.75; Western mixed and Southern, 75c@$1.37. Pigeons, full-grown, 25@30c.; young, 20@25c.

Prime partridges scarce and firm; few sales reported; prime grouse steady. Soft grouse and partridges have sold at very irregular and low prices and there have been a good many of them. Some lots of grouse have been too far gone to sell at any price. Woodcock are scarce and firm. Fresh English snipe and plover sell at about $1.50 per doz. Grass plover were there any, would sell a good deal above quotation for ordinary plover. Ice house snipe and plover are unsalable. Some lots of western ducks have arrived and sold at 75c. for Mallard and Redhead, 40c. for Teal and Wood and 30c. for common ₱ pair. Reedbirds are quoted at $1 and blackbirds at 20@30c. ₱ doz. Venison in fair request and firm when in good order; supply small.

Grouse, choice, 80@85c.; soft, 20@40c.; partridges, prime, $1.50; soft, 50@75c.; woodcock, choice $1.12@1.25; inferior 70@80c.; English snipe and plover, fresh-killed, $1.25@1.50; venison, Minn. short saddles, 18@20c.; Western, 16@18c.

PROVISIONS.—The market is active and strong and prices for all hog products seem well set. Exporters are making liberal purchases, as it seems useless to hold off for a more favorable early turn, in the present aspect of the situation.

Pork, extra prime, ₱ bbl. $13@13.50; Western mess, new, $19.50@20. Lard, steam Western, ₱ 100 ℔s., $12.45@12.50; prime city, $12.40. Hams, smoked city, ₱ ℔. 13½@14c.; pickled Western and city, 12½@13c.; Shoulders, smoked city, 9¼@9½c.; pickled, 8½c. Rib bellies, pickled, 10½@11½c. Bacon, long clear and Western 10¾c. Beef, Western mess, ₱ bbl. $12@13; packet, $13@14; India mess, ₱ tce. $21.50@23.50. Beef hams, ₱ bbl., $22@23.

Receipts for the week—Beef, bbls. and tcs. 1,108; pork, bbls 1,156; cut-meats, pkgs. 21,350; lard, do. 8,460.

Exports for the week—Beef, bbls. and tcs. 2,525; pork bbls. 2,858; cut-meats, ℔s. 4,232,733; lard do. 4,319,043.

SEEDS.—Clover is very dull. Timothy firm. Rough flax-seed nominal; held at $1.47½@1.50, without sales bbls about $1.40@1.45.

Clover, Western, 1880, car lots on track, 9¾@10c Timothy, job lots in store, $2.90@3.25.

Receipts for the week, 5,950 bush.

TOBACCO.—Seed leaf still active, but the movement smaller than last week.

Crop of 1880, 12½@21½c. for Pa. assorted; 14@50c. for New England; 14@18c. for State flats; 5@15c. for Wis. and 6½@11c. for Ohio; Ky. dull and weak at 6½@7½c. for lugs and 7¾@15c. for leaf.

VEGETABLES.—Exports of potatoes for week, 3,200 bbls. The demand is active for choice potatoes; many lots of State are running poor. Havana is calling for good qualities and the call helps to stiffen prices.

Potatoes—Early Rose, Eastern, ₱ bbl., $2.50@3; L. I. $2,62@2.75; State, $2.25@2.50; Snowflake, State, $2@2.50; Burbank, State, $2@2.50; do. L. I. $2.62@2.75; Peerless, State, $2@2.25; sweet potatoes, Va. yellow, $2.50@2.75; Del. River, $2.75@3.

Quite an extra growth of cucumbers has been secured and they are dull. Onions held with more firmness. Prime garden truck is generally firm.

Sweet corn, ₱ 100, 75c.@$1; wax beans, L. I., ₱ bag, $1; string beans, 75c.@$1; Lima beans, potato, $3@3.25; flat, $2.50@2.75; cucumbers, ₱ 100, 75c.@$1; pickles, ₱ 1,000, $1.50@2.50; egg plant, ₱ 100, $5; tomatoes, ₱ bush., 40@55c.; squash, Marrow, ₱ bbl., $1.50; cabbage, red and other, ₱ 100, $6@9; beets, L. I., ₱ bbl., $1.25@1.50; white onions, $2.25@2.50; yellow, $2.25; red, $2@2.12; Chester, $2@2.12; carrots, $1.25@1.50; turnips, Russia, $2@2.25; pumpkins, ₱ 100, $5@7; cauliflower, 75c.@2.50.

WOOL.—Trade opens slowly, but the feeling is firm and in some grades there is a possibility of advanced prices. California and Texas Fall clip will soon appear; they have opened at home at comparatively high figures.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 1, 1881.

BEEVES.—Receipts for the week, 13,571 head; do. last week, 14,248 do. An important Jewish holiday occurs on Monday, and as many important buyers would not then be present, there has been active trading all the week. Sellers were very anxious to close out yesterday and liberal concessions were made, but without resulting in a clearance. Eight car-loads of Texans held over since last Monday were sold at 5c. to dress 54@55 ℔s; 12 car-loads of fresh arrivals at 7@7¼c.; a few selected out of a 16 car load brought 7¾@8c.; 13 cars of Colorado Texans changed hands at 7¾c. and upward of 30 car-loads of Colorados at 7¾@8¼c. to dress 55 ℔s.; some poor scallawags from Buffalo sold at 3@3½c. live weight. Two cars of prime Kentucky steers brought 11¾@12c, respectively, and 33 head of 1,515 ℔s average sold up to 12¼c. to dress 57 ℔s. State grass-fed bulls have declined ½c. during the week, and are hard to sell in car lots at over 2½c. live weight.

MILCH COWS.—There is a good demand for the light receipts; sales mainly at $35@55; a few extra $60@65.

VEAL CALVES—Scarce and firm; top made readily.

Live calves, prime N. J., 9c.; do. State, 8½@9c.; poor to good, 7@8½c.; Mount Hollys, 7@9c.; buttermilks, 4½@5½c.; grassers, 2½@3¼c.

SHEEP AND LAMBS.—Receipts for the week, 30,574 head; do. last week, 37,811 do. Sheep were rather dull and barely steady at the close. The supply of lambs was just about equal to the demand and sales were quick at stronger prices for prime stock. The few sales of sheep took the wide range of 3¾@5¾c. Lambs sold down to 5c. for culls and up to 7c. for choice, but 6¾@6¾c. covers most of the transaction.

SWINE.—Receipts for the week, 27,043 head; do. last week, 28,267 do. Market steady at 6¾@7c. for Western corn-fed. Some common pigs held at 4c. New Jersey pork, 8½@9½c.; city dressed, 8¼@8¾c.

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For the Young.

THE HORTICULTURAL CLUB.

FIRST DISCUSSION.

Topic: Grapes—Their Culture, Best Varieties, etc

AT the first regular meeting of the club for discussion, Uncle Mark was chosen chairman, with but one dissenting voice, viz; his own. On taking the chair he kindly thanked the Cousins for the honor conferred, and announced the topic for discussion. He remarked that grape growing depended so much on soil and climate that it was impossible almost to consider any one variety as adapted to general cultivation. A variety that would thrive well and prove prolific in Minnesota was likely to be a failure in the South. It is an error to suppose that the vine will thrive and bear fruit anywhere, cultivated or not cultivated. It may grow, but if the soil be thoroughly worked, it will repay one for his extra labor. As to varieties the chairman considered the Wilder, Delaware, Elvira and Massasoit as good to cultivate in this latitude.

Willie Marston said that the Goethe is a favorite and if well pruned and not allowed to overbear it does exceedingly well. His father likes the Concord as it does not seem to be so easily affected with the phylloxera.

Oscar Chapman had the Concord and Malaga, as he calls it, growing in the same arbor. The latter bloomed two weeks earlier than the former and the fruit grew nicely in beautiful shaped large bunches until nearly ripe then it began to rot. He killed his vine by carelessly applying salt to its roots. He asked a remedy for the grape rot.

The chairman suggested high-trellis training in order to get freer circulation of air and better light. No sure remedy known. It is better to plant varieties not susceptible to it if possible.

Eula Chapman had some vines which became infested with insects, which were killed by an application of strong tobacco tea and potash. The Concord bears a fine crop this year.

Georgie Wilson thinks the Concord does the best of all in Florida. The Scuppernong is the most common. It has a dark copper color, a pleasant taste but rather tough skin. When a vine is ripening its fruit, a delightful aroma from it fills the air. It is said to make a good wine—four gallons to the bushel.

Henry Jacobs asked what varieties succeed best in Central New York, to which Harry French of Elmira responded that of five kinds fruited on his father's grounds the Concord stands first, being most reliable. Catawbas do not generally ripen, and growth of wood is feeble; Isabellas are apt to be frost bitten before fully ripe. Have about 40 Catawba seedlings now planted, hoping to find one at least worthy of cultivation. The Martha did not survive the last Winter.

As to a remedy for the phylloxera or grape-vine root-louse, requested by Emma Janes, the chairman stated with such varieties as the Catawba and Delaware, grafting on phylloxera-proof roots has proved beneficial.

Willie Edwards thought that the surest way to avoid phylloxera is to plant such varieties as are not subject to its ravages. The Concord, Wilder, Martha and Goethe are but little affected with the pest.

Francis Herndon thinks the Poeklington about the best white grape. The vine is a strong grower and is said to never mildew.

Ezra Morse sowed grape seeds about the middle of October; the young plants were removed to a warm building when frost came, and were covered with glass. In the Spring they were set out and have done well. Grapes should not be allowed to overbear. Thin out the blossoms on all overloaded vines and do not allow them to bear over six bunches the first year after setting. He prefers the Delaware and Concord.

The subject for the next discussion will be "Orchard fruits; their management for Winter use; packing for market; most profitable kinds, etc."

FARMING FOR BOYS AND GIRLS.

HENRY STEWART.

Oats.

OATS follow wheat in the order of value in our small-grain crop. It is a most useful grain and furnishes excellent food for man, as well as horses, cattle, sheep, pigs and poultry. It succeeds best on rich, moist soils, and 100 bushels per acre of the best varieties is sometimes grown. It will produce a fair crop, or 40 to 50 bushels per acre on poor, sandy land, and is, therefore, very generally grown, and is made a regular member of the common rotation of crops, following corn and preceding wheat. The word, oat, is derived from an Anglo-Saxon word *ate*, which means to eat, and our word eat is originally of the same meaning, or synonymous with oat. This signifies the fact that our ancestors, the Anglo-Saxons, used this grain as their chief breadstuff. The cakes which, as is related in English history, were suffered to burn by the English-Saxon king, Alfred the Great, as he was left to tend them in a hut where he had taken refuge, and for which he received a sound scolding by his hostess, were oat cakes, and no doubt the king in his temporary misfortunes, eat those cakes with as good an appetite in his humble lodgings, as he had before, and did after, in his palace.

The Latin name of the oat is *avena*. This word signifies "something desirable," and proves that this grain was highly considered by the ancient Romans, who probably introduced it into Northern Europe when they conquered and occupied it.

Oats succeed best in cool, moist climates. The best oats in the world are grown in Ireland and Scotland, where the season of growth is long and cool, and where "the rain, it raineth every day." These oats are very plump and heavy, and frequently weigh 54 or 55 pounds to the measured bushel; here, oats rarely weigh over 32 pounds to the bushel and often less than that.

There are many varieties of oats, derived chiefly from the Tartarian, Siberian, Poland, Norway and Irish potato oat. Oats are black or white, or black and white mixed. The Tartarian oat is black; the Poland and Irish potato oat are white, and very short and plump. The latter was so called from the first of its kind being found growing in a manure heap made chiefly of the stalks of potatoes. The Norway oat is black and white, or greyish, from a mixture of these colors. The Tartarian oat has a peculiar manner of growth, the panicle or head all growing on one side, from which it has taken the name of "horse-mane," or "mane" oats. The potato oat is chiefly grown where oatmeal is made, and is the best and most valuable kind grown; but it succeeds only upon rich, moist, loamy soil, while the Tartarian yields well upon light, sandy soil, and produces a fair crop where the heavier oats would fail.

Oats are usually sown upon corn stubble, early in Spring, and two and a-half bushels of seed per acre are used. It is supposed by some that oats do not require careful sowing and that the seed will grow if it is even not well covered. This is a great mistake. "What is worth doing is worth doing well," in respect to oats as to everything we have to do. The reason why the yield of oats is so small and our grain is so light is, no doubt, that sufficient pains are not taken to prepare the ground and cover the seed in a thorough manner. In all the work of the farm this truth should always be remembered—that it pays to do everything in the best manner.

Oats should be harvested before they are thoroughly ripe, otherwise the very slender and weak pedicel by which each grain hangs to the stalk gives way, and a great deal of the grain is wasted and lost. Oats should be cut as soon as the straw near the head becomes yellow, and when the grain is still so soft that it may be crushed between the finger-nails, but is yet not milky or doughy, but dry when squeezed and broken. At this period the straw is of the most value for fodder and there will be little loss of the grain. Oat straw is both nutritious and soft, and is readily eaten by horses and cattle. It is far too valuable for feeding to be used for litter.

Oats are rarely manured, as they come after corn, to which manure is usually applied. But no other crop pays better for liberal manuring or for an application of artificial fertilizer. Salt has an excellent effect upon oats when used at the rate of three to five bushels per acre; and superphosphate of lime, at the rate of 150 to 300 pounds per acre, is remarkably beneficial to this crop.

NOTE.

OUR first "Discussion" appears in another column, and it will serve to give an idea of what I want the members of the Club to do. I did not receive as many "opinions" as I expected to, but shall hope that all will be more interested in the discussions hereafter. It will do you much good to learn to express your views upon a subject, and, uniting study with experience, this ought to be a good means toward gaining increased knowledge in horticulture, etc. Now then for the next discussion, which will be published in three weeks, let *all* show their interest by dropping me a few lines on a postal card. We want short notes and such as will enable us to impart the most information one to another. Of course our meeting is rather an imaginary one, hence these discussions may be considered as reports of said meeting; but don't *all* imagine that some one else will do the writing. This is just the time to consider the subject proposed for the next meeting, and I think that most farmers' boys can write something from experience. The girls, too, should have a word to offer on so interesting a topic. Now hurrah! for the one on Orchard Fruits. U. M.

Arboricultural.

PLANTING BLACK WALNUTS.

I AM glad to see the RURAL advocating the growing of nut-bearing trees, and especially the black walnut, which is so valuable for timber. These trees are so easy to get started and grow so rapidly that no one need hesitate to make the effort. They will grow on any kind of rough land, however exposed, among the rocks, on dry knolls, or on bottom land if it is not covered with water. Our oldest black walnut trees we are confident will bear nuts another year. We have let them grow with the limbs low down, which has a tendency to make them fruit earlier. They are eight years old and will measure 10 inches in circumference at the foot. These trees were planted by digging a hole in the slaty ground with a pick-axe, into which the nuts were placed as soon as they were ripe. In some instances the soil had to be brought from a distance to cover them, as there was not sufficient ground among the stones to do so. They were put in, three or four nuts in a place, six inches deep, and the ground pressed down firm with the foot.

The little trees come up in the early Summer strong and vigorous, and unless the grass is too rank they will take care of themselves and grow finely without any further care. If the grass is likely to be rank about the spot where the nuts are planted, it should be spaded over at the time they are planted. If planted in rows, the ground can be plowed before the nuts are put in. We have done this and then plowed a shallow furrow into which the nuts were scattered and then covered. It is the best plan to put the nuts into the ground where they are to grow, in the Autumn, unless there is danger of the squirrels digging them out, which they are sure to do if the location is near their haunts. The nuts may be spread upon the ground as soon as gathered and covered with leaves or coarse manure and left until Spring; or they may be put into a box and mixed with sand and left out-of-doors uncovered until Spring. The box should be so open as not to hold water. In either case the nuts should be put into the ground as early in the Spring as it can be prepared.

There are many farms with hill-sides or spots unsuited for cultivation, in which these nuts can be planted and a grove started with no expense or trouble worth mentioning. These same places would furnish as much pasture with the trees as without them, and in many cases more, as the trees would bring moisture. When these trees are grown for timber they can be planted closer together, and should be trimmed to give them an upright growth. They should be put in rows six feet apart, the trees four feet from each other. In after years every other tree can be cut out, if it is found they are too thick, to give room for those remaining. While young, the ground should be cultivated, to make a more rapid growth; but when the trees are large enough not to be injured by cattle or sheep the land may be pastured and no further trouble be incurred. In 30 years the trees will be large enough to cut market logs. F. D. C.

The Vineyard.

RAISIN MAKING IN CALIFORNIA.

I RECENTLY visited three of the largest and most successful grape growers on the coast. One of them was Mr. R. B. Blowers, of Woodland. Mr. B. is making a specialty of raising grapes for raisins. He says that the Muscatel is the best grape for this purpose. He has until recently cured them by laying them on thin boards or platforms, about two by three feet, which he lays in the furrows between the rows of vines. It takes from two to three weeks to cure them in this way. After they have laid several days he turns them by placing another board over the top and turning them over, then removing the top board. Could one depend on fair weather and no rain this way of curing them would be the cheapest and best; but as the grape does not mature until just about the season they expect rain, it very often happens that a storm comes up and destroys the whole crop. So it has become a matter of necessity, in certain portions of California, that those making a business of converting their grapes into raisins must use fruit-dryers that will enable them, in the case of rain, to save their crops. Mr. Blower has, no doubt, the best raisin-dryer in the country. Its capacity is about 20 tons; time required to cure the grapes is from eight to ten days. He introduces heat at 100 degrees into the separate drying chamber and after it is charged with moisture exhausts it by means of an exhaust fan. After the grapes are taken from the dryer they are put in sweat boxes and left from one to two days, the object of which is to equalize them, or, in other words, some that are not as dry as others will absorb the moisture of others. After being taken from the sweat-box they are carefully assorted and boxed.

The seedless Sultana is a favorite raisin grape, and will eventually be the raisin of the future. It is not much larger than our currant, and is seedless; does not take so long to cure, and makes a finer and better raisin. The time is not far distant when California will supply the United States with its raisins. The quality is about as good now as the best imported, and the grape-growers of this State are just waking up to the fact that they can make more money out of their grapes by converting them into raisins than wine The result is that there have been and will be more vines set out this year than in many years past, and California raisins will soon be sought for in preference to those imported.

Sacramento, Cal. VINEYARDIST.

Scientific.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 66, SEPT. 1, 1881.

637. Forrester's Corn Manure, made by Geo. B. Forrester, 188 Pearl Street, New York City; sent by M. S. Baldwin, Naugatuck, Ct.

643. Oat manure.

646. Potato manure.

647. Corn manure.

Nos. 643, 646, 647 were made by George B. Forrester, New York, and sold by S. B. Wakeman, Saugatuck, Ct.

645. Stockbridge Corn Manure.

650. Stockbridge Potato Manure.

645 and 650 were made by the Bowker Fertilizer Co., Boston and New York, and sold by Hubbell & Wakeman, Saugatuck.

Nos. 643, 646, 647, 645 and 650 were sampled and sent by James B. Nash, of Saugatuck.

648. Strawberry manure.

649. Onion manure.

648 and 649 were made by George B. Forrester, and were sent by the dealer, S. B. Wakeman, Saugatuck.

644. Ground bone, made by George B. Forrester; sent by John H. Robinson, Saugatuck.

660. Castor pomace, sent by A. J. Baker & Brother, New York City.

	637	643	646
Soluble phosphoric acid	4.90	4.95	4.88
Reverted " "	0.71	1.04	0.56
Insoluble " "	0.44	0.33	0.23
Nitrogen of ammonia salts	5.25	4.79	3.38
" " organic matter	0.25		
Potash	8.67	8.61	9.50
Chlorine		3.29	0.66
Estimated value per ton	$46.54	$49.13	$43.10
Cost per ton	$47.50†	$49.00*	$49.00*

	647	645	650
Soluble phosphoric acid	6.62	5.46	5.54
Reverted " "	1.33	1.35	1.29
Insoluble " "	0.37	1.97	1.93
Nitrogen of ammonia salts	4.58	0.31	0.24
" " organic matter		3.73	3.68
Potash	6.63	5.29	4.85
Chlorine	2.79	2.33	2.21
Estimated value per ton	$49.91	$42.70	$39.17
Cost per ton	$49.00*	$50.00	$50.00

	648	649	644	660
Soluble phosphoric acid	6.31	3.98		
Reverted " "	0.77	0.50		
Insoluble " "	0.21	0.42	20.95	1.56
Nitrogen of ammonia salts	3.20	5.06		
Nitrogen of organic matter	0.23		4.01	4.74
Potash	6.15	6.30		0.97
Chlorine	0.66	0.42		
Estimated value per ton	$42.42	$43.57	$33.41	$17.91
Cost per ton	$41.50*	$49.50*	$35.00*	$22.50†

* At Saugatuck. † In New York.

642. Nitrate of soda, imported by the Mapes Formula and Peruvian Guano Co., New York and Hartford; sent by J. W. Hemingway, Plainville, Ct.

Analysis.

[Nitrogen	15.79]
Equivalent to nitrate of soda	95.90
Moisture	3.00
Undetermined matters	1.10
	100.00

Nitrogen costs 26.9 cents per pound.
Costs $12.75 per 300 pounds in New York.

612. Swamp muck, sent by N. P. Perkins, Williamantic, Ct.

This muck was dug last November and has since lain in an open field.

Analysis of 612.

The undried sample contains, per cent.

Water	77.59
Organic and volatile matter [with nitrogen 0.41]	15.65
Ash	6.76
	100.00

The ash contains

Silica and substances insoluble in acid	6.15
Oxide of iron, alumina and phosphoric acid	.38
Lime	.14
Other matter not determined	.09
	6.76
Poisonous iron salts	trace

The dry muck contains

Organic and volatile	69.82
Ash	30.18
Lime	.62
Nitrogen	1.83

The organic matter contains

Nitrogen	2.92

The sample of Soluble Pacific Guano, 565, reported in Bulletin 58, April 28, was from a small quantity remaining over from last Fall in the hands of the dealers, H. A. Stillman & Co., Hartford, and is stated not to represent the article in market during 1881. Its price the manufacturers tell us should have been given as $42 per ton and not $45.

S. W. JOHNSON, Director.

PERSONALS.

Annie Muller committed suicide, in Detroit, because her sweetheart gave his trousers to another girl to mend.

General Rosecrans says that while Garfield was a member of his military family he was lovable and impulsive, and so devoted to his party that he would sometimes give way to partizan zeal.

Mr. George B. Loring, Commissioner of Agriculture, is in Chicago. He is not as enthusiastic about the cultivation of the tea plant in America as Le Duc was. He sees a great development in the cultivation of the sorghum sugar-cane.

Another of the sons of Guinness, the great stout brewer, has married into the peerage, Capt. Guinness having married a daughter of the late Earl of Howth. They were joined at Howth, where her family have resided 700 years without intermission, and in direct succession. Her brother is thirtieth Baron.

Guiteau's mail is every day very large, and consists mostly of postal cards. Some writers condemn him to hell; others volunteer to be his counsel for the sake of the notoriety. One Texas man sends him a bundle of switches with which to whip himself to death; a Georgia man wants to be hangman. There are pictures also. Guiteau is not aware that these things are sent to him.

Stock.

The People have Proclaimed

THE CLYDESDALE

The King of Draft Horses.

Eleven Importations For 1881 Already Received

Others on the way from Scotland

POWELL BROTHERS,

SPRINGBORO, CRAWFORD CO., PA., the most extensive importers in America of CLYDESDALES, the best breed of Draft Horses in the World. Largest and finest collection on the American Continent.

Also breeders of Trotting-Bred Roadsters, and Importers and Breeders of Holstein and Devon Cattle. Catalogues sent free. Correspondence solicited.

☞ Mention the Rural New-Yorker.

Trees, Seeds, Plants, &c.

NEW KANSAS GRAPE--EARLY VICTOR.

The best very early Black Grape yet introduced. One of the most hardy, healthy, vigorous and productive grown. Fruit tender, sweet, rich and pure-flavored, ripening quite two weeks before the Concord. Makes a fine, high-flavored wine. Circulars free.

JOHN BURR, Leavenworth, Kansas.

LARGE STOCK OF

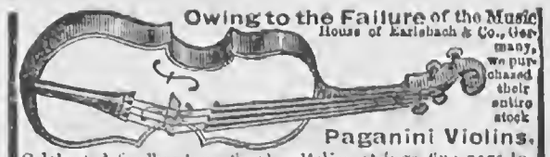
PEACH and APPLE TREES,

and other fruits, among which can be found varieties suited to all sections. A large list of long-keeping Apples,—Kieffer and Leconte Pears, Grapes, Raspberries and Strawberries in large or small lots. I also offer a full line of Nursery Stock at low rates. Apples, Peaches, Kieffer and Leconte Pears, sent by mail. Special rates given where large lots are wanted. Catalogue showing how and what to plant, with much valuable information, mailed gratis to all who apply for them. RANDOLPH PETERS,

Great Northern and Southern Nurseries, WILMINGTON, DELAWARE.

Miscellaneous.

10 CENTS to JAN. 1. THE CHICAGO WEEKLY NEWS will be sent postpaid, from date to Jan. 1st next, for 10c. This trial subscription will enable readers to become acquainted with the cheapest metropolitan weekly in the U. S. Independent in politics, all the news, correct market reports, six complete stories in every issue. A favorite family paper. **Send 10c.** (silver) **at once** and get it until Jan. 1, 1882. 11 trial subscriptions for $1. Regular price 75c. a year. Address Chicago Weekly News Chicago, Illinois.



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Miscellaneous.

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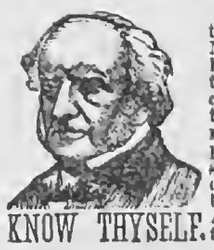
$5 to $20 per day at home. Samples worth $5 free. Address Stinson & Co., Portland, Me.



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WHY ARE WE SICK?

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by causing free action of these organs and restoring their power to throw off disease.

Why suffer Bilious pains and aches!

Why tormented with Piles, Constipation!

Why frightened over disordered Kidneys!

Why endure nervous or sick headaches!

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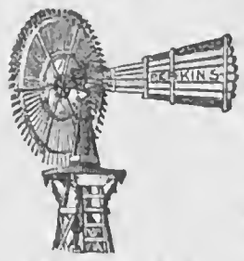

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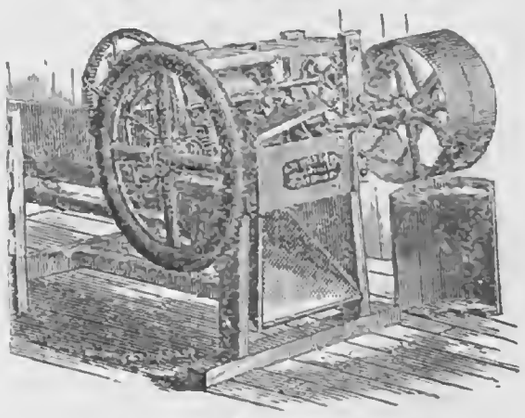

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Humorous.

MANY students burn midnight oil, but do very little midnight toil.—Cambridge Tribune.

BEFORE marriage she was dear and he was her treasure; but afterwards she became dearer and he treasurer, and yet they are not happy.

THE czar has succeeded in maintaining absolute monarchy. But he is afraid to come out and see how it is getting along.—Burlington Hawkeye.

"HAZEL KIRKE" was performed at Carson night before last, and so affected the audience that it was necessary to mop the floor between acts.—Virginia City Enterprise.

"STATESMAN?" yelled a newsboy, thrusting his head in at the door of an avenue saloon. Four of the six thirsty loungers arose promptly and answered. "Here."—Texas Siftings.

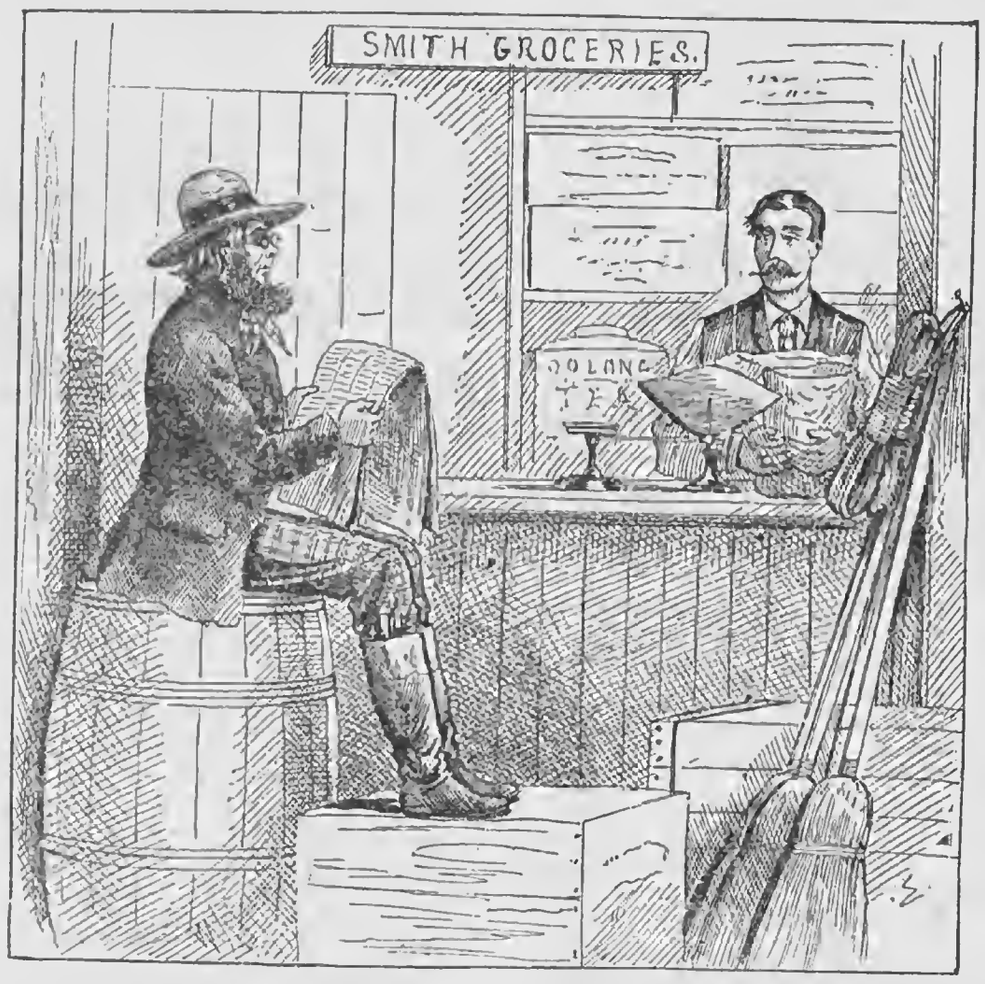
A man in Connecticut is said to have been cured of Bright's disease by a diet of skim-milk. If skim-milk is a specific people hereabout will never suffer from the disease.—Boston Commercial Bulletin.

"MY daughter's painting," said Bullibear proudly, stopping before an alleged work of art. "Beautiful, isn't it?" "Yes," replied Fogg slowly, "but what do you call it? What does it represent?" "Ah, well—yes—the fact is we have not decided what to call it yet; but isn't it lovely?"—Boston Transcript.

Parish Clerk (at vestry meeting on the question of organ blower's salary—the rector in the chair): "You see, sir, it isn't as if there was only the hymns, but there's the comin' in and the goin' out, and the 'sponses and the prayers, and them Psalms take a won'erful deal o' wind."—*Punch.*

"ARE you fond of novels, Mr. Jones?" "Very!" responded the interrogated gentleman, who wished to be thought by the lady questioner fond of literature. "Have you," continued the inquisitive lady, "ever read 'Ten Thousand a Year'?" "No, madame; I never read that many novels in all my life."—Bulletin.

"Denis, my boy," said a schoolmaster to his Hibernian pupil, "I fear I shall make nothing of you—you've no application." "An, sure enough sir," said the quick-witted lad, "isn't it myself that's always been tould there is no occasion for it? Don't I see every day in the newspapers that 'No Irish need apply,' at all, at all?"—*Hartford Times.*



MAN NEVER IS BLESSED.

Farmer Jones, (been reading market price list.)—"There, that's just the way! Whenever prices get good, crops turn out bad."

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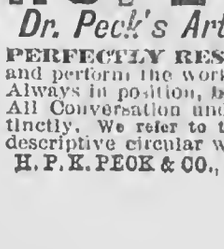

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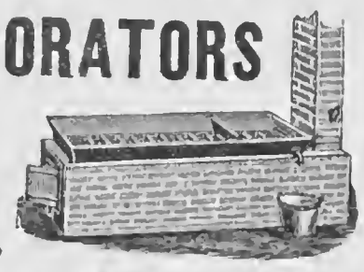

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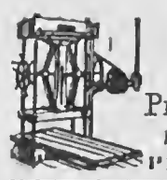

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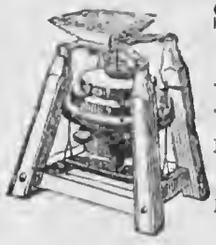

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Ralph Evans

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Horticultural.

SOUHEGAN OR THE SKOWHEGAN BLACK-CAP RASPBERRY.

E. WILLIAMS.

EARLY in July I received an invitation to visit Messrs. Hale Brothers, South Glastonbury, Ct., to see the above new Black-cap. Owing to a mistaking of dates I did not reach there till the day after the general gathering, so that I had the whole field to myself. The fog that had enveloped us all night through the Sound, and all the morning on the river, had lifted just before reaching the landing, and as I stepped ashore the sun shone out with apparently greater intensity, as if to make up for lost time. Taking the wagon path from the landing, a half-mile walk brought me to the village where I inquired my way, and another mile or so brought me to Elm Fruit Farm.

It *was* hot, but from the village out the road was devious and the noble maples and elms lining it on either side, afforded a grateful shade much of the way, and the rolling country, growing crops, and diversity of scenery, rendered the walk a pleasant one.

I went direct to the Black-cap patch where I found one of the proprietors and his pickers gathering the crop. A few rows of the Souhegan, however, had been left untouched and I had a good opportunity to see and taste it. It certainly was very fine and productive, reminding me of the Doolittle as I used to grow it before it was troubled with the blight. *Possibly* the Souhegan may be more productive than the Doolittle as grown there alongside of it; but as the latter had been gathered I could not judge. I think I have seen Doolittles fully as productive, which is saying enough on that point. I believe the new berry will probably average a trifle larger, a little more acid, and a deeper jet black. If a week earlier, as claimed, therein lies its chief merit, and where a local market will take any quantity of them at 16 cents per quart, as the Messrs. Hale were then disposing of them, it will pay to raise them.

A severe rain the previous day had softened the berries somewhat, yet a quart box of them wrapped in a tight package, proved in first-rate condition on reaching home, 48 hours after picking. If the Souhegan has enough vigor of constitution successfully to withstand or resist the blight so destructive to our other Black-caps, it will prove a welcome acquisition, otherwise there is little encouragement to attempt to grow any of them except on a limited scale. A first-quality red raspberry that will stand up like that, would be a great acquisition. Who will produce it?

Returning, I spent a day with your occasional contributor P. M. Augur, of Middlefield, the Pomologist of the Conn. State Board of Agriculture, who with his sons are quite extensively engaged in fruit growing. They have several young peach orchards that are looking well, and the older trees were carrying double the crop they ought to. Crops generally were very promising.

Montclair, N. J.

THE SOUHEGAN BLACK-CAP.

SEVERAL times during the past two months mention has been made in the RURAL of a new Black-cap raspberry the orthography of which has been given as Skowhegan, and as it gives promise of being by far the most valuable of any Black-cap, it seems important that it should at least be given its correct name. This is Souhegan, a name that it takes from that of a small river in New Hampshire, near where it originated some ten years ago. I have watched it carefully during the past three fruiting seasons and find it more hardy than any other Black-cap, and very productive. The fruit is large, jet black, without bloom, very sweet and rich, and ripens *one week in advance of* the Doolittle growing in the same field, and on this account it must prove very valuable for market, as it comes in just at a time when there is a scarcity of fruit, strawberries being nearly all gone and red raspberries and the other Black-caps not being quite ripe. Our first pickings the past season were sent to market along with the Windsor Chief, Glendale and Kentucky Strawberries, and sold at 25 cents per quart, and our whole crop of a little over 100 bushels was sent to market before we picked a single crate of the Gregg, the latter selling from 11 to 16 cents per quart, while the Souhegan sold from 15 to 25 cents per quart. The greater price was obtained not because they were really worth more than the Gregg, but simply because they came earlier when there was less competition, and on this account we shall plant it very extensively. While at the New England Fair of Worcester as well as at the meeting of the American Pomological Society, in Boston, I talked with a number of fruit growers from Massachussetts and New Hampshire, and every one of them spoke very highly of it, all agreeing that its *extreme earliness* and great productiveness, as well as the vigor and hardiness of the plant must make it the most profitable of Black-caps not only for market, but for the family garden as well.

SOUHEGAN OR SKOWHEGAN RASPBERRY.—From Life.—Fig. 488.

The Souhegan originated in 1871 with John A. Carleton, Hillsborough, N. H. from seed of the Doolittle. The fruit you show is from plants set in the middle of July, 1879. The points of value of this variety are: hardiness of the plant—it passed through last Winter all right while the Gregg, Doolittle and Mammoth Cluster in the same field were more or less damaged; productiveness and early ripening, ripening in Connecticut about June 25, or a week before the Doolittle. When first brought to our notice, Mr. Carleton, the originator, claimed that it would produce four times as much as any variety in cultivation, and offered to pay our expenses to New Hampshire and back if we did not find it as represented. We therefore paid him a visit and were so well satisfied that we purchased the entire stock and have now about an acre in cultivation.

Mr. Downing, under date of July 16, 1881, writes: "A friend near me has two plants of the Souhegan Black-cap which I saw last week, and I was much pleased with them, as they are quite early, of large size, very productive, quite firm and of a deep black color and sweet flavor. From what little I have seen of it, I would think it a very promising variety for the market."

All of the experienced berry growers who have seen it on our grounds unite in saying that it is far ahead of any other Black-cap now in cultivation.

South Glastonbury, Ct. J. H. HALES.

[We had pretty good authority for calling it Skowhegan; for in answer to our inquiry on this question Mr. Charles Downing wrote: "It is Skowhegan, but as it is more generally known as Souhegan it would be well to say Skowhegan or Souhegan."—EDS.]

RAYS.

ON the occasion of the meeting of the American Pomological Society at Boston the other week, what a happy time we had and a profitable! Jolly Berckmans came from Georgia, well-skilled Warder from Ohio, profound Lyon from Michigan, good-hearted Watson from far-off Texas, matter-of-fact Saunders from Washington, exuberant Coleman from Missouri, refined Parsons from Long Island, and such a lot of other "boys" were there from everywhere, the happiest and the jolliest of men. And how we greeted dear old friends and long absent faces, and joyfully received introductions to the planets we had not seen before, and thus absorbed in mutual love and sympathy with one accord sat down and tried who best could work and best agree. But still there was a gap as there is everywhere—there was no Douglas there or Meehan, nor were there many others that we wished to see, but we forgot them not.

* *

BUT don't we men folks catch it in "What Others Say" p. 566! And what Turk-rascals those rich farmers in those rich agricultural regions are to impoverish their wives and children so, and feed and house and care so well for horses, cows and sheep! If they had some of my neighbors' wives around, they would quickly learn that women in America have mighty rights—and know it.

* *

AND a little further on I find—the men of family, in a majority of cases, and not the women, are barbarians! Good gracious! Why? Because there are no flowers around the house. "Go where we will in the United States, the flowers about the house are almost infallible signs that there is a woman about." No such thing. Tending flowers is easy, happy, pleasant work, a becoming pastime task for women; men yield it over to them as they do the cook-stove. But men who live alone in settled homes in which are no women, old bachelors we may style them if you please, usually have neat and comfortable dwellings, and almost invariably lots of flowers.—But let me give you a striking instance from the far Northwest:

* *

LAST year in the interest of the Tenth Census of the United States, Sereno Watson, the eminent California botanist, traveled in the far Northwest and was now in the mountains that separate Montana from Idaho. He had taken the Lola Trail and experienced in it great difficulty and peril—* "For five days and for over 100 miles we were up as it were among the clouds rarely below 6,000 feet altitude and as often above 7,000, the greatest difficulty, however, being the scarcity of grass for our horses * * * the animals were for two nights without anything to eat. But as there comes an end to all things, good or bad, we at length reached the end of the spur which we had been following, and came down into a grassy meadow with a stream * * * Pushing on the next day down the valley and coming upon signs of inhabitants, cattle, a mown meadow (and the grass cut with a mowing machine, too), Indians preparing camass, and finally a fine, large ranch with wheat and oat fields, a comfortable house, and a nice garden with vegetables, fruit and flowers—'There must be a woman here," I said. But I was mistaken—two bachelor brothers again. Here we got fodder for our horses, good "square meals" for ourselves, and sleep on the hay-stack—as I find in my note-books."

* *

SPEAKING of the dwellings in the mountains, Mr. W. says: "These solitary houses, of which I came upon many in my journeying, are occupied usually by single men, old bachelors that is, sometimes alone, sometimes in pairs, squatters upon some bit of meadow land, perhaps, which they have found in the mountains, and which they have fenced in and cultivate in the hope that it may some time be valuable

* From MSS. given me by the author, Mr. Watson.

and in the meantime give them occupation and a living. Their cabins are often as neat and orderly as though woman had been there, but they readily admit their loneliness."

* *

EMPLOYER to workman sneeringly—"Well Walt. feel warm out there?" "Warm!" exclaimed Walter, "Why, hot is no name for it, it is regular roasting. You come out and try it." "No sir," said his employer. "You s e what it is Walt. when I was young I saved my money and now that I am getting old I can afford to sit comfortably in the shade and hire shiftless fellows like you to do my work."

* *

UNDER the name of Petunia hybrida florepleno fimbriata I got a packet of seeds last Spring and paid a big price for it. The seeds were very few because the petunia in question was an exceedingly fine, new novelty, but they germinated readily, grew well, were planted out and in due time blossomed. Mostly all had fimbriated, or frill-edged, flowers, about one in eight was double; all were of the coarsest-growing nature and the colors of the flowers among the most miserable found in petunias. But under the name of Petunia hybrida nana compacta I got another packet of seed (and for one-third the price of the double-fimbriated one) which gave me good satisfaction. The plants, though not so neat and pretty as their pictures, are compact, neat and copious, and without exception their blossoms have been beautifully striped, or, if plain, intensely colored.

* *

One of our finest September perennials is Chrysanthemum uliginosum; it grows some three to five feet high and bears a copious crop of large, showy, white, daisy-like blossoms. It is grand with me just now. But my good friend, John Saul, the nurseryman at Washington, has had sad experience with it. A few years ago, wishing to add some of the finest hardy herbaceous plants to his nursery stock, he imported this chrysanthemum, and since then has propagated, advertised and sold it. But what an amount of abuse it has brought him! It has grown well and bloomed well, but some of his customers declared it was only a White Weed, and heaped opprobious imprecations on the head of honest John, who when he failed to pacify them by explanation, refunded to them their money. Now, this shows a deplorable lack of ordinary observation on the part of those customers. The leaves, manner of growth and time of blooming of the chrysanthemum in question are entirely different from those of the White Weed.

* *

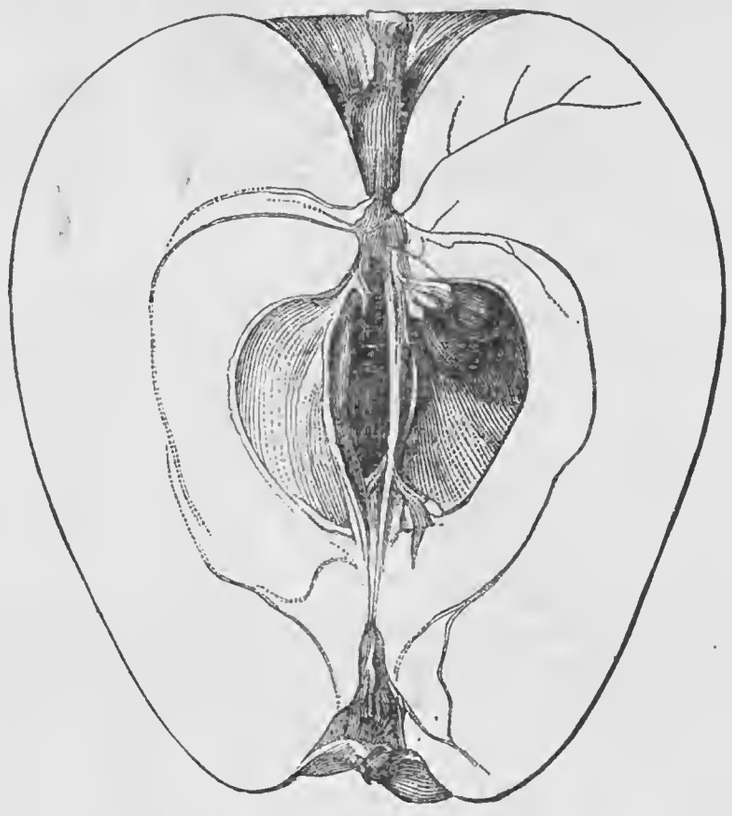
SOMETIMES plants behave differently in different places, as is the case with Parry's Marigold, botanically named Tagetes Parryi. This is a "new" species indigenous to the mountains of northern Mexico, where it was discovered in 1878 by Drs. Parry and Palmer. Dr. Palmer who first discovered it (and not Dr. Parry as the name would imply) told me that as soon as he saw it he knew it was something good for cultivation, it was growing in the rocks and a solid mass of yellow. He gave me some seeds and I have grown lots of it ever since, but I cannot recommend it as a decorative plant—it grows too much, blooms too little and smells too bad. Why should cultivation change its habits? Because we change the natural conditions of its growth. In its native habitat it ekes a scanty living high and dry among the rocks, and by its true perennial nature assumes a scrubby habit more incitant of flowers than leaves. A year or so later Hallock, Son & Thorpe, of Queens, L. I., advertised and sold it as a novelty under the impression that in cultivation it would at least maintain the reputation it received as a wilding. But their customers reported unfavorably of it, and the firm repented having sent it out. But the firm was not to blame. In fact, I admire and endeavor to encourage that spirit in our florists which seeks that which is new and of good repute, to disseminate it. Wild plants, home or exotic, are usually improved by cultivation, and this case of Parry's Marigold being the reverse is simply because we have reversed the conditions of its natival state.

* *

I WISH I could attend the horticultural exhibition now being held at Cincinnati, but I cannot do so conveniently; however, I am informed they have a fine and well patronized display of plants and flowers, and surely they made great preparation for it. My eminent Ohio friend, Dr. John Warder, called on me the other day; he was as radiant and brilliant as ever, and expressed himself highly pleased with the Cincinnati exhibition so far as the plants were concerned, but, oh, how he deplored the floral abominations in the shape of bouts and monkeys and such-like wretched nonsense. Show cut flowers singly, in bunches or gracefully and harmoniously mixed in bouquets, so that every flower shall mean a flower and maintain its individuality as a blossom, and use not these lovely jewels to paint a vile contortion.

* *

BUT on the occasion of the meeting of the A. A. A. S., at Cincinnati a few weeks ago, I had an opportunity of observing the preparations being made in the horticultural department of the Great Industrial Exposition now being held there. Though the building is a large one, it was said to be barely ample for the flower show. There is a large grotto built of shaggy stone and cement, and overhead the roofs and archways in it are



THE CHENANGO STRAWBERRY APPLE.—FIG. 488.

lined with unequal ropes of tow in imitation of tree roots and the whole thing whitewashed in drab and sprinkled over with minced glass for effect's sake in gas-light. The front of this rockery is thickly clothed with mosses, ferns, vines and little trailing plants and dwarf firs and spruces, while adown its steep and rugged face a torrent of Ohio water came splashing over. And wimpling through the building, in a cemented, tortuous bed well jarred and jagged with rocks, a goodly stream of water spread, its sides being lined and banked with ferns and mosses and other appropriate plants. The bank-heads and plots were to be sodded over, and on these, as tables, the exhibition plants were to be set. On a clump of irregular tree-limbs in a corner were to be suspended the handsome East Indian pitcher plants belonging to the Cincinnati Floral Company. The end of the building were shrouded in long-running vines, as the Madeira, and the walls were hidden altogether in wood-moss. This moss, brought mostly from Kentucky, had been gathered in sheets in the woods and now stuck to the walls with paste just as we would paper.

LEON.

Green Peas in the Fall.

In answer to the inquiry "whether any of the readers of the RURAL have ever been so successful as to obtain a good crop of green peas in the Fall months," p. 666, I would state that a few years ago I forked over a plot of ground from which a crop of Philadelphia Extra Early Peas had been taken, and fertilized and sowed it to turnips, and a fine self-planted crop of peas sprang up and yielded well. I never saw finer peas of that variety. I have never renewed the experiment, because I have never had an occasion to do so. I usually plant four or five varieties in the Spring, planting for a succession, and get all the peas I want without the trouble of planting a second crop. I should, however, plant a second crop with a good deal of faith that they would succeed, though I very well know that the garden pea has been persistently bred as an early Spring or cool-weather vegetable.

Georgia, Vt. O. S. B.

Pomological.

THE CHENANGO STRAWBERRY APPLE.

THE Chenango Strawberry Apple is one that, not only from its showy appearance but from its quality, meets with a very ready sale in our markets during September and October, too. Our drawing is from a specimen sent to us by Mr. J. T. Lovett, of New Jersey, and is of a fair average size. It originated in the town of Lebanon, Madison Co., N. Y. Mr. Downing says that it is much esteemed as a table fruit wherever grown. The tree is vigorous, spreading. The fruit is of a whitish color, shaded, splashed and mottled with light and dark crimson over most of the surface. The flesh is white, very tender, quite juicy, mildly subacid. It thrives best in Kentucky, it would appear, according to the reports of the American Pomological Society, and very well in Nova-Scotia, New Hampshire, New York, Ontario, Michigan, Wisconsin, Ohio, Nebraska, Utah, Alabama and Louisiana.

MARSHALL PEAR.

WHILE at the Mineola Fair we were presented with a box of Marshall Pears by Mr. P. H. Foster, Babylon, Long Island, This pear originated on the farm of William Marshall, N. Y. and is now, we believe, for the the first time offered for sale. It reminds us, in appearance and in quality, of the Buffum, though the flesh is finer-grained, more buttery and of a perceptibly higher flavor. As shown in our engraving, which is a portrait of one of those presented to us by Mr. Foster, the shape is roundish—somewhat obtuse-pyriform. The skin is well covered with russet; the stalk very long; cavity small. In quality it may be described as buttery, juicy, somewhat aromatic and vinous. The flesh is white. The tree is said to be moderately vigorous though very productive. It ripens 10 days after the Bartlett and, it is claimed, possesses first-class shipping qualities—a claim which, on account of a rather hard skin, is no doubt just. See illustration, page 700.

PACKING APPLES FOR MARKET.

IT is no uncommon thing in the country to hear fruit raisers complain that their shipments to city markets do not bring as good prices as they should, and the blame is at once saddled upon the commission merchants. Now, there is said to be a cause for everything, and the cause of poor prices for fruit must be in the condition of the fruit itself, in its unwholesome appearance when it arrives at the market, in the poor quality or variety, or it is owing to an over-stocked market. A great many disadvantages, however, may be largely avoided by care in assorting and packing the fruit for shipment.

A careful assorting is quite essential in order that no unsound fruit may find its way to the barrels and that one variety only as uniform in size and quality as possible, may be put in each package. It is an unfortunate habit, which some have fallen into—that of pouring the picked fruit directly from the picking bag or basket into the shipping barrel, leaves, broken twigs, etc., included, and still more unfortunate is it to put even fair-looking "wind-falls" into the package, and sell them for picked fruit.

An interesting experiment, as tried a few years since at one of our agricultural colleges, was as follows: Two barrels were filled with apples, just as picked from the tree; then two barrels were carefully graded and marked No. 1 and No. 2. The ungraded brought in the New York market the same price as No. 2, though probably three-fourths of them were as good in quality and size as No. 1, and the barrel marked No. 1 brought 50 cents more than No. 2. Assorting will pay.

In packing, turn the barrel bottom-side-up; remove the head which is opposite the one on which the address is to be stamped, and place a layer of apples, with stems down, upon the head. Then fill the barrel, shaking it down occasionally, so that the head must be pressed in snugly with a lever. This can be easily done by nailing a cleat upon any upright standard, a couple of inches higher than the top of the barrel; then, rolling the barrel up to the standard, place a piece of joist six inches long upon the barrel head, on which to rest the lever, while one end is placed under the cleat. While one person presses down on the lever, another can nail in the head. Mark the barrel plainly with names and addresses of both consignor and consignee, and the amount and variety of fruit contained in it and it is ready for shipment.

Our foreign friends are disposed to find fault with the American method of packing fruit, and they have reason for so doing. Nothing is surer to destroy our good reputation in commercial transactions with foreign countries than deception and dishonesty. Already they have found out that in the packing of fruit there is a too general tendency to place the best on the top of the package where it may give a good name to an inferior article beneath. Such a practice should not be allowed to go on, and the fruit-growers are the ones to remedy it. What is true of foreign dealers is equally true of home-dealers—all deprecate the practice as something tending directly to injure trade in this line, and to foster a feeling of distrust on the part of the purchaser, and this once established is not easily removed.

Field Crops.

RYE AS A SOILING CROP.

HENRY STEWART.

THE dry season has brought into prominent notice the subject of green fodder crops. Pastures and meadows have been seriously injured by the drought and the Winter store of fodder has been already drawn upon for the support of the stock. There cannot fail to be a scarcity of fodder in the Spring, and it will not do to turn cattle upon the meadows already weakened by the want of rain for ten weeks consecutively. Some provisions for the supply of the cows will be required. There is none that can be so easily made as by sowing now a few acres of rye. This should be done as soon as possible, because an early start, if the ground is good and the season propitious, will afford some pasturage before the Winter sets in. To secure this will repay the cost of a moderate application of fertilizer, which will not only begin to return its cost this season, but will make a second dividend in the Spring. For soiling or for pasturage, rye will be found the most valuable crop of the season. It is cheaper than wheat, is far better as a fodder, and is ready for use earlier. It is productive of milk if it is cut before it is hard and dry, and the surplus, if cut before the grain is formed, makes excellent hay. It will make a good crop of fodder upon poor soil and on this account is especially adapted for the beginning of a course of improvement of a poor farm.

But there are some points in regard to its culture and uses upon which erroneous ideas are current. In the first place, there needs to be a thicker seeding than is usual, when the crop is grown for grain, and the poorer the soil the thicker should be the seeding up to four or five bushels per acre. I have sown all the way from two-and-one-half to five bushels to the acre, and three-and-one-half or four, have given the best yield of the best fodder, which is all the better the finer it is. Thick seeding gives a thin, slender, tall, leafy growth which is the best for both fodder and hay. With three-and-one-half bushels of seed and 300 pounds of a "complete" concentrated fertilizer, I have grown a crop which cut 110 pounds of green fodder to the square rod, or more than 8¾ tons to the acre early in May. This is quite equal to the maximum expectation of the yield of soiling crops, which is, that the produce of a square rod should support a cow for one day, and an Ayrshire or Jersey cow will not consume more than 60 pounds of green rye in a day, when she is provided with four or five quarts of meal with it.

The most disappointing mistake in regard to this crop is that it can be cut several times in the season. This is altogether out of the question. The habit of growth of rye is to throw out a bunch of radicle leaves, or imperfect stalks with spreading leaves, in the Fall. If the season is warm and long-continued, the roots spread by throwing out new sets of similar leaves until the ground is completely covered as with a sod; if the seed has been sown early and the warm weather continues, the stalks may throw up from the center of each an ear-bearing stem, the ear of which may or may not emerge from the sheath. In either case, to cut this or permit it to be grazed off, destroys the ear, and the plant must throw up new off-shoots from the roots or the crop of grain is destroyed, so that a very vigorous crop needs to be pastured down in the Fall, not so much to prevent smothering in the Winter, as some think, but to check its luxuriance and succulence, which encourages the growth of seed stalks in the Fall and which cause it to succumb to the frost or to rot under the close covering of a deep, wet snow. In the Spring the plants do not tiller so much as in the Fall, unless when very forward and vigorous they are pastured down and checked somewhat; but they soon throw up the ear shoot. If the crop is cut, this

must be done before the sheath has come into range of the scythe, otherwise the embryo ear is cut off and the crop is confined to those stalks which have so far been delayed in their growth by the vigor of the leading ones. At any rate, then the cutting must necessarily be done while the herbage is small and before the main shoots have grown to a length of three inches, else the second growth will be very light. The first cutting of rye, in fact, will be so light as to be hardly worth taking, and, if it is worth it the second growth will be very light. I have grown rye for soiling more or less for 15 years, and have never yet found it to yield a double cutting worth the labor; if the first is good for anything, the second is next to worthless; and if the second is to be good, the first must be taken so early as to be of little value. There is very little growth in rye before April, and as rye often shows ears in April it must be very clear that there cannot be time to make much of a first cutting and yet get a second one. In fact, one may, under favorable circumstances, turn a few calves on to the rye in the Fall or Spring, but not cows, excepting under special and rare circumstances, and then merely to save the rye, rather than to feed the cows a full meal.

When the heads appear the cutting of rye may begin and may last until it is in full blossom, when it should be cut and made into hay. At this time, which will be in June, the clover and early grass will be ready for cutting and the rye will be getting hard and woody. Rye has often disappointed those who have grown it for soiling, because it has been cut too late; for as soon as it gets tough and hard, it is a poor milk-producing food; but when it is young it is different. As soon as the blossoms appear it should be cut and not left a day longer.

When there is ample store of fodder, the rye cannot be put to a better use than to plow it under as a green manure for corn. This can be done with ease, when it is five or six feet tall, by means of the drag chain recently described in the RURAL, and the stalks completely covered; the surface should then be rolled, and harrowed only with a sloping-tooth harrow, so that the rye is not torn up. This course pursued for a few years, with rye and corn alternately, and the rye sown again on the corn stubble, will make a light soil as rich as a garden. If this is done or proposed to be done, there should be twice as much rye sown as will be cut, and then one-half can be plowed in, in alternate years. In cutting the rye it should not be forgotten to leave a sufficient quantity to the last, and put it in sheaves and dry it for making bands for binding the fodder corn in sheaves. This is the most convenient manner of putting up fodder corn, and rye straw is the best material for binding.

CORN NOTES.

C. A. GREEN.

I PLANTED pure white seed corn without one kernel of mixture with any other color, yet on harvesting I find one quarter of the crop is pure unmixed dark red in color, and nearly twice as productive as ordinary varieties, the ears being much more numerous, and of amazing length. There was no red corn growing in the vicinity—indeed this freak of the red ears is not a new one, but it appears in this variety of white corn regularly. I shall plant the red corn by itself next season and note the results. Our corn, being on low ground, was not at all injured by the protracted drought. There are few crops that reward the farmer more generously for attention in selecting desirable seed than corn. By selection we can, in time, make a variety combining almost any qualification desired.

I have now, Sept. 27, a considerable portion of my 10 acres of corn husked. I have never been able to see the policy of deferring corn-husking until the weather becomes so cold as to benumb the whole person, and render a full day's work impossible, and until the days are so short and the weather so uncertain as to prolong the job indefinitely. I instruct my men to husk only the merchantable ears, considering the safest place for the soft ears and nubbins to be with the stalks, where the stock will find and consume them without waste. I believe the time will come when we shall have perfected machinery for husking rapidly in the field, or else for thrashing out the corn, as we now thrash wheat. Corn is a wonderful crop, full of beauty, utility and profit; but the ingenuity of the age has not yet grappled with the problem of harvesting it economically. It is not only our main reliance for fodder, for pork, mutton, beef, and alcohol, but now does much towards supplying us with sugar and sirup. The loss of no crop is felt so keenly, as we are all likely to realize after the present light yield. Who will invent machinery for harvesting and thrashing this important product. A reaper should cut and leave it in gavels, where it should lie until partially cured. Then it should be bound with willow bands in small bundles and shocked until fully cured. Then we should have some machine for thrashing it. If the thrashing could not be done otherwise, the stalks and corn could be run through a ponderous cutter and chopped into pieces, and then thrashed. There is certainly some way of securing the desired end. Where the corn is designed to be fed on the premises, these chopped stalks and corn can be fed without waste to all stock except swine, and this is an economical method of harvesting. A husking machine is now manufactured, but how far it is successful I have not been able to learn. A publisher solicited its advertising, and was advised that as the demand for machines far exceeded the supply, the company could not spend money in advertisiug. But as I have not found this machine, or any other, on exhibition where every opportunity was offered to show farmers what it could do, and considering the multitude of machines that could be manufactured in an emergeney, I suspect this invention is not perfected far enough to induce farmers to use it largely. I am not posted, however, and should be glad to hear from those who are.

Monroe Co., N. Y.

Sprouting Crab-Grass---Panicum Proliferum.

THIS is an annual grass having smooth leaves and stems. The leaves are a foot or two in length, flat and rather broad. The culms are thick and succulent and much branched. The panicles are large, pyramidal, the slender branches spreading, the culms become two or three feet high, or much higher. It is found on salt marshes, especially on sandy soils, from Massachusetts southward. It flowers in August and September. The anthers are orange-colored. Cattle and horses seem very fond of the plant. In the South it is quite a common weed in corn fields. Mr. Mohr, of Mobile, in the Agricultural Report, says: "In damp, grassy places it prefers rich ground, throughout the coast region. It commences to vegetate vigorously in the hottest part of the Summer months. The foliage is rich and tender, and the succulent, rather thick stems are sweet and juicy. After cutting, it throws out numerous sprouts from the lower joints, which grow rapidly so as to allow repeated cuttings until frost."

Mich. Ag'l Coll. PROF. W. J. BEAL.

SPROUTING CRAB-GRASS.—FIG. 469.

JUTE CULTURE IN LOUISIANA.—Herewith I send the RURAL a sample of jute fiber obtained from my Point Clear plantation in this parish. The seed was sown in the latter part of last March and in the first days of August the plant had reached a hight of from 10 to 14 feet. A part of it was cut down and steeped during eight days, when the bark was entirely gone, having dissolved like so much starch and leaving the fiber hanging loosely to the stalks. This was easily separated by hand and thrown on the ground to dry. It was afterwards worked through a "hackle" by hand and then washed in clear water. Nothing more was done to it—and the fiber speaks for itself. I calculate that, planted in drills four feet apart, it will yield 1,200 pounds, and sown broadcast not less than 2,000 pounds. I have 25 acres of jute covered with seed, which I shall permit to mature, as I intend to make a heavy planting next year—say 300 acres, and shall then have a good supply for sale. I do not seek notoriety but merely desire to show to what additional use our rich soil can be put.

SPIKELET OF SPROUTING CRAB-GRASS. FIG. 470.

Plaquemine, La. C. A. B.

[The sample is three feet long, the fiber strong and silky.—EDS.]

The Herdsman.

STOCK-FEEDING UNDER DIFFICULTIES.

PROFESSOR E. W. STEWART.

Suggestions for the Season.

PERIODICALLY our farmers are forced to face a failure of pastures with short forage and grain crops. "Misfortunes seldom come single," but skill is only shown under difficulties. If the farmer's crops were always good, his cattle always thrifty and healthy, prices always satisfactory, I fear there would be less progress than now. The farmer must learn to face all his difficulties and conquer them all.

This season has brought one of the most severe droughts ever experienced. It literally went to the root of pasture grasses and dried up their juices in a remarkably short time. Its extent is the whole country, commencing first in some of the Southern States, but reaching all the States before the middle of August. The favorable point is that many of the States affected by drought matured a fair hay crop before the dry weather became severe; and this will lighten the situation in those States very much. The corn crop is so much reduced that its price will be raised at least 60 per cent. over last year's price. This will be a very serious obstacle in those States where the corn crop furnishes the staple article, both of grain and coarse fodder, for winter-feeding and fattening. It will reduce exportation of corn, which I do not think a calamity, for it is much more profitable to feed our corn and export our meat instead.

The straw crop is also a moderate one, and was formerly considered of little account in feeding, but is now better appreciated. The method of harvesting the corn crop in the Western States renders the stalks, or stover, of very little value as food for cattle, and still less for sheep. They become mere dried, woody fiber. If the corn were put in shock as soon as the ear reaches the dough state, and while the stalk is green, the stover would have a value of one-half to two-thirds that of hay.

FALL MANAGEMENT IN DROUGHT.

The question first to be considered is that forced upon farmers everywhere for immediate decision—What is the best plan of Fall management in view of the severe drought? The first and general answer to be given to this question, and in which all good feeders will agree, is to supplement the pasture with other food to make a full ration. Nothing can be more opposed to profitable feeding than to compel young and growing cattle or milch cows to live upon short rations during the mild weather of the Fall. Nature indicates a mild temperature as the most favorable condition for producing growth, flesh, fat or milk from a given quantity of food. The same food will produce during October from one-third to two-thirds more growth, fat or milk than in cold weather. Young cattle should be pushed so as to reach Winter in fine, thrifty condition, and those intended for fattening should be made to lay on flesh and fat as fast as possible during the mild weather, so as to render the finishing process in cold weather the more easy. If they are suffered to reach cold weather in a thin and unthrifty condition, they are less able to withstand the cold, and with impaired digestion can make only very slow progress with full feeding in Winter. It is, therefore, simply strict economy to feed such growing and fattening cattle a full and generous ration during the mild Fall weather. And for milch cows good feeding is most imperative, or the profitable production of milk, for which the cows are kept, will cease. This principle of feeding is most evident to all who have studied the subject.

DRIED GRASSES AND CLOVERS.

Where prudent foresight has been exercised, clover, at the first indication of blossom, has been cut early in June, nicely cured and put away for a time of need. This is only slightly less nutritious and appetizing to cattle than the green clover itself. And the time of need is now everywhere that pastures are short. The cattle, put into barn and fed over-night with this sweet-smelling clover hay, will go into the pasture in the morning with such satisfaction as hardly to miss its aforetime freshness. Those farmers who sow Timothy and clover for home feeding, and have cut it when the clover reached its first blossom, will find this delicate, preserved grass most welcome to their cattle now. The miscellaneous grasses of our meadows, cut also in the greatest succulence, and nicely cured, will furnish a most excellent supplementary food to the brown and bare pastures. All these grasses and clovers will also have yielded a second crop, even in this past season. Being cut so early, the grass starts anew and so vigorously as to produce a respectable second crop before the drought stops its growth. These second crops, thus cured, are the best substitutes for pasture

obtainable, except when the same grasses and clovers are preserved in silo.

GRAIN A SUBSTITUTE FOR PASTURE.

But when the farmer has not cut these early crops of clover and meadow grasses, and has only common hay, then it is profitable for him to use grain in some form to feed with common hay as a substitute for pasture. The farmers of our Eastern and Middle States are quite accustomed to regard grain as a comparatively expensive food; but this is a misapprehension of the facts. Hay throughout the Eastern States will at present average about $20 per ton, and is not much less in any of the Middle States. Let us, therefore, make a comparison between hay and grain, including by-products of grain and manufactures of oil-bearing seeds. The painstaking Germans have endeavored to find the feeding value of different grains and forage plants from actual feeding trials assisted by chemical analyses. They have taken meadow hay as the standard of value and compared these other foods with it. The following table will show the digestible constituents of hay, grain and by-products used as cattle food, and also the value of each compared with hay. This table will be convenient for reference for the reader who wishes to know the comparative prices he can afford to pay for different foods:—

	Digestible nutrients.			Nutritive Ratio.	Compared with meadow hay.
	Albuminoids.	carbohydrates.	Fat.		
Meadow hay medium	5.4	41.0	1.0	8.0	1.00
Red clover hay "	7.0	33 1	1.2	5.9	1.08
Alfalfa " "	9.4	28.3	1.0	3.3	1.10
Swedish clover	8.6	34.8	1.8	4.6	1.19
Timothy hay	5.8	43.4	1.4	8.1	1.09
Upland grasses, average	5.3	40.9	1.1	8.2	1.00
Indian corn	8.4	60.6	4.3	8.6	1.73
Oats	9.0	43.3	4.7	6.1	1.53
Barley	8.0	58.9	1.7	7.9	1.47
Rye	9.9	65.4	1.6	7.0	1.68
Millet	9.5	45.0	2.6	5.4	1.45
Buckwheat	6.8	47.0	1.2	7.4	1.19
Peas	20.2	54.4	1.7	2.9	2.25
Flax seed	17.2	18.9	35.2	6.1	3.85
Cotton seed	17.1	14.7	27.3	4.7	3.24
Wheat bran	10.0	48.5	3.1	5.6	1.58
Wheat middlings	8.9	54.8	2.6	6.9	1.56
Rye bran	10.6	50.0	2.3	5.3	1.56
Buckwheat bran	13.5	44.0	3.9	4.1	1.79
Pea-meal bran	9.2	45.8	1.2	5.3	1.34
Millet bran	4.5	38.8	2.7	10.1	1.02
Barley bran	11.5	43.2	3.6	4.5	1.62
Corn bran	6.2	55.1	3.6	10.3	1.42
Corn-starch meal	8.2	19 3	1.8	7.4	0.60
Brewers' grains	4.8	11.3	1.2	3.0	0.56
Malt sprouts	20.8	43.7	0.9	2.2	2.08
Linseed cake	27.6	27.0	10.4	2.0	2.98
Linseed meal (extracted)	27.8	33.9	2.1	1.4	2.51
Cotton seed meal (decorticated	33.2	17.6	16.2	1.8	3.60
Cotton seed meal (undecorticated	17.5	14.9	5.5	1.7	1.75

The above table is based upon 100 pounds' weight of each article. Meadow hay means the miscellaneous grasses grown in old meadows, and this represents the unit of value, 1; and when the other articles of food have a higher value, the figures show the fraction above, or if less, below; as, for instance, Swedish or Alsike clover is 1.19; corn, 1.73; that is, corn is worth 73-100 more than good common hay. Thus, if 100 lbs. of hay are worth $1, then 100 lbs of corn are worth $1.73, or 97 cents per bushel; wheat middlings worth $1.56, and oats $1.53 per 100 lbs., or 49 cents per bushel. Peas would be worth $2.25 per 100 lbs. or $1.35 per bushel; barley, 70 cents per bushel; rye, 94 cents; buckwheat, 51 cents; flax-seed, $2.15 per bushel. This comparison will show that grain of the various kinds is not dearer than hay at the market prices, except, perhaps, barley, which, on account of its large use for malt, bears an exceptionally high price. As compared with hay at $20 per ton, corn, oats, rye and peas are usually cheaper than hay.

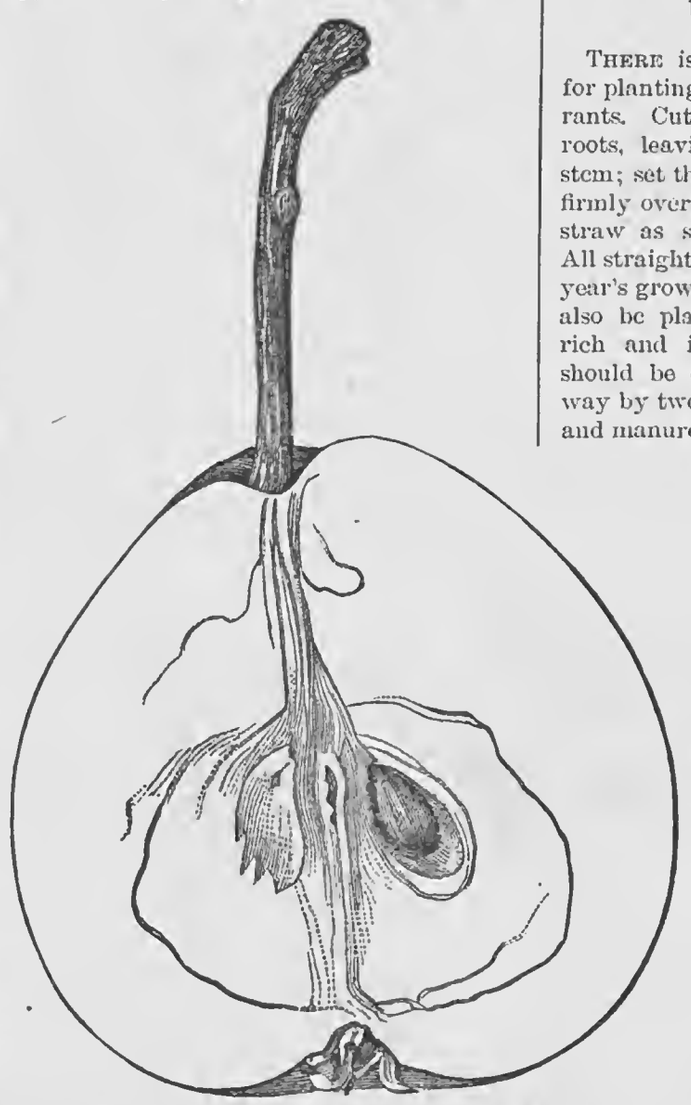
REFUSE OR BY-PRODUCTS.

But we shall find the most economical substitute for pasture in wheat middlings, bran, malt sprouts, linseed meal and cotton-seed meal. Let us figure these with hay at $15 per ton or 75 cents per 100 lbs.; then middlings and the different kinds of bran would be as cheap at $23.40 per ton or $1.17 per 100 lbs.; linseed meal (extracted or new-process) would be as cheap at $1.93 per 100 lbs.; decorticated cotton-seed meal at $2.70 per 100 lbs.; malt sprouts at $1.66. Now all of these can be bought, where on sale, at less than these figures, except middlings, and some of them for 30 to 40 per cent. less. We thus see that the prevalent opinion that grain is a more expensive food than hay, is quite erroneous. Another important advantage in favor of grain is that it is easily combined with all kinds of coarse fodder, so as to make it a well-balanced ration. This enables the farmer to feed everything profitably. Let us now examine the

RATION FOR CATTLE ON PASTURE.

The object is to give all animals full rations for growth, fattening or milk. As we have seen, the farmer cannot afford to let his animals go with scanty, unnourishing rations, and the question is—What ration is the cheapest to fully make up for the short pasture?

The table I have given above will offer a large number of foods to select from. And, first, if a stable is near to the pasture, then it is better to feed in the stable; if not, long troughs may be used in the pasture for young and fattening cattle. The farmer who is provided with a cutter to run by power, may cut several tons of hay in the barn, which may be carried to the field in a large box as wanted. This cut hay, put into the troughs, may be mixed with grain or ground feed. If middlings or any fine feed is used, it may be mixed with the cut hay in the barn and carried to the field ready mixed; or the hay may be placed in the trough and the ground feed or grain spread on top in due proportion and mixed in slightly. Long hay may be used in the same way. The cattle will then, necessarily, eat the hay and grain together—a matter



THE NEW MARSHALL PEAR.—FROM LIFE.—SEE PAGE 698. FIG. 491.

of a good deal of importance in the digestion of corn especially.

Among many other rations the following may be fed. For one to two-year-olds: 2 lbs. middlings,, 2 lbs. new-process linseed meal, 4 lbs. hay; or 2 lbs. of oats and 2 lbs. of corn; 2 lbs. of decorticated cotton-seed meal, 2 lbs. of wheat bran; or 2 lbs. of wheat middlings and 2 lbs. of malt sprouts soaked for a few hours—the hay being used with each ration.

For cattle of 1,200 lbs.: 2 lbs. of corn or corn-meal, 4 lbs. of linseed cake, or new-process meal, or cotton seed meal, with 4 lbs. of hay. If the cattle are to be sold for beef early then double or treble the amount of corn or corn meal; or, probably the best ration in Fall on poor pasture, for cattle of this weight would be, 3 lbs. middlings, 3 lbs. corn or meal, 4 lbs. new-process linseed meal and 4 lbs. hay. This is not a heating ration, but well adapted to lay on flesh or fat, and the variety would make it palatable—a matter of importance in fattening. The feeder can combine a large number of rations from the above table, choosing those most easily and cheaply obtainable.

MILK RATION ON POOR PASTURE.

With the dairymen this extra feeding must not be delayed on such sun and drought-burned pastures. No profitable milk production is possible without full rations. And the dairyman is in a situation, with butter at 35 cents a pound, to look with complacency upon this extra feeding, for the milch cow repays him every night with good interest for all his extra rations.

It is important to provide for the health and strength of a cow as well as the production of milk. Professor Horsfall, of England, always combined 2 lbs. of bean meal with the ration for his cows, on account of its richness in muscle-forming and bone-renewing elements. We have a substitute for this in new-process linseed meal, and it costs less to us than bean meal does to the English farmer. The following ration for dairy cows will be in every way satisfactory: 2 lbs. new-process linseed meal; 2 lbs. wheat middlings; 3 lbs. corn-meal and 4 to 6 lbs. of hay to be eaten with it. This will cost 10 cents besides the hay per day; whilst any respectable cow with this ration, will produce from 20 to 25 cents' worth of butter per day; besides, it assists to put her in good condition for wintering. In feeding for milk, variety of food should always be considered. I will give suggestions for Winter feeding of stock in another article.

Miscellaneous.

RURAL BRIEFLETS.

THERE is no better time than the present for planting blackberries, raspberries and currants. Cut the first two back nearly to the roots, leaving only two or three inches of stem; set them in mellow soil; pack the earth firmly over the roots and cover with litter or straw as soon as freezing weather arrives. All straight stems of the currant plants of this year's growth may be left. Grape-vines may also be planted now. Unless the ground is rich and in every way suitable, trenches should be dug not less than five feet either way by two in depth. Fill in with sandy loam and manure of any kind. Then set the vine firmly, having spread out all of the roots, and cover with hay or straw after cold weather has fairly set in—not before. It is always better to provide stakes or trellises before the vines are planted. We would also remind our readers that if they intend to make new plantations of small fruits of any kind *in the Spring*, there is no better time than now to prepare the plots. The days are pleasant; work is a pleasure, and farm work is no longer pressing.....

A few weeks ago, one of Dr. J. B. Lawes's articles, written for this journal, appeared in the Mass. Ploughman without credit. We alluded to the oversight in a letter to the editor, whereupon the Ploughman publishes the following explanation:

☞ The very valuable article written by Dr. J. B. Lawes, which appeared in the Ploughman of Sept. 3 should have been credited to the RURAL NEW-YORKER where it originally appeared. The article was copied into the Ploughman from one of our exchanges where it did not appear as original, accordingly due credit could not be given.

In the course of every year, we see many RURAL articles appropriated by other journals; and always with regret, not alone because we have been defrauded of what belonged to us just as much as the very name of our journal; but because ostensibly respectable papers setting themselves up as moral teachers and condemning right freely the shortcomings of others, should themselves be guilty of this lowest species of pilfering.....

OVERSIGHTS do occur among the most conscientious journals, as in the case of our respected contemporary the Mass. Ploughman; for the managing editor cannot *always* give personal attention to every department. But he is always ready to make a correction or to give due credit as soon as he ascertains to whom it belongs.....

FOUR or five years ago, as we remember, we raised half a dozen plants from seed of the Eucalyptus globulus which was then first talked of as the great Australian Fever Gum Tree. One plant—about five feet high—was exposed to frost of three or four degrees and the consequence was that it died. Still the tree is commended as one not only suited to the Southern and Middle, but for the Northern States.....

MR. A. M. PURDY writes to us that he has grown the Naomi Raspberry for 12 to 14 years and that he *knows* it and "Lost Rubies" to be one and the same. We have always had the Naomi, but Lost Rubies has not yet fruited, so that there has been no opportunity of comparing them together.....

LOST RUBIES and Shaffer Raspberries were received from Chas. A. Green, May 9th. Both have made a sturdy growth, the canes of the former being purple; those of the latter green.

.....

MR. GREEN says that he is propagating the largest raspberry in the world—Shaffer's Colossal. The canes are colossal also, other varieties appearing like dwarfs in comparison. It throws out strong branching roots like a sapling. He challenges the world to show a raspberry averaging so large. We presume that Shaffer and Shaffer's Colossal are the same.....

FROM a personal correspondence between two noted swine breeders we copy the following: "In a recent agricultural journal the inquiry is made as to the relation of dished faces and heavy jowls to well marbled meat in Berkshires. My impression is that heavy jowls indicate a disposition to lay on fat apart from the lean meat. Am I right?" He is answered as follows: "I think you are right in regard to heavy jowls. Those Berkshires with thinner jowls make the best hams, shoulders and bacon—lean, tender, juicy meats mostly—very little fat. Heavy-jowled swine make fatter pork, etc. I used to breed the lighter jowls in preference to the heavy, and from them have had hams weighing 20 pounds or more, very sweet, tender, and juicy with a rim of fat round them not over half an inch thick. Such are the *most profitable* for consumers, and they are most readily sold in market at an extra price.....

THE RURAL has received many favorable reports of the Washington Oats and many unfavorable ones. They seem to have smutted more than other kinds. Summing up the evidence of these reports and adding our own, we should say that the Washington Oats are no very decided improvement upon old, well-tried kinds.....

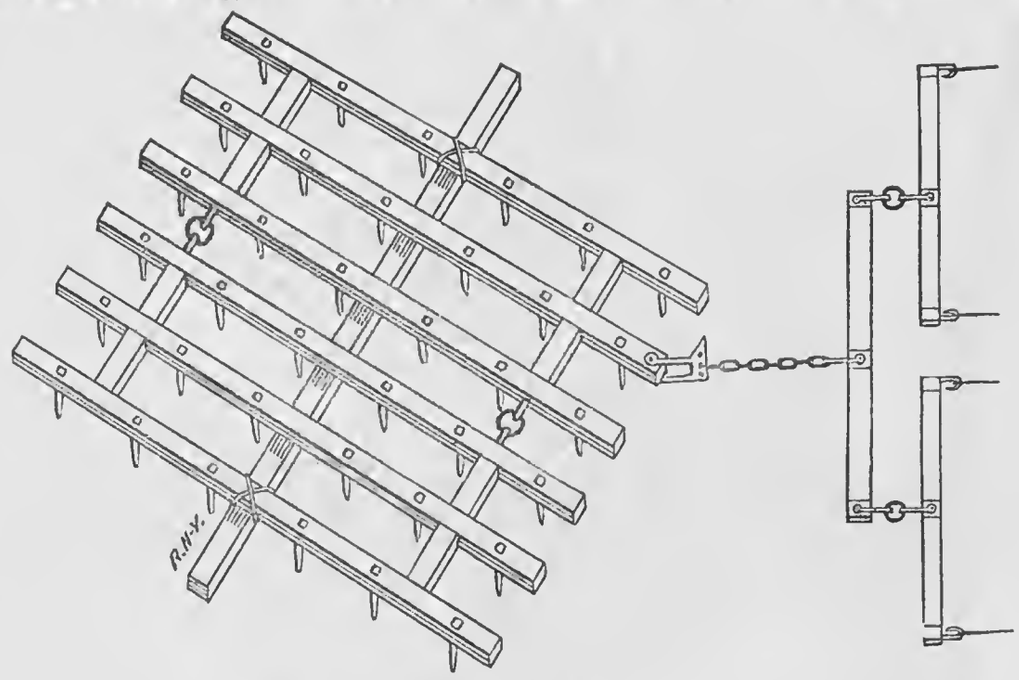
OWING to the drought our potato tests are not worth reporting—those, we mean, made at the Rural Farm. Those at the Rural Grounds (New Jersey) were satisfactory and will be reported in due time. Six kinds of new seedlings from Mr. E. S. Brownell; four from Mr. Frank Searle; several from B. K. Bliss & Sons, fifteen or twenty single potatoes from various subscribers were all cut to single eyes, carefully planted and staked. But the results need not be reported.....

WE may now report more definitely as to the "Cuban Queen" Watermelon extensively advertised and sold by W. Atlee Burpee & Co., of Philadelphia. We planted two hills April 29, using one shovelful of muck, wood-ashes and hen manure mixed together. The first and largest melon ripened Sept. 8, and measured 20 inches in length, 11 inches in thickness, and weighed, as we have stated, 27½ pounds. The flesh is a bright red in color, sugary, tender and excellent, extending to within three-quarters of an inch of the skin. The skin is irregularly and broadly streaked with whitish and dark green similar to the citron watermelon. The seeds are a dark brown. Each vine bore three melons varying greatly in size and shape, some being as round as an apple. But all were sweet and "thin-skinned," as is said when the colored or edible flesh extends to within an inch of the rind....

THE immense benefits gained by humanity at large from the improvements of all sorts in modern agriculture, are due chiefly to two grand sources. One, the establishment of freedom and equal rights on this broad continent of unoccupied soil, which has attracted people from all nations and provinces, who, by their intercourse and observation of each others' ways and procedures, have gradually rubbed off the blinding superstitions and false prejudices which had fettered all more or less. This has opened the way to belief in the possibilities of better ways than those trodden of old.

The other is the modern press and Post Office which not only enlarge the village interchange of opinions and experience to the limits of the nation, but take into weekly consideration the discoveries, and new sources of advantage developed in any and every civilized country of the whole wide world.....

SOME topics will for a time take the lead in arresting attention and exciting discussion in this universal arena of agricultural inquiry. Some, again, of extreme importance, will seem to be for a time neglected. Such is, perhaps, the great interest of sheep husbandry. It is easy to prove, in presence of a thriving flock of sheep that there is no sort of stock so profitable upon a farm. But in spite of extreme hardiness, there are many flocks that do not thrive but the reverse. One of our English exchanges, "The Live Stock Journal," commends Mr. A. M. Garland's remarks at a recent convention of sheep-breeders at Philadelphia, as touching a point vital to this interest. He said: "Many errors creep into print through the attempt of empirics to supply the demand coming from every section of the country for practical information relating to sheep husbandry. The ill effects of these can often be traced in fields whence better results would have ensued if those best qualified to teach had done what they might have done in that direc-



PULVERIZING HARROW.—SEE PAGE 710.—FIG. 492.

tion. . . . Let each flock-owner do what he can by way of contribution to our literature through such channels as are open to him. It is to your interest as wool-growers that you let your lights shine. If you know anything that by possibility may benefit your fellow-flock-owner, tell it to him. If you are doubting, seek his counsel; and, ninety-nine times in a hundred, you will get sympathy and assistance, in addition to good advice. If you are the victim of any prejudice— if you are running in a groove—get out of it. Find some higher stand-point, and you will discover, if you have not hitherto realized it, that there is more in your chosen industry than you or I have yet dreamed of."....

THE Washington Department of Agriculture is sending out a number of different kinds of Wheat:

RICE WHEAT is a beardless, reddish amber of medium-sized grains from Frederick Co., Maryland. It is said to be a vigorous grower, hardy and ripens early.

GERMAN AMBER WHEAT is said to have originated in Germany. It is said to be comparatively rust-proof and to yield well and make excellent flour. It is beardless and the berry is small.

CHAMPION AMBER WHEAT.—This is a beardless variety from York Co., Penn. It is said to have stiff straw, to be hardy and to yield well. It has a medium-sized grain of an amber color.

DALLAS WHEAT is a smooth, amber variety especially adapted, it is said, to those sections of the South where rust prevails. It ripens early and is said to be as nearly rust-proof as any good wheat in cultivation. It is an amber wheat and the kernel is of medium size.

LEMON WHEAT.—This is a beardless kind of medium size or rather small grain, from York Co., Penn. It is said to yield heavily and to bear stiff straw.

BENNET WHEAT. — Small, amber kernel; bearded head. From West Virginia. It is said to have stiff straw and to ripen with Fultz and make good flour.

WASHINGTON GLASS WHEAT.—This is a beardless kind from Cumberland Co., Penn. It is said to be a strong grower and to yield well. The grains are of a light amber color and of good size.

What Others Say.

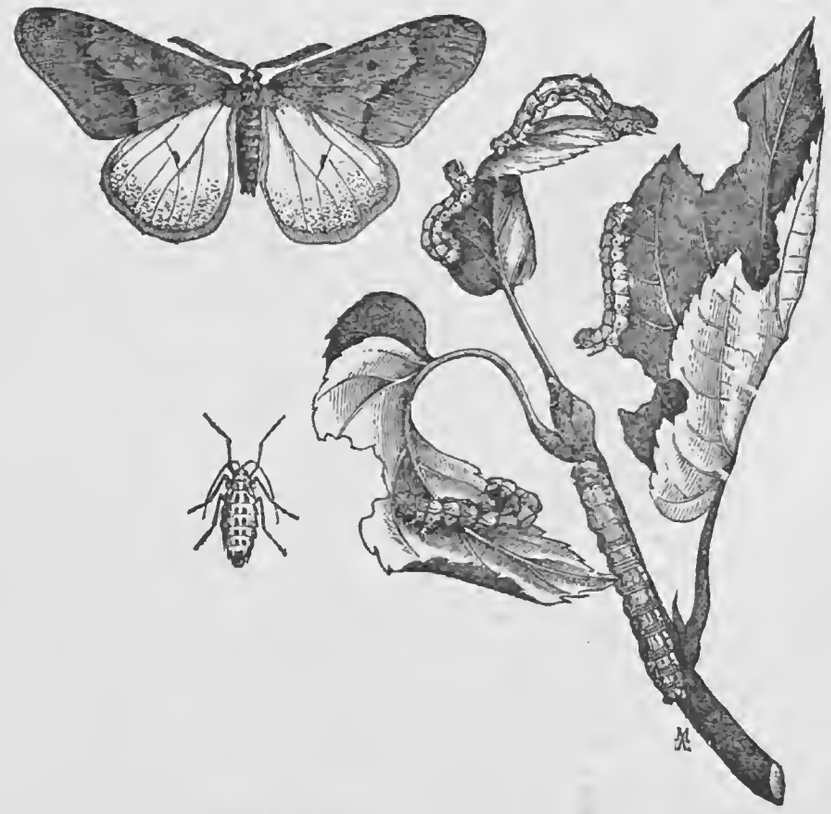
A VETERAN'S CHEERY AND CHEERING WORDS.—Marshall P. Wilder concludes his stirring address delivered before the Eighteenth Session of the American Pomological Society, as follows: "In conclusion, gentlemen, let me express again the great gratification that your presence affords me, here in old Boston, here at my old home, where, ere long, I shall cast off the thread bare covering of humanity, where this worn-out frame and this tired brain shall rest under the shadow of mine own trees in yonder cemetery. But while my life is spared, my earnest prayer will be for the perpetuation of our Society and the diffusion of its blessings to mankind. One after another of our friends will fall by the wayside, and ere long all of its founders will have joined those who have gone to that better land where fruits are immortal and whose harvests are eternal. But the progress of American pomology, rural economy, domestic comfort, and cultivated taste, which has been developed by our association, will continue its glorious march until all shall realize that fruits are one of the most beautiful emblems of Divine beneficence—one of the most perfect and useful gifts of God to man."

SAVING SEED CORN.—A writer in the Prairie Farmer picks his seed corn and hangs it up in the smoke-house and smokes it just as he does his meat. He builds a good smoke every day until both corn and cob are perfectly dry. He is not afraid of getting it too dry, he says. It must be kept in a dry place until planting time, and where there is plenty of air. He is careful not to let it heat in the shock before getting it hung up. When the weather is warm, corn will heat in a heap so as to injure the germ. He has saved his seed corn in this way for the past 20 years, and it never fails to grow.

JARRING FOR THE CURCULIO:—Mr. J. J. Thomas says (Albany Cultivator) he has had annually large crops of plums for the past 15 years by the jarring process, the only harm which has come from it being that too heavy and unthinned crops injure the vigor of the trees. From about 30 trees, the man who did the work this year caught and destroyed from 300 to 400 curculios a day for a few days, after which they were rapidly reduced in numbers. The most difficult fruit to protect is the nectarine, but no difficulty has occurred in securing loaded crops by the process he has employed, including the insertion of iron plugs to strike on with a heavy hammer, which brings down every beetle with the first blow.

SURFEITING LAND WITH FERTILIZERS.—Mr. C. S. Reed, who, it will be remembered, was one of the Royal English Commission to look into our agriculture, says of concentrated fertilizers, that continuous grain growing by their aid will not long succeed on some stiff soils. For two years the dressings answer well, but in the third they seem to lose their efficacy, and the land shows signs of being tired of grain growing. The Springs of the last few years have been cold and wet in England, and the most valuable portion of the nitrogenous fertilizers may have found its way into the nearest rivulet. But when the season has been favorable he finds that the land refuses to answer the whip as it does at first. The straw not only grows weaker, but a great deal turns white before it ripens, and produces hardly any grain; while, if the dressings are increased, the straw is flaggy and weak, and is sure to lodge with the first pelting rain.

ORCHARDS IN MICHIGAN.—The almost fabulous prices at which well developed fruit farms have exchanged hands in Western Michigan have led many to believe that it requires a large investment to enter the realm of successful fruit culture, says Sec. Garfield, in our esteemed contemporary, the Michigan Farmer. It is only in cases where orchards have come into successful bearing and are returning a large income that the lands command extravagant prices. The fruit region of Michigan is extensive, and only a small part of the land available for the production of even the more tender fruits has been improved. As good locations can be secured to-day at rates varying from ten to twenty-five dollars per acre as those which have changed hands at from $200 to $1,000 per acre after the plantations were in full bearing.



LIME TREE MOTH.—SEE PAGE 710.—FIG. 493.

TRANSPLANTING.—As the season for transplanting has arrived, we give the following account of how the operation had best be done, from a late catalogue received from Ellwanger & Barry, of Rochester, N. Y.:

1st. The Preparation of the Soil.—For fruit trees the soil should be *dry*, either naturally or made so by thorough drainage, as they will not live or thrive on a soil constantly saturated with stagnant moisture. It should also be well prepared by twice plowing, at least, beforehand, using the subsoil plow after the common one, at the second plowing. On new, fresh lands, manuring will be unnecessary; but on lands exhausted by cropping, fertilizers must be applied, either by turning in heavy crops of clover, or well decomposed manure or compost. To ensure a good growth of fruit trees, land should be in as good condition as for a crop of wheat, corn, or potatoes.

2d. The Preparation of the Trees.—In regard to this important operation there are more fatal errors committed than in any other. As a general thing, trees are placed in the ground precisely as they are sent from the nursery. In removing a tree, no matter how carefully it may be done, a portion of the roots are broken and destroyed, and consequently the balance that existed in the structure of the tree is deranged. This must be restored by a proper pruning, adapted to the size, form and condition of the tree, as follows:

Standard Orchard Trees.—These, as sent from the nursery, vary from five to seven feet in hight, with naked stems or trunks, and a number of branches at the top forming a head. These branches should be all cut back to within three or four buds of their base. This lessens the demand upon the roots, and enables the remaining buds to push with vigor. Cut off smoothly all bruised or broken roots up to the sound wood. In case of older trees of extra size, the pruning must be in proportion; as a general thing it will be safe to shorten all the previous year's shoots to three or four buds at their base, and where the branches are very numerous some may be cut out entirely.

3d. Planting.—Dig holes, in the first place, large enough to admit the roots of the tree to spread out in their natural position; then, having the tree pruned as above directed, let one person hold it in an upright position and the other shovel in the earth, carefully putting the finest and the best from the surface in among the roots, filling every interstice, and bringing every root in contact with the soil. When the earth is nearly filled in, a pail of water may be thrown on to settle and wash in the earth around the roots; then fill in the remainder, and tread gently with the foot. The use of water is seldom necessary, except in dry weather, early in Fall or late in Spring. Guard against planting *too deep;* the trees, after the ground settles, should stand in this respect as they did in the nursery. Trees on dwarf stocks should stand so that *all the stock* be under the ground, and *no more*. In very dry, gravelly ground, the holes should be dug twice the usual size and depth, and filled in with good loamy soil.

4th. Staking.—If trees are tall and much exposed to winds, a stake should be planted with the tree, to which it should be tied in such a manner as to avoid chafing. A piece of matting or cloth may be put between the tree and the stake.

5th. Mulching.—When the tree is planted, throw around it as far as the roots extend, and a foot beyond, five or six inches deep of rough manure or litter. This is particularly necessary in dry ground, and is highly advantageous everywhere, both in Spring and in Fall planting. It prevents the ground from baking or cracking, and maintains an equal temperature about the roots.

6th. After Culture.—The grass should not be allowed to grow around young trees after being planted, as it stunts their growth and utterly ruins them. The ground should be kept clean and loose around them, until, at least, they are of bearing size.

SNAILS AND TRUFFLES IN FRANCE.—The trade in snails and truffles in the Paris markets is enormous, and something that the outside world can scarcely understand. It is stated that about 90,000 pounds of snails are sent to the Paris market daily from the gardens of Poitou, Burgundy and Provence, where the breeding of this mollusk is made a specialty. The natural delicate flavor of their flesh is improved by feeding them on aromatic herbs. In other parts of France truffles are produced in vast quantities, and the total value of the entire product is estimated at from 18,000,000 to 20,000,000 francs. Neither of these industries has as yet been introduced into this country. Snail culture might be readily undertaken, but the propagation of the truffle is as yet somewhat of a mystery.

HANDLING APPLES.—The Maine Board of Agriculture concludes a bulletin as follows: Fruit growers may reasonably expect fairly remunerative prices for all the apples they can put upon the market in good order. Pick before heavy frosts, and before over-ripening, handle with *extreme care*; store in cool cellars, and guard against extremes of temperature By observing these precautions they may be kept, if desired, till late in the season without loss, or till the trade calls for them.

THE APPLE CROP.—It also says that the apple crop in Maine the present season is a bountiful one. In those counties not especially adapted to fruit growing, there is no more than an average crop, and in some localities it falls below; but in the great fruit-growing belt of the State—Western York County, Cumberland, Oxford, Androscoggin, Franklin and Kennebec—the crop is abundant. Throughout this belt, with limited local exceptions, the Baldwin is the leading variety grown. In many towns there will be more of this variety harvested than ever before in one season. In Sagadahoc, Knox, Waldo and Southern Penobscot the crop is a full average, but the Baldwin does not lead to the extent that it does in the counties first named. The apple crop in the great fruit-growing States outside of Maine is a light one. Michigan, through its highest authority, reports "the shortest crop in many years." Such is the scarcity in Illinois that "they are now selling for four to five times their usual price." In New York the crop reports to the State Agricultural Society give apples "a light crop," "a very light crop," and in seven of the best fruit-growing counties "almost no crop." An extended trip through the best apple sections of Massachusetts found the trees almost barren of fruit.

THE Society of Public Analysts of Grea Britain and Ireland have adopted as a standard for the poorest pure milk, 9 per cent. of solids minus fats, and 2.5 per cent. of fats—a total of 11.5 per cent. of solids. There is little doubt that milk containing less than this percentage of solids is watered or skimmed.

RELATIVE COST OF CORN AND PORK.—When corn is worth 30 cents per bushel, it pays to convert it into pork, if the latter sells for $3 per 100 pounds. With corn at 40 cents, pork should sell at $4 per 100 pounds; corn at 50 cents, pork $5; and so on, adding $1 to pork for every increase of 10 cents per bushel in corn. This is the estimate placed on the relative prices of these two articles by the Prairie Farmer. If the pork sells for less than is represented by the corresponding price of corn it is fed at a loss; if more, the advance is profit —in each case regarding the manure as pay for the trouble.

A LONDON paper says, as to the term "cornering:" "We are greatly indebted to our American cousins for supplying us with terms which express in one word the meaning of half a dozen sentences." . . . . . Clare Sewell Read thinks every farmer who makes even the roughest experiments should give the results to the public, stating faithfully failure or success. . . . . Some men make you feel as though the warm sun had just broken through the clouds, while others make you feel as though a sudden east wind, with its arms full of a cold fog, had caught you with too thin clothing on. . . . . Sample copies, posters etc., of the RURAL NEW-YORKER will be sent free to all who apply. Let all who can do it without telling a story, speak a good word for the RURAL. A good word is the next thing to a subscription. . . . . Why not eat woodchuck? It is a cleanly creature that feeds on clover and similar forage. A New-Yorker who entertained this view invited some friends to dine, and served them with meat of this neglected farm stock, prepared in different ways, and they, not being prejudiced by knowledge of the character of the repast, pronounced it, "delicious."—Food and Health. . . . . Mr. John A. Phelps of Conn., according to The Farmer of that State, inculcates in his boys a love of country life and the paternal acres in this way —which is as sensible as it is effective: "He rents them plots of ground for potatoes and tomatoes; sells them manure to enrich their crops, taking pay in labor; teaches them to make their own sales, keep their own accounts and carry their own 'scrip' etc., etc."—N. Y. Tribune. . . . . Speaking of Venus's Fly-Trap (Dionœa muscipula) Dr. Thurber tells the following: "The sashes of the green-house, in Summer, are, of course, open, and insects of all sorts get caught in the Fly-traps The other day a "potato-bug" tried it. The rascal was caught, but though it gnawed a hole through the fly-trap, I am glad to say that it did not get out. Dionœa was quite too much for Doryphora. Still the catching of such big insects seems to exhaust the Fly-trap, and after a leaf has caught one, it loses its sensitiveness. . . . . Unfortunately, the trade in chemical manures is not confined to honorable houses, says a noted Frenchman, M. Marchaud, and therefore your self-interest dictates that you should be especially careful not to imperil your success by purchasing manures which unprincipled dealers offer under imposing titles and perhaps even false descriptions, with the intention of deceiving you, that they may thereby enrich themselves. . . . . J. K. Hudson has resigned his position as Secretary of the Kansas State

Board of Agriculture. Mr. F. D. Coburn has been elected to fill the vacancy. . . . .

A set of rascals in Chicago have been palming off rotten fruit upon poor people, at low prices, under cover of a nice-looking layer of sound fruit on top of the basket and a gauze netting over all. . . . . A dollar invested in wheat-middlings will pay for 100 pounds, and this will feed a calf a long time, and really add double its cost to the value of the young animal. So says Col. Curtis in the N. Y. Tribune. . . . . Another writer in the same journal says that he is of the opinion that the coming harrow will not be a harrow at all, but a cylinder armed with strong curved knives or teeth revolving at considerable speed, and it is not unlikely that the same implement can be easily and quickly converted into a roller. This, of course, only applies to Western farms where the fields are free from stone and stumps. The spring-toothed harrow is a very good implement but too expensive. Another Western tool that answers a good purpose is called the Jack-plane harrow, a better implement than the spring-tooth, but, like it, too costly—$25. . . . . Elderberries are not so named because they are any older than any other berries. They derived their name from the fact that an elder of a church first discovered their color by sitting down upon a bunch of them at a picnic.—Afloat.....Brudderly feeling goes a good way in case of sickness, or want, or death, but it seldom reaches down to a hoss trade.—Detroit Free Press via N. Y. Tribune. . . . . Mr. Randolph Peters, the experienced nurseryman of Wilmington, Del., says that in the future for Maryland and Delaware he should plant dwarf pears rather than standards. In those States they have been found to pay better.

Everywhere.

NOTES FROM KANSAS.

I AM living in the southeast corner of Douglas County, Kansas, where I first "pitched my tent" in 1860, since which time vast changes have been wrought. During this time I have passed through droughts, grasshoppers, chinch bugs, the civil war, etc., but in spite of all these seeming drawbacks in the past, I love my adopted State no less than when I first landed here in the then Territory of Kansas.

Disasters are not, as a rule, as great as they at first appear, and hence in regard to our State, although we would not claim grasshoppers to "be a blessing in disguise," yet their advent "played out" the noxious weeds, and the ground seemed to have absorbed a fresh store of plant food from the atmosphere, and we had a succession of fruitful seasons. Neither have chinch bugs done much damage since then, in fact they "quit" about that time and only in the last year or two have they been around much. Our dry weather is generally from the middle of July to the middle of August. The last few years our rains here have come about the 19th or 20th of August; hence we usually have a good growing season for crops before the dry spell, and our practical farmers are learning to plant so as to secure the maturity of their crops as early in the season as possible, or else to postpone planting such things as late potatoes, sorghum, etc., so as to have them grow and perfect themselves after the Fall rains and before the killing frosts. On the uplands, a killing frost does not usually occur before the 17th of October; but on the bottom land "truck" is usually "cooked" two weeks sooner. The pastures get very dry here during the "heated term." D. R. Locke says the grass is greener in England than in America and I am inclined to the opinion that during midsummer, this greenness of the grass grows gradually less as one journeys westward across the continent.

But in spite of all that could truthfully be said against this State, her course is onward to future greatness and increasing prosperity. She is situated near the center of the continent and the transportation of all her products to the the sea-board is somewhat against her; but this matter is measurably overcome by converting the corn into pork and beef. This is the money-making business of the country.

Our "feeders" who buy up their feeding cattle during the Fall—who raise their own pigs and make a business of getting as many pounds of flesh as possible upon the animals in the shortest time and at the least cost, are the thrifty farmers, as a rule. But they add also to the prosperity of others. They feed large quantities of corn besides what they raise themselves, and they buy up all the scattered stock through the county, for which they usually pay good prices. But this year it is thought that there will not be more than one-third of a crop of corn in this part of the State, and hence our "feeders" are slow about engaging largely in the business. Now corn will be worth 45 to 55 cents per bushel, and hence the cattle to feed on corn at that price would have to be bought "right" in order to secure the usual margin of profit.

Douglas Co., Kansas. M. A. O'N.

RURAL SPECIAL REPORTS.

Idaho Territory.

BLACKFOOT FARM, Oneida Co., Sept. 26.—When I first subscribed for the RURAL NEW-YORKER, it was the seeds I wanted, but now since I have become acquainted with the paper, it is the paper first and the seeds next. I am satisfied that those having the success of the best interests of our great and glorious country at heart, should do all in their power to advance it and promote its usefulness. As regards the seeds, I received all in due time except the white Elephant Potato, which was not received until about May 10. Not being ready for the others, I planted only the Branching Sorghum, the Washington Oats and the White Elephant Potato. The first I planted, I believe, too early, for only one seed came up: it grew, but turned out small and of no importance. I think the soil and climate are not suitable for it here. The oats grew splendidly and I think will prosper here, but the rust almost entirely destroyed those I planted. The White Elephant Potato had 12 eyes. I planted them separately on May 12; 10 came up and grew very thriftily, except four which, compared with the others, were rather feeble. I dug them September 12 and got 79 tubers; 40 were marketable, one weighed 2¼ pounds; the others were from the size of a hen's egg down to the size of small marbles; all weighed 31¾ pounds—I think an enormous yield. The land was well manured and well watered by irrigation. P. B.

Illinois.

CHAMPAIGN, Champaign Co., Sept. 27.—Since the 10 hours' rain on the 15th inst. we have had several light showers, but hardly more than enough to lay the dust. But it has been raining north, less copiously south and the indications seem to be we shall be approached from both sides and deluged with several downpours. But I have no expectation of a wet Autumn and hardly think we shall see much more rain this side of the Autumn equinox than we had upon the other. But as moderate as they have been, the late rains have done a world of good in helping out the corn crop, in softening the soil so it could be seeded and in germinating the newly sown wheat. Besides, the pastures and meadows have been freshened up and where the soil has not been too much impoverished the sward has become a mass of living green. But still the creeks are not increased, the sloughs are dry and all but the best (say 25 per cent.) of the wells of the country, afford no water. Nor will they till from three to six inches of rain have fallen within a limited time. Nothing but actual experience can afford an adequate idea of extra work, trouble, anxiety and money loss, involved in a drought such as the farmers of the south two-thirds of Illinois have passed through since early July; even if we consider only so much of these as a scarcity or failure of water insures. Think of having from seventy-five to a hundred head of stock and half as many hogs to furnish water daily for; when sloughs are dry, wells giving out, creeks five or six miles off, pastures short, the sun shining through a sky of fire, the mercury ranging from 80° at sunrise to 95° and sometimes 100° at noon, and this continued for weeks without interruption—and consider, further, that water enough having been secured for one day, the same task had to be done the next, with the reasonable fear that water cannot longer be had, the animals must be sold, or, if kept inclosed, they will die, or turned out, wander away in search of water. Though the crop losses in Illinois from the drought have been confined mostly to the thin, light-colored soils south of the general direction of the old Terre Haute and Alton Railroad, the stock losses from shrinkage and enforced sale from water scarcity have been half as large, and possibly more. After such enormous losses in the grain and cattle States north of the Ohio and Missouri Rivers, to which must be added the failure of the cane crop in the Cotton States, and a decrease in the cotton yield from 25 to 35 per cent., the total of which will reach several hundred millions, it cannot be otherwise than the business of the country will feel these in a very marked way and perhaps new fashion. Meantime in the Chicago market, the advance over this time last year in the five leading cereals, has been equal to an average of 48 per cent., the date being Sept. 24. Thus wheat has advanced from 90⅝c. to $1.31½, or 45 per cent. Corn from 39⅜c. to 68c.—70 per cent. advance. Oats from 29c. to 41½c., or 43 per cent. advance. Rye from 82c. to $1.09¼, or 33 per cent. advance, and barley, from 75c. to $1.13½, or an advance of 50 per cent. In regard to the character of next Winter there is nothing to prophesy about it, the whole matter of a cold or warm Winter being a question of a less or greater amount of rainfall absorbed in the soil or lying on the surface. If the first condition obtains (in the Mississippi Valley) over one or two hundred thousand square miles, the Winter will be dry and very cold; if the second, that is, if the ground is saturated with water, the Winter will be a moderate one. B. F. J.

Iowa.

MAGNOLIA, Harrison Co., Sept. 28.—The Washington Oats I put into rich ground and they broke down, but I will have a quart of seed. From the White Elephant Potato I get 38 good-sized tubers and it must be remembered that in Western Iowa we have suffered dreadfully from dry weather. Potatoes are selling for $1 to $1.25 per bushel now. My asparagus has grown finely and I will have a fine bed next year. My wife's pink seeds were a failure. Wheat yielded only four or five bushels per acre; oats good; corn half a crop. O. V. B.

Kansas.

WHITING, Jackson Co., Sept. 29.—A very dry Summer. RURAL seeds well attended to, but only to see them burnt up along with the rest of the garden "truck." Rye good; wheat rather light; corn poor. Rye, $1 per bushel; wheat, $1.25; old corn, 50c.; new corn, 35c.; potatoes, $1. J. E.

Michigan.

CARO, Tuscola Co.—We live in the burnt district and have saved nothing but our house, and feel heart-thankful for a shelter. Pen cannot describe the scenes of misery which prevail. Many are now dying from "gangrene," the flesh dropping from the bones. L. P. R.

LITCHFIELD, Hillsdale Co., Sept. 28.—The drought still continues, though on the 9th, 10th and 27th we had some fine showers—enough to to make wheat sowing pleasant. Late corn will be very light. Wheat makes a better yield than expected, judging by the straw. My Branching Sorghum grew finely; was seven feet high. I cut some off in July and it is now three feet high again. My White Elephant Potato I cut to single eyes. I have 27½ pounds of as nice tubers as I ever saw. I also planted one pound of Mammoth Pearl—very fine tubers—and got over half a bushel. I must say that I am very highly pleased that the RURAL takes such a deep interest in the welfare of the farmer. I hope the farmers will take an interest in keeping the RURAL flourishing. May it have a long, pleasant life. I had the Russian White Oat this year, but it did not yield as heavily as some of the advertisements promised, though it grew large and looked very fine. G. K.

ST. LOUIS, Gratiot Co., Sept. 26.—I cut the W. E. Potato into 14 pieces of one eye each, and planted one eye in a place 22 inches apart in the row, in good garden soil. The vines grew very strong, promising a big yield. The crop counted 90 tubers, 60 of which were fair-sized. Weight of crop 24 pounds. The same number of eyes of the Beauty of Hebron gave 22 pounds, planted in the same manner and beside the W. E. The Washington Oats grew finely, without smut or rust, but yielded only six pounds of tolerably fair grain. The R. B. Sorghum—what we did not cut early—now stands 7 feet high. Nearly every seed grew and branched out prodigiously. Our cow pronounced it excellent feed. I think her judgment good. The second growth is about two feet high. The asparagus has grown finely, but I can see no difference in the two kinds. Our Spring was wet and cold; our Summer dry and hot. Corn a good crop, but potatoes light and selling at 80 cents per bushel. Wheat was light, but oats good, and selling at $1.30 and 40 cents respectively. Butter, 28 cents; eggs, 15 cents. Our county is comparatively new: flat or gently undulating, and heavily timbered with beech, maple, ash, oak, some pine, basswood, elm, soft maple, etc. We get flowing wells of excellent water at a depth of 40 to 200 feet. I feel like complimenting the RURAL on its great improvement since removing to New York. Father was a subscriber to the old Genesee Farmer of Rochester, and later to the RURAL under D. D. T. Moore, and it came to us regularly till it went to New York City, "us" children thinking very much of its coming. I have the issue of 1853 complete, and enjoy looking the old book over occasionally, partly to awaken old sympathies and to note the difference between the old and the present manner of conducting an agricultural journal. You will find my $2.00 ready for years to come, or while I live and am able to get 2 00 cents in a pile. Success to the present administration! [Thanks.—EDS.] J. W. S.

Nebraska.

AUSTIN, Sherman Co., Sept. 22.—Other papers as well as the RURAL NEW-YORKER, contain so many complaints about dry weather, that it occurs to me to give an account of the rainfalls here: June, 10 rainy days; July, 10 days; August, four days; Sept, four days to date. Among these four the rainfall on the 6th was the heaviest during the whole year. J. B. N.

New Jersey.

MARKSBOROUGH, Warren Co., Oct. 3.—The W. E. Potatoes have done very well, although it was too dry for potatoes. I got 17 eyes out of the two small potatoes sent me, and planted a single eye in a place and got 16½ pounds of nice-sized tubers. I sowed the Washington Oats in my garden; there were quite a number of smutty heads, but the grain was fair, the straw medium-sized and the yield 8½ pounds. The R. B. Sorghum did not do very well; it came up very poorly and did not make any growth. P. W. S.

New York.

AUSABLE, Clinton Co.—All the RURAL seeds were planted in my garden—heavy, stony ground, manured lightly every Spring with barnyard manure plowed under. The R. B. Sorghum seeds did not come up, unless the grubs took them before I could see them. The Asparagus seeds all grew. The plants are looking fine. The oats came up well, and grew very fast until ready to head; then it was too dry and they had to wait a while, and rusted badly, and there were a great many heads of smut. I let the hens harvest them. My potato I cut into 18 pieces and planted them on May 9. They got no extra care, but were sprinkled twice with Paris-green and plaster to keep off the bugs. I dug them Sept. 20, and got 153 tubers; one weighed 25 ounces; 30 of them weighed 29¾ pounds, and they all weighed 65¾ pounds. Who beats my elephant? The flower seeds did nicely. My wife and sister say they are splendid. S. H. C

CATO, Cayuga Co., Sept. 29.—It has been very dry here the past season, but the RURAL seeds have done well. The White Elephant Potato was planted May 13th, 25 eyes making 25 hills; 24 grew. I dug them Sept. 1; had 73 pounds of nice tubers, the 13 largest weighing 10 pounds; one weighed 1¼ pound. The asparagus is doing nicely; it is 15 inches high. The Washington Oats were partly destroyed by hens, but I have four quarts of nice seed, The R. B. Sorghum is making a nice second growth. I have left a dozen hills which I think will mature seed if frost holds off 10 days more; it is nearly in the dough state now. The flower seeds were not sown this season.

I have been testing the Amber Cane this year. I planted 24 square rods. Mr. Charles Kellogg, living about a mile from me, tried it last year, using an old feed-cutter for a crusher, which did not get half the juice. This year he has 60 square rods and has purchased a three-roll Diamond Mill of Geo. L. Squiers & Bros, of Buffalo, N. Y. The first day he crushed out 200 gallons of juice. He had altogether 340 gallons of juice which made 54 gallons of nice molasses. From my 24 rods I got 22 gallons, worth 80 cents per gallon. Several farmers will plant Amber Cane largely next season as it has proved a success with us. I followed your example and planted my corn in drills, using an Albany planter, dropping the kernels 10 inches apart; the result is I have a heavy piece of corn, well eared, while corn in hills is less than half a crop. J. K. R.

GRAFTON, Renns. Co., Sept. 27.—I planted 28 nice White Elephant eyes in ordinary garden soil, May 7, with no other manure at planting than a spoonful of Lister's Superphosphate to each piece. They were placed 18 inches apart in rows three feet apart. They soon came up, were hoed and watered three times with liquid manure dipped from depressions in the barnyard during the fore part of the season, and once with a weak solution of potash. I dug them Sept. 26; the heaviest yield from one piece or sprout was 4 pounds and 13 ounces; the heaviest tuber was 1 pound 15 ounces; heaviest 12 tubers weighed 15 pounds 12 ounces; the weight of the entire lot was 87½ pounds. Query: Is the White Elephant a white potato? I supposed it was until I dug mine, which I find to closely resemble the Beauty of Hebron in color. This latter variety sent out by the RURAL, has now been planted and harvested the third time with entire satisfaction; we consider it a great acquisition, yielding this year double what the Early Rose does alongside of it receiving the same treatment and cultivation, although with us ripening somewhat later. The Washington Oats stood about six feet high, with strong straw. They were sowed in drills in common garden soil, with no manure. There were many smut heads found, which I at first attributed to the variety, but afterwards found that not only the Washington Oats, but my other varieties in the field were badly smutted, as were also those of the neighborhood generally. After cutting, the chickens obtained access to them and destroyed many, so I estimate that from smut and chickens I lost fully one-third. I thrashed and saved 12 pounds of good heavy grain. Both varieties of asparagus came up well. I have 127 fine plants in all, but can say nothing as to the merits or

demerits of the thing, having never raised any before and knowing nothing of it. The sorghum seeds were planted, and nearly all germinated; they have made a rather slow growth. I think it hardly adapted to this climate. The Golden Rural Tomato of a former distribution is, with us, a great acquisition, it being not only earlier, but so hardy, and above all such a prolific bearer. [We have said little about this excellent tomato for the simple reason that it is yellow.—EDS.] The potato crop in this vicinity is very light. Corn an average crop. Oats heavy. Buckwheat very light, perhaps owing to the hot, dry weather. Springs and wells the lowest known for years. D. J. P.

LYONS, Wayne Co., Sept. 29.—The White Elephant Potato had 11 eyes, and I planted them in 11 hills on May 9, at the same time as Rural Branching Sorghum and Washington Oats. I planted them on clover and Timothy sod, the first row being next to a strong piece of grass—three tons per acre. This did not quite give them a fair chance. I dug the potatoes Sept. 23 and got 58 tubers—15 pounds in all; there were only three small ones; the rest were all larger than the sample sent. The price of the RURAL could not buy them. Although I have taken it for over thirty years without a break, it has never been better than now. The Washington Oats grew very nicely—no smut or rust. The R. B. Sorghum made a good growth. I am going to save all the seed to plant next year. Just in my locality we are experiencing the greatest drought we have ever had. Many farmers are sowing their wheat for the second time, and this is the very garden of Central New York. Wheat turns out better than expected; it is of good quality, though the crop is 25 per cent. short. Oats and barley good; potatoes short on account of drought; apples short 75 per cent., although one of the best apple counties in the State. Pears a good crop. Small fruits short. J. B.

PERU, Clinton Co., Sept. 29.—Crops better than last year. The drought did not last very long; but the oats were somewhat injured by it. From the package of Washington Oats I harvested five pounds. The White Elephant Potato was very small; it had nine eyes: received no extra cultivation; yielded 63 pounds. A number of tubers weighed from 1¼ to 2½ pounds. They are splendid. The asparagus seed came up finely. The pinks were very nice. M. A. H.

Nova Scotia.

WEYMOUTH, Digby Co., Sept. 24.—Wheat did not thrash out as well as was anticipated, the straw rusted slightly, and the grain was more or less shrunken. Potatoes below an average. Hay an immense crop, but a good deal damaged in harvesting. Apples, pears and plums very plentiful. Have had beautiful weather for harvesting grain this month with about enough rain for the pastures and late root crops. A frost on the night of Sept. 21, injured tender crops. I cut the White Elephant Potato to single eyes; had 20; planted them about May 10, in hills two feet apart, one eye to a hill, on a piece of low, rich land. About a week after planting a heavy rain deluged the land, leaving only the tops of the hills out of the water. Cut seed of any old variety of potatoes would, no doubt, have rotted in the hill, but out of 20 hills of the White Elephant I had 19 strong plants; the other hill came up but made a feeble growth. I dug them a few days ago and had 44 pounds of fine potatoes; the largest weighed 18 ounces; six of the largest, 5½ pounds. I have several varieties of excellent potatoes, including Beauty of Hebron, and I am satisfied that the White Elephant for a late potato is a decided acquisition. The Washington Oats were planted about one inch apart in drills eighteen inches apart, on soil of medium quality, to which was added a small quantity of rock superphosphate. The oats grew about five feet high, many of the leaves were over an inch in width. About one-third of the heads were smut; the rest splendid grain, many of the panicles having 150 spikelets. They thrashed out seven pounds. The Rural Branching Sorghum is a failure with me; the weather being cold I did not plant it until the 9th of June, on rather poor soil; but few of the seeds germinated and they have only grown about three feet high. The season was very unfavorable. The asparagus seeds were planted close to the potatoes, and at the same time; they were a long time coming up and did not all germinate. I have 150 nice plants. The flower seeds were sown in pans in the house and came up very quickly, and I think every seed germinated. When large enough they were transplanted to the garden and have been a mass of bloom for some time. We have not seen anything like them for variety and beauty. I am much pleased with the RURAL NEW-YORKER. It comes to me regularly every week, crowded with practical information, and, I may add, free of cost, as I am satisfied that the seeds alone have paid me for time and money expended. W. H. S. D.

Pennsylvania.

BERWICK, Columbia Co., Sept. 27.—Wheat hardly an average crop—not as good as last year. Corn about one-fourth of a crop. Oats good in the straw, but not so good in the grain. Potatoes not half a crop. Hay good. My Elephants did nicely for the season. I planted two quite small tubers and got 28½ pounds, some nice-sized tubers, but most were small. The weather is very dry. Everything is drying up; runs, springs and wells like the rest, and the river is the lowest I ever saw it, and I have been about it for 60 years. The grain that is in the ground and is coming up is wilting, drying and dying, and if rain does not come soon, the next crop of wheat will not be much. Prices are as follows: Wheat, $1.40; corn, 75c.; oats, 45c.; potatoes, $1; hay, $12; clover seed, $8; butter, 30c.; eggs, 20c. Business good; work abundant, and money enough to back it up. I. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

RASPBERRY BLIGHT.

C. W. Evanston, Ill., sends a specimen of his raspberry vines which are badly spotted, and he asks what ails them and how to treat them. Last year's vines bore some berries the past season, but were drying up and dying out; this year's vines made a growth, but they became spotted like last year's vines.

ANS.—We submitted the specimen to Mr. E. Williams, of Montclair, N. J., Secretary of the New Jersey Horticultural Society, who has devoted much attention to the matter, and he says: "This malady is no new thing to me. It has troubled my Black-caps for years, so that I had to discard them entirely. It was this same disease which was submitted to our Experiment Station last year, the result of whose investigation was published in the RURAL of June 19th, 1880, page 390. We progress very slowly in this matter. This much has been learned—that it is due to a fungus. Prof. Lockwood so stated at the Winter meeting of the New Jersey Horticultural Society, Feb. 6th, 1879, and illustrated its growth. He could not give any preventive or remedy except cutting and *burning* the affected canes. In view of the little we know regarding this particular fungus the case stands about thus: If the RURAL'S correspondent does not destroy his affected plants and the fungus with them, the fungus will destroy his plants for him to all intents and purposes, as it has done for others, and burning is the *only* remedy I know of. He can judge as to his best course. I sent the letter and specimens to Mr. Ellis, of Newfield, N. J., a recognized authority on microscopic fungi, whose opinion on the matter appeared in the RURAL of June 19, 1880, with the hope and request that subsequent examinations would enable him to give us a little more light on this dark subject. I append his reply, and remark that if, as he states, the disease does not exist in his locality, it is more than I can say of any locality I have visited this season. My observations lead me to assert that this fungus thrives under all the favorable and unfavorable conditions named, and I can conceive of no conditions of weather or temperature that seem to materially impede its progress.

I also sent an apple leaf infested with a gall or fungus, which is fearfully prevalent up the Hudson River, the entire foliage of large trees being as yellow as the yellowest of Autumn leaves, and no fruit being on any of them. I find a few leaves on some of my young trees similarly affected, and I fear its ravages since seeing it in the vicinity of Newburgh, N. Y." Mr. Ellis says:—

"The disease on the Black-cap canes is new to me. There is nothing like it here. The trouble is caused by a fungus growth which is closely allied to the production known as Ascochyta Rubi, which affects the leaves of various species of Rubus, but without producing any injurious effects, so far as I know. The fungus on the specimen sent has spores much like the above-named species—oblong, eliptical, hyaline, nucleate .0025-.0031 *m m* long by half or one-third as wide, produced abundantly in little cavities (perithecia) which are situated in the central part of the pallid spots on the affected canes. This fungus growth, if it is desirable to give it a name, might be called Ascochyta necator, being apparently quite destructive in its effects. It belongs to that class of productions known as imperfect fungi, being probably the first stage of development in the growth of some ascomycetous fungus.

"I said the trouble was caused by this fungus. That assertion needs, perhaps, some qualification. Fungi, like other plants, appear and grow only under favorable conditions of heat and moisture and, as far as the parasitic fungi are concerned, there is in general, if not always, some special condition in the affected plant which invites and promotes the parasitic growth. If a plant has become enfeebled by long-continued drought, or if its tissues have been gorged by long-continued wet weather or by over-stimulation with unfermented manures, it is, of course, much more liable to the attacks of various fungoid growths. The present season has been an unusual one, and the atmospheric influences may have been such as to start into life and active growth the germs of various organisms which might perhaps otherwise have lain dormant.

"It may be that your advice to root out the affected plants is the best that can be given. If, however, the roots are not yet seriously affected, it may be that next year they will send up a healthy growth. Past experience shows that the diseases which have at various times threatened the destruction of various crops, have after a while either passed by entirely, or lost so much of their first virulence that they are no longer formidable. Witness the potato rot, and I hope we may add in a few years, the grape rot.

"The fungus on apple leaf is Roestelia lacerata *Tul*, and is a real fungus and not insect work. It is common here. Prof. Oersted supposed that the cedar apple fungus was only another stage in the growth of this Roestelia, but this view has not yet been fully confirmed."

TIMBER-GROWING IN DAKOTA.

"*Subscriber*," *Stuttman Co., Dakota*, asks, 1, what is the most valuable rapid-growing tree for outside shelter belts in that country; 2, will the sweet chestnut do well in Dakota; 3, when is the best time to set strawberries there.

ANSWER BY PROF. J. L. BUDD, OF THE IOWA AGRICULTURAL COLLEGE.

1. Back from the river bottoms timber-growing on the uplands of Dakota will be fraught with much difficulty unless careful attention be given to the selection of varieties. In the hot, dry air and soil of that region the cottonwood and willow will prove short-lived and unprofitable. Beyond a reasonable shadow of doubt, the White Poplar, often known as Abele or Silver Poplar, should take their place in the formation of quick growing outside shelter trees on these great, storm-swept prairies. It will maintain health and make very rapid growth under conditions, as to aridity and heat, that would injure or kill most other trees. The real value of its timber for economic uses is yet little known in this country; but it has long been recognized in all parts of Europe. In reality, it is the heaviest, closest-grained timber found among all the species of the poplar genus. It has another merit in a section needing shelter belts, so badly as Dakota—viz.: Every piece of root two inches long will, in a single season, make quite a miniature tree. It also grows from cuttings of the limbs with more certainty than most of the poplars. The sprouts may become something of a nuisance on the sides next to cultivated fields, but they will amount to nothing in the dense shade of the timber belt. With the shelter of the poplars on the south and west, the Box Elder, Green Ash, Black Wild Cherry, Black Walnut, Butternut, Honey Locust, and the Hardy Catalpa can be started as time and means permit. A pamphlet of 36 pages, published by the Iowa State Horticultural Society, giving explicit instructions in the propagation, setting and management of forest trees on the prairies, will be sent to applicants who forward a three-cent stamp. 2. After providing outside shelters on the south and west, the chestnut can be grown, if the nuts be planted where wanted and protected somewhat for two years, to carry them through Winter, until they become deeply rooted. 3. In that dry country always set as early in Spring as the ground becomes in good condition for working. Keep the plants in rows and keep the ground between the rows heavily mulched Summer and Winter, in Winter covering the plants also with a light coating of prairie hay.

MAKING GRAPE WINE.

S. P., Massingford, Va., asks how to make grape wine for family use.

ANS.—To obtain good wine, good grapes are necessary. They should not be gathered when moist with dew or rain, and none but sound, thoroughly ripe grapes should go into the press. The grapes may be crushed by hand in a tub, in small quantities, and any small cider or wine press will do for pressing. After crushing put the "mare" into a tub where an equable temperature may be kept, not falling below 65 degrees. Fermentation will begin about the third day and after this has continued actively for 36 hours or so, the free juice may be drawn off, and put into a cask. The remaining "mare" must be pressed at once. When the fermentation of the extracted juice has abated so that a bung may be driven into the cask, the wine may be said to be made. When the fermentation has wholly ceased and the wine become clear it should be drawn off into another cask, and after fermentation in this has stopped, the wine may be bottled for use. After the grapes are assorted every operation should proceed rapidly, the stemming, crushing and pressing processes following in rapid succession. The wine cellar should have a considerable evenness of temperature, freedom from wetness and good ventilation so that the temperature can be changed gradually when necessary. Large casks are claimed to be better than small ones as a large body of wine will ferment more perfectly than a small one. A common house-cellar will answer the purpose for a small quantity of wine if it can be kept cool enough in Summer. A temperature of 45 degrees is then desirable.

FLOWERS AND "THINGS" FOR SAN FRANCISCO BAY REGION.

J. C. M., Mt. Eden, Cal., asks, 1, the names of a dozen silver-leaved and golden-bronzed geraniums, 2, what kind of palms would we recommend, in addition to Brahea filamentosa and Chamærops excelsa which he has now growing; 3, the names of 12 double and single fuchsias; 4, the best manure for roses and how should it be applied.

ANS.—1. Silver-leaved—Bijou, Flower o the Day, Lass o'Gowrie, Mrs. Laing, Pearl and Mountain of Snow. Golden-bronze.—Marechal Macmahon, Black Douglas, Beauty of Calderdale, Pride of Mount Hope, Count Munster and Emperor of Brazil. 2. There are very few palms as hardy as Chamærops excelsa, or judging from its native habitat, as Washingtonia filifera (the species you call Brahea.) You had better find out what kinds are grown as hardy about San Francisco. We would suggest Sabal Palmetto, serrulata and Adansoni; Chamærops hystrix, Martiana, humilis, and its varieties and Fortunei. The last named is barely distinct from excelsa. 3. Single—Earl of Beaconsfield, splendens, Spitfire, Lord Byron, Covent Garden White and Improvement: Double—Mrs. H. Cannell, Tower of London, Snow Fairy, Alpha, George Peabody and Prince Leopold. 4. Farm yard manure, and in quantity according to the condition of your ground and vigor of your plants, bearing in mind that Roses are gross feeders.

RAISING BALSAM FIRS FROM SEED.

P. R. L., Kalamazoo, Mich., asks how to raise Balsam Firs from seed. Last Fall and again this Spring he planted some, having soaked some of the seed and put in the rest unsoaked, but only a single plant came up, and he would like to learn the cause of the failure.

ANS.—Not knowing the method pursued in sowing the seeds, we cannot say why they failed. It is very likely, however, that the seeds were imperfect. The seeds being sound, one should have reasonable success by sowing in shallow boxes in a sandy soil, covering the seeds about a quarter of an inch deep, watering as needed, and shading by slats, or in any way that will allow the air to circulate over the boxes. The young plants will need watching to prevent "damping off" when they appear above ground. One can buy plants a few inches high cheaper than he can raise them.

Miscellaneous

P. Mc D., West Fork, Ind., asks, 1, for information about the Perkins and Kallista Grape.

ANS.—1, The Perkins is a Labrusca grape. Husmann describes it thus:—"Bunch medium, rather loose, shouldered; berry oblong, pale red; with fine lilac bloom, sweet but foxy; apt to drop from the bunch when very ripe. Ripens as early as the Hartford Prolific, healthy, hardy, and very productive; generally sells well in market; a strong grower, with thick, leathery leaves. We know nothing of the Kallista.

G. K., Litchfield, Mich., asks whether the RURAL Dent Corn will mature in that section.

ANS.—Very likely it will, with an ordinarily favorable season. The Blount Corn matured in some places as far north, although it originated much farther south. We expect the Rural Heavy Dent will thrive over as wide a range of country as any of the well known varieties.

J. K. R., Cato, N. Y., sends specimens of ears of the R. B. Sorghum, cut Sept. 22, and asks whether it will mature seed.

ANS.—The seed sent would mature even though frost came at once after they were cut.

Geo. T. Whitmore, West Union, Fayette Co., Iowa, asks for the names and addresses of some breeders or dealers in Polled cattle in that or one of the adjoining States.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT. 8, 1881.

B. H. C.—W. D.—E. W. L.—J. P.—M. A. H.—W. H. S. D.—O. S. B.—P. B.—E. W. S.—O. V. B., thanks.—H. & S., too late for this issue.—H. S.—C.—L. A. R.—C. E. P.—E. McMahon, many thanks. It does not yield very heavily here.—L. S. H.—I. S.—J. B.—A. A. P.—J. A. H.—T. H. H.—S. H. C.—J. K. R.—S. M. J.—G. T. W.—A. A. B.—H. S.—E. G. R.—A. E. B.—J. L. B.—R. C. D.—T. H. H.—J. B. N.—C. A. G.—J. Andrews. By a coincidence we have received two lots of grapes marked 1 and 2, and we fear we cannot determine which is which.—H. L. W.—W. H. K.—M. N. B.—D. C. S., thanks.—H. S.—C. A. B.—D. J. P., thanks.—A. L. C. Give us the *truth* whatever it is.—D. S. M.—J. N. S.—W. F.—J. B. S.—M. S. H.—C. W.—J. W. Y.—F. T. R.—H. C. W.—R. W.—L. W. A.

THE
Rural New-Yorker,
A National Journal for the Country and Suburban Home.
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, OCT. 15, 1881.

If the Rural New-Yorker is not received promptly when it is due, subscribers will confer a favor by notifying us at once.

Put your name and address upon the box or package or parcel, friends, when you send us grapes, apples, pears, insects, flowers, or anything. Please bear in mind that we receive many such, and that we cannot place the letters or postal cards which may arrive, days before or after, with the parcels, unless the address is written upon them in full.

"A farmer who places his corn in a silo should clearly understand that in doing so he destroys a considerable amount of the food which the corn contained when introduced." See Dr. Lawes's article, page 705.

Thanks—thanks for a gentle little rain that has invigorated our drooping wheat plants. We could have sacrificed our main wheat plots without loud murmurs; but our little plots—our specialties that we have worked so hard to get together—our pets, we could *not* spare them. Their loss would be irreparable to us—indeed to our readers.

We find that our reproduction of the Shropshire Ram "Dudmaston Hero," Fig. 476, page 669, is presented without credit to the London Agricultural Gazette, in which the original engraving appeared. We should have made this acknowlegement to any paper, under any circumstances, but we are the more anxious to reproach ourselves for the oversight to the Agricultural Gazette, because that journal is always scrupulously careful to give credit where credit is due.

Latest.—The first frost occurred at the Rural Farm, Oct. 5. The drought is not yet broken and the farmers cannot plow for wheat. Some of the wheat sown at the Rural Farm about Sept. 20, is dying. The lower the roots of the young plants extend the less moisture they find. What little moisture there is in the soil seems to be confined to within a few inches of the surface. It is safe to predict thus early that the wheat crop in this section of country for 1882 will be *light!*

We find the followiug item in our respected contemporary the London Agricultural Gazette, the first farm journal of England: "And an American contemporary which has just arrived (the Annual Fair edition of the Rural New-Yorker) is brimful of the same teaching. It gives long accounts of comparative trials of cereals; stating the average length of ear, of straw, the yield in bushels, and weight per bushel, with a minuteness of detail of which, except at Rothamsted, we have no parallel in Great Britain."

A prominent member of the Illinois State Board of Agriculture said to our Western agent a few days since, that our Wheat Special was worth $10,000 to the farmers of Illinois alone, and that the State would do a good thing if it would appropriate $10,000 for subscriptions to the Rural New-Yorker—said papers to be sent to prominent farmers throughout the State so that they could get the benefit of our Experiment Station, as the great State of Illinois is too mean to run one for itself.

The average ear of the 12 ears of the Rural White Dent, which took the first premium at the Mineola Fair, is 12½ inches long, has 16 rows and 52 kernels to the row. All were well filled out at both ends; the kernels are large and placed as closely as possible. This well-marked variety shrinks far less than the Chester Co. Mammoth and is, judging by the past most unfavorable season, the best white dent corn we have ever raised or seen. The illustration in the Fair Number of the Rural as the typical ear, is not at all exaggerated.

National Finances.—The financial affairs of the Government are in a very prosperous condition, judging from the debt statement for the first quarter of the fiscal year, which closed on the 30th ult. The aggregate receipts for that time were over $107,000,000; for the same time last year they were $98,000,000, or an increase of $9,000,000, which isn't so bad, after all! Should the reduction of the public debt continue for the three quarters ensuing, in the same proportion, the total amount of reduction July 1, 1882, would be, in round numbers, $148,000,000, as the estimate for the first quarter is $37,000,000. However, we should be content if that magnificent sum is not quite reached.

The Weather.—Until the 5th inst. we had not fully realized that Autumn had come, so long had Summer prolonged its stay, but the frost of Tuesday night served as a reminder. There is nothing phenomenal in the coming of frost at this time of the season, except its suddenness, for last year, according to the Signal Service reports, frosts were recorded as early as Aug. 16 in Massachusetts, New Hampshire, New York and Pennsylvania, while by Sept. 15 they were quite general. From our news columns it will be seen that nearly every section of the country was visited with frosts last week, and that considerable damage was done to ungathered fruits and vegetables. In Pennsylvania grapes were frozen on the vines, while in the most northern tobacco-raising States the "weed" was much injured. The prospects now are that a warmer wave is approaching and that we may yet enjoy our usual Indian Summer.

The Michigan Relief Fund has grown to nearly a quarter of a million dollars, but it is estimated that at least five times this amount will be needed to keep the people of the afflicted region from absolute want during the coming Winter. In the time of Ireland's distress, a couple of years ago, America generously sent food and money to relieve the famishing and clothe the ragged. Shall America be less liberal to her own children than to her neighbors? The contributions to the fund for Mrs. Garfield have already amounted to over $350,000, and with the insurance on her husband's life, the liberal appropriation in her behalf which Congress is sure to make, and her present possessions, it is estimated that she will have at least $500,000. Many of our most influential papers are therefore suggesting that all future contributions which the generous and philanthropic may feel disposed to make, should help to relieve the deplorable need of thousands in the burnt district rather than further swell the Garfield fund, already large enough to meet all reasonable wants or wishes. We hope that thousands of our readers have already contributed the price of that "Michigan Bushel" of wheat towards helping their co-workers, and those who have delayed doing so we would remind that he doubles his gift who gives it promptly.

THE RURAL CROP FORECASTS AND H OUTCOME.

In our Special Crop Number of June 25 last, in summing up our conclusions drawn from upwards of 2,000 reports sent to us from all parts of the country, we ventured to predict that the total wheat crop of 1881 would be 20 per cent. below that of 1880. "The latter," said we, "has been estimated by the Agricultural Department at 480,849,723 bushels, so that, on this basis, this year's aggregate crop can hardly be far from the neighborhood of 380,000,000 bushels." Furthermore, for reasons previously given, we expressed an opinion that the Department's estimate was from fifteen to twenty million bushels too high, and that, therefore, a corresponding reduction should be made on the above estimate of ours. This would make the aggregate yield this year from 360,000,000 to 365,000,000 bus. This estimate was made six weeks before the average harvest time. After the harvest has been completed, Bradstreet's has made a careful investigation of the aggregate yield of wheat and corn, and from 3,000 trustworthy reports estimates the total yield of wheat at 368,962,000 bushels—or within three million bushels of our estimate nearly four months earlier.

Of the corn crop of 1881 we said in the same issue: "According to the Department of Agriculture the total yield last year was 1,537,535,000 bushels, from which a deduction of 15 per cent. would leave 1,308,535,000 bushels as the aggregate of this year's crop. Inasmuch as the corn crop is made in July or August, however, there is still time for a great deal of improvement," or, of course, of injury. With anything like an ordinary season for making the corn crop our estimate of the out-turn of this would, we have no doubt, have proved comparatively as close to correctness as our estimate of the wheat crop. Owing to the very unusual drought that afflicted most of the country during the critical period for corn, the injury to the crop has been greater than could have been foreseen at the date of our report. Bradstreet's estimates this year's total crop at 1,193,641,000 bushels, or about 115,000,000 bushels less than our estimate—by no means too high an estimation of the loss from the widespread severity of the drought. In the shorter interval between our estimate of the wheat crop and the harvesting of it, the weather was ordinarily favorable for wheat, and therefore our conclusions approximated very closely to the truth; in the longer interval between our estimate of the corn crop and the harvesting of it, the weather was unusually unfavorable for corn, and therefore our original estimate of the shortage was too low; but since then we have several times revised our original views as the drought extended its ill effects.

THE RURAL'S PRETENSIONS.

Why is it that so little attention has been paid to the improvement of our cereal crops—the most valuable of the world? It is hard to answer, unless it is that we are so prone to overlook the great problems of life while wasting our energies upon those trifles that can yield no substantial benefit to mankind. Suppose that Charles Darwin, instead of spending years upon the investigation of so-called carnivorous plants, had devoted his incomparable talents to the improvement of those plants immediately serviceable to man, what might we not have looked for as the results! Until of late years, no systematic, scientific labor has been bestowed upon the corn plant; which, we cannot doubt, is destined, at no distant day, to stand first among America's farm crops. And yet no other plant is more susceptible to improvement by careful crossing and selection. And with wheat—who, until within a few years past, has attempted its improvement? Among the Experiment Stations of this country, the Rural Farm stands almost, if not quite, alone in its endeavors to originate and disseminate superior varieties of grain. We have now 25 different kinds of wheat which have originated at the Rural Farm, nearly all of which, in its sandy soil, promise to far excel the Fultz and Clawson which—as if there were no other wheats—are the reigning favorites of our country.

In our present Free Seed Distribution we send out Mr. Wysor's Fultzo-Clawson and Surprise Wheats, after testing them for several years. This is the beginning of the dissemination of improved cross-bred varieties, and ere the merits of these have become well known, we hope to be ready to distribute other kinds of our own origination, which shall succeed at least where those fail.

The Rural New-Yorker has naturally been looked upon as seeking merely to advance its own interests through its Free Seed and Plant Distribution. The truth, however is becoming *felt*. The amount of money expended in our work of the past four years, and the earnestness with which that work has been conducted begin to tell their own story, viz., that the Rural has merely been selected as a medium—and an excellent one—of testing over a wide extent of country the seeds and plants which in its Experiment Grounds have given high promise of superiority, and of giving to them a quick and just celebrity or death. But decidedly improved kinds of plants can not always, or generally, be determined in one year or five, and we make bold to state our belief that the five years to come will afford our good readers far better evidence of the efficiency of our work than the past five years have done.

The Rural has received little encouragement from its brother agricultural journals. They have made no reference, as a class, to the corn, oats, wheats and other plants we have cultivated and disseminated over the country purely at our own expense, and without the faintest knowledge as to whether it would add a name to our subscription list or a mite to our income. As a matter of good faith to our readers; as a proof of the justice of our pretensions, we have in *every* case refused to sell a plant or seed to our subscribers, since to have done so would at once have impaired the reasonableness of our claim that "we are working in the interests of agriculture as our foremost aim."

But, as we have intimated, the truth is beginning to be *felt*. Our subscribers confide in us because we are consistent. The seeds and plants we have sent them according to their own testimony have in many cases proven more valuable than the cost of many subcriptions to this journal. Our subscribers—thanks to them—are beginning to do our motives justice; and our friends of the big-hearted agricultural press will follow them some day. It is a long lane that has no turning; but the longest lane will be found for those who profess a benevolent interest in any class or community merely to secure a livelihood to themselves. May the truth prosper; may we be successful in providing the means of doing good to farmers and gardeners according to our deserts; for there are few greater privileges or pleasures in life to those who have studied vegetable nature.

BREVITIES.

If the Rural New-Yorker is not received promptly when it is due, subscribers will confer a favor by notifying us at once.

We have never seen California pears so abundant and cheap as during the present season.

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Mr. Lovett's colored picture of the Manchester Strawberry in his catalogue, by no means does the size of that berry justice, as it grew at the Rural Grounds the past season.

At the New York State Fair there were 20 Clydesdales and 26 Percheron horses. A special prize of $100 was awarded to the Clydesdale stallion, Brown Glancer, whose portrait appeared in the Fair Number of the Rural New-Yorker.

The cabbages along the route to and from our farm present a deplorable sight. They are literally eaten up by cabbage worms. Cabbages are being peddled about the country for from 10 to 20 cents for poor heads. Would it not pay Western gardeners to ship to New York?

All of our young friends who desire to remain active members of our Youths' Horticultural club, are requested to send in their names and addresses before December 1st. We have selected a certain kind of seed to distribute among the members for another year and premiums for the best yields will be offered.

A new use for broom-corn is announced from Sutter Country, California, where a considerable amount of it is raised. A process is said to have been lately discovered by which "the finest and most delicious flour can be made from the seed" to the extent of half its weight, leaving the remainder a valuable cattle feed. It is predicted that the discovery will at no distant day "revolutionize the breadstuffs of the world."

The Seckel at the Rural Farm this year ripens two weeks earlier than the Seckel at the Rural Grounds. No rain, to speak of, has fallen in either place for about the same length of time. The soil of the Rural Farm, where the land is level, is sandy. That of the Rural Grounds, situated in a valley, is clayey. The Seckels of the latter are fully one-third larger than those of the former. We mention these particulars to show how a popular fruit may vary in localities separated by only 40 miles.

During the year ending January 1st 1881 we imported 56,000 bales of jute, worth $20 each. This was principally used for bagging, and came all the way from British India, paying a freight of $12 per ton; in addition to which the government levies an import duty on it. Jute culture has been successfully tried in Louisiana and Florida, and we learn from Jacksonville that the Okeechobee Land Company which has contracted to construct a canal across the Florida Peninsula and to reclaim a vast tract of swamp land by draining Lake Okeechobee, intends to experiment with jute culture on a large scale next year.

So much importance has the Illinois Central Railroad attached to the article, "Rye to the Rescue," written by our contributor B. F. Johnson and published in our Wheat Special of September 10, that the President, W. K. Ackerman, has had it republished in pamphlet form and is sending it to all the officers and agents of the road with the following note:

"I send herewith a number of copies of an article which appeared in the Rural New-Yorker, a short time ago, on the cultivation of Winter Rye. At the present juncture I think the suggestions in the article are well worth consideration, and shall be glad if you will circulate the pamphlet among the farmers in your vicinity, and send copies also to the newspapers."

In the case of Bliss vs. the New York Central Railroad Company, the facts were these: An engine drawing a cattle train was driven through the water on the track, although it was evident the engine fires would be extinguished and the cattle could not be taken out; and when the conductor was urged to telegraph for an engine to a town forty miles away, he refused to do so. The plaintiff recovered for injury to the cattle caused by the unusual confinement, and the company appealed. In delivering the opinion of the New York Court of Appeals, Judge Finch said that whether or not there was gross negligence in failing to send for the engines was for the jury to decide, and that it was negligence in the company not to supply sufficient motive power to move the train.

Farm Economy.

ENSILAGE.

J. B. LAWES, LL.D., F.R.S.

ENSILAGE has met with no favor in Great Britain. This is, I think, more due to the general growth of roots, which furnish abundance of food for the wintering of stock, than to any distinct investigations into the merits or demerits of the process.

Near London brewers' grains are sometimes placed in silos during the Summer months, when the supply is much greater than the demand and they will pay for storing; but these grains have already gone through the process of fermentation and have lost the greater portion of their starch and sugar.

The same may be said of the pulp of the sugar beet: here again most of the sugar has been abstracted, and it must further be borne in mind that both these substances are the refuse of some manufacturing process, which must be disposed of, and, if worthless, be either given or thrown away.

To make a silo of succulent vegetation abounding in sugar and other valuable elements of food—with the certainty that a very considerable amount will be destroyed—can only be advocated on very different grounds.

We know that corn, in the more succulent stages of its growth, contains a considerable amount of sugar—so much, indeed, that its manufacture has been suggested as an article of commerce.

I have myself never seen the products of a corn silo, but when I read of alcohol and acids as forming part of them, it is not difficult to conclude that the source of these is the sugar of the corn, and probably very little of this will be found remaining.

A farmer who places his corn in a silo should clearly understand that in doing so he destroys a considerable amount of the food which the corn contained when introduced.

With regard to the value of the process to a farmer in the States, I cannot pretend to form an opinion. The value of food may be so great at one period of the year, as compared with another, that the loss attending the operation may possibly yet result in a gain.

Corn is grown so cheaply in the States that a loss of food which would be considered ruinous in England might be there disregarded.

The advocates of the system say that although a good deal of the food of the corn is destroyed, some of the woody matter, which in its natural state would be indigestible, is during fermentation converted into food. It is quite probable that such may be the case. Experiments are still wanting to show what is the real loss which takes place. In order to arrive at any just conclusion, 40 or 50 tons of corn should be weighed into and out of the silo, and samples of the corn, as it goes in and comes out, should be submitted to careful analyses.

When the results were known it is possible that the exaggerated opinions which appear to prevail in some places with regard to the value of this process, might be reduced to a more rational level.

Rothamsted, Eng., Sept. 12.

Miscellaneous.

WHEAT IS QUEEN.

Rural Ramblings Down Red River.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

No one properly appreciates the attractions of scenes he is perfectly familiar with. The citizen who lives within a stone's throw of Niagara fails to compass the grandeur of the view. The Indian who stands with folded arms gazing idly at the beautiful Yosemite mutters his native "ugh!" and, wrapping his dirty blanket closely around him, seeks his smoky wigwam. So, to a great extent, we found the inhabitants who people the park region of Minnesota seemingly oblivious to the fact that Fate has cast their lines in one of the happiest localities we have ever chanced to visit. Not grand, not massive with giant hills, gaunt bluffs and mountains kissing the clouds, but a continuous "park" for over 100 miles after leaving the eastern terminus by either line of the St. Paul, Minneapolis and Manitoba Railway—a rolling, undulating, never-ceasing panorama of scenic beauties, coming in rapid succession as the swiftly-moving train rattles on to the famous wheat fields of the Red River Valley. As we swiftly pass, first on one side, then on the other, in quick succession appear the pebbly shores of pretty lakes—God's own mirrors—in which are daily, aye hourly, reflected the beauties of the skies, cloud pictures never-ending, ever-changing. Around the banks is a growth of forest timber from which even yet the timid deer is often seen emerging, while at varied distances are thrifty villages which have sprung to life, many of them since the building of the railway. At times we reach an elevation from which we can view the landscape for 20 miles around, and perhaps see a dozen lakes at once and the thrifty farms scattered along their borders. Speeding thus along we see hunters laden with spoils of the chase—ducks, prairie chickens, geese, etc.; sportsmen who prefer the rod to the gun, dragging from the shore magnificent strings of fish—pickerel, pike, bass and perch. By a special invitation we spent the Sabbath at "Fairview Place," the home of K. Kneutson of Osakis, which is upon the southern bank of Osakis Lake, 130 miles from St. Paul. Osakis is one of the thousand beautiful lakes which dot the park region, and it unites all the advantages desirable for a resort for hunting, fishing or pleasure. Fairview Place is all its name indicates and more. Here are a handsome, well-kept house, a number of cottages, a wealth of natural timber, a fleet of sixteen boats, etc., and the genial proprietor intends to do still more the coming season to increase the pleasure of tourists, sportsmen or travelers, who wish to pass a week in the health-giving pursuits for which opportunity is here afforded.

ON TO THE RED RIVER.

Once more seated in the clean cars of the "Manitoba Route" we speed along past many bodies of pellucid water, varying in size, until we emerge at last upon a level, which extends as far as the eye can reach. Here are thousands of acres just shorn of their wealth of golden grain, which appears in groups of conical stacks at varied distances, like the wigwams of the aborigines, who but a few years since peopled this region. We are in the famous Red River Valley, and we know it instinctively, but it is not as we expected to see it—an undulating plateau; but as level as a table as far as the eye of man can reach, with here and there a little strip of timber which indicates a stream meandering along, watering the fertile soil and at length finding its way to the Red River of the North; near which, we sped "down north" past the great divide and in frequent sight of waters which seek the great ocean through the far-distant Hudson's Bay. And this river—how we were disappointed! Instead of the magnificent current our mind had pictured, we found a sluggish, narrow stream, as brown and turbid as the Big Muddy, but of great consequence to this region, as it is navigable as far up as Moorhead and Fargo and traversed by nearly 30 passenger and freight steamers, receiving along its course many incoming streams, some of which are also navigable.

The wheat yield of the United States is estimated for this year to be between 350,000,000 and 400,000,000 bushels—furnishing the world to a great extent with bread. Is Cotton king? If so, then wheat should certainly hold the position and obtain the soubriquet of queen. A Cincinnati paper says, in a recent issue: "The progress in wheat culture in the United States possesses much interest and especially in view of the high price which it it now brings as compared with a few years ago. As recently as 1850 only about 9,000,000 acres of land in this country were devoted to wheat culture. By 1876 the acreage had increased to about 20,000,000, and in 1880 to about 38,000,000. Passing some other statements, we will comment briefly upon the following: "In average yield per acre, Stark Co., Ohio, occupies the front rank, producing 24,7 bushels per acre in 1879." Query? why not give the crop of 1880, in the same locality? "Next comes Portage Co., Ohio, producing 22½ bushels per acre." Inquiry will satisfy the writer of his mistake as to the best yields. Kittson Co., Minn., produced a yield of 22.92 bushels. "Michigan has 17 counties that in 1880 yielded over a million bushels of wheat; Illinois, 11 counties; Ohio, 7 counties—" which he kindly names, the largest yield being that of Seneca, 1,574,522.

He forgets(?) to mention, however, that during the same year Minnesota had thirteen counties with a yield of over one million bushels each; one having 2,740,962 bushels, and that, too, with the disadvantage of a far smaller population, and a newer country. We simply draw these comparisons because we do not want that Cincinnati paper to harbor the delusion that Ohio is the only wheat field in the world, and for the purpose of seeing fair play at all hazzards.

From Harpers' Magazine for September we quote a sentence suggesting quite the reverse. "The Red River of the North rises near the head waters of the Mississippi, but, flowing in the opposite direction to the larger river, forms the boundary between Minnesota and Dakota, and entering the Candian province of Manitoba, finally discharges itself into Lake Winnipeg. The prairie drained by this river and its tributaries contains, roughly estimated, 40,000,000 acres, and from our standpoint is the beginning of the vast section of fertile land, which stretching in a widening belt to the Rocky Mountains, is drained by the Saskatchewan River, and further north by the Attrabasca and the Peace," and no portion of it can excel or equal the fertility of the valley traversed by the St. P. M. and M. R. R. along the line of which, we gleaned the following statistical information, as being more satisfactory than conjecture. We should, however, state that the figures given include also also the counties in the park region, adjoining the prairie lands of the valley of the Red River of the North to the southeast, but all of them tributary to the Manitoba route. The yield for 1880 was 10,227,580 bushels of wheat, an average of 16.88 bushels to the acre for this tract as compared with the official statements of 13.30 bushels for the entire State while, dividing the sections of country named, the average yield for the Red River Valley of the crop for 1880, reaches 21.17 bushels of wheat to the acre; and this is increased in the crop of 1881, so far as results have been obtainable, to an average of over 24 bushels. The same tract produced also 149,950 bushels of oats. Of potatoes the yield was 1,096,706 bushels from 9,506 acres or an average of over 113 bushels to the acre. We saw also beets and other root crops of enormous size and remarkably large yield, evincing the versatility of the soil for an extensive range of products.

It would be difficult to fully comprehend the present, or anticipate the future of either the portion of Minnesota referred to or Northwestern Dakota, already resounding with the tread of the iron horse, with hundreds of miles of railway in process of construction and immigrants pouring in daily by the train-load. On the train which brought us up from Saint Paul on the St. P. M. & M,, we counted five well filled coaches. The population of the twenty counties through which we have traveled in Minnesota, was in 1875 by the State Census, 87,964, while the national enumeration of 1880 gave them 154,298, both being exclusive of Hennepin County. Parties interested in studying and familiarizing themselves with the topography of this State, or of the section of which we write, would find a valuable auxiliary, as we have, by consulting a sectional and railway map of Minnesota and Northwestern Wisconsin published by the Merchants' Lithographing Co., formerly of St. Paul, now (we believe) located at Fargo D. T., and comparing the statistics and resources therein given with the total area of the State, comprising 83,520 square miles—50,759,840 acres of land besides the 2,700,000 acres of water surface.

There are still opportunities here and there for securing Government lands under the homestead and other acts, although they are rapidly diminishing, as the entries in 1880 aggregated 18,271, covering 2,197,160 acres; besides 210,200 acres sold by the St. P., M. and M. from their immense land grant. Of the former it is impossible to ascertain the amount brought under cultivation, but of the latter there were 54,472 acres, this large amount being doubtless stimulated by the liberal rebates offered by the company, of $2.50 per acre for breaking and 50 cents per acre for the first crop produced. Standing where the Atlantic's roar greets one's ears, one thinks of this country as one far distant, and associates it with the golden tints and shades of the setting sun, or the trials and deprivations of the sturdy pioneer; but, standing here, we view the social, religious and educational privileges of our Eastern home, and with the great lakes, navigable rivers, and nearly 3,500 miles of railway in this State extending its steel length eastward, we cannot but deem our Eastern or Southern markets as right to the very doors of this inexhaustible wealth. The St. P., M. and M. Railway alone reports an increase exceeding 100 per cent. in its traffic over that of the same month of last year. The climate in this portion of the Northwest is pleasing, healthful and invigorating, and begets a just pride upon the part of its citizens in its position in the mortality statistics of the world, which show the death rate in Minnesota at one in 121; in the whole of the United States at one in 74, and in Great Britain and Ireland, one in 46. Supplement all these advantages and resources with the intelligent character of the people, the provision by law for free and universal education, with most of the religious and æsthetic surroundings of older State, and one realizes how great are its advantages for settlement.

CATALOGUES, ETC.

J. T. LOVETT, Monmouth Nursey, Little Silver, Monmouth Co., New Jersey. Catalogue of the new and promising Manchester Strawberry, with a colored plate.

ALSO, general catalogue of small fruits, with a showy colored plate of the popular Pocklington Grape.

QUARTERLY REPORT of the Kansas State Board of Ag., for the quarter ending June 30, 1881, J. K. Hudson, Sec'y., Topeka, Kansas.

Societies, &c.

SESSION OF THE AMERICAN POMOLOGICAL SOCIETY AT BOSTON.

[Rural Special Report.]

A PREVIOUS article ends with the close of the first day's session.

The report of the committee on foreign fruits was read by Mr. Ellwanger, of Rochester, N. Y., at the opening of the morning session on Thursday. In it the committee remarked upon the diminished demand for foreign fruits—a circumstance which they attribute, no doubt correctly, to the more perfect adaptation of the now numerous native varieties to our climates and soils. The subject of

GRAPES AND GRAPE CULTURE

was then taken up. Its consideration was opened by a carefully-prepared paper from the foster-father of the Delaware Grape, George W. Campbell, of Ohio, in which he confined himself mainly to the improvement of this fruit by artificial crossing and hybridization. He held that by this process varieties are likely to be produced equal to the best foreign kinds. As warranting this expectation, he referred to the wonderful improvements of the last few years, and hoped for still more wonderful results yet to come. He remarked that, even in our Northern States, we have a better climate than that of sunny France, and that the time is not far distant when America will stand first among vine-producing countries.

This essay was followed by the discussion of varieties in the order named in the catalogue of the Society.

ADIRONDAC elicited a considerable divergence of opinion. It was said to be successful in Rhode Island when grafted upon hardy stocks. It was also said to be successful with some growers in Michigan, while several others urged that it be stricken from the catalogue.

AGAWAM was commended by President Wilder, except that the bunches were often small. Rev. Mr. Burnet, of Ontario, said the proper way to get good bunches is to give the vine room and let it run. It was commended for Michigan, Ontario and Eastern New York, although Mr. Strong, of Massachusetts, differed from the President as to its desirability for that State.

ALVEY found no one disposed to commend it, for it was generally regarded as unsatisfactory.

BARRY was commended by the President as an excellent grape, as handsome as the Black Hamburgh and much like Herbert. Several others similarly commended it.

BRIGHTON was commended as worthy of a star in Michigan, Ohio, Ontario and Virginia, but as only doubtfully successful in Missouri, when grown upon clay.

CHAMPION elicited wide differences of opinion. A motion to strike it from the catalogue was met by the statement that in Ohio it is the most profitable grape, while it was claimed to be profitable in New Jersey, Pennsylvania and Western New York. Yet another gentleman, in reply to the statement that this is profitable in the Canadian Provinces, asserted that in Montreal it cannot be sold at a cent a pound. Still it was said to be good for wine.

COTTAGE received but faint praise, although a star was proposed for Missouri.

CREVELING received the same treatment. It was found so unproductive at Philadelphia that a 50-acre vineyard had been dug up.

CROTON was universally condemned as unsatisfactory, doubtless on account of its tendency to mildew.

CYNTHIANA was passed, with little discussion, as a grape mainly valued at the South.

DELAWARE also was passed, with little discussion, as successful in Maine, one of the most valuable in Massachusetts, though liable to mildew. In New York it is but partially successful. In Missouri it does better than Concord. [This does not accord with my observation in that State.] In Michigan it is one of the most valuable.

DIANA, much to my surprise, was most strongly commended for Georgia.

ELSINBURG, Elvira, Essex, Eumelan and Goethe each received at best very doubtful commendations.

HERBEMONT was commended from Ohio and Texas as their best wine grape.

IONA received the highest commendation as to quality, but was said to be only locally successful. It was thought that it would be found successful when grafted on vigorous, healthy stocks.

The successful varieties in Georgia were spoken of somewhat at length by Mr. Bertram, of that State.

THE JOHNSON GRAPE was recommended from Virginia and South Carolina.

LADY was commended as early and good, following Moore's Early.

LINDLEY was commended by President Wilder as the best of the Rogers's red hybrids.

MASSASOIT was commended as one of the

best in Rhode Island, Ohio and Western New York.

MARTHA was condemned in Rhode Island and Ontario, but was said to be more profitable than the Concord in the Hudson River region, and successful in Connecticut. [Where are the olfactories of the purchasers?]

MERRIMAC was said to be superior to Wilder in Western New York.

MOORE'S EARLY is claimed to be two or three weeks earlier than Concord, with larger berry, but of less vigorous growth.

PERKINS was commended from Georgia, but was thought too poor to be retained on the list. It was evidently more popular at the extreme South.

SALEM was said to be very fine in Michigan, New Jersey, Virginia and Pennsylvania, but was condemned in Rhode Island and Connecticut.

TELEGRAPH, UNION VILLAGE and WALTER received little or no commendation.

WILDER was commended as the best of the Rogers's hybrids.

WORDEN was held to be best of all the black grapes in Georgia; earlier and better than Concord. Also esteemed in Connecticut, New Jersey, Ontario and parts of Massachusetts.

After going through with the list, opportunity was afforded for the consideration of new varieties, whereupon the following were named and discussed:—

EARLY DAWN, one of the best in quality, but doubtful as to foliage.

MONROE, a cross between Delaware and Concord; early, vigorous, delicious.

NORWOOD, said to be larger and better than the Concord; "very good" to "best;" vigorous, a long keeper.

MCDONALD'S ANN ARBOR: very large, black; quality like that of Concord.

WHITE ANN ARBOR (Woodruff's) on exhibition, with berries dropping badly from the stem.

RED SEEDLING (Woodruff's): bunches very large; a week or ten days earlier than Concord.

The last three are exhibited in the Michigan collection.

JEFFERSON looks like Lindley; not foxy; almost as good as Iona, and better adapted to the climate of Massachusetts.

NAOMI: large clustors, but not large berries.

POUGHKEEPSIE RED, although called "now," was on the Society's tables 21 years ago.

POCKLINGTON, NIAGARA, DUCHESS, PRENTISS and LADY WASHINGTON, all of which had been examined by the Fruit Committee two years since, were again under consideration; but the discussion elicited no new or important facts respecting them.

On the conclusion of the discussion the Society adjourned to three o'clock P. M.

The afternoon session was opened by P. T. Quinn, of Newark, N. J., with an address on

STRAWBERRY CULTURE.

He had, within the last dozen years, changed his views as to the proper methods of growing strawberries. He was now assured that the best of soil, with thorough culture, is required for the production of fine berries and profitable crops. Until recently he had planted in Summer, but he had found Spring planting more profitable. He gives clean culture till the middle of September and then mulches for the Winter, raking off the covering in Spring. He does not use horse power in cultivation during the bearing year, because the feeding roots come too near the surface. After describing his method of dealing with pickers, he stated that he had produced over 171 bushels from a single acre. He expected next year to produce from 125 to 160 bushels to the acre. He thought almost any good soil could be made to produce 100 bushels to the acre. He makes it a rule to test the promising new varieties. He considered the Charles Downing the best, all things considered. Boyden's 30 was popular with dealers. His last crop netted him 14 cents per quart.

Dr. Hexamer followed, dwelling largely on the importance of irrigation. He agreed with the previous speaker in his preference for Spring planting, and thought the Wilson one of the best shipping berries.

The meeting then proceeded to the consideration of the varieties named in the catalogue. Owing to unavoidable duties at the exhibition hall I was not present at this discussion. I learn, however, that, as might have been anticipated, the broad extent of territory represented developed great contrariety of experience with the varieties considered. I learn also that when the second fruit on the list—the Bidwell—came under consideration its originator, B. Hathaway, of Michigan, was found to be present, and, when called out, he gave a history of its origin and parentage, thus dissipating the uncertainties that have heretofore prevailed respecting it. ***

MONTREAL HORTICULTURAL SOCIETY SHOW.

[Special report to the RURAL NEW-YORKER.]

THE constant and increasing success of this active society ought to be an encouragement to those interested in horticultural pursuits in and around every city or large village in the country. It seems evident that when the right methods are used, such societies are maintained, I cannot say without difficulty, but with no more difficulty than attends all useful enterprises. "No good thing without labor," is a universal rule. The work of a horticultural society is eminently useful, yet there seems a lack of disposition almost unaccountable, to put the needful labor into the work among horticulturists everywhere. The city of Springfield, Mass., is filled and surrounded with gardens and cultured people, yet the Springfield Republican, recently alluding to their horticultural society, said that last Winter, when for a joke there was a rumor spread that a considerable balance in the society's treasury was to be divided among the membership, there was a full attendance, but that since then hardly half a dozen could be got to the meetings, and the society was evidently dead. Are the lovers of fruits and flowers throughout the country so sordid as this, and are such the reasons why the continuous success of our societies is so difficult? I cannot think so, and yet it is evident that the steady progress of any such organization is almost always based on the unremunerated and self-sacrificing labors of a very few. A lady once said to me that it seemed to her that gardeners were generally a churlish sort of persons; and I was moved to say in reply that there was, indeed, much in the conduct of those who visited their grounds to make them so. Even among themselves, however, there frequently appears a lack of fraternity, such as the editor of the RURAL sometimes complains of as existing among the members of the agricultural and horticultural press. Selfishness is, indeed, too common amongst men and women in all grades and occupations.

The recent exhibition of our Montreal brethren was a real triumph and a marked step in advance even of their previous very excellent shows. The display of large and well grown tropical plants was truly most extensive and magnificent, testifying not only to the skill of the gardeners of the city, but to the taste and liberality of their employers. The same can be said also of the show of greenhouse plants of every class, of ferns and cut flowers of every description, and of fruits grown under glass, especially grapes and peaches. The display of the products of the vegetable garden was most creditable, and in this poor year for melons it was remarkable to see the magnificent specimens displayed not only here, but in the markets and upon the hotel tables. I was told that considerable shipments of Montreal-grown melons had been made to Boston and New York this season, and that they brought the highest prices in those markets.

The show of out-door grapes was also surprisingly fine, embracing several hundred plates and nearly 90 varieties, including all of the newer sorts, and some nearly entire suites of the Rogers's, Arnold's and Ricketts's seedlings, with others less known to fame. These grapes were, most of them, very well matured, and the Brighton, Niagara, Prentiss, Pocklington, and Wellington were shown in a condition to to give a very favorable opinion of their merits.

Since at the American Pomological Show at Boston one of the members of the Montreal Society won a medal for his beautiful exhibit of apples, it need not surprise any one that in a combined effort the tables devoted to this fruit glowed with the beauties of form and color. It seems unquestionable that the long days of high latitudes tend to the development of bright colors in fruit, and it is certainly a distinguishing characteristic of Canadian apples. Along with these high colors go also high and spicy flavors and aromas, as is amply attested by many favorite varieties which, aside from the Fameuse, are little known outside of the province of Quebec. The RURAL has presented cuts and descriptions of some of these to its readers, the chief of which for excellence, the Fameuse Sucree, the Decarie and the Bourassa, ought to be more widely known.

The electric light was brought into requisition at the Montreal show during the evenings, and its effect in bringing out the colors not only of the fruit—and the flowers, but also of the gay and tasteful apparel of the thousands of ladies who thronged the immense hall of the Victoria Skating Rink in which this exhibition was held, demonstrated that this method of illumination had here found a most fitting opportunity. T. H. H.

ILLINOIS STATE FAIR.

[RURAL Special Report.]

THE 29th annual fair of the Illinois State Agricultural Association opened at Peoria, Ill., September 26th and lasted until October 1st. The grounds are pleasantly situated about a mile from the center of the city, and are probably the handsomest grounds used by this Association, which holds its fairs generally in different places each year. They have plenty of shade, and the people of Peoria have shown great enterprise in fixing them up so that, with the buildings put up by exhibitors, there is every convenience for making a fine exhibit. The hotel accommodations at this place are miserable, and if it had not been for the Committee of Public Comfort, who made arrangements for rooms and board outside, and the great number of people who threw their houses open to visitors, I do not know what the great crowd of Thursday would have done. Wednesday and Thursday were the two fine days of the fair, and the attendance was very large, amounting to over 30,000 people on Thursday, running the gate receipts up to nearly $14,000. This is the largest day's receipts ever taken in by this Society. About 4,000 visited the fair on Friday in a drenching rain that drove exhibitors and all to shelter; but they were there to see the fair and no rain could keep them back. The show in all departments was very large and fine, and as the Society, even with the rainy weather, find a handsome surplus in its coffers, and exhibitors, as a rule, are well satisfied, there is a good prospect that a still larger fair will be held at this same point next year.

I heard a great many complaints about the judging of cattle, and I think this Society, as well as some others I could mention, should pay more attention to the selection of competent and expert judges to decide on the merits of pure-bred stock. They should pay them well and compel their attendance. This picking up of judges at the last moment on a fair ground to fill vacancies often results in getting men who, while they may be perfectly honest in their convictions, are not sufficiently acquainted with the breeds which they are called upon to judge. I heard one member of a committee ask one of the breeders of Polled Angus cattle, "Are those cattle imported from Poland?" and I saw one or two cases where a great deal of dissatisfaction was given through similar ignorance.

There were 543 horses on exhibition, about equally divided between draft and roadsters. The exhibits of imported and grade Normans and Clydesdales were especially fine, and the show they made in the ring attracted, for a wonder, nearly as much attention as the agricultural horse-trot, which, I am sorry to say, is again encouraged by this Society. Mr. E. Dillon, of Bloomington, Ill., made a very handsome exhibit of Normans, and carried off 15 first and second prizes. E. Hodgson and E. D. Fuller also made large exhibits in this class. In Clydesdales Robert Halloway, of Alexis, Ill., made the largest exhibit and carried off five first and three second prizes. The sweepstakes agricultural stallion prize in this class went to one of Powell Brothers' horses, exhibited by E. Hodgson. The number of exhibitors in this class was very large, and the show in the ring for sweepstakes numbered 24 stallions and 13 mares.

The show of cattle was very fine and extra-large, no less than eight herds competing for the beef sweepstakes, and 13 for the dairy sweepstakes. New York and Ohio were well represented. The Short-horns numbered 71. Messrs. J. H. Potts & Son, Sandowski and Rayburn were the largest exhibitors. The herds shown by Potts and Sandowski were the same exhibited at the Chicago fair, where Messrs. Potts & Son carried off the sweepstakes premium for beef. This herd is headed by the bull "Master of Richmond," which won six first and five second premiums here. H. Sandowski's fine herd bore away the sweepstakes beef premium here after a very sharp competition, eight herds competing, comprising Short-horns, Herefords and Polled Angus.

Of Herefords there were 75 on exhibition. C. M. Culbertson's fine herd, headed by the bull "Sir Garnet," attracted a great deal of attention, as did also the herds of Thomas Clark and William Constable. It seems curious that these purely beef cattle should be beaten by what you Eastern men call a milk-and-dairy breed, but out here Short-horns are bred mostly for beef.

As a beef breed, the Polled Angus promise in a short time to compete closely here for preëminence with both the Short-horns and Herefords, as they are already doing in Great Britain. Of the 23 on exhibition Frank Redfield, of Batavia, N. Y., exhibited a fine young herd, headed by the young bull "Manrico," and including Princess Eighth, whose picture appeared in the Cattle Number of the RURAL. He carried off first premium in each class where he could enter, having done the same at the Chicago fair. Messrs. Anderson & Findlay also showed a herd of this breed, but they were not in as good condition as they might have been.

In Holsteins there were 42 competitors for honors, but New York bore them all away with the fine herd of the Unadilla Valley Association, of West Edmiston, N. Y., known as the Dutch Friesland herd. This is the same herd that carried off the $500 sweepstake dairy prize at Minneapolis, and it won the same prize here after a very sharp competition, over 13 herds contesting for it, including Jerseys, Ayrshires and Devons. The Holsteins are making a good impression wherever they are exhibited. W. A. Pratt also exhibited a fine herd of Holsteins and was awarded a sweepstakes premium for his cow "Astria."

There were 60 Ayrshires and the competition between them was very strong. Fine herds were shown by J. F. Converse, Woodville, N. Y.; John Stewart, Illinois; A. J. Wilson, Ohio; W. F. May, Illinois, and others. Mr. Converse carried off the herd premium with the same herd that won the young herd premiums at Chicago and Minneapolis. He also got six first and two second prizes.

In numbers the exhibit of Jerseys surpassed any other breed, amounting to 112 head. As might be expected, the competition here was keener than in any other class, no less than 13 cows competing for the four-year-old-and-over prize. It was as fine a show of cattle as I ever saw in any ring. The largest exhibitors in this class were Messrs. Hoover & Co., Columbus, Ohio; E. H. & S. S. Tripp, Illinois; W. L. Gardner, Ohio; George Merna, Illinois, and others. Messrs. Hoover & Co. showed their fine "Eastwood herd," including the fine cow, "Pride of Eastwood," that took the sweepstakes premium at Chicago for the best dairy cow of any breed and any age. He was also awarded the sweepstakes dairy herd prize at Chicago. Much dissatisfaction was expressed in this class, as well as in the Ayrshire, at the awards made by the judges, not only in some of the classes, but also in regard to herd premiums.

Messrs. D. J. Whittemore, Ohio; O. B. King, Connecticut; William Younger, Illinois, and L. F. Ross, Illinois, were the largest exhibitors of Devons, which numbered 83. Some very fine cattle were shown, including Mr. King's fine herd from Connecticut. Mr. Younger carried off the herd premium.

Of sheep there were 243 long wools, 208 fine wools and 195 middle wools. Not only were most of the breeders in the State well represented, but a large entry was also made in each class by Messrs. E. & O. Sorley, of Canada, who brought down some very fine animals and carried off a number of premiums.

The swine show, as is usual in this State, was truly excellent. There were 201 Berkshires; 96 Essex; 200 Poland-Chinas; 51 Jersey Reds; 112 Chester Whites; 102 Yorkshires and 63 Suffolks. The black breeds, it will be seen, made the largest showing, although the white breeds are increasing fast in this vicinity.

Fruit, Flower and Domestic Hall was very attractive. The exhibit of cut flowers made by E. Wyman & Co., Rockwood, Ill., was very fine; but the amateur show, on account of the drought, was not as good as usual. Mr. Baller, of Bloomington, Ill., exhibited a good collection of plants. The fruit show was good and large, but I did not see anything novel. Apples and fruit generally—what there were of them—looked better than expected. Hiram Sibley made a very handsome exhibit of floral requisites and horticultural tools in this building.

In Manufacturers', Vegetable and Dairy Hall the show was light. The Union Pacific Railroad Company's exhibit of grasses, cereals and vegetables grown in the Mississippi Valley, and occupying a corner of one wing of the building, was the feature of the display in this hall. In the dairy department two samples each of butter and cheese constituted the show. Messrs. Cornish & Curtis made a handsome display of rectangular and box churns and butter-workers, and the Cooley Creamer was shown up in good shape by John Boyd, of Chicago, Ill.

The agricultural implement and machinery exhibit was the largest ever seen on the State Fair Grounds. All of the principal plow sulky, cultivator and harvester manufacturers were on hand, and some of the machines were finished up in a style fine enough for parlor ornaments. Kingman & Co., of Peoria, had a fine building and represented 14 large firms. Many other dealers had also erected buildings and represented numerous parties. Large and prominent concerns, like John Deere & Co., had buildings of their own well filled with the products of their factories. P. P. Mast & Co. made a very handsome display of grain drills. Walter A. Wood showed automatic binders and full lines of reapers and mowers. Saw mills, tile mills, thrashers, traction engines, wind mills, corn shellers, etc., were in profusion; but, with the exception of a hay and hog rack combined, there was nothing strictly new. Many improvements were shown, and, take it all in all, if we except the rainy Friday, the 29th Illinois State Fair was a success. I must tender thanks to the officers of the Society for many courtesies. W. H. K.

THE VERMONT STATE FAIR.

[Special Report to the RURAL NEW-YORKER.]

AS usual, the State Fair at Montpelier was favored with good weather, and the pecuniary results were quite satisfactory. The exhibi-

tion of horned stock, though very good in quality, was not nearly as large as at some former fairs; and, judging by the last three, there is a steady lessening in interest in this department. Geo. L. Reynolds of Burlington, made the largest exhibit of Short-horns—13 from his herd of 63, headed by Kirkleavington Le Grand 3d, bred by L. B. Cannon, of the same locality, who has lately sold his herd of Bates cattle, mostly to the West. Kirkleavington is said to be the only pure Bates bull in New England at this time. The only other herd exhibited was by C. K. Gray, of East Montpelier, though a dozen or so of individual specimens were brought in. The interest in Short-horns is decidedly on the wane in Vermont. The same may be said of Devons, though the number of these shown was in excess of that of the Durhams. Hungerford & Dyke, of Shelburne, showed a fine herd of 17, eight of which were a recent purchase from Mr. Sessions, editor of the Devon Herd Book. Geo. Daves, of East Montpelier, had a good herd of seven, and there were some minor exhibits. There was a still greater falling-off in Ayrshires, which seem to have retired, thoroughly beaten in public opinion by the Jerseys. Even of this popular breed the exhibit was small compared with those of former years, only two parties contributing, the chief of whom, in numbers at least, was H. W. Keyes, of Newberry, who had an excellent herd of 13. A few Holsteins and Guernseys, with a meager show of grades, working oxen and fat cattle, seemed to make it plain that the close devotion of Vermont farmers to butter dairying is excluding from our farms nearly every sort of cattle but Jerseys and Jersey grades.

In the sheep show the Merino took the lead as usual, yet only four flocks were in competition, Dean and Jennings, of West Cornwall, getting the gold, and L. P. Clark, of Addison, the silver medal for flocks. The other prizes were divided between all the competitors pretty evenly. Down sheep, Shropshire and South, were represented by two flocks and a few smaller entries, all very good. Cotswolds, hitherto a distinguishing feature of this fair, hardly second to Merinos, showed an equal or greater falling-off, our Canadian friends being conspicuous by their absence, and the State breeders represented only by a single flock and a few single specimens. I am unable to say what is the cause of this general falling-off, but certain it is that many county fairs have had better and larger exhibits of live stock than were to be seen at our State Fair this year.

As for swine, they are never many, and were less than usual here; while of poultry, which last year were brought out in by far the largest and best collection ever seen in the State, some 20 exhibitors, more than half local, comprised the entire exhibition this year.

The exhibit of farm machinery and implements of all sorts was as large and varied as usual, and is really of more general interest and importance than any other part of our fairs, judging by the attention bestowed upon it by visitors. Space does not admit of particularization, but about all that was of note or value find a place in the RURAL from time to time. Dairy implements and mowers have hitherto drawn the bulk of the attention, but I am glad to report a rapidly increasing interest in instruments of tillage, indicative of a profitable drift in the agricultural mind. Grass and butter are the main things for Vermont, but our excellent soil is capable of yielding profitable crops for shipment in much greater profusion than hitherto, and the indications are that we are increasing the area of tillage throughout the State, without any decrease of our grass products.

The only thing in which a great and decided increase was shown at this fair was in the department of fruit. Fruit in all the ripening colors of Autumn blazed in every nook and corner of Mechanics' Hall. It usurped the tables extending through its center and overflowed upon the tables extending along the sides. There was never so large an exhibition in Vermont. There were some 30 exhibitors and 700 plates of specimens. This fine and instructive show was simply the result of a little energy and work on the part of the venerable Judge Miller, superintendent of this department, who, though past his three score and ten, has set an example, which, if followed by his coadjutors in other departments, will enable me to give the RURAL a more encouraging account of succeeding fairs by our State Society. Very little money (not nearly enough) was appropriated for this department, but *work* did it.

The show of dairy products, maple sugar and other Vermont staples is always, for some reason, very meager, and this year it was even less considerable than in years past. A little zeal expended here would yield proportionately as remarkable results as in the fruit department. The floral show, limited chiefly to amateurs, was yet very fine, the vicinity of Montpelier being noted for the taste and horticultural skill of its lady gardeners, and the liberality with which they bring out their treasures for exhibition on occasions like this.

Our State Society (unlike that of New York) is in close alliance with the trotting horse (or rather the horse-trotting) interest, and spends the bulk of its money on this department. Here, too, the results of energy *and* money are seen in many entries and very good sport for those that like it. Horses are class "first" on the premium list, and this is right enough. There was a fair count of entries for legitimate premiums, and superior animals took the gold and silver medals and other prizes in this class. But the largest appropriation went to the trotting purses, and here concentrated the rowdy, gambling crowd which this use of money tends to encourage and increase, and which exercises so vile and demoralizing an influence upon the young men of the farm who assemble on such occasions. It is an unmistakable curse which almost, if not quite, offsets the benefits of these exhibitions. But the farmers, the religious farmers of the State, are alone to blame. By becoming members of the State Society and attending its business meetings they may easily make it all that they desire. Leaving it, as they do, to a small number—practically almost a close corporation—in which the horsemen are a majority, they must take the responsibility which belongs to them for whatever is amiss in our chief agricultural holiday season. T. H. H.

THE RHODE ISLAND STATE FAIR.

[RURAL Special Report.]

THE 61st annual meeting of the Rhode Island Society for the Encouragement of Domestic Industry, was held at Narragansett Park, near Providence, commencing Sept. 27, and continuing four days. The weather was particularly fine, the attendance good, and the exhibition throughout a complete success. It has not been my good fortune to visit this place in former years; but I am credibly informed that in many respects this meeting has been more successful than any held for many years.

The pomological display was, however, deficient in quality and quantity here as at other fairs I have attended during the year, the drought having materially affected this part of the exhibition.

In the stove department I noticed a fine display made by the Rumford Chemical Works of Providence; and as a convicing proof of the excellence of their baking powder, they dispensed thousands of biscuits made by their preparation much to the satisfaction of the hungry crowd of visitors congregated in front of their booth.

The cattle department was unusually fine, and contained some of the finest animals ever shown on the grounds. The Hon. Joseph F. Brown, president of the Association, had, for exhibition only, a fine collection of Ayrshires, including a fine bull three years old, and several of his progeny. Fine Ayrshires were also shown by Obadiah Brown, Henry E. Smith, John Dimon, Isaac Hazard, Seth R. Davis, the Dexter Asylum and the State Farm. Some very fine Swiss cattle were exhibited by D. G. Aldrich and John H. Bancroft, of Worcester, Mass., the latter carrying off the first herd premium for his excellent herd of this breed, as well as the second premium for his three-year-old bull. George J. Martin showed seven head of fine Devons, and Harvey Dodge, 12 head of the same breed. The Guernsey breed was well represented by Joseph F. Brown's exhibit. At the head of A. Warner's herd of the same breed was Gypsy Boy, dropped September, 1877, one of the finest specimens of this breed in the country. William H. Hopkins showed 16 head of Ayrshires, 18 Jerseys, and one grade from his famous stock farm, which did credit to his care and success in breeding. Jerseys were also shown by Judge C. S. Bradley who received several premiums. Twenty-four head of grade Ayshires were shown by W. P. Larkin. Among bulls entered for the special premium offered by Hon. E. D. Pearce, president of the Ayrshire Breeders' Association, was one owned by Bela J. Stone, Westboro', Mass., which the RURAL will probably soon illustrate. The tent for the display of agricultural implements is filled nearly full with the displays of local hardware dealers, and but little room is left for manufacturers. In fact, the tent is too small by one-half for the purpose intended and in this particular the officers might make a decided improvement, by allotting more space for this department. Plows made by the Wiard Plow Company, Smith, Whitcomb & Company, Ames Plow Company, Remington and Syracuse Plow Company, were among the exhibits. The Monitor, Yankee, Bay State and J. H. Thomas & Sons' hay rakes attracted a considerable attention. The Acme harrow, the La Dow disc harrow, and others were noticeable, and so were the Warrior and Buckeye mowers. Road machines made by S. Pennock Sons & Co., and the Eureka, were seen in operation, doing their work well and to the satisfaction of all. Dairy implements were well represented.

The Vermont Farm Machine Company, of Bellows Falls, Vt., exhibited a full line of their Cooley Creamers, the Davis Swing Churn, Nesbit Butter Press, and the Eureka Butter-Worker. These implements attracted much attention, the principles of submerging milk for raising cream being so useful and practical that all visitors were interested and satisfied that the Cooley creamer possesses merits which make it a leading creamer of this country. The committee awarded it and the Davis Swing Churn each a first premium. The Cooley also received first premiums at the New Jersey State Fair, the Connecticut State Fair, the Pennsylvania State Fair, the Ohio State Fair, and the tri-State Fair at Toledo, Ohio. As a further evidence of the merits of the Cooley, butter made by this creamer received the first, second and third premiums at the New England fair at Worcester, Mass., the first premium, a $50 silk dress pattern, at the St. Lawrence County fair, a $60 silk dress pattern at the Broome County fair, and many other premiums at other fairs where premiums were offered. The sales have increased largely every year, and in all cases the workings of the creamer have been satisfactory and the results far exceeded the purchasers' expectations. The Stoddard and Blanchard Churns, and Moseley's Creamery were also shown. G. B. B.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

HINTS.

A LITTLE lard or butter improves bread or cake made of Graham or Indian meal—it makes them more light and tender.

Soda or baking-powder biscuits must be handled as little and made as rapidly as possible.

Fresh lard is better than butter to grease cake-pans.

Ink stains on mahogany or black-walnut furniture may be removed by touching the stains with a feather wet in a solution of niter and water—eight drops to a spoonful of water. As soon as the spots disappear rub the place *at once* with a cloth wet in cold water. If the ink stains then remain, repeat, making the solution stronger.

Silver that is not in use may be kept from tarnishing by burying it in a box or barrel of oat-meal.

Pencil marks can easily be removed from walls, wood-work and marble by rubbing with a damp woolen cloth and a little sapolio.

Fine wire milk-pail strainers that become stopped up may be readily cleaned by rubbing with a damp cloth dipped into baking soda.

To tell Good Flour.

It should be white with a yellowish tint. Squeeze some in your hand, it will retain the shape given by the pressure. Throw a little against a perpendicular surface it will adhere or fall in a mass.

Shammy Skins

Although these skins were originally from the chamois, the most now in use are taken from the flesh side of sheep-skins which have been split. The skin, after passing through the ordinary processes of washing, etc., are soaked first in lime-water and then in a mixture of bran and water or in a weak solution of sulphuric acid, after which they are beaten in a mill until no moisture remains in them. They are then saturated with fish-oil, again beaten and more oil applied. When thoroughly impregnated with oil they are hung for a short time in a room heated to a given temperature after which they are carefully washed in a solution of potash.

To Detect Adulteration in Ground Coffee.

Place a few grains in a saucer and moisten them with a little cold water. Chicory will very soon become soft, while coffee will take a long time to soften. Again, fill a tumbler full of water and gently drop a pinch of the coffee on the surface. Pure coffee will float some time while chicory or other soft roots will soon sink, changing the water to a brownish or yellowish color.

Rhubarb for Summer Complaints.

Rhubarb I find to be the best medicine in derangements of the stomach and bowels, as Summer complaint, cholera infantum, cholera morbus and such like. Every family ought to keep this harmless and yet effective drug on hand, particularly where there are children. Put in a teacup one teaspoonful of the powdered rhubarb, a little bicarbonate of soda (saleratus), a few drops of essence of peppermint and sugar enough to sweeten. Pour the cup nearly full of boiling water. Let it settle and get cool, then give a teaspoonful of the clear liquid every hour or oftener, and more if necessary. Rhubarb is a purge, yet given in often-repeated, small doses it checks looseness of the bowels effectually and leaves them in a better and healthier state than any other remedy I am acquainted with. T. GR.

DOMESTIC RECIPES.

Fried Egg-Plant.

Make a thin batter of two beaten eggs, one-half cup of milk, a little salt and flour to thicken. Slice and pare an egg-plant and place in salt and water for an hour. Dry the slices between a towel, dip each piece into the batter and fry in hot fat to a good brown.

To Wash Bed Flannel.

Mix a handful of flour with a quart of cold water, put over the fire and boil ten minutes. Add this to some warm suds and wash the goods very gently. Rinse in three or four warm waters. A. E, M.

Baked Pears.

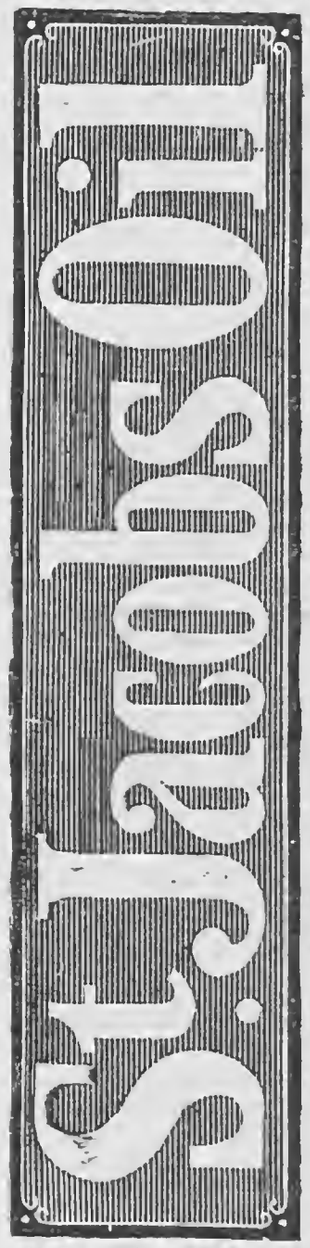
Peel ripe pears, cut in halves and pack in layers in a stone-ware jar. Strew a little sugar over each layer. Pour a small cupful of water, to prevent burning. Cover tightly and bake three or four hours in a well-heated oven. Let them get very cold before serving. Eat with sweet cream.

To Prepare Ox-Gall for Washing Colored Clothing.

Empty the gall into a bottle, put in a handful of salt and keep closely covered. A teacupful to five gallons of water will prevent colored articles from fading. J. V. D.

Miscellaneous.

The Philadelphia Easy Hour mentions Mr. J. A. Walton, of 1245 N. Twelfth street, that city, as an enthusiastic endorser of St. Jacobs Oil for the relief and cure of diseases of horses.



THE GREAT GERMAN REMEDY FOR RHEUMATISM, NEURALGIA, SCIATICA, LUMBAGO, BACKACHE, GOUT, SORENESS OF THE CHEST, SORE THROAT, QUINSY, SWELLINGS AND SPRAINS, FROSTED FEET AND EARS, BURNS AND SCALDS, General Bodily Pains, TOOTH, EAR AND HEADACHE, AND ALL OTHER PAINS AND ACHES.

No Preparation on earth equals ST. JACOBS OIL as a SAFE, SURE, SIMPLE and CHEAP External Remedy. A trial entails but the comparatively trifling outlay of 50 CENTS, and every one suffering with pain can have cheap and positive proof of its claims. DIRECTIONS IN ELEVEN LANGUAGES.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

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PROFESSOR HORSFORD'S PHOSPHATIC BAKING POWDER

Made from Professor Horsford's Acid Phosphate.

Recommended by leading physicians.

Makes lighter biscuit, cake, etc., and is healthier than ordinary Baking Powder.

In cans. Sold at a reasonable price.

The Horsford Almanac and Cook Book sent free.

Rumford Chemical Works, Providence, R. I.

News of the Week.

HOME NEWS.

MONDAY, Oct. 10, 1881.

THE Republican State Convention was held in this city on the 5th, and was organized under the Presidency of Ex-Senator Thomas C. Platt. Senator Warner Miller was the temporary, and Mr. Chauncey M. Depew the permanent, Chairman. The nominations were:—General Joseph B. Carr for Secretary of State; State Senator Ira Davenport for Comptroller; Leslie W. Russell for Attorney General; General Husted, of Westchester, for State Treasurer; Silas Seymour for State Engineer, and Judge Francis M. Finch for Judge of the Court of Appeals.

In the vote for a United States Senator, taken in the separate houses of the General Assembly of Rhode Island on the 4th, Mr. Nelson W. Aldrich received 55, a majority of all the members of the Assembly.

On the night of the 4th inst. frost was reported to the U. S. Signal Station in this city from Erie, Pa., Boston, Mass., Davenport, Iowa, Detroit, Mich., Grand Haven, Mich., LaCrosse, Wis., Oswego, N. Y., Pittsburgh, Pa., Portland, Me., Sandusky, O., St. Paul, Minn., and from our exchanges we notice that the sudden change was general throughout the country. In New England the temperature fell from 17 to 30 degrees, in the lake region from 14 to 20, in the Ohio Valley from 10 to 22 and in the Mississippi Valley from 10 to 22. The greatest fall was at Nashville, where a difference of 47 degrees was marked, the mercury falling from 59 to 12 degrees in twenty-four hours. At Norfolk there was a change of 40 degrees, at Chicago 36 and at Milwaukee 30. At Lewiston, Me., Stove, Vt., Wolfboro, N. H., Bangor, Me., Manchester, N. H., and other northern towns, snow fell and ice was formed. Much damage was also done to the tobacco crop in the South. The lowest temperature (38 degrees above zero) in this city was reached Wednesday morning at six o'clock, the average temperature for the day being 44 degrees.

The French guests arrived here on the Canada. They were met with an ovation at the pier, and were escorted by the Seventh regiment up Broadway to the Fifth Avenue Hotel.

In company with the State Reception Committee, they visited the Military Academy at West Point on Friday last. The ships-of-war Kearsage and Vandalia transferred the distinguished company to that point. On Saturday they proceeded to Niagara Falls.

Seoville, Guiteau's brother-in-law, has consented to act as the latter's counsel. He does not anticipate a speedy trial. He says the defense will be insanity, and that he undertakes the case at the urgency of his wife, Guiteau's sister, and almost the only friend the assassin has on earth.

Director of the Mint Burchard has issued the following: "The Government has fixed no valuation upon mutilated silver coin other than the market value of the silver they contain. They are purchased at the mints by weight, as bullion, and the value depends on the price of silver on the day the coin is received at the mint."

Two European steamships landed 1,483 immigants at Castle Garden on the 4th, the Sailor, from Bremen, 916, and the Erin, from Liverpool, 567. Among the latter are sixty-three of the exiled Hebrews from Russia, fourteen of whom will be sent to Houston, Texas; the remainder will be taken care of by the Local Committee until places are found for them.

The public will be gratified to learn that the work of repairing and renovating the White House is going on briskly; that plumbers are specially busy there; that the gas and sewer pipes are to be taken out and replaced with porcelain-lined piping; and that particular attention is to be paid to the condition of the bath-rooms, and their sanitary improving. There are to be new carpets also, with new furniture, altogether costing $10,000. The public received an impression during the illness of President Garfield that the White House was not a safe edifice to live in.

Geueral Francis A. Walker has been asked to accept the presidency of the World's Fair at Boston, contingently, we presume!

Forty-eight of the expatriated Jews who are now on their way to seek homes in this country arrived at the Castle Garden emigrant depot recently by the steamer Egypt, from Liverpool. There were 10 families among them, and all appeared to be active energetic, healthy people. They were met by a deputation of the committee lately organized in this city to advise and aid them and their suffering compatriots, and were sent to Chicago and Toledo, where efforts will be made to locate them and get them employment.

An Overworked School-Girl.

From one of this large class of sufferers we have the following testimonial:

"CINNAMINSON, N. J., Aug. 1, 1880.

"From a feeling of gratitude and a desire to benefit others in a like situation, I voluntarily give my experience with the Compound Oxygen Treatment. When I began it I had for more than a year been suffering from nervous prostration; for I belong to a class which increases yearly, viz. *overworked school-girls.* My general improvement for nearly two months after I began the Home Treatment was scarcely perceptible, but at the end of that time I began to improve, and now, after eleven months have passed, I can safely say that I have been cured. *I sleep and rest well, and am generally in the possession of a good appetite, while headaches and backaches are quite unheard of.* My throat is cured, and my voice is stronger than ever before. I surprise my friends by my greatly increased physical strength. The fact that I have induced several friends to try this Treatment is an evidence of my faith in its curative power." Our Treatise on Compound Oxygen, containing large reports of cases, and full information, *sent free.* DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Oct. 10, 1881.

THE following agricultural news has been culled from telegrams received here from Friday noon to date: EASTERN STATES.—Portland, Me.: The advance in breadstuffs is the most noticeable feature of the week's trade. Provisions and all country produce are likewise buoyant.....Boston, Mass.: There is a good healthy tone in the wool market and prices are well sustained with a good demand from manufactories. Sales of all kinds amounted to 2,500,000 lbs., including Penn. and O. fleeces at 43@45c. for X, XX, XXX, and above, Mich. at 41@43c., principally 42c. There has been a noticeable advance in flour and pork, the former reaching $10 a barrel wholesale, and the latter $24 a barrel for first class—the highest prices for several years. Demand consumptive rather than speculative. .....MIDDLE STATES.—Buffalo, N. Y.: Wheat dull; $1.58 bid for hard Duluth on spot. No. 2 corn, 72c. Cattle receipts for week, 10,355 head; prices stronger.....Philadelphia, Pa.: Three cargoes of wheat taken for Lisbon; but British shippers are not buying, and supplies of all grains are in excess of terminal storage. Prices ruling too high for large export trade. Demurrage of $1 per car being paid to railroad companies under protest. Owing to the break of the Chicago corner in corn, the closing prices of wheat and corn have dropped 2c per bush. Wool quiet, but prices very firm; the week's sales aggregate 650,000 lbs.....WESTERN STATES.—Detroit, Mich.: Wheat less active; most of it held against "options" (that is, against contracts for future delivery). Supply of pork and lard unusually small. Apples, beans, and potatoes scarce, with upward tendency. Local mills grinding to full capacity. No. 1 white wheat, $1.42⅝ cash; Nov., $1.45⅝. Corn, No. 2, Oct., 69c.; Nov., 70c.....Grand Rapids, Mich.: Owing to the drought there has been an increase of price in all farm products and every-day necessaries. Butter, eggs, potatoes, meat, poultry, etc., rule higher now than at any time since the war, and prices are still going up..... .....Chicago, Ill.: The "corner" in corn has burst up. Until Friday the receipts of grain were very heavy, as it was rushed forward to meet the obligations of the "shorts." Arrivals were 3,130,339 bush. of corn; 333,671 bush. of wheat, and 408,624 bush. of oats. Shipments: 1,133,704 bush. of corn; 209,679 bush. of wheat; and 440,022 bush. of oats, leaving 11,300,000 bushels of grain in store against 7,622,451 at same time last year. Elevator capacity is 19,000,000.....Cleveland, Ohio: No. 2 red winter wheat, $1.50; Timothy, $2.90; clover, $5.50@5.75.....Cincinnati, Ohio: Grain and provisions quiet. Wheat until Wednesday dull, but rallied on Thursday. Corn and oats slow and lower.....Dayton, Ohio: Tobacco raising an important industry here; the yield will be larger than was expected..... Milwaukee, Wis.: Weather changeful and stormy: considerble damage to unthrashed grain as the result. A large yield of potatoes, but the shortage in other parts of the country has caused prices to be double those of last year. Receipts amount to 15,000 barrels per day. Wheat changeful; prices 1@2c lower..... Minneapolis, Minn.: A good deal of threshing during the week; millers purchasing 100,000 bushels of wheat a day at the highest price for eight years—60 per cent. above last year's prices. Other crops turning out well. Large crops of potatoes selling for shipment at double usual prices, 80 cents. Over $120,000 daily required by millers to pay for wheat .....St. Paul, Minn.: Weather gloomy. The agricultural machinery trade reports a surprising promptness in the payment of farmers' notes. Prices for labor high.... Omaha, Neb.: Produce dealers jubilant at present high prices, which hold firm with an upward tendency. Labor high. Reports from all over the State show advances in grain, and farmers who have crops are doing well.....Denver, Col.: Flour and wheat steady. Hay on demand at better prices. Vegetables plenty.....St. Louis, Mo.: The Fair is attracting an unusually large attendance. Few fat cattle or good packing hogs are offered here now. The thin stock received goes off slowly and at raisers' loss. Sheep offerings are mean.

In Bradstreet's—the excellent paper published by the large mercantile agency of that name—there appeared last Saturday an estimate of the wheat and corn crops for 1881, founded on 3,000 reports from all the grain-growing sections. Of it this is a summary:

WHEAT.

	Bushels.
Western States	248,137,000
Pacific coast	33,325,000
Colorado and Territories	12,000,000
New England	1,000,000
Middle States	34,500,000
Southern States	40,000,000
Total	368,962,000

This is against 480,000,000 bushels in 1880, showing a loss of 111,038 bushels. Following is a summary of the yield of wheat in the Western States in bushels:

	1880.	1881.
Illinois	56,500,000	24,675,000
Indiana	48,400,000	29,750,000
Iowa	34,750,000	24,000,000
Nebraska	11,900,000	14,686,000
Michigan	23,375,000	18,640,000
Minnesota	41,500,000	33,170,000
Missouri	28,000,000	18,890,000
Ohio	48,500,000	35,815,000
Kentucky	9,000,000	8,087,000
Wisconsin	16,000,000	19,500,000
Kansas	19,500,000	19,949,000
Total	343,570,000	248,137,000

Returns of the corn crop are less favorable than those of wheat, but nevertheless will not be pleasantly regarded by the operators who have gambled upon a half crop. Summarized the corn crop of 1881 is as follows:

	Bushels.
Western States	869,241,000
Southern States	247,500,000
Middle States	62,400,000
New England States	7,000,000
Pacific coast	2,500,000
Territories	5,000,000
Total	1,193,641,000

The yield of corn in the Western States is shown by the following table:

	1880.	1881.
Ohio	119,910,000	74,250,000
Michigan	31,816,000	25,470,000
Indiana	98,228,000	75,950,000
Illinois	240,452,000	166,268,000
Wisconsin	38,767,000	37,200,000
Minnesota	15,478,000	17,200,000
Iowa	260,192,000	191,880,000
Missouri	160,463,000	125,240,000
Kansas	106,218,000	73,388,000
Nebraska	52,507,000	81,705,000
Total	1,130,052,000	869,241,000

The Southern States suffered largely from the drought, and the corn crop in Kentucky reaches only 40,500,600 in 1881 against 86,039,000 in 1880. Tennessee reports a shortage of 48 per cent—Virginia and Texas 40 per cent.—and nearly the same for West Virginia. Altogether the corn crop of the United States of 1881 is short about one-third of a usual yield. .....The value of the hay crop in New York in 1879 the census puts at $60,267,240—the most valuable in the Union..... One of the largest second crops of hay ever known in Maine—fully one-third of the fine first crop, quality greatly superior.....The International Dairy Fair at Cedar Rapids, Ia., takes place Nov. 29 and 30 and Dec. 1 and 2.....Christian Kroeger, dairyman, Sheboygan Falls, Wis., has just been fined $10 and costs for skimming milk he took to a cheese factory. Afterwards he paid the parties $60 damages rather than stand a suit..... ....At the late auction sale of the pure Polled Ayrshire herd of the bankrupt Marquis of Huntly, 32 head were offered, including 24 cows, the rest being bulls and calves. The cow Vine Smith brought $580, and the herd averaged $250 per head.....

The Louisville Commercial cites the case of Capt. Chas. N. Corri, of that city, who was cured by St. Jacobs Oil, after suffering for years with rheumatism.—York (Neb.) Republican.

Truths.

The truth is that no person pursuing indoor occupations, can expect to escape the consequences. Those great organs, the liver and kidneys, will become inactive, and they need just such a remedy as Kidney-Wort to keep them in healthy condition.—Household.

Prof. Horsford's Baking Powder.

BARON LIEBIG, the eminent German Chemist, said, "The Baking Powder of Prof. Horsford, I hold to be one of the weightiest and most beneficent inventions which has been made in recent times."

WE again call attention to the Robbins Washer and Bleacher of the Bissel Manufacturing Co., whose large advertisement appears in this issue. We have frequently spoken in strong terms of praise of both the article and the manufacturers. Our readers who want a really first class labor saver will do well to send for this washer.

Thousands of ladies have found sudden relief from all their woes by the use of Lydia E. Pinkham's Vegetable Compound, the great remedy for diseases peculiar to females. Send to Mrs. Lydia E. Pinkham, 233 Western Ave., Lynn, Mass., for pamphlets.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

BURNETT'S COCOAINE

Promotes the Growth of the Hair,

And renders it dark and glossy. It holds, in a liquid form, a large proportion of deodorized COCOANUT OIL, prepared expressly for this purpose. *No other compound* possesses the peculiar properties which so exactly suit the various conditions of the human hair.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 8, 1881.

BEANS AND PEAS.—Beans hold their strong course, a good demand attending the higher rates. Red kidneys are wanted. New green peas in a small way quoted $2.10@2.15; old, $1.90@2. Southern B. E. peas $2.20@2.25 ₱ 2-bush. bag.

Marrow beans, new, $3.55@3.60; mediums, $3.50; pea, $3.35@3.50; white kidney, $3.50@3.55; black or turtle soup, $2; red kidney, new, $3.

Receipts of beans for the week, 11,692 bush.

Exports do. 265 bbls.

BEESWAX—Unchanged at 21@22c., the latter for Southern.

BUTTER.—Another quiet week is recorded. Fancy grades have sold up to arrival, but there is a large proportion of the supply that cannot be rated fancy, and it begins to look as if sweet and useful grades have been claiming too close a relationship with choice creamery. The butter market is not in good shape. Interior owners hold on stubbornly for nearly what is quoted here and quotations here have already restricted consumption. Such a combination would be apt to weaken any commodity, and fair table grades of butter are not indispensable when they go above the popular purse, especially when oleomargarine has tightened its hold upon so many outlets. Buyers are trying to induce holders of dairies to break off the tops, but it is too early in the season. A good many dairies are showing poor ends of Sept. owing to the heat of that month.

Creamery, finest tubs, 36@37c.; good to prime, 32@34c.; other quality, 24@26c.; sweet cream, 29@31c.; State dairies do. 25@28c.; do. half tubs, choice, 30@31c.; do. fair to prime, 25@29c.; Welsh tubs, 25@30c.; poor State, 20@25c.; Western imitation creamery, 20@30c.; do. dairy, choice, 26@28c.; other, 17@22c.; factory or ladle-packed June and Iowa, 18@19c.; other, 15@17½c.; common Western, 15c.

Receipts for the week, 42,345 pkgs.

Exports do. 1,142 do.

Cold storage to C. R., 90s.

The official figures of the amount of stock in this city for October are as follows:—

State creamery, tubs and pails	8,031
State creamery, firkins	1,819
Western creamery, tubs	18,432
State dairy, tubs and pails	7,810
State dairy, firkins	4,282
Western dairy, tubs	8,329
Western factory, tubs	48,669
Western factory, firkins	2,855
Total packages	100,227
Stock in Boston (pkgs)	42,945

CHEESE.—The stock in this city Oct. 1st is stated at 122,795 boxes, in Boston at 20,517 boxes, in Liverpool at 130,000 boxes. The market has been a counterpart of last week, dull and unsettled. Fine September cheese have been of uncertain value; some lots are reported to have been offered at 13c. The home trade has paid our quotations, or perhaps a shade more, for a limited quantity of State cheese. We hear of no sales of Wisconsin cheese. Ohio cheddars are scarce and nominal. Medium grades are dull; no export demand for them. Heavy skims are in very bad position. Receivers have been compelled to force lots not keeping well upon the peddlers at 25@30c. a box.

State factory, fine, 12½@13c.; good to prime, 11½@12c.; fair to good, 10½@11½c.; poor to fair, 10@10½c.; Ohio factory, flat, fine mild, 12½@13c.; good to prime, 11@12c.; fair to good, 10@11c.; creamery, partly skimmed, choice, 10@11c.; poor to good, 4@7c.; fully skimmed, ½@2c.; full-skimmed factory, ½@2c.

Receipts for the week, 40,258 pkgs.

Exports do. 18,080 do.

Liverpool cable, 64s.

Steam to Liverpool, 46s. 3d.@20s.

DRIED FRUITS.—Fine qualities of apples are firm and quite a number of evaporated have changed hands latterly in sellers' favor. Peeled peaches scarce and firm; unpeeled easier.

Apples, evaporated, new, 11@13c.; do. old, rings, choice, 13c.; do. fair to prime, 11@12c.; N. C. new, sliced, extra fancy, 8½@9½c.; choice, 7½@8c.; fair to good, 5½@7c.; Southern, new quarters, choice, 6@7c.; fair to prime, 5½@6c.; inferior, 5@5½c.; State, old, fine-cut, choice, 6½@7c.; quarters, do. 6¼@6½c.; small lots, 6¾c.; Ohio and Mich. choice, 6@6½c.; Western, fair to good, 5½@6c. Peaches, evaporated, peeled, 18@, 33c.; unpeeled, 26c.; N. C. peeled, new, fancy, 23@24c.; choice, 22@23c.; Ga. peeled, choice, 22@23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 9c.; halves, Tenn. 8½@8¾c. Plums, State, black, 17c.; Southern Damson, 14½@15c. Blackberries, 13@13½c. Cherries, Southern, dry, 19@20c. Raspberries, 28c. Huckleberries, 15½c.

EGGS.—Receipts for the week, 6,769 bbls.; do. last week, 7,357 do. Cool weather has given the market a good push and prices firm and quite close for all grades. Ice house eggs are hard to sell; they turn out poor this year. Limed are offering with a place for cheap use.

Near points, 25@26c.; State and Pa. 24@25c.; Canadian, 23@23½c.; Western, 23½@24c., under grades 22@22½c.; limed State 19@20c.; Western, 17@18c.

FLOUR.—In general sales flour has fallen off in prices, and were it not for the moderate supplies a sharp decline would be threatened. Buyers stocked quite freely when the offering was liberal, though in the excited feeling of the time they paid high figures. There is now a disposition manifested to hold off as long as possible in the expectancy of a favorable turn in rates.

No. 2, $4.50@5.10; State and Western, superfine, $5.50@6.10; city mills, extra, $7.60@7.85; Spring wheat, extra, $6.40@6.85; Spring XX and XXX, $7@8; patents, $8@9.50; Ohio round hoop shipping, $6.30@7.00; trade brands, $7.25@7.75; St. Louis extra, $6.75@7.25; do. double extra, $7.40@7.85; do. family, $8@8.25; Southern extra shipping, $7@7.50; do. XX and family, $7.75@8.50. Rye flour, superfine, $6@6.40. Corn-meal, Brandywine, $3.85@4; do. Western, $3.60@3.90.

Receipts of flour for the week, 97,486 bbls.; corn-meal 2,266 do.

Exports of flour for the week, 51,422 bbls.; corn-meal 1,675 do.

FRESH FRUITS.—Choice apples are firm and in demand. Exports for week 7,830 bbls. Many are going from Canada. Pears have advanced. Prime grapes doing better; common lots show. Cranberries have a fair outside demand. A supply of peaches is made up of odds and ends.

Apples, Western New York, prime mixed lots, ₱ bbl. $2.25@2.50; fair do. $1.50@2. Sweet, $1@1.50; King, $2.75; 20-oz. $2.37@2.62; Maiden Blush, $2..50@2.75; Fall Pippin, $2.25@2.37; Baldwin, Jersey, ₱ bbl. $1.75@2; Greening, do. $1.75@2. Baldwin, Jersey, bulk

$2,000 Worth of Valuable Gifts

For those who raise the best crops from the Rural New-Yorker's Free Seed Distribution of next year!

Its Free Seed and Plant Distributions during the past four years have placed in the hands of farmers and horticulturists some of the most valuable farm and garden plants in cultivation.

Its Experiment Farm (the first to have been established in connection with journalism), is worked in the interest of its Subscribers.

The Fair Number of the Rural New-Yorker explains all. It will be sent to applicants free.

You should subscribe for the Rural New-Yorker. It is a national weekly 16-page journal, with over 500 Original Illustrations per year. The best artists---the best writers. Ask those who know. Address

34 Park Row, New York.

$1.25@1.50. Pears, Bartlett, ice-house, prime ₱ bbl. $9@10; prime to good $5@8; prime, ₱ keg, $4@5; do. inferior, $2@3; Sheldon, Western N. Y. ₱ bbl. $3.50@5; Beurre Bosc, $4@7; Duchess, $3.50@4.50; Virgalieu, $4@5; Bourre d'Anjou, $4@5.50; Seckle, choice, $6@7; fair to good, $1@3; ₱ keg, $2.50@4; cooking, ₱ bbl. $2@2.50. Peaches, NewJersey and up-river select, fancy, ₱ bskt, $2.50; choice lines, $1.75@2; fair $1.25@1.50; common, $1@1.25; culls, 75@80c. Quinces, apple, up-river prime ₱ bbl. $3@5. Grapes, Del., State, case of 18 3-lb boxs, $4.50@5; bskts, choice, ₱ lb, 9@10c.; poor to fair, 6@8c.; Catawba State, bskts, ₱ lb, 5@6½c.; Concord, case 18lb bxs, $1.75@2; do. in bskt. ₱ lb, 3@4c.; up-river, loose, ₱ lb, 3@4c. Cranberries, Cape Cod, choice, ₱ bbl. $7; do. fair to good, $4.50@5.50; do. poor to fair, $4.50@5; ₱ crate, $1.75@2.50; Jersey, prime, ₱ crate, $1.50@1.75; do. poor to fair, $1@1.50.

Peanuts quiet and steady. Choice new shellbarks are in fair demand at $1.25@1.50 ₱ bushel; old and new inferior lots of new have sold at $1. Chestnuts scarce and in good demand; prices higher.

Peanuts, Va., hand-picked, ₱ lb, 7¼@7½c.; fancy, 6¾@7c.; extra prime, 6½@6¾c.; good to prime, 5½@6¼c. shelled, screened, 6@6½c.; unscreened, 5½@6c.; pecan nuts, 9@11c.; hickory, shell-bark, new, ₱ bu; $1.25@1.50; chestnuts, $9@9.50.

GRAIN.—The wheat market has lost its vitality and at the moment the outlook is dark and threatening. A number of failures at the West have cooled speculative ardor and spot and visible supplies begin to regain their natural influence in transactions. Shippers are sending grain products along with more regularity than they could or would while speculation was at fever-heat. No item of grain exhibits the full high-priced confidence that has ruled so long and the general tone of the market is downwards.

Wheat, Spring, $1.30@1.46; Spring No. 2, $1.43@1.45; red Winter No. 2, $1.52½@1.53½; red Winter, $1.40@1.54; white Western and State, $1.40@1.52. Rye, $1.05@1.09; Oats, white No. 1, 57@57½c.; No. 2, 55@56c.; No. 3, 52@53c.; mixed, No. 1, 48½@49c.; No. 2, 47½@48c.; No. 3, 44@46c. Corn, Western mixed, 68@71c.; No. 2, 73@73½c.; yellow, 73@77c.; white, 78@80c. Barley, Canada, No. 1, $1.10@1.13; do. bright, $1.14@1.16.

Receipts for the week, wheat, 1,000,782 bush.; corn, 1,709,925 do.; oats, 216,319 do.; rye, 29,511 do.; malt, 72,814 do.; barley, 185,450 do.

Exports for the week, wheat, 725,228 bush.; corn, 397,480 do.; oats, 73,252 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Sept. 17. bush.	1880. Sept. 10. bush.	1879. Sept. 18. bush.
Wheat	19,491,352	14,360,769	18,146,639
Corn	27,581,974	19,812,209	10,938,531
Oats	6,468,050	2,746,353	2,511,868
Barley	1,393,024	1,403,506	1,705,277
Rye	901,804	664,846	687,008
Total	55,639,291	38,987,683	34,019,323

HAY AND STRAW.—Exports for the week, 275 bales. Only the best grades of hay show firmness; prices for under grades have a wider range, average quality being quite poor again. Straw steady.

Prime Timothy hay, ₱ 100 lbs., $1.05@1.10; medium Timothy, 80@95c.; shipping grades, 60@65c.; clover mixed, 70@75c.; clover, 60@70c.; Straw, long rye, 70@75c.; short rye, 45@55c. oat and wheat straw, 30@40c.

HONEY—Offering at 17½@18c. white clover comb choice; 14@16c. fair to good; 13@14c. buckwheat. These are mostly retail or single-case prices; a fine line of clover is reported at 16c.

HOPS.—The market has advanced for all good hops under news of possible wants abroad, especially for England. The new prices have not been paid largely by any interest as yet; brewers will not pay the extreme for any grade.

Crop of 1881, choice, 26@28c.; good to prime, 22@24c.; fair to good 20@22c.; 1880, choice, 20@22c.; fair to prime, 14@18c.; poor to fair, 10@14c.; eastern, 10@15c.; 1879 fair to prime, 12@14c.

Receipts for week, 3,931 bales.

Exports for the week, 1,325 do.

MILK.—The supply has been very short and in some instances retailers had to pay wholesale all they could charge their customers. The average for commission milk, 40-qt. cans was $3.36, opening at $3 and closing at 4. The price paid farmers for Sept. was 2@2½c. Consumers begin to express very widespread dissatisfaction at the practice of feeding beer-grains to cows, and it will not be long before the abuse will be resented.

POULTRY AND GAME.—The market is steady for nearly all kinds of dressed poultry, the cooler weather causing a better demand. Quotations for turkeys are for mixed young and old; the demand for them is good. Chickens and fowls sell promptly. Spring ducks in good demand, old neglected. A few Philadelphia young geese sold at 11c. Western old geese sold at 10@12c. Squabs are selling less freely because of the larger supply of game birds and are quoted lower.

Turkeys, Phila. prime, 15@16c.; State and Western dry-picked, 14@15c.; scalded, 13@15c. Chickens, Phila. spring, 19@20c.; Bucks Co. do. 17@18c.; Jersey, do. 16@17c.; State, do. 15@16c.; Western, do. 14@15c. Fowls, Phila. dry-picked, 16@17c.; Bucks Co. 15@16c.; Jersey, dry-picked, prime, 15@16c.; do. scalded, 14@15c.; State and Western, dry-picked, prime, 15@16c; scalded, prime, 14@15c.; inferior, 12@13c. Ducks, Spring, Phila. ₱ lb, 17@18c.; Jersey and Bucks Co. 16@17c.; State, 15@16c.; old, fair to good, 10@12c. Squabs, white, ₱ doz. $2.50@2.75; dark, $1.50@1.75.

Chickens and fowls have brought good prices, but have fluctuated a little according to supply. At the close there is as much stock offerings as can readily sold at quotations. Turkeys have sold well, generally mixed old and young at 12@13c. A few extra old turkeys reached 15c. Extra large ducks are scarce and higher, but medium and poor are in fair supply and only steady. Geese quiet and unchanged.

Chickens, Jersey, spring ₱ lb. 15c.; State and Penn. 11@14c.; Western, 11@13c.; Southern, 11@13c.; Fowls, Jersey, State & Penn. 14c.; Western, 13c.; Southern, 13c. Roosters, old, 7@8c. Turkeys, Jersey and Penn. 13@14½c.; Western, 13@14c.; young, 10@13c. Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 60@75c.; Western, 50@60c.; Southern, 50@55c. Geese, Jersey, per pair $1.50@1.75; N. Y. and Penn. $1.25@1.50; Western mixed 87c.@$1.12; Southern, 75c@$1. Pigeons, large, strong birds, 25@30c.; young, 20@25c.

Game has an inferior demand with more favorable weather for use and show.

Grouse, choice, $1.12@; soft, 50@75c.; partridges, prime, $1.25@1.50; soft, 75c.; woodcock, choice $1.25; inferior 75@85c.; English snipe and plover, fresh-killed, $1.75@2.00; venison, Minn. short saddles, 19@20c.; Western, 16@18c.

Grass plover very scarce and quoted at $3 ₱ doz. Reed birds firm at $1@1.25 and black birds dull at 25@30c. per doz. Wild ducks scarce and salable at 75c. for mallard and red-head, 40@50c. for teal and wood, and 30@40c. for common ₱ pair.

PROVISIONS.—Hog products have lost their buoyancy; quotations have been moving in buyers' favor all the week and a sharp decline is noted at the close. Hogs have arrived in larger quantities than was expected and that fact together with tight money have given a pause to speculative and prompt buying interest. Beef and beef hams steady.

Pork, extra prime, ₱ bbl. $15@15.50; Western mess new, $19.50@20. Lard, steam Western, ₱ 100 lbs., $12.2 prime city, $12.15. Hams, smoked city, ₱ lb. 13¼@13¾c.; pickled Western and city, 12¾@13¼c.; Shoulders, smoked city, 9@9¼c.; pickled, 8¼@8¾c. Rib bellies, pickled, 10¾@11c. Bacon, long clear and Western, 10⅜@10¾c. Beef, Western mess, ₱ bbl. $12@13; packet, $13@14; India mess, ₱ tce. $21.50@23.00. Beef hams, ₱ bbl., $22@23.

Receipts for the week—Beef, bbls. and tcs. 382; pork, bbls 3,420; cut-meats, pkgs 12,111; lard, do. 11,596.

Exports for the week—Beef, bbls. and tcs. 916; pork bbls. 2,550; cut-meats, lbs. 5,613,940; lard do. 4,477,780.

SALT.—The advance that has been quoted is well held, the importations running moderate and demand good. The following are the quotations:—Ashton's at $2.50; Higgins's at $2.50; Phœnix superfine sifted dairy at $2.50; Holmes's extra sifted, $2.40; Deakin's at $1.40@1.50; Evans's at $1.40@1.50; Washington's at $1.40@1.50; Marshall's at $1.40@1.50 Virden's at $1.40@1.50; Worthington's at $1.40@1.50; Turk's Island, 25@30c.; Mediterranean at 25@28c.

SEEDS.—Clover dull; no export inquiry; sales could not be made above quotation, but holders generally refuse to accept the prices. Timothy in good consumptive demand and firmer.

Clover, Western, 1881, car lots on track, 9¼@9¾c.; Timothy, job lots in store, $3@3.25; flax-seed, American rough, ₱ bush. $1.42½@1.45.

Receipts for the week, 5,520 bush.

TOBACCO.—There has been something of a frost-scare to invigorate sales, but no positive advance has resulted.

VEGETABLES.—Exports of potatoes for week, 4,471 bbls. Choice potatoes are not plenty and shippers, grades are not equal to export orders. State potatoes when sold in bulk, and nearly all arrive so, are quoted 175 lbs. to bbl. Sweet potatoes firm again.

Potatoes—Early Rose, Eastern, ₱ bbl., $2.75@3; L. I. bulk, $3@3.25; State, $2.50@2.75; Prolific, Eastern, $2.62@2.75; Snowflake, State, $2.50@2.75; Burbank, State, $2.50@2.75; do. L. I. $2.87@3; Peerless, State, $2.25@2.50; sweet potatoes, Va. yellow, $3@3.25; Del. River, $3.25@3.50; Jersey, $2.75@3.

The frost of the past week has stiffened prices for most garden truck.

Sweet corn, ₱ 100, 75c.@$1; wax beans, L. I., ₱ bag, $1.75@2; string beans, $1.75@2; cucumbers, ₱ 100, $1.25@1.50; pickles, ₱ 1,000, $1.50@3; egg plant, ₱ 100, $5@6; tomatoes, ₱ bush., 40@50c.; squash, Marrow, ₱ bbl., $1.50@1.75; cabbage, ₱ 100, $7@10; beets, L. I., ₱ bbl., $1.50@2; white onions, bulk, $2.50@3; yellow, $2.25@2.50; red, $2@2.25; red Chester, $2@2.25; carrots, ₱ bbl. $1.50; turnips, Russia, $2.25@2.50; cauliflower, $1@5.

WOOL.—The offerings have been very readily bought up, and prices, without being actually higher, have hardened to an extent that precludes some moderate concessions that might have been obtained a week or so ago. Never in the history of the trade has the clip been so well marketed at this early date as for this season, and the wool-grower seems determined to occupy his full place in the increasing commerce of the country.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 8, 1881.

BEEVES.—Receipts for the week, 13,309 head; do. last week, 13,571 do. Thirty-four car-loads of Colorados sold on Friday at 7¾@8¾c. to dress 55 lbs.; 2 cars of Montana cattle at 5c. live weight, and the range for common to strictly choice native steers was from 8c. to dress 55 lbs to 12¾c. to dress 57 lbs, and 5½c. ₱ head—latter price for a car-load of Kentucky steers, 1,467 lbs average. No very poor cattle on sale. A car of small grass-fed bulls changed hands at 2¾c. live weight.

COWS AND CALVES.—There has been a brisk demand for good cows; buyers have paid $55 by the car-load and in a smaller way $60@70 have been frequently quoted.

VEAL CALVES—There is a good demand for prime calves. Many lots run poor and show forced marketing.

Live calves, prime N. J., 9@9½c.; do. State, 8¾@9c.; poor to good, 6@8¾c.; Mount Hollys, 7@9¼c.; buttermilks, 4@5c.; grassers, 3¾@4c.

SHEEP AND LAMBS.—Receipts for the week, 45,478 head; do. last week, 30,574 do. Prime stock was in demand at fair prices, but common and medium grades of both sheep and lambs, which have composed the greater part of the offerings, have had slow hold. The reported transactions were 3½@5¼c. for poor to good sheep and 5½@7¼c. for common to prime lambs. Twenty car loads of stock are reported to arrive at 60th st. to-morrow, but probably several loads of lambs will be taken off at Albany.

SWINE.—Receipts for the week, 27,471 head; do. last week, 27,043 do. Live Western corn steady at $6.70@6.90 ₱ 100 lbs. New Jersey pork, 8@9¾c.; city dressed, 9c.

Terms for 1881.

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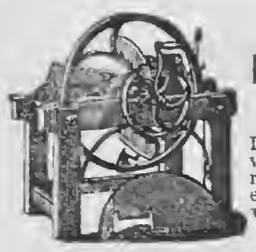

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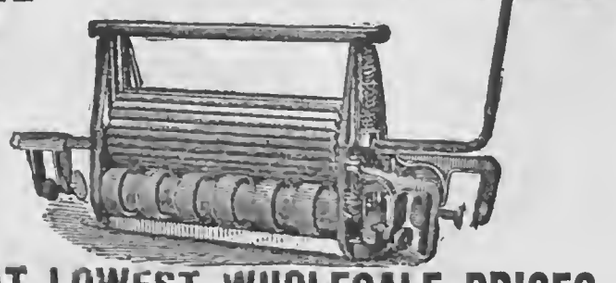

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EXPLANATION.

THE reports of fairs will, for a few weeks, necessarily interfere with the literary departments of the paper. We ask indulgence for the limited allowance of space.

WITH MUCH SYMPATHY for the bereaved, we make the following announcement: On September 13 occurred the death of Alice Carey, age three years, daughter of Dr. and Mrs. T. H. Hoskins, of Newport, Vt.

For the Young.

NOTES.

WE ARE contemplating for the next Children's Seed Distribution the sending out of a package of seed (varieties yet to be selected) to each member of the club, and for the best yield from the seed sent a prize will be offered. As there are probably some members of the club whose names are yet on our list who have changed their residence, or who may no longer be interested in us, I propose to revise the list, or rather begin a new one. Now, note carefully what I say! Every boy or girl who wishes to become a member of the RURAL Horticultural Club and share in its Seed Distributions when made, and who will agree to write to Uncle Mark at least twice a year, and as much oftener as they desire, may now send in their names and addresses, which will be at once enrolled. This must be done immediately in order to secure a share in the Seed Prize. Those who were previously members of the Club must send in their names as well as those who were not; and this revised list will be published in 1882, and thereafter annually.

IT IS thought best to hold our "Club Discussions" but once a month, so that the next one, on Orchard Fruits, will be published in the RURAL for Nov. 5. However, let all respond early. The more the merrier!

WE HAVE been obliged to sacrifice much of our department to pressing matter this week. Sorry! U. M.

Entomological.

LIME TREE WINTER MOTH.

(See page 701 for illustration.)

IT is often said that if any wild plant be taken and by patient cultivation made to beautify the home of man or contribute to his wants, it is attacked by a host of insects and other foes that had never before preyed upon it. While investigation does not prove the saying to be strictly true, still a survey of the different insects that feed upon any one of our cultivated plants, would seem to show that it is so. Take, for instance, the apple tree. In the seventh Illinois State Entomologist's Report no less than 23 different species of caterpillars, or larvæ of butterflies and moths, are enumerated as feeding upon this tree, either on the leaves or the fruit, to say nothing of the numerous beetles that bore its trunk or fruit, or the other orders of insects that live on some parts of the tree. The insect named at the head of this article, the Lime Tree Winter Moth (Hybernia Tiliaria) is not one of the 23, but one more that may be added to that list.

The Lime Tree Winter Moth is related to the canker worms, in that its habits are not unlike those of the Fall canker worm that is the most common in the northern portion of the United States. Its most common food plant is the lime tree or basswood, where some of them may be found every year, but occasionally they are found on elm or apple trees where they do considerable damage. Like the canker worm moths, the males of this species have wings, but the females are wingless, or rather their wings are rudimentary, not allowing them to fly. The male is of a rusty buff or nankeen color with thin wings that expand about two inches. The fore-wings have two wavy, brown lines crossing them, the inner one sometimes being faint. The female is grayish or yellowish-white, sprinkled with fine black dots, and two rows of black spots down the back. The body is about half an inch long.

The moths hatch in the Fall, and, after pairing, the females deposit the eggs in little clusters on the trunk and branches of the trees. These remain in this condition till about the time the leaves are ready to expand in the Spring, when they hatch and feed upon the young leaves very much like the canker worms. They are larger than the latter and of a different color. When full-grown they are about 1¼ inch long, of a "bright-yellow color, with ten crinkled, black lines along the top of the back, the head rust-colored." The eggs hatch a little later than the eggs of the canker worm, and the worm is a little longer in coming to maturity. As soon as it has attained its growth, it lets itself to the ground by a web, goes down five or six inches beneath the surface where it forms for itself a little cell and changes to a chrysalis. It remains in this stage till the last of October or the first of November when the moth emerges and makes provision for another brood; very often, however, some do not hatch until Spring.

From the description it will be seen that the habits of this insect are very much like those of the Fall canker worms, and, as might be inferred, the same remedies may be resorted to in case they attack the apple trees. To prevent the eggs being deposited in the trees, tin or building-paper bands or whatever else is used, must be applied in the Fall. If the pests are found in the trees in the Spring, Paris-green in water thrown upon the tree with a garden syringe will destroy them. Probably this is one of the best remedies, as it kills all worms that eat the leaves sprinkled with it. If apples are growing thereon at the time, it might not be safe to use this, as it might become lodged about the stem and render the apples unfit for use.

The cut accompanying this, Fig. 493, gives a very good idea of this insect and its work, representing the male with the wings expanded, the female below, and the larvæ in different stages of growth on the leaves.

Carbondale, Ill. G. H. FRENCH.

Implements, &c.

Adams Direct-Draft Barn Horse-Power.

THIS power, brought out some years ago, has been greatly improved and perfected lately, and was exhibited in operation at the Michigan State Fair where it attracted a great deal of attention. As will be seen by the illustration, the power consists of a wooden wheel, hinged through the middle, suspended horizontally upon an upright shaft about three feet eight inches from the floor. The horse works inside the wheel. The shaft turns with the wheel; its upper end runs through a plank on the scaffold and a pin in the lower end works in a box on the floor. There is but little friction and but little oiling to be done on any part of the power. It takes up only twelve feet of room, and is especially adapted to the farmer who has feed to cut or grind, wood to saw, corn to shell or anything where a good, desirable one or two horse power is needed. It is simple and durable and, as it requires no mechanical skill, farmers need not fear to let their hired man or boy run it. When not in use, it can be quickly and easily taken down and set on one side, where it will not take up useful space. Its price brings it within the reach of all requiring a good power.

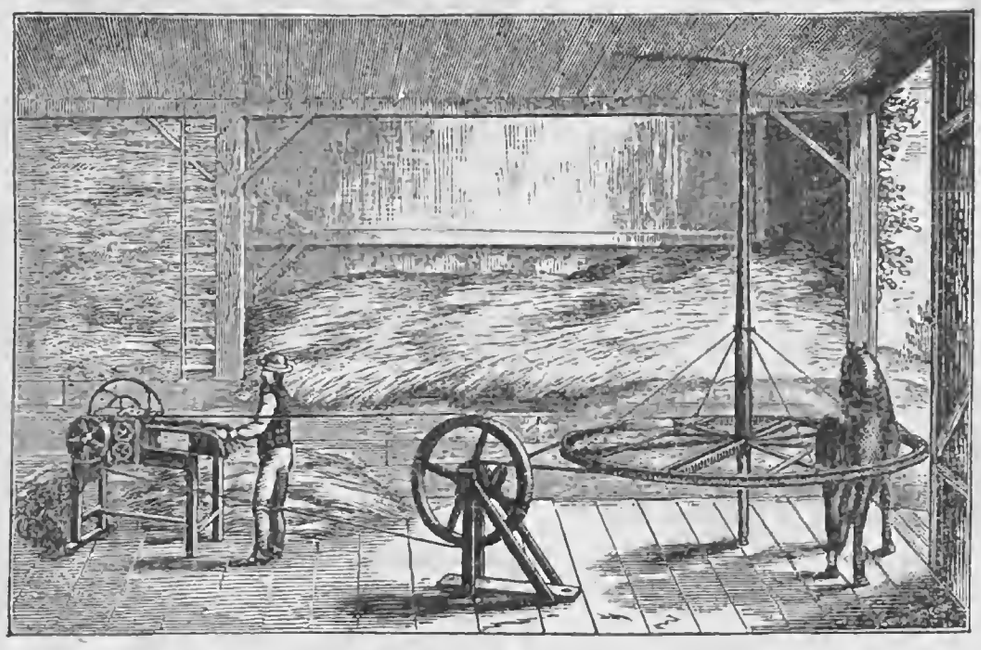

FIG. 474.

A Pulverizing Harrow Attachment.

Mr. H. Reynolds, Shiawassee Co., Mich., says of this device: When used in connection with a drag or harrow it is very effective in leveling, crushing and pulverizing cloddy and roughly plowed ground. It is made by fastening a 2x4-inch scantling underneath, and about the center of the harrow. Fastened firmly and unyieldingly it seems more effective than when cut in two in the middle. On top of the harrow put a weight, such as a rail or fence post, to keep it close to the work. This does not seem to add to the draft, and there is no clogging on strawy, corn-stubbly or cloddy ground; and the drag seems at least one-half more efficient with than without the device—quite an item in a busy time.—(See page 700.

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Improved Cornell Corn Sheller.

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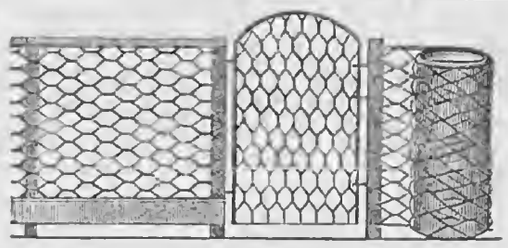
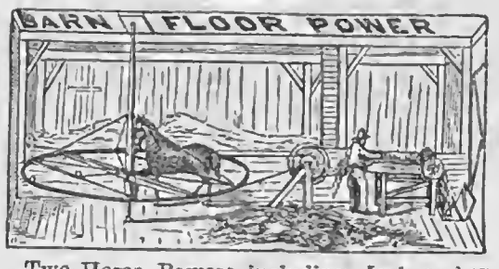


The Sedgwick Steel Wire Fence

Is the only general purpose wire fence in use. Being a strong net-work without barbs, it will turn dogs, pigs, poultry as well as the most vicious stock, without danger to either fence or stock. It is just the fence for farmers, gardeners, stock-raisers, and railroads; very desirable for lawns, parks or cemeteries. As it is covered with rust-proof paint it will last a lifetime. It is superior to boards in every respect, and far better than barbed wire. We ask for it a fair trial, knowing it will WEAR itself into favor. The SEDGWICK GATES, made of wrought iron pipe and steel wire, defy all competition in neatness, lightness, strength and durability. We also make the BEST and CHEAPEST ALL IRON Automatic or SELF-OPENING GATE. Ask hardware dealers, or for price list and particulars address

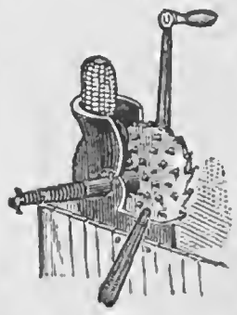
Sedgwick Bros., Richmond, Ind.



Two-Horse Powers, including Jack and 17 feet Belting, $40. Works in room 12x15. Larger sizes if wanted. Folds out of the way in five minutes. Very durable. Circulars free. Agents wanted.

SMITH & WOODARD, Kalamazoo, Mich.

THE WOODS CORN SHELLER.



PAT. NOV. 23, 1880.

It is the best, cheapest & simplest machine in the market. It separates the corn and cob, and remember it is warranted for 5 years if used in a proper way. Nearly 1,000 now in use and giving good satisfaction.

AGENTS WANTED

in every county in the United States. For terms and particulars address

J. L. WOODS,
Sole Manufacturer & Patentee
ALLIANCE, OHIO.

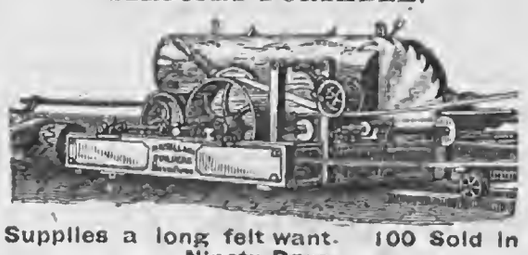
Sample Sheller sent on receipt of $3.00.

COMMON SENSE ENGINE.

Simple, durable, of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3 horse power, $275; 5-horse power, $300; 7-horse power, $375; 10-horse power, $500. These engines fully guaranteed in every respect. Address Common Sense Engine Co., Springfield, Ohio.

THE MASSILLON PONY MILL

STRICTLY PORTABLE.



Supplies a long felt want. 100 Sold in Ninety Days.

Every owner of a Farm Engine located in moderately timbered country can find profitable employment the year round by purchasing one of these Mills.

Every owner of a timbered lot is interested in having one of these Mills in his neighborhood. No more hauling logs to mill. All the waste saved.

Write for Circulars and Price Lists, and address of nearest Agent. [Name this Paper.]

RUSSELL & CO., Massillon, O.

EVAPORATING FRUIT.

SENT FREE | Treatise on improved methods. Tables yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa

Agents wanted. $5 a Day made selling our NEW HOUSEHOLD ARTICLES and FAMILY SCALE. Weighs up to 25 lbs. Sells at $1.50. DOMESTIC SCALE Co., Cincinnati O.

Implements and Machinery.

The A. P. Dickey Farm and Warehouse FANNING MILLS.

THE BEST IN THE WORLD.

Obtained Centennial Award and Grand Medal, also best award at Paris exposition in 1878. They clean perfectly, Oats, Chess, Cockle, and all foul matter from Wheat and Barley. *They grade and separate for seeding and market*, clean all kinds of small seeds, and are perfect chaffers. They will save any one their cost annually. Lowest freights procured for purchasers.

Address DICKEY & PEASE, Racine, Wis.

THE

RIGHT SPEEDY Corn Sheller.

Cheap, Durable and Effective; She is 12 to 14 bushels per hour. It is the best corn sheller made, and I warrant them for five years. Price $5, or, handsomely nickle-plated, $6.

AGENTS WANTED.

If there is no agent in your vicinity, I will send Sheller prepaid on receipt of price. Send for circular.

CURTIS GODDARD,
ALLIANCE, OHIO.

Mention Rural New-Yorker

Trees, Seeds, Plants, &c.

ALL BEST VARIETIES

AMERICAN GRAPE VINES,

Small Fruit Plants and General Nursery Stock. Also Thoroughbred Land and water Fowls. Prices low, and stock unsurpassed. Orders booked now for Fay's New Prolific Red Currant to be delivered in Spring of '82. Catalogues ready.

GEO. S. JOSSELYN, FREDONIA, N. Y.

POMONA NURSERY.

100 ACRES IN SMALL FRUITS.

Manchester, Mount Vernon, Bidwell, Banieht and other choice Strawberries. Early Welsh, Queen, Cuthbert and Turner, the best hardy Red Raspberries. Snyder, Wallace and Taylor, the hardiest and most productive Blackberries. KIEFFER'S HYBRID PEAR, handsome, large, good quality, bears young and abundantly. "40 Years Among Pears," "40 Years Among Small Fruits": either for 15 cts.; both for 25 cts. *Catalogue free.*

WM. PARRY, Parry P. O., N. J.

GRAPE VINES.

All Leading Varieties in large supply. Warranted true to name. Prices low. Also, the celebrated

NEW WHITE GRAPE,

PRENTISS

Send stamp for Price and Descriptive List. Also Trees, Small Fruits, etc.

T. S. HUBBARD, Fredonia, N. Y.

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A SPECIAL OFFER ON THE NEW GRAPES:
Pocklington, Lady Washington, Prentiss, Jefferson, Duchess, Worden, Brighton,
ALL THE NEW STRAWBERRIES:
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GEORGE S. WALES, Rochester, N. Y.

New and Rare Winter Flowering Plants.--New Fruits, Dutch Bulbs, &c.

New Pears, new Peaches, new Cherries, new Grapes, new Strawberries, &c., with a large stock of all kinds of Fruit Trees, Shrubs, &c.

DUTCH BULBS.—Large importations direct from the leading growers in Holland. First quality Bulbs. Beautiful Hot-house plants, Draccenas, Crotons, Orchids, Winter Flowering Plants, Roses, &c., well grown. Cheap.

Catalogue mailed to applicants.

JOHN SAUL, WASHINGTON, D. C.

Stock.

40 Clydesdale Stallions

AND MARES—Mostly Imported.

60 Hambletonian Stallions,

AND MARES OF THE FINEST BREEDING.

Largest Herd of

HOLSTEIN CATTLE.

With largest milk records in America.

Separate Catalogues of each class of stock with milk record of cows. Denote which is wanted.

☞ Correspondence solicited.

SMITHS & POWELL,
esside Stock Farm,
SYRACUSE, N. Y.

PERSONALS.

Lotta, the prima donna, is this month to wed Harry Cleveland, a tenor.

The Chicago Times says that neither ex-President Hayes nor rich Governor Foster, of Ohio, has subscribed a cent to the Garfield family fund.

Mr. Edison is reported by the Rubber Era to hold $5,000,000 worth of stock in the various companies formed to introduce his incandescent light.

Mr. James R. Keene has sent $2,500 to the Mayor of Detroit for the Michigan sufferers—the biggest subscription we have heard of. May he come out ahead in his next bull corner in agricultural produce.

J. Stanley Brown, the Private Secretary to President Garfield, is to remain with Mrs. Garfield as her financial agent, and one of his duties in Washington will be to dispose of her Washington residence.

Cephas Thayer, of Medway, Mass., now in his 93d year, attended the funeral ceremonies of President Garfield the other day in that town. He also attended the funeral of President Washington in 1799, being then 11 years old, and is still vigorous, both mentally and physically.

New Publications.

THE NORWAY MUSICAL ALBUM.

By FORESTIER and ANDERSON.

A collection of weird, strange, and yet strangely captivating Songs and Melodies from the land of *Ole Bull*; just the music that inspired his imagination. Norse and English words. A musical novelty that will delight lovers of what is wild, rich and romantic in legend and song. Price $2.50.

GARFIELD'S FUNERAL MARCH. Fine portrait. 40 cts.

ROBERT FRANZ' ALBUM OF SONG.

Old and new. Approved by the master himself. A book in which every note is a gem. German and English words. A hundred exquisite songs. $2. boards; $2.50 cloth.

HARALD OF PRAISE. For Choirs and Conventions. $1.

The Ideal. (75 cts.) By L. O. EMERSON. Is the best Singing School book of the distinguished author. Admirable collection of interesting, wide-awake, effective music, combined in a practical and thorough course. Ideal success in an Ideal singing class will result from using the book.

SONG BELLS. For common schools. *Emerson*. 50 cts.

OLIVER DITSON & CO., Boston.
CHAS. H. DITSON & CO. J. E. DITSON & CO
843 Broadway, New York. 1228 Chestnut St., Phila.

GARFIELD Agents wanted for Life of President Garfield. A complete, faithful history from the cradle to the grave, by the eminent biographer, Col. Conwell. Books all ready for delivery. An elegantly illustrated volume. Endorsed edition. Liberal terms. Agents take orders for from 20 to 30 copies daily. Outsells any other book ten to one. Agents never made money so fast. The book sells itself. Experience not necessary. Failure unknown. All make immense profits. Private terms free.
GEORGE STINSON & CO., Portland, Maine.

THE BOOK OF THE SEASON.
PAQUITA. A True Story, Wild & Sad.
by the noted author and poet, Joaquin Miller. This book, filled with romance and adventure, is *fascinating as a novel*, and pronounced by all to be
THE GREATEST INDIAN STORY OF THE AGE.
AGENTS WANTED IN EVERY TOWN to sell this work. Send for circulars and see our extra inducements. Address
AMERICAN PUBLISHING CO., Hartford, Conn.

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THE COMPLETE HOME.
The Great Household Book of the Day. Interesting, Practical, Attractive and Useful.
Tells How To Live comfortably on a small income. Make home beautiful and happy.
Full of things which every housekeeper wants to know. Fine paper. Clear type. Beautiful bindings. Low price.
Agents Wanted. Sales Rapid. Success Sure.
Experience in canvassing not necessary. Full description and liberal terms sent free. Address
J. C. McCURDY & CO., Philadelphia, Pa.

SOMETHING NEW FOR AGENTS.
RAMBLES *THROUGH OUR COUNTRY.*
A new, fascinating, and exceedingly instructive GEOGRAPHICAL GAME, that entertains both old and young.
Agents Wanted, Ladies or Gentlemen.
Now is the time to take orders for Christmas Delivery. Send for description and liberal terms. Address
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THE CHICAGO WEEKLY NEWS
will be sent postpaid, from date to Jan. 1st next, for 10c. This trial subscription will enable readers to become acquainted with the cheapest metropolitan weekly in the U.S. Independent in politics, all the news, correct market reports, six complete stories in every issue. A favorite family paper. Send 10c. (silver) at once and get it until Jan. 1, 1882. 11 trial subscriptions for $1. Regular price 75c. a year. Address
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Chicago, Illinois.

ROBBINS

FAMILY WASHER

WASHING WITHOUT LABOR!

A WONDERFUL INVENTION!

IN 1871, Mr. H. R. Robbins, of Baltimore, invented and patented the now famous **Robbins' Family Washer and Bleacher.**

It was the original, and as now improved, the best and only perfect self-operating Washer in the world.

It will do all the family washing in less than half the time in which it can be done in any other way, without hand labor, with but very little soap, without chemicals and without any wear and tear or yellowing clothes.

More than fifty thousand of these Washers are now in use, giving perfect satisfaction. We have thousands of testimonials from all parts of the country—from Public Institutions, Hotels, Clergymen, Lawyers, Farmers, Editors and every class of people, and we have the Editorial Commendations of all the principal papers in the land.

In 1878 The Bissell Manufacturing Company purchased the patent for the Washer and after two years careful experimenting succeeded in simplifying the Washer, and in adapting it to use in any size and style of boiler as also in the old fashioned iron wash-pot so much used in the South (in which the original Robbins' Washer would not work) and obtained a reissue of their patent on the 21st day of December, 1880.

THE PRINCIPLE OF THE WASHER.

The operation of the Washer consists in rapidly and continuously forcing the hot soap suds contained in the boiler from the bottom to the surface, through a tube at the rate of ten gallons per minute and then drawing it down again **through the soiled clothing,** while that is expanded by the boiling heat—causing it to remove every particle of dirt and leaving the articles after rinsing, thoroughly cleaned and bleached. It is impossible for it to tear or wear, or in any way injure the fabric, as there is no friction whatever.

HOW DOES THE WASHER WORK?

The Washer having been placed in the bottom of the boiler or pot, as soon as the water commences to boil all that which is beneath it, being surrounded with heated metal becomes hotter and more expansive than that in the remainder of the boiler, and thus has a tendency to rise through the tube, while at the same time all the steam formed beneath the Washer is **forced** to pass out through the tube, and carries along with it the water in the washer and tube with great force, its place being supplied by the water outside, which is rapidly drawn into the washer and in turn heated and expelled, thus creating a constant and powerful current upward through the tube and downward **through the fabric, giving a water force** which cannot be obtained in any other way. The fabric being expanded to its utmost by the boiling water, the dirt, softened by the action of the soap, is at once swept away by the force of the flow.

Thus we have, 1st. The greatest possible heat; 2d. Perfect chemical action of the soap, and 3d. Force of water. All of which are necessary to thoroughly cleanse and purify any fabric.

What is it that cleanses the clothing in the ordinary modes of washing by rubbing, pounding, squeezing, drawing between rollers, etc.? It is the filling of the fabric with soap suds as hot as may be (**boiling** heat being unattainable, especially in hand rubbing) and then **forcing it out** again, and repeating the process until the clothes are clean. But all of these processes require **hand labor.** You must turn or pound, or squeeze or rub; there is little choice between them, while with the **ROBBINS' WASHER the labor is dispensed with** and any other work of the house may be done while the washing is **doing itself.**

THE CAPACITY OF THE WASHER.

There are two sizes, the No. 1 or family size, which works in any family boiler or wash-pot having a bottom 8¼ by 8 inches or larger, and holding 10 to 15 gallons of water. It takes only 3 or 4 ounces of soap to 10 or 12 gallons of water, will wash bed or table linen, a boiler full in 10 or 15 minutes, wearing apparel in from 20 to 30 minutes, without rubbing, and requires no previous preparation of the clothes, such as soaking over night. Take the clothes dry, and when the Washer gets *thoroughly at work*, fill the boiler as full as it will hold by gently pressing them down with a stick. Use no chemicals, only good soap and soft water. If the water is hard, it may be softened by a small piece of borax, which is harmless.

For Lace Curtains this Washer is *invaluable.* It cleanses them as no other process can, and without the slightest danger of injury.

No. 2, or small hotel size, will do the work in a boiler holding 15 to 25 gallons, and wash, of average pieces, from 1,500 to 2,000 per day; or it may be used in any smaller boiler. They will work in anything that has a bottom large enough for them to rest upon; say ten inches in diameter.

We also make a Washer 5x8¼ inches, suitable for use in sunken bottom boilers, and having the same capacity as our No. 1.

THEY ARE MADE OF SOLID BRASS, (except the tube), and can neither **rust, corrode, break nor wear out.**

QUESTIONS AND ANSWERS.

Q. What kind of boiler do you use? A. Any kind of a boiler will do.

Q. How can you have a flow of water at the rate of eight or ten gallons per minute in a boiler holding only eight or ten gallons? A. The same water is used over and over again; and in order to be thus used, it must pass down through and through the fabric; and this with the soap and heat is what does the work.

Q. How can you use a large quantity of water in a boiler already full of clothes? A. Fill the boiler two-thirds full of water; as soon as the washer commences to work, put in the clothes DRY.

Q. Can you wash flannels and colored clothes? A. We wash anything that can be washed. Flannels and colored clothes need but little soap, and from five to ten minutes of the full operation of the Washer. **Flannels should be rinsed in Hot water.** It is the change from boiling to COLD water that contracts the fiber, causing them to shrink. Any FULLER will tell you this is so. Fugitive prints will part with their colors by this or any process, but fast colors will not be injured.

Q. Can you use the common soft soap of the farm-house? A. Yes, if good.

Q. Is it not better to put very dirty clothes to soak over night? A. No; better not.

Q. Will your Washer remove the streaks from dirty wristbands and collars, such as farmers and mechanics wear, after they have been worn a whole week, as they usually are? A. The Washer will cleanse the dirtiest clothing. Unusually soiled portions may require a second operation to remove the dirt entirely. Give the clothes a thorough rinsing in hot water.

Q. How can it be possible for so simple a thing to cleanse fabrics? A. How is it possible for it NOT to cleanse fabrics?

Remember that the entire contents of the boiler are **forced through** the expanded clothing **every minute,** or at least twenty times at every washing, and you will see at once what the result **must be.**

Q. Will your Washer do all you claim for it?
A. Yes; it will. We guarantee this.

SAMPLE WASHER.

On receipt of **$3.50** we will send a single No. 1 Washer to any part of the United States, all charges pre-paid. No. 2, **$5.00.**

Cash must accompany all orders.

Remit by Post-Office Order, Registered letter, or by draft on New York.

SPECIAL NOTICE.

As to the reliability of this company, we refer you to the MERCANTILE NATIONAL BANK of New York, or to any Express Company in New York.

In ordering, write plainly your name, post-office, county and State.

WHAT THE PAPERS SAY:

"The best we have ever known, we speak from experience."—*Youth's Companion.*

"The Robbin's Family Washer and Bleacher is as represented."—*N. Y. Weekly Sun.*

"We have confidence in recommending it to the attention of our Lady readers."—*N. Y. Christian Advocate.*

"We would pay many times the price asked rather than do without one."—*Farm and Fireside.*

"A truly wonderful article, which is destined at no distant day to work a complete revolution in the method of accomplishing the family washing. We speak from our own knowledge."—*Chicago Inter-Ocean.*

"From nearly a year's acquaintance with this company and their Robbins Washer, we unhesitatingly recommend them."—*Farmer's Review.*

"It cannot fail to facilitate washing, and at the same time save much wear and tear of clothes."—*Am. Agriculturist.*

"The washer does exactly what is claimed for it, and is cheap at ten times the cost!"—*New York Tribune.*

Good Agents wanted, both Male and Female.

Send for sample and terms to agents, and **secure a business that will pay you well.**

When you order or write please mention this paper.

Address,

BISSELL MANUFACTURING CO.,

50 BARCLAY ST., - NEW YORK, N. Y.

Miscellaneous.

MAKE HENS LAY.

An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & CO., Boston, Mass., formerly Bangor Me.

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AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co.,** 163 Tremont Street, Boston, Mass.

KNOW THYSELF. GOLD MEDAL AWARDED the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation," bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25, sent by mail; illustrated sample, 6 cents; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, 4 Bulfinch St., Boston.

53 NEW & Beautiful Chromo Cards, name on, 10c. Agents fine sample Book 25c. Best pay. Best selling cards. NATIONAL CARD WORKS, New Haven, Ct.

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Dr. Peck's Artificial Ear Drums

PERFECTLY RESTORE THE HEARING and perform the work of the **Natural Drum.** Always in position, **but invisible to others.** All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address,
H. P. K. PECK & CO., 853 Broadway, New York.

ASTHMA *Quickly and Permanently* **CURED**

Dr. Stinson's Asthma Remedy is unequaled as a positive Alterative and Cure for **Asthma and Dyspepsia,** and all their attendant evils. It does not merely afford temporary relief, but is a permanent cure. Mrs. B. F. Lee, of Belmore, O., says of it: "*I am surprised at the speedy effects of your remedy. It is the first medicine in six years that has loosened my cough and made expectoration easy. I now sleep all night without coughing.*" If your druggist does not keep it, send for treatise and testimonials to
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MANUFACTURERS OF

FARM AND FREIGHT WAGONS

Platform Spring Wagons, Three Spring Wagons, Four Spring Wagons Open and Top Buggies, Phætons, Sewing Machine Wagons, Buckboards.

The MITCHELL WAGON is Monarch of the Road, only the very best stock used in its construction and made by the best wagon mechanics in the world. The Spring Wagon and Buggy Department is entirely separate from the Farm Wagon shops. And for the manufacture of this class of work we have facilities unsurpassed. Send for Catalogue and Illustrated Price List

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Best place to secure a sound Business Education or Spencerian Penmanship is at the SPENCERIAN COLLEGE, CLEVELAND, OHIO.

30 elegant cards, Snowflake, etc., 10c. 20 samples 8c. *Agts. wanted.* List free. C. VICK, Arbela, Mich

$7 PAYS to sell our Rubber printing stamps. Samples free. J. M. MITTEN & CO., Cleveland, O.

CHEAP NEWSPAPERS & MAGAZINES.

Send 6 cents for Catalogue of 3,000 Newspapers and Magazines at Club Rates. *Agents Wanted.*
H. A. KENYON, P. M., DWIGHT, ILL.

20 Gold and Silver Chromo Cards, with name, 10c. post-paid. GEO. I. REED & CO., Nassau, N. Y.

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This illustration represents an Elegant, Heavy Gold-Plated Propelling Pencil, a beautiful, useful, and valuable article, which we propose to make an **Absolute Free Gift** to you! It is guaranteed to be of fine, heavy gold plate, very durable, is of handsome design and superior workmanship, and is one of the most useful articles in the world for any one. It makes a most beautiful charm for attaching to a lady's or gentleman's watch-chain, and as a holiday or birthday present to a friend, nothing could be more appropriate. Being the publisher of the old-established, well-known, and reliable literary and family paper, **The Cricket on the Hearth,** and desiring to introduce the paper into thousands of new homes, we make this grand, unparalleled offer: Upon receipt of **only 27 Cents** in postage stamps, we will send THE CRICKET ON THE HEARTH for **Three Months,** and to every subscriber we will send, **free,** one of these beautiful Pencils. This is the regular price of a three-months' subscription to the paper—hence the premium Pencil is an **Absolute Free Gift** to all who subscribe. THE CRICKET ON THE HEARTH is a mammoth 16-page, 64-column *illustrated* paper (size of *Harper's Weekly*), beautifully printed, and filled with charming Serial and Short Stories, Sketches, Poems, Useful Knowledge, Wit and Humor, Facts for Farmers, Useful Recipes, Reading for the Young, and all that constitutes a first-class, entertaining and instructive family and home periodical. This is by far the **Greatest and Most Liberal Offer** we have ever made, as *the Pencil alone is worth much more than we ask for both it and the paper.* Whoever neglects this opportunity will miss one of the best chances to secure a great bargain that was ever offered. Our premium Pencil is no cheap or worthless toy, but an elegant, valuable and useful article, which any one would be proud and happy to possess. *Satisfaction guaranteed or money refunded.* As to our reliability, we refer to any publisher in New York. For $1.00 we will send *five* subscriptions and *five* of the premium Pencils. (Mention this paper.) Address, **S. H. MOORE, Publisher, No. 3 Park Place, New York.**

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It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say **IT IS PERFECT.** Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**

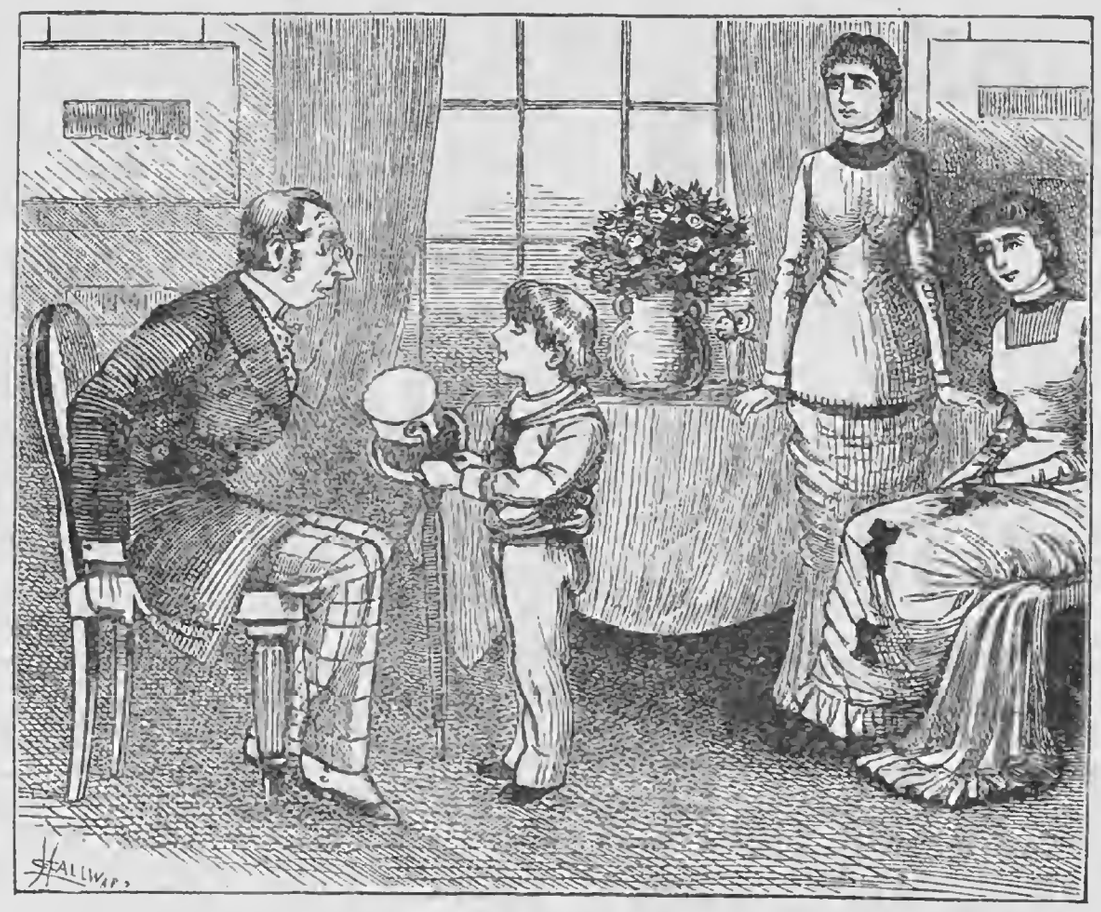
★ USE ★ ONLY ★ THIS ★ THE ★ FIRST ★ AND ★ THE ★ BEST ★

Humorous.

THE business of a telegraph company is spread from pole to pole. So is that of a washerwoman.

"HOLD on!" yelled a policeman to a citizen who was speeding toward the depot just as the train was pulling out. "Hold on! what are you after?" "I'm after time!" hooted the panting citizen, and of a verity he was.—Burdette.

AN old-fashioned minister, passing a new-fashioned church on which a spire was going up, was asked how much higher it was going to be. "Not much" he answered; "that congregation don't own much higher in that direction."



A GENTLE HINT.

Small boy (to visitor)—"Here's your hat and umbrella, and you'd better go now, or mamma will be cross as she was the last time you called and stopped so long." [Judy.

209 Percheron Horses

Arrived in New York Aug. 25th

And under Customs valuation

Were Bonded for

$350,000.00.

These horses were imported by

M. W. DUNHAM,

WAYNE, DUPAGE CO., ILL.,

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One-Fifth of All Imported French Horses Now Living in America.

During the past 17 months 360 STALLIONS AND MARES have been imported from France to this establishment, being MORE than the combined importations of all other importers of Draft Horses from all parts of Europe for any one year.

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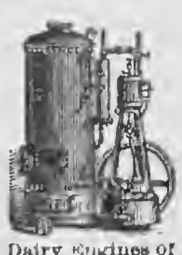

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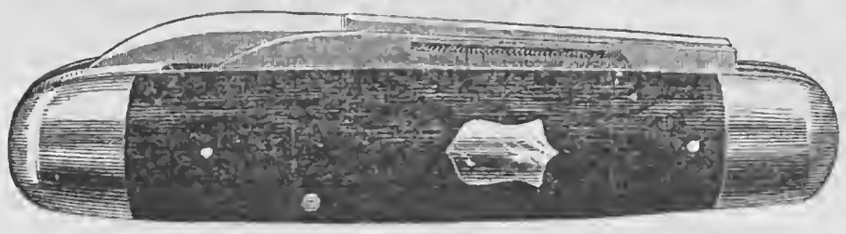

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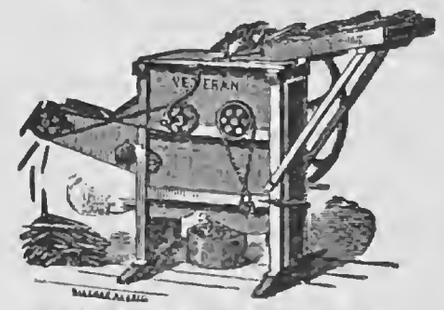

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL. No. 1656. NEW YORK, OCT. 22, 1881. PRICE FIVE CENTS $2.00 PER YEAR

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The Herdsman.

OUR ANIMAL PORTRAITS.

Dutch-Friesian Bull Mooie (26).

CATTLE of the "Dutch-Friesian" breed and those of the "Holstein" breed are so nearly related and resemble each other so closely, both in appearance and beef and milk-producing good qualities, that they have been generally confounded in this country. The owners of cattle from the low-land districts of Friesland and North Holland, however, claim that it is from the herds of that region that all the other varieties of Dutch cattle have descended, and that in several points they so far excel all of these other varieties, or at any rate differ so far from them, that they are entitled to be considered a distinct breed. Accordingly they have given them the general name of "Dutch," indicative of their being the fundamental type of all the low-land breeds of cattle that extend through the Netherlands, Flanders, Holstein, Denmark, etc., and to this the word Friesian has been added, the more distinctly to locate the origin of the breed, and particularly to distinguish it from the other breeds of Dutch cattle. Under this name are included imported black-and-white piebald dairy cattle of North Holland and West Friesland and their pure-bred descendants in this country.

The distinctive suffix has been added by the American Association of Breeders of Thoroughbred Dutch or Friesian Cattle, which has lately published the first volume of the Herd Book of this breed. Of bulls this contains 44 in the Main Registry and 19 in the Appendix Registry; while of cows there are 185 in the former and 19 in the latter. The Appendix Registry is for youthful candidates for the Main Registry, to which they are transferred when, upon examination, it is proved that they have fulfilled the conditions for admission to it. The fulfillment of these conditions guarantees a profitable cow; for, in addition to their possession of undoubted purity of blood, only such females are admitted as the experience of the Association has found to be capable, under favorable circumstances, of producing 6,000 pounds of milk in the two-year-old form; 7,000 pounds in the three-year-old form; 8,000 pounds in the four-year-old form, and 10,000 pounds if over 4½ years old at the date of calving, and therefore classed as "aged" cows. Moreover, the Herd Book tells us that in many instances from 3,000 to 5,000 pounds of milk have been produced in excess of this standard.

In view, therefore, of this high requirement for entry into the Herd Book of the breed, and of the careful manner in which its fulfillment is ascertained, there is little wonder that the herds registered therein are gaining an exalted reputation as dairy cows wherever they become known. Of these herds the largest and most famous is that belonging to the Unadilla Valley Stock Breeders' Association, of West Edmiston, Otsego County, N. Y. As mentioned in our report of the Illinois State Fair, in our issue of October 15, this herd bore away all the honors in the Holstein class at Peoria, after having carried off the $500 sweepstakes prize for the best dairy herd at the Minnesota State Fair, at Minneapolis, after a sharp competition with 13 other herds, including Jerseys, Ayrshires and Devons. It will also be seen by our report of the St. Louis Fair, in this issue, that this herd carried off all the premiums in its class at that grand show.

In view of the fact that, for breeding purposes, the bull is half the herd, the importance of having a first-class bull can hardly be overestimated when improvement is the object or the prevention of deterioration in a prime herd. As "scrub" and grade males are always uncertain in their "get," the use of the best-formed of them is constantly resulting in worthless calves, owing to "reversion" or "harking back" to some poor progenitor of the sire. Thoroughbred bulls should therefore always be used, and these should be of that breed whose special characteristics it is desired to engraft upon the offspring. The Dutch-Friesian being, before all, a dairy breed, special care is taken that the bulls admitted to registry should be only such as are most likely to produce deep-milking heifer calves. Accordingly, in addition to purity of blood, each registered male must have a well-developed escutcheon according to the Guenon system—a system which is considered particularly valuable in aiding in the selection of a first-class bull. An excellent specimen of bulls of this breed is Mooie (26), imported and owned by the Unadilla Valley Stock Breeders' Association. He was bred by A. W. Oosterbaum, of West Friesland, Holland, and calved March 20, 1878; sire, Jan; dam, Durkje. In the Herd Book he is thus described:—"Evenly variegated, white face, throat, over shoulders and over hips; head and neck very fine; horns very small, waxy; shoulders low and finely formed; body very long and round; chine straight; hips smooth; rump very broad; quarters heavy; crops well filled; limbs short and fine; handling best; escutcheon best, with thigh ovals. Length, 68-22¾; width, 20½-20½; hight, 53-55; girth, 78. July 1, 1880."

DUTCH-FRIESIAN BULL, MOOIE.—FROM A PHOTOGRAPH.—Fig. 493.

OUR GOAT.

L. S. HARDIN.

I HAD taken a cottage near the city for the Summer, and among other novelties in possession of my neighbors were innumerable vagrant goats, whose peculiar ways of eating brown paper and old rags, and lying on the soft side of large rocks in preference to the dust of the road or the soft green-sward, enlisted my amazed curiosity.

There were no milkmen in our neighborhood, and buying milk of those who own but one cow is annoying and often disappointing, as no regularity of supply is guaranteed. They do not seem to know how to water regularly to keep the supply uniform. As an experiment I determined to buy a goat. As soon as this fact became known among the neighbors the price of goats went up about 50 per cent. From five dollars apiece good milkers immediately advanced to eight or ten dollars each. By cautious inquiry and adopting a knowing look, I finally got on the track of one that belonged to a poor man whose house had burned down a few days before. Being without a home, and as his goat was slightly aged and about to go dry, he parted with her for three dollars. I concluded this would be no great loss if I had to give her away. She gave milk enough for tea and coffee for my little family, and that was all we asked of her. At first it required two to milk her, one at the head and the other at the teats; now, however, she is perfectly gentle. After going dry about four weeks she dropped a kid, and from that time to the present, with plenty of grass, she has given regularly a pint of milk night and morning. We keep her tethered on the lawn, and only three or four times this Summer, as hot as it has been, have we been able to induce her to drink any water. The succulent grass seems to satisfy her thirst. We keep a stall in the cellar for her at night, which only needs sweeping out occasionally, for she is a wonderfully clean animal. The amount of food she consumes is inconsiderable.

The quality of goat's milk is not peculiar, as I was led to believe from the statements of many who were able to keep cows, having the conveniences for doing so. The only peculiarity about it in appearance and taste is its wonderful richness. For coffee it is far better than condensed milk, which we had used a long time, while the milk of native cows cannot compare with it in point of richness, nor do I think the full milk of the best Jersey equal to it, though Jersey cream is certainly richer.

From the best information I can procure from those who have owned our goat in former years, she must be close on to 14 or 15 years old. Her front teeth are entirely gone—worn down to the gums. She has every appearance of lasting several years yet. The kid, a "Billy," was wonderfully playful and affectionate, and when the milker stooped down to milk his mother he would take a running start and up the milker's back he would go until two feet rested on the shoulders and two on top of the person's head. This was his favorite position, and whoever sat down within his reach was sure to feel him clambering up his or her back.

Take it all in all, we are delighted with our goat, and when one considers, first, the low price of the animal—from four to eight dollars; second, the rough and common food she will thrive on; third, her absolute cleanliness; fourth, the extra richness and nutritive qualities of the milk, all this along with the little care necessary, when compared with that needed by the cow, the wonder is that the goat is not more popular everywhere. Goats breed in three months, which should give about three kids a year, and if a heavy milking breed can be procured, or a new milking breed be created, they should pay, for the trouble of handling, a handsome profit near a city, where the poor people of the suburbs appreciate them far more than their more exalted neighbors.

I notice that a Goat Club or Society has lately been organized in England, and I hope the members have turned their attention to establishing a breed of heavy milkers for city and cheese-dairy purposes.

Thoroughbred Stock vs. Common Stock.

A great deal has been said in our agricultural journals on this subject. Now I do not want to be understood as being opposed to thoroughbred stock by any means, for I am satisfied that we owe a great debt of gratitude to our most enterprising men all over the country for introducing it; but it is a word of caution that I want to give to good, honest farmers who, I fear, have been led astray many times by such flowery speeches as we sometimes see in print. They may think if they pay $500 for a Short-horn, or $100 for a Berkshire or Poland-China, or $200 for a South Down, that this will make their fortune. But let me tell them they must not stop

here. I can take the most common hogs of our country and in five years I can raise hogs that will compare with the best pure-breds, by carefully selecting and using the best for breeders, and being careful to feed regularly, feed well, keep clean and in well-ventilated quarters. On the other hand, I can buy the purest thoroughbreds and in five years, by neglect, they will be as bad as, or worse than, our most common stock. Good blood is all right, but in my opinion there is more in good, careful, regular feeding, thorough cleanliness and good ventilation than in anything else with all kinds of farm stock.

Harford Co., Md. JAMES HARRY.

Farm Topics.

THE TRUTH ABOUT IT.

THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

THE VALUE OF MUCK.

How doctors differ! A few years ago Dr. Dana wrote a Muck Manual in which he made some enthusiastic but erroneous statements in regard to muck and manure. It is but a short time ago that the RURAL NEW-YORKER was taken severely to task by a correspondent who had more faith in Dr. Dana's theories than truth would justify, for stating that Dr. Dana's work on muck was full of errors. But now comes another doctor, Dr. Nichols, editor of the Boston Journal of Chemistry, who backs up the RURAL and says "that book (Dana's Muck Manual) is full of errors and absurdities." Here is a justification of the editor of the RURAL NEW-YORKER, which is certainly gratifying because we who pin our faith upon its s atements are glad to see it vindicated when these are questioned. But, alas! Dr. Nichols falls into the same muck delusion, as he calls it, but in a contrary direction, in regard to muck. This gentleman even fails to realize the difference between muck and mud, for he talks about "a substance holding 70 per cent of clear sand and 30 per cent of black mold" as being muck; and also of "a farmer digging muck out of a mud-hole." Again he says muck "holds no available plant food although it coutains some nitrogen."

Now the editor of the Boston Journal of Chemistry should know what muck is. I could send him a sample dug from a depth of five feet, that he would suppose was rotten cow-dung, and that contains nothing but decayed vegetable matter and which smells so strongly of ammonia as to be pungent to the eyes and nose when freshly dug. When burned, this muck leaves less than two per cent. of a light ash. In color it is brown; in texture it is fibrous and cuts under the spade precisely as well decayed manure made of straw and dung would do. It loses precisely 70 per cent. of water when dried at 300 degrees. Now this is what I call muck and what I know to be a valuable fertilizing material. I can see it forming every year under my own observation. An uncleared part of my swamp is now covered with a dense growth of weeds and bushes, which would amount to probably 25 tons per acre. The leaves and stems of these plants fall down and decay and have doubtless grown and fallen and decayed in this manner for centuries, making a bed several feet deep. There is no mineral matter in it but what has been derived from the ashes of the burned herbage when it has been occasionally consumed, for in the bottom even I find, when digging, charred fragments of stems and thin layers of black, carbonaceous material mixed with greyish, ash-like matter among the brown mass.

If Dr. Nichols is right, then a reclaimed meadow must be a useless piece of land. Every farmer knows different. The richest onion beds in existence are made from such swamps reclaimed and cultivated, and it has passed into a proverb—viz: "as rich as an onion bed"—that rich land is required for onions. The best corn and flax lands and the richest meadows are made from reclaimed muck swamps and the muck carted from the ditches has helped to fertilize the uplands.

Now what are plain farmers to do when doctors disagree so? Here is Dr. Dana who, so far as I know, was equally competent to form an opinion as Dr. Nichols who, I believe is a druggist just as Dr. Dana was, and he says muck is very valuable, and Dr. Nichols, on the other hand, says muck is worthless. What are we to do? Are we farmers to put our thumbs in our mouths and wait for the doctors to settle this matter, which, alas! they never will. We cannot wait for that. We have our muck swamps to drain and ditches to dig and we want to use the muck. A plain farmer, too, can tell Dr. Nichols something in regard to handling muck; for he does not draw it to the barn when it contains 90 per cent of water, but digs it in the Fall when it is driest, and leaves it in heaps until it contains less water than common manure; and then he hauls it to the barn-yard and fills the pens and yards and manure cellar and stables with it and saves all the urine of his stock by this means. And the plain farmer knows that the true value of muck is actually known among farmers, however it may be among chemists. In fact, when the Boston Journal of Chemistry says "the true value of muck is well understood among chemists *or at least it ought to be*," it admits that some chemists know nothing about it. And "which of these chemists are which?" How are we to distinguish those that know from those who ought to know, but don't? In the mean time we farmers think some of us know as much as some chemists do about the practical working of our farms on which we have spent our lives.

An old and contemptibly ignorant and conceited person once wrote "How can he be wise whose talk is of cattle?" and some persons in these days are apt to think very much the same. But there was a wise man who once wrote, "Doth the plowman plow all day to sow! Doth he open and break the clods of the ground? When he hath made plain (smooth) the face thereof, doth he not cast abroad the vetches and the wheat and the appointed barley and the rye in their place? *For his God doth instruct him to discretion and doth teach him.*" And if we consider that the universal mind, the intelligence of a thoughtful and observant human being is here referred to as the teacher, is not the farmer so endowed with discretion and taught, able to distinguish, after years of practical experience, what is good and useful in his own business as well as another man who never plowed a furrow or never put a spade into a bed of muck, or used a load of manure in a field and closely observed its effect?

The truth—which always lies between extremes—is, that real, genuine muck—decayed vegetable matter, which contains two or three per cent. of nitrogen—*can* be made to yield up its value to the soil and is so made every day by farmers who know that it is a manure as much as straw is, or leaves from the woods are, when it has been brought into the right condition as straw and leaves are, in the yard or manure heap, and the cornfield will prove it every time to a farmer who has muck and uses it. S.

The "Muck Delusion."

I was sorry to see an article in "W. O. S.," September 24, under the head of "Muck Delusion," in a measure indorsed by the RURAL, as I think it will do harm in giving lazy people an excuse for not composting their manure with muck or peat when they can get it. I know by experience that it makes extra work to put two loads of muck with every load of farm manure, and have nearly three loads of manure to haul and twice the amount of crops to harvest. I have been under the "muck delusion" more than 20 years, and am more deluded than ever. I could not account for the corn at the second hoeing being a foot taller in rows manured in the hill with a compost of one-third manure and two-thirds muck, than in the alternate rows manured with the same quantity of barnyard manure, until Professor S. W. Johnson found twice the amount of ammonia in peat that he found in barnyard manure. I believe, with General Noble, of Connecticut, that the only hope of a man on a sandy farm is his muck swamp, and I aim to compost all the manure I make, and I succeed in deluding the crops as much as I do myself.

Oswego Co., N. Y. S. M. JEWELL.

[The RURAL by no means indorses all that appears under the heading "What Others Say." It merely wishes in that department to tell its readers the chief matters of interest or importance discussed by others.—EDS.]

Cheap Ensilaging.

In the RURAL of October 8, Horticola asks whether any experiments have been made in making cheap silos, and in reply I would say that Dr. Faxon, of the Sailors' Home, Quincy, Mass., ensilaged a large quantity of corn last Fall simply by digging a trench six feet deep by eight wide and as long as he required. The corn was not cut up, but laid in all one way and well trodden down. Before he commenced putting in the corn he set posts against the sides and ends of the trench or pit. Against these he laid rough boards; put in his stalks which held the boards in place. The earth was packed in between the boards and the ground. When the pit was filled four feet above the top, it was thatched by putting straw on top, and the rest of the dirt was put on it. The silo was opened in March, and the Doctor said that for all he could see it was as good as Dr. Bailey's of Billerica, Mass. This year he has put in a lot in the same way.

E. BENNETT.

COVERING WEEDS WITH A PLOW.—Mr. A. E. Boyce writes us from Hennepin Co., Minn., that the chain attachment to a plow, for covering weeds, described in the RURAL of August 20, and in the RURAL of Sept. 17 said to have been patented in 1866, and again referred to in our last issue, was fully described as long ago as June and July 1851 in the Wisconsin and Iowa Farmer and Northwestern Cultivator, published at Racine, Wis.

Field Crops.

THE POTATO CROP.

THE POTATO CROP FOR 1881 is estimated by the Department of Agriculture at about 68 per cent. of a full yield. South of latitude 40 potatoes are almost a failure, and even in some parts of Illinois and Kansas there will be scarcely enough for home consumption. Since a comparatively small area is ever planted to this crop, any shortage, caused by insect pests, drought or rot is all the more severely felt. The fact that there is oftener a scarcity of this crop than of almost any other and a consequent higher price, should encourage a larger cultivation, and thus, in unfavorable seasons, we should escape positive want in this important article of food. While there has been a great improvement in machinery for the cultivation and harvesting of other crops, there has not been so great progress in adapting labor-saving machinery to the cultivation of potatoes, and in this fact we may find one reason why a smaller acreage is devoted to them, than to corn, wheat or rye. There is a great deal of manual labor to be done in the potato field if one would attain the best results, and the average farmer prefers to raise those crops in the cultivation and harvesting of which he may have more aid from horse or steam power. Notwithstanding the labor required and the injury to the crop from insect pests, etc., in view of its importance as an article of food, of its frequent scarcity and consequent high price, it would seem to be to the farmer's advantage to increase the acreage of this crop wherever land is well suited to its growth.

The value of the potato crop may be seen by comparing the average value of the yield per acre for ten years from 1870 with that of corn, wheat, rye, oats and barley. The U. S. Statistical Abstract gives the annual average value of the corn yield per acre as $11.54; of wheat, $13; of rye, $9.02; of oats, $10.03; of barley, $16.27 and of potatoes, $49.31. This shows that the potato crop will return the farmer a much larger sum per acre than any other of the crops mentioned, and that is an item to be considered. A word on the

GATHERING and storing of the potato crop is now in season. I have quite frequently met men who seemed to think that the potato possesses some inherent quality which will preserve it sound and healthy for an indefinite time under any conditions or circumstances. Such men will, perhaps, go into the potato field just after a rain, throw out the tubers from the ground, muddy and wet, remove them to the cellar or elsewhere in a damp condition and, naturally enough, their potatoes decay before the Winter is fairly begun. Then down come execrations on the potato bugs, the weather and even the variety of the potato itself, which should have possessed better keeping qualities. It is a mistake to dig potatoes when the soil is wet, and then store them in such condition. It is time and money lost in the end. I speak now of those farmers (and they comprise a very large class) who raise only enough for their own use, or who dispose of what they happen to have left over early in the Spring. Dampness favors the potato rot, and if this one trouble can be checked it will make a very noticeable difference in the marketable potato crop throughout the country.

Carelessness in digging is another thing to be avoided; when potatoes are all hacked up with the hoe or fork, they are on the way to the pig-trough; that is to say, they will soon begin to decay and will be assorted out for the pigs during the Winter. The proper time to assort them is when they are picked up, and unsound ones should not be placed in the bin or trench with the sound ones under any circumstances. They will prove to be bad company and, like bad human company, they will corrupt their associates. A little care in placing the fork, in digging, will prevent much mischief later. Of course, where the plow or potato digger is used, similar care will be profitable, but these have not, as yet, superseded the old, back-breaking hoe. Potatoes, dug with care and when the soil is dry and removed to the cellar or pit without too long exposure to the sun, may be said to have a good start for the Winter.

STORING.—Those men who do not make it a practice to market their potatoes in the Fall, are often nonplussed as to how to store them so as to insure the most perfect results. The mound system has its advocates, so has the pit or trench method, but if a man has a good cellar under house or barn, frost-proof yet cool and dry, in my opinion he has a good place to store his tubers. The cellar has certainly this advantage, that in case the potatoes *do* rot, it may easily be known and the offending members may be removed, whereas the trouble may not even be surmised, and, if so, not remedied, until Spring, if the tubers are out-of-doors. It is not very satisfactory to find, on opening a mound in the Spring, a reeking, odoriferous mass of rotten potatoes, many of which might have been saved if the difficulty had been known. I do not say that potatoes never decay in the cellar or that they never keep well in a mound or pit, but th chances for keeping are, in my opinion, in favor of the cellar. With proper care, the potato crop, though a hard one to raise, is, nevertheless, as a rule, a paying one, and is worthy of more extended cultivation.

J. W. D.

TOBACCO-GROWING NOTES.

TOBACCO stalks make an excellent fertilizer for general farm crops. They are most conveniently utilized by applying them broadcast over pasture lands where their influence may be clearly seen from the increased vigor of the grass growing about the stalks. This grass is greedily eaten by most kinds of stock and seems to be relished in preference to that grown where other manure has been used. The stalks may be spread evenly over sod ground to be plowed down for corn or potatoes. When applied to tobacco ground, they should be cut up with a hatchet or feed-cutter and applied as other manure. In order that all of the strength from the stalks may be utilized, they should be applied to the soil in the Fall or as soon as they are freed from the leaves. When piled up in the open air exposed to storms, the elements most valuable as fertilizers are readily washed away.

WHEN it is desired to use coarse manure for tobacco, it should be applied as early as possible in the Fall and plowed under before Winter. Two additional plowings in the Spring, making three in all, mix the manure thoroughly with the soil. If the manure is well rotted, it may be applied as a top-dressing in the Spring with better results, I believe, after the soil has been plowed and harrowed and preparatory to the final fitting for the plants.

A TOBACCO grower in Tioga County, Pa., reports to me favorably of the use of hide scrapings or tanners' refuse as a tobacco fertilizer. A personal examination of his tobacco grown on soil manured with the scrapings, revealed no unfavorable symptoms in the quality of the leaf. The growth of the plant was large, but I was informed that there was danger of applying it too thickly when the tobacco is in a green state, as my friend had found from experience. The best results had been obtained from the refuse when mixed and applied with stable manure.

IT is generally advisable to plow under manure that is applied in the Fall. If left on the surface it is liable to become leached and washed by the heavy Autumn and Spring rains or during the "break-ups" of Winter. I have frequently seen water made black from having leached through manure, running in a stream from a Fall manured tobacco field. The loss at such times is great and should never be allowed a second time.

IT is not best to be in haste to take tobacco from the poles or laths, and to strip the leaves from the stalks. Let the natural juice from the leaves escape and the butts or stems become thoroughly cured before taking down the plants. This will avoid danger of stem-rot while the tobacco is in the "pack," provided the stripping is done as soon as the plants are taken from the poles. G. A. G., JR.

Chemung Co., N. Y.

Flax Raising in Kansas.

I have had experience in flax culture both in Illinois and Kansas, and find the soil of Northeastern Illinois and this Southeastern part of Kansas is well adapted to flax raising. I prefer new land, say the second or third sod, so as to have it free from weeds. I plow my ground as early in the Spring as possible, (but one should not plow it when too wet); then I harrow and roll until it is free from clods; then I sow about the middle of April. I always sow 10 quarts per acre with a broadcast seeder. It will mature in about 60 days. When ready to cut, the bolls will be brown, and the straw of a yellowish cast. I always reap with a self-rake reaper; let it lie half a day in the sun; then it is ready to stack. I let it stand in the stack until about the first of October when I thrash it and keep my seed until Spring, as I can generally get a better price about sowing time. The average yield per acre is about 10 bushels. Of late years the price per bushel in the Spring is from $1 to $1.25. The cost per acre for raising, count-

ing seed and liberal wages for all work from plowing until the crop goes to market, I find to be about $4.50. F. R.
Cherokee Co., Kansas.

Raising Flax in Kansas.

I have raised flax to some extent ever since its first introduction into this county and, I think it yields best on high, prairie soils. I plow either in Fall or Spring and harrow till the ground is mellow and level. I sow broadcast half a bushel of seed per acre and harrow once. When most of the pods are brown I harvest with a Champion Reaper; let it lie on the ground eight or ten days and it is ready for thrashing. The yield has been about ten bushels per acre on old ground and eight bushels on new ground. It is worth from 80 cents to $1 per bushel. The straw is worth about the same as wheat straw for feed. The expense per acre for raising flax has been, in my experience, from $3 to $4. J. W. M.
Coleville, Kansas.

Horticultural.

HOW TO MAKE AN ASPARAGUS BED.

PETER B. MEAD.

THE asparagus (Asparagus officinalis) is one of the oldest inmates of the garden, and was quite as much esteemed several hundred years before the Christian era as it is to-day. Its cultivation, I am inclined to think, has come down to us through the long line of ages, somewhat enveloped in mystery and superstition.

The directions sometimes given for making an asparagus bed are so elaborate, laborious and expensive, and some of them so entirely without any good reason in the nature of the plant, that I shall make no further allusion to them, but confine myself to the simpler methods now pursued in the garden and in the field. So far from an asparagus bed being an expensive luxury, I shall show in the end that no man is so poor that he may not have one, provided he has a small plot of ground on which to make it. At present I shall confine myself to the garden.

THE SOIL.—It is undoubtedly true that a light loam or sandy soil is the best for our plant, and a heavy clay about the worst in its natural condition. The soil should be free from standing water. There are few homes where such a spot cannot be found. The best asparagus sent to the New York market is chiefly grown on light sandy soils contiguous to the seashore, and in such places the plant is often found growing wild. A heavy loam will be much improved by the addition of a liberal quantity of sand.

MANURES OR FERTILIZERS.—In the preparation of the bed I confine myself exclusively to old, *thoroughly rotted* barn-yard manure, which has not had its chief goodness washed out by rains. Special or artificial fertilizers will find their proper place on the surface as top-dressings when needed, though even then I prefer the barn-yard manure.

PREPARATION OF THE SOIL.—This is done by trenching with the spade, which is a rather laborious operation, and consists, as usually done, in reversing the soil or placing the good soil at the bottom and the poor soil on the top, mixing in the manure as the operation proceeds. The following method, however, involves less than half the labor, and I have found it to be quite as good, and in some cases better. First, mark out the size of the bed, and then mark off a piece about three feet wide, and from this piece remove all the top soil to the depth of the spade, or about one foot. Next cover this open space or trench with from four to six inches of manure (according to your supply), and dig it in the subsoil, mixing the subsoil and the manure well together. If you can get some leaf mold, two or three inches of this dug in with the manure will be a valuable addition.

The next operation will be to spread from four to six inches of manure over the whole of the bed that has not yet been disturbed. Then mark off another piece three feet wide, and throw the top soil, to the depth of a foot, into the open trench mixing in the manure while doing so. There is now another open trench three feet wide, which must be covered with manure and spaded up as before directed. These operations must be repeated until the whole bed has been trenched, the last open trench being filled with the top soil that was dug out of the first trench. The surface soil, it will be seen, still remains on the surface, while the subsoil has been stirred and enriched with manure. This preparation I have found to produce quite as good results as when the soil has been trenched to the depth of three or four feet, with the subsoil brought to the surface, as is commonly recommended; and in some soils I think a foot-and-a-half quite enough. A little leveling and a thorough raking will leave the bed in good condition for the reception of the plants.

PLANTS AND PLANTING.—There is a difference of opinion as to the age of the plants to be used. I have settled down to the conviction that there is nothing better than well-grown plants one year old. They are certainly less troublesome to handle than those that are older and may be cut quite as soon. There are two methods of planting more or less commonly practiced. One consists in opening a trench about one foot wide and six inches deep, and spreading out the roots on the bottom in a natural manner; the other consists in cutting an edge perpendicularly along the line, and laying the roots along this edge somewhat fan-fashion, dividing the roots pretty equally on each side of the crown. In either case the crowns should be placed about six inches beneath the surface. The first is the better method though involving a little more labor. The trench in either case should be only half-filled up till the plants have got well above ground, when the trench may be filled up level.

DISTANCE AT WHICH TO PLANT.—On this point opinions and practices have undergone a considerable change during the past ten years or so, the tendency being to increase the distance, and, perhaps, to run into an extreme, to the waste of land. All are pretty well agreed, however, that the rows should be from three to four feet apart in field culture, the latter distance finding much favor in sandy soils. Wide planting in the field has manifest advantages in the use of labor-saving implements, and the plants yield better and live longer than when huddled together in the old way. In the garden, however, I prefer closer planting, say two feet apart for the rows and a foot-and-a-half between the plants in the rows as the minimum distance. For large-growing kinds, like Conover's Colossal, I would increase these distances six inches and a foot. The planting may be done in the Fall or in the Spring, and it is well to prepare the beds in the Fall even if the planting should not be done until Spring.

For field culture the ground is generally prepared by using the subsoil plow, the aim being thorough and deep preparation and a liberal use of manure.

MAKING BEDS FROM SEED.—I have already reached the limits assigned me, but I must, nevertheless, add a few words about my experience in making asparagus beds from seeds, which to some will probably be the most useful part of this article. I will do it with all possible brevity. I have really never had better beds than those made by sowing the seeds where the plants are to remain, with a gain of a year at least in the time of cutting, besides the saving of much labor. The bed being prepared as above directed, stretch a line and draw a drill six inches deep, throwing the earth on each side like the furrow made by a double mold-board plow. This drill can easily be made with a spade, the soil being drawn or pushed to either side till the required depth has been reached. The drill should be six inches deep measuring from the *level* surface of the ground, and not from the top of the soil thrown out in making the drill, as is commonly done in making drills. Sow the seed in this drill, and cover two inches deep. When the plants are about three inches high, thin them out to the proper distance apart, and gradually fill up the drill as the plants increase in growth.

This is a simple way of making a bed, and the second year the growth of the plants will surprise you. If you have choice seed, and not much of it, look it over carefully, reject all that are bad, and then put two or three together at intervals of 18 inches or two feet, or where a plant is to remain, all but one being pulled up when two or three inches high. If the surplus plants will not come up without disturbing the roots of the one that is to remain (as is often the case), they should be cut out. In this way a small quantity of seed may be made to go over a large bed.

If your bed has not been prepared, and you wish to sow the seed for future use, enrich a piece of ground, draw drills a foot apart and two inches deep, sow and cover the seed, keep the bed clean, and transplant to a prepared bed when the plants are a year old. The seed should be sown as early as possible in the Spring. Late sowings sometimes fail. Begin weeding as soon as the plants can be seen.

The space between the rows of young plants in a new bed of asparagus may be utilized by growing a crop of lettuce, radishes, beets or other low-growing plants; but it is not wise to continue this beyond the first year, except for the radish and lettuce. These plants must be kept well away from the asparagus, and the bed kept entirely free from weeds. A good deal of the future success of the bed will depend upon a free, uninterrupted growth during the first year.

I hope I have simplified somewhat the manner of making an asparagus bed. Its future care and treatment, however briefly told, would require space enough for another article, which I may give if it should be deemed necessary. [Please.—EDS.]

RURALISMS

IS IT to be a real outgrowth of a genuine love and taste for flowers in their simple and natural beauty, or only a craze or a passing fashion? Be that as it may, another "weed" has found a place in the ladies' corsage. The Golden Rod (Solidago) has been freely used by ladies during the past Summer and Autumn for belt and corsage adornment, and I am bound to say that I have seldom seen them use any flower in a more graceful and becoming manner, especially when the complexion and the dress harmonized with the color of the flower. I remember one case where I thought the arrangement simply exquisite, being influenced, it may be, by the fact that the young lady was very beautiful and dressed with rare good taste. I am trying to think how far it will be wise to encourage this sort of thing with the ultimate view of making some kinds of weeds rare. The thought is rather perplexing.

THE Fair of the American Institute is now (Oct. 3) under way. On September 3d the first weekly floral exhibition was held. The terrible drought marred it greatly, and the horticultural exhibits generally were not up to the usual standard; but there were two objects of such rare excellence and so rarely seen in good form as to make up for many shortcomings. These two objects were a *real* dinner-table design and a funeral design. The New York florists make up some very beautiful things, and their mechanical execution is worthy of all praise; but their conceptions of what a dinner-table design should be are greatly at fault. Mr. Davidson, two or three years ago, at an exhibition of the New York Horticultural Society, presented a dinner-table set conceived in the best taste; and now Miss Lizzie Bennett, of Brooklyn, exhibits at the American Institute a center-piece for the dinner-table conceived with rare good taste and finished up with those light and graceful touches which it is generally supposed only a woman's hand can give. It was just what a dinner-table piece should be, light, airy and very graceful, and that is all that need be said. In dining out nothing can be more provoking than to be seated opposite a lovely and entertaining woman and be divided from her by a great, solid mass of flowers that you cannot see through, or over, or around; and it is almost as bad to have a great mass of flowers sprawling all over the table, sadly interfering with all comfort and pleasure in eating.

IT so happened that the funeral design alluded to above was also from Miss Bennett. This design was the very perfection of simple beauty, being neither more nor less than a cross with diagonal arms, camellia leaves, and the white, fragrant flowers of Eucharis Amazonica; but a pure taste had given to these few and simple things such a grand expression of grace and fitness as to make one feel that it was altogether such an offering as the loved living might place on the grave of the loved dead without offense to God or man. It was so different from the great, clumsy, uncouth, expressionless objects that too often mock the solemnity of the grave, that it is worth while to stop a moment to notice it. It was the best funeral design I have ever seen. A score or two of men might take the same material and copy the design, and yet fail to fully produce the same effects. The hanging of the festoons of the Eucharis would be their weak point, while it was Miss Bennett's strong one. I hope they will try, however.

I HAVE noticed with pleasure that the Sheldon Pear has been growing in favor with the public for several years past. This Fall it has been abundant in the New York market, and has sold well. It is one of our best pears, and deserves all the favor it promises to receive. Every year the pear is becoming a more popular fruit.

I AM indebted to my old friend Mr. Wilder for an early copy of his address before the late meeting of the American Pomological Society. It is evident that age has not abated one jot of his interest in the great work of his life. The address is written with all the vigor and enthusiasm of youth. HORTICOLA.

REMARKS AND COMMENTS.

I REGRET very much that I have not the pleasure of being personally acquainted with "Horticola," as from his instructive notes in the RURAL I consider him one of our most skillful horticulturists, as well as a close and very accurate observer. On this account I dislike to "cross swords" with him; but what does he mean by saying that "roofing slate and cedar shingles make the best mulch for strawberries he ever used?"

WILL "Horticola" please be so good as to give a few notes descriptive of the Caroline Raspberry? How does it compare with the other varieties in hardiness? Has it been tried at the Rural Farm, and if so, with what result? [It is one of our most hardy and productive kinds, and there is scarcely another raspberry—certainly no other yellow variety—that we more confidently recommend to Mr. Parnell and to our readers in general.—EDS.]

THE SPANISH CHESTNUT is rather tender when young, and in such a severe Winter as the past one it must be expected to be injured, especially when grown in an exposed situation; but when the trees become large they pass through our severest Winters without sustaining any injury. I advise all who contemplate planting this chestnut to plant in the Spring. Cut the trees severely back and give them a thorough mulching before the middle of May, and be careful to select good and strong plants with an abundance of fibrous roots, if planted in an exposed situation. Small trees will do well if planted in a sheltered place, provided grass and weeds are not permitted to grow around their roots. In good garden soil this species grows with the greatest rapidity. I have a tree that is over 20 feet high, which I raised from a nut planted in the Fall of 1875. This has received no special care or attention. I have also a noble specimen over 40 years of age, which is over 38 feet high, with wide-spreading branches; it measures 11¼ feet in circumference one foot from its base. The fruit is large, but of rather poor flavor when eaten raw. Before it is eaten, however, it should be cooked, which considerably improves the flavor.

OUR native chestnut trees have only a very few burrs on them this season. Chestnuts will be very scarce in this vicinity.

HORTICOLA remarks, page 562, that strawberries rotted badly the past season on account of the wet. Mine were mulched with wheat straw, and it would have been a difficult task to have found a rotten berry, excepting those the birds injured.

IT SEEMS very singular why the Ott Pear is so very variable. I have three trees from which I obtained three bushels of excellent pears, so far as size is concerned. Of these 2½ bushels were of fine flavor, while the other half bushel, obtained from another tree, were worthless on account of their indifferent flavor. As my trees are not over 600 feet apart, and are in all respects treated in the same way, I am at a loss to account for this difference. Can it be that it arises from having two varieties of this pear in cultivation, or is it due to local causes? The tree is of moderate growth and remarkably productive. The fruit is small, of a greenish-yellow marked with russet, and of a rich, sugary flavor.

ON AUGUST 26 I picked all my Rostiezer pears. From one small tree I obtained three pecks of fine fruit. It is of medium size and of an exceedingly sweet and pleasant flavor. The tree is of vigorous growth and a profuse bearer. In season from the middle to the end of August. The size and quality of the fruit are greatly improved by judicious thinning when the fruit is about half-grown.

WITH the exception of Seth Boyden, all the other varieties of strawberries continue to stand the drought remarkably well; but I think that young plants will be scarce next season, in this vicinity at least; my plants are producing no runners.

THAT excellent pear, the Wadleigh, I think originated in New Hampshire. Be this as it may, it is an excellent sort and should be brought prominently into public notice. Indeed, I do not recollect seeing the name even mentioned in the nurserymen's catalogues or horticultural publications, but I am in hope that this brief note will induce some of our amateurs at least to give it a trial. I am certain that they will not regret so doing. The tree is of vigorous growth and is remarkably productive. The fruit is of medium size and of a roundish shape, with a beautiful yellow skin and a rich, juicy, delicious flavor. It is in season the last week in August. [J. J. Thomas speaks of it as "melting, juicy, very good. Origin, N. H." A. J. Downing says of it:—"Flesh white, fine, a little gritty, juicy, melting, pleasant; September. Origin, N. H." —EDS.] CHAS. E. Parnell.
Queens Co., L. I.

Testing Tomatoes.

Being desirous of testing tomatoes as to earliness, adaptability to market, etc., I purchased, last Spring, in New York of the leading seedsmen, a packet each of 30 varieties,

embracing nearly all now offered to the public. Little Gem ripened 10 days in advance of all others. Red and Yellow Cherries came next in order. For market Acme and Livingston's Perfection take the lead, being very smooth, of good shape and ripening all over without green spots. Excelsior and Arlington are also fine tomatoes for market. To those who like a yellow tomato I would name Golden Trophy and Green Gage as the best of their color. Conqueror failed to conquer a single point, dropping all its fruit as it began to color. French Erect or Tree Tomato stands erect about 18 inches high and has set some fruit which has not ripened at this date. [They are very late, irregular in shape, and have little to commend them.—EDS.] I have raised 15 bushels of sweet potatoes of Bliss's Early Golden, Peabody and Southern Queen. Early Golden, nearly white, and Peabody, red, are about the same in point of earliness and productiveness. O. L. H.

Springfield, Mass.

The Vineyard.

THE NIAGARA GRAPE QUESTION.

MR. BENSEL'S REPLY TO MR. WOODWARD.

TAKEN severely to task by the Secretary of the Niagara Grape Company in the RURAL of the 1st instant, because I had the temerity to express, in a previous number, an opinion adverse to the interests of that Company, it seems necessary that I should say a few words to set myself right before the public.

I am "a plain, blunt man," not a propagator, and I have no money interest in any fruit specialty. My garden is a city plot, "thirty-five feet front," in which I grow a few grapes, a few peaches and a few pears; but my experience with fruits has been gained only by long, close observation and the spending of much money. Thus much can probably be attested by the veteran, Mr. Peter B. Mead, and one or two of my neighbors not unknown to pomological fame. So, the grand hits which the Secretary imagines he has made fall harmless to the ground.

The main point which I insisted on in the previous article, was that objectionable fruits should not be imposed upon the public simply because of the ignorance in regard to better varieties. We have plenty of the "good-enough-for-market" grapes before we come to the Niagara. The Concord and Hartford Prolific are of this sort, and they are *cheap*, as growers are now finding to their cost.

The "vineyard not far from New York"—only seventy-five miles—was visited by myself and a friend a few weeks since. As yet it is only a *plantation*, the roots having been set out last Spring. Mr. Rogers, the owner, is a gentleman, and should not be drawn into controversy. He has a right to spend his money as he chooses, and he certainly has large faith in the *selling qualities* of the Niagara Grape. He brought to the Highland Fair a basket of Niagaras direct from the grounds of the Company, which I thought were not ripe, and so exacted from him a promise to mail to Mr. Downing a cluster picked from the vine on the 15th of October. The Niagara is not an early grape, and would not be better if possessing that peculiarity; for, if left late on the vine, it may pass a portion of its foxiness into the air, but there will be enough remaining, according to my experience of last year, to place it far outside of the list of good grapes. If my offense has been rank in disclosing serious objections to the Niagara Grape, it must have arisen from handling so rank a subject without gloves.

The fling of the Secretary at Hudson River seedling grapes he must himself consider in bad taste, when he recalls the richness and fine qualities of the Iona and Israella, the Quassaick and Jefferson.

I will only add that exhibitions of spleen towards individuals, like that shown by J. S. Woodward, Secretary, etc., give no additional weight to argument, and are not generally employed by the gentlemanly correspondents of the RURAL NEW-YORKER.

Newburgh, N. Y., A. A. BENSEL.

[It always seems to us that where earnest, honest agriculturists or horticulturists are aiming to place the truth before the public, there need be no personalities or unkind feelings entertained or expressed, even though a wide difference of opinion exists. EDS.]

WE saw several bunches of the Pocklington Grape one day last week. The bunches and grapes were of extra-large size and the quality decidedly better than that of the Concord.

FOREIGN AND AMERICAN WINES.

Reply to a "Trade" Journal.

"THE American Wine and Grape Grower" makes objection to our remarks made some time ago on the subject of the purity of foreign wines, or rather their impurity, as compared with the product of our native vineyards. We profess to be surprised at the statements made by our respected contemporary, which claims by its name to represent the interests of American grape growers and wine producers rather than those of the dealers in foreign wines. As to the figures given by us representing our native wine product, viz. 6,000,000 gallons yearly, we have only to say that it is an estimate based on the reports of the Agricultural Department and not upon bare guess-work. In 1870 the product was reported at 3,000,000 gallons, and it would be a hazardous guess, which would make our product to be "25 to 30 millions annually of *late years*." Such a surprising jump from 3 to 30 million gallons at a bound, is quite beyond the probability, and we prefer at present to consider our own figures, viz.: Six million gallons, to be correct, rather than those of the American Wine and Grape Grower. If we should be wrong, we should rejoice to know that this industry, at present beyond reproach, has flourished so amazingly.

But the main point involved is still more clearly correct, as we have stated it. The evidence is unimpeachable. Common report, based upon incessant statements in the public prints; common knowledge of supporting facts; the confessions of foreign journals interested in French agriculture and viticulture, etc., and we might mention, the frequent advertisements in technical papers of flavoring, coloring, and reinforcing substances used in the trade, that prove to outsiders even what is going on within—all support our statement, which in fact was but mildly put.

Further, we have personal knowledge of foreign persons who have introduced into this country the business of manufacturing wines of various sorts from the basis of common alcohol, elderberry juice, gooseberry juice, and other stuffs and coloring and flavoring matters, and who occasionally appear as advertisers in newspapers for partners with capital to carry on this business. This is not an American industry. It did not grow here, although since its introduction it has taken root extensively and is engaged in supplying this market with "French" wines which were formerly imported. A reference to the files of that excellent journal, *Journal d'Agriculture Pratique*, would show conclusively that the fraudulent manipulation of wines is a constant industry in France, and that that journal has taken frequent occasion to remonstrate with French vineyardists against the general practice of coloring their wines with a poisonous substance derived from aniline, and which is declared to be destroying the French wine business. We don't feel inclined to disregard the report of the examinations made by the Parisian authorities to which we referred. These examinations were not confined to the common saloons, *cafes, cabarets* and wine-shops, but to all places where wines were sold, both of high and low degree, and they are therefore fair and impartial evidence upon the case.

Lastly we *know* from our own personal knowledge gained some years ago at the centers of the French wine productions, when virtue had not fallen to so low an estate as it now has, that unusually poor wines were largely made up for foreign markets, and in one especial case we recall a knowledge of a cargo of Bordeaux wines shipped to New York, which were invoiced at the impossible price for pure wines of 75 cents the dozen bottles. We by no means wish to represent all French wines as "sophisticated abominations," but knowing many facts regarding the scarcity of really pure wines, and believing the statements of responsible French journals, we prefer to decline "to take any French in ours" so long as we can procure American wines that have not yet come under the manipulators' hands. And so long as we can believe that our wines are pure we should prefer them for ourselves, were we to drink wine at all, and advise others to prefer them for their healths' sake as well as for patriotic and philanthropic motives. We regret to have to differ with the American Wine and Grape Grower upon a matter of such serious importance as this of which we are telling only the bare truth. But the truth should be told.

The Swine-Herd.

WINTERING PIGS.

THERE can certainly be very little profit in having pigs come in the Fall and being obliged to feed all Winter and Summer, or a whole year before fattening for market. Pigs that come early in the Spring and are pushed along all Summer and Fall and are ready to market in December, pay the best. This is especially true when feed is scarce and high. Last year this was the case—a partial failure of the corn crop made feed rather high and pigs that were kept over and have to be fattened now, at present prices of corn and pork, will prove a losing investment. Corn at the present time is selling at 65 cents a bushel and pork brings five-and-a-half cents per pound gross, so that there is an exceedingly small profit in turning corn into pork, and pigs that have been kept over will hardly pay for their feed.

Pigs cannot be stunted except at a loss. Stunt them once and they never fairly recover from it. To make a profitable business of pig raising and fattening, they must be kept growing from the start, or you are losing money all the time they are not growing, and the larger the pigs or hogs are the greater is the loss. When feed is as high as it is at the present time, there is not only great danger of slighting, but almost an irresistible temptation to feed as little as possible, and in this way stock will not make the growth they should, and when this is the case there is a per cent of loss that no amount of extra feeding afterward will fully make up.

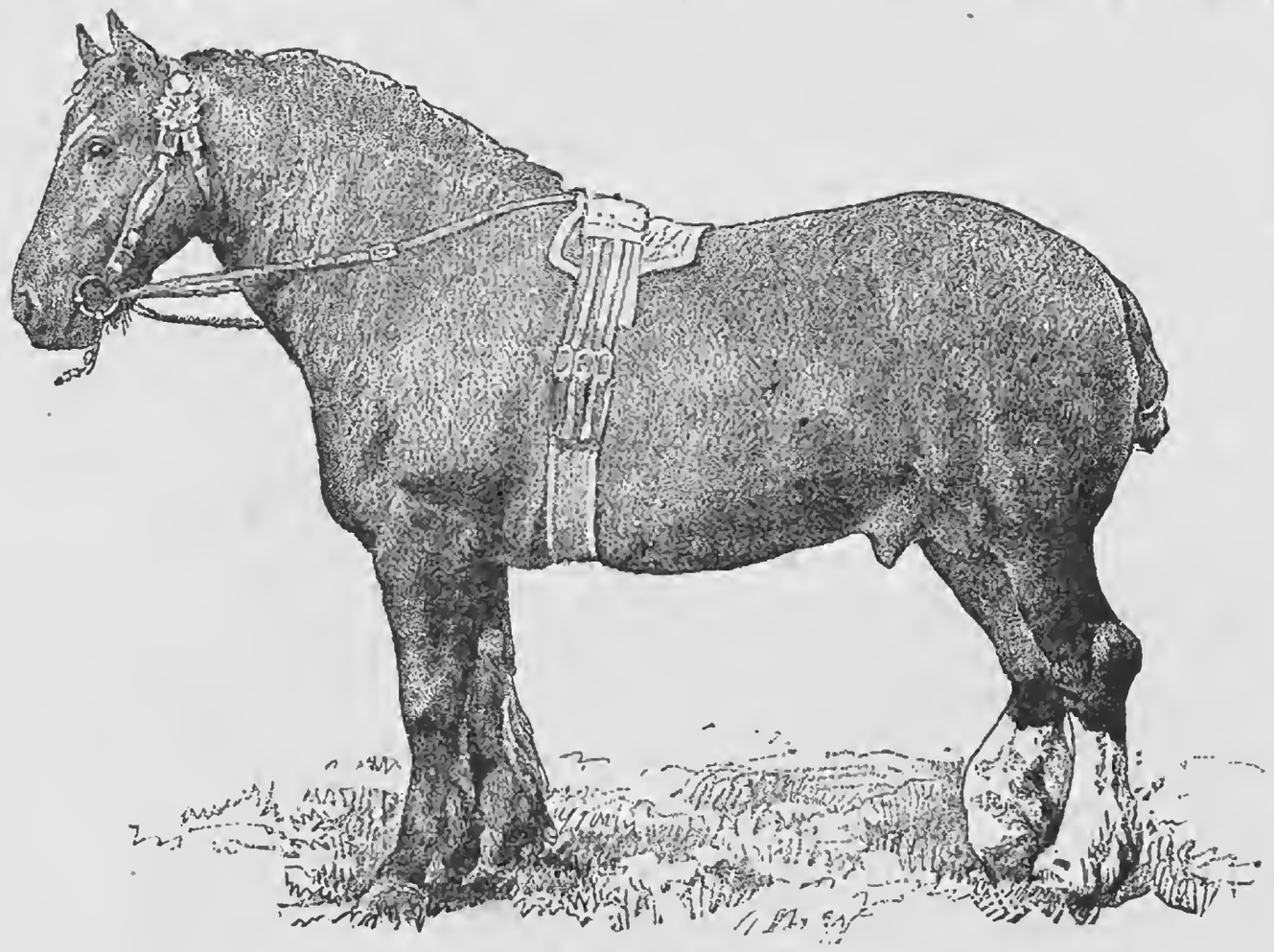
It is upon this basis that many farmers who are scarce of feed are now offering to sell at very low prices young stock pigs, rather than feed them through the Winter at present prices. Very few have corn over and above what will barely feed their stock through the Winter, and the amount of pork or beef fattened for market will be comparatively small; much below the average and will, as a rule, be marketed as early as possible. It should be borne in mind, however, that while the large number of hogs that will be thrown on the market this year on account of scarcity of feed, must lower prices, the very same cause will tend to raise the price of hogs next year by causing a scarcity of them; thus all who can keep their hogs will get good prices next year.

Miller Co., Mo. N. J. SHEPHERD.

The Horseman.

THE CLYDESDALE STALLION POINTSMAN.

FROM our English exchanges we notice that the Clydesdale horses are being largely introduced into England where their rivals in this country, the Percherons or Percheron-Normans, strange to say, have never gained a foot-hold. In the accompanying engraving we present to our readers a likeness of the Clydesdale stallion, Pointsman, winner of the second prize at the late Royal show at Derby, and bred and owned by Mr. James Whyte, of Aldborough Hall, Darlington, Durham. Of the portrait the London Agricultural Gazette, from which we have re-engraved it, says: "Barring possibly a slight disproportionate dwindling of the hind-quarter—the slighest relative diminution of dimension there—owing to the position of the animal before the lense of the photographer, this appears to us a very excellent and life-like reproduction of the animal." Either English horsemen do not bestow so much care as Americans on producing a sleek, well-curry-combed and plump appearance in their horses before posing them before the photographer's lense, or else the American artists are more inclined than their English brethren to prefer a handsome appearance to a truthful representation.



CLYDESDALE STALLION, POINTSMAN.—FIG. 494.

Implements, &c.

THE PERFECT HATCHER.

(For Illustration, see page 717.)

WE give herewith an illustration of the Perfect Hatcher, which is one of the latest improved machines for artificially hatching chickens. As old as this art is, it has never been attempted to be perfected until within the last score of years. Within that time the nature of the process of egg hatching has been very closely studied by intelligent experimenters until the art of artificially producing the chick from the egg may be said to be practically mastered; that is, machines have been so perfected and adapted to the business that with very little care, intelligent management, and a reasonable amount of watchfulness, a larger percentage of eggs can be hatched than with hens in the usual way.

In handling this machine—and still more in handling others—the beginner must bring to his work a certain amount of mechanical "gumption" and patience. To make a complete success of it he should also know a considerable about hens and their ways. In the first place, the eggs should be fresh beyond a doubt. They should go into the machine as soon as received. The machine itself should be in perfect order and kept in that condition. Constant vigilance is necessary to see that no spoilt eggs are left in the machine to destroy the purity of the air over the healthy eggs. In fact, all the instructions that arrive with the machine should be carefully and intelligently followed, and then a satisfactory issue to the undertaking may be confidently looked for.

We have seen the Perfect Hatcher in full running order, turning out the chicks by the hundred daily. We have also taken some of the chicks home and raised them to fine, healthy fowls. From what we have seen of the operation of a hatching machine, there need be no fear of a want of success in getting the chicks in fine, healthy condition from a fair proportion of the eggs put in the machine. It is our belief that, with the proper appliances, at least a third more chicks can be raised by hand than with the best method of hen service. This will, however, require the most constant and unremitting care and attention, and in order to have the great essential among the proper appliances spoken of, the temperature of the air where the chicks are kept should never fall below 75 degrees or go above 100 degrees. If these conditions can be faithfully kept there need be no fear of raising chicks in Winter as well as in Summer and in any numbers desired. The Perfect Hatcher is as nearly automatic as any machine yet invented, and we believe that in hatching it is not excelled by any machine in the market, and that in the hands of a reasonably careful person, who can command an equitable temperature to work in, it will prove a profitable success.

THE GIANT ENSILAGE CUTTER,

THIS machine is made by E. W. Ross & Co., Fulton, N. Y., who have had 25 years' ex-

perience in building cutters. Like all the work turned out by the firm, this cutter is made of the best material and in a thoroughly workman-like manner. It is of extraordinary strength, weight and capacity, and admirably adapted to fulfill the requirements of evenness of cut, great durability, enormous capacity, and ease of feeding essential in a good ensilage cutter. Apart from these advantages, the special claim is put in for it, that, while the knives of downward-cutting machines are always rapidly "dulled" and often broken by cutting down upon the gravel, stones and other grit, which are always to be found, more or less, in hay, straw, stalks and other fodder, the four spiral knives of this machine, cutting upward, escape this injury, as there is a space in front and rear of the rollers through which objectionable matter drops, being loosened by the rollers, so that fodder goes to the knives free of all grit, etc. Our agent has often seen these machines in use and assures us that in every case they were proving highly satisfactory. While the Giant Cutters Nos. 18 and 26, run by sweep power or a small agricultural engine, are designed especially for cutting ensilage, seven smaller sizes of cutters are made by the same firm for cutting other sorts of fodder. Indestructible chain carriers as well as extension tables are also furnished to order. Full descriptive circulars and price lists will be supplied on application.

Miscellaneous.

RURAL BRIEFLETS.

We have received several samples of wheat from Mr. R. Parkhurst, of Missoula Co., Montana. Of one variety he says:

"It is a wheat known here as White Aouse or Aowse which is now generally raised by our farmers. When fully developed the kernels are much larger than those of Oregon Club, specimens of which I also forward, and it yields more than any other variety we have ever tried. I have found here a head of the Club Wheat containing 120 kernels and a single stool containing 190 stalks, all from a single kernel. I also send some specimens of the Washington Oats raised here from the RURAL seed."

We do not know of any wheat by that name; but it closely resembles the "White Fountain" which we have been raising at the Rural Farm for two years, originally from Spring seed. We take it that Mr. P.'s samples are from a Spring-sown crop. These heads average nearly six inches and about 10 breasts to a side. The remarkable part of them is that each breast contains from *five* to *seven* kernels of large size. We would feel much obliged to Mr. Parkhurst if he would send us (at our expense, of course), a quart of this seed in time to sow next Fall. An illustration of White Fountain will appear in the RURAL in due time, so that our friend will have the opportunity of comparing his White Aouse with it. One panicle of his Washington Oats measures one foot and 10 inches and bears 329 spikelets; the other measures 18 inches and bears 293 spikelets. These remarkable panicles may be seen at the RURAL office.....

Our friend-indeed and quondam neighbor, the A. A., has been turning itself inside out, and making a commendable endeavor to change its thrice-told-tale aspect. Now let it affect—if it can not feel at heart—a liberal-minded course and we should hope for it a more prosperous and influential career. As an evidence of this let it first of all give credit to the RURAL NEW-YORKER for the changes which have so much improved its appearance and reading matter. Copying, you know, good A. A., is the sincerest evidence of admiration. Now, be frank—just once to see how it seems, and speak out—like a little man—your admiration.....

"OUR attention was called to the remarks on Wheats in the RURAL of a late date by a friend. And we see you are still of the opinion that "Black-bearded Centennial" and "Golden Grains" is the same wheat. We send you by to-day's express a package containing heads of "Golden Grains," new crop; please to examine the same and oblige yours truly. You will not find any Blackbeard about them. Because there is "a similarity" between the two wheats is no reason why you should jump at conclusions. One is black and the other is white, and "Golden Grains" is a *larger grain* and a different-shaped berry from the "Centennial Wheat." We trust you will do us the justice to notice the difference in the next issue of the RURAL. Respectfully, S. Y. HAINES & CO.....

In a previous communication, in reply to our letter of inquiry, Mr. Haines refused to give us any light as to the origin of "Golden Grains," but he stated that the Black-bearded Centennial and "Golden Grains" were "as different as day and night." Now he admits they are similar. The two heads sent to us by Mr. Haines bore white beards. That is no proof that the variety is not Black-bearded Centennial. At least one-quarter of the heads of our plot of the latter bore white beards. The grains of Mr. Haines's samples were compared with Black-bearded Centennial grains sent to us by Professor Blount. The shape was not precisely the same, though the difference was less than that we have observed in others of the same variety grown in widely-separated regions. Other samples of the kernels of Golden Grains could not be distinguished from those of the Black-bearded Centennial. Mr. Haines is mistaken also in saying that they are larger.....

We observed another difference, viz., that the breasts of the "Golden Grains" were closer together on Mr. Haines's samples than upon those either of our own or Prof. Blount's Centennial. But this variation often occurs even in the same field of wheat. In the "wholesale price list" sent out by Messrs. S. Y. Haines & Co. to seedsmen and dealers some remarkable statements are made. It says: "The size of the grain is ENORMOUS, fully three times as large as our best common wheat!" Inasmuch as the grain is no larger than that of Black-bearded Centennial—supposing them to be different kinds—this statement is erroneous. It also states that it is "the heaviest grain" to the bushel. This is also erroneous, since it weighs but 62 pounds. It also states that "Golden Grains makes the finest flour in the world!" This is absurd. It is a *soft* wheat and deficient in gluten. How have S. Y. Haines & Co. ascertained that "it makes the best flour in the world?".....

Messrs. Haines & Co. sell this "Wonderful Golden Grains" or "Palestine Mammoth Wheat" the present season to *seedsmen* at "40 cents per pound, net." If it is *not* Black-bearded Centennial and is all that the firm claim for it, they have a right to fix their own price and give it the name of "Golden Grains," provided it had no name. But in so far as we are enabled to judge from careful observation and inquiry, this Golden Grains is Black-bearded Centennial; for which reason we have endeavored to guard our readers against imposition. Should it appear that the RURAL is mistaken in these views, we shall hasten to make it known. That, however, the similarity between the two grains is *very* close there can be no doubt whatever.....

A FEW days after writing the above, we selected from our own crop of Black-bearded Centennsal two heads bearing white beards. The beards of one head were pulled off and the two heads forwarded to Messrs. S. Y Haines & Co. with the following note of inquiry:

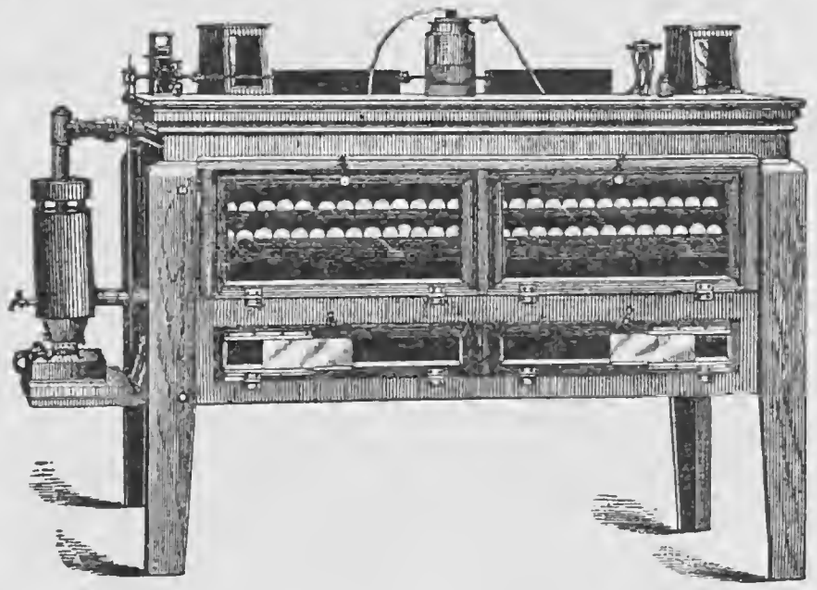
"We send you two heads. Which is Black-bearded Centennial—which Golden Grains, if either?"

The following, received the 12th inst., is the reply:

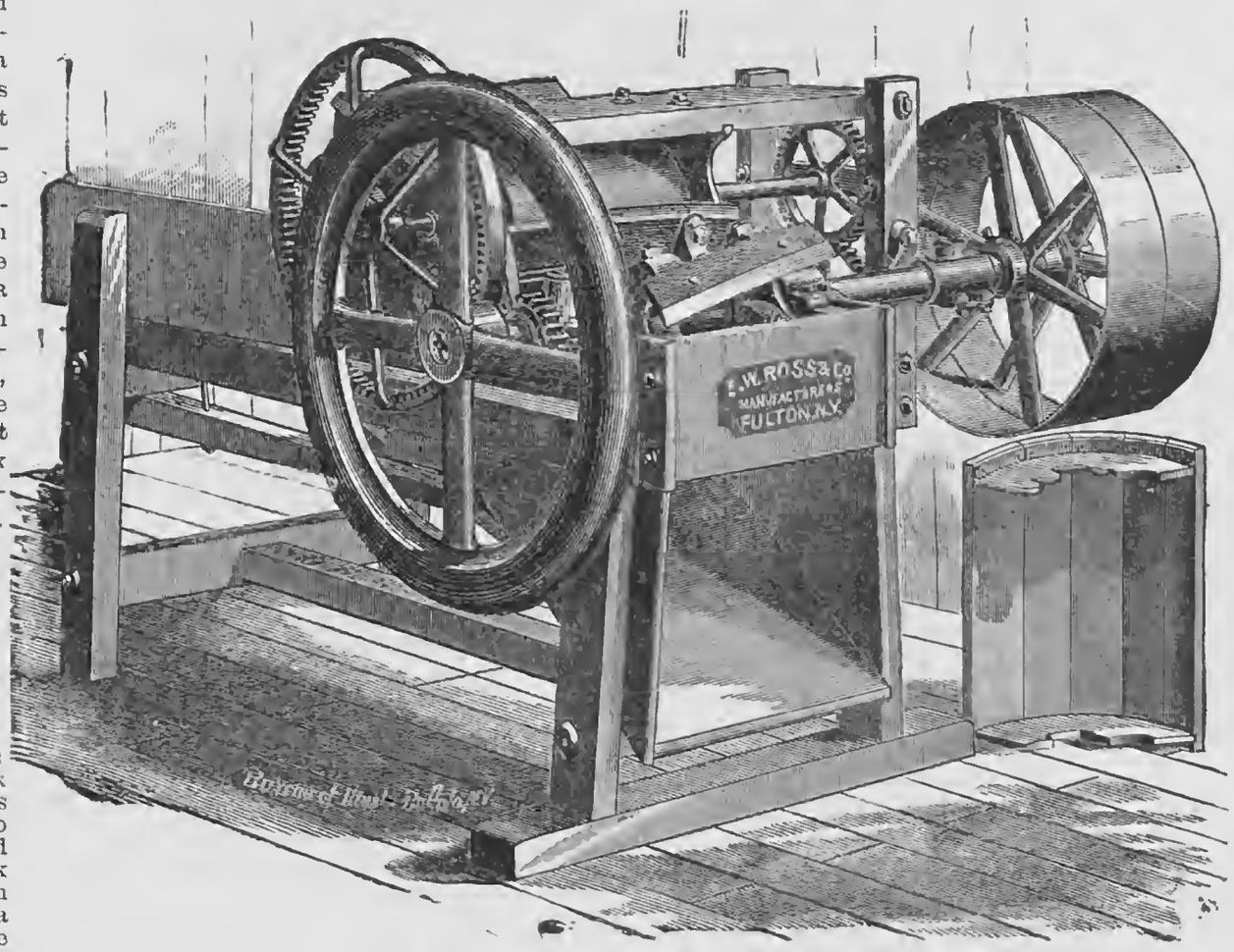
"We are somewhat puzzled over the heads of wheat sent us to examine. The shape of the grain is like Golden Grains, but if you will compare the heads with what we sent you, you will find a difference between them. The mesh is not the same, neither is the grain as good; probably this is a poor sample head you sent. We would like to know about the two wheats, or if they are one and the same thing—because we introduced our wheat three years ago. This makes the fourth season. We procured seed from the Willimette Valley, Oregon, and from a reliable party. The first we have heard about Centennial or Black-bearded Wheat has been the past two seasons. Please to give us what data, etc. you have, and let's trace up the history of each. The heads you sent are the first thing we have seen approaching ours; but we would like a little more information on the subject.

S. Y. HAINES & Co."

We have only to add that we have not succeeded in our endeavors to trace the history of Black-bearded Centennial and would be glad to receive any information in the matter. Messrs. Haines & Co. seem no longer to press their statement that the two kinds are as different "as day is from night" and we are glad they are now willing that we should know as much about it as they.....



THE PERFECT HATCHER.—SEE PAGE 716.—FIG. 495.



GIANT ENSILAGE CUTTER.—FIG. 496.

What Others Say.

INDIAN CORN.—Prof. Beal begins a lecture on Indian Corn by stating that he knows very little about it. Then he goes on to prove to the audience that he knows a good deal about it—from which we have a right to conclude that Prof. Beal knows very little about what he does know. We make a few brief extracts:

Indian corn is the most beautiful crop raised on the farm, whether we consider the grain as shelled and ready to feed or to market, the white or golden ears as they fill the farmer's crib, or the majestic sub-tropical stalks as they grow in their leafy luxuriance during the heat of Summer. From the blade to the full corn in the ear it is full of mystery, beauty, and promise. In the words of C. A. Green, "The corn-field is grand to look upon in its glory in August. It resembles an army of tasseled knights, decorated gracefully with ribbons, each member of which sports a silk pocket handkerchief." * * * * The plants of the grass family are of more value to man and his domestic animals than all other plants combined. Of all the cereals, wheat is the most valuable for food, rice feeds the most people, while on account of the ease with which it can be raised Indian corn supplies the greatest number of wants. Our kinds of corn are very numerous and variable, but they are, most likely, all derived from one species.

* * * * The tallest full-grown stalk of corn which I have seen grown in Michigan was fourteen-and-a-half feet high. The seed came from Missouri and was planted in 1880 by William Gladden, of Lansing. Mr. C. L. Flint, Secretary of the Board of Agriculture in Massachusetts, says that a stalk in Eastern Tennessee measured twenty-two feet and three inches in length. One at the Centennial Exposition, from Kansas, was said to be seventeen feet high. * * * * The largest ear in the museum of the Agricultural College has eleven-and-a-half inches of corn, is three inches in diameter at the base, two-and-a-half inches near the middle, two-and-one-fourth inches near the top. There are twenty rows of corn, with about sixty kernels in each row The ear was raised on Long Island on the Experimental Farm of the RURAL NEW-YORKER, and is a yellow dent, known as the Chester County, Pa., Mammoth. * * * * From the point of view of chemical composition there are, broadly speaking, two kinds of Indian corn, the common and the sweet. The greater richness of sweet corn in albumenoids and fat is very decided, and indicates a higher nutritive value than that of common corn. Sweet corn in all the analyses contains more ash, more fat, and less carbo-hydrates than common corn. Flint and dent corns have, in the gross average, practically the same composition, as will be seen from the comparison of 31 flints and 19 dents. Western corn has also, in the gross average, about the same nutritive value as Eastern corn. The ripe grain as a crop contains absolutely more of every ingredient than the unripe. * * * * The extremes of time required for growing corn to maturity, so far as I know, are 70 and 200 days. The small yellow pop corn, which grows from two to two-and-a-half feet high, often ripens in 20 days, and perhaps less, while in the Southern States corn often requires 200 days for growth and maturing. Climate has a wonderful effect on corn. Prof. Shelton, of Kansas Agricultural College, sends corn to the Michigan Agricultural College which has been raised there for three years. It went to Kansas as King Phillip, it comes back well marked with dent. He says it is the effect of the climate and is not due to crossing with dent corn. * * * * * Every one undertaking to improve corn should study the best that has been written on the subject, have his ideal of perfection, and then strive to reach it. In some one or more departments of agriculture every farmer should strive to excel. The improvement of some variety of corn has scarcely begun to attract the attention which its importance demands. Some results are quickly reached and the subject grows in interest with study. * * * The construction of silos in which to keep ensilage till needed for Winter use is receiving much attention, and we shall very likely soon know whether or not it is a profitable way to keep fodder. If we only wait a little, the book farmers or fancy farmers too often sneered at will soon solve this important question without any expense to the practical farmer who does not believe in wasting time and labor on experiments.

FIGS IN MAINE.—Our bright young contemporary, The Home Farm, of Augusta, Maine, says that figs grown in Maine were among the curiosities shown at the recent exhibition of the State Pomological Society. They were grown by Mr. F. O. Frost of Monmouth, who called them Brown Turkey Figs. They were grown on trees set in the garden, the trees being given the same care that one would give apple or pear trees. They yield two crops a year; and Mr. Frost showed specimens of both crops—one fully ripe and one about a quarter grown. The trees are taken up in the Fall and the dirt shaken off, when they are placed in the cellar and receive no care till again set in the ground in Spring.

MR. C. M. Hovey, writing of the maples in the Mass. Ploughman, cannot omit the mention of one called Wier's Cut-leaved, an accidental variety of the White Maple, found by Mr. Weir of Illinois, among his seedlings. It has a slender, drooping habit, and the leaves

are most delicately and finely cut or divided. It is a very ornamental tree for lawns or flower grounds.

ALL ye who are thinking of seeking a new home, listen to this good piece of advice from Henry Stewart. We fully indorse what he says:—No person who intends to change his locality and mode of life should fix himself at the start in any strange locality. He should accept no statements of strangers or persons interested in inducing him to purchase property. He should, on the other hand, act with deliberation and common sense, and be in no hurry. There is a satisfactory place for every man somewhere; but it is hardly possible that he can strike it at the first effort, and it is best to spend a month or two in traveling and exploring, and then to settle down temporarily in the place chosen until the first impression is either justified or corrected.

THE editor of the American Rural Home says that the man who through indolence or inefficiency fails to properly till and fertilize his soil has no right to ask God's blessing on his labors, for he has neglected to co-operate with Him in the appointed way through which such blessings come . . . . . To judge of the condition of an apple tree is like judging of the condition of sheep in a pasture, says Prof. Beal. Look at the sheep and not at the pasture, and if they are plump and fat they are all right . . . . . From the versatile pen of the late Mrs. Mary Locke—a regular contributor to the Pacific Rural Press—we take the following paragraphs: "If you have a grand, noble farm, try to feel like a king and treat your wife like a queen. . . . . To plant homes worthily woman's toil and care were also needed, and hallowed be their memory. * * When we have found our leisure, we must do something with it or it will "sour" on our hands. . . . . Yes, hard knocks pay if they give us self-reliance and fortitude; if they broaden instead of hardening our sympathies; if they knock out of us arrogance and self-conceit, instead of putting more in." . . . . . I want to see farmers look better than they do—dress better, carry themselves with as much easy grace and confidence as though they felt in every muscle that handling the plow, the shovel and the hoe is just as dignified and gentlemanly as measuring dry goods, dealing physic, reading law or managing "rings.'" . . . . . There is some reason for thinking that after all has been "said and done" no crop pays the British farmer better than wheat, says the London Agricultural Gazette.

Everywhere.

RURAL SPECIAL REPORTS.

Dakota.

BATTLE RIVER, Custer Co., Oct. 3.—The original White Elephant weighed four ounces; its youngsters weighed 44 pounds—a light yield for this region. W. N. W.

Illinois.

CHAMPAIGN, Champaign Co., Oct. 1.—It has been raining moderately in this county and neighborhood for the past 24 hours, and nearly two inches of rain have fallen. Presumably the same is true for the greater part of the State, since the storm which moved east out of the valley of the Missouri, Thursday, had two or three hundred miles of north and south diameter. This breaks partially, if not wholly, the drought of 1881, so far as Illinois is concerned, and in that light may be regarded as a special providence, for the water famine will be put an end to, grass will come to something before cold weather, in pasture and in meadows, the earth will be so softened that the hardest and most refractory soils can be broken up and sown to wheat, and, last of all and most important of all, the wheat land plowed and sown in the dry weather will be in a measure compacted so as to stand a hard Winter should it come. Besides the stock men and farmers, the railroads have been put to great cost and inconvenience to obtain water, in some cases on north and south lines engines having to make sixty and seventy miles between water stations. The water is running in the sloughs for the first time in three months, and there are surface accumulations of it on hard-pan soils, which will last for some time. Prices are still on the rise, the two leading cereals having reached the highest figures for the year yesterday. Winter wheat, $1.45@1.50; Spring, $1.35@1.40; cash corn 73 cents, and May corn 78 cents, with almost every leading agricultural product in sympathy. And these prices are regarded as legitimate and not speculative by those who have the best means for information. But the pinch on the corn and hog crop will not be felt for at least eight months, and then what the markets will be nobody pretends to know. One of the surprises of the times and season is the display of the magnitude of the power which keeps the price of cotton down, in the face and eyes of the fact that the crop has been reduced at least 30 per cent. Pork is now $20.00 a barrel, corn meal two cents a pound, and corn $1.25 a bushel in the South, with the almost sure prospect of an advance of 25@50 per cent. before the next crop is made. It is easy to see the cotton growers will be in a bad way, indeed, if there is not to be from 33 to 50 per cent. advance in the crop they produce. Contrary to general expectation there will be considerably more acreage sown to wheat and rye this year than last, and I suppose the acreage would be nearly doubled if seed could be had on credit by those who, though responsible, cannot pay money down for seed. B. F. J.

DE PUE, Bureau Co., Oct. 5.—Corn is about two-thirds of a crop. It has been selling at 70c. per bushel, but dropped yesterday to 65c. The White Elephant was planted May 10, cut into 10 pieces, one in a hill; eight grew, and yielded 105 tubers weighing 18 pounds when dug, Oct. 1. The R. B. Sorghum was planted in May; the last of July I cut it one foot from the ground when about four feet high. Now it is three feet high. I left some for seed, and on Oct. 1, I noticed it had tasseled out, but I am afraid it won't mature. The W. Oats are pretty nearly all smut; but I've got two quarts of seed. The asparagus didn't do well, but the pinks are beauties. F. P. R.

STILLMAN VALLEY, Ogle Co., Oct. 4.—The small White Elephant Potato was cut into 13 pieces with an eye in each, and each eye had a hill of its own three feet apart. They were hoed three times and 12 grew. They were dug Sept. 15 and yielded 56½ pounds of fine tubers. One of them weighed a pound and 14 ounces—the finest lot of potatoes ever raised in this county, and I can prove it. The oats, flower seeds and sorghum all did well, but the asparagus never grew. I. A.

Indiana.

PITTSBURG, Carroll Co., Oct. 3.—I cut my Rural Branching Sorghum on Sept. 20. It averaged seven feet in hight. Only 42 grains grew. It was transplanted into rows 3½ feet each way, one plant in each hill. I cut 399 stalks with leaves from the bottom to the top; would have cut sooner but for the extreme drought. No signs of seeding; left two of the longest stalks to see what they will do. Think we will have to plant a little from hot-beds in the Spring to get seed. I am convinced that it is the best fodder plant in America. The White Elephant comes to the front with 141 pounds of small potatoes. Potatoes in this part of the country are a complete failure. We had one-third of a crop of wheat; corn is three-fourths of a crop. I tried the RURAL'S method of cultivation with one 12-acre lot of corn, harrowed it just as it showed above ground; afterwards plowed with a common walking cultivator four times. At no time did I plow over three inches deep, and to-day it is the best field of corn in my neighborhood. N. B. B.

LA GRANGE, La Grange Co., Oct. 3.—From two ounces of W. E. Potato seed I dug 59 pounds of splendid tubers. We cooked some and pronounce them good. R. B. Sorghum made a wonderful growth, but I think it cannot compete with corn here. Asparagus doing splendidly. Oats blasted badly. We had good success with all the other seeds and plants. Farmers have had rather indifferent success this season. Our corn will average a fair crop; potatoes one-fourth of a crop. All vegetables scarce. The outlook for the young wheat is good—fine growing weather. Prices of produce are: Wheat, $1.25; corn, 70c.; oats, 30c.; potatoes, $1; pork, on foot, 5@6c. per pound; butter 20c.; eggs, 16c. N. S.

Iowa.

DAKOTA, Humboldt Co., Oct. 3.—I have 48 asparagus plants. The W. Elephant I planted in 17 hills—an eye in each. Twelve of'em yielded 16 pounds. Those from the four other hills I didn't weigh. The W. Oats and R. B. Sorghum were failures, except two hills of the latter one of which had 13 stalks, the other three. The flower seeds came up well but a heavy rain washed them all out, so that we did not have any left. Crops are poor, with the exception of corn which is above the average of other years. We had a snow storm on September 16, but no frost till September 29, and that was light and did not injure anything. G. L. H.

WELLMAN, Washington Co., Oct. 5.—The White Elephant Potato we received had 10 eyes, of which nine grew, producing 101 tubers, 35 large and 66 medium to small. The Branching Sorghum and Washington Oats did not do well on account of wet weather in June. Of the asparagus every seed seemed to grow. The plants stand from eight to 10 inches high. We have five carnations. The picotees are just splendid—26 different kinds. Mother takes all our visitors to see them, and they are praised by all. We have 26 Cuthbert Raspberries from the one you sent out a year ago. E. B. S.

Kansas.

DOWNS, Osborne Co., Oct. 6.—The RURAL seeds were almost a failures owing to the drought. The White Elephants were very well at first, but the bugs and drought injured them severely. I have a couple of quarts of seed for next Spring. From the Washington Oats I only got the seed back. The asparagus grew well for a time, but the dry weather "was too much" for it. The R. B. Sorghum grew five feet high but did not seed. The pinks turned out poorly. Dry weather began the last of June and has lasted ever since, with the exception of one rainfall early in September. Wheat, however, is about 15 bushels per acre; but corn was burnt up by the hot winds, so that there is hardly any. Potatoes scarce and rotting. The young wheat is being eaten up by chinch bugs. No fruit. The look-out for the coming Winter is dark enough here. Wheat sells for $1.10; corn, 55c.; potatoes, $1.25 and hard to get. We like the RURAL so very much that we don't know how we lived so long without it. J. B.

PARSONS, Labette Co., Oct., 4.—The dry spell is broken. Virtually it has lasted three years. On the 24th of September it rained half an inch; on the 28th, one inch; 29th, two inches; and on the 30th there was more rain rushing down the runs than I had ever seen. No such serious drought as we have seen the past eight weeks, had ever occurred here. Nearly all the work on many farms was in hauling water and digging wells. About half the usual area of Winter wheat is in and up, and farmers have been busy plowing up to this time. Grass and wheat and turnips are growing finely. We see now very plainly the results of a *season's* toil on the farm. Vegetables (except early Spring) are entire failures. Fruit was almost a complete failure. Oats a fair crop. Wheat on acreage planted, three to five bushels. Corn—our chief crop—is pitiful, and may be put thus: Out of 10 parts of its acreage, two were no bushels to the acre; three, four; two, ten; two, twelve; one, twenty; giving an average for the crop of this county of seven-and-six-tenths bushels to the acre. This will be very nearly the average corn product of the State, except on about an area equal to 20 square miles in Central Southern Kansas, which will average 40 bushels to the acre. The consequences will be quite hard on small farmers. Had there been one-third or one-half a crop the present prices would have made the crop as profitable as a full crop of former seasons. But seven-tenths will have none to sell. Grass was (and is) a good crop. Prices are: wheat, 95c. to $1.35 per bushel; corn, 40 to 65c; oats, 45c; potatoes, $1.50 per bushel; castor beans $1.75 per bushel; flax seed $1 per pound: flour, $4.50 per 100 pounds; coal, 13c. per bushel; lumber, $22.50 per 1000; brick, $7.50 per 1000. Castor beans and cotton are but one-third to one-half of an average crop. J. B.

Kentucky.

GARRETTSBURG, Christian Co., Oct. 4.—This it the largest tobacco-growing county in the State, and also among the first in wheat production and corn raising. Tobacco will make three-fifths of a crop if frost does not come before October 15. German Amber, Fultz, Golden Chaff and Georgia Rust-proof wheats are the favorites hereabouts. W.E.M.

Maine.

NORTH PARIS, Oxford Co., Oct. 4.—I planted the small Beauty of Hebron and raised a quarter of a bushel of tubers. The next year I raised nine bushels, and after selling enough, at 50 cents a peck, to pay the subscription price of the RURAL for two years, I planted the remainder, and have harvested this Fall 275 bushels of very nice potatoes. I carried some to the Oxford County Agricultural Fair last week and took the first premium for the best specimens of potatoes on exhibition. I have engaged quite a number of bushels for planting at one dollar a bushel, and think I can dispose of nearly all I have to spare at that price. I think it pays to take the RURAL NEW-YORKER, and you can reckon me among your life subscribers. W. W. D.

Massachusetts.

SPRINGFIELD, Hampden Co., Oct. 3.—The White Elephant Potato weighed four ounces: it was cut to eight eyes and planted one piece in a hill—soil a sandy loam. One shovelful of manure was used in each hill. Product, 27 pounds of fine-looking tubers. Corn has been a fair crop, although it was backward during the first half of the Summer owing to cool weather. Potatoes are a light crop in most cases, the bugs having done considerable injury in some fields and dry weather injuring those planted late. O. L. H.

Michigan.

CORUNNA, Shiawassee Co., Oct. 5.—My R. B. Sorghum is doing well; most of the seed came up, and it is coming to seed now. I cut several hills and they are growing fast. My W. E. Potatoes did not do very well owing to the drought. They were dug about the 1st of September and yielded about five pounds of nice white tubers. The Washington Oats did very well. The asparagus seed came up finely; I think I have about 125 plants of both kinds. Of the carnations and picotees about five plants came up and some of them have blossomed. H. W.

DETROIT, Wayne Co., Oct. 4.—The W. E. Potato was cut into 13 pieces; 12 of them grew and produced about six pounds of tubers, a very small yield, but I shall save all for another year's trial. The W. Oats did well. I harvested eight pounds of clean seed from the sample received. The stalks stood about four feet high and the grain was very smutty. The R. B. Sorghum I planted on June 11 on a piece of land which was cultivated three times before planting, leaving but very little weeding to be done afterwards. At the same time I planted near-by some Pearl Millet seed which I had left over. Both of the seeds came up well, but the Pearl Millet out-grew the R. B. S. On August 13 I selected some average hills of both and cut the plants about six inches above ground—they were all four feet high; six hills of R. B. S., in which there were 40 stalks, weighed six pounds, while two hills of Pearl Millet, 48 stalks, weighed four pounds. This shows a better yield for the millet in the first growth; but the second growth is in favor of the Sorghum; for on Oct. 4, the same hills were cut again; the stalks were three feet high and weighed 6½ pounds for the sorghum, and four for the millet. F. P

Minnesota.

ANOKA, Anoka Co., Oct. 5.—From my very small White Elephant I made eight hills with one eye in a hill, and got half a bushel of nice tubers. The R. B. Sorghum I planted on May 18 in a row four rods long. It grew to a hight of eight feet, and the heads were from six to eight inches long and the seeds got pretty ripe, though the stalks are green yet clear down to the ground. The land had some barnyard dressing and nothing else. I think I have seed enough for from 10 to 15 acres. B. H. C.

CAROLINE, Le Sueur Co., Sept. 30.—The W. E. Potato was cut in single eyes, planted in drills, three feet apart, eighteen inches in a drill and yielded 74 pounds. Several weighed 1½ pound apiece. How is that for Minnesota "big woods?" Mold's Ennobled Oats yielded heavily but lodged badly. The W. Oats stood well but were damaged somewhat by smut. The asparagus is doing finely. The carnations and dianthus are beauties. G. V. MCG.

LAKE CRYSTAL, Blue Earth Co., Oct. 6.—The White Elephant weighed two ounces and had 10 eyes. I planted it about May 15th, one eye in the hill, in common garden soil; no manure for two years; no more care than my other potatoes. The bugs did not hurt them any. I dug them Sept. 5; one hill weighed 8½ pounds; the ten hills weighed 56½ pounds. There were 200 tubers, nine-tenths of which were good eatable potatoes. We have had a poor season for potatoes—too much rain. It has rained here as often as every three days (except for about three weeks in harvest) for the past six months. There is no thrashing and not much plowing is done. The water was never known to be so high. The oldest inhabitants are drowned out, so we have lost past records; but what are alive never saw it so high. The R. B. Sorghum is about 10 feet high, and is not topped out. It would not ripen here, so it would not pay to plant it. The pinks were nothing but common single pinks, with the exceptions of two, and they were small. M. M.

Missouri.

CALDWELL, Oct. 3.—Of several kinds of grass and clover I sowed last Spring the only kind that lived through the drought was an experimental patch of Alfalfa. It came out as sound as a dollar. Red Clover, common and mammoth, Timothy, Orchard Grass and Red-top all perished. Much of the old pastures and meadows perished, Red-top being about the only grass that remained unhurt. The White Elephant made 17 pieces, which were drilled in a row about 18 inches apart as early in April as the ground would permit. At the same time I planted Early Rose in rows on either side. The Elephant made a beautiful growth, much like the Early Rose, except that the leaf was a little larger. It ripened about a peck of very fair tubers about the same time as the Early Rose—the first week in September. A few tubers have rotted since digging, and so have some of the Early Rose. The Washington Oats promised well, but were destroyed by a horse getting loose and eating them. The Branching Sorghum was planted about May 20, came up quickly and well, but, I suppose owing to drought, never headed. So far as my taste goes, I can find no more sweet about it than in a stalk of broom-corn. I turned the cattle on it on the 1st of September, and for several days they did not touch it, and when they did, they ate it to within three feet of the ground and then left it; while last year I turned them on a piece of Amber-cane sown broadcast and they ate it to the ground. The cow-peas were greatly mixed as to color, but came up well and yielded finely. Both varieties of asparagus came up sparingly, but

started off well until they were checked by drought. J. L. E.

Nebraska.

PLUM VALLEY, Knox Co., Oct. 4.—The R. B. Sorghum was planted on the last day of May on ground never plowed before; no manure. It came up well and stands to-day green with 12 to 20 stalks in a hill and 10 feet high. I have gathered some heads the seed of which I think will grow. The W. Oats the grasshoppers harvested. The asparagus seeds came up fairly; the plants stand 12 inches. The flower seeds were planted on new ground and they have done poorly. J. P.

New Jersey.

SCHRAALENBURGH, Bergon Co., Oct., 3.—There has been no rain to wet the ground half an inch from July 30, to September 28. The Washington Oats were sown in my garden in early Spring. They made a good stand; none of them lodged; but they grew a large quantity of smut. The asparagus seeds were also planted in the garden. They look exceedingly well, considering the great drought during the Summer. The small White Elephant Potato, having 11 eyes, was cut into as many pieces and planted in sandy loam. All sprouted; the grub cut one plant twice, when it died. A mole burrowed under another and eat off the stem, leaving nine. On Sept. 29, I dug 64 tubers, mostly of a good size, weighing 16 pounds, which I consider good, taking into account the great drought. The flower seeds have all died for want of rain. Sorghum not planted. C. A. C.

[The above report comes from near the Rural Grounds. Eds.]

New York.

FORT ANN, Washington Co., Oct. 1.—From the two small White Elephants I made 13 hills. Upon digging them I found the grubs had made bad work with them; but I secured 36¾ pounds. One weighed 1¾ pounds, another 1½ pound. The season has been very dry and the potato crop is very light. F. A. B.

GALWAY, Saratoga Co., Oct. 7.—The White Elephant weighed three ounces, and was planted in three hills, from which I harvested 38 large, full-grown Elephants. The R. B. Sorghum is now 6¼ feet high and the seeds will mature soon. The W. Oats I sowed on a light loamy soil without any fertilizer. They turned out well; from one kernel alone there were 22 stalks measuring 5¼ feet, with heads 17½ inches long. J. K. M.

GOOD GROUND, Suffolk Co., Oct. 8.—My White Elephant Potato weighed four ounces. I planted it 15th of April in eight hills and dug, on Sept. 15, 32 pounds of fine Elephants besides a few baby Elephants. Shall cook a few and if they are as good as they look I shall keep the rest for seed. The Washington Oats did well. I planted the sorghum in three drills or rows, and about the middle of August I cut one row, but it kept right on growing, and is now up about five feet high. The other two rows are full of seed heads about nine feet high, but a few nights ago the frost killed the leaves. Some of the heads are out of blossom and some are not. Do you think I shall loose the seed? I should be sorry to loso it, for it is just what I want. [We have several times expressed our belief that the seeds will seldom, if ever, mature so far North unless the plants intended to mature them are raised in cold-frames or pots so as to have an earlier start than the ordinary field crop.—EDS.] The asparagus did not come up very well; but the pinks are splendid. It is so dry here that late cabbages and turnips are a total failure. J. E. R.

North Carolina.

ASHEVILLE, Buncombe Co., Oct. 5.—The crops of Western North Carolina are very unsatisfactory. Tobacco can't be more than two-thirds of a crop. Corn is lighter than it has been for several years. Wheat is almost a failure, and oats but little better. Vegetables of all kinds are short and inferior. Peaches were plentiful, but of poor quality, and apples about the same. Yet I think with even this poor outlook that most persons will have ample sustenance. In fact, this has been a coun- of such plenty that with a little economy we will steer through all right. S. C. S.

Ohio.

DAMASCOVILLE, Columbiana Co., Oct. 3.—The Cuthbert Raspberries proved perfectly hardy here. Quality of fruit very good. The Beauty of Hebron potatoes, notwithstanding severe drought, averaged large and smooth—much more prolific, and I think better in quality, than the Early Rose. The White Elephant weighed two ounces. It was cut into as many pieces as eyes (18 or 20), and planted one in a hill, 16 to 18 inches apart. It yielded 34 pounds. The largest weighed 1¼ pound; the six largest, six pounds. Very few small ones. The asparagus seed came up well; grew slowly in consequence of drought, yet will make good roots. The R. B. Sorghum came up finely. One seed made 15 stalks; many others from five to ten. Till within a few weeks it made so little growth, that I did not cut it off. Since rain it is growing very fast, and I hope a few seed will ripen. The Southern cow peas I think will prove valuable, especially to enrich poor land. None of the above were grown on extra rich soil, or had any other fertilizer than stable manure. My daughter has grown from the RURAL seeds some flowers which we prize very highly. I have named only a part of the kinds that I consider valuable. The seeds I regard as of more value than many times the subscription to the RURAL. E. W.

LUCAS, Richland Co., Oct. 2.—I planted the White Elephant, cut to single eyes, on May 12, and dug 53 large tubers on August 6. Potatoes in this county are scarce. Farmers are mostly through seeding. Wheat is worth $1.40; corn, 70c.; oats, 40c. W. D.

RAVENNA, Portage Co., Oct. 6.—Have dug White Elephant Potatoes to-day. One medium-sized potato was cut into 15 pieces, with a single eye in each, planted in 15 hills, and all grew and yielded 19 pounds of good-sized, fine-looking tubers. With Beauty of Hebron for an early variety, Snowflake for a medium one, and the White Elephant as a late variety I am satisfied. I do not regard the Washington Oats as a success. Have a bed of asparagus started from seed of Giant Dutch and Argenteuil. R. E.

Pennsylvania.

MEADVILLE, Crawford Co., Oct. 2.—To-day we have had the first good rain we have had since Spring. From the White Elephant Potato I got 11 pounds of nice tubers. My Washington Oats I sowed on rather wet ground; the berry was good, but th Rural Branching Sorghum did not do well. The asparagus, celery and carnation are very nice. The Judas Tree is six inches high. W. S. S.

Vermont.

TROY, Orleans Co., Oct. 5.—September was our warmest month this year. Yesterday about noon it began to grow cold, and now we have a regular Texas norther in Vermont. Apples are all frozen on the trees. Potatoes are not half dug, and will not be half a crop. They are worth 60 cents per bushel to ship. I hear complaints of their rotting badly. Other crops are fair. September made a good corn crop in this part of the State. I hear it is selling for $1 per bushel, while Western corn brings 85 cents and oats 40 cents. The hay crop was heavy except in a few places where Spring frosts killed the grass. We have had what one might call a wet-dry Summer—it has rained a great deal of the time, but there have been no heavy rainfalls, so that the streams have been very low and mill-men are complaining of a scarcity of water. The cloudy weather has probably injured the potatoes, but fruit trees have grown splendidly. A. C. D.

Wisconsin.

ELROY, Juneau Co., Oct. 2.—The RURAL seeds sent to me have given great satisfaction and no little pleasure. The R. B. Sorghum I drilled through my fingers in three rows about 60 feet long; then raked it in with a hand hay rake. I have a very good stand. When about five feet high I began to cut it, leaving an occasional stalk for seed. The second growth is now over four feet high. I have cut some of it, and the third crop has started to grow. Stock, horses and colts eat it with evident relish. I consider it a good fodder plant. The Washington Oats I sowed broadcast and from the few received I have got 6¼ pounds of grain, and 9¼ pounds of straw. From the small W. E. Potato I have dug 60 pounds; the largest is ten inches long and weighs two pounds one ounce; the others go from about half a pound to 1½ pound. The asparagus and flower seeds have done equally well. My wife has plenty of flowers, and some fine ones, but none of the kinds that come from those seeds. It has been quite a pleasure to show them to friends and neighbors who call occasionally and also to speak a few words for the RURAL. None of the seeds received any special care and no extra work. They grow on land that has been under cultivation for over 20 years. Considering the late Spring we had here, I think the RURAL seeds have done remarkably well. E. R.

NEW CASSEL, Fond du Lac Co., Oct. 3.—From the White Elephant I had 12 hills planted about May 1, and these yielded 34 pounds of good-sized tubers. The R. B. Sorghum didn't do well owing to a cold, backward Spring. From the Washington Oats I got 11 pounds. Wheat is about half a crop. Oats and barley good crops. Corn about half an average yield. Wheat sells for $1.34; barley, 90c.; oats, 30c.; corn, 50c.; potatoes, 90c. Winter wheat is looking well. J. O. N.

REEDSBURG, Sauk Co., Oct. 4.—I cut the White Elephant into 11 pieces and planted one piece in a hill, and from the 11 hills I had 62 pounds of nice tubers, some of them very large. The Rural Branching Sorghum did very well; some of it was over nine feet high; but it was too late to ripen seed. The pinks were beautiful. E. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

SAWDUST AS MANURE, ETC.

W. L. S., Namozine, Va., says:—"I have 300 or 400 loads of sawdust where there was an old mill seat, can I make it available as manure by composting it? 2, What is the best work on artificial manures or on composting? or, where can I get a circular treating on these subjects?"

ANS.—1. If Mr. S. had mentioned the kind of wood out of which the sawdust was made, and the kind of land he proposes to use it upon, we could then give a more definite reply. Old sawdust from such woods as oak, hickory, maple, beech, birch, basswood, white wood, elm and many other kinds of wood, contains so much potash and lime besides a little phosphoric acid, that it has some value as manure: but pine, hemlock, poplar, spruce and other soft wood sawdust has very little manurial value. Yet the latter has an excellent mechanical effect mixed with a stiff clay soil, rendering it more porous, and thus admitting a freer circulation of air and deeper penetration of rootlets, and thus resulting in larger crops. A little coating or mulch of this poor sawdust will also protect Winter wheat or other Winter grain from heaving out with frost. It is also an excellent absorbent, and thus valuable for bedding stock and absorbing the liquids, and therefore it may profitably be composted with stable manure. It will assist in preserving the valuable constituents of the manure, but has very little manurial value of itself. This is the best general use that can be made of sawdust. 2. Dana's Muck Manual, $1.25, though inaccurate in many respects, Bonner's Method of Making Manures, 25c., and Bruckner's American Manures, $1.50, will give information on composting; and Ville's School of Manures, $1.25, will give a good idea of chemical fertilizers. Any one of them can be got through the American News Co., New York.

WINTERING ROSES OUT-OF-DOORS.

M. W.-F., Bryn Mawr, Pa., says:—"Will certain roses—Safrano, Isabella Sprunt, Enfant de Lyon, M'd'lle Austine, Bon Silene, and Laurette—live out-of-doors, with moderate protection, in this climate (Philadelphia)? I have very nice and thrifty rose plants of these varieties, that are still blooming. If I lift them and take them in the house for wintering, they will *surely* die; so what had I better do in order to save their precious lives?"

ANS.—All the roses you name will live out-of-doors with slight protection in your locality. We have so grown them for many years. The best covering consists of leaves. If these are not at hand, long litter from the stable will answer the purpose. If the shoots, or a part of them, can be pegged down, it is better to do so, as the parts exposed (especially the late, unripe growth) are likely to be killed if the Winter should prove to be severe. If the shoots are not pegged down, the leaves or litter should be heaped up about the plants in a conical form, and some brush or sticks placed on them to keep them from blowing away. Do not cover the plants too thick, especially with manure litter, but give enough for protection; and it is important that the covering be not applied till the ground has become slightly frozen. Uncover early in the Spring. If the tops of some should be killed, the crowns will send out vigorous shoots. A very successful rose amateur near New York wraps his Tea Roses in hardware paper, with a little litter at the base, and seldom loses a plant.

PLANTING GLADIOLI.

E. B. S., Wellman, Iowa, asks how to plant gladioli bulbs; he has failed in three attempts.

ANS.—Select good, rich soil, or make it so by manuring. Dig trenches 18 inches deep and, any time in May, plant the bulbs about a foot apart and cover with two-and-a-half inches of soil. When the plant is growing do not trim it unless the leaves have turned brown. Any injury to the leaves is an injury to the bulb, though cutting the flowers will add to the nourishment of the bulb. Take up the bulbs for the Winter about November 1st, and after they are dry place them in paper bags. If the gladiolus is to be propagated from seed, it should be sown in pots or boxes as soon as it is mature and put in a greenhouse, or it may be sown in March or April in a hot-bed with moderate heat. Cover the seeds lightly. Shade the young plants from the sun. Re-pot and put in the ground in June. In the Fall take up the pots and put them in a warm, dry place, leaving earth upon the roots. Plant out in May. They should flower the third year.

Miscellaneous.

J. A. R., Wadena, Ia., sends specimens of two varieties of apples. Of one he says it is a seedling of a tree bought of a Rochester, N. Y., nursery some 20 years ago; that last year it yielded three barrels of fruit which kept until April in prime condition as there were not a dozen speckled apples among them all, and he inquires whether it is a seedling. Of the other specimen he says it is from a sprout of the Tetofsky and closely resembles the Russian apples. The tree grows tall and straight with very few branches. The specimen sent is one of 23 that grew on less than two feet of a branch, making a solid mass, and our inquirer asks whether it is possible that it should be a hybrid, as the tree closely resembles the Tetofsky in shape and color while the fruit is entirely different.

ANS.—We sent the specimens to our friend, Mr Charles Downing, for his opinion, and he writes: "The apples were received in good condition. J. A. R. first says the green apple is a seedling; then afterward he says: 'I send it to you to ascertain if it is a seedling, etc.' From his own account it is very uncertain whether it is a seedling or not, and until that point is settled it is hardly worth while to introduce it. The other apple which he also says is a seedling and which is now ripe, is a pleasant apple but not equal in quality to many of our best apples of its season, and it is not good policy to introduce any that is not equal to those we now have. Of course, this is only a single specimen and imperfect, and may not be characteristic of the variety; there may also be something as to the tree's growth, bearing, etc., which may make it valuable for that locality." With regard to the likelihood of the second apple being a hybrid, all we can say, with our present scanty knowledge of the conditions of its growth, etc., is that the blossoms of apples may cross through the agency of wind or insects. Plants raised from seeds of such crosses would in most cases show the cross.

H. K., Copper Hill, N. J., asks whether it would be advisable to sow wheat in this dry weather with 400 pounds of superphosphate to the acre.

ANS.—The wheat should be sown now, if at all this Fall. With regard to the use of superphosphate in dry weather, it must be remembered that no sort of manure can be of much use as plant food unless there is sufficient moisture to dissolve it, as plants can only absorb food in solution. If we are to have any rain in this section this Fall, we must have it in time to render the superphosphate available as plant food, and the fact that the seed is sown late increases the necessity for some fertilizer that will stimulate the young growth at the earliest moment, so as to strengthen it against the Winter.

M. A. A., Peru, N. Y., asks, 1, how to protect his asparagus this Winter; 2, the best early potato for sandy soil—is the St. Patrick good; 3, where can seed potatoes be obtained.

ANS.—1. Cover with a mulch of leaves or straw after cutting off near the ground. It requires but little protection. 2. The Beauty of Hebron and Early Ohio are both good varieties. We know but little of the St. Patrick. 3. At any prominent seed store.

E. W. K., Glens Falls, N. Y., asks when should Sweet Vernal Grass be sown.

ANS.—We should now prefer early Spring for the latitude of Glens Falls.

K. Mc C., Winchester, Va., sends leaf and flower for name.

ANS.—It is a double flower, and we cannot decide what it is without a plant.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT., 15, 1881.

U. S. H.—C. W.—I. W. T.—F. T. R.—H. C. W.—R. W.—L. W. A.—N. T.—S. W. P.—H. S.—C.—L. A. C.—C. E. P.—E. McMahon, many thanks. It does not yield very heavily here.—M. A. H.—W. H. S. E.—O. S. B.—P. B.—E. W. S.—O. V. B., thanks—H. and S. too late for this issue.—B. H. C.—W. D.—E W. S.—J. P.—W. J. V.—E. B.—I. F. C.—J. L. E. G.—F. D. C.—G. L. H.—C. D.—N. S.—D. H.—F. H. S.—W. E. E.—J. O. N.—F. R.—E. R.—W. N. W.—P. S. W.—W. F., we are out of the number asked for, but will try to procure one.—W. H. L.—E. W. K.—F. A. L. B.—C. S. C.—J. B.—D. W.—B. F. J.—J. B.—P. B. M.—W. W. D.—C. D.—A. M. S.—W. T. S.—J. K. M.—We are always thankful to correspondents and subscribers for any new or interesting agricultural items from their parts of the country.—N. B. B.—O. L. H., thanks.—J. B.—O. W. F.—G. V. McG., thanks.—R. E.—F. P. R.—E. B. S.—D. A. L.—M. M.—I. A.—J. E. R.—E. F.—A. D. M.—Z. H. S. C. S.—M. W. V.—H. M. Y.—G. H. F., thanks.—O. B.—Job S. Morris, subscription money without address. A subscriber from London Grove, Pa., sends for our next seed distribution without signing his name.—G. A. G., Jr.—W. T. T.—R. W. C.—F. McM.—H. M. Y.—Z. H.—M. W. F.—E. W.—T. A. K.—H. S.—J. G.—E. W.—W. L. D., thanks—T. E. A.—W. L. F.—S. W. J.—A. J. C.—T. T. L.

THE
RURAL NEW-YORKER,
A National Journal for Country and Suburban Homes,
PUBLISHED EVERY SATURDAY.
Conducted by
ELBERT S. CARMAN.
Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.
SATURDAY, OCT. 22, 1881.

If the Rural New-Yorker is not received promptly when it is due, subscribers will confer a favor by notifying us at once.

We find it takes about twice as long to cut corn planted a foot or so apart in drills as it does when in hills. A farm hand should cut an acre per day of medium-sized stalks in hills. A single stroke of the corn-cutter usually cuts every stalk. But in drills every stalk has to be cut separately. We find that our men have averaged not over half an acre per day.

We regard Dr. Hexamer as one of our best judges of small fruits. In conversation with him the other day, speaking of the Souhegan, or Skowhegan, he says that he thinks it will take the place of Davidson's Thornless, with which it ripens. But, being larger and more prolific, it will go between late strawberries and the main crop of Black-caps. He pronounces it an early Doolittle, upon which it is a decided improvement.

Whenever the Rural says anything strongly in favor of a new strawberry, raspberry or grape, it is generally freely quoted in nurserymen's catalogues. But we have never yet seen an unfavorable comment quoted from the many unfavorable reports we have published. If we were to print only the favorable reports received respecting the seeds and plants which have been distributed by this journal, we should feel that we were if not misleading our readers, withholding at least, "the whole truth."

NEW LAWS FOR NEW YORK.

The laws passed by the New York Legislature at its last session have just been published, and among them a few are of special interest to dwellers in the country.

One of these is a law authorizing the incorporation of voluntary associations for the purpose of developing suburban homesteads or villa parks. Each association may buy lands, lay them out on the principle of landscape gardening, sell off lots and maintain such regulations for roads, walks and other embellishments, that each family may enjoy the drives, walks, shade trees and ornamental plants of the whole park. Such ornamental villa parks are frequent in the neighborhood of large cities in the Old Country, and are not unknown in the United States—witness Lewellwyn Park, N. J.—but heretofore such properties could not be easily managed in this State in the absence of suitable legislation.

There are two new laws for the encouragement of planting shade trees along the public roads and to punish any mutilation or willful injury to trees growing along roads or side-walks. Even hitching horses to these trees or leaving horses standing close enough to them to be able to injure them, is forbidden under a penalty not exceeding $10 for each offence.

Another law authorizes farmers to form associations anywhere in the State for the maintenance of agricultural fairs and exhibitions, and it is to be hoped that farmers themselves will in future take a more prominent part in the formation and management of such associations than they have hitherto done in most places.

THE VALUE OF MUCK.

The Rural has been criticized because in a late issue it copied, under "What Others Say," the article on the value of muck from the Journal of Chemistry. But the article in question was copied, not because it agreed with our views, but because it was quite opposed to them. And we supposed—so often have our views been expressed—that every attentive reader would know this without making comment necessary. When we planted the Rural Grounds (Bergen County, New Jersey), eight years ago, the "soil" with which the holes for the trees and shrubs were filled in was muck, dug out of a springy little valley running through the premises—the accumulation of many years of leaves and vegetable matter which had there collected and decayed. It was also liberally spread upon the land for small fruits, grapes and flowers, as well as upon most parts reserved for grass. All alike have grown luxuriantly. Rarely have we seen healthier specimens of trees or shrubs or those which make a greater annual growth. During the entire growing season we are obliged to cut the grass twice a week, unless the weather is exceptionally dry, and the grass still grows with undiminished vigor, though it has never received a dressing of manure or fertilizer of any kind. When so-called science and results disagree, we cling to results, and are prone to believe that so-called science has made a mistake, for true science never makes mistakes. It would be difficult, in the face of such experience, to make us believe that good muck is valueless as plant food. But there is just as much difference in so-called muck as there is in different soils. When we speak of the value of muck we refer to that sort of soil which results from decaying vegetation in moist or wet places. For the rest, we refer our readers to the article under "The Truth About It."

FOREST TREE SEEDS.

Now is the time for gathering seeds preparatory to raising forest tree seedlings next year. As the cost of gathering and sowing the seeds and cultivating the plants is but a trifle as compared with the prices demanded for the young trees by the nurserymen, and as there is the possible delay in delivery, heavy freight charges, and the risk of injury by the transfer, it is to the farmer's interest to raise his own seedlings. With proper care and attention there is but little reason why the novice in tree-raising should be obliged to record any more failures than the professional, the first and most important step being to procure the seeds at the proper time and to preserve them carefully until the season for sowing them arrives.

Some of our forest-tree seeds will retain their vitality but a short time after maturing, and, of necessity, such should be sown very soon after they reach maturity. In this class come the elms and red and silver maples, which ripen their seeds in Summer; but the seeds of various other kinds, as those of the nut-bearing trees, need not be planted until Spring. In fact, it is better to preserve such over Winter on account of the numerous insects, vermin and small animals which prey upon the seeds or nuts, and in the Spring they may be sown like vegetable seeds, the depth of covering to depend on the size of the seed planted.

For preservation through the Winter hard-shelled nuts, such as the hickory and butternut, may be mixed with a little ordinary soil and left in heaps out-of-doors; but chestnuts, beechnuts, acorns, etc., after the outer shell is removed, should be spread out in the shade until they feel dry; then place them in shallow boxes with alternate layers of clean sand, and when cold weather comes bury them in a dry place about six inches deep. This is done to keep the contents moist and at an even temperature. The more delicate seeds of the magnolia, basswood, etc., may be preserved in the same manner. We close as we began, by saying that now is the time to begin the work.

SULPHIDE OF CARBON AND THE PHYLLOXERA.

Sulphide of carbon has been extensively employed as one of the most effective remedies against the phylloxera, in France, Italy, Spain, California, and, indeed, wherever the pest has extended its ravages. The phylloxera, as is well known, kills the vine by preying upon its roots, and the usual mode of applying the sulphide is to place it in holes close to these. Here it soon evaporates and spreads about in the soil in the form of vapor, and it is this that kills the insect. At a late meeting of the Academy of Sciences at San Francisco, however, Dr. Behr, who has been extensively experimenting with the sulphide, said that as an insecticide he considered it "worse than worthless," inasmuch as it destroys the vine whether it kills the insect or not. In his experiments he has found not only that it always killed the roots with which it came in contact, but that in some cases it killed the phylloxera only after long exposure, the pest often surviving the roots to which it was attached. When sunk deeper than the roots he found it did not evaporate and it was at the same time useless and harmless. Professor Max Cornu, a well-known member of the Viticultural Commission of France, also writes that during a recent visit to the vineyards of Aude, Herault and Eastern Pyrences, he discovered that considerable injury had been done by the application of sulphide of carbon. The roots of vines too close to the holes in which the stuff had been deposited he found partially or completely dead. Moreover, as water dissolves one one-hundredth of the sulphide, this dissolved part, coming in contact with the roots after heavy rains, causes severe disaster, for he, too, found that "where this agent touches the bark of the roots it strikes them dead." Vines, whether affected by the phylloxera or not, that had been treated with sulphide, he found presenting very often a yellowish appearance of the leaves, while the vegetation was tardy, irregular and interrupted, so that an untrained eye would mistake the effect of the sulphide for that of a severe invasion of the phylloxera. The sickly appearance ceased where the application of the sulphide ended. Is this another case where the treatment is as dangerous to the life of the patient as the injury?

PROTECTION FOR WESTERN HERDS.

In an article under the caption of "A Proposed Western Embargo on Eastern Cattle," in the Rural of Sept. 24, we said that while our record showed that we had always urged the necessity for the adoption of some effective means to protect the vast herds of the West from the contagious pleuro-pneumonia which for the last few years has existed here and there among the cattle of some of the Atlantic States, still we thought that this object could be accomplished by some measure less sweeping than that pressed upon Gov. Cullum, of Illinois, by the Treasury Cattle Commission—a nearly absolute embargo on the westward transportation of all cattle from New York, New Jersey, Pennsylvania, Maryland, the District of Columbia, and Virginia. At the same time we stated—what experience has amply demonstrated in numerous cases—that the great risk to the public interests from a special commission lies in the fact that it feels bound to justify its existence by exaggerating the danger it was created to investigate. Quoting this sentence, apart from the context, a late issue of the Chicago Tribune sees in it an intimation of personal feeling which shows that the first move of the Commission is looked upon with unjust suspicion. We have absolutely no personal feeling in the matter. Our only desire is to guard and promote the best interests of farmers and stock-owners in all parts of the country. While anxious that those of the West should be protected from loss by contagious diseases, we are also anxious that this should be done with a minimum of hardship to those of the East.

As we stated in the above article, contagious pleuro-pneumonia when most prevalent in the States named above, was confined to a few cases here and there, according to the testimony of the veterinarians appointed to investigate the matter, of whom Dr. Laws, a member of the Cattle Commission, was one. In New York, New Jersey and Pennsylvania vigorous measures have been taken for the eradication of the disease, and it was officially announced some months ago that it had been extirpated from Pennsylvania, while in all the other States its ravages have been greatly circumscribed. Indeed so few are the cases now existing in the region it is sought to schedule, that it is by no means easy to find one. In our large correspondence with residents in all parts of that country the disease is scarcely ever mentioned. In the local papers, too, it is seldom or never referred to. One may travel for days through the farming districts without ever coming across a case or even hearing of one. In a late issue of the Iowa Homestead, Dr. Knapp, of the State Agricultural College, an excellent authority, after quoting our article above referred to, says it is worthy of grave consideration. He had lately been traveling extensively among farmers in this section, and had heard of only a few isolated cases. Mr. Howard, an acquaintance of his, had the same experience. Within the last fortnight we have questioned several gentlemen who travel a great deal among farmers in the Atlantic States, and the cases any one of them has seen or heard of have been very few and mild. If the disease is so prevalent in the Atlantic States as to justify such a sweeping measure as that recommended by the Commissioners, in justice to the farmers of the country these gentlemen should specify the places in which it prevails. Isolate affected herds or even sections rigorously; but for the sake of a sick cow or two at long intervals is it necessary or just to quarantine all the herds of so vast a territory? The Western herds must be protected at any cost, but justice and expediency demand that the cost should be made as light as possible to the stock-owners of the East who wish to sell their cattle, and to those of the West who wish to buy them.

BREVITIES.

On the night of Oct. 5, at the Rural Grounds, there was the severest frost ever known in that neighborhood for the season. Turnip tops were frozen and even celery harmed.

The Pocklington Grape is certainly showy. It seems to us that in quality it is decidedly sweeter than the Concord, while, except in color and size, very much like it in all other respects.

Take dry sand 20 parts, wood ashes, five parts; sulphur, one part, and mix together for dust baths for poultry during the Winter months. Place this in large boxes and keep them sheltered from rain. Whitewash the houses now and later, kerosene the perches, and your poultry will not be troubled with insects.

In Great Britain after 1883 the farrier and the cattle doctor will be superseded by men who must pass a strict examination with regard to the diseases of horses, cattle, sheep, swine and dogs. Doctors of stock will have to pass through a regular course of study just like doctors of men. The sooner the same rule is enforced in this country the better for our stock and our men—at any rate for those of the latter that own the former or are interested in them alive or dead; and who isn't?

The question of a right of way was decided on August 23 by the Supreme Court of California in the case of Carey vs. Rae. Such a right does not originate in mere convenience; it must spring from an express grant, or from an implied reservation, or from a usage for a length of time sufficient to create a prescriptive right, or a bar under a statute of limitations, either of which is presumptive evidence of a grant. The right to pass over the land of another as a necessity, because the regular road is impassable, ceases with the immediate necessity.

According to telegrams from Atlanta, Ga., the managers of the great Cotton Exhibition have not yet completed their arrangements and the exposition will not be fairly under way until November 1. How is it that although the best men are always presumably selected to manage such shows, they are never, yes *never*, ready by the appointed day, however long the time for preparation, however assured the promises of promptitude and however be praised the executive abilities of the managers.

In the case of Echenrode vs. the Chemical Company of Canton, Md., a contract had been entered into to make and deliver a certain amount of phosphates at a specified price; the manufacturer had given notice that he was ready to make and deliver them, but the other party to the contract refused to receive any, whereupon an action was brought for damages. The Maryland Court of Appeals lately decided, through Judge Miller, that the plaintiff could recover, as damages for the breach of contract, the difference between the cost of manufacture and the prices agreed upon.

The persecutions to which the Jews are being subjected in Russia are forcing great numbers of them to seek homes in less bigoted countries, and many of them have already arrived here and still more are expected. A committee of prominent Hebrews has been formed in this city to provide for the immediate wants of their immigrant bretheren, and to seek places of settlement for them in different parts of the country. Already 160 families have gone to Texas, most of them to engage in agriculture—at any rate until they realize that more money can be made by their race in trade than in the vocation for which their ancestors were renowned in the days of Jewish independence. Last week the State of Louisiana offered to the committee 160 acres of its most fertile land for each and every family of these Jewish immigrants willing to settle there—we wonder whether a like offer is open to Christian immigrants, or even to Christian natives.

The Michigan Relief Fund has already received $104,387 from this city and over $53,000 from Boston which contains about one-fourth of the population of New York; but while the latter contributed upwards of $250,000 to the Garfield Fund the former's contribution was under $20,000. In supplying the wants of the suffering community the South has vied with the North, the West with the East, the more distant places donating money; the nearer, clothing, lumber, provisions, grains for seed, and utensils of all kinds. Energetic distributing committees have placed the vast supplies where they have done the most good. The immediate wants of all have been relieved, a good area of wheat has been sown, temporary buildings erected, and cattle supplied with fodder—but while harvest is far off, Winter is close at hand, and the generosity of the country must still supply large sums to prevent absolute starvation. Governor Jerome has appointed a commission of prominent men which will hereafter have sole charge of everything pertaining to the relief of sufferers in the burnt district. All future contributions should therefore be sent to Ex-Gov. H. P. Baldwin, Chairman, Fire Relief Commission of Michigan, Detroit, Michigan. All who have not sent in the price of that "Michigan Bushel" of wheat should forward it promptly to this address.

Societies, &c.

THE GREAT ST. LOUIS FAIR.

[RURAL Special Report.]

THE 21st annual fair of the St. Louis Fair Association opened at St. Louis, Oct. 3, and closed Oct. 8. The rain which commenced on the 1st inst., continued right along up to Tuesday and put the grounds in a fearful condition; mud was so deep that up to Thursday it was almost impossible to get around the grounds. If the Society had shown a little more enterprise and laid boards at the crossings it would have been a great accommodation to visitors. Wednesday the weather cleared up and by Thursday the grounds were sufficiently dry to render them passible. The attendance was nearly as great as last year, and if it had not been for the rain this would have been the most successful fair ever held by the Association. As it was, the receipts ran over $75,000 and after all expenses are paid there will be a handsome balance in the hands of the Treasurer. The show in all departments was very good, but the exhibits were not as numerous as last year. The grounds are so large that it takes a long time to get a correct idea of the great amount of stock and machinery on exhibition. Probably to avoid rivalry or contrast with the grand display at Atlanta, there was no exhibition of cotton this year. The ampitheatre has probably the finest ring in this country for showing cattle and horses. Sup't. Filley's rules were carried out to the letter, and no owner of an animal was allowed in the ring while his cattle were being judged. This with the good selection of judges makes the awards at this fair worth something more than the mere amount of the premiums. Judges here are not paid, but Mr. Filley admits that eventually it will be necessary to pay expert judges for each class.

The cattle shown in the area included 44 Devons, 38 Herefords, 36 Short-horns, 42 Polled Angus, 37 Ayrshires, 21 Holsteins and 38 Jerseys. There were about 100 more on exhibition or that arrived too late to compete for premiums. The low water in the river and the difficulty of getting cars prevented a number of Missouri and Kentucky breeders from exhibiting. Nearly all the premium herds from Peoria and Chicago were present, and most of those from the former place were equally fortunate here. Messrs Hoover & Co., of Columbus, Ohio, carried off all the herd and sweepstakes prizes in the Jersey class with their fine Eastwood herd, although among their competitors here were the same animals that defeated them at Peoria; but, then, all acknowledge that the judges here were much more capable than those at the Illinois State Fair. The Unadilla Valley Dutch-Friesian herd carried off all the premiums in the Holstein class, for at these fairs all the cattle from the Netherlands are grouped together in the Holstein class. Messrs Potts and Palmer divided the Short-horn honors, while C. M. Culbertson carried off the principal prizes in the Hereford class. The show of Polled Angus was very fine. Frank Redfield of N. Y. with his young herd won the young-herd prize and two sweepstakes.

The sheep show was large and excellent. Mr. Cooper's fine flock of Oxford Downs attracted a great deal of attention. Long and middle wools are the sheep for this section, and they filled the greater part of the exhibit.

The swine show was good, but not up to that of last year.

In the agricultural and machinery departments the display was even larger than last year, but there was not as much variety. The show would have been still larger had it not been for the blockade on the railroads. Some exhibits shipped 30 days before the fair have not yet arrived. Fairs pay the railroads well—especially out here in the West—and the railroads ought to interest themselves more and see to it that goods intended for exhibition get through in time, and shippers should patronize the roads that accommodate them in this way. The larger class of machinery such as thrashers, engines, saw-mills, hay and cotton presses were here in strong force.

Many new buildings and additions had been made during the year, and these were well filled with all the new and improved agricultural implements made for this section of the country. Houses like John Deere, Deere, Mansur & Co., the Moline Plow Co., the Oliver Plow Co,, the Whitman Agricultural Co., J. A. Field & Co., etc., had fine buildings of their own for the display of their goods. Messrs. Deere & Co.; showed a new power lift on their Gilpin sulky, for throwing the plow out of the ground. It is a very simple application and takes well. Walter A. Wood's new automatic binder also attracted a crowd of interested inspectors. The Plow display was large. One of the interesting features of fair was a test of traction engines on the grounds. The "Vibrator," "Case," "Canton Monitor," Hooven, Owens & Co., "Belleville," "Gaar, Scott & Co.," and "Ritchie," were all tested for the purpose of ascertaining the amount of the direct draft of each on a level.

The J. I. Case engine attracted more than ordinary attention on account of the large amount of power developed. Its large area of fire surface gives it steaming advantages that place it in this respect far ahead in this line of engines. It is simple and easy to manage; every lever, wheel and valve is under the control of one operator. A few hours' practice will enable the average farmer or thrasherman to fully understand and run it. This is something that farmers are looking for, and Messrs. Case & Co. have taken the greatest pains to make this engine as simple as possible. Mr. Steven Bull, the Vice-President of the company, and Walter Dutton, General Agent, had Mr. Walrath, the superintendent of the works, on the ground, to thoroughly explain and show up its great traction powers. The engine was attached to another traction engine in full gear, and drew, on a dead level, equal to over nine tons, and this on the soft, clay ground and with only 85 pounds of steam, at the same time running the air pressure up to 65 pounds with apparent ease. The wheels are a great improvement, as they are made extra-large and are entirely of wrought-iron, with broad tires, giving greater direct draft than can possibly be obtained from smaller wheels. Another great improvement is the square-bottom boiler, the ash-pan of which can be readily detached, giving the operator easy access to the interior of the fire-box for examination and repairs if necessary. The crown sheet is strengthened with heavy wrought bars firmly riveted in the strongest manner, and it is also provided with a well-arranged safety plug as a precaution against explosion in case of carelessness—a great advantage. Another is the peculiar arrangement of the traction gear: it is constructed in such a manner that when all of the gears are thrown out, the engine can be drawn from place to place as an ordinary portable engine, without the friction and wear of the gears common in other engines. It is geared to run seven miles an hour on a good road, and it can easily do it. Messrs. J. I. Case & Co., Racine, Wis., its builders, also exhibited their new "Agitator" thrasher. They run the largest works of this kind in the world.

The Deering New Automatic Twine Binder, shown in operation by W. F. Olin, general agent for Wm. Deering, Chicago, Ill., was among the most interesting of exhibits. The remarkable success that this binder has met with—over 8,000 of them having been sold and put into active service during the past year—is evidence enough to show how well it takes with farmers. The enterprise of the manufacturers is shown in the improvements constantly being made, they having added this year an iron cutter-bar, a new device for raising and lowering the platform and a perfectly adjustable reel, with two motions by a single lever at all times under the control of the operator. This is an automatic binder and has a canvass grain adjuster that evens up the butts, a very valuable improvement, as it allows the farmer to take up tangled-down and short grain in the best possible manner. This binder, like all of Mr. Deering's goods, was very handsomely finished. Mr. Olin also showed Deering's new iron mower. This is an entirely new machine which has just completed its first season, and has met with a success second only to that of the binder. It is a model of compactness and simplicity. Mr. Deering also makes the Leader Reaper and Warrior Mower. These machines are well known all over the world. One of the largest factories in this country is being run to its fullest capacity and 1,300 men are given employment in turning out the Deering machines.

One of the largest and handsomest displays of carriages ever made upon a fair ground was that made by Deere, Mansur & Co., the Southwestern branch house of the Cortland Wagon Co., Cortland, N. Y. They were awarded the first premium for this display, and well they deserved it. They showed 50 jobs and 42 varieties of platform and three-spring wagons, buggies and phaetons of all descriptions and surrays. The Cortland Company by turning out none but the best goods in the market and paying especial attention to style and finish, have worked up an immense trade in this great Southwestern market. This branch alone has sold over 4,000 buggies and wagons the present year. It speaks well for one of our New York institutions when they come way out here and control a trade like this right under the noses of our large Western manufacturers; but Mr. Fitzgerald, the president of the company, had the pluck to work up the trade before the others got in, and now by putting out a superior line of finished goods he proposes to hold it.

The first premium for largest and best display of Missouri machines was awarded to the Whitman Agricultural Co., St. Louis, Mo., on their fine exhibit of corn shellers of all sizes and description, feed cutters, Young America and Monarch corn-and-cob mills, cider mills, etc. This company made a very handsome exhibit, which they will probably exceed another year, as their new factory at Clark and Eighth Streets, is now in full blast and their increased facilities for manufacturing will give them a chance to enlarge their line. They have improved their celebrated Young America and Monarch corn-and-cob mill this season by adding *cast-cast* steel grinders; all the bearings, too, are now chilled and they have increased the thickness of the cone and strengthened the breakers. These popular mills are so well known that a detailed description would be superfluous.

THE St. Louis Branch of the Gibbs & Sterritt Manufacturing Co., Corry, Pa., made a large and handsome exhibit of Climax mowers and reapers and self-binders. To meet the demand of the times this enterprising firm have added to their list, this year, the new Climax automatic self-binder. This is a twine-binder on the packer principle and has stood the past season very sucessfully. It has been thoroughly tested in the field, and the company propose to put it in the market next season on its recognized merits. The new front-cut Climax light mower attracted a great deal of attention. It is a light, compact and simple machine. Its gearing is inclosed in a neat, iron case. The crank shaft has bearings in front and behind the pitman head, obviating the motion produced when the crank shaft is overhung, and giving a strong and even motion to the knife. This is an important improvement. The Climax machines are constantly gaining in favor, and both the Chicago and St. Louis houses report an excellent year's business.

A great portion of the main building was occupied by the large and varied display of drills made by the St. Louis branch of P. P. Mast & Co., Springfield, Ohio. They showed the Buckeye spring-hoe drill, the Buckeye spring-pressure shoe drill, the old reliable Buckeye hoe drill, the Buckeye combined fertilizer and force-feed grain drill, and also a full line of Buckeye three and five-hoed drills, cultivators, sulky plows, cider mills, Buckeye spring-tooth sulky harrows, broadcast seeders, etc. This firm makes drills to suit any and every section of the world where grain is raised, and their reputation is so fully established that sales are made on the name alone. The St. Louis branch has doubled its business within the year. The main factory at Springfield, Ohio, is the largest in this line in the country, and it is run to its fullest capacity to meet the demand for the Buckeye goods.

An exhibit that attracted a great deal of attention was that made by the Vandevere Corn Planter Co., Quincy, Ill. They had the larges and finest show of planters on the grounds, including the Barlow Rotary, Vandevere and Quincy planters. A distinctive feature in the Barlow planter is the rotary or revolving seed cup, by the use of which the corn is sown five hills in advance. This planter is also noted for its regularity of drop. I have seen it set to drop a single kernel and it did not miss once in 1,700 times. This makes it very effective in drilling corn, as its drilling attachment can be set to drop from 12, 15 and 18 inches, and its regular work should always insure a good stand. Thousands of these planters are now in use, and the demand the past season far exceeded the supply.

The MOLINE WAGON Co., Moline, Ill, showed one of the handsomest farm wagons ever put out upon a fair ground. This wagon was fixed up differently from the ordinary run of fair exhibit goods in that it fully represented a fair sample of their regular wagons, and the work was all in the finish. The Moline Company have doubled their manufacturing capacity within the past year, and are now putting out 60 finished wagons a day. Their goods have attained a high reputatio for superior quality, finish and lightness of draft, and meet with full approval wherever introduced. They make a full and complete line of spring, half-platform, three-spring and farm wagons of all kinds to meet the demands of all sections of the country.

A full line of haying implements was exhibited by J. E. Porter, of Ottawa, Ill., including the well-known Porter wood-track hay carrier, hay derricks, etc. As usual, Mr. Porter carried off the first premium at this fair.

Miscellaneous.

SAUK CENTRE, MINN.

A Hasty Glance at This Busy City.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

PROMINENT by virtue of its location and excellent surrounding country; progressive from the activity and energy of its business men; proud of the advantages and inducements which it is able to offer to capital and labor to locate here—thus we found this thriving little city. It is incorporated, and by last census numbered 1,211 souls, now estimated at 1,500 to 1,600. It has an admirable location in the midst of "The Park Region," 117 miles from St. Paul, on the "Short Line" of the St. Paul, Minneapolis and Manitoba Railway. Near it, and within easy access, are Big Sauk (upon which it borders) Birch Bark, Cedar, Fairy (2¼ miles north) Whipple, Villard and Osakis Lakes: all beautiful bodies of water, abounding in fish. Several of them are becoming popular resorts. Around them may be found quantities of game—wild geese, ducks, prairie chickens and partridges, with deer and bear for those seeking larger spoils.

Land about Sauk Centre can yet be purchased (wild) at from $4 to $10 per acre. It is a good stock country with timber lands to the north and east and prairie to the south and west, upon which are large yield of cereals and root crops. Michigan Winter apples are obtainable at from $2,50 to $3,00 per barrel.

Besides the railroad mentioned, this city will have the Little Falls and Dakota, now being constructed to connect with the Northern Pacific and with Duluth's projected lines—operated by the N. P. The Sauk Centre and Northern is now being surveyed from here to the magnificent hard-wood timber region of the North, and one or two other lines are projected. Thus it is rapidly assuming the position of a railroad center.

The town itself is well laid out, with wide, clean streets, substantial business houses and neat residences. There are five churches—Episcopal, Congregational, Baptist, Methodist and Catholic. There is also a good brick school building, value $13,000, well ventilated, with seven departments and as many teachers. Various orders are represented by flourishing lodges; A F and A M; I. O. O. F.; I. O. G. T; T of H; and K of H. There is an efficient volunteer fire department. Two excellent newspapers, the "Tribune" and "Herald," contribute largely to the advancement of intellectuality and social union. A Board of Trade has been recently organized, the object being to concentrate the energy of many into one body for the protection and advancement mutual interests, and surely the importance of these demands it. The secretary will give attention to letters of inquiry. The commercial business of the past year was $1,371,950; bank capital $100,000, with an aggregate business of fully $4,000,000. The wheat marketed here was over 500,000 bushels, thus showing it a centre of trade. The county has no indebtedness and that of the city is light. It is mostly peopled by Americans, with a small foreign element. In manufacturing we found two flouring mills—one water and one steam, the latter having received the State premiums for its flour. There is, too, a manufactury of fanning mills of world-wide reputation, and a foundry. There is a good water power only partially utilized. As an aid to the labors of our enterprising citizens, to become a large and thriving city Sauk Centre only needs agricultural implement and wagon factories (to use the abundant hard wood) a canning establishment, a creamery and cheese factory, a custom flouring mill and the attention of the better class of immigrants.

CATALOGUES, ETC.

THE JOURNAL OF THE AMERICAN AGRICULTURAL ASSOCIATION for 1881 will contain, among other articles, "A Description of a Model Dairy and Stock Farm," by Francis D. Moulton, with fifteen pages of illustrations, and articles on "Sheep Husbandry in the South," by Colonel J. H. Moore, of Kansas; on "Farmers and the Tariff," by Prof. Arthur L. Perry, of Williams College; on "Co-operative Experiments with Fertilizers," by Prof. W. O. Atwater, of Wesleyan University; on the "Relation between Seeding and Quality in Fruits and Vegetables," by Dr. E. Lewis Sturtevant; on "Agricultural Education for the Young," by Dr. Byron D. Halsted, and on "The Railroad and the Farmer," by Hon. Edward Atkinson, with a reply thereto by Hon. L. E. Chittenden, President of the Anti-Monopoly League. There will also be an article fully describing the RURAL NEW-YORKER'S, Experiment Farm. Beginning with this number the Journal is to be published quarterly, the next number appearing in January next.

THE WILD GARDEN, by W. Robinson, F. L S. Published at 37 Southampton Street, Covent Garden, London, England, and by Scribner & Welford, New York. Illustrated. The author is the originator of what has become known as the "Wild Garden" system, which consists essentially in placing "perfectly hardy exotic plants in places and under conditions where they will become established and take care of themselves." The work before us consists of 179 pages, is substantially bound, nicely printed in clear, bold type, and illustrated with numerous engravings by Alfred Parsons. In it the author sets forth his idea of what a "wild garden" should be, and tells what different orders of plants may be utilized in producing the best results, and how. Some years since Mr. Robinson contributed several articles to the RURAL NEW-YORKER on the "Wild Garden," and the idea was rapidly taken up in America, England and France. We commend the book to all, and especially to those who delight in transforming "unseemly" places into gardens of beauty. It is our desire and intention to refer to this valuable work again.

Literary.

THE STRANGER ON THE SILL.

BETWEEN broad fields of wheat and corn,
In the lowly home where I was born;
The peach tree leans against the wall,
And the woodbine wanders over all;
There is a shadowed doorway still,
But a stranger's foot has crossed the sill.

There is the barn—and as of yore,
I can smell the hay from the open door,
And see the busy swallows throng,
And hear the pewee's mournful song;
Out the stranger comes—oh, painful proof,
His sheaves are piled to the heated roof.

There is the orchard—the very trees
Where my childhood knew long hours of ease,
And watched the shadowy moments run,
Till my life has imbibed more shade than sun;
The swing from the bow still sweeps the air,
But the stranger's children are swinging there.

There bubbles the shady spring below,
With its bulrush brook where the hazels grow,
'Twas there I found the calamus root,
And watched the minnows poise the shoot,
And heard the robin lave his wing—
But a stranger's bucket is at the spring.

Oh, ye who daily cross the sill,
Step lightly, for I love it still;
And when you crowd the old barn eaves,
Then think what countless harvest sheaves
Have passed within that scented door
To gladden eyes that are no more.

Deal kindly with these orchard trees;
And when your children crowd your knees,
Their sweetest fruit they shall impart,
As if old memories stirred their heart;
To youthful sport still leave the swing,
And in sweet reverence hold the spring.

The barn, the trees, the brook, the birds,
The meadows with their lowing herds,
The woodbine on the cottage wall—
My heart still lingers with them all,
Ye strangers on my native sill,
Step lightly, for I love it still.

THORNS AND ROSES.

(Continued from page 690.)

Lost to outward things, he read on, comparing the text with manuscripts before him, until something in one of the papers puzzled him; he bent over it closely, then turned to the accumulation on the table in search of a missing link. His hand touched something, neither book nor paper, but a little knot of rose-colored ribbon, and his pale face flushed, as, rising, he pressed it to his lips.

"My books," he sighed, "you are dear to me, and I have made you my companions; but you cannot, you cannot give me human love! She was right," he said, pausing by the old escritoire, "one Lovel must remain alone. But I dare not let this mood grow on me!"

With an effort he resumed his search for the paper in the escritoire, and touching something cold under the dusty heap, he brought it out, then dropped it suddenly.

It was a dagger with a carved handle—a blade marked, it seemed, with rust.

Brandon's face, if pale before, was livid now, and filled with a dread and horror impossible to describe; great drops started on his forehead; he looked at his hands as though he expected to see stains on them, and shuddered.

"Why this night of all others?" he groaned, "can nothing blot out the past and efface that red stain from my memory at least? Will it come—shall I be found? Oh! Heaven, do Thou have mercy on me!"

The face bent on the trembling hands was convulsed with agony; the strong frame quivered from head to foot; and even the entrance of the old housekeeper did not rouse him.

"Brandon—Mr. Brandon! What is it?"

"Look," he said, shrinking from her touch, "I came on this to-night! To-night, of all others!"

"Oh! Mr. Brandon, why have you kept it?"

"To-night," he repeated, "this ghastly anniversary!"

"Dear master, for the love of heaven, forget it!"

Ah! Anna, the past is eternal, and my struggles are vain. But this, at least, shall go."

And as he spoke he plunged the dagger into the burning embers, then sank into his seat, laying his arms on the table, and there resting his head, whilst the old woman stood with wet eyes, whispering words of comfort. But at length he looked up with his old melancholy smile.

"You needn't fear, Anna. I could not help—just then. Leave me now."

He watched her as she walked away, meeting her backward glance with the same forced smile.

But when alone, he walked to the window, and stood gazing out, with dark, weary eyes, and quivering lips, at the quiet glory of the Autumn night, as though he sought for peace!

CHAPTER VI.

WHEN Winter had come, with "his frosty, merry train," we were necessarily much confined to the house, and therefore the days were more monotonous than had been those of Summer and Autumn; but in spite of this, Edith declared her intention of remaining at Lovel House, and had written home to that effect. She lamented to me that no rich suitor had appeared, though, she argued, it proved the world's bad taste in thus neglecting her. I was rather surprised that she stayed here.

"Why, my dear cousin," she said, when I one day expressed this surprise to her, there's only home for me to go to, because papa likes us all to be together at Christmas: and its either home or Lovel House. I can't stand Mrs. Hawdon's charity dinners and blanket-distributings. They are perfect nuisances, not to speak of the prosy people she gathers round her for so-called festivities; and I choose to stay here. Shall we go out? I'm sick of the house!"

I agreed, and we presently left the house together, walking through the village, with its cottages roofed in snow and the bright flame of cosy fires shining through the windows. There was an old woman whom I specially wished to see, and when we reached the crooked, one-eyed building that was her home, I proposed to Edith that we should both go in.

"Not I, Kate! I have no fancy for these stuffy little rooms and 'poverty's counsel.' You go as you like it, and I will wait outside;"

I went in alone and found the old lady very ill and equally cross. A little cluster of winter blossoms brightening the dingy room had, she informed me, been brought by Mr. Brandon himself, who had also written a letter for her to her married son. Musing on the peculiarly delicate kindness with which my kinsman was endowed, I bade farewell, and went out to the street, looking for Edith.

At no great distance I perceived her talking eagerly to a gentleman who leaned on the gate of a cottage garden—"that stranger" who had taken to haunting our daily walks. An unusual feeling of annoyance stirred within me. I went on, looking anything but amiable.

Edith was not in the least embarrassed or confused. She looked at me with her own cool self-possession, her expression unchanged.

"I hope you found the love-lorn one better? Allow me to introduce you to a very old friend of mine, Mr. Edgar Dana."

Mr. Edgar Dana bowed, coloring slightly, and glancing half-deprecatingly at me; but I returned his salute coldly, and looked at Edith with, I hope, some of the contempt I felt. Glances, contemptuous or otherwise, were thrown away on that young lady, for in return she gave me her sweetest smile, and extended her hand gracefully to the stranger, saying:

"Good-by for the present, Edgar. We shall be very glad to see you at Lorel House. Come, Kate."

She turned away, and I followed, so utterly bewildered that speech for some moments was impossible; and then, when I recovered, it was prevented by the appearance of Nevil Verner, who had been riding behind us, and now pulled up to address us, inquiring, after the usual greetings, if that were Brandon from whom he had just parted. Edith gave a side-long smile," not wholly dissimilar to that with which Lara favored his foe—if contempt, mischief, and disdain had any share in it.

"Don't you know Brandon when you see him? That is a new admirer of Kate's, who wants to carry her away. Aunt is broken-hearted."

"Edith!" I exclaimed, coloring indignantly, and angry with myself for doing so; but she laughed, and Nevil abruptly bowed farewell, riding away.

Edith set off at a rapid pace: but not being particularly anxious to overtake her, I did not hurry myself. She waited just inside the gates of Lovel House, and as I advanced, leaned against a tree, with a peel of merry laughter that made the garden ring; then cried, breathlessly:

"My dearest coz, you look just like an icicle. I think I have done you a great service to-day, so don't be angry."

"If you think I am angry because of your silly statement to Mr. Verner, you are much mistaken; but I think you have been guilty of great deception."

"If you are going to preach I am going in." And away she went along the avenue, I after her quietly, and entering the house, followed her upstairs, after announcing our arrival to aunt.

Edith was waiting in the dressing-room, and studying her face in the mirror.

"Now for the sermon, Kitty. How have I been guilty of deception, joy of my heart?"

"Who is the gentleman you introduced?"

"Your education has been strangely neglected if you never heard of the Dana's."

"Of course I have heard of them." I replied.

"Good angel of my life! Edgar is a relative."

"He traveled with you; he has been here ever since; and you pretended that he was a stranger. That is deception pure and simple, Edith; but I will not be a party to any further deception, whatever it may be."

And prepared for a battle, I sat down beside the fire, whilst Edith looked fixedly at me.

"Madam Gravity," she said, letting the shining coils of her hair fall down, "I said he was a stranger that day, because, ages ago, we had agreed to be strangers; we are so now, in a certain sense, so it is not deception."

"Ask yourself if you have been straightforward. You made me believe you had never met this Mr. Dana before, Edith, and you know it."

"Listen then, Kate, and I will tell you:

Edgar was once on very friendly terms with my people, of course in the days when he—did not go gipsying, but had expectations. He was an orphan-ward of an old doctor in this county, but lived near us, society receiving him favorably, as it was popularly supposed he would inherit his guardian's savings. I was a school-girl, he a 'collegian,' and during holiday-time we were a great deal together, and as was inevitable, we fell in love. It was considered a good match, but we were absurdly young, and marriage then was out of the question. But there was an engagement, tacitly acknowledged, until the doctor died intestate, his property was claimed by the next of kin, and Edgar's fortune "scattered was to wintry winds." As soon as this was known there was a call to arms, a gathering of the clans, and a general uproar. Edgar was cut by his great relatives, and banished with the information that he was a clever young man, and the world was a wide field of labor for clever young men, especially if they were penniless. Then he was summoned to my home, but we had no "Lucy and Master of Ravensword" performances. Papa was very kind, very polite, and of course Mr Dana knew as well as he did that Edith could not be expected to regard a childish promise as serious; and it might be better if he ceased his visits just at present. I had no wish to marry poverty, so I said 'Good-bye' and we agreed to be strangers. There was a farewell to the long letters, the homeward drives from dances, the walks, the foolish words, the stolen meetings——Oh! cousin, for nearly a month I cried my eyes out! I never saw anything of Edgar until last year, when we met at the opera. Papa was very gracious to him, because I was then half engaged to that rich old Mortimer, who died after of apoplexy. You can imagine my amazement last Summer when Edgar got into the compartment; there was a tragic start on his side. We met almost as strangers, and I gave him Lovel legends to prevent him speaking of old times. That is all, and now am I so wicked?"

"What is Mr. Dana doing here?"

"He is secretary to General Polwyn."

General Polwyn was a retired Indian officer who was writing a history of the war.

"Does your father know?"

"Never thought it worth my while to tell him."

"Then you are acting wrongly, and I can't allow Mr. Dana to come here, after what you have told me."

"Do you think I am mad, Kate? On my word, if I were dying of love for Edgar, I wouldn't take him unless he were rich. Papa once said, "Don't marry a poor man, Edith, for you would make yourself and him miserable;" and it is true. Edgar's poverty is an eternal bar!"

"Then why have anything to do with him?"

"Are you one of those stiff old things who call flirtation a crime? I can't cut Edgar—I won't! I shall tell papa, Kate; he knows me better than you do. He knows, and Edgar knows, that I shall go to the highest bidder, like a picture!"

"There is a wise proverb about playing with edged tools, Edith."

"Do you suppose I could forget our positions, or the difference between Miss Lovel and General Polwyn's secretary? Thanks for the compliment you pay my common sense!"

She was angry with me, I thought, and we dressed in silence; but ere we left the room she laid her head on my shoulder, saying:

"I wish, Kate, I were like you, and not selfish—not sordidly ambitious!"

The unusual gravity left her. She pointed at her reflection in the mirror, laughing:

"With that face I ought to win more than love in a cottage, even though I am only

"'A penniless lass wi' a lang pedigree!'"

I stayed behind a few moments; and when I returned to the parlor, I found aunt Dorothy looking slightly bewildered as Edith sang the praises of her newly-found friend. Later on she dropped me an airy curtsey, exhibiting a letter in her own dashing caligraphy.

"I have confessed all to papa, and have told him that you are afraid he will object to Mr. Dana's visits."

"Very well," I said. "If your father approves, I have no more to say.

For some days after our encounter with Mr. Dana, neither Edith nor myself had been out, as the weather was cold and stormy. Nevil had not called lately, and I was wondering if he were ill, when Brandon came, and he believed that all at Nevil Towers were well.

(To be continued.)

For Women.

CONDUCTED BY MISS RAY CLARK.

OLD-FASHIONED ROSES.

THEY ain't no style about 'em—
And they're sort o' pale and faded
Yit the doorway here, without 'em
Would be lonesomer and shaded
With a good 'eal blacker shadder
Than the morning' glories makes.
And the sunshine would look sadder
For their good old-fashion' sakes.

I like 'em cause they kind o'
Sort o' make a feller like 'em;
And I'll tell you, when I find a
Bunch out whur the sun kin strike 'em
It allus sets me thinkin'
O' the ones that used to grow
And peek in through the chinkin'
O' the cabin, don't you know?

And then I think o'mother,
And how she used to love 'em,
When they wuzn't any other,
'Less she found 'em up above 'em!
And her eyes, afore she shut 'em
Whispered with a smile, and said
We must pick a bunch and put 'em
In her hands when she was dead.

But, as I wuz a sayin',
They ain't no style about 'em,
Very gaudy er displayin',
But I wouldn't be without 'em.
'Cause I'm happier in these posies
And the hollyhawks and sich
Than the hummin' 'at noses
In the roses of the rich.

SUMMERING.

(Continued from page 689.)

IN the hotel dining room were gathered the usual variety of the human species. At the table next us was a group of three, whose manners, jewels and generally over-fed condition proclaimed them unfortunates with more cash than brains. The two ladies were especially below par. Such bangs! Only nabobs could have afforded bandoline sufficient to keep them in position, and alas! they trifled sadly with some of the proprieties.

After dinner we visited the new Mountain House, which stands farther south overlooking the same view as the old Mountain House. From there we went on to Sunset Rock, Haines Falls, and other points of interest. As we neared the town which was the limit of the day's travel, something was said about temperance, and Miranda remarked that she was quite ready to lecture that evening if we would procure a place for her. We proposed she should rehearse to us, and she immediately began.

"I conduct my lectures after the Socratic method," she said, whereupon she directed her questions to our driver, and as they were quite out of his line, his answers were preposterously wrong. She proceeded with scientific explanations and elaborate arguments, discovering to Mr. Q. such a knowledge of his internal structure and of chemical combinations and effects that the whole situation was infinitely funny to the occupants of the back seat. "Sugar is composed of carbon, oxygen and hydrogen," said she. "Oh, you can't come that on me!" interrupted her incredulous hearer, "I've seen 'em make sugar lots of times, and they never put any such stuff as that in it!" Miranda had been teaching chemistry and physiology and was President of the Juvenile Temperance Union, so she was "up" on her subject, and with merry peals of laughter she went on through the physical and moral phases of the theme much to Mr. Q.'s amazement and our amusement.

She emphasized her elucidations with many earnest gestures, the effect of which was hightened by the very demoralized condition of her gloves, which, though in a normal state when we started, had suffered untold things from their wearer's clambering up rocks, picking new botanical specimens, and from the stage, which had been newly varnished for the occasion.

At the conclusion of the lecture we found ourselves near our journey's end, and once more in the pleasant little town lying surrounded by mountains, we dismissed Mr. Q., who proved himself the model driver to the last, for he possessed the proverbially extortionate spirit which characterizes the class the world over, and though an agreement had been made for the distance, he assured us there was a misunderstanding. The guileless Miranda had not detected the far-off odor of that common species of vermin whose proclivity in such cases is distinguishable only to those who, to speak elegantly, have cut their eye-teeth, but Abigal and I had begun to reason within ourselves and were not surprised nor so ready to be persuaded. On principle I declared for the

stipulated sum, but decided that he had undercharged on the start to secure the trip, trusting to the weakness of "gullable" women for getting the rest at the journey's end. So we compromised and said farewell.

The next morning we took the stage at an early hour, and rode through Stony Clove—well named, for it was the roughest of roads. Through the Clove it was quite chilly, and ice lay in the crevices of the rocks. I braced myself at first, trying to keep somewhere, but finally let go, and went through a series of gymnastics that exercised every muscle in my body. We arrived in Phœnecia just in time for the train to Rondout, where our ways separated.

It was our first Sunday in the Catskills that we heard of the assassination of the President. The news did not reach us out there on the farm till the Sunday morning, and then we heard that he was dead. We went to church in the little school-house in the afternoon, and the itinerant preacher spoke of the terrible event, giving us our first reliable news.

I have looked in on several friends on my roundabout way back, have enjoyed the renewal of former acquaintances, and met many new friends that I shall not soon forget. Everywhere, too, I have found the national sorrow, and heard the new burden of prayer from the family altar. And to-day, as I write, there is still only a hope left.

The Summer is ended, and beautiful September is here. When we went away, the fields were white with daisies, and the mountain sides were flushed with the delicate waxy flowers of the laurel, and sweet wild roses blossomed everywhere. Fresh for the year's work, with a grateful remembrance of a lovely Summer, I came back last week through wildernesses of golden rod, purple asters, and the dark, rich, crimson sumach.

Sept. 19, 1881.

SPLENDID GIRLS.

If young ladies who indulge in handkerchief flirtation, or any other flirtations, could know how lightly their names are bandied about among the very young men who laugh and flirt with them, their cheeks would be dyed with crimson.

I have yet to see an older brother, who was not serene in his reproval of such deportment in the sister he loved, and whose fair name he wished to have held in high esteem. Modesty is the only current coin of our sex. No matter how much the customs of the age may seem to condone the opposite style.

In averting one extreme it is not necessary to be dull and stupid and prudent, and generally uninteresting. I know girls who are very queens in society, standing as high in the esteem of the young men, above the flirtation girls, as Mont Blanc is above the vale of Chamonni. "Splendid girls" is the universal verdict, but they would as soon think of flirting with a star. It is a grand thing to stand star-high in the estimation of society, and not be counted as a marsh will-o-the-wisp

These fine girls are generally well dressed even to daintiness, though their dresses may not be costly. Their gloves are as fresh as new laid eggs if only four buttoned thread ones, and their shoes always *look* new, although they may have been a year in service.

They have the little tricks of elegance which so enhance any toilet; the sprig of geranium leaves and blossoms nestling in the lace at throat, the dash of crimson ribbon on the quiet colored dress, the pretty wave or curl or friz in the hair, all giving a "light of hand" look to the appearance.

But the "splendid girl" knows something. She can talk sense with the boys, and give them confidentially, good advice on topics about which they consult her. She can take up the conversation when it turns on politics even, and is thoroughly posted on the events of the day. She is likely to have her prejudices and preferences in opinion, but she is a lady, and never brings them forward offensively. The flirtation girl looks on with sheer envy, and some bitterness, when she sees how she is sought after by the finest men in the room and how easy it is for her to carry on a spirited conversation.

But after all it is the thorough goodness of her heart that is the chief charm of the girl. She is ever ready to do a kind act to any one, and she has calls enough on her time and talent, and she likes it, and never complains. It is worth some effort to attain to such a standing in any community.

J. E. McC.

FASHIONS.

It will certainly be hailed with satisfaction by ladies who have been bewailing the extravagance of fashion, that dresses appear likely to be made up a great deal more plainly than they have been for many seasons past during the coming Autumn and Winter.

The reason of this is, obviously, the return to handsome fabrics, such as brocades, satins, and more especially the particular kind of watered silk known as French moiré. This last has been given up so long that it is almost unknown by the present generation of young ladies, and now comes to them quite fresh and new. It is the same with all materials, and in general with all things appertaining to fashion. But it is seldom things thus taken up again appear or are used in exactly the same way as before; thus, moiré is employed this Autumn chiefly in combination with other fabrics, such as cashmere veiling, and other fancy woolen materials. It forms the flounces, revers, plastrons, scarfs, and such like accessories of these fancy woolen dresses.

Young ladies who are debarred from wearing complete dresses of French moiré are allowed the use of this handsome material in the way of trimmings and accessories of the toilet. Skirts are less scant and clinging than heretofore, and trimmings are beginning to be put on plain rather than gathered or fluted. Lace is still a great favorite in the way of trimmings, but the choice just now is for embroidery.

The embroidery patterns are worked in silk or fine wool, instead of cotton, for the Autumn and Winter. Flounces, put on almost plain, plastrons, revers, facings, cuffs, collars, and plain panels are embroidered in this way with silk or wool, either of another shade or of a contrasting color.

Ladies possessing dresses of French moiré, long put away on account of the inconstancy of fashion, will do well to cut them up and use them in combination with cashmere, making up a pretty and fashionable toilet. They need not grieve at the cutting-up business, for, as before said, though fashion takes up things that have long been laid aside, it is never quite in the same way; and it would be an error to suppose the moiré dress of twenty years ago would ever be fashionable again exactly as it is.

Checked and striped woolen fabrics, checked serges—notably with striped borders for trimmings—light flannels, French and American bunting, cheviot cloth, and limousine are favorite materials for Autumn costumes, which are invariably made with the short round skirt. The skirt is either pleated all the way up to the waist, or trimmed with flounces put on in wide flat pleats or hollow pleats divided by plain spaces. In the latter case, some semblance of a scarf-drapery is generally arranged over the upper part of the skirt and loosely tied behind.

Bodices are made up in a variety of ways. There is the basque-bodice, with rounded basque in front, and either a plain or plaited postilion behind; and there is also the peaked bodice, with flat paniers at the sides, and the round waist bodice, worn with a belt and shirred at the shoulders and at the waist.

Most sleeves are now made with small revers at the top matching the rest of the trimming. Sometimes the cuff is omitted, and the sleeve is made semi-short, and so tight that the long glove can be slipped over it.

Elegant cloth jackets for the Autumn are made tight-fitting and double-breasted. Dark green is the favorite color, and bids fair to supersede the long popular seal-brown, for the Autumn and Winter.

A mantle of mixed style, very convenient for traveling, is a sort of semi-fitting palctot, fastened all the way down with buttons, finished with a long pointed hood, edged with silk cord, and falling down over the puff at the edge of the back. This serves as a mantle, and if worn over a short plain skirt with a fluting round the bottom, it forms a very useful costume for the morning, for excursions, or simply for home.

Mantles of a dressy style are made either in the sacque shape or in the Mother Hubbard fashion, shirred across the shoulders and in the back. These shapes seem likely to prevail through the Autumn for mantles of heavy silk and satin, while the redingote shape is preferred for cloth garments. The black satin pelisse, lined with bright-colored satin and trimmed with black Spanish lace, forms a nice transition between the light Summer mantle and the heavy fur cloak of the winter.

TABLE MATS.

Mrs. Sweet's reference to table-mats, reminds me of a cheap, serviceable set I once saw.

A lady who was living far from the city, wanted a new mat or stand for her coffee-pot and being unable to procure one, she took a straw-bonnet (stone color) and ripping the braids apart, sewed them together again, in a flat, round shape, lining it with a piece of thick cloth, and a piece of stiff wigging.

This was so neat and serviceable that she bethought herself of a number of discarded, white, straw hats and bonnets in the attic, which she soon transformed into a nice set of table-mats.

Mrs. W. V. A.

CORRESPONDENTS' CORNER.

A request for a recipe for bleaching ferns received a few weeks ago was delayed for satisfactory information we now publish a reply clipped from the Art Interchange which answers it satisfactorily: "Ferns must not be bleached in the ordinary chloride of lime or soda; it is too powerful. Use Tilton's bleaching fluid. Lift them carefully by hand from the liquid immediately on becoming white and press very carefully between folds of a soft towel; then place between the leaves of a book until ready for mounting."

Domestic Economy

CONDUCTED BY EMILY MAPLE.

HOUSEHOLD NOTES.

MARY WAGER-FISHER.

"Our best quinces come from New York State," said a Philadelphia market-man to me the other day, and they're worth 60 cents the half peck. Most years they're about 40 cents.

"But I want half a bushel."

"'Twill be all the same ma'am, at the rate of 60 cents the half peck," so I paid $2.40 for my half bushel of quinces, thinking that New Yorkers could go into no more profitable business than quince raising. And why are quinces not more generally produced? Does it require more vigilance to keep the borers out of the stock, than to produce potatoes, bugs and all? And it would take nine bushels of potatoes at rather more than 50 cents a bushel to equal the value of one bushel of quinces. My neighbor says that stewed pears flavored with quince are delicious. But I like the flavor of the pear. Here, in the neighborhood of Philadelphia, the quince is so precious that its parings are cooked in order to extract the last drop of flavor, and quince jelly is considered the ne-plus-ultra of jellies.

A calico wrapper large enough in the sleeves to slip on over a dress, is one of the most convenient garments a housekeeper can have. There are many times when one wishes to be "dressed up," and still is obliged to put the finishing touches to a meal, to go into the cellar, to work about the stove, or to wash dishes, in the doing of which a wrapper slipped on over the frock will keep it from all soil.

It is a good time now to buy ready-made Summer garments, as most dealers are willing to sell measureable garments at a low figure.

It is a common belief that the coffee grain improves by age, but unless the coffee is kept in a *dry* place, the berry loses in strength and flavor. This, at least has been my own experience. A quantity of "Old Government Java Coffee" in its green state, became at the end of six or eight months entirely without flavor, although at the outset it was of first quality. It had been kept in a sack in a close closet, into which the sun never shown and which was consequently not fully dry. I mentioned the fact to various dealers as I had opportunity, and their unanimous reply was, "It was the dampness that *produced the mischief.*"

Have not all housekeepers of much experience learned that the *cheapest* sugar for all culinary purposes, is granulated sugar?—the cheapest for the table of the "hired help" as well as for cooking purposes. If not, try equal amounts in weight and observe the result. It will almost invariably be found that the granulated sugar lasts enough longer than the "coffee sugar" to compensate for the difference in price, while the convenience of the one over the other is not to be overlooked.

I now and then hear from house-keepers such pleasant reports of kerosene stoves—their convenience and economy, that it is rather surprising that they do not more generally come into use, especially in localities where the fuel of the farm has to be bought. For small families, or for use in hot weather, they seem to be particularly convenient and economical. It might lead to good results if such readers of the Rural as have them in use, would give their experiences, not omitting the cost of oil per hour.

I am sorry to see girls learning to operate the sewing machine, before having learned to use the needle dexterously. There is no art more necessary for a girl to be conversant with than that of being accomplished in the use of the needle—not only to sew well, but to repair garments neatly, to make a handsome button-hole, to sew on buttons, and to mend gloves. To be able to sew neatly by hand, is almost indispensable, and is an art only acquired by diligent practice, while to operate a machine, fairly, is a mechanical operation instead of an accomplishment. Mothers should see to it, that the fine art of needlework is not sacrificed to the fascination of the sewing machine.

In washing dishes supply yourself immediately after the meal is finished with a pitcher, or large-mouthed mug partly filled with hot water. In this, stand up all the silver spoons, forks and knives. The water should not be deep enough to reach the knife handles. Wipe, with a soft towel, after five or ten minutes. In this way, the silver escapes many a scratch, especially if left for the kitchen-maid to clean. It is a very small task for the mistress of the house to do, and saves her much vexation. A great annoyance in many households is the frequent breaking of the handles of coffee and teacups. Indeed the breakage became so alarming in my own, that I no longer allow those pieces to be passed to the kitchen, ordinarily, but have them wiped in the dining-room, and there is no more breakage. Half the breakage in dish-washing and in handling dishes, comes from the slovenly way in which they are gathered up. Everything is to be gained by placing the pieces that are alike together, and when this is done, and the silver, or steel-ware is disposed of as above suggested, half the work of putting the table service in order, is over. Wiping towels for glass-ware, is a specialty—a soft linen usually woven with cross-bars of color, and costing 12½ cents a yard. The soft Russia crash at the same price, is nice for dishes. Some housekeepers prefer wiping towels partly cotton. Worn-out bed-spreads, from their soft, close texture, make excellent dish towels. If you are so situated that the care of your dishes devolves upon hired help—not over-tidy are they sometimes—you can command a tolerable degree of cleanliness in dish cloths and towels, by having a full supply, so that the soiled may be taken daily from the kitchen and fresh ones put in their place. Such a method increases the size of the weekly wash, but I know of no better method by which to compass the slovenliness of the "hired girl" in regard to dish towels. Both cloths and towels should be well dried after use, as they rapidly rot from being continually wet or damp.

The Other Side.

Apropos of another side to the thrice-told story of A. E. S., p. 675, I will tell you of one reason why young men hesitate to wed. Mrs. A. was an old maid of 47; then she married A., 63, and a thrice-told widower. He was a hard-working plasterer, and adored his wife. I boarded with them. One night something was said about the kitchen floor. Mrs. A. remarked that she would get Mr. A. to scrub it when he should come home. And so she did; poor old man! Much other work his wife might do he also did at her command. We boarders thanked our stars that we were bachelors.

Jack.

Eating Radishes.

To those who are deprived of the satisfaction of eating radishes on account of poor teeth, I would say, grate them. If you have no grater you can easily make one out of any old piece of tin. Lay it on a soft board, punch holes in it with a sharp nail, and tack it, rough side up, on a shingle or small board.

Maggie Woolman Thomas.

DOMESTIC RECIPES.

Frothed Chocolate.

Put on to boil three pints of new milk. Wet three large tablepoonfuls of Baker's chocolate in a cup of hot water and pour into the boiling milk. Simmer 10 minutes stirring frequently. Then take from the fire sweeten and stir in the whites of two eggs beaten to a stiff froth. Put into a pitcher two or three whites of eggs beaten stiff and sweetened and pour over the top of each cup of chocolate before serving.

Excellent Rusk.

Make a thick batter of a quart of new milk, a half cup of good yeast and flour to thicken. When very light add a cup of butter rubbed to a cream, two cups of white sugar and three eggs well beaten, add flour to make a soft dough. Knead and set to rise for three or four hours, then make into biscuit and let stand until light and puffy. You may glaze just before you take from the oven with a little cream and sugar or the white of an egg, or make thin icing; flavor with lemon and brush over the rusk when cool.

Long Island.

Stewed Kidneys.

Three kidneys cut lengthwise each into three pieces, wash and wipe dry. Put into a frying-pan three tablespoonfuls of butter, a teaspoonful of minced onion, pepper and salt and a cup of good gravy. When this is hot put in the kidneys and cook slowly 20 minutes. Add the juice of a small lemon and a pinch of the grated rind. Take up the kidneys and lay upon a hot dish with toast underneath, thicken the gravy with browned flour, boil up and pour over all.

Mary B.

News of the Week.

HOME NEWS.

MONDAY, Oct. 17, 1881.

BAD MANAGEMENT AT YORKTOWN.—The authorities having the Yorktown celebration in hand have made a grievous blunder in not providing proper, or in fact sufficient, places for the entertainment of the guests on the great occasion. Their most eminent success, according to reliable information, has been attained in leaving undone things which might have been done in good season, and there is a probability that many will return to their homes at an early date with their patriotic ardor somewhat cooled. There is little excuse for any neglect in these preparations, as an immense crowd was expected, and the blunder about quarters for our French guests is without sufficient reason. The old Moore house, where the articles of capitulation were signed, has been renovated and partially rebuilt, but it will not accommodate one-half the visiting Frenchmen, who did not come here to be packed away nights, like herrings in a box. Unless private enterprise comes to the rescue there is a likelihood that the French officials and others from "over the sea," will go home again with no exalted views of American hospitality. Barns, sheds and houses on land, and barges, old vessels, etc., on water, are being fixed up with bunks and their floors covered with mattrasses for sleeping accommodations, and as for eating, people must catch a bite where they can, or do as they would at a pic-nic—take a lunch with them. But then, we suppose they wish the recollections of the Peninsular campaign to be as vivid as possible!

THE PROPOSED WORLD'S FAIR AT BOSTON.—Several months ago a committee of 28 was appointed to consider the feasibility of holding a world's fair at Boston. On the 13th inst. that committee met and rendered its report. While the general opinion seems to be favorable to such a project, there is some doubt as to how far this sentiment may be relied on for substantial aid until the project has assumed some definite form as to capital, time and location. Beacon Park has been offered for the purpose free of rental, and this has encouraged the committee somewhat in their efforts; but the main thing is to secure a guaranteed capital of not less than $5,000,000, and if this can be done the committee recommend the holding of the fair. Besides the general public interest, several prominent citizens must devote a large share of their time to the work and a simple business organization must be formed under a special charter of the State, to be "broadened in its scope and materialized by concurrent resolution of Congress." While all this is possible, we do not now look upon it as probable.

SPECIAL SESSION.—On the 10th inst. the Senate met in special session. Senator Bayard (dem.) of Delaware was elected President of the Senate *pro tem*, which constituted him Vice-President of the United States. On the 11th, Miller and Lapham of New York, who succeeded Conkling and Platt, and Aldrich of Rhode Island who succeeds the late Senator Burnside, were duly sworn into office and took their seats. On the 12th the Republican Senators met in caucus and decided to present the name of Senator David Davis, of Illinois, for President *pro tem*. On the 13th, Senator Logan, of Illinois, offered a resolution to elect his colleague, Davis, President *pro tem.*, and on being put to vote the resolution was carried 36 to 34, Messrs. Bayard and Davis not voting. Senator Anthony, a previous candidate for the position, and Senator Bayard, the deposed President, were appointed by Senator Harris, temporary chairman, to escort Mr. Davis to the chair.

Guiteau, the assassin, was brought into court on the 14th inst. and indicted. His plea is "not guilty." His lawyer, Mr. Scoville, said the defence would mainly consist of two points—first, insanity; second, the wound was not necessarily mortal. The trial is put down for November 7 next.

Wyatt Henry Cardwell, a grandson of the Revolutionary orator, Patrick Henry, turned up as a vagrant at the Memphis police headquarters a few days ago. He possesses a fine education, but is unable to stand against rum.

The election in Ohio, held on the 11th inst., resulted in favor of the Republicans, by a plurality of 25,000 for Foster, their candidate for Governor. In Iowa the Republican majority is estimated at 48,000.

The Democratic Convention at Albany last week made the following nominations:—For Judge of the Court of Appeals, A. Schoonmaker, Jr., of Ulster; for Attorney General, Roswell A. Parmenter, of Rensselaer; for Secretary of State, Henry Purcell, of Monroe; for Comptroller, George N. Lapham, of Yates; for State Treasurer, Robert A. Maxwell, of Genesee; for State Engineer, Thomas Evershed, of Orleans. A new State Committee was appointed, of which Daniel Manning was elected chairman. The Tammany men, before leaving Albany, drew up an address protesting against their exclusion from the State Democratic organization.

Hannibal Hamlin, of Maine, has been appointed Minister to Spain; Walker Blaine, the Secretary's son, has been appointed Third Assistant Secretary of State, and Mark S. Brewer, of Michigan, Consul-General to Berlin.

Dr. J. G. Holland, editor, poet and novelist, died in this city on the 12th inst. of heart disease. He was born at Belchertown, Mass., July 24, 1819. Since 1870 he has been editor of Scribner's Monthly, now the Century Magazine.

The descendants of Baron Steuben who were invited to attend the Yorktown celebration arrived in this city on the 13th inst. There are seven in the party. They were received with honors by Government representatives and others.

A fire in the Fourth Avenue Horse-car stables and vicinity destroyed about $1,500,000 worth of property on Monday night. Over 300 horses are now reported killed. Morrell's store-house was consumed, in which much valuable property was stored, such as paintings, books, furniture, etc. Humphrey Moore loses an oil painting valued at $20,000, and some 500 other paintings, sketches, etc. Cornelius Vanderbilt lost a library of choice books worth $15,000, one volume—a copy of Audubon's Ornithology—costing $12,000. His son lost a rare painting valued at $55,000. Mme. Pauline Fischers, the well-known prima donna, lost a valuable library of 800 volumes and 65 opera scores. The exact amount of losses and insurance cannot yet be ascertained.

The Cincinnati Industrial Exposition, after having been open to the public for 31 days, is closed. The treasurer's books show that the expenditures have exceeded the receipts by about $15,000.

The United States Trust Company, of New York, has had registered at the Treasury Department $275,000 in 4 per cent. bonds in the name of the company as "Trustees of Mrs. Lucretia R. Garfield and the surviving children of James A. Garfield, deceased," being the amount purchased with the proceeds of subscriptions to the Garfield fund. These bonds will yield an annual income of $11,000, and cannot be paid off by the Government until the year 1907.

The case of the men who robbed the passenger train on the Iron Mountain Railroad on the night of September 2, and who were pursued and finally captured on September 28—one in Texas and two in the Indian Nation—and brought to Washington, assumed a new and sensational phase in the Special Term Court, when each of the robbers pleaded guilty to 14 indictments, making the term of punishment 70 years for each man.

Charles P. Thompson, of Gloucester, has been nominated for Governor of Massachusetts by the Democrats of that State.

Theodore Stock, a miser, who lived in Toledo, Ohio, died in a fit in his cabin. He left a quarter of a million to one of two children. He subsisted on the refuse of hotels, and made a portion of his fortune by burying the victims of cholera.

The total earnings at Sing Sing prison for fiscal year ending September 30, 1881, are $228,254.14; total expenditures, $187,127.20, leaving a net profit for the year of $42,126.94.

The army retired list is limited to 400. There are at present only seven vacancies, while fifty officers are eligible to retirement.

The commissioner of patents reports 13,000 original patents issued the first nine months of the present year, an increase of 2,300 over last year. The receipts were $65,000 in excess of those for the corresponding period last year. The report recommends a considerable increase in the crop examining and clerical force, and calls for an appropriation of $94,000.

Guiteau in his autobiography traces all his misfortunes and failures in life to his early training, and is especially severe on his father, to whom he attributes most of his calamities and ill success. He shows how he persistently followed the late President with the intent to assassinate him, and re-affirms that he believed he was acting under special Divine authority. He denies any legal liability, and says that for twenty years he has had an idea that he would President.

After several months inquiry the Committee of Twenty-eight appointed to consider the feasibility of holding a world's fair in Boston met on the 13th. They reported that to successfully inaugurate and forward the project it would be necessary to secure a guaranteed capital of $5,000,000, and that it was doubtful if that sum could be raised, unless private subscriptions were supplemented by State and city aid, which could not properly be expected.

The Albany new City Hall corner-stone was laid on Thursday with Masonic ceremonies, which were witnessed by a large concourse of citizens. The box which was deposited at the laying of the corner-stone of the old City Hall in 1823 was opened and the contents noted. It was then, together with a new box and new contents, deposited with the new corner-stone.

Garfield's picture will be placed upon the five cent international postal letter stamps.

The Rev. John A. Lansing of Brookline, Mass., who was jointly indicted here with Miss M. Ward, of Waverly, N. J., for obtaining $14,000 worth of bank shares from Mrs. P. C. Upham, widow of the late Professor Upham, of Bowdoin College, by false pretenses, has been released from prison, Mr. A. V. Stout, of the Shoe and Leather Bank, becoming his bondsman in the sum of $3,500.

The Detroit Post and Tribune furnishes a careful approximation of the losses by the recent farm and forest fires in Ottawa, Allegan, Manistee, Huron and Sanilac counties, Michigan. The total is $2,346,413. There were 1,147 dwellings burned, 28 school houses, 8 churches, 12 hotels, 130 stores, 34 mills and 20 docks. The insurance on all this was only $628,632—so that an absolute deficiency of $1,722,781 remains to be met. What should be done is to see that their immediate and most pressing wants are provided for. To do this, even on the most limited scale, will require at least $600,000 and probably $1,000,000. But the total of the contributions from all sources is now about $300,000.

"Simply Wonderful."

The following is an extract from a letter received July 6th, 1880, from which it will be seen that Compound Oxygen did a work which, to use the author's own language, is "simply wonderful!" He says: "Since I wrote you last (about five weeks ago) I have gained fourteen pounds in weight, and my general health has improved accordingly. I have just finished the Treatment which you sent April 12th, and the work which it has done is simply wonderful. I did not tell you before that my physician had just given me up. Such was the case. Six weeks ago I was so weak that I could barely walk across the floor. The other day I walked three miles." Our Treatise on Compound Oxygen containing large reports of cases, and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Oct. 17, 1881.

THE following items of agricult ral news have been condensed from telegrams received here from Friday noon to date: Portland, Me.—Produce market firm and very active at higher prices. Farmers paying their debts well.....

Philadelphia, Pa.—Wool firm; but trade only moderate. Western consignors holding off for better prices. Goat-skins scarce and prices slightly advanced. Leaf and plug tobacco within the past 60 days, has advanced 15 per cent., while in smoking tobacco there has been no appreciable change. Wheat lower and unsettled.....

Detroit, Mich.—Grain trade restricted by lack of storing capacity. Holders threatened with extra storage charges unless the elevators are promptly relieved. Corn, oats and clover seed, dull and lower. Provisions comparatively scarce and low. Potatoes and butter are abundant and prices a trifle lower. Wheat firm. No. 1 white $1.36⅞ cast. No. 2 red, $1.40½.....Chicago, Ill.—Grain and provisions weak and unsettled for a week. October corn sold on Friday as low as 59⅝c, and November 60c—a decline of 16c in 10 days. Wheat sold at $1.30—a decline of 15c in the same time, and in the same interval pork has dropped $2.50 per barrel. Prices, however, have probably touched bottom. There are now ten million bushels of corn in the elevators and still receipts are heavier than shipments.....Peoria, Ill.: It has rained steadily during the week. Laborers are demanding higher wages and usually get them. .....Cleveland, Ohio: Grain market weak and unsteady: No. 2 red Winter wheat, $1.41; shelled corn, 60@71c.; new in cars, 65c.; oats firm at 40c. for No. 1. Weather rainy and unfavorable to dairy interests.....Columbus, Ohio: Crops excellent hereabouts..... Evansville, Ind.: The tobacco crop hereabouts is not damaged so much as was reported. Much of it is still in the fields and looks fine; but, owing to swift growth after the rain, it is thought it will cure dark.....Milwaukee, Wis.: Rain falling nearly every day has delayed delivery of grain and other produce from interior points. An enormous amount of business in grain has been done from day to day, however, with violent fluctuations in prices. The general feeling is bearish, heavy sales resulting in a decline of nearly 10c. a bushel in wheat. Mills generally well up with their contracts, and if they continue running, flour will be lower.....

Minneapolis, Minn.—Another week of rain Fall plowing behind. A good deal of wheat thrashed this week in all the Northwest. Millers buying 100,000 bushels daily. Market closed weak at $1.33. Of flour 85,000 bushels shipped during the week. Some discouragement among small farmers owing to poor crops.....Louisville, Ky.—Grain markets all lower; distillers buying corn therefore liberally. Leaf tobacco unimproved; burley only in good demand.....St. Louis, Mo.—Cotton steady with some improvements in futures; receipts since Aug. 31, 50,086 bales—50 per cent. more than at the same time last year. Wheat on the down grade; market demoralized and unsettled. Corn, ditto. Provisions declining. Live stock average receipts; good steers at firm figures; thin, in liberal supply and low. Freight blockade at East St. Louis owing to unusually large shipments and "pinkeye" disabling transfer horses. River Convention now assembling—an important gathering. Kansas City, Mo.—Cattle market firm and active. Hogs weak, and prices 10c@15c lower; best grades now selling for $6@$6.25.....Omaha, Neb.—Weather for the week rainy and gloomy. Orders for goods pouring in from the country, however. Produce scarce and dealers are buying heavily through the country, paying high prices. Large shipments of cattle are being received, and grain receipts are increasing. Porkers are bringing $6.50.....Denver, Col.—Hog market quiet, receipts small, but supply ample. Fruit very active, a brisk demand for apples. Colorado ranch produce is crowding the market. Hides dull. Deer and antelope skins abundant; prices fair..... Baltimore, Md.—A slight advance in the cattle market and prime heavy are in demand. A heavy falling in the breadstuff market owing to moderate purchases. Market for Western wheat was excited, and one day's sales amounted to 714,000 bushels. Southern wheat dull and weak; Fultz, $1.35@$1.40, and Longberry, $1.45@$1.53. Corn easier and prices for Southern and Western lower. Better grades of butter in demand and firm. Oleomargarine finds ready sale at 20c@22c, solid packed, 21c@23c rolls, and 23c@25c prints. Cheese market active, commanding strongest prices.....Richmond, Va.—Tobacco market firm owing to dry weather; "brights" higher, and it is thought they will continue to advance.....Wilmington, N. C.—Provision trade brisk. Cotton receipts increasing. The rice crop falls short..... Charleston, S. C.—Rice crop estimated fully 24 per cent short of last year's crop, prime selling at 8c.....Savannah, Ga.—Long, dry spell. No frost yet. Cotton quiet but firm.....Atlanta, Ga.—Cotton coming in freely, though farmers are holding for higher prices. Crop will soon be gathered. Weather still favorable for picking.....Augusta, Ga.—Grain and provisions lower; supply light. Cotton coming in rapidly. In some localities the plant is still growing and fruiting. Unless the Fall is unusually late, but little of the new crop will mature.....

In many parts of the West and especially in Illinois there are grievous complaints of injury of a very unusual nature to the corn crop. It seems that owing to the unprecedented drought during the past Summer and the late heavy warm rains the corn on the cob has in many cases sprouted, as if it were in the ground, while in other cases the butts of the ears have rotted. Fields of corn which to the eye appear capable of yielding from 35 to 45 bushels of merchantable corn per acre, will, it is said, owing to this cause give a much smaller yield. The damage is variously estimated at a loss of from 10 to 30 per cent. of the crop in different places. It appears to make little difference whether the stalks are standing upright or whether they have been bent over until the tips of the ears touch the ground.....

New Orleans, La., Weather still warm with occasional showers favorable for cane and cotton. Cotton market firm with an upward tendency. Rice steady and in active demand .....Nashville, Tenn.: Wheat and flour firm and in good demand. Milling wheat worth $1.55@1.59. Fine Fall weather after the severe drought has given us a splendid growth of grass. Cotton receipts good; sales slow. Montreal, Canada: Wool firmer and in active inquiry from manufacturers. Cattle trade dull; grain trade heavy.....J. H. Sanders, editor-in-chief of the Chicago National Live Stock Journal, Chicago, has retired from that paper and will begin the publication of a weekly to be called the Breeder's Journal.

From the reports made at the Annual Convention of the National Farmers' Alliance held the other day at Chicago, it appears that already 1,000 Alliances have been organized with a membership of 24,500. These Alliances are distributed as follows:—Nebraska, 291; Kansas, 245; Iowa, 150; New York, 60; Wisconsin; 51; Minnesota, 50; Illinois, 45; Michigan, 19; Missouri, 19; Indiana, 10. Each member is to pay 10c. towards the support of the alli-

ence. The officers elected for the following year are: John D. James of Kansas, President; Hon. Matt. Anderson, of Wisconsin, Vice-President; D. W. Wood, of Illinois, Secretary; Allen Root, of Nebraska, Treasurer. Resolutions were adopted in favor of equal taxation; a just income tax; moderate salaries for government officers, and civil service reform; the abolition of free railroad passes to legislators and other public officials; Congressional legislation on interstate traffic; public agitation against railroad monopolies and exactions; a change in the patent laws exempting users of patented articles from liability for royalty; the establishment of a uniform royalty on all pateuts on payment of which any one can make the goods; penal legislation against food adulteration; the nomination of all elective officers by the direct vote of members of the organization instead of by conveutions.

COMMISSIONER Loring is arranging for an eight days' conference of the leading agriculturists of the country to be held in Washington at the rooms of the Department of Agriculture, opening on January 10, 1882. It is proposed to secure the presence of representatives of State Boards of Agriculture, agricultural journals and agricultural colleges as well as leading farmers and stock breeders and all others especially interested in agricultural affairs. The first two days will be devoted to agricultural colleges and societies and the discussion of the general principles of farming, and of questions relating to agricultural education. The next two days will be occupied by the consideration of the various modes of breeding, feeding and handling cattle, horses, sheep and swine, their sanitary condition, and the questions of transportation, exportation, etc. January 14 and 15 will be devoted to discussion of all matters relating to cereal crops, and during the two following days the management of vineyards and the manufacture of wine will receive full consideration.....

THE annual convention of Short-horn breeders is to meet at Jacksonville, Illinois, on October 26 and 27. It is believed that a change in the organization will be effected in the way of rendering it more aggressive, and with this object in view an effort will be made to elect young and enterprising men as officers. From all accounts, there seems to have been a great lack of enterprise and push among Short-horn men of late, all the more noticeable in face of the energy with which rival breeds of cattle are being brought to the favorable notice of the public.....

It would be supposed from its popularity that only one substance is now known to the world for the relief of rheumatism, and that is St. Jacobs Oil.—St. Louis (Mo.) Dispatch.

Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., is rapidly acquiring an enviable reputation for the surprising cures which daily result from the use of her Vegetable Compound in all female diseases. Send to her for pamphlets.

What ails you.

Is it a disordered liver giving you a yellow skin or costive bowels; or do your kidneys refuse to perform their functions? If so take a few doses of Kidney-Wort and nature will restore each organ ready for duty.—Star.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

Garfield and Family—elegant engraving 19 by 24—sent for 24c. (stamps). Sheehy & Co., 33 Barclay St., N. Y.

Premature Loss of the Hair.

May be entirely prevented by the use of BURNETT'S COCOAINE.

THE superiority of BURNETT'S FLAVORING EXTRACTS consists in their perfect purity and strength.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, October 15.

CHICAGO.—WHEAT active, firm and higher; No. 2 red Winter at $1.34@1 35; No. 2 Chicago Spring, $1.34¼@1.34½ cash; $1.34½ October; $1.35⅝@1.34¾ November; $1.37¼ December; $1.34@1.34¼ all the year. CORN active, firm and higher at 60¾c., cash and October; 61¾@61½c., November: 63¼@63⅜c. December; 69c. May. OATS moderately active and higher at 43¾c., cash; 43½@43¾c. October; 43¾c. November; 44½@44⅝c, December; 47⅝c. May. BARLEY stronger at $1.04½. FLAXSEED stronger and higher at $1.44@1.48. PORK strong and higher at $17.50 cash; $17.25@17.30 October and November; $17.45@17.50 December; $18.57½@18.60, January. Lard active, firm and higher at $11.77½@11.80 cash, October and November; $11.95@12 December; $12.15@12.17½ May. Bulkmeats active, firm and higher; shoulders, $7.80; short rib, $9.25; short clear $9.60. HOGS—market active and stronger, with a good demand; mixed packing, $5.75@6.50; choice heavy, $6.60@7.30; grassers and rough, $4.70@5.50; light $6@6.45; culls, $3@5.50. CATTLE—receipts for the week 43,000 head—the largest on record; market weak and lower on poor stock; choice fat; $6.40@6.60; fair to good, $5.25@6; common to medium, $4@5; butchers', $2.30@4; stockers and feeders, $2.90@4.20; range cattle, 10@15c. lower; through grass Texans, $2.95@3.65; half breeds and natives, $3.90@4.65. SHEEP—fair to choice, $4.40.@5; common to medium weak and dull at $3@4.

ST. LOUIS.—WHEAT—No. 2 red Fall, $1.45 cash; $1.48⅝ November; $1.51⅛ December; $1.54⅛ January; No. 3 do. $1.36; No. 4 do. $1.27. CORN, higher but unsettled at 62½c. cash; 64⅝c. November; 67¾c. December; 69⅛c. January; 73½c. May. OATS higher at 44@45⅜c. November; 47¼c. December; 49c. January. RYE better, $1.06½. CATTLE—Supply wholly of grass Texans, which are strong; good to choice, $3.25@4; common to fair, $2.50@3; good to choice native shippers' steers, $5.75@6.40; exporters, $6.50@7. SHEEP—demand good for all grades above common; fair to good, $3.50@4.25; choice to fancy, $4.50@5. HOGS firmer on light receipts; Yorkers, $6.20@6.25; packing, $6@6.50; butchers' to fancy, $6.60@7; pigs, $5.50@5.60.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 15, 1881.

BEANS AND PEAS.—Export and other large buyers begin to meet the strong figures that prevail for beans and the market closes better than at our last for all new grades. Old reds, $2.60@3. Southern B. E. peas are in stock and down to $3 ₱ 2-bush. bag.

Marrow beans, new, $3.60; mediums, $3.55; pea, $3.55; white kidney, $3.60; black or turtle soup, $2; red kidney, new, $3.15@3.25.

Receipts of beans for the week, 20,600 bush.

Exports do. 613 bush.

BUTTER.—There is a weakish tone to the market for all but fine grades, and these are showing forced rates in consequence of the scarcity of fancy. The fact is, butter seems to have lost its boom along with several other items of produce, and prices are up to a point that keeps the general stock large. In the opinion of the trade the next turn in prices will be in buyers' favor. Exporters seem to have deserted the market, and reports from abroad do not show a want of anything that can be sent out profitably. We repeat quotations:—

Creamery, finest tubs, 36@37c.; good to prime, 32@34c.; other quality, 24@26c.; sweet cream, 29@31c.; State dairies do. 23@28c.; do. half tubs, choice, 30@31c.; do. fair to prime, 25@29c.; Welsh tubs, 25@30c.; poor State, 20@25c.; Western imitation creamery, 20@30c.; do. dairy, choice, 26@27c.; other, 17@23c.; factory or ladle-packed June and Iowa, 18@19c.; other, 15@17½c.; common Western, 15c.

Receipts for the week, 34,155 pkgs.

Exports do. 2,962 do.

Cold storage to G. B., 908.

CHEESE.—The lull of the past few weeks has had no important variation. Prices for fine factory hold nominally as before. Exporters act as though they are in want of fine goods but not at current figures. The cable is too low for their safety and the quality of the bulk of the supply is not as attractive as it should be at this advanced part of the season. Sellers, however, maintain a still tone for any parcels of fine rating stock, but are anxious to move the sharp Julys and Augusts. Western cheese are running poor.

State factory, fine, 12¾@13c.; good to prime, 11¾@12c.; fair to good, 10¾@11¾c.; poor to fair, 9¾@10¾c.; Ohio factory, flat, fine mild, 12¾@12¾c.; good to prime, 11@11¾c.; fair to good, 10@11c.; creamery, partly skimmed, choice, 10@11c.; poor to good, 4@9c.; fully skimmed, 2@3c.; full skimmed factory, 1@3c.

Receipts for the week, 39,478 pkgs.

Exports do. 13,797 do.

Liverpool cable, 58s.

Steam to Liverpool, 12s. 6d.@17s.

COTTON.—A steadier tone prevails, as crop accounts do not promise to materially cheapen stock. The trade has now a more settled information as to the yield; the accepted estimate is 5,750,000 bales. This is is below last year's growth, but somewhat above early estimates.

CURRENT PRICES.

Quotations based on American standard of classification.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8 11-16	8 15-16	8 15-16
Strict ordinary	9¼	9¼	9¼
Good ordinary	10 1-16	10 5-16	10 5-16
Strict good ordinary	10 9-16	10 13-16	10 13-16
Low middling	11⅛	11⅛	11⅛
Strict low middling	11⅜	11⅜	11⅜
Middling	11 9-16	11 13-16	11 13-16
Good Middling	11 13-16	12 1-16	12 1-16
Strict good middling	12 1-16	12 5-16	12 5-16
Middling fair	12 9-16	12 13-16	12 13-16
Fair	13 5-16	13 9-16	13 9-16

STAINED.

Good ordinary	8 5-16	Low Middling	10
Strict good ordinary	9 5-16	Middling	11⅛

Receipts for week, 15,312 bales.

Exports do. 21,200 do.

DRIED FRUITS.—There is no important movement but the general tone especially for apples is steady. All holders look confidently to a future support of at least annexed prices.

Apples, evaporated, new, 11@13c.; do. old, rings, choice, 13c.; do. fair to prime, 11@12c.; N. C. new, sliced, extra fancy, 8½@9c.; choice, 7½@8c.; fair to good, 6½@7c.; Southern, new quarters, choice, 6@7c.; fair to prime, 5¾@6c.; inferior, 5@5½c.; State, old, fine-cut, choice, 6½@7c.; quarters, do. 6¾@6¾c.; small lots, 6½c.; Ohio and Mich, choice, 6@6½c.; Western, fair to good, 5¾@6c. Peaches, evaporated, peeled, 1880, 33c.; unpeeled, 26c.; N. C. peeled, new, fancy, 23@24c.; choice, 22@23c.; Ga. peeled, choice, 22@23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 9c.; halves, Tenn. 8½@8¾c. Plums, State, black, 17c.; Southern Damson, 15@15½c. Blackberries, 13@13½c. Cherries, Southern, dry, 19@20c. Raspberries, 28c. Huckleberries, 15½c.

EGGS.—Receipts for the week, 8,839 bbls.; do. last week 6,769 do. The demand has run steady and the presence of limed has not had a cheapening impression upon fresh. All stock brings prompt prices and general quality favors trade.

Near points, 27@28c.; State and Pa. 25½@26c.; Canadian, 24@24½c.; Western, 24@24½c., under grades 22@23c.; limed State 21@22c.; Western, 20@21c.

FEATHERS.—There only small sales, but holders remain firm at 62@65c. for white live geese and 25@40c. for mixed.

FLOUR.—With the decline in wheat flour has had a lower tendency daily showing in a decline of 5@10c. ₱ bbl. per day in standard grades.

No. 2, $4.00@4.00; State and Western, superfine, $5.35@5.85; city mills, extra, $7.25@7.50; Spring wheat, extra, $6.30@6.65; Spring XX and XXX, $6.75@7.75; patents, $8@9.50; Ohio round hoop shipping, $6.50@6.90; trade brands, $7.00@7.50; St. Louis extra, $6.65@7.00; do. double extra, $7.75@7.75; do. family, $8@8.25; Southern extra shipping, $6.85@7.25; do. XX and family, $7.50@8.25. Rye flour, superfine, $5.70@6.10; buckwheat flour ₱ 100 lbs. $3.80@4.10. Corn-meal, Brandywine, $3.85@3.90; do. Western, $3.40@3.85.

Receipts of flour for the week, 106,480 bbls.; corn-meal 4,790 do.

Exports of flour for the week, 35,893 bbls.; corn-meal 1,948 do.

FRESH FRUITS.—Exports of apples 3,000 bbls. Choice fruits of all kinds doing well.

Apples, Baldwin, State, ₱ bbl. $3@3.25; Jersey, $2.75@3.00; Greening, State, $2.75@3.12; N. Spy, do. $3@3.25; Fall apples, do. red varieties, $3.25@3.50; State, green, $2.75@3.25. Pears, Sheldon, Western N. Y. ₱ bbl. $4.50@6.50; Beurre Bosc, $5.50@7.50; Duchess, $4@5.50; Virgalieu, $5@7; Beurre d'Anjou, $5@7; Seekle, choice, $8@9; fair to good, $6@7; ₱ keg, $3@4.50; Vicar of Wakefield, ₱ bbl. $3.50@4.50; cooking, $2.50@3. Peaches, NewJersey and up-river choice ₱ bskt. $1.75@2.75; prime, $1.25@1.50; fair $1@1.25; culls, 75@80c. Quinces, apple, prime ₱ bbl. $1@6. Grapes, Del., State, case of 18 3-lb bxs, $5@5.50; bskts, choice, ₱ lb, 11@11c.; poor to fair, 8@9c.; Catawba case of 18 3-lb bxs, $3.25@3.50; State, bskts, ₱ lb, 6@7c.; Concord, case 18 3-lb bxs, $2@2.25; do. in bskt, ₱ lb, 3@4c.; up-river, loose, ₱ lb, 2½@3½c.; Isabella, State bskts, 3@3½c. Cranberries, Cape Cod, choice, ₱ bbl. $8.50@9; fair to prime, $7.50@8; do. poor to fair, $5.50@7; ₱ crate, $2.50@3; Jersey, prime, ₱ crate, $2.00@2.25; fair to good, $1.50@1.75; do. poor to fair, $1.25@1.50.

GRAIN.—Confidence does not seem to be in any way restored in wheat. Quotations have not yet reached an exporting point, though supplies at the seaboard have a depressing effect. Corn and oats participate in the tame feeling that predominates at the close.

Wheat, Spring, $1.39@1.42; Spring No. 2, $1.37@1.40; red Winter No. 2, $1.43½@1.47½; red Winter, $1.35@1.51; white Western and State, $1.37@1.50. Rye, $1.03@1.07. Oats, white No. 1, 51@55c.; No. 2, 53@53½c.; No. 3, 51c. mixed, No. 1, 48c.; No. 2, 46½@47½c.; No. 3, 42@44c. Corn, Western mixed, nominal, 70c.; No. 2, 69½@70c.; yellow, 70@73c.; white, 72@76c. Barley, Canada, No. 1, $1.05@1.10; do. bright, $1.10@1.12; State 4-rowed, 95c.@$1.02½. Buckwheat, 90@95c.

Receipts for the week, wheat, 645,015 bush.; corn, 1,007,966 do.; oats, 113,224 do.; rye, 25,386 do.; malt, 6,450 do.; barley, 136,900 do.

Exports for the week, wheat, 430,914 bush.; corn, 614,882 do.; oats, 1,950 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Oct. 8. bush.	1880. Oct. 9. bush.	1879. Oct. 11. bush.
Wheat	20,109,817	14,494,852	20,787,411
Corn	28,120,876	19,934,221	11,037,559
Oats	5,759,915	3,447,268	2,705,182
Barley	1,922,209	2,177,379	2,063,042
Rye	1,052,599	702,295	764,511
Total	57,025,546	40,743,168	37,356,705

HAY AND STRAW.—Receipts of hay are lighter, but there was quite accumulation in store and former prices are very little varied. Shipping shows the strongest prices. Straw has advanced a trifle; demand good for long rye.

Prime Timothy hay, ₱ 100 lbs., $1.05@1.10; medium Timothy, 80@95c.; shipping grades, 65@70c.; clover mixed, 70@75c.; clover, 60@65 c.; Straw, long rye, 75@80c.; short rye, 50@55c. oat and wheat straw, 40@45c.

Exports of hay for the week, 1,865 bales.

HONEY—Arrivals are large and prices are weakening. Offering at 16@18c. white clover comb choice; 15@16c. fair to good; 12@13c. buckwheat.

HOPS.—The market is firm and higher; brewers have appeared for stock and grumble at the sudden sharp advance. Exporters are not doing much here, but they are sending a good many from the interior and any reduction of visible supply strengthens the feeling.

Crop of 1881, choice, 29@32c.; good to prime, 26@27c.; fair to good 22@24c.; 1880, choice, 20@23c.; fair to prime, 14@18c.; poor to fair, 10@14c.; eastern, new 22@28c.; 1879 fair to prime, 10@15c.

Receipts for week, 7,088 bales.

Exports for the week, 2,098 do.

MILK.—Prices have made a good average for commission milk, $3.30 ₱ can of 40 quarts, but the fluctuation has been wide ranging $1.75@5 per can. The tone of the market is easy as milk arrives in larger sweet supply now that the weather is cool.

POULTRY AND GAME.—There is a fair demand for prime dressed. General quality especially lots from a distance run uneven.

Turkeys, Phila. prime, 15@17c.; State and Western dry-picked, 14@15c.; scalded, 13@15c. Chickens, Phila. spring, 18@20c.; Bucks Co. do. 17@18c.; Jersey, do. 16@17c.; State, do. 14@15c.; Western, do. 13@14c. Fowls, Phila. dry-picked, 16@—c.; Bucks Co. 15@16c.; Jersey, dry-picked, prime, 14@15c.; do. scalded, 14@15c.; State and Western, dry-picked, prime, 13@14c; scalded, prime, 12@13c.; inferior, 10@11c. Ducks, Spring, Phila, ₱ lb, 17@19c.; Jersey and Bucks Co. 15@16c.; State, 13@15c.; old, fair to good, 10@12½c. Geese, Phila. dry picked, young, 14@16c.; do. old, 11@12c.; Western, old 8@10c. Squabs, white, ₱ doz. $2.50; dark, $1.50@1.75.

Liberal supplies of live have kept down prices. At the close the quantity offering is large and the demand from killers slack. A few sales of single coops to the grocery trade are reported a shade above our quotations. Turkeys are not over plenty and good lots are in demand; some lots of poor thin sold at 10@12c. Ducks and geese rule about steady.

Chickens, Jersey, spring ₱ lb. 12@12½c.; State and Penn. 11½@12c.; Western, and Southern, 10@10½c.; Fowls, Jersey, State & Penn. 11½@12c.; Western and South'n, 10@10½c. Roosters, old, 5@6c. Turkeys, Jersey and Penn. 12@14c.; Western, 10@13c.; Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 70@75c.; Western, 50@60c.; Southern, 50@55c. Geese, Jersey, per pair $1.30@1.62; N. Y. and Penn. $1.25@1.50; Western mixed $1@$1.25; Southern, 75c@$1. Pigeons, large, strong birds, 30@35c.; young, 25@30c.

Western game is in large supply and prices are drooping; wild ducks firm at 75c. for redhead and mallard, 50c. for teal and 40c. for common ₱ pair. Reed birds are quoted at $1@1.25 and blackbirds 20@30c.

Grouse, choice, $1.12@1.25; soft, 50@75c.; partridges, prime, $1.25; eastern, $1; soft, 50@75c.; woodcock, choice $1; inferior 50@75c.; English snipe fresh-killed, $1.50@1.75; plover, do. $1.50@1.75; venison, Minn. short saddles, 19@20c.; Western, 17@18c.

Venison scarce and wanted. Shippers should avoid cutting saddles too short. Buyers want the loin, and about three ribs should be left on.

PROVISIONS.—The exports of hog products are light and speculation has lost its animation. At this season of the year there is apt to be some manipulation on the part of packers in effect to secure hogs at the most favorable rates. The undertone of the market, however, indicates an early revival of strong prices. Tierce beef has advanced with stock bought up largely for this and next month, and barreled beef has strong sympathy.

Pork, extra prime, ₱ bbl. $14@14.50; Western mess new, $18.50@19.25. Lard, steam Western, ₱ 100 lbs., $12@12.05; prime city, $11.90@11.95. Hams, smoked city, ₱ lb. 13@14c.; pickled Western and city, 12@12½c.; Shoulders, smoked city, 8¾@9.; pickled, 8@8¼c. Rib bellies, pickled, 10@10½c. Bacon, long clear Western 9½@9¾c. Beef, Western mess, ₱ bbl. $12@13; packet $13@14; India mess, ₱ tce. $22.00@25.00. Beef hams, ₱ bbl., $20@21.

Receipts for the week—Beef, bbls. and tcs. 885, pork, bbls. 2,850; cut-meats, pkgs 22,121; lard, do. 16,895.

Exports for the week—Beef, bbls. and tcs. 2,191; pork bbls. 2,372; cut-meats, lbs. 3,578,628; lard do. 4,449,162.

SEEDS.—Clover has sold in car lots as low as 9c., but holders are a little firmer at the close and have refused that price. Selected seed suitable for export has sold at 9½@9¾c. Shipping inquiry moderate. Timothy quiet.

Clover, Western, 1881, car lots on track, 9c.; Timothy, job lots in store, $2.85@3.25; flax-seed, American rough, ₱ bush. $1.45@1.50

TOBACCO.—Is without quotable change.

VEGETABLES.—Fine lots of potatoes are scarce and prices again favor sellers. The average quality of State is not prime.

Potatoes—Early Rose, Eastern, ₱ bbl., $3.12@3.25; L. I. bulk, $3.25@3.37; State, $2.75@3; Prolific, Eastern, $2.75@3; Snowflake, State, $2.75@3; Burbank, State, $2.75@3; do. L. I. $3.25@3.37; Peerless, State, $2.50@2.75; sweet potatoes, Va. yellow, $1.75@3; Del. River, $2.00@2.50; Jersey, $2@2.25. Bulk potatoes 275 lbs. to bbl.

In garden truck the feeling is generally firm; cool weather directs more trade to the coarser kinds.

Sweet corn, ₱ 100, 75c.@$1.50; egg plant, $5; tomatoes, ₱ bush., 50@75c.; squash, Marrow, ₱ bbl., $1.50@1.75; Hubbard, $1.75@2; cabbage, ₱ 100, $7@9; beets L. I. ₱ bbl. $1.25@1.75; white onions, bulk, $3@3.25; yellow, $2.50@2.75; red, Eastern, $2.25@2.50; red Chester, $2.25@2.50; frosted, $1.75@2; carrots, $1.25@1.75; turnips, Russia, $2.50@3; cauliflower, $1@5; pumpkins, ₱ 100, $1@7.

Exports of potatoes for week, 3,908 bbls.

WOOL.—Quiet and held at unchanged prices. Buyers have filled up quite liberally and the trade is now more of a style to keep up assortments than of a real wholesale character.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 15, 1881.

BEEVES.—Receipts for the week, 16,145 head; do. last week, 14,829 do. The early part of the week was attended with a large offering and remarkably large sales. Since Wednesday there has been less animation and are down ½c. from Wednesday's rates with a rather oppressive offering. Sales were so limited yesterday that not much of a scale of prices could be established. Several car-loads of Colorados changed hands at 7¾@8c. to dress 55 lbs.; common to good native steers 8c. to dress 55 lbs. to 12c. to dress 57 lbs. No choice quoted.

COWS AND CALVES.—Supplies have run larger and an active demand has used them up. Ordinary to prime milch cows sell at $40@65; extra natives $70@75 in a single way.

VEAL CALVES.—Calves continue in light supply and firm prices rule for all decent stock.

Live calves, prime N. J., 9¼@9½c.; do. State, 9@9¼c.; poor to good, 6@9c.; Mount Hollys, 7@9¼c.; buttermilks, 4½@5½c.; grassers, 3@3½c.; up-river dressed choice, 13@14c.

SHEEP AND LAMBS.—Receipts for the week, 35,962 head; do. last week, 45,473 do. A few prime lambs and some choice wethers were wanted at Jersey City and would have brought good prices, but common stock was dull and heavy. The extreme prices obtained at 6th street yesterday under a pressure could not be maintained to-day, and lower rates were accepted before the close. Poor to fair sheep are quoted at 3½@5¾c.; good to choice do. at 5½@6c; poor to fair lambs at 5¼@6½c; good to prime at 6¾@7¼c; bucks at 3@3½c.

SWINE.—Receipts for the week, 25,621 head; do. last week, 27,471 do. Market for live firm and high. For Ohio a range of $7@7.12½ ₱ 100 is given. New Jersey pork, 9¼@9½c. light; other weights, 8¼@9c.; city dressed, 8¼@9c.

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No. 37.

HENRY STEWART.

Barley.

ONLY good farmers can grow barley. But this should not prevent farmers from growing it, because every one who has a farm should determine to succeed in everything he undertakes to do, and therefore a difficulty should be met and conquered, rather than let it overcome him. So that because barley is a difficult crop to grow, every one should try to grow it, until he succeeds, and then there is nothing but what he may be able to do in the way of growing good crops? Barley was once the principal bread grain of the world. The ancient Egyptians believed it to have been the first grain used by mankind, and as was their habit in regard to valued things, they believed it to have been brought into the world by a goddess, Isis. This of course is only an imaginary fiction, but it shows how ancient the use of this grain was in the earliest times, and how much it was valued. We remember how Ruth gleaned barley in the field, and how Abraham set barley cakes before the angels who visited him. It is certain that barley was far more commonly used than wheat, and that its origin is so far back that no one knows where it was first grown. It probably originated in Syria which was the earliest inhabited country in the world and where it was used for the bread of mankind and for grain for horses.

There are four species of this plant. Common barley is a Spring grain and is six-rowed; two-rowed barley is also a Spring grain, and is grown more than any other kind because it is preferred by brewers on account of its good quality for making malt. Winter barley is four-rowed or square-headed. There is also a beardless variety which is rarely cultivated. With the exception of the last mentioned variety, barley is bearded; and the beards are much stiffer, stouter and longer than those of wheat and rye. A grain of barley measures about one-third of an inch (.345) in length and a barley-corn has been considered as a measure, for centuries; three barley-corns being equal to one inch.

This grain is more cultivated over the world and supports a larger number of people than any other. It grows with great rapidity and in some countries two crops of it are taken from the ground in one year. In far northern climate, as in Lapland and Siberia, where the Summers are very short and very warm, the barley matures in six weeks from the sowing of the seed. No other grain could be grown in such a short Summer as prevails in that northern latitude. Barley is therefore seen to be more important to the subsistence of mankind than wheat. It will grow upon any kind of soil that is well manured. The best soil is a rich strong loam, but it succeeds very well with good tillage on light sandy soils. It is the most nutritious grain for horses and poultry, but as we can produce corn more cheaply than barley, the latter is rarely grown here for that use. It is grown in America only for the use of the brewer. It is preferred for this use because it contains about six per cent of a sort of sugar which makes it valuable for making malt.

Malt is the grain of barley, steeped in water and put in heaps until the young sprouts and rootlets appear; it is then dried in kilns. This process changes some of the starch of the grain into sugar and the malt is remarkably sweet. It is this sugar which is changed into alcohol by the fermentation of the malt infusion which is thus made into ale and beer. The invention of this popular drink is said to have been made by the ancient monks, who certainly were very good brewers and loved good ale. Some persons think it is wrong to grow barley for this use, as it is very certain that much misery happens to many persons who drink liquors to excess. It is no doubt wrong for any man to do a thing he believes to be wrong; but whether it is wrong or not to grow barley is a question every one must decide for himself. It is a profitable crop as it yields on good soil 40 or 50 bushels to the acre and the straw is valuable for feeding.

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

Dona Eulalia Perez Guillen.

VIOLET and Daisy were looking over the contents of the card receiver. This was a quaint affair, made of thin sections of cactus from which the succulent tissue had been removed, leaving a framework which, for beauty and delicacy, could not be surpassed by the finest carving. The basket was varnished, the sloping sides were tied by blue satin bows, and the whole formed a dainty ornament for any parlor table.

Under the cards were a number of photographs that Daisy took, hoping to recognize some old acquaintances; but at sight of the first she exclaimed, "Violet Erman, what creature is this?"

"Violet laughed. "Oh, that is the picture I've been intending to show you. I wondered what had become of it. Now can you tell which of our numerous relatives that is? And don't you think I strongly resemble her?

"Stop your nonsense, and tell me who it is," answered Daisy. "If any of your relations are as hideous as this I think they would be justified in committing suicide."

The card she held in her hand represented a blear-eyed, hollow-cheeked old woman in a dark calico dress. There was no trace of comeliness in her face or figure, and Daisy gave utterance to a most natural opinion when she pronounced the picture "hideous."

"Who is it?" she asked again, impatiently. "How mean you are, Violet, not to tell!"

"That, my dear, is, or rather was, the oldest woman in the United States," said Violet with a tragic gesture toward the subject of this discussion. "Shall I give you an historical sketch of the lady I learned from one of the papers some time ago? 'Dona Eulalia Perez Guillen was born in Lower California, and there married; and when San Diego was first settled in 1769, she was the mother of four children, and accompanied her husband, who was a Spanish soldier, to that place. He was transferred to the Mission San Gabriel soon after its founding in 1771."

"Oh! give us a rest! as Bert would say," laughed Daisy. "You know I can't endure history, and you have poured enough into my unwilling ears to last me for the rest of my natural life."

"You wouldn't have stopped me so easily, young lady," responded Violet, "only I forgot what came next."

That was fortunate for me. But now I would really like to know more about this woman. What did you say her name was?"

"Dona Eulalia Perez Guillen," drawled Violet. "But that's too long for every day. The people about here always called her 'the old woman.' Not a very beautiful title, but we all knew who it meant."

"Is she alive?"

"No, she died three years ago in the Summer. I remember asking one of the girls who lived near what was the matter with her, and she said that she died of old age! She was not sick at all, but died while sitting at the table."

"And you say that she was the oldest woman in the United States. I believe San Gabriel has more than its share of objects of interest. How old was she?"

"They could not tell her exact age," said Mrs. Erman, who seated herself in a rocking-chair, sewing in hand, but from different events that she remembered they knew she must be between 140 and 145 years old. She had been married a number of years when our Mission church was built, and that was one hundred and ten years ago."

"Where did she live?"

"In a little *adobe* house about a mile and a half from here. She lived with her youngest daughter, a Mrs. White, who is considerably over eighty."

"There are over one hundred and seventy-five of her descendants now living," continued Mrs. Erman as she turned a hem. "They claim to be the only pure Spanish at the Mission; but I am sure some of them look as if there might be a large proportion of Indian blood in their veins."

"Of course you have seen the lady."

"Yes, we all went to the house once with some friends who were visiting us," said Violet. "She was sitting in one of the doorways as we drove up, but went into the house when she saw us, and we found her ready to receive us in the best room. This was long and narrow, and I remember there were several large pieces of embroidery and queer old pictures there."

"But how did she look? Like this photograph?"

"Yes, only worse, if that is possible. Her skin was dreadfully wrinkled, and looked more like old leather than anything else. She could see without glasses, but her eyes were quite sunken and the lids were very red, the lower ones seemed to be turned almost inside out, so that I could not bear to look at her. Of course she had lost all her teeth years and years before, but they said she fed herself without any help."

"I was surprised at one thing, Daisy," interposed Mrs. Erman, "and that was the appearance of her hands. They were not contracted and drawn out of shape as is frequently the case with very old people, but were still well-proportioned, and her fingers were tipped with finely-shaped nails that many a younger person might have envied. I had abundant opportunity for observation as she made a great many gestures."

"I suppose her hair was white," said Daisy.

"Yes, it was when we saw her, and it was braided in several queer little tails. But it is said that a few months before her death it commenced turning black again."

"What did she wear?" asked Daisy, with pardonable feminine curiosity.

"Oh, she had on an old, brown calico dress, and had two little bags hanging from her neck that mamma thought must contain charms—one in front and one behind; and fastened to her sleeve was a cross and rosary."

"Could she speak English?"

"Not a word," said Mrs. Erman; "but she jabbered incessantly in Spanish, and one of her great-granddaughters—a handsome, dark-eyed *senorita*—acted as interpreter. And we found that the old lady was trying to tell us how much finer the country used to be, and what a great deal of money the people had before so many new settlers came! But I believe that is the general feeling among the old Spaniards. Many of them have lost their immense ranches, flocks and herds through mismanagement, and they throw all the blame on the new-comers."

"Some of her relatives were determined to take her to the Centennial," said Violet, "and the poor old creature was crazy to go, for she thought it would make her rich, and, more than all that, she would learn to speak English!"

"I believe they had quite a law-suit over it," added her mother. "Her mercenary friends were determined to regain a part of their lost wealth. But Mr. White said that she could not have endured the long journey, as she seldom left the house—not to speak of the unaccustomed excitement at the Exposition. It was fortunate that the suit was decided in Mr. White's favor, for the poor creature would otherwise have made the vain attempt to gain wealth and wisdom."

"And the proprietor of Woodward's Gardens at San Francisco offered five thousand dollars for the privilege of exhibiting her a few months, but Mr. White would not consent to let her go."

"When our visit was ended and we rose from our chairs she rose also, and as she stood by Mrs. Brewster, who is very small, you will remember, I noticed that Señora Guillen's head just reached our friend's shoulder. And yet they told us that she was a remarkably tall woman in her prime!"

"She shook hands with us all in a very friendly way, particularly with papa—how she did grin when he left four bits in her hand!" Violet laughed aloud at the recollection. "And as we were getting into the carriage she bade us *Adios!*"

"And what does that mean?" inquired Daisy.

"Well, Daisy, have you been here all these months without hearing *Adios?* It means good-bye. Bert, let us say *Adios* to the old woman for to-day. Come, mamma, put up your sewing and play a game of croquet with us before it is time to go for the mail."

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK.—I will send you a letter written by an Indian boy at the "Arapahoe Mission," Indian Territory. My brother brought it when he returned from there. I think it is very well written—don't you? The Mission has scholars from four years to twenty years of age, the youngest is a wee little tot of four years old, just baptized, and she feels too important to have anything to say to the camp-occupants of her race any more. I wish the writing could be published as it is. The letters are written as school exercises.

Truly yours,
Madison, Wis. FRANKIE BROOKS.

ARAPAHOE MISSION

Miss Lounnond I like to write on paper I think this letter is good dont you think Miss Lounnond? I think very nice I want write on paper I saw white man he can hardly walk. his name is Mr. Seger he is so slow when he walks. just like Corry. Funny man Mr. Seger make laugh, I think that is pretty good, I am write too much this night. I think willie is pretty good boy he wants to make fun every day. I write both sides of my paper that is all

My name is Mr. Paul

UNCLE MARK.—I noticed by the RURAL of Aug. 20th that one could become a member by simply sending their address. My father, through the Chicago Weekly Inter-Ocean, became a subscriber to the RURAL, in which I read many pleasing and instructive things of good to me. During last Winter, when we lived in Montgomery County, Iowa, we lost everything in the house by fire. Some one writing to the RURAL from Northeastern Iowa has induced my father to go up there to buy a house. He is now up there looking up land.

Your would-be niece,
MARY ELIZABETH BOHN.
Dallas Center, Iowa.

Sabbath Reading.

SEEDS.

WE are sowing, daily sowing,
Countless seeds of good and ill;
Scattered on the level lowland,
Cast upon the windy hill;
Seeds that sink in rich brown furrows,
Soft with heaven's gracious rain;
Seeds that rest upon the surface
Of the dry, unyielding plain.

Seeds that fall amid the stillness
Of the lowly mountain glen;
Seeds cast out in crowded places,
Trodden under foot of men;
Seeds by idle hearts forgotten,
Flung at random on the air;
Seeds by faithful souls remembered
Sown in tears, and love, and prayer.

Seeds that lie unchanged, unquickened,
Lifeless on the teeming mold;
Seeds that live and grow and flourish
When the owner's hand is cold.
By a whisper sow we blessings,
By a breath we scatter strife;
In our words and looks and actions
Lie the seeds of death and life.

Thou, who knowest all our weakness,
Leave us not to sow alone!
Bid thine angels guard the furrows
Where the precious grain is sown;
Till the fields are crowned with glory,
Filled with mellow ripened ears—
Filled with fruit of life eternal,
From the seeds we sowed in tears.

AN EXQUISITE FLOWER.

BOTH in shape and hue, the rose of Sharon is an exquisite flower. Its blossoms are bell-shaped, and of many mingled hues and dyes. But its history is legendary and romantic in the highest degree. In the East, throughout Syria, Judea, and Arabia, it is regarded with the profoundest reverence. The leaves that encircle the round blossoms dry and close together when the season of blossoms is over, and the stalk, withering completely away at last from the bush on which it grew, having dried in the shape of a ball, which is carried by the breezes to great distances. In this way it is borne over the wastes and sandy deserts, until at last, touching some moist place, it clings to the soil, where it immediately takes root and springs to life and beauty again. For this reason the Orientals have adopted it as the emblem of resurrection.

THE sun may grow dim in the heavens; the stars may burn out in the distant sky; heaven and earth may pass away; the sea may vanish from our view; men may fall from their steadfastness, and angels may fail to keep their high estate; but the Lord's promise will not fail, and He will fulfill His word. With this assurance we may bid adieu to anxiety and fear, and heed that word which says, "Let your conversation be without covetousness, and be content with such things as ye have, for He hath said, I will never leave you nor forsake you. So that we may boldly say, the Lord is my helper. I will not fear what man shall do unto me."—The Christian.

THE sheep are not always led through green pastures. The path is sometimes bestrewn with craggy rocks; sometimes over precipices. Sometimes the storm hangs dark, the whirlwinds blow, the hail cuts, and the lightnings flash. But keep near to the Shepherd—keep on upward through the darkness. The storm will pass away, the rugged path will end, and the Lord who is our Shepherd will lead us at least into the green pastures and beside the still waters.—E. H. Chapin.

"THE Church of the living God," "the whole family on earth" is not shut up within the narrow limits of any sect, or environed by the creed of any denomination. Be ours to cherish loyally the institutions of our own, but saying, at the same time from our heart, "Unto all that in every place call upon the name of Jesus Christ our Lord, both theirs and ours, grace be unto you and peace from God our Father, and from the Lord Jesus Christ."—Dr. Eddy.

WHERE the mind is left free, religion can never have dangerous enemies, for no class has then a motive to attempt its subversion; while the interests of society demand a foundation for the principles of justice and benevolence. Atheism is a folly of the metaphysician, not the folly of human nature.—George Bancroft.

THERE is only now and then an opportunity for displaying great courage, or even great wisdom; but every hour in the day offers a chance to show our good nature, charity and kindness of heart.

Many mourn for their sins who do not repent of them; they weep for them, but continue in them.

We ought to school ourselves not to add, by word or look, to the unhappiness of those who have already enough to bear.

PERSONALS.

Orson Pratt, one of the Mormon apostles, died at Salt Lake City a few days ago, aged 75 years.

Senator Beck thinks King Kalakaua one of the best-informed and best-educated men he ever met.

The fund for Mrs. Garfield closed on Saturday, Oct. 15, and is known to have then amounted to over $400,000.

Captain Jack's lieutenant in the Modoc war, Scar-faced Charlie, is now a peaceful farmer at Quapau, in the Indian Territory.

George M. Seoville, Guiteau's brother-in-law and counsel, says that the prisoner's only brother, John M. Guiteau, of Boston, refuses to have anything to do with the coming trial.

The total expenses of Pres. Garfield's illness and burial are put at about $335,000, of which Congress will be asked to pay $100,000; the State of Ohio $25,000 and private parties have to pay the remainder.

W. F. Cody, known to fame as "Buffalo Bill," was shot at three times by a crank at Council Bluffs, Iowa, the other evening. One of the bullets "grazed his cheek," and probably got flattened in so doing.

Nelson W. Aldrich, Rhode Island's newly-elected Senator, is said to have entered Providence when a youth in the same modest manner that Whittington entered London—on foot and with his clothes slung over his back. He procured employment in a wholesale grocery store and gradually rose in life till he is now the head of one of the largest firms in the State. He is Grand Commander of the Knights Templar of Massachusetts and Rhode Island.

The trustees of President Garfield's estate will assume that the estate is responsible for the expenses of the president's illness and death, and ask the doctors to present their bills. Whether Congress will take action in the matter remains to be seen. The property left by the late president consists of the Washington home, the Mentor estate, a half interest in some Virginia land worth about $1500, a little Chicago real estate of small value, some mining stocks and the life insurance of $25,000.

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Miscellaneous.

Mr. E. Purcell, No. 11 Ann Street, New York, used St. Jacobs Oil for rheumatism with entire relief—writes a New York journal.—Richmond (Va.) Christian Advocate.

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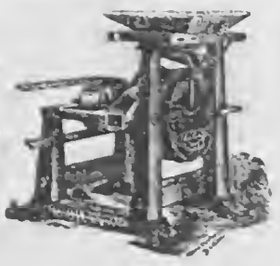

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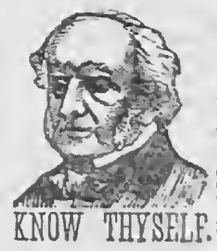

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A LITTLE girl has an uncle who has taught her to open and shut his crush hat. The other evening, however, he appeared with an ordinary silk one. Suddenly he saw the child coming, with his new silk hat wrinkled like an accordeon. "Oh, uncle," she said, "this one is very hard? I've had to sit on it; but I can't get it more than half shut."

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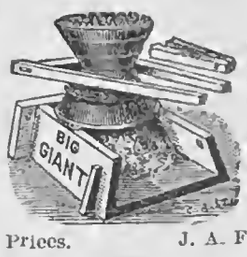

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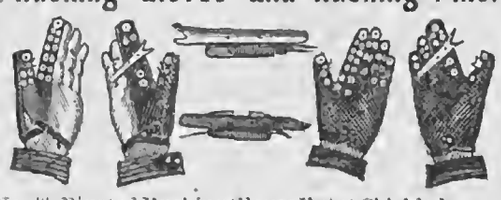

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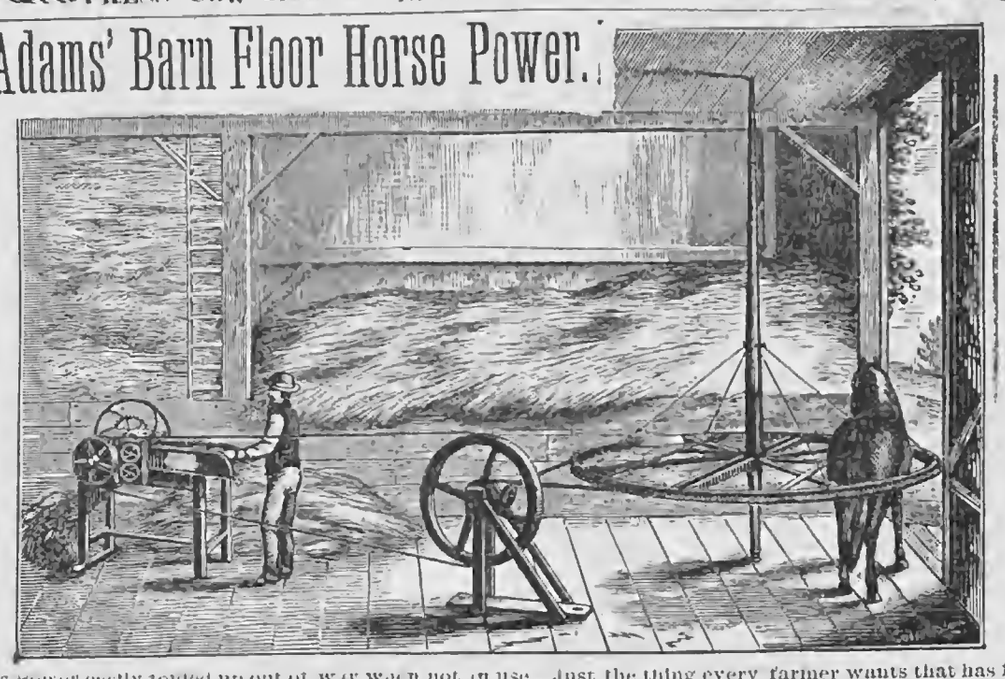

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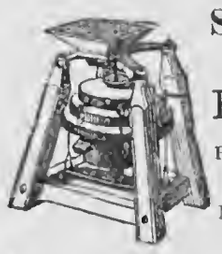

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Horticultural.

BAUHINIA CORYMBOSA.

THE Gardeners' Chronicle of England presents an original drawing of Bauhinia corymbosa which we should think would prove a decided acquisition in this country as it would be very likely to prove hardy. Indeed it is surprising, as the Chronicle remarks, that this fine climber should be so little known. Our picture has been reproduced from the above. The leaf consists of two oblique, oblong-obtuse leaflets, covered with reddish down on the under-surface. These twin leaflets suggested to Linnæus the propriety of dedicating the genus to the memory of the two botanist brothers, John and Casper Bauhin. The flowers are in loose racemes, the long flower-tube resembling the spur of a pelargonium, and encircling the long, slender stalk surrounding the ovary. The five petals are regular, pinkish, crenulate at the edge, and only three out of the five stamens are perfectly developed.

RAYS.

A NEIGHBOR came to me the other day for advice regarding "geraniums" to bloom in the Winter. His plants were planted out during the Summer months; they grew rankly and bloomed well, but as it was now October he guessed he should have to lift and pot some of them to blossom in the house during the Winter months, and he hated to, too, as they were so pretty in the garden whose good looks he should mar by their removal, and there were no signs of frost yet. You are too late, my friend. You may lift them now, trim them in a little, pot them in somewhat small-sized pots and get blossoms in early Spring. Geraniums require time to mend their loss of roots and crops, and although they may develop all the flower-buds set on them now, they will not likely form new ones till they recover from the check of shifting. Geraniums for winter-blooming should be set out by themselves, say in a row or bed in the vegetable garden, in an open, sunny place with plenty of room, and their shoots be kept shortened back. About the first of August they should be lifted and potted and the pots plunged in the earth with a piece of slate or wood or a lot of ashes under them to exclude worms. They will soon set to rooting and growing, and you must keep pinching. Those required for very early blooming, say in October or November, should not be shifted again, but, instead, fed with manure water; but those required in December and later may get another shift. Geraniums love full sunshine and a light, airy place, and blossom best when they become pot-bound, that is, when their pots are full of roots.

* *

MANY growers have ceased to plant out their winter-blooming plants, as geraniums, stevias, mahernias and the like, on account of the gross growth they make, no matter how tended. For my own part I prefer planting out, if for no other reason than to get a vigorous start, but at the same time I emphasize early lifting and potting and plunging out-of-doors for the rest of the season. Plants keep clean and stocky and have firmer and better flower-bearing wood in October than if not lifted till the end of September.

* *

WHAT a grand system of parks the Chicago folks can boast of, and what belts of glowing colored plants may be seen there; such profusion and such variety! Still if there are not in the vegetable kingdom plants enough to paint the flower-beds of the Chicago gardens, the gardener has to summon to his aid sea-shells, whole and broken! What a libel on horticulture, what an abortion of that which should be beautiful—a flower-bed. But I have seen worse things where better might be expected, namely, in Massachusetts. A few years ago I visited a pretentious private garden there. There were caged animals in a wood, buffalo in a field, monkeys in a house, ground traps to take folks by surprise, funny things in a museum, and a spacious garden filled with flower-beds. In a series of scroll beds Mexican cotyledons were freely used, and, to add color to the beds, minced glass and earthenware—blue, white and red—were introduced in lines and patches! I surely hope no reader of the RURAL will ever endeavor to imitate such hideous apostasy. In your flower-beds grow what plants you have or can conveniently get—marigolds, asters, dahlias or whatever else you please, but call in no extraneous matter and make what should be beautiful detestable. And in that Eastern garden, too, is a grotto, to enter which each of us paid 10 cents. That, too, is another meaningless, abhorrent feature to be avoided in gardening; a grotto may be novel, is it beautiful? is it useful?

* *

WE are lifting our plants and housing them so that frost may not reach them, and as some of your readers have green-houses, let me say a word to them. In Spring, when plants are growing, they need a rising temperature; in Summer, while they are in vigorous growth, a uniformly high one, and in the Fall, when they have completed their season's growth, a temperature under that of Summer, and gradually and steadily lower until we reach the minimum, say 45 or 55 degrees, more or less as the case may be. Better be very careful in lifting and potting your plants, than lift carelessly and have to place them in close, warm houses to recuperate. * *

I HAVE a fine lot of Chinese Primroses, and I have just been shifting them from five-inch to six-inch pots. Now I don't believe in crocking pots of four inches and under for quick-growing and soft-wooded plants, but for pots over four inches I think a little drainage is a benefit, and my primroses corroborate my opinion. Several of the five-inch pots had no drainage; others had it, and throughout the drained pots showed a decided advantage; they were much better filled with roots than those that were not drained. My primroses are grown in cold-frames wherein the pots are plunged in coal ashes.

* *

IF YOU have not scuffled them out, you will find lots of young seedlings of Sweet Williams, Canterbury Bells, Foxgloves, and Perennial Larkspurs around the parent plants. Now if you prepare a bed of light, mellow soil in some sheltered corner, and plant in it, in rows, these little seedlings, the young plants will grow much better than if left where they germinated, and, all being together, you can conveniently give them a little protection in Winter, say with some tree branches or sedge grass. A cold-frame, if you have it, is a better place. The Larkspurs will bloom next year; some of the Foxgloves ought to; but neither the Sweet Williams nor the Canterbury Bells will blossom till the year after. LEON.

BAUHINIA CORYMBOSA.—Fig. 497.

Farm Topics.

EXPERIMENTS ON THE USE OF WILTED POTATOES AS SEED.

PROF. F. H STORER.

IT has repeatedly been alleged by practical men that the yield of potatoes is increased when the tubers used as seed are allowed to wilt before they are planted. The justice of this idea has been verified by a Bavarian experimenter, Dr. Kraus, who has recently tested the matter methodically; once in a dry year, and again in a season favorable for growth. Kraus propounded to himself the following questions: How great a difference is there between the growth of the vines from fresh and from wilted seed? What is the cause of this difference? and what relation does the increased or diminished growth of the tops from wilted seed bear to the yield of tubers? For his experiments, he used whole potatoes, both large and small; some of them he planted when they were fresh, others after they were slightly wilted, and others still after they had been strongly wilted.

When fresh and wilted seeds were planted side by side the shoots of the fresh seed started first above the surface of the ground. The retardation due to wilting was not particularly noticeable in case the season was moist and the seed large, not even when the seed had been strongly wilted, but it was distinctly observable when small seed was used; and, in case the season was dry and the seed was delayed very decidedly, the vines from large seed grew appreciably higher in all cases than those from small seed. But while, on the one hand, these differences tended continually to disappear when fresh seed had been used, they always increased in the case of wilted seed, and to the disadvantage of the vines grown from small seed. When the seed potatoes were large and the season favorable for growth, even strong wilting did not perceptibly diminish the development of the vines. Wilting of the seed potatoes appeared not to have any influence on the time of blossoming. But in a very dry season it happened that the flowers became abundant upon the vines from

wilted seed sooner than they did on the others. It was noticed incidentally that the vines from large seed flowered before those from small seed. When small potatoes were used as seed, a decidedly larger number of stalks grew from those tubers which had been strongly wilted than from those which were planted in the fresh state. At the same time a slightly larger number of prominent stalks were obtained from the wilted seed than from the fresh seed, but the average hight of the vines grown from wilted small potatoes was less than that of the vines grown from fresh seed; whence it appears that the stalks from wilted are really less vigorous than those from fresh seed.

Large seed not only gave a larger number of stalks anyway than small seed, but the number of stalks was still further increased when the large seed was slightly wilted. There was, however, no increase in the number of stalks on wilting the seed more strongly, though the number of strong stalks from a given seed increased. In a moist season, it was judged from the appearance of the vines that the term of growth of the plants from wilted seed had not been perceptibly shortened; but in a dry year it appeared distinctly enough that the plants from wilted seed ripened earlier than the others. At the time of harvest there were obtained both a decidedly larger number and a much larger weight of potatoes from the seed which had been wilted than from that which had been planted fresh. And it appeared that in general the productiveness of each single stem was greater in proportion as the seed from which it grew had been more strongly wilted. Large seed always gave better results than small seed, of similar condition; but there was obtained from small wilted seed almost as large a yield, both in respect to the number and the weight of the tubers, as was got from large fresh seed. It appeared, furthermore, that wilted seed yielded a somewhat larger number of small potatoes than were got from fresh seed, and the difference was specially marked in the case of experiments made in a particularly dry season.

Similar experiments made with Jerusalem Artichokes gave corresponding results. It was specially noticeable that the plants grown from wilted seed were much less vigorous than those from fresh seed. Some of the wilted seed never grew at all, especially in cases where the sets were small; and during the entire period of growth the stalks from wilted seed were always inferior to those from fresh seed, and this in spite of the fact that a larger number of stalks grew from the large wilted seed than from seed of the same size when fresh.

In seeking to explain the cause of these appearances Dr. Kraus argues that, owing to a deficiency of water in the wilted seed, the development of the eyes at the butt or "seed-end" of the tuber is hindered to such an extent that a larger number of the side eyes find opportunity to send forth shoots than would otherwise be the case. If the seed was planted in the fresh condition, the eyes at the seed-end would naturally develop first, and were it not for the lack of water they would start so quickly and grow so rapidly that most of the side eyes would have no chance to grow at all. By hindering, at the start, the natural development of the eyes at the seed-end, a comparatively large number of the side eyes are enabled to develop, even to the stage at which they strike root for themselves and support an independent existence. This view consists perfectly with the observed facts that the sprouts from wilted seed appear above ground at a later period than those from fresh seed; that the wilted seed give a larger number of stalks; and that there are more tall stalks to the hill, and more tubers. Naturally enough, the larger the number of independent stalks there are the more potatoes will they produce. But, from the very nature of the changes brought about by the wilting, it is manifest that little if any advantage can be expected from wilted seed unless the soil is good and the season favorable throughout the term of growth of the crop. In a very dry year, for example, Kraus got no larger weight of potatoes from his wilted seed than from the fresh seed, although the number of tubers to the hill was actually greater. There would be small use in striving for many potatoes to the hill unless the conditions are such that the tubers can grow to a good size.

It is plain that these experiments have an important bearing upon some other points in potato-growing beside those specially studied. They reënforce, for example, the modern view that it is best to put comparatively few eyes in each "hill," in cases where potatoes are grown for table use. It is thought by many farmers now-a-days that our ancestors were decidedly at fault when they took pains to plant a large number of eyes; and the old plan of putting a couple of large potatoes in each hill has in good part given place to a system in accordance with which no more than two eyes are planted in a given place. The motive for this change is the desire to get the largest possible number of merchantable potatoes and few small ones, and it is plain that, as soils and seasons go, the desideratum will be much more likely to be obtained where there are no more than two competing plants at a given spot than where there are a dozen.

It is noticeable that these experiments, made with whole potatoes, do not touch the question of the utility of wilting seed that is to be cut to the small number of eyes customary in modern practice. Even the explanation offered by Kraus fails to meet this consideration. In this respect it is less satisfactory than a suggestion made some years since by Franz, viz., that the process of wilting involves a transfusion of soluble matters from one part of the tuber to another, of such kind and character that the side-eyes have a better opportunity to draw in nutriment than they had before. This suggestion has much to recommend it, for undoubtedly one necessary consequence of the loss of water during the wilting is that the contents of the cells, such as albumen and other matters fit to feed the young shoots, must move about from one cell to another and be readjusted, as it were, but as a result of these movements, there is a certain tendency in the potato to germinate, that is to send forth shoots, or, at all events, to make the eyes begin to start; and it is a fact, thanks apparently to the slow and equable transfusion of nutritive matter, that the side eyes get almost as good a start, or preparation for starting, as those at the seed end. Were it not for the movements induced by the wilting, that is to say if the potatoes were put in the ground in the fresh state, a large proportion of the original soluble food contained in them would go at once to start the seed eyes and the side eyes would have comparatively little chance to prosper.

In reply to the question, how far the process of wilting should be pushed? Franz argues that it should never be allowed to go so far that the potatoes cannot be handled and transported without risk of rubbing off the the sprouts; but that up to this point wilting is advantageous. The wilting needs to be gradual and may be effected in a light, moderately warm place. It appears, however, from the foregoing that there would be no sense in trying to hasten the process by means of artificial heat. It would seem, moreover, that if potatoes are to be wilted, the wilting should occur before they are cut for seed, and not afterwards, and this remark must be specially true in case the eyes at the seed-end are not to be planted. It is a noteworthy fact that some American farmers discard altogether the eyes at the seed-end of the potatoes and throw it aside when preparing the tubers for planting, apparently for the reason that it is not easy to leave attached to these crowded eyes such a supply of the substance of the potato as would serve for the proper nourishment of the young shoots. But it is notorious that the seed-eyes of unwilted potatoes are provided naturally with a somewhat better supply of nourishment than the side-eyes, and if wilting does really serve to transfer some of this superabundant food to other parts of the tuber, it should manifestly be allowed to occur before the time of cutting. Furthermore, there would seem to be no good reason why the eyes at the seed-end should not be planted, in case the potatoes have been wilted. The smallness of the slice attached to these eyes will be no great detriment provided the sprouts are fairly started, for, in that event, enough nourishment will have gone into the sprout to insure its continued growth.

VARIOUS TOPICS.

B. F. JOHNSON.

Ears with the Shucks on.

In writing from any given section of the country it is almost always well to preserve the local color, and therefore in the epigraph above I have chosen the word "shucks" in preference to husks—the one being a common and the other a sectional word. Thus the Illinois farmer "shucks" his corn but does not "husk" it, and he cuts it up and puts it in "shocks," but not in "stooks."

And, by the way, in cutting up corn the green-hand finds it very difficult at first to place the corn so it will stand without further support than the three or four tied or top-fastened stalks he begins with—simply because he has not acquired the knack of setting up each armful perpendicularly. But this is easily corrected if, instead of cutting around one way till the shock is finished, he cuts first from right to left once round, then from left to right the next time, and so on until the job is finished. In this case the inclination to slant one way is corrected by half the armfuls leaning in one and half in the opposite direction. Good corn is commonly cut up from 14 to 16 hills square, and when the work is well done the shocks stand without support and without tying, through the stormiest Winters.

We often meet with striking examples how that which may be true for the East is not true for the West in many matters of agricultural practice. As an example: the agricultural editor of a New York city paper applauds the course of a correspondent who at the South commenced a clearing—deadening the trees in the Spring contrary to the advice of his neighbors and in opposition to the local custom, which is to do all that work in the Autumn. The reason given for this course in the South is that when the wooded surface is exposed suddenly to the heat of the direct rays of the sun in Summer, the soil is impoverished in some way—many say by too great an evaporation of the nitrogen, which does not take place in so great a degree in the North. And one objection which cotton planters make to small grain crops is that baring the surface in May and thereafter leaving it exposed to the sun in the hottest part of the year, deprives the soil of much of its natural fertility, which cannot be recovered for several years.

And this may be the explanation of the advantage which follows summer-fallowing on the strong, black soils of the prairie. If these new soils are not summer-fallowed, the wheat crop is apt to fail in respect to the yield of grain, but not of straw, which is liable to rust and lodge. But as the soil loses a portion of this excess of nitrogen the custom is abandoned and we see the summer-fallow system gradually going out of use—as some time ago in Ohio, and more lately in Indiana, Illinois and farther west, as these lands become worn and partially exhausted of their nitrogen, and their vegetable matter is reduced. These and the above are facts perhaps worth Mr. Lawes's attention in discussing the subject of the relation of nitrogen to crops.

And in this connection let me ask if Mr. Lawes has a correct idea of the greater amount of nitrogen in the atmosphere in the West and South than in the East and North. As a measure of this difference, he is probably not aware that an unpainted tin roof, in the latitude of Toronto or Montreal or Quebec, will remain bright and sound for a quarter of a century; whereas in the latitude of Chicago, St. Louis or Vicksburg it would tarnish in a month, and rust out in a year or two. This is on account of the little nitric acid precipitated from the atmosphere in the North and the much more in the South, so much that bright steel and iron surfaces show red-rust in a few minutes after being exposed to the drops from a passing shower. Until Mr. Lawes sees the corn fields of Illinois, the cotton fields of the Yazoo River country in Mississippi, and the sugar-cane fields of the Teche, in Louisiana, he will have but a feeble conception of the role nitrogen plays in the crops of the West and South in comparison with those of the East and the North.

In reply to an inquiring subscriber another editor of a paper of great political reputation in the same city, says barbs on fence wire are barbarous and unnecessary, adding that a fence of smooth wire answers an equally good purpose. Now the facts are that, some time about 1860, Messrs. Miller & Toll, then broom corn growers on a considerable scale, put up a considerable length of smooth wire fence to protect a young hedge in the first place, and their crops in the second. But their example was not followed, since a smooth wire fence was found unequal to turning swine, and cattle quickly learned to reach through and strain the wires so they were displaced or gave way. But better testimony of the worthlessness of smooth wire is furnished by the experience of the Illinois Central Railroad Co., which has built several hundred miles in Illinois along its line. In the beginning, five wires were used, three barbed and two, the second and the fourth, smooth; but the fence was soon found insufficient and the smooth wires have been taken out and barbed ones substituted.

Barbed wire having come so suddenly into fashion as a part of the material for the best and cheapest fence, the substitution of iron for wooden posts was necessarily not far off. And now a fence consisting wholly of iron is made and sold for 50 cents a rod for short distances and something less for long ones. This fence consists of three doubled and twisted barbed wires and a post of inch iron gas-pipe five-and-a-half feet long, furnished with a flange and that with triangular wings, which, set a rod apart, keep it in place. A mile of three wire fence complete (so the inventors say) weighs less than a ton and may be put into a common wagon and set up by two men and a pair of horses in a comparatively short time. That the objections to barbed wire on the score of barbarity, is one wholly of ignorance and a false sentiment, is proved by the rarity of accidents on the Illinois Central Railroad, which was the first to adopt and introduce it into Southern Illinois, where the contour of the surface and the character of the animals are such as to invite accidents of the kind.

The Apiarian.

WINTERING BEES.

PROFESSOR A. J. COOK.

Surely, after the experience of last Winter, when the loss of bees was so great and widespread, no subject is more worthy of intelligent discussion and more sure to gain an appreciative hearing among bee-keepers than that of wintering. After close observation and varied experiments for a series of years, I believe I may say that certain practical points are well settled, and so most worthy of the attention of bee-keepers.

1st. It is certain that bees should have in the hive at the commencement of Winter at least 30 pounds of good, wholesome food. This does not mean glucose or thin uncapped liquids obtained from cider mills, etc. It means good, capped honey, or else sirup made of coffee "A" sugar, or from granulated sugar, which, if the latter is used, must be fed in time to be all capped over before cold weather comes. It is often suggested that the beautiful white honey of early plants, like linden and white clover, is safer than the later grades which come from buckwheat and the various Fall flowers. I think there is no ground for this opinion. I have tried each kind repeatedly and see no difference. The late honey may be more apt to be mixed with unwholesome liquids and so not so good. This is more likely, as after the Autumn harvest is over the bees are very strong in numbers, and being always eager to store, they make free to collect the oozing juices of wounded fruits and the liquids about sorghum and cider mills. Except from such impurities, I should feel that Autumn honey was equal to any other. I do not know from experience that it is not anyway; but many apiarists think that it is not, and there seems reason for the opinion.

If the 30 pounds of honey are not in the hive, and cannot be supplied, then the bees must be fed either extracted honey or good sirup, as suggested above. From reason and experience alike, I believe that the honey should be concentrated on to a few frames, and the bees by use of the division-board be confined to a small portion of the hive. This conserves the heat, insures better wintering, and is even more necessary to prevent Spring dwindling.

Again, the bees should remain quiet in the confinement of Winter, so that breeding is not desirable. In the absence of pollen or bee-bread they cannot breed. So I would have little or no pollen in the Winter stores. This is not a mere opinion, but a fact wrought out from experience.

2dly. No fact is better sustained than that bees must have a nearly uniform temperature to be able to surely survive in long confinement, with no chance to fly out. This is found to be from 35 to 45 degrees Fahr. about the hive. This temperature keeps the bees quiet. If the temperature rises above or falls below these limits the bees become uneasy, over-eat, become diseased and often die. If the weather permits frequent flights, then extremes of temperature seldom do mischief.

To secure this even temperature four methods are in use: The surest, as I have demonstrated by several years of experience, is a good cellar. This, though not superior for most of our seasons, is most to be recommended, as it is *always* safe. By a good cellar I mean one that preserves the uniform temperature between 35 and 45 degrees Fahr. from December 1st to April 1st; that is well ventilated, so as always to be sweet; one that is dark and quiet, and, perhaps, I should add one that is dry, though this seems not to be necessary. To secure the desirable temperature and good ventilation at the same time, nothing serves so well as sub-earth ventilation. Connect the bottom of the cellar by means of a four-inch iron or tin pipe with the stove pipe in the room above. This room should be one in which there is fire each day. The pipe from the cellar should join the pipe in the room above so high as not to interfere with the draft of the stove. Also from near the bottom of the cellar run an eight-inch tile five or six feet beneath the surface of the ground for a distance of 50 or 60 feet, when it is to rise to the surface. The end should be protected by a screen. This arrangement not only keeps the air sweet, but tempers the current as it comes through the earth, so that it is warm in cold weather and cool in the warm days of Spring. We have tried it in this region with the most gratifying success. An open cistern in the cellar is also excellent to temper the air. This has also proved very successful. A sweet running stream, if it could be secured so as not to expose the cellar, would be admirable.

Another method often adopted to secure uniform temperature is to bury the bees. It is often referred to as putting the bees in a clamp. In principle this is like a cellar, as both make the earth serve as protection. For a series of years I had no loss by this method, but one exceptionally warm Winter nearly half of the buried bees died, while all in the cellar, in fact all others, wintered well. That burying bees might be made a success I believe; but the bees are beyond the reach of examination, so if anything is wrong we do not know it, and so cannot remedy it; hence I hesitate to recommend this method, though with it I have had what would be called excellent success.

Packing under and about the hives with a thick layer of straw, or, better, with chaff, which is held in place by use of a box which surrounds the hive, is a third method which has been used with more or less success. The packing should be at least a foot thick, and a tube is so fixed that the bees can fly out at any time when the weather is warm enough. Thus the bees are left on the Summer stands and need no attention after they are once packed. Last Winter, however, proved that this plan would not answer on very cold Winters.

A fourth method, that of chaff hives, is the same in principle as the above. The hive is double-walled, and the inclosed space is filled in with chaff. In both these last cases a chaff pillow is placed immediately above the bees. I have always objected to these chaff hives as awkward, costly and inconvenient. Last Winter added—and unreliable.

There ought also to be abundance of young bees in the hive in the Fall. I have proved the importance of this by direct experiment. This is not only important in wintering, but it insures against spring-dwindling. To secure young bees in the Fall, the bees must be kept breeding through September. With the Syrian bees—I suppose the same is true of the Cyprian—or with a September honey harvest, this will be secured without extra pains. Otherwise, feeding a little daily throughout this month will continue the breeding.

A hole one-half inch in diameter cut through the middle of the combs to afford a winter passage is also desirable.

A thick layer of chaff held by porous cloth, immediately above the bees, above which there should be small ventilating openings, I think desirable, though not essential to success, even in the cellar. If chaff hives or packing are used the entrance should be nearly closed; in the cellar or clamp it should be left wide open.

Preparing for Winter—that is, seeing that there is abundance of honey, that it is in few frames, that there is little pollen, and that the brood chamber is confined to about one cubic foot of space, by use of the division-board—may well be done as early as the middle of September. Then, if there is a Fall harvest, the bees are still gathering and will be less cross. If there is honey to extract, it is thinner and more readily extracted. If the bees are to be fed, this gives a chance to have all capped up in good time. If storing is still going on, as is true with us this year, a few empty frames may be put next to the division-board, and removed when the harvest ceases.

I believe that the above offers all needed hints to solve the vexed question of wintering.

Ag. College, Michigan.

Field Crops.

QUACK GRASS—TRITICUM REPENS.

PROFESSOR W. J. BEAL.

This grass is also known as "Quick Grass," "Twitch Grass," Quitch Grass," "Couch Grass," and "Dog Grass." It belongs to the same genus as all of our cultivated wheats. It varies greatly. The spikes on thrifty specimens are nearly a foot long; on poor specimens, two inches or less. The leaves are flat, often rough on the upper side and resemble those of timothy—Phleum pratense. The grass varies in hight from six inches to three feet-and-a-half, depending on the soil and situation. It flowers in June to August.

Gould says, "The farmers of the United States unite in one continuous howl of execration against this grass." This is owing to its habit—well-known to most farmers—of sending out long underground stems (not roots) which rapidly extend the grass in every direction, especially in light soil. In good soil it will cut a fine crop of hay of excellent quality. In poor soil, the growth is short and small. It starts very soon after mowing and affords a good pasture where almost any other grass would do the same. It has undoubtedly been introduced at the East, but on the Western plains it is indigenous. Where it vegetates freely it does not seed, but when the stalks grow small and short, seeds are often developed. It is very hardy and adapted to a great variety of climates. When once introduced it comes to stay. Here is the great trouble; the farmer sometimes wishes to raise something else on his fields and Quack Grass stubbornly contests anything like extermination. It has been introduced into some parts of the South for the double purpose of furnishing feed and

SPIKELETS OF QUACK GRASS.—FIG. 498.

forming a turf to prevent banks from washing. It starts very early in Spring. There is no royal way to kill it. Thorough tillage will accomplish the object. I have killed several pieces in different ways without attempting to raise a crop at the same time. I have succeeded best in the following way. Plow late in the Fall, and go on to it as soon as possible after the ground thaws out—not waiting for the soil to settle. Cultivate well every two or three days till no traces are seen, which will usually leave time for a late crop of potatoes or rutabagas in the same season.

TOBACCO-GROWING NOTES.

There are several methods of hanging tobacco in curing barns, practiced by growers of seed-leaf tobacco. In the two more common methods the plants are either hung or strung upon poles with twine, or suspended upon lath by small wire hooks one end being driven into the butts of the plant stalks. In the latter method there are several important advantages gained, resulting in a saving of time and in securing the crop without damage to the leaves from sun-burning or mutilation.

The difference in cost of fitting a curing barn for hanging tobacco by the two methods—using lath and hooks, or twine and poles—is much more rapidly than in wet seasons, but it is a common error to harvest tobacco too green, which results in loss in yield and in a product too thin in texture and too light in color to suit the present fashion.

I cannot better express my views on this subject than to quote the remarks of Mr. W. W. Albro at a late meeting of the Chemung Valley Tobacco Club. He said:—Ten years ago cigar manufacturers could not find tobacco that was too thin and silky in texture. To-day they want a leaf that will stand a natural sweat and two or three artificial sweats, so they can obtain a color of leaf as black as my hat. The important question then is:—How can we obtain such a leaf? I answer, by ripening our tobacco. The longer tobacco stands in the field the more gum the leaf will contain and the heavier will be the yield per acre."

In times of drought tobacco will ripen prematurely. The leaf assumes the leading indications of maturity—a light mottled appearance—and sometimes the plant is attacked by rust, causing damage to the crop. If the needed rain comes in time these indications of ripeness will gradually disappear and the plant will again commence growing. When the rust appears so as to afford signs of serious damage to the crop, it is best to commence the work of harvest immediately, otherwise there will usually be no loss from allowing the plants to stand in the field until three weeks or even longer after the "topping" is done.

Chemung Co., N. Y. G. A. G., JR.

FOR HANGING WITH TWINE UPON POLES.

The following materials are required, costing at present about the amounts affixed.

462 poles 2½x5 in., 16 ft. long—7,700 feet—at $9 per M.	$69 30
Twine required for four acres	4 00
Total	$73 30

FOR HANGING UPON LATH WITH HOOKS.

210 poles 2½x5 in., 16 ft. long—3,500 feet—@$9 per M.	$31 50
4,000 lath, 1½x¾ in., 4 ft. long, @ $3 per M.	12 00
200 lbs. hooks @ $12 per 100 lbs.	24 00
Total	$67 50

Experience and good judgment are necessary to determine when tobacco is ready to harvest. Previously in my articles on this subject, I have stated that tobacco should be cut about two weeks from the time when the plants are topped. The inexorable laws of fashion are constantly changing and tobacco manufacturers demand a different leaf now from what they wished for a few years ago. At present there is a rage for dark cigars, and in order to meet the wants of manufacturers, growers must allow their tobacco to become fully ripe before harvesting it, which gives the product "body" so that it may be made of the desired color by re-sweating. For this reason I would extend the time to three weeks after "topping" when conditions allowed. Of course the length of time required to ripen a crop of tobacco will vary with circumstances. Some varieties will ripen earlier than others and in very dry weather tobacco will ripen

QUACK GRASS.—TRITICUM REPENS.—FIG. 499.

SMUT AND INSECTS IN WHEAT.

Mr. Stewart, in his "Remarks on the Wheat Number," on page 658, says that I made a mistake in my reference to smut, in the Wheat Number. Referring to Johnson's son's Encyclopædia of Agriculture, I find that the only kind of smut mentioned under that head is the Uredo segetum, to which various other scientific names are given. A part of the description of this fungus can apply only to the Uredo fœtida, for it is said that smutted grains of wheat are composed of about one-third their own weight of a green butyraceous, fetid and acid oil, and also of nearly one-fourth of a vegeto-animal substance similar to that which comes from putrid gluten. Besides, all the solutions which are prescribed for destroying the fungus apply exclusively to the stinking smut, for there is no other to destroy after the wheat has been thrashed. Now, the black heads which appear in wheat have no fetid odor, or, indeed, much odor of any sort. They are never seen except for a short time after wheat has been in bloom, for at harvest the black powder has dropped off or been blown away by the wind. In the work referred to above, smut balls are incidentally mentioned under the head of blight, where they are said to be analogous to the Uredo segetum. The term smut, as popularly used among farmers, millers, and dealers in wheat, applies only to fetid smut, for that is the only sort which concerns them, since, if not taken out, it injures the flour. I take this occasion to say that farmers, while they may be ignorant of the scientific names of things which come under their observation, frequently have more distinct ideas of the things than the books which profess to teach them.

Mr. Stewart, in his further remarks, says that Col. Curtis calls the midge the wheat weevil. Now Mr. Stewart has himself confounded this same midge with the Angoumois grain worm (Anacampsis cerealella). The maggots of the midge, or European wheat fly, do not eat out the heart of the kernels of wheat, as he says they do. They either eat the pollen, which prevents the kernel from forming at all, or else, if it has already formed, suck at it from the outside, which causes it to shrivel, or if too fully developed for that, blotches are made in its color. The maggots have generally disappeared at the time of harvest, therefore no midges proper would be found in the screenings from the fan, as Mr. Stewart says they are. Mr. S. has also mistaken a habit of the Angoumois grain worm for one of the Tinea granella. Dr. Harris, in his treatise on insects expressly states that the young moth worms do not burrow into the grain, as has been asserted by some writers, who seem to have confounded them with the Angoumois grain worms; but as soon as they are hatched they begin to gnaw the grain and cover themselves with the fragments which they line with a silken web. This fully accords with my own knowledge of them, for they and I are old acquaintances. I am familiar also with the midge and grain weevil; the Angoumois grain moth I have never seen. "This last," Dr. Harris says, "is somewhat similar in its habits to the Tinea granella, for it, too, spins a silken web, but it differs from that not only in its description, but in the fact that it lays its eggs mostly on the ears of wheat and barley in the field while they are still growing and are soft and tender; sometimes also on stored grain in the Autumn, from which it appears that it breeds twice a year. The little, worm-like caterpillars, after they are hatched, disperse, and every one selects a single grain into which it burrows, and remains concealed therein after the grain is harvested. Having eaten out the heart of the grain, they spin a silken web to divide the hollow lengthwise into two unequal

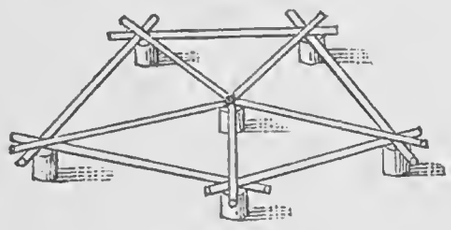
parts, the smaller containing the rejected fragments of the food, the larger cavity serving instead of a cocoon, wherein the insect undergoes its transformations. Before turning to a chrysalis it gnaws a small hole through the hull and sometimes through the chaffy covering of the grain, through which it can easily make its escape." This insect is said to have been very abundant at one time in the western part of New York and in Northern Pennsylvania.

Pulaski Co., Va. H. L. WYSOR.

Farm Economy.

STACKING CORN FODDER.

THE scarcity of fodder and its certain high price with a correspondingly high value of all the products of fodder, make it advisable to use every means for saving every kind of feeding stuff in the best condition. Corn fodder and fodder corn are rarely saved as well as they might be. Considered as coarse feed, "roughness" is the term usually applied to it. It is treated as though it were fit for nothing better than to be cast out and trodden under foot, as it is, for the greater part. But



FOUNDATION.—FIG. 500.

where corn fodder, or stover—as its right name should be—is justly estimated, its value is held to be but little less than that of "meadow hay" which is the mixed grasses usually found growing on old mowing land. Its relative value is taken at eight dollars a ton when meadow hay is $10. Now no farmer at any time can afford to waste feed worth eight dollars a ton, much less now, when meadow hay is worth $15 in many localities. There is waste in feeding corn fodder, no doubt, even when moderately fair economy is practiced in the using of it, but there is little care given to the saving of it and poorly saved fodder is always wasted in using, because it is damaged more or less.

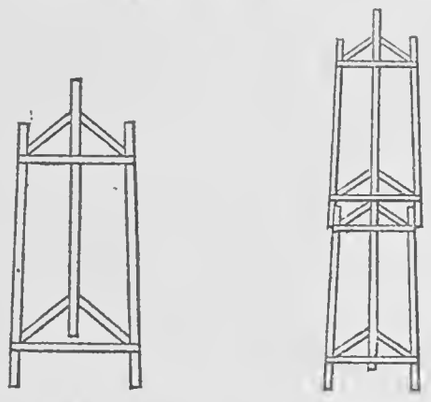
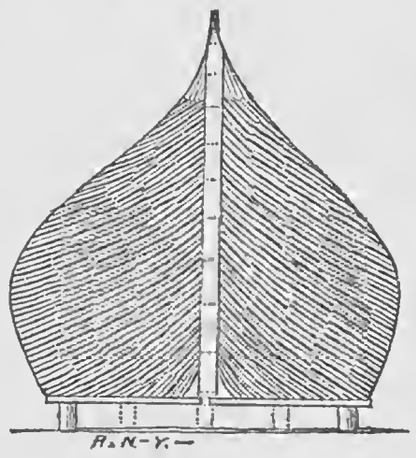


FIG. 501. VENTILATOR. FIG. 502.

It is supposed to be difficult to save corn stalks in good order; that either they must be moldy from too close stacking or packing away in the mow, or dried and tasteless from too open stacking to let in the air to prevent molding. But they may be saved perfectly well, if but moderate care is taken with them. Stacking is by far the safest method, and good sized stacks the easiest and least troublesome. There are three requisites for keeping the stalks in good order; one, is good bottom ventilation; another is thorough central ventilation; the last is such an arrangement of the bundles in the stack that rain or snow cannot penetrate but must run off as the rain runs off from the roof of a shingled house. The following devices have been found perfectly successful in saving corn fodder and fodder corn in the very best, the driest, greenest, and sweetest condition.

First; a foundation is made for the stack. This consists of six blocks or short posts, or large stones, set in the ground as shown at Fig. 500. Poles or rails are laid from one of these to another, and other rails are laid crosswise to hold the bundles of fodder. This provides the required bottom ventilation. Second, some short pieces of rails, or light poles or stout laths or strips are made into triangular frames about 18 inches wide and four feet long as shown at Fig. 501. These are made sufficiently wider at the bottom than at the top, so that one will fit over the end of the other as shown at Fig. 502.

These being provided, the third and last part of the business is to build the stack as follows. A section of the ventilator is placed in the center of the foundation and a second one is fitted on to it. A lot of bundles of stalks are ranged on end sloping towards the center around the ventilator. Other bundles are laid on these, sloping still more and so on to the outer edge of the stack, the bundles lapping on each other, as shingles do on a roof. The center of the stack is built up by laying some bundles down lengthwise for the others to rest upon so as to get the desired slope. The stack is thus carried up with care to push the butts of the outer rows out, a few inches beyond the ends of the bundles under them, so as to widen the stack for about eight or ten feet up as shown at Fig. 503. This throws the drip from the top of the stack entirely off from the lower part and completely prevents even the ends of the fodder from becoming wet and damaged.



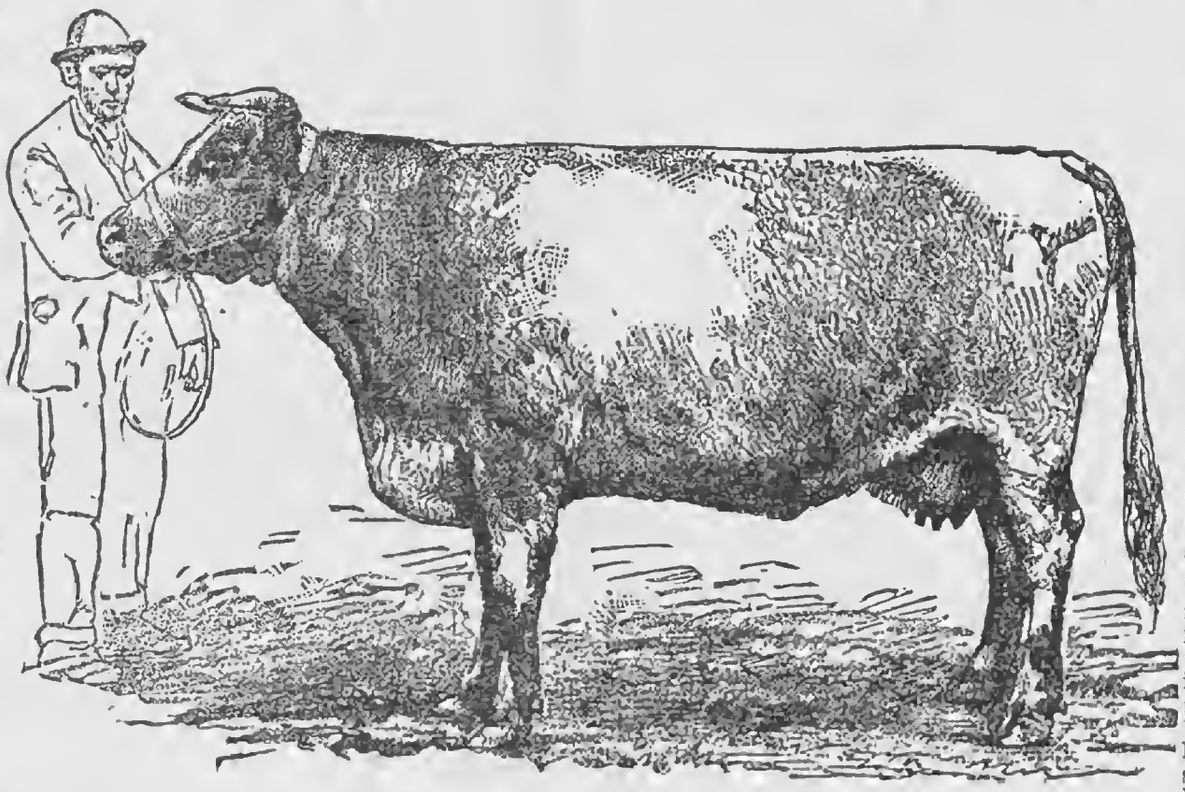
CORN STACK.—FIG. 503.

The stack is then drawn in gradually and the center bundles brought more nearly upright so as to get a good slope to the outer bundles to cause them to shed water. It is a good plan to push a few sharp-pointed, small poles down into the stack when it is two-thirds built, as this binds it and prevents it from lopping over as it settles. When the top is nearly reached the central bundles should be bound with straw bands and at the top this is done very firmly, the butts being spread out so as to cover well the tops of the bundles under them. A few sheaves of long rye straw should be spread and bound at the top to finish it off. This is a very important point, as, if water enters here, it will go through the whole stack, and yet there is no place so easily secured against the entrance of rain. When the stack is built, one should go over it with a long handled shovel or a heavy pole and beat down the outside so as to pack it well that the rain may run off easily. A ladder should be used in building the stack near the end of the work.

Cheap Ensilaging.

In reference to Mr. Bennett's communication under the above caption in our last issue, Dr. W. L. Faxon, Superintendent of the National Sailors' Home, Quincy, Mass., writes us under date of October 13:

"I think the result of my field silos very satisfactory. The one of last year was made in October just after the first frost. The trench was 84 feet long, 10 feet wide and 18 inches deep; posts were placed at intervals of six feet along the sides, and beginning the deposit of corn fodder on the bottom of the trench, the sides and ends were laid up with rough hemlock boards as the deposit increased. No especial care was taken to make good joints. The corn stalks were laid all lengthwise and tramped as hard as was convenient. To keep the sides from sloping outward they were banked with earth as the filling increased in depth. One, and the chief, object of making a trench was to keep the sides plumb as well as to obtain dirt easily to bank with. When the pile inside the posts was five feet deep it was covered with Eel Grass and about 18 inches of dirt were thrown on top.



SHORT-HORN COW, MATCHLESS 5TH.—FIG. 504.

The mass settled about one-third. The pit was opened December 1, and the fodder was found in good order. The last was fed out some time near the 10th of March this year. No rotting or molding was observed.

The 9th of last month (Sept.) I prepared a small trench 6x12 feet in the same manner. It was opened October 3. The fodder is about three feet in thickness and it is as perfectly preserved as any other fodder cut in small pieces. I think there is less heating, and one thing is very certain, namely, that four or five days may be taken to fill the pit with no heating to injure the fodder, as is the case when it is chopped.

Two things are to be observed—to keep the sides of the deposit plumb, and to put weight enough on the top—two feet of dirt are ample."

The Herdsman.

OUR ANIMAL PORTRAITS.

Short-horn Cow Matchless 5th.

IN this country Short-horn cattle are prized almost wholly for the rapidity as well as economy with which they lay on an unusually large quantity of beef, and that of a superior quality, with an unusually small amount of inferior meat as well as of offal either at an unusually early age or whenever in later life it is desired to turn them off. It is not often that they are used here for dairy purposes, although there are some excellent dairy herds of this breed in Vermont, New York, Illinois and Iowa, and grade Short-horns are still commoner in dairy sections; but other breeds, particularly the Jerseys, Ayrshires and Holsteins, are generally preferred for butter, cheese and milk. In England, however, Short-horns, generally pure-breds, but frequently high grades, constitute the majority of the dairy herds and are especial favorites with those who supply towns and cities with cream and milk. The readiness with which they fatten whenever for any cause it is desirable to turn them off for the butcher, is a strong recommendation to this class, in addition to their deep-milking capacity, which has been preserved and developed in England much more carefully and generally than in this country. Accordingly the dairy prizes at all the great English shows are generally won by representatives of this breed, a fine specimen of which we here present to our readers in the cow Matchless 5th, which at the late dairy show in London, England, took the Champion prize as the best dairy cow in the yard. She is the property of Mr. C. E. Tisdall who has long been prominently identified with the English Dairy Association. She was bred by Mr. Hobbs, of Maisey Hampton, Gloucestershire. who writes of her to the English Farmers' Gazette, from which her likeness has been re-engraved, that when newly calved she produced 20 quarts of milk per day, and yields a good supply through the whole season. The judges appear to have looked on her square, well-shaped udder as indicative of a good milk producer, although her last calf was dropped Nov. 1, 1880. She is by a bull of the Gazelle tribe. Of the engraving the Gazette says that though it fairly represents her, yet the lack of deep shadows and surroundings has given less impression of the depth and mass of the body than was produced either by the photograph or by looking at the living animal.

NOTES BY A STOCKMAN.

A TIMELY question for study is, can we prevent contagious diseases of live stock? Every year we lose millions of dollars through these diseases. Some years ago many thousands of human lives were lost by the same class of diseases, and men believed them to be visitations of Providence mysteriously inflicted upon the world for some evil doings. This was partly right in one sense, but wholly mistaken in another, as we have learned since the nature of these diseases has been understood. There was indeed—had it been realized rightly—a willful and wicked neglect of proper sanitary precautions through which these lives were uselessly sacrificed. Now when cholera, diphtheria, typhus, influenza, and other such fatal disorders prevail, we know something is very wrong about the wells, the cellars, the cesspools, the drains, or our personal habits, and we go to work and provide the proper remedies.

There is a close analogy between these human diseases and those of our domestic animals. In fact, they belong to the same class, are produced by the same causes, and are prevented by the same precautions. We have had Congressional Commissions and investigations enough, and to spare, were it not that these draw the public attention to the matter. The truth is, that no Commissions or other cumbrous devices of the Legislatures will reach the root of the matter. The owners of live stock must themselves go to work and use the very same methods to save their stock as those by which they save themselves.

The wonderful and mysterious principle of life is the same in mankind and animals. It is touched and affected and destroyed by the very same influences in each class. But with our stock it is a question of dollars and cents. It ought to be made a question of humanity and morality. "The righteous man regardeth the life of his beast." The converse being true, he who disregards it is unrighteous. Let us seriously think of this obligation which appertains to our higher position as holding "dominion over the beasts of the field" and make our rule humane and kindly. This is our duty and cannot be avoided without criminal responsibility.

Just here, I would ask the hundreds of persons who profess the moral obligation to be kind to the dumb beasts, why they misquote the above line and write "the merciful man is merciful to his beast." There is no such sentence, except as it is misused so frequently. The misquotation appears on the ambulance of the Society for the Prevention of Cruelty to Animals and a cruelty is inflicted upon every person who reads the misquotation and knows how wrong it is, and has his sense of the fitness of things outraged.

Besides, it does not put our duty upon the high plane it ought to rest upon. It is not a question of mercy but one of righteousness and therefore the responsibility is greater.

Now just at this time the frost has touched vegetation which is decaying and filling the air with a sickening odor in all low places and meadows. The nose is an instrument of warning, and scents danger afar. And there is danger in this frosted vegetation and decaying herbage. Myriads of germs of disease are rioting in this decaying substance, filling the air and water with poison. And soon we shall hear of cattle dying; of sheep pining; of hogs sickening; and the disease itself becomes a source of infinitely greater danger by the spread of the contagion.

Water is bad and unwholesome; wells are low and streams are partially stagnant. Dairymen are complaining of bad milk which is to be looked for under these circumstances, and this danger affects persons who use the milk. If we wish to prevent loss and fulfill our moral obligations, we must look to every source of disease and avoid it. Every farmer should make a study of the nature of these diseases, so that he may be prepared to act with understanding and reason.

Doubtless many an honest dairyman (do not smile, gentle reader, for there are as many honest men among dairymen as among other classes) has been brought to grief by that delusive test of milk, the lactometer. I would guarantee to show any reasonable jury by a few tests in their presence, how skimmed milk may appear better than rich milk, and the richer the milk the poorer it shall seem to be, when tried by the lactometer. But a curious case of an honest milkman recently came to light. He had a cow. This cow was peculiar and gave very poor milk. The cow's milk on testing, was declared to be watered and the man was fined. But, like a brave man, he fought in his defence and appealed against the verdict. A chemist analyzed the milk taken in his presence directly from the cow and proved it to be abnormally rich—in water. The man proved his innocence and escaped his unmerited punishment. No doubt many similar cases have occurred in which men have borne undeserved disgrace and have been unjustly convicted by the lactometer and the prejudices and ignorance of a jury.

This story has a moral, which is, that every dairyman should test his own cows by the cream gauge, as well as by the lactometer, so that he may know his bad and his good cows, and understand how to defend himself if unjustly accused.

Dairy Husbandry.

A CREAM PARTY AT KIRBY HOME. STEAD.

A CREAM party was held on September 30, at Kirby Homestead (the quarters of our esteemed friend, Col. F. D. Curtis), which everybody said was both pleasant and profitable. People understood why it was called a cream party when they saw the long row of glass cans ranged on a temporary shelf under the trees, filled with milk, with the cream all up, some of it thick and some thicker, each one of the cans containing a portion of the morning's milk of one of the cows standing in a row close by. Some of the cows had the record they had made all printed in large type and posted by their sides. Then there were churns, from those of a primitive character up to the best, and a Moseley creamery was in operation, sending up the cream so rapidly that in three hours it was all up to the top of the can. There was butter in the bowl, and butter in the churn, just churned, in the granulated form, the best for salting and draining out the buttermilk. Fodder corn 12 feet high stood around, leaning against the huge shade trees, and a big pile of big roots all helped to explain what a cream party meant.

If anybody had any doubt, it was made clear when the bell rang in the afternoon and the crowd of visitors assembled around the front piazza and the speaking began. The host thanked every one for coming, and said he had been "worried" because in his vicinity there was not butter enough, and what there was, was not good enough. He wanted to talk to his neighbors and farmers about it. The average yield per cow, he said was not half as much as in Vermont; we got less than 100 pounds of butter, they got 200 pounds. Better cows, more feed, less work and better butter were necessary if any money was to be made. Cows could be improved by breeding; some had done it. Mr. B. Callaghan's cow, half native and half Ayrshire, on exhibition, proved this, and so did the cows of Alexander Davidson, the Rev. C. W. Backus and Geo. M. Heaton. The herds of the last three had been bred from Jersey stock. Mr. Callaghan's cow had supplied his family with milk and cream, and made 28 pounds of butter in 10 days, and 410 pounds in a year. When five years old, she had made 64 pounds of butter in June; and when six years old, 66 pounds. Mr. Heaton's half-bred Jersey had made in a week, when two years old, 9¼ pounds of butter; when three years old, 12 pounds 6 ounces; and 15½ pounds when six years old, the last trial in April before being turned to grass. Cows should, he said, be tested, every one, and the poor ones turned into beef. As soon as the flush of feed is over, extra feed should be given. His cows had given one-third more milk in dry weather by feeding four quarts of wheat middlings daily, which cost four cents. In hot weather cows will stay out in the sun and fight flies only long enough to satisfy the cravings of hunger. All they eat in such a case will not make much milk. They must be tempted to eat more in the stable, and all of this extra feed will make milk.

Under the old system of taking care of milk there is too much labor. Farming had been made much easier by improved implements, and so had butter-making by ice setting and the creameries. This was not all: when milk was set in pans in warm weather, it would not all be ready to skim at the same time, and some of the cream would become rancid; this would in time make the butter rancid, for although the germs of putrefaction in it may be only in one pan of milk, or one skimmer of cream, yet, like leaven, it would affect a whole tubful of butter. This was the reason why there was so much poor butter and so much disappointment to hard-working housewives when the butter was sold. The changes of atmosphere and conditions, warm cellars, etc., were generally such that the butter would be poor. With ice or cold water the temperature of the milk and cream could be controlled and both could be kept sweet. He believed in sweetness. Fermentation meant putrefaction, and this was decay. People would not buy, at a first-class price, butter on the way to decay.

Mr. T. B. Clark, a practical Vermont dairyman, who makes 25 cows average over 200 pounds of butter each every year, who had been induced by Col. Curtis to be present, then explained the creamery process, and the handling and care of the cream and butter. He also told the farmers how he manages his cows. He went from the small pan system to that of the large, shallow pans with water running around them. This was better than the small pans, but when the deep-setting plan was introduced he went into that, notwithstanding he had built an expensive milk-house for the other. He found ice much better than water, as the former gave perfect control over the milk, while the latter did not. One was a success, the other was a partial success. He fed his cows all they would eat, as there was no profit in poor cows, or those poorly fed.

Rev. Mr. Parkinson made a pleasant address on the benefits of social gatherings and discussions among farmers. They should meet oftener and talk about just such topics as had been elucidated. A farmer was not wise or sensible who stood aloof from any improvement, or the opportunity to improve. The old rut led up hill too much. He should go home wiser and grateful.

Dr. Geo. A. Stuart, a local physician, read an instructive paper on contagion from milk and its relation to health and disease, and stated that typhoid fever and other diseases had been transmitted in milk. Milk was susceptible to taint and contagion, and required clean and healthful surroundings. Cows could also convey disease through their milk if the food or water they consumed was foul or infected, or even the air.

The ample hospitalities and the charming sunshine served to make the greetings, if possible, more cordial. May there be more such!

A RURAL READER.

The Swine-Herd.

MY PIGS.

I AM experimenting in growing pork, and have taken, for the purpose, 12 pigs of the Poland-China breed. I have provided dry, sheltered sleeping quarters under a low, temporary shed covered with a hay roof, and adjacent to a covered alley-way, filled loosely with hay, under which they can burrow to avoid the hot sun or the cool air of night. The pigs are, one-half of them, three months old, and one-half, two months old. They have been "altered" and weaned in the most successful manner, and as they are all growing in a remarkable degree, I will describe my management of them.

I have a long, shallow, V-shaped trough outside of the regular hog-yard (which is 80x100 feet inclosed by barbed wire only) and beside the trough a barrel for swill. I have a lot of coarsely ground corn, some wheat bran, and some wheat shorts; these I mix in the barrel, and manage to have the mixture sour all the time. I put two common pailfuls of it to 40 gallons of cold water, but I do not always make the swill of the same proportions of the three kinds of feed; in fact, I aim to keep up a constant variety in their feed by continually varying the proportion. For instance, calling the corn No. 1, the bran No. 2, and the shorts No. 3, I begin *to-day* by making a mixture of six parts of No. 1, three parts of No. 2, and one part of No. 3, *to-morrow* it will be 5, 3 and 2; the next day, 4, 3 and 3, the next day 3, 4 and 3, and the next day 5, 3 and 2, and so I "swing around the circle." By this means I keep their appetite continually active.

In addition to these rations, they have, three times a day, sour milk, to the amount of a pailful each time, apart from their regular swill. They get their swill at five and nine A. M., at noon, and at four and seven P. M.—in all five times a day. All day they run in the corn field, where there are many cool, damp places and plenty of green herbage to nibble at. Although I give them at each feed all they will eat, they come promptly to the trough when called, and eat as if it were their first meal, and feared it would be their last.

They are remarkably sleek, lively and thrifty, and their growth can almost be noticed from day to day. I am as regular as the clock in feeding them, and believe it to be a *sine-qua-non*. I am sure the variety I make in their swill is a most important matter, as well as giving them their liberty, both night and day. They are very sociable, and never squeal, except when following me to the feed trough, and this is another point I aim at. As the "quiet sow gets all the swill," I am educating these pigs, as I did their mothers before them, to be quiet, so that each one can get all the swill it wants. I do not pretend to offer the treatment as particularly new, but I do assert that it is rare—too rare altogether.

"My pigs" get feed enough at each feed; get it often enough; get variety enough; get exercise enough, and are content. Under these conditions they cannot help growing; they have nothing to squeal for, and their fine condition proves my course to be the correct one. I recommend this plan absolutely to all who wish to enjoy pork raising; as to me, there is real enjoyment in seeing success follow full feeding, and no sign of surfeit to follow.

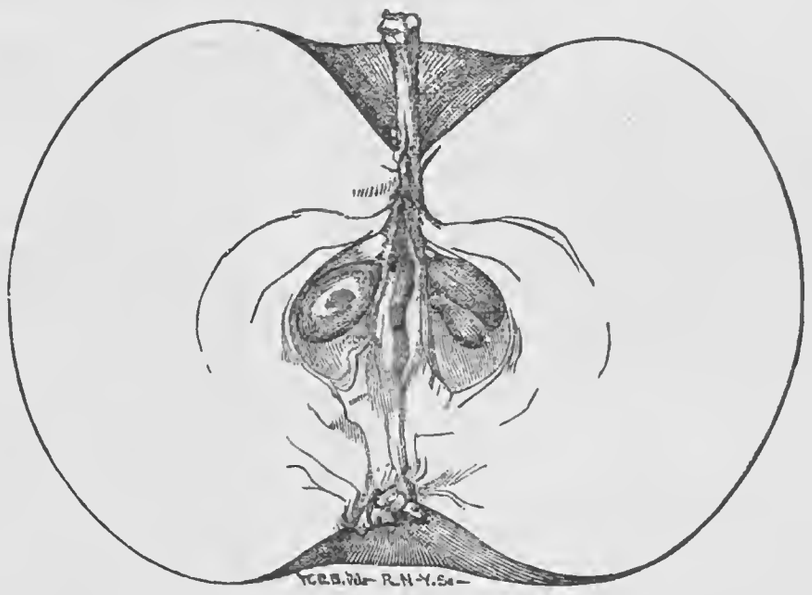
S. RUFUS MASON.

Pomological.

JERSEY HAWTHORNE APPLE.

E. WILLIAMS.

THE "Haththorne," as old people used to call it, is a local apple in this vicinity and has not, as far as I can learn, been much disseminated. The oldest, and I suppose the original, tree is still standing in West Orange, N. J., and was in 1840, to use the language of the gentlemen who then purchased the farm, in the very prime of life and vigor and producing abundantly. I have not been able to find any other trees now standing, that did not emanate from this one by grafting. It has generally been supposed to be identical with the Hawthornden of Downing, an apple of Scot[illegible] origin, and I, too, accepted this story until I fruited the latter and found it entirely distinct. The old tree bears no evidence of ever having been grafted, and I can find none that leads me to suppose it is not a seedling. The fruit has been frequently exhibited during the last dozen years without being identified with any known variety, and to avoid confounding it with the foreign variety I have felt justified in calling this "Jersey Hawthorne."



JERSEY HAWTHORNE APPLE.—FIG. 505.

The trees are of vigorous growth and the limbs are elastic (just the reverse of R. I. Greening and such rigid varieties), making a full round head. It is a profuse bearer in alternate years. Fruit medium to large, round, quite regular, flat, usually very fair and handsome; skin greenish-white, becoming light-yellow at maturity, often with a light blush, on the exposed side, slightly sprinkled with gray dots. Stalk three-quarters of an inch long, rather slender, set in a deep cavity. Calyx closed. Basin moderate. Flesh, white tender, crisp, juicy, subacid, pleasant. A handsome apple of fair quality. Season, October to January.

Changing the Bearing Year.

A neighbor some years ago had a tree of Dutch Mignonne the fruit of which did not suit him though it bore abundantly on the "off" year when apples were desirable. He also had several trees of the Jersey Hawthorne doing well. I remember one season he realized $4 per barrel for some of the fruit. He grafted his Dutch Mignonne with Hawthornes and when it came to bear it took on the Mignonne habit of bearing in the "off" year, so that now he has Hawthornes every year. Will not this fact score one on the affirmative side of the question "of the influence of the stock on the graft"?

Montclair, N. J.

Miscellaneous.

What Others Say.

DESTROYING THE CANADA THISTLE.—At a late meeting of the Markham (Canada) Farmers' Club Mr. Slater made some suggestions as to the destruction of the Canada Thistle. We find the report in the Toronto Globe. He had killed everyone of them by repeated cultivation. He and his gardener, Mr. Burgess, had started experimenting with thistles; had found that a dense shade would kill them, but that merely cutting off the tops would not. As the result of the experiments he had become fully satisfied that three or four cuttings just under the surface were sure death to thistles. So he purchased a new set of shovel teeth for his cultivator and ran that over his field. It cut the thistles and left them standing, but in a few hours they wilted beautifully and dropped. In ten days they were up again and received another dose of the cultivator. This time the thistles grew again, but weak and soft, and one more cutting finished nearly every one of them. He expected that a crop of barley and clover would finish off whatever seedlings might spring from seed left in the soil. For thistly land from which a grain crop had just been taken, he would first go over the ground with a grubber to loosen it and give the weed seeds a chance to germinate. Then he would run his scuffler and cut off the weeds; let the seeds grow again and cut again. One of the greatest mistakes a farmer could make was to plow under land foul with seeds without doing something to germinate the weeds. He thoroughly believed that plowing was of no good against thistles. Besides, the saving effected by using a cultivator instead of a plow was immense. A man can cultivate three times as much as he can plow. On the ordinary farm, in two or three days a cultivator will go over all the summer-fallow there is. Any farmer can find time to do this, while farmers could not and did not find time to plow their fallows. So that even if plowing was as effectual as cultivating, which it is not, cultivating would be best.

THE YORK IMPERIAL APPLE.—If ever a fruit did better in Eastern Pennsylvania than the York Imperial Apple in the few years it has been tested, then it must be as nearly perfect as we can expect. It is as regular in bearing as the return of the seasons, as large as the favorite old Pennock, and as handsome in color as was that variety in "the good old times" of our fathers; it has no imperfections to speak of to mar its glossy red surface; and in quality it has just that nice commingling of acid and sugar sure to please the majority of judges of good fruit. It is not so rich as the Smokehouse, and yet it is by no means deficient in flavor; nor so spicy as the Newtown Pippin, although it possesses a fragrance peculiarly its own. In the orchard, the outline of the tree is not to be commended, and yet it is a remarkably healthy and vigorous grower, with rich, dark green foliage. It will not produce so many apples as Smith's Cider, but there will be more bushels per tree; and as regards value, the York Imperial is immeasurably its superior, and always commands a much better price. So says Josiah Hoopes in the N. Y. Tribune, the agricultural department of which is, as we view it, ably and conscientiously conducted. Since reading the above we have made inquiries as to where this apple thrives best. According to the record of the American Pomological Society, the States are Pennsylvania, Maryland and Virginia. Favorable reports have also been made from some parts of New York.

CROPS ON LONG ISLAND.—The Democrat of Bellefonte, Pa., has the following: "Center County farmers are not only just but generous, and would not think of rejoicing over any reported failure of crops, consequent upon the drought in other sections of the country. Nevertheless, "Misery loves company," and we confess to being a little less uncomfortable on the score of the discouraging emptiness of our barns and cribs, when we learn that we are "no worse off than our neighbors" of other counties and other States. The RURAL NEW-YORKER comes up smiling with an amusing cartoon of "The Long Island farmer gathering his crops." His face wears a most forlorn expression as he trudges homeward with a basket upon one arm, containing his entire crop of potatoes and garden truck, a small sickel in the same hand, and in the other his whole grain crop, done up in a single sheaf of wonderfully slender proportions." We would say that although all late crops (especially corn) have proven comparative failures, the Long Island farmer was blessed with very heavy crops of wheat, oats and hay and has, in fact, little cause of complaint.

CHINA AND CALIFORNIA.—Hon. John Bidwell says, in the Pacific Rural Press (Cal.), that the great want of a California farmer is a fair price and an adequate market, there being no question in his mind about his being able to produce the greatest abundance. No market can be deemed available unless products can be transported to it with, at least, a small margin of profit. After giving the statistics of the grain crops of the State, he refers to China as a market: "We have a treaty with China and, as I understand, we have ample control of Mongolian immigration. All is satisfactory. Why may we not lay hold of China and convert that vast empire of more than 400,000,000 people into a boundless and never-failing market for all our surplus flour? I do not mean to compel the Chinese to swallow our bread at the cannon's mouth. But lay hold of China by the stronger and more enduring ties of friendship. I can see no reason why we should perpetuate the senseless abuse and prejudices for which politicians and demagogues have in

the past been so largely responsible. We on this coast are too needy, and our country is too powerful and too magnanimous to give any uncertain sound on a question of such vital moment to her Pacific border. The shipments of flour to China began with 96,000 barrels in 1865. For the present year they have been at the rate of nearly 300,000 barrels. But China takes more than flour from California. During the last month, August, the exports of merchandise from San Francisco were larger to China than to any other foreign country, England excepted.

HERE I must mention an extraordinary event which took place in a sister's poultry-yard. She possessed some very fine cherry trees of the best of all kinds for cherry brandy, and the cook had been hard at work making a large quantity. The cherries, after being soaked in the brandy until all their flavor was drawn out, were thrown by one of the servants into the poultry-yard. An hour later, every dweller there was furiously and frantically drunk. The turkeys went running and tumbling all over the place, the ducks tried to stand on their heads, whilst the chickens ran backwards. No harm seemed to come, however, and after an hour or two the drunken fit wore off, and the fowls came to their senses—Lady Gay, in the Live Stock Journal of England.

A REPORT of the late British Dairy Association says that the goats were placed in the body of the hall, under the gallery, where they were far better situated than last year. The demand for these animals was plainly evidenced by the number of "Sold" cards over those exhibits which were for sale, some fetching very high prices—in the case of the milking prize winner, £7; others mere reasonable sums.

BUT while the Canadian farmer is toiling from sunrise to sunset, says the Hour, his rulers are piling up a debt the payment of which must eventually come out of his own pocket, so that, granted that he has purchased his land at a fabulously cheap rate, he finds at the end of the year that he has to pay his share of numerous assessments which he had not previously taken into account. While the United States are busily paying off their obligations, the Dominion is clapping on more financial sail than she can or ought to carry. Several shrewd English papers prophesy that her commercial collapse is only a matter of time, and that a not very remote one.

SIX Nevada widows, each worth over $300,000, have formed a compact and solemnly agreed to take no men but editors for second husbands. The reason for this is that they know editors are above pecuniary considerations, and will only wed for love. And we wish to add that every editor in the land considers all these ladies as among the loveliest of their sex and highly intellectual.—Boston Post. . . . . That kind of inane flattery which, in the popular slang, is known as soft soap is made of very powerful lie. . . . . You can't make good out of evil any more than you can skim the cream off the top of a pan of milk and then turn it over and skim it off the bottom. . . . . We hope, says the Rural Home, that the time will soon come when our agricultural societies will be satisfied to depend upon the attractions offered by a good exhibition of farm products, stock, machinery and manufactured fabrics, without bringing outside and questionable attractions to *draw*. The RURAL NEW-YORKER hopes so too. . . . . When Mr. Moody held his celebrated revival in Chicago, he was asked which class of persons he had the most difficulty in converting. He promptly replied, "Newspaper men." . . . . . The London Live Stock Journal says that no one now doubts that the high excellence of Scandinavian dairy products which have so often beaten their own out of the market, is the direct result of the Scandinavian Dairy Schools. . . . . It is not generally known how very fond fowls are of roots; and a few mangolds, turnips, carrots, or beet roots are well bestowed on them, for during Winter poultry frequently flag for want of green food, which can in this way be easily given. . . . . "Now we come to the neat little Ayrshires; and if the breeders of any other kinds of stock want to know what sort of an udder a cow should have, let them come to the Ayrshire classes and study the models of perfection to be found there, not in isolated instances, but in almost every instance."—London Fanciers' Gazette.

THE Mark Lane Express (London) says that there never were such great discrepancies in estimates of the American wheat crop as there never were so many speculators having command of journals in the United States as there are now. Every newspaper report is looked at with suspicion, and it is even doubtful whether the official estimates are not influenced by the machinations of speculators operating on those who supply reports to the United States Agricultural Department. . . . . Finally, our great hope for the future—our great safe-guard against danger—is to be found in the general and thorough education of our people, and in the virtue which accompanies such education.—Garfield. . . . . If there be one thing upon this earth that mankind love and admire better than another, it is a brave man—it is a man who dares to look the devil in the face and tell him he is a devil.—Garfield. . . . . Poverty is uncomfortable, as I can testify; but nine times out of ten the best thing that can happen to a young man is to be tossed overboard and compelled to sink or swim for himself. In all my acquaintance I never knew a man to be drowned who was worth the saving.—Garfield. . . . . President Arthur will have his hands full. He must decide whether a half-dozen swindlers shall be allowed to take possession of the country, or whether it shall be controlled by the people.—The Hour. . . . . As an indication of the excessive drought in Pennsylvania, it is remarked that the fish in the Juniata River raise a dust when they move about. . . . .

You must either soar or stoop,
Fail or triumph, stand or droop;
You must either serve or govern,
Must be slave or must be sovereign.
Must, in fine, be block or wedge,
Must be anvil or be sledge.—Goethe.

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

GARDEN, Clark Co., Oct. 11.—The drought has wholly destroyed all the RURAL seeds. My Branching Sorghum never put out a single panicle. We have had the severest drought I have ever known and most of our crops are total failures or nearly so. I gathered six tubers from my White Elephant—the largest about one inch long. H. M. Y.

Canada.

GLENMORRIS, Brant Co., Oct., 10.—The weather in this part, in common with many other parts of the country, has been very dry the last four months: we had no rain of any account in August or September, but we have had some fine showers since October came in. The turnip and potato crops are poor; pastures bare. Oats, barley and peas good. Wheat a little below the yield of the last two years. Hay good. The RURAL'S seeds all grew finely. I cannot boast of such a large yield from the White Elephant as some of your correspondents; neither are they white but of the color and size of a Rose potato. The Branching Sorghum would have ripened seed, I think, if the Fall had been favorable. The carnations were beautiful. I took a prize for them at our local fair. The Cuthbert Raspberry plants grew finely, kept growing all Winter and now stand nearly six feet high, having borne a few berries last Summer. The early Amber Sugar Cane seems to do well in this part. I procured a package of seed from Cole & Brothers, seedsmen, Pella, Iowa, and tried it this year again, having grown some last, and it has done well, considering the dry weather. Some stalks measured over ten feet in length. I showed the cane and sirup at our Provincial fair and took first prizes on both; but nothing took my attention so much as the Cuban Queen Watermelon advertised by the RURAL. Having procured 15 seeds from Burpee of Philadelphia, I raised some of the finest ever seen in this part; but, alas! one fine night the biggest of them all took to their legs or to those of some rascally thief and left. R. R.

STRATFORD, Ont., Oct. 12.—At the North Perth Agricultural Society's Fall exhibition, which opened September 15, I showed a sample of the White Elephant Potato grown from seed received from the RURAL. I had not the quantity required to take a premium, but the judges highly recommended the potato, stating that in their opinion it was a most desirable variety for general cultivation, and as there is a demand for a good *late* potato, there being plenty of good early ones, it is likely to become a standard variety. The yield of the White Elephant was good, although, owing to the extremely dry weather, it was not so large as some I have seen quoted. I may state that at the same fair I exhibited sweet potatoes grown at Stratford, several of which weighed upwards of a pound each. Pretty good for so far north, is it not? C. W. Y.

Connecticut.

STRATFORD, Fairfield Co., Oct. 8.—In the RURAL of October I you hoped that I had cut some of my sorghum off and would report the result. I did cut some of it off about August 15, and the second crop had grown to the average hight of two feet six inches when the frost cut it; it should have been cut earlier in the season the first time. I counted the stalks in two hills of the first and second crops; one hill of the first crop had 12, and one of the second crop 22 stalks; the other hill of the first crop that I counted had 26, and the second crop 30 stalks. I think it a succeses as a fodder plant. R. W. C.

Dakota.

JAMESTOWN, Stutsman Co.—I had pretty good luck with the RURAL seeds; the asparagus is doing very well; the Washington Oats did not stand the dry weather so well as some common oats I had beside them. The Sorghum is a rapid grower. I cut mine three times, and fed it to the cows—they ate it greedily. The White Elephant I got was frozen before planting time. G. G.

Illinois.

ONARGA, Iroquois Co., Oct., 14.—We have had no frost here to hurt anything yet. It was very dry all Summer until the middle of August. After that time until the first of October, we had a good rain once a week. Since the first of October it has rained one-half the time and the ground is very wet, but the pastures are splendid. No apples and but few potatoes in this county. Corn half a crop; hay a fair crop; oats heavy. I dug the White Elephant Potatoes a few days ago, and had 82 tubers, large and small; quality first-class. I have two fine rows of Branching Sorghum 10 rods long very full of good seed. It stands 10 feet high and is green yet. The first of August I cut several hills; it was five feet high at the time. It has made a second growth of six feet in hight. A part of it was cut the second time on September 15; the third crop is two feet high now: the second growth has 40 stalks to the hill. H. H. C.

WATAGA, Knox Co., October 9. — When the RURAL seed came last Spring they were all right as I supposed. One small White Elephant potato looked all right, so I put it away where I knew it could not freeze until I wanted to plant it; then I found nothing but the skin with a thin watery matter in it, so I suppose it was frozen when I received it. The Sorghum seed came up well and grew as fast as corn. It was planted about the first week in May. It had from five to twelve stalks from one seed. About the middle of August it was eight to ten feet high. I cut a few stalks to see about its sprouting. The cut stalks grew well. Some of them are three feet high with seed heads out. The seed was nearly all ripe two weeks ago, and I have saved a good quantity. I cut the last 10 days ago and it has all started to grow again. I shall plant more of it next year. I fed it to my horses, and they were very fond of it. The oats did not nearly all come up; they rusted and smutted badly. I saved a little over a pint, some heads were 14 inches long. The asparagus did not come up well on account of very dry weather. This also caused potatoes to be a failure. The flower seeds my wife planted, but on account of dry weather and too many chickens they did not do much. A SUBSCRIBER.

Iowa.

ALGONA, Kossuth Co., Oct. 11.—We are having a very rainy season and farmers are much behindhand with their work. Crops are light in this county. Our White Elephant potatoes, dug to-day, were Elephants both great and small, and Elephants with tusks. We received our Elephant late in May. It was small for an Elephant, but had 15 eyes. It was planted about the 24th in common garden soil that had not been manured this year. We had 30¾ pounds, with common culture. We received our flower seeds so late that we did not plant them this year, except the pinks, and they came up well, but the 'hoppers ate them up after I had put them in the garden. I saved four plants which I have in the house, they have not bloomed yet. Two of the pentstemons I got last year bloomed this year and were nice. A. C. H.

KEOSAUQUA, Van Buren Co., Oct. 14.—Our long drought is now succeeded by almost continuous rain. No frost yet. Pasture good. Oat crop generally good, and hay also. Wheat poor. Corn about half a crop. The White Elephant sent me did well. The Rural Branching Sorghum is doing finely also. The Washington Oats did not have a fair trial. D.S.J.

Kansas.

FONTANA, Miami Co., Oct. 9.—After a protracted drought all through August and July rain fell on October 1, and thoroughly saturated the ground and raised all the brooks and rivers past fording. We had a big rain last night again. The acreage of wheat is very small in this county. The White Elephant Potato as well as the asparagus and flowers came up well, but the drought injured the potato crop, so that there wasn't half a crop, but I dug 90 White Elephant potatoes. W. P.

AGRICOLA, Coffey Co., Oct. 12.—We have had a very dry season; no rain from July 12 until September 30. My White Elephant Potato made me one-third of a bushel of tubers. The Rural Branching Sorghum was eaten down by my neighbor's horses; it came up again, but the weather was too dry for it to make much growth. T. W. T.

Michigan.

SOUTH HAVEN, Van Buren Co., Oct., 11.—The Rural Branching Sorghum nearly all came up and grew well. Now what has not been cut stands about six feet high and is a dense mass of growth, one hill having 28 fine stalks. I cut five or six hills in August and it is now four feet high. I counted one hill that contained 31 stalks. It is undoubtedly an excellent fodder plant. The asparagus did well. I have 90 plants. I drilled the oats and had three large sheaves; have not thrashed them yet. They rusted. My potato was very small, weighing less than two ounces. I planted it in good soil one eye in a hill. I dug 179 ounces of large tubers, making 89½ bushels to one. Those dianthus seeds nearly all grew and among a large collection of flowers they stand unrivaled; all colors were represented, double and single. A few have not blossomed this season. I do not think the sorghum will ripen in this latitude. I like the RURAL ever so much. O. B.

Minnesota.

STOCKTON, Winona Co., Oct. 10.—I send you to-day, one head of Rural Branching Sorghum, that you may see how it ripens seed in Minnesota on the 44th parallel of latitude. [The head is fine and the seeds fully matured. EDS.] The seed was planted May 6, and received ordinary corn culture. It grew to a hight of eight feet, and when it was cut off sprouted again. All of it blossomed and nearly half of the seed matured before I cut it down more than a week ago. I had 75 hills and am convinced it is an excellent fodder plant. The White Elephant Potato was divided very carefully and made 18 pieces; it was planted May 6, one piece in a hill, eighteen inches apart; it received the same care as my other potatoes and was dug Sept. 21, and yielded 216 tubers which weighed 80 pounds; the largest tuber weighed one pound 11 ounces; six of them, six pounds nine ounces. They are smooth and of handsome shape and mostly of large size. The Washington Oats were drilled May 6, and made a very handsome growth; but just as the heads began to form some cattle got into the field and ate the tops off. Other stalks sprang up and formed heads, but being so late they were struck by rust and not a seed matured. I was very sorry to lose them as I prized them highly. The soil upon which the foregoing were grown was ridge land and the seeds were the first crop—no manure of any kind. I have a nice lot of asparagus about 20 inches high, and the pinks are and have been for two months a thing of beauty. We have had but one frost yet. We are having a rainy Fall, and farm work is much delayed. Crops were an average, except wheat, our main crop, which was injured more than usual by chinch bugs. Prices are high. We like the RURAL very much and think the "Condensed News" the best *unpatented* article in the country. W. E. B.

Missouri.

CHARLESTON, Mississippi Co. Oct. 10.—Corn half a crop; potatoes two-thirds; wheat about five-eighths. There will be less wheat for next year, more potatoes, and about the same area of corn. Up to the present time wages are disproportionate to prices of produce in this section. M. V. R.

KANSAS CITY, Jackson Co., Oct. 16.—The late rains have had a good effect in Kansas. Along the Kansas River from Topeka to Kansas City I noticed that the grass had started again, and that Winter wheat was all up and looking remarkably well. This was in marked contrast to the burnt-up foliage on the trees. This rain 30 days earlier would have had a very beneficial effect upon the corn crop. The drought continued right up to the time of husking, and the crop falls short of the report given in your Western correspondents' letters last week. I see that friend Richard Goodman, Jr., in RURAL of October 15, also takes up the cudgel for better committees on live stock at our fairs. Keep it up, and in time the State associations will come to it, and a premium will amount to more than the money or medal that goes with it. W. H. K.

New Jersey.

MONTCLAIR, Essex Co., October 11.—Our drought may be said to have terminated, for we have had slight showers that have laid the dust and dampened the surface sufficiently to start the weeds and bring up fodder corn planted nearly three months ago. Two months of foddering already make a gloomy outlook towards Spring. But little grain has been sown yet and little plowing done—ground too dry and hard. Notwithstanding a three hours' rain on the 3d, it is astonishing how little it penetrated. A gentle, steady 24 or 48 hours' rain is wanted to wet the earth to any depth. A cold wave struck us on the 4th, sending the temperature down to the ice-making point. A fall of 50 deg. in 24 hours brings fires in demand and kills all tender vegetation. Potatoes about one-third of a crop; the bottoms of the hills have not been wet since the vines came up.

A splendid promise but a great failure. Won't they be high before next planting time! W.

New York.

CLYDE, Wayne Co., Oct. 12.—The first cold snap of Autumn occurred on the 4th. Quite a considerable surface of water and damp ground was frozen over, but the high wind prevented a frost. However, all ungathered grapes, etc., were destroyed by a hard frost on the night of the 10th. From about the time of the shooting of the President no rain of any account fell here until the day of his funeral, since which we have had frequent storms. There was not enough rain to start the loose kernels on the ground and in the heads of wheat scattered on the harvest fields until the last day of September; but the soil was not penetrated to the depth of the plow until the 4th inst, since which considerable plowing has been done, and sowing has been continued up to the 9th. Some farmers finished sowing the first week of September, in the dust; others continued at different times to the 20th and 25th, and others waited till after the rain came. The early-sown came up at once in moist places in some fields, and evenly on summer-fallows. The remainder of early pieces are now all up, after lying on the ground 30 days—every kernel growing. Now, is there such a thing as the malting of wheat after sowing, except, perhaps, here and there a few kernels? All observers know that very soon after the "sprout" starts upward from the base of the kernel, the roots start from the same place and are continually piercing deeper into the soil. Hence, how is it possible that a kernel should malt, except in some instances where the moisture of the soil evaporates very rapidly soon after the blade sheets up, before the roots start, or where the only dampness for the depth of a foot happened to be at the surface of the ground around the seed, which, swelling the kernel and starting the blade, and the roots shooting downward only to pierce into the dry dust farther, would certainly end in the death of a plant if a severe drought continued. However, it seldom happens that seed sown in the ground, which once, by its surroundings, is started, is suddenly stopped in its growth and life. There are instances, however, where wheat, lying in the ground without starting, is attacked by a fungus which soon destroys the germ—the kernel is readily powdered in one's hands by rubbing. At different times during the last month many of the worst-appearing kernels, soft and seemingly with a dead germ, which were found by digging in the sown wheat-fields, were tested by planting in flower pots, and afterwards watering generously. In every instance every kernel grew. Hence, not only from many such slight tests, but also from general inquiry and observation in this vicinity, it is concluded that, on the whole, those who sowed before Sept. 20th are far ahead of farmers who sowed after that date; for some of the early pieces grew right along, while all other pieces and parts of the fields came up as soon as the rain fell in sufficient quantity. No sowed pieces were plowed over; all reports to that effect, upon careful inquiry, failed to be confirmed. Some, it is true, began plowing or cultivating the ground over to sow again, but were soon convinced that their wheat was all right and coming. Those who waited for rain were hindered from sowing at once by it. Others who did not plow or fit the ground until after the rain, did it then in a hurry; hence it was not thoroughly fitted. After all, wheat which came up no earlier than the first of this month will need a very favorable Autumn and Winter to build on it any hopes of a bountiful harvest. Thus far all wheat is growing very slowly. Wells are very low, and there is no water in swamps yet. Peaches and grapes were plentiful. Apples scarce, and nearly all falling off the trees. Winter apples are worth $2@2.50 per barrel. Early-planted corn and potatoes gave a good yield; late, almost nothing. Oats and barley extra-good. Corn is worth 80c.; potatoes, 80c.; barley, six rowed, $1; two-rowed, 85c.; wheat, $1.45. Clover seed is filled well, but only a few pieces were grown compared with the area of former years. W. X.

Ohio.

PORTAGE Co., October 10.—The Fall rains, warm and plentiful with abundant sunshine between showers, have caused the State to put on airs, so green does everything appear. Fall feed is growing rapidly and the wide-spread death that was prophesied to our grass lands in September has not come. Not one per cent of the grass died. Wheat seeding is yet being vigorously pushed and has taken almost the form of a mania. The result of this late seeding is very problematical, for of success there is only one chance in ten. The milk supply is again rapidly increasing, and milk is selling to the creameries at 15 cents per 10 pounds. Cheese 12½c. Live stock scarce and selling at high prices. Wheat, $1.45; rye, $1.15; oats, 48c.; apples, $1; potatoes, $1.25. J. G.

Tennessee.

MERIDIEN, Cherokee Co., Oct. 12.—I have dug the White Elephant Potatoes and find they weigh 32 pounds from 10 eyes planted in hills. One potato weighed two pounds. The Branching Sorghum I consider very valuable. The Washington Oats blighted badly. G. T. S.

Vermont.

HARTLAND, Windsor Co., Oct. 10.—My White Elephant Potato gave 67 tubers weighing 13½ pounds. They were on dry soil and the drought was severe in this section this year. One pound of Grange gave 17 pounds; one pound of Ontario, 22 pounds; one pound of White Star, 34½ pounds; one pound of Silver Skin, 38 pounds. I had 16 kinds of potatoes this season. Triumph, Burbank's, Beauty of Hebron, Pride of America, Sutton's Magnum Bonum I think will do well here. The frost in June hurt the potatoes and corn before the dry weather and hot sun. The Rural Branching Sorghum came up well, but I think it is too cold for it to grow very large. T. A. K.

Wisconsin.

GREEN BAY, Brown Co., Oct. 9.—Our season has been peculiar—wet in early May and again in late June, and then dry, but the drought was not so severe as farther south and east. Our hay crop was above an average. Barley and rye gave good yields. Corn is about three-fourths of a crop. Potatoes are more than an average crop on heavy and moist soil; but light on poor and light land. On the whole, the farmer has reason to be thankful for fair crops and good prices. I think the RURAL seed distribution is doing much good in causing farmers to make closer observations and comparisons as well as giving them many valuable useful and ornamental plants. The Branching Sorghum has 10 to 15 stems from one seed. I cut ten hills on August 7, when it was from five to six feet high; it has grown up again from two to three feet high; that which I left uncut is eight feet high and the seed in the milk, as green as in June with thermometer at 70°. The White Elephant Potato I received weighed two ounces, had nine eyes, and was planted May 17, and dug Sept. 26—yield 35 pounds. It is undoubtedly a great acquisition for the Rural family. The pinks are simply beautiful, they have been in bloom for two months, and have brought forth many expressions of delight from the people who saw them. That the blessings you are weekly and annually sending forth to the great Rural family, may return, not only in material wealth but in sympathy and good fellowship is the sincere wish of T. B.

LAVALLE, Sauk Co., Oct. 13.—We have had a very favorable season for growing crops. Though the Spring was late, the Summer was hot, with seasonable showers and a flood in July. August was hot and somewhat dry, but we had showers every 10 or 12 days. The last of September and first of October have been very rainy and the water was the highest of the season the first of the month. We had frost on October 6. Wheat was a short crop; barley good; oats, corn, potatoes, hay all good crops. Wheat, $1.10@1.25; oats, 30c.; corn, 50c.; barley, 55c.; potatoes, 60c.; butter, 20@23c. White Elephant Potatoes a good crop. Washington Oats rusted and lodged and were destroyed by bugs. M. S. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

SLIDE GATE PATENTS.

L. S., Burgettstown, Pa., sends a rough sketch of a slide gate on which parties are claiming a patent "royalty" in that neighborhood, and asks for information with regard to it, having heard that the RURAL, years ago, illustrated and described it.

ANS.—Our inquirer does not mention the name of the patentee of the gate in question, and the sketch does not quite represent any patented gate with which we are acquainted; but from the general appearance of the gate shown, and the manner of doing business practiced by the "royalty" sharks, we should judge it is either the Teel or Lee gate. Both of these were profusely illustrated and fully described in the RURAL of January 25, 1879, with the view of warning farmers against the exactions of agents who were demanding "royalty" on them, and of eliciting further information about them for the benefit of the farmers of Michigan in the first place, because they were contesting the patents in the courts, and of the farmers of the whole country, in the next place, because they would be protected by the triumph of the Michigan contestors. Teel's patent is No. 2,667, and was issued on December 1, 1823, and reissued July 2, 1867. The Lee patent is No. 50,605, and was issued on October 24, 1865. Professor R. C. Carpenter, of the State Agricultural College, Mich., took a prominent part in contesting the validity of these patents in that State, and in reference to the result of the contest he writes us, under date of October 14:—"We in Michigan, after our expensive law-suit, have learned to believe that there are no valid patents covering the simple slide gate. The farmers of Michigan were subjected to persecution under both the Teel and Lee patents. In the case of the Lee gate the patent covers a peculiar combination of slats and strips which, I venture to say, can not be found on any gate in Pennsylvania. Some 44 suits were begun against farmers in this State for infringement on this patent, all of which, with one exception, were dismissed without trial. That case having been carried to a conclusion, resulted so decidedly in favor of the farmers as to end completely all persecution under the Lee patent. Agents were immediately afterward sent throughout the State to collect royalty under the Teel patent. This patent without doubt covers the ordinary slide gate, but the farmers were able to prove the use of this gate for more than 20 years, and the Court decided a second time in favor of the farmers. In view of what has been proved in Michigan regarding the use of the slide gate, there is no question regarding the right of all to use this gate. Persons undertaking to collect royalty for its use should be treated in the same manner as swindlers." Should the farmers of Pennsylvania, or, indeed, of any other State be harassed by fellows seeking royalty under either of these patents, we shall be glad to furnish the same information with regard to the patents, that has been sufficient to secure a verdict against them in the Michigan Courts. We ask our readers, therefore, to let us know whenever any rascal troubles them on this score.

SORGHUM BUGS.

E. W. H., New Orleans, La., sends for name and history some insect pests that destroy the seed heads of the Rural Branching Sorghum, Pearl Millet, etc.

ANSWER BY PROF. G. H. FRENCH.

The insects sent me as doing damage to Sorghum seed heads in the Gulf States are scientifically known as Leptoglossus Phyllopus; the last name meaning Leaf Foot, and they might be known as the Leaf Foot Bugs. Say gave them the name of Anisoscelis Albicinctus. The only mention I find of this insect economically is in the report of the Department of Agriculture for 1875, where Mr. Glover says this of it in speaking of hemipterous insects generally: "Some of the insects of this family are said to be beneficial to the farmer by destroying other injurious insects, among which may be classed Leptoglossus Phyllopus. We have met with these insects frequently in Florida on the cotton plants, and at first suspected them of sucking the sap from the young bolls; but, although we watched their actions diligently, we must say that we never saw them in the act of piercing the bolls in order to suck the sap, and only once caught them under suspicious circumstances where a boll had been pierced in several places, and the sap was exuding from the wounds. Several of these insects were gathered together very near the flowing sap; they, however, dispersed as soon as they were observed, and flew away immediately." Further on he says that Mr. E. J. Earle of Evergreen, S. C., saw them destroying other insects. These are hemipterous insects belonging to the family Coreidæ to which belong the well known Squash Bugs (Anasa tristis), all of them being furnished with a long beak or rostrum instead of jaws. Those that are plant feeders pierce the plants with this beak and suck the juices, and those feeding upon other insects pierce their prey, suck out the fluid parts and cast away the dry skin. It may be that these insects found in the seed heads of sorghum were in reality feeding upon some other insects that were destroying the seeds. If the seeds or the other parts of the head were eaten by gnawing, then certainly it was not by this insect for it has no jaws. The insect in question is a brown bug five-eighths of an inch long with a white mark across the back and the hind legs expanded near the feet.

SILVER WORMS.

A Subscriber, Washington, D. C., asks how to get rid of the little Silver Worms that eat holes in all sorts of clothes.

ANSWER BY PROF. G. H. FRENCH.

There are two species of the so-called "Silver Worm," a Spring Tail (a species of Podura) and a Bristle Tail (Lepisma saccharina) that are common about houses, but more particularly the latter. They are both gray insects, the first with little bristles bent under the abdomen by means of which it makes considerable leaps. The bristle tails have, instead, three long bristles projecting from the tips of the abdomen. Both are somewhat flat, elliptical insects without wings and move rapidly. The Bristle Tails are to be found in houses through the most of the country, but they usually do so little damage that I have not seen any special remedies recommended by writers on economic entomology. I use camphor gum to keep them out of my cases of insects. If the clothing, such as silks or woolens, were in boxes or trunks a little camphor gum put among the clothes about twice during the Summer would prevent injury from these insects. Clothing that hangs in closets if molested could be treated the same as for clothes moths—frequent airing, shaking and sunning.

PLANTING CHESTNUTS.

W. H. L., Cooperstown, N. Y., having some 20 acres covered with worthless cherry and apple trees which he wishes to replace with chestnuts, asks when and how to plant these.

ANS.—Plant the nuts this Fall while fresh, just where you want the trees. Cover them two or three inches deep. If you are afraid squirrels will remove them this Fall and Winter, bury them with their bulk of damp sand in a box till April. Then plant them where the trees are wanted.

Miscellaneous.

F. P., Detroit, Mich., being about to move to a distance of 200 miles this Fall, and wishing to take his asparagus plants to his new home, asks whether he can transplant them when he moves, as there is no one to whom he would like to entrust their care where they are now set.

ANS.—Yes, they may be transplanted Keep the roots moist. Prepare the plot of ground to which they are to be removed well—have it rich, deep and mellow. A sandy, well-drained soil is best. Plow or dig trenches a foot deep four feet apart and set the plants two feet apart in the trenches. Spread out the roots well and cover. Give the bed a mulch of farm manure in December.

F. McM., Fair Haven, N. J., asks the meaning of *speciosa* as applied to such plants as Catalpa speciosa, Magnolia speciosa, etc.

ANS.—The word is the feminine form of the Latin adjective *speciosus*, showy, handsome, When the noun it qualifies is masculine, the masculine form of the word is employed, as Amaranthus speciosus, the Showy Amaranth; when it is feminine, the feminine form is employed, as Catalpa speciosa, the Showy Catalpa; and when the noun is neuter the adjective, too, must be neuter, as Chrysanthemum speciosum, the Showy Chrysanthemum.

N. K., Cherry Creek, Nevada, sends two specimens of grass for name, and asks their value as feed in comparison with Timothy.

ANS.—They are identical—Triticum repens, whose familiar names are Quack, Rye, Scotch or Quitch Grass. For feed it is just about as valuable as Timothy, but it is generally considered a pest, for the reason that it is difficult to get rid of it when once it is established.

H. M. Y., Clarke Co., Ark., asks where he can get the Marlboro Seedling Raspberry, and a Shropshire ram.

ANS.—We believe the Marlboro is not yet offered for sale. Shropshire Downs are for sale in the West by A. O. Fox, Oregon, Wis; Geo. Allen & Son, Palermo, Ill; Morgan & Cotton, Camargo, Ill; J. A. Brown & Son, Decatur, Ill: Mrs. Ann Newton, Pontiac, Mich.

W. D., Brookville, Ohio, asks how to winter the pinks from the Rural seed.

ANS.—They will not need special care. A little mulch worked in the soil of the beds in which they grow, will perhaps help them. We hope you have saved seeds from the best varieties which bloomed. If taken in they will continue to bloom after a rest.

N. H. B., Evelyn, Ga., sends for name some grass plumes which when dry open out, making a handsome appearance.

ANS.—The grass plumes are Erianthus Alopecuroides. They grow in swampy pools from Virginia to Florida. They quite resemble those of the beautiful E. Ravennæ, a hardy grass cultivated for ornament.

O. G. D., Wellville, Va., asks where can he can get seed of Egyptian or Green Valley Grass—Sorghum halepense.

ANS.—We think Dr. Jones, of Herndon, Ga., can supply it.

A. L., Topeka, Kansas, asks whether there is any dealer in Polled Angus Cattle within a "reasonable" distance of that point.

ANS.—Yes. A. B. Mathews, Kansas City Mo.

W. L. Bishop:—We hope to report later.

A. C.:—The more we see of the Pocklington Grape the more we like it. The quality is better than that of Concord.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT., 22, 1881.

M. V. R., box received.—C. T. L.—W. E. Bubar, Stockton, Winona Co., Minn. A well-ripened seed head of what we suppose to be the Rural Branching Sorghum.—W. Y. H., thanks.—W. H. D.—R. R.—M. D.—A. S. S.—O. C. D.—J. J. W.—M. A. H.—T. W. T.—W. S. H.—G. T. S.—N. McI.—D. S. J.—J. H.—H. H. C.—A. C. H.—W. P.—L. E. B.—L. A. G.—J. S.—H. D. W.—F. H. W.—M. J.—F. E. B. B.—L. C.—L. M.—T. D.—A. Z.—T. H. H. A. M.—R. N.—N. A. R.—H. J. S.—J. P.—E. S.—S. G.—S. M. P.—M. C.—E. M. T.—F. R.

THE
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We would remind those who kindly propose to solicit their acquaintances to subscribe for the Rural New-Yorker for another year, that the present is really in some respects a more favorable time for such endeavor than later in the season. The weather is now generally more pleasant than in December and January and the competition from professional agents far less keen. We beg to say that we shall at all times be very glad to send posters and specimen copies for this purpose (including the Fair Edition) free of all charge to all who apply. Moreover, to each new subscriber for 1882, who subscribes before New Year's Day, we will send the Rural New-Yorker *free* for the remainder of 1881, beginning with the first issue after the receipt of his subscription.

If the Rural New-Yorker is not received promptly when it is due, subscribers will confer a favor by notifying us at once.

The Rural New-Yorker will be sent from now until January 1st., 1883 for $2.00. Our new posters for 1882 are now ready and will be sent *gratis* to all applicants. The Fair Number which fully explains our Free Seed Distribution and contains our Premium List will also be sent to all applicants, free of charge.

Of six grape-vines all planted in the same soil and same situation and treated alike, Niagara has made the most wood and the heaviest main stem; Concord next, Moore's Early next, Brighton next and two seedlings of our own least. Moore's Early was the first to lose its foliage, the two seedlings second, Brighton third, Concord fourth and Niagara last.

We have now completed the measurements of our special corn plots; of the Benton corn manured and unmanured; of the Chester Co. Mammoth grown upon the same land upon which the Blount's was raised last year, and finally of another plot (about three-quarters of an acre) of Chester Corn grown upon low land and manured with concentrated fertilizers. The reports will be presented in due time.

Of late months, we rarely present an original engraving of a fruit, plant or animal that does not elicit inquiries, which shows there is a misapprehension on the part of advertisers regarding the object of such illustrations. We have never asked or received any compensation whatever for the cost and presentation of these engravings. Our object is to bring before our readers in the most prominent manner the latest improvements in fruits, grains, ornamental plants, farm implements, etc., or the finest specimens of thoroughbred stock with the best and most trustworthy information we can glean respecting them. To provide material for such illustrations and the information derived from actual tests are among the main objects of the Rural's Experiment Grounds.

HOW DISEASE IS SPREAD AMONG STOCK.

A well known veterinarian of this city, a frequent contributor to the Rural, was summoned a week ago to a farm in Monmouth County, N. J., to investigate the cause of sickness and death among the swine on the place. On his arrival he found that four had already died and three more were sick. A post-mortem examination showed that the trouble was due to hog cholera. The owner had originally possessed 16 hogs, and on September 22, had bought 14 more from a dealer near this city, who said they had come from "Ohio." About a week after their arrival they began to sicken and die, and a fortnight afterwards the last of them perished. But before its death the home herd had begun to show the results of bad company, two of them having become sick. Since then others have been prostrated and several have died. A neighboring farmer had also bought 10 head from the same dealer, out of the same Ohio drove, and at the time of our friend's visit to Monmouth County three had been buried and more were sick.

This case affords an excellent illustration of the manner in which contagious diseases are spread among stock all over the country—not hog cholera alone but pleuro-pneumonia also and all other ailments of that sort. In the absence of efficient legislation for the protection of our stock, each farmer must individually adopt the best possible precautions to insure the safety of his cattle, sheep and swine, yes, and of his poultry, too. Whenever economically practicable, every farmer who desires to keep his domestic animals clear of contagion should breed his own stock. By doing this he will not only stand an excellent chance of escaping losses from contagious diseases among them, but with care and good judgment he will, in a few years, secure a herd or flock especially suitable to his circumstances and surroundings and therefore especially profitable. If this is impossible, then he should buy only from *farms* which he *knows* to be free from contagious ailments, and the animals he thus purchases must be transported to their destination in special cars or steamboats, for the ordinary cattle cars are, in many cases, among the worst disseminators of disease. The adoption of these precautions will, doubtless, always necessitate some extra outlay; but the neglect of them will often entail serious loss.

GAMBLING IN FARM PRODUCE.

Gambling in grain and other farm products, especially when it has assumed the form and proportions of a "corner" in any commodity, is attracting a great deal of attention everywhere of late, but particularly at the West. This is due to the unusual frequency and magnitude of such speculative movements, brought about by the manipulations of wealthy speculators who have lately introduced into the produce markets the tactics which they formerly practiced chiefly in the stock markets. A special impetus was the other day given to the discussion of the subject by the charge of Judge Jameson of Chicago to the Grand Jury of Cook County, in which he called attention to an almost forgotten Illinois statute making such gambling an offence punishable by fine or imprisonment or both. This law is directed against dealing in "options;" "forestalling the market" and "cornering the market or trying to do so." The "options" here referred to, however, are not the ordinary "options" quoted in market reports contracts to deliver or take a commodity at a fixed price at any time optional with the buyer or seller within fixed limits in the future—but what is commonly known as "puts" and "calls," which are privileges bought and sold entitling one to either sell or buy so much grain or other commodity within a certain period—transactions made only to a limited extent and not recognized by the Board of Trade in any market. By "forestalling the market" is meant, according to the Illinois Statute, "spreading false rumors to influence the price of commodities sold therein." "Cornering the market" Judge Jameson defines thus: "A party securing a contract for the future delivery of some commodity in the market, making it impossible for the other party to complete his contract except by purchasing of his adversary at his own price or paying in cash the difference fixed by such adversary." This the Judge characterized as "a process of driving unsuspecting dealers in grain, stock and the like, into a corral and relieving them of their purses." This is hardly fair, however, so far as the regular operators are concerned, for each party is trying to get the best of the other, and the "unsuspecting dealers" who are shorn to-day were probably among the shearers yesterday and will be again to-morrow, for the "bear" of one month is not unfrequently the "bull" of the next, and the one is "relieved of his purse" about as often as the other.

There is no doubt that it is grossly unjust, nay, downright dishonest, to exact the delivery of a commodity the entire supply of which is under the control of the party making the exaction. But beyond this individual injustice, a grievous public injury is done by such a monopoly, for the unlawful rise in price due to the fictitious value set upon the "cornered" commodity, has, as a rule, to be ultimately paid by innocent parties who had no chance to win by the gambling transaction. Moreover, the regular course of business is impeded or blocked by such gigantic speculations which have a demoralizing tendency on the entire community.

The great obstacle to putting an end to them by legislation lies in the difficulty of proving the offense; for among the overreached speculators there exists a strong disinclination to "squeal." The gambler in grain or in other commodities, like most of the gamblers in cards, does not seek protection from the law. In fact he can protect himself by refraining from gambling, and the dividing line between gamblers in produce and legitimate dealers is fluctuating and by no means clearly defined. The Boards of Trade and Exchanges can, if a majority in each so wills, suppress the pernicious practice more effectually than any legislation, and it is to be hoped that for the sake of their own reputations and the public welfare they will take vigorous action to this end.

So far as the farmer is concerned, "cornering" a product is an advantage, in that it raises the price of it, thus affording him an opportunity of selling it at a very profitable figure. On the other hand, however, it tends to foster a spirit of gambling in him, also, leading him to hold back his crops in ordinary times in expectation of getting for them the higher prices obtainable during the cornering processes, though to do so he has often to borrow money on mortgage to carry on his legitimate business. Not unfrequently, too, this spirit of speculation is so strong that during the rise due to the corner he clings to his produce for still higher prices till the corner has culminated either in success or failure, after either of which issues prices rapidly sink, often for a time below the legitimate level. During such periods of fictitious depreciation, the shrewd farmer will never market his products, but will always wait until the reaction has set in, which in such cases is sure to occur in a few weeks.

BREVITIES.

Send for the Fair Number of the Rural New-Yorker and the new poster for 1882. *Both will be forwarded* gratis *to all applicants.*

The Jersey bull, Prospect, whose likeness graced the first page of our Fair Number, died about a fortnight ago from drinking too much water at his home on the Messrs. Rowe's Co-operative Stock Farm near Fredricksburg, Va.

Remember this: Wait until a severe frost that freezes the ground at least two inches in depth before covering strawberry beds. Then use straw or coarse manure to cover. Straw is better because it contains no weed seeds. Cover lightly but as uniformly as possible. Sticks of any kind may be used between the rows to hold the covering.

In the case of Maddox vs. Brown, the Supreme Court of Maine has decided that the owner of a horse and wagon, who has lent it, is not responsible for injuries caused by the negligence of the borrower. In the above case Brown's son, aged 17, was using the wagon on his own business, under a general permission given by his father, when his carelessness caused the injury to Maddox for which he claimed damages from old man Brown.

Of the 447 female graduates of the Hartford, Conn., High School since 1848 only 147 have been married; a poor show for marriage among highly-educated females. Are they too independent to seek male help, or too shrewd to be saddled with male selfishness? Or, is their ideal hero so perfect that he is rarely met with? Or is it that the males are afraid of so much learning and independence, or do they believe that a masculine education unfits for feminine duties? On the other hand, of those 447 highly "finished" females only 25 have died; an excellent proof of the sanitary value of education—or of single-blessedness.

Apologetic.—We have received the following note: "Please give me *credit* for the wrong name which now partially attaches to the new Black-cap, Sonhegan. Mr. Downing requested me to find the name on the map or in the post-office directory, but not discovering it in either, I naturally supposed that it was intended for the more widely known Indian name Skowhegan—a post-village on the Kennebec River, Maine. The creek mentioned by Messrs. Hale is but little known outside of its locality, and hence so far as there is error, it is exclusively mine. A. A. Bensel.
Newburgh, N. Y.

Farmers and the Signal Service.—We have noticed an article going the rounds of the agricultural press stating that the Signal Service was about to make arrangements whereby farmers in the vicinity of Signal Service Stations could be informed of the probable condition of the weather 24 hours or so in advance. This was to be done by setting off colored rockets during the evening of each day. In order to get at the facts in the case, we referred the statement to Gen. W. B. Hazen, Chief of the Signal Service Department, who replies that he has never entertained the project of informing farmers, or others, of the weather indications by means of rockets.

The Commissioner of the General Land Office in his report just sent out to the Secretary of the Interior, speaking of the delay of business due to the insufficient clerical force in his office, says that in a single division of public lands there are now over 60,000 entries and legal notices of settlement and claims unposted on the tract books and unexamined, and about 1,300 contracts unexamined. Other divisions are as much or more behind from the same cause. Delay in this department of the public service often entails much inconvenience and loss upon those least able to endure either—the settlers—homesteaders, and others—along our Western frontier. We trust therefore, that the deficiency here will be promptly supplied—a thing that can be economically done by drafting to this office some of the very supernumerary clerks in some of the other departments at Washington.

A number of wholesale importers of hay recently brought a test case at Albany, N. Y., against the United States, to recover an alleged excess of duty. It was claimed that the duty of 20 per cent. collected pursuant to the United States custom laws was illegal, in that hay was a raw material while 20 per cent. duty was chargeable on it only as a manufactured article. The Government claimed that the processes of cutting, drying and curing grass, as they converted the starch and gluten therein to sugar, made hay a manufactured article, and called experts to prove it. The jury, however, gave a verdict in favor of the plaintiff for $2,000—the excess of duty collected. It is said that should the duty on imported hay be placed at 10 per cent.—the amount chargeable on it as raw material—the Government will lose from $500,000 to $1,000,000 a year. The case is to be appealed to the United States Supreme Court. The decision will be of importance to our farmers in the States along the Canada border, and to Canadian farmers, who are sure to increase their imports of hay should the Court decree in favor of the lower rate of duty.

The estimates made by the Department of Agriculture of the wheat and corn crops of last year have been revised on the basis of the Census returns of the crops of 1879. Many returns to the Department of last year's crops stated that the crops of 1880 were "such or such" a percentage below or above the crops of 1879, and the aggregates were worked out on this basis. It turns out, however, that the Department's estimates for 1879 were below the figures given by the Census, so that it has been found advisable to alter the yields of wheat and corn in the various States. According to the new estimate just published, last year's total wheat crop amounted to 498,549,868 bushels instead of the 480,849,723 bushels previously estimated—an increase of 17,700,145 bushels. The revised estimate also puts the total corn crop of 1880 at 1,717,434,548 bushels, instead of the 1,537,535,000 of the previous estimate—an increase of 179,899,548 bushels. Of course, all estimates of this year's wheat and corn crops based on the correctness of the Agricultural Department's figuring on last year's crops will have to be revised on the basis of these revised estimates.

The American Humane Association held its fifth annual meeting at Boston last week. Representatives were present from Maine, New Hampshire, Massachusetts, Rhode Island, New York, Pennsylvania, Delaware, Illinois, Nebraska, Georgia, and Nova Scotia. It proposes to have agents in every town and city, at a cost of from $18,000 to $20,000 a year, which is to be collected by voluntary subscriptions. Already this humane league is said to be represented in the 36 States and Territories. Its object is to prevent and punish cruelty to dumb animals. The chief end at present engaging its attention is the proper transportation of stock on our railroads. To further this the Association offered, some time back, a prize of $5,000 for a satisfactory stock car in which animals can rest and be fed and watered while in transit. In competition for this prize 700 designs were sent in by representatives of every State and Territory except Washington Territory and New Mexico. Canada, England, Switzerland and Russia were also among the competitors. Not a little, no doubt, to the disappointment of every one of the 700, Mr. E. L. Brown, of Chicago, who presided, announced that not one of the designs had so complied with the requirements as to deserve the prize. This is, therefore, still open to competition among the inventive geniuses of this and other countries.

A century-and-a-half ago—or, to be precise, 146 years ago, in 1735—a number of Bulgarians, too haughty longer to brook or too hasty longer to bear Turkish insolence and outrage, fled to Hungary. Adam delved and Eve span and the exiles were mostly of the same honorable vocation as their remote exiled ancestors, and, like the subjects of the Pharaohs, their children have mostly followed the craft of their fathers. Wrenched from the crushing Ottoman grasp by the fierce mailed hand of Russia during the late Turko-Muscovite war, the Fatherland the other day invited the descendants of her children, exiled by tyranny, to share in her newly acquired freedom, offering them a large area of land near Sistova on very easy terms. Twelve thousand of them were eager at once to exchange their long-accustomed hardships for the ease which distance of time and place rendered all the more alluring. The contracts for the farms which several generations of them had expended their hard, dull lives in tilling, had now expired, and they were all the more joyous to start. The Magyars, however, the liberty-shrieking compatriots of Kossuth, like those other tyrants of old, refused to let the people go. Passports were denied, and orders are reported to have been issued for the use of force to prevent the exodus, should force be necessary. No sea, Red, White or Yellow, unfortunately, separates Hungary from Bulgaria; Moses, too, alas! is dead, even he who freed our "niggers"; and, more's the pity, the rod is nowadays considered an instrument of oppression, not of freedom.

Miscellaneous.

FACTS AND FIGURES

Regarding Minnesota, Dakota, Town and Country Along Red River.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

AFTER a pleasant ride over the St. Paul, Minneapolis, and Manitoba Railway, which, by the way, they are relaying with steel rails to the Dominion, we arrived at Pembina, D. T., which lies on the west side of the Red River of the North, near the Manitoba line and Fort Pembina. It is a well-situated town of some 800 population, with an annual business estimated at $600,000. There are four religious societies, a frame school building, to be replaced by a modern brick structure to cost $8,000. Among other improvements we note a handsome $15,000 court-house and jail nearly completed. Masons and Odd Fellows have organized lodges. A good weekly paper, the Pembina Pioneer, ably represents this section. Pembina County has many rich wheat lands still open for entry, and farm lands for sale at prices from $3 to $25 per acre, according to location. The county is well watered and timbered along the streams.

In a conversation with H. R. Vaughan, an old resident and land agent, he accounted for the large yield of wheat in this section by the increase in grains. The breasts are long and full, each spikelet containing three to five grains and sometimes even six. The varieties now grown are Scotch Fife, Red Fern, with the new Pringle's Surprise, Golden Drop, White Russian and other importations, all seeming to do well. A. F. Appleton, a farmer on Park River, makes the following astonishing but true report, which shows what *can* be done:—"I had 30 acres of crop on last year's breaking, without back-setting; 14 acres of wheat thrashed 496 bushels of No. 1 hard—about 35½ bushels per acre. From 16 acres I had 1,042 bushels of splendid oats—65 bushels to the acre. I have not heard of any one thrashing less than 30 bushels of wheat to the acre in this section." The climate—the usual objection to this far Northwest—is, of course, cold and clear in the Winter, but people live and thrive. It is said that one degree west is regarded as equivalent to half a degree south in temperature, and the fact which we have learned—that 1,500 miles northwest of Winnepeg buffalo graze the year round—tends to prove the assertion.

Our next stop was at St. Vincent, Minn., the present northern terminus of the St. Paul, Minneapolis and Manitoba Railway and the southern terminus of the Canada Pacific. This company courteously desired us to visit the Province of Manitoba, an invitation we may be able to accept the following season. The first building in St. Vincent was finished in the Spring of 1879, and the place has now a population of 300 to 400. The St. Vincent Town Site Company, J. P. Shepard resident manager, are the proprietors It is the desire of the company to have actual residents, to whom lots will be sold reasonably low. The needs of the town are a hotel (expected to be supplied this season), a saw-mill, and hardware and saddlery stores. They have an Episcopal Church, a Presbyterian Society and a good school. John A. Vanstrum, post-master, will willingly reply to correspondence. The Red Wing Mill Company own here the largest elevator on the line.

Going south, we stopped for dinner at Hallock, a yearling, but with a good hotel, built as a sportsmen's resort, and four or five stores. We lodged at Argyle—if a dry-goods box and blanket be termed lodging—and found when morning dawned a smart little town, mostly Scandinavian and Canadian, of some 175 population. The railroad company are making arrangements to build a new depot to supplement their three stores, two grain ware-houses and dwellings.

Warren, our next stopping place, was platted in September, 1879, and now claims 300 population. It has the elements of thrift, brisk, enterprising business men, and the added luxury of an excellent little paper, the Warren Sheaf. As in the case of other towns aloug the line, a good proportion of its people are foreign. Near this town, as well as near any of the others, are abundant opportunities to purchase farms of from 40 acres upwards at very reasonable figures. We attempted to thank McCrea Brothers for their courtesies, but they forestalled us by cordially commending the enterprise of the RURAL NEW-YORKER for informing its readers of the truth regarding this country. We ate a hearty supper at Euclid, and learned that the town was prospering. It contains over 100 people, has a Presbyterian Church and a new school-house, costing $2,500. The up train now stops for dinner here at the handsome hotel, and again for supper on its way back. These towns are all new, as the railroad has originated them, while a tide of immigration is pouring in which will speedily make them busy trade centers.

We spent a day of interest under the care of Chas. E. Hamilton, R. E. and R. R. Land Agent, at Crookston, Minn., where the St. P. M. & M. branches out into Dakota. The city, which is within a bend of the Red Lake River, is three years old and with nothing but this wondrous country to aid it, it has now a population of from 1800 to 2000. It has a Methodist church, and Congregational, Baptist, Catholic and Episcopal organizations. The last will build soon. There is also a good school system, graded and high, employing five thorough teachers. The buildings are valued at $10,000. There are two newspapers, the "Chronicle" and "Journal," alive and active to the interests of the country. Here, too, are to be found civic and social organizations of repute; improvements steady, substantial and rapid; broad streets; numerous business houses; good sidewalks, etc., and an excellent agricultural country being rapidly settled by farmers from abroad and from the East; stimulated no doubt by the liberal rebates for breaking and plowing, offered by the R. R. Co., upon their low prices for lands. Here is an item: M. R. Brown put 40 acres to oats, paying every expense, with interest calculated; the total cost was $596.41; the storage until Spring was $110; the yield was 2,200 bushels; the price received 55c. per bushel—total $1210; actual profit, $503,49. Near almost any station equally good land can be purchased at from $5 to $10 per acre. The business of Crookston for the last year has been over $900,000. It is a terminal point for freight train service and with a flume which would cost from $60,000 to $70,000, it could obtain a 1400 horse power, with a 12 foot fall. Such rapid and permanent improvement must be a marvel to any one not conversant with this country. We noticed a very fine court-house which is nearly completed at a cost of $20,000; a handsome building is about finished by the First National Bank, while there are many pretentious residences.

About midway between Crookston and Grand Forks was Fisher's Landing, now called Fisher, a bright and growing town—it would be hard to find a dead town in this live country. It is on the Red Lake River, at the head of navigation. Messrs. Demers and Thompson own the town site and the latter informs us that from his 1,000-acre farm he has obtained 22,000 bushels of wheat, so it is plain good crops are not the exception, but the rule. Religion and education are well provided for. Business men are constantly busy. The exports of grain from this town will exceed 500,000 bushels this season, besides what is used by the Red Lake Flouring Mills, of 100 barrels daily capacity, now running night and day. "No. 1 Hard" grinds up into just as good flour here as at Minneapolis. There are three elevators here with a capacity of 150,000 bushels. There are also substantial building improvements; good bricks, manufactured here, are bought for $8 per 1,000. Farm property is not high and hence the increase in population is marked.

Whirling westward sixteen miles we cross the Red River of the North, the boundary line between Minnesota and Dakota Territory, and halt in Grand Forks, beautifully situated upon the western bank. We remained here only a couple of days, feeling most of the time as if encompassed by a western cyclone; everybody moves as if run by steam power. The streets were whirlpools of business, and the stores miniature bee-hives. The oldest, young city, and the largest, small one of which we have written. It has a population of about 2,800, churches, schools, press, (semi-weekly, and weekly), civic societies, a fire department, a chamber of commerce, elevators overflowing with wheat, railroads to the North, South, East and West, by the St. P., M. and M., though their Eastern line only runs into the the main line of this county, from St. Paul to Pembina, at Crookston; transportation by the Red River steamers, a banking Capitol of $150,000, a commercial business of about $1,250,000 annually, and several embryo manufactures.

The details of all these, and the inexhaustible resources of the country tributary to this point, both agricultural and commercial, as also the possibilities and advantages in manufacturing, demand more time and space than we can appropriate here, and they will receive a special review from our pen in the next number of THE RURAL NEW-YORKER.

One of our party visited Ojata 12 miles to the westward, the present railroad terminus. Here within a year a little burgh has sprung up like magic, upon the prairie. Stores like mushrooms in a cavern have appeared in a single night. They say they have 200 population, and whether it is over estimated or not, certainly it is a "booming" little place. Over 30,000 bushels of wheat have been marketed here within four weeks. Upon the train we met J. J. Cavenagh of Grand Forks, who is proprietor of the town-site. Lots are bringing $25 to $100 and a need is felt for a harness-maker, shoe-maker, and wagon shop. They have timber within six miles on the Turtle River. The town is populated by Americans and Canadians.

The St. P. M. & M. are employing many men in the construction of their line to the Dominion west of the Red River. We were almost hourly greeted by marvelous reports of this country, and observation verified most of them.

We had the pleasure of meeting Messrs. Comstock & White of Moorehead, who are largely interested in towns and lands along the line. We also met the Hon. Jno. La Moure, of Pembina, D. T., one of the proprietors of the town of Grafton, which is rapidly settling up with energetic business men and bids fair to become a point of considerable importance. It is on the Park River—a region bearing an enviable reputation for agriculture. It is the county-seat of Walsh Co., and though it is only 60 days old, yet it has from 30 to 40 buildings now up. The former gentlemen besides being the owners of Grafton, are also town proprietors of Bathgate in Pembina Co., on the Tongue River, 10 miles from the boundary line, and of Minto, a station on the Forest River (or Old Salt) near which large salt deposits are found. The settlement of Canadians is quite large around here. Minto has an admirable location for sporting, hunting and fishing, as well as for agricultural products. Manvel, named after the general manager of the railroad, is on the Turtle River, the first town north of Grand Forks. Dakota, although it has no railroad lands in this vicinity, is quite thickly settled with small farms, especially along the streams. Along the west bank of the Red River are the villages of Bowesmont, Drayton, St. Andrews and Acton.

It has been our object in giving this pen picture of this land of the golden grain, to stick closely to "facts and figures" and to do so without any blatent "puff" or undeserved commendations. The information as far as we can learn can be relied upon. The special reports given are of course among the best. No country is devoid of drawbacks; but here to the worker the returns seem reasonably sure, and in many cases remarkable.

Societies, &c.

SESSION OF THE AMERICAN POMOLOGICAL SOCIETY.

[RURAL Special Report.]

THE SOCIETY was called to order on Friday, at nine o'clock A. M., by Vice-President Barry.

The report of the Committee on the Award of the Wilder Medal, which has been heretofore noticed, was followed by that of the Committee on Fruits Exhibited. This committee found on the tables 535 plates of pears, 188 of apples, 17 of peaches, 100 of grapes, 17 of plums and 71 of miscellaneous fruits, shown by the following

EXHIBITORS.

Michigan State Horticultural Society, 69 plates of apples, 19 of pears, 23 of grapes, six of peaches; also, as part of the same, an exhibit from the Grand Traverse region by Judge Ramsdell, to show the influence of Lake protection at latitude 44 deg. 40 min. north, 26 varieties of apples, six of pears, seven of plums, one of nectarines and three of peaches. This collection also included well-preserved specimens of Roxbury and Golden Russets of the crop of 1880, which had been kept, without special appliances, in an ordinary cellar.

The Montreal Horticultural Society exhibited 34 varieties of apples and one of pears; Warren Femo, of Massachusetts, 53 of pears; Benj. G. Smith, of Massachusetts, 50 of pears; F. M. Marble, of Massachusetts, 19 of pears; Hovey & Co., 190 of pears; Dexter Asylum, 12 of pears. Of seedling pears D. W. Lathrop exhibited one plate; Edward W. Lincoln one, while 90 seedlings of the late B. S. Fox, of San José, Cal., were again on exhibition, together with 30 varieties of grapes. W. A. Bradbrook, of Norfolk, Va., showed four plates of pears; G. F. B. Leighton, one plate of Duchesse, very large; S. C. Hartow, Bangor, Me., 14 varieties of pears and 68 of apples; E. Williams, Montclair, N. J., one plate of apples; W. H. Hills, Plaistow, N. H., one plate of apples; Robert H. Gardiner, Gardiner, Me., 10 plates apples; Z. S. Ragan, Missouri, five plates apples; Bush, Low & Meismer, Bushburg, Mo., four plates grapes; T. S. Hubbard, Fredonia, N. Y., one variety grapes; H. S. Anderson, Union Springs, N. Y., one variety grapes; A. J. Caywood, Poughkeepsie, N. Y., two varieties grapes; G. A. Stone, Rochester, N. Y., one variety grapes; J. B. Moore & Co., Concord, Mass., two varieties grapes; Niagara Grape Co., one variety grapes; Dr. M. Struetzeder, California, nine varieties grapes, one variety oranges, nine varieties miscellaneous fruits; J. W. Wolfkile, Los Angeles, Cal., 14 varieties oranges, four of Japanese persimmons; Mrs. Jeannie Carre, Los Angeles, Cal., four varieties oranges, one of China lemon; M. Rosenbaum, Pasadena, Cal., two varieties oranges, one seedling lemon; —— Robinson, San Gabriel, Cal., three varieties oranges, one of Sicily lemons, one of pomegranates; P. J. Berckmans, Augusta, Ga., six varieties Japanese persimmons, two pomegranates; M. H. Bixby South Haven, Mich., one basket peaches, illustrating his mode of packing this fruit for transportation. Also, by a class of students of the Michigan Agricultural College, assisted by Professor Cook, eight cases of insects beneficial and injurious to fruit culture, carefully classified and arranged. A map showing the horticultural capacities and the present status of fruit culture in the lower peninsula of Michigan, also accompanied the exhibit from that State.

The report of the Committee on New Fruits, which was also made in this connection, together with a report of the remarks following it by Hon. P. J. Berckmans, Prof. W. J. Beal, Dr. John A. Warder and Isidor Bush, condensed as much as possible are as follows:

NEW FRUITS.

Grapes—By C. H. Woodruff, White, Ann Arbor, too acid; Woodruff's Red, berry large, red, pulpy; McDonald's Ann Arbor seedling, berry very large, blue, pulpy, said to be earlier than Hartford Prolific. By J. H. Ricketts, Lady Dunlap, berry medium, amber, vinous, quality very good; Golden Gem, berry small, white, delicate, muscat flavor, sweet, best; Empire State, berry above medium, white bunch long, cylindrical, shouldered, berry good, a showy variety. By T. S. Marvin, Watertown, N. Y., Continental, berry medium, bunch above medium, compact, slightly shouldered, color white, very good; Rutland, berry and bunch medium, compact, color blue-black, fleshy, spicy, vinous, skin thin, very good; Corporal, bunch and berry medium, loose, color black, slightly vinous, good; Sharon, bunch small, cylindrical, compact, reddish amber, flesh dissolving, very good; Laura, bunch small, not very compact, very small, light amber, pulpy, hardly good; Watertown, bunch medium, loose, berry medium, slightly oblong, white, flesh breaking, sweet, very good. All these varieties show indications of foreign parentage. J. G. Burrows, Fishkill, N. Y., Reliance, bunch small, resembles Delaware in size and color, but not so compact or so sweet.

Pears—Lothrop's seedling No. 1, medium, pyriform, yellowish with russety, flesh melting, medium fine grain, juicy, very good, promising. Seedling pears from B. S. Fox, San Jose, Cal., No. 58, medium, oblong, pyriform, gritty; No. 180, large, globular, coarse, rather astringent; No. 180, pyriform, large, partakes of the nature of the Beurre d'Anjou; No. 100, above medium, turbinate acute, sweet, very good.

Hon. P. J. Berckmans, President of the Georgia Horticultural Society, spoke on new Southern fruits. Prof. W. J. Beal, of the Michigan Agricultural College, Lansing, spoke on the classification of pears and apples by their flowers, claiming that this would often prove very useful. He exhibited diagrams illustrating his subject. Dr. John A. Warder, President of the Ohio Horticultural Society, made some remarks on the methods of protecting orchards. Prof. Bush, of Bushbury, Mo., spoke on a method of improving the catalogue of the Society. He urged that the localities to which a fruit is unsuitable should be indicated, as well as those to which it is peculiarly suited.

The Committee on New Fruits, to whom the preamble and resolutions respecting the naming, exhibiting and judging of fruits had been referred, reported, recommending the appointment of a committee to devise a set of rules, as proposed in such resolutions, to be reported at the next biennial meeting of the Society.

The report of the committee was accepted, and Vice-President Barry named the following persons as a committee for this purpose:—T. T. Lyon, Chairman, Dr. John A. Warder, John J. Thomas, C. M. Hovey and P. J. Berckmans.

The Society then proceeded to the discussion of varieties of

RASPBERRIES,

as named in the catalogue. Little of special novelty or importance was developed during the consideration of the catalogue varieties, which were rapidly passed over; after which opportunity was afforded for the naming and characterizing of new and comparatively untested kinds. Among these the following were named and generally favorably spoken of by those who had acquaintance with them, viz.:—Hopkins, Hoosier Mammoth, Southegan, Cuthbert, Caroline, Parnell, Patrician, Iowa Seedling, Reliance. It is not the policy of the Society to commend novelties under any circumstances; hence the names of these simply go upon the record accompanied by the remarks

of individual members, but without action by the Society, the discussions, with the varieties in question, going, tacitly, to the Committee on Revision of the Catalogue, as a portion of the matter from which they are to evolve their conclusions.

The Chairman named as a Committee on Resolutions Dr. John A. Warder, of Ohio; J. S. Woodward, of New York, and William Parry, of New Jersey, whereupon the meeting adjourned to three o'clock P. M.

At the opening of the afternoon session the Society resumed the consideration of catalogue varieties, commencing with

BLACKBERRIES.

Ancient Briton and Barnard were spoken of as failing to attract the attention they deserve, although they have been a long time before the public. New Rochelle (Lawton) still holds a prominent position. Snyder, although lacking size, is valued for its hardiness; it was commended especially for New Jersey. Wachusett is valued and much grown in Massachusetts, where it is hardy and prolific. Wilson's Early is considerably grown in Michigan and New Jersey. Kittatinny was commended, except that it frequently suffers from red rust, or fungus. Opportunity being afforded for the bringing forward of newer varieties, Taylor's Prolific was named as hardy, productive and of fine quality. Wallace also was named as a strong grower and a prolific bearer.

The consideration of the catalogue list of

PEACHES

was then taken up. Alexander was very highly commended at the South, ripening about the first of June and continuing three weeks. Honeywell was said one year to be 15 days earlier than Alexander and the next year 15 days later. It requires a long time to properly determine the relative season of these new varieties. It was said to be a regular bearer every year. Briggs's Red May is a little later than Alexander, and, being serrate-leaved, it is liable to mildew at the North. Bower's Early is much larger than Alexander. Barnard is losing its former reputation in Michigan and should have one star stricken from the column for that State. Early Rivers is an excellent peach, and should be in every orchard. It is growing in favor. Early Albert was praised as a fine variety. Beatrice was objected to as too small. Foster was claimed to be inferior to Early Crawford, and similar in season. Hill's Chili is hardy and bears well; like Barnard, it is declining in popularity. Stump the World is a valuable white-fleshed peach. Keyport White is bearing better than most others this season. Levy's Late was recommended for Washington. Wheatland and also Columbia can be easily and surely reproduced from the seed. Early Silver is a nice, luscious early peach. Stonewall Jackson succeeds well. Wager is a heavy bearer. Bilyius is a desirable very late peach.

The discussion of varieties of peaches having been concluded, a short time was devoted to a random discussion of

PEARS.

It was stated that Clapp's Favorite gives great satisfaction, but shows a tendency to blight in various localities. Sterling is one of the most desirable of early market pears, and one of those least liable to blight. Souvenir du Congres is scarcely as good as Bartlett. It averages of larger size. It is of clean and healthy habit, but likely to be affected by severe cold. There is no other pear as large as this, of as good quality. Beurre de l'Assomption is hardy, large, and the tree vigorous. Frederick Clapp bears abundantly, is very vinous, and of objectionable form. President Clark is of medium size and very promising.

RESOLUTIONS.

The deliberations of the Society were now closed. The report of the Committee on Resolutions being called for, the following were reported and adopted:—

Resolved, That, as the American Pomological Society, we would express sincere and heartfelt thanks to the Massachusetts Horticultural Society and the people of Boston for the very cordial manner in which its members have been received and for the hospitalities extended to them while here.

Resolved, That we would express our thankfulness that our worthy and honored President, Hon. Marshall P. Wilder, has been spared to us, and has so far recovered from his recent accident that he has been enabled to so satisfactorily preside; and we truly hope that he may long be spared to meet with us and preside at our deliberations.

Resolved, That we would express our great horror at the dastardly and cowardly act that struck down President Garfield, and our deep love and sympathy for him and his family in their severe affliction; and we devoutly pray that he may be speedily and fully restored to perfect health.

A resolution of thanks to the press of Boston generally, for the able and faithful manner in which the proceedings of the convention have been reported, was also unanimously adopted.

On motion of Colonel Coleman, the convention resolved, That the exhibitions of fruits should be hereafter, as heretofore, encouraged by the Association.

The convention then adjourned, to meet at the banquet in Music Hall at six o'clock in the evening.

NORTH CAROLINA STATE FAIR.

[Special report to the RURAL NEW-YORKER.]

THE twenty-first annual exhibition of the North Carolina State Agricultural Society opened on the grounds of this society at Raleigh, Oct. 9, and closed Oct. 15. The weather during the entire fair was pleasant, the attendance good and the exhibition in many respects superior to any former ones, the only noticeable falling off in any of the departments being in cotton and cereals. These products have suffered much from the long-continued drought and the early biting frosts. Tobacco, which in this section is a staple product, was severely injured by the late frosts, and, indeed, in Southern Virginia and Northern North Carolina many crops were entirely destroyed, and with a few exceptions—where farmers had gathered a part of the crops—they lose everything.

A visitor to these grounds during the fair is particularly impressed with the improvements in cattle and horses that have been made of late. Where a few years ago one only saw native and grade cattle he now sees many well-bred cattle of popular breeds, including the Devons, Jerseys, Ayrshire and others. It is pretty generally believed in this section that good grade cows do better in this latitude than the pure-bred, and hence the grades were the most numerous. A very fine grade cow six years old was sold on the grounds to P. A. Wiley, the Treasurer of the Society, for $100. She has a fine milk record and attracted much attention. But few pens of sheep were shown. A few Merinos, Cotswolds and South Downs represented the principal breeds, and these were thin in flesh and showed signs of thin and dry pasturage.

The display of hardware and cutlery by T. H. Briggs & Sons, and of farm wagons, by Julius Lewis & Co., both extensive dealers of Raleigh, was an important feature of the exhibition and added largely to the attractiveness of the fair. The implement and machinery display of L. L. Polk & Co. was one of the best on the grounds. This enterprising firm deal largely in all the leading implements and improved machinery, and in their booth they had a Skinner & Wood engine in operation, to which was attached a thrasher and wood saw made by A. W. Gray's Sons, an ensilage cutter from the New York Plow Co., and all in working order. Among their exhibits I noticed the Cooley creamer, the Davis swing churn, the Kemp & Burpee manure spreader and many other improved and popular labor-saving implements. The Champion mower and reaper, the Thomas rake, the Reiner harrow, and other well-known implements were exhibited by the local dealers. Mr. J. D. Potterfield, the State agent for C. & G. Cooper's engines, made a very handsome display. The traction engines were shown in operation, and a portable engine of the same make was also used to run a part of the machinery in Machinery Hall. The Butterworth thrasher, made at Trenton, N. J., was the receiver of the first premium, and last year the same separator received the highest award of merit—a silver medal at the North Carolina Fair. Gill & Son and G. M. Smith & Co. also showed fine thrashers.

On Wednesday Gov. Jarvis was in attendance and made a brief but practical address. He alluded to the extreme drought and early frosts which had so severely affected the agricultural interests of the middle section of the State, and forcibly urged, what the RURAL has so often done, the great necessity of good and thorough tillage of the soil. "No matter" he said, "whether the season be wet or dry, the man who plows and hoes his corn and cotton the best will receive the best crops." He contended that there was no cause for gloom, and predicted that within the next year more miles of railroad would be completed in the State, more capital from without would be permanently invested within its borders and more immigrants would be settled among them than in any previous year since the war.

C. B. B.

CATALOGUES, ETC.

HAND-BOOK of Virginia. Third Edition. By State Commissioner of Agriculture. A very full account of the Geology and Mineralogy of the State; of its numerous resources, its educational facilities, etc. The appendix contains census returns of crops and sheep by counties.

THE 35TH ANNUAL REPORT OF THE OHIO STATE BOARD of AGRICULTURE FOR 1880. By W. I. Chamberlain, Sec'y. In this report Sec. Chamberlain has succeeded in presenting to the public a concise statement of the agricultural interests of Ohio. The work embraces the reports of various business meetings of the Board; of the State Fair of 1880, of the annual Agricultural Convention and of the proceedings of various county societies. A part of the volume is devoted to matters of interest concerning Farmers' Institutes, together with lectures, essays and addresses delivered before the various Institutes. The Board is engaged in a new work in the inspection and analysis of commercial fertilizers, and on monthly reports on condition of crops and stock. Mr. Chamberlain in his prefatory remarks takes occasion to note the fact that the general assembly promptly voted increased appropriations for the Board, thereby placing the department on an equal footing, in a financial point of view, with other State Departments. In the appendix occurs the 14th annual report of the State Horticultural Society for 1880–81. Some instructive papers on "Ornamental Planting," "Picking, Keeping and Marketing Apples," "Rural Cemeteries," "Fruit Evaporation," etc., etc., appear in this portion of the work. On the whole, the 634 pages of the work are replete with valuable statistical and general information. Secretary Chamberlain is doing a good work for the agriculture of Ohio by his earnest endeavors in its behalf, and for the agriculture of the whole country, by setting a good example of energy and thoroughness for the imitation of similar officials in the other States of the Union.

Literary.

THORNS AND ROSES.

Continued from page 690.)

Brandon's visit was the only event in these few days, and he had been out in the snowstorm to see some sick tenant, though we did not hear this from himself. He was one of the few who are content to do good in silence, and, as Edith said, he very seldom used the first person singular in conversation.

She gave him an account of Edgar in her own laughing way, and how clearly does that scene rise before me now! Her sunny face turned to him—the careless grace of her attitude, his dark eyes bent on her with the rare smile flickering in their depths and I knew not what was the strange feeling that shot through my heart; it was many a day ere I did know.

At length Mr. Hays's expected letter came, and Edith brought it to me in triumph. He wrote in a style that gave me an insight into his character; a polished, courtly coldness pervaded it, though he was fond of his daughter in a way. He commended my prudence; but Edith, he was certain, would never forget herself, or the ills that rose from poverty. He would be obliged by any kindness shown to Mr. Dana, a young man for whom he had much esteem. There was an unnecessary amount of caution; he insisted a little too strongly on the difference between Edith and her old lover. I thought I would not have had my father write thus.

"Well?" said my cousin, impatiently.

"I can say no more. I am in no way responsible for you; I will not be, and you please will let Mr. Hays' understand that."

"Fiddlestick! Edgar *shall* come!"

She went away to tell Aunt Dorothy that her father would be personally obliged by any kindness shown to Mr. Dana—this being sufficient to secure aunt's approval; for "the love of old loves and lost times," had not faded from her heart. It was decided that Mr. Edgar Dana should be invited; Nevil Verner had not returned, and aunt wondered what had become of him. The storm had passed, the wintry days were bright and clear, but he did not come.

One afternoon Edith, who had been out riding, returned with the announcement that she had met Mr. Dana, and had given him an invitation, which he had accepted.

"I knew I had only to say come, and he would wish to come, though, Lady Kate, he has pride enough to keep away if he thought you did not want him. I made a speech on your behalf and on aunt's.

Aunt Dorothy was a little mystified about Edith's friend. She fancied that he was related to the Hays's, and though rather shocked by her niece's free and easy invitation, was pleased because others were pleased.

I was sorely troubled about Nevil. Why did he not come? Could it be that he had credited Edith's foolish tale? It might be that he did; and if such were the case, I could not undeceive him. I told myself that the love which faltered at an idle jest was little worth; but notwithstanding my attempts at philosophy, my heart was heavy.

When the evening came on which we expected Mr. Edgar Dana, Edith was in high spirits. I was a little curious also, knowing his story; but when the listened-for ring came, the visitor was Nevil.

He greeted aunt with his usual courtesy; the same to me, replacing the smile and warm clasp he had previously given me. I was hurt and disappointed; but I hid my feelings, inquiring about Mrs. Verner as though I saw no change, whilst he gave some explanation—I know not what—for his absence. Mr. Dana shortly after was announced, and Nevil flashed a glance at me—half scorn, half anger—which proved that my suspicions had been well founded.

Mr. Dana was painfully shy and nervous, looking at Edith as though asking for help; and the thought struck me that he was peculiarly sensitive with regard to his altered position, though Aunt Dorothy could not have been patronizing to any one. Shrinking and embarrassed, he got into a corner, affecting to be absorbed in an album, and I looked at him with interest. I think he remembered other days, and was doubtful as to whether the ladies Lovel and the master of Nevil Towers would be disposed to feel friendly towards General Polwyn's secretary; but I consoled myself by thinking that he and my good Branden would soon fraternize, for if any one understood sensitive natures it was he.

Edgar Dana was of middle hight and rather thin. His face, though weak, was an attractive one, and the vivid color in his cheeks deepened when anyone addressed him. His hands were small and white, the blue veins showing clearly; his eyes, gray and dark, were brightly restless. He was very young—very proud, too, in a boyish way; as the short thin upper lip betrayed.

Little by little Edith drew him into conversation, asking him what he thought of our country's scenery.

"Every one admires Kingston," said Edith; "but you ought to see Mr. Verner's garden, oughtn't he, Mr. Verner?"

"My property has no claim to antiquity in your eyes, Miss Edith," returned Nevil; "but with many modern mine may compare favorably; for instance, with General Polwyn's."

"The General is very proud of his garden," said Mr. Dana, to whom this remark seemed addressed.

"Modern improvement," said Nevil, turning to aunt, "would be out of place here at Kingston."

"There is nothing more sad," said Edgar, "than when we return to a place we have loved, to find it changed—to find that strangers have 'improved' away the spots familiar to us."

"My own opinion, Miss Lovel," cried Nevil; "but if I cared much for a place I would not leave it."

Mr. Dana seemed to have extinguished himself by his former long sentence, and silently turned the leaves of the book, the flush in his cheeks a little brighter; and Edith had got into an argument with Nevil, the subject of which I had missed by watching the young stranger.

CHAPTER VII.

"Some people are never wrong," Edith was saying.

"I do not pretend to be one of those people, and am ready to admit myself in the wrong when I am," Nevil responded, to which she replied:

"Ah! of course, when you are! Why did you stay away so long?'

"My mother was not well, and I did not care to leave her."

"You are the most self-denying gentleman I know! Do go on! I wish you'd speak of yourself sometimes."

"Well, Miss Lovel," he said, coloring, "it would be possible to find more disagreeable subjects of conversation."

"Possible, but rather difficult.

"Kate, come and play for Mr. Verner's dying to sing that new duet."

Whether he was dying or not, he sang, and thus we left Aunt Dorothy and Edgar alone; and when I glanced towards them, he was seated beside her, talking without the least restraint, and for the first time smiling. I thought that their natures were alike—gentle, sensitive, refined.

Nevil went away early, taking leave of me coldly. Mr. Dana followed with a promise to return soon, aunt having taken a fancy to him.

"He is the most innocent creature on earth!" she said, when our guests had gone. "I don't think he's strong enough for a secretary. What a pity want of money should bring such troubles!"

Edith came to my room that night, as I stood by the window, with the step of a queen—her haughty lip curling, her eyes sparkling.

"What is your opinion of Edgar Dana?"

"I like him, only he is very shy."

"He feels his position acutely, Kate, and he was made to feel it; but he is simple honor itself, and if he had been more worldly he might have hung on to his great relatives. If he had only a penny, he'd give it to the first one who met him with a tale of distress. If he had anyone to work for, he'd work hard: but he does not think it worth while for himself. There's Edgar for you! I hope you admire Paragon to-night?"—To be continued.

MAGAZINES FOR OCTOBER.

EDUCATION.—An International Magazine. Bimonthly. Contents: Frontispiece, Education and Sanitation; The Loss and Recovery of Classical Manuscripts; The Teacher's Work in the Development of Mental and Moral Power; German Universities; Real Education, Its Principles and a little known Chapter in its History. Part III; Relation of Academic to Professional Work; Notes on an Infant; Kant and his English Critics; The National Council of Education; The Concord School of Philosophy; A Crisis in American History; Miscellaneous Notes; Bibliography of Education.

GERMAN UNIVERSITIES.—What most strikes an American on visiting the German universities or colleges—for this English distinction is unknown here—is, in the first place, the unpretentious buildings that are made use of. Though Leipzig is not a large place, a stranger might walk through it from morning till night and pass and repass the university buildings without ever suspecting that inside, in dingy rooms filled with the commonest wooden benches, the foremost men of Europe, in their departments, were lecturing to young and even middle-aged men from every quarter of the globe. With us, a magnificent pile of buildings is usually the first step in founding a university; the library, apparatus, and general inner economy being two frequently matters of secondary importance. The Germans, on the contrary, rent or build a row of houses in a quiet part of the city, get together all the books and manuscripts they can afford to buy, erect as many museums and laboratories as possible, and offer perhaps modest incomes, but with a large liberty and many privileges, to talented and enthusiastic men, irrespective of creed or politics, to come and further the cause of science and learning. In short, here the instruction and intellectual advantages to be had make the university; there, in too many cases, the buildings and externals. What the Germans themselves regard as the chief characteristic of their system may be summed up in freedom of teaching, freedom of learning, method, and organization.—James Washington Bell, in education.

HARPER'S MAGAZINE.—Contents: Frontispiece, With Grandpa; A Berkshire Road; Journalistic London; The Peabody Museum of Archæology and Ethnology; Adirondack Days; Frederick A. Bridgman; The Telegraph of To-day; Cotton and its Kingdom; Anne. A Novel; Raldy. A Story of the Wisconsin River; The Mormon Situation; "Faint Heart ne'er Won Fair Lady;" A Laodicean. A Novel; Editor's Easy Chair; Editor's Literary Record; Editor's Historical Record; Editor's Drawer.

THE MEASURE OF BRIDGMAN'S SUCCESS.—It was my fortune to watch the European career of Mr. Bridgman from its beginnings, and to have forced upon my notice the disadvantages and the privileges that are peculiar to the Western Republican in earning the consideration of the world of culture which exists on the other continent. That world of culture, without meaning to do so, constitutes itself a close corporation. If the republican aspirant acquires some traces of that accent of civilization which is the freemasonary of the educated circles, his accomplishments are his reproach. He is asked, if a painter, why he does not bring into the world's art some national flavor, like the passion of Munkacsy, or the embroidery of Fortuny, instead of emulating the faded perfections of traditional art. He is charged to remain provincial at his peril. If he insists on falling into the line of art-progress in its classical development, every merit he assumes is liable to be imputed as a fault, and the suavities and accomplishments he may acquire, such as would be recognized as perfections in the European, are apt to be blamed upon him as the little hypocrisies of the renegade. That the subject of this paper has conquered a marked place, not by insisting on his foreign accent, but by competing in those pure classical themes where all contestants are equal, is so much the more to his credit. It is a harder success than are the common successes of what may be called dialect art, where only half the merit is in the hard, uncompromising test of quality, and the other half is in the piquant strangeness which excites wonder, where the award of popularity is given by those who can have no competence, merely because they are tickled, and not because they can judge of felicities and fidelities.—Edward Strahan, in Harper's Magazine for October.

THE NORTH AMERICAN REVIEW. Contents: Some Dangerous Questions; The Elements of Puritanism; The State and the Nation; The Idea of the University; Why Cornwallis Was at Yorktown; Shall Two States Rule the Union; The Ruins of Central America; Washington as a Strategist.

WHY CORNWALLIS WAS AT YORKTOWN.—When Lord George Germaine waited upon Lord North with the news of the surrender of Cornwallis at Yorktown, on the 19th of October, 1781, the minister received it, Germaine says, as he would have taken a ball in the breast, and exclaimed: "O God! it is all over!" It was not merely that a battle, or a town, or an army had been lost; it was the loss of the cause. The final military movement, which had been devised and depended upon for the subjugation of the American Colonies, had failed, and the British Empire was now hopelessly divided.

No wonder that such intelligence came to Lord North like the blow of a bullet. The misfortunes of his country, even when they were not the result of his own stupidity and obstinacy, he could bear with the most good-natured equanimity; but this announcement of a disintegration of empire was the announcement also of the defeat of party. Who could stop to think of the welfare of the people when a cabinet was in jeopardy? Had Lord North ever heard of that habitual prayer, through all those trying years of the Revolution, of a country clergymen in Massachusetts —"Deliver us, O Lord, from Lord North, the Flesh and the Devil!"—he would have felt almost ready to acknowledge that the most earnest purpose of the petition had been listened to and that Providence had gone over to the side of the rebels.—Sydney Howard Gay, in N. A. Review for October.

PHRENOLOGICAL JOURNAL.—Contents: John A. Broadus, D.D., portrait; Alaska's Promise; Studies in Comparative Phrenology, chapter IX.; Form and Growth of the Head; Welsh Preaching and What it Did; Man and Woman in Society; Two English Queens—Margaret of Anjou, Elizabeth Woodville; On Hair; Young Folks of Cherry Avenue, concluded; Hypnotism; Philosophy of Ruralism; Good Physicians; Notes in Science and Agriculture; Editorial Items; Poetry; Answers to Correspondents; Personal; Wisdom; Mirth; Library; Publishers' Notes.

HOW THE SWEDES WARM THEIR HOUSES.—Visitors to the Centennial Exposition at Philadelphia must remember the great porcelain-covered stoves which formed part of the Norway and Sweden exhibits. They attracted not a little attention, and should have taught our enterprising stove manufacturers a practical lesson. It would appear, however, that they were regarded mainly as curiosities, and quite incompatible with our American spirit of enterprise.

* * * "The fact is, that the American people are oblivious to the frightful effects that come from their system of heating, and only become aware of its discomforts and dangers after passing a Winter with English grates or the 'kakelung.' To return to the last-named system, a 'kakelung' is simply a great stove of masonry, covered with porcelain plates, having usually five flues, through which the gases of combustion must pass up and down, a distance of 30 to 50, or even 60 feet, before escaping into the air. The general principle of their operation is to provide enough material to absorb all the heat from the fire—to conduct the gases through these long flues until their temperature has fallen to a point that no longer gives off heat. The quantity of the material in the 'kakelung' is so great that the temperature from one firing (which is always enough) will not raise the temperature of any part so much that the hands cannot be held upon the outside."—Phrenological Journal for October.

APPLETONS' JOURNAL.—Contents: Saints and Sinners, Part Fifth; Sketches and Reminiscences by Ivan Tourgenieff; English and American English; French Intellectual Life; Byron, Goethe, and Mr. Matthew Arnold; An Adventure in the Philippine Islands; Two Theories of Poetry; The Meiningen Company and the London Stage; Lawn Tennis and its Players; Reviews; Editor's Table; Notes for Readers.

AN ADVENTURE IN THE PHILIPPINE ISLANDS.—Have you ever met with a Spanish *savant?* Well, I admit the species is rare, but I knew one in Manila. His name was Don Inigo Azaola, and, in all my journeyings through the different parts of the world, no more amiable a fellow has ever crossed my path. The name Azaola has been perpetuated in science by our countryman Meyen; but the splendid man who was attached to it has been sleeping these sixteen years on the Campo Santo of Manila.

It is twenty-six years now since I happened —no matter for what object—into Manila, a place which even now has many peculiarities, but which at that time bore a much more characteristic impress of the mixture of Asiatic and old Spanish customs which a more lively intercourse with other nations has since somewhat worn away, but by no means altogether effaced.

I dabbled in botany a little at that time, and old Don Inigo, who, with his scientific inclinations, stood somewhat isolated among the good people of Manila, was charmed to have found in me some one who, like himself, could grow enthusiastic over things upon which his countrymen looked down with sovereign contempt. He considered me entirely in the light of a plant, insisted that he had discovered me, and claimed the right, as discoverer, of disturbing at will my matutinal slumbers for purposes of botanical excursions, and appropriating my evenings for social intercourse.—H. H. Behr in Appletons' for October.

ATLANTIC MONTHLY—Contents: Dr. Breen's Practice, VII., VIII.; Origin of Crime in Society; Carlyle's Laugh; Martha; The Two Hamlets; The Portrait of a Lady, XLVII—XLIX.; River Driftwood; A Tropical Sequence; My Neighbor's Ring; The Katrina Saga, Part II.; Is God Good? Place de la Bastille, Paris: Dean Stanley; Some Recent Novels; The Contributor's Club; Book of the Month.

IS GOD GOOD?—A tendency to ask irreverent questions is no sign of strength. It is wholesome for us, in this day of facile defiance and hard acceptance, to remember this. In an age which fails in deference, it is a healthful thing to do, to summon our spiritual instincts to order. The bust of young Augustus in the shop window wears a lung protector; Clytie serves to advertise the "Boston battery;" and positivist writers go out of their way to address Jehovah by the familiar pronoun "you." We have not passed the period when skepticism is more apt than not to be regarded as a proof of superior intelligence, but we have reached the stage at which no intelligent mind can thus regard it without severe and honest study of its own motives. It is a lesson as old as Aristotle that philosophy is not the art of doubting, but the art of doubting well.

While the inclination to irreverence, let us repeat, is no indication of mental robustness, the courage to question accepted doctrine may be not only a proof of devoutness, but the condition of the profoundest submission to truth.

This recognition of the inherent right of every man to have the reason for what he believes, and so shake his destiny by the shoulders till he gets such reasons, is postulated today, in educated thought.—Elizabeth Stuart Phelps, in Atlantic for Oct.

GODEY'S LADY'S BOOK.—Contents: Steel Plate, Scene from Sir Walter Scott's "Tales of a Grandfather;" A Novel, Clara F. Guernsey; Shorter stories, poems and sketches, make the letter-press up to Godey's high standard. The fashion illustrations are new and numerous, and all the departments are worthy of commendation.

ESTES & LAURIAT'S Autumn Announcement has been received. It consists of a list of new books and new editions.

Send for the Fair Number of the Rural New-Yorker and the new poster for 1882. *Both will be forwarded* gratis *to all applicants.*

Domestic Economy

CONDUCTED BY EMILY MAPLE.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

I OFTEN try to imagine what my children would be if they had nothing to do. As it is, there is an excess of work these Autumn days, that fills every thought and hour. Cutting grapes, picking apples, taking up plants for Winter, and storing the vegetables must be done before frost. Already a cold snap the other night touched even hardy plants. The apple-tree leaves have curled up, the flowers that were left to brighten the Autumn days are scorched and withered, except a few hardy annuals. The children, too, feel the sudden change, and we "open the camphor trunk, and bring the mittens down." Colds are so easily contracted after the Summer heat, and the sudden changes of the past month have been very trying.

In this locality while picking fruit we find the greatest difficulty to procure help that will be careful in handling the apples. So "papa" has hired the children, giving them 50 cents a day while the picking lasts. Even little "Hope," who is only six years old, but strong and hearty, earns 25 cents daily by picking up the fallen apples. I think for children there is no *gift* of money so pleasant as money *earned.*

The RURAL is very proud of its prizes no doubt, as given in a late paper, and we are proud of ours, for the children of Every-day House competed with the Province of Quebec in an exhibition open to the world, and were very successful.

It would have amused an on-looker to see the examination of grapes and apples, the profound air with which old and young contemplated specimens to get the best shaped and largest, and the result was a number of first and second prizes. Then the amateur florist made up bouquets and a basket and took in three roses in pots, as well as native ferns and immortelles, besides 100 varieties of annuals as cut flowers, and came off with flying colors. First prizes were plentiful, and so were second, the money amounting to over $30, without speaking of a diploma or two, and the encouragement given by these attempts. I think if farmers and fruit growers would encourage their young people to exhibit, giving them the prize money when won, it would do more to help the advancement of horticulture, and to foster the love for country life than all the essays ever written.

One of our boys exhibited a collection of forest tree seeds, 36 varieties, all labeled and assorted into little boxes, that attracted a great deal of attention. They were shown at several places, receiving a diploma and extra prize, and one of our horticulturists writing of them says: "They drew a good deal of attention as a splendid idea not before thought of." In these days of tree planting and nut sowing it is something to be able to show, to those who do not know, the germs of all the forest.

These little things in every-day life help to make home happy, to employ the minds as well as the bodies of the children and to give them some aim in cultivation. And, mothers, when the children are troublesome, prepare, this Autumn, for them a piece of ground, tell them to save seeds, and when Spring comes, let them each have made choice of what they will grow for *profit* and for the *fair*—send for catalogues during the Winter; they help to educate the children, and I find nurserymen and seedsmen most obliging, always forwarding their catalogues in answer to a postal card, and in a year when they accumulate I have found that a fifteen-cent box of paints will keep a three-year-old child quiet for hours—in coloring the pictured flowers of Henderson's or Vick's to suit its own taste. The RURAL is doing a vast amount of good in distributing seeds to the children. Our campanulas, dianthus, gladioli, and many others received from it were valuable additions to the prize cut flowers. Make the children feel that they have an interest in the work, that they are partners in the farm, and will gain or lose by its profit or loss, and you hold the key that unlocks many difficulties, and explains much of the discontent that made Maud Muller "look to the far off town," and he who penned those lines, the gentle poet Whittier, now an old man, wrote to me this past Summer that the happiest part of his life has been "that spent in watching the growth of a tree or plant." Such words are encouraging, they show there is something purer and better than the struggles for gain in the crowded city, and that a country life, made as happy as it can be "with content is great gain."

DOMESTIC RECIPES.

APPLE DUMPLING.

Make crust as follows: Prepare and boil, as for eating, four medium-sized potatoes. When tender mash fine and to two cupfuls of potatoes add the same quantity of sifted flour. Mix together with a chopping knife so as to keep light. Now add a cupful of butter and chop in with the knife. Add salt and mix to a paste with very cold water, doing all with the knife. Have apples chopped. Divide the paste, roll into squares, put in the center of each some of the chopped apples, bring the corners together and pinch the edges. Have ready some small square cloths dipped in water and floured on the inside. Put a dumpling into each, leaving room to swell, tie up and boil an hour, serve at once. E. K.

POTATO CROQUETTES.

Two cups of cold, mashed potatoes, two beaten eggs, a tablespoonful of melted butter, salt and pepper. Mix all together and form into oblong rolls. Dip into beaten egg and roll in cracker dust. Fry in drippings, or lard and butter.

RICE CROQUETTES.

Two cups of cold boiled rice, two beaten eggs, two tablespoonfuls of melted butter, a little salt and flour to form into any shape you please. Be careful not to get the paste too stiff. Roll in flour, then in beaten egg, and lastly in cracker crumbs, and fry in sweet lard or drippings.

OYSTER PIE.

Line a pie-tin with good paste, put into a brisk oven and bake until brown. Chop a quart of oysters, thicken a cupful of boiling milk with a small spoonful of corn-starch, season with a spoonful of butter, salt and pepper to taste, put in the minced oysters, boil five minutes, stirring constantly.

STEWED CELERY.

Scrape and cut into inch bits. Cook until tender in salted water. Drain off, add enough milk to cover the celery, let come to a boil, stir in a large spoonful of butter rolled in flour; season with pepper and salt, stew five minutes longer and serve. LONG ISLAND.

CORRECTION.—In the RURAL of Oct. 15, p. 707 appeared a recipe "To Wash Bed Flannel." The word Bed should have been Red.

News of the Week.

HOME NEWS.

MONDAY, Oct. 24, 1881.

PROCEEDINGS AT YORKTOWN.—The Yorktown celebration was formally commenced on the 18th inst. and on the 19th a reception was held by President Arthur. After the opening of the exercises of the second day with prayer by Bishop Harris, Secretary Blaine introduced President Arthur who in a few well chosen words addressed the assembly. Max Outrey, on behalf of the French delegation made a brief address in which he dwelt largely on the friendly feeling existing between the two Republics. In closing he thanked the American people for the cordial welcome extended to the French representatives. Marquis de Rochambeau followed Outrey, speaking in French, and he was succeeded on the platform by Colonel Steuben, of the German delegation. Robt. C. Winthrop delivered the oration of the day, in which he paid a glowing tribute to the Frenchmen who took part in the campaign of 1781, dwelling especially on the record of Lafayette. He sketched the military career of Washington, the scene at the surrender and closed with a strong plea for the perpetuation of those institutions which our forefathers had caused to be established. On the 20th, a grand military review and naval drill were the features of the day. This virtually completed the ceremonies of the occasion. The monument will be erected as soon as it is finished.

FLOODS IN THE WEST.—Heavy floods are again visiting the West. At Dubuque, Iowa, the railroads on the river front were under water; at Warsaw, Ill., much damage is reported to crops and stock. At New Canton and Rockport, Ill., the flood came so suddenly as to take the people completely by surprise. A large area of Winter wheat is sown, which will be completely destroyed. From the 15th to the 26th all trains on the C., M. & St. P. R. R. were abandoned at Moline, Ill., and 3,000 tons of hay were afloat at that place. The lower portion of Davenport, Iowa, was overflowed. At St. Louis railroad travel was impeded, the K. & St. P. Railroad having abandoned all trains to Hannibal. Much damage has been done to property along the Mississippi.

Memorial services on the death of President Garfield were held in Boston on the 20th. Gen. N. P. Banks delivered the oration. Mayor Prince presided.

The Delta Upsilon College fraternity held its annual convention with the Brown University Chapter on the 20th inst. Hon. David A. Wells presided at the public services. Ex-Governor Blair, of Michigan, was chosen President for the ensuing year.

There is another rumor of reviving the World's Fair project in this city. It won't do for Boston to get the start of New York, you know!

Mayor Carlton, of Port Huron, Mich., has issued a card to the public thanking them for their generous contributions to the Michigan sufferers and requesting that no further donations in kind be sent in, as they have adopted the plan of distributing money; $11,000 have already been disbursed.

It is announced that Watson H. Gilder, who for the past 10 years was the late Dr. Holland's assistant in editing Scribner's Monthly, will become editor of The Century.

It has been decided that the monument of General Burnside shall be an equestrian statue and that it shall be set up in Providence. Citizens of Bristol, R. I., offered to contribute from $5,000 to $10,000, providing the statue is erected there.

The annual meeting of the Woman Suffrage Association will be held at Louisville October 25 and 26.

Cadet Whittaker now appears before the public in a new rôle. He is concert manager for colored vocalists.

One of the present freshmen class at Yale is a man of middle age. He was examined for entrance 20 years ago but went into business threafter. He now returns to take up his deferred course. Good for him!

The Grand Trunk railway is selling tickets at reduced rates from Chicago and Detroit to all points in Michigan by the Vanderbilt lines. The agent at Chicago refuses to furnish a schedule. This is the first direct cut to local points, excepting the Buffalo rates which were made some weeks ago by the same road. It is not known whether the Vanderbilt lines will meet this cut or not.

Twenty-four Mormon missionaries arrived here from Utah, on the 17th, on their way to Europe. The Mormon conference appointed a hundred missionaries, sixty of whom will go to Europe and the remainder work in the United States. Thirteen have started for the South.

In Cleveland, workmen have torn down the Garfield pavilion and the arches in the park. The dias, upon which the body lay in State, will be preserved at the Western Reserve Historical rooms. The relics will be preserved at the Capitol, at the Columbus City Hall and in the armories in Cleveland. Most of the floral emblems will be distributed as Mrs. Garfield dictates.

Insomnia.

One of the almost invariable results which follow the use of "COMPOUND OXYGEN" is to give the patient sound and refreshing sleep. A lady writes of her daughter: "The continued use of Compound Oxygen soon gave her healthy and refreshing sleep, and all anodynes are abandoned." Says a patient: "Since using your remedy my sleep is natural and good. My spirits are in a much more healthy condition. I have no need of anodynes. Another writes: "Before I commenced taking it (the Compound Oxygen) I did not sleep any at night, had no appetite, and my cough was so troublesome that I had no rest. Since I commenced taking it I have slept well at night; my appetite has very much improved; I scarcely cough at all; and, in fact, I feel better in every way." Another says: "I was perfectly sleepless, often three nights in succession, followed alternately by one night of horrible slumber, known as nightmare. Now sleep is restored, mind clearer, step firmer, all healthy action greatly increased." Another lady, referring to her daughter, says: "My daughter has improved in flesh, and looks well. She sleeps well at night—sleeps all night, a thing she was unaccustomed to do. Before taking the Oxygen, wakefulness was one of her troubles. I can see that she is much less nervous, and in better spirits." A gentleman, writing of his wife, says: "I have followed your directions as nearly as possible. Have left off all the medicines and stimulants my wife was taking, and the result of our treatment so far has been more satisfactory than anything preceding it. She has been able to sleep good at night without the use of chloral, a thing she could never do before." Our Treatise on Compound Oxygen, containing large reports of cases, and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Oct. 24, 1881.

THE following items of agricultural news are condensed from telegrams received here between noon on Friday Oct. 21 and noon today, Oct. 24: Portland, Me.—Weather fine; farmers and others paying debts freely.....Boston, Mass.—Flour and pork in good demand, but with a slight falling off from last week's prices. Wool trade heavier than in the corresponding week last year, and generally in a healthy condition. Sales of all kinds 2,650,000 pounds including 200,000 pounds of the best xx and above at 45c. Coarse carpet wools wanted at 15c@20c. Combing and delaine firm at 47c@50c. Pulled wools firm at 33c@50c.....Philadelphia, Pa.—Receipts of produce falling off and prices again tend upwards. Wheat, corn and oats unsettled in sympathy with fluctuations at the West.....Cincinnati, Ohio.—Grain market sympathizes with Chicago. Wheat 1c@2c lower than at same time last week. Corn 4c@5c lower. Receipts of tobacco during the week show improvement in quality; prices better.....Cleveland, Ohio,—Grape season nearly over; yield rather less than usual; quality a trifle off, but prices will make this an average with other years. From winter's losses of vines, drought, and anxiety growers' enthusiasm is dampened, so fewer new vines than usual will be planted this Fall and next Spring. Potatoes scarce, $1@1.05 on track; $1.10@1.15 in warehouse per bushel. Fruit scarce, choice picked apples $3.50@3.75 per barrel. Beans very scarce, though hand-picked marrow sell for $3.75@3.85 per barrel.....Louisville, Ky.—Produce firm and active; wheat $1.15; corn No. 2 white, 78c, do. mixed 71c. Oats No. 2 white, 48c, do. mixed 46c. rye No. 2, $1.18. Leaf tobacco market still strengthening, offerings still very light; consignors waiting for better prices.....Detroit, Mich.—Lumber exceedingly active; prices firm with upward tendency. Pine lands booming, thousands of acres changing owners. Lake freights dull; rates half of last year's. Wabash road about to build at once a million bushel elevator; existing storage capacity 1,300,000 bushels. Wheat No. 1 white, $1.37⅛, cash; No. 2 red, $1.40⅛; No. 2 white, $1.34⅛. Corn high mixed 67c. Oats No. 1 white, 48c. Clover seed—prime, $5.35.....Evansville, Ind.—Tobacco season about closed; yield estimated at about half the usual crop. Late rains, causing rapid growth, make the grade coarse and inferior.....Chicago, Ill.—grain receipts not so heavy owing to bad country roads throughout the Northwest from late heavy rains and present floods. Less speculative activity; prospect good for quiet market for some time. Tendency in cereals generally a little upward; but hogs and cattle are selling at lower prices and the outlook just now is downward. Receipts of breadstuffs for the week 116,138 barrels of flour; 274,102 bushels wheat; 1,596,510 bushels corn; 486,897 bushels oats. Shipments, 97,019 barrels flour; 170,894 bushels wheat; 2,097,284 bushels corn, and 272,744 bushels oats, so that stock of all cereals, except corn, is increasing.....Peoria, Ill.—Weather clear and cold. The Illinois State Agricultural Society closed here on Thursday, having been largely attended from all parts of the State. Much freight blockade.....Milwaukee, Wis.—The unsettled condition of the grain trade is having a depressing effect on general business. In some parts of the State unharvested crops have been injured by continued rain. All cereals are either dull or lower. Provisions and hogs are dull.....Minneapolis, Minn.—Rained four days this week. In spite of bad weather and worse roads farmers are delivering grain freely. The Millers' Association bought 600,000 bushels during week, Market has declined 3c. Flour quiet; 96,500 barrels shipped in last six days. Farmers badly behind with work all over the State. Rivers and streams higher than ever known at this season. Lumber active; a large amount of logs will be carried over the winter. Trade checked by bad roads, debts being well paid as produce moves.....St. Louis, Mo.—Freight blockade still tighter. Switch yards covered with loaded cars owing to faulty local transportation. Grain has tumbled all round, in spite of bad reports of Fall wheat planting and damage to corn by rain. Causes of decline are: Over-crowded elevators, therefore no room for storage, and fears of extra charges; prices too high for profitable export and prospect of speedy close of navigation. Tobacco boom has "busted." Provisions exceedingly dull. Cattle receipts small; quality poor; prices lower. Horse and mule market at a stand-still owing to "Pink-eye." Good game coming in rapidly. River high and rising, levees in danger. Except as to crops situation as bad as last Spring.....Kansas City, Mo.—Weather very wet. Country merchants are paying promptly and have lots of cash, showing that farmers are doing well. Much inconvenience from freight blockade.....Omaha, Neb.—Pleasant Autumn weather now. Prices of produce steady for the week. Bad condition of country roads hinders business of all sorts. Last week's rains stopped thrashing. Wheat was damaged in stack; loss not great. Most counties report a larger corn crop than was expected.....Denver, Col.—Flour and feed quiet; produce active. Supply of hay large; fall in price of home growth. Vegetables firm. Hides and tallow active. Country buyers in crowds to buy winter stock. Large purchases of wool by Eastern buyers. Of cattle 100 car-loads were shipped from Trinidad during the week. Splendid weather.....San Francisco.—Wheat touched $1.77¼ per cental, but dropped one cent. Wool stagnant.....Baltimore, Md.—Orders for canned goods far ahead; shipments behindhand. Canned tomatoes, $1.30, an advance of 25c per dozen. Green corn 10c. per dozen higher. Canned peaches $2.80@$3 per dozen compared with $1.65@$1.75 last year. No prospect of a decline in these prices. Small fruits all sold out. Prime grades of Southern wheat in demand; low grades dull. Western wheat lower. $1.45½@$1.46 cash to $1.56¼ for Jan. Corn steady, prices firm. Southern white, 74c for new; 77c for old.....The steamer Leipsig from Bremen, Germany, has just bought 8,000 cabbages from Oldenburg—the first European importation of vegetables ever brought here.....Norfolk, Va.—Cotton coming in very freely from the far South and West.....Richmond, Va.—Prices of all vegetables and breadstuffs are high; but it is thought to be due to the fair, and when it closes a decline is expected.....Charleston, S. C.—A cool spell the last two days—turpentine up to 50c.....Savannah, Ga.—Cotton market opened firm on Wednesday afternoon with a strong demand on Thursday with prices hardening.....Augusta, Ga.—Farmers have had a good season for planting crops. Most of the cotton gathered is of good quality. Over $600,000 in the King Cotton Manufacturing Company have been subscribed. All the mills running full time with orders for ahead.....New Orleans, La.—Cotton strong, fully up to former rates. The first of this season's sugar arrived last Monday—12 days later than first arrival last year.....Memphis, Tenn.—Light frosts have fallen. Prices of provisions and produce lower than for some time past. Cotton receipts falling off owing to extra efforts of planters to pick the crop before wet weather sets in.....Nashville, Tenn.—Wool market dull with light receipts. Corn, oats and hay quiet; prices unchanged.

The Austrian consul's in Servia report the harvest this year extremely unfavorable. Not more than half as much as the crops of last year have been gathered in this year's harvest. This serious failure is attributed partly to destructive frosts, and partly to the wide prevalence of blight. From Roumania the reports are very much to the same effect as those referring to Sorvia. In most parts of Moldavia and Wallachia the yield is not half the average.....A correspondent of the Amador, Cal. Dispatch says that there are from 60,000 to 80,000 acres of fine grape land in that county which need but enterprise and industry to yield an annual income of $2,000,000. And yet men living on some of this very land are barely making a living because they have not the energy to develop its resources..... The United Kingdom in 1880 consumed 8,650,000 gallons of French wines, against 5,620,000. in 1876. The rate of consumption continues during the current year.....

An Indianapolis exchange mentions that St. Jacobs Oil cured Mr. J. H. Mattern, a letter-carrier of that city, of a severe sprain, contracted in the war.—Detroit (Mich.) Western Home Journal.

Cause and Effect.

Disease never comes to us without a cause. Ask any good physician the reason and he will tell you something interferes with the working of the great organs. Kidney-Wort enables them to overcome all obstructions and preserves perfect health. Try a box or bottle at once.—Mirror and Farmer.

Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., is rapidly acquiring an enviable reputation for the surprising cures which daily result from the use of her Vegetable Compound in all female diseases. Send to her for pamphlets.

All the prize lots of butter, eighty-three in number, of the recent London Dairy Show were salted with Higgin's Eureka Salt. The Higgin process has revolutionized the dairy salt business of Great Britain.—American Dairyman.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

Garfield and Family—elegant engraving 19 by 24—sent for 24c. (stamps). Sheehy & Co., 33 Barclay St., N. Y.

Burnett's Cocoaine

Softens the hair when harsh and dry.
Soothes the irritated scalp.
Affords the richest lustre.
Prevents the hair from falling off.
Promotes its healthy, vigorous growth.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, October 22.

CHICAGO.—WHEAT moderately active and higher; No. 2 Chicago Spring, $1.34½@1.34¾ cash; $1.35 October; $1.35⅞@1.36, November; $1.37¾ December; No. 3 do., $1.20. CORN fairly active and a shade higher at 61@61⅛c., cash; 61¼@61⅜c., October; 61¾@61⅞ November; 63⅛@63¼c. December. OATS moderately active and higher at 44c., cash; 44¼c., November; 44⅝c., December; 48c., May. RYE easier at $1.02¼. BARLEY firm at $1.05⅛@1.06. PORK steady with a fair demand at $16.85@17, cash; $16.80 November; $16.90@16.95, December; $17.95@17.97½ January. Lard fair, active, and a shade higher at $11.62½@11.65 cash and November; $11.75@$11 77½, December; $11.92½@11.95, January. Bulkmeats stronger; shoulders, $7.50; short rib, $9; short clear $9.40. HOGS—demand good and prices firmer, but not higher; mixed packing, $5.70@6.35; choice heavy, $6.30@6.90; light $5.90@6; culls and grassers, $3.75@5.50. CATTLE—market weak and dull; exports $6.40@7; good to choice shipping, $5.40@5.90; common to fair $4@5; butchers' cows, $2@4.50; bulls, $2@3.50; oxen, 3.50@4; steers, $3.50@4.50; stockers and feeders, $3@4.

ST. LOUIS.—WHEAT moderately active, and higher; No. 2 red Fall, $1.44⅝, cash; $1.46¾, November; $1.49½, December; $1.55⅛, January, No. 2 do., $1.39; No. 3 do., $1.28½. CORN higher at 62¾c., cash; 63½c., November; 66⅜., December; 67½c., January; 72¾c., May. OATS higher at 43½c., cash; 44⅞c., November 47½c., December; 48½c., January; 51⅜c., May. Rye better at $1.05 bid. BARLEY steady; choice to fancy $1@$1.15. PORK quiet; jobbing, $18. Bulk-meats quiet; car loads Shoulders, $7.60; Clear Rib, $8.45; Clear Sides $9.80. Bacon slow; Shoulders, 8⅞c.; Clear Rib, 10⅛c.; Clear Sides, 11c. Lard nominally, 11½c. Butter and Eggs nominally unchanged. HOGS lower; Yorkers, $5.80@$5.90; common to good packing, $5.50@$6.40; butchers' to fancy, $6.50@$6.60.

CINCINNATI.—WHEAT strong; No. 2 Red Winter, $1.45. CORN steady; No. 2 Mixed, 60c. OATS easier; No. 2 Mixed, 46½c.@47c. RYE quiet at $1.14. PORK quiet at $10.50. Lard in light demand, but holders firm, at 11⅜c. Bulk-meats in fair demand; Shoulders, 8c.; Clear Rib, 9½c. Bacon quiet and unchanged.

$2,000 Worth of Valuable Gifts

For those who raise the best crops from the Rural New-Yorker's Free Seed Distribution of next year!

Its Free Seed and Plant Distributions during the past four years, have placed in the hands of farmers and horticulturists some of the most valuable farm and garden plants in cultivation.

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You should subscribe for the Rural New-Yorker. It is a national weekly 16-page journal, with over 500 Original Illustrations per year. The best artists---the best writers. Ask those who know. Address **34 Park Row, New York.**

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 22, 1881.

BEANS AND PEAS.—Supplies of beans came forward freely and buyers have in some cases obtained a trifle off. The general feeling, however, is firm. Stock is believed to be mainly out of growers' hands, though farmers have been able to utilize the full crop as the weather has been very favorable for thrashing. Peas of all kinds are tending downward. Green Wis. $2; Southern B. E. peas $3 ₽ 2 bu. bag.

Marrow beans, new, $3.35@3.60; mediums, $3.50@3.55; pea, $3.40@3.55; white kidney, $3.55@3.60; black or turtle soup, $2; red kidney, $3.10@3.25.

Receipts of beans for the week, 21,250 bush.
Exports do, 446 bbls.

BEESWAX.—Dull at 21@22c.

BUTTER.—The market keeps in about its former groove, fine grades selling while under grades drag. Exporters are not in want of stock. All prime Western sells upon arrival, and the demand for Western imitation creamery seems well established.

Creamery, State and Elgin, choice, 36@37c.; good to prime, 34@35c.; sweet cream, fresh, 32@34c.; fair to good, 28@32c.; State, June, good to prime, 26@28c.; poor to fair, 24@25c.; Western, choice, 31@33c.; good to prime, 30@30c.; fair to good, 28@30c.; poor, 18@23c.; June, prime, 26@27c.; fair to good, 22@25c.; State dairies, choice, 28@29c.; good to prime, 25@27c.; fair, 23@24c.; State dairies, half tubs and pails, choice fresh, 32@33c.; good to prime, 28@30c.; fair to good, 24@28c.; Welsh tubs, choice, fresh, 31@33c.; good to prime, 27@29c.; fair to good, 24@27c.; poor to fair, 18@24c.; Western imitation creamery, 26@30c.; Western dairy, fresh, choice, 27@29c.; good to prime, 23@25c.; fair to good, 20@23c.; poor to fair, 17@20c; factory and ladle-packed, Iowa, fine June, 18c.; Ohio and Indiana, 17c.; June, good, 16@16½c.; late made, good, 16½@17c.; fair, 15@16c.

Receipts for the week, 33,150 pkgs.
Exports do. 2,672 do.
Cold storage to G. B., 90s.

CHEESE.—The tame, uninteresting condition of the market that has ruled for the past month or more continues. Some nice September cheese are showing, but the quality is off from the expected standard and the few shippers that appear for small orders offer nothing higher than has been quoted for top grades right along. July and August cheese are neglected by exporters; some have gone abroad on owner's account; Ohio cheese not running fine in quality; some old low-grade skims are offered at buyers' figures.

State factory, flue, Sept. 13c.; good to prime, 11½@12c¼.; fair to good, 10½@11¼c.; poor to fair, 9½@10½c.; Ohio factory, flat, fine mild, 12@12½c.; good to prime, 10½@11c.; fair to good, 9@10½c.; creamery, partly skimmed, choice, 10@11¼c.; poor to good, 4@7c.; fully skimmed, 2@3c.; full-skimmed factory, 2@3c.

Receipts for the week, 40,911 pkgs.
Exports do, 22,093 do.
Liverpool cable, 57s.
Steam to Liverpool, 10s. 6d.@15s.

COTTON.—A more settled feeling abroad has steadied the market for spot and early futures. Liverpool buyers are calling for closer to their usual wants than before and our own operators are operating with more confidence in all the early deliveries. Market closes fairly strong.

CURRENT PRICES.

Quotations based on American standard of classification.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8⅝	8⅞	8⅞
Strict ordinary	9 3-16	9 7-16	9 7-16
Good ordinary	10	10¼	10
Strict good ordinary	10⅛	10⅜	10⅜
Low middling	11 1-16	1 5-16	11 5-16	11 5-16
Strict low middling	11 5-16	11 9-16	11 9-16
Middling	11⅝	11¾	11¾
Good Middling	11¾	12	12
Strict good middling	12	12¼	12¼
Middling fair	12⅛	12⅜	12⅜
Fair	13¼	13½	13½

STAINED.

Good ordinary	8¼	Low Middling	9 15-16
Strict good ordinary	9⅛	Middling	11 1-16

Futures quiet, closing steady at an advance of 1 to 2 points, against 4 to 6 points early in the day; sales, 110,000 bales.

October, 11.40@11.46c.; November, 11.41@11.43c.; December, 11.55@11.65c.; January, 11.71@11.83c.; February, 11.89@11.98c.; March, 12.01@12.14c.; April, 12.11@12.27c.; May, 12.29@12.38c.; June, 12.42@12.48c.; July, 12.60c.

Receipts for week, 42,550 bales.
Exports do. 10,281 do.

DRIED FRUITS.—Evaporated apples have advanced. All apples are held firmly. Peeled peaches strong; unpeeled pressed some for sale. Small fruits steady with moderate stocks.

Apples, evaporated, new, 13½@14c.; fair to prime, 12@13c.; N. C. new, sliced, fancy, 8½@9¼c.; fair to choice, 6½@8c.; Southern quarters, choice, 6@7½c.; State, old, fine cut, choice, 6½@7¼c.; quarters, do. 6½@7c.; small lots, 6¼@6¾c.; Ohio and Mich. choice, 6½@7c.; Western, fair to good, 5¾@6¼c. Peaches, evaporated, peeled, old, 35@40c.; unpeeled, new, 18@20c.; N. C. peeled, fancy, 21@23c.; choice, 20@23c.; Ga. 22@23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 8½@9c.; halves, Tenn. 8½c.; quarters, 8¾c.; Plums, State, black, 17c.; Southern Damson, 15@15½c. Blackberries, 13c. Cherries, Southern, dry, 19@20c. Raspberries, 28@29c. Huckleberries, 15@15½c.

EGGS.—Receipts for the week, 7,663 bbls.; do. last week, 8,839 do. A good market prevails; trade is not really steady at the high prices, but the quotations are latterly supported by moderate receipts.

Near points, 27@28c.; State and Pa. 25@26c.; Canadian, 24@24½c.; Western, 24@24½c., under grades 22@23c.; limed State 21@21½c.; Western, 20@21c.

FLOUR.—A few of the locally established brands show some steadiness, but the bulk of the offering are in buyers; favor and have not at all rallied from the prostration noted in our last. The trade does not expect much if any recovery while visible wheat shades the market in the lack of export movement. Rye flour has sold freely. Buckwheat flour scarce and the market opens slowly with the high rates that rule.

No. 2, $4.15@4.75; State and Western, superfine, $5.15@5.65; city mills, extra, $7.25@7.50 Spring wheat, extra, $5.75@6.10; Spring XX and XXX, $6.25@7.75; patents, $8@9.50; Ohio round hoop shipping, $6.10@6.40; trade brands, $6.50@7.20; St. Louis extra, $6.25@6.65; do. double extra, $6.75@7.35; do. family, $7.50@8.00; Southern extra shipping, $6.25@7.00; do. XX and family, $7.25@8.25. Rye flour, superfine, $5.65@6.00; buckwheat flour ₽ 100 lbs. $3.80@4.10. Corn-meal, Brandywine, $3.90; do. Western, $3.40@3.80.

Receipts of flour for the week, 109,930 bbls.; corn-meal 3,626 do.

Exports of flour for the week, 57,573 bbls.; corn-meal 4,141 do.

FRESH FRUITS.—Apples are scarce and firm. Exports for week 2,150 bbls. Pears in large supply again and favoring buyers. Cranberries sell with light supplies of apples helping them. Quinces in better demand. Grapes steady when prime. Peanuts continue quiet and firm; stock much reduced. The receipts of new so far have been of inferior quality and sold at about ⅔c. Hickory nuts are in good demand, light supply and higher. A few Western nuts have arrived and sold at $1.25@1.50; very few are good enough to reach the outside figure. Chestnuts plentier and lower; demand slack. Receipts from the south are generally wormy and undesirable.

Apples, Baldwin, State, ₽ bbl. $3.25@3.50; Jersey, $3@3.25; Greening, State, $3.25@3.50; N. Spy, do. $3.25@3.50; Fall apples, do. red varieties, $3.50@4.00; State, green; $3.25@3.50. Pears, Sheldon, Western N. Y. ₽ bbl. $5.00@6.00; Beurre Bosc $6.00@8.00; Duchess, $4@5.00; Lawrence, $3@5; Beurre d'Anjou, $5@6; Seckle, choice, $7@8; fair to good, $3@6; ₽ keg, $2@4; Vicar of Wakefield, ₽ bbl. $2.50@3.00; cooking, $2.00. Peaches, New Jersey and up-river choice ₽ bskt, $1.75@2.00; prime, $1.25@1.50; fair $1@1.25; culls, 75@80c. Quinces, apple, prime ₽ bbl. $3@6; No. 2 ₽ bbl. $3@4. Grapes, Del., State, bskts, choice, ₽ lb, 9@11c.; Catawba State, bskts, ₽ lb, 6@9c.; Concord, State, in bskt, ₽ lb, 3@5c.; up-river, loose, ₽ lb, 3@4c.; Isabella, State bskts, 3@3½c. Cranberries, Cape Cod, fancy, large, ₽ bbl. $9.50@10; good to prime, $8.50@9; do. poor to fair, $7@8; frosted $3.50@4; ₽ crate, $3@3.50; Jersey, fancy, ₽ crate, $2.75@3; good to prime, $2.50@2.75; fair to good $2@2.25; do. poor to fair, $1.50@2.

Peanuts, Va., hand-picked, ₽ lb, 7¼@7½c.; fancy, 6¾c.; extra prime, 6½c.; good to prime, 5½@6¼c. shelled, 5½@6c.; pecannuts, 9@11c.; hickory, shell-bark, new, ₽ bu; $1.50@1.62; chestnuts, Southern, ₽ bu. $5@5.50; northern $6.50@7.

GRAIN.—Wheat has kept its declining course, and possible heavy supplies have quenched the few animated sessions that have occurred on 'Change. At one time the deliveries at points of collection were larger than elevator resources could accommodate. Advices from abroad are not encouraging. In fact, it would seem as if Great Britain has deserted us for other points of supply and it is certain that strong trade-checking rates have given for the moment an inlet for other wheat producing countries.

Corn, though relatively high for that grain, has, in comparison with wheat, been attractive for the shipping demand and a good export movement is reported. Unfortunately the No. 2 styles are not in liberal stock. Oats have hardened somewhat in price, as the wants of the market are naturally enlarging.

Wheat, Spring, $1.32@1.45; Spring No. 2, $1.41@1.43; red Winter No. 2, $1.51@1.51½; red Winter, $1.49@1.53; white Western and State, $1.35@1.48. Rye, $1.02@1.06. Oats, white No. 1, 50½@51c.; No. 2, 53@53½c.; No. 3, 49@49½c.; mixed, No. 1, 47½c.; No. 2, 46½@47c.; No. 3, 43@45c. Corn, Western mixed, 67@71c.; No. 2, 71½@72½c.; yellow, 70@73c.; white, 72@75c. Barley, Canada No. 1, $1.13@1.16; do. bright, $1.16@1.18; State 4-rowed, 95c.@$1.02½. Buckwheat, 95@98c.

Receipts for the week, wheat, 973,200 bush.; corn, 491,000 do.; oats, 147,000 do.; rye, 31,825 do.; malt, 45,850 do.; barley, 305,000 do.

Exports for the week, wheat, 669,350 bush.; corn, 732,700 do.; oats, 3,933 do.

HAY AND STRAW.—There is an improved demand and with moderate receipts prices for hay and straw close firm, the latter a trifle higher.

Prime Timothy hay, ₽ 100 lbs., $1.05@1.10; medium Timothy, 90c.@$1; shipping grades, 65@70c.; clover mixed, 70@80c.; clover, 60@65 c.; Straw, long rye, 80@85c.; short rye, 55@60c. oat and wheat straw, 40@45c.

Exports of hay for the week, 875 bales.

HONEY.—There is a fair trade in a small way. Fancy small boxes clover, 19@20c.; other sizes 15@18c. buckwheat, 12@15c.

HOPS.—Prices in this city have lost the upward tone of last week. Most of the free receipts are going abroad on country bought account. Many of these parcels have been obtained at 25c. in the interior. Brewers are taking only small quantities for prompt use.

Crop of 1881, choice, 28@29c.; good to prime, 26@27c.; fair to good 23@26c.; eastern, 22@27c.; 1880, good to prime, 18@23c.; poor to fair, 12@15c.; 1879 fair to prime, 10@15c.

Receipts for the week, 8,592 bales,
Exports for the week, 1,831 do.

MILK.—Surplus commission cans of forty quarts have sold out from day to day at $2. Milk arrives in good order and the supply is ample for all uses.

POULTRY AND GAME.—Turkeys and fowls are lower. The weather does not support the free receipts of the moment.

Turkeys, Phila. prime, 14@15c.; State and Western dry-picked, 12@13c.; scalded, 11@12c. Chickens, Phila. spring, 16@18c.; Bucks Co. do. 14@16c.; Jersey, do. 13@14c.; State, do. 12@13c.; Western, do. 11@12c. Fowls, Phila. dry-picked, 14@15c.; Bucks Co. 12½@13½c.; Jersey, 12@12½c.; State and Western, dry-picked, 12@12½c.; scalded, 11@12c.; inferior, 10@11c. Ducks, Spring, Phila. ₽ lb, 16@17c.; Jersey and Bucks Co. 14@15c.; State, 13@14c.; old, fair to good, 10@12c. Geese, Phila. dry-picked, young, 14@15c.; do. old, 10@12c.; Western, old 8@10c. Squabs, white, ₽ doz. $2.50@3.75; dark, $1.50@1.75.

Cooped stock is plenty and prices have ruled low all the week. Cheap figures have started up trade at the close.

Chickens, Jersey, spring, ₽ lb. 11c.; State and Penn. 10@11c.; Western, and Southern, 10c.; Fowls, Jersey, State & Penn. 11c.; Western and Southern, 10c. Roosters, old, 5@6c. Turkeys, Jersey and Penn. 10@12c.; Western, 9@10c. Ducks, Jersey, extra-large, ₽ pair, $1@1.25; Jersey, New York and Penn. 80@75c.; Western, 50@60c.; Southern, 50@55c. Geese, Jersey, $1.50@1.75; N. Y. and Penn. $1.25@1.50; Western mixed 87c@$1.12; Southern, 75c@$1. Pigeons, large, strong birds, 30@35c.; young, 25@30c.

Fine pkgs of game are steady and prices are more popular. Wild ducks are firm for Canvas-back at $2 and Red head at 75c. ₽ pair; Mallard at 60@65c.; teal and wood at 40@50c. and common at 30c. Venison is in good request and steady.

Grouse, choice, ₽ pair $1.12@1.25; soft, 50@75c.; partridges, State and Western, $1@1.12; Eastern, 75c.; soft, 50@62c.; woodcock, choice, 75c.; inferior, 40@50c.; English snipe fresh-killed, ₽ doz. $1.50@1.75; plover, do. $1.50@1.75; venison, Minn. short saddles, ₽ lb. 19@20c.; Western, 17@19c.

PROVISIONS.—Hog products have not received the export support that the close of last week promised, and prices are wavering again. Large quantities of ready bacon at the West has a depressing effect upon the provision trade and in the opinion of the trade most of it will have to be loosened before prices can be named with crispness. Beef and beef hams doing well with reduced stocks.

Pork, prime mess ₽ bbl. $17@18; extra prime, ₽ bbl. $16@16,50; Western mess new, $18@18.25. Lard, steam Western, ₽100 lbs., $11.85@11.90; prime city, $11.80. Hams, smoked city, ₽ lb. 13@13½c.; pickled Western and city, 12½@12¾c.; Shoulders, smoked city, 9@9½c.; pickled, 8@8¼c. Rib bellies, pickled, 10@10½c. Bacon, long clear Western 9¾@10c. Beef, Western mess, ₽ bbl. $12; packet $11; India mess, ₽ tce. $25.00@27.00. Beef hams, ₽ bbl., $21.

Receipts for the week—Beef, bbls. and tcs. 1,025; pork, bbls. 5,600; cut-meats, pkgs 20,602; lard, do. 16,646.

Exports for the week—Beef, bbls. and tcs. 3,250; pork bbls. 3,050; cut-meats, lbs. 4,580,638; lard do. 6,130,982.

RICE.—Quotations are for
Carolina, choice, 7¼@7½c; good to prime, 6¼@7¼c; common to fair 5½@5¾c; prime, 7¼@7¾c.

SEEDS.—Clover seed is held more firmly; holders of car lots could probably sell at 9c., but refuse that price. Exporters have paid 9¼@9¾c. for choice selected seed from store, but are not at the moment making many inquiries. Considerable seed is said to have been recently lost at the West by the wet weather. Timothy quiet.

Clover, Western, car lots on track, 9@9¼c; Timothy: job lots in store, $2.95@3.25; Flaxseed, American, rough, ₽ bu. $1.45@1.47½.

Receipts for week, 10,956 bu.
Exports, 5,446 do.

SUGAR.—Quotations are for:
Cut loaf, 10¾c.; crushed, 10¾c.; powdered, 10¼@10¾c.; granulated, 10c.; confectioners' A, 9¼c.; coffee A standard 9¼; off A, 9¼@9½c.; white extra C, 8¾@9c.; extra C, 8¼@8⅝c; C, 7¾@8¼c.; yellows, 7@7½c.

TOBACCO.—Kentucky quiet, unchanged; seed leaf fairly active. 1880 Pennsylvania, 10@18c; 1880 New England wrappers 14@28c.

VEGETABLES.—Exports of potatoes, 3,100 bbls.; of onions, 100 do. The general demand for potatoes is not so sharp as it was and receipts are heavy enough to form some accumulation. Prices quoted very full. Sweets dull at easier prices.

Potatoes—Early Rose, Eastern, ₽ d.-h. bbl., $3; L. I. $2@2.25; State, $2.75; do. bulk, ₽ bbl. $2.50@2.62; Prolific, Eastern, d.-h. $2.75; Snowflake, State, d.-h. $2.62@2.75; do bulk, $2.50@2.63; Burbank, $2.50@2.62; do. L. I. $3@3.25; Peerless, State, $2.25@2.50; sweet potatoes, Va, yellow, $2@2.25; Del. River, $2.50@2.75; Jersey, $1.75@2.

Cauliflowers are very variable in quality, hence the wide range. Cabbages have advanced. Other items firm, though onions are not moving actively.

Onions, white bulk, ₽ bbl. $4@4.50; yellow, $2.50@2.75; red, $2.50; Chester, $2.50; tomatoes, L. I. ₽ bush. 75c.@$1; squash, Marrow, ₽ bbl., $1.50@1.75; Hubbard, $1.75@2; cabbage, ₽ 100, $5@12; beets, L. I. ₽ bbl. $2@2.25; carrots, $1.25@1.75; turnips, Russia, $2.50; cauliflower, $1@6; pumpkins, ₽ 100, $1@8; celery, ₽ doz. $1.75@2.

WOOL.—The movement in fine wools has not kept the pace that was expected. These grades have not yet declined but they have sunk into a quiet that is symptomatical of an easier feeling. The common grades have already weakened and concessions have attended such trade as has transpired. It must be remembered, however, that unusually brisk selling period has been secured this Fall and the present lull will be severely felt.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 22, 1881.

BEEVES.—Receipts for the week, 17,108 head: do. last week, 16,145 do. It has been a notably light week in the sales of dressed beef and butchers have quite neglected the market for cattle. A good deal of stock remains unsold at the close. Texans and Colorados sold at 7@8¾c. to dress 55 lbs.; poor to choice natives 7¼c. to dress 55 lbs. to 12½c. to dress 57 lbs. A few extras made 13c.

MILCH COWS...The market retains the firmness that has been noted for several past weeks. The current ranges are $35@50 for common to fair, and $55@70 for good to choice—the latter wanted at full figures.

VEAL CALVES—There is a good demand for all nicely fed stock. Medium milk, buttermilk and grassers slow at prices.

Live calves, N. J. choice, 9¼@9½c.; do. State, 9@9½c.; poor to good, 6@8¾c.; Mount Hollys, 7@9¼c.; buttermilks, 4@4½c.; grassers, 2¾@3¼c.; up-river hog-dressed 13@14c.

SHEEP AND LAMBS.—Receipts for the week, 42,275 head; do. last week, 35,962 do. Trade has ruled dull and many lots have been carried over. At the close prime sheep were steady; low grades declined. Sheep range 4@5¾c.; lambs, 5½@6¾c.

SWINE.—Receipts for the week, 35,334 head; do. last week, 25,621 do. Arrivals are large, and with plenty to come buyers have had the advantage all the week. Quotations $6@6.62 ₽ 100.

New Jersey pork, light, 9@9½c.; other weights, 8@9c.; city dressed, 8½@8¾c. Pork tenderloins, 13@14c.

Terms for 1881.

The subscription price of the Rural New-Yorker is
Single Copy, per year..... $2.00
" " Six months..... 1.10
Great Britain, Ireland, Australia and
Germany, per year, post-paid..... $3.04 (12s. 6d.)
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Simple, Strong, Durable, Rosette Wheel and perfectly Self-regulating, avoiding 100 wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up-stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SOMANAUK, ILL.

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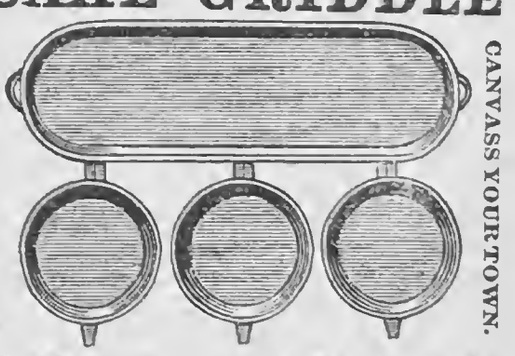
The NEATEST and most PRACTICAL thing ever seen. Pleases everybody. Every family wants one. No one after using will be without for many times its cost. ☞The Round Pans being hinged separately, each cake can be turned into the long pan as soon as it is sufficiently done on one side, and the round pan returned ready for another cake. The Griddles are made of cast-iron and weigh 4 lbs. Sample griddle by express in shipping box 60c; by mail registered $1.25. POSTAGE STAMPS TAKEN. Send for sample griddle and terms to agents; canvass your town right away, you will be surprised at the great number of orders you will get. Address F. M. VAN ETTEN, Manuf'r, 208 LaSalle St., Chicago, Ill.

For the Young.

RAISING SEEDLING GRAPES.

I DARE say there is not one among you that does not like good, ripe grapes—and I still further dare say that there is not one among you who would not feel proud if you succeeded in raising from the seed, a vine that bore grapes as good as, or better than, those which grow in your own or neighboring gardens or vineyards. I would be very glad if I could induce every member of the Horticultural Club to make the trial. A sunny southern window is all that is needed. Procure six-inch pots, give ample drainage by covering the holes with broken pieces of pots or stones, then fill up with good, sandy soil. Plant three seeds in each pot an inch deep—do not allow the soil to dry out and yet do not keep it wet. Plant the seeds as soon as taken from the grape, otherwise they will dry and not sprout readily. Place the pots in a sunny southern or eastern window. Some of the seeds may germinate in three weeks, while others may require one or two months before they appear. By next Spring they will have made a growth of from one foot to 18 inches. They may then be planted in the open ground. In the Fall cut the wood back to two eyes and cover with straw lightly. The next Spring permit but one of these buds (the stronger) to grow thus confining the seedling vine to *one* shoot. So grown, most of the vines will fruit the third year. If white grapes are preferred, select seeds from white grapes. This would not insure white fruit in the seedlings, but a greater percentage would prove white than if seeds from black grapes were planted.

This is not a difficult experiment and is worth trying. You know the professional fruit raisers think they do a very praiseworthy thing when they originate from seed some new variety which proves to be a good one, but there's no use in their having all the praise for doing what any industrious member of the Club may do under similar circumstances. Wouldn't it be glorious if some one of the cousins should succeed in raising a new grape that should equal—ah, no! surpass—even the best now cultivated! It isn't impossible, and if you don't succeed the first time try until you do. Parents should encourage children in this kind of work, and assist them in their endeavors to learn how to propagate all kinds of fruits. It will be time well spent. U. M.

SOMETHING MORE ABOUT GRAPES.

I SUPPOSE that no garden can be called complete unless it has one or more grape vines placed where the sun will shed its genial rays and fill the clusters almost to bursting with sweetness. There are two varieties of the wild grape in this vicinity, one called Pigeon Plum, which is small and black; the other is nameless so far as I know. It is larger than the first, and is a dark red in color. Neither of them is disagreeable, but it seems rather strange that the Norsemen should have valued them so highly as they did when they first came to this country. All the grapes which are cultivated here excepting those which are raised under glass, are said to be descended from native vines, but the European vines grow without protection in California. Foreign grapes are particularly distinguishable by the fact that the pulp adheres to the covering.

The grape has many enemies, both insects and parasites, but with the exception of a little mildew our vines are free from them. There is a worm, however, a distant relative of the ordinary caterpillar, [A little indefinite.—U. M.] which is very fond of the stems of the grapes and cutting out a piece of the stem is, on the whole, rather embarrassing, to say the least, to the bunch of fruit which depends from it.

Probably the two worst enemies of the vine are mildew and phylloxera, the latter having been introduced into Europe from America (?). Sulphur is very highly recommended for the first of these two: for the latter, two remedies seem to have been successful. One of these is to submerge the roots for a month in the Winter time; the other is to apply a weak solution of sulphocarbonate of potash.

Grapes will rarely grow to any extent outside the temperate zone being limited to 10° north of Boston, and 16° south. Beyond these limits it is necessary to place them under cover, as too powerful heat is as bad as too much cold. Even for some degrees inside their northern limit the fruit is small and insipid, so that it is hardly worth cultivating.

Chelsea, Mass. C. A. BUTTERWORTH.

YOUNG QUERIST.

M. N. B., Cedar Mills, Minn., wishes to know how much trimming a vine should receive each year. Some nurserymen say "cut back to within two or three buds of the previous years growth." I should think that would be too severe.

ANS.—The advice given is as good as may be. One vine can ripen only just so much fruit without injury. If permitted to ripen more, the grapes are smaller and the bunches loose.

D. A. L., Havana, N. Y., wishes to know what kind of tobacco is best adapted to this climate.

ANS.—The Connecticut Seed-leaf is probably the best for your vicinity. The Glissner, Ohio Broad-leaf, Lancaster and the "Brand" are recommended by G. A. Goff, Jr., Elmira, N. Y. Write to him concerning best varieties, seed, etc.

W. C. B., Buckeye Centre, Ill., inquires if a lemon tree will bear fruit without budding or grafting.

ANS.—Yes. But it *may* be many years.

In answer to Harry F., Elmira, N. Y., p. 662 I would say that Pyrethrum roseum does blossom the first year from seed, and plants more than one year old often blossom twice a year; but as regards bearing seeds that is an uncertainty in young as well as old plants, still plants raised from seed in Spring often bear seed the first year. F.

Members of the Horticultural Club for Week Ending October 22.

O. F. Fuller, Bessie Brainard, Burt McMahan, Bertha McMahan, Dwight A. Lake, A. D. McKay, Harry French, W. J. Mason, Millie Emerson, H. R. Duke, Arthur Cummings, C. A. Butterworth, N. L. Arters, Flora Erskine, Kate Erskine, Walter Gilbert, T. H. Goode, Minnie S. White, M. Nellie Baldwin, Lucy L. Haller, Frank D. Clark, Wilbur F. Saxton, Nellie McIntyre, Bursie McCrea, Ida M. Moreland, Jessie Packard, Nellie Packard, W. H. Rand, Amelia Mirkler, Minnie Palmer, Percy Tuthill, Porter Darrow, Bennie Winer, Nellie Winer, Flora Person, Hattie Jones, Clara Jones, J. E. Gallup, D. R. Young, Sarah Young, J. W. Stowell, Allie Stowell, Harry Dewis, Clarence Hays, Fannie Metcalf, Nancy Rhodes, Sarah Rhodes, Alice Taylor, Charlie Taylor, Frank Bear, Charles Bear, Gertie Cornwell, Berdie Cornwell, George Shumurrok, Fred Schellenger, G. F. Wedge, Hulda Lick, Nina Coates, Phil Coates.

Send for the Fair Number of the Rural New-Yorker and the new poster for 1882. Both will be forwarded GRATIS *to all applicants.*

Scientific.

CONNECTICUT AGRICULTURAL EXPERIMENT STATION.

BULLETIN NO. 67, OCT. 15, 1881.

652. Canada ashes, sampled and sent by Robert S. Cone, Moodus, from cargo of 1,000 bushels (barge A. P. Wright) purchased of James A. Bill, Lyme. Price 17 cents per bushel.

ANALYSIS.

Potash	1.05
Soda	.50
Lime	34.65
Magnesia	2.68
Oxide of iron	1.49
Phosphoric acid	.88
Sulphuric acid	.20
Sand and insoluble matters	8.61
Charcoal	2.27
Water	24.25
Carbonic acid and loss	23.42
	100.00

The composition is that of good leached ashes.

655. Impure limestone, sent by N. B. Bill, Williamantic.

CHEMICAL ANALYSIS.

Lime	20.28	
Magnesia	.43	
Potash	.03	
Soda	.30	
Oxide of iron	1.89	
Sulphuric acid	trace	
Soluble in strong acids		22.93
Silica and silicates insoluble in acids		61.20
Carbonic acid (and loss on ignition)		16.49
		100.60

This rock is said to be situated about two-and-a-half miles from Williamantic, and to occur in layers that in the aggregate amount to three feet in thickness. It burns and slakes like common limestone. It contains, in round numbers, 40 per cent. of carbonates of lime and magnesia.

The sample analyzed was from a loose fragment believed by Mr. Bill to be identical with the rock of the ledge.

Very probably the impure lime obtained by burning this rock may be of great advantage if skillfully employed upon the contiguous farms.

G. W. DICKINSON'S BONE MANURES.

657. Ivory dust.

658. Bone turning chips.

666. Pure bone sawdust.

The above are from the manufactory of George W. Dickinson, of Essex, Ct. 657 and 658 were sampled by T. S. Gold, from material purchased of Charles A. Sill, of Saybrook, agent. 666 was sampled by the manufacturer and received through Mr. Gold.

MECHANICAL ANALYSIS.

	657	658	666
Fine, smaller than 1-50 inch, per cent	52	23	95
Fine medium, smaller than 1-25 inch, per cent	21	29	5
Medium, smaller than 1-12 inch, per cent	18	27	..
Coarse medium, smaller than 1-6 inch, per cent	9	13	..
Coarse, larger than 1-6 inch, per cent	.	3	..
	100	100	100

CHEMICAL ANALYSIS.

	657	658	666
Nitrogen	3.38	3.73	2.15
Phosphoric acid	26.86	25.97	19.20
Estimated value	$39.54	$37.88	$29.41
Selling price at Saybrook in bulk	$35.00	$30.00	$20.00

661. Soluble Pacific Guano, manufactured by the Pacific Guano Co., Boston, Mass. Sold by H. A. Stillman & Co., Hartford. Sampled August 30 by Dr. E. H. Jenkins.

The Station is informed by the manufacturers that the sample of Soluble Pacific Guano, 565, reported in Bulletin 58, April 28, was from a small quantity remaining over from last Fall in the hands of the dealers, H. A. Stillman & Co., Hartford, and does not represent the article in market during 1881. Its price, the manufacturers inform us, should have been $42 per ton and not $45.

At the manufacturers' request, sample 661 has been taken for analysis. The results are here compared with those obtained on 565.

	661	565
Nitrogen of nitrates	.62	none
Nitrogen of organic matter	1.74	2.61
Soluble phosphoric acid	7.29	5.90
Reverted " "	1.52	1.36
Insoluble " "	3.42	4.05
Potash	1.76	2.28
Chlorine	1.76	2.45
Estimated value	$36.83	$35.36
Price at Hartford	$45.00	$45.00

MAPES F. AND P. G. CO.'S FERTILIZERS.

662. Pure fine bone dissolved in sulphuric acid.

663. Bone superphosphate.

664. Leopoldshall Kainite.

665. Mapes Tobacco Manure, Conn. brand.

The above samples, manufactured by the Mapes Formula and Peruvian Guano Company, were sampled by Dr. Jenkins at the Company's Hartford Branch, August 30.

	662	663	664	665
Nitrogen of nitrates	....	....	. .	2.52
Nitrogen of ammonia-salts	....	....	....	1.95
Nitrogen of organic matter	2.74	....	....	.39
Phosphoric acid, soluble	1.65	13.41	....	3.29
" " reverted	19.34	1.51	....	2.32
" " insoluble	3.16	.70	....	1.85
Potash	....	....	12.68	7.42
Chlorine	....	....	26.08	1.14
Estimated value	$53.69	$37.14	*	$49.20
Selling price	$42.00	$36.00	$18.00	$53.00

* Potash in this Kainite costs 7.1 cents per pound.

S. W. JOHNSON, Director.

Stock.

40 Clydesdale Stallions

AND MARES—Mostly Imported.

60 Hambletonian Stallions,

AND MARES OF THE FINEST BREEDING.

Largest Herd of

HOLSTEIN CATTLE.

With largest milk records in America.

Separate Catalogues of each class of stock with milk record of cows. Denote which is wanted.

☞ Correspondence solicited.

SMITHS & POWELL,
Lakeside Stock Farm,
SYRACUSE, N. Y.

209 Percheron Horses

Arrived in New York Aug. 25th

And under Customs valuation

Were Bonded for

$350,000.00.

These horses were imported by

M. W. DUNHAM,

WAYNE, DUPAGE CO., ILL.,

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One-Fifth of All Imported French Horses Now Living in America.

During the past 17 months 360 STALLIONS AND MARES have been imported from France to this establishment, being MORE than the combined importations of all other importers of Draft Horses from all parts of Europe for any one year.

100 Page Catalogue sent free on application. Contains over 40 illustrations and the history of the Percheron race. Order Catalogue "N."

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GREAT CHICAGO FAIR, 1881,

In competition with the Largest and FINEST collection of **CLYDESDALE HORSES** ever shown, consisting of the PRIZE WINNERS at the GREAT SHOWS of SCOTLAND and ENGLAND.

M. W. DUNHAM'S Herd of Percherons

WAS AWARDED THE

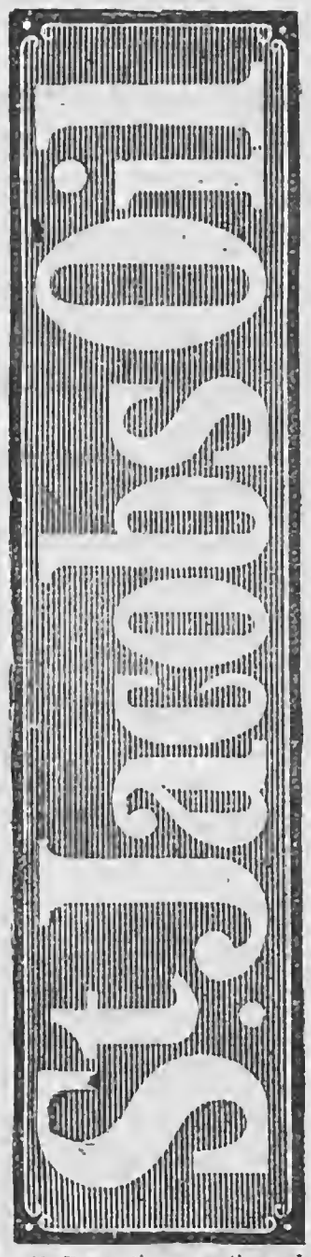
Grand Sweepstakes Prize $1,000

AND GRAND GOLD MEDAL.

His Mare "MIGNONETTE," was awarded the GRAND SWEEPSTAKES PRIZE, $500, and GRAND GOLD MEDAL, and his Stallion, "VIDOCQ," was specially recommended to receive the Society's GOLD MEDAL.

Miscellaneous.

From the Wilmington (Del.) Republicen: Mr. J. M. Scott, corner Third and Madison Streets, had a remarkably fine horse cured of the scratches by St. Jacobs Oil.



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The standard for a Century. This Chocolate is made from the choicest Cocoa, carefully selected and prepared. It is the best preparation of plain Chocolate in the market for family use.

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In tracts to suit purchasers, 100,000 Acres of valuable Timber (abundance of Walnut and Stave Oak) Coal, Iron Ore, Lead, Antimony and Salt Mines, Farming and Grazing Lands, in Southwestern Virginia. Climate, soil and water unsurpassed. Really the richest country in natural resources on this continent. For further particulars address J. PETTEBONE,

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PERSONALS.

Cleveland happened to have a thoroughfare named Guiteau Street. The name has been changed to Abram street.

The late Dr. J. G. Holland's most remunerative work was his "Life of Lincoln," from which he made $20,000.

M. Gambetta is reported as possessed of a strong love for luxury. Among the other expensive articles which he owns is a silver bath tub.

Governor Louis A. Wiltz, of Louisiana, who had been slowly dying for several months, and did so last week, displayed so much courage and tranquility as to arouse the admiration of all approaching his bedside.

Robert L. Stuart, Robert Lenox Kennedy and his sister, Miss Kennedy, have each given Mrs. Garfield $15,000, or $45,000 altogether. The money was deposited a few days ago in the Bank of Commerce, New York, to Mrs. Garfield's credit, and notice sent to her that she could draw it at her pleasure. This is not included in the "Relief Fund" of $363,000.

Trees, Seeds, Plants, &c.

POMONA NURSERY.

100 ACRES IN SMALL FRUITS. Manchester, Mount Vernon, Bidwell, Banicht and other choice Strawberries. Early Welsh, Queen, Cuthbert and Turner, the best hardy Red Raspberries. Snyder, Wallace and Taylor, the hardiest and most productive Blackberries. KIEFFER'S HYBRID PEAR, handsome, large, good quality, bears young and abundantly. "40 Years Among Pears," "40 Years Among Small Fruits": either for 15 cts.; both for 25 cts. *Catalogue free.*

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20,000 CUTHBERT, - - -	$1.75	$12.00
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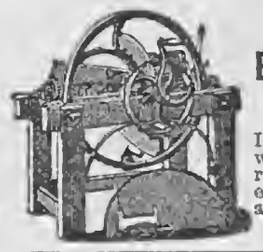

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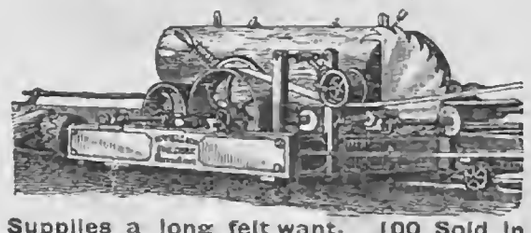

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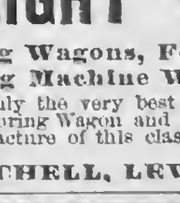

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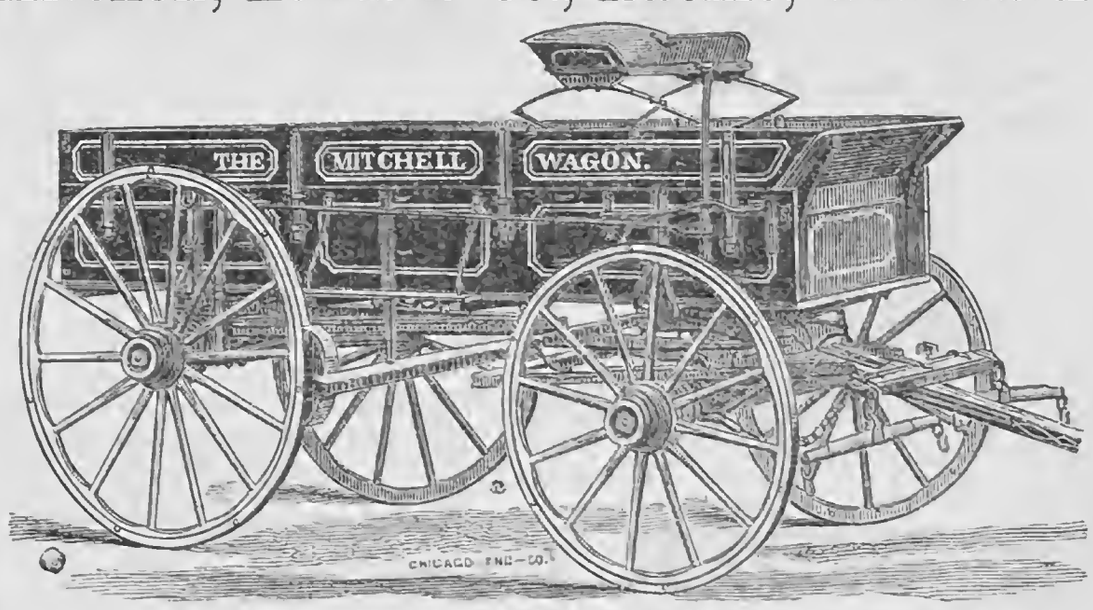

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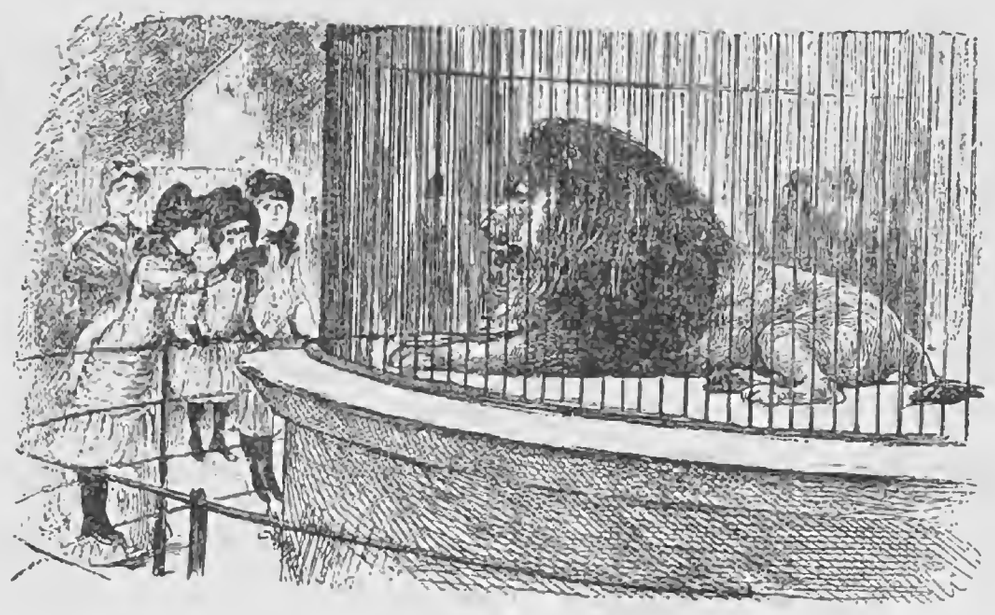

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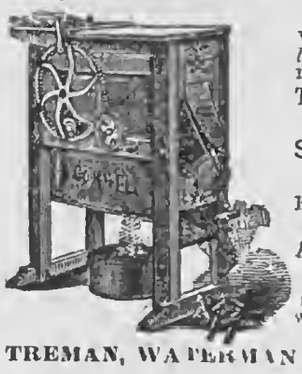

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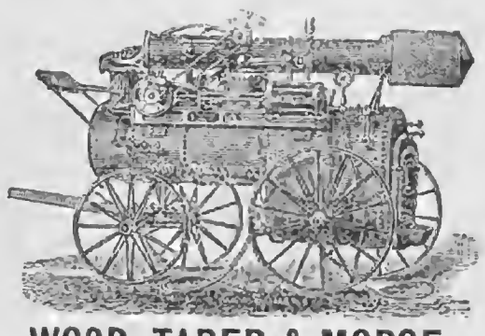

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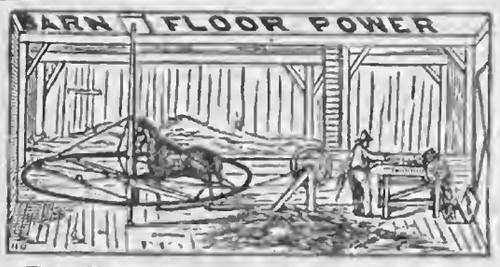

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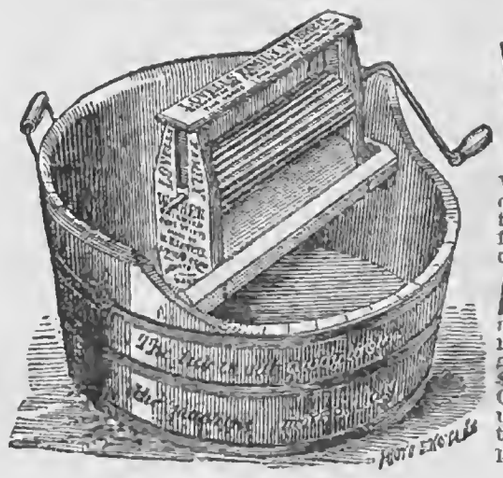

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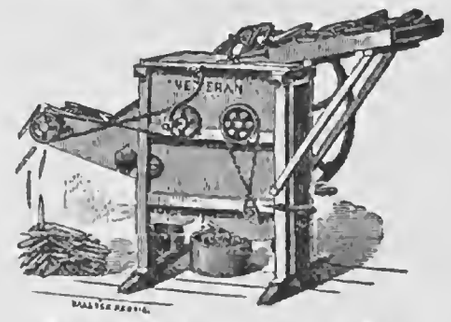

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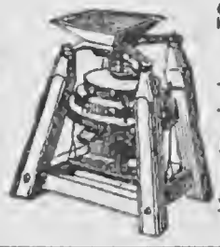

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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The Herdsman.

OUR ANIMAL PORTRAITS.

Polled Suffolk Cow, Handsome 5th.

WITHIN the last few years polled cattle have been gaining rapidly in public favor in this country. Apart from their other merits, the absence of horns is greatly in their favor. The possession of dangerous weapons begets, in man or beast, a strong tendency to make a hurtful use of them, fostering a quarrelsome disposition, ever ready to take or give offense. Deprived of this incitement to contention, the polled breeds of cattle are all of a quiet, peaceable disposition. Having no weapons to fight with, they have no temptation to do so. They live in peace with each other and with other animals in the same yards or pastures. None of the numerous injuries and fatalities among companions and attendants due to the vicious, reckless or accidental misuse of their horns by other breeds can ever be charged against polled cattle. They occupy less room in the stable, the railroad car and at the feeding trough. Their quiet nature promotes rapid fattening; their gentle disposition makes them favorites with the most timid.

There are four British breeds of polled cattle—the Galloway and Angus or Aberdeen in Scotland and the Norfolk and Suffolk in England. Youatt, writing in 1834, describes the Norfolk and Suffolk as quite distinct breeds, giving preference to the latter both for beef and milk-producing capacity. Both, he thinks, undoubtedly sprang from Scotch Galloways, droves of which had from a very early period been prepared for the London market on the pastures of the adjacent counties of Norfolk and Suffolk. These were crossed on the native red, Devon-like cows of Norfolk, and on the dun-colored, deep-milking cows of Suffolk, and the progeny became so much more numerous and profitable than the old sorts, that they have come to be regarded as the native breeds which they have superseded. What difference still exists between the cattle of these two counties, is very much less marked than it was half a century ago, and in describing them at fairs and speaking of their characteristics they are now-a-days clubbed together as Norfolk and Suffolk Red Polled cattle. The Suffolk, however, is somewhat lower in stature, and finer than the Norfolk, besides being shorter in the leg, broader and rounder, and possessed of a greater propensity to fatten and attain heavier weight. Among hornless cattle they hold a position somewhat analagous to that occupied in England by the Short-horns among horned beasts—they are prized alike for their merits as dairy and beef animals. While, however, the Short-horns are favorites in nearly all parts of the country, the popularity of the Norfolk and Suffolk cattle is confined almost entirely to the counties from which they take their name. Of late the breeders of Red Polled cattle have been bringing them more than usual to public attention by publishing a Herd Book of the breed and making larger and more carefully selected exhibits of them at various agricultural shows, especially at those held within the two counties. The first volume of the Herd Book was published in 1874, and the first part of Vol. II. has just been issued. Together, they contain the pedigrees of 611 bulls and 1,966 cows. Special attention is bestowed on keeping a record of the various tribes included in the breed. At the Norfolk Agricultural Show held last June at Norwich, there were 62 entries of the breed, which won high encomiums from all lovers of fine cattle who beheld them, and at all the late fairs held in that part of the island they won a fine reputation.

Youatt says the Suffolk cow could be easily fattened to 500 or 600 pounds; now-a-days that would be considered a very light weight, as cows of the present breed run from 900 to 1,600 pounds. A medium-sized cow, from 1,000 to 1,200 pounds, is found, however, to be the best for both beef and milk, for any increase of weight above that is apt to be gained at the expense of the milking qualities. Probably the most economical plan would be to keep two strains, one of medium size for milk, and the other of larger size for beef, or the choice between the two might be determined by the object the owner might have in view—beef or milk. For the former the Red Polled is claimed to be as excellent a beast as the more famous Angus, maturing early and laying on rapidly and economically an excellent quality of meat, most abundant in the choicest parts and finely marbled with a desirable admixture of fat and lean. At the late Norfolk show two calves, a bull and a heifer, under 12 months, won first prizes; and of them the Agricultural Gazette said:—"We never saw, of any breed, calves of like age so extraordinarily developed; they were finished like two-year-olds. For milk the red polled breeds have always had a higher reputation than the black polled, both for quantity and quality. At the Suffolk show in England on June 30 last, a special prize for the cow giving the largest mess of milk was awarded to the Red Polled cow Wild Rose, which gave 13 quarts in 12 hours—less than she was accustomed to yield on the farm. The Red Polled cow Battersea 4th is certified to have made over 20 pounds of butter per week in the season.

The points of a superior animal of this breed are:—"Color, a deep red, with udder of the same color, but the tip of the tail may be white; nose dark and cloudy. Form, a neat head and throat and a full eye; a tuft or crest of hair should hang over the forehead. The frontal bones should begin to contract a little above the eyes and should terminate in a comparatively narrow prominence at the summit of the head. In all other particulars the commonly accepted points of a superior animal are to be taken as applying to the Norfolk and Suffolk Polled cattle." The accompanying likeness of Handsome 5th represents a fine specimen of cows of this breed, both as a beef and milk producer. She is owned by G. F. Taber, Patterson, Putnam County, N. Y., the largest importer of Red Polled cattle, and was bred by R. E. Lofft, Bury St. Edmunds, England, one of the most extensive breeders of these cattle in the Kingdom, and a frequent winner of prizes at the various agricultural shows at which they are exhibited. Before leaving England Handsome 5th had handsomely added another to his long list of premiums. She was also one of the herd that carried off all the premiums in that class at the New York State Fair, at Elmira, last September.

POLLED SUFFOLK COW, HANDSOME 5TH.—FIG. 506.

JERSEY COW PRIDE OF EASTWOOD (10,297).

THOSE who have read the excellent reports of the Western fairs that have been appearing in our columns, will have noticed the frequent triumphs of the Eastwood Jersey Herd owned by Messrs. Hoover & Co., Columbus, Ohio. Of this fine herd the glory is the cow Pride of Eastwood, an excellent likeness of which we present to our readers at Fig. 510. She has a record of 21 pounds 13 ounces of unsalted butter made in seven days, when four years old, 90 days after calving, which, her owners claim, exceeds any record within their remembrance. During her career at the fairs this Fall she has won, or helped to win, the following prizes:—First prize in the four-year-old class at Minneapolis, Minn. At the same place she was also one of the herd that won the first Jersey herd prize and the second prize at the grand dairy herd competition for $1,000. At the great Chicago Fair, in a class of 23, she carried off the sweepstakes prize as the best dairy cow of any breed or age. She was also one of the first-prize Jersey herd which also bore away the grand dairy prize of $500 and a gold medal valued at $100. At the Illinois State Fair, at Peoria, she again came up a first-prize winner, and shortly afterwards she added to her honors at the great St. Louis Fair by taking the first prize in the four-year-old class and the sweepstakes for cows of any age, besides being one af the first-prize dairy herd. A glance at her splendid udder and fine form will remove all surprise at her triumphant progress.

Dairy Husbandry.

THE DAIRY COW.

HENRY STEWART.

Garget (Mammitis).

GARGET is the common name given to diseases of the udder. The technical name, mammitis, or inflammation of the mammæ or milk glands, includes a number of affections of this organ; garget, ropy milk, bloody milk, diseased or impure milk and whatever may cause disorder of the milk secretions.

A description of the construction of the udder, or rather the mammary glands, of which the cow has four inclosed in one common envelope, all of which we call the udder, will explain more clearly the nature and effect of the various disorders which are commonly included in the term garget. At figure 507 is a representation of a supposed section of the udder made lengthwise through it, from front to rear. At A. is the milk vein so called, but really the abdominal subcutaneous vein, which in cows has an enormous volume. The capillary or ultimate branches of this vein are very numerous, and connect and anastomose, or form a continuous net-work, with the capillary or ultimate branches of the sub-cutaneous abdominal artery, which supplies the mammæ with blood. These capillaries surround and envelop the gland vesicles, shown at figure B. These gland vesicles here figured, appear as magnified four times. Each one of these minute vesicles has the office or function of secreting the milk from the blood supplied to it by the arteries, and the blood which has parted with its quota of milk, then passes to its veins on its way to the lungs and heart for purification and a fresh supply of nutriment from the great thoracic vein which pours into the heart the blood newly formed from the digested food. Thus the milk is as direct a product of the blood as are the muscular tissue and fat, which are deposited in their proper places from the proper vessels of supply. These gland vesicles are clustered in groups around

the lactiferous, or milk-conveying, ducts. much as a bunch of grapes is clustered around the stem upon which they hang from the vine-stalk. They are about 1-200ths of an inch in diameter. Each vesicle contains a number of cells and each cell has a nucleus or central mass; this is shown at fig-

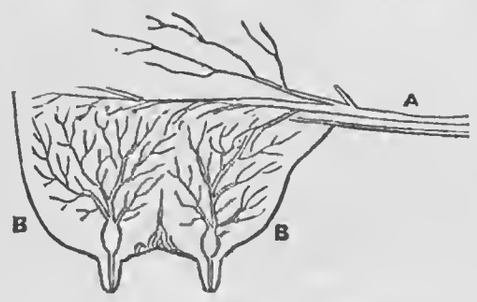


FIG. 507.

ure 509; in which the gland vesicles are highly magnified. These gland cells become infiltrated with fat during the period of milk production and this fat supplies the cream of the milk. The milk ducts converge and run into two, three, and sometimes four large channels which in their turn empty into a larger reservoir situated at the base of the teat (see Fig 507 at B.) These milk ducts are lined with a fine mucous membrane and this itself secretes some portion of the milk which always contains more or less mucus. The teat is formed of, first, this fine mucous membrane, which is very delicate and sensitive, then a thick layer of tissue over which the mucous membrane is doubled; and this tissue is again covered by the skin.

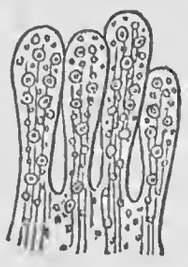


FIG. 508.

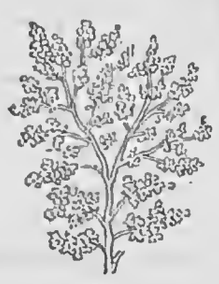


FIG. 509.

Among this tissue are numerous bundles (fasciculi) of muscular fiber, arranged in a circular and a longitudinal manner around the duct or orifice of the teat. At the base of the teat is the sphincter muscle, which operates as an elastic band or ring to close the duct; below this are several other bands of concentric muscular fiber, and around the duct, lengthwise of the teat, are arranged numerous other fibers. A coarse representation of this

FIG. 510.

arrangement is given at figure 510. These muscular fibers, as well as the whole of the structure of the glands, are abundantly supplied with nerves. The whole of the glands is completed in structure by connective tissue which forms the mass of the udder, and this is surrounded and supported by several wide, elastic bands, and held in its place by the skin which covers them.

From this description of the milk glands of the cow and the secretory apparatus can be readily understood its delicate and sensitive character. The large supply of blood which passes through it from the important artery which supplies the whole reproductive apparatus, renders it remarkably sensitive to any disturbances of the circulation, or any accidental local derangement. Inflammation arising from an excessive circulation and supply of blood is accompanied with engorgement of the fine vessels, and blood may pass directly through the secretory glands into the ducts and become mingled with the milk. This explains the phenomenon of bloody milk, or the sensitive mucous membrane abundantly supplied with blood in minute circulating vessels, when in a condition of inflammation from whatever cause, secretes an excessive quantity of mucus, and hence we may have ropy milk, which is milk so largely mixed with mucus as to become adherent and stringy. Or when this ropy, adherent, glutinous mass fills the ducts and no milk can flow through them, the whole secretory function is arrested; the udder becomes hard; the gathered matter is absorbed into the connective tissue, and we have a development of garget or inflamed udder in its worst form.

Unless speedily relieved, the fine secretory cells become obliterated in a growth of hardened tissue, and the gland so far as this may occur, loses permanently its power of producing milk; and we find sometimes one of the glands, that is, a quarter of the udder, with its teat, spoiled for future use and dried up permanently. In bad cases the continued inflammation produces pus which burrows through the tissue, destroying the glands, and finally appears at the surface as an abscess, by which the products, of the inflammation escape. But the damage to the secretory apparatus may have been beyond remedy, because the minute cells of the finer glandular structure have been destroyed. The structure of the teat explains why the cow is able to retain the milk or let it down as is done in the operation of milking. The whole muscular part of the udder is under the control of a system of voluntary nerves. The cow can draw tight the sphincter muscle which closes the outlet of the main lactiferous reservoir at the base of the teat. She can contract the muscular bands which support the whole udder, and so compress the whole arrangement of the ducts as to prevent the flow of milk. Or, when by reason of weakness of the sphincter muscle or by the will of the cow, it is loosened, when the weight of the loaded udder may become irksome to her, the passage is opened for the escape of the milk, the milk is leaked away and lost. Sometimes, again, the fine membrane lining the teat is injured and tumors or lumps are produced and the duct is obstructed, the cause may be easily understood. Or when the skin at the outer orifice of the teat scales off, as it is apt to do, and the milk spatters and spreads instead of flowing with an even stream, we may recognize the cause of the trouble from knowing the precise method in which the teat is constructed. The whole udder is a most wonderful organ, and the dairyman, or the owner of a cow, recognizing this fact, will do well to exercise the greatest care in every way to protect so sensitive and delicate a structure from every chance of injury.

A NEW FIELD FOR A GREAT INDUSTRY.

Cheese Dairying in the Southwest.

SOME years ago, I became satisfied that certain parts of the Southwest possessed great advantages for the manufacture of cheese; but I had been pushing new things with such pertinacity and frequency upon the people with whose interests I have been most completely identified, that I have kept back the business which will be the topic of this article. Lately in a tour through the West I became more than ever impressed with the advantages for cheese-making which the grass belt of East Mississippi and Western Alabama possesses. Determined to see if there was any "weak spot" in the deductions I had made in regard to the matter, I visited Little Falls, Herkimer Co., New York, and made a tour among the cheese-makers there, visiting several of the largest manufactories, and talking with the practical men whom I met. I was overjoyed to discover that not only were my views corroborated; but the cheese-makers in one or two instances gave me some points to show the advantages of the above-named country over the North and West, that had not suggested themselves to me.

"Cheese-making in Mississippi! Why, I never thought of such a thing," was the first exclamation of almost everyone, when I inquired what was thought of making cheese there: then I would draw out my note-book and give a synopsis of my points; and I soon had a convert. I did not find a single dissentient voice among all the cheese-makers I talked with; but the subject was new and no one had thought about it, except here and there an occasional one "wondered" why cheese could not be made profitably in the South. I will give briefly my points just as I submitted them to the cheese-makers;

First. In East Mississippi a cheese factory can be run the year round, because pastures are to be had the year through, in clover, Blue-Grass, etc., for eight to ten months in the year, and Bermuda Grass, Japan Clover, etc., all Summer. At the West—in Michigan, for instance—factories are idle from about Nov. 1 to May. In New York, the matter is a little better; but at the best, the capital involved in a factory and the men working in it are idle from one-half to one-third of the year. Is it necessary to say anything on the advantages of being able to make cheese all the year instead of only for six or eight months?

Second. In the Southwest there is no competition, and there is a home market. If there is a cheese manufactory in the Southwest, I don't know of it; I don't believe there is one south of the Ohio River. I think I may safely assert that there is not one in the States of Alabama, Mississippi, or Louisiana. The cost of transportation and the charges of many middle-men are saved. The merchants would order direct; and advertising, commissions, etc., would be saved. A stock would never have to be carried any time, because there would be no competition, nor would it have to be sold at a sacrifice because the owner could not afford to carry it.

Third. A higher quality of cheese could be made because the milk would be grass-flavored the year round. This would produce an evenness of quality, which would give a cheese-maker a reputation and a better price for his product, as well as a readier sale.

Fourth. There would be a more even supply of milk, thus giving an opportunity for a larger product of cheese. At the North and West, as is well known, by August or earlier, the supply of milk falls off about one-third, owing to failing pastures, and soiling with green corn and other devices has to be resorted to, to even maintain that; in the South, Bermuda *never* fails, except by reason of cold weather, and in its season it is superior even to Blue Grass. Besides Bermuda, the South can have Johnson Grass—claimed by some to even surpass Bermuda, Japan Clover and others. Moreover, in the North and West hot weather and flies affect the yield of milk very much, and, strange as it may seem, these do not sensibly affect cattle in the prairie region of Mississippi, it being well known that a cow can be milked there any time of the day; the molestation from flies, mosquitoes and gnats being incomparably less there than at the North and West. Then again, few or no cheeses would be lost by skippers; fresh meats receive little injury from "fly-blowing" there.

Fifth. In the country in question the cost of fuel to keep milk at the proper temperature would be less than at the North and West, for it is cheaper. Of course, this applies only to the seasons of early Spring late Fall and Winter.

Sixth. Building material is somewhat cheaper in Mississippi; this, although not much, is something; and not to be unmentioned in any attempt at a thorough exposition of the advantages of the South.

Seventh. A great advantage lies in the fact that the immensely fertile prairie lands of East Mississippi can be bought at from $5 to $15 per acre. There are no finer grass lands on the continent. Land once in grass, is in grass there for a life-time. Clover needs no re-seeding. The pastures are green the year round. North and West lands are worth (I mean in the choice cheese-making regions) from $50 to $150 per acre, and cows must be fed during Winter, at considerable cost. Is it necessary to elaborate this vast advantage?

Eighth. The evenness of temperature in Summer facilitates the "curing" of the cheeses. From May to November in the South, the heat is even enough to let the curing process proceed uninterruptedly and without artifical heat, thus enabling parties to promptly "realize" on their product. North and West the variation of temperature at times hinders "curing."

Ninth. Another very considerable item is, that "scrub," or common cows, can be bought at $10 to $15 each. These, crossed by Jersey or Ayrshire bulls, will give very superior milch cows; and make the cost of fine milch-cows less than at the North and West. The skim-milk cheeses made from these grades would be superior to that grade of cheese made from the product of Northern stock. The day is coming, when cream cheeses, made from the grade Jerseys and Ayrshires at the South, are going to lead the market.

All along, perhaps the reader is wondering how we are going to cool off our milk to the proper temperature. No trouble at all. In the first place, our nights are invariably cool—a great help. In the next place, we can get cool water from our springs, or from artesian wells 500 or more feet deep, or we can get an even temperature of 62 degrees in our sub-earth dairies in the rotten limestone rock. Readers may find something new in these thoughts; but the South is seeking and welcoming new things. Thousands of acres are being seeded to the grasses. We are beginning to make hay and raise cattle and sheep. We are beginning to raise our own pork. We are introducing peppermint from which to distil oil. We are going into silk-raising. We can raise three crops of cocoons per annum. We will soon be raising jute for our cotton, bagging, etc., and have a manufactory in New Orleans. We are beginning to raise the castor bean. Our cotton manufactories and woolen mills are rapidly increasing. We shall soon be making our own shoes, harness, and leather. Our coal and iron mines are being rapidly developed. In fine, we are on the "high road" to rapid, substantial, enduring progress and development.

Mobile Co., Ala. M. B. HILLYARD.

Veterinary.

TREATMENT OF PUERPERAL FEVER IN A COW.

I HAVE read Mr. Stewart's articles on "The Dairy Cow," with much interest, and especially the article on "Care of Cows in Calving," published some weeks since, and, although it may appear like egotism for me to attempt to add anything to what he has written on the subject, I have thought perhaps an experience I recently had, in a case of an attack of puerperal, or milk fever, and the result of a course of treatment entirely different from that recommended by him, might interest readers of the RURAL.

I have a very choice cow that did not come in until about the last of June. I think perhaps there would have been no trouble with her, were it not that the morning on which she calved it was cool and rainy and she became thoroughly soaked. After dropping her calf I put her in the stable, and as I always do in such cases, fastened her in the stanchions, to prevent her from eating the afterbirth. Right here I think is where I made my mistake. Had I rubbed her thoroughly until she had become warm and dry, I doubt whether any ill effects would have followed; but from being wet and then confined so that she had no chance for any exercise, although she ate readily of some feed I gave her; yet after standing in the stable for four or five hours she was taken with a violent chill, and suddenly became so weak that it was with difficulty we could get her on her legs after loosening her from the stanchions.

I began the treatment by rubbing her smartly, and especially her limbs which seemed very cold. This I continued for about an hour, after which we drenched her with two heaping tablespoonfuls of cayenne pepper in about a pint of sweet milk.

This was recommended by a neighbor of mine, a man who has had many years' experience in the care of cows, and keeps a dairy of 40 cows or thereabouts. He claims that in all his experience he has never found anything that had so good an effect in such cases as the free use of cayenne pepper.

Be that as it may, the effect was all that could be desired in this case, the cow becoming naturally warm after a little time, and although she was very weak for a day or two, and, as a natural result of so great a shock of the system, the flow of milk was much decreased for a few days from what it would otherwise have been, she has since the first few days after calving given her ordinary mess of milk as compared with previous years.

Since I began writing the above communication an incident has occurred illustrating how prone we are to believe *our way* the only correct way, or, even if the same or equally good results are reached by some other means, to still consider that ours is *the best way*. The incident, which I think worth relating, is this. An uncle of mine was visiting me, and I told him about the case of this cow, and my treatment of her, and its result. He admitted that he thought I was very fortunate in saving her, "But", said he, "I think it would have been better if you had used saltpeter, instead of cayenne pepper," and he proceeded to give the result of his treatment of a case by the use of that remedy.

Farm Topics.

THE TRUTH ABOUT IT.

THE object of articles under this heading is not so much to deal with "humbugs" as with the many unconscious errors that creep into the methods of daily country routine life.—EDS.]

MORE ABOUT ENSILAGE.

HENRY STEWART.

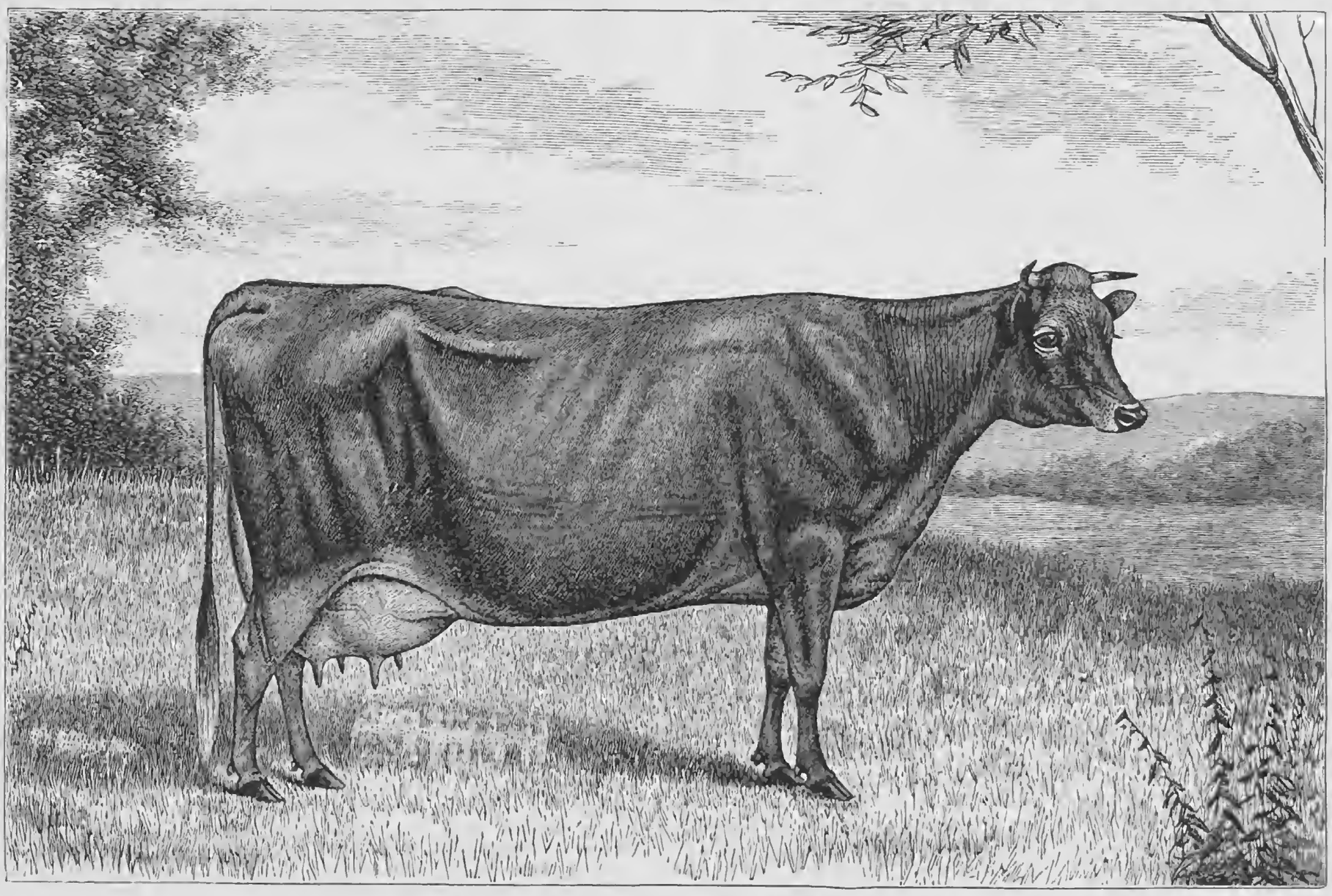
Now that Dr. Bailey has subsided, his dropped mantle has been taken up by Mr. Mills, or I might say that Dr. Bailey has passed over his hat to Mr Mills as a token that the latter gentleman has far outdone him in his stories about ensilage. A statement is going the rounds of the papers which is calculated to strike the populace with wonder and give them an idea that farming under "the new dispensation," as the disciples of the Bailey school of ensilage term it, is a more rapid road to wealth than any other known speculation. The statement is to the effect that Mr. Mills fed last year, from 10 acres of corn fodder, 140 animals, cows and horses, for seven months. The past Summer he has fed 100 cattle, mostly milch cows, for six weeks, on five acres of oats. Further, he believes that he can keep 150 cattle from now until the corn crop of 1882 is ready, that is eleven months, on the corn fodder cut from 25 acres. All this is copied verbatim from a prominent newspaper which has a wide circulation, and is copied from some other source not acknowledged.

Now let us figure up a little upon what Mr. Mills has done, leaving what he believes he can do out of the question. One hundred and forty head of cattle fed seven months are equal to one head for 980 months; this being from 10 acres it is equivalent to one head fed 98 months, or 2,940 days, from one acre: 2,940 days' feeding at 80 pounds per day is equal to 235,200 pounds, or 117 tons 1,200 pounds as the yield from one acre. This is pretty good for a corn crop and in an excessively dry season, too; and we may wait with wonder for the next man's story. But this king plant, corn, is "called up" by the oats, which for oats "goes him" at least "one better" quite recklessly. One hundred cattle fed for six weeks, or 42 days, are equal to one fed for 4,200 days. This from five acres is equal to 840 days from one acre of oats; 840 days at 80 pounds per day are equal to 67,200 pounds, or 33 tons 1,200 pounds of oats per acre. What other oats can hold up their heads to these oats? These should be the true "Ennobled" oats! Now, I should be sorry to doubt the *facts* above

given, although the figures do push them pretty hard.

I have claimed to have done something in growing corn myself, and some persons have in a sort of high moral way repudiated in the coldest and most unsympathizing manner the intimation that they were the authors of a statement (made by me) that it was easy to grow 100 bushels of corn per acre. But as *I have* done it; and the editor of the RURAL NEW-YORKER has done it; and a whole lot of farmers' boys have done it, it must be a very modest man who will say that it cannot easily be done. But let that pass. What will those gentlemen — my friend E. W. S. and Prof. Roberts—say about this corn crop of 117 tons 1,200 pounds per acre grown by Mr. Mills? It must, of course, have been grown, because he fed it, and cattle cannot fill their bellies on stories, however big and inflated they may be. A plain farmer may realize what this crop amounts to when we figure up that it is three - quarters of a ton, nearly, from a square rod of 252¼ square feet, or 16½ feet square; that is, six pounds to each square foot. But Mr. Mills, of course, has that attribute which was possessed by the Father of his Country when he was a little boy and amused himself with his little hatchet among the cherry trees, and so we must believe this story, unless a wicked printer has put a wrong figure in it.

Now the truth about this ensilage business is told by Mr. Lawes so far as regards the value of the fodder. As regards the yield, every farmer can easily judge for himself; the real value of the process is in preserving the fodder in a succulent condition without losing any of the value of it in drying. Grass is better than hay, green oats and corn are better than dried straw or fodder. Why it should be so, when in drying only the water is lost, it is difficult to say. But we know it is so. Then if we can preserve the green fodder in its fresh condition, even with a loss of some of its nutritive value, we gain a good deal. The process is of such certain value that persons should not be led into disparaging it by these big stories. No truth is shamed by the persons who bring it into discredit by exaggeration and vainglorious boasting of what they have done or expect to do. I believe the process will turn out to be the very thing required to make soiling cattle fully effective, the whole year round; and if so, the key to cheap feeding and rich fertilizing of the soil has been found.



JERSEY COW, PRIDE OF EASTWOOD, (10,299.)—SEE PAGE 745—FIG. 511.

VARIOUS TOPICS.

B. F. JOHNSON.

PERHAPS there is no more striking instance of how readily agricultural implement makers and inventors consult the wants and wishes of farmers in respect to new tools and the improvement of old ones, than the suddenness with which all the self-binding harvester manufacturers threw away their wire attachments and adopted those using twine. I have sometimes thought inventors were, after all, the first and foremost in improved farm practice, for as soon as, and sometimes before, the need of new tools and implements has been made manifest to a very few only, the inventors had them ready at hand. When, in consequence of several wet seasons in succession, many fields grew up to have a sward of weeds and coarse grasses no common single plow could master, the sulky or riding plow, capable of almost any work, came to the rescue; and when the wheat acreage increased beyond the power of the farm and surplus labor of the country to harvest it, the self-binder appeared on the scene. Having witnessed all this, I am prepared for the cotton picker and the corn shucker, and almost any other imagined implement there is a loud call for.

REFERRING to the wheat crop of the East, which in many places has suffered very much from continued heat and drought, as that of the Mississippi Valley did from the same causes this time last year, it is gratifying to be able to report that the continued, and, part of the time, copious rains since the 27th of September have brought the crop forward in a most gratifying and surprising way. Perhaps late seeding has been interfered with and in some cases prevented, for it is rare that for this latitude (40 degrees) and time (October 14) wheat sown after, makes a paying crop. But perhaps the most gratifying circumstance to be mentioned at this time is the probable considerable, if not general, destruction of the chinch bugs, which were so incredibly numerous a few weeks ago that they thickened the air, resembling a thin cloud of smoke for three or four warm afternoons. If the present multitudes of chinch bugs disappear all of a sudden, and from what appears to be insufficient causes, it will be repeating nothing more than the experience of the past on several occasions —whereat we shall heartily rejoice.

BUT if the last week in October or the first week in November is two or three weeks too late to sow wheat in the middle latitudes, it is not too late to sow rye, and therefore where land has been prepared for wheat and the copious rains have prevented the use of the drill, rye can be substituted for wheat with reasonable certainty of a good crop, when sown as late as the last of November. Late in the month of March, 1881, I had the opportunity to see many thousand acres of wheat, the very feeble condition of which prefigured the failure of the crop at harvest; but in every case where I encountered rye my eyes were relieved and refreshed with a mass of living green. To be sure, last Fall was a cold and dry one and the Winter very severe, and the present Autumn so far, for the West, has been warm and wet, but rye is so hardy a cereal it is reasonable to suppose its ability to make a crop where wheat fails will insure the same thing under conditions favorable to wheat.

THERE is a constant loud call from the South for varieties of what are called rust-proof wheat and oats. That there should be a demand for them is reasonable enough; but it is not so that it should be made on the North. The Southern States belong to the category of warm and dry, if not hot, climates, and the cereals suited to those sections should be from climates of a similar character; say the countries lying along the south shores of the Mediterranean Sea in Northern Africa—Morocco, Algiers, Tunis and Tripoli. The cereals, in common with all plants, live and develop under a certain range of temperature, flourishing best at a certain mean. When this is exceeded on the one side or the other, growth is arrested, fungus in some form appears, and the plants die. This is what happens where cereals, differentiated to moderate temperatures, are exposed to the intense heat of the South: the growth of the plant is arrested, and rust or fungus steps in, and the result is as we see.

IF the Chief of the Department of Agriculture, in looking about for seeds for distribution, would keep in mind the needs of the South for varieties of wheat, oats, barley and rye, and, I may add, Indian corn, suited to the peculiar soils and hot Summer seasons, and consult the characteristics of the cereal crops of the countries named above, it is probable some very valuable new varieties might be obtained. Many of the wheats of Northern Africa are remarkably hard, flinty and nitrogenous; others soft and starchy, while all, or nearly all, are so tender they will submit to nothing like severe frosts. Then there are the cereals of the high table lands of Mexico and Central America. Doubtless among those might be found many which would be found to be rust-proof in the South, that is, so well endured to a hot climate, that the process of growth would go on under a sustained high temperature.

IT has been generally supposed that Indian corn was so much of a tropical plant that Northern varieties, especially those large ones of the Mississippi Valley, would stand any reasonable amount of heat and drought both in the upper and lower cotton belts. But the experience of this year has corrected this notion, for it is found that in Louisiana the Creole (that is the native corn) has produced fair crops under conditions of heat and drought where corn, the product of Northern seed, has wholly failed. This admits of the reasonableness of the idea that there are varieties in existence capable of withstanding an unusual amount of drought and that at the same time will attain maturity under a comparatively low Summer temperature, while there are others, which, having acquired the tendency to make strong and large root growth, will yield good crops on comparatively poor soils.

PROFESSOR BLOUNT'S WORK AT THE COLORADO STATE COLLEGE.

THE interests of agriculture demand careful experimentation. Some men, either at their own or the State's expense, must give up farming for profit and devote their best time and talent to a work which shall produce its best results for coming generations. Such men deserve commendation, inasmuch as what they do is done not so much for self and self-interest as for the public and public interest.

It is hardly necessary to say to RURAL readers that Professor Blount, of Colorado, is one of the foremost experimenters of the day in agriculture, and the work he is doing for Colorado and the country in general should be gratefully recognized. With the necessary working facilities furnished by the State he is enabled to carry on a series of experiments as to methods, varieties, treatment of soil, etc., etc., which are greatly to his credit, and, yet more, to the advantage of the State in which he lives. His experiments in wheat culture have, perhaps, been the most interesting, as they probably are destined to be the most profitable to the farmers of the West. He has originated new varieties; has shown that in well-prepared land too much seed is sown to the acre; that Winter wheats will do well in Colorado, and that thorough cultivation is the great secret of success in farming. Professor Blount expects to perfect 15 new hybrids, or crosses, in wheat next year, and, together with the 124 varieties already produced, we may expect an interesting report another year. Any improvement in variety or cultivation of wheat is of great importance to the vast wheat-producing sections of the country. In his wheat experiments he has sown at the rate of 50, 40, 30, 20 and 15 pounds to the acre, and he concludes that 30 pounds to the acre, when the soil is well tilled, will produce as much grain as 90 pounds to the acre when the soil is poorly tilled. Here is an important item, and if it be true, as it doubtless is, that from a-half to three-quarters of a bushel are wasted, as he says, on every acre, estimating the total acreage to wheat at the low figure of 32,000,000 acres, in a single season 16,000,000 bushels, at the least calculation worth more than as many dollars, could be saved and devoted to a better purpose.

The potato blight has been claiming Mr. Blount's attention, and it is his opinion that the disease first develops itself in the form of a black spot at the base of the stalk and that the black line extends downward to the root and through the potato. He has, in all his investigations, found no insects, and believes they have nothing to do with the blight, but the cause is probably atmospherical. He thinks a remedy can easily be discovered, though the exact cause for the disease it may be difficult to determine. His investigations have been extended to almost every crop produced. He has grown flax, hemp, jute, and rice successfully, and even sweet potatoes have been made to produce well. Twenty-one varieties of tame grasses are under test, all sorts of forest trees are being cultivated, new varieties of fruits are being originated and tested; in short, he is doing a comprehensive and thorough work and the results thereof will tell.

Aside from the actual advantage which will accrue from his experiments, *per se*, his position as Professor of Experimental Agriculture and Mechanic Arts in the Colorado State College enables him to impart such instruction to his students as will encourage them to continue the work, and they will carry with them into their field of labor a practical knowledge of how to cultivate the soil, a lofty ambition to excel therein, and an ability to combine theory and practice in such proportions as to bring about the best results. Such is a bare outline of what Professor Blount is doing to exalt and ennoble and render more profitable the vocation of the farmer.

Field Crops.

RAISING FLAX.

THE beginning of flax culture in Kansas dates back to about the year 1870. Previous to that time the principal crop of small grain had been Fall wheat, but the yield of that cereal was so uncertain and the crop was attended with so many failures that its cultivation gradually ceased in this part of the State. The introduction of flax supplied the place of wheat and the success attending its cultivation soon led to a rapid increase in the area sown to it and it now occupies a prominent rank in our industries both in regard to a number of acres sown and remunerative returns for the labor expended.

The soil of our prairies is a rich, black

loam from one-and-a-half to three feet in depth. It contains a small percentage of sand which not only gives it warmth but accounts for its loose and mellow character and the ease with which it can be pulverized and prepared for crops. It appears to contain all the elements necessary to the successful growing of flax.

In selecting ground for this crop, that upon which corn was grown the previous year is in every respect suitable. The first step in preparing the ground is a thorough plowing. I then go over it with a harrow in order to level and pulverize the soil which is then ready for seeding. I have practiced both drilling and broadcast sowing and both methods have proved equally successful; but, as a general rule, I would recommend the use of the drill to all who are not experienced broadcast sowers. If the seeding has been done with a drill I then go over the ground with a heavy roller, which completes the process of pulverizing and packing the soil and leaves the ground smooth and level and in proper condition for reaping. If the seeding is done by broadcast sowing, it is then necessary to go over the ground with a harrow or brush to cover the seed: then finish up with the roller. The right time for seeding in this latitude seems to be the latter part of April and not later than the first week of May. The proper quantity of seed to sow per acre is about three pecks.

In harvesting the crop I use the Improved Buckeye Reaper, with the table self-rake, which throws the flax off on the ground in small bunches or gavels, in which condition it is left to dry or cure, which usually takes from four to six days: if the weather should be wet or unfavorable it will be necessary to turn the gavels over with a fork, or, what is better still, set the gavels on end in small bunches with the heads up (just as Buckwheat is set up) in which condition it will stand through repeated rains and then dry out without injury to the grain. The proper stage of ripeness when ready for reaping, is when the bolls assume a rusty-brown color, and it matters not if the leaves and stalks are still green then is the proper time to reap it.

When the gavels have become sufficiently dried out or cured, it is then ready either for thrashing immediately from the field, or for stacking to be afterwards thrashed at leisure. I have usually practiced the latter plan for the reason that to keep the machine running the former requires a strong force of men and teams, that is not always available. The latter plan requires but a small force to stack the grain, which can afterwards be thrashed out at one's convenience with a small force of "help." I usually let the grain remain in the stack from six to ten weeks before thrashing. The yield of straw after thrashing is usually from one-third to one-half ton per acre. This I carefully stack at the time of thrashing and feed it to my horses and cattle during the Winter. It makes a good substitute for hay; stock are very fond of it and eat it with a relish; and it apparently has all the nutritive qualities of the best of hay. The area of my flax crops has ranged from 40 to 65 acres; this year it amounted to 50 acres. The average yield per acre for all previous years has been from 11 to 12 bushels; but this year, in consequence of the prevailing drought, my crop only averaged six bushels per acre—barely half a crop, and I might remark that a half crop of all other kinds of grain as well as hay will be the result in Kansas this year.

I have usually marketed my crop of flax during the month of October. The average price has been about $1 per bushel; this year the present market price is $1.25. I have found flax culture one of the most profitable industries that I could engage in; and flax now occupies an important place among the agricultural products of this part of the country. The soil and climate here seem well adapted to its production; it is entirely exempt from the ravages of the chinch bugs that damage other crops more or less; its production is attended with less labor than that of any of the cereals and in the routine of crops it plays an important part. For instance, there is no better ground for flax than that on which corn has grown the previous year; the flax then leaves the ground clean and in fine condition either for wheat or rye or for oats or corn the following Spring, which makes a very desirable rotation for crops. LEROY SAXON.

Atchison Co., Kan.

A POTATO EXPERIMENT.

IRA. J. BLACKWELL.

IN the following statement I give the cost of raising one acre of potatoes, the size of the pieces, the yield of 16 different varieties, and the order in which they came to maturity. The land was cropped with corn last year. The potatoes were planted from April 12 to 16, all the work not having been done on one day:

The acre was manured with 550 pounds of Mapes Potato Manure, applied in furrow with potatoes, value	$14.57
1,000 lbs. potash salts, sown broadcast	9.00
7 loads barnyard manure, spread on land before plowing	10.0
Hauling manure and applying fertilizers	2.00
Planting, one day for teams and three men	5.00
11 bush. of potatoes for planting	14.45
May 23, ½ day cultivating, going twice to row	.50
" 28, plowing and cultivating, going four times to row	.75
6 days' hoeing, at $1.25 per day	7.50
June 1, 1½ lb. London-purple	.25
2 bush. plaster	.70
Applying plaster and purple, 1 day	1.25
" 14, ½ day cultivating	.50
" 20, ½ " "	.50
" 22, 1 " pulling weeds	1.25
1½ lb. London-purple and 3 bush. plaster	1.23
1 day applying	1.25
July 8, ½ lb. purple, 1 bush. plaster	.42
" 23, 2 men digging potatoes 1 day	2.50
team ½ day	1.00
" 25, 2 men and boy ½ day digging, and team	2.25
" 26, 2 men and boy and team ½ day digging	2.25
Aug. 4, 2 men ½ day and team ½ day digging	1.70
Total	$80.85

No rent is here charged for the land, as I calculate that the succeeding wheat crop will be benefited by the manure enough to pay the rent of the land.

Order of ripening.	Am't of seed.		Rows.	Yield. bush
Early Ohio	1½ bus.	small seed.	4¾	11
Bliss's Triumph	½ "	" "	⅝	2
Early Vermont	1 "	large "	4	12
King of the Earlies	2 "	small "	12	38
Beauty of Hebron	3¼ "	medium "	16	50
Pride of America	½ "	large "	1¾	5
Magnum Bonum	1 "	" "	5½	12
Queen of the Valley	1 lb.	" "	30 ft.	¼
Adirondac	1 "	small "	30 "	¾
Brownell's Beauty	½ bus.	" "	1 row.	1½
St. Patrick	1 "	" "	4 "	12
Burbank's	½ "	" "	1½ "	4
Peerless	½ "	" "	1 "	1½
Dunmore	½ "	" "	1¼ "	4
Mammoth Pearl	½ "	large "	1½ "	4
Bliss's Imp. Peachblow	½ "	small "	1 "	1½
			159	

Thus at the time of digging the yield was 159 bushels of tubers, costing $80.85, or about one cent per bushel more than it would have cost to buy the potatoes, counting nothing for the value of the new varieties over the old ones. It is proper to state that no rain fell on the potatoes after July. On July 4th three-quarters of an inch of rain fell, and on the 11th one-sixteenth of an inch, followed on the 14th by one of the driest days, the wind blowing hard from the northwest and killing the leaves on the vines. This will account for the light yield of the later varieties.

I am now positive that the Burbank and the St. Patrick did originate with different parties, although they look very much alike in growth of tuber and vine, and the time of ripening is the same. The St. Patrick will rank as first quality; the Burbank, second. Both are good croppers. The Magnum Bonums were uniformly large, and it is a desirable potato. The Beauty of Hebron is first this year for size, productiveness and quality. I raised 17 pounds of the White Elephant from two ounces of seed—nice potatoes so far as tested, though not high enough in quality, as they cook a little heavy. They may do better hereafter.

Pride of America is the only variety that has rotted any, and this has not rotted badly; otherwise it is a nice, smooth, desirable variety. Mammoth Pearl will take a front rank, being of good form, running large, and cooking dry and fine. Queen of the Valley did well, considering how the dry weather hurt it. Adirondac has the appearance of the old Peachblow; it did pretty well, being late. Early Ohio, to get a crop, must be planted close, as it will only turn a few to the hill of even-sized tubers, that are among the earliest, and cook dry and mealy as soon as they are large enough to dig.

The potatoes were plowed under every third furrow and planted about ten inches apart in the furrows, the furrows being also ten inches apart. I intend to put on double the quantity of barnyard manure next time, and drop the potatoes six to eight inches in the row. I shall harrow as soon as the potatoes come up, first turning a ridge over the vines, thus saving the cost of hoeing, and tending the crop better. We had a wet spell at the time this should have been done this year and it took all the profit for the hoeing. Among all the potatoes that I have a knowledge of the Ohio, King of the Earlies, Beauty of Hebron, Magnum Bonum, Mammoth Pearl and St. Patrick I think the best.

Titusville, N. J.

TOBACCO-GROWING NOTES.

A TOBACCO barn should stand in a sheltered location or where it is not exposed to driving storms. The usual shape of these buildings being long, narrow and high, they are more liable to injury from heavy gales of wind than most other outbuildings. It is also preferable that they extend north and south rather than east and west. This applies to localities where the prevailing winds are northerly.

IN times of dry weather, after tobacco has become nearly or quite cured, the leaves are very brittle and if handled or in any way disturbed while in that condition, the soundness of the leaves is impaired. For this reason great care should be exercised that strong winds should not be allowed to blow directly upon the plants when dry, as it will always cause damage to the crop. A tobacco barn should be so made that strong winds may be excluded when desired, or so that it can be amply ventilated when the condition of the weather is damp and "muggy," which is otherwise liable to cause damage from "pole-sweat."

TOBACCO-curing barns are usually made to contain three, four or five tiers of hanging plants according to their hight, with a half tier extending through the gable end of the building and supported by purline plates. The barn for three tiers is preferable, although the cost of a building to contain a given number of acres is more than when made to hold four or five tiers of plants. The following are the objections to high tobacco-curing barns: 1st. The labor of harvesting a crop is increased with the hight the plants are hung from the ground. 2d. The quality of the tobacco is not so good when cured in the upper tiers of a high barn, probably because it cures too rapidly there. 3d. The barn itself is more liable to receive damage from high winds. Growers who contemplate building curing barns will do well to consider these points.

IT is not safe to judge of the profits of tobacco growing from the results of a single year's crop. It must be remembered that once in a period of five or six years a crop is quite certain to receive serious damage from the elements, which tends to reduce the profits of that year's crop, if it does not result in positive loss when all things are taken into account. Storms of wind or hail sometimes cause almost entire ruin to a crop while standing in the field, and I have myself, within the past fortnight, suffered heavy loss from the result of a terrific cyclone which completely demolished a tobacco barn filled with a recently harvested crop of tobacco, which was, of course, almost destroyed. The profit from one crop may seem almost fabulous, while the following year may result in little or no gain owing to unfavorable weather. G. A. G. JR.

Elmira, N. Y.

Sheep Husbandry.

THE OXFORDSHIRE DOWN SHEEP.

THE OXFORDSHIRE DOWN is a comparatively newly-established breed which has lately been gaining a high reputation on this and the other side of the Atlantic. In 1838 Mr. J. T. Twynam, of Whitechurch, Hampshire, the chief originator of the breed, describing its origin, in the Farmers' Magazine, said that six or seven years before he had introduced an improved Cotswold ram among a few Hampshire Down ewes and the progeny soon convinced him of their vast superiority. He continued his efforts to form the breed, but his plan was in direct opposition to the general opinion respecting crossing, for, instead of going back, after one cross, to the original breed on either side, he used half-bred rams with half-bred ewes—a practice he found condemned by three-fourths of the old school of breeders. In 1857 the breed received its present distinctive name; but it was not until 1862 that it was awarded a separate class at the English fairs. In addition to its strain of South Down blood through the Hampshire Down, the Oxford Down also received a draft directly from crossing South Down ewes with Cotswold rams, the progeny being used with crosses of the Cotswold and Hampshire Down in the formation of the breed. To produce large size, however, the latter cross was that chiefly employed. The progeny was a sheep heavier than the Hampshire Down and more closely resembling the Cotswold in size and fleece. The wool, however, is finer and firmer than that of the Cotswold and from five to eight inches long. Of the various Down breeds the Oxfordshire alone is classed among the long-wools.

A sheep of this breed has a head a good deal like that of a Cotswold, with a tuft on the forehead, but the great prepotency of its remote ancestor, the South Down, is manifested by the dark color of its face and legs, a characteristic transmitted through its immediate ancestor, the Hampshire Down, which was formed, 75 years ago, by a cross between the South Down and a white-faced, horned sheep, a native of Hampshire and the adjacent districts. The Oxford Downs are nearly as large as the other long-wool breeds, the Cotswold and Leicester, and yield nearly the same quantity of wool, which is thick-set and somewhat curly, and in great demand for the manufacture of worsted. They have a long barrel, short legs, and yield a large quantity of mutton, which, when under two years old, is claimed to be better than even South Down, though inferior to it when over two years. It is the excellent quality of their meat rather than the high value of their fleece, that is giving them a "boom" just now in England, for prime mutton there is now profitably high-priced and is likely to continue so, while the great increase in the growth of wool in Australia, New Zealand and South America, and the vast scope for producing it there on land of nominal value, are pretty sure to keep down the price of wool in Great Britain.

Oxford Downs were first introduced into this country by R. S. Fay, of Massachusetts, and Hon. W. C. Rives, of Virginia. The former found them of good constitution and better adapted than South Downs to rough pastures. In England they are found to thrive on wet soils on which neither the Cotswold nor South Down could get along well. They are very hardy, active and excellent foragers, requiring little purchased food and standing winter exposure well—at any rate in a climate like that of England, destitute of extreme severity. The cut, Fig. 511, re-engraved from the Agricultural Gazette (Eng.), represents a very fine ram of this breed owned by Mr. Charles Howard, one of the oldest and most extensive breeders of Oxfordshire Downs.

The Vineyard.

SEEDLINGS FROM HYBRID GRAPES.

THERE seems to be some inherent difficulties, such as the violation of some law of nature, pertaining to plant life, in our attempts to obtain improved grapes from hybrid plants. I have grown a good many of these hybrid seedlings, and seen a good many more originated by other horticulturists, and I do not now know of a seedling of much practical value from a hybrid grape. There seems to be little known upon the topic, and few observations of experiments recorded, but what positive knowledge we have is not in favor of hopeful results from this class of seedlings. Of course, there is no sterility in the case under consideration; but such seedling grapes are usually of feeble habit, and when one does grow vigorously, it seemingly discards its dual origin, and goes back to the side of the stronger parent. I have grown, and seen many seedlings of the Delware; not one of them approaches the parent in the quality of its fruit, and most of them are imperfect in their reproductive organs. A like rule seems to hold good for all vines of this class. As near, then, as we can arrive at the matter, it is the tendency to revert that prevents success or improvement in these seedlings, and all hybridists and propagators should carefully note this law of nature. This tendency to reversion seems to be greater in hybrid than in unmixed plants. Improvements are usually gained by slow processes, the change in hybrids is too sudden, and seems to violate nature's methods. D. S. M.

Miscellaneous.

RURAL BRIEFLETS.

WE are glad that more attention is being paid to the improvement of the watermelon which is so unlike all other fruits and which when grown in perfection is scarcely excelled by any other. But this can rarely be said. Farmers have hitherto looked too much upon a watermelon as being a watermelon an they have been correspondingly indifferent as to the variety planted. During the past season we raised six different kinds, and two of these—the one below noted and Cuban Queen—were so superior to the well-known Black Spanish and Carolina that we should never cultivate the latter again if the others could be obtained.

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WHITEWASH the hen-houses. Clear out and put in order the stables and cattle sheds. Attend to all painting at this season of the year: there is no better time. Cut out the old canes of blackberries and raspberries. Prune grape-vines. Bank up celery. Weed the asparagus beds and spread salt and manure after the first hard frost. Prune currant bushes. Prepare the covering for strawberry beds. Collect bean poles and pea brush and store in a dry place. Provide lime for Winter use. Give the cellar a thorough overhauling, cleansing and whitewashing. Construct frames for vegetables, roots and plants. Collect seeds of nut-bearing, late peach and ornamental trees and shrubs; mix with sand, place in boxes and bury the boxes in well-drained soil. Raspberries, blackberries, currants and gooseberries may still be planted, better, indeed, than in the Spring. Hill the earth about the newly-set plants somewhat and cover each with a shovelful of coarse manure. It is a good time to plant grape cuttings. Set them at an angle in trenches and pack the earth firmly about them. Let the cuttings include two joints and place them at such a depth that the upper end of the cutting shall be one inch out of the ground. Then cover with hay or straw.....

ALL who admire the incomparable beauty of beds of spring-blooming bulbs should now prepare the ground and plant them. Is there anything in the floral world more gratifying than the brilliant colors of hyacinths and tulips blooming in all their brilliancy while yet the leaves of trees and shrubs have not unfolded? Crocuses, crown imperials, anemones, oxalises, ranunculuses had better be left until Spring.....

IN selecting hyacinths choose every color that any trustworthy catalogue mentions—dark and light blue, rose, red, deep red, white and yellow.....

IN selecting tulips choose those which will insure the longest season of bloom. The earliest are the Duc Van Thols-crimson, red, white and yellow, growing about six inches

high. These may be planted in pots and forced in the house. The Tournesols come next, bearing large pæony-like double flowers which, though less showy and desirable to our taste than the single kinds, last a longer time and serve to connect one class with another. Then follow the Single Early Tulips; then the Parrots, the dashiest of flowers; and finally the Late or Show Tulips, the showiest and everywhere the most prized of all. They are placed in three sub-classes viz., Bizarres which have a yellow ground marked with other colors; Bybloems, white ground marked with violet and purple; and Roses, white ground marked, splashed or variegated with cherry, roso, etc.....

THE preparation of soil for tulips and hyacinths is very simple. Let it be mellow, deep and fairly rich. Set the bulbs any time before the ground freezes, three or four inches deep. Instead of removing them after they have bloomed, as many do, to be replaced in the Autumn, we set bedding plants between the tulips and hyacinths, cutting off and removing their leaves as soon as they begin to decay. Hyacinths give their handsomest blooms the first year. But large, heavy bulbs will bloom satisfactorily for from three to four years, though each succeeding year the racemes bear fewer flowers Tulips, on the other hand, continue to multiply from year to year and our experience has been that they had better remain undisturbed for three years. Then they may be dug up, separated and replanted, again to remain three years.....

NEARLY all of the so-called Spring bulbs may be grown in the conservatory or window garden. For this purpose, Fall catalogues give ample direction.....

THE wash for trees that suits us as well as any, is one made of quick-lime, sulphur and whale-oil soap. The quantities need not be given since it is only necessary that the wash should be of about the same consistency as the lime wash applied to walls, or a little thicker. A tablespoonful of flour of sulphur for every 25 trees suffices, and the soap should be cut up in bits and with the sulphur be added to the quick-lime before it is slaked. As we have often stated before, a small quantity of lamp black or dark-colored mineral paint, which may be purchased at any grocery store for five cents the pound, will color the wash so as closely to imitate the color of the bark. As a protection against rabbits and mice this wash is excellent, as we know from experience.

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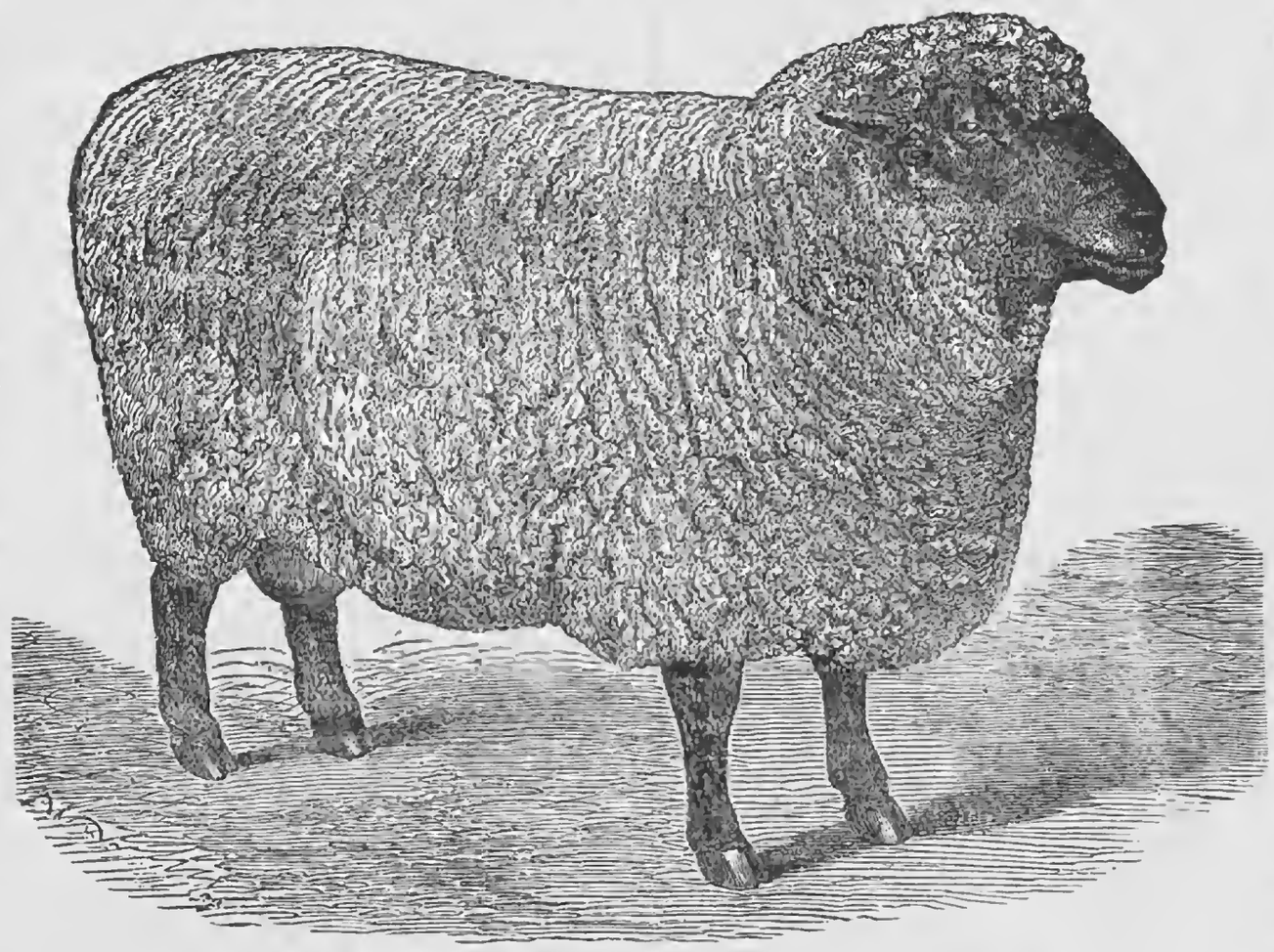
SPEAKING of watermelons, we have yet to speak of one which is, we think, the best ever raised at the Rural Grounds. The label thus imperfectly gives the name and address. "B. F. Rogers, Orville, Atlanta" which is the only record that can be found of the sender or his whereabouts. The melon is "thinner-skinned" than the Cuban Queen, and the flesh sweeter. The single hill planted bore four melons, all much alike in excellence, "thinness of skin" and size. The largest and earliest weighed 21 pounds and measured 9½ inches in thickness and 17 inches in length. It ripened August 25. The skin is light green with very dark green (nearly black), broad, irregular stripes. The rind or white flesh is not more than half an inch in thicknesss—the flesh a deep red and very solid. The seeds are white and small.

What Others Say.

PERENNIAL FLOWERS.—A dear old lady, who has gone where all flowers are supposed to be perennial, says Annie L. Jack in the Sixth Report of the Montreal Hort. Society, always met me in the Spring with this sentence; "Gi' me flooners that dinna dio i' the Fall, sic as keep the groound a' Winter." And in her garden the earliest and brightest tulips grew, the pale narcissus in profuse bunches, the sweet-scented violet perfumed the air, and the earliest gowan (daisy) showed its tiny star. She had a bunch of lilac and snowball for every caller, and the crimson pæony was her delight in its season. Tall, blue larkspurs reared a stately contrast to the spiræa, and the monkshood and snapdragon made mouths at the children who chose to squeeze their long tubes. The words of my friend have occurred to me often when fighting with drought and insects to save the annuals, that were doomed at best to give only two months' bloom. Even geraniums have a glaring sameness and newness that seem too conventional for beauty, and greenhouse pets count as so much money from the purse. Of course, in a Canadian climate we are not supposed to be able to save delicate plants out-of-doors, but I think even this a fallacy, for the snow of our Winters is in itself a better protection than the wrappers given a little further south to prevent freezing and thawing. A little forethought in Autumn will give in Spring a wealth of bloom from flowering bulbs, snowdrop, crocus, tulip and hyacinth. Then, before the roses come the Lily of the Valley, and, among other hardy plants, the pinky, white, heart-shaped bells of Dicentra spectabilis. The varied members of the family dianthus, which signifies "The Flower of God," are remarkable for hardiness and beauty, the China pink especially, coming into bloom in early Spring, when only a year from seed, and the old-fashioned Sweet William a little later. All the plants I have mentioned are as easily raised as vegetables, and well repay cultivation; even in city gardens they should have a space for their sure if not fashionable beauty. Nothing can exceed the display made by a bed of perennial phlox, and its variety is such that bloom may be had from May till October, of every shade and color. The Scarlet Lychnis is another herbaceous plant of value, and the double hollyhocks are not to be despised The perennial pea stands the most trying Winter, and so do the pansy and forget-me-not. While I have tried and "found wanting" many so-called hardy shrubs, I have a few faithful friends that give a show of bloom: the deutzia and syringa in early Summer; later, the Rhus cotinus or Smoke Plant, and the althæa; while quite late in the season, the new Hydrangea paniculata gives immense trusses of white blossom, and has proved hardy the last three Winters. It would be an improvement in our gardening if some of the old, tried favorites were re-established, and less time and trouble bestowed upon new and short-lived plants that are not sufficiently superior to deserve the attention bestowed upon them.

SHIPPING FAMEUSE TO ENGLAND.—Our valued contributor, Mrs. Annie L. Jack, made a few remarks before the above society respecting shipping the Famense Apple to England. Some years ago, allured by the promise of high prices, she decided to ship a few barrels of Famense to Liverpool, and although they reached their destination in good condition, and were consigned to commission men of well-known integrity, the result could not be called a success from a financial point of view. The sales were from four to five dollars per barrel, but the expense of freight and other costs reduced this by one-half, which, counting in the *risk*, is hardly profitable. It would be well for those interested in shipping Famense from Montreal and its vicinity, to consign the business of sales into the hands of some *one* dealer, and to send in separate consignments, so that this choice table apple may have all the advantages of successful sales instead of, as is often the case, going in with a mixed lot of inferior fruit. If growers would combine with this end in view, the Famense of that Province would soon win for itself, and retain, a name in the English market.

VALUE OF THE BLACK WALNUT.—In an address on Forest Tree Culture read before the Montreal Hort. Society, Hon. H. G. Joly, speaking of the Black Walnuts, says that the value of the wood is so considerable (a dollar a cubic foot at the present time) and it is getting so scarce that it struck him as the most worthy of being introduced and cultivated there. True it did not grow spontaneously anywhere in the Province of Quebec, but this appeared to him no conclusive reason why it should not grow and flourish there. He did not fear Canada's great colds, for in the West, the natural home of the Black Walnut, the thermometer often ranges as low as there, though for a shorter period at a time. He procured a bag of Black Walnuts from the West in the Fall of 1874, and sowed them at once; it was late in November; he had to remove the snow and break the frozen ground, but he thought the earth the safest place to Winter them. They began to come up about the tenth of June following; not five per cent. failed, and they have never been artificially sheltered in any way. Of those left undisturbed where they were sown, he has not lost one; they have now had six Summers' growth. He had just had some of them measured, so as to be certain of their size; the hight of the four largest was as follows: 15½ feet, 14½ feet, 14 feet and 12 feet, and they were thick in proportion. Some of the trees were transplanted when two years old, but they had made a comparatively feeble growth. Wherefore Mr. Joly concludes that it is better to sow the seeds where the trees are to remain.



OXFORDSHIRE DOWN RAM.—AFTER LONDON AG. GAZETTE.—FIG. 511.

GETTING RID OF STONES.—One may well pity the farmer whose soil is too liberally provided with stones, and who struggles with them day after day, and year after year, without making much impression upon the overplus, says Mr. Stewart, a regular contributor to the Times. The life-work of many a farmer has been, and is, to get rid of the stone from his fields. Monstrous walls have been built up around the fields, which are but little less troublesome in this position than when scattered over the ground. The easiest way to get rid of stones is to bury them. This is done with far less labor and in less time than drawing them from the field; there is but one handling of them, and they are out of the way forever. The whole work may be done with the plow and a stone-boat. A trench may be plowed out two feet deep in a short time, and if necessary may be deepened in places to receive the larger stones that are not too heavy to be lifted or rolled on to the stone-boat. Two such trenches may be made at a convenient distance apart, so that a load may be picked up in going from one to the other and avoid the necessity for taking heavy loads or turning around. When the trench is filled to within a foot of the surface the soil may be plowed back on to the stone and leveled with a harrow. The stones will be below the reach of the plow and will never afterward give any trouble. Larger stones should be buried where they lie by digging holes of sufficient size and toppling them over by means of a lever or a grab-hook and chain. Rocks that are too large to be handled in this manner may be shattered by a charge of dynamite. Dynamite is the most effective agent for breaking stone. A mass of 10 or 20 tons may be broken into several pieces by exploding a pound of it under the rock. A hole is driven under the rock in the earth with a crowbar and the cartridge is inserted. A fulminating cap attached to a fuse is first fixed in the end of the cartridge. The hole is filled with dry sand or even water, and the fuse is lighted. The shock usually shatters the mass into a few large pieces which can be handled with a bar, and where the stone is desired for buildings of any kind, this method is the best possible. Stone may be split in regular shapes by means of steel wedges. A few half-inch holes three inches deep are drilled on the line of the desired fracture, and the wedges, protected on each side with a strip of soft iron, are inserted in the holes. The wedges are struck somewhat lightly in regular succession with a hammer, and after a few blows the stone splits along the line of the drill-holes. Everlasting gate-posts and foundation-stones for buildings, may be thus split from large rocks with little trouble.

ADVANTAGES OF MICHIGAN.—Secretary Charles W. Garfield recapitulates the advantages of Michigan in his recently published "Glimpse" at her Horticulture, as follows:—

Michigan is practically free from debt; her public institutions are her pride and her educational system is commended by the best educators in the country.

The agricultural advantages for mixed husbandry are of the very best; the climate is not equaled by any Northern State; the air is clear, the water pure, and the variations in temperature comparatively slight.

The landscapes are beautiful, and a wide range of fruits, plants, flowers and trees, that form the accompaniments of a well embellished home, can be grown successfully.

Delightful resorts are near at hand everywhere: and a refined and intelligent people make up her present population.

Michigan has a motto upon her coat of arms, *Si quæris peninsulam amœnam circumspice:* if you wish to see a beautiful peninsula, look about you. That is no flaming advertisement of exaggerated proportions, but is a simple introduction to those who enter our borders, the apparently complimentary language of which is found by every visitor to be a truthful statement.

The old derisive songs that told of ague, marshes, rattlesnakes, and wolverines as the natural products of Michigan are not sung any more; and none visit the Peninsular State who do not go away with pleasant accounts of her climate, soil, productions, and people.

PACKING FRUIT.—Select perfectly sound specimens of apples and pears, says Dr. Calder, and pack them in boxes or barrels in common land plaster or gypsum, using first a layer of fruit and then a layer of plaster, using as much fruit as possible without having the specimens actually touch each other. Close the package and lay it away in some cool place where it will not freeze. The plaster will exclude the air and keep the fruit at an even temperature, and it will be found perfectly preserved after a very long interval.

MR. BUCKE, of Canada, calls attention to the fact that the raspberry may be transplanted at any time during the year, whether in full leaf or otherwise, if a good spadeful of earth is raised with the plant, the hole in which it is to be deposited having been previously made. He usually fills up gaps in the row with present year's young plants during the month of August, and finds they succeed better when they have time to take hold with their roots before the season's growth has fully ended.

PRESERVING GRAPES.—The method of preserving grapes adopted by Mr. Roe, as we see by the Christian Union, has proved very satisfactory to him after several years' experience. The grapes are picked on a dry, clear day with grape scissors, so as not to handle them much, and all imperfect berries and those not fully ripened are removed. They are then placed in clean, dry earthen jars in layers a bunch deep, dry straw paper is placed between the layers, and the jar filled in this way. A double sheet of paper is placed over the top layer and the lid then put on. Strong, unbleached muslin is pasted entirely over the lid, or cover, of the jar, completely covering the opening so that no air may enter. When this covering has fully dried and hardened the jars are buried on a dry knoll sufficiently deep to be beyond the action of frost, a stake being placed over each jar to locate it accurately. Isabellas have been kept in this way until late in February, and have proved excellent.

DR. LAWES says, in the Albany Cultivator and Country Gentleman, in a field close to his house, sown with mangels and manured with barnyard dung, he noticed in the month of June a broad strip in the middle, measuring about one acre, upon which the mangels were much better than in the rest of the field. As the manure applied to the crop could not possibly have produced this effect, he inquired further into the matter and found that where there is now one field there were formerly two,

separated from each other by a hedge having a very broad margin of grass on each side. About 33 years ago the hedge was removed, the grass was plowed out, and the fields were converted into one. He had samples carefully taken both of the soil upon this strip and of that in the middle of the field on both sides; these are now being analyzed, but it is by no means certain that any appreciable difference will be detected in the composition of the soils: there is, however, the fact of a marked improvement of the crop, due to grass that was plowed up 30 years ago.

DR. LAWES thinks that the United States farmer will be wise in using phosphates for the growth of corn, so long as they continue to give him a good crop; and at all events, if they fail to do this, they will remain in the soil, and can at any time be made available for vegetation by the use of some nitrogenous manure; whereas, an application of ammonia or nitrates is irretrievably lost, if not taken up by the growing crop.

WHEN GOOD FARMING DIDN'T PAY.—It may be stated as a fact, remarks the Live Stock Journal, (Eng.) that the best farmers have suffered most from the wet weather of the past two months. Their expenditure in labor and manures has produced heavy crops, which have gone down under the storms. So also is it true that a poverty-stricken crop suffers comparatively little from bad weather, both before and after it is cut. Well developed crops, full of vigor and substance, are much more open to the ravages of inclement seasons. Thicker on the ground, they dry slower when a fine day comes; and the chronic dampness promotes fungoid growths and germination of the ripened grain, while not a few of them ripen the more "unkindly" in the absence of the sun.

THE year throughout, the above journal concludes, must be set down as a bad one, and the prospect for the winter is gloomy enough in consequence Grass is still fresh and green for the most part, but the land is sodden with wet; hay and turnips are far below last year's crop; feeding-stuffs are high in price, and stock are low; but, above all, the harvest in many counties cannot but be reckoned as a disastrous failure, though not so much so in yield as in quality.

A WRITER in the Agricultural Gazette of England says that milk from good cows, well fed and well housed, will contain over 12 per cent. of "solids." Milk from ordinary cows, poorly fed, will not contain more than 11½ per cent. of solids. Now it is the solids in the milk that produce our cheese and butter, and as the difference between 11½ and 13 is about 14 per cent., it follows that our yield of cheese and butter might be thus most materially increased.

"OH, dry up!" as Autumn said to the leaf. "I'm not so green as I was," replied the leaf: "so I'll take your advice." . . . . . One hundred and ten thousand dollars for a lot on Fifth Avenue, on the corner of Seventy-fourth Street, 29x150 feet. This is the highest price ever paid for a private lot on this island. . . . . At a trial of the audiphone before the authorities of the National Institution for Deaf Mutes, at Paris, it was found to be useless. . . . . When a man has no mind of his own he can always find a woman who will give him a piece of hers. . . . . The New England Farmer asks, when will farmers learn to provide themselves with more than a single year's supply of food for themselves and their stock, instead of throwing themselves upon the mercy of speculators and gamblers. . . . . In pruning currant bushes, says Mr. Bucke of Ottawa, Canada, they should be kept moderately open; the red and white bear best on two and three-year-old wood, never on one-year-old; and for this reason a few suckers should be allowed to grow up each year, and the four-year-old stems should be removed with the knife. A stool of six bearing stems with three suckers would be about the correct thing for a model plant, but circumstances will frequently remodel the idea in all bush and tree culture. . . . . SPEAKING of tenants' rights the Mark Lane Express says: It is a kind of religion—a fetish-worship. "Fear God, honor the king, and knuckle down to your landlord"—that is the piousa djuration still current . . . . . It has been a kind of "Open your mouth and shut your eyes, and see what Providence, in the shape of your landlord, will send you." The moral effect has been similar to that of the hope that something "may turn up," so well satirised by Dickens . . . . . When nothing more than justice is asked for, there is no occasion to beat about the bush. The mealy-mouthed season has been perennial too long . . . . . In a wooded ravine near Egbertville, Staten Island, says the Bulletin of the Torrey Botanical Club, there is a vine of *Vitis cordifolia* (Winter or Frost Grape) having a circumference of 25½ inches at a point three feet above it base. It completely covers three cedar trees, each at least 30 feet high, and is a very beautiful plant.

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

LISTOWEL, Ont., Oct. 12.—Most of the seeds of last year were unsuccessful, but the Hibiscus Syriacus, and Hibiscus Moschentos both grew and died down for the Winter. I carefully covered them, and in the Spring I was glad to see them again come up, and by the latter end of June could see the flower buds, but a cool day or two seemed to check them and they turned yellow and fell. The unusally hot weather of August and September brought others forward, of which only one opened and that was imperfect, and so the H. Syriacus has disappointed me much as it seemed to prove that this climate was too cold for it. Mold's Ennobled Oats were again sown, but though the yield was good they were very light. The Washington Oats were good and did not rust at all. So much for the old seeds. The Giant Purple Dutch Asparagus came up very thin and Argenteuil hardly grew at all, not making over six plants. The seeds of the dianthus started early in the house and were planted out; they have flowered well and been much admired. The carnations, too, look well. I raised quite a number of the plants and shall look forward anxiously to see them bloom. The Rural Branching Sorghum seems to have come up better with me than with many others, as only six hills missed out of 36, and when I cut it at the end of September it ranged in hight from two to four feet, and when the frost came on Oct. 3, the tallest bunch was just coming into head. The cow I fed it to liked it much. I think I have a few seeds left, and will try again, but am afraid the season is too short to get the full benefit of it. The White Elephant Potato also did well. I kept the seed potato in dry sand all winter and it came out quite fresh in the Spring, and I cut it into nine pieces, an eye to each, and planted them at the end of May, hoed them well and dug them the last of September. I did not weigh them, but should put them at about half a bushel. There were 59 tubers, the smallest as large as the seed. Though they do not yield like the Beauty of Hebron, I value your last collection very much. The crops round here are all housed and thrashing has been going on for some time. Wheat is turning out much better than expected, and the Spring crops are unusually good; so is the potato crop in spite of the bugs which, though numerous in the Spring, did but little mischief; some even did not pick them at all. The White Elephants were infested the worst as they were green when all the rest were dead-ripe, and the pest literally swarmed on the vines. Wheat $1.37; peas, 70c.; potatoes, 50c. to 60c. per bushel; eggs, 15c. per dozen. Peas are very free from bugs this year, but the caterpillars swarmed on the cabbages, and where not picked the pests in some cases about ate them up. A. J. C.

TRENTON, ONT., Oct. 17.—The White Elephant Potato, cut to single eyes, I planted on April 17, in 12 hills, one eye to a hill, in good garden soil. I am somewhat disappointed in the crop, for, judging by the growth of the tops, I expected an immense yield. I dug them September 12, and got 14 pounds. The asparagus seed germinated nicely and is doing well. I sowed the Washington Oats April 30, in drills 12 inches apart, seed four inches apart in the drill. They grew splendidly, being five feet high, and many of the panicles having from 150 to 170 grains. I had the misfortune to have them badly ruined just as they were fit to cut. I was, however, still able to save one peck of seed for another year. I planted the Rural Branching Sorghum on May 27; but it was a failure, for what few seeds germinated made a very poor growth—not over four or five five feet in hight, not nearly as good a growth as corn planted alongside, I sowed the flower seeds in a box in the house. I think every seed germinated. They were transplanted to garden as soon as the weather permitted, and we were well rewarded for our trouble, as we had a magnificent display of pinks. The seeds are worth much more than the price of the RURAL. W. H. L.

Illinois.

VOLO, Lake Co., Oct. 18.—I have lived on this farm for 36 years having come from Long Island. Then this place was in a state of nature; now it is the handsomest country I have ever seen, and the best land for mixed farming. It is like a nobleman's park in the Old Country, throughout. The county is bounded on the east by Lake Michigan; on the west by Fox River, and on the North by the State of Wisconsin. There are 40 lakes in it with the Oplain River crossing it, so there is a good supply of water and timber here. Some of the lakes are Summer resorts for the Chicago people. Fox Lake, which is the principal one, is five miles from here. We have had no frost here yet. The last week there was very heavy rain. The month of September had the heat of July with April showers all through it. Our drought was of short duration here. The grass was only about one week turning brown when the Fall rains came; then it commenced to grow; now it looks as it did in June. Not much Fall grain is sowed here, but what is looks good. There will be an abundant supply of fodder for the coming Winter, although a great quantity of hay in swath and cock was lost in July on the bottoms from the heavy rain we had then. Potatoes a light crop. Corn about 80 per cent. of last year's crop. Most of the oats were lodged from the heavy rain and wind in July, so they did not fill well. Wheat a poor crop. The Washington Oats I planted in drills on a clay knoll in my orchard—I put them in the poorest place I could find so that they would not grow too much straw; but the rain and wind in July laid them flat on the ground. There were a few blasted ears among them. I had five pounds of very nice oats; I think they will do well in this climate. Of the Rural Branching Sorghum only a few seeds grew, but they made a wonderful growth; they branched so from the roots that they covered about half the ground, and that would not do, but they must, when the seed began to turn white, commence to branch from the upper joints and from four to five of these branches on each stalk have seed heads; but I do not expect they will mature; it is too late in the season. I have a quantity of heads tied in bunches and hung up for seed well matured. I think the Rural Branching Sorghum the thing to have in a dry time to keep cows to their milk. I cut a few hills the 10th of September; the cows relished it although grass was flush. Those hills grew a second growth three feet high. The asparagus did not appear until July. The plants are growing finely now, The baby elephant I received weighed about two ounces. I dug them the first week in September. I got 27 pounds. They are a nice sample of potatoes; the heaviest weighed one pound a piece. The flower seeds did nicely. I have a nice lot of Cuthbert Raspberry vines. I am going to transplant them shortly; they bore a fine lot of fruit this season, having stood the Winter well, though one day the thermometer went down 25° below zero, with no snow on the ground. I like the RURAL NEW-YORKER very much. I would not be without the seed I have raised of the Rural Branching Sorghum for the price of the paper for one year. T. D.

Indiana.

ELKHART, Elkhart Co., Oct. 16.—Just as in most of the other parts of the country, it has been a very dry season here. The Rural Branching Sorghum is doing finely; nearly all the seeds came up. The Washington Oats did well. Old farmers to whom I have showed them say they never saw such oat heads. This year I have taken more pains with my garden than ever before and find it pays. Before this year I never attended a fair; but acting on the RURAL'S advice I went to our fair the other day, with 30 different varieties of vegetables, and came away with 34 premiums. I spent three days at the fair, beheld many new things, learned a good deal and saw the people, some of whom I had not seen for 20 years; and the visit paid well, too. This pleasant and profitable change I attribute entirely to your paper. Never has the ground been so wet as now, and it is still raining. Potatoes rotting somewhat. W. B.

Iowa.

APLINGTON, Butler Co., Oct. 10.—The Washington Oats I sowed in the garden. I cannot speak very highly of them; think the straw is too weak for this place and would be liable to lodge. The Rural Branching Sorghum I think fully equal to your recommendation; but it ought to be put on very clean ground, on account of its slow growth when it is young. My White Elephant came all right, but when I dug it out of the sawdust I thought it a mouse instead of an elephant. Its weight was just one ounce. It had eyes enough for an elephant, however—eight of them—which were planted one in a hill. They had the same care as my other potatoes and no more. This Fall from those eight hills I dug 70 tubers, which weighed 17½ pounds. I think that is a pretty heavy increase. We are having a very wet Fall. Grain is not half thrashed. Crops of all kinds are very poor. Corn is broken down very badly, and is growing in the field on account of warm, wet weather. There are but very few farmers who know the value of pumpkins. It costs nothing to raise them with corn. Feed them to hogs; there is nothing better for them than the seeds. Try it and see how quickly their cough will stop. L. E. C.

EARLVILLE, Delaware Co., Oct., 21.—The flower seeds I handed to the domestic department. We anticipated the pleasure it would give to see them in blossom, but, alas! they were destroyed by chickens and mice when they were about to blossom. The asparagus I put in drills one foot apart, so that I might hoe them. After putting in the seed I put some radish seed and some small sticks also in the drills and then covered the seed with a garden rake. The radish seed grew. I hoed between the drills but the asparagus did not make it appearance. Will it be likely to grow next Spring? [Think not.—EDS.] I planted the Oats on one perch of ground; they grew strong with a stout straw. From their appearance in July I expected nearly one bushel; but black smut appeared and then red rust followed very bad. Soon after they broke down and lay flat on the ground, I have not over one quart of good oats. The potato I cut into ten pieces, with one eye to each. I planted them the first week in May. One plant was very weak: the others grew strong. I dug them September 1, and had two common buckets full of good tubers, some very large, and nearly all of good marketable-size potatoes. I had a few cooked, and they were of splendid quality. The Rural Branching Sorghum I planted May 10. About one-third grew. I did not follow your directions but experimented on it, but I state with confidence it is a very valuable plant for cattle feed, if first cut in August. I cut one-quarter of it September 1, about six inches from the ground, I also cut a few two feet from the ground. In a few days shoots started out in a thick cluster, and it would have produced a large amount of feed had I cut it one month sooner. The remainder I let stand for seed, as I wanted more for next year. It grew eleven feet high with abundance of seed; it is not quite ripe but I cut it to-day when it was quite green, fearing a frost might destroy it. The seed is hard so I think it will germinate. I think I have enough for an acre or more. To raise seed yearly I think in this latitude we must raise plants in boxes and then transplant them after frost is gone. None of these seeds had any manure. They were grown on a rather light, sandy loam. The ground for potatoes was manured last year. The first frost to affect tomato vines came this morning. Oats not half our usual crop. Potatoes the same. Early planted corn good for the year, but by far the greater part of it was planted late. Many pieces will not yield over ten bushels per acre. W. C. C.

ROCK FALLS, Cerro Gordo Co., Oct. 17.—The weather around here has been very wet for the last six weeks, and we have been deluged with rain the last few days. There has been hardly any thrashing or plowing done this Fall. The seeds from the RURAL have done well except the Washington Oats, which rusted and never filled; and the pinks were destroyed by the black potato bugs, just as they commenced to flower. The asparagus has done very well, and we will have a lot to transplant in the Spring. The Rural Branching Sorghum seeds all grew, but the stalks were not cut off in time for another growth. The White Elephant Potato was cut into 21 eyes, but only 15 came up. I dug 90 good-sized tubers, weighing 22 pounds. W. W. W.

Kansas.

GRANADA, Nemaha Co., Kan., Oct. 20.—As in most all other places, it was very dry here until recently; now, however, we are having fine showers which are causing grass and wheat to make a fine growth. Our chief crop, corn, will be but about one-third of a full crop. My Rural Branching Sorghum is about seven feet high and green. I gathered ripe seeds from it three weeks ago. My White Elephant Potatoes did well considering the drought; but they resemble the Early Rose in every particular. They ripened as soon and blossomed at the time. L. H. S.

Massachusetts.

CHICOPEE FALLS, Hampden Co., Oct. 18.—The White Elephant potato you sent me I cut to single eyes; ten eyes made ten hills. I put barnyard manure in the hill. I dug them about Oct. 1. Number of potatoes, 195; large 165, and small 30 The large ones weighed 43¼ pounds, which I call a large yield, as they had only common cultivation and the season has been very bad for potatoes. I planted two pounds of Mammoth Pearl potatoes and had 6¼ bushels of large and one bushel of small tubers. The corn crop has proved better than we expected, on account of the warm weather in September. Potatoes above one-half a crop. Grass and rye were first-rate this year. The first frost we had here was on Oct. 5, and it froze the ground a little. We like the RURAL first-rate. The White Elephant potato alone is worth the price of the paper. E. W. C.

Michigan.

MAPLETON, Grand Traverse Co., Oct. 17.—The past season has been very dry here, though not as bad as in many other places we read of. The RURAL'S seeds all did well. I consider them well worth the price of the paper. Wheat about half a crop; oats and hay good; early-planted corn and potatoes are a light crop, but late-planted are good. Prices are: wheat, No. 1, $1.22; oats, 50c.; corn, 70c.; potatoes, 75c.; barley, 75@80c. butter, per lb.,

25c. I am very much pleased with the RURAL and the manner in which it is conducted. F.E.B.

STEVENVILLE, Berrien Co., Oct. 19.—On April 17 I planted the White Elephant Potato, weighing five ounces. I cut it into 17 pieces with one eye in a piece, and planted one piece in a hill without any manure. The potato bugs destroyed five hills when they first came up. The Summer was very dry, and the moles went through them, and then the grasshoppers hurt them badly. I dug them on October 14, and the yield weighed 36 pounds. They were all nice tubers; the heaviest hill weighed five pounds 15 ounces; the heaviest potato, one pound nine ounces. The flowers were very nice; they are in bloom yet. I think the RURAL the paper every farmer ought to have. I would not take $5 for the White Elephant Potato, and the RURAL is worth $2. A. M.

Missouri.

KANSAS CITY, Jackson Co., Oct. 14.—The seeds did not get quite a fair trial from me. The oats were given a fair and early start, but weeds and drought spoiled them. The White Elephant Potato did not do so well as the Snowflakes I planted nearly at the same time; still my medium-sized potato yielded half a peck of tubers that will do for seed next year. The Rural Branching Sorghum, I am sorry to say, did not get planted. The picotees and carnations have come up and are looking well and this Winter we hope to have fine plants in the hot-house from them. Of asparagus I will try to have good reports from next year. Western Missouri suffered a good deal from drought, but it has got too badly scared for all the hurt. Crops are not so far below the average in quantity or quality; but those compelled to feed corn and bran and millstuff generally in this section think we might as well have had a famine. As much as $20 per ton for bran has been and is being paid here by many of the dairymen, and as they don't read the RURAL, as a rule, they feed it dry alone with hay, and wonder why they can't make more money even when they have to sell their milk at 13 to 15 cents per gallon. H. W. S.

New York.

AVOCA, Steuben Co., Oct. 23.—Winter wheat proved better when harvested and thrashed than estimated in my last report; but it is still about 20 per cent. below an average; quality very good. The wet weather at the beginning of harvest did not injure it to any great extent. The price is $1.50 per bushel for the best. The Fultz, Clawson and Wicks are the leading varieties. Not as great an acreage as usual is being sown this Fall, owing to the extremely dry weather at seeding time making it difficult to plow and properly fit the ground and also preventing the seed from coming up well. The stand is small yet; but the warm, wet weather we have lately had has been very favorable for a good growth. Spring wheat is not very largely grown, and was a light crop owing to the hot, dry weather at the time of filling. Oats are a good crop, having got a good start in the Spring before the drought commenced, and as we had very favorable weather for harvesting, the crop was secured in splendid condition and as the acreage was large we have a surplus for market. They are now worth 50 cents readily. Rye was a good crop not much injured by the late drought. There was a fair acreage of it and there is a ready sale at $1, and as the straw is worth $6 per ton to bale for paper-making, the crop is a paying one. Barley showed the effects of dry, hot weather in filling; but as only a limited amount was sown the result is not as disastrous, but at the price, $1, it pays very well. Buckwheat suffered more severely from the hot, dry weather than perhaps any other grain; consequently it is a light crop, but as there was a very large acreage and the price is high—85 cents—it is of considerable importance. Potatoes are a fair crop where uninjured by blight which in many localities killed the vines long before the potatoes were mature. This was especially the case along the river flats and on low lands, while on the hills in many places they were not effected by the blight, but they were by the late drought: large quantities are now being marketed and shipped by rail at 75 to 80 cents. Corn was badly damaged by the cold, wet weather in the Spring; also by worms which necessitated plowing up many pieces and sowing to buckwheat. The dry weather late in the season prevented the ears from filling as completely as they otherwise would have done, but the warm, dry weather during the Fall caused it to mature in good order, consequently we have a fair crop—no market price for it as yet. Apples are a light crop and the warm Fall has ripened them early, while the hard winds have blown them off and they are now rotting badly. Hay was a fair crop and secured in fine order—worth $8 per ton delivered. The weather for a week has been favorable to Fall feed which will serve to lessen the demand for hay. M. A. H.

COPENHAGEN, Lewis Co., Oct. 22.—The small White Elephant Potato, weighing 2½ ounces, had ten eyes, two of which I cut into halves and planted 12 hills on May 20—soil, clay and black muck. I dug 30 pounds of good-sized tubers; the largest weighed 1½ pound; the four next, 1¼ pound each. The Washington Oats were sowed at the same time; they grew nicely; but the birds destroyed a considerable amount of them; yet I harvested three pounds. The Rural Branching Sorghum grew eight feet in hight. My wife is highly pleased with the flowers. I have taken the RURAL for 21 years. J. Y.

MECHANICVILLE, Saratoga Co., Oct., 20.—All the RURAL seeds were tested and my success with them was good, considering the season which has been dry and cold a great part of the time. The Washington Oats were sown April 23rd in rows 12 inches apart; I harvested seven quarts weighing seven pounds 12 ounces; the yield would have been much larger but the birds and chickens took about half of them. The White Elephant Potato was cut into 10 pieces and each piece was planted separately—yield 43 pounds of tubers, some very large. My success with the Rural Branching Sorghum has been different from what I have seen reported; a few seed were sown about the middle of May, from which I have obtained 55 heads of ripe seed; the rest, which were sown later, have grown 11 feet high. Some of the stalks were cut off and the second growth was 20 inches. All branched freely and it promises to be a good fodder material. The asparagus came up well, and is three feet high at present and some of the shoots three-eighths of an inch in diameter. The pinks are doing well; and have had some fine blossoms, to repay for the labor given them. In regard to the crops about here, corn and potatoes are usually light; oats good; grass, medium; rye and wheat were killed out somewhat last Winter, but wheat sown this Fall is looking well. J. H.

NASSAU, Rensselaer Co., Oct. 20.—It has been very dry in this section this season and there has not been rain enough yet to raise the water in the wells. Consequently the RURAL seeds have not done as well as might have been expected. The White Elephant Potato was cut into eight pieces and sprouted in a box. Seven of them were transferred to the garden May 14 and were dug September 15, yielding 45 tubers, 28 large-sized, 14 medium and three small, weighing 11¼ pounds. The Washington Oats grew large and stood up well until they headed, when they went down flat, and before they ripened the chickens destroyed the most of them. Of the Rural Branching Sorghum seed not one came up. The asparagus seed came up well and the plants stand from eight to ten inches high. From the flower seeds five plants matured, which were very fine. We are more than satisfied with the RURAL. F. H. H.

PATCHOGUE, Suffolk Co., Oct. 20.—The RURAL seeds did finely. I have nearly a peck of the White Elephant Potatoes and about the same quantity of Washington Oats, which I would not exchange for the price of the RURAL. B. H. S.

Ohio.

BRIDGEPORT, Belmont Co., Oct., 17.—I planted the Rural Branching Sorghum, a few seeds, in hot-beds on March 20. Three came up and grew: two of the seeds produced 31 heads of nice seed, some of them over a foot long. The rest of the sorghum I planted in the open ground on June 23, where it grew over five feet high when I cut it, after which it again grew two-and-half feet high. Some of my heads of sorghum can beat any I have yet seen reported. I planted the White Elephant Potato April 23 and dug a few nice tubers. The asparagus seed was planted April 26; I had 110 plants of the Washington Oats; the chickens destroyed about one-third but I got about seven pounds. I planted the pink seeds in a hot-bed; and transplanted them into open ground. I had over 20 different varieties. C. H. Z.

Pennsylvania.

NEWCASTLE, Lawrence Co., Oct. 22.—Wheat from 10 to 25 bushels per acre; worth $1.35 per bushel; was $1.50 per bushel last week. I sold what I had to sell at $1.50. Oats are below an average; selling at 50c. per bushel. Corn is below half a crop; worth 50c. per bushel in the ear. Potatoes, a very poor crop, $1 per bushel. From three acres I got only 160 bushels—weather too dry for potatoes. My White Elephants did not do well and there was something that ate them in the ground; the ground was all hollow in and around the hills. R. A.

WINTERBURN, Clearfield Co., Oct. 18.—We are in the midst of a drenching rain, the first good soaker we have had since June. Nearly all the crops were more or less injured by the drought, except wheat and grass which were good, the latter extra, and although there is more hay in this section than can possibly be fed this Winter, yet the drought has sent it up to $20 per ton. All other products are correspondingly high; wheat $1.50 per bushel; corn, $1; oats, 65 cents; potatoes, $1.25. Apples are plenty at a moderate price now, but they will not keep well this year. H. F. S.

Wisconsin.

DARIEN, Walworth Co., Oct., 2.—The season has been very changeable. Crops light especially corn and potatoes. Oats and barley average crops. Fruits nearly a failure. Strawberries, raspberries and grapes were average yields, and prices for them were good. Potatoes are very scarce and high—$1 per bushel. The White Elephant fills the bill. I received two small tubers with 25 eyes amongst them. They were cut to single eyes and planted in drills, May 1. They were dug Sept 1, and yielded 60 pounds, two-thirds of them were good-sized tubers. The yield would have been heavier were it not for the drought: quality No. 1. The Beauty of Hebron has excelled all others with me for earliness and quality. If any of the RURAL readers has a better potato than Hebron for Early and the Elephant for late, let him report. Z. H.

INDEPENDENCE, Trempealeau Co., Oct. 12.—The White Elephant Potato was cut into 11 pieces, having had 11 eyes, and planted one piece in a hill, on May 17, on common mucky soil, and dug October 4, after lying out in six weeks' rain: weight, 62½ pounds. They were very large—no small ones. I think they are a good potato for low, wet soil, as they do not rot. The flower seeds did not grow, except the pinks. The Rural Branching Sorghum grew seven feet high and the seeds got ripe. The Washington Oats did well. H. D. W.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

SOWING TREE SEEDS.

S. E. R., Spirit Lake, Iowa, asks how and when to plant apple, Honey Locust and Red Haw seeds.

ANS.—Apple seeds are sown in Autumn in drills, made in rich, mellow soil, and here the seedlings should remain from one to three years, according to the richness of the soil. When the seedlings are about a quarter of an inch in diameter they may be transplanted, either in the Spring or Fall, to rows one foot apart and three to four feet apart in the row. If they are thrifty they may be budded the Autumn following their transplanting. Honey Locust seed may be sown in the Fall or Spring. Some recommend scalding it a little before sowing, but too excessive heating may destroy the germ. Seed for hedge plants should be gathered from thorny trees. Haw seed is slow in germinating. The fruit is placed in a "rot-heap," where, mixed with earth, it is exposed to the weather for a year before sowing. Then it should be sown and cultivated like other hedge plants.

Miscellaneous.

J. A. Z., Wheeling, W. Va., wishing to learn all he can about farming before starting as a novice in the business, asks for the names of some good works treating on the subject.

ANS.—A really good work on farming does not exist in this country, though there are some excellent works treating of special features or branches of farming. Such works as Mason's and Johnson's Encyclopedias of Agriculture give much fuller and more valuable information about all departments of farming than any American work; but they relate to English farming, the economy of which differs in several respects from that of farming in this country. Moreover, both have been published some time, and therefore do not contain the results of recent research, and more has been learned about scientific agriculture in the last few years than in the previous few centuries. Among American works that treat of farming in general are Allen's New American Farm Book, $2.50, and Emerson's Farmers' and Planters' Encyclopedia, $6, both of which can be had through the American News Company, New York. The latest work of the sort is Farming for Profit, by John E. Reed, published by McCurdy & Co., Philadelphia, Pa., price $4.50.

J. A. B., Norfolk, Va., having seen it stated that Long Island farmers are using Paris-green on their turnips to destroy the cabbage-worm, asks whether it would be safe to so use it, and also whether it could be safely used on kale to be cut next Spring.

ANS.—We do not approve of the use of Paris-green when it comes in contact with the edible part of any fruit or vegetable which is to be used as food for man or beast. In 99 cases out of 100 probably no injury will result, nor will there, perhaps, even in 999 cases out of 1,000, but the one-hundredth or one-thousandth case in which sickness or death is produced by it, renders the thing objectionable. London-purple is less dangerous and equally effective; and pyrethrum is equally death-dealing and wholly harmless to man and beast. We should certainly never advise the use of this poison on kale or cabbage.

A. F., Bergen Point, N. J., asks, 1, whether the South side of Long Island is as well adapted to fruit culture as those counties of New Jersey that border on the Delaware River and Bay; and what section within easy distance of New York and Philadelphia markets is best adapted to fruit culture.

ANS.—Pears, peaches and small fruits thrive well on Long Island in the place named. Apples and grapes thrive only moderately well. We cannot answer the other questions trustworthily and are unwilling to state mere impressions. A personal examination of the fruits of the various sections inquired about and careful inquiry of disinterested parties living there would be best.

J. C., Homer, N. Y., sends specimens of a weed that proves troublesome thereabouts, and asks its name and how to get rid of it.

ANS.—It is Silver Weed—Potentilla Anserina. It grows on wet banks, brackish marshes, etc., in New England and south and west to Pennsylvania, as well as in the Northwest. The leaves are all from the roots or in tufts on long, slender runners like the strawberry's. We are not sure that it is a formidable pest anywhere, and it should be easily exterminated by cultivation.

F. P. N., Watson, Mich., asks where he can get Guenon's work on the "Escutcheon."

ANS.—Guenon on Milch Cows, 75 cents to be had through the American News Co., N. Y. The best work on the subject, however, was published about a year ago by J. M. Stoddart & Co., 727 Chestnut St,, Philadelphia, Pa. It is by Willis P. Hazzard. It is fully illustrated and in it Guenon's somewhat intricate and hard-to-understand system is simplified, explained and practically applied. It costs 50 cents in paper and 75 cents in cloth.

W. E. B., Stockton, Minn., asks, 1, if asparagus plants need mulching or covering this Winter; 2, will the RURAL wheats in next Distribution do to sow in the Spring; 3, will the RURAL pinks live if left out this Winter.

ANS.—1. Asparagus is a hardy plant and does not generally need covering. In your climate it might be well to cover or mulch it. 2. We have never tried sowing our wheats in Spring. We should be pleased to have you make the trial. 3. The pinks may need a little covering in your latitude, but no other extra care.

J. E. R., Good Ground, L. I., asks how to keep sweet potatoes through the Winter.

ANS.—It is difficult to keep sweet potatoes in the Winter in this latitude. A gentleman from Virginia, an extensive sweet potato grower, recently informed us that the surest way is to pack in boxes with dry sand, placing first a layer of sand then one of potatoes and so on until the box is filled.

L. H. S., Granda, Kansas, asks whether we can supply a bushel of the Rural Heavy Dent corn, and, if not where can it be had elsewhere.

ANS.—Our good friends are reminded we never sell anything. If it prove as good a kind elsewhere as at the Rural Farm, no doubt all seedmen will offer it.

C. E. S., Lairdsville, N. Y., asks when should quinces be trimmed.

ANS.—The quince needs very little pruning, an occasional thinning out of the crowded or decayed branches being sufficient. If the trees have been neglected in this respect, early Spring is a good time to remedy the neglect.

J. W. B., Union City, Pa., asks where can he get some good two-year-old mulberry trees, and about the price per 100.

ANS.—Of Thomas Meehan, Germantown, Pa. Price about 50 cents each.

L. L. S., Kankakee, Ill., asks 1, how to get rid of the morning glories that cover a lot of 10 acres, which has been plowed every year for 34 years; 2, a way to ditch without spades.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, OCT., 29, 1881.

C. P.—E. P.—E. H.—E. J. M.—G. J.—H.—A. B.—L. B.—L. Van W.—C. Van W.—P. S. K.—M. E. P.—B. G. S.—S. W.—D. P. N.—F. D. C.—C. P.—A. N.—P. S. K.—J. H. M.—L. V. W.—E. H.—E. P.—G. W. S.—J. J. S., thanks.—L. S., Atchison Co., Kas., thanks.—W. D.—Pampas, other plumes received from Evelyn, Ga., without name of sender or explanation.—G. G. C.—P. S. R.—P. R.—W. D. H.—H. W.—F. H. L.—W. A. S.—C. L.—L. W. B.—L. B.—W. C. C.—C. E. S.—M. A. G. N.—G. W. B.—C. E. P.—G. A. G., Jr.—C. A. G.—A Subscriber.—A. F.—L. L. S.—H. N. S.—A. E. B.—H. S.—C. L. Babcock, thanks for persimmons.—S. W.—J. H.—J. A. M. B.—S. M. McL.—I. Y.—A. F. C.—A. Y. Allen, shall report.—F. D. C.—M. V. R.—H. & S.—T. T. L.—A. J. C.—L. S. H.—W. H. R.—W. W. W.—W. B.—A. M.—H. F. S.—L. H. S.—E. W. C.—J. F.—J. A. Q.—L. E. C.—R. G., thanks.—M. H.—R. H.—M. K.—L. P.—M. P.—D. J.—D. J.—S. T. D.—M. A. G.—C. L. C.—E. M. C.—H. H.—E. B.—C. A.—W. H.—M. H.—B. L. C. H.—H. G.—M. I.—S. L. H.—A. S.—W. W. E. C.—E. A. J.—E. E. F.—E. M. T.—T. D. E.—H. C. K.—C. Y.—E. B. S.—E. R.—J. R.

THE
RURAL NEW-YORKER,
A National Journal for Country and Suburban Homes,
PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 31 Park Row, New York.

SATURDAY, NOV. 5, 1881.

We beg to call special attention to the letter of Mr. R. Goodman, page 753, respecting aid for the unfortunate Michigan sufferers.

We have often spoken in high terms of the beautiful Zebra-striped Eulalia grass. If not for its odd leaves with transverse stripes of yellow; if not for its hardiness, vigorous growth and adaptation to many different soils and situations, it is at least desirable for its handsome plumes, scarcely less ornamental than those of the half-hardy Pampas Grass.

We have to-day—October 28—pulled two quinces from the new kind, Champion. They do not seem to be quite ripe, and if we were to judge of the merits of the Champion from this bit of experience, we should say there is little to recommend it over the old kinds, the Apple or Rea's Mammoth. We do not hear that much attention is being paid to the improvement of the quince.

We call attention to Mr. A. S. Stonebrakers's report of the Rural Branching Sorghum as a full corroboration of all we have ever said in its favor. It is published in this issue, page 753. It is a noteworthy fact that this sorghum, during the prevalent drought, has not wilted in the least at the Rural Farm, while beside it Indian corn has been burnt up. Even those plants which have been cut back to the ground, have continued to grow as thriftily as if they were receiving all the rain needed.

Readers of the Rural, do us the justice to believe and to remember this. Nobody can be more desirous of ascertaining the *real merits* of the seeds or plants which we distribute than the Rural itself. Our desire is to introduce *improved* varieties. As soon, therefore, as it appears that any given kind has no special value, we want to make it known just the same as if it were of the first value. We have no pecuniary interest in any seed or plant which we test, originate, disseminate or introduce. If our readers find them excellent, we are glad to have them say so; if inferior, their reports will find a place in this journal all the same.

William Watson of Brenham, Texas, tells us he has a hundred acres in peach orchard and could make a good living off his peaches alone. Last year he had an enormous crop; this year a Spring frost ruined his crops, but for the little he had he got big prices. The Alexander ripened during the second week of May, and he sold its fruit for $2.50 a peck, but could not get nearly so high a price in a good crop year. He declares that Texas is the best peach State in the Union. His land is rolling, sandy prairie. The trees grow fast and come into bearing early, but they are not long-lived. He also tells us that he has grafted the Japanese Persimmon on the common American one with good success; it takes kindly and grows rankly.

Remedy for a Cow's Barrenness.—Mr. T. C. Anderson, states in the Kentucky Live Stock Record, that he last year purchased the pure Bates cow, Seventh Duchess of Vinewood, at the Port Huron sale, for a low price, as barren. He took her to his farm at Side View, Kentucky, put her on to a grass pasture, gave her a pint of hemp seed daily, kept salt and ashes constantly by her to lick at pleasure, and she had plenty of good spring water. On the 18th of the past October, she gave birth to a deep red heifer calf of great value, got by the 23d Duke of Airdrie. Hemp seed is said to be a specific also against abortion, if given daily after the cow has gone three months, or so, with calf, continuing till about a month before calving. Working a cow in the yoke, and at the same time keeping her thin in flesh, will sometimes cause a barren cow to breed.

The Michigan Relief Fund is growing far too slowly. The Fire Relief Commission has just issued an urgent appeal for more assistance. The funds on hand will last only about three weeks longer—just to about the beginning of regular winter weather. What have the people in your neighborhood, especially the farmers, been doing to help the sufferers? Have you—yes, you who read this—sent on the price of that "Michigan Bushel" of wheat yet? If not, this is a splendid time for doing so. It would have been a trifle better to have forwarded it a month or more ago, as the price then was higher; but if it was not sent then, in all your life there will never be a better time to do this generous deed than just now. Speak to your neighbors, too, on the matter; one energetic man or woman in each neighborhood would do a world of good in helping those suffering Michigan farmers.

Five years ago, as we remember (the exact figures have been given in this journal from year to year), we planted a strong root of Paulownia imperialis in a circular bed. The growth was confined to one shoot. This grew the first season about 10 feet high, and was cut down late in the Fall. The second season's shoot grew 11 feet high; the third nine feet; the fourth eight feet; and the past season's six feet high. Other shrubs and trees in the same plot have maintained their vigor, the soil having been enriched once or twice since the Paulownia was planted. Thus it appears that the roots from this heroic treatment of the stem are becoming weakened and the evidence afforded is against severe pruning. The injury which hedges—both deciduous and evergreen—often sustain after they have grown to the desired size and fullness is often attributed to drought, to sudden changes during the Winter, or to intense cold; but it is very likely due to the severe pruning they have received during their hedge existence. We have more than once had occasion to think that apple and pear trees which have been "thinned out" to "admit the air and sun" have been seriously injured in the same way.

The Public Domain.—Judging by the amount of land taken up for settlement of late, Dakota appears to be the favorite with those who go West to grow up with the country. The area of public lands disposed of within that Territory during the last five years amounts to upwards of 8,000,000 acres. It was in 1877-78 that the rush began, the amount of land taken up that year having been six times as great as during the preceding twelvemonth. Since then the increase has been steady and rapid till in the last fiscal year 2,673,333 acres were taken up. The public lands taken up within the last five years in Kansas have also run over 8,000,000 acres, and in 1878-9 the area there disposed of was considerably larger than that mentioned for Dakota last year; but since 1879 there has been a marked falling off. During 1880-81 there has also been a considerable falling off in the acreage taken up in Nebraska, the largest area having been disposed of in 1879-80. Altogether the State has disposed of 4,226,939 acres during the last five years. California has got rid of 2,474,881 acres in the last five years, and 1,411,000 acres have been taken up in Washington Territory. In the five Southern States of Alabama, Arkansas, Florida, Louisiana and Mississippi, 1,514,000 acres were disposed of in the last fiscal year, Alabama and Arkansas supplying about one-third each. A very large amount of land was taken up in Texas, but that State contains no land belonging to the United States.

A LARGE PROSPECTIVE HORSE MARKET.

In 1877 J. A. Bridgland, our consul at Havre, with the permission of Secretary Evarts, imported some American horses with a view to selling them for the use of the French cavalry. They gave entire satisfaction and the consul has just reported that there are now upwards of 600 American horses in the French service. The enormous armies of Europe use an immense number of horses for the cavalry, artillery, commissariat and transport departments, and horses suitable for the several branches of the service are always in demand at good prices. It is estimated that there are in this country at least 3,000,000 horses suited for the European cavalry service, and the brilliant victories of the American race-horses, Iroquois and Foxhall, on the English and French turf, will help to impress the value of our stock on the minds of foreign buyers. Hitherto a great discouragement to the trade has been due to the high price charged for the transportatian of live stock by the French Trans-Atlantic Steamship Company; but new steamers are now being built both in France and England for the express purpose of engaging in the live stock trade between France and the United States, and these are sure to largely increase the traffic if managed with energy and intelligence by our horse dealers.

LATEST FEATURES OF THE RAILROAD WAR.

The era of cheap railroad fares to and from the West, has been greatly enjoyed by transient travelers on pleasure trips, and by the mercantile community (especially in this city), with whom there has been a special "boom" in business. Early last week the Pennsylvania, and Baltimore & Ohio roads had enough of the fun, and raised their rates to about the old figures. It appears that the original cause of the feud between the various lines was the difference in fares between Western points and Boston *via* New York, and Boston *via* Albany. It is about fifty miles farther from Chicago to Boston by the former route than by the latter, and the Boston and Albany company claimed that the mile rates between Boston and Albany and Boston and New York should be the same. To this the Pennsylvania, and Baltimore & Ohio roads have objected, and they claim that the fare from Chicago to Albany and to New York should be $20, and that from these points to Boston the regular rates, which differ by a dollar, should be maintained, making the through rates by way of New York $25, and by way of Albany $24. Against this the New York Central and Boston & Albany railroads pooled their issues, and the fight began. The great Vanderbilt line, last week, met the advances of its Pennsylvania neighbors by fixing the passenger rates from Chicago *via* Albany to Boston at $10.25; and *via* New York at $15; the fare from Chicago to New York being put at $9.25. We do not predict the next step, but we can speak certainly of the past. The warfare has made a great "boom" in trade; it has given unusual opportunities for cheap business and pleasure trips, and it has shown that railroad companies can live and have their being on much lower rates than they have been receiving for several years past.

"TIT FOR TAT."

"Down with the enemies of German agriculture!" was the cry at the meeting of the congress of German agriculturists the other day at Berlin, and by the "enemies of German agriculture" was primarily meant the United States of America. The constantly increasing importations of meat and breadstuffs from America to Europe, it was insisted, endanger the German production of grain and cattle and increase the existing agricultural distress in England, France and Germany. Accordingly the assembled land proprietors, speaking for the entire agricultural interests of Germany, strenuously advocated the increase of import duties upon agricultural products so as to render the tariff practically prohibitory. As a means of relief three measures were proposed: First, an increase of duties on products from this country; second, a league of the Central European States against the great grain-producing countries, Russia and the United States; and, third, better railroad facilities from the chief grain-producing regions of Central Germany and Hungary to the grain-consuming centers of the continent.

In this movement there is undoubtedly a menace, probably even a danger, to our export trade in live stock, meat and breadstuffs. It is part of a general course of opposition by European agriculturists against the free importations of farm products from this country. We are making bread and meat too cheap for the poorer classes in Europe, and the producers of these commodities there naturally resent the depreciation of prices. Statesmen, too, and financiers are becoming alarmed at the increasing drain of money to this country in payment for our agricultural exports. Bismarck is known to favor even a higher tariff than that lately imposed on foreign imports; France and a half dozen other European countries have already, on a frivolous pretext, prohibited importations of our hog products. The party of "fair trade" is still active and growing in England, and to meet this swelling tide of opposition there are two obvious courses open to this country. First, we must see to it that all our exports are strictly good. Behold what an impetus has been given to the present anti-American movement by the exportation of a little inferior pork! An embargo like that on our hog products is now being vigorously urged against our canned meats in Continental Europe, and less virulently in the United Kingdom. Shall we permit a few reckless speculators for the sake of individual gain to inflict still heavier losses on the trade of the nation by sending unwholesome food to the markets of the outside world? Second, if Germany shall adopt and France continue a policy of practical prohibition of our products, we must adopt retaliatory measures. Our people have more reason to seek protection against adulterated French wines than France has to embargo American meats on account of a few cases of trichina. To those who cry "Down with American importations," let our answer be "Protection of American citizens against foreign frauds and adulterations."

BREVITIES.

Will the winners of the prizes for the best five heads of wheat please send us their correct addresses as soon as possible!

A cotton growers' convention assembles in Atlanta, Ga., on Nov. 2, at the instigation of Commissioner Loring who has sent out invitations to all the agricultural societies in the Cotton Belt. A large attendance is expected.

There is a rumor, which appears almost too good to be true, that the British Admiralty has decided to introduce into the navy American salt beef instead of the article hitherto cured at Deptford. What a howl of indignation and protest so excellent an innovation would draw forth from John Bull both as butcher and stock-owner. "A more vexatiously irritating innovation can hardly be conceived," exclaims a London newspaper angered by the very idea of the improvement.

The composition of buckwheat has been examined by M. C. Lechartier. He found that the proportions of mineral matter in the straw increases with the weight. The straw may become richer in phosphoric acid than the grain, differing in this respect completely from the straw of the other cereals. The aggregate of the principal fertilizers removed from the soil by an entire crop of buckwheat is much more considerable than for a crop of wheat yielding the same quantity of grain.

In all the talk, East and West, about preventing and punishing gambling in the produce markets, the entire force of public condemnation seems to be directed against the "bulls" alone. Is this just? If the "bull" does occasionally toss up a commodity beyond its legitimate price as fixed by the ratio of supply and demand, does not the "bear" often pull it down below that point? The "bull" is sometimes, 'tis true, an unruly, objectionable animal to the general public, but the "bear" is always a hateful beast to the farmer, and we insist that whatever coercive or penal measures may be adopted against the one shall also apply to the other

From a very interesting table in the American Bee Journal on the honey yield for this year, we observe that the comparative order of the States as to total honey product is New York, Pennsylvania, Ohio, Michigan, Wisconsin, etc. But Dakota, though twenty-sixth on the list as to total yield, is first in the average number of pounds per colony, her average yield being 159 pounds. Wisconsin follows, a good second, with 112 pounds, and Louisiana comes third with 98 pounds. While New York takes the lead in heaviest total yield, her average per colony places her eleventh on the list. Notwithstanding the last was a very severe Winter on bees, those that survived have done good work, bringing up the average per colony in all States from 55 to 69 lbs.—nearly double. The amount of extracted honey, as compared with comb honey, is found to be much greater, showing that it is constantly growing in favor. Out of the total surplus reported, viz., 9,467,622 pounds, 5,477,176 pounds were extracted, and of this quantity 4,946,226 pounds were "light" extracted. The table was compiled from reports from less than a quarter million colonies, or about one-twelfth the whole number in America. If these reports may be taken as an average of the whole, the total honey crop for this year will not be less than 120,000,000 pounds, worth, at the least calculation, a million and a-half of dollars.

In the case of the City of Eufaula, Ala., vs. McNab the facts were these:—The city paid, in its bonds, $10,000 for land to be given to a manufacturing company as an inducement to build its works within the corporate limits, in the expectation that the business and commercial prosperity of the place would thereby be advanced. The bonds were not paid when they fell due, and thereon suit was brought and judgment given for the plaintiff. An appeal was made to the Supreme Court of the State, and the question considered was as to the power of the city to buy the land for the particular purpose stated. The bonds were issued under section 24 of the city charter which reads as follows:—"The council shall have full power and authority to purchase, and provide for the payment of the same, all such real estate and personal property as may be required for the use, convenience and improvement of the city." In deciding the case, in June last, Judge Somerville, while reversing the decree of the lower court, said that the terms of the charter are imperative that such property must be "required for the use, convenience and improvement of the city." Collateral commercial or business advantages will not be sufficient; property must not be acquired in aid of private enterprise, however laudable its purpose or useful its encouragement. This decision affects pleasantly many villages and small towns—oh, yes, and a few pretty large ones too—throughout the county, especially in the newly settled parts of it, and unpleasantly, of course, some of their luckless, confiding bond-holders.

Miscellaneous.

GRAND FORKS. D. T.

Its Location, Agricultural Surroundings and Commercial Importance.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

IN our last letter from this wonderfully progressive region we gave an introductory sketch of this city, promising more interesting information to follow. Upon our arrival we woro immediately impressed with the location. After visiting so many prairie towns, it is pleasing, indeed, to drop in on one which has a garnishing of natural timber, a silvery river wending its way on the east of the city, while westward as far as eye can scan, are fields just denuded of their wealth of grain.

Leading from the city the iron rails of the St. Paul, Minneapolis and Manitoba Railroad are seen trending to the South, to Fargo and the Northern Pacific; to the West to the great uncultivated tracts, to the north through the valley of the Red River to Manitoba, and to the east connecting at Crookston with the main line. A railway from this point to Duluth would be of undoubted reciprocal benefit, both as an outlet for grain and an inlet for merchandise and timber. Located midway in this great and fertile region, surrounded upon all sides by excellent lands, many of them already yielding a bountiful harvest, Grand Forks must necessarily be a center for supply and demand.

The wheat crop of Grand Forks County for 1880, was 463,160 bushels; that of 1881, 875,000 bushels, the increase being due to a larger acreage and a better average yield. The amount of wheat marketed in this city in 1880, exceeded 800,000 bushels, large quantities having been received from across the river (in Minnesota.) The receipts this year probably will not exceed those of last very largely, as several new stations have been opened north and west to keep pace with the growth of the country, although the capital and business represented by the increase of the acreage, center of necessity largely in Grand Forks and become tributary to its commercial interests. There are a few farmers who pay more than usual attention to securing a diversity of products, raising oats, barley, flax, hay and root crops; but as yet the hobby of nearly all is wheat, and the dangers of riding a hobby are well known to all farmers in older communities.

By the official census of 1880 the population of Grand Forks was 1,703; now by careful estimates it is reckoned at 2,800. There are five churches—Presbyterian, Methodist, Episcopal, Lutheran and Catholic. They have a handsome brick school building worth over $20,000; a graded school of five departments and teachers, efficient and successful. There is a good volunteer fire department. The cosmopolitan character of the people demands and sustains two English papers—the Grand Forks Herald, weekly and semi-weekly, and the Grand Forks Plain-dealer, weekly. There are also two weekly Scandinavian papers of good reputation. We were pleased to hear from the many Eastern people located here that the RURAL NEW-YORKER retains its place in their hearts and in many of their homes. Lodges of A. F. & A. M., I. O. O. F., and K. of P. are well sustained. The only indebtedness of the city consists of bonds recently voted for the erection of a city hall and jail, covering $5,000. These bear seven per cent interest and are now at three per cent premium.

The business-men of this city are active, enterprising, and busy workers; the stores well stocked and some efforts are being made to replace the wooden buildings with substantial brick structures. A Chamber of Commerce has been recently organized to protect and foster home interests. James Twombey, Secretary, will be a reliable correspondent. To give an adequate idea of the commercial importance of the place we only need to state that the commercial business (exclusive of wheat) approximates over $1,250,000. The active banking capital of the city is $150,000 with abundance of local means to co operate in enterprises. There are two steamers plying on the Red River regularly between here and Pembina, and they were built at this point. Timber in the vicinity is of excellent quality, oak predominating, and on this account it is thought by many that an agricultural implement manufactory would do well. A small three-run flouring mill is operating here night and day. The capital and enterprise of the city are agitating the subject of building a large merchant roller flouring mill to grind the staple product of the country to the tune of 75,000 to 100,000 barrels annually. People here need it, and we hope they will get it. We were told a foundry and machine shop would do well. There is now a wagon and carriage factory. A good quality of clay is quite near, and for contemplated improvements large brick yards are needed.

A word of the country and we close:—Of its soil and products we have treated. It has three rivers crossing it, their banks and valleys well timbered. The water near the river is not equal in quality to that obtainable a short distance back, which is excellent and plentiful. The bonded indebtedness of Grand Forks County is $14,000 at seven per cent, with no floating debt.

From this pen picture your readers can glean the salient points; but in no other way but by a personal visit to the places described, can their various elements of prosperity be properly appreciated.

We are frequently asked, as the easiest way of learning geography, "What is the best and most direct route to reach this Far Northwest?" The Pennsylvania R. R., to Pittsburgh; the Pittsburgh, Fort Wayne and Chicago, to Chicago; the Chicago, Milwaukee and St. Paul; or Chicago, St. Paul, Minneapolis and Omaha R. R. to St. Paul; and the St. Paul, Minneapolis and Manitoba R. R. direct to destination.

THE FREE SEED DISTRIBUTION.

WHEN we are the recipients of articles of real or supposed value, it is our duty, not only to the donor, but to ourselves, to make known the value thereof, especially where experience is necessary to gain that knowledge. The first in importance seems to be the Rural Branching Sorghum. My seed came up badly, and I got but one stalk to the hill. I planted on March 23, 3x3½ feet apart, and although but one stalk came up to the hill, it branched out to such an extent that the stalks nearly met in the rows. I cut it up about four weeks ago, except two hills for seed, and the growth around the hills is now from three to four feet high. The fodder made from that cut is eaten more readily than fodder of sugar corn. In fact, my horses eat all of it, not leaving a piece even of the stalk. I planted mine with a hoe, simply making an opening for the seed, and from that time on it never received any cultivation, even by plow or hoe. I regret to say so, but circumstances prevented it, and yet it kept on growing and never wilted, although we have had an unusually dry season, such as to burn up the corn before maturing. In conversation with the few subscribers I send you, they say their sorghum simply beats anything to grow they ever saw, and, wet or dry, it is always growing and green. It is certainly the fodder plant for the South.

I was unsuccessful with my White Elephant Potato, partly on my own account and partly owing to the weather. The vines had come up nicely when one severe freeze came—on the 13th of April—from which they never recovered. The asparagus came up well and holds its own very well. My Washington Oats proved a failure, as they nearly all smutted, which may have been owing to their being planted so late. This is one difficulty we have in succeeding with the seeds received—as it is generally too late in our climate for most of them, when received. My pinks have done finely and have given my family much pleasure. I measured one yesterday and it was 2½ inches in diameter, of a beautiful variegated color, whether a picotee or carnation I do not know, as I am not familiar enough with the pink family to tell. I had a white one that bloomed some time ago, one of the blooms measuring three inches in diameter. They are beauties, you may be sure, and I have an endless variety of colors. The subscribers I secured for you are freedmen, and they are infatuated with the RURAL. E. W. Williams told me yesterday that he would rather eat corn bread and do without meat, if necessary, to secure the RURAL. A. S. STONEBRAKER.

McLennan Co., Tex.

THE SUFFERING FARMERS OF MICHIGAN.

IT is quite gratifying to see that one *agricultural* paper has taken up in earnest the case of the poor people of Michigan who have suffered so much and will continue to unless help comes to them before Winter sets in. As in the case of the Kansas unfortunates a few years ago, the most apathetic class was *apparently* their own, the farmers, judging by the little notice taken by the agricultural papers and the gatherings at farmers' meetings. But injustice may be done by ascribing apathy and indifference to the individuals because their leaders and representatives show so little enthusiasm in the cause. Now as then, in towns and villages, East and West, collections are taken up mainly through the churches whose congregations are composed of the farming community, and if any one or two persons will start the ball it will roll into big dimensions and money, clothes and all necessaries will be gladly furnished. We have just raised here in Lenox, mainly through two churches, Episcopal and Congregational, $950 to be sent to the poor people in Michigan, and the general fund throughout the county is being daily augmented by subscriptions through the churches. But the good work must go on for some time yet if the 20,000 destitute people are to be assisted to the extent they should be. The people and farmers of Michigan have not called upon outsiders before doing what they could themselves, and they are yet striving nobly in the good work, but their appeal for assistance from other States should not be unheeded. Money is now more essential than other forms of assistance as these poor farmers have not only to be clothed, fed and housed, but put on their feet again in their vocation by being furnished with teams, seed and the other implements of their calling.

The RURAL NEW-YORKER has been among, if not the very first of influential agricultural organs at the East in making the distress of the Michigan farmers a subject of its leading articles, and if others had followed the example, the aid for the sufferers from their more fortunate brethren would have been more prompt and liberal. It is to be hoped sufficient money will soon be raised to prevent further calamities to those already very unfortunate people of Michigan. R. GOODMAN.

Lenox, Mass.

NOTES AND COMMENTS.

I REGRET to have to mention the fact that the Flemish Beauty can no longer be relied on to produce fine fruit. From several trees which I possess, there was only one that had pears worth gathering. On the others they all cracked open and were thus rendered worthless. I am informed that this cracking is becoming common in other localities. In order to obtain the fruit of this variety in perfection, it should be gathered much sooner than other pears and ripened in the house, for if it is allowed to remain on the tree it soon becomes soft and worthless. I usually gather it about the third of September even before it parts readily from the stem. The tree bears when quite small and is very productive and is of upright, luxuriant growth.

THE Jersey Gratioli is another excellent pear and is one that is deserving of more attention than is at present given it. The tree is very productive and is of vigorous growth. The medium-sized fruit is not of a very handsome exterior, the rough skin being of a greenish-yellow color covered with russet patches. It is, however, of a rich flavor and is quite juicy. It requires to be gathered about September 20, and ripened in the house.

THE St. Ghislain is also a most excellent medium sized pear with a rich, juicy, and sprightly flavor. It is also remarkably productive, producing its fruit upon the exterior branches. In season from the middle to the end of September.

I DO not think, Leon, that sowing the seed of sweet peas eight inches deep has had much to do with your neighbor's success (see page 665), but a rich deep soil, shelter, lots of water, keeping the seed pods picked off, together with a little care as to training and to furnishing supports as early as required, are all the essential requisites to the successful culture of sweet peas, and any person who will give this beautiful annual this necessary attention will be well repaid. It is to be regretted that these beautiful climbing plants are not as extensively cultivated as they should be. It may cause surprise to some of the RURAL readers, but it is, nevertheless, true that some persons have the impression that they are nothing more or less than common peas; but not only are the flowers as delightfully fragrant as mignonette, but they are of every hue from pure white to the darkest purple and deep scarlet, and some varieties are also beautifully striped. The seed can be obtained cheap in mixed packets or in separate colors as may be desired, and should be sown as early in the Spring as possible. To those who wish to obtain a few of the most distinct varieties I would recommend the following: Scarlet Invincible, a beautiful deep scarlet; Scarlet, striped white; Invincible, striped; Blue-edged, white and pink, edged with blue; Painted Lady, rose and white and brown; Princess of Prussia, bright blush.

I NOTICED that a good deal has been said of late relative to the tomato rot, and as it has caused me considerable annoyance for the past two seasons I was much pleased with the papers on the subject in the RURAL for October 1. When I first noticed the rot among my tomatoes I was inclined to the opinion that it was caused by the tomato worm, but upon the closest examination I failed to discover a single worm. As I am well acquainted with the habits of the tomato worm, and as no leaves have been destroyed on my plants, I am quite confident that it is not the tomato worm that has caused the rot in my tomatoes, and as far as my experience extends, I am of Mr. H. Stewart's opinion, that it is of fungoid origin. Mr. Stewart's paper on the subject is one of the most carefully written that I have seen as yet, and clearly shows that he has given the subject the closest examination. Now, as to the remedy—have we any? So far as I know we have none. As soon as I became satisfied that the rot was not caused by the worms, I had my plants examined daily and all imperfect, rotten and spotted fruit removed. This plan was followed daily for about two weeks. At the end of that time the rot had ceased. This plan, however, was of little avail; for about September 20, the rot appeared again and both large and small, green and ripe tomatoes began to rot rapidly. In this connection it may be well to remark that I notice that the Trophy Tomato is more subject to the rot than any other variety I have in cultivation, while the Little Gem is perfectly free from the ailment. CHARLES E. PARNELL.

Queens, L. I.

CATALOGUES, ETC.

HOOPES BRO. & THOMAS'S Hand-Book of Flowers. Westchester, Pa.

EIGHTH Biennial Report of the Illinois Asylum for Feeble-minded Children. C. T. Wilbur, Secretary and Superintendent.

GENERAL INDEX and Supplement to the nine reports on Insects of Missouri. By Chas. V. Riley, Entomologist to Department of Agriculture.

REPORTS OF THE CONSULS of the United States, Nos. 10 and 11, Aug. and Sept., 1881. Published by the Department of State, Washington, D. C.

STUDY OF THE VARIOUS SOURCES OF SUGAR, by Lewis S. Ware. Price 50 cents. Published by H. C. Baird & Co., 810 Walnut Street, Philadelphia, Pa.

AGRICULTURAL ADVANCEMENT IN THE UNITED STATES. An address read at the organization of the American Agricultural Association, Dec. 10, 1879, by C. V. Riley, A. M. Ph. D.

FOURTH QUARTERLY REPORT OF BUREAU OF STATISTICS for the three months ending June 30, 1881, issued by the Treasury Department from the Government Printing Office, Washington, D. C.

BIENNIAL REPORTS of the Commissioner of Arkansas Public Lands: 1st, from Oct. 1, 1874, to Sept. 30, 1876; 2nd, for two years ending Sept. 30, 1878; 3d, for two years ending Sept. 30, 1880. D. W. Lear, Little Rock, Arkansas.

HOMES FOR THE HOMELESS. This little Pamphlet of eight pages tells on what conditions the State of Arkansas offers to donate about three million acres of land to actual settlers, in tracts not to exceed 160 acres for each applicant. To be had *gratis* of D. W. Lear, Commissioner State Lands, Little Rock, Arkansas.

TENTH ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE ILLINOIS INDUSTRIAL UNIVERSITY for the two years ending August 30, 1880. This handsome work of 261 pages, octavo, besides giving a full account of the University, gives a great deal of valuable information on various farm topics in a series of papers prepared by members of the faculty and the head farmer. Among these are papers on Experiments in Corn Culture by Professor G. E. Morrow; Farm Leveling Instrument, Prof. Baker; Water for Stock, Head Farmer Lawrence; Blight of Apple and Pear Trees, Prof. Burrill; List of Native and Foreign Woods, Prof. Ricker; four papers by Prof. Weber on Contamination of Well and Cistern Water by Organic Matter; Determination of Organic Matter in River Water; Notes on Arragonite, and the Flash Test of Kerosene; two articles by Prof. Scovell on Shrinkage of Corn and Analysis of Soils of the University Farm, and an instructive article by Professors Scovell and Weber on Chemical Analysis and Practical Experiments with Sorghum Cane. We shall have occasion to refer to this work later on.

Societies, &c.

VIRGINIA STATE FAIR.

[Special report to the RURAL NEW-YORKER.]

THE 21st annual fair of the Virginia State Agricultural Society opened on the grounds of the Society, at Richmond, on Oct. 17, and closed Oct, 27. The weather throughout the entire fair was pleasant—more than can be said of the dust—and the exhibition was equal to those of former years. The officers made a mistake in attempting to hold a ten days' fair during the Yorktown Centennial, and so far as gate receipts are concerned, they have hardly realized their expectations. Exhibitors find a great deal of fault at the extra expense they are put to, and all believe that one

week is all that is necessary and profitable for any State agricultural show. Visitors on no single day numbered over 5,000, and but very few farmers were among that number. While I do not assume to know the rules and regulations of this Society, I do assume to say that if the officers expect farmers and agricultural implement men to attend their fair and become interested in its success, they must in future shut out all side-shows, "fakirs," gamblers, wheels of fortune and chariot races. Farmers do not come to an agricultural fair for the purpose of getting fleeced out of their money by sharpers, who have been plying a very profitable business here during the entire fair, having been licensed to swindle the visitors by the officers of the society.

POULTRY.—The poultry interest was unusually well represented, and the birds shown were very fine. The Messrs. Rowe, of Fredericksburg, Va., had the largest and best exhibit in this department. They showed Light Brahmas, Black Cochins, Plymouth Rocks, Houdans, Silver, Golden and White Polish, White-crested Black Polish, Colored Muscovy, Pekin and Rouen ducks, Brown China geese, Pea Fowls and Bronze turkeys, upon which they received premiums for every coop, including all sweepstakes, premiums and collection prizes. Coops were also shown by Messrs. Hollingsworth, Briscoe, Gillman and Ellison.

SHEEP.—In this department were shown some of the finest specimens of pure-bred sheep in this country. The Cotswolds, Hampshire Downs, South Downs and Merinos, as well as some fine grades, were particularly noticeable and praiseworthy. The principal exhibitors were Green & Farrer, of Orange Court House; A. P. & M. B. Rowe, of Fredericksburg, J. A. Reid & Bro., Gordonsville, Geo. Crisman, Harrisonburg; Carson & Sons, Riverton, and others, all of Virginia.

SWINE.—Mr. A. M. Bowman, of Waynesboro, exhibited nine head of very fine Berkshires; A. P. & M. B. Rowe, Fredericksburg, a fine lot of Jersey Reds, Essex and Berkshires, and F. Lovelock, Gordonsville, Jersey Reds. In this class as in the sheep department the animals exhibited were all splendid specimens and attracted much attention.

CATTLE.—In point of number not so many entries were made as in some previous years; but in point of quality no finer show was ever seen upon the grounds of the society. Fine herds of Jerseys were shown by M. B. Rowe, Roland, Buford, Green & Farrer, and G. Julian Pratt. The first premiums on two and three-year-old bulls went to M. B. Rowe and the second premium on three-year-old bulls to the same. The second premium on two-year-old bulls was won by J. S. Atlee. There were also very fine exhibits of Ayrshires, Short-horns, Devons and "native" dairy cows. Much credit is due Mr. Geo. Palmer, of Saltsville, Va., in this connection, a former resident of Syracuse, N. Y., who came into Virginia several years ago, and who has been engaged in improving the condition of stock in this State since his arrival here. His exhibit of Short-horns was the finest of its class, and particularly so was the "Duke of Onondaga,,' and "Rosebud's Oxford," each of which weighed upwards of 2,000 pounds. He also showed a yearling bull bought of A. Rennick, a famous breeder of Kentucky.

POMOLOGICAL.—The display of fruit was not large and showed unmistakable signs of the severe drought which has prevailed in this section. There were, however, a number of dishes of fine apples, and it was surprising so fine a quality could be grown in so droughty a season.

THE AGRICULTURAL IMPLEMENT DISPLAY was equal to any in former years and comprised exhibits from the principal manufacturers South and North. Mr. Ashton Starke, H. M. Smith & Co., and McGraw & Co., local dealers in agricultural implements, made fine shows, and their exhibits were very prominent features of this department. Among the leading implements deserving of special mention, are the following:

The KEMP & BURPEE MANUFACTURING COMPANY, Syracuse, N. Y., for the first time on these grounds, exhibited their combined manure spreader, pulverizer and cart. The machine was shown in full operation, and attracted large crowds. The farmers in this locality have been looking for some time for a machine that would mince up and distribute tobacco stalks. None, however, had hitherto been obtainable, and as a test of the merits of this one, it was loaded with sorghum stalks from which the juice had just been extracted. It was the severest test that could possibly be made, and all were much surprised at the thoroughly satisfactory way in which it minced and evenly distributed this load of sorghum stalks. The test convinced all of the justice of the claims put forth in its behalf, and many availed themselves of the opportunity to secure one of these machines. It sows with equal ease marl, ashes, fertilizers, wet or dry manure of all kinds, distributing the stuff with perfect uniformity, and thereby increasing the yield of grain or other crops to an extent that soon repays the cost of the machine.

THE HOOSIER DRILL COMPANY, of Richmond, Ind., exhibited one of their eight-hoed grain drills, with grass-seed and fertilizer attachments. This company commenced the manufacture of grain drills in 1857, and have steadily increased in manufacture and improvements from year to year until their patents and improvements number over eighty at the present time. Although they have a capacity of manufacturing over 10,000 drills, it has been found inadequate to meet the demands, and this year they are enlarging their works, and with increased facilities they hope to be able to meet all demands during the coming season. The simplicity and ease of operation of this drill are among its most noticeable points. The fertilizer distributor consists of a rotary plate which revolves under a square-edged casting which renders it a perfect force feed. The device for changing the quantity of seed or fertilizer consists of a changeable lever, which can be regulated while the team is in motion and does not necessitate the changing of wheels or cogs. This drill has received first premiums at nearly every fair where exhibited, and meets with general favor from all who examine its workings. The company also exhibited the Hoosier corn drill which is meeting with such wide approval. Readers of the RURAL will remember that this drill was used last season in planting the corn on the Rural Experiment Farm from which 150 bushels of shelled corn to the acre were harvested, as was stated in the Corn Number. The excellent work done by this drill contributed possibly not a little to the production of this large yield.

C. WATSON, Yanceyville, N. C., exhibited a rotary harrow which is comparatively a recent invention. All farmers who have tried it are convinced of its merits and it bids fair to take a first rank among this class of implements. Heretofore the constuction of harrows of this kind has been too complicated; the liability to become deranged from use, and the cost have prevented them from being generally employed. All these points have been overcome in the above harrow and we predict for it an extended sale. The harrow is not turned at the end of the row, and it never chokes up.

The Hoosier, Monach, Champion, Hagerstown, McSherry and Bickford & Hoffman drills were shown, all standard and worthy machines. Thrashers made by the Geiser Manufacturing Company, H. M. Smith & Co., B. Gill & Son, J. W. Cardwell & Co., were all shown in full operation. W. Deering & Co., 254 North Broad Street, Philadelphia, showed one of their string binders.

Mowers, made by Walter A. Wood, the Champion and John P. Manny were among the exhibits. Among plows, the Oliver chilled, Roland chilled, Dixie, Leader, So. Bend Watt & Call, and the Oliver and Deere Plow Sulkies attracted much attention.

Corn drills, manufactured by the Hoosier Drill Company and the Farmers' Manufacturing Company, both of which are familiar to RURAL readers, were particularly noticeable.

Corn shellers, the Cornell, Young America, the Favorite and Crescent, were each shown in operation, as also was the Whitman cob mill. Other Machines—cultivators, rakes, the Cooley Creamer, Davis and Blanchard churns, and implements of merit—were on exhibition, which space will not permit me to mention.

The fair virtually closed on Wednesday the 26th, with a grand parade, over four miles in length, of the tradesmen of Richmond. It was a "gala" day for all, and the parade was thought one of the largest of its kind ever held in the city. I would suggest to officers and stockholders that if they wish to see success crown their efforts in the future, and are desirous of making the State Fair of Virginia what it should be, they must exclude gamblers and sharpers of all sorts who openly ply their callings; and rely more upon the patronage of farmers and other decent citizens. And if the press and inhabitants of the city feel an interest in this matter, they must unite and give a hearty support to the efforts of the Society in this praiseworthy direction.

G. B. B.

NOTES.

THE Arkansas State Horticultural Society met Oct. 19th and elected officers for the ensuing year as follows:—Wm. H. Lipton, Little Rock, Pres't.; Benj. Thomas, Little Rock, 1st Vice-Pres't.; J. T. Mott, Hot Springs, 2d Vice-Pres't.; Prof. W. S. Thomas, Alexandria, 3d Vice-Pres't.; E. H. Chamberlain, Little Rock, Recording Sec'y; I. H. Nowlin, Little Rock, Corresponding Sec'y.; J. B. Hoag, Judsonia, Treas.; and Wm. F. Patton, Little Rock, Alfred Rison, Little Rock, C. C. Davidson, McAlmont, W. S. Thomas, Alexandria, Geo. W. Kennedy, Argenta, Executive Committee.

THE next meeting of the society will be held in January next, time and place to be selected by the executive committee.

A NUMBER of prominent citizens of Arkansas met at Little Rock, Oct. 19 for the purpose of forming a State Agricultural Association, and elected the following officers:—Gilbert Knapp, Little Rock, Pres't.; B. D. Williams, Little Rock, 1st Vice-Pres't.; W. H. Hunter, 2d Vice-Pres't.; J. H. Joslyn, 3d Vice-Pres't.; Peter Brigman, 4th Vice-Pres't.; Mr. Van Winkle, 5th Vice-Pres't.; Benjamin Thomas, Secretary; Thomas Fletcher, Treasurer. The society was organized on the plan of the New York State Agricultural Association and promises to be a flourishing body and to greatly promote the cause of agriculture in that State.

The Poultry Yard.

POULTRY NOTES.

In the RURAL of September 24, A. S. S. asks some questions which seem to me to demand a little more attention. The first I would refer to is, "Are the Langshans hardy and profitable?" This question should be answered most emphatically in the affirmative. I have bred them two years, and have found them extremely hardy and the very best of Winter layers. The statement that they are identical with the Black Cochins does the breeders of them an injustice. The facts of the case are these: Eight or nine years ago Major Croad was on an exploring expedition in China in the employ of the British Government. While in the Langshan district, in the northern part of China, he came across the fowl, and sent some to his home in England, where they created quite a sensation. The Langshan is distinct from the Cochin, the latter coming from the southern part of China. In shape the Langshans are more like the Brahmas, but have much longer tails, and large single combs. Their legs are black, the webs between the toes being of a pinkish color. That they are closely related to the Cochin I do not deny; nor do I deny that the Brahma is also. But I do believe that they are a distinct breed just as truly as the Dark Brahmas are distinct from the Light Brahmas. The comb of the Langshan, as I have said, is single, like that of the Cochin, but much larger.

The other question was, "Are the American Seabrights pure-bred or only a cross?" The American Seabrights (known by a variety of names, such as Excelsiors, Eurekas, Silver Laces, Hambletonians, etc.) are fowls resembling the Plymouth Rocks. They have been bred a number of years, and can as truly be called a pure breed as the Plymouth Rocks. They are, however, a cross between the Silver Spangled Hamburg and the Dark Brahma. I once saw the Dark Brahma hen through which came one of the best yards of Hambletonians. They are very hard to raise, having been bred "in-and-in" to such an extreme degree. In most yards the birds have the rose comb of the Hamburg, but some fanciers breed for the pea comb. The rose comb is the more popular and will be one of the qualifications in the new "Standard." How they came by the name of American Seabrights is a mystery, but such they are called. There has been, however, a move lately among the breeders of them to agree on the name Hambletonian. Whether it will succeed or not remains to be seen.

Both the Langshan and the Hambletonian are recognized by poultry fanciers as being pure breeds, and it is generally understood that they are to be admitted to the Standard at the coming session of the American Poultry Association.

D. C. S.

Providence, R. I.

Our correspondent seems to refer to a variety of poultry different from that of which we spoke under the name of Sebright Bantams. In the American Standard of Excellence, revised by the American Poultry Association, and published in 1879, the "points" of the Golden Sebright Bantams are given on pages 178, 179 and 180, and those of the Silver Sebright Bantams on the three following pages. It is to these we referred. The Sebright Bantam owed its origin and name to Sir John Sebright, who devoted much attention to its development some 60 years ago. There is an offshoot from it sometimes known as the American Sebright, but last Spring these were characterized in the RURAL as a poor sort not likely to be admitted to the Standard, by G. S. Josselyn, Secretary and Treasurer of the American Poultry Association, who is certainly an authority on such matters. Evidently the American Seabrights spoken of by our friend is a different sort from these American Sebright Bantams and from the Golden and Silver Sebright Bantams to which we referred.

A HINT TO SHIPPERS OF POULTRY.—As the season advances the demand for live poultry diminishes. Chickens should now be *well fattened* and shipped so soon as the weather becomes sufficiently cool, as much better prices are usually obtained than later in the season. Be very sure the animal heat is *all* out before packing. Pack in small boxes using plenty of *clean* and sweet straw. Ship to reach our market about the middle of the week.

E. & O. W.

Arboricultural.

TRANSPLANTING.

T. T. LYON.

ON page 701 of the current volume of the RURAL NEW-YORKER, an extract is published, from the catalogue of Ellwanger & Barry, of Rochester, N. Y., replete with valuable information upon this important subject,

It may be considered an act of temerity to differ, in any important respect, from what must be supposed to be the deliberate conclusions of persons so justly esteemed as high authority on subjects of this character. Nevertheless, I crave the forbearance of the editor while I call in question the sufficiency of the following directions, occuring in paragraph 3rd.

PLANTING.—"The trees, after the ground settles, should stand in this respect as they did in the nursery. Trees on dwarf stocks should stand so that *all the stock* be under the ground, and *no more*."

That the first direction is intended to apply to standard trees; that is, trees on their own roots, will, of course be readily understood. That the direction is sound, when applied to strong, dry or well drained soils I fully concede. It should not, however, be forgotten that men do frequently plant orchards upon moist and even wet soils, and especially on ground underlaid with retentive sub-soils. True, it may be said, very forcibly, that this should never be done. Admitted: and yet the fact remains that it is sometimes done. Besides, cases are not unfrequent in which trees are planted where the surface soil is but thin, with a "hard-pan" immediately below, so utterly impervious to the roots of trees that to plant them "as they stood in the nursery," would be to insure their failure with the first serious drought, especially should it occur before they shall be fully established.

In either of the cases mentioned my advice to the planter would be to set the tree directly upon the surface; or, in an extreme case, even upon a slight artificial mound; and draw good surface loam about it till the roots are buried even a little deeper than in the nursery, making the hillock very broad both at the apex and base as a security against drought. I accept the criticism, that this is not a proper way to prepare such ground for orchard planting; but the fact remains that such ground, in the condition described, is frequently planted to orchards, and, farther, that the practice is very sure to be continued. There is yet another case of very frequent occurrence, and one likely to be continued, and which undoubtedly should be continued, to which the direction in question should only apply with some modification. I refer to planting in light, dry, porous sand, such as is not unfrequently employed for this purpose in the Michigan "Peach Belt" if not elsewhere. In such soils trees are much surer if planted even two or three inches deeper than they stood in nursery, and this is often done with entire success. Indeed, I have very frequently seen fruit trees of all kinds growing thriftily, year after year, with sand drifted about them by the wind, till the roots are buried in two, three and even four feeth of earth.

Trees in soils of this character, with our trying lake breezes, especially in Spring and Autumn, need the aid of deeper planting and also of low branching to enable them to hold their position, while at the same time they are all the better prepared to withstand the droughts of Summer. Moreover, it should not be forgotten that the influence of high winds and of Summer drought increases as we go westward, and hence that the rules that apply in the planting and management of trees at the East, require modifications to meet the varied circumstances farther west.

Dismissing this part of the subject, I invite attention to the latter part of the recommendation in question—that trees or dwarf stocks should stand so that *all the stocks* be under ground, and *no more*. I recall to mind the circumstance that, many years since, the now venerable president of the American Pomological Society participated in a lengthy discussion of the question, how deep to plant dwarf pears; he urged that they should be planted with the point of union well beneath the surface so that ultimately the pear would emit roots, and thus acquire the vigor and longevity of a standard, thus combining the early fruitfulness of the dwarf, with the permaneney of a tree upon its own roots. I also well recollect my impression at the time that

Col. Wilder was confessedly the victor in the discussion, and that he was simply defending his own practice, which so far as I am aware he has not even yet changed; although he still continues to be an extensive practitioner in this direction. I will admit that a dwarf, planted as specified, may do very well as a shrub, in the garden, where a large tree would be out of place; but I cannot do away with the conviction that, for orchard planting with an eye to profit, it would prove an utter failure.

Pomological

FIRE BLIGHT--FROZEN SAP.

A. A. BENSEL.

FIRE-BLIGHT, as it is usually styled, is much more general on the pear trees of the Hudson River Valley this year than it has been for many years past, and the only remedy known, which is at best but partial, has not been applied as thoroughly as it should have been. Doubtless it seems a great sacrifice to the orchardist to have to lop off and cut away bearing branches, which last year were so thrifty and even the past Spring were so promising, but it will be found that as a general rule the more thorough the pruning the more certain the cure. Cutting far below the outward appearance of disease is necessary, because the poisonous ferment will mingle more or less with the healthy rising fluids. Much of the blight could be checked by Spring pruning or rather heading in the branches before the bursting of the buds. This, however, would only be necessary where it is suspected that the poisonous fluid remains in the tree.

I cannot agree with those who assert that the true cause of fire-blight is found in fungus growth and infusoria. The usual course of fungi is to attack old and weakened wood, while in this pear blight the most vigorous young growth is the first to give tokens of the disease. And against the theory stands the fact that no other wood of fruit or forest tree exhibits similar symptoms. Can fungus be so limited?

It is stated that fire-blight can be propagated by inoculation and this fact is given to prove the fungus theory. It would prove any other, I think, quite as well. The yellows in peach trees can also be extended in the same manner. Neither will the more active animal economy resist inoculation. The existence of infusoria in fermenting water or decaying vegetable matter is too well known to enter into the discussion as a *cause* of blight.

The remedies are not different from those which can be applied in frozen sap blight; and I am prepared by my observations the present season to affirm that the difference between the two forms of blight is only dependent upon variations of the seasons. In other words, the *frozen sap*, or more truly the fermenting sweet water, which would have become true sap under favoring circumstances, has only attained a different position in the tree economy from that which is exhibited in fire-blight. When the leaves fall capillary attraction becomes feeble, if it does not cease entirely. The rising fluid falls short of the intention of nature and does not become aerated, because the leaves have fallen—in short, is not healthy, inspissated sap at all. It remains in the small branches which are most exposed to early frosts, freezing and thawing alternately.

Fire-blight is first observed in the small branches; frozen-sap blight in blackened dead patches on the large limbs and body of the tree. However much they may agree or in whatever they may differ, the results point the pear grower to some rules which must be observed to attain success.

Where there is liability to standing water on the subsoil or hard-pan the orchard must be thoroughly underdrained. The early Spring and Summer growth is all that should be looked for or required of the pear tree. Late Summer or early Fall plowing is injurious. Even if it does not produce Fall growth the sap of the tree is excited to the injury of the buds and often to the production of blight. It should be remembered, too, that fertilizers readily assimilated are to be cautiously used on the pear tree.

By closely watching the seasons the keen observer may sometimes employ such measures as will evade both blights. Let it be remembered that "eternal vigilance is the price" of good pears.

Fruit Trees For Lawn Plants.

Horticola puts a question on p. 633 which no one could answer better than himself. But as he invites others to reply to it I will say that what rather unfits fruit trees for lawn planting is that, like other creatures, when they become producers of progeny, they lose much of the grace and attraction which once made them so "pleasant to the eye." The weight of fruit spoils the figure of the tree often beyond restoration, yet one cannot resolve to remove a tree that yields so much, doing its best so well, even when it has become an eye-sore in front, a broken-branched wreck among the neat, trim plants of ornament. Cherries, of some sorts, where they endure the seasons well, and Siberian Crabs, and the large-leafed, large-fruited variety of mulberry keep their form and luxuriance well, their fruit being small—and removed in July and August they have time to recuperate by a second growth. The mulberry—one tree is enough—is especially adapted to lawn planting, the only objection being that the daily visits of the children through its long period of bearing make that portion of the grass look sorely beaten. A grape bower is a common and highly recommendable feature of a lawn, and any of the fruits are admissible when the lawn is large and gradually merges into a sort of informal fruit yard or orchard, which can be divided off by an almost unperceptible wire fence so as to conserve the appearance of roominess and freedom. W. G. W.

For Women.

CONDUCTED BY MISS RAY CLARK.

THE CZARINA ON EDUCATION.

ALTHOUGH the late czarina regarded strict religious training as the most important element in the education of youth, over which she exercised in her adopted country a surveillance as energetic as it was benevolent, yet remarks a contemporary, she never hesitated to express her disapprobation of the narrow-minded bigotry only too prevalent in Russian schools, which tended towards developing fanatical faith in church dogmas and traditions at the expense of human sympathies and affections. Some years ago her majesty was inspecting the Smolnoje Institute for Girls, then under the direction of Madame Leontieff, a pious dame of the old orthodox pattern, whose educational views were more like those of a mediæval abbess than of a nineteenth century lady-principal. During the examination of the pupils the empress, singling out one of the elder girls, asked her, "What is love?" to which unexpected question the lady, blushing deeply, returned no answer. Madame Leontieff stepped forward, and craved permission to inform her majesty "that in her school no instruction was imparted to the pupils on this particular subject, and that in all probability the girl did not even understand the meaning of the word her majesty had deigned to pronounce." "That is much to be regretted," replied the empress, "for woman's life is naught but love—first of all, love for her parents; then love for her husband; and lastly, love for her children. If these girls have acquired no just comprehension of love, they have been very badly prepared for the duties of life." Having thus expressed herself, the empress left the institute in manifest displeasure; and a few days later Madame Leontieff received her dismissal from the Imperial Ministry of Education and Public Worship.—Young Ladies Journal.

THAT THRICE TOLD STORY AGAIN.

A. E. S., must be the wickedest of men. In a late RURAL he pities the "poor husband who comes in from his own work and is set doing his wife's." I have seen enough of the daily life of the farmer's wife to *assure* the wise and large-hearted A. E. S. that he need not waste his tender compassion on the husband. Likely the wife doesn't call on him, and more likely he'd refuse if she did, or do it unwillingly.

In general there is no animal so selfish and forgetful of his mate as the farmer in average circumstances. Every day she labors beyond her strength. Early and late and all day on her feet. That is what ails American mothers—too much on the feet!

Farmers are apt to be untender and uncouth.

Women are subject to ailments that are trying and a husband should be kind and thoughtful and thus enable his wife to endure gracefully her trials. Let him fail to be considerate and he never has her whole heart again. MRS. MARIA JENKINS.

CORRESPONDENTS' CORNER.

"A Constant Reader" who made request for information regarding the covering of slate frames, will please note the following:

To cover slate frames take a piece of flannel long enough to go completely round the slate and twice as wide as the frame. Sew the ends together, slip it on the frame and sew a plait in each corner; then put a little mucilage or glue on the frame under the flannel and place a weight on it till it is dry. The cover and frame will then adhere.

MOSS DALE.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

CONCERNING THE TABLE.

MARY WAGER-FISHER.

NEITHER the best, nor the poorest domestic I ever had in my employ, succeeded in setting the table properly; at the best, there were always some essential things lacking—dishes for fruit, plates for salad, not enough cups or glasses—always something that would necessitate an additional demand. And is this not often true among mistresses, as well as maids, among farmers' daughters, even, who may regard themselves as being really quick and bright? How many of you set the table so well that when the family is seated around it for a meal, nothing is lacking? There are many, I well know, who fail to do this, and for the help of such, let me suggest that you make out a list of things to be done in setting a table, hang it up in the dining-room and read it three times a day. The list may be arranged something like this:

1. Lay the cloth neatly, with the central fold in the middle of the table, and place the caster exactly in the center, if caster is required.
2. Spoons, large and small.
3. Knives, forks and napkins in place.
4. A goblet at each place.
5. Mats for the vegetable dishes and coffee-pot.
6. Salt and pepper boxes.
7. Butter knife and butter plates.
8. Sauce dishes, cups, saucers and sugar bowl.
9. If there is to be soup, place the soup ladle and soup plates at the place of the hostess or mistress, who is to serve. Put a table, or dessert-spoon at each place, alongside the knife.
10. Where the meat platter is to be set, spread a large napkin, with the diagonal points on the central line of the table cloth. The object of this is to protect the cloth from the soiling that often comes from carving the meat. It may be removed for dessert. Put dinner plates in a pile at the host's place. Between the plates and the platter that lay the carving set, and a spoon.
11. Dessert. On a side table, or on the dining-table if there be room, arrange what is required for the dessert; plates, knives, forks or spoons, and finger bowls, where there are children about the table, and during fruit season especially, finger bowls are such a convenience, as to seem a necessity. They are far preferable to fruit napkins and in the long run much less expensive in labor and money. A child is very readily taught to clean its fingers and mouth with the aid of a finger bowl, and napkin, or eating apron, and the habit once formed is invaluable. Very fair napkins for every-day use are made of glass toweling which cost 12½ cents a yard. Another adjunct of the table, or dining-room, is tooth picks. How much they save the teeth from decay, and consequently save in dentist's bills, each one can judge for himself. They cost from 10 cents a box, up. Those of maple are strong, and cost 15 cents. The best are of orange wood—a box is supposed to hold about 2,500. Boys who are expert with the jackknife, can use that implement to very good advantage when the whittling fever is on, in the manufacture of tooth picks. There is considerably more profit in it than in setting a whole evening and whittling indefinitely over the floor, or the kitchen stove.

The caster is by no means so generally an omnipresent object on the table as formerly. A low plate, or dish of flowers, takes its place oftentimes. All floral decorations for the table are low; at least, things that obstruct the view across the table, are dispensed with.

Many untrained children long retain the habit of pushing the food on the fork, spoon, or knife with the fingers. They will very quickly take to a "pusher" for such purpose. Cut from the side of a half slice of bread a strip an inch wide, for the "pusher," and the little ones will think it great fun to use it in pushing their food on their fork, or spoon.

Of course in families where there is much work and few hands to do it, it is simply impossible to always have the table properly ordered, and many times there is not money to spare to furnish it as one would like. But it is always well to keep the table, and the habits of the table, up to the best mark feasible. Frugality should never be dispensed with. A crowded table, is, I think, very unpleasant—I would have room enough, if I could only afford a long, plain deal table, with only a muslin cover. I would rather do without the cover, than be crowded.

By the way, all persons who possess a fine cherry table should prize it. An old cherry table that has been well cared for, is as valuable as mahogany, and the older it becomes, the more valuable it is. Where the wood is very fine, well polished and free from spots, the most elegant dinner may be served upon it without a cloth. Handsome mats should be provided for the hot dishes.

One thing should never be allowed at table—the habit of putting potato skins, chicken bones, etc., on the cloth beside the plate. If the dinner plate is not large enough to hold this refuse, a small plate set between every two plates, will serve the purpose. It is much easier to wash dishes than to wash and iron table cloths well. Train the children to the most tidy habits possible at table, to regard the soiling of the cloth as an offence to be sorry and ashamed of—to keep the knife and fork on the plate and off the cloth. A well ordered table, at which cheerful amenities prevail, is worth more to the growing up family than the finest parlor that can be had.

DOMESTIC RECIPES.

HICKORY-NUT MACAROONS.

Take the meats and pound fine, add any spice you please, make frosting as for cake, and stir thick with the meats and spice. Flour the hands and make the mixture into balls the size of hickory-nuts. Place on buttered tins (allow room to spread) and bake in a quick oven.

STEWED CELERY.

Scrape and cut celery into inch lengths, cook tender, drain, pepper and salt, dish and pour over a cup of drawn butter in which has been stirred the juice of half a lemon. K. L.

QUESTIONS ANSWERED.

WAX FOR FLOORS.

Will you give recipe for a wax for polishing an oak floor, and oblige, MRS E. D.

ANS.—Take six pounds of yellow wax and cut into small pieces; then stir into a hot solution of three pounds good pearlash and rain water. (Water enough to dissolve the pearlash). Keep the mixture well stirred. After the wax is dissolved and effervescence ceases, stir in three pounds of dry, yellow ochre. Turn into tin and let harden. A pound of this mixture dissolved in four or five pints of boiling water is sufficient for the floor of a medium-sized room. Apply while hot to the floor with a paint brush. Stir the mixture frequently. If put on at night it will be dry by morning. Now polish with a large floor brush. This last requires much patience and hard rubbing. Finally go over the floor with a coarse woolen cloth.

CLEANING GRANITE TEA-POTS.

How shall I clean a granite tea-pot that has become brown on the inside?

MRS. BAUMGARTNER.

ANS.—We clean our Britannia and earthen ware tea-pot as follows: fill with a hot solution of washing-soda and water. Let stand for several hours. Then empty and rub thoroughly with a woolen cloth and sapolio. If satisfactory wash and scald, if not, repeat the process.

EGG OMELET.

Please give recipe for the above. J. E. S.

ANS.—Allow two tablespoonfuls of sweet milk and a pinch of salt for each egg. Beat the yelks until thick and creamy, add the milk and salt and last the whites beaten to a stiff froth. Pour into a hot pan in which a piece of butter the size of a walnut has just been melted. The mixture should at once begin to bubble. Slip under a broad-bladed knife frequently, to prevent burning. Cook three or four minutes and when the top begins to set, fold over, shake the pan to free the omelet and carefully turn over onto a hot platter. When a large omelet is needed it is best to divide the mixture and make two or three smaller ones, sending each to the table as soon as done.

EVAPORATED FRUIT; YEAST-CAKE AND LEMON JELLY.

No. 1. Where can evaporated fruit be obtained also Vienna yeast-cake? No. 2. I wish to know how to make jelly with lemons and gelatine. S. M. LACHLAN.

ANS.—No. 1 Evaporated fruit may be obtained of Maxfield & Co., 67 and 69 Park Place, N. Y., and Vienna Yeast cakes of Gaff, Fleishmann & Co., 153 Third Avenue N. Y. No. 2. The juice of fine and grated peel of two lemons, one package of Coxe's gelatine soaked in two coffee-cups of cold water, two coffee cups of granulated sugar, a pint and a half of boiling water. After the gelatine has soaked for two or three hours, add the lemon juice, peel and sugar, stir thoroughly, cover and leave for an hour. Then pour in the boiling water and stir until sugar and gelatine are dissolved. Strain through a flannel bag. Pour into a wet mold or glass. It will jell in from five to six hours. In warm weather set on ice.

News of the Week.

HOME NEWS.

MONDAY, Oct. 31, 1881.

AFFAIRS AT WASHINGTON.—On the 24th nst, the President nominated Ex-Governor E. D. Morgan of this State as Secretary of the Treasury in place of Mr. Windom. He was at once confirmed by the Senate, but would not accept the office. On Thursday last the name of Judge Charles J. Folger, of New York, was sent to the Senate by the President and that body confirmed Mr. Folger's appointment to the secretaryship of the Treasury. Postmaster-General James was reappointed, and was at once confirmed without reference to a committee. His nomination was made as a compliment to the efficient service he has already rendered the Post Office Department. Mr. Frank Hatton, of Iowa, was also confirmed as First Assistant Postmaster-General to succeed Mr. Tyner.

On the 25th the Senate adjourned after having confirmed most of the nominations made by the President. In the last hours of the session there was considerable fillibustering over the nomination of one Statham, to be Postmaster at Lynchburg, Va. Wilson, the present incumbent, had betrayed his trust, and Statham was named as his successor, but being recommended by Senator Mahone, whom the Southern democrats do not particularly love, he was opposed by the democrats, and by dilatory motions they prevented his confirmation. The nomination was finally laid on the table, and will be taken up in December at the regular session. The only work of importance done by the Senate in special session was the electing of David Davis as President of the Senate and *ex-officio* Vice-President of the United States, and the confirmation of the nominations to the Cabinet noted above.

Mr. Windom has resigned his position in the cabinet, and has been elected United States Senator by the Minnesota Legislature. In the Senate the vote stood Windom (Rep.), 29; Smith (Dem.), 5; scattering 4. In the House Windom 86, Smith 11, scattering 3.

Mr. Beecher resigned the editorship of the Christian Union of this city, on the 25th inst.

A terrible disaster occurred on the Mississippi river near Davenport, Iowa, on the 27th inst, whereby a steamer with about 30 persons on board was dashed to pieces against a bridge. Only eight persons were reported saved. The cam rods of the engine gave way and left the steamer to the mercy of the waves and she was hurled with violent force against the abutments. The latest report says that 18 persons have been saved.

The completed census of New Mexico Territory gives it 119,565 inhabitants, males being in excess by 9,000; 108,721 are whites and 111,000 native, showing that the native white Mexican stock is still the most important element. The increase since 1870 is only 8,000.

In the Criminal Court Messrs. Scoville and Robinson, counsel for Guiteau, made an application for the postponement of the trial of their client, and after hearing argument pro and con the Court stated that under all the circumstances in the case he would postpone the trial from November 7 to November 14. Mr. Scoville stated that in his opinion the Court had jurisdiction over the case, and intimated that he would not raise any question on that point.

An interesting ceremony took place in Union Square, this city, on the 25th. It was the presentation to the city of a handsome bronze drinking fountain, the gift of Mr. Daniel Willis James. The total hight of the work is 18 feet, and the cost $35,000. The exercises were brief and in good taste. What's the good of a fountain without water!

Four hundred and sixty-one persons were arrested during the fiscal year ending June 31, 1881, for depredations upon the United States mails. Of these 424 were prosecuted in United States Courts and 37 in courts of the several States where the arrests were made. In the United States Courts 188 were convicted, 26 were acquitted, three escaped, five forfeited bail, proceedings against 24 were dismissed, one was killed while resisting arrest, and 177 await trial.

At the Atlanta Exposition two suits of clothes—for Governor Colquitt of Georgia and Governor Bigelow of Connecticut—were made from seed cotton picked in the morning.

Walnut timber thieves, who have been overrunning the Indian Territory, have been checked by Secretary Kirkwood, who has rendered a decision that all walnut on the Indian reservations belongs to the Indians, and cannot be removed without their consent.

The New York Central Railroad Company, on the 26th, made an advance in its rates for passengers to the West. This action was due to the fact that the Pennsylvania Railroad Company a day or two previous increased its rates. The Central did not increase the prices to the same ratio as that charged by the Pennsylvania company. The Central's schedule, issued lately, is on the basis of $9.25 for Cincinnati, Chicago, Columbus, Detroit, Indianapolis, Milwaukee and Toledo; $8.25 to Cleveland, $14.25 to Quincy, Hannibal and Kansas City and $11.25 to St. Louis. These are the net prices, the rates being formed by means of a rebate from the prices based on $20 to Chicago.

At Mount Washington, N. H., on the 26th, a slight snow fell, the wind blew ninety miles per hour, and the mercury fell to 3° below zero.

Hamlin Brothers' sugar refinery, at Peoria, Ill., the largest glucose factory in the world, was totally destroyed by fire on the 27th. The loss is estimated at $500,000; insurance, $250,000. Four hundred men are thrown out of employment through the disaster.

The water in Cochituate Lake, the source of Boston's supply, is very low and badly tainted with vegetable impurities. A committee of the city Government have made an investigation with the view of deriving a supply from the branch works at Sudbury River, but found the latter also polluted. A water famine is not feared, but the danger is that pumping will have to be resorted to, in which case the supply must be reduced from 34,000,000 to 20,000,000 gallons daily.

Immigrants have been pouring into the country for the last three months at the rate of almost 2,000 a day—171,803 in 90 days. Notwithstanding the turmoil in Ireland, less than 10 per cent. of the total immigration is Irish—16,361; the English, Scotch and Welsh number nearly 30,000, the Germans, 59,000, Canadians, 19,000 and Swedes, 13,659.

Walker Blaine, oldest son of the Secretary, is reported to be a candidate for nomination to Congress in the Third District of Maine next year.

Twenty thousand people visited the cotton exposition on Thursday and enjoyed the festivities prepared for the occasion. It was Governors' Day, and there were present Governors Hoyt, of Pennsylvania; Bigelow, of Connecticut, with his full staff; Jarvis, of North Carolina; Hagood, of South Carolina, and Colquitt, of Georgia. Speeches of welcome were made by Gov. Colquitt and Director-General Kimball, and responses by each visiting Governor and other distinguished visitors. The Governors were then wined and dined at Exposition Hotel, and in the evening were the recipients of various attentions from the citizens.

President A. D. White, of Cornell University, who recently resigned the Berlin mission, has entered into bonds with the trustees of the University not to accept any political office for four years.

An old gentleman from the interior of Ohio last week presented for redemption $17,000 in six per cents. called in last July. He refused to accept a draft on the Treasurer, and insisted on being paid in gold. The coin, which weighed 75 pounds, was placed in a satchel, and the man staggered under the load as far as the Assistant Treasurer's room, where he began the task of counting the treasure. After the entire amount was carefully counted and found to be correct, the old gent was persuaded to express the coin home.

The site of the O'Leary stable, in which a $4 cow started the $200,000,000 fire at Chicago, is now occupied by a two-story brick residence with a tablet stating that the fire of 1871 started at that point and went to Lincoln Park.

About a thousand applications a day are being received for the Garfield relics. The committee has decided to prepare from the building material of the pavilion a variety of articles for which contributions will be received and applied to the monument fund.

At Reading, Pa., a cannon has been cast which will be twenty-five feet long. It is known as the Lyman Haskell gun, and the shot will be propelled by the explosion of power in four pockets as well as in the chamber. It will throw a 160-pound shot ten miles.

Guiteau's counsel, George Scoville, has secured the co-operation of Mr. A. S. Trude, a well-known lawyer in Chicago, who has had twelve or fifteen years' practice and who has high standing in the courts there. He is especially well informed in criminal law.

The Senate has confirmed the nomination of Charles W. Seaton, of New York, to be Superintendent of the Census.

President Arthur has rented the pew formerly occupied by President Madison in St. John's Episcopal Church, Washington. The church was built in 1815.

Wednesday was the closing day of the Richmond-Yorktown centennial celebration. There were 20,000 strangers there. The procession occupied two hours in passing a given point. Business was suspended. The streets were thronged. The British flag was raised on the state capitol and saluted by the Richmond howitzers.

At Napoleon, O., the trial of B. K. Scott, ex-governor of South Carolina, for the murder of young Drury at Progress, last Christmas, begun Wednesday.

The Pennsylvania Railway Company has contracted for 50,000 plants of various kinds to be delivered at the stations between Jersey City and Philadelphia. The purpose is to have flower beds at every station along the route.

The will of the late Col. E. B. Morgan of Auburn, N. Y., was probated on Saturday week. Among the public bequests are $100,000 to Wells College, Aurora, N. Y., in addition to $100,000 already given to form a Morgan fund for the college.

The remnants of the Philadelphia Centennial Exposition have been sold by auction. The great organ, which cost $20,000, went for $5,000, and it is to be removed to a Boston fair building. The largest mirror in the world, 11 by 18 feet, in one plate, originally costing $5,000, was bought by a saloon-keeper for $900.

It seems a queer arrangement of things that while the Atlantic coast has been terribly afflicted with drought the Northwest has been the victim of deluges. The cities of New York and Brooklyn are in danger of disaster from water famine, while other towns are almost inundated by the rising of the rivers. A better division of moisture between the valley of the Hudson and the valley of the Mississippi is clearly desirable. It would be strange if a region unduly parched should be called upon to subscribe to sufferers from floods.

There are 245 towns and cities in the United States having a population of 10,000 and upwards. General Walker, late Superintendent of the Census, predicts that the census of 1890 will give the United States a population of 64,467,000.

Private Secretary Brown estimates the expenses of the president's sickness at $100,000, of which $53,000 is for doctor's bills. Bliss wants $25,000, Agnew and Hamilton each $12,000, Reyburn $3,000 and Mrs. Edison $1,000. Woodward and Barnes, being government officers, may not get anything.

The new laboratory at Cornell University is to be erected in the spring, at a cost of $50,000 to $60,000. Plans are to be drawn this winter for new university buildings, which are to cost $150,000. They will be erected next year.

A MISSING LETTER.—In the report of the St. Louis fair, in the RURAL of October 22, a typographical error occurs in the description of the Barlow Planter, made by the Vandever Corn Planter Company, of Quincy, Ill. In the sentence "A distinctive feature of the planter is the rotary or revolving seed cup, by the use of which the corn is *shown* five hills in advance," *shown* was made to read *sown* by the omission of a letter.

A Strong Endorsement.

A lady residing in Georgia, whose son was threatened with consumption, wrote to several of our old patients, whose testimonials in favor of Compound-Oxygen we had published, asking if these printed testimonals were true. Among them was T. S. Arthur, the well-known author, who replied to her June 17th, 1880, as follows: "MRS. M——: In reply to your favor, I will state that the testimonial to which you refer is genuine. From what I have myself experienced and from what I know of the effect of Compound Oxygen in others, I am satisfied that this new remedy is one of remarkable curative power. Your son, I think, can hardly fail to receive benefit. Others as badly diseased, and suffering for many years, have been cured, or greatly relieved, by this Treatment, as you will see by Drs. Starkey & Palen's Report of Cases, which I am well assured are authentic." Our Treatise on Compound Oxygen, containing large reports of cases, and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Oct. 31, 1881.

THE following items of agricultural news are condensed from telegrams received in this city from various points from noon on Friday October 28, to noon to-day, October 31: Boston, Mass.—Hides higher and in good demand. Prices of wool are well sustained. Cotton has advanced 1-16c over price at close of last week.....

Providence, R. I.—Cotton market strong at 12¼c for middling uplands, and 12½c for middling gulfs. Outlook favorable for higher prices.....

Philadelphia, Pa.—Butter and cheese are very firm; fruits somewhat dull, Prices of wool are exceptionally firm.....

Cincinnati, Ohio.—Flour 15c@25c lower. Wheat and all other grains except corn are lower. Stock of hog products low. Winter packing has been begun by three houses. Leaf tobacco buoyant, with firm prices.....Dayton, Ohio.—The tobacco crop in this section is turning out finely, and prices are ranging firm and high.....Louisville, Ky.—Flour easy; grain dull; provisions fair. Leaf tobacco firmer with an advance of ¼c@½c on dark grades, and 1c@2c on burleys.....Indianapolis, Ind.—Stocks of wheat and corn in elevators are double as large as at this time last year.....Detroit, Mich.—Weather very fine. It is reported that grain rates East will be advanced 5c@10c on November 1. Grain trade moderately active.....Milwaukee, Wis.—Weather still stormy and unsettled. Considerable damage from overflows and washouts in various parts of the State. Receipts of wheat light, owing to impassible condition of roads in the interior. Flour quieter and lower owing to falling-off in demand; a number of mills are shutting down..... Chicago, Ill.—Bad roads and bad weather have a depressing effect on all trade. A better feeling in grain. The advance in freights has had the good effect of putting more cars at the service of shippers. Receipts of breadstuffs for the week are; 113,316 barrels flour; 305,886 bushels wheat; 1,401,464 bushels corn and 357,326 bushels oats. Shipments for week: 88,622 barrels flour; 170,414 bushels wheat; 2,242,435 bushels corn and 358,177 bushels oats leaving in the elevators about 3,800,000 bushels wheat; 9,500,000 bushels corn; 375,000 bushels oats and 307,400 bushels barley.....Peoria, Ill.—Hog packing houses are preparing to start winter packing..... Quincy, Ill.—This Sunday night the Mississippi River at this point is nineteen feet above low water mark, having risen slowly all day. All railroads south and west from here remain suspended, except the Hannibal and St. Joseph, which is still running. The inhabitants of the Suy Valley have moved out to the high grounds and many of them have taken refuge in this city. The water is steadily spreading over the thousands of acres of fertile farms protected by the embankment and the loss to the farmers will be very heavy. All the levees in this vicinity have been broken by the great pressure of water and the low lands are now completely flooded. This is the greatest flood ever known in this season of the year and there is no record of a higher stage at any time except during the Spring freshet in 1851. ..... St. Louis, Mo.: The freight blockade is slowly loosening. Flour very dull; local millers talking of closing down through November. Grain receipts still in excess of shipments. A downward tendency in all grains during the week. Provisions, too, extremely dull. Hogs are a full average of 20c. off during the week, owing to warm weather. Packing being done only with aid of ice. Cattle market demoralized. Receipts on Saturday, 1,200 head; shipments, 700. Horse and mule receipts small and behind demand.....Kansas City, Mo.: Weather clear and pleasant, but roads bad from late rains.....Omaha, Neb.: Rainy; travel greatly impeded. Prices of grain still high. Potatoes have fallen off 10c. owing to large shipments from Minn. Fears entertained of want of fuel during the Winter, as the supply of coal in the State is small.....Denver, Col.: Stocks of grain, flour and feed are larger than for some time back. Baled hay continues to arrive. Demand for tallow and hides still increasing. A good trade is growing with Kansas towns for Colorado produce. A carload of Colorado cabbage was lately sent to Kansas City—the first on record..... San Francisco, Cal.: Late rains starting grass and volunteer grains. Plowing is now general in many sections. Great agricultural activity owing to favorable outlook. Forty ships arrived during the week, chiefly coal laden to load grain. An Australian steamer due during the week brings $800,000 from New Zealand, the balance of trade in our favor.....Baltimore, Md: Grain from the West to the seaboard has advanced 2½c. to 5c. per 100 pounds. Cotton receipts still unusually large. Grain market moderately quiet.....Norfolk, Va: Cotton, flour and corn mills run day and night.....Wilmington, N. C.: Cotton picking is progressing favorably.....Charleston, S. C.: Turpentine still selling at 50c. Cotton receipts heavier: middling 11¼c; low middling 11c; good ordinary 10¼.....Savannah, Ga.: Collections coming in slowly from country places; and when the cotton is sold, they'll be harder to make. Cotton opened Friday morning with a strong demand and higher prices were asked and paid for middling and low middling: middling, 10⅞c; low middling, 10⅝c; good ordinary, 9½c.....Augusta, Ga.: Cotton receipts for the week in excess of last week's. Yet there is a general disposition among farmers to hold their cotton for higher prices. Collections good..... ....New Orleans, La.: Cotton firm and in good demand. Middling 11¼c; low middling, 10⅞c; good ordinary 10½c..... Memphis, Tenn.: Cotton receipts have fallen off considerably owing to bad weather, but if rainy weather continues planters will gin what cotton they have gathered, and an increase may be expected.....Nashville,

Tenn.: Corn dull and lower. Oats, hay and rye quiet; prices unchanged from last week.....Halifax, Nova Scotia: Provisions and produce still in good demand at firm prices with an upward tendency. Potatoes and apples in special demand, nearly all for foreign shipment. The potato crop throughout Nova Scotia is hardly an average one; in Prince Edward's Island it is fairly good..... Toronto, Canada: Receipts of barley comparatively small owing chiefly to wet weather—not over 15,000 bushels a day. About 200,000 bushels were shipped last week to the United States. Malsters holding back in expectation of lower prices. Owing to abundance of Fall wheat, prices for that sort are lower than for Spring. No. 2 Fall, $1.34; No. 2 Spring, $1.36 in lots.....

The Menasha (Wis.) Press says: A. Granger, Esq., of this city, uses St. Jacobs Oil on his horses with decided success and profit.

Another Important Patent Decision.

The United States Court of the Eastern District of Pennsylvania, Justice Butler presiding, has just decided that Dederick's patents on his horizontal baling press, wherein the loose material is pressed by sections into bales, are valid and protect him in the exclusive manufacture and use thereof.

Kidney Complaints

of all descriptions are relieved at once, and speedily cured by Kidney-Wort. It seems intended by nature for the cure of all diseases of the kidneys caused by weakness and debility. Druggists sell both dry and liquid. —Congregationalist.

We are strongly disposed to regard that person as the best physician who does most to alleviate human suffering. Judged from this standard, Mrs. Lydia E. Pinkham, 233 Western Ave., Lynn, Mass., is entitled to the front rank, for her Vegetable Compound is daily working wonderful cures in female diseases. Send for circular to the above address

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

BURNETT'S COCOAINE

Promotes a Vigorous and Healthy Growth of the Hair.

It has been used in thousands of cases where the hair was coming out, and has never failed to arrest its decay.

Use BURNETT'S FLAVORING EXTRACTS—the best.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, October 29.

CHICAGO.—WHEAT active, but weak; No. 2 Chicago Spring, $1.32cash and October; sales at $1.34¾@1.36¼, December; No. 3 do., $1.19; rejected, 96c.@$1. CORN active at 61½@61⅝c., cash; 61⅝c., October; 61¾c., November; 63¼@63⅜c. December.; 63⅝c., January; 61c., May; rejected, 58½c. OATS easy at 44¾c., cash; 45c., October; 44¼c., November, December and January; 47⅝@47¾c., May. FLAX-SEED easy at $1.42½@1.43. RYE easy at $1.02½. BARLEY easy at $1.06. PORK in fair demand, but unsettled, at $16.50, cash; $16.40, October; $16.37½@16.40, November; $16.50@16.55, December; $17.80, January. Lard fairly active and a shade higher at $11.40, cash and November; $11.57½@11.60, December; $11.75@$11.77½, January. Bulk-meats easier; shoulders, $7; short rib, $8.90; short clear $9.30. HOGS—market weak and prices 5@10c. lower than on Friday; mixed packing, $5.70@6.30; choice heavy, $6.40@7.00; light very slow and weak at $5.75@6; Yorkers mainly $5.95; culls and grassers, $3.70@5.40. CATTLE—market very quiet, but steady; export steers, $6.40@7; good to choice shipping, $5.40@6; common to fair dull at $4@5; butchers' steady; poor to fair cows and mixed, $2@3; good to choice, 3.50@4.20; stockers and feeders very dull and weak at $2.25@4. range cattle steady; Texans, $3@3.75; half-breeds and natives, $3.65@5; milkers and Springers, $25@52 per head. SHEEP—prices generally unchanged; inferior to fair weak at $2.80@3.25; good to choice heavy muttons, $4@5.

CINCINNATI.—WHEAT dull and declined 1c @2c since yesterday; No. 2 Red Winter, $1.42. CORN in good demand at full prices; No. 2 Mixed, 69¼c@69½c; new, in ear, 58c. OATS dull; No. 2 Mixed, 45c.@45½c. RYE in fair demand and firmer; No. 2, $1.11½. BARLEY quiet; No. 2 Fall, $1.15. PORK dull at $19. Bacon scarce and firm; shoulders, 9c; Clear Rib, 10¼c; Clear Sides, 11c. BUTTER.—Creamery is not in excessive supply, and prices of fancy are firm. Most of the off-grades have been worked off. The market closes quiet but steady. Fancy creamery sells 37@38c, prime do. at 35@36c, choice dairy at 28@30c, prime to choice Western Reserve at 27@28c, medium do. at 22@25c, prime to choice Central Ohio at 20@23c, common at 15@18c, and inferior 12@14c per lb. CHEESE.—The receipts have been liberal, but the supply of choice of mild cheese is light, and prices are firm. Prime to choice factory sells at 12½@13½c per lb. HEMP is in fair demand and firm. Rough Kentucky sell at $125.00 per ton on track. Single dressed sells at 8½@9c and double do. at 10@10½ per lb., from store. HOGS steady and firm; common and light, $4.90@$6.10; packing and butchers', $5.80@$6.40.

ST. LOUIS.—WHEAT active; No. 2 red Fall, $1.41¾, cash; $1.42¼, November; $1.45⅝, December; $1.48½ January; $1.50 February. CORN active at 62½c., cash; 63c., November; 65½c., December; 67⅝c., January; 69½c., February; 72½c., May. OATS dull at 44c., bid, cash; 50¼c. bid, May. Rye, $1.03½. PORK dull; jobbing, $17.75. Bulk-meats lower; Shoulders, $7.40; Clear Rib, $9.25; Clear Sides, $9.60. Bacon dull; nothing doing. BUTTER easier; dairy, 28@35c.; creamery, 34@38c. EGGS quiet at 18@20c.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Oct. 29, 1881.

BEANS AND PEAS.—The market is not so strong for beans as it was. Buyers seem to be holding off for a turn in their favor. This may occur in some good useful stock now coming in, but sellers express a firm future tone for the finest wants. Green peas are again lower, now quoted $1.90 for Wisconsin bbls. Southern B. E. peas quiet at $3 ₱ 2 bu. bag.

Marrow beans, prime, $3.45@3.50; fair to good, $3.25@3.35; medium, choice, $3.30@3.40. fair to good, $3.15@3.25; pea, choice, $3.15@3.20; white kidney, $3.50@3.55; red kidney, $3@3.10; oil, $2.60@2.85; turtle soup, $1.90@2.

Receipts of beans for the week, 15,540 bush.

Exports do. 125 bbls.

BUTTER.—The market is steady at slightly shaded prices for fine State dairy and creamery; Buyers have become very particular as to quality and will accept not the least imperfection in creamery when they pay the extreme. A good class of distributors are becoming a little independent of the fancy grades that have held the market so long, as good fresh Fall farm stock begins to arrive. During the week there has been some little competition for these new goods and prices have held up better than the close of last week indicated. Western butter is not much of a feature, that is, grades for table use, and they hold high prices. Common and off-quality stock is a great drug and owners have begun to try and brighten the offering by distributing it to other cities. Exports very light and there is no show of an improved outlet at the moment.

Creamery, State and Elgin, choice, 36c.; good to prime, 31@35c.; sweet cream, fresh, 32@33c.; fair to good, 28@30c.; State, June, good to prime, 26@28c.; 24@25c.; Western, choice, 31@35c.; good to prime, 30@32c.; fair to good, 28@29c.; poor, 18@28c.; June, prime, 26@27c.; fair to good, 23@25c.; State firkins, dairies, choice, 28c.; good to prime, 25@27c.; fair, 22@24c.; poor, 18@20c.; dairies, half tubs, choice, fresh, 32@33c.; good to prime, 28@30c.; fair to good, 25@28c.; Welsh tubs, choice, fresh, 31@32c.; good to prime, 27@29c.; fair to good, 24@27c.; poor to fair, 18@23c.; Western imitation creamery, 29@31c.; Western dairy, fresh, choice, 27@28c.; good to prime, 24@25c.; fair to good, 20@23c.; poor to fair, 15@20c; factory and ladle-packed, Iowa, fine June, 18c.; Ohio and Indiana, June, good, 17c.; late made, good, 16@16½c.; fair, 15@15½c.; poor, 11@14c.

Receipts for the week, 32,675 pkgs.

Exports do. 2,400 do.

CHEESE.—The market took an encouraging start early in the week but at the close the buoyant tone has subsided. The fine late made have been held to a degree that makes some accumulation of desirable lots and shippers are using the circumstance against holders. A little animation abroad will check a further decline and the outlook for very fine mild State is for above 13c. Under grade cheese close very weak; the home trade does not give much support. Skims of all kinds very dull, and good useful parts have declined.

State factory, fine, Sept. 13c.; good to prime, 11½@12c.; fair to good, 10½@11½c.; poor to fair, 9½@10½c.; Ohio factory, flat, fine mild, 12@12½c.; good to prime, 10½@11c.; fair to good, 9@10½c.; creamery, partly skimmed, choice, 9½@10½c.; poor to good, 4@8c.; fully skimmed, 2@3c.; full-skimmed factory, 1@3c.

Receipts for the week, 51,517 pkgs.

Exports do. 17,236 do.

Liverpool cable, 58s. 6d.

Steam to Liverpool, 8s. 9d.@12s. 6d.

COTTON.—It has been a tame week in this staple. Speculators have no encouraging incentives and cash buyers seemingly have no pressing wants. Prices closed fairly steady.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running to quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	9	9
Strict ordinary	9 5-16	9 9-16	9 9-16
Good ordinary	10⅛	10⅜	10⅜
Strict good ordinary	10⅜	10⅝	10⅝
Low middling	11 3-16	11 7-16	11 7-16
Strict low middling	11 7-16	11 11-16	11 11-16
Middling	11⅝	11⅞	11¾
Good Middling	11⅞	12¼	12¼
Strict good middling	12⅛	12⅜	12⅜
Middling fair	12⅝	12⅞	12⅞
Fair	13⅜	13⅝	13⅝

STAINED.

Good ordinary	8¾	Low Middling	10 1-16
Strict good ordinary	9⅜	Middling	11 3-16

Average of futures:—

October, 11.13c.; November, 11.40c.; December, 11.66c.; January, 11.86c.; February, 12c.; March, 12.17c.; April, 12.33c.; May, 12.48c.; June, 12.50c.; July, 12.57c.. August, 12.63c.; September, 12.15c.

DRIED FRUITS.—There are no changes to note in prime lots of any variety. Unpeeled peaches, however, quoted to the extreme. The demand for small fruits is brisker than usual and the scarcity of some standard will give well cured lots a ready market.

Apples, evaporated, new, 13¾@14c.; fair to prime, 12@13c.; N. C. new, sliced, fancy, 8½@9½c.; fair to choice, 6½@8c.; Southern quarters, choice, 6@7½c.; State, old, fine-cut, choice, 7@7½c.; quarters, do. 6½@7c.; small lots, 6¼@6¾c.; Ohio and Mich. choice, 6½@7c.; Western, fair to good, 5¾@6¼c. Peaches, evaporated, peeled, old, 35@40c.; unpeeled, new, 18@20c.; N. C. peeled, fancy, 24@25c.; choice, 22@23c.; Ga. 22@23c.; Southern, peeled, fair to good, 19@20c.; unpeeled halves, N. C. 8½@9c.; halves, Tenn. 8½c.; quarters, 3¾c.; Plums, State, black, 17c.; Southern Damson, 15@15½c. Blackberries, 13c. Cherries, Southern, dry, 19@20c. Raspberries, 23@25c. Huckleberries, 15@15½c.

EGGS.—Receipts for the week, 4,583 bbls.; do. last week, 7,053 do. The demand is very good considering prices. The trade is not large but frequent calls upon a moderate stock of fresh have sustained about these quotations all the week. Lined are doing remarkably well compared with fresh.

Near points, 23@24c.; State and Pa. 26@27c.; Canadian, 25c.; Western, fresh, 25½c.; fair to good, 22½@24½c.; lined State 21@22c.; Western and County, 20½@21c.

FLOUR.—The week has been in favor of buyers, but the business has not been important, as but little wholesale trade has developed with the downward turn of prices. There seems to be a disposition on the part of operators in flour, as with many other items of spot produce, to let the market settle one way or the other, as they think that prices are now to a point that make the risk reasonable.

No. 2, $3.30@4.70; State and Western, superfine, $5.00@5.50; city mills, extra, $7.25@7.50 Spring wheat, extra, $5.40@5.85; Spring XX and XXX, $6.00@7.25; patents, $7.50@9; Ohio round hoop shipping, $5.65@6.10; trade brands, $6.25@7.00; St. Louis extra, $5.55@6.35; do. double extra, $6.50@6.85; do. family, $7.00@7.50; Southern extra shipping, $6.00@6.60; do. XX and family, $6.75@7.75. Rye flour, superfine, $5.45@6.65; buckwheat flour ₱ 100 lbs. $3.90@4.20. Corn-meal, Brandywine, ₱ bbl. $3.80@3.85; do. Western, $3.40@3.75.

Receipts of flour for the week, 120,750 bbls.; corn meal 3,250 do.

Exports of flour for the week, 37,200 bbls.; corn-meal 8,225 do.

FRESH FRUITS.—Exports of apples, 1,891 bbls. Since Jan. 1st, 215,338 do.; same time last year, 318,400 do. Prices have run up to a use-checking rate and the market is something weak. Some samples of the delicious Canadian Fameuse, or Snow Apples as they are named here, are bringing $3.75@4 ₱ bbl. Pears very dull and irregular; few barreled lots of any kind remain. Quinces are quiet, but not plenty and held firmly. Grapes in fair supply and demand; prices steady. Cranberries scarce and show an important advance. Florida oranges will be here next month. September shipments have not done well heretofore

Apples, Baldwin, State, ₱ bbl. $3@3.25; Jersey, $3@3.25; Greening, State, $3@3.25; N. Spy, do. $3@3.25; mixed lots, do. $2.75@3; King, do. $3.75@4.00; Phœnix, Jersey, $2.75@3. Pears, Sheldon, ₱ bbl. $5@6; Duchess, $3.50@5.00; Lawrence, $3@4; Vicar of Wakefield, $2.50@3.50; cooking, $2.00. Boston box pears plenty and have a wide range $1.50@4. Quinces, apple, prime to choice, ₱ bbl. $5@6; No. 2, $3@4. Grapes, Iona, State, bskts. 15 lb, 8@10c.; Catawba State, bskts, 6@7c.; Diana, State, bskts. 5@6c.; Concord, State, bskts, 2@3c.; up-river, loose, 2@4c.; Isabella, State, bskts, 2@4c. Cranberries, Cape Cod, fancy, large, ₱ bbl. $10@10.50; prime to choice, $8@9.50; good to prime, $8.50@9; poor to fair, $7@8; frosted $3.50@4.50; ₱ crate, $3@3.50; New Jersey, fancy, ₱ crate, $3@3.25; good to prime, $2.50@2.75; fair to good $2@2.25; poor to fair, $1.50@2; frosted, 75c.@$1.25.

Peanuts quiet and firm. A few extra prime new sold at 6¼c. Prices firm. Hickory nuts favoring sellers. Chestnuts moving better and a shade higher. Black walnuts shelled would probably sell at 17@18c. ₱ lb.

Peanuts, Va., hand-picked, ₱ lb, 7¼@7½c.; fancy, 6¾c.; extra prime, 6¼c.; good to prime, 5¼@6¼c. shelled, 5½@6c.; pecan nuts, 9@11c.; hickory, shell-bark, Northern, ₱ bu. $1.50@1.75; Western, $1.50@1.60; chestnuts, Southern, $3.50@4; Northern, $4.50@5.

GRAIN.—Quotations for the week are as follows:—

Wheat, Spring, $1.25@1.42; Spring No. 2, $1.39@1.41 red Winter No. 2, $1.43½@1.49; red Winter, $1.35@1.50; white Western and State, $1.35@1.45. Rye, $1.00@1.05; Oats, white No. 1, 51c.; No. 2, 51½c.; No. 3, 50c., mixed, No. 1. 48c.; No. 2, 47½c.; No. 3, 45@46½c; Corn, Western mixed, 66@67c.; No. 2, 69½@70½c.; yellow, 70@73c.; white, 73@75c. Barley, Canada No. 1, $1.17@1.30; do. bright, $1.20@1.23; State 4-rowed, $1@1.05. Buckwheat, 95@97c.

Receipts for the week, wheat, 794,750 bush.; corn, 580,325 do.; oats, 190,575 do.; rye, 53,850 do.; malt, 40,500 do.; barley, 124,500 do.

Exports for the week, wheat, 562,000 bush.; corn, 703,000 do.; oats, 3,200 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Oct. 22. bush.	1880. Oct. 25. bush.	1879. Oct. 25. bush.
Wheat	20,857,536	17,180,091	25,691,223
Corn	27,870,174	19,328,286	10,413,981
Oats	1,658,208	4,799,002	3,082,000
Barley	2,523,603	2,470,300	3,790,021
Rye	1,210,865	865,773	912,054

HAY AND STRAW.—Exports since Jan. '80 66,100 bales; do. last year 96,250 do. The market is in good shape. The offering is considerably reduced. There is a good demand at firm prices; straw steady.

Prime Timothy hay, ₱ 100 lbs., $1.05@1.10; medium Timothy, 85c.@$1; shipping grades, 65@70c.; clover mixed, 65@80c.; clover, 60@65 c.; Straw, long rye, 80@85c.; short rye, 55@60c. oat and wheat straw, 40@45c.

HOPS.—The Producers' Price Current says: "Receipts are very large and the tone of the market weak. Much of the stock was bought early and pays a large profit at present quotations and enough holders are willing to realize to keep the market well supplied with goods. Exporters have been in the market for strictly sound good useful hops at 20c, and have obtained a fair quantity. Brewers buy cautiously occasionally paying 28c. for a choice lot. A very few fancy samples holding at 30c. London advices are less favorable; the market quiet; highest quotation for choice American 15s.

Crop of 1881, choice, 28@—c.; good to prime, 25@27c.; fair to good 22@25c.; eastern, 20@27c.; 1880, good to prime, 18@23c.; poor to fair, 12@15c.; 1879 fair to prime, 10@15c.

Receipts for the week, 7,927 bales,

Exports for the week, 2,534 do.

LEATHER.—Quotations are:—

HEMLOCK SOLE.

	Buenos Ayres.	California.	Com. hide.
Light	22 @23	22 @22½	21½@22
Middle	23½@24½	24 @24½	23 @24
Heavy	24 @26	24 @25	23 @25
Good damaged	22 @23½	22 @22½	21 @22
Poor damaged, all kinds			18 @20
Export and jobbing leather			26 @27½

UNION TANNED.

Slaughter.

Light bucks	35@37	Middle crop	33@34
Middle backs	37@38	Heavy crop	33@34
Light crop	31@32	Bellies	15@16

Calcutta buffalo—

Light	20@21
Middle	20@21
Heavy	20@—
Damaged	17@18

MILK.—Commission opened at $2.72 ran up to $3 and closed at $2 ₱ can of 40 quarts; late supplies large.

POULTRY AND GAME.—Supplies of dressed are liberal and good quality State and Ohio give an easy tone to prices.

Turkeys, Phila. prime, 14@15c.; Jy 12@14c; State and W'n d.-p. 12½@13c.; scalded, 11@12c. Chickens, Phila. spring, 15@16c.; Bucks Co. do. 14@15c.; Jersey, do. 13@14c.; State, do. 13@13c.; Western, do. 11@12c. Fowls, Phila. dry-picked, 13@14c.; Bucks Co. 12½@13½c.; Jersey, 12@13c.; State and Western, dry-picked, 11@12c.; scalded, pr, 11@12c.; Inferior, 10@11c. Ducks, Spring, Phila. ₱ lb, 16@18c.; Jersey and Bucks Co. 15@16c.; State, 13@15c.; old, fair to good, 10@12c. Geese, Phila. dry-picked, young, 13@15c.; do. old, 10@12c.; Western, old 8@9c. Squabs, white, ₱ doz. $2.75@3; dark, $1.75@2.

Cooped stock has arrived freely and prices are easy. A good trade is now using up all prime live.

Chickens, Jersey, spring, ₱ lb. 1'@12½c.; State and Penn. 11@11½c.; Western, and Southern, 10@11c.; Fowls, Jersey, State & Penn. 11@12c.; Western and Southern, 10@11c. Roosters, old, 5@6c. Turkeys, J'y and Penn. 11@12c.; Western, 10@11c. Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 65@75c.; Western, 45@55c.; Southern, 45@50c. Geese, Jersey, $1.50@1.75; N. Y. and Penn. $1.25@1.50; Western mixed $1@1.25; Southern, 75c@$1. Pigeons, large, strong birds, 30c.; young, 25@30c.

Game has arrived very freely and as the weather has not been assuring for holding; prices are generally weak.

Grouse, choice, ₱ pair $1.00@1.12; soft, 50@60c.; partridges, State & Western, $1@1.12; East'n & Minn, 75c.; soft, 50@60c.; woodcock, choice, 50@60c.; English snipe fresh-killed, ₱ doz. $1.75; plover, do. $1.50; venison, Minn. short saddles, ₱ lb. 19@20c.; Western, 17@18c; whole deer, 12@14c; wild ducks quoted $1.75 for canvassback, 50@60c. for redhead, 40@50c. for mallard, 25@40c, for teal and wood and 25c, for common ₱ pair.

PROVISIONS.—The closing remark in our flour paragraph bears upon provisions. Exporters are holding off and prices are wavering.

Pork, prime mess ₱ bbl. $17@18; extra prime, ₱ bbl. $16@16.50; Western mess new, $18. Lard, steam Western, ₱ 100 lbs., $11.70@11.80; prime city, $11.65@11.70. Hams, smoked city, ₱ lb. 13@13½c.; pickled Western and city, 11¾@12¾c.; Shoulders, smoked city, 9c.; pickled, 8c. Rib bellies, pickled, 9½@10¼c. Bacon, long clear Western, 9¼c. Beef, Western mess, ₱ bbl. $12; packet, $14; India mess, ₱ tce. $25.00@27.00. Beef hams, ₱ bbl., $21.

Receipts for the week—Beef, bbls. and tcs. 608; pork, bbls. 2,255; cut-meats, pkgs 22,300; lard, do. 18,800.

Exports for the week—Beef, bbls. and tcs. 1,361; pork bbls. 2,813; cut-meats, lbs. 4,059,694; lard do. 3,438,783.

RICE.—There is considerable inquiry for large parcels for export, but as the limits are below prevailing rates, orders have to go unfilled. Quotations are for Carolina and Louisiana, common to fair, 5¾@6¼c.; good to prime, 7@7¼c.; choice, 7¾@8c.

SEEDS.—Clover seed is in moderate request at quotation; exporters are offered lots from store at 9¾@9¼c, but make few purchases. Timothy seed is steady.

Clover, W'n, 1881 car lots on track, 9@9½c; Timothy: job lots in store, $2.85@3.25; Flaxseed, American, rough, ₱ bu. $1.50.

SUGAR.—Quotations are for:

Cut loaf, 10¼@10¾c.; crushed, 10¼@10¾c.; powdered, 10¼@c.; granulated, 9 15-16@10c.; mould A, 9¾@9¾c.; confectioners' A, 9¼@9¾c.; standard A, 9¼@9¾c.; off A, 9@9¼c.; white extra C, 8¼@8⅞c.; yellow extra C, 8¼@8¾c; C, 7¼@8c.; yellows, 7@7¼c.

TOBACCO.—Kentucky leaf is very quiet, as exporters are out of market. Seed leaf has a good demand for consumption here and abroad.

VEGETABLES.—Exports of potatoes, 1,083 bbls.; since Jan. 1 '81 867 do; same time last year 172,531 do. Receipts have piled up and the market feels the weight of them. Prices are 25c off compared weight last week. The strong market that has ruled here of late has induced the experiment of shipping European produce here. Potatoes and cabbages have arrived in a small way from England and Germany. In the opinion of the trade the stock is not down to such reduced conditions as to make room for these innovations. Sweet potatoes are doing a little better; onions tending easier.

Potatoes—Early Rose, Eastern, ₱ d.-h. bbl., $2.75@3; State, $2.50@2.75; do. bulk, ₱ bbl. $2.50; Prolific, Eastern, $2.50@2.75; Snowflake, State, d.-h. $2.50@2.75; do bulk, $2.50; Burbank, d.-h. $2.50@2.75; bulk, $2.50; Peerless, State, $2.25; sweet potatoes, Va. yellow, ₱ bbl. $3.25; Del. River, $3.50; Jersey, $2.75@3.25.

Onions, white bulk, ₱ bbl. $1; yellow, $2.50@2.75; red, $2.25@2.50; red, Chester, $2.25@2.50; red inferior, $2; tomatoes, L. I. ₱ bush. $1.25@1.50; squash, Marrow, ₱ bbl., $1.50@1.75; Hubbard, $1.75@2; cabbage, ₱ 100, $4@10; beets, L. I. ₱ bbl. $2.25@2.50; carrots, $1.50@1.75; turnips, Russia, $2.25@2.50; cauliflower, fancy, ₱ bbl. $5; average quality $3@3.50; inferior, $1@2; pumpkins, ₱ 100 $10@6; celery, ₱ doz., $1.50@2.

WOOL.—Manufacturers are again in market, and as the stock of fine fleeces is moderate and cannot be largely added to from raising points after the heavy early trade; prices are strong under a competition. The Fall clip of Californian is being marketed there; trade reported slow, as holders are looking for higher bids than are current.

X and above Ohio, 44½c.; X Ohio delaine, 49c.; unwashed and unmerchantable Ohio, 31½c.; scoured Texas, 70@75c.; Spring do. 18@25c.; Fall do. 24c.; Spring Cal. 25@36c.; Australian, 44c.; Donskoi, 31½@32c.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Oct. 29, 1881.

BEEVES.—Receipts for the week, 15,839 head; do. last week, 17,101 do. The closing market compares well with Wednesday's sales. Cattle arrived late, and for that reason stock sold a little lower than it would, as butchers were in large attendance, all wanting stock. Texans sold at 7½@7¾c. to dress 55 lbs.; Colorados at 8@8¼c.; common to choice natives 8c. to dress 55 lbs. to 12¼c. to dress 57 lbs., with some rough oxen down to 7½c. to dress 55 lbs.

VEAL CALVES.—A number of good selling weeks have attended veal calves and the market again closes steady.

Live calves, N. J. choice, 9½c.; do. State, prime to choice, 9½c.; fair to good, 8½@9c.; poor to fair, 6@8c.; Mount Hollys, 7@9½c.; buttermilks, 3½@4c.; grassers, 3@3½c.; hog-dressed up-river, 12@14c.

SHEEP AND LAMBS.—Receipts for the week, 40,337 head; do. last week, 42,275 do. Good sheep were scarce and brought full late prices. Lambs were in liberal supply, and with a good many reported on the road the feeling was very weak and a reduction of ½c. per pound is reported on all grades. A car-load of choice wethers sold at 5c. but most of the sales of heep were at 3½@5¼c; lambs ranged from 5c. to 6¾c

SWINE.—Receipts for the week, 32,781 head; do. last week, 35,324 do. At the close prime corn hogs seldom exceed $6.40 ₱ 100 lbs.

New Jersey pork, light, 9@9½c.; other weights, 8@9c.; city dressed, 8¼@8¾c. Pork tenderloins, 14c.; beef do. 17c.

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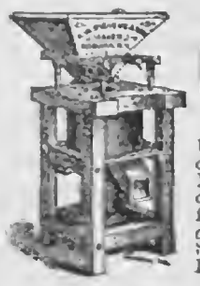

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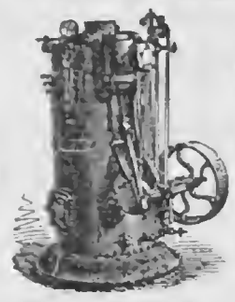

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No. 38.

HENRY STEWART.

Root Crops.

THE next crops in importance to grass and grain are roots. With these, potatoes are generally included, although these are not roots, but tuberous enlargements of underground stems. Besides potatoes there are usually grown turnips, rutabagas, mangels, beets, carrots and parsnips. Turnips are related to the cabbage tribe of plants; rutabagas are a species of turnip, brought from Sweden and Russia, and sometimes called Swede turnips; mangels are a species of beet, but not so sweet as the sugar beet. This root is largely cultivated in Europe for making sugar, and the French and Germans procure all their sugar and molasses from it. It is grown for the same purpose to a small extent in America, but it does not seem to become so profitable as our more cheaply-grown Southern sugar cane. Carrots and parsnips are not often grown as field crops, except in market farms and gardens; but their great value for feeding render them a very desirable crop for farm culture.

Only good farmers grow roots in large quantities, because they require rich soil, plenty of manure and ground free from weeds, which would choke the plants when young and small and prevent their growth. But a good crop of roots supplies a larger amount of fodder than any other crop that can be grown. A yield of 30 or 40 tons of turnips or mangels per acre is by no means unusual with farmers who know how to grow them; and 30 tons or 60,600 pounds per acre, would furnish one cow or ox with 60 pounds per day for 1,000 days or nearly three years. No other crop that is grown will support an animal for this long period of time.

As roots are usually fed in the Winter when the other feed is dry, the fresh, juicy roots are then very acceptable to the stock and serve to keep them in the best of health, when, without them, the dry feed would not be so healthful. On this account mangels and beets are grown for feeding cows for the dairy in the Winter, and turnips and rutabagas are grown for feeding to sheep and oxen, or to beeves that are fattening for the butcher. The latter are not desired for dairy cows because they possess a strong flavor and give a disagreeable taste to the milk and butter.

Roots are grown in drills, usually 24 to 30 inches apart, so as to permit them to be kept clean with the cultivator or the horse-hoe. The seed is sown in the drills either by hand or with a machine made for the purpose, and much thicker than is actually needed for the plants to grow. This is done to get a good stand; or a sufficient number of plants so close together in the drills that the surplus may be cut out with a hoe and leave a regular row of plants at even distances apart, and from eight to twelve inches. If the seed were sown only at this distance apart some would fail to grow, others would be destroyed by flies or cutworms or grubs and then there would be many vacant spaces which would greatly lessen the yield. For this reason several times as much seed is sown as would really be required, but the cost of the seed is of small account as compared with the value of a full crop. Of mangel seed, about six pounds per acre is sown; of sugar beets, about 12 pounds; of turnips, about four pounds; of rutabagas, about four pounds, and of carrots about two or three pounds. Mangels and beets are sown the earliest; usually early in May; carrots are sown in May or June; rutabagas in June or early in July; and turnips in August. The reasons for this variation in time of sowing are that mangels and beets are tender and require the Summer heat of the sun to force their growth; while turnips are not injured by light frosts and thrive better in the cool Fall weather than in the hot Summer; besides the turnip is a rapid growing plant and if sown in May or June it would become too old and perhaps run to seed before Fall; and this would destroy the value of the root for feeding.

THE HORTICULTURAL CLUB.

SECOND DISCUSSION.

Topic:—Orchard Fruits; Their Management for Winter Use, Best Varieties, etc.

THE second meeting was called to order by the Chairman—Uncle Mark. He said the importance of the question about to be discussed could not well be overestimated. It is not enough to have apples, plums and pears, but we should have the *best* varieties of them, such as will taste, look and keep the best. We want not only the best varieties, but we should know how to keep them so that we may enjoy them, even the year around. Nothing is healthier at any season of the year than good, sound, ripe fruit, and this is especially true at the Spring season. While there are some apples, such as the Golden Russet, which has good keeping qualities of its own, proper care in packing, and keeping in a temperature just above the freezing point, will enable us to keep almost any good Winter varieties much longer than we commonly do. For late Winter use the Baldwin, Golden Russet, Belmont, Ben Davis and Danver's Winter Sweet apples may be recommended.

NELLIE MCINTYRE—Of our varieties I consider the Wagener the best. For Winter use we prefer the Baldwin, Spitzenburg, Ben Davis and English Russet. Apples should be carefully picked and put in the cellar on shallow box-shelves, where they may be easily assorted.

HENRY WELFARE—Apples should be packed in barrels or laid on shelves in the cellar. The more leaves the better. The Snow Apple did as well with us, this year, as any. The Russet and Seek-no-further keep best here in Michigan.

ROSY BENTON—Orchard fruits are unknown to many of us children on the Western prairies, except as we get them in the market. My brother Andrew wonders what those cousins living in a world of fruit would think to buy apples in the market and find, on opening the barrels, that the first two layers were large, perfect apples and all the others small, imperfect ones. That's the way we find them sometimes.

THE CHAIRMAN—The deception just mentioned is, I am sorry to say, too commonly practiced. Just to make apples sell well some dishonest men resort to mean tricks. I hope none of the Club will ever think of doing such a thing. Honesty, in everything, is the best policy, and those who deceive others in packing fruit will, I hope, realize the fact. If they are once found out nobody will buy of them the second time, and while they may get a good price for one lot, they may get a very poor one or none at all after their way of doing business is known.

NELLIE BALDWIN—We do not grow very large apples in this part of Minnesota, but among the best are the Wealthy, Minnesota, Tetofsky and Duchess of Oldenburg. We have excellent varieties of crab apples, such as Early Strawberry, Orange, Whitney's No. 20 and Transcendent. The last is subject to the blight after a dozen years or so, but it it very fruitful and pays well before the disease affects it. Our plums are the wild varieties, some of which are very fine and large.

W. J. MASON—About eight years ago I picked some wild plums and planted the stones. When the little trees came up I took good care of them, and now I have plums that are as much superior to wild plums as a peach is superior to wild grapes. They are very large and sweet. Worms make their nests in our trees in the Spring, but I soon clean them out by applying a kerosene torch.

W. D. HERRICK—No farmer should be without orchard fruits. Of apples for Summer use I think Early Harvest and Strawberry are the best; for Autumn, the Pippin and Maiden's Blush; for Winter, Ben Davis, Golden Russet, Baldwin and Talman's Sweet.

WILLIE PRESTON—We raise a great many pears and plums. Among the former we prefer Beurre d'Anjou, Brandywine, Bloodgood, Seckel and Bartlett, and among the latter the Early Green Gage, Golden Gage, Isabella and Miner are good varieties.

FRANKIE LEWIS—I would like to ask the Club if packing apples in sand or in cut straw is better than the old method with barrels and boxes simply.

THE CHAIRMAN—It is decidedly better. Sand-packing is to be commended. Fruit will keep longer and fresher than in any other way. The apples thus preserved lose less water by evaporation, are very free from moldiness, and when one happens to decay it does not easily affect the others. Straw-packing, while it may preserve the fruit as well, is quite apt to give it a musty taste if the straw gets damp. There is but little advantage in wrapping apples in tissue paper, since, if the cellar is damp, mold will develop itself on the paper. Good authorities recommend storing in dark, damp cellars.

JOHN MORRIS—The great secret in keeping apples in the Winter is in first packing only the perfectly sound fruit. Bruised fruit will soon decay and impart disease to that adjacent. The practice of pouring apples, unassorted, from the picker's basket into the barrel in which it is to remain is to be deprecated.

THE CHAIRMAN—I am glad to notice an increased interest in these discussions. The topic for December 3 will be "Winter Flowers for the Parlor: how and what to propagate."

A PROPOSITION.

"ALL WORK and no play makes Jack a dull boy," but it is no worse than all play and no work, if it is as bad; in fact, I'd rather raise my little ones on the work. I think they would be more apt to make good men and women, yet I love to see them play and hear them laugh, for

> "The laugh of a child, so wild and so free,
> Is the merriest sound on the earth to me;"

and no child better enjoys a romp and play than the one who has learned his lessons well, or finished any task.

I am much interested in your Horticultural Club; hope you will take good care of your gardens, and share your surplus with those who have not your advantages. Now if Uncle Mark will not let me join because I'm a woman, perhaps he will let me get things from you and at the same time help you. I do all kinds of hair-work—make switches, curls, watch-chains and flowers of hair. I will make these, or show how it is done, and let you pay me in choice lilies, roses, grape-vines, raspberry or strawberry plants or other plants that I have not, if you furnish hair material. Many little girls would like to learn, and if they will write what they have to spare, and the price they wish, I will answer, if we can make a bargain. Plants must be well packed in damp moss or paper. Some years ago I gathered a large lot of flower seed and sent all over the United States to poor little girls who were not able to buy, and I've never had more satisfaction than in the reading of their humbly thankful letters. But now I have three little ones of my own who want to have flowers and fruits, and they want to know how to to help raise them as soon as they are large enough. MAGGIE WOOLMAN THOMAS.

Kent, Union Co., Iowa.

A PLEA FOR THE CHILDREN.

"PLEASE, papa, can't I go?"

"I wish you would quit bothering me about going to school. They say Tom Hawkins is obliged to sell his farm this Fall, and it will be sure to go cheap, for he's let it go down till I'm ashamed to have it adjoining mine; and what a nice thing it will be to have this farm and that all together."

"But, papa, I'd like so well to go."

"Didn't I tell you that I want to save enough to buy that other farm?" said Josiah Clover to his daughter Nellie, who wished to attend a select school.

I sat in the next room sewing, and thinking how I had heard sister Della coaxing father for the same luxury which her daughter Nellie was pleading for, and I can hear the answer yet, almost as if I had just heard it uttered. "For mercy's sake stop your bothering me about going to school; stay here and mind your own business," said father. And as she grew up to be a young woman how often I could hear her sobbing after having cried herself almost to sleep.

A few years after, Jo. Clover took our little girl to help him build a home. Six years later we saw the sod closing over her grave. Baby Nellie was motherless—another victim to overwork had gone to rest. Many times did father tell me that he wished he had let his darling go to school. I don't believe she ever got over that rough answer.

Now I dare say I have seen as much of this world as many of your readers, and I shall always insist on giving the children a chance to go to school, if they want to.

AUNT MOLLIE.

NOTES.

THE Cousins will doubtless be glad to see the report of the meeting of the club in this issue. I am more and more impressed that *we*, not I, can make this of much interest, if we are so disposed. For our next discussion which will occur in four weeks, a subject on flowers for the Winter has been chosen, and I hope that the nieces especially will take up the subject in a lively manner; they will have to or the nephews will out-do them. However, the young ladies have done well this week. Now, let's see who says the best things about the next topic, the boys or the girls. If you don't know much about the culture of house plants, ask your mother or aunt or cousin about them. Enlist them all in your service, then send to the RURAL your best opinions. In that way our discussions will be interesting. My roll of members is increasing wonderfully and bids fair to be a much longer one than the former. We want every wide-awake boy and girl in the RURAL family to join us. We should like to hear what the Cousins think about our "Discussions."

New Members of the Club for Week Ending Oct. 29.

Lizzie Miller, Emma Beshoar, Fred H. Webster, Lyman Candee, Bertie Brown, Nellie McIntyre, Henry Welfare, W. D. Herrick, Grace Ellis, Fred H. Loucks, Pearl Roberts, Preston Roberts, S. P. Shull, Clara Lindsay, Elinor Baldwin, Geo. Baldwin, Lillie Beythan, T. E. Tregemba, Minnie Aiken, Gracie Neil, G. G. Curtis, Rosy Benton, Andrew Benton, Rolla Hershiser, Harwood Hershiser, Minnie Knapp, Lillie Pratt, Millie Pratt, Daisy Johnston, Minnie Gunn, Charlie Chambers, Ella Chambers, Ella Berlin, Clara Abbey, Walter Humphrey, Mary Humphrey Alida Humphrey, Martha Henry, Belle Lawson, Bertha Lawson, Carry Heeney, Herbert Green, Mamie Irwin.

Miscellaneous.

The Sunday Argus, Louisville (Ky.) observes: A Woodbury (N. J.) paper mentions the cure of the wife of Mr. Jos. H. Mills, of that place, by St. Jacobs Oil. She had rheumatism.

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Agents wanted. $5 a Day made selling our NEW HOUSEHOLD ARTICLES and FAMILY SCALE. Weighs up to 25 lbs. Sells at $1.50. DOMESTIC SCALE CO., Cincinnati, O.

PERSONALS.

Horatio Seymour, Jr., of New York, expects to move to Michigan to take charge of extensive landed interests.

Walt Whitman has been invited to pay a visit to Mr. Swinburne, the poet, and will leave for Europe in a few months.

The late Governor Wiltz, of Louisiana, left his widow and five children in poverty, and a committee of leading citizens has appealed to the people of the State to provide a fund for them.

Mr. Gladstone gives this account of himself: "By blood I am a Scotchman; I am by residence a Londoner; I am by marriage a Welshman; and I am by birth a Lancashire man."

S. D. McEnery, who, by the death of Governor Wiltz, has become Governor of Louisiana, is fifty-four years of age. He is a man of fine address, exceedingly popular, and is opposed to rings and ring legislation.

Stock.

Cheshires a Specialty.

At State Fair, 1880, my stock won *all* the FIRST PREMIUMS in class Large White, and all the seconds but one. I have on hand a lot of

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☞ *Mention this paper.*

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$66 a week in your own town. Terms and $5 outfit free. Address Hallett & Co., Portland, Maine.

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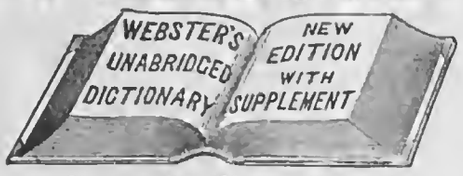

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Miscellaneous

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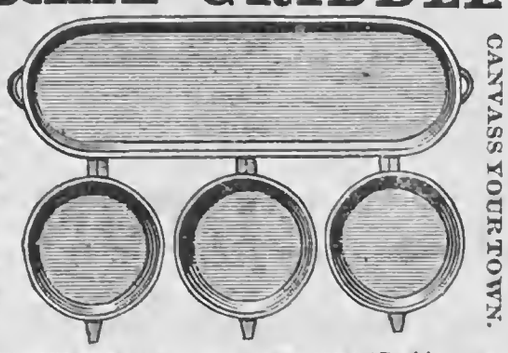

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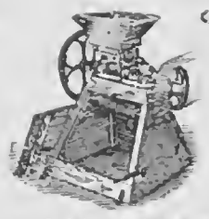

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Having struggled 20 years between life and death with **ASTHMA** or **PHTHISIC,** treated by eminent Physicians and receiving no benefit, I was compelled during the last five years of my illness to sit on my chair day and night gasping for breath; my sufferings were beyond description. In despair I experimented on myself by compounding roots and herbs and inhaling the medicine thus obtained. I fortunately discovered this **WONDERFUL CURE** for **ASTHMA** or **CATARRH,** warranted to relieve the most stubborn case of Asthma in **FIVE MINUTES,** so the patient can lie down to rest and sleep comfortably. Any person not fully satisfied after using one-third of a box can return the remainder to the proprietor and the money will be refunded, or send me your address for a trial package **FREE OF CHARGE.** Should your druggist not keep the remedy, I can send it by mail on receipt of the price **$1.00.** For sale by all Druggists. Address D. LANGELL, Proprietor, Wooster, Ohio, or **ALBERT IMGARD,** Manager, 46 Astor House Offices, New York City.

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THE Chinese always paint eyes on their junks. "For," say they, "sposee no got eyes, how can they see which way walkee?"

WHY is it that beggars who are perpetually asking for "a lift," always get angry when it is given with the end of a boot.—Manatee News.

CONVERSATION on a seaside hotel veranda, between a young man and an elderly guest: Young man—"I must have seen you somewhere, eh?" Elderly Gent—"Very likely; I am a pawnbroker."

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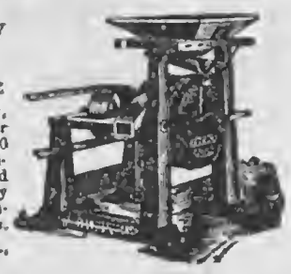

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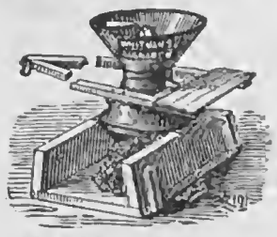

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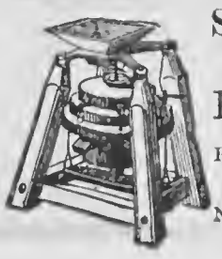

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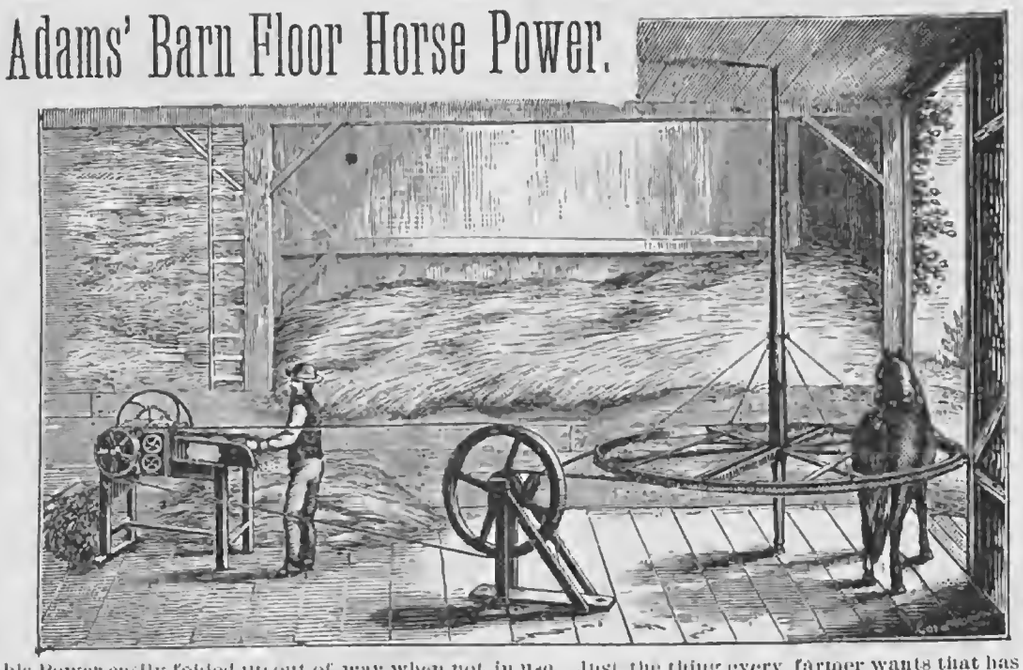

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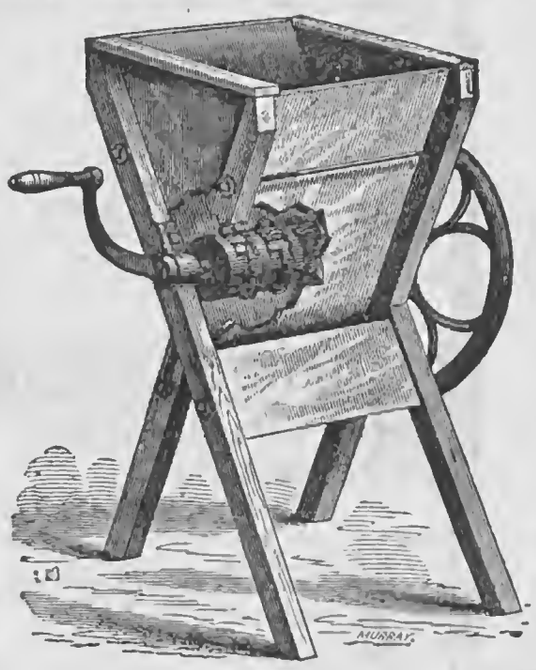

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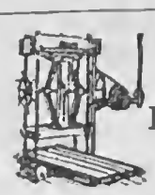

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Ralph Evans

VOL. XL. No. 1659.} NEW YORK, NOV. 12, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

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The Herdsman.

OUR ANIMAL PORTRAITS.

Dutch-Friesian Cow, Sjoerd.

THE SUCCESS that attends the introduction to general notice of a breed of cattle or other domestic animals, that has previously been prized only within a limited area, depends very largely, at the outset, upon the skill with which the introduction is effected. It is a trifle doubtful whether the Short-horns would have stepped to the foremost place in the front rank of neat cattle so rapidly had not special attention been called to the fattening capacity of the breed by the peregrinations of the enormous "White Heifer that Traveled," just at the time when the labors of the two Collings and of the other early breeders of the race were bringing to general notice the fine qualities of the choicest developments of the cattle formerly highly valued locally along the banks of the Tees. The "Heifer's" wanderings quickly attracted wide attention to the great merits of the breed to which she belonged, and a few years won for these merits a general recognition which it might otherwise have taken as many decades to obtain. To secure rapid popularity, and consequently high appreciation and high prices for any breed of stock, not only are great merits necessary, but skill and enterprise are also essential in bringing these to the favorable notice of the people.

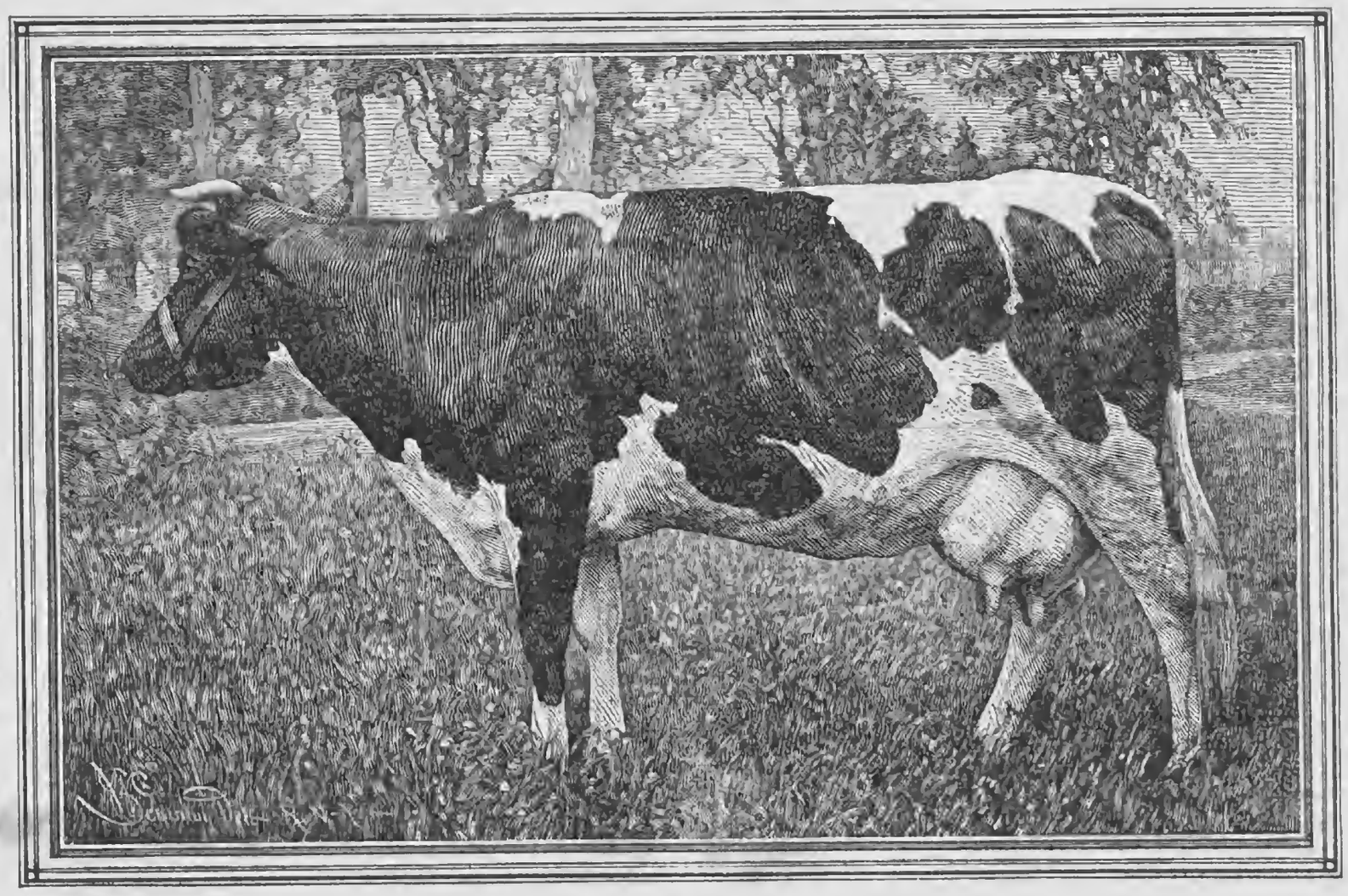
The visitor to English agricultural shows and cattle fairs, or the reader of English agricultural papers, cannot fail to notice the frequent appearance of the same herds or single animals at the chief exhibitions in different parts of the country. Within the narrow boundaries of England this is a matter of comparatively little difficulty or outlay, but in this country, where vast distances intervene between the points at which our chief agricultural fairs are held, to incur the trouble and expense necessary to make such frequent appearances speaks well for the spirit and enterprise of the exhibitor, and for his high opinion of the excellence of his exhibit.

The Unadilla Valley Stock Breeders' Association has lately successfully accomplished such a venture, Mr. Langworthy, their agent, having just returned from exhibiting a herd of 12 choice Dutch-Friesian cattle at the four leading Western fairs. At the Minnesota State fair, at Minneapolis, they were awarded six first and three second premiums, including the first and second prizes in the Holstein class, and the first herd prize in the sweepstakes class, composed of all the dairy breeds, six herds competing for the Holstein and twelve for the sweepstakes dairy premium. After this the herd was divided, five animals going to the Northern Wisconsin fair and seven to the Chicago fair. At the latter they were awarded five first prizes and one second, including the sweepstakes in the class Holsteins, for which five herds competed. At the Illinois State fair, at Peoria, the herd was reunited and carried off eight first and two second premiums, including the sweepstakes for dairy breeds, for which 13 herds competed. Finally, at the St. Louis fair, the last they attended, they were awarded nine first and four second premiums, including the first and second herd prizes in class Holsteins, and the sweepstakes on single bull and on single cow. Altogether the premiums won by the herd at these four shows foot up $2,645—a sum that will go a long way towards paying the expenses of the trip. By this successful series of exhibitions this breed, previously little known in this country, has been widely introduced to public favor, and doubtless the high reputation and sales of this herd will well reward the enterprise that planned the journey and the skill that has brought it to a prosperous close. At the various fairs the protests made against the admission of these Dutch-Friesians into the Holstein classes were overruled. In all fairness this decision could be justified only on the understanding that the Dutch-Friesian and Holstein cattle are substantially identical—the Dutch-Friesians being merely a tribe of the Holstein breed, or *vice-versa*, so that the reputation won by these cattle in competition with other breeds should be shared by the Holsteins generally, while their triumphs over the latter merely reflect credit on the herd or tribe.

In the RURAL of October 22 we presented to our readers a likeness of the bull Mooie, a fine specimen of the males of this herd and of the Dutch-Friesian breed. We now place before them an excellent likeness of one of the cows which has lately contributed to the Western success of the herd, Sjoerd, No. 71 in the American Dutch-Friesian Herd Book and No. 83 in the European Friesian Herd Book. She was bred by Albert S. Heeg, West Friesland, Holland; calved February, 1875; sire, Gerber; dam, Sjoerd. She was imported by her present owners, the Unadilla Valley Stock Breeders' Association, of West Edmeston, N. Y. Before her importation she had won first prize at the West Friesland fair, held at Lenwarden, Holland, in 1779. Her milk was subjected to a four weeks' test for butter last March, commencing on the 6th, with the following results:

	lbs.	oz.
Milk for 28 days	1,757	8
Average per day	62	12
Butter of 28 days	73	1½
Average 7 days' yield	18	4½
Greatest 7 days' yield	20	2
Average yield per day	2.61	
Milk per pound of butter	24	

In the Herd Book she is described as follows: "Black predominating, shield, white throat, spot on shoulders, white left hip and loin; head large but well formed; horns short, curved inward and slightly downward, black-tipped; neck fine at throat, well set to shoulders; chest capacious; shoulders thin at top; chine straight; hips very broad; rump very broad and level; handling best; escutcheon best, with thigh ovals. Length, 69.21½; width, 23¾–20½; hight, 56–56½; girth, 78½. July 7, 1880."



DUTCH-FRIESIAN COW, SJOERD.—FROM AN INDISTINCT PHOTOGRAPH..—Fig. 512.

Farm Economy.

CORN-FED STOCK.

B. F. JOHNSON.

THE corn crop in Central Illinois is, you may be sure, in a bad way, though probably the damage done by sprouting and rotting in the field, is a good deal over-estimated. Compared with last year, there will not be, for the whole State, over a third of a crop of merchantable corn; but the unsound corn, that is, the portion thought to be good enough for stock and particularly hogs, will be larger than for several years, say, since the crop of 1875. But the feeding of unsound corn which disastrously affects the health of some swine, will not be so much seen or felt this Fall as in course of next Summer, when hog cholera will probably play as conspicuous a role as when consuming the damaged portions of the crops of '75 '76 and '77. While probably hog cholera poison is not directly derived from unsound corn, the feeding of it so lowers the animal's vitality as to invite the attacks of all manner of disease, whether epizootic, infectious, contagious or otherwise. But that certain forms of disease in the human subject do arise from a nearly exclusive diet of unsound, unripe or damaged corn is notorious, chief among which is the pellagrue of the French and the pellagra of the Italians, common to the half-fed and half-paid peasantry of the south of Europe. The physiological and anatomical structure of swine and that of man, having more points in common than that of any other domesticated animal, it is neither illogical nor unreasonable to suppose a nearly exclusive diet of the same article would produce diseases of a similar or related character. The corn crops of '78 '79 and '80 were not only remarkably large, but very sound ones and so were those of winter wheat. While these crops were being consumed, hog cholera nearly disappeared, and the farmers of the country were not called upon to adopt the heroic remedies recommended by the veterinary commission, appointed by the chief of the Department of Agriculture. This commission reported with considerable unanimity that hog cholera was nearly as infectious, contagious and dangerous to swine, as pleuro-pneumonia to neat cattle and should be treated accordingly; that is, all affected and infected swine should be slaughtered and the premises occupied by such, thoroughly disinfected. Luckily the report was received with public derision and incredulity and the country was saved an enormous sacrifice.

THERE is no manner of doubt but an exclusive, or nearly exclusive, corn diet not only lessens the vitality, invites disease, and finally destroys the constitution of the progeny, but also produces butchers' meat of an inferior quality compared with that made from more nitrogenous foods. If the sole object of feeding swine were to produce the greatest amount of lard, and if bone, nerve, muscle and flesh were of small account and the health of the animal of still less, then an all-corn diet would be a proper one. But if sweet and juicy lean flesh is wanted and fat meat which wont shrink away to a rag in the pot, or fry to a mere scrap in the pan, and these to come from an animal of sound health and good digestion, then something beside corn must be provided—and that something must be more or less nitrogenous food like peas, barley, oats, milk or the product of milk in any form, and, last but not least, animal food.

I suppose I will be likely to astonish many and disgust not a few, when I say the best pork, that is, the sweetest, the juiciest and the tenderest, is often made in a slaughter-house yard, where in addition to unlimited corn, the swine have equal opportunity to satisfy their craving for animal food. The next best pork is made on grass and unlimited sour milk and butter-milk, while hogs eating mast and running at large, make remarkably sweet and juicy lean meat, but the fat is very oily, and when dry cured, becomes nearly transparent, and when aged, rancid.

But all this is so contrary to the generally accepted idea, that some explanation seems necessary. Carbonaceous foods, like corn, produce fat, and nitrogenous foods, like oats, produce flesh, therefore, when we wish to put fat on an animal we feed the former, and when flesh and muscle, the latter. But even the most carbonaceous foods contain a certain portion of nitrogenous matter, and the most nitrogenous, other certain portions of

carbonaceous substance. So if we feed a horse corn and nothing but corn he will get very fat and still be able to do some work, and a hog will do very well indeed when fed on oats or barley, but he won't get very fat, at least, not for a long time. But when corn is fed, most of its substance goes to make fat, and little is left to furnish material for building up the bony structure, the organs of digestion and respiration and the other fleshy substance of the body. But the fat through the entire body is contained in very small cells the walls of which are not fatty, but fleshy substances, and these are thick or thin according to the food furnished, thin when the food is corn or carbonaceous and thick when it is nitrogenous.

A very fat corn-fed hog is little more than a ball of lard and grease. Its vital organs have been reduced in size, its blood in quantity and the juices of the body crowded out to give place to cells containing fat, the walls of which are so thin and tender an ordinary strip of pork, cut from such an animal, will not hold together, unless supported by the skin. When the fat is fried or boiled the oil escapes and nothing is left but a mere scrap, and when the lean is cooked in any way, the meat is found dry, tasteless, hard and tough. But under a nitrogenous diet the entire bony and lean parts are fully developed, the blood is strong and rich, the juices of the body abundant, the cells have thick walls, the fat has some strength and fiber in it, and may be cut in small strips and used for larding game and lean meats. When boiled the fat shrinks some, but not much, in the pot; when fried, two-thirds of the substance remains after the oil is out; and when the lean is boiled, fried or roasted, the meat is tender, juicy and sweet. A diet of corn produces the extreme on the one side, and a meat diet, such as is afforded by milk and flesh food, on the other—and thus pork flesh is always good or bad, according to the amount of nitrogenous or carbonaceous food given.

But it is true that the fat of hogs fed on a diet largely nitrogenous, is softer under a medium temperature than if the food had been of an opposite character, but nevertheless the facts remain of less shrinkage in cooking and more sweetness and flavor. In times past when the house lights were chiefly furnished by tallow candles, those who could, obtained the tallow to make these from grass-fed beeves, because the tallow would make candles which would not run; whereas that taken from corn-fattened cattle, required the addition of alum or some other similar substance, to harden it. But the tallow of grass-fed beeves is not only harder, but the fat is harder too, and shrinks less in cooking; while the flesh is juicier and sweeter. How a grass diet favorably affects the sweetness of the fat and juiciness of the lean is well illustrated in the meat of the buffalo; and beeves fed on distillery slop, that is, on corn after the starchy portion has been abstracted, make juicier and sweeter beef than where the diet is whole corn chiefly; but the fat is softer and higher-colored.

Though popular ideas have not been corrected in respect to the value of fat as an article of diet, popular tastes have, and now when most of us buy a steak from a butcher, we say when the carcass is a fat one, "Oh, don't give me so much tallow." Fifty years ago, everybody wanted as much fat on their roasts and steaks as possible, and buyers would have been indignant had butchers cut away the fat the former are now so anxious to get rid of. Fifty years since or earlier, the price of tallow was something near that of lean meat; now it is a great deal less, that difference in price measuring, in some sense, the extent to which fat has been laid upon butchers' stock, at the expense of corn.

And now we come to the summing up of the whole matter. Within 50 years, and since the settlement of the West and the increase in the production of the cereals, and notably Indian corn, the food material for the making of fat has increased out of all proportion to that class of vegetation which makes bone, flesh and muscle; and without becoming justly sensible of the fact, we have gone astray in putting on fat at the expense of lean, and to the serious damage, not only of the health and constitution of the animals, but to the lessening of the value of the meat, in the case of butchers' stock, and destroying the health of such of our stock as are used for breeding and work. The consequences are, dear beef and pork and cheap tallow and grease, if not lard, and the appearance of a new class of diseases in farm stock of all kinds. It was a natural thing, of course, that after long centuries of feeding, during which the most costly and difficult thing to get was fat, when we suddenly became possessed of the material to furnish it at low cost, we should make use of it in an extravagant way, and that the result should be as we see; but now that the mistake has been forced on our attention in a hundred ways, the correction of abuse will come in due time, and just as a matter of course.

And hence we hear of more grass, roots, vegetables and milk for hogs, and barley, oats and peas in place of Indian corn; and for sheep and neat cattle, Winter pasture which is everywhere easy to be made on all the Blue Grass soils south of 40 degrees. Of course, the return to the medium between the two systems will be slow, and corn will always hold a prominent place as the chief and leading grain in fattening butchers' stock; but it will soon come to be recognized that for breeding stock and for young animals the less corn they have the better, where a vigorous constitution, sound health, prepotency and long life are sought.

Horticultural.

RAYS.

If you have a Calla Lily that is in bad order, shake it out of its pot and repot it into as small a pot as you can conveniently get it into, using lots of clean drainage, and a soil of little pieces of old sods out of which you have shaken the loose earth, with some sharp sand added, something through which water will percolate as freely as through a sieve. When this pot is filled with roots you should shift into a larger size and use richer soil, but always an open one.

* *

In Shaw's Gardens at St. Louis, the other day, I observed a "Collection of Bible Plants" in a plot out-of-doors near a large conservatory. Most of them were growing in pots, but set outside for the Summer. They were labeled as follows:

Almond Tree—Amygdalis communis; Eccl. xii., 5.

Apples of Gold—Citrus medica: Prov. xxv., 11.

Bay Tree—Laurus nobilis; Psalm xxxvii., 35.

Box Tree—Buxus sempervirens; Isaiah, xli., 19.

Camphor Tree—Laurus camphora; Rev., xviii., 13.

Cedar of Lebanon—Cedrus Libani; Psalm, lxxx., 10.

Cinnamon Tree—Cinnamomum; Prov., vii., 17. Rev. xviii., 13.

Fig Tree—Ficus carica; Deut. viii., 8. Matt. xxiv., 32.

Fir Tree—Cupressus sempervirens; Ezekiel xxxi., 8. Isaiah xxxvii., 24.

Frankincense—Amyris toxifera; Song of Sol. iii., 6.

Husk or Carob Tree—Ceratonia siliqua; Luke xv., 16.

Hyssop—Capparis rupestris; I. King iv.. 33.

Mustard Tree—Salvadora Persica: Matt. xiii., 31.

Olive Tree—Olea Europæa; Hos. xiv., 6.

Palm Tree—Phœnix dactylifera; Psalm lxixii., 12.

Sycamore Tree—Ficus sycomorus; Amos vii.. 14.

Wild Vine—Vitis Labrusca; Isaiah v., 5.

"The identification of the plants mentioned in the Bible is a task of great difficulty; and in almost all instances the result of the most learned investigations, whether by Bible commentators or by botanists, is unsatisfactory and open to doubt." So says the Treasury of Botany. I will not, therefore, ask what sort of Frankincense the ancients got from Amyris toxifera, but I would like to know where on earth they got hold of our Northern Fox-grape, Vitis Labrusca, which is purely an American species and nowhere found wild in the Old World. No, not even to-day, let alone 2,200 years before Columbus discovered America!

* *

In answer to a query in the London Garden about an indoor grape-vine border and the best vines to plant in it where there is plenty of heat, W. Coleman (one of the best indoor fruit growers in Britain) answers, in substance:—Build the vinery on arches or piers; have an inside and outside border; let the bed for the border be four feet deep, concreted and sloping one inch to the foot to the front, where should be a drain all the length of the border, In the bottom place a nine to eighteen inches deep layer of stones or brickbats covered over with lime, rubbish and gravel, and over that a layer of sods green side down, then the soil. To begin with, have the border five feet wide and altogether inside, or three feet inside and two feet outside and walled around with sods, and year after year, as the vines demand it, add three to four feet in width to the border. For compost use equal parts of turf from a heavy limestone pasture, one year stacked, and fresh soil free from lime off igneous rock; to six barrow-loads of this add one each of old lime rubble, charred refuse and burned earth, but no manure. Crushed one-half-inch bones with the dust, to the extent of 12 per cent. of the whole mass, may be added with advantage. Plant the vines—one-year-olds—in February, March or April. In planting, wash away all the soil from the root-balls, disentangle the roots, spread them out in every direction and cover with fine soil; then put a stake to each vine and cover the border with a mulching of short manure. Kinds of grape-vines for a warm house: Black Hamburgh, Maddresfield Court Muscat, Alicante, Foster's Seedling, Buckland, Sweetwater and Muscat of Alexandria. For Autumn and Winter use add Gros Colmar, Lady Downes. Black Morocco, Alnick Seedling, Gros Guillaume and White Tokay. I would say that ordinary pasture turf may be as good as that off a limestone pasture.

* *

Horticola's note on abutilons, p. 652, prompts me to say that so far as I know them, Abutilon insigne has no equal as a Winter bloomer. It has large, prominently netted and rusty, hairy leaves, a scraggy habit if uncared for, and in Winter and Spring, instead of producing its blossoms singly, as in Boule de Niege, or in bunches as in Darwinii, it bears them as it were in long, pendant racemes or panicled racemes. The flowers are open, prominently veined and of a purplish-brown color. It seldom blossoms in Summer, is harder to propagate than most other Abutilons and may not bear transplanting with so little impunity. Leon.

FRUIT NOTES.

CHARLES A. GREEN.

A blind man has more acute senses of feeling and hearing than his brother whose eyes are perfect. The strong mentally are apt to be weak physically—nature makes compensation for our defects. I never knew a man so bad but I could discover in him some trait to admire. Thus it is with fruits. We are searching for varieties possessing *every requirement*, but must be reminded that such varieties are an utter impossibility. We may make progress in size, or vigor, or productiveness, and lose in quality, health or beauty. At rare intervals we make headway in many points of merit, and then the world applauds. Our progress is truly wonderful, and much may be hoped for, but our expectation should not be given too wild a rein.

No fruit garden is complete without a vine of the Iona Grape. Here it sets as much fruit as the Concord, and in order to induce it to ripen early we remove a portion before maturity—the earlier the better. The Iona is of better quality when partially ripe than many varieties when at their best. Crushed in the mouth, the pulp (if it may be called pulp) dissolves instantly, and we are refreshed as though sipping the finest old wines. It is almost seedless—often having but one seed and that exceedingly small. Healthy and hardy as it is here, I wonder it is not more often called for at the nurseries. If some one should introduce a new variety as desirable, it would create a sensation. [The Iona has never borne a fair bunch of grapes at the Rural Grounds.—Eds.]

Horticola asks for an improvement in color and quality on the valuable New Rochelle Raspberry, and I assure him that I can fill the bill. An old gentleman in this county has found in his garden a seedling that proves to be of better quality and color and much larger and more vigorous. It is the largest raspberry I have ever seen, and makes the largest plant, forming a hedge behind which a farm wagon and team could be hidden from observation. If Horticola will favor me with his address, I will gladly send him plants for testing. It is called Shaffer's Colossal.—[Already referred to as being tested at the Rural Grounds.—Eds.]

Peach growers may be congratulated on the art displayed by them in covering the different varieties with different colors of gauze, ostensibly to prevent too frequent testing of samples of the fruit, but, in fact, to enhance the beauty and price of the produce. No one but the initiated imagines how marvelously beautiful a basket of red-cheeked Crawfords or Fosters may be made by stretching a two-cent strip of gauze or mosquito netting over it. The observer will notice that different colors of gauze are used with different varieties, which he supposes to be merely a matter of chance, but the suiting of the color to the variety is closely and shrewdly followed to the pecuniary advancement of the peach grower. I saw a man exhibiting some Crawfords at the Fair in baskets covered with pink gauze, and his peaches attracted a crowd, while others on exhibition, equally large and showy, were passed without notice.

Fruit growers find it important to give their goods a showy appearance in the markets. "An article well put up is half sold," is an old saying which applies well to fruit. The miserable practice of marketing grapes in market baskets holding half a bushel, whence the dealer dumps them upon his stand, where they are culled, thumbed, and clusters partially denuded by purchasers or loungers, then wrapped in a bundle like so many onions minus bloom and everything that makes them attractive, belongs to a past age. Grapes should be gathered with shears designed for that purpose, and without handling be deposited in baskets holding five, ten or twenty pounds. These baskets should be covered, and sold by the pound with their contents

The strawberry beds will soon require covering for the Winter. The covering is often put on too early. In fact, it is the repeated thawing and freezing of Spring that often do the greatest injury. When the earth is frozen hard enough to bear up a wagon and team, the time to cover has come. If one has a few valuable plants it will pay to cover the beds with evergreen boughs just enough to shade the plants—this is the best of all coverings. Litter from the horse stable is generally used, as it is light and easily scattered, and enriches the soil. The objection is that Timothy, clover and other seeds are not destroyed by the digestive organs of the horse, and these seed down the strawberry beds that have been so carefully weeded. If wheat straw is spread now in the pasture or orchard and permitted to be picked over and trodden by the stock for a few weeks, weed seeds will be detached from it, the straw shortened, and a desirable mulch secured. Heavy, cloddy manure should never be used for the covering of strawberries. Generally twice the amount of covering necessary is applied. On our clay loam covering is not absolutely necessary, yet it will pay by increasing the yield in most seasons. On low soils or any subject to heaving, covering is indispensable.

It is often desirable to heel in trees and vines during the Winter, but this is a hazardous undertaking with the novice. High and dry ground should be selected, the soil made fine and firmly pressed about the roots which should not be crowded together. Nurserymen cover stock thus heeled in with evergreen boughs, and when the work is well done the stock is safer than when left undug But through haste and carelessness I have seen stock taken out of the trenches in the Spring with blackened or moldy roots—completely ruined. If it is impossible to find an elevation, a ditch should be opened to permit surplus water to escape.

Monroe Co., N. Y.

NOTES AND COMMENTS.

Yes, Horticola (page 662), the abutilons are excellent plants for room cultivation, and in the greenhouse or conservatory they are indispensable. Good, strong plants of A. Mesopotamicum and A. M. variegatum, when grown in six-inch pots and suspended from the rafters of the greenhouse, and when trained on a low, circular trellis, are, when in full bloom, excellent decorative plants. But in order to see the flowers of this pretty species in all their beauty it is necessary that it should be grafted or inarched on some of the robust-growing species, such as A. Santana or A. striatum, about four or five feet high. With a little care and attention as to pinching back the shoots, it will soon form a compact head with drooping branches reaching almost to the ground, and when in full bloom no plant can equal it in beauty.

A. Thompsonii is also an excellent room plant, and, whether in blossom or not, is always attractive on account of its leaves being beautifully mottled with golden spots. It requires to be grown in a sunny situation in order to bring the variegation out distinctly. Its flowers are produced in great profusion throughout the entire year. If I were confined to the choice of one abutilon, I would select this.

A. Sellowanium marmoratum is another exceedingly attractive variegated variety and is also an excellent foliage plant, the large leaves being of a golden yellow, richly tesselated with green. A. Auguste Pasewold is another beautifully variegated variety, the large, thick-set, dark-green foliage being elegantly blocked with yellow. A. roseum superbum is another very distinct variety, and one that is well adapted for room cultivation on account of its producing flowers in the greatest profusion. The flowers are of a rich rose-color, beautifully veined with delicate pink. A. William Fowler, with bright yellow flowers; Snow Storm, of dwarf, compact habit and pure white flowers; Santana, dark crimson, are also excellent varieties..

In cultivating the abutilons it is well to remember the fact that they are greenhouse shrubs, attaining a hight of from four to eight feet, or even more, so that where the necessary room can be given, large, old plants are valuable on account of the immense quantity of flowers which they produce. They can be given the treatment as advised by Horticola, but for window cultivation I think that smaller plants would be preferable; so for this purpose I advise that young plants be propagated or procured in the Spring and planted out in

sunnny situation about the end of May, about four or five feet apart, so that they may not become drawn. Pinch the shoots back occasionally if they show a tendency to grow out of shape, and about the middle of September take them up carefully and pot them, using a compost composed of two-thirds well-rotted sods and one-third well-rotted manure.

IS THERE any remedy, that can be easily and cheaply applied, for the cabbage worms? I never saw them so numerous and destructive as they were during the past season. Whole fields of both cabbage and cauliflower have been destroyed by them. In this vicinity many remedies have been tried, but without success. The question is how to apply them, as most of the worms work on the under-side of the leaves. CHAS. E. PARNELL.

Queens Co., L. I.

THE CYCLAMEN.

PETER B. MEAD.

THE cyclamen is a beautiful winter-blooming plant, and is not yet as well known as it deserves to be, especially among amateurs. It is highly prized by those who know it. There are several species of the cyclamen, some one of which is in bloom from Fall till Spring, C. autumnalis being the first to show its pretty flowers, and it should be the first planted. The best known among us is the C. Persicum, of which there are not a few varieties or variations, the foliage generally differing more than the flowers. Some decided improvements, however, have recently been made, the most striking, in foliage and flower, being known as Giganteum, of the Persicum type, a very good portrait of which accompanies this article.

The cyclamen will flower freely either in the greenhouse or the sitting-room, and responds generously to very ordinary care after having been once established. The plants may be raised from seed, and in experienced hands small flowering corms may be produced in one year from the sowing; but the better way is to buy the corms. These may now (Nov.) be bought of the florist already potted, or of the seedsman, who imports them. Those bought of the seedsman will be dry and very much shriveled, and seem to be more dead than alive. The soil I use is made up of rich loam (rotted sod being best), leaf mold and sufficient sand to make the mixture light and porous. The corm should be laid on the surface of the soil, very slightly pressed in, and secured in position by a couple of bent wires or pegs till roots have been emitted. The watering should be light till the corms have filled out and begun to grow. They should be watered regularly and freely when in bloom, and the water gradually withheld in the Spring when the flowers have disappeared.

At this point there is a difference of opinion as to the treatment. Many withhold water altogether, and let the corms dry up; but this practice is going into disuse. I have always succeeded best by withholding water gradually in the Spring, but never allowing the soil to become so dry as to cause the corms to shrivel. In fact, I generally set the plants together in a shady place in the open air, and give them a dash of water occasionally till Fall, when I turn them out of the pots, shake off all the soil that will come away, and repot them, giving them pot room according to their needs. This is simple and is really all that is needed.

A single corm, carefully grown, can in time be made to produce three or four hundred flowers in a season; such a plant is a rare and beautiful sight. It is a beautiful plant, in fact, at all times, the foliage being ornamental and the flowers unique and striking and sometimes quite fragrant. It will do best in a moderate or low temperature. Red spiders and mealy bugs will sometimes prove troublesome, but frequent syringing or occasional washing will keep both in subjection.

THE MOCK-ORANGE OR SYRINGA.

WILLIAM FALCONER.

BOTH of these names are applied to one of our commonest and prettiest garden shrubs. On account of the orange-blossom fragrance of the flowers of some of the kinds, the common name of Mock-Orange was given to these shrubs; as Syringa is the botanical name of our lilac shrubs, I think it is inapplicable to those which are botanically known as Philadelphus, therefore I would suggest that we drop the name Syringa in this case and cling to that of Mock-Orange.

Mock-Oranges are very common and very beautiful, copious and in most cases hardy, and they are usually in blossom from the first of June till the first of July, of course, earlier or later according to the part of the country in which they are growing.

Several of them are indigenous to the United States, some to Eastern Asia, and others of unknown origin are supposed to be garden varieties; indeed, the species throughout are rather ill-defined. The first to come into blossom is P. coronarius; it has creamy-white flowers that are powerfully fragrant. It is a native of Japan, etc. There are single and doubled-flowered as well as a dwarf form of it. P. hirsutus, a hairy-leaved species from the Southern Alleghanies, and which has smallish, white, scentless flowers, is next

CYCLAMEN PERSICUM GIGANTEUM.—FIG. 513.

in order. It gets cut back considerably in severe Winters. This species is sold in the Southwest as P. Mexicanus. Then comes P. inodorus also from the stream banks of the hill-country of the South Altantic States; its handsome variety called grandiflorus, also wild there, and other kinds as P. latifolius and P. speciosus of unknown origin, but all

THE MOCK-ORANGE—PHILADELPHUS SPECIOSUS.—FIG. 514.

apparently quite hardy. Bringing up the rear are Lewisii, a smallish, spreading and somewhat tender species from Oregon; and Gordonianus, a tall-growing species found wild along the shaded banks of mountain streams from California and Oregon into Washington Territory. Besides these, there are other reputed species and several varieties grown by our nurserymen.

Mock-Oranges grow readily in our gardens and are easily propagated by means of cuttings of the ripe, one-year-old shoots or seeds. They blossom best when grown in an open situation, and delight in good soil and moisture, but the better they are fed the ranker they will grow and that is rather objectionable than otherwise. There is only one thing in the culture of the Mock-Orange, that I think calls for pronounced attention, and that is pruning. The usual method is, about midsummer to top over the shrubs, like hedge plants, with shears, thus leaving stumpy thickets of shoots, and robbing them of most of their flowering wood. Better keep the shrubs well thinned by the entire removal of most of the root sprouts, and annually reducing old wood in favor of that which is firm and young, and moderate cutting back of the shoots that have just bloomed, and a partial bit of judicious Summer shortening of the current growth.

P. speciosus, the subject of the illustration, which we reproduce from the Gardeners' Chronicle, is, so far as size and showiness are concerned, one of the handsomest of all Mock-Oranges. It belongs to the P. inodorus class. If I could have but one Mock-Orange I would take speciosus; if two, speciosus for its large, white blossoms, and coronarius for its fragrance.

Asparagus.

Will Mr. Mead in his next article inform us which is the best time for cutting off the tops of asparagus? Some say after the first hard frost or two; others that this injures the roots, and that the tops should not be cut before the last of March in this climate. If left on till then, the seeds are scattered over the garden, germinate and make plants, which are as much in the way of the gardener as so many weeds. If cut off in Autumn, the asparagus can then be dressed with stable manure, to lie on and protect it all Winter. In the Spring this can be forked in among and alongside of the roots, and be all the fertilizing the crop will need. It would be more desirable to cut off the tops and dress it in Autumn, because the gardener is not so hurried in his work as in Spring. B.

GLADIOLI.—To multiply more rapidly this magnificent flower, save the little bulblets. If well grown they blossom the second year, and occasionally sport. I have a new color this season from such a sport. It requires three years for seedlings to blossom. I get nearly as many new varieties from my offsets as from my seedlings. D. S. MARVIN.

[We have saved hundreds of the bulblets and they usually come pretty true to the parent bulb.—EDS.]

Field Crops.

TOBACCO-GROWING NOTES.

AS SOON as tobacco has become thoroughly cured it should be taken down from its hanging position in the curing barn and the plants piled in "ranks," with the butt-ends of the stalks outward, and carefully covered upon the top to prevent the leaves from drying. This work can only be done when the leaves are made soft and pliable by warm, damp weather. It is very important that the tobacco is in good condition as regards moisture when taken down, otherwise artificial means for moistening the leaves will be necessary, which necessitates additional labor and risk; for tobacco is sometimes seriously damaged, and even ruined, from improper artificial dampening. It is wise to take down as much of the crop as possible before Winter fairly sets in, for if left, an opportunity may not occur again until Spring, when the work of taking down, stripping and assorting will prove much more expensive, for it will greatly interfere with the regular Spring work of the farm.

WHOEVER has tobacco to manipulate during the coming Winter should provide a good place in which the work can be done comfortably and conveniently. The necessary requirements for a good tobacco assorting-room are that it shall be large, light and warm. The room should be furnished with tables or benches, on which the work of assorting the leaves can be done conveniently. A sky-light window gives the best possible light for the work, as the rays of light then fall directly upon the leaves and over the shoulders of the assorters, which gives them better opportunity to judge correctly of their qualities. A side-light window, with the light shining directly against the face of the workman, is to be avoided, for it is not only very trying to the eyes, but the work cannot be accomplished so pleasantly or so effectually.

THE sooner the leaves are stripped from the plants, after they are taken down, the better. If allowed to remain in a "rank," or pile, with the leaves left upon the stalks, fermentation is almost certain to occur in warm weather, which will result in serious damage to the crop. The leaves should be carefully stripped off the stalks, one by one, and tied in small bundles weighing five or eight pounds, with a coarse cord which will not cut the leaves. The bundles should be tied near the center, so that the butts of the leaves will have opportunity to become thoroughly dry and compactly "ranked," with their butts extending outward. The tops of these ranks should be kept well covered to prevent the drying of the leaves, and if weights are placed on the top of the rank, all the better.

GREAT CARE needs to be exercised while manipulating leaf tobacco, not to allow the leaves to become dry. The piles, or "ranks," should be kept carefully covered, and the

stripping should be done, so far as practicable in warm, damp weather. The assorting also should be done in a warm, damp atmosphere, made thus either naturally or artificially. The latter requires that the work be done in a tight room in which the air is impregnated with moisture from the evaporation of water. A kettle placed upon a stove in which there is a steady fire day and night, kept filled with water, will accomplish the desired result in a close, tight room. G. A. G., JR.

Chemung Co., N. Y.

NOTES FROM THE RURAL FARM.

WE planted a patch of the Early Ohio Potatoes April 23. The crop matured July 12. They were planted in sandy soil without manure, single eyes one foot apart in drills three feet apart. They were hoed once and London-purple was applied once. The yield was at the rate of 150 bushels to the acre. There is much to be said in favor of this variety—a seedling of the Early Rose. The tubers lie close together in the hills and are remarkably uniform in size. The Early Ohio has with us a flesh-colored skin. The eyes are sometimes deep, though generally as shown in the cut, Fig. 515, which is characteristic in shape and size. The flesh is nearly white with more of the potato, or "strong," flavor than most others of the same parentage. The vines grew only a foot in hight and bore no blossoms. As the tubers grow close together in the hill and average only medium in size and the vines are short and upright, it will appear that the pieces may be advantageously placed less than one foot apart and the drills not over two feet apart. So cultivated, a large if not a heavy yield might be looked for. The Early Ohio is everywhere among the earliest of potatoes—upon this farm the earliest of any we have ever tested. It submits to slouchy treatment, and a single cultivation with the harrow after the sprouts appear, suffices to produce a fair crop. It has been grown in this neighborhood for several years and as a first early potato is preferred to the Beauty of Hebron.

The drought is finally broken. Occasional showers are falling as we make these notes—one having time to soak in the ground ere another commences, the weather remaining warm. While this is helpful to the growing wheat, it will scarcely determine many farmers to sow wheat who have been unable to sow before this time.

THE BRITISH WHEAT CROP OF 1881.

J. B. LAWES.

[DR. LAWES favored us with an advance slip of the following, which was first published in the London Standard. We were unable to print it, however, until this issue.]

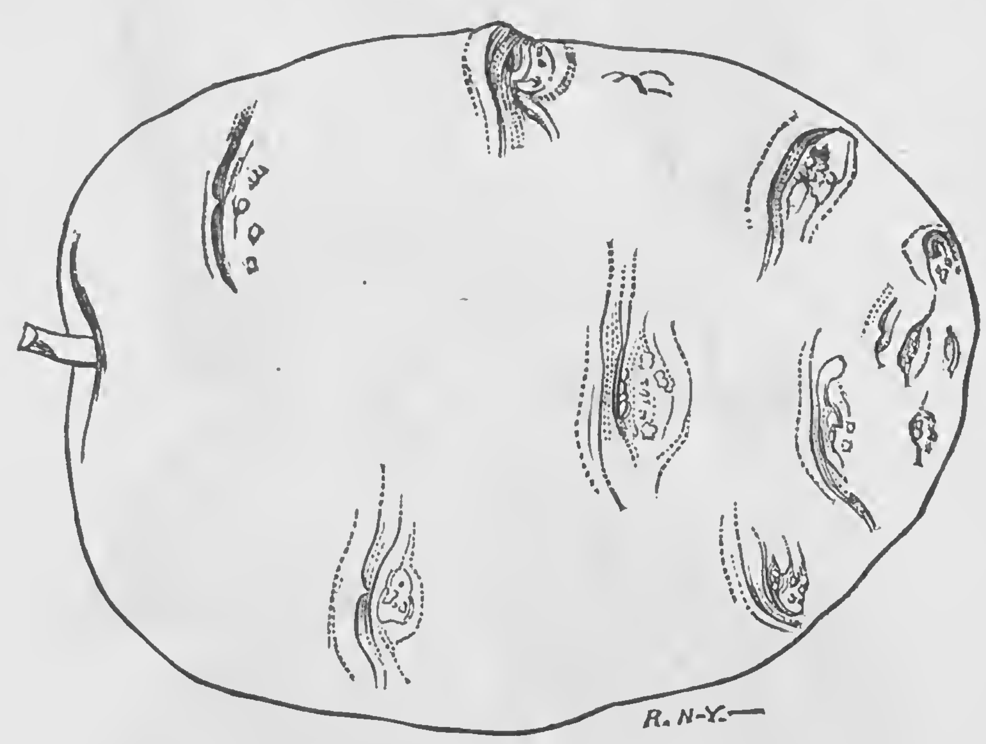
THE seven seasons ending with 1881 have been more disastrous to British agriculture than any seven consecutive years of which we have a record. Those who hold the opinion that the fluctuations of the weather occur in definite cycles will have some difficulty in finding a parallel to the period of the last seven years without going back to very remote records.

The change in the relative proportions of home-produced and imported wheat which has taken place during the last few years, has entirely altered the character of the trade. In 1868-70 two-thirds of the total bread consumed was the produce of home-grown wheat. A few years later the requirements of the country were met by one-half of home-grown and one-half of foreign wheat. But the harvest of 1879 scarcely supplied one loaf in four required, that of 1880 only one in three, and that of 1881 will also supply only about one loaf in three required.

We cannot ignore the fact that, in consequence of these great changes, the question of a good or a bad wheat crop, however important it may be to the land-owner or the cultivator, is no longer of the same importance to the nation at large as it was formerly. Another point worthy of notice is that, although our requirements for foreign wheat are becoming larger and larger, the fluctuations in the amounts required from year to year are becoming much less. Thus, after the bad season of 1860, the net imports of wheat increased from 4,500,000 to 10,000,000 quarters, or by more than 100 per cent. In 1872-73 the imports were 3,000,000 quarters more than in the previous year, corresponding to an increase of about 33 per cent. But after the harvest of 1879, the worst on record, when the net imports of wheat increased from 14.1 to 16.4 million quarters, the increase only amounted to about 16 per cent.

During the year ending August 31, 1881, the amount of foreign wheat retained for home consumption was more than 16,000,000 quarters. As the area under wheat in the United Kingdom was last year rather less than 3,000,000 acres, a deficiency of half a quarter per acre in the yield of the crop, although a very serious matter so far as the interests of the cultivator are concerned, has comparatively little influence on the requirements of the country at large for foreign wheat.

I have no doubt that my estimate of the home wheat crop of 1880 was considerably too high. The average of the usually selected plots in my experimental wheat field showed a produce of 27 bushels, reckoned at 61 pounds per bushel. There was not at that time sufficient evidence to show how exceedingly bad was the yield of the crop upon the lighter soils; nor can I now account for the fact that in that year wheat grown continuously was so much better than wheat grown in rotation. For example, in the experimental field of light soil at Woburn, the land growing wheat every year showed but little difference between the crops in 1879 and 1880; but where, in the same field, wheat was grown in an ordinary four-course rotation, after clover fed off by stock with cake or corn, or without cake or corn but with an application of artificial manures, the produce of 1880 was from 11 to 16 bushels per acre less than under the same treatment in the very bad season of 1879.



EARLY OHIO POTATO.—FROM LIFE. FIG. 515.

In the following table is given the produce in 1881, upon the same selected plots as usual, in the field at Rothamsted, which has now grown wheat for 38 years in succession. There is also given for comparison the average produce, on the same selected plots, over the last 10 years, 1871-1880; over the preceding 19 years, 1852-1870; over the total period of 29 years, 1852-1880; during which time the same manures have, in every case, been applied to the same plots:—

HARVESTS.	Unmanured—plot 3.	Farm-yard manure—plot 2.	Artificial manures. Plot 7.	Plot 8.	Plot 9.	Mean of plots 7, 8, 9.	Mean of plots 3, 2 and 7, 8, 9.
BUSHELS OF DRESSED CORN PER ACRE.							
1881.	13¾	30¼	26¾	35⅝	35⅛	30⅞	25 (1)
Average 10 years, 1871-80...	9¾	29¼	29¼	30⅞	34⅝	32⅜	23⅜ (2)
Average 19 years, 1852-70...	14¾	35¾	36	38¾	37	37⅜	30¼ (3)
Average 29 years, 1852-80...	13⅜	33⅝	32⅞	36⅞	36¼	35	27¼ (4)
WEIGHT PER BUSHEL OF DRESSED CORN—POUNDS.							
1881.	59.0	58.9	58.8	59.1	58.4	58.8	58.6
Average 10 years, 1871-80...	57.5	59.9	59.3	59.1	58.8	59.0	58.8
Average 19 years, 1852-70...	58.2	60.0	59.4	59.1	59.4	59.0	59.1
Average 29 years, 1852-80...	58.0	60.0	59.4	59.1	58.5	59.0	59.0
TOTAL STRAW, CHAFF, ETC., PER ACRE—CWT.							
1881.	10¼	21⅛	19⅝	26	32⅛	26	19⅜
Average 10 years, 1871-80...	8⅞	29⅞	29½	37½	41⅞	36¼	21⅞
Average 19 years, 1852-70...	13⅞	33⅞	35¾	41⅝	41⅝	39¾	28¾
Average 29 years, 1852-80...	11½	32⅝	33¾	40¼	41½	38¾	27⅜

(1) Equal to 24 bushels, at 61 pounds per bushel.
(2) " " 22½ " 61 " " "
(3) " " 28⅜ " 61 " " "
(4) " " 26⅜ " 61 " " "

These figures do not show much prospect of an abundant harvest. The yield per acre is low, and the quality indifferent. In no case among the nearly 40 plots in the experimental field does the weight per bushel reach 60 pounds, and the produce of straw is at the same time exceedingly low. In an adjoining field 21 varieties of wheat were grown side by side; not long before harvest the crops presented an exceedingly luxuriant appearance, and it was considered that the yield would be from 50 to 60 bushels per acre. The result of the thrashing is, however, disappointing. The highest produce in the field is only 54 bushels per acre, with a weight per bushel of 57½ pounds, and the lowest produce is, in two cases, 39½ bushels, in one with a weight of 61 pounds, and in the other of scarcely 59 pounds per bushel. It is, I think, quite evident that the yield of the wheat crop will vary very much, not only in different districts, but in the same district, and even in different fields on the same farm.

The produce in my experimental field, taking the mean of the same selected plots as for many years past, shows an average of 24 bushels per acre reckoned at 61 pounds per bushel; and assuming an average crop of wheat to be 28 bushels, the crop is 14 per cent. below the average.

According to the returns of the Registrar-General, the population of the United Kingdom was a little below 35,000,000 on June 30, 1881. Making due allowance for the natural increase, the mean population to be fed during the year commencing Sept. 1, 1881, and ending August 31, 1882, will be 35,280,000. Estimating the consumption at 5⅝ bushels of wheat per head, the quantity required to feed the population will be a little under 25,000,000 quarters, or 200,000,000 bushels.

The area under wheat in the United Kingdom was, during the past harvest year, slightly under 3,000,000 acres. If the yield in my experimental field be taken as a guide, the total wheat crop of the country would not amount to 9,000,000 quarters; and, deducting from this the amount required for seed, the quantity of home-produced wheat left available for consumption would be only about 8,000,000 quarters; and we should thus have to depend upon foreign supplies for nearly 17,000,000 quarters, or 136,000,000 bushels. As, however, wheat has risen considerably in price, and the potato crop is likely to be abundant, it is probable that our requirement for foreign wheat may be satisfied by an import equal to that which we have received during the last two years—namely, from 16,000,000 to 16,500,000 quarters.

With a stationary or decreasing area under wheat, and a rapidly increasing population, it is probable that, before many years are past, the home produce of wheat will not furnish more than one-fourth of the total amount required.

Old Sweet Potatoes Under New Names.

A WRITER in a recent number of the RURAL speaks of growing Bliss's Early Golden, Peabody and Southern Queen sweet potatoes. This suggests to me that here are two potatoes under wrong names. That under the name of Peabody introduced some five or six years ago, was nothing but the Red Bermuda that has been in cultivation as long back as I have known sweet potatoes After growing the Peabody and comparing it with the Bermuda and calling the attention of growers to the two, there was no room left for doubt as to their identity, and I so reported to an agricultural journal, possibly the RURAL NEW-YORKER. This seemed generally to be accepted, but I notice a noted grower of plants still puts it out under the name of Peabody. This custom of selling an old plant under a new name is too prevalent, and where known to be such, can be characterized, if the truth is told, as a dishonest one. I find also that the Early Golden introduced in 1880, is identical with the Yellow Strasburg, a variety sold under that name in the West as much as four years ago. And I have a letter lying before me from Rev. Leon Wilson, of Cynthiana, Ind., which narrates how he found a vine growing among some Bermudas, differing from them in color, and, that having sent it out to different parties it came back to him under the name of Yellow Strasburg. I grew this and the Early Golden which I got of the Agricultural Department, together, and they proved alike in every respect. These statements are made in the interest of truth and fairness. J. A. FOOTE.

The Swine-Herd.

PIG EXPERIENCE.

COLONEL F. D. CURTIS.

LAST year we lost money on a pen of pigs. The price of pork was low and we thought we would feed them a month or two longer, although the weather was beginning to get cold, and we would have the advantage of an increase in price as well as an increase in weight. We made the pen as warm as possible and fed them all the shelled corn they would eat, thoroughly cooked. After feeding them a full month, the price of pork being no higher and the pigs apparently not gaining, they were slaughtered. We were satisfied that the corn consumed was a loss. The manure which was made did not any more than pay for the labor of cooking the feed and the care of the pigs. This year we are not disposed to try any more such experiments. This mistake is often made by farmers of feeding without any profit.

IT requires very close calculation to make profit in fattening animals. We have several sows now suckling pigs which we designed to turn off this season. Corn is worth 72 cents a bushel, and pork is nine dollars a hundred in our markets. On this basis will it pay to try to fatten these hogs? We do not think it will. We have heard old farmers say that it will always pay to fatten pigs when pork would bring as many dollars a hundred as corn is shillings a bushel. No doubt this rule is good when the fattening can be done in warm weather. In cold weather the ratio should be double for the price of pork; for our experience teaches us that animals will not gain half as fast in cold weather as they will in warm, and although the price of pork is exceptionally high, we have concluded to winter these sows. They can be nearly wintered on the corn it would take to fatten them, or, what is better yet, they can be wintered on apples and roots and the corn be saved. The corn which it would take to fatten them will furnish feed in the Spring to prepare the pigs for sale, and make a handsome income. After that, if allowed to go without offspring, by early Autumn they can be made nearly ready to butcher on pasture alone. This is the cheapest way to make pork.

THE cider mills in this vicinity are offering 12½ cents a bushel for apples. Farmers generally sell to these mills all their apples which are not good enough to market as barreled fruit—such as refuse grafts and common apples. We shall put ours in the pig-house ellar to feed to the hogs. Father used to winter his store hogs entirely on apples and they kept in good condition. We are satisfied that six bushels of apples will go a good deal further in feeding pigs than a bushel of corn, which is the relative proportion at the present price of both.

A MAN refused the other day to buy a thoroughbred boar pig, although he said he wanted him very much, because he could not get him for one dollar less than the price asked. This is a kind of economy which may save a dollar—but is it wise? We rather commend the more progressive farmer who thinks that the best is the cheapest.

IT is surprising to those not acquainted with the fact to see how much crude sulphur pigs will eat when fattening. It should be given to them every few days; or, what is better yet, be kept in the pens where they can help themselves to it. When pigs are fed a large amount of hearty food, their stomachs become disordered and they need sulphur and charcoal to neutralize the acidity and to correct the condition of their stomachs. When it is given to them plentifully they will eat better, digest more and are freer from bowel disorders. These correctives help to keep the blood pure and the skin free from affections. When hogs have these correctives their flesh must be healthier. We have had hundreds of hogs and never a case of cholera, which we attribute to the healthful effects of plenty of charcoal and sulphur together with succulent feed. A long-continued corn diet will invariably produce fever and more or less inflammation of the stomach and bowels.

The Horseman.

EASTERN MARKET FOR WESTERN HORSES.--No. 1.

L. S. HARDIN.

IT was one of the wisest sayings of the "Bard of Avon" that "the bearer of ill news hath but a losing office." No one is very fond of being told a disagreeable truth, and therefore a little censure may fall to my part if I in any degree contribute toward destroying one of the idols of horse worship; as it is proposed, however, to deal with this subject solely from a money point of view, if my facts hold good the conclusion can be drawn by each reader to suit himself.

That the Eastern farmer has been following a cruel delusion until his market has abandoned him, I think it is not only easy to demonstrate, but still easier to point out the

sources whence the false teaching emanates. In the first place, our human nature carries a superfluous and burdensome quantity of the spirit of gambling—the desire to take a chance based upon our superior judgment and skill; This weakness of our nature is taken advantage of by parties with a view to make a profit out of it. Hence we find the arts and allurements of the race-course, with its exciting contests and many risks, enlisting the ambition of every country boy with the hope that some day he may be able to produce a a colt that will win not only the thundering applause of excited thousands, that he reads about in the papers, but the more substantial emoluments of the race track in the shape of rich purses. In the lottery of breeding fast horses somebody is bound to win a Maud S or a St. Julien. Of the thousands of losers who contribute to the prize we never hear. Thus not only the young men of the farm but those who are old enough to know better go on from year to year in the effort to raise the horse that can win the money. Now, let us see what the result of that practice has been.

Trotters it is well known "go in all forms," and for the matter of that in all sizes, too; but the first requisite of a fast trotter is to have plenty of day-light under him. To get the benefit of whatever skill has been developed in breeding race-horses the mass of farmers have been compelled to adopt certain families that have shown a predisposition for speed. Among the numerous families we may mention Hambletonians, Clays and Black Hawks as the most prominent at the East. By breeding stallions of these families to leggy, cold-blooded mares, a class of weak, leggy animals has been created and the "bone and sinew" of horse flesh well-nigh eliminated from the race.

If these statements are true, then let me ask the question: Does it pay the highest profit to raise this class of horses? I think it easy to demonstrate that not only does it not pay, but that it is rapidly destroying what little is left of a market for Eastern-bred horses. In the first place, has anybody ever made money by simply breeding trotting horses? By breeding is not meant trading in horses, nor will it do to say a man makes money by breeding trotters when he has bank stocks and factories to furnish the money for running his farm. The prizes are so far apart that not one in a thousand succeeds. Then if the horse does sell at a fabulous figure it is never procured until his speed has been developed, and that is almost invariably done by some professional horse jockey, and it is he who reaps the benefit, and not the breeder. For medium or even high-class trotting stock the general market is destroyed by wealthy breeders who throw large numbers on the market and care nothing for the prices obtained, as they simply breed for pleasure and are entirely independent of success in obtaining remunerative prices.

The expense of raising a colt to a marketable age is seldom properly calculated. He is generally looked upon as a scavenger to eat what would otherwise go to waste on the farm. Such, however, is not the case. A colt is rather a dainty feeder, and eats very little that other stock reject. The outlay of money and trouble in raising him is so small day by day that it goes by unnoticed, but the aggregate is pretty large, and if the expense be carefully summed up, it will be found that he costs not less than from $150 to $200 by the time he is four years old, in addition to cost of service of the stallion. The demoralizing effect upon young men of training trotters is too apparent to need even a hint of warning to the average father.

The question as to what size horses should be to produce the greatest profit to the breeder is dependent somewhat upon circumstances. If needed only for farm use and driving long distances to market, a horse of 1,200 pounds' weight will probably do the work with greater speed and less injury to himself than a horse that weighs 1,600 pounds. It is probable in this country farmers could do their work with greater economy by the use of heavier horses than they are accustomed to employ, by hauling heavier loads, using double plows, larger harrows, etc., as farmers now do both in Continental Europe and in England. But my principal purpose is to induce those who have the proper appliances to consider if it will not pay them to furnish large, stylish horses for carriage and draft work in the large Eastern cities.

Farm Topics.

THREE HORSES ABREAST.

I noticed in a late RURAL another of those complicated three-horse eveners, and I take the liberty of sending you a sketch of one that I have used for a long time and which I like very much. It is light, simple and cheap. The evener, A, five feet long, is two inches thick, four inches wide at the middle point, and two-and-a-quarter inches at the ends. At B, B are two plates of two-inch band-iron, with cast-iron rollers, as shown in the cut. C, C are small cable-chains with hooks attached at the ends. The hooks at the ends of the evener are represented at D, with a loop, which slips over the end of the evener, and is fastened with a staple in the back side to admit of freer movement. By removing one set of pulleys and chains, and moving the other to the center of the evener, two horses may be used conveniently. A. V. CLARK.

Miscellaneous.

RURAL BRIEFLETS.

WE believe this is the largest White Elephant Potato we have heard of:—

Stratford, Ont., Canda, Oct., 22.—This may be of interest to you, from the Seaforth Expositor: "Mr. John Teddy of East Wawanosh, has grown potatoes on his farm this season some of which weigh over three pounds and three ounces. These potatoes are called the White Elephant and the seed was procured from New York." White Elephants took first prize at South Perth County exhibition at St. Mary's, Oct. 4. and 5. C. W. Y.

WE have to thank Mr. A. L. Crosby for the following light upon the history of the Black-bearded Centennial wheat:

In the RURAL NEW-YORKER of October 22, you ask for help in tracing the history of Black-bearded Centennial Wheat. I will see what I can do to help you. In '76 there was shown at the Centennial Exhibition some wheat from *Australia* I think, but won't be sure. A Mr. Easter, of Baltimore, procured some of it and grew it for a year or two and in the Summer of '79 I first heard of it, and about that time I sent to the Department of Agriculture for some new variety of wheat to try, and I received two quarts of white wheat labeled Back-bearded Centennial, and the label also stated that it was grown by Mr. Easter. I saw Mr. Easter and he gave me the account of it that I have given you. My wheat I drilled in the same field with Fultz and found it considerably later and not nearly so hardy. On harvesting, I found some of the beards, which were unusually long, were tipped with black and some were white. The wheat as sown was a dirty white, the berries large, some of them shriveled and not handsome by any means. The wheat I grew was greatly changed in color on account of the character of the soil (a red loam) and might be called a light red. The yield was not satisfactory and as it was late and not hardy I did not sow it again. Mr. Easter has now been dead about a year or I could refer you to him for these facts. As I have a little space left I cannot refrain from telling you how much I am pleased with your journal. I think you are doing a good work. I took the RURAL for a trial of three months when it was published at Rochester, and three months' trial was sufficient. But now if any farmer can read it for one year and not get his money's worth, he either knows all there is to know or else he doesn't know anything. A. L. C.

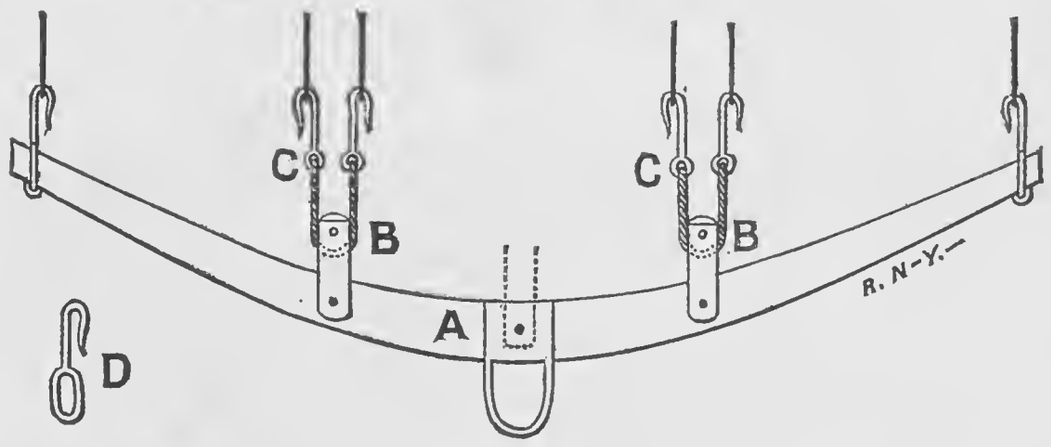
AWHILE ago, we reproached our correspondents Messrs. Holmes & Sweetland that their praises of the far western country in which they are traveling, were excessive. Here is a part of their reply:

"WE claim that our letters are free from personal flatteries and so far as they are commendatory of the country passing in review under our pencils, they are, in every respect truthful, and nothing could induce us to misrepresent through your columns, both for the reputation of the RURAL and ourselves. There are thousands of people East—readers of your journal—who desire to know of the topography, soil, climate, products, price of the lands and farms, taxes, streams, timber, railroads, stock-raising, dairy product, schools and society in this great West, and this information we endeavor to give tersely and truthfully, and have not made any statements in our correspondence but what are capable of convincing proof; hence the admonition to "keep within the truth," is fully in accord with our views and practice. It is a fact that the simple truth regarding much of this Western country, is so far beyond the comprehension of many Eastern farmers that for years they have heard and read with incredulity, and this is the principal reason why so many of them have not long ago come West, and placed themselves within the range of absolute conviction and conversion.....

AWHILE after we sent out the now well-known Cuthbert Raspberry in our Free Plant and Seed Distribution, Judge Parry of New Jersey introduced the Queen of the Market Raspberry. These two were soon ascertained to be the same and Judge Parry's attention has several times been called to the fact. Nevertheless he still maintains there is a difference—still sends out the Queen of the Market as if it were entitled to the name. When leading horticulturists themselves disseminate plants under erroneous names and decline to rectify the error when it has been repeatedly and authoritatively pointed out, there can be no end to the impositions which the purchasing public are obliged to submit to.....

Now comes the "Lost Rubies" Raspberry, introduced by Mr. Chas. A. Green, an enterprising, competent and, so far as we know, conscientious nurseryman. This raspberry is said in some respects to be more valuable than the Cuthbert. But Mr. Purdy, of Palmyra, N. Y., who has had years of experience with small fruits, expresses a positive opinion that it is Naomi, an old variety that has already at various times been re-introduced under other names. Years ago Mr. A. S. Fuller presented the writer of this with a collection of his raspberries, which we have since carefully preserved. Among the collection was Naomi. Comparing it with Lost Rubies as the latter comes to us from Mr. Green, we find that the canes of the latter are purple while those of the former are green. How is this? If Mr. Purdy is right then our Naomis are not Naomis or our Lost Rubies are not Lost Rubies.....

MR. GREEN, as we understand him, does not claim that Lost Rubies is a new variety. It differs from any other variety with which he is acquainted, and although he has consulted others, he has thus far been unable to identify it with any of the old kinds. Of one thing we feel assured, should it prove to be Naomi or any other old raspberry, Mr. Green will not follow Judge Parry's example and continue to sell it under its new name.....



THREE HORSES ABREAST.—FIG. 516.

WE wish the banana was better known as a conservatory plant, presenting to our eye one of the noblest types of vegetation. But it need not be confined to conservatories, since it stands both the dust and heat of a living-room much better than many inferior plants which are cultivated for their large leaves. We speak of Musa ensete. The fruit is not edible like that of the plantain and banana which are sold in the streets and fruit stores. These are M. paradisiaca and sapientum. The fruit of the former is longer and not so thick and has what might be called a core running through the center, which is tough and disagreeable to the taste. Musa ensete also stands wind and rain with little laceration while the others are torn into shreds. In tropical countries the value of these plants is scarcely less than that of cereals and tubers and roots in temperate countries. In the tropics it is said, "the pith of the stem, the tops of the floral spike and even the shoots of several species are eaten as vegetables." Cultivation has produced many varieties of form, color and taste. . . . . Another plant which will stand any amount of dust is the India-rubber Tree, Ficus elastica. We have seen very good specimens of this even in the street windows of New York. It may be cut back from year to year as it grows too large for the space it is to occupy. It will stand light frosts and its leaves are large, glossy and of a deep green color.....

A RESPECTED friend writes us as follows: "Our good friend Mr. Mead has given only the laborious and expensive method of making and cultivating an asparagus bed, as practiced in the gentleman's small, fenced garden. Perhaps he means to give field cultivation hereafter. I never allow my garden fence to be so near the cultivated ground that a horse and wagon or a plow cannot be run out at every side with plenty of room to turn, etc. I cultivate the whole garden almost entirely by horse power, and thus make and cultivate an asparagus bed at about one-fifth the cost of doing it in the way described by Mr. Mead."

OUR friend and contributor, Chas. E. Parnell, need scarcely have looked for the Tomato Worm even as late as the middle of September. We do not doubt that Mr. Stewart is quite right in attributing the tomato rot to a fungoid origin—but our readers will find that the tomato worm causes the rot too.

What Others Say.

IN the Fall of '79, about the middle of October, a writer in the Michigan Farmer thought his wheat destroyed by the fly, and he sowed a piece about the 20th, thinking at least that he would raise his bread and seed. It came up, but it did not get much growth in the Fall, and in the Spring it was literally destroyed by the fly, so that he plowed it up; while his wheat sowed about the 10th of September, yielded 27 bushels to the acre. He has raised wheat about 40 years and never had any destroyed by the Hessian fly sowed from the 10th to the 15th of September. That is his experience, whether it is worth anything or not.

PRODUCTIVENESS OF OREGON AND FULTZ WHEAT.—John M. Stahl tells the Ohio Farmer how 20 acres of wheat yielded in that State the past season. Of this, 11 acres were in Oregon and nine acres in Fultz. The Oregon thrashed out 208 bushels, or very nearly 19 bushels per acre. The Fultz yielded 128 bushels, or a little over 14 bushels per acre. It will thus be seen that the Oregon yielded five bushels more per acre than the Fultz. They were sown side by side in the same field, and the Fultz was on slightly the better soil. In 1879–80 his Fultz was almost a total failure, while his Oregon made a fair average yield. The reader may think that 14 and 19 bushels are small yields. In a good year they would be. But Mr. Stahl is quite sure that, taking into account the entire acreage of wheat sown, the average yield per acre in his county was not four bushels. The RURAL'S experiment of two years with this wheat has been very favorable, as already noted. It bears a reddish chaff and is bearded. The straw is purplish and slender, but strong. The heads average but 2½ inches—six breasts, 2¼ kernels to a breast. But the grain is large.

THE following is sent to us, clipped from a Wisconsin paper—the name of which does not appear:—"C. C. Deits, of Minn. Junction, last Spring received from the RURAL NEW-YORKER one potato of the White Elephant breed, which weighed 1½ ounce, and he planted it in five hills. Last Saturday he dug from these five hills 33½ *pounds of potatoes*. They are all fine and large, not one of them being as small as the seed. At this rate it has been figured that on one acre of ground over 2,000 bushels can be raised." Ahem!

NOR is it unhealthy to eat pork on general principles, the blind prejudice of many to the contrary notwithstanding, remarks the Western Rural. We have been careful to observe during the last few years the effect of pork consumption upon those who ate a great deal of it, and we have no hesitancy in alleging that no better or more harmless meat than pork comes on to the American table.

CIDER MAKING.—A late meeting of the Farmers' Club, as reported in the Husbandman, discusses the best methods of cider-making. There are at least three or four indispensable requisites to making good cider. The fruit should be fully matured and fully ripe, and free from bitter, crabbed, unpleasant flavor, as the process of grinding and pressing cannot enrich or improve the natural flavor of the juice. Cleanliness is another indispensable requisite, as sweet cider is most sensitive to anything with which it comes in contact, and will take an unpleasant and ruinous flavor from musty or filthy barrels, or from apples that have been allowed to heat and mold by lying in bins or large piles, or by lying too long under the trees with grass growing over them, or by being picked dirty with leaves or other litter, or by being scooped from a dirty wagon-box, or if the straw used in laying up the cheese be musty or have any weeds in it, the cider will partake of the bad flavor. A half-dozen stalks of ragweed will flavor the cider from one hundred bushels of apples. . . . . It is of vast importance that the cider should come from the press with the least possible of pomace or sediment; hence the very great importance of the manner in which the apples are ground. . . . . Mr. Ketcham said, "I have repeatedly heard the assertion that cider would be better in large quantities, or large casks, than in small ones. My experience has proved this to be true. I have many times filled a five-gallon or ten-gallon keg with choice juice, and after particular care, invariably and in every instance its fine flavor was changed to a dead, sluggish sour, and it was consigned to the vinegar cask. In larger casks it is less exposed to air and fermentation is retarded. A cool place, even down next to freezing, is very essential in order that fermentation may go on very slowly. So kept, cider will increase in excellence all Winter. And now I may give it as my opinion, based upon my own experiments, that by selecting proper fruit, excluding everything that can impair, even the worm holes, and all that we would reject in eating an apple, we may have a drink that will compare favorably with the juice of any fruit that our soil produces."

S. M. Carr remarked that he fully concurred in the above. It is possible to get just as good cider from grated apples. The latter process makes more care necessary; the juice must be filtered. His way is to run it through clean gravel and straw. That strains out all pomace—at least all that can be arrested in the passage through a filter that may be close enough to permit very slow draining if required, and he thinks makes the cider as free as it can be from crushed apples. It is true that the juice can hardly be made entirely free from pomace by any process, and pomace is injurious to cider. To make a good filter put about two bushels of clean gravel in a barrel provided with suitable holes in the bottom to let the juice drain; mix a little char-

coal in the gravel, cover with straw and charcoal and the thing is done. The gravel should be washed until water will run off clear.

When you come to an extra-good hill of potatoes, toss them out separately and pick them into a barrel, and save especially for seed. Will not this have a tendency to increase the the yield if practiced for a term of years?—Home Farm via Tribune. . . . . Henry Ward Beecher says:—"My father used to say: 'Henry, when you kindle a fire never throw an armful of wood on at once; that will put it out. Get some kindling that is dry and put one shaving on, and one more, and one more, and, little by little, you can build just as big a fire as you have a mind to.'" Mr Beecher certainly learnt the lesson well; for he has kindled several roaring fires during his eventful life. . . . . Among the cargo of the steamer Leipsig, which arrived at Baltimore October 22 from Bremen, were 8,000 heads of cabbage, imported from Oldenburg, Germany. This is said to be the first importation of European vegetables ever brought there, and is due to the high prices of home-raised cabbages. It is not long ago that the Rural was advising its Western friends to send cabbages to the New York market. . . . . The Herald says that 7,000 Morwomen are divided among 3,000 Mormen. . . . . The Lowell Citizen says that the man who went to work with a will was a lawyer. . . . . If you wish to be really happy take a good deal of out-door exercise and never run in debt. . . . . It is one thing to have a house to live in and quite another thing to have a home to live in. . . . . Professor Beal says that to be constantly giving information in science makes intellectual tramps, and not trained investigators.

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

Brantford, Ont., Oct. 27.—The Washington Oats yielded 28 pounds; the White Elephant Potato 35 pounds—none very large. The Rural Branching Sorghum is not suited to this locality—grew about six feet high. The seasons are too short for a successful crop. Asparagus seeds were not sown until late, consequently they made little growth. I have 16 picotees and carnations and the remainder of the plants under *these names* are a mixture of Chinese and Japanese pinks, some of which have bloomed, but they have produced none equal to what I have. The pink seeds were pinks of all kinds, from the florist's pinks down, or, rather, up, to Heddewigii, double and single-fringed and plain. My pentstemons of a former distribution bloomed this Summer, and are very pretty. One iris also blossomed and was magnificent. Abies Sibirica succumbed to the heat and drought this year. The Cuthbert Raspberry has done well, producing a large quantity of strong canes for next year's fruiting. They stood our last severe Winter uncommonly well; thermometer at one time 32 degrees below zero. J. G.

Illinois.

Champaign, Champaign Co., Oct. 26.—If the climate of the valley of the Mississippi is one of intensities and extremes, it is at least one in which there is no end of compensations. After three months' heat and drought we had three weeks of moderate and refreshing rain, and now after the rains comes some of the most magnificent weather ever experienced. For four days of last week there were light frosts of a morning, but so light they killed nothing on the surface, but did change the foliage of trees so that they have put very unusually high-colored garments on. Then came two days of rain and then more such enjoyable and delightful weather it is difficult to picture it. The skies are a pure and cloudless blue; pastures, meadows and wheat fields, a vast stretch of living green; tree and shrub vegetation shows all colors from deep green to bright scarlet and from dark brown to pale gray—the temperature ranges from 50° to 60° at sunrise and sunset, and from 70° to 75° at noon; the winds are laid; and, in short, Indian Summer has come without the preliminary of frost or the storms which commonly usher it in. B. F. J.

McHenry, McHenry Co., Oct. 26.—We received the Rural seeds and gave the following a trial. Rural Branching Sorghum is doubtless all that is claimed for it; from the few seeds that came up it has branched out till the row is well filled and eight to ten feet high, planted on light, rich soil. Unless the frost holds off it will not ripen, but we shall give it another trial next Spring as we planted only a part of the seed, reserving some in case of failure. The White Elephant Potato contained 14 eyes and was planted in 14 hills, of which 13 grew and produced 18 pounds of potatoes, the three largest weighing two pounds. We think it an excellent yield considering the dry weather and the potato pests. This one-eye business has given us an insight as to the waste of planting so many unnecessary bushels to the acre. The flower seeds gave a fair show and the flowers are highly prized, being both new and beautiful. We shall have a grand display next year. I think we are more pleased with the seeds than we would be with a chromo, and you can count on our subscription another year, for we are meditating on that big corn, for this is the farm for corn, being oak openings under good cultivation. But wheat is almost a failure in this part of the country, it being so very light. This reminds me of a suggestion in a late Rural about cleaning seed wheat—if every seed was good the result would doubtless be a heavier crop of grain. Our first frosts, which were light, occurred on Oct. 19 and 21. Heavy rains now and warm weather. Corn and potatoes are plentiful in this section. Oats light; apples scarce. Butter, 30c.; eggs, 20c. I've just sold three dozen chickens at 6c. per lb.; $4, per doz. Sold 12 hogs for $5.50 per hundred. P. L.

Monticello, Pratt Co., Oct. 24.—From 20 hills of the White Elephant Potato I dug 35 pounds of Elephants. The oats I put into rich ground and they broke down. I have a fine bed of asparagus plants standing about one foot high. The flowers were a success; the Rural Branching Sorghum a failure. G. A. S.

Iowa.

Illyria, Fayette Co., Oct. 24.—After our long drought through July, August and up to the middle of September, the rain came and it has rained almost ever since; now it is raining every day and night. The wells are almost full; some are running over. Cellars where they are not drained are fast filling up. Farmers are getting badly behind with their work. Our corn crop is very good—about an average. Potatoes a good crop, but many of them have been dug in bad order; some farmers are complaining of their rotting in the ground. Wheat none; very little sowed; what there was, chinch bugs ate up entirely. Oats about two-thirds of a crop. Barley not very good. Fruit a light crop; hay and grass very good. Flax a poor crop. Farmers will do well here this year, because everything brings a fine price. Cream and butter are very high, in fact, the prices are up for everything the farmer has to sell. Corn and hogs are very high for this time of year. Fayette County farmers feel good. I cut my Elephant into 15 pieces, one eye to the piece and planted them in a drill 15 inches apart in the rows, and plowed them once, hoed them twice, and dug 70 pounds of nice Elephants, the largest one weighed 2¼ pounds, the next 1¾ pound; three 1¼ pound each; five of the largest weighed 7¼ pounds—beat that who can. We had some baked for dinner and found them very good. The asparagus is doing well. The flowers are the finest I ever saw. The Washington Oats were a failure. The Rural Branching Sorghum grew finely; but I cannot tell much about its wonderful qualities, as I went to York State and other places the past Summer, and when I came home it was five feet high and I cut it only once; cattle and hogs are very fond of it. W. H.

Mentor, Bremer Co., Oct. 22.—The White Elephant yielded 46½ pounds of tubers. Of the Rural Branching Sorghum nearly all the seed grew 10½ feet high. I have got quite a lot of ripe seed. If I had planted it as early as I might, nearly all of it would have got ripe: as it was, only the main stalks produced ripe seed. I did not plant until May 20. The hens got the oats. The pinks grew and were nice. Potatoes and corn are good; oats fair. It has rained about half the time for the past seven weeks; streams so high that mills cannot run; ground so wet we cannot plow. E. E. F.

Newell, Buena Vista Co., Oct. 24.—All of the Rural seeds were planted in my garden—black prairie soil, new land broken a year ago last June. The Rural Branching Sorghum was planted June 1; it grew six feet but produced no seed. The asparagus seed all grew; the plants are one foot high. The oats came up well and grew very fast; they rusted very badly; heads half smut; saved one quart; will try them again. The White Elephant Potato I cut into seven pieces and planted them June 1; they got no extra care; on October 1 dug five pounds of nice tubers. The flower seeds did splendidly; my wife and daughters say they are the finest they have seen. We have had a very wet Summer here. June, very wet; July, very fine weather; August and September, very wet; October, rain all the time; cannot do any farm work at all—no plowing or thrashing has been done yet, and it is too wet to husk corn as it cannot be hauled from the field. J. F. L.

West Branch, Cedar Co., Oct. 24.—The Rural seeds were received in due time last Spring, but the season was so late that no planting could be done till about the 5th of May. The medium-sized White Elephant Potato was cut into 12 pieces, with one eye in each, and planted in drills 12 inches apart, making 12 nice hills, which did finely till the bugs took them when they were nicely in blossom, and then, in spite of Paris-green, London-purple and hand-picking, they were ruined about the middle of August. However I got a good yield of small tubers, all of which have been saved for seed. The Rural Branching Sorghum was planted May 10 in three rows four rods long. It grew well from the start, there being 10 to 20 stalks about eight feet high to the hill. On August 8, I cut all but one hill, which was left to see if it would seed. I cut off the heads of this hill on October 15; the seeds were all hard, and the color of the heads was a brownish-green. I think the seeds are ripe. The cut stalks are now about four feet high. The asparagus seed did not germinate well, and the two months' drought was hard on it, but I will have plants enough for a pretty good bed. The Washington Oats were not planted. The flower seeds gave us some beautiful pinks, some very double and some single, but all beautiful. No carnations. The first frost of the season visited us October 18. W. A.

Kansas.

Walnut, Crawford Co., Oct. 21.—The sad drought of 1881 was broken here September 29 and was followed by heavy wind and rain storms. What corn was left on the stalks in the field was snapped off or blown down upon the ground, and the long-continued rain has prevented our farmers from getting into the fields to gather it; consequently the corn crop is very much damaged. Wheat, oats and flax that have not yet been thrashed, are also badly injured by the rain. About one-half of the hay, straw and fodder is ruined, and it will require a very careful use of feed, together with good warm shelter for our stock, to get them through this Winter. Since the rain set in our late potatoes took a fresh start, and if frost stays off two weeks longer we shall have a large crop of these tubers, as I never saw potatoes grow faster than they are doing now. B. G. S.

Maryland.

Rayville, Baltimore Co., Oct., 20.—The drought which began the first of July still continues; corn and potatoes about half the usual crops. A majority of our farmers are unusually late sowing grain this season. That which was sown early has come up very thin, and has an unhealthy appearance. A large acreage of rye is generally sown on account of the demand for straw by the numerous paper-mills which are located in this section. There are twelve of them within a radius of six miles and all use straw, with one exception. I planted the seeds of the Rural Branching Sorghum, on May 14, in ground prepared in the same manner as for corn. A large percentage of the seeds did not germinate. As it was planted in a row beside a patch of corn, it received the same cultivation as the latter; the growth was slow until July 1, when it grew off finely. On July 19, when about two-and-a-half feet high, I cut a few hills, containing from seven to eleven stalks each, about four inches above the ground. On August 4, the same hills were cut again about six inches from the ground and the cut stalks measured two-and-a-half feet. On September 1, it was again cut about eight inches above the ground and the stalks measured two-and-a-half feet; and on October 4, it was again three feet high when it was cut off at the ground, making a total growth of 10 feet two inches, in the driest season our "oldest inhabitant" remembers. That which was not cut at all grew seven feet high; the blades were killed by a severe frost on the 5th inst. It was then in full bloom, and I succeeded in saving enough seed to plant next year by covering the tops with paper bags when I thought there would be frost during the night. The frosts killed the blades but did not kill the stalks. I cut the tops off to-day and some of the seeds are filled with flour, while others are in the doughy state; but I think that with good attention they will all germinate. The cows and horses passed judgment upon it and pronounced it *good*. P. S. C.

Michigan.

Evart, Osceola Co., Oct. 22.—We had a dry Summer and Fall up to the middle of September. Since then it has been very wet. Crops have turned out very good except corn. Considering the drought, the hay crop was good, as the dry weather did not come on soon enough to hurt it. Late potatoes are turning out better than was expected in this neighborhood. I planted my White Elephant the 9th of May in good garden soil—10 eyes and pieces. I dug them September 8, and got 48 rather small tubers; the hot, dry weather killed the tops prematurely. The Rural Branching Sorghum I planted June 10; it grew rank, throwing out a good many suckers. I cut a part of it about the first of September, and the second growth was two feet high on October 1. I counted 57 stalks in one hill. What I did not cut grew about six feet high, but did not seed: my horses and cows ate it greedily. The Washington Oats grew finely and yielded well, but were badly rusted and there was a good deal of smut. My hens got at them and harvested most of them for me, but I have saved more than the original package for seed; will try them again. The flower seeds came up well and were *splendid*. Prices are: Wheat, $1.30; corn, 60c; oats, 50c; potatoes, 60@75c; butter, 28@30c. Now about the Beauty of Hebron Potato: I think it the best eating potato I have ever seen—with me it is 10 days or two weeks ahead of Early Rose; but I find some of them have a hard black spot in them. I gave some to a neighbor last Spring; he planted them on ground well manured and they were nice in size but were nearly all of them black inside. I planted some on new ground without manure and do not find many affected ones among them; the soil is sandy loam. Last year I thought it was on account of hot, wet weather, but that has not been the case this year. "But with all their faults I love them still." I am trying several new varieties this year. The asparagus seeds were soaked before planting, but only a few plants came up, and some of them not until this Fall. I think the good old Rural is doing me a great deal of good and I shall continue to take it as long as I live if I can get the money to pay for it. My father took the Genesee Farmer and then the Rural, and "us boys" when we got homes of our own took it—I have only missed one year in twenty, and think it improves with age and acquaintance. I am trying to have my neighbors subscribe for it. [Thanks.—Eds.] First frost Oct. 4. E. O. T.

Minnesota.

Hutchinson, McLeod Co., Oct. 24.—The season here has been remarkably wet, so much so that we cannot do our plowing or much other work. There will be a great deal of plowing to be done in the Spring. I thrashed my Washington Oats. I could not save more than half of the seed, but they are very nice—large grain and heavy. The flower seeds were very satisfactory. J. C.

St. Cloud, Stearns Co., Oct. 24.—We have had in this part of Minnesota almost continuous rains since last Spring, consequently some of our crops are not first-rate, notably wheat and hay. The grass was abundant, but the meadows were overflowed and the hay in many instances was totally ruined, and what is saved is generally in poor condition. This applies more especially to the natural meadows; the Timothy and clover hay is generally in good condition. The White Elephant Potato had 13 eyes. I divided the eyes and made 27 hills, or, rather, sets, as I planted them in a row 20 inches apart. I dug just 200 pounds, and I think at least 20 pounds rotted on account of the wet. We have tried them on the table and find them superb. I planted the Rural Branching Sorghum on May 22, 3½ feet each way. Just two-thirds of the seeds failed to germinate, but as I planted three seeds in a hill, I had enough to transplant and have one plant in a hill. Soil gravelly loam, manured with four wheelbarrowfuls of rotten barnyard manure, made principally from tame hay and wheat shorts and bran. I gave good corn cultivation with hoe only. There were from nine to thirty-two stalks from each plant. I did not cut it until the middle of September. It grew from nine to ten feet high. Seed did not ripen. The stalks were cut in the feed cutter and mixed with wheat middlings. The cows ate it well. In some sections of the country it is, no doubt, *the* fodder plant; with me I think sweet corn more profitable. The Early Marblehead Sugar Corn, the earliest I ever saw, had full-grown corn for table in 45 days from planting—the best early corn I ever had. The asparagus I could not plant; I intend to do so next Spring. The carnations were not carnations at all, but beautiful, nevertheless—very double and splendidly colored. L. I. Salter.

Nebraska.

Crawford Valley, Antelope Co., Oct. 22.—I planted Rural Branching Sorghum, May 10, on light sandy loam. *No manure.* It grew very nicely; seed did not ripen. Sowed Washington Oats and Mold's Ennobled, in drills side by side. Both grew well; like the "Ennobled" best. The Asparagus seed all grew nicely. The small White Elephant Potato with eight eyes I cut into eight pieces, making eight hills; dug 13½ pounds of rather small tubers; bugs destroyed the tops early; common cultivation, no manure; ground all quite new, only second crop. Corn a fair crop; wheat and oats failures on account of late Spring. A. B.

New York.

Moravia, Cayuga Co., Oct. 24.—The "dry spell" reached us this season in earnest. Never, in the memory of the oldest inhabitant, has it been so severe. Wells have become dry that have never been known to have failed before. Fruit is scarce. Oats a fair crop. Wheat below an average. Corn half a crop. Potatoes are better in some portions

than in others. Shipments of potatoes from this station in the month of September amounted to 10,000 bushels; thus far this month, they are being forwarded as fast as cars can be obtained to receive them, and thousands of bushels are in store awaiting transportation. The White Elephant I received made twelve hills, an eye in each; bugs very plentiful; product 17 pounds. The Washington Oats grew four feet high and yielded three pints of seed. Prices are: Wheat, $1.50; barley, 90c; oats, 50c; corn, 75c; flour, $4; butter, 30c; eggs, 25c; hay, $10; potatoes, 80c; hogs, 8c; beans, $3. G. W. S.

Ohio.

PLEASANT PLAIN, Warren Co., Oct. 24.—The White Elephants weighed two ounces and had 21 eyes. On April 19 I planted one eye in a hill in good garden soil; used old hot-bed manure and unleached ashes, well mixed. On September 15 I dug 16 pounds, some weighing a pound each. The weather was very dry. The Rural Branching Sorghum came up nicely. It was planted in drills, but too thick. I cut every other row; the suckers are now four feet high and 10 or 12 to each plant. The remainder is now 10 feet high, and there is a sucker to nearly every leaf-joint. Some of the heads are now ripe. The frost of the 20th did not affect it any. The Washington Oats were a failure—rusty. The asparagus seed did not propagate well—but few plants. The pinks are doing very well; some are in bloom. I obtained one pound of the White Russian Oats of D. M. Ferry & Co., of Detroit, Mich. They were planted in drills six inches apart, in garden soil. The product was 1½ bushel; four to six stalks from one grain. C. W. D.

Pennsylvania.

COLUMBIA, Lancaster Co., Oct., 26.—I had hoped to be able to make a report on the White Elephant Potato, that would go ahead of all others, but the severe and long-continued drought, cut the crop short. My son started the potato in the greenhouse—cut off the sprouts and soon rooted them, cut them off again and again, until he had five or six boxes, 12 by 18 inches, filled with growing sprouts, and hundreds of little potatoes, the size of peas, on the surface of the ground. After danger of frost was past he planted them out in a row 120 feet long. All started finely until the dry spell commenced in May; then they made little growth afterwards. Bugs, too, appeared determined to use them up. The several sprinklings of Paris-green bothered the bugs somewhat. His crop was 49 pounds of small potatoes. As to the Rural Branching Sorghum, I also planted a few seeds in a pot and afterwards planted out three plants. These soon started to grow and throw out sprouts, each plant eight to ten. The main stalk grew up eight feet, and the sprout six to seven feet high. All the seed on nine heads on each of the three plants ripened perfectly, and I now have about three pints of very nice seed. Now what shall I do with the seed? [We give your address, so that those desiring seed may apply. EDS.] As we farmers in Lancaster Co., Pa., have not yet got to the soiling system, we have no use for this kind of green feed, preferring to let our cattle pick their feed in the fields. The asparagus seeds came up well, but the drought soon finished them, as it did our cabbage, celery, and other garden truck. The flower seeds were nothing new or extra. Our wheat was a fair average crop; corn over half a crop; tobacco a medium crop, but of extra quality, free from flea-bites or worm holes. Light rains lately are bringing up the wheat finely; but springs and wells are not yet affected. J. B. GARBER.

GLENORA, Butler Co., Oct. 24.—The Washington Oats I drilled in good ground. They grew very rank, but smutted badly; I got half a gallon of good seed from them. From the White Elephant Potato I got almost a peck of nice tubers, which I thought a good yield, owing to the continued dry weather we had for so long a time. Potatoes are worth from $1@1.30 per bushel. The asparagus seed germinated and grew finely. The Rural Branching Sorghum was a failure; only a few seeds germinated. The RURAL pinks were beauties. I think the RURAL a worthy paper and hope it may long flourish. G. G. G.

Washington Territory.

KLIKITAT LANDING, Klikitat Co.—In this section wheat must be sown shortly after February 1, for in many seasons a crop of late-sown grain does not get rain enough to cause it to sprout. Experiments with the seeds you sent out this year show that the White Elephant hardly equals the Early Rose either for quantity or quality. The Rural Branching Sorghum is a real success. The Argenteuil Asparagus, fair; German Asparagus, almost a failure. The carnations have been a wonderful success and a real surprise, such a variety and so beautiful. The pinks have taken splendid roots and we are looking forward for a fine show next year. The season has been a favorable one for farmers. Growing crops have all about matured. Prices here are, per pound, wheat, 1c; corn, 2½c.;—a poor crop here; barley, 1c; oats. 1¼c; potatoes, ¾c; pork, 5@6c; beef, 3@4c; apples, ¾c; grapes 2@4c; peaches and n arly all kinds of small fruits abundant and prices low. G. W. B.

Wisconsin.

MINNESOTA JUNCTION, Dodge Co., Oct. 24.—My original White Elephant Potato weighed 1½ ounce. I planted it in five hills and dug 33¼ pounds of nice, large tubers—all larger than the one planted. I would not sell the potatoes for what three subscriptions to the RURAL cost. The asparagus also came up finely and has done well. Most of the carnations have blossomed and my "better half" thinks they are splendid. The Rural Branching Sorghum has done finely and I think I shall save some seed. The Washington Oats lodged badly, and half turned out smut. Crops are poor. The average yield of wheat is nine bushels; potatoes good; oats, middling; corn, a failure, on account of the white grub. Old meadows are all destroyed by the same pest. We are having rain almost every day and plenty of it. Ground too wet to plow or to do any work on the farm. Cows pay best of anything on the farm; we get 32 cents per pound for creamery butter. Fall seeding good on account of having so much rain. We have had but three frosts that amounted to much; they have not killed our geraniums in the garden. Not as much Winter wheat has been sowed as usual. I think it pays to take the RURAL NEW-YORKER, and you can count me as one of your life members as I am an old reader. I have bound copies in my library since 1871, so you see I am no stranger to the RURAL NEW-YORKER. C. C. D.

TROY, Walworth County, Oct 23.—Our crops, on the whole, have been rather poor; wheat yielded from three to twenty-five bushels; averaging from six to eight. Corn, early-planted, good where the grubs did not eat it; late, very poor; oats a fair yield, but light in weight. Potatoes the same as corn—early, good; late, very poor; half a crop. My White Elephant was small, but when cut with one eye in a piece, it made 16 pieces which were planted one in a hill: 14 grew and after taking out three tubers the rest weighed 34 pounds. The Rural Branching Sorghum did first-rate. I cut it twice to feed to my horses. I thinned and saved two hills for seed: it was cut last week before frost, and I think I shall have plenty of seed. After gathering the seed I cut the stalks and the horses devoured them greedily. The asparagus did not grow; the other seeds my wife gave to her sister. H.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

THE LATE IRISH LAND LEGISLATION.

W. H. N., New Brunswick, N. J., asks what advantages are conferred on the Irish tenant farmer by the Land Act lately passed by the British Parliament.

ANS.—Briefly summarized the new Land Act provides that every tenant shall be entitled to a lease of fifteen years; that expenditures for improvements shall go to his credit in giving him a property interest in his holding; that on the expiration of the lease he shall be entitled to compensation for this property, and if it is not paid, he shall be entitled to a new lease without change of rent; that in case of disagreements, rate of rent shall be determined by a special court called the "Land Court," lately created for the purpose of settling land questions; that in fixing rent, valuation is to be made on naked land; that no tenant shall be evicted except for non-payment of fair rent as fixed by the court; that the tenant may sell his property interest in the lease or improvements at any time, and that under certain specified conditions the tenant may become the purchaser of the land held under the lease, receiving aid from the government to do so, by a loan secured on the property and payable by installments within a certain limit of time. The Land Court has just begun operations and rendered its first decision last Wednesday at Monaghan. Before its recent suppression, the Land League made ample arrangements for testing the value of the new law, for tenant farmers, by bringing before the court a large number of cases where the rent was not very excessive, yet where a reduction was thought just. Such cases will now be tried without the aid of the League, and for some years to come claims for reduction of rents must form the vast majority of business before the court. Its first decision reduced the plaintiff's rent six guineas—about $31, on a small holding on which the rent was not high in comparison with that charged for other land of the same nature. The excessively high rent sometimes charged may be inferred from an application made to the Dublin Land Court last Wednesday to fix the rent on a holding in Cork where the Poor Law's valuation was £27 and the present rent £113. In spite of the Land League, an enormous number of tenant farmers are sure to seek relief from the court; 2,000 tenant farmers in the single county of Limerick have already resolved to apply to the court to fix their rent judicially or set aside unjust leases, while 11,000 applications are being prepared in County Clare.

THE FIVE-COURSE SYSTEM OF CROP ROTATION.

A. L., Westover, Md., asks what we think of the five-field system of rotation, and what rotation would be advisable where wheat and corn are the principal crops—soil mostly heavy loam, with a yellow clay subsoil; level. Clover and Timothy grow kindly, but oats are not a certain crop.

ANS.—This is a very important question, as it opens up the whole subject of the management of a farm carried on under the mixed system. Where wheat and corn are produced and some cows are kept, as well as a few head of beeves fattened each year, and a small flock of sheep is kept, the five-course or five-field system is the best that can be pursued. There are two fields in grass—one for hay and one for pasture; or both for hay if there is a permanent pasture on the farm besides the five fields, as there should be. Then the second or oldest grass field is plowed for corn, the corn stubble is put in to roots or oats or both with some potatoes. Wheat follows the oats or roots and is seeded with grass and clover. There are two fields of grass; one of corn; one of oats, roots and potatoes; and one of wheat, and these crops furnish some wheat, hay, potatoes, oats, butter, pork, wool, lambs, eggs and poultry for sale; and corn, corn fodder, hay, straw, roots, and some oats for feeding. There is no other system of farming which is so desirable or profitable as this when the character of the soil suits it precisely. A heavy loam soil, kept well manured by feeding as much stock as possible and buying bran or cotton-seed meal to help in feeding the straw, corn fodder and roots to cattle or sheep purchased in the Fall for this purpose, is very suitable and may be kept by good management as rich as a garden. The manure is all given to the wheat, being plowed in on the oat stubble and the potato ground; this insures good wheat and fine grass; this good sod makes certain a fine corn crop and a good oat crop following. We think there is no better system for such farms as are suitable to it.

ADVANTAGES OF AGRICULTURAL STATIONS.

A. S., Westover, Md., asks whether there is any means by which an ordinary farmer can tell about what percentage of potash and of other fertilizing materials there is in the muriate of potash ordinarily sold for agricultural purposes.

ANS.—No—not with any certainty. In those States which have agricultural experiment stations, such as Connecticut, New Jersey, North Carolina, etc., one of the most important objects of these institutions is to analyze samples of fertilizers of all sorts sent in by farmers from all parts of the several States. In this way the agricultural value of various sorts of manures, such as muck, ashes of different woods, marl, etc., is determined, and farmers can either employ them profitably if they are of real utility, or avoid the outlay of time and labor upon them if they are worthless. Unscrupulous manufacturers of commercial fertilizers are also prevented, to a great extent, from adulterating their goods through fear of detection and exposure through the stations. In those States where no such stations exist, it would often pay the farmers of any district to employ a competent chemist to make an analysis of such fertilizers as are largely used. In giving, from time to time, the analyses of fertilizers, made by the Connecticut and New Jersey Experiment Stations, our object is to show the composition of the analyzed fertilizers to our readers throughout the wide district in which those particular articles are used.

Miscellaneous.

E. L. W., Brooklyn, Pa., 1, sends two specimens of seedling apples to get our opinion as to the value of the fruit. The tree is 50 years old and enormously productive. Thereabouts the apple is known as Weston's White Apple. 2, How should quinces be raised from cuttings.

ANS.—1. It is an apple, in our judgment, of the finest quality and should be propagated and disseminated. 2. Take the cuttings now. Cut close to the old wood. Set them in a firm soil and press the earth closely about them, leaving only the tips out of the soil an inch or more. Cover with manure. Quince cuttings often fail in sandy soil. Keep them mulched during next Summer to preserve moisture. The following Spring they may be set where desired or in nursery rows.

W. H. Hapley, Mass., wishing to obtain the next number of the Journal of the American Agricultural Association, asks its price and where can it be had.

ANS.—The next issue will be very interesting and instructive, as may be seen by the bare list of its contents lately published in the RURAL. It will contain about 300 pages of matter by some of the best agricultural writers, and will cost only 75 cents per copy. It is now in press and will be ready for distribution in a week or two. Those wishing copies should address the Secretary and Editor, J. H. Reall, 127 Water Street, N. Y.

Subscriber, Glendale, Mich., asks, 1, will the Robbins Family Washer do what it is claimed to be able to do; 2, where can he get the Vergennes Grape.

ANS.—1. A number of notices of this washer have appeared from time to time in the "Domestic Department" of the RURAL, a few of which were unfavorable, but most of them spoke highly of it. After a good test at the Rural Farm it gave complete satisfaction. Probably a good deal depends on a careful use of it. 2. Thomas Calef, Bridgeport, Conn., advertised Vergennes Grapes for sale in the RURAL some time back.

W. M. N., Darien, Conn., asks, when is the best time to plant Black Walnuts; 2, the address of "The Advance."

ANS.—1. When the nuts are gathered for planting they should be laid in heaps on dry ground and covered with straw or sods on which should be piled earth enough to exclude water and prevent alternate freezing and thawing. In Spring they may be planted in ground marked out, in rows four feet apart. 2. The New York office of The Advance is No. 60 Bible House. It is dated and published here and at Chicago.

T. L. P. C., Cartersville, Va., says that six years ago he manured his orchard with about 35 loads per acre of stable and pig-pen manure, and ever since his apples have been more inclined than formerly to rot on the trees, and less disposed to keep well, and he asks for some preventive of rotting.

ANS.—Perhaps the soil was rich enough before the application of the manure. Any stimulant that excites an undue growth might cause fruit to rot. But the trouble should remedy itself. Root-pruning might be effective.

J. G. S., Ellinwood, Kan., asks the address of the Iowa Horticultural Society with a view to getting its 36-page pamphlet giving explicit instructions in the propagation, setting and management of forest trees on the prairies, which Professor J. L. Budd, in the RURAL of October 15, said would be forwarded to applicants on the receipt of a three-cent stamp.

ANS.—Prof. J. L. Budd, Ames, Iowa, is Secretary of the Society and Editor of its publications. Applications should therefore be made to him.

W. C., Sparta, Ill., asks for a description of Rea's Mammoth Quince.

ANS.—Rea's Mammoth resembles the Orange or Apple Quince in form and color, but is one-third larger. It is large, roundish, shaped like an apple, and of a fine golden color. The tree is a strong, thrifty grower, and moderately productive. The leaves are longer and darker than those of the Apple Quince.

J. F L., Newell, Iowa, asks whether the RURAL'S Dent corn will mature as far north as that latitude.

ANS.—We should doubt it. Better try the Rural Thoroughbred.

L. P. Stevens, Norfolk, Conn., wants to know where he can obtain trees of the Marshall Pear recently illustrated in the RURAL.

ANS.—From P. H. Foster, Babylon, Long Island, N. Y.

S. W. McLachlan, Miss.—The present, for your section, is probably as good a time as any to plant asparagus roots. Other questions will be answered under Domestic Economy.

S. H., Pewaukee, Wis., sends a stalk of grass for name.

ANS.—It seems to be Hungarian Grass.

FOR OWNERS OF BATES SHORT-HORNS.—A "Subscriber," Chesterville, Me., wishes to learn through the RURAL who has for sale a Short-horn bull of Bates blood. He says: "Will not object to color, nor if he is cross (sic,) if he comes cheap enough and is high-bred enough to make it pay."

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV., 5, 1881.

J. F. L.—H. H. B.—H. & S.—L. P. S.—G. G. G.—A. J. C.—G. A. S.—T. G. T., bulbs received.—N. R., thanks.—B. F. J.—E. L. W.—S. H., plant received. Answer in Querist.—J. B.G.—A. B.—J. A. L.—C. C. D., thanks.—S. H. M.—C. W. D.—W. C.—E. O. T., thanks.—L. M.—C. B. W.—J. A. F.—C. S.—A. M.—A. W.—M. F. McC.—T. L. P. C.—M. C. T.—E. C. J.—I. E. S.—H. T. M.—J. G.—W. V.—H. E.—P. E.—S. W. G.—J. S. J.—C. D.—P. C.—N. A.—K. P. S.—H. M. J.—K. L.—P. M. E.—S. B. G.—W. S.—P. N. D. A. B. F.——B. L.—S. P.—J. G.—M. E. J.—H. E.—M. E. P.—W. C.—H. C. P.

THE
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PUBLISHED EVERY SATURDAY.

Conducted by
ELBERT S. CARMAN.

Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, NOV. 12, 1881.

SEVEN YEARLY SUBSCRIPTIONS WITH $14 ENTITLE THE SENDER TO THE RURAL NEW-YORKER FOR ONE YEAR FREE.

WE would remind those who kindly propose to solicit their acquaintances to subscribe for the RURAL NEW-YORKER for another year, that the present is really in some respects a more favorable time for such endeavor than later in the season. The weather is now generally more pleasant than in December and January and the competition from professional agents far less keen. We beg to say that we shall at all times be very glad to send posters and specimen copies for this purpose (including the Fair Edition) free of all charge to all who apply. Moreover, to each new subscriber for 1882, who subscribes before New Year's Day, we will send the RURAL NEW-YORKER *free* for the remainder of 1881, beginning with the first issue after the receipt of his subscription.

WE ask every subscriber, now that the subscription season for 1882 is upon us, to speak of the RURAL NEW-YORKER to his neighbors and friends in such terms as he may think it deserves. Such words have more effect than anything that the newspaper agent or advertisements can state. We respectfully submit that our friends may in this way serve the cause of agriculture, the true interests of which the RURAL professes to have at heart.

WHITE GRUBS as they are commonly called—the larvæ of the May Beetle—are becoming the most formidable of our insect pests. The worst of it is that no practical means of destroying them are known; for we deem the method sometimes advocated—that of destroying vegetation by frequent plowing and thus starving the grubs to death -quite impracticable. Upon our strawberry beds we have applied sulphur, salt and hellebore in as large quantities as we dared; nevertheless, the grubs are at present quite as destructive as ever.

POTATOES are rotting badly in the RURAL FARM country, Long Island, N. Y., and farmers are getting rid of them as fast as possible. The same state of things exists about the RURAL EXPERIMENT GROUNDS in Bergen Co., New Jersey. In view of this, we should advise those of our Western readers whose potatoes are keeping well to hold them. Potatoes imported from Ireland are now selling in this market—for the first time within our remembrance, or that of "the oldest inhabitant," within our acquaintance. A couple of years ago during the period of Irish distress, America presented a large quantity of potatoes for seed to the Emerald Isle, and now the progeny of these have come to their ancestral home bringing several native varieties with them.

THE Mock-Orange illustrated on page 763 of this issue—re-engraved from the London Gardeners' Chronicle—is often called syringa, which is the botanical name for the lilac. The name of Mock-Orange is also misleading since, aside from a faint resemblance in the odor of its flowers to those of the orange, there is no resemblance or relationship. Philadelphus is its botanical name, and it were better to make that its familiar name as well. Let us assure those of our readers not acquainted with this old-fashioned plant that it has claims to rank among the first of our hardy shrubs. It begins to bloom in early June and its flowers are beautiful, fragrant and borne in profusion. It is extremely hardy—it thrives in almost any soil or situation, and grows to the hight of from six to ten feet.

THE PROPOSED NEW YORK EXPERIMENT STATION.—A meeting of the organizers of this project was held the other day at Albany, but beyond the closing of the career of the old Board of Control and the inauguration of the new Board, nothing was done. However good the intentions of the old body, it was unable to do anything decisive towards establishing the station, and it is certainly to be hoped that its successor will have better luck or more energy. About two years have now elapsed since the appropriation of $40,000 to meet the expenses of the Station for the first two years. That any doubt should at any time have been possible as to legality of the appropriation reflects small credit on the friends of the measure in the Legislature. Surely there has now been time enough not only to remove all doubt on this point by appropriate legislation, but also to have at least started the Station. The farmers of the State expect the new Board of Control to take prompt action in the matter.

WE have been censured by a number for giving expression to the opinion that "Golden Grains" and Black-bearded Centennial Wheats are the same. The doubt, however, seems now to have been removed. We have no reproach to cast upon S. Y. Haines & Co., of Philadelphia, and are willing to suppose that they were imposed upon and that in selling Golden Grains as a new wheat, they did not know it was Black-bearded Centennial. It is our duty, as it is our pleasure, to expose such mistakes whenever we are enabled to do so, notwithstanding some firm or individual may suffer pecuniarily thereby. Black-bearded Centennial, as our readers are aware, took the first RURAL NEW-YORKER premium, the kernels of the average head sent by Professor Blount, of Colorado, weighing 107 grains. Where, as in Colorado, it thrives well, either as a Winter or Spring wheat, it must yield heavily, as the kernel is very large and the spikelets grow close together. From the appearance of the grain, however, we should not suppose it would make good flour, though, as to this, little if anything is known.

IN a private note, Professor Beal of the Michigan Agricultural College says:—"Our Bermuda Grass has spread and grown wonderfully this year." He proposes to bury a little to keep it. Late in June Prof. Beal received some rhizomas of Johnson Grass. It has done well and ripened seeds. How far North the roots of this grass will prove hardy has not, as yet, been ascertained that we have heard of. The late M. B. Batcham wrote the RURAL six months previous to his death, that he thought they would prove hardy in Painesville, Ohio, where in his own grounds he was testing it. We saw this grass (Sorghum halepense) growing in a garden at Aiken, S. C., where the rampageous root-stocks were fast taking possession of the soil to the exclusion of all else. Our readers will remember that this Johnson Grass was much talked of three years ago as "Green Valley Grass." It was illustrated in the RURAL NEW-YORKER of April 24, 1880. The root-stocks are perennial and endure any amount of drought. It may be cut several times in a season and is relished by stock either as green food or hay. As to the Bermuda Grass at the RURAL FARM, we may say it is still green and growing rapidly. It has blossomed freely all Summer though no seeds have been formed.

THE ATLANTA EXPOSITION.

A GREAT and lasting benefit which the South will derive from the Atlanta Exposition will be the revelation of itself to itself, or, in other words, the revelation of its own resources and capabilities for industrial advancement, which have not heretofore been fully recognized or appreciated. The "Dark Ages" of the South are past; a new era of industrial prosperity has dawned; new ideas and new methods are superseding the old, and the immediate and highly important question for the industrial classes of the South now to determine is, How shall we obtain the most and best crops with the least outlay? The present exhibition will do much to place the Southern planters in a new and true light before the people. It will show not only that the South *has* produced goods of such a nature and such quality, but also that there are undeveloped resources which, in the near future, will be developed, if the new spirit of enterprise which is now exhibited be lasting, as no doubt it will. While we look with pride on the rapid advance which has been made throughout the country in industrial and mechanical improvement during the last fifty years, the South seems not to have kept pace with the other sections of the country; but the progress which it is destined to make in the next half century, will, we believe, surprise even the most sanguine. The Atlanta Exposition is the right thing at the right time, and its success will not be measured simply by the extent of the display, but rather by the stimulative effect which it will have upon Southern industries.

A GLANCE AT THE HOG CROP.

THE Summer hog packing season, including the eight months from March 1st, to November 1st, having closed, a brief review of the work done is in order. Special reports from all the packing points in the West show that the number of hogs packed through the season amounted to 4,772,934 against 5,323,898 for the same period last year—a decrease of 550,964; while for the twelve months closing with October 31, the decrease was 580,000, the aggregate for the past year being 11,695,000 against 12,275,000 last year. Chicago falls short about 270,000; Indianapolis, 215,000; Cleveland 90,000, and St. Louis and Cedar Rapids, Iowa, 60,000 each, while at several other points the shortage is smaller. On the other hand, Cincinnati has gained about 35,000, and Milwaukee 25,000, while Omaha has packed nearly 50,000 against none last year. The ill effects of the European movement against American hog products are shown very plainly by the statistics of our exports during the past twelve months. From November 1, 1880 to March 1, 1881, our exports were 110,000,000 pounds more than during the preceding Winter packing season, yet now, at the close of the Summer packing season, there is a decrease of 170,000,000 pounds in the year's exports as compared with those of the previous twelve months.

This shows that since the first of March our foreign exports have been 280,000,000 pounds less than during the corresponding eight months last year. This falling off is equivalent to the dressed product of about 1,600,000 hogs since March 1. As the decrease in the number of hogs packed during the Summer season was 550,964, and the decrease in our exports for that period equal to 1,600,000 hogs, if the former number be taken from the latter we shall actually have an increase of the product of upward of 1,000,000 hogs for home consumption or storage during the last eight months as compared with the corresponding period last year. During the past season the prices of hogs have been much higher than during the summer season of 1880, though the animals have averaged somewhat lighter. At present the average prices of hogs and hog products at Chicago, the principal hog market in the country, as compared with those at the corresponding date last year, are:

	1881	1880	Increase.	Per cent.
Hogs	$6.25	$4.65	$1.60	32
Mess Pork	16.50	14.00	2.50	18
Lard	11.40	8.10	3.20	40
S. C. Sides	8.70	7.15	1.55	21

The average weight of the hogs received at that point last month was 242 pounds against 247 for October 1880.

Now a few words as to the prospect for prices during the Winter packing season, which begins to-morrow, Tuesday, November 8, at Chicago. The State Auditors of Ohio, Indiana, Illinois, Iowa, Missouri, Kansas and Nebraska furnish annual statements of the number of hogs reported to them for taxation, and these statements put the hog crop of 1881 at about 800,000 less than that 1880. All of them report a decrease except Missouri which reports 3,639,279 this year, against 3,369,279 last year, making an increase of 270,000. It will be noticed that the figures are the same, but the 3 and 6 in thousands are transposed. Inasmuch as all other reports from that State go to show a decrease in the number of hogs this year, there is certainly a mistake in this return. Considering 270,000 as a decrease instead of an increase, the total decrease in the above seven States this year would be about 1,300,000, and it is not unfair to conclude that there will be a corresponding falling off in the other States which produce a far smaller proportion of hogs, so that the aggregate decrease cannot be far from about 2,000,000 head. Although the hog crop is short, however, it is not unlikely that owing to the deficiency in the corn crop and the high prices for both hogs and corn, farmers will push their hogs to market early in the season, to save their corn, in which case prices are pretty sure to fall until the supply becomes lighter.

BREVITIES.

THE year 1881 has been so short that we have scarcely grown accustomed to writing it. And now we must prepare for 1882.

ATTENTION is called to the communication of A. J. Caywood in the Entomological Department, as of importance to peach growers.

B. F. JOHNSON remarks, truly enough, in another column, that a very fat corn-fed hog is little more than a ball of lard and grease.

Send for the Fair Number of the Rural New-Yorker and the new poster for 1882. *Both will be forwarded* gratis *to all applicants.*

THE appointment of Mr. F. D. Coburn as Secretary of the State Board of Agriculture of Kansas, in place of Mr. J. K. Hudson, seems to give very general satisfaction. Mr. Coburn is spoken of as a thorough farmer.

WE have raised quite a number of philadelphuses (Mock-Oranges) from seed, but no changes either in flower, leaf or habit have been noted. Seed collected now and sown in pots will soon germinate. See Mr. Falconer's article, p. 763.

IN the last article on the Dairy Cow, page 746, cuts 508 and 509 were transposed at the last moment before going to press, and it was forgotten to make the corresponding changes in the text. Accordingly where reference is made in the text to Fig. 508, it should have been 509, and *vice versa*.

ACCORDING to experiments made at the Illinois Industrial University it appears that the safest way to secure the full benefit of either the Early Amber or Orange Sorghum cane crop for sugar manufacture, is to begin cutting the canes when the seed is in the "dough," and to grind them as soon as possible after cutting. It seems to Professor Morrow that the manufacture of sugar from sorghum is the most promising new branch of agriculture for Illinois.

A new Society has just been formed at Burlington, Vermont with the brief title "The Vermont and New York Lake Shore Association for the Promotion of Agriculture and the Mechanic Arts." Its promoters are enterprising men in Western Vermont and Northeastern New York who have decided to fix its capital at $25,000, and subscriptions, it is said, are pouring in satisfactorily. One of the foremost objects of the Association will be to hold an annual fair at Burlington, as it is alleged that ever since the State fair has been held elsewhere it has not prospered, while it was always a success when held at Burlington.

WHILE until the past week the East has been suffering severely from drought, the West has been suffering grievously from a deluge. Both conditions have equally retarded Fall work on the farm; but in addition to this, the Western down-pour has inflicted heavy losses on the farming community by destructive floods along the river bottoms and damage to unthrashed grain. Dalrymple, the Dakota wheat king, for example, had thrashed one-third of his wheat before the wet weather began, but the remainder, he says, has been injured to the extent of one to three bushels per acre and one or two grades in quality, the loss being 15 per cent. The aggregate of a loss anything like this over a wide territory, would be enormous.

PROBABLY there is no country in Christendom in which the condition of the peasantry is so wretched as in sunny Italy. Not only have they generally to drag out a hard, cheerless existence on the scantiest and poorest fare, but they are often subjected to the most galling humiliations—or what would be humiliations if centuries of oppression had left them spirit enough to feel indignities. Last year the prefect of one of the chief cities, an owner of extensive vineyards, obliged his laborers to wear iron masks during harvest time to prevent them from eating the grapes. This barbarous custom has been in vogue in some parts of Italy ever since feudal days, and although it was denounced by the newspapers last year, it is still practiced—and that prefect is still in office.

OWING partly to the high price of wheat and partly to the scant supply of it, a large number of flouring mills are shutting down in the Northwest and as far south as St. Louis. At the latter milling center fully half the mills—and the largest among them—have suspended work, and the same is the case at Milwaukee. The stock of flour throughout that section, too, is so very large that it is desirable to reduce it, and it is said that a lower wheat market in Ohio and Indiana is enabling the millers of these States to take almost exclusive possession of the Southern trade. Mills at interior points in Illinois and Iowa are reported to be buying considerable supplies of wheat from Chicago and St. Louis, which shows either that local supplies are inadequate or that the farmers are holding their grain for considerably better prices than those now ruling at the collecting centers.

GOVERNOR CULLOM'S PROCLAMATION against the importation into Illinois of cattle from those sections in which some herds are reported to be infected with pleuro-pneumonia in Connecticut, New York, New Jersey, Pennsylvania, Delaware and Maryland, is a timely and praiseworthy measure, if the grounds on which it is based are real. The Treasury Cattle Commission at first recommended that the entire States should be scheduled in any part of which the disease existed; we protested against such an embargo as too sweeping, and we are pleased to see that Governor Cullom has prohibited importations only from the infected counties, thus greatly diminishing the embargoed area. It is not unlikely that the constitutionality of the act of the Illinois Legislature authorizing his action, will be tested before the U. S. Supreme Court. For our own part, in view of the urgent need of effective legislation for the protection of live stock from contagious diseases, we trust the act will either be sustained or not questioned.

Scientific.

THE DRIVEN WELL TROUBLE.

THE tube or driven well controversey appears to be exciting a very unusually lively interest among farmers throughout the country just now. Messrs. W. D. Andrews & Bro., the owners or agents of N. W. Green's patent, appear to be extraordinarily busy collecting "royalty" from the owners of driven wells everywhere. In this State alone between 1,000 and 2,000 well-owners who have refused to pay $10 royalty for each well of the kind, have been summoned from all quarters to appear before the U. S. Circuit Court at Utica in a few days. To do this personally must entail heavy expense for travel, loss of time and hotel expenses; to appear by counsel must entail an outlay nearly as large as the claim for "royalty," even if the harrassed well-owners of each neighborhood should club together to defray expenses. A judicial decision against the claims for "royalty," however, would be a compensation for the annoyance and loss of time and money; but judging from the issue of half a dozen, or so, cases which have been already brought to trial before the U. S. Circuit Courts, a favorable decision can hardly be expected from these tribunals, each of which appears to feel bound to follow the precedent set by any other. A careful review of the case, however, leads us to believe that an appeal to the United States Supreme Court would be much more likely to free the driven-well owners of the country from the annoyance and exactions to which they are subjected. The expenses of such an appeal, however, would be so heavy that they could only be met by contributions from all those interested in upsetting Green's patent. Whatever the decision of the Supreme Court, the following truthful sketch of the early history of the driven well clearly proves that equity certainly does not require that the public should be heavily taxed to reward the individual talent, outlay or labor involved in the invention of this method of well-making.

The essential difference between the immemorial dug and artesian well, and the modern tube well, is, that in the two former the earth removed from the hole is brought to the surface, while in the last it is forced aside by a pointed drill driven down to the water-bearing strata. With a few rare exceptions, this drill consists of an appropriate length of wrought iron pipe, perforated at the bottom, and tipped with an adjustable, conical point, having a short stem fitting into the tube and a circular shoulder projecting slightly beyond it. When the perforated part has been submerged in the subterranean water a pump is attached to the upper end, and henceforth the tubular drill serves both as a curb to the well and a suction pipe to the pump.

The earliest account published in the country of the tube well-process of well-making occurs in an American reprint of "Mac Kenzie's 5,000 Receipts," issued in Philadelphia in 1829 by Jas. Kay, Jr. & Bro. On page 388, a recipe "to raise water in all situations," tells us that the finest springs may be formed by forcing an iron rod into the ground, withdrawing it on reaching water, and inserting in the aperture a pipe for the passage of an abundant stream. Apart from the suggestive heading of this recipe, it is likely enough that flowing wells were chiefly, or maybe, exclusively contemplated by it; but the process of making a well, not the method of getting water out of it, is the question involved in Green's patent; and the process described in his specification and covered by his claim is substantially identical with that set forth in Mac Kenzie's antedeluvian recipe-book. Of this household work three large editions had been scattered through the country, before the process clearly advocated by it, first occurred to Green's inventive genius in 1861.

During this year the rumored death of some of our soldiers, by drinking from poisoned wells in Virginia, caused much speculation among the troops about to visit the hostile territory as to the best method of obtaining pure water. At this time Green, who had been educated partly at West Point, was the colonel of a volunteer regiment quartered near his home in the village of Cortland, N. Y. During a discussion among the officers of the regiment on the hydraulic problem, the Colonel suggested that water might be obtained by inserting a tube into a hole made in the ground by an iron bar, and directed one of his lieutenants, named Mudge, to make the experiment. The spot selected for this was on the margin of a neighboring stream. An iron bar was worked down a short distance by lifting and dropping it alternately. On its withdrawal the water rose to within a few feet of the brink of the hole into which a common tin boat pump was then inserted, and an attempt made to pump it dry. Contrary to general expectation this was found to be utterly impracticable, for the water of the adjacent stream swept through the thin barrier of intervening sand into the vacuum produced by the action of the pump.

By Green's order Mudge continued, for some time, his experiments with this unsatisfactory result. In every case a "drive rod" to make the hole was indispensable. To ascertain when this had reached water, repeated withdrawals were often necessary. The fall of loose earth, sand and pebbles from the sides of the empty hole added annoyance and delay to increased labor. Moreover in loose, friable formations there was always danger of the entire work collapsing whenever the rod was withdrawn. Into this rickety hole a sheet-iron cylinder was gingerly introduced to serve as a wall to the well, and a guard to an inner lead-pipe for the passage of the water. The entire operation was more complicated, hazardous and uncertain, and hardly less expensive than the old mode, and not a single well sunk by Mudge under Green's direction turned out a permanent success.

IN October 1861, Green's regiment went south; but Mudge returned home in the following January, and two months later was followed by Green who had been dismissed from the army for shooting the Major of his regiment. This deed brought upon him much public opprobrium and imbittered the three or four ensuing years of his life by the legal proceedings to which it gave rise. This worriment, however, was not without subsequent compensation. In it he found a valid legal excuse for four years' negligence in asserting any claim to the invention of this process, and also for his marvelous ignorance of the public use others were, meanwhile, making of the discovery, a knowledge of which, without a protest, would have nullified his tardy claim to patent, in 1866.

After his return Mudge drove a few wells on his own account, but speedily tired of the profitless occupation and sought more remunerative employment, whereas Green, all whose labors in the matter had hitherto been pleasantly vicarious, took no further interest in it now that a prosecution of it would have involved personal exertion and outlay. His legal embarrassments, indeed, left him little money and less heart for experimenting in a sordid occupation for which his education had naturally given him a gentlemanly contempt.

Meanwhile James Suggett, an old well digger of the village, who had been hired by Mudge as an assistant in his early experiments, continued to drive an occasional well whenever he could contrive to get an order for it. Such an order gladdened his heart in September 1862, yet it sorely puzzled his head how to fill it. The well-making business had of late been dull and unprofitable, and the old man's funds eked out by his credit could not purchase a sufficiency of tubing. In the previous May he had begun to substitute gas-pipe for sheet-iron as a well-curb, and in his present impecunious dilemma the ingenuity in makeshifts, born of galling poverty, urged an escape from the expense of lead pipe by the use of a single gas pipe to discharge the combined functions of the two tubes hitherto deemed essential to success. At the same time a fortunate difficulty in obtaining the loan of a "drive rod," suggested another tentative innovation. By forging to a point the end of the gas pipe which his limited means had purchased, he transformed it into a stout tubular drill, and thus, all unconscious of the ultimate results of his labor, insured the permanency of the process, and forged the instrument that was presently to open the way to his own rapid enrichment.

The well constructed under these difficulties was the first brilliant success, and Suggett's makeshift expedient soon came to be regarded in the light of provident improvement reflecting no small credit on his inventive ingenuity. Thirteen months later, in September 1863, he filed an application for a patent covering his tubular drill, its point and perforations, and on the 29th of the following March this patent was granted. No sooner had Suggett obtained it than he hasted to sell territorial rights under it, before its value could be lessened by rival claims, or infringements.

In those restless days of flush pockets, and feverish speculation, tube well rights soon became popular as investments among those interested in domestic hydraulics, as oil well stock among the general public. Hence Suggett's luck differed as much from that of ordinary patentees as his method of invention. From the first he found a ready sale for his rights and presently investors flocked to him with nearly as much eagerness as ordinary inventors exercise in searching for them. Ere the close of the year the piecemeal sale of his entire patent had lifted the lucky well-digger from indigence to affluence, and lodged him snugly among the capitalists of the village.

His financial success, quite as much as the obvious shortcomings of his crude but suggestive devices, soon flooded the country with auxiliary patents, covering a few needed and a host of superfluous improvements. Of these some substituted an adjustible point, of various shapes and materials, for Suggett's clumsily forged makeshift. Others excluded sand from the suction pipe by screening its perforated end internally or externally, with wire-gauze or minutely perforated sheets of different metals. Suggett, with characteristic simplicity, had imperfectly accomplished this during the process of driving by economically packing the perforated end of the drill with rags to be fished out with a hook attached to the end of a long rod, when water had been reached. The bulk of these patents, however, differed from each other merely in trifles so absurdly immaterial that imposition not improvement must have been the aim of their owners. Of tube wells throughout the country fully four-fifths have already contributed in their cost to the price wrung from well-drivers for territorial rights under some one of these patents.

It was not in human nature that that Mudge should witness Suggett's rapid enrichment without attempting to profit in like manner by the scheme which it was now exasperatingly evident he had himself abandoned prematurely. Accordingly in August 1775 he applied for a patent for MacKenzie's process of well-making, and this was readily granted on the 24th of the following October. Six months' trial, however, demonstrated the fatal advantages of the pointed and perforated drill protected by Suggett's patent, all claims to which he had frankly repudiated in his own application. Finding, however, that his patent, in its present form, was useless, and still worse, unsalable, he surrendered it on the 5th of March, 1866, and boldly sought an amended reissue covering a perforated pipe and point in addition to the process claimed in his surrendered patent.

By this time Suggett's success and the widespread use of the system that had sprung from it, had roused Green to a lively sense of the vast possibilities of fortune still latent in the novel enterprise. Mudge's early experiments ordered by him were constructively his; and Mudge's late patent gratuitously proved that a process of making a hole in the ground was patentable. Suggett's application had embraced a claim for this which the underlings of the patent office had so unfeelingly ridiculed that his agent—Hon. R. H. Duell, Congressman from Onondaga Co., in those days and Commissioner of patents later on—prudently docked the instrument of this pretention. Yet Green might well have hesitated about contesting Mudge's conceded claims had not the latter voluntarily resigned the vantage-ground of possession. On this missmove his alert rival filed, 12 days later, an application for a patent for the process of sinking wells by forcing down a rod into the water under the ground, then withdrawing it and inserting in its place a tube, perforated but not closed at the bottom, for the purpose of extracting the water. This process was identically the same covered by Mudge's surrendered patent, and substantially the same described in Mac Kenzie's ancient repertory. In view of the reciprocal infringements of the rival claims of Suggett, Mudge and Green, the Patent Office, on the 31st of March 1866, declared an interference between the three. After three diverse decisions, as many successive appeals, and 22 months' litigation, the U. S. Court for the District of Columbia finally decided that Suggett's patent and Green's claim were equally valid, and that the luckless Mudge had no rights which the Patent Office was bound to recognize.

Without money to introduce his patent, Green at an early day made an agreement with an extensive manufacturer of iron pumps, whereby, for a certain consideration, in selling his patent rights he insisted on the exclusive use of the pumps of this manufacturer. Straightway the other pump manufacturers combined to test the validity of the patent. The case, however, was decided against them in 1876, and although they talked a good deal at first about taking an appeal to the Supreme Court of the United States, they have hitherto made no movement in that direction. Several other test cases have been tried before U. S. Circuit Courts in various parts of the country, but as there was no new evidence as to the use of Green's, or, rather, McKenzie's, method of well making before 1861, the Courts in every case have followed the precedent set at the first trial. At no time has the country been so thoroughly ransacked as it is at present for fresh evidence to invalidate the patent. In the absence of such evidence we are sorry to be compelled to own that we can see no probability of upsetting the patent otherwise than by an appeal to the United States Supreme Court, and there the issue would be very doubtful. Much as we would desire to free the farmers of the country from exactions made under this patent, truth and a regard for their best interests force us to make this declaration. We are now investigating the subject and beg of our readers to forward to us any new information they may have of the matter, and in order to post them thoroughly on what has already been ascertained we shall return to the subject in our next issue, or so soon thereafter as we shall have collected the information for which we are now searching.

Miscellaneous.

THE RED RIVER VALLEY.

Another Letter upon its Soil, Products, Cities, Towns etc.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

OCTOBER, which to more southern climes means the sere and the yellow leaf, here in the Red River Valley, brings the frosts which strip the trees of their variegated foliage, not in pairs, but in perfect showers, dropping to earth to become a part of the enriching soil. The portion of the country considered in this letter lies in the very heart of the great wheat-growing region of the Northwest; the land made famous by that grade of Spring wheat termed "No. 1 Hard," which has become of such value through the introduction of roller flouring mills. The counties through which we journeyed to obtain the data for this letter, were parts of Polk and Clay in Minnesota and parts of Grand Forks, Trail and Cass in Dakota. These counties will contribute this year not less than 6,399,100 bushels of No. 1 wheat which at the prices at the time of writing ($1.35) would give the farmers of this district $8,728,775. From an able article from the pen of J. S. Hansen we quote. "The peculiarities this year have been a lack of rain during the growing season when it is usually abundant, and an excess during what is generally the harvest season. In order to learn the effect in the remarkable wheat region I made a trip. The wonderful soil which enjoys a world-wide reputation, has fully maintained its high renown, even under adverse circumstances, and the result of the harvest just closed stands a new and strong argument in favor of its wonderful productive capacity."

We have made close and careful investigations and fully concur in the statements made. Many farms are yielding a larger average to the acre this season than last, and while the general average may perhaps be somewhat less, it will be on account of the lack of proper cultivation on the part of the farmer, or else neglect in seeding or thrashing.

Upon the branch of the St. Paul, Minneapolis and Manitoba R. R. running north from Fargo to Grand Forks have sprung up several smart and active little towns. The largest of these is Hillsboro (formerly Hill City.) It was named for General-manager Hill of the Manitoba line who has large landed interests. Last November it was platted, a fact which seems incredible as we look now upon its 400 to 500 population. There are two large elevators, hotels, a dozen stores, lumber yards, a good newspaper, a school and many business interests. It is ten miles west of the Red River, on Goose River in the very heart of the wheat lands of this valley. Buxton (52 miles north of Fargo, named for T. J. Buxton of Minneapolis) is another handsomely located prairie town. It is a good trading point and already has two elevators, two stores, a blacksmith's shop, a depot, two lumber yards and a really first-class hotel which has made it noticeable as a sportmen's resort. Another elevator and a schoolhouse are on the *tapis*. As to prices or local interests we refer readers to Budd Reeve Esq., of Buxton.

Grandin is a new but promising town 28 miles north of Moorhead and Fargo, named from, and situated near, the great wheat farm of the Grandin Bros., who are part proprietors. All branches of business are needed and its location should insure it a considerable grain market. Messrs Comstock and White, of Moorhead, kindly volunteered information concerning this section much of which space precludes mentioning. Our next stop was at those well known western cities.

FARGO AND MOORHEAD

the dual cities—so called on account of their location and conflicting interests. Fargo is upon the west and Moorehead upon the east bank of the Red River, the former in Dakota Territory and the latter in Minnesota. As a consequence there has been, is, and will be, a spirit of rivalry, but as far as we could judge not of rancor or ill-feeling. Of Fargo who has not heard, springing up, as it has, in a decade into a city of great commercial importance? In this letter we will briefly summarize the leading points of interest gleaned, giving our friends a more detailed description next week. The population at the time of the last census was 2,701; now it is estimated at from 4,000 to 5,000. There are six churches; two school-houses, with a new one in process of construction to cost $35,000; two daily, three weekly and one Sunday, newspapers, (one of which is Scandanavian) several civic societies; a Chamber of Commerce of 65 members, organized in 1879; a U. S. Land Office; two local fire insurance companies, and an immense traffic both wholesale and retail, as is

evinced by the following figures: The banking and exchange business forthe year ending, Oct. 1, 1881, is approximated at over $20,000,000; commercial transactions, exclusive of wheat, will exceed $11,000,000. The banking capital of Fargo is $315,000 (five banks). There were 1,350,000 bushels of wheat marketed in 1880. There are two large elevators, a large roller flouring-mill, and several smaller manufactories. The value of permanent improvements for the past year is estimated at $500,000. The growth of Fargo has been largely stimulated since the advent of the St. Paul, Minneapolis, and Manitoba Railway, offering a competitive line to the Northern Pacific. Several railway projects, some under way, we will discuss anon. Here we found the Holly water system with a capacity of 1,000,000 gallons per day; a street railway organized to be built this Fall; telephone connections with Moorhead, 97 working and 50 more ordered; and, in fact, all of the modern improvements. There are three large and well kept hotels, besides a dozen smaller ones. This ambitious young city, not content with a contracted radius of trade, is reaching out for country merchants' patronage and will become, no doubt, a commercial center for jobbing as well as retail trade.

Moorhead, too, has the aspirations and desires of her sister city and, although behind in the matter of population and volume of business, has the energy and will to become an earnest competitor. From this point two new railway lines are being built north and south, and with the trunk roads mentioned, this city bids fair to be a railway center of no mean importance. The necessity of a foot and a wagon bridge between the two cities is felt by both, and it will doubtless be built the coming Summer. Moorhead tallied 1,800 at the census: now estimated 2,700 to 3,000. It has six religious societies and five churches; the finest school building in Northwestern Minnesota; a weekly newspaper (a daily is soon to be established), and various civic societies. The public improvements of the past year foot up over $400,000, the greatest of which is the building of a magnificent hotel, the Grand Pacific, to cost when completed, with furniture, $165,000. It has 120 rooms, hot and cold water, gas, elevators and every modern appliance for comfort or luxury. That, with their present excellent house, will be apt to give Moorhead a reputation. In this handsome building the St. P. M and M. R. R., is to have ticket and general offices, waiting rooms, etc., all trains stopping here for meals. Other improvements to be inaugurated by this railway — round house, shops, etc.—will foot up largely. The handsome opera house is a feature. It cost $16,000 and is arranged neatly and tastily. That is something Fargo lacks and needs.

Moorhead has good water-works, the same telephone exchange, a street car company organized to operate with the Fargo company, and in many things the "dual cities" are aiding and abetting the interests which should be common to both. The banking capital of Moorhead is $160,000, with two banks; exchange and banking business between five and six millions. There is a large and increasing commerce—700,000 bushels of wheat were marketed there in 1880. The place has a storage capacity for grain of 150,000 bushels—to be more than doubled the present year. There is a fine roller flouring mill as well as a large brewery and other manufacturing interests. Property is yet reasonable and large purchases are constantly being made in both cities, as Eastern capital is seeing the advantage of Western investments. Around these cities the country is of the same general character as other portions of the famous valley heretofore described. A fuller and more detailed review of Moorhead's interests we will make the subject of a succeeding letter. The Red River of the North is navigable as far up as this, there being two lines plying between these points and Grand Forks.

East of Moorhead the St. P. M. & M. Railway intersects the Northern Pacific at Glyndon, a young village which commands its portion of trade in the section. Here we made a hearty breakfast. Speeding up the line which runs north to Manitoba, the first town of any importance at which we stopped was Ada. It is about midway between Glyndon and Crookstown, has a population of over 500, with elevators, numerous stores, hotels, lumber yards, etc. As a grain mark t it is rapidly improving, last year's shipments being over 350,000 bushels. It has at present an extended radius of trade, drawing for 20 miles around. There are church organizations, schools, societies, etc., and in many ways the town presents those characteristics which indicate a rapid growth and permanent prosperity. There is a bank as well as a well edited paper, the "Ada Alert," very aptly named, indicating, as it does, its wide-awake, broad-guage proclivities.

There are many ways in which the farmers of this district could still further improve their condition. They are taking too many eggs in one basket, or, in other words, putting too much reliance on wheat. We were astonished to learn that at Fargo and Moorhead, oats had been imported to a country where the yield is never less than 50 bushels and often as high as 75 to the acre. Then again, flax can be planted on new breaking, giving a considerable yield and improving and benefiting the soil, while it pays the farmer a profit on his first year. With free government lands, liberal rebates on purchases of the St. P. M. & M. railway lands, a short, prosperous season, and a comparatively certain yield, bringing a good price, it is no wonder that the most self-satisfied people we have met are the farmers of the Northwest.

Societies, &c.

THE ARKANSAS STATE FAIR.

[RURAL Special Report.]

THE NEW GROUNDS of the Arkansas State Mechanical and Agricultural Association are pleasantly situated about one mile from the city of Little Rock, Ark., and this is where the State Fair was held October 17-22, this year. The citizens have spent a considerable amount of money in fitting up the grounds, and as they are roomy and easy of access, there is no reason why, under proper management, this fair should not improve year after year. This year's fair was a great improvement over those of former years; yet, judged from a Northern point of view, the agricultural portion could not be called a success—too much horse, too much side shows, too much old-fogyism, and not enough of the life, energy and display that at the best fairs do so much in the way of educating both the dweller in the town and the dweller in the country. I never met with a warmer reception in my life than at this fair. A thing that very forcibly impressed me was the almost universal wish of the progressive men of this State for Northern immigration, Northern push and ideas. Within the past six years the State has made more progress in agriculture than during its entire previous history; but, strange to say, the railroads, especially the St. Louis, Iron Mountain and Southern, and a few progressive people are at the bottom of all this improvement. The State will not do anything for agriculture. The college, with its so-called experiment station, is situated so far away from any agricultural center that it is at present of no real use to the agricultural and horticultural portion of the community. The railroads centering here are doing the greater part of the work, assisted by the individual efforts of citizens and the State press.

The needs of this State can be easily ascertained on an examination of the fair, by what is *not* exhibited as well as by what is. Among the cattle on exhibition were a few good specimens of imported stock; but, though milk here is now worth 10 cents per quart and butter 40 cents per pound, still there has been no general effort to improve upon the native stock, and this in a country where all the finer grasses will grow the year round: clover, Timothy and Alfalfa grow luxuriantly, and Bermuda Grass spreads even into the city. What is wanted are good bulls of the Ayrshire, Holstein and Jersey breeds to cross on the native cows and thus improve the progeny for dairy purposes. In importing pure-breds from the North they should be brought when young, as they must get acclimated if expected to live. The native cattle here are small, weighing from 500 to 800 pounds, and they do not give over seven quarts of milk a day. I saw a number of pairs of steers that would not weigh over 600 pounds apiece. There is a great field for the dairyman and breeder in this State. In the agricultural department there were the same marks of negligence and unthrift. What was worth seeing was made up in great part by exhibits of such progressive men as Messrs. Kerr & Kannady, of Sebastian County, in the extreme western part of the State. For their county exhibit they brought seven car-loads of cattle, cotton, coal and agricultural produce, which made an excellent display of what the county produces. Their show of corn and wheat was especially good. Another fine exhibit was that made by G. W. Davis, of Jefferson County. He made a fine show of Eureka Cluster Corn, of which he raised the past season 76⅞ bushels of shelled grain per acre—a very large yield, considering the severity of the drought. This corn very much resembles Blount's White Prolific. It has about the same size of ear and kernel and grows from four to ten ears per stalk. It ripens with him in about 100 days.

The various soils of this State are fitted for almost every branch of agriculture. Cotton and corn thrive finely on the rich bottom lands; corn, wheat and garden products on the uplands. But with all these rich lands, large crops are not the rule. The farmers in this section want a higher education, and, so far as I can find out from talking with good representatives from all parts of the State, the farmers are more than willing—they are anxious—to learn and profit by the best methods practiced elsewhere in their vocation. Improved agricultural machinery is very little known in the State, and much of the cultivation is still left to the blacks, who rent the farms on shares and wear out the land with their loose manner of farming. For the first time in the history of the State, a State Agricultural Society has just been formed. Its officers are progressive farmers and planters, and they propose not only to develop the rich resources of the State energetically themselves, but also to call in Northern men, ideas and push, and raise the average crop of corn from 30 to 75 bushels per acre; of wheat from seven or eight to 30 bushels; and of rye, cotton, oats, etc., in proportion. The land here is capable of producing as large crops as are harvested in any part of the great Southwest; all that is needed is proper tillage to bring them forth. The Society proposes to establish county and town societies all over the State.

The exhibit made by the Little Rock and Fort Smith Railway, which runs through the center of the State from Little Rock to the western boundary, showed the great variety of products which that section of the country is capable of raising. Dr. W. W. Hippolite, Vice-President of the National Bee-Keepers' Association, made a handsome exhibit of honey and bees. He uses a modification of the Langstroth hive, made to suit this climate. There was quite a fair display of butter and cheese in small quantities, the first premium on which was carried off by an old New-Yorker—Walter Crandall, of Prairie County.

The show of agricultural machinery, wagons, etc., was light. It would be well for our manufacturers to make better exhibits here another season, for I never found a population more sadly in need of improved machinery. Cotton machinery—presses, gins, planters, etc.—were on exhibition, but no grain drills, saw mills or mowers and reapers, and many other machines that are needed in this section, were not shown. Numbers of farmers and planters, if only they were made acquainted with the advantages of these machines, would buy them, and, by greatly increasing their crops by their use, open up an extensive market for them. Sheep and swine were about the same in merit as the cattle, and could be greatly improved by more care and better breeding. There was a world too much horse—not "agricultural hoss trots," but regular horse races, with all the accompanying pool-selling. This sort of thing should be replaced by breeders' purses, and the pool-sellers should be driven from the grounds, as well as the side shows, which have no proper place at an agricultural fair. Several gambling games were started on the grounds—absolute swindles—but to the credit of the officers of the Society it must be said that as soon as they found out the character of these, the swindlers were hustled off the grounds and their tools confiscated.

It is claimed that to draw a crowd it is necessary to have horse racing, military shows, etc. Let this Society next year use the same amount of money paid this year to the horse owners and military companies and offer extra premiums for breeders of cattle, sheep, swine and mules, as well as for county exhibits of agricultural produce, and see if the reform will not bring not only a much finer lot of exhibits, but also as large a crowd. The citizens of Arkansas have altogether too much pride in their State to allow their fair to become a failure, and a large and fine show of stock and machinery will bring numerous visitors from other States, as well as throngs of natives. The progressive citizens of this State are fully alive to the fact that if they want people to come here they must show them not only what lands they have, but what these lands can and have produced. In a short time an agricultural paper will be started under the auspices of the new State Agricultural and Horticultural Societies, following, as far as its means will permit, the style of the RURAL NEW-YORKER — devoting more attention to the treatment of facts than of theories, and if the farmers and planters throughout the State give it the support already promised, its success will be assured. W. H. K.

CATALOGUES, ETC.

FOURTEENTH ANNUAL REPORT of the Ohio State Horticultural Society for the year 1880-1. Dr. J. A. Warder, Cincinnati, President; G. W. Campbell, Delaware, Ohio, Secretary: We shall take occasion to refer to this very valuable report again.

TENTH REPORT on the Noxious and Beneficial Insects of Illinois; by Cyrus Thomas, Ph.D., State Entomologist. This is one of a series of reports, the first one of which was made by Mr. Marsh, the next four by Dr. LeBaron, and the remaining five by Professor Thomas. The value of these reports is well attested by the large demand for them, not only in Illinois, but in other States as well. A large portion of the present report is devoted to the descriptions of larvæ, as it is in the larval or worm stage of existence that farmers and horticulturists meet with many insects. But two orders have been here discussed, the Lepidoptera and Hymenoptera, as it is the author's aim to treat thoroughly, each year, of one or more of the notedly injurious insects. The Army worm is discussed in its various life stages. There is a descriptive catalogue of larvæ; the question of the relations of climatic conditions to the development of injurious insects forms an interesting chapter; a new corn insect is discussed, and a long list of plants injured by the various insects mentioned in the report and of the scientific names of the species which injure them, is affixed. There are numerous illustrations throughout the work—about 200 in all. Dr. Packard's paper on the Hessian Fly is inserted by his permission. Professor Thomas is doing a grand work for the State of Illinois and the country in general, in his investigations into the nature, habits, etc., of various noxious and beneficial insects, and we wish him "long days" in which to carry on a work so much demanded.

Entomological.

A NEW INSECT ON PEACH TREES.

A. J. CAYWOOD.

QUITE A SCARE is taking hold of peach-growers here, and they have good reason for the fright owing to the danger threatening their business. About four years ago I was informed that certain growers were losing peach trees in from one to two years after the cause made its appearance. On visiting the places, I found gum issuing in small jets all over the trunk, from the surface of the ground to well up among the branches, and so numerous were the jets that it was difficult to put the end of one's finger between them. I found minute insects moving about on the surface of the bark, so small that they had previously been overlooked. On placing a microscope over them I discovered a perfect beetle with covered wings, almost precisely the shape of the large May Beetle, but not more than one-sixteenth of an inch in length, and when the wings were extended they were three times the length of the body. For the want of a proper name I call it the "gum bug." It is brown, approaching black.

During the past two years I have endeavored to ascertain its changes from the egg to the perfect beetle, with less success than with any other insect to which my attention has been called. I thought the egg was deposited in the bark in the Fall, and that the larva, after hatching and living there one season, made its appearance as a perfect insect annually; but I find the beetles, both under the bark and on the surface, eating their way in and placing themselves in a position like that of those I find under, and whether the egg is deposited in the ground and the insect there perfected, afterwards attacking the tree for food, or whether the transformation occurs in the bark, I have not determined. It is possible that the egg is laid in the bark; that the perfected insect comes to the surface annually, and afterwards eats back a hole in which to deposit its egg; but having no knowledge of any insect that deposits its egg in this way. I cannot convince myself of its certainty.

The pests do not appear on young trees to half the extent that they are seen on larger ones. They are first discovered near the ground and the second and third year they proceed up the trunk. This fact led me to believe that the egg is deposited in the tree. This Fall I took out and utterly burned some 25 five-year-old trees that one year ago were pictures of health. By running the hand up the body a handful of gum could be obtained with one effort, each insect killing a spot of bark half an inch in diameter down to the wood; but the cavity in which it lies is but an eighth of an inch across. Passing through the grounds of a neighbor a few days since I did not discover a single peach tree that was not a perfect blotch of gum, and all of them will be removed next Spring.

The beetle makes its appearance about the first of September and continues its warfare down to December. As above stated, it is new here, but may have been known longer in other sections. Some think it has been introduced in trees from other localities. If it does exist elsewhere, and a remedy is known, we hope it will be speedily given, or the peach business is doomed; for when the pests make their appearance they surely spread from tree to tree until all are infested. They began with me in a single tree.

No gum issues while the insect is in the hole—I suppose they consume it; but it follows

when they leave. Heretofore I have been opposed to all kinds of daubs or tight covering on the bark of trees, but I have been compelled in this case to try some experiments. I made a wash of two parts of lime and one of wood ashes, in a pailful of which I put two tablespoonfuls of crude carbolic acid and two of Paris-green, and with the mixture I made a covering over the trunks with a brush, but the bugs come out and a few enter through it, but I intend to wrap the bodies of trees with roofing paper tarred on the outside, which also repels the peach borer.

Marlboro, N. Y.

Pomological

THE OTT PEAR.

I would like to ask Mr. Parnell, see RURAL Oct. 22, p. 715, col. 4, what time his Ott Pears ripened. Mine began to ripen about the middle of September and continued on till the middle of October, and then, as the fruit was falling from the tree rapidly, I picked all, and have been using them since, chiefly for baking, as it is very sugary and by this cooking it becomes juicy and tender even in its skin, which before baking is rather thick, hard and dry. This pear is as delicious baked as the Jersey Sweet or the celebrated Belle Bonne apple. It is precisely as Mr. Downing describes it in the Fruits and Fruit Trees of America, edition of 1857, p. 441, except in the ripening, which he says is the middle of August. [For the benefit of those who have not Downing's excellent work, here is his description of the Ott Pear:—A seedling of the Seckel. Originated with Samuel Ott, Montgomery Co., Pa. Tree moderately vigorous, very productive. Young wood reddish olive-brown. Fruit small, round-obovate, greenish-yellow, partially mottled with russet, reddish on the sunny side. Stalk long and curved inserted in a slight depression. Calyx open in a round, open basin. Flesh melting, sugary, rich, perfumed and aromatic. Ripe middle of August. An excellent little pear, somewhat variable. Good to very good," —EDS.] Perhaps, however, my pear may not be the genuine Ott, but some other sort. There was no difference in the quality of those borne on different trees, as was the case with Mr. Parnell's, but all were alike sugary. I think these will keep in store as late as the middle of November. I am going to try a few to see if they do so, sound and sugary. A. B. ALLEN.

The Vineyard.

THE MARY GRAPE.

This grape was received from Mr. Peter Sandovel, of Sandy Creek, N. Y., a year ago last Spring and fruited this season. The grape proves to be the Massasoit, one of Rogers's hybrids. I have them both under the same conditions within a rod of each other. They have been examined by several skilled horticulturists, and no man can see any difference. I think Mr. Sandovel claims it to be a Labrusca grape, but it has all the characteristics of Rogers's hybrids—fine quality, emasculated clusters and all the other features of these hybrids. Here is a fine opportunity for Mr. Sandovel to rise and explain why he is sending out to the public the Massasoit with a new name. D. S. MARVIN.

Watertown, N. Y.

[A vine labeled "Mary" was sent to the Rural Grounds several years ago. We cannot at this time find the record. It has made a feeble growth and never fruited.—EDS.]

Domestic Economy

CONDUCTED BY EMILY MAPLE.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

THE days are cold and dark and dreary; truly the dullest Autumn I ever remember, without a ray of sunlight for days together, with leaden skies and falling leaves. The children feel the influences of the weather and lose their bright serenity. The roses in the greenhouse are slow to blossom and need the rays of sunshine to hasten development. Everything feels the absence of warmth and light. But we go on with our domestic affairs; the Fall house-cleaning must be done; pickles be furnished and packed away, the garden needs to be looked after and such bulbs as gladioli and others, carefully secured. The poultry, too, seem as if they felt a lack of something to help them fulfill their destiny, and eggs are not plentiful. We know there will be a change for the better when the buckwheat is thrashed; for at this season of the year nothing is better than that grain alternately with corn for laying hens. So, the other day, we made some cookies that were independent of eggs, and which were pronounced very good by all the family. It was from this simple recipe: Two cups sugar, one cup sweet milk, one of butter, half a teaspoonful of soda with flour enough to roll. We flavored some with vanilla, others with lemon and their only fault was that we too soon found the bottom of the cake box. Children seem to have a natural fondness for cake, and such as this simply made is better for them than a more expensive article. For this reason we often make our own candy, as the little one's enjoy the making and we know it is more wholesome than that which is highly colored and often unhealthy. What a care and thought are little children during the dull Autumn weather! No more freedom to ramble at will through the fields for wild flowers and fruit. No more Summer birds, and waving trees. "Why do the leaves come off?" asks little four-year-old, and there is in his tone a regret that finds an echo in older hearts.

THE ROMANCE OF HOUSEKEEPING.—FIG. 517.

KEROSENE STOVES.

MARY Wager-Fisher, page 723, asks for the experiences of those having used kerosene stoves.

Our family has had one in use since May 1. The total amount of oil used, including that burned in our lamps, has been 37 gallons, costing $3.70. The cost of oil for the stove has been therefore less than two cents per day—cheap enough certainly. The cooking has all been done on this stove about six days in the week, the cook-stove only being used for washing, heavy baking, etc. We consider the kerosene stove one of the greatest conveniences that has been invented for years, one that nearly every family in this section that has enterprise enough to take the papers and read them has availed themselves of. A meal can be cooked on them in about the same time it requires to get a coal fire ready for cooking, and then if a little hot water is wanted at any time, as in sickness, it can be had in a few minutes. Another important consideration is, it does not heat the room, an advantage that any woman will appreciate during the Summer months. These stoves are now kept by all hardware dealers in endless variety, so that there is no difficulty in procuring what one wishes. And now a word of advice; in purchasing be sure to buy one of the greatest heating capacity to be found, one with four burners is the best. The largest can be run as lightly as you wish, while a small one will not do all you desire.

I think that our oil stove has saved us, in fuel, the cost of it already besides its great convenience.

May I be allowed to add that I am in no way interested in the sale of these stoves, and that it will be needless for your readers to send me postal cards asking terms, etc.

Onondaga Co., N. Y. NELSON RITTER.

CONSIDERATION FOR THE SICK.

PERSONS who have had and seen but little sickness cannot appreciate the suffering of a sick person from noise. During an attack of malarial fever, a few years ago, it seemed to the writer as if the members of the family tried to slam the doors, and we thought that if we recovered we should surely teach both old and young of the household to go about their duties with less noise and particularly to open and close doors carefully. The olfactory sense is also keener during illness and we well remember the nauseous sensation caused by tobacco smoke. One member of the family who was absent during the day and whom we dearly loved to have sit with us in the evening, joined us only after supper and after he had smoked his pipe. He was sensitive and we did not care to mention our *then* great repugnance for tobacco, but no doubt it would have been far better to have "spoken out" than to have suffered night after night from the fumes of that dreadful pipe.

Persons in health are too apt to think such persons notional and treat them accordingly. Nervous and notional they are, it is true, but they are entitled to all the consideration in the world and those who care for them should be willing to make every reasonable sacrifice to gratify their desires, however whimsical they appear.

DOMESTIC RECIPES.

MASHED TURNIP.

Pare and boil, adding a few potatoes in time to boil tender with the turnips. Drain, mash, and, if not entirely free from lumps, pass through a colander. Season with pepper and salt and a generous lump of butter.

POTATO SOUP.

Peel and slice 12 medium-sized potatoes, cover with boiling water, cook 10 minutes, drain off the water, add a quart of cold water, an onion minced and a little salt, and cook until the potatoes boil into pieces. Pass all through a colander into two quarts of good soup-stock free from grease. *Simmer* half an hour. Boil half a cup of rice until tender and dry. Put into the soup, season with pepper, salt and two tablespoonfuls of butter, and serve.

BARLEY SOUP.

Two or three pounds of beef from the skin, two pounds of cracked bones, an onion, four stalks of celery, four potatoes, a gallon of water, pepper and salt. Put all into the soup-pot and boil very gently three hours. Wash a cup of barley and boil in a very little clear water 20 minutes. Strain the soup, pressing hard, boil up, skim, add the barley and simmer 30 minutes.

PLAIN TAPIOCA PUDDING.

Soak a cup of tapioca over-night in a little cold water, an hour before wanting add a quart of boiling milk, a coffee-cup of sugar, four beaten eggs, half the rind of a lemon, grated. Stir thoroughly, pour into a buttered mold, cover tightly and set into a pan of boiling water in the oven. Cook from 45 to 60 minutes. Turn out and eat with hard sauce.

VUE DE L'EAU.

Miscellaneous.

FREE TO YOU!

A Beautiful Pearl Shell Necklace and Locket!

Among the beautiful new goods imported from Europe this fall, the **elegant Pearl Shell Necklace and Locket** which is represented by the accompanying illustration, has attracted marked attention. Our engraving is reduced in size, shows only a section of the chain, does not do the goods justice, and, in fact, only a faint idea of the remarkable beauty of this charming Necklace and Locket can be obtained from it. The Necklace is composed of a number of beautiful Pearl Shells jointed with silvered ornaments; the Locket is of enameled pearl set in silver plate. This is not a child's Necklace, neither has it any appearance of cheapness; it is a new and beautiful design, will never tarnish or wear out, and will be admired by all who see it. We now propose to make an **Absolute Free Gift** of one of these elegant Pearl Shell Necklaces and Lockets to every one who desires to possess it. We propose, in order to extend the circulation of our large and beautiful magazine, THE FIRESIDE AT HOME, and introduce it into thousands of new homes, to give a NECKLACE AND LOCKET FREE to every THREE MONTHS' TRIAL SUBSCRIBER. *Read our great offer: Upon receipt of* **Only 25 Cents** *in postage stamps, we will send* **The Fireside at Home for Three Months,** *and to every subscriber we will send one of these Elegant Pearl Shell Necklaces and Lockets Free.* THE FIRESIDE AT HOME is a large and handsome magazine of 32 large 3-column pages, with a handsome cover, elegantly printed and profusely illustrated. It is the largest and finest dollar magazine in the world. Each number contains a complete novel by a celebrated author, many interesting short stories, sketches and poems; many illustrated descriptive articles, very instructive; portraits and biographies of distinguished people; Ladies' Fancy Work, Sermons by leading Divines, Household Recipes, Farm and Garden Notes, Stories, Puzzles and Games for the Young, Wit and Humor, etc. By taking advantage of this great offer you can secure this large and charming magazine for three months (including all the brilliant holiday numbers soon to be issued) and our beautiful Pearl Shell Necklace and Locket—all for only 25 cents! Every lady should send for this great bargain for herself; every gentleman should send and get the magazine for himself and make the premium a present to a lady friend. The two will be sent to different addresses if desired. *Perfect satisfaction guaranteed or money refunded.* As to our reliability, we refer to any publisher in New York, also to the commercial agencies. Send at once, and get the greatest bargain of the age. Address,

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His Mare "MIGNONETTE," was awarded the GRAND SWEEPSTAKES PRIZE, $500, and GRAND GOLD MEDAL, and his Stallion, "VIDOCQ," was specially recommended to receive the Society's GOLD MEDAL.

Wind Mills.

ENTERPRISE

WIND MILL.

Known and sold throughout the world and acknowledged The Best. Simple Durable, Strong. Few Joints. Frictionless Turn Table. Multiplying Ball Governor. All sizes for Rail Road City and Farm Purposes. Every Mill Warranted.

Enterprise Feed Mills

New and startling. For Wind, Horse, Steam or Water Power. Climax Corn and Cotton Cultivators. Pumps, Tanks, &c. Send for *brown* Catalogue

SANDWICH ENTERPRISE CO., Sandwich, Ill.

IMPROVED CALIFORNIA

WIND MILL.

Simple, Strong, Durable. Rosette Wheel and perfectly Self-regulating, avoiding all wearing joints. Also, Steven's Pony Feed Grinder and a perfect Rotary Motion attachment, without gearing, the power being communicated by the lift or up stroke of Pump Rod. Can be used for cutting feed, churning, &c. The best, cheapest and most useful power in the market. Full particulars, circulars, &c., sent free. Address the Manufacturers. CLARK & CO., SYCAMORE ILL.

CHALLENGE WIND MILLS

Victorious at all fairs. Over 7,000 in actual use in every State and Territory of the U. S. It is a section wheel—has been made by the present Co. for ten years; in all that time not one has blown down without tower breaking—a record no other mill can show. We leave it to the public to determine their merits. Mills sent on 30 days' trial. Best Feed Mills, Corn Shellers, &c., &c. Catalogue free.

CHALLENGE MILL CO., Batavia Ill.

COMMON SENSE ENGINE.

Simple, durable, of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3-horse power, $275; 5-horse power, $300; 7-horse power, $375; 10-horse power, $500. These engines fully guaranteed in every respect. Address Common Sense Engine Co. Springfield, Ohio.

News of the Week.

HOME NEWS.

MONDAY, Nov. 7, 1881.

The World's Fair project is having a singular see-saw between New York and Boston. The former city undertook it, and then gave it up. Boston thereupon examined it, and very nearly gave it up. But before this conclusion had been reached, the prospect that Boston would try it seemed to revive it in New York; and when Boston had about despaired of it the news that New York was after it again started the Boston movement afresh. This may not actually have been the way events went on, but there are appearances suggesting that such influences were at work. At all events people in both cities have the project now under consideration, being apparently reluctant either to give it up or carry it forward. The Boston executive committee of thirteen on the World's Fair met Nov. 1, and agreed upon the form of a circular to be addressed to three of the leading representatives in each class of business trade and in each profession. The circular calls upon the gentlemen to organize immediately in the interest of an exhanstive personal canvass among their business and other acquaintances so that the ground may be covered.

Thirty subscriptions of $1,000 each have been made at Cleveland, O., towards the erection of the Garfield monument. Nearly $14,000 in cash has been received by the committee.

Mrs. Garfield, at Painesville, Lake County, O., on the 2d inst, took out letters of administration on the late President's estate. Her bondsmen are W. S. Streator, Internal Revenue Collector, and N. B. Sherwin, Cleveland's Postmaster, both of whom have been General Garfield's life-long friends. The main bulk of the property to be cared for is the house at Washington and the farm at Mentor. There is very little personal property, and the life insurance of $50,000 is equally divided between the wife and family.

On Tuesday, November 8, elections will be held in Virginia, Pennsylvania, Massachusetts, Colorado, Mississippi, Nebraska, Wisconsin, Maryland, New Jersey, New York and Minnesota. Five of these elections will be held for the purpose of choosing a full board of State officers, and Legislatures will be chosen in four Commonwealths. New York will elect four Congressmen; various other officers will be chosen in different States, and constitutional amendments will be voted upon in Nebraska, Wisconsin and Minnesota.

The reductions in the star route service during October aggregated $55,778, making a total since Postmaster-General James began his reductions of about $1,575,000 per annum.

The average yearly income of the public school teachers in Maryland is $260.

Secretary Folger is expected to take charge of the Treasury Department about the 12th inst.

Senator Johnston says that the deficiency in the Yorktown fund will amount to $10,000.

New York is relieved of its apprehensions on the score of water. Copious rains have deluged the Croton supply region, and the stint gates have been raised at the storage reservoir in Central Park. Citizens are now using and wasting water with the usual freedom, and if frost does not lock up the streams too early there need be no fear of water shortage the coming Winter.

Governor Long, of Massachusetts, is first to give the turkey warning that his day of doom approaches. He fixes the 24th inst for Thanksgiving in that State.

The estimates of the Postmaster General encourage the hope that the department will become self-sustaining at no distant day. Estimating expenses at what past appropriations and deficiency bills prove they will be, Mr. James thinks $920,000 will measure the excess of expenses over receipts during the fiscal year ending with June 1883. And if business maintains the present rate of increase even that amount will not be wanted. The post-office department was never before so near self-support.

Lieutenant Governor Weston, of Massachusetts, has given $1,000 for the Garfield professorship at Williams college.

Colonel Dudley, Commissioner of Pensions, has submitted to the Secretary of the Interior a recommendation that Congress be asked to appropriate $100,000,000 for disbursement of his office during the next fiscal year (ending June 30, 1883) in payment of annual and accrued pensions, and also that an immediate deficiency appropriation of $20,000,000 be requested for the purpose of paying all arrearages of pensions to claimants whose cases have been or may be favorably adjudicated during the present fiscal year.

Arrangements are being made by the Postmaster General whereby the mail from this city to Chicago shall reach its destination about a day sooner than it now does. The mail will leave here at 4.35 A. M., arriving at Buffalo at 7.40 P. M. and at Chicago at 9.05 A. M. of the following day. The regular mail train now leaves here at 8 A. M. and reaches Chicago at 7.40 P. M. the second day.

A Newark N. J. Bank has been robbed of $2,000,000 by its former cashier. He has turned States evidence and has involved several others in the crime.

Wendell Phillips has been invited by the Treasurer of the Irish Land League to go to Ireland and advocate "No Rent," but the "silver-tongued orator" declines. He cables a despatch full of sympathy but says his health will not permit him to continue in public speaking to any great extent.

Snow fell in many localities on the 4th. In portions of Chautauqua county it reached a foot in depth. At Mauch Chunk, Pa., the mercury went down to 12 degrees above zero.

Governor Cornell has designated Thursday, November 24, as a day of national thanksgiving and prayer.

The Hon. Hannibal Hamlin, the new Minister from the United States to Spain, with his wife, sailed for Europe in the steamship Illinois from Philadelphia on the 5th. Miss Blaine, daughter of Secretary Blaine, and ex-Senator John Scott and wife of Philadelphia also sailed in the same vessel.

The resignation of the Hon. John W. Foster, Minister to Russia, has been accepted by Secretary Blaine, in the name of the President. The President has not yet decided upon Mr. Foster's successor. For the present the affairs of the Legation will be under the charge of Col. Wickham Hoffman, as Charge d'Affaires ad interim.

Postmaster-General James will retain his place in the Cabinet till the 1st of January, when he will take the direction of a new bank in New York city.

Hoboken, N. J., had a $300,000 fire yesterday. Had the fire companies responded the flames might have been checked before much damage was done, but being volunteers, working without pay, and having been ill-treated by the City Council, two only out of seven companies responded and one of these was made up of one alderman and 25 small boys. The citizens, generally, did not blame the firemen for their non-action. Hoboken may now see the advisability of having thoroughly equipped, well-paid fire companies!

"Wonderful, Wonderful Medicine!"

So exclaims a patient, Rev. J. S. Fesperman, of Statesville, North Carolina. Writing June 2d, 1880, he says: "In the Providence of God I owe my present state of health to your Oxygen. I was near the gate of the grave, and as I believe close to the great portals of eternal life, when I commenced taking what I now consider the greatest of all healing agents, Compound Oxygen. I can not refrain from saying, 'Wonderful, wonderful wonderful medicine!" Physicans and friends had believed that I could not live any length of time, and I am here yet, with my large family of children, and able to walk from three to four miles every morning. I can not speak in terms too high of your remedy." Our Treatise on Compound Oxygen, containing large reports of cases, and full information, *sent free*. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Nov. 7, 1881.

Illinois Embargoes Eastern Cattle.

The following proclamation has been issued by Gov. Cullom of Illinois: "State of Illinois, Executive Department, Springfield, Ill., Nov. 1, 1881. In pursuance of the act of the General Assembly of the State of Illinois, entitled "An act to suppress and prevent the spread of pleuro-pneumonia among cattle," approved May 31, I, Shelby M. Cullom, Governor of the State of Illinois, do hereby proclaim that I have good reason to believe that pleuro-pneumonia among cattle has become epidemic in certain localities in the States of Connecticut, New York, Pennsylvania, New Jersey, Delaware, and Maryland—viz.: in the County of Fairfield, in the State of Connecticut; in the Counties of Putnam; Westchester, Kings, and Queens,, in the State of New York; in the Counties of Lehigh, Bucks, Berks, Montgomery, Philadelphia, Delaware, Chester, Lancaster, York, Adams, and Cumberland, in the State of Pennsylvania; in the Counties of Bergen, Hudson, Morris, Essex, Union, Somerset, Hunterdon, Middlesex, Mercer, Monmouth, Ocean, Burlington, Camden, Glouster, and Atlantic, in the State of New Jersey; in the County of Newcastle, in the State of Delaware; and in Cecil, Hartford, Baltimore, Howard, and Carroll Counties of Maryland; and I hereby, as required by said act, prohibit the importation of any domestic animals of the bovine species into this State from the aforesaid counties in the States of Connecticut, New York, Pennsylvania, New Jersey, Delaware, and Maryland after the 10th day of November inst., unless accompanied by a certificate of health properly signed by a duly authorized verterinary inspector. Any corporation or individual who shall transport, receive, or convey such prohibited stock shall be deemed guilty of a misdemeanor, and upon conviction thereof shall be fined not less than $1,000 nor more than $10,000 for each and every offense, and shall be liable for any and all damage or loss that may be sustained by any party or parties by reason of the importation or transportation of such prohibited stock. (Sec. 4 of act approved May 31, 1881.) In testimony whereof I hereto set my hand and cause the great seal of State to be affixed. Done at the City of Springfield, the day and year above written. By the Governor: S. M. Cullom, Henry Dement, Secretary of State." The above proclamation has been received just as we are going to press.

THE following items of agricultural news are condensed from telegrams from the various points received here from Friday evening, November 4, to this Monday afternoon, November 7: Portland, Me.—General business falling off, and will do so until end of year. The season, however, has been prosperous and profitable, especially in all kinds of agricultural produce..... Boston, Mass.—Demand for wool good, full prices sustained. Sales for the week 2,450,000 lbs including Ohio and Pennsylvania at 43@44c for x and 44@45c for xx and above. Michigan in demand at 42@42½c, though some heavy lots have been sold as low as 41c. Considerable doing for the Philadelphia market in No. 1 fleeces at 45@47c for Michigan and Ohio. Unwashed fleeces ranged for 15@24c for low and coarse; 27@28c for fine, and 28@35c for medium. California wool hard to sell. Beef dull. Pork and lard quiet; flour dull and prices less firm.....Buffalo, N. Y.—Receipts of grain, instead of increasing as usual at this season, are falling off. Owing to a disposition to hold back grain at the West many vessels have had to seek more remunerative business than competing for the small grain freightage. The grain receipts for October were only 6,237,751 bushels, a falling off of 10,000,000 from same time last year—the smallest receipts in ten years. Shipments of grain by canal this year foot up 28,302,872 bushels against 63,278,404 in 1880. Shipments of grain from elevators by railroad from January 1 to November 1 were 19,788,860 bushels, against 24,309,738 bushels in 1880. The small business tracable to railroad wars and consequent close competition, and wild speculation which has prevented grain from coming forward.... Philadelphia, Pa.: The wool market is quiet; holders are firm, however. Cotton quiet, with a shade of improvemnnt. Flour prices are a little off, while wheat prices are slightly stronger. Produce fairly active at good prices. A fair jobbing trade in provisions.....Dayton, Ohio: Favorable reports still come in from the tobacco country. Desirable tobacco remains strong, prices of lower grades have advanced slightly, which is significant.....Cincinnati, Ohio: Reports from tobacco regions say the second crop is maturing nicely. The pork packing season has opened but business is so far light. Corn wheat and flour dull.....Toledo, Ohio: grain market strong; prices firm, with an upward tendency. No 2. red Wabash wheat, $1.33 spot; $1.35½ Dec.; $1.37⅞ Jan., $1.40 Feb. Corn No. 2. spot, 61c. Oats No. 2. 44c.....Louisville, Ky.: Pork packing has not begun, weather being too warm and farmers' prices being thought too high. Tobacco quiet and stationary. The new crop of barley brings 3@5c. more than at this time last year. Provisions firm. Wheat receipts light with a declining tendency in prices.... Detroit, Mich: grain trade light. Wheat crop in Western Mich. is nearly all bought up. Elsewhere half to three-fourths is kept back: but it is largely sold for future delivery. Trade in corn, oats and flour vastly greater than at corresponding time in previous years, while in wheat it is three-fourths less. October was the greatest speculative month in the year—sales 11,000,000 bushels. Scarcity of cars restrict grain and all other trades. Weather and roads bad..... .....

CHICAGO, ILL.—Hogs coming in freely, averaging about five pounds lighter than last year. Packing houses getting under way, but prices of hogs are weak. Receipts of grain comparatively light with a bearish tendency in prices.....St. Louis, Mo.—Pork has dropped. Tobacco weaker. Wheat receipts increasing largely. Weather still inducing corn molding.....Milwaukee, Wis.—Weather still unfavorable, grievously affecting receipts and shipments. The wheat market has taken an upward turn under influence of wet weather, a keen speculative demand and steadier cablegrams, the net advance being 1@1⅛c per bushel. Receipts and shipments of cereals are light. Bad roads are blocking movement of produce.

Cited by the Washington (Ind.) Gazette is the fact that the colts in that locality have a sort of lameness in the joint. J. F. Meyers cured his by anointing it with St. Jacobs Oil.

Rumford Chemical Works.

This is one of the prominent manufacturing concerns of Providence, R. I., whose reputation is world wide. It was organized with a limited capital, but by energetic, persevering industry in the manufacture of their standard preparations, they have grown to a magnitude which is little short of the marvellous. They manufacture in enormous quantities, Prof. Horsford's Phosphatic Baking Powder, made from his Acid Phosphate. This Powder is packed in tin cans of the usual sizes, and is made according to the directions of Prof. Horsford, the well known authority on bread. The names of the inventor and manufacturer of the Powder are a guarantee of its superiority and healthfulness.

Doctors may Disagree

as to the best methods and remedies, for the cure of constipation and disordered liver and kidneys. But those that have used Kidney-Wort, agree that it is by far the best medicine known. Its action is prompt, thorough and lasting. Get a box or bottle and try it.—Eagle.

ATTENTION ARKANSANS!—B. G. Sweet, Walnut, Crawford Co., Kansas, says: "Will some subscribers to the RURAL NEW-YORKER, living in Arkansas, who would be willing to answer questions in relation to their section of the State, as to price of land, climate, etc., kindly send me their addresses by postal card."

We are strongly disposed to regard that person as the best physician who does most to alleviate human suffering. Judged from this standard, Mrs. Lydia E. Pinkham, 233 Western Ave., Lynn, Mass., is entitled to the front rank, for her Vegetable Compound is daily working wonderful cures in female diseases. Send for circular to the above address.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

Dandruff

Is Removed by the Use of Cocoaine.

And it stimulates and promotes the growth of the hair.

BURNETT'S FLAVORING EXTRACTS are the best.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 5, 1881.

BEANS AND PEAS.—Several weeks of slack trade have caused some depression and holders have been forced to meet buyers. Exporters are not operating and the home trade make quite a handle of the reports of foreign beans to come. The season, however, is young and holders of prime do not express any alarm at the weak condition of the market. Green peas plenty at $1.75@1.80 for Wisconsin: Southern B. E. peas doing better: quoted $3.10 per 2 bu. bag.

Marrow beans, prime, $3.40; fair to good, $3.15@3.25; medium, choice, $3.25@3.30, fair to good, $3.00@3.15; pea, choice, $3.25@3.40; white kidney, $3.40@3.45; red kidney, $3.00; old, $2.00@2.85; turtle soup, $1.80@1.90.

Receipts of beans for the week, 10,016 bush.

Exports do. 101 bbls.

BUTTER.—The market is without new features. Trade is much below the usual expectation for Nov. Fine creamery and dairy are quoted as before, but in the opinion of the trade the next turn will be in buyers' favor. Early bought dairies are making money at present rates. Western and under grades of State dull and weak.

Creamery, State and Elgin, choice, 36c.; good to prime, 33@34c.; sweet cream, fresh, 32@33c.; fair to good, 24@30c.; State, June, good to prime, 25@28c.; Western, choice, 31c.; good to prime, 30@32c.; fair to good, 28@30c.; poor, 18@23c.; June, prime, 26@27c.; fair to good, 22@25c.; State firkins, dairies, choice, 28c.; good to prime, 25@27c.; fair, 22@24c.; poor, 18@20c.; dairies, half tubs, choice, fresh, 32@33c.; good to prime, 28@31c.; fair to good, 25@28c.; Welsh tubs, choice, fresh, 31@32c.; good to prime, 27@29c.; fair to good, 24@27c.; poor to fair, 18@23c.; Western imitation creamery, 29@31c.; Western dairy, fresh, choice, 26@27c.; good to prime, 23@25c.; fair to good, 20@23c.; poor to fair, 17@20c; factory and ladle-packed, Iowa, fine June, 17½c.; Ohio and Indiana, June, good, 17c.; late made, good, 16@16½c.; fair, 15@15½c.; poor, 14@14½c.

Receipts for the week, 28,490 pkgs.

Exports do. 2,825 do.

Comparative receipts and exports from May 1st:

	Receipts, pkgs.	Exports, lbs.
May 1, '81, to Nov. 1, '81	922,908	11,699,262
" 1, '80, " " 1, '80	880,950	19,567,255
" 1, '79, " " 1, '79	920,598	22,501,933
" 1, '78, " " 1, '78	815,148	15,940,811
" 1, '77, " " 1, '77	776,601	12,769,988

COTTON.—There is no pointed animation and some one expresses it "it is anybody's market at the moment." The outlook is a little firmer as there are reports of frost damage at some points of the cotton belt.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	9¼	9⅛
Strict ordinary	9 7-16	9 11-16	9 11-16
Good ordinary	10¼	10⅝	10⅛
Strict good ordinary	10 11-16	10 15-16	10 15-16
Low middling	11 3-16	11 7-16	11 7-16
Strict low middling	11 7-16	11 11-16	11 11-16
Middling	11¾	11⅞	11⅞
Good Middling	11 15-16	12 3-16	12 3-16
Strict good middling	12 3-16	12 7-16	12 7-16
Middling fair	12 11-16	12 15-16	12 15-16
Fair	13 7-16	13 11-16	13 11-16

STAINED.

Good ordinary	8¼	Low Middling	10 3-16
Strict good ordinary	9⅛	Middling	11 3-16

Average of futures:—

November, 11.55c.; December, 11.68c.; January, 11.86c.; February, 12.01c.; March, 12.16c.; April, 12.29c.; May, 12.42c.; June, 12.53c.; July, 12.63c.; August, 12.70c.; September, 12.68c.

CHEESE.—The market still has only a moderate attendance and prices do not exceed our last rates. The chief run is upon fine Sept. The home trade is also using late markets and the competition is about all that supports 13c. All low grades of cheese are dull and accumulating.

State fact'y, fine, Sept, 12¾@13c.; good to prime, 11½@

The Fair Number of the **Rural New-Yorker** *(44 pages), which contains a full description of our* **Free Seed Distribution for 1882,** *also an account of the* **$2.000 worth of Presents** *offered to those subscribers who produce the best yields, and our Premium Lists for all who interest themselves in securing subscribers for the Rural New-Yorker, will be sent free to all applicants. Our new Posters are also ready and will be sent free to all. Our friends and agents are reminded that the present is, on many accounts, a more favorable season for securing subscriptions, or the promise of them, than later, when competition is keener.*

The Rural New-Yorker is for the North, South, East and West.

It knows no sectional prejudices. Everybody who is interested in a garden, vineyard, orchard or farm; in new plants, in farm or garden implements; everybody who is interested in Horticulture, and seeking through such means to increase the happiness of life and home, should subscribe. The Rural New-Yorker is the earnest friend of all who love nature and her works.

The first journal to have established an Experimental Farm conducted in the interests of its readers.

The Rural New-Yorker is acknowledged, by those who should know, to have worked a new era in rural journalism. Five Hundred Illustrations from nature annually; the best writers; the best draughtsmen. Ask those who know.

Horses, Cattle, Sheep, Swine, Poultry,

Milk, Butter, Cheese, Diseases of Animals, Bees, Injurious Insects, Grain, Grass, Small Fruits, all Ornamental and Useful Trees and Shrubs are among the prominent subjects treated in its columns.

No matter where you live, you cannot afford to be without the Rural New-Yorker. It is the progressive, aggressive, alert, original, conscientious rural journal of the age. Thousands of testimonials to this effect. Our **Everywhere Reports** are invaluable to the Farmer and Horticulturist. They have proven of great value to them in determining the best time to **Buy** or **Sell.** Our market reports are corrected by a special reporter up to the time of going to press. Our agricultural and general news embraces everything of interest to intelligent readers. Correspondents everywhere. Thirty-second year of its age: Fifth year under its present management. Try it—*Try it*—TRY IT—for one year. It will cost you but $2.00. It may save you hundreds. Try it as a measure of Economy.

The objects of the Experiment Farm of the Rural New-Yorker are to test all kinds of new seeds and to present the results to our readers; to produce new varieties of grain by cross-breeding; to test new farm implements and methods of culture, with a view to producing the greatest yields at the smallest cost; to disseminate seeds of varieties which, from our own tests, have proven of unusual worth among our readers, without cost to them, and thus advance the agricultural interests of the whole country.

The Rural New-Yorker has no personal interests to subserve. It has neither seeds nor plants nor books nor anything whatever to sell. It is conducted purely in the interests of Agriculture and Horticulture and Stock-Keeping. Its tests of plants, seeds, manures, implements, are made regardless of individual interests or those of advertising patrons. It holds the interests of LAND CULTURE as above all others, and its aim is to benefit all who occupy themselves in the culture of land and its attendant industries, either for pleasure, profit or support.

The Rural New-Yorker earnestly labors to instruct the stockman and breeder; to introduce new fruits of improved quality; to make known the beneficent influences of the garden and of trees and shrubs about the home; to increase the comforts, refinement, health, and the general welfare of all who own and cultivate land. It tests all new vegetables, and makes known their value. It tells how to raise them in the greatest perfection. Shrubs and trees, flowers, plants of every description, the methods of cultivation to suit the varied and ever-changing conditions which arise, constitute prominent departments.

The insect enemies which infest our field crops, our fruit trees and small fruits as well as vegetables and flowers, and which seem to be rapidly increasing, are subjects of our most careful consideration, and entomology in general is treated in our columns by the ablest specialists in the country.

The Progress and Development of American Horticulture and Agriculture

are always our earnest endeavor. Such efforts as these have brought the Rural New-Yorker to the position it now occupies. The Price of the **Rural New-Yorker is reduced to $2.00 a Year,** payable *invariably in advance.* We have now no club or second price. It is alike to all. ☞ Send for the Fair Number which explains all.

Address RURAL NEW-YORKER, 34 Park Row, New York.

12½c.; fair to good, 10½@11½c.; poor to fair, 9½@10½c.; Ohio factory, flat, fine mild, 12@12½c.; good to prime, 10½@11c.; fair to good, 9½@10½c.; creamery, partly skimmed, choice, 9½@10½c.; poor to good, 4@7c.; fully skimmed, 2@3c.; full skimmed factory, 2@3c.

Comparative receipts and exports from May 1st.

		Receipts, pkgs.	Exports, lbs.
May 1, '81 to Nov. 1, '81		2,106,929	92,268,507
" 1, '80 to " 1, '80		2,044,490	91,489,026
" 1, '79 to " 1, '79		1,922,483	85,693,341
" 1, '78 to " 1, '78		2,439,248	98,880,022
" 1, '77 to " 1, '77		1,850,153	83,006,250

Receipts for the week, 61,317 bxs.
Exports do. 21,700 do.
Liverpool cable, 58s. 6d.
Steam to Liverpool, 10@15s.

DRIED FRUITS.—There is a steady but small demand for all apples and a better movement in peaches. Prices show no material change, but there are a few buyers at the extreme. Small fruits are steady.

Apples, evaporated, new, 13½@14c.; fair to prime, 12@13c.; N. C. new, sliced, fancy, 8½@9½c.; fair to choice, 6½@8c.; Southern quarters, choice, 6@7½c.; State, old, fine-cut, choice, 7@7½c.; quarters, do. 6½@7c.; small lots, 6½@6¾c.; Ohio and Mich. choice, 6½@7c.; Western, fair to good, 5¾@6¾c. Peaches, evaporated, peeled, old, 35@40c.; unpeeled, new, 18@20c.; N. C. peeled, fancy, 21@25c.; choice, 22@23c.; Ga. 22@23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 8½@9c.; halves, Tenn. 8½c.; quarters, 8½c.; Plums, State, black, 17c.; Southern Damson, 15@15½c. Blackberries, 13c. Cherries, Southern, dry, 19@20c. Raspberries, 28@29c. Huckleberries, 15@16c.

EGGS.—Receipts for the week, 8,006 bbls.; do. last week, 8,383 do. The market is firm for extra-fresh stock and cooler weather gives sellers some independence. Held eggs are slow. Many buyers at this season prefer good limed to doubtful fresh. Some Danish eggs have been shown; they do not compare well with home lots.

Near points, 30@32c.; State and Pa. 27@28c.; Canadian, 25½@26c.; Western, fresh, 26@26½c.; fair to good, 23@25c.; limed State 21½@22c.; Western and Canadian, 21@21½c.

FLOUR.—The week has been unsatisfactory for all dealers. Buyers seem to have been in expectation of a sharp decline, and were partly correct. Prices dropped 5@10c. ₱ bbl. daily and all wholesale prices are weak at the close.

No. 2, $3.50@4.40; State and Western, superfine, $4.05@5.25; city mills, extra, $7.00@7.20; Spring wheat, extra, $5.25@5.65; Spring XX and XXX, $5.75@6.75; patents, $6.50@8.50; Ohio round hoop shipping, $5.60@6.00; trade brands, $6.25@6.75; St. Louis extra, $5.70@6.10; do. double extra, $6.15@6.60; do. family, $6.65@7.00; Southern extra shipping, $5.35@6.25; do. XX and family, $6.40@7.25. Rye flour, superfine, $5.20@5.50; buckwheat flour ₱ 100 lbs. $3.20@4.10. Corn-meal, Brandywine, ₱ bbl. $3.80@3.85; do. Western, $3.25@3.75.

Receipts of flour for the week, 120,931 bbls.; corn-meal 4,515 do.

Exports of flour for the week, 45,589 bbls.; corn-meal 3,475 do.

FRESH FRUITS.—A good many sound lots of apples have been hastened forward and the market feels their weight; few lots exceed $3@3.50 ₱ bbl. Pears are irregular; they have had a marked long season. Grapes steady. Cranberries have lost some of the excitement that last ruled and prices are lower.

Apples, Baldwin, State, ₱ bbl. $3@3.25; Greening, State, $3@3.25; Jersey, ₱ round hoop bbl, $3; N. Spy, State, $3@3.12; mixed lots, do. $2,50@3; King, do. $3.50@4.00; Phœnix, Jersey, ₱ round hoop bbl. $2.75@3. Pears, Sheldon, ₱ bbl. $4@7; Duchess, $3.50@5.00; Lawrence, $3@4; Vicar of Wakefield, $2.50@3.50; cooking, $2.00; Boston bxs, $1@1.50. Quinces, apple, prime to choice, ₱ bbl. $5@5.50; No. 2, $3@4. Grapes, Iona, State, case of 18 3-lb. bxs, $3@5.50; bskts, ₱ lb. 9@10c.; Catawba State, case of 18 3-lb. bxs, $3.50@4; bskts, ₱ lb. 7c.; Diana, bskts. 5½@6c.; Concord, bskts, 2½@3c.; Isabella, bskts, 4@4½c. Cranberries, Cape Cod, fancy, large, ₱ bbl. $10; prime to choice, $8.50@9.50; good to prime, $8@8.50; poor to fair, $6.50@7.50; frosted $3@3.50; ₱ crate, $2.75@3.25; New Jersey, fancy, $3; good to prime, $2.50@2.75; fair to good $2.25@2.50; poor to fair, $1.75@2.25; frosted, 75c.@$1.25.

Old peanuts are in small supply and held very firmly. New are generally inferior in quality; extra prime quoted at about 6¼@6½c. and common at 5@5½c. The crop is thought to be scarcely one-third that of last year. Hickory nuts plentier and declining. Buyers are generally refusing to pay above $1.50 for choice State lots. Chestnuts about steady.

Peanuts, Va., hand-picked, ₱ lb. 7¼@7½c.; fancy, 6¾c.; extra prime, 6½c.; good to prime, 5½@6¼c. shelled, 5@6c.; pecan nuts, 9@11c.; hickory, shell-bark, Northern, ₱ bu. $1.37@1.62, Western, $1.37; chestnuts, Southern, $3.50@4; Northern, $4.50@5.50.

GRAIN.—The upward tone of all important cereals seems to be silenced and as wants are moderate it is not unlikely that later combinations will soon form to improve the movement in export specialties.

Wheat, Spring, $1.25@1.41; Spring No. 2, $1.38@1.40; red Winter No. 2, $1.42@1.43½; red Winter, $1.30@1.45; white Western and State, $1.30@1.41. Rye, $1.00@1.05; Oats, white No. 1, 53½c.; No. 2, 51½c.; No. 3, 49½c., mixed, No. 1. 49c.; No. 2, 48@48½c.; No. 3, 45@47c; Corn, Western mixed, 65@70c.; No. 2, 69@69½c.; yellow, 69@71c.; white, 70@73c. Barley, Canada No. 1, $1.11@1.13; do. bright, $1.11@1.16; State 4-rowed, 97½@$1. Buckwheat, 93@95c.

Receipts for the week, wheat, 800,400 bush.; corn, 737,560 do.; oats, 158,316 do.; rye, 56,900 do.; malt, 35,120 do.; barley, 220,700 do.

Exports for the week, wheat, 616,300 bush.; corn, 434,700 do.; oats, 2,524 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Oct. 22. bush.	1881. Oct. 30. bush.	1879. Nov. 1. bush.
Wheat	20,857,536	19,108,102	24,822,679
Corn	27,970,474	19,364,145	11,615,264
Oats	4,653,278	5,033,379	3,358,057
Barley	2,523,603	2,611,581	4,360,004
Rye	1,210,863	897,187	967,513

HAY AND STRAW.—Exports for week 875 bales. With a better general offering the demand is not so sharp. Only strictly choice will bring the last top rates. Under sorts of timothy are a shade lower; straw tending lower.

Prime Timothy hay, ₱ 100 lbs., $1.05@1.10; medium Timothy, 80@95c.; shipping grades, 65@70c.; clover mixed, 70@80c.; clover, 60@65c.; Straw, long rye, 75@80c.; short rye, 50@60c. oat and wheat straw, 40@45c.

HONEY.—Cooler weather gives more tone and firmness to the market. The offering however is large and prices are quite full.

HOPS.—The Producers' Price Current says: "Early in the week the market had a firm tone and there was a fair degree of life in the trade. For a day or two past very little business has been done and the market has lost a little of its buoyancy. Advices from the country report a few sales of very choice State hops as high as 30c. It is possible that that price could be made here for a very fancy article, but it would be quite extreme. Brewers are buying very sparingly. Exporters have to go to the interior for the quality to suit them and these prices are above their limits. Old hops are scarce, in good request by ale brewers and firm. London advices report a light consumptive demand; American quoted 140@180s."

Crop of 1881, choice, 28@29c.; good to prime, 25@27c.; fair to good 22@25c.; eastern, 18@27c.; 1880, good to prime, 18@22c.; poor to fair, 10@15c.; 1879 fair to prime, 8@15c.

Receipts for the week, 4,731 bales,
Exports for the week, 1,969 do.

MILK.—Commission sold at a range of $2.50@3 ₱ can of 40 qts; average, $2.68.

POULTRY AND GAME.—Fine poultry is doing well; poor or ordinary lots dull and cheap. Thanksgiving Day will be celebrated November 24. Turkeys must be in fine condition for quick sales. Plump, handsome lots, regardless of size, is the rule. All property should be here three days before the red-letter day.

Turkeys, Phila. prime, 16@17c.; J'y 14@15c; State and W'n d.-p. 13@14c.; scalded, 12@14c. Chickens, Phila. spring, 14@17c.; Bucks Co. do. 14@15c.; Jersey, do. 13@14c.; State, do. 12@13c.; Western, do. 11@12c. Fowls, Phila. dry-picked, 13@14c.; Bucks Co. 12@13c.; Jersey, 12@13c.; State and Western, dry-picked, 11@12c.; scalded, pr, 11@12c.; inferior, 10@11c. Ducks, Spring, Phila. ₱ lb., 16@17c.; Jersey and Bucks Co. 15@16c.; State, 15@16c.; old, fair to good, 10@12c. Geese, Phila. dry-picked, young, 13@14c.; do. old, 10@12c.; State and Western, old 8@9c. Squabs, white, ₱ doz. $2.75@3; dark, $1.75@2.

With liberal arrivals of dressed, cooped stock is too abundant for regular or even good prices.

Chickens, Jersey, spring, ₱ lb. 12@13½c.; State and Penn. 11@11½c.; Western, and Southern, 9@10c.; Fowls, Jersey, State & Penn. 10½@11c.; Western and Southern, 8½@9½c. Roosters, old, 5@6c. Turkeys, J'y and Penn. 11@12c.; Western, 9@11c. Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 60@75c.; Western, 45@55c.; Southern, 45@50c. Geese, Jersey, $1.50@1.75; N. Y. and Penn. $1.25@1.50; Western mixed $1@1.25; Southern, 75c@$1. Pigeons, large, strong birds, 30c.; young, 25c.

GAME.—Supplies have been in bad shape most of the week. At the close there is a promise of a better trade.

Quail, ₱ doz. $2.50@3; grouse, choice, ₱ pair 75c@$1; soft, 40@60c.; partridges, State and Western, 75@90c.; Eastern & Minn. 60@70c.; soft, 40@50c.; woodcock, choice, 65@75c.; inferior, 50@60c.; English snipe fresh-killed, ₱ doz. $1.50; plover, do. $1.25@1.50; rabbits, ₱ pair, 30@40c.; venison, Minn. short saddles, ₱ lb. 15c.; Western, 13@14c; whole deer, 10@12c.

PROVISIONS.—Prices have fallen for all hog products and with free deliveries imminent there is no immediate hopeful outlook.

Pork, prime mess, ₱ bbl. $17@17.25; extra prime, ₱ bbl. $16@16.25; Western mess new, $17.50@17.75. Lard, steam Western, ₱ 100 lbs., $11.30@11.35; prime city, $11.25@11.30. Hams, smoked city, ₱ lb. 13@13¾c.; pickled Western and city, 11@11½c.; Shoulders, smoked city, 8¾c.; pickled, 7½@7¾c. Rib bellies, pickled, 9¼@10c. Bacon, long clear Western, 9½@9¾c. Beef, Western mess, ₱ bbl. $12; packet, $14; India mess, ₱ tce. $25@27. Beef hams, ₱ bbl., $18.50@19.

Receipts for the week—Beef, bbls. and tcs. 1,475; pork, bbls 5,500; cut-meats, pkgs 22,000; lard, do. 18,000.

Exports for the week—Beef, bbls. and tcs. 2,100; pork bbls. 3,550; cut-meats, lbs. 4,096,008; lard do. 3,869,928.

RICE.—Advices from the milling centers note the receipt of rough as in bad shape, and that in dressing there is a greatly diminished yield and a large proportion of low quality. All desirable parcels sell quickly at full rates. East India styles are selling freely in bond, but neglected for home use. The quotations:

Carolina and Louisiana, common to fair, 5¾@6¼c.; good to prime, 7@7¼c.; choice, 7¾@8c.

SEED.—Clover seed is in little better jobbing demand; quoted at 9@9½c. Timothy seed is strong and in demand; quoted at $2.95@3.15. Flax seed has shown a brisk business at the advance that has been quoted for a day or two, and some 60,000 bushels have been taken at $1.55@1.60.

SUGAR.—Quotations are for:

Cut loaf, 10¾@10¾c.; crushed, 10¾@10¾c.; powdered, 10¼@10¼c.; granulated, 9⅞@—c.; mould A, 9¾@—c.; confectioners' A, 9⅜@—c.; standard A, 9¼@—c.; off A, 8¾@9⅜c.; white extra C, 8¾@8¾c.; yellow extra C, 8@8¼c; C, 7⅞@7¾c.; yellows, 7@7⅜c.

TEAS.—The following prices at N. Y.:

Hyson, common to fair	20 @24
Superior to fine	28 @32
Extra fine to finest	35 @40
Choicest	Nominal
Young hyson, common to fair	15 @20
Superior to fine	23 @32
Extra fine to finest	36 @45
Choicest	55 @68
Gunpowder, common to fair	20 @26
Superior to fine	30 @40
Extra fine to finest	55 @55
Choicest	62 @75
Imperial, common to fair	21 @25
Superior to fine	30 @36
Extra fine to finest	40 @45
Choicest	50 @55
Hyson skin to Twankay, common to fair	14 @16
Superior to fine	17 @18
Extra fine to finest	Nominal
Uncolored Japan, common to fair	15 @20
Superior to fine	28 @35
Extra fine to finest	40 @43
Choicest	37 @55
Oolong, common to fair	16 @21
Superior to fine	25 @35
Extra fine to finest	40 @50
Choicest	60 @75
Souchong and Congou, common to fair	16 @20
Superior to fine	25 @35
Extra fine to finest	40 @50
Choicest	60 @75

TOBACCO.—Market generally quiet.

VEGETABLES.—Exports of potatoes for week 2,345 bbls. Potatoes are in large supply and favor buyers. The arrivals of Irish potatoes from Ireland and Wales via Liverpool have amounted thus far to 3,000 sacks. They consist chiefly of two varieties called Champion or White Rock, and Rose. The former are of medium size with deep eyes, resembling the White Peachblow in shape, but having a yellowish color. The Rose are smooth skinned and about the same shape as our Early Rose but of different color. They are grown in dark soil and present a dirty and rather unattractive appearance, but are said to cook dry and mealy. Some sales of the White Rocks have been made at $2@2.25 ₱ sack, but there is very little demand for them as yet and most lots have been put in store. The Rose are held at $2.50. Sweet potatoes are held firmly but are not active; some fancy Delaware river marks cannot be bought under $3.75 but large sales can be made above $3.50.

Potatoes—Early Rose, Eastern, ₱ d.-h. bbl., $2.75@3; State, $2.50@2.62; do. bulk, ₱ bbl. $2.50; Prolific, Eastern, $2.50; Snowflake, State, d.-h. $2.50@2.62; do. bulk, $2.50@2.62; Burbank, d.-h. $2.50@2.62; bulk, $2.50; Peerless, State, $2.12@2.25; Mercer Eastern ₱ d.-h. bbl. $2@2.25; sweet potatoes, Va. yellow, ₱ bbl. $3@3.25; Del. River, $2.50@3.62; Jersey, $2.75@3.25.

Garden truck fairly firm.

Onions, white bulk, ₱ bbl. $1; yellow, $2.50; red, east, $2.25; red, Chester, $2.25; red inferior, $2; squash, Marrow, ₱ bbl., $1.50@1.75; Hubbard, $1.75@2.25; cabbage, ₱ 100, $6@12; beets, L. I. ₱ bbl. $2@2.25; carrots, $1.50; turnips, Russia, $2@2.25; cauliflower, fancy, ₱ bbl. $5@5.50; average quality $2@2.50; inferior, 75c@$1; pumpkins, ₱ 100 $4@8; celery, ₱ doz., $1.25@2.

WOOL.—The market is ruling quiet but firm. Manufacturers are buying small lots to keep up assortments, but refuse to stock up largely for future requirements at present prices. Holders are confident of being able to sustain the market at current rates, but are not generally anticipating any material advance. Small lots of California Fall clip arrive, but there is little demand for them; quoted nominally at 18@23c. for lambs' and 14@18c. for Fall. Texas Fall generally quoted at 18@23c. according to grade and condition. Pulled wool steady and in very moderate demand.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Nov. 5, 1881.

BEEVES.—Receipts for the week, 12,000 head; do. last week, 15,825 do. Compared with Wednesday's market drovers report very little if any change in common natives, Texans or Colorados, but medium to prime natives a little stronger—in some cases $1 per head and in others nearly ½c. ₱ lb. Buyers and sellers are hopeful of a material change in the dressed beef market which will soon be felt at the stock yards for the present supply under ordinary circumstances would not be excessive. The transactions in Texans and Colorados were at 7@8¾c. to dress 55 lbs.; poor to medium natives 7¼@9¼c. to dress 54@55 lbs. and fair to choice do. at 9½@12¾c. to dress 56@57 lbs.

SHEEP AND LAMBS.—Receipts for the week, 37,448 head; do. last week, 40,837 do. Trade has been light but the weather is favorable for holding and sellers were not anxious to realize. Sheep range 3¼@5¼c; lambs, 5@6½c.

SWINE.—Receipts for the week, 29,387 head; do. last week, 32,781 do. The feeling is better as more hogs needed for city use with cooler weather; corn fed quoted 6@6¼c. ₱ lb.

New Jersey pork, 8@9½c.; city dressed, 8¼@8½c. Pork tenderloins, 11c.

MILCH COWS.—The demand is good for all decent stock. State cows by the lot have sold at $45@55 ₱ head; singles, $70@80.

VEAL CALVES.—Market firm and active at extreme ly good rates.

Hog-dressed country, choice, 13c; fair to good, 11@12c; grass, 5½@6c; live calves, N. J. prime to choice, 9¼@9½c.; do. State, prime to choice, 9@9¼c.; fair to good, 8¼@8¾c.; poor to fair, 6@8c.; Mount Hollys, 7@9¾c.; buttermilks, 4@4½c.; grassers, 2¾@3½c.

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For the Young.

FARMING FOR BOYS AND GIRLS. No. 39.

HENRY STEWART.

The Potato.

THE potato is one of the important farm crops. It furnishes a part of the daily food of nearly every civilized person and it is the material out of which a large quantity of starch, gum and alcohol are manufactured. The potato belongs to a large family of plants called by botanists *solanaceæ*, and among which are some curiously diverse kinds of plants. The tomato belongs to the same family as the potato, and so does tobacco. The deadly poisonous plant, nightshade, is also related to the potato, and the family likeness of all these plants exists in the similar formation of the flowers or blossoms. One may notice this in the tomato and the potato as an example of the way in which plants are classed by botanists by this test. It is considered by some persons, and wrongly, that the potato tuber is the seed of the plant. The seed is borne upon the stalks and is contained in small round green balls or seed vessels. The tubes are enlarged stems, and the eyes are simply buds, which, when they sprout and grow, produce stems and leaves in a manner similar to that of many other plants.

The potato is a common farm crop, and when properly grown is very profitable. It, however, rarely receives the attention which it deserves. The average yield amounts to no more than 75 bushels per acre, while with good care 150 bushels may be grown with ease, and in many cases 300 bushels per acre are produced.

The potato thrives upon any kind of soil except a wet one. Sandy loam and gravelly soils produce the finest qualities, the tubers being of high flavor, and containing a large proportion of starch, are dry and mealy when cooked. Clay soils when well prepared will yield good crops, and well-drained black swamp lands produce a fine quality and above an average quantity. This crop requires a deeply-plowed and mellow soil that has been manured the previous year. A corn stubble or a clover or grass sod is most suitable, as the decomposed manure, or the decaying sod, provides the most acceptable food. Fresh manure is hurtful in two ways; it encourages the grubs of beetles which lay their eggs in the manure, and it causes the skin to become rough and scabby in patches, which greatly spoils the appearance and value of the crop.

Fall plowing of the land is of advantage, and if fresh manure is of necessity to be used, it should be plowed in at that season. In the Spring the ground is cross-plowed and this mixes the decayed manure with the soil in a thorough manner. Fall plowing is beneficial in another way, in that it turns up the insects from their burrows in the soil, where the watchful eyes of the crows and other birds, and skunks and other animals, soon discover them.

It is a mistake to suppose that the frost injures the grubs and other insects that are in the soil. These are doubtless paralyzed to some extent by the cold and are less able to escape their many and active enemies, but a few hour's warm sunshine restores them sufficiently to enable them to again burrow in the soil and hide themselves, and the hardest frosts do not occur at the season when plowing can be done. But these and other insects are not killed by the severest frosts, being only rendered dormant, to awake and return to active life again in the Spring. In dealing with our insect enemies it is necessary to learn and understand their habits, and we shall then be able to strive with and conquer them with greater ease and effect.

Seed potatoes are usually selected from the smallest that are sorted out as unsalable. There is scarcely any difference to be noted between the product from small or large potatoes, and even the peelings of potatoes will produce as good a crop as large cuttings, if care is taken not to injure the buds or eyes. The flesh of the seed may yield a little nutriment to the plant, but if the soil is sufficiently good, that will supply the young roots, and the small amount of food that can be procured from the seed is of very little account. Nevertheless, it is very useful and interesting for boys to try for themselves how this crop may be grown under various methods, for what we learn by or through our own work and experiment is of much more use and value to us than anything we may be told or may read of.

Potatoes are much benefited by a moderate application of fertilizer in the drill or the hill; superphosphate of lime, wood ashes, plaster or rich compost scattered about the seed, but not placed directly upon it, start and produce a vigorous growth. When planted in drills, these are usually made about thirty inches apart, and seed dropped about eighteen inches apart in the drill. When planted in hills the distances are about twenty-seven inches each way. The soil should be kept well and frequently stirred, and all weeds should be destroyed when they are small and easily killed. This saves much after labor. When the plants are in blossom all deep cultivation should cease, because then the young tubers are forming and must not be disturbed.

Potatoes "sport" or vary in character greatly, but they do not mix or become crossed in the soil. Crossing can only occur through the fertilization of the blossoms, and the changing of the character of the seed in the seed balls or real fruit of the plant. New varieties are produced chiefly by sowing this seed, and every seed may produce a distinct kind of potato; they are also produced to some extent by the "sporting" or varying of the character of the tuber by accident in some way we cannot understand. The Late Rose was thus produced among a crop of Early Rose, and other instances of the same kind are known.

There is no other crop which can be made of greater interest to a young farmer, both in observing its manner of growth, in studying its peculiarities, and in trying to produce new and valuable varieties. The original home of this plant is Chili in South America, from whence it was brought to Virginia and from thence taken to England where it was long grown as a curiosity and only for food after many years of very partial cultivation. It is now one of the chief necessaries of life.

KINDNESS TO FATHER AND MOTHER.

"Oh, wad some power the giftie gie us,
To see oursels as ithers see us."—BURNS.

I SOMETIMES think that it would be a good thing if we could realize how very ugly our actions are sometimes, but then perhaps we would only feel sorry and go on the same. A while since I called on a neighbor—a frail little woman. Her oldest girl had gone to school; another had a felon on her finger so she was unable to do anything, while the third, a girl of twelve, was too lazy to do anything. The mother had done the washing that morning and churning had to be done before supper. She did not call her twelve-year old to help churn or bring wood or do anything. Another time I called on a woman who had a family of ten to do for. Her youngest child was two months old. The mother was trying to send all her girls to school but she was weak and became weary so easily. I told her there was no great hurry about her girls going to school as they were well on in their studies, and advised her to keep one of them at home. While we were talking they came home. I told them what we had been talking about and they at once offered to stay and assist their mother. They were such a help to the mother whose strength returned and she no more looked so weary.

The mother in the first case soon had an attack of fever which nearly cost her life. Was either place among the RURAL's boys and girls? I hope none of them were there. Ah, children, be kind to mother! No one can ever take her place! No one will ever love or care for you as she does, so take care of her and help her when she needs your help. I do not want boys and girls to have all work and no play, but I want them to remember that they are no better than their parents. If you are able to have servants to wait on you, it is not so bad, but don't make servants of father and mother. One of the brightest thoughts in my memory is of the dear old father on his death bed saying, "She's been a good little girl to me." It is worth more than money to me. No kind act is ever regretted, let it be done to whom we will; therefore, children, let us go on together helping one another in word and deed, sharing one another's tasks as well as sugar plums, and we will be as nearly happy as we can be in this world.

MAGGIE W. THOMAS.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK:—We live at an elevation of 7,500 feet above the level of the sea. The days are warm, the nights cold. Our Winters are not near as cold as in Denver. The thermometer sometimes gets down to 15 or 20 degrees below zero, while in Denver it sometimes falls below 30. We have considerable wind in Fall, Winter and early Spring. We have had little experience in vines or orchard fruits; all we know is what we read, and if we give the opinions of others what shall we say? they are so numerous and contradictory. We tried grapes several years since; one poor little vine survived three years, or until the locusts took it. We set out four grape vines last Spring, two Concords, one Lindley and one Merrimac. They have all done well so far, but we can tell better another year. We set out one little quince last Spring, which bids fair to do well. We shall continue to try fruits until we are sure we cannot grow them here. Thanks for the Pyrethrum roseum seed. They came too late for this year, but we will try them in a hot-bed in the Spring. You requested us to send you a drawing of the seed drill we made. We have had to learn to draw first, but now think we shall be able to send one soon. Yours, ALICK TAYLOR.

Deer Valley, Col.

[It is not necessary that you should excel in drawing in order to send us the outlines of the drill. A rough sketch will do, though, of course, you are to be encouraged in exact drawing.—U. M.]

DEAR UNCLE MARK:—Please include me as one of the Horticultural Club. I sent you a bouquet and some Minnesota plums some time ago, but was taken sick and could not write. The editor of the RURAL requested subscribers to say what part of the paper they would like improved, I would like to see a little *more room* given to the Cousins, for you don't know what a disappointment it is to wait all the week for the dear old RURAL and then find that the poor Cousins are crowded out. Gen. Grant did not treat his relatives that way! I have thirty bushels of lovely pinks and my celery is splendid; but the Red Bud did not grow. How would it do to have the Christmas number devoted to the Cousins? Your niece.

SUSAN MAUDE CULLEN.

[I am glad that the Cousins are becoming so interested in the Youths' Department and want to see it every week. I shall endeavor to have it appear regularly if possible, but sometimes we have to give way to the "big folks," who have so much to say. Many thanks for the invitation to visit your St. Paul home. —U. M.]

New Members of the Club for Week Ending Nov. 5.

Berty W. Park, Maybelle M. Park, Minnie White, H. L. Gilchrist, Willard B. Cole, B. D. Niles, Josie A. Johnson, Flora Anthony, Cora Anthony, Mary Lahey, Annie Lahey, John F. Lake, Ada M. Hamilton, Edith C. Ransom; T. S. Swarm, Anna L. Farr, Phebe Leikeman, George Grover, Lulu Morse, Mary Stonebraker, Carrie Wheeler, Carrie Spooner, Katie Henri, Hettie Fuller, Inez E. Shiedler, M. McConkey, Eddie C. Jones, Allen Martin, Mate C. Thurlo, Annie Winfrey, Mary Cotta, Charles Cotta, Kate E. Clapper, Minnie Kemper, M. J. Blakeslie, Susan Maude Cullen, Amy B. Powers, Ida Carter, Bertha Staley, Etta Child, Juddie Child, J. R. Peebles, T. J. Beebles, Ella Turner, E. B. Shaffner, Etta Shaffner, Clara Yarner.

The Puzzler.

HIDDEN MOUNTAINS.

1. You must not build a dam, sir.
2. Sara, rats will bite fearfully.
3. St. Euer, if feed is given out let's know.
4. Are you alive, Suv? I used to think not.
5. Mamma, Una loads the gun.
6. Yes, Ina is a boarding-school miss.
7. I made blackberry brandy.
8. Has it come at last?
9. Popoe ate pet Lily's pigeon.
10. Get me a pine bur, Alice.
11. An Indian scalps his victim.
12. You and Essie are invited.
13. I landed at Hong Kong.
14. So valentines are out of date.
15. You must go to Lima.
16. Do please me, Rose.
17. Pap, I consider it good.
18. Leb! anonymous letters are vile.
19. Ah, Sequa, late I rise now-a-days.
20. That topic, Hincha, I never argue on.
21. Is Al coming home soon?
22. Major Ullos killed a snake.
23. Are qui parsed like quoi?
24. The direction was "Saco to Paxim."
25. I played tic tac on ice.

☞ Answer in two weeks. LITTLE ONE.

TRANSPOSITION.

No ensdrif dink rowd thawoers nile
Had tills hertawos elpnis mane
Rhee dants kile ratss hatt reev hines
Ni vealnes laticecs marf.
Ot herce eth ghints fo golon nad owe
Hichw tormals teem rewhere hety go.

☞ Answer in two weeks. PANSY.

A FRACTIONAL PUZZLE.

One-seventh of mercury; one-seventh of camphor; one-seventh of sulphur; one-tenth of chloroform; one-ninth of chamomile; one-eighth of magnesia; one-ninth of glycerine. Take one from each and form a sort of medicine. LITTLE ONE.

☞ Answer in two weeks.

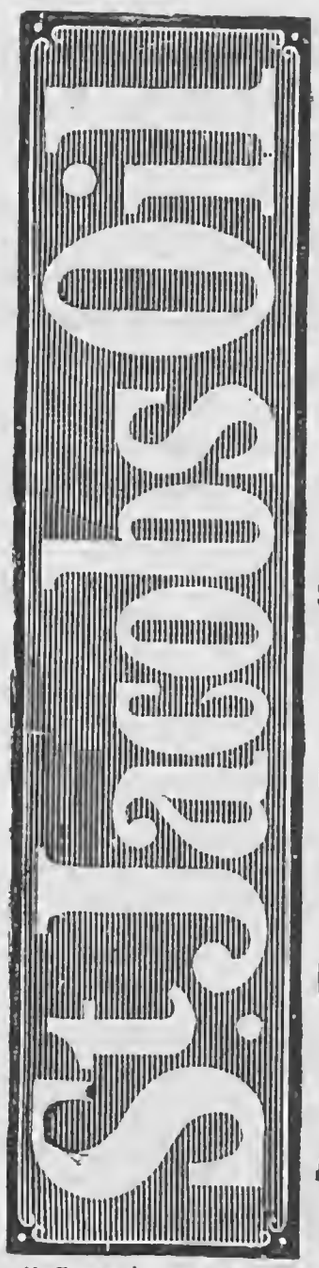
PUZZLER ANSWERS, Aug. 20.

HIDDEN HOUSE ARTICLES.—1, Sofa; 2, settee; 3, lounge; 4, trunk; 5, poker; 6, shovel; 7, tongs; 8, platter; 9, what-not; 10, bracket; 11, broom; 12, brush; 13, tub; 14, funnel; 15, mouse-trap; 16, wisp; 17, cabinet.

CROSSWORD ENIGMA.—Pomegranite.

Miscellaneous.

An Elkton, Md., paper mentions the case Mr. T. Deenen, of that place, who suffered severely with rheumatic pains until he tried a bottle of St. Jacobs Oil, which completely cured him.—Indianapolis (Ind.) Journal.



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"The only two men of the present century who knew what they desired and willed it strongly," says an English critic, "have been Bismarck and Cavour. The one created Italy, the other Germany."

Ex-Senator Timothy Howe, of Wisconsin, who at this writing seems destined to have a place in Arthur's Cabinet, is troubled with an asthmatic affection, for which he has recently sought relief at the Hot Springs of Arkansas.

The Earl of Pembroke, who is possessed of considerable humor, has just issued the following notice:—"Wilton House. The Earl of Pembroke begs to inform the gentleman or gentlemen who lately shot some of his Canada geese that the common tame goose of this country affords quite as good sport to the shooter and is far better eating."

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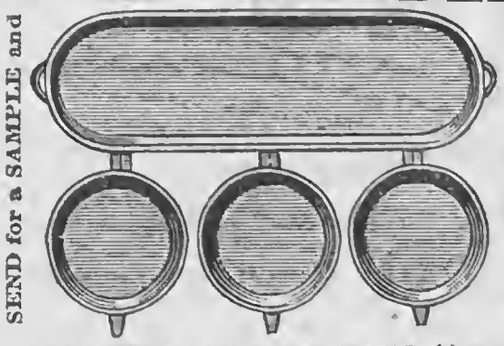

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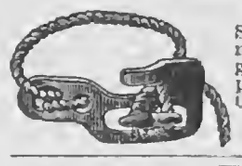

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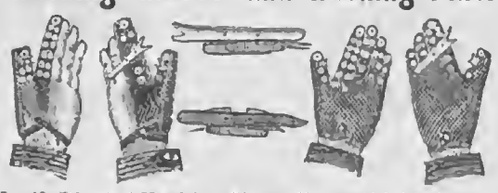

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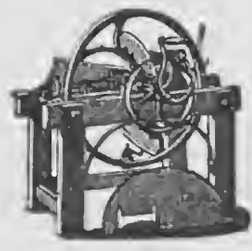

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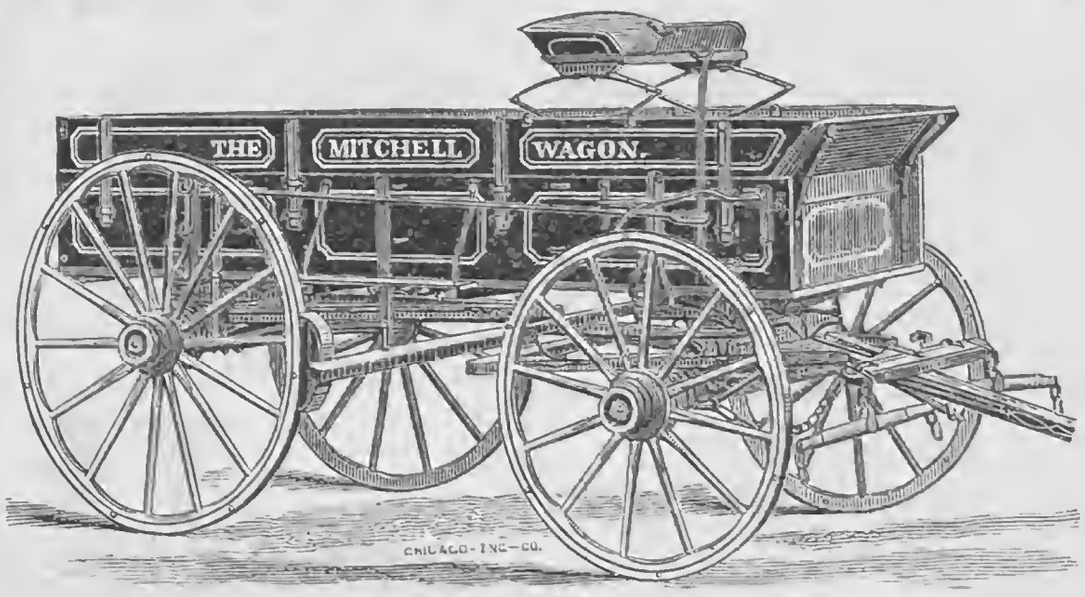

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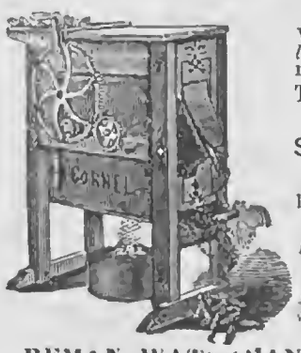

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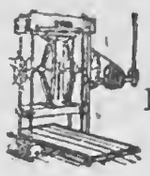

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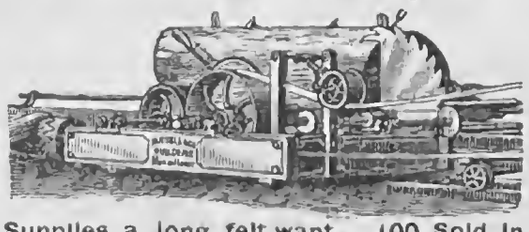

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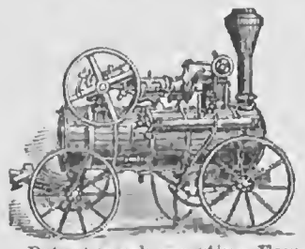

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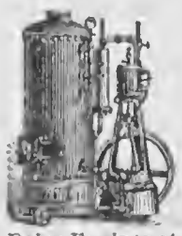

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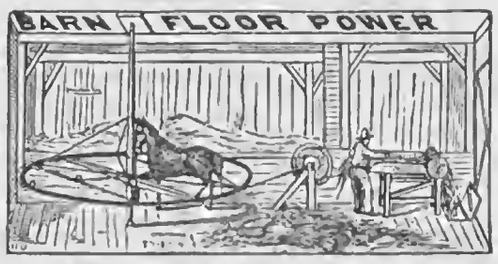

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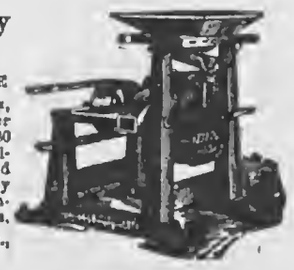

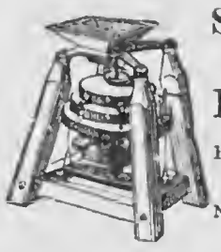

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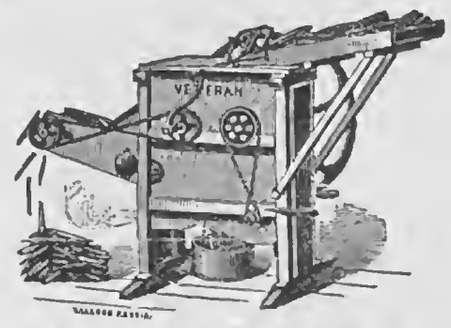

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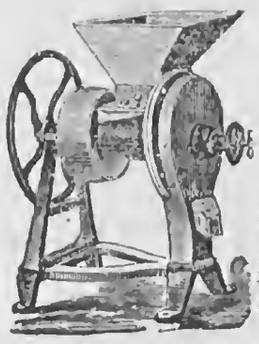

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Vol. XL. No. 1660.} NEW YORK, NOV. 19, 1881. {PRICE FIVE CENT $2.00 PER YEAR

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Field Crops.

WHITE FOUNTAIN WHEAT.

We herewith present an engraving from life of White Fountain Spring Wheat, the original of which was sent to us by Prof. A. E. Blount of Colorado. It has been cultivated in a small way at the Rural Farm as a Winter wheat, and, though late, we have some hopes it may yet prove valuable as a Winter wheat. Mr. R. Parkhurst, of Montana, sent us several heads of a wheat which he said was there called "White Aowse," as we read it.

Fig. 518.

Our readers may remember that we remarked upon the unusually large number of grains in a breast, many of which contained five and a few seven. The heads so closely resemble those of White Fountain that we believe them to be the same. The following note has since been received from Mr. Parkhurst:

"You slightly mistook the name of the wheat I sent you. Instead of White Aowse, it is White Towse. It is a Spring wheat." At your request Prof. Blount kindly furnishes the following information:

"White Fountain (Spring wheat) was received from Ohio last year. The seed received was by no means attractive—soft, dark and very light and shriveled. It is a pedigree variety, having been improved by selection. In Colorado as a Spring wheat it succeeds admirably, producing from four ounces sown 101 pounds of clear hard and beautiful grain. Smooth head, white chaff and stiff straw."

We have only to add that we commend a trial of this wheat to our friends of Colorado Montana, and of Spring wheat growing sections generally. Yet we can furnish no information as to where seed can be procured, beyond giving the addresses of the two gentlemen above named. They are Professor A. E. Blount, Fort Collins, Colorado; R. Parkhurst, Stevensville, Missoula Co., Montana.

NOTES FROM THE RURAL FARM.

Tests With Leading Varieties of Sweet Corn.

All of the kinds remarked upon below were planted May 9, one foot apart in drills four feet apart. No manure was used. The chief object of the experiment was to ascertain the best kinds for succession, so as to give a constant supply of tender ears from the time of the earliest to ripen until frost.

Narragansett was in tassel		July	10
Early Minnesota	"	"	10
Moore's Early Concord	"	"	15
Triumph	"	"	17
Tuscarora	"	"	10
Hickox	"	"	19
Asylum	"	"	22
Evergreen	"	"	25
Mammoth	"	"	26
Black Sugar	"	"	26
Egyptian	"	"	26

Early Narragansett and Minnesota were ready for the table July 20, though the ears were small and imperfect—those of Minnesota being rather more matured. The plants were four feet high to the tip of the tassel. There seem to be two or three days in favor of Early Minnesota. The ears are ready for cooking as soon as the silk browns; while with Narragansett the ears are not ready until the silk is blackened. Both of these bear but one ear of from eight to twelve rows to a stalk. These were the only kinds in use to August 11.

Moore's Early Concord was then ready. The tassel of this kind is in bloom at the same time that the silk appears. It is more prolific than either of the above. The ear is generally 12-rowed and six inches long. The stalks were slender and four-and-a-half feet high.

Triumph was ready for use August 10. This grows about five feet in hight, generally one ear (12 to 14 rows) to a stalk. There are few barren stalks; in silk and tassel at the same time; that is, the silk (pistils) were ready to receive the pollen from the tassels (stamens) when ripe.

Tuscarora ripened at the same time, August 10. Stalks six feet high. Generally two ears to a stalk. Silk and tassel ripe at the same time. Ears long and from eight to ten rows—often widely separated. The kernel is large, oval, rather flat and as white as snow. They do not shrivel as in most kinds of green corn and, though tender, are not sweet.

Hickox grows six feet in hight. Boiling ears ready August 12. They are generally eight to 12-rowed, long and tapering; often two to a stalk, but more barren stalks than in Tuscarora. Silk and tassel matured at same time.

Asylum grows five-and-a-half feet high, one ear to stalk; ripe August 11. The ears are 10 to 12-rowed, regular and well filled out. Silk and tassel matured at the same time.

Mammoth. First ready August 16. Stalks seven feet high. Generally large ears, one to a stalk, 12 to 18 rows. Silk appears before the pollen.

Black Sugar or Mexican: Stalks six feet high; leafy, thin stalks. Often two ears to a stalk; generally eight to 10 rows, eight inches long. They are ready for cooking several days before they show color, though they are excellent for several days after. Silk and tassel matured at the same time. First mess August 17.

Stowell's Evergreen: Stalks six feet high and heavy, shapely ears, 14 to 20 rows, small kernels, ready for boiling August 19. The tassels shed their pollen generally before the silk appears.

Egyptian or Washington Market: Ready for cooking August 19. Stalks seven feet high. Often two ears to a stalk, about 14 rows, short, stubby—well filled out. Tassels usually shed their pollen before the silk is receptive. Though many of the stalks bore two good ears, there were quite a number that were earless.

In use August 22: Egyptian, Triumph (an occasional ear), Tuscarora, Hickox, Evergreen, Moore's Concord (an occasional ear), Mammoth, Black Sugar, Asylum.

In use August 28: Egyptian, Tuscarora, Hickox, Evergreen, Mammoth, Black Sugar, Asylum.

In use September 1st: Egyptian, Tuscarora, Hickox, Evergreen, Mammoth, Black Sugar, Asylum.

In use September 10: Evergreen (a few ears), Mammoth (a few ears), Egyptian (a few ears).

Remarks. It should be noted that for small garden plots, it is better to select those kinds of sweet corn whose tassels bloom and shed their pollen at the same time that the silk appears and is ready to receive it. A small plot of Moore's Early or Black Sugar, for example, would probably set more kernels to the ear than a small plot of Stowell's Evergreen, because each plant of the first two may be self-fertilizing, while each plant of the Evergreen, as a rule, has to depend upon some other plant for pollen.

With the object of having the best kinds of sweet corn for every-day use from the middle of July until frost we should select, as the result of the above tests, the following: Early Minnesota, Moore's Early, Triumph, Black Sugar, Stowell's Evergreen.

There are several kinds which have been offered of late years that are earlier than Early Minnesota. We tested, last year, Mr. Gregory's Marblehead Sweet Corn which gave boiling ears in 61 days. But the limit of earliness in sweet corn, as in tomatoes, seems to have been reached. Any further gain is more than lost in quality, size and yield.

As to quality in the earliest varieties of sweet corn, we could not distinguish one from the other. Triumph is sweet and tender for an intermediate, and Black Sugar and Stowell's Evergreen are probably the sweetest and richest of the late kinds. For family use we choose the Black Sugar as of the first quality; but the ears are rather small and many object to their color. All of the kinds that matured at the same time were more or less mixed. Some of the Evergreen ears were one-eighth Black Sugar, while some of the Black Sugar ears were liberally sprinkled with white kernels. Black Sugar kernels were found one-quarter of a mile distant in ears of Blount and and Chester.

We have never valued grain drills the more for being provided with fertilizer attachments. They are troublesome, cumbersome, and worse than useless. The object of drilling in fertilizers is, as we understand it, to give the grain (wheat, let us speak of) an early start. This may be very desirable, it is true, when for any reason the grain is sown late and a shorter time is allowed before freezing weather begins for the plants to tiller and fortify themselves against the severities of the long winter through which they are to pass. But if the land is fertile—and unless it is wheat cannot prove a profitable crop—and well fitted, and the wheat is sown early, why should fertilizers of any kind be used merely or primarily to give the wheat a start? Except in periods of great dryness, the wheat will start in three or four days and a fertile and well prepared soil will insure a sufficient growth ere the advent of frozen ground and settled winter weather. It is a plain case that if wheat could be sown broadcast and covered as well as by the drill, broadcast sowing would produce a heavier crop than drill sowing—the same quantity of seed being sown—for the reason that each plant would be less crowded by its neighbors and each root would find more nourishment. Fertilizing in the drill—the same as fertilizing in the hill for corn—stimulates the young plant. It induces an excessive growth of plants which, without the fertilizer, would take full possession of the soil. But in the Spring the roots have penetrated beyond the fertilizer, so that the seed-bearing culm or stalk which requires the most food, receives the least. The young plant has been pampered at the expense of the old plant to which we look for our crop of grain. It is equivalent to eating a hearty meal in the morning for heavy work which is to be done the next day. When concentrated fertilizers are sown broadcast, all parts of the soil are treated alike and the roots of the plants through every stage of their existence experience the benefit.

We stated that the fertilizer attachment was troublesome, and this for two good reasons. First, it cannot well be made large enough to hold half, or indeed, a quarter enough fertilizer—so that at almost every bout the lid must be raised and the box refilled. Second, it must be thoroughly cleansed immediately after use or the fertilizer becomes corroded and baked upon the zinc or other lining.

The warm weather continues with gentle rains. Wheat is growing rapidly. Many young apple and pear trees are in second bloom and leaf, thus exhausting the material which should have remained stored through the Winter for Spring growth.

TOBACCO-GROWING NOTES.

Tobacco that is not fully cured at the approach of cold, freezing weather so that some of the leaves on the plants are frozen before they are entirely cured, makes what is usually termed "fat" tobacco. If the stems of the leaves only are green at the time of the freezing, the effect is less disastrous than if the whole or part of the leaf were frozen. Such tobacco has what is known as "fat stems," and may by artificial means for drying, be converted into a valuable article. For the leaves when the body of them is frozen so that they turn black after being dried, there is no remedy, and they should always find their way to the compost heap.

Stripping tobacco is in order as soon after the tobacco is thoroughly cured as the grower can give to it his undivided attention. The plants should not be taken from the poles or laths until the leaves are moist and pliable, and if any "fat" leaves are found, the stripping should succeed the taking down as soon as possible. When stripping, all "fat" or green leaves should be thrown aside, and not placed in bundles or "hands" with sound tobacco for the reason that such leaves are likely to induce sweating after the tobacco is placed in "rank," which sometimes injures the quality of the crop. It is economy to perform the work of stripping as far as practicable during the warm days in November rather than allow it to remain until cold Winter weather, which necessitates doing the work indoors by a fire.

The time required for tobacco to cure depends very much upon the condition of the plants as regards ripeness, when they were cut. Thoroughly ripe tobacco will cure in at least three weeks less time than is required to cure that cut in a green state. This is another good argument in favor of allowing tobacco to become fully ripe before harvesting it, especially is this true with late crops; for experience has proven to many growers that one week in the field while the tobacco is ripening, is worth two weeks after the tobacco is hung in the curing barn, in hastening the process of curing.

A tobacco protective insurance organization is likely to be formed in the Chemung Valley, for the mutual benefit of tobacco growers, in protecting them against losses from hail or wind. Such an organization, if it could be made successful in its working, would put a new face upon the tobacco-growing industry in the locality or district of which it is comprised. The industry is, as it now stands, one of risk, and those who engage in it may find it remunerative or the reverse as fortune favors them. It often happens that the outcome of a whole season's toil and the whole resources of an individual are destroyed in a few moments of snow, hail or wind. A protective organization such as is being considered would make the business fairly safe for those who desire to become members thereof. G. A. G. JR.

Horticultural.

RAYS.

F. D. C., p. 694, draws a very pretty walnut picture. I am not quite so sanguine. So far as my observation extends, black walnut trees for timber require rich land to grow in and will not pay in poor ground.

* *

Of all the sub-evergreens in my garden the pyracantha is just now the prettiest. Dense in habit and thickly clad with deep-green leaves, its shoots are wreaths of scarlet fruit in clusters. It is a highly ornamental shrub for the garden, hardy at zero but unreliable in severer weather, and a valuable hedge plant at the South. It is easily propagated from cuttings of the ripe wood or layers; indeed, the branches that lean upon the ground root freely of themselves.

* *

While the scarlet-fruited winterberries brighten many a Northern swamp and those of the youpon the creek and river timber belts of the South, the Burning-bush, or Spindle-tree as it is likewise called, a wildling also but as a garden shrub used everywhere, is all ablaze with its red fruit, and when seen in front of evergreens, as pines and spruces, is one of the most effective bushes of the Autumn.

* *

Crocuses remind us of early Spring when several species and many varieties associated with snowdrops, Siberian squills, hepaticas and the like, brighten many a garden plot before the frost, and oftentimes the snow, have gone. But there are many crocuses whose time of blooming is the Fall, notably that large and handsome blue one called speciosus, one of the finest of all crocuses, and, too, one that is quite cheap. If any reader contemplates planting bulbs he should get a score or more of this crocus and plant them in clumps. They are perfectly hardy, and in a rich, moderately moist and not too exposed place will continue to grow and blossom year after year with vigor. Besides speciosus, among others the following half dozen are in full bloom with me now, the last week in October: Crocus pulchellus, medius, sativus, nudiflorus, longiflorus and Shoesi. And we might add some meadow saffrons which are crocus-like, bulbous plants with rose-purple flowers, and which also blossom in the Fall, and are very beautiful and hardy.

* *

Apropos of "Horticola's" note on drought-withstanding trees, p. 683, and his reference to the ailanthus, I may say that at Cincinnati some two months ago I was interested in observing how green and bright and flourishing was the ailanthus growing on the steep faces of the high clay hills that surround the city where no other tree seemed to grow at all, and in what a deplorable condition the victims of a vitiated atmosphere, exceptional heat and drought and leaf-vermin, were the elms, lindens, maples, mulberries and other trees that grew within the city parks. As a timber tree for the South the ailanthus has considerable claims, and for that purpose hundreds of acres have recently been planted with it in Kansas. But, even admitting the beauty of its leaves, I have not much favor for it either as a street, lawn or garden tree.

* *

Another excellent drought-withstanding tree is the Osage Orange. Many of us know this as a hedge plant only, but kept to one clean, straight stem from the beginning, with the shortening in of a shoot now and again to preserve the balance and comeliness of the specimen, it makes a handsome lawn or avenue tree. And it will flourish in lands so poor that most other trees would starve in them. But it is very greedy—a far-reaching and gross feeder, when it can get the chance; in fact, the manner in which it impoverishes the soil for several feet, often yards, on either side of it, is one of the greatest faults the farmers find with it as a hedge plant. Indeed the farmers have ceased to regard it as favorably as they used to, and many of them, even where the Osage Orange is perfectly hardy, express a preference for the Honey Locust.

* *

In addition to your answer about cutting-ants, to R. T. J., Austin, Texas, I would say, that when I lived in Texas we were sadly annoyed by these depredators. We used, when practicable, to flood them out by cutting ditches to their "towns" so that when heavy rains fell, flooding ensued. But the flooding process is seldom available. Cyanide of potassium dissolved in water, say two or three medium-sized lumps to a gallon of water, and morning and evening a little of this poured into the mouths of their entrance-holes will kill all that pass that way for some hours. But the most effectual method of destroying them is by fumigating them with sulphur. There are machines for this purpose—injecting the fumes into the "towns," and your correspondent might either buy a machine and use it himself or hire the work done by seme of the people who buy the right to use the machines and make a business of killing ants. But no matter how well he may clear his place of ants he can never enjoy immunity from them, as they prevail in vast numbers all over Southwestern Texas.

* *

At the Phœnix nurseries, Bloomington, Illinois, some weeks ago, I saw thousands of roses in process of propagation from cuttings. The cuttings were little pieces with two eyes and one leaf to each, the leaf was removed from the lower eye as that was the root end. They were then inserted quite thickly in a shallow bed of sand laid on a bench in a little greenhouse, and during the day-time old newspapers were laid over them to shade them from the sun. The atmosphere of the house was kept moist by much sprinkling, and the cuttings, too, and papers were dewed over with a syringe. When I saw them they were beginning to root nicely; in a few weeks more they would be potted off singly into very small pots, and after a while into three-inch or four-inch pots. When established in these second-shift pots they will be in good condition to ship to customers. There was no fire-heat in the greenhouse. A cold-frame would have done as well, but it would be more troublesome to attend to. Later cuttings may be started in the same way, but as they will be slower in rooting, a little fire-heat after they have begun to callus will help them greatly.

* *

And Mrs. Henry Ward Beecher says, page 637, that the toughest kind of meat may be made tender by steeping it for seven hours in vinegar-acidulated water. Perhaps it is not generally known that the unripe fruit of the tropical pawpaw (Carica Papaya) is most efficacious for the same purpose, and has been used for that end in the West Indies and other tropical countries for many years. In Southern Florida, where it is grown a good deal and fruits freely, the unripe fruits are sliced or cut up as we do onions, and fried or otherwise cooked with meat, and not only do they render tough meat tender, but they are a palatable vegetable to those accustomed to eat them. Outside of tropical countries we have barely any practical acquaintance with the fruits of the pawpaw tree; but that is not to be the case much longer, for Mr. Harding, of the firm of Henry P. Thayer & Co., the botanical laboratories, Cambridgeport, Mass., is soon to proceed to Florida for the purpose of making arrangements for the shipping of pawpaw fruit in some form or other to their laboratories at the 'Port. Thus within a year or two we may expect to be able to buy pawpaws in some prepared form from our village grocer. The North American pawpaw is quite a different tree from the species in question, and is known botanically as Asimina triloba. The tropical pawpaw is a peculiar-looking small tree with a soft-wooded, unbranched stem and an umbrella-like tuft of big, deeply-notched leaves, not very unlike much-divided leaves of Castor beans, at the top. They grow very fast, and in Southern Florida I have seen them well fruited when not over six feet high. Should the endeavor of Messrs. Thayer & Co. to introduce the pawpaw in a marketable condition be successful, and a demand arise for their manufacture, a new and important crop will be added to those already grown for profit by the Florida farmers, and, Northern farmers, not only does the juice of the unripe papaws make meat tender, but—forgive me if I say it—it has the reputation of being effectual in removing freckles; tell your daughters so and save your buttermilk.

* *

Some trees and large shrubs growing thickly together as a shelter-belt and screen, and now no longer needed in that way I have just rooted up and cleared away, and will lay out the ground they occupied as a lawn, with some specimen trees upon it. After rooting out the trees and bushes I cleared them away, roughly leveled up the ground, then carted on a quantity of well-rotted, earthy material from the rubbish-heap, trenched the ground to the depth of two feet, at the same time mixing well the compost with the soil and keeping it mostly near the bottom. The bottom spit was merely dug over and left in the bottom. The land was then graded and after that heavily manured with well-rotted manure and carefully and smoothly dug over again, one spit deep. In this condition I will let it remain till next Spring, so that by the influence of rain, frost and snow it will get well compacted and show plainly any bumps or indentations the irregular working and leveling may have left and which will then be easily rectified. In the case of land that is already level, firm and clear, the mere trenching, manuring and digging might not cause, if properly worked, an objectionably uneven surface if laid down to grass at once; but where big holes have been dug so as to get out tree roots, hollows are sure to occur, therefore it is better to wait till Spring before finally smoothing the surface and sowing the grass. The deep working is not only of benefit to the grass, but of vast importance to the trees.

* *

Several of the shrubs that I dug out I planted again; but as their roots were greatly reduced in removal, I cut back their tops in proportion. I cut out all the soft, pithy shoots and weakly, scraggy inner twigs, also old and enervated shoots, altogether or back to vigorous branches, and the tops of all the shoots a little, noting in the cutting to leave no eyeless snags. In planting I worked fine soil in among the roots and packed the earth almost as firmly as if I were setting a fence post. No manure was allowed to come in contact with the roots. The Fall is a good time to set out hardy deciduous trees and shrubs unless in an exposed situation; then I prefer the Spring-time, as I also do for plants that are somewhat tender, and evergreens of all sorts. But if set out in September I am not sure that Spring planting is more desirable. In the event of transplanting deciduous trees or shrubs that are still in full leaf, it may be well to strip off the leaves.

* *

I observe in an English paper a correspondent has just found out that the gloxinia can be grown in the kitchen window. Why, many a farmer's wife in America not only knows that, but ranks the gloxinia as one of her stand-by house plants for Spring and early Summer, just as much as she does Oxalis floribunda for Winter. Hereabouts we have a very easy and satisfactory way of growing gloxinias. We have hot-beds in Spring in which to start seeds of our various tender plants, and which, of course, are emptied before the end of May. Well, when emptied, we add a little more soil and therein plant our gloxinia roots. They soon begin to grow, and that rankly, and there they blossom all Summer long. Thrips and red spiders do not trouble them, neither do they rust. We keep sashes thinly shaded with whitewash over them all the time, but tilted up a little; never water overhead, but, instead, introduce the spout of the water-pot between the rows; indeed, when planted out, gloxinias do not want much water. We give no water after the last week in September, because we want to ripen the roots preparatory to lifting them and storing them in sand in the cellar, shed or elsewhere for the Winter. Seedlings raised in Spring and planted out in this fashion come into blossom in late Summer and make stronger roots than if grown along in pots.

* *

What a grand thing peat muck is for trees and shrubs. Some years ago we got a lot of it for the digging and hauling, and we dumped it some two to three feet deep on a piece of waste land, there to remain till we should use it. In order to reduce it to as earthy a mass as possible I had it turned over once or twice. I had a lot of Austrian Pines and Norway Spruces to plant as a shelter belt in a stiff brick-clay soil. I dug large holes and filled up with half muck and half clay, well mixed together, and the way those evergreens have grown, so strong, is amazing. I have also used it for deciduous trees and shrubs of many kinds, and in transplanting them was often amused to find the enormous ball of roots that came up with each plant. All grew vigorously in the muck-mixed soil. In September, 1876, I cleared a piece of land on which trees and large bushes were growing, to lay it down as a lawn, with, towards the outside, beds of shrubs. I told the men to trench and manure the whole space and add a lot of the muck earth near the outside, where I intended planting the bushes. Then I went to the Centennial. On my return I found the ground prepared, graded and ready for sowing, and that, instead of preserving the muck to the space I told them of, they had used it equally all over the ground. The grass was sown and has grown rankly ever since, but the surface is uneven and spongy. With a good deal of rolling it is well enough as an ordinary lawn, but if required for a croquet ground its spongy, puckered surface would be sadly objectionable. A base-ball ground was needed in town, and a field—a perfect sand bed—was given for the purpose. But how to get a sod of grass upon it puzzled them. Many plans were proposed. Any amount of manure could be had, but that would soon waste through the sand. A layer of brick clay some inches under the surface met with considerable favor; but finally they decided to add a heavy coating of peat muck—the most earthy part—and manure enough. A year later there was a fine sward upon that field and the boys were playing ball upon it. And the grass looks well upon it still. Peat muck is the greatest thing for growing Couch Grass I know of.

Leon.

STRAWBERRY CULTURE.

The varieties of strawberries mostly grown here are Wilson, Col. Cheney, Crescent Seedling, Capt. Jack and others in smaller quantities. In cultivation the first thing to be done is to plow the ground in Fall the last thing before it freezes up for the Winter, as this is sure death to the white grub which would otherwise be sure death to the strawberry plantation. In the Spring, just as soon as the ground will "work," prepare it first by thoroughly cultivating it about three inches deep and afterwards by harrowing, and finally by planking or rolling and marking. I set the rows 3½ feet and the plants about a foot apart in the row. In setting I use a cast-iron dibber made for the purpose: it is about eight or ten inches long and about three inches wide at the top, and quite thin, so that it works into the ground very easily. With one of these dibbers one man can easily set 2,000 strawberry plants in half a day, which is long enough to work at the business at one time, as it is hard on the back.

In taking up the plants *never* throw them into a basket loose; for if the roots dry crooked it makes very slow setting; but, as they are taken up, keep them in the hand till you get 20 or 25, always keeping the roots *straight*. Plunge the dibber down, working it back and forth so as to make a good, smooth hole; then by taking the plant in the left hand it will drop into the hole with the roots deep and straight, just as they are wanted. Then plunge the dibber on the opposite side of the hole and about two inches from the plant, with enough slant to it to bring the point very near the roots at the bottom of the hole, and press the plant in firmly enough, so that it cannot be pulled out by one leaf stalk. Plants set in this way will not wilt, even in very dry weather, but will grow right along.

The after care consists in good, thorough cultivation and hoeing. For a cultivator I use what is called a duck-foot cultivator. The teeth are arranged so that they will only stir the ground, without throwing the dirt on the plants, and are made to go about eight inches deep, thus keeping the ground loose and mellow and in the best possible condition for a thrifty growth of plants, which must be got in order to get a good crop of fruit. Cover plants, as soon as hard freezing begins, with marsh hay or rye straw to keep them from heaving by alternate freezing and thawing.

Fort Atkinson, Wis. R. Jay Coe.

IN THE GARDEN.

We have had a very considerable drought; not over two inches of rain fell in two months' time. The second crops of garden vegetables have proved a partial failure. This is especially true of late-set cabbage plants; cucumbers, notwithstanding the dry weather, did fairly well. Tomatoes are a full crop. Winter squashes are almost an entire failure. While we may regret the dry weather there are valuable lessons to be learned from a drought, that may be worth much to us in the future as a part of our stock in trade. For several years I have spaded about one-half of my garden and the other half has been plowed and in every case the spaded ground has paid the largest profit. It is hard, tedious work to spade ground, but if it pays why not do it? Deep spading insures a crop in a dry time, and the effect may be seen in a garden for several years. A liberal dressing of manure should be given before the ground is spaded, at which time the manure will be well mixed with the soil from the surface to the depth of a foot.

I have found that onions are the easiest of all vegetables to transplant, and that two crops of them may be taken from the same ground in one year; the first crop to be the English multipliers, the second to be the thinnings from the Black Seed onion bed. My way the past season was to mark off the ground and then spread the small onions along the row, letting them lie flat on the ground with the tops, all one way: and then hoe about an inch or two of earth over the bulbs, letting the dirt cover the stalks about half their length. After they got well rooted I reversed the tops and this left them about the right depth to bottom finely.

I have a way of taking up celery plants to transplant that scarcely checks their growth. The plants are in beds three inches apart; I take them up with a trowel, leaving as much earth as possible on the roots of each plant, and lay them down carefully about 50 in a place. I then sprinkle them until the ball of earth is thoroughly wet. They can then be handled without the dirt dropping away from the roots. I handle them by the tops, placing them on a wheel-barrow to put them in the trench. I often scatter several hundred before transplanting, as there is no danger of their wilting if left for several hours, provided the sun does not shine on them after they are set out. I give the plants a good watering and that is all they ever get except from the rain. I partially shade them for a week or two by means of laths. I take an armful and drop one every 3½ feet across the trench and then lay two parallel with the rows of celery

directly over the celery, letting the ends rest on the laths lying across the rows, leaving the laths about their width apart. This gives the celery a partial shade and helps it wonderfully in starting. A. WAKEFIELD.

Oneida Co., N. Y.

NOTES FROM THE RURAL GROUNDS.

The Witch-Hazel

WE do not know that the Witch-Hazel is ever spoken of as an ornamental shrub and yet, a few days ago, as we were looking at a thicket of these plants in full bloom, it occurred to us it might well be used with good effect. The flowers borne on hardy shrubs, now that the leaves are falling and severe frosts have occured, are not to be despised even though less showy than the most indifferent of those which bloom during the Spring or Summer. As shown in the illustration, Fig. 519, the Witch-Hazel flower is peculiar. The four yellow petals are less than an inch in length, and less than a line in width. But three of these flowers are clustered together upon a single flower stalk, and the stalks are often close together—so that the shrub, after all, makes quite a showy appearance. The Witch-Hazel begins to bloom just as its leaves are falling and continues in bloom long after every leaf has fallen. The fruit, however, is not perfected until the next Spring and often persists until Fall when the shrubs are again in bloom. It may as an ornamental shrub be considered the opposite of the favorite Forsythia viridissima offered in every nurseryman's catalogue. This unfolds its golden flowers in the Spring before the leaves appear. Hamamelis virginica is its botanical name, and it is a close relative of our Liquidambar or Sweet Gum. It grows from five to ten feet high, growing in many parts of the country sometimes on hillsides, sometimes along streams. Infusion of the leaves is thought a valuable medicine in cases of bowel complaints and hemorrhages. There are several Japan varieties of the Witch-Hazel, but the difference, so far as we learn, is chiefly in the size of the leaves.

Those Picotees, etc.

I want to say how much pleasure I have had from the picotee Rural seeds. The package claimed to contain carnations, but they all came up picotees, eight varieties, and they are blooming yet as gayly as in August. All they lack is fragrance—which the pansy also lacks—but one shouldn't expect everything. Anaximander was so well pleased with the Rural Branching Sorghum that he intends to have it among his crops next year. The White Elephant Potato came very near being entirely swallowed up by a freshet, but divided portions stuck in their places and were dug up in due time a respectable little crop that is stowed away for next year's planting. The long drought was unfavorable for the asparagus seeds—there are one or two dozen plants however; so, all in all, we have abundant reason to have pleasant and profitable reminders of the RURAL NEW-YORKER for many a year to come. While I am on the subject, I wish also to report concerning the Cuthbert Raspberry plants received two years ago from the RURAL. Both are now large bushes and bore well the past Summer. We were delighted with the fruit, it being so much larger, firmer and freer from seeds than either of our other varieties of red raspberry —the Antwerp and Philadelphia. Indeed, it seems to be the *best* red raspberry, in *every* respect that has as yet made its appearance, and it seems scarcely worth while to cultivate any other. The bushes had only the ordinary protection of manure about their roots last Winter, which was, as you know, of extreme severity, but the canes were not injured.

Bryn Mawr, Pa. MARY WAGER-FISHER.

Challenger Lima Beans.—See Page 780.

We present a sketch of a bunch of the Challenger Lima Bean offered in the next Free Seed and Plant Distribution of the RURAL NEW-YOKER, which was made from a specimen sent to us by the farmer with whom this variety originated—or rather by the farmer who originated the variety, since it is the result of many years of selection. Our own plot of this variety, owing to the drought, perhaps, quite disappointed our expectations—the yield being little in excess of that of well-known kinds of this valuable bean.

The Vineyard.

AN ERROR CORRECTED.

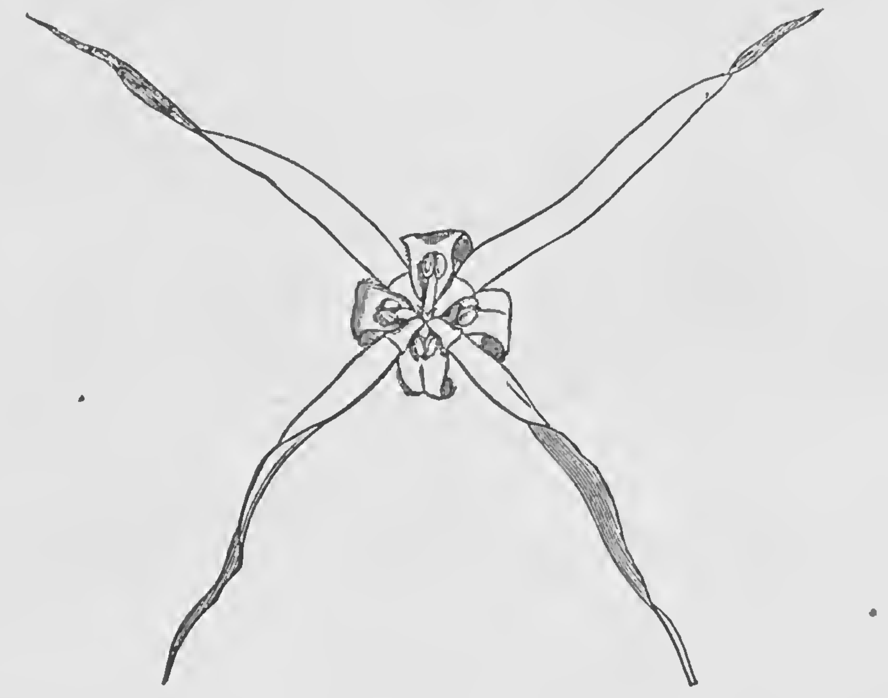
Mr. Marvin's New Grapes.

IN the American Pomological Society's report on new grapes, an abstract of which I find in the RURAL of Oct. 29, after giving a partial list of the exhibits—including six of my own, among them Centennial, and Sharon —I find this remark: "All these varieties show indications of foreign parentage?" As far as my own exhibit is concerned, I can positively say there is not a particle of foreign parentage in them; they are pure native grapes every one of them. To show this, I invite the committee and any interested botanist or horticulturist to call upon me next year, to inspect my vines, and I will convince them of the wrong that has been done me. I have always opposed using the foreign to improve the quality of our native grapes. The files of the RURAL will bear me out in this. [It is true.—EDS.] Indeed I have endeavored I may say to champion the fight against any admixture of the two classes. If there has been no mistake made in the reporting, I can account for this opinion in but one way:—

Our horticulturists have for so long a time been studying the Northern type of our Labrusca grapes, and hybridizing them with the foreign, and they have studied the Northern type of our Æstivalis grapes, and their grand capabilities, and the Southern type of our Labrusca grapes, and their capabilities so little, and so casually, that when they see anything superior to the Concord type, they are surprised, and immediately jump at a conclusion, and attribute the good quality to the foreign vines.

In one sense this is an unconscious tribute to the value of my long endeavor to improve our native grapes, and I accept it as a compliment to their improved quality. But there is another view of the matter, that I must also notice. I took the pains to attach a card to a cluster of each variety exhibited, giving its botanical class. If the committee saw and read this card, they thought I was attempting to palm off foreign hybrid for native grapes; but I cannot believe this to be the case. I have the utmost respect for each of the several gentlemen composing the committee, and I refrain from saying anything further than that I consider it simple justice to correct this imputation against the value and usefulness of my labor. For the committee themselves I believe will all cheerfully agree with me, that when our native grapes have the quality of the foreign hybrids, they are far superior to them. D. S. MARVIN.

Watertown, N. Y.



THE WITCH-HAZEL—(Expanded Flower, mag.)—Fig. 519.

Farm Topics.

A FARMER'S RETROSPECT.

MANY of your gray-haired readers will remember how in their boyhood barn-floor work —to say nothing of any other—was a very different thing from what it is now, and can see in this one portion of the farmer's toil a striking example of the vast improvement made in the details of agriculture within little more than half a century. I have a plain recollection of seeing the thrasher at work with his flail on a floor made after the old Roman plan, as told by Columella, of clay beaten down and toughened with oil. At the end of the week's flailing he had an assistant to turn the fan—a rickety thing about five feet long with four wings or sails to which four old bags were hung, which went flying and flopping around as the fan was turned to raise a wind. The thrasher poured his thrashed grain out from a large wooden hand-sieve or shook it through a coarser one called a riddle, and by repeating this slow, clumsy, laborious winnowing and supplementing it with a skillful whirling of the grain in a sieve too fine to let it through, he got the grain clean enough to measure up for the granary and to determine the thrasher's pay. This whirling of the sieve of grain was called row-ing (pronounced *row*), and was an art attained by long practice and which only old hands could do well. Thrashing machines were coming into use, and winnowing machines, too: but they were great rarieties, and as they took the whole long Winter's work out of the hands of the poor thrashers they were looked upon by them as so many dragons threatening to take away the only means of existence from them and their families. Many barns were set on fire where these "cursed inventions" had a place. Now in the same country the machines do all the thrashing, requiring but a few men a short time, and even the cottages where the thrashers once lived have almost entirely disappeared. Their descendants find work in factories. W. G. W.

THE WITCH-HAZEL—Leaf and Flowers.—Fig. 520.

The Herdsman.

NOTES BY A STOCKMAN.

IT is stated that an effort will be made at the Chicago Live Stock Exhibition to determine what "handling" indicates. "Every one" was supposed to know this years ago, who knew anything about stock. Dr. M. G. Ellzey, of Washington (a name hitherto unknown in this connection, I believe), is reported to have said somewhere and somehow, that "it would be a good move in the right direction for the agricultural colleges with their model farms, if there is any man about them who knows how to judge of and describe the handling of a beast when alive and how to make an intelligible description of the carcass when slaughtered."

NOW, if Dr. M. G. Ellzey is a real docto that is, a doctor of medicine and surgery, he ought to know something about anatomy; and yet he says, or is reported to say, "There is neither anatomical nor physiological connection between the hair on the perineum of the cow and her lacteal glands." Now, a real doctor should know that the same important artery which supplies the lacteal glands with blood, supplies also the capillary vessels which nourish the skin and hair of the perineum, and that if the circulation of the one is largely developed, the arteries with the veins are, as we know they are, largely developed in some cows, there is both an anatomical and physiological connection between the udder and the escutcheon, or the hair on the perineum. Now, I would like to say to Dr. M. G. Ellzey that these reported remarks are utter foolishness. Why should persons and doctors be ever casting slurs upon our agricultural colleges? What agricultural colleges have model farms and a choice of fattening stock to study "handling" upon? and what sort of a description of a carcass does this doctor suppose to be an intelligible one? Does he want to hear about "the thick crops," the "full bosom," the "sweet, delicious handling," the "wealth of hair," and all the other slang and absurdity of some of the English amateurs of live stock, introduced here?

HERE comes our jolly butcher who knows all about stock and carries a *pocket* edition about him of what he knows, and he grabs a handful of skin which folds loosely in his grasp and slides and slips over the soft, mellow, thick, deep, unctuous and elastic coating of fat under it, and he pokes his three fingers deep into the yielding hide and then he knows that there is meat there and plenty of fat marbled and interlarded with it.

BUT he shakes his head when he comes across a beast whose hide seems to be drawn tight over the ribs and stretched until it is as thin as a drum head, and he knows that although there may be fat there it lies by itself and the meat will have none of that marbling which makes it so juicy and tender and melting in the mouth, and which pleases the butcher because it cuts up without waste and every ounce of fat is meat and not tallow.

Handling? Well I should smile to think what those jolly old Short-horn men c half or three-quarters of a century ago w have thought and have done had it been w pered to them that at a fat cattle show to be held at Chicago in 1881, it was going to be determined what handling indicates. There would have been some profane remarks about Chicago and other matters and things, no doubt.

WHAT is the use of being a giant if one does not use the strength of a giant? And what is the use of having a pair of Norman or Percheron or Norman-Percheron—or whatever else they may be—horses weighing more than two tons and keeping them drawing a plow that makes but one furrow. With a pair of those monstrous and powerful horses the prairie farms should use gang plows having at least two, if not three, shares, and so do the work of two or three pair of small horses.

MORE than two hundred Norman horses are to be exhibited at the Chicago fair, while at the New York State fair only 53 of Norman-Percheron and Clydesdale horses were shown. This shows how popular this class of horses has become in the West during a few years past. But what is the use of such big horses unless they do a proportionate amount of work? And we have so far heard a good deal about the horses, but not so much yet about the amount of work they have done.

THE enterprise enlisted in the business of importing these French horses is something remarkable. Two hundred and ninety head, valued at about a quarter of a million dollars, imported in one steamer, says a great deal for the importer and for the steamer as well.

IT makes some difference whose ox is gored. That old fable will never be worn out so as to be laid on the shelf. It is applicable every day. Once upon a time those selfish and jealous English people were hardly pushed by some American cattle men who crowded their beeves into the English market and raised a very hot competition with the native beef. And these English people raised the cry of pleuro-pneumonia and stopped the business to a considerable extent and so disgruntled the Western cattle men. And in course of time some Eastern farmers, who had a lot of calves and little feed to spare, sent these little creatures to the West, where there were not enough calves to consume the abundant fodder. This made a serious competition with the Western cattle men who wanted to sell their own calves. And so they raised a cry of pleuro-pneumonia, and charged these poor little calves with their parents' sins, just as the wolf charged that little lamb with roiling the water before he was born.

"ALL is fair in love and war"—and business. And Eastern men should by no means get their "backs up," but go to work in a friendly, business-like manner and do precise-

ly what the Western men did, and that was, prove very conclusively that there was no pleuro-pneumonia in theirs, and that there was no healthier place in the world for cattle than the Western States. And they should get a high official to use his official influence to support the fact that pleuro-pneumonia in the East is totally unknown to the inhabitants and that they themselves are living in daily dread and fear of infection from the West of Texas fever and some other diseases which have heretofore come from that way, but about which very little fuss has been made. The great West scarcely owns all the United States Government and the East has some claims upon it, too.

YET the West is a great place. It is able to feed the whole world with the help of a few men from the East now and then, and occasionally a few thousand thrifty, healthy calves from the East to fill up their broad pastures. And so let us have peace.

English and American Mutton.

The difference generally between these is so great it is not to be wondered at that any one who has tasted the former should be dissatisfied with the latter. The English as well as the Scotch mutton sheep, are so much larger than the American that they give fuller and more desirable joints for roasting and boiling, and especially a greater amount of tender lean and very juicy chops for broiling. These can be cut an inch thick, and yet cooked evenly through; whereas the American usually comes off the gridiron half burnt on the outside, dry, stringy and tough within, proving not only unsatisfactory but most unprofitable meat for consumption.

We are glad to observe that a considerable impetus has been given lately to the improvement of our sheep for the shambles. More of the well-bred mutton sorts have been imported during the past 18 months than for some years before; and we hope they will be followed up rapidly by other importations and bred and crossed here with such care on the natives as to shortly furnish our markets with good mutton as plentifully as it is now done in Great Britain.

Angus Cattle at the St. Louis Fair.

I observe that these black Polled Scotch cattle were the most numerous of all exeept the Short-horns, which were exhibited at the late great fair at St. Louis. I am glad to see the attention of Western breeders at length fully roused to the merits of this distinguished class of animals, to rear steers for the British market. The beef of no breed brings so high a price there or is so quick of sale, except that of the Scotch Highland or Kyloe cattle. But these last are of a much smaller size and have long, sharp horns, both of which are so objectionable. This sort of animals could never find favor with American breeders.

The best Angus cattle are nearly as large generally as Short-horns—some are fully so—and being destitute of horns, breeders who have tried them on the great Western Plains say they can be reared and marketed there for from 10 to 20 per cent. less cost than horned beasts. This of itself is a handsome profit. They can also be stowed so much closer in railroad cars and on board ship that the cost of transportation is considerably reduced, and there is less loss of them by goring and other injuries to which cattle are subjected when sent to market. A.

Dairy Husbandry.

TESTING MILK.

HENRY STEWART.

THE use of the lactometer, or rather the hydrometer or water measure for testing milk is a delusion and a snare. This instrument is constructed for measuring the relative specific gravity of liquids, pure or distilled water, water at a temperature of 60 degrees being taken as the standard. The so-called lactometer or milk measure is in its very name a fraud and a delusion, because it does not in reality measure milk, but merely the water in it and the specific gravity of the fluid which shows the quantity of solids in solution or suspension in it. Milk is a complex fluid containing a certain proportion of water, mixed with an uncertain proportion of various salts some casein and some sugar which are heavier than water, and some fat and volatile oils which are lighter than water. Now, it is an utter impossibility for any measurer of specific gravity to ascertain what the true relative gravity or weight of a liquid should be when it contains every time a different quantity or proportion of each one of these added substances and each one differing somewhat in its own specific gravity. For instance, we take the milk of a "native" cow, that will not show more than three or four per cent of cream, and which at certain stages of her condition of pregnancy is unusually charged with salts, and it will show a high specific gravity, being much heavier than water, in the ratio perhaps of 1.035 to 1.000 or three-and-a-half per cent.

Then we take the milk of a fresh Jersey cow, a rich butter maker, in which there may be 25 or 30 per cent of cream and, of course, a less ratio in proportion of salts, sugar and casein, and it may show a specific gravity of

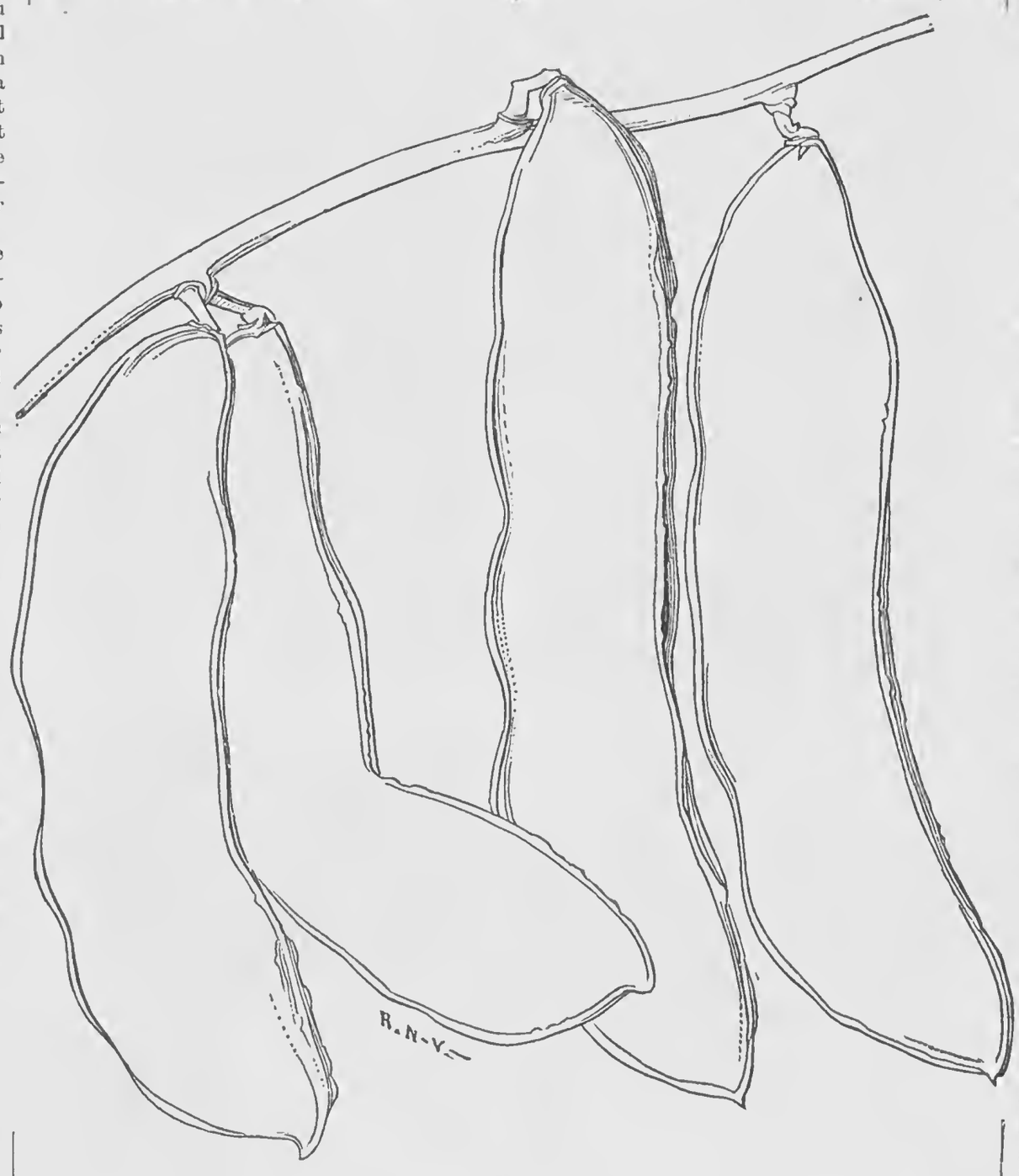
THE PIOSCOPE.—FIG. 521.

only 1.025, or one per cent less than the other milk. Then we take this rich milk and add water in considerable quantity (I do not stop to work out the equation algebraically, but some of your readers who have more time than I may find out how much water would be needed), and this rich milk is raised in specific gravity equal to that of the less rich milk. Then the hydrometer or lactometer would say that these two milks were of a better quality than the rich Jersey milk, because they scaled 1.035. This shows what an unreliable test is the lactometer, which is simply a hydrometer with the scale marks varied somewhat. Unfortunately the lactometer is the judicial test in courts, and many a milkman or dairyman has been unjustly convicted by its false testimony.

The cream gauge is a good test of the quality of milk, but it requires much time to work, and it is uncertain because different milks throw up the cream with different degrees of rapidity and a rich milk, after 24 or 36 hours, might be adjudged poorer than another which has put up its cream more quickly. So the cream guage is a faulty test. I have been experimenting recently with a new milk tester made in Germany, a specimen of which was kindly sent to me for trial by my friend A. P. Sharp, of Baltimore. This is known as the Pioscope, (Heeren's Milchprüffer), and it works on the basis of the density and opacity of the milk. It consists of a jet-black, circular plate of vulcanite, having a circular shallow cell in the center (See Fig 521). The two heavy rings in the center represent the central cell surrounded with a low rim and a concentric rim a short distance,—about one-eighth of an inch—from it, leaving a shallow, circular groove between them. A circular glass plate is made to cover this vulcanite cell and its border. The center of the plate corresponding to the cell in the vulcanite plate, is clear and transparent; the rest of the plate is divided into six segments each colored in shades graduated to match the different qualities of milk: the first is marked "cream;" the next, "very fat" or rich milk; the next "normal:" the next, "poor" milk, and the last, "very poor." The central cell being filled with milk to be tested, the glass cover is laid on and presses out the surplus of milk over and above the requisite film to fill the cell. The jet-black vulcanite, of course, shows through this thin film of milk in the precise proportion to its density, and the milk to be tested is matched in color by the colored segments of the glass plate.

Rich milk from one of my cows that yields 12 pounds of butter weekly, appears on the Pioscope much lighter in color than normal milk and scarcely so light as the very fat milk; the difference is, however, scarcely to be distinguished. One drop of water added by means of a pipette to this milk, reduces it at once to the shade of poor milk and two drops bring it to a darker shade than very poor. The cell holds about 10 drops from the pipette. Several tests with other cows' milk result in the same way. Five per cent of water added shows very distinctly, and 10 per cent carries it to the bottom of the scale. Except an accurate chemical test by analysis I don't know of any other that is so sure and sensitive as this, and it seems to be one that may be used with satisfactory results in place of the uncertain lactometer and the slowly acting cream gauge. It is instant in effect and can be used and mark the result in one minute after the milk is drawn from the cow, and indeed it is then only that milk can be tested with any accuracy because its condition changes every moment after that.

Another test depending for its effect upon the same principle, viz., the density of the milk, was brought into use a few years ago, but it failed because of the uncertainty of its elements. It consisted of two small sheets of glass cemented to wooden sides and bottom, leaving the top open and a space between the glasses forming a narrow cell about a quarter of an inch from wall to wall. This was mounted on a graduated slide and a lighted candle was placed at the end of the slide. The cell being filled with milk, was moved on the slide until the light could be seen clearly through the milk. It is obvious that the result depended upon two very uncertain elements viz., the dullness or brightness of the light and the sharpness or dullness of the eye of the observer, besides the gradations of the light would at any rate be so very difficult to estimate that no accuracy at all could be secured. This milk tester soon disappeared from view and its light went out. Neither of these objections apply to the Pioscope the action of which is based upon conditions which are always equal and certain.



THE CHALLENGER LIMA BEAN.—FIG. 522.

The Horseman.

NORMAN-PERCHERON HORSES.

THE ancient county of Le Perche formed part of the old province of Maine in France, and was bounded on the north by Normandy. Since the subdivision of the old French provinces into departments by a decree of the National Assembly, January 15, 1790, the old division Le Perche has been distributed between the departments of Orne, Eure-et-Loire and Eure, its ancient capital, Montague, being still one of the chief towns of the first-named department. Ever since the eighth century at least it has been always famous for its draft horses called Percherons. With regard to the origin and development of the breed there is some dispute, as there is with regard to all races that date back to the Dark Ages. Some say it owes its commencement to a cross of pure Arabian blood upon the heavy draft horses of the country as far back as 732, when Charles Martel defeated the Saracens in a great battle a few miles to the northeast of Poitiers, capturing a vast number of their cavalry horses. Some of these, tradition says, were crossed on the horses of Le Perche and from this commixture of blood springs the Percheron. The race is said to have been still further improved in the fourteenth century by crosses of Arabian war horses brought home from the Holy Land on the return of the French Crusaders. In course of time the horses of Le Perche and those of the neighboring province of Normandy, which partook more or less of the same ancestry, became mixed from frequent intercrossing, and the horses which of late years have been so largely imported from France for the improvement of American horses, have been to a great extent the progeny of these coguate races, and hence have been widely known as Norman-Percherons. Whatever admixture of blood has been made, however, occurred so long ago that the present breed known by that name is considered decidedly pure, the horses belonging to it being strongly prepotent, that is, having the capacity of transmitting their special characteristics in a marked manner to their offsprings.

The following are briefly the points of a Percheron horse:—Head short; brow broad, with a hollow between the eyes and nostrils, sometimes called a dish-face; neck long, well arched and heavy, but, like the head, in keeping with the general massiveness of the frame; back short; barrel well ribbed-up and round; legs particularly short from the knees and hock downwards, heavily haired, without the fetlocks and feet being shaggy; sinews iron-like; feet hard, sound and unusually exempt from disease; hight from 14¼ to 18 hands; color generally gray; weight from 1,400 to 1,800 pounds, though sometimes horses of the breed run over 2,000 pounds, but in such cases there is generally considerable doubt as to their being pure-bred. Indeed, there is excellent authority for the opinion that of all the horses over, say, 1,800 pounds imported from France into this country few if any are pure Percherons; but, as Mons. Lavalard says, they are mostly either descendants from horses imported into Le Perche from Bologne or Belgium, or from other parts of France or bought up in different parts of France for exportation to the United States. In view of the fact that cross bred animals, however well formed and however closely resembling their pure-bred parent, are always very uncertain in the character of this progeny, it is highly important that every purchaser of a Percheron or Norman-Percheron horse intended for breeding purposes, should have assurance of the purity of its descent. The character of the importer is the main reliance in this case, and of these the most extensive, widely known and successful is Mr. M. W. Dunham, of Wayne, Du page Co., Ill., who has on his two farms—one of 600 and the other of 2,000 acres—one-fifth of all the Percherons ever brought to this country.

Entomological.

THE PINE-LEAF MINER AND ITS PARASITES.

PROFESSOR J. HENRY COMSTOCK.

A LITTLE MORE than seven years ago I first observed that the Pitch Pines (Pinus rigida) at Ithaca, N. Y., were infested by an interesting little insect, a caterpillar which is so small that it can live within the leaves—or needles, as they are popularly called—of this tree. The softer inner part of the leaves furnishes the larva with food; the firm outer layer, retaining its form after the inner part has been eaten out, constitutes a tube within which the larva lives. Thus a single leaf serves both as house and pasture for the tiny creature. The part of the leaf which is eaten out dies and turns brown, rendering the work of the larva conspicuous.

What are in all probability the eggs of this insect have been found deposited singly near the base of the leaves. They are nearly round, flattened on the side of attachment, and slight-

ly so on the opposite side. Their average diameter is one-twentieth of an inch. The general color is reddish-brown, differing in intensity with the stage of development. The surface of each egg is marked with numerous delicate ridges, which meet at the center. We have not proof positive that these are the eggs of this leaf miner, but their size, appearance and place of deposit seem to indicate that they are

The work of the larva is well shown in the engraving, Fig. 523, and also the larva itself, highly magnified. From a study of the mines the larva appears to burrow towards the end of the leaf first. Should it arrive at the end of the leaf (and it almost invariably does) before attaining full growth, it reverses its position and mines towards the base. The hole of entrance and of future exit is apparently in all cases enlarged and the excrement pushed through, as there is but little to be discovered in the mine, while it can always be found in a greater or less quantity at the opening or on the leaves below. No instance has been observed in which one larva has injured more than a single leaf of the Pitch Pine, but a specimen of this insect was found in Virginia upon the common Scrub Pine (P. inops), the leaves of which are shorter and more slender than those of the Pitch Pine, and, from observations made upon this specimen, it would seem that one leaf, if small, does not afford all the food needed by a larva.

When found, on the 1st of January, this specimen was hibernating, the mouth of its burrow being covered with a thin silken curtain. Six days after, being transferred to a warm room, it was found that this curtain had been broken and the insect had left its mine. It was soon found on another leaf and the same day formed a new burrow, where it continued to eat until January 23, at which time it had completely excavated the leaf. After this date all operations appear to have been suspended, and there were no signs of life in the burrow until March 3, when a parasite issued.

Leaves of Pitch Pine are frequently observed to be completely mined out, and nearly full-grown larvæ are occasionally found crawling about over the leaves and twigs; so it seems probable that with this species of pine also two leaves may sometimes be successively mined by the same larva.

The full-grown larva is nearly one-fifth of an inch in length. Its color is light brown, with the head and the shields on the second and last segments black. The body is clothed with a few delicate hairs. The form of the larva is shown in the cut. Upon reaching full growth the larva spins a slight covering to the mouth of the mine and retreats a short distance above it. There, after spinning a few supporting lines of silk, it becomes transformed to a long and slender pupa, which is light brown at first, but afterwards black. When removed from the mine the pupa is very active, jerking the short part of the abdomen, which extends below the wing cases, from side to side with rapidity. The form of the insect in this stage is shown in the upper left-hand corner of the engraving. It forcibly suggests that the creature has been developed in narrow quarters. The duration of the pupa state is from 10 to 14 days. The moth makes its exit from the pupa shell without disturbing the position of the latter, leaving it attached by its threads some distance up the mine, and works its way to the entrance. The moth is represented in the lower part of the cut, much enlarged. Its expanse of wings is three-eighths of an inch; its color is brownish-yellow, with the fore wings marked by three white bands. The scientific name of the insect is Gelechia pinifoliella.

I have observed this species more abundantly on the Pitch Pine in New York than elsewhere. But it infests several species of pine; and is found, to my knowledge, in all of the Atlantic States from New York to Georgia.

When I first observed it at Ithaca it was not very abundant; but it increased steadily till two years ago the Pitch Pines in this vicinity were so badly infested that the general color of the foliage was brown instead of green, nearly every leaf being mined by the larvæ. It seemed at that time as if the death of the trees must soon follow, as there was no practicable way of protecting them from the pest. The larvæ, working, as they do, within the substance of the leaf, are beyond the reach of the substances which are used to destroy insects Fortunately, however, although the little leaf miner is protected from the attacks of man, it is not secure from the enemies belonging to its own class. I found three species of parasites preying upon it. And to-day, as I look from my laboratory window, I see an excellent illustration of the important results brought about by these parasites. The trees which two years ago were brown and apparently dying are to-day green and vigorous. A close examination reveals the presence of a few leaf mines, but not one where there were fifty two years ago.

Cornell University, Ithaca, N. Y.

Miscellaneous.

RURAL BRIEFLETS.

A WRITER in the Ohio Farmer pokes fun at our statement that in order to improve a given variety of wheat, kernels should be selected from the middle of the ear or a little above it. "Now just fancy a man," he says, "thus preparing the heads for a hundred bushels of seed wheat. Wouldn't he have a a nice job?" We have found that the flowers just above the middle of a wheat head are the first to bloom and that the kernels are therefore the first to mature. In seeking to improve a given kind of wheat, we cannot begin with the entire field. It must be done either by selection or cross-breeding. It is very easy to ridicule the efforts of those who by patient work are trying to effect some good purpose. Mr. Stahl might just as well ridicule us for spending from two to four hours every pleasant day in our wheat fields while engaged in the tedious work of crossing wheats. As the result of the season's work we had barely a thimbleful of seeds to show. But from this little quantity of seed Mr. Stahl may some day be glad to sow a part of the product. That it would be absurd for every farmer to select his seed-wheat by shelling out by hand the middle kernels of the best heads, or even as he would select his seed-corn, is very evident, and this was stated in the article criticized.....

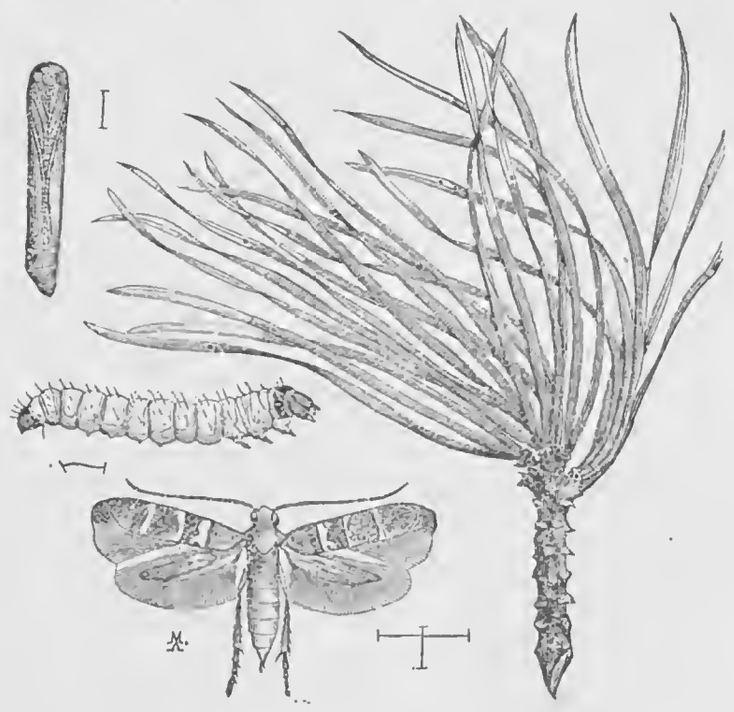
THE Normantown Wonder, Dumeller or Wellington Apple, as it is severally known in England, is said to be of large size, highly prolific and possessed of first-rate keeping qualities. It meets with a ready sale in the London markets. We should be glad to know if this apple has been tried in this country and with what results.....

TWO new double Tropæolums are announced in France—one bearing scarlet, the other yellow flowers as large as those of double portulaca and quite resembling them. They may be looked for in florists' Spring catalogues, we presume.....

WE learn that Professor Blount enters as a competitor for our wheat premiums. We hope that every RURAL subscriber that owns a square rod of land will strive either for the wheat or corn premiums. It may be well thus early to state that the Fultzo-Clawson wheat is to be planted upon a plot 33 feet square (one fortieth of an acre) *one grain every 12 inches apart either way*. As for the Surprise wheat, each competitor will treat it as he chooses. There is but one premium offered in connection with this—twenty-five dollars for the best five heads. Only a few grains will be sent of the Surprise, as has already been stated, since we have but a small quantity of seed.....

PROFESSOR BLOUNT writes us: "I had a plenty of Black-bearded Centennial with *white* beard. As you say, wheat of the same kind will sometimes vary in chaff, beards and even color of kernels. This arises from climatic changes such as showers succeeded by hot suns as well as from soils."....

A FRIEND, who has made wheat a study for years, writes us as follows:—"I have read with interest your correspondence with Messrs. Haines & Co. in regard to the identity of the Black-bearded Centennial and the Golden Grains wheats. I have all the while believed you to be right. What you say about the flour-making quality of either of these wheats is apparent to the most careless observer. They are very soft and will not make as good flour as the Clawson. It appears to me that if you wish to trace the history of the Black-bearded Centennial you might get on the track by writing to the Department of Agriculture and ascertaining where they obtained the supply which they distributed several years ago. I am not certain, but I think it is stated in the Virginia Commissioner's report that this wheat was imported by the Department from Australia. It was among the Australian exhibits at the Centennial. If Messrs. Haines got the Golden Grains from the Willamette Valley, Oregon, there is nothing more likely than that it was also brought there from Australia.".....



THE PINE-LEAF MINER.—FIG. 523.

What Others Say.

EFFECTS OF FREQUENT CULTIVATION.—From the Report of the Illinois Industrial University for 1880, we select several very interesting parts: In an experiment to compare common with frequent cultivation of corn, a plat was planted June 14. One-half, in alternate strips of four rows, was cultivated six times during the month of July; the other half three times. The result was as follows:

				Pounds.
Four rows, cultivated	3	times		229 60
" "	6	"		292 60
" "	3	"		259 70
" "	6	"		229 70
" "	3	"		331 80
" "	6	"		329 70
" "	3	"		315 00
" "	6	"		299 60
" "	3	"		276 50
" "	6	"		269 50
" "	3	"		261 80
" "	6	"		295 80
" "	3	"		276 50
" "	6	"		284 90
" "	3	"		291 90
" "	6	"	only three rows	211 40
Averages of rows cultivated	6	times		303 97
" " "	3	"		243 89

Frequent cultivation gave an increase in yield of something over eight per cent. In another experiment of the same nature the increase was a little over five per cent.

SHRINKAGE AND PER CENT. OF COB.—As shown in the report of Prof. Scovell, Agricultural Chemist, the average shrinkage of ten ears of each of six varieties of yellow dent corn, gathered October 7, 1879—when all was fairly matured except one variety—and kept in a warm room until February 28, 1880, was 12.1, 16.8, 17.4, 22.5, 22.8 and 33 per cent. The percentage of cob at same date, taking varieties in same order, was 12.3, 16, 12.6, 15, 11 and 14.4—the average being 13.7 per cent. In another trial in 1880, of corn well dried in a warm room, the average percentage of cob in specimen ears of fourteen dent varieties was a little over 14. The varieties were from 10 to a little over 20 per cent. The weight of the cob varied from one ounce to two-and-one-fourth ounces.

CONVEYING WATER BY A SIPHON.—Water being required for pasture lots on the farm of the Industrial University, reports Mr. E. L. Lawrence, the head farmer, the attempt was made to supply it from wells, located high enough above low portions of the lots to permit the use of a long siphon, by which the water should run *up* and out of the well in a steady stream to the point required. Aside from the collection of air in the tubing, there is no probability of this getting out of order as is the case with the wind-mill: there is no machinery to wear out and there is no cessation of action. The first expense, of course, depends upon the depth of the well, and the distance the water is to be carried. In many cases, however, this is much less than the original cost of the wind-mill. The two trials made have proved eminently successful.

WITH the view of obtaining water by means of the siphon, for stock supply, the following experiments were made: First, in July, 1878, under the following conditions: Well nine feet deep to bottom, depth of water from two to 4½ feet, size of pipe used, one-half inch. Distance from well to tank, 700 feet. Pipe laid 2½ feet below the surface. Highest point where pipe is laid, above bottom of well, nine feet. An excavation of 2½ feet was made for place to set the tank, and one side planked over, with tile laid underneath connecting with a previously laid drain, 100 feet further down the slope, with a pipe connecting with the pipe to carry off the overflow from the tank.

The cost of this is given as follows:

Tank holding 12 barrels	$ 9 75
700 feet ¾ inch gas pipe @ 3c	21 00
Digging and filling 700 feet of ditch	9 00
Excavating for tank, fitting pipe, etc.	15 00
Total	$54 75

To remove the air from the pipe a common cistern pump, costing $3 was used. The result of this may be briefly stated. Whenever there is four feet or over of water in the well, the flow is uninterrupted and continuous; thus from October, 1879, to May, 1880, it never stopped, and never froze during the Winter. When the water in the well falls below four feet, it is necessary to use the pump to remove air from the pipe that accumulates at the summit. With three feet in the well, the pump must be used for about ten minutes, about once a week, and oftener if the water falls below that point.

The second trial was made about three-fourths of a mile from the first, in October, 1879. In this case the conditions are as follows: Length of pipe, 1,000 feet. Fall from surface of water in well to bottom of tank, five feet. Size of pipe used, one inch. Here, instead of going over the hill, as in the first instance, we went around it and for several rods dug down from five to six feet to lay the pipe, so that no point is higher than where it leaves the well. This will supply water at all times for 100 head of cattle and cost $119. It is thought worth $500.

SUGAR FROM SORGHUM.—1. From careful chemical analyses of and practical experiments with Sorghum cane grown on the University Farm, the following general conclusions were reached. It appears that crystallized sugar can be obtained from sorghum, of as good a quality as that of the ordinary brown sugars found in market. A portion of this brown sugar was re-dissolved and the solution passed through a mixture of charcoal and clay. On evaporation it yielded a light brown sugar, which dried very rapidly in the air, and showed no trace of sorghum taste or smell. A portion of this product was placed in a percolator and the adhering molasses washed out. The result was a perfectly white sugar.

2. To insure the production and best yield of crystallizable sugar, the juice must be treated with lime before heating. If, after skimming, the excess of lime be neutralized by aluminum sulphate, sulphurous acid, or even sulphuric acid, the sirup obtained will be of a light color; otherwise the excess of lime will cause the sirup to be dark.

3. From the proximate analysis of the cane, it appears that one acre of sorghum produces 2,559 pounds of cane sugar. Of this amount we obtained 710 pounds in the form of good brown sugar, and 265 pounds were left in the 737 pounds of molasses drained from the sugar. Hence, sixty-two per cent. of the total amount of sugar was lost during the process of manufacture. This shows that the method of manufacture in general use is very imperfect.

4. The 710 pounds of sugar, at eight cents a pound, would bring $56.80. The molasses is worth, at 25 cents per gallon, $17.75; or the products of an acre of sorghum would bring $75.55. There is no question that, with proper care and apparatus, the above yield can be readily doubled.

5. Nearly two-thirds of the sugar, as has been seen, is left in the *begasse*. This could, in great part, be recovered by percolation with water, as is done sometimes in the manufacture of beet-root sugar.

IN feeding rutabagas with grain in proper proportion as related in the Husbandman, Pres. McCann of the Elmira Farmers' Club would count them worth 28 cents when corn is a dollar a bushel—that is to say, he considers four bushels of rutabagas worth a little more in cattle feeding than a bushel of corn, when both are fed together.

G. W. HOFFMAN thinks that roots used in feeding cattle are worth for that purpose not more than 10 cents as compared with grain at market rates. The main advantage in the use of roots is in their favorable action in the improvement of condition, not as flesh-making food so much as an appetizer and regulator. With corn at a dollar he would prefer to use it rather than pay 25 cents for rutabagas. His estimate of relative values would be not far from five of rutabagas or beets or carrots to one of corn. Potatoes rate higher. They are worth in his feeding nearly half as much as corn—say three bushels, perhaps two-and-a-half, of potatoes to one of corn. Common flat turnips he ranks about ten to one. All these estimates it must be understood are for mixed feeding.

J. S. VAN DUZER notes that a late estimate of the value of wheat bran for cattle feeding is lower than for hay. It seems to him at variance with the facts, but may be correct.

G. W. Hoffman considers it is about right. The thin wheat bran, that we buy now-a-days is about as poor as bran can be. Ton for ton he would prefer good hay. He has fed a great deal of wheat bran and has come to regard it as low in the scale of values.

J. S. Van Duzer, if he had to buy bran and hay at the same price per ton, would take more of the bran. He has fed a great deal of it, and can not accept the low estimate of value.

PERSISTENCY OF HUNGARIAN GRASS.—A writer in our esteemed contemporary the Kansas Farmer, makes this statement as to Hungarian Grass. Ten years ago he sowed 30 acres of new sod with Hungarian seed. The next two years he raised corn on the same land, and the Hungarian grew so thickly that he was forced to use the hoe.

The following year he sowed Timothy seed, hoping to kill the Hungarian. Instead of Timothy, the Hungarian grew about two feet tall, fine and even, turning out over two tons per acre. In the Fall he sowed again to Timothy, but for lack of rain the seed did not start, and the following season he mowed another crop of Hungarian, thicker, but not so tall as the last. The following season he sowed Timothy again, and mowed another fair crop of Hungarian. He plowed the field and planted to corn, and each year the Hungarian grows thriftily among the corn, some of the heads as full and fine as the original crop. It is useless he says to sow Timothy in the Spring after Hungarian. Timothy sowed in September, if we have rain to start it, will kill out Hungarian the following season. Hungarian seed shells in handling more than other seeds, but will not sprout the same season as wheat and oats, but will wait in the ground years for its chance to grow.

A MEMBER of the Western New York Farmers' Club, as reported in the American Rural Home, said he had asked shippers if they supposed purchasers, if they knew that the fruit (apples for instance) were not uniformly as good as they were on top, would pay more for them if they were faced than if they were put in just as they would average. They said they thought they would, and that they had become so accustomed to it that they expected to find them thus faced. . . . In one instance where buyers were packing potatoes, they told him that they faced both ends of the sacks so that they would appear well on top in the sacks, and when turned into the barrels the bottom part of selected potatoes would present a fine appearance on the top of the barrel.

THE Scientific American says that a resident of London, England, claims that that city spends over $25,000,000 a year for oysters, and that more than twice the number of these bivalves would be used if they could be obtained at as reasonable prices as in America. The genuine Whitestable oyster fetches about 75 cents or 80 cents a dozen. Oyster culture in England is yet in its infancy. Large numbers of oysters are now carried to England from this country. The most popular size for eating is a shell about as large as a dollar. They are packed in barrels very closely and kept right side up during the voyage. Quite a trade is now springing up in carrying "seed" oysters to Europe . . . . . The seaboards of Georgia, South Carolina, and Texas abound in oysters. In some places they have grown up into reefs extending for twenty miles along the coast. Much of this oyster wealth may yet become available for Northern markets . . . . . Science has demonstrated that oysters can be so managed that their spawning seasons can be regulated, and thus good oysters be had and eaten every week in the year. This is arranged in the Connecticut waters by planting them in different depths of water. This secures variety in temperature. The greater the heat the earlier the oyster will spawn. Therefore by moving them into shallow water in a sheltered place where the sun will warm the water easily the spawning season will be over in early summer. Those in the deeper and colder water will, of course, feel the heat later, and therefore spawn later. Thus one portion of the oyster supply can be always ready for use.

OUR friend, Governor Furnas, according to the Pacific Rural Press, had heard of the attractions of California, but he thinks the half had not been told him. In fact, the Governor remarked that if his interests in his own State were not so large, and his associations and relations other than what they are, he would pull up stakes and emigrate to California with a view to engaging in horticulture there. . . . . Dried bananas from Jamaica.—An attempt is being made, says the Gardeners' Chronicle (London), to find a mar for this product, and there is no doubt that they will form an acceptable addition to the dessert-table, as they have the sweetness of the dried fig without the inconvenience of the numerous seed-like fruits. There is no doubt also that they have a considerable nutritive value. . . . . IT is physically demonstrable, says Professor Orton, in Secretary Chamberlain's Ohio Agricultural Report, that in multitudes of instances the cess-pools feed the wells. The additions to the cess-pools of one day are pumped from the well the next. . . . . God forbid us any longer to misinterpret His providence; and we, alas, must bear our own burdens, and, for a multitude of our sicknesses, at least, must accept the humiliating explanations which are furnished by our ignorance, self-indulgence and laziness. . . . . Progress (Phila.) thinks that, after all, vanity in the abstract is but a laudable desire to appear well and to feel convinced in your own opinion that you are accomplishing that desire. You are happy in the estimation of yourself, and the world is by no means a loser in the profit it receives from this almost universal ambition to put the best foot foremost. Thinking well of one's-self often brings with it the strongest craving for the good opinion of others. . . . . Morally and physically we must suffer to be beautiful. Savage and civilized alike endure tortures to gratify the æsthetic instinct. Men, women and children all suffer for the sake of beauty. . . . . It is a glorious sign for the South, says the Farmer and Mechanic of Raleigh, N. C., when field laborers can earn from fifty to eighty cents per day, and when artisans of all trades can find employment from dawn till dusk, and all night in some localities. Speed the plow! Rattle the loom! Ring the trowel! Whistle the factory engine! Stick the types! Swing the school-house bell! . . . . . The Husbandman thinks that in the common-sense view it is absurd to issue a patent on wire fence. It is no more an invention than a thorn bush is. Machines for making barbs and attaching them, may properly be patented, but the product ought to be as free as the material of which it is constructed. . . . . Justice, it is to be feared, is blind in more senses than one, remarks the London Live Stock Journal. A poor wretch who goaded by the pinchings of poverty, steals a bagful of turnips, is sent off to the county gaol for a month; while the scoundrel who does his best to poison his neighbors by selling unwholesome meat escapes with a fine, which is easily paid out of his ill-gotten gains.

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

ALTUS, Franklin Co., Nov. 3.—What opinion many readers of the RURAL may have of Arkansaw (now called such in order to obey the dictum of a late Legislature of the State) I do not know, but I presume that since a more general diffusion of knowledge abroad through the columns of the 100 newspapers published here, the world has a better opinion of our resources, as well as of our intellectual and moral character. We are now quiet and peaceable in all our borders, with a low degree of prosperity as compared with former years. The past season our soil labored to bring forth its usual quota of cereals and fruits, and succeeded admirably under the burning sun and cloudless heavens of our unparalleled Summer for drought and heat. Railroad constructing is on the "boom," and some of the magnates are competing zealously in efforts to cross our State in several places. Soon we expect to be able to tell of a population equal to our unbounded resources. We are able to sustain a million more of people than we have from agricultural resources alone. Then the undeveloped mineral wealth is now attracting the attention of capitalists. Our mineral waters are everywhere abundant, and in medicinal properties will compete with half the world beside. I have spent 14 years traveling over the hills, mountains, valleys and bottom lands of Arkansas, and have become familiarly acquainted with every nook and corner of it, and I hesitate not to say that it compares well with any State in our great country and far excels many of the older settled States in its grand resources. GREGORY.

HOT SPRINGS, Garland Co., Nov. 3.—Is it not provoking to reflect that after enduring one of the severest droughts ever known, we are now likely to have no fruit next year? We thought that to lose our crops the present season was all we could endure, but the prospect of the future fruit crop is gloomy enough. Pears, early apples, plums, peaches and other fruits are, or soon will be, in full bloom, The shrubbery is also blooming; we are having the finest of Spring weather and unless old Boreas makes haste this way we shall have no fruit left. It is to be hoped old Saturn, Jupiter and all those other big fellows will get back into their places again and remain there during this generation. Cotton is about all picked; everybody sowed turnips. We have some rye and wheat. Fall pasture is coming on finely. Stock thin and very cheap, $6 to $10 per head for cattle. After all, we have something to be thankful for—this delightful climate and these hot, healing waters. T. J. B.

California.

DEER VALLEY, Park Co., Nov. 1. — We dug some large holes in the garden and procured some very rich soil, cut the White Elephant Potato to single eyes and planted them one in a hill. They came up nicely, but were cut down twice by frost early in June; still we have several pounds of nice tubers, but no very large ones. Of the asparagus seeds a little over one-half germinated and did nicely. It was very dry here in May and June, and we had to water the bed every day. The Washington Oats we sowed in the garden in drills two feet apart, giving each plant ample room. They did well, but not better than other varieties we have tried. The ground has been manured somewhat every year. The longest panicles measured 15½ inches. We put a few of the flower seeds in boxes; only one plant survived. We will try starting the rest in a hot-bed in the Spring. As for the Rural Branching Sorghum, we waited for frosts to be over until too late; we will have to try the hot-bed. C. T.

Canada.

CORNWALL, Ont., Oct. 27.—The RURAL comes to hand as regular as a clock and is more interesting and instructive than any agricultural paper I have ever seen. Many a time, when thinking about economizing, my thoughts have turned to the RURAL, but not to dwell there long, for I would soon conclude that it is the best investment I could make. The seeds alone are worth the money, and I shall be the last to grumble if you raise the price to $2.50. I shall certainly give up my local paper before I give up the RURAL. The harvest has been very good in this section, with the exception of corn, which has been a failure; but as this is not generally a corn-growing country, we do not suffer much. Hay is a good crop, but not extra in quality owing to heavy rains at harvest time. Oats and barley very good. Wheat very fair considering the dry weather. Potatoes and all roots very good. The early frost we had cut down everything we had left in the garden in the shape of turnips, celery, cabbage, etc. I had a beautiful crop of Beauty of Hebron raised from the seed the RURAL sent. I had bad luck with my White Elephants. I cut the potato to single eyes and only one came up; the others were killed by heavy rains in the Spring. From the one eye I raised 4½ pounds of potatoes, which I think ought to satisfy any one. The sorghum was a failure with me, but the other seeds were all excellent and a great acquisition. I am looking forward to the new Free Seed Distribution with some pleasure, for I know there will be something good about them. W.T.

Colorado.

TABLE ROCK, El Paso Co., Nov. 1.—My Rural Branching Sorghum came up very well; but this location is too high and the seasons too short to ever make it a success here. I cut my White Elephant to single eyes; all came up well; the vines grew quite rank and I harvested 11 pounds only. The season was very dry, or no doubt they would have done better. The Washington Oats came up well, and after removing the stalks containing rust as fast as it appeared—which was considerably—I got 10 pounds of clean oats of very fine quality. The asparagus did very well, considering the season; the seed nearly all grew. The grain crop in this locality was very light; most of it was cut for hay. Potatoes a fair crop and on some ranches good. No fruit is raised in this vicinity. J. E. K.

Illinois.

DOVER, Bureau Co., Nov. 1.—The asparagus seeds of both kinds came up very well. Rural Branching Sorghum did finely. Washington Oats came up well, but my hens found them, and took them before they were ripe. The White Elephant Potato I cut into 13 pieces and planted in 13 hills, yield 53 tubers weighing 13 pounds and 10 ounces of very good size. All the seeds did well for such an extremely hot, dry and buggy season. Now for the pinks: I planted the seeds from both packages in the house on April 14 in a box. They came up finely and I transplanted them into the ground about the middle of May; the 10th of June the first pink opened; it was double and very pretty. About the 25th of June I began to have plenty of blossoms and counted at one time 36 pinks, all of different shades and markings, but what seemed strange to me was that not one was pure white. When I transplanted into the ground the first time, I sowed the rest of the seeds, and they did equally well with the first. To-day I picked my last pink to put on a bridal cake. The carnations have not blossomed yet, but I have taken them into the house and they are looking fine. I have saved a goodly amount of seed and my pink roots out-of-doors have unopened buds now which a few warm days will perfect. I have enjoyed my bed of pinks very much indeed and shall take pains to keep those in the ground alive for Spring. C. A. T.

Kansas.

CAWKER CITY, Mitchell Co., Nov. 2.—I hope some of those who have succeeded in raising seed from Rural Branching Sorghum will let it be known if they have any to spare, as ours failed to seed. We are anxious to get enough to try again, as we consider it a valuable article for stock food. Ours grew finely, each hill having from 12 to 20 stalks. The other seeds did fairly, but none so well as the sorghum. The oats grew well, but we failed to get seed from them, too, as the native grasshoppers liked them so well that they, very selfishly, took the whole crop. The potato, on account of the drought, failed to give us much more than the seed. We only harvested three small tubers. The pinks, what I saved of them, were fine. In our part of the State crops are generally poor. The early-planted corn did very well, but that of late planting was, much of it, an entire failure on account of the drought. Potatoes, the same. They sell here for $1 to $1.25 per bushel. I think our State is destined to become a fine stock country, unless a few more dry seasons frighten us all away. E. S. W.

Maine.

BOLSTERS MILLS, Cumberland Co., Nov. 3.—The crops are all gathered. Corn was very good; the potato crop was also very good with some and light with others. The grain crop was fair with most of the farmers. The RURAL seeds did well From the single White Elephant I got 72 good-sized tubers. The Branching Sorghum didn't grow very well. R. S. P.

Michigan.

BRONSON, Branch Co., Nov. 2.—The White Elephant Potato was of the size of a common hen's egg; it had seven eyes; I cut it into seven pieces and planted them in seven hills all in a row 16 feet long, on the 8th of May. The vines made a wonderful display—very large and rank. I dug them on the 28th of August—weight of crop 28 pounds, mostly large and fine. The Rural Branching Sorghum I planted on the 20th of May, one seed to a hill. It made a very slow start, but by the middle of July it was five feet high, with from seven to twelve stalks to a hill. From July 25 to 31 I cut off half of the piece for a second growth; it is now green and growing, with from 20 to 34 stalks in the hill, six feet high, averaging 20 pounds from both growths to each hill!! My horses devour it with a relish. We had a long spell of dry weather in part of July and all of August; the sorghum remained green and growing when everything else suffered. I think the seed raised on the uncut half of the patch will grow. W. A.

MARSHALL, Calhoun Co., Nov. 2.—I had eleven hills of White Elephant Potatoes and nine came up and did well. Of the dianthus and picotees every seed germinated and the plants are splendid—155 different kinds: half blossomed. The Rural Branching Sorghum and asparagus did well. The Washington Oats did better than the White Russian Oats right alongside, but the drought put all the seeds back, so it was not a fair trial for any of them. J. R. T.

TERRY ST'N, Bay Co.—My White Elephant Potato weighing less than two onnces, was cut into 16 pieces by dividing some of the eyes. The pieces I rolled in plaster and planted one in a hill in dry sandy loam on May 10. Yield, 152 tubers, weighing 64 pounds. Largest one weighed 1⅛ pound. A frost on June 10, cut potatoes and all tender plants to the ground. Washington Oats grew well, but rusted badly. Rural Branching Sorghum made a fair growth but did not ripen seed. Asparagus did well, also the plants from the flower seeds. Success to the RURAL! E. M. P.

Ohio.

CAMDEN, Preble Co., Nov. 3.—We have had fine showers for the last month, which have revived our pastures and given our wheat a good start. Our early sown wheat has been badly injured by the fly and grub worms. My White Elephant did not do very well as it was so very dry. The Branching Sorghum stood the drought extremely well and ripened its seed finely. The asparagus made a good growth. We have had but little frost and late potatoes have not been much injured yet, and our Peachblows may make a moderately good crop. Early Rose are almost a complete failure. W. M,

GALLIPOLIS, Gallia Co., Nov. 2.—I have taken the RURAL 23 years and I cannot get along without it, as it is the best paper of its class that I can find and is growing better as it grows older. The weather was too dry and hot for the White Elephant, but I have one-half peck of small tubers. The Washington Oats rusted somewhat and smutted badly.

The Rural Branching Sorghum came up nicely; nearly every seed grew. It was planted May 23 and was up May 28. On August 1 it was six to eight feet high; by the 15th the lower blades began to dry up. I cut all but six or seven hills. I thought it was so dry it would not grow any more, but it grew about 18 inches before it rained—about the middle of September. The second growth is now five or six feet high; what I did not cut is about 10 feet, is headed out and some seed I think will grow. It is a success. The asparagus came up very well. The weather was too dry for the flower seeds. Wheat, one-fourth of a crop; hay, one-half to three-fourths; corn, one fourth to one-half. Late potatoes are growing yet; they wont average more than one-fourth of a crop. About the usual amount of wheat has been sown; it looks fine. W. H.

Pennsylvania.

BROOKLYN, Susquehanna Co., Oct. 24.—The RURAL seeds were all valuable here except the oats. I had 21 pounds of potatoes, large and very nice. Was much pleased with the sorghum; shall try it again if I can find seed. We all like the RURAL very much, and as long as I can make $2 a year you may count me a permanent member of the RURAL family. E. L. W.

MIDDLEBURG, Snyder Co., Nov. 5.—The RURAL was worth a whole crop of corn to me; let me explain: In many parts of Pennsylvania and other places corn is an almost entire failure this year. In the RURAL I saw the Hoosier corn drill advertised, and got one and planted half of 10 acres 16; and half 20 inches apart. What was 20 inches apart is very good, and that which was 16 is not quite so nice in the ears. On the whole 10 acres there are only a few nubbins, while five or six neighboring farmers have hardly any corn, and what they have is nubbins and not much of that. Now whom shall I thank for this? Why the RURAL NEW-YORKER, for if I had not read the RURAL I would never have got the corn drill. Nor is this the only instance. I also get the Agriculturist but the RURAL is of a more experimental nature, while the Agriculturist merely suggests how it might be done. Another instance, when a subscriber asks a question of the RURAL he is sure to get an answer: It pays any farmer to get the RURAL NEW-YORKER. G. S. S.

WALLSVILLE, Luzerne Co., Nov. 7.—I received two White Elephant potatoes, one in the forepart of Winter the other in the Spring: the two weighed eight ounces and contained 37 eyes. I planted them one eye in a hill on May 7, in good garden soil. All came up except four or five hills. I dug them Aug. 13, and got 23 pounds of from small to medium-sized tubers; not white but resembling the Beauty of Hebron in color. The bugs injured them very much, I think. The second crop of old bugs cut the leaves nearly all off before I was aware of it. The Rural Branching Sorghum I planted June 1. I planted Black Mexican sweet corn at the same time and close beside the Sorghum. Both came up well; but from the time they both came up until the corn was ripe, I do not think there was a time but what there was double the weight of sweet corn on the same amount of ground that there was of Rural Branching Sorghum. The corn made a good growth and eared well, while the Rural Branching Sorghum attained but four or five feet in hight, the drought affecting it more than it did the corn. I am fully persuaded that there has not been anything found as yet; nor is there likely to be soon that will equal corn for a fodder crop in this section, and to get the best results I would plant the larger kinds of sweet corn in drills far enough apart to cultivate and thin enough to permit the crop to ear somewhat. The Washington Oats I sowed but do not think they are any improvement over the common white oats of this section. The Ennobled Oats did well this year; but I do not like the color. I have a fine lot of nice asparagus plants for transplanting next Spring. The pinks did splendidly and were as near perfection as anything of the kind ever seen in these parts. Notwithstanding the drought, Winter grain, oats and hay were good crops. Corn and potatoes light. Fruit medium. The prices at our nearest market (Scranton), are about as follows: hay, $15 to $17; wheat, $1.40; corn, 75c.; oats, 50c. to 55c.; potatoes, 90c; apples per bbl., $1.50 to $2; butter, 28c. W. E. M.

Texas.

DENTON, Denton Co., Nov. 1.—We had a poor crop season here as in most other parts of our country. Thousands of acres of corn made absolutely nothing; but there was an immense lot of old corn left over, and a good oat crop for the small amount sowed, and now we are having an abundance of rain which is making the grass as good as or better than it was in the Spring, so, putting this and that together, we will make out to live if we don't die. This part of Texas is a beautiful prairie country and one of grand capabilities. The soil is splendid and from one to five feet deep, commonly two or three. We usually have two wet seasons in a year—one in the Spring and the other in the Fall; and with these exceptions it is what might be called a dry climate, and the drier the healthier. My corn averaged 15 bushels to the acre; wheat, 15 bushels; barley, 10 bushels; oats, 30 bushels, cotton $20 worth to the acre. Our greatest trouble just now is caused by the army worms, which are eating and killing our young oats, wheat and barley. As near as I can tell, and as far as my knowledge extends, they have killed about 19-20 of all in the State. Small grain, however, is chiefly sown only in the north middle part of the State, the center of the grain region being somewhat west of the Texas Central Railroad.. J. H. J.

Wisconsin.

CROSS PLAINS, Dane Co.—After reading of such large yields from the RURAL seeds, I am ashamed to say anything about mine, but still I don't think 13 pounds of tubers from two ounces of seed so very bad, all things considered. They are very nice-looking, five of the largest weighed from 10 to 17 ounces. The sorghum and asparagus did not germinate very well owing to a dry spell we were having at time of planting, but what did grow have done well. I left some hills of sorghum to see if it would seed and think some of it will grow. I can brag on the number of stalks to the one seed or hill if nothing else, for I counted from 22 to 42 from one seed, and after the second cutting it started for a third crop; but the frost arrested it. The Washington Oats promised finely but the wind and rain storms broke them down so very badly that I got only 2½ pounds of very light oats. I sowed part of the dianthus seed which came up well, the plants look very pretty and are of a good many different colors, both single and double—from white to almost black, spotted and fringed. I expect something grand from that bed of dianthus next Spring and Summer. E. A. T.

NEW CASSEL, Fond du Lac Co., Nov. 1.—It has been raining almost all of the time of late. Farmers are backward with their work; it is too wet to plow or to do anything else on the land. Corn that is in the shock yet is in bad condition, and the fodder is almost spoilt. Winter wheat is getting pretty large. Many think early sowed will get too large. Rye is looking fine and there is a good deal of it sowed here this Fall. Potatoes were a pretty good crop and command a good price—about 75c. per bushel; wheat, $1,25; barley, $1; corn, 75c.; rye, $1; oats, 30c.; clover seed, $5.75; Timothy, $3; butter, 20@30c.; hay, $8 per ton. J. O. N.

Washington Territory.

WAITSBURG, Walla Walla Co., Oct., 29.—The yard is green with young weeds and grass which have just sprouted. Wheat is just beginning to come up. The tenth of this month, the people awoke in the morning to find fruit trees, which were full of foliage and ripe fruit, and flower-gardens which were radiant with bloom, among them, the tender petunia, all enveloped in a mantle of snow, which was at least an inch in depth. It made a pretty picture, but caused many exclamations of surprise, for we never before saw snow so early in the season, in this country; but it was not very cold, and I guess the injury done to ungathered fruit will not be very great. Tomatoes are still in the market for one cent per pound. The very finest of apples can be bought for one cent per pound. Wheat is still 60 cents per bushel; barley, 87½ per hundred pounds. Corn is quite high so little is raised. Our nights are too cool for the successful growth of it. We have to pay five cents per pound for sweet potatoes; but they are very fine large ones. There are many immigrants coming in now. Many come in late in the Fall, and often have to camp out half the Winter because houses are all occupied. They ought to come earlier in the season. M. A. R.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

FATTENING RATION FOR CATTLE.

A. L. C., Catonsville, Md., says, "Can the RURAL help me any with a feeding ration for fattening cattle. I propose feeding 42 head in box stalls. I have any quantity of corn-fodder, about 30 tons of clover hay and plenty of corn; also a mill for grinding and a power cutter. Bran is worth $25 per ton; new-process oil meal, $28. I cannot feed mixed feed wet up, without great labor."

ANS.—Our correspondent is well situated for fattening his cattle in luxurious comfort. And if he wishes to do it with the greatest economy of food let him run his corn-fodder and clover through his cutter together, cutting as short as he can; or, say, one-half inch long. This may be cut in the proportion of eight of clover to twelve of corn fodder. These should both be fed into the cutter together. Had he told us the weight of his cattle, the amount and proportion of the ration could better be determined. But we will suppose them to weigh an average of 1,000 pounds when put up, and that he proposes to feed them five months or 150 days. He says he has plenty of corn, but he does not say what corn is worth per bushel, yet it can hardly be worth less in Baltimore than 75 cents, or $1.34 per 100 pounds, and this will make its cost after grinding as much as new-process oil meal, $28 per ton. On this basis we will try to give him a ration which will be likely to yield the best result from a given cost of food. It requires a certain proportion of the different elements of food to make the best ration for fattening or growing steers. Let us suppose this ration to be, for his 1,000-pound steers, eight pounds of clover hay, 12 pounds of corn fodder, 10 pounds of corn meal and four pounds of new-process linseed meal per head per day. This is supposed to be the average ration throughout the 150 days' feeding, starting with a little less. And to make this better understood, let us see of what the dry digestible matter of this ration consists. It will be understood better in the following formula, giving the amount in pounds and hundredths of pounds in each part of the ration.

Rations.	Digestible nutrients. Albuminoids	Carbo-hydrates	Fat	Total nutrients.
	lbs.	lbs.	lbs.	lbs.
8 lbs. clover hay	.56	3.04	.10	3.70
12 " corn fodder	.13	4.44	.04	4.61
10 " corn meal	.84	6.06	.48	7.38
4 " linseed meal	1.11	1.35	.08	2.54
31 "	2.64	14.89	.70	18.23

A study of this ration may be instructive. It will be seen the eight pounds of clover have more than four times as much albuminoids, or muscle-forming matter, as 12 pounds of corn fodder, and that four pounds of linseed meal have 30 per cent. more of this element than 10 pounds of corn meal; but in carbo-hydrates or starch, sugar, fat, etc., the corn meal is the richest. This ration has about the proportions found to be best by the Germans in practical feeding. The writer of this has also used a ration very similar, with the best result. Our friend should grind his corn and mix it with the linseed meal in the above proportion, and feed the mixture with the cut clover and corn fodder. Place three pecks of the mixed cut fodder in the manger of each animal and then put on this about five pounds of the mixed meal dry. In eating the meal the cattle will also eat the cut fodder, and all will be raised and remasticated together. The meal will thus be all digested. This feed will be given three times per day. If the cattle are thrifty at the start they should gain 400 pounds per head and the gain in price per pound live weight should be at least two cents per pound; and if the sale price is six cents, the gain will be $44 per head ($24 on the 400 pounds gain and $20 on carcass). This would pay for the grain food and leave about $16 for clover and corn fodder, and the manure will well repay the labor. Its value is greatly increased by the use of the linseed meal.

SALTING PORK, ETC.

G. W. B., Klickitat Landing, W. T., asks, 1, will barrels that have been used for packing butter in, or barrels that have contained sirup or molasses, answer for pork barrels; 2, about how many pounds of salt are necessary in salting 100 pounds of pork; 3, should anything else besides salt be used, when putting down pork in the barrel, to make it wholesome and good; 4, is it necessary to make a brine to pour over the pork, or will the juice of the meat form its own brine; 5, how long should the meat remain in the brine before taking out to cure; 6, how should the meat be cured after it is taken out of the brine; 7, will the manner of curing pork be successful if applied to beef.

ANS.—1. It would be safer to use new barrels for packing pork. Barrels which have contained sirup or molasses are good for hams and shoulders. Barrels which have contained butter would be very likely to be tainted, and this would injure the pork. 2. It is best to make a brine for packing pork strong enough to float a potato. This is the common rule. The bottom of the barrel should be covered with salt whenever pork is packed. 3, 4, 5, 6. Nothing should be put into a barrel with pork except salt. It may be packed without making a brine by putting a quantity of salt in the bottom and between each layer of meat and also on top, to the extent of 15 pounds to the hundred, and then pouring in sufficient well water to cover the whole contents. The meat should always be submerged in the brine or it will rust and spoil. It will keep only a few days if taken out of the brine unless it is smoked. Pork will only absorb a certain amount of salt, but the brine must be as strong as stated in order to withstand the effects of temperature and keep sweet. Less salt will answer if the meat is not to be kept a long time, and when it is there should be salt enough so that it cannot possibly be all dissolved. Eight pounds of salt to 100 pounds of meat are ample for hams and bacon, to which two quarts of molasses or five pounds of sugar and two ounces of saltpeter may be added. When prepared in this manner the meat need not be left in the brine longer than six weeks before being smoked. It may be cured dry, *i. e.*, the salt, saltpeter, and sugar or molasses may be mixed together and rubbed on the fleshy side of the meat and the meat piled together until the mixture is all absorbed. It should then be smoked. When designed for immediate use, six pounds of salt to 100 pounds of meat are sufficient. 7. For beef a brine should be made which will float a potato, and two ounces of saltpeter be added for every 100 pounds of meat. If the beef is first sprinkled with the saltpeter and left a day or two before it is placed in the brine, it will have a redder appearance and will not absorb so much of the salt.

COTTON SEED AS AN ONION FERTILIZER.

B. W. H., Lawrence, Texas, asks whether cotton seed is a complete fertilizer for onions to be raised on sandy soil—the onions to be put in before the middle of November.

ANS.—We have never applied cotton seed as a fertilizer especially for onions, though we have seen it used in a general way for vegetables with satisfactory results, and have found it beneficial to everything, except during such dry years as this, when it is likely to do more harm than good, burning and prematurely ripening the crop. Much the better way would have been to compost it with stable manure in about equal proportions; but as the case stands, we would apply it broadcast at the rate of 100 bushels per acre; plow it under, giving a liberal dressing of wood ashes, 40 to 50 bushels per acre, after the onions are up. Should the weather be favorable to the germination of cotton seed immediately after applying, but little benefit will be derived from its use. Good results would follow if, as the weather becomes colder, a slight furrow was opened close along on each side of the rows in which the cotton seed has been placed and covered by turning the soil back again.

Miscellaneous.

S. F. B., Buckeye Center, Ill., asks, 1, whether the RURAL pinks will winter out-of-doors; 2, will tuberoses have to be planted in the house, and when will they bloom.

ANS.—1. Yes. 2. To have flowers in August or September the bulbs should be potted and put in a hot-bed in March, where they should remain until they grow to a hight of three or four inches. In June the plants may be turned out carefully into the open ground. For flowers in October the bulbs should be planted in pots in May, carefully tended through the Summer and taken into the house before frost appears.

M. B. P., Henderson, N. C., sends a specimen of "Rag Gourd" and asks what is its botanical name.

ANS.—It is Luffa or Cucumis acutangulus. The fruit is sometimes eaten when young, the same as vegetable marrows so esteemed in England—but when ripe it becomes strongly purgative. When dried and reduced to its fibrous parts, it serves as a sponge or dish cloth and it is sold in various European countries as Egyptian Sponge. We have tried to raise it at the Rural Grounds with poor success. The season is too short.

G. F. R., Napoleon, Ohio, asks which is the better sort of corn — Chester County Mammoth or the RURAL Dent, and where can he get half a bushel of each.

ANS.—We much prefer the RURAL Dent from *this* season's trial. It does not shrivel so much. Leading Ohio seedsmen sell Chester County Mammoth. RURAL Dent is not yet for sale.

C. A. T., Dover, Ill., asks whether we shall have seed of the Rural Branching Sorghum for sale next Spring.

ANS.—We sell absolutely nothing but the RURAL NEW-YORKER. All seeds pass out of the RURAL's hands after our distributions. Seedsmen will sell the Rural Branching Sorghum, no doubt.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 12, 1881.

W. S. B.—W. H.—E. M. P.—W. A.—R. J.—R. Parkhurst, Montana, thank you.—M. B. P.—J. C.—M, J.—T. G. T.—the flower not yet received.—A. J. T.—W. F. B.—J. A. F. & Co.—J. J. H. G.—H. L. W.—J. H. J.—C. J. H.—D. P. C.—W. Z. H.—T. J. B.—A. V. G.—J. E. K.—G. H.—T. H.—M. A. R.—A. V.—A. E. B.—F. D. C.—M. W.-F.—W. V.—P. C. J.—J. O. N,—C. H. G.—A. B. A.—F. S. H.—J. S.—G. L. R.—G. W.—O. R.—H. S.—D. S. M.—H. S. M.—M. B. P., thanks.—J. R. T.—B. C. D.—P. B. M.—Farmer's Daughter, thanks.—A. L. J.—G. G.—J. C. H.—J. S.—A. M. P.—M. R. S.—A. L. J.

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SATURDAY, NOV. 19, 1881.

SEVEN YEARLY SUBSCRIPTIONS WITH $14 ENTITLE THE SENDER TO THE RURAL NEW-YORKER FOR ONE YEAR FREE.

THE MICHIGAN SUFFERERS.—The total amount of money contributed to the Relief Fund is about $500,000. In St. Clair, Sanilac and Huron Counties, there are 2,200 families who should have at least $100 each to carry them over the Winter. The Saginaw and Tuscola districts are not included in the above. Some objections to contributing to the fund are made on the grounds that Michigan is a rich and prosperous State, and should take care of herself, but until the legislature assembles no legal appropriations can be made by the State, and until it can do so, her sister States must aid her. The response has been prompt and the contributions large, but more money is needed, and needed now. Let the good work go on!

WHEAT AND SHEEP.—Notwithstanding all the disasters to these two products for several years past, English farmers contend that they pay best in the long run; and so far from giving them up, they are now determined to increase their production in the future as rapidly as possible consistent with other things. Their system of feeding off the crops of grass and roots with sheep—or the "golden foot," as they are called—and then sowing the land to wheat, is the easiest and one of the most scientific systems of farming practiced in any country. It is also one of the most profitable systems, superior, no doubt, if adopted in America, to that so common now of corn and swine. Aside from this, the two former are much more healthy food than the two latter, and make better bone and muscle, and grow up a finer and hardier race of men and women, especially if the wheat flour is not bolted to be made into bread, puddings and other dishes.

DERBYSHIRE HORSES.

IT SEEMS that a few of our breeders of the larger class of farm and cart horses have at last found out that the Derby horses are the best of their sort in England. It is the stallions bred in that county which have been used for some years past to cross on Clydesdale mares, which have so improved their progeny and given them the reputation they are now so freely enjoying. We are glad to note that some of our countrymen have lately been visiting the stables of the Hon. Edward Coke, of Longford, Derbyshire, who is considered the best breeder of Shire horses. He lately had a sale of 47 head, from colts up to aged horses, which made $15,970, an average of $340 each, within a fraction. These are large prices, considering that there were seven foals, six two-year-olds and the same number of three-year-olds among the aged horses and mares. One of the latter fetched the astounding price of 310 guineas ($1,550). It is a misfortune that, when our horse breeders began to import those of a large class so freely some ten years ago, continuing to the present time, they had not taken the pains to find out these in Derbyshire. They would then more generally have got horses of superior muscular power, an extra quality of bone and the best of feet and legs; great spirit also, fine, quick action for their size, indomitable pluck and endurance. But, instead of this some, if indeed we may not say a considerable number, of other kinds of horses that have been imported are quite the reverse of all this.

THE APPLE CROP.

BESIDES being an "off" year for apples, the drought has very materially affected the apple crop. In this State it will not be over 25 per cent. of an average crop, the supply for New York markets being, it is said, the smallest in fifteen years. The largest and best shipments received here this season have been from the New England States and Canada, those from the latter place being at present the best in market. Apples shipped from the Northern and Western counties of this State are usually the favorites in this market, but this year they are so small and knotty as to be hardly marketable. The custom, which we have before alluded to in the RURAL, of dishonest packing of fruit, is doing much damage this season both here and in foreign markets; and, if persisted in, shippers and producers must take the results. Not only are the apples poorly packed, but the barrels are undersized, some lacking a peck of full measure. Such shipments cannot successfully compete with those where the fruit is carefully packed and full measure given, nor should they. Dishonesty can claim no reward. The shortage in the crop is apparent when we consider the comparative amount of exports of the last two weeks in October for this year, and the same time last year, approximately estimated. In 1880 the exports for the two weeks were 167,375 barrels, while for the same period this year they are only 20,462 barrels, a decrease of 146,913 barrels. The total exports of apples, green or ripe, last year were 1,121,754 bushels, of which about 167,000 barrels on 417,500 bushels were shipped during the last two weeks in October; that is, something over one-third of the total amount. Judging from the number of bushels shipped for the same period this year, the total export for 1881 will be not far from 158,000 bushels, or about 967,000 less than last year.

THE PURIFICATION OF TOWN SEWAGE.

THE Native Guano Company of Aylesbury, England, according to the Statist, has perfected a valuable method of purifying town sewage. Aylesbury has 8,000 inhabitants, and its average daily flow of sewage is 300,000 gallons. For dealing with this the Company gets $1,500 a year from the corporation to which it pays $500 a year for the use of the works, so that the town gets rid of its nuisance at a cost of about 12c. per capita per annum. The sewage is treated so as to induce precipitation. Near the beginning of the main sewer some puddled clay, charcoal and a small quantity of blood are passed into the sewage. A trifle further on a little sulphate of alumina trickles into it; thereafter, the separation of the solid and liquid components is automatic. From the point where the alumina solution falls into the sewer, a channel about two feet wide runs in a straight line for 45 yards, and when the sewage has arrived at the end, it is chemically acted upon and the solid portions begin to separate from the liquid. From the narrow channel the mixture flows into the first of three tanks in which the precipitation of the solid matter continues, the overflow passing gently to the second tank and thence to the third where there is but little discoloration and almost a total absence of organic matter in suspension. From the third tank the overflow runs into a channel in which it is exposed to the air, and eventually is conducted into a brook far cleaner than the brook itself.

During the whole process there is absolutely no smell, and the sludge precipitated in the tanks is not offensive. When the tanks are full this sludge is pumped into an elevated receptacle whence pipes convey it to screw presses which separate the water from the solid portion. After quitting the presses the cakes are dried and finally shipped in the form of inoffensive powder, packed in bags for transport. Referring to the relative value of Peruvian guano and native guano made in this way, it is said that by using two tons of the latter at £3 10s. per ton the results would be as great as from half a ton of the former at £14 per ton; in other words, the Peruvian guano is four times as efficacious and four times as dear, so that for the same money the same effects will be produced though four times as much of the home-made guano must be used.

A CHANGE NEEDED IN THE PATENT LAWS.

THE facility with which patents can be obtained in this country has no doubt contributed greatly to its manufacturing success by stimulating the inventive ingenuity of the people. Hence there are about 22,000 applications for patents every year, and about 12,000 patents granted. The total number of patents granted up to last January was 225,000. The vast majority of these were for insignificant things, and it is probable that out of the entire quarter of a million patented inventions not over 100 were of such value as to revolutionize the practice in any particular department or to form for us a subject of national pride. From so vast a multitude of patents so vast a multitude of abuses have arisen that the whole present patent system has fallen into disrepute, and a strong feeling exists either for a radical reform of it or its entire abolishment. This feeling is especially strong among the farmers of the country, who have been the chief victims of grievous oppression and sheer swindling in connection with the sale of patents or patented devices. Hence the Grange, the Farmers' Alliance and all other associations of agriculturists are vigorously agitating a reform of the system, dwelling especially on the injustice of the frequent exaction of "royalty" from the innocent users of patented articles. With one voice they are all demanding that the law shall be so changed that royalty can be collected only from the manufacturer and not from the users of patented devices. Their demand is so just and their harrassment has been so unbearable that the alteration must soon be made if they loudly and resolutely persist in clamoring for it.

In a recent essay Mr. Roland Cox has pointed out the probability of an important change in the law relating to re-issued patents, a change that may invalidate two-thirds of the re-issued patents now in force. Under the name of re-issues the existing statutes provide that when any patent is invalid or inoperative by reason of defective or insufficient specification through "inadvertence, accident or mistake," the invention intended to be secured in the first instance may be re-stated under such restrictions as are supposed to guard against fraud. These statutes, however, have been so liberally construed that re-issued patents have frequently been permitted to cover not only the invention first patented, but also anything else suggested by it, and not already formally protected. The Supreme Court has lately declared that the real object of a reissue of a patent is not to allow its enlargement, but merely to permit the correction of inadvertent mistakes and the restriction of claims improperly made, or made too broad. Moreover, Justice Field, sitting in Circuit Court, has lately held that there can be absolutely no re-issue where the original patent, on the original specifications, is valid and operative, and at least two of the other judges are known to hold a similar opinion. The inventor seldom gains by these re-issues; for generally before they are granted the patent has become the property of a corporation. Then, to use the words of Judge Bradley: "A reisssue of the patent is sought, with expanded claims sufficiently general and comprehensive to embrace a wide monopoly of structure and to shut up competing establishments. In this way the patent laws have been made the instruments of great injustice and oppression."

BREVITIES.

AN account of the great Chicago fat stock show has just come to hand too late for publication in this issue.

HAMAMELIS (Witch-Hazel) illustrated in another column is described by several authorities as bearing a "rich" yellow flower. The flower is yellow certainly—but the richness of the color does not appear.

A FURIOUS BULL that had commenced goring a couple of men was lately coaxed off by letting out some cows to him. The moment he saw these he ceased his attacks on the men, joined the cows, became placid, and was easily driven into his stable.

A BALKING OR JIBING HORSE it is said may be easily started by taking up his near fore foot with the left hand, as a blacksmith does for shoeing, then prick him gently behind the ribs with a spur in the right hand. The horse feeling powerless to move thus held, as soon as his foot is set down, starts at once and goes off without further trouble. He ought not to be struck then, but patted and spoken to gently and encouragingly.

A CORRESPONDENT of the English Agricultural Gazette says that had they expended one-fourth the money in improving utility horses which they have done on racers, they would not now be obliged to depend on foreign countries, as they are now doing, for any part of the number necessary for every-day uses. He speaks particularly of those with "short, stout muscular legs, clean and flat." This is a point which cannot be too often strongly urged upon American horse breeders.

FROM Washington we learn that Commissioner Loring has decided to discontinue work on that experimental tea farm, and has sent a clerk to South Carolina to distribute the plants among private parties who may wish to try home-raised tea. All the government property there is to be sold or removed and the problem of the practicability of profitable tea culture in this country is to be abandoned by the government, its solution being left to private enterprise. We are sorry.

A DRAFT from W. J. Taylor's Polled Angus herd in Scotland averaged for 11 cows £56, 19s. 8d.; three two-year-old heifers, £41, 6s.; six one-year-old heifers £26, 12s. 9d.; six heifer calves, £17, 11s. 9d.; one two-year-old bull, £40, 19s.; two bull calves, £28, 17s. 6d.; One handsome seven-year-old cow, Kate Duff, fetched 155 guineas ($775), and a fine three-year-old, 70 guineas ($350). As Polled cattle are now commanding considerable attention among us, we thought our readers might like to know what a good ordinary lot was worth per head in Scotland.

THE Board of the New York Agricultural Experiment Station met at Albany last Friday and effected a permanent organization by electing the following officers: Pres., Robert J. Swan, of Geneva; Sec'y, N. M. Curtis, Ogdensburg; Treas., Luther H. Tucker, Albany. Two committees were appointed: one, composed of J. W. Woodward, James McCann and N. M Curtis, to examine farms with a view to selecting the best location for the Station; and the other, consisting of Governor Cornell, W. A. Armstrong and N. M. Curtis, to secure a director for it.

MR. JOS. NIMMO, Jr., Chief of the Bureau of Statistics, states that the number of tons of freight carried on the 13 chief railroads increased from 45,557,002 tons during 1873 to 78,150,913 tons during 1880—an increase of about 71.5 per cent. The receipts from freight, however, increased only from $112,004,648 in '73 to $148,388,178 in '80—an increase of $31,383,530 or only about 28 per cent. The average rate per ton fell from $1.77 per cent per ton per mile in 1873 to 1.07 per cent per ton per mile in 1880—a decrease of 39.5. And with anything like business-like management and moderation in percentage on actual capital invested, there is ample room for a great additional reduction—not ten years hence, but at once. Mr. Nimmo advocates governmental supervision of railroads.

OUR agent at the Atlanta Fair writes us that the exposition as a show is a fine success; but the attendance is very light. The several States had appointed committees to confer with the railroads and so far had met with considerable success. All that is necessary is to get the people there but they will not pay three, four and five cents a mile for excursion tickets. The Southern roads are the ones that are holding out. In view of the great drawback to the success of the exhibition which persistence in high fares would inevitably produce, we are glad that according to a telegram of last Saturday, all the roads have now agreed to charge only at the rate of one cent a mile for excursion tickets to the exhibition. A continuance of the former high charges would not only have greatly lessened the success of this remarkably fine show; but it would also have deprived thousands of the valuable information obtainable by a visit to its accumulated treaures.

THE Ladies Association for the Encouragement of British Woolen Manufactures has lately been established in England by the Countess of Bective. Its object is to restore the fashions in wool and worsted which preferred the fine lustre worsted wools of England to everything else for dress fabrics. Of late years these have been largely superseded by the skillfully constructed soft worsted fabrics of France; but the new association, having secured a long list of titled patrons, is bringing a great deal of social pressure to bear to restore the old fashion for dresses and trimmings made of home-grown wool. The influence of such organizations, gotten up by fashionable idlers, really for the sake of passing time and creating a little pleasurable excitement, but ostensibly for charitable or patriotic objects, is seldom more than fleeting, and already the ardor of the new Association is damped by the refusal of the Princess of Wales to use her personal influence to further the movement.

THERE appears to be some prospect of obtaining earlier and more trustworthy crop reports than have hitherto been obtainable. Last Wednesday and Thursday several meetings of the inter-State Association of Boards of Agriculture were held at Chicago. J. W. Porter, president of the Iowa Board presided, and W. I. Chamberlain, secretary, of the Ohio Board, was secretary. Delegates were present from Michigan, Ohio, Indiana, Illinois, Iowa, Nebraska, and Kansas, and the Department of Agriculture was represented by its former Statistician, J. R. Dodge. The main topic of discussion was the status of the State and national crop reports, and the best means of obtaining uniformity and superior accuracy. A plan of co-operation with the National Department was agreed upon, which will be presented to the Commissioner of Agriculture who is urgently requested to obtain and publish frequent reports on the condition of growing European crops with reference to the probable demand for our surplus grain and other agricultural products. A permanent organization was effected.

IT looks very much as if the recent British land legislation for Ireland was the commencement of a new era in land tenure in the United Kingdom. The reductions already made in the rents by the Land Court have averaged somewhat over 25 per cent. of the old rates, and this although the cases brought before it at the outset were, by the advice of the Land League, only those in which what was thought moderate rents were charged. The reductions must be much greater in cases where "rack rents" were exacted. Already, however, Irish landlords are demanding from the Government compensation for the diminution of their incomes caused by its action. English and Scotch farmers are now insisting on the speedy passage of land bills as favorable to them as that now under trial is to their Irish compeers. English landlords are reducing rents on an average about 25 per cent., in hopes of deferring such a measure; but the tenants claim the reduction as a matter of right, not of generosity, and, moreover, they claim the right to leases, payment for improvements and the other advantages conceded by the Land Act. The more energetically they agitate for such legislation, the sooner will it be granted. If it is delayed, the fault will be entirely their own; and now that even the weather favors their demands, they should insist upon them, lest fairer weather should lessen their force.

Miscellaneous.

FARGO, DAKOTA TERRITORY.

Its Rapid Growth, Extensive Commerce and Present Necessities.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

THE almost magical development of the great Northwest is nowhere more apparent than in the many cities which have risen upon the plains and in the fertile valleys almost like Aladdin's mystical palace, in a single night.

Not one of these shows more marked progress than the city of Fargo, D. T., situated upon the Red River of the North, where it is crossed by those great railways, the Northern Pacific and the St. Paul, Minneapolis and Manitoba, of which we gave a brief sketch in our last. Our first impressions of Fargo in regard to its life and commercial interests were rendered favorable by the fact that the business streets resembled a human beehive, while our application for rooms at the principal hotel was met by a discouraging nod and the information, "We are quite full; don't know whether we can accommodate you or not." Inquiry shows 35,000 registered arrivals at the three leading houses during the past year. Fargo's 4,000 to 5,000 population worship in six churches—Episcopal, Methodist-Episcopal, Presbyterian, Baptist, German and Norwegian Lutheran, and Catholic—buildings valued, entire, at $50,000. Her rising generation are educated by competent teachers in graded schools of six departments. The two buildings (one brick) now used for that purpose, are valued at $20,000. A handsome, new, two-story brick to cost 35,000, is now being built to supply the demand for additional school facilities. Fargo is justly proud of her efficient press. The Argus, published mornings (Sunday included), also has a weekly edition. We were surprised to find the library of the Argus exceptionally complete, containing every public document since 1832. The Fargo Republican, an evening paper, also publishes an excellent weekly. The Posten is a weekly Scandinavian paper. The city has three amusement halls, but sadly needs an opera-house, and a good one. Bright oases of green in shape of Island Park, City Park, (given to the city by the Northern Pacific), and Harwood Park, lend their charms to adornment and beauty. Fargo has the excellent Holly water system, built by Holly & Co., in 1880, capacity now 1,000,000 gallons per day, having been doubled since last year. It will throw four fine streams 100 feet high. The cost was $75,000. The fire department comprises a hook-and-ladder company, a good hose company with forty-four fire hydrants.

The value of permanent improvements for the year ending Oct. 1, is estimated to exceed $500,000, while the radius of trade, instead of contracting, is becoming more extended by the increase daily of the jobbing and wholesale business, and careful estimates made by five leading citizens, place the commerce of the year past (exclusive of wheat) at over $12,000,000. In wheat they received at this market, in 1880, 1,350,000 bushels. The price at the time of writing is $1.35 per bushel, which is remarkably high. The storage capacity of the three large elevators aggregates 300,000 bushels.

The banking capital of the city is $315,000 (four banks) and the aggregate exchange business is approximated at $20,000,000. It seems wonderful where a decade ago was nought but the trackless, untrod prairie. From the postmaster we learn that the money-order business for the last year foots up $140,000; the sale of stamps, $15,000, and that the office employs five assistants. It has recently moved into a new brick, devoted exclusively to its use. What with its telephone connections with Moorhead; its Chamber of Commerce, established in 1879, now numbering 65 members among the leading business men; its local insurance companies; its street railway organized with the contract let to build this Fall, Fargo is certainly putting on metropolitan airs, and for our part we know of no city which has earned a better right to do so.

Fargo owes much of its prosperity to its railroads; in fact, the Northern Pacific gave the town its first boom—as they say out here. Now it has, in addition to that, the St. Paul, Minneapolis and Manitoba, which road has a branch running north. The N. P. has a rolling mill and machine shops, mammoth stock-yards for Montana cattle, and numberless improvements, while it is from this point that trains will run on the Black Hills branch now graded 55 miles, and on the branch to the north, through Casselton. The Fargo and Southern is now being graded to connect with a system of Chicago roads, while a charter has been granted to the "Fargo and Northwestern." There are also river connections by the Red with Winnipeg, two lines operating during navigation.

The manufacturing interests of the city are yet in embryo, and, in our judgment, it has now reached that stage of progress where manufacturing is of essential and vital importance. Now, as a nucleus we note a large roller flouring mill of 125 barrels' capacity, a a blank-book manufactory, the Argus Lithographing Co., two planing mills, a hay press, and a 15,000-barrel brewery, all operating. Added interest in flax culture through the country will soon require an oil mill and tow mill. There is always room for flouring or oatmeal mills, while numberless other manufacturing enterprises would find within reasonable distance the crude material and a ready market. In our "Notes of Interest" we find the city indebtedness is only $30,000, $9,000 of which are bonded. * * * That it is considerered by many the best horse market in the Northwest, there being three exclusive sale stables accommodating 525 horses or mules. * * * That coal costs $10 to $11 per ton (hard), $6.00 (soft) in quantities, wood selling from $3 to $5 per cord. * * * That although this is considered a "no timber" country, the government survey gives Cass County (of which Fargo is county seat) 55,000 acres. * * * That the Fargo Agricultural Society of Dakota held its first fair Sept. 13 to 16, which proved successful. Their grounds comprise 80 acres with all necessary buildings and a magnificent race-course. They will hold annual territorial fairs. * * * That Fargo has six lumber yards. * * * That the University of Northern Dakota has purchased 20 acres of ground and expects to build soon. * * * That every business and professional man seems to take an individual and particular pride in Fargo, his home; and loses no opportunity of sounding its praises. If only a part of the laudations extended us were transcribed, it would fill a page, but we prefer to "stick to our text" and advise those who wish to know more to apply either in person or by proxy.

Societies, &c.

AT THE ATLANTA EXPOSITION.

[RURAL Special Report.]

THE Cattle Exhibit was much better than I anticipated seeing, and as Southern breeders contributed a great part of it, it showed conclusively that good cattle of some breeds can be raised fully as well in the South as in the North. In this particular section by proper cultivation fine clover can be raised and Orchard and Crab Grasses grown the year round. Bermuda Grass also offers fine grazing the whole year. Animals of all breeds imported from the North should be brought young the better to acclimatize them. The Jerseys seem to do best in this section, and some remarkably fine herds were exhibited. The herd of J. B. Wade, headed by the two-year-old Bull, John Rex 6th; 4579, carried off the first premium. This bull also carried off the premiums for bulls between one and two years old and the sweepstakes premium for Jersey Bull of any age. He was bred by J. Ratchford Starr. Mr. Wade showed seventeen head and among them were some very fine animals; his eight-months calf Luckie Bell is a daughter of Champion of America and traces her ancestry, through her dam, back to Pansy 6th. His four-year-old heifer 'Donna Fay,' 6294, was bought of T. H. Vail whose cattle brought such high prices some years ago. His four-year-old heifer Tennolla, 6712, has made the remarkable milk record of 359 pounds three ounces in one week, the largest day's registering being 55 pounds one ounce. Mr. Richard Peters of Atlanta also exhibited a fine herd of Jerseys. In his herd were the two-year-old-heifer Auta 11,237, bred by Mr. Taylor of N. J., the one-year-old bull Emperor of Belmont, Sire Watts, 2618; Dam, Pride of St. Marys, 3662, bred by W. T. Walters of Maryland, and three fine heifers, Vesperina Baron, 10,103, Willis Baron, 10,109 and Wietita Baron, 10,110, bred by Colman Ayres of Pennsylvania. Mr. G. W. Palmer of Saltville, Va., contributed largely to the success of the exhibit by bringing in a fine lot of Jerseys, Short-horns, Devons and fat cattle, and carried off a fair number of premiums. In his Jersey herd he showed two fine old imported cows: Gem of Springwood 1965 and Rose's Hairbull 3243—also a very handsome yearling bull "Fred Emery." His Short-horns were headed by the three-year-old bull "Rosebud's Oxford" which carried off the first premium. He also showed in this herd a very fine cow Susan 6th. His fat cattle grade Durhams, four in number, averaged 2000 pounds each. Among his Devons he showed the fine three-year-old bull "Eldorado."

Devons followed Jerseys very closely in number. D. J. Whitmore, Casstown, Ohio, carried off the herd premium with a fine Northern herd headed by the 2000-pound eight-year-old bull "Barefoot." Edward D. Hick's of Nashville, Tenn., also had a fine herd on exhibition. The only herd of Short-horns that entered the arena was that of J. R. Anderson, Ohio. This excellent herd was headed by the six-year-old bull "Springdale Airdrie" 2nd, which weighed 2,600 pounds, and the balance of the herd weighed in proportion: they carried off the herd premium.

The great question here seems to be as to what cattle are best fitted for the Cotton Belt. It is generally conceded that the Jer-frame with less twist than the warp, and as soon as that is put in the shuttle the loom is ready to proceed.

The machinery shown in its department if anything excelled the very excellent display made at the Centennial Exposition at Philadelphia. Many improvements have been made since that date and they were all on exhibition here.

After examining the different sorts of cotton as they come from the field, visitors could see all the different processes of manufacture. First the cotton is sent to what is known as the seed cotton cleaner, which removes all the sand, dirt and loose trash, saving the wear of machinery and lessening the danger of fire. It detaches motes from the lint, thoroughly loosens up the cotton, causing the gin to run lighter and cleaning the seed more perfectly, thus rendering the ginning process more healthy and pleasant and at times converting dirty, storm cotton into merchantable shape. Next comes the ginning. There were gins of all styles on exhibition shown in full operation. They are divided into various classes; first, the saw gin with condenser attachment which had the lead in ginning short-staple cotton; next the roller gin which is more especially used for long-staple or Sea Island cottons; and then the belt gin for long-staple or Sea Island. The roller and belt gins are rather slow for short-staple work, and the saw gins are more generally used; but improvements are being rapidly made in the belt gins, and they will probably soon be able to do fully as much work as the saw.

From the gins the cotton goes direct to the press. A large number of presses were on exhibition, hand hydraulic and perpetual. By the hand, or hydraulic the cotton is pressed into bales of from 450 to 500 pounds, weight. It takes about 1500 pounds of seed cotton to make a bale of lint cotton. The hand presses are generally used by the smaller planters and the hydraulic by large planters and cotton presses. The "Perpetual" is a press made by a Northern manufacturer; it puts up very compactly a small bundle known as a quarter bale, of 125 pounds. This small package meets with great favor among the Eastern manufacturers.

After this the cotton goes to the picker, which brings out all the seed shells and imperfections that have been left in by the gins, and here it is wound up in a long roll ready to go to the cards, after having been cleaned of all the dirt remaining in it. Then it goes to the carding machines, and several ends together are then carried to what is known as the railway head where they are united to go into a can for the first drawing. They are then doubled up at the next drawing and put into a can which goes to the "slubber." From there, doubled two into one, it goes to the fine speeder where it is prepared for the spinning frame. Then the warp is prepared many ends on a beam, and several beams on a slasher, where the yarn is sized for warp ready for weaving. The filling is roving taken for warp and spun on the spinning

THE KEMP & BURPEE MANUFACTURING CO. of Syracuse, N. Y., with their accustomed enterprise have upon exhibition the Kemp & Burpee Manure spreader in operation upon the grounds. To the average farmer of this section this is a comparatively new machine and attracts the attention of all visitors to Agricultural Hall. The machine is used for distributing fertilizers of all descriptions, and the cotton planters of this section are particularly interested in the adaptability of the spreader for distributing cotton seed which is largely used by them for fertilizing purposes. It is attachable to the forward wheels of any farm wagon and can be used for an ordinary cart, by simply removing the toothed roller. It completely pulverizes all kinds of manure, whether wet or dry, and the rapid revolution of the roller prevents it from being clogged no matter what may be the condition or quality of the manure to be distributed. It is pretty generally known that complete pulverization and an even distribution of manures are necessary in order that cereals of all kinds shall receive the benefit of all the fertilizer used, and the more perfect the distribution is, the more food is disseminated to the rootlets of the plant. All these points are practically applied in the distribution of manure by this spreader. So completely does it pulverize and so evenly does it distribute that every rootlet receives its proper amount of food and the yield is thus increased, it is claimed, fully one-third. Different sizes are made to meet the wants of the farmers in the North and the cotton seed fertilizers of the South, and from the many sales effected here I conclude that the manufacturers have again been wise in making an exhibition of their spreader at this Exposition.

seys will do well if properly acclimated, all through the South. As to the suitability of Devons there are many different opinions; some claim that they are readily acclimated and do well, while others deny this. As for the fat cattle, it is claimed that pure-bred Short-horns, Herefords and Polled Angus cannot be raised here even if bought when young; but bulls will live long enough to breed to the native cattle and the grades do well.

Atlanta, Ga., W. H. K.

The Swine-Herd.

FOOD ECONOMY WITH PIGS.

COL. F. D. CURTIS.

WE are satisfied that white corn is better for feeding to pigs than yellow flint. The grain is light, containing less fat-forming material; consequently it is not so heating. It makes a more healthy growth, making body (bone and muscle), together with the fat, whereas the harder and richer yellow flint corn makes a preponderance of fat. Pigs will not break down when fed on the former so soon as when fed on the latter. It digests more easily. There is a good deal of waste in feeding raw yellow flint corn, as pigs, especially when feeding, are at first apt to eat more than the stomach will assimilate. There is therefore less danger of cloying and breaking down the digestion. We have a notion that white corn is not so exhaustive to the soil, and we are satisfied that it will yield better on poor land than the yellow varieties.

IT is beneficial to pigs while being fed corn or other heavy food to fatten them, to give them a change every day from stimulating food. They will be found to relish raw pumpkins, apples or roots. If their appetites begin to flag, it is best to increase the quantity of these lighter foods, and to reduce the amount of grain. Fruit and vegetables are cooling to the blood and help digestion. Pigs will fatten faster with less grain and a feeding of these than on all grain, or at least they will make more healthful meat. We don't like for our table a pig which has been stuffed to the verge of founder on clear corn. The feeding place of such pigs may be discerned afar off.

WE are glad to see that cheek is not so highly estimated as formerly. Sagacious swine breeders are learning that body is of more consequence. Cheeky pigs may fill the bill at fairs and win admiration on account of roundness and plumpness and filling lard-tubs, but they don't meet the requirements of the American stomachs. To do this we shall have to improve backwards. We want pigs to eat rather than to look at—long bodies and hams with less fat. Such hogs have longer heads and smaller chops. The markets demand hogs of this style, as consumers do not like the waste of over-fat hams and pork.

ECONOMY in food is generally not much considered when food is cheap; but, nevertheless, it bears the same proportion to the price of pork. When plenty abounds, the farmer is not apt to measure his bushels. He feeds wholesale and wastes wholesale. He throws his corn on the ground and the pigs run over it, tread it into the mud and a considerable percentage is lost. The fattening of animals does not generally allow this margin of loss. A tight floor should be provided on which to feed corn—and this should be kept clean. A pig will neither relish its food as well nor eat so much when it has to dig it out of the mud and eat it smeared with filth. One turns away from such sights with little relish.

EXPERIMENTS have demonstrated that cooking food adds to its value about 25 per cent. for fattening pigs. From this apparent gain must be taken the miller's toll, one-tenth, and the cost and labor of cooking. Very few farmers practice cooking, notwithstanding the increase of the food value. They do not consider that it pays, or else they dislike the trouble. In old times, when farmers figured closer than they do now, it was an almost universal custom to cook all the food for pigs. Pigs will eat more and digest it better when food is slightly fermented. This also necessitates grinding, and on this account it is not generally practiced. It will undoubtedly pay, as the extra gain would more than equal the tribute to the miller. When pigs eat a large amount of meal in a raw state and not soured, it will ferment more or less in the stomach and this condition tends to destroy the appetite and to produce scours.

Literary.

OUR CELLAR DOOR.

EDGERTON.

When I was small—about so high—
We had some neighbors living nigh
Who had a little "chub;"
These neighbors were considered poor,
But, then, they had a cellar door,
And had a washing-tub.

Ah! many a youthful hour I've spent
In sweetest pleasure and content,
Upon that cellar door;
Or, gathered at the washing-tub—
Myself and that same little "chub"—
To sail our vessels o'er.

How well I recollect the night
When first I saw the little sprite
Dressed in the cleanest pink;
I stood a munching gingerbread,
When she shied up to me and said,
"You're awful nice, I think.

"If you'll give me one of your cakes
The next time that my mother bakes
I'll give you one of mine;
And you may come and play with me
And climb up in our cherry tree,
Won't that be real fine?

"And slide down on our cellar door,
Play marbles on our kitchen floor,
Won't *that* be real nice?"
And I, transported with the thought
Of all the happy visions wrought,
Divided in a trice.

It's many years ago, since then,
And I have mingled much with men
And had my ups and downs;
In almost every varied phase,
I've seen life since those youthful days,
In country and in towns.

In all my wanderings, near and far,
That "chub" has been my guiding star
And brought me safely through.
And when I've wavered from the mark,
Her voice has whispered in the dark
"Be careful what you do.

"Act manly, brave and well, your part,
For you're entrusted with a heart
As true to you as steel;
Guard well the sacred precious trust,
And never humble in the dust
The pride in you I feel."

Now, over the corner there,
With hazel eyes and nut-brown hair
You see the counterpart
Of her, who many years before,
Slid with me down the cellar door
And gave to me her heart.

THORNS AND ROSES.

CHAPTER VII.

(Continued from page 738.)

"What do you mean, Edith?"

"Oh, child! how blind you are! Is it that you can't or that you won't see?" and shaking her head, she left me as abruptly as she had entered.

If she had alluded to Nevil's coldness, I had seen that plainly enough, and knew its cause; he had believed Edith's words, and would not ask me if they were true. But I could not speak first; if he were ice I could be snow; if he were flint, I could be steel; yet never having lost an affection before, my heart was heavy, and I could not rest. I thought of the first day I had come here, of my early life, until my musings centered on Brandon; but even this brought pain, a sorrow that had been in my mind lately, to-night more acutely felt.

When I had returned home, I had contemplated a renewal of our old friendship—of the brother-and-sister affection so dear to me in the past. I had hoped for this, and our first meeting had confirmed my hopes. Yet it was not to be; Brandon and I were not to each other what we had once been; a shade had risen between us—not coldness, not unkindness, the man's heart was as warm and loving as had been the boy's; but there was something wanting, or there was something ever lay between us keeping us apart. We had been long asunder; he had grown used to my absence; he was his own counsellor; and time had made me too exacting.

Aunt Dorothy had much to say on the subject of Edgar Dana, and Edith preserved a discreet silence as to the feelings once existing between them. The evening on which he had been invited to return was at hand, and destined to be a memorable one for me for more reasons than one.

We were sitting in the firelight, aunt discussing Christmas festivities, Edith lying back in her chair languidly, when Brandon entered bringing with him a frosty freshness from outside air.

"I am glad you came," said Edith, rousing herself, "because we shall introduce you to Edgar Dana. We expect him, so mind you are lively, and don't sit as if you were meditating on your manifold iniquities, as you generally do."

"I will be good," he said meekly. "What shall I talk about to please your friend?"

"You will be all right if you don't patronize or ignore him—the one irritates, the other hurts him; hit the happy medium."

"What are you going to do on Christmas-day?" interposed Brandon; but our answers were prevented by the entrance of lights—and Edgar.

He was less nervous now, and greeted aunt Dorothy smilingly, and colored as he bowed to Edith and to me—she, in her long, soft dress, looking beautiful. Aunt introduced him to Brandon. I had thought these two would be at ease with each other directly, and that my kinsman would soon win his way with Edgar Dana. He held out his hand with his own cordiality; but, to my surprise, Edgar shrank back, and neither offered his own hand nor took Brandon's, and he looked round at us, as if asking something. What did he mean? He might be shy and nervous; but Brandon was so gentle that he had no need to stand blushing and hesitating, as if he expected my kinsman to strike him.

Aunt and I were sitting together—Brandon examining the sketches on Edith's elaborate easel—when she rose and left the room, and, to aunt's delight, Mr. Dana joined us two. Brandon wheeled the little chess-table to her side, speaking guily enough for him; but Mr. Dana did not play chess, and retired into his "inner consciousness."

"Suppose I give you a lesson?" proposed Brandon; "and aunt Dorothy shall see that I play fair."

I do not know what else he said, but few could be unhappy or uncomfortable with Brandon Lovel, and Mr. Dana consented, but with the same strange hesitation; he looked curiously at my kinsman, at aunt, at myself, as though still seeking an answer to that unknown query. Edith returned, and I left this room for aunt Dorothy's parlor—in darkness save for the "fitful firelight"—and seated myself on the low fender-stool. There was one for whose presence I was longing, despite the change, and had I remained in the other room my thoughts might have been read. How much an idle word can do—only that had changed him! Once he had been so kind, had been so tender, and now?—Edith's song answered me:

"'Now you are cold to me, Robin Adair!'"

And tears rose fast to my eyes. How foolish of me—how contemptible—how unlike Kate Lovel! Then a footstep caused me to rise hastily indeed. I had not heard his arrival—I knew not for how long he had watched me—but Nevil was beside me in the red glow of the fire.

CHAPTER VIII.

I could not speak as I responded to the rather stiff bow with which Nevil greeted me, but I was outwardly calm and composed.

"Don't let me disturb you, Miss Lovel," he said, leaning on the mantle-piece, and studying the wide prospect afforded by the fire, "I trust I do not intrude on your thoughts?"

"Not at all. Suppose we join the others?"

He did not answer and I also relapsed into silence, though I wished he would speak or move, it being so ridiculous for us to stand here speechless. Possibly someone would come in search of us, but I did not wish to avoid what might be my only chance of explanation. My meditations were soon interrupted, for as I bent to light a taper he abruptly changed his position, rattling the unoffending fireirons, and I met his eyes fixed on me angrily, and—the taper went out.

"Are you disposed to accede to the wishes of your Cornish admirer?" he said, scornfully.

"I beg your pardon," I returned, icily; "I do not possess a Cornish admirer, Mr. Verner."

"Ha? Mr. Dana does not come from Cornwall?"

"He is no admirer of mine, even if he did."

"Then how does he happen to visit here, pray?"

"He is a friend of my cousin's, to whom her father wished us to show kindness; and if you desire further information——"

"Not your lover! Was Edith's story false?"

"I had never before spoken to Mr. Dana; she was only speaking in jest."

"How absurd I have been!" cried Nevil, stamping. "How dare Edith say such a thing! I believed it, Kate; and I was so angry, that I would not come to see you, because I thought you were playing with me. I loved you, and you knew it. My dearest girl, I was half mad with jealousy; but now I will speak to you, dear, and tell you of my love. You know it, Kate!"

"And if I do, Nev—Mr. Verner?"

"Then you will love me in return. Ah! do not be so proud and cold! Is it that you doubt me. The day may come when I shall prove the strength and fervor of my love; for a love such as mine can neither change nor falter, and time will show you this. I can't plead—I can't speak as perhaps you wish. Dear Kate, believe me, the devotion of a life shall prove my truth; my heart shall be your refuge! Do you love me?"

I do not know what I answered, if I answered at all, for he caught me a prisoner; and I was so happy that I scarcely heard his passionate pleading as we stood there, "the world forgetting, by the world forgot."

"Kate, do you love me?"

"Yes, Nevil, I do;" and he showed me a little ring brilliant with diamonds.

"See, sweetheart, this is for you; and if you had not loved me I would have thrown it in the sea. Wear it, will you, for my sake?"

"You do love me, Nevil?" I said, touched by the gladness his simple nature did not hide.

"With all my heart, and I may some day prove it. I am not sorry now for Edith's jest, but how could I believe it? You're not angry?"

"Oh, no! But always tell me if I do anything to annoy you. Let us be open and candid with each other, for where there is little trust there is less love."

"Indeed I trust you; and we two shall live for each other. Now I will put this ring on, and you must not take it off until—until our vows are broken—and that means never."

After a pause we left the parlor, Nevil's arm round me until we reached the opposite room, when he released me with a smile.

It was a happy evening; Nevil and I sat together, Brandon singing until it was time for them to go; Mr. Dana had already gone, and whilst waiting for Brandon, who was discussing Christmas affairs with aunt, Nevil beckoned me out to the garden.

Oh, that sweet moonlight night, with the long silver rays resting on the snow—the sky, with its solemn crown of stars, bending over us—the soft, low voice of the wind sighing through the leafless trees! We walked to and fro in silence, charmed by the beauty of the scene; and I thought of my lover, of him to whom I now belonged. When he had asked my love he had not forgotten his manly dignity, he had not stooped to slavish worship and flattery, and I admired him all the more. The sound of my kinsman's voice, singing as he came down the avenue, roused me, and called me back to earth. He seemed little surprised at my being here; and as I watched my lover and my friend go away together. I wondered if one would tell the other of the engagement. Returning to the house, I told aunt Dorothy all.

"My dear Kate, how delighted I am!" she cried. "Nevil is so good—you will be so happy!"

She sat turning my ring round and round, and talking of Nevil, until Edith came in, who, hearing the news, looked curiously at me, and aunt left us together.

"I suppose you are in a state of bliss," said my cousin calmly staring. "Was he very overpowering? Did he sing his own praises, and tell you how honored you ought to feel?"

"Edith, you have one opinion of Nevil Verner; I another. As I am not always telling you of his virtues, will you be silent as to the faults you find in him?"

"*You* find none? Cousin mine, I will say no more; you see him now at his best, and will do so until he finds another. He values a thing until he wins it, and he has won your love. You have seen a child run after a butterfly—to use an old simile—and Nevil has caught his butterfly, and will be charmed with it till another, more difficult to capture, flits before him more difficult, therefore of more value. Good-night, my love, good-night!"

She left me, singing gaily to herself.

The morning dawned so brightly that I resolved to ride out and exercise Diamond; and shortly after breakfast I set out alone, Edith declining to accompany me, on the plea of a headache. I was glad to be alone, for I wanted to think of yesterday; to realize that I was engaged to Nevil, and loved by him. Kindly words greeted me as I passed through the village; a future, clear as the sky, lay before me, for though sorrow and troubles might come, there would be always one on whom I could rely—one true heart my refuge. The faults in my character he would help me to overcome; trusting and loving, we would walk hand-in-hand through life.

Happy as I could be, I rode on. Passing the boundary of my own estate, and entering my kinsman's, I wondered if I should meet him. Blue smoke curled from the chimneys of the straggling cottages, a robin crossed my path, and a yellowhammer chipped on the low stone wall. Just as I turned a corner I beheld a sight that made me smile. An old woman—bent, feeble, and decrepit—a stalwart man supporting her with one arm, on the other carrying a battered basket, and a horse brought up the rear. My kinsman, of course; and I watched him escort his companion to a little roadside cottage, hand her the basket, and bow as if she were a duchess. He had just remounted, when I cantered up and greeted him.

"Riding as usual, Kate! Shall we ride on together?" he said, quickly.

"I saw you with that old lady!"

"Oh! she slipped over a stone, and——"

"And you dismounted, helped her up, and carried the basket. Ah! I never find you but you are doing good to someone—doing some kindness of which you alone would think! Anyone else would not have dismounted."

To be Continued.

For the Young.

A COUSIN'S EXPERIENCE WITH SEEDLINGS.

I THOUGHT I would write my first letter to you and my cousins. I will tell you what I am trying to do. Last Summer, late in June, I planted one Charles Downing strawberry and about eight weeks ago eight little plants came up, and one of them died about a week ago. I have them growing in the house now. October 10 I planted about 75 Concord grape seeds, and I have some seedling potatoes. I will tell you how I got them. Last Fall, 1880, as soon as there were ripe potato balls on the vines, I planted some in a box and put it in the house. The seeds germinated and grew nicely until Nov. 25, when I removed them to the cellar. In the Spring I took them up and planted them out. They grew nicely. This Fall when I dug them I was greatly surprised at what I found in the hill. There were 33 potatoes, varying from a robin's to a bantam's egg in size and of all colors, kinds and shapes. One of the vines died down about two weeks before the Beauty of Hebron did. If nothing happens next Fall I will tell you more about them. Last Fall I took 15 Cherry Currant cuttings and left four buds on each. These I put in the ground, leaving one bud above ground. This Spring I went to see how many had started. There were twelve. This Fall I set them out; they were about seven inches high. I set out altogether about 75 currant cuttings, and I have now 85 currant bushes in all. Last Spring I set out about fifty quince cuttings and now have 12 small bushes. I planted them the same as I did the currant, except I covered them with a few leaves or hay and watered them often so as to keep the ground moist. If the cousins have no currant or quince bushes they can take grape cuttings and, leaving from three to five buds on a cutting, put them in the ground in a slanting direction and leave one bud out of the ground. The Concord will be a good kind to practice on. I have a lot of cuttings of grape vines to set out this Fall. The Delaware grape you cannot well start without laying a branch down. I procured cuttings from the following named vines: two Salems, two Marthas, two Crotons, two Crevelings, one Brighton and two Eumelans. Of the 11 cuttings two Salems, one Martha, two Crotons, one Creveling and one Brighton lived. In a little while I will send Uncle Mark a kind of plant which grew in my strawberry bed last Summer. I want him to tell me the name of it when I send it.

Blackstone, Mass. O. F. FULLER.

[I am greatly pleased to hear that one member of the Club, at least, is succeeding so well with seedlings. The writer of the above letter is on the right road to successful fruit raising and his example I hope will be followed by many others of the club.—U. M.]

KEEPING FRUIT IN WINTER.

OPINIONS differ greatly upon this subject, but there is one point upon which all are agreed and that is that the lower the temperature above the freezing point the better it is for keeping fruit of any kind. Some people are of the opinion that a damp atmosphere is best, but I have good success in keeping apples in a very dry cellar and I cannot see why it would not be equally good for other fruits.

I think the difference in seasons has some effect upon the keeping qualities of fruit for some years apples and pears will keep well while, perhaps, the next they will rot badly under precisely the same conditions. Moreover there is a great difference in the keeping qualities of different varieties of fruits. In securing a kind of apple or pear that will keep well one should look for firmness of flesh and thick skin, though there are some objections to the latter. But whatever variety of fruit one may have it is absolutely necessary that it should be handled with the greatest care in picking, packing, etc. I have seen fine fruit absolutely spoiled for long keeping by the carelessness of the pickers who bruise it when gathering. Judging from my own experience I should say that it is much better to keep fruit covered, especially that packed in shallow boxes or bins. This is necessary in most cases in order to maintain a uniform temperature. When packing apples or pears which are long keepers it is best to use barrels or deep boxes; but this is not advisable for fruit that does not keep well, as it will be bruised too much in sorting. WILL.

YOUNG QUERIST.

N. L. A., Freehold, Pa., asks, 1, how are seed distributions conducted by the Department of Agriculture at Washington, D. C.; 2, is the Saxon Importing Company reliable.

ANS.—1. There is no stated time for making the distributions of seed. Applications for seed should be made through your Senator or

Representative at Washington. 2. We know nothing to the contrary.

O. W. F., Blackstone, Mass., asks what we think of the following named grapes:—August Giant, Moore's Early, Eumelan and Wyoming Red.

ANS.—August Giant is quite similar to Martha, very sweet and foxy and larger in berry and earlier. It drops from the stem badly. Moore's Early is a decidedly valuable grape on account of its earliness. It is almost identical with the Concord, its parent, both as to fruit and vine, except that it ripens with Talman and other early varieties. It cracks badly. Eumelan is a delicious grape when it can be successfully grown, but it is one of the most uncertain varieties in cultivation. Wyoming Red is also known as Wilmington Red, Hopkins's Early Red, Chemung Red. It is an early grape, very hardy and a heavy bearer. It is exceptionally free from mildew and other diseases, and is rich, sweet and pleasant. It drops from the stem easily, but, on the whole, is a desirable grape, both for the table and for market.

New Members of the Club for Week Ending Nov. 12.

Matilda Taylor, Mary Wright, Edgar Hinman, Clarence Bramhall, W. S. Bramhall, Jennie and Henry McDermott, Katie Culbertson, Willie Rugh, Jenny Patten, Fred Bennett, Maj Pruyn, Florence Hayward, Rosy Benton, Andrew Benton, Eloise Seaman, Fannie Metzgar, Katie Metzgar, Edith Hunt, Francis Miller, Ziza E. Crochern, Alden Crochern, Netter Weaver, Mary Wilde, Maud Van Allan and sisters, Mannie Cole, Pliny Cole, Clara Cole, W. C. Baumgartner, J. R. Johnson, T. Goodman, Nellie Bates. J. W. Randall, M. King, Carrie Garyour, Tommy Garyour, Barnard Eckardt, Phebe French, May Jacobs, John Arbenhust, Archie Randall, Josie Randall, Edwin Hayward, Josie Abdiel, Lizzie Abdiel, Chris Miller, Harry Miller, Hugh Miller, Irvin Robinson, Dora Lichard, Anna Knapp.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

A CRIME AGAINST CHILDHOOD.

MARY WAGER-FISHER.

LATTERLY, in my morning drives, I have seen the children of the neighborhood wending their way to school, and my attention has been attracted by their lack of erectness, produced by the high heels on their shoes. I observed a number that were round-shouldered, and in eight out of every ten, perhaps, the perpendicular line fell at the back of the head. Perched on high heels, the natural pose of the body must be to incline forward.

If adult men and women choose to sacrifice their own health in wearing high heels, it is a matter that principally concerns themselves. But a child has a right to wise and judicious care, and to oblige the tender, growing creature to walk, run and stand with the heels lifted a half or whole inch above the rest of the sole of the feet, is monstrous, is criminal, and this crime against children is so widespread that it is amazing—except that nothing need be regarded as amazing—that it continues to be perpetuated with so little protest from physicians and such aids as they ought to find in really intelligent people.

It is true that the children of fashionable people—and by fashionable I mean people who possess high social position, intelligence and usually a competence of wealth—wear shoes without heels, or with what is called the "spring" heel, until six to eight years of age, and from that time on until twenty the heel is kept broad and low. But as one descends in the scale of intelligence and common sense he will find the high heel growing more and more prominent, until children of even the tender age of two years will be found perched upon them trying to walk. I sometimes wonder that preachers who have eyes to see the sins of the people against their bodies ever find time to preach against the sin of the soul.

The greatest crime caused by high heels is the ill and sometimes disastrous effect produced upon the spine. On girls in particular very serious harm is inflicted otherwise—a result that should be avoided at all cost. Minor ill effects are produced upon the muscles of the legs, and the flat part of the foot, which is forced to support more than it ought. The toes and the large joint become distorted, corns and bunions begin to form, and the foundation is laid for a great deal of suffering in the future, as well as for present aches. I suppose that a lady whom I saw last Summer may be taken as a general exemplification of a great many mothers. She had money and plenty of wit, and, in the main, excellent sense. She had two beautiful young daughters of 13 and 15—beautiful, except that neither had beautiful feet. Those members had been stuffed into narrow-soled, narrow-heeled, narrow-toed, high-heeled shoes, until the feet were shockingly deformed. The father of the girls was a large shoe dealer. His son's feet were very finely shaped. He wore broad-soled, broad-toed, low-heeled shoes. Why the feet of the daughters had not been allowed an equal chance in the world with those of the son I couldn't well make out. One of the girls was wearing shoulder braces to make her straight, and one day, as the mother was deploring the child's round shoulders, I ventured to say that I thought low-heeled shoes would be better for her. "I quite agree with you," exclaimed the mother. "The girls wear too high heels all the time, but somehow we neglect having the heels cut off. But it *must* be done." Whether the cutting-down process has begun I don't know, but I thought if those girls were under my control not 24 hours would pass before their feet went into "common-sense" shoes.

No class of people are quicker to respond to the demands of the public than are manufacturers, and if buyers demand a certain sort of shoe they will very soon get it. It is possible that in a great many country towns low-heeled, broad-soled shoes cannot so readily be had as the reverse. But the high heel can always be lowered by having the shoe dealer cut off several layers of leather. He never likes to do it, and will try to convince you that the heel is none too high, etc., etc. But if you insist upon it he will cut the heel down to suit you sooner than lose your custom. That children with crooked and bow-legs, turned-over ankles and other weaknesses of feet and legs, so abound among the lower classes is not at all to be wondered at when one considers the extremely bad way in which they are usually shod. Mr. Beecher not long ago put into a prayer this sentence:—"Lord, help us to be patient with the *ignorance* of others." To combat ignorance is, beyond all doubt, the most difficult and trying thing humanitarians have to encounter. But I believe that as much harm results from procrastination and carelessness and a lack of energy in instituting reforms where intelligence exists as from ignorance. If people would only do as well as they know, the world would take a long leap ahead. High heels and narrow soles are almost as bad as the Chinese method of compression. The dwarf King of France who brought them into fashion to increase his apparent stature probably never dreamed how many fools there were adown the generations of time to imitate his example. The beauty of any member of the body consists in its outline—its shapeliness and *proportionate* size, instead of its littleness. A small foot, or hand, is only comely in connection with a small person, while any part of the body that has been made small by compression is simply vulgar. Freedom is as necessary to beauty as purity, and there is no freedom where nature is being cruelly violated, as she maintains her rights most bravely, and when overpowered leaves in her train a line of woes full of torture and humiliation. Finally, do not omit to keep high heels from under the young people's feet.

DOMESTIC RECIPES.

Oysters.

FRIED OYSTERS.

Drain, dip each oyster into a little cold water to remove bits of shells, and place where it is cold for half an hour. Then roll each into powdered cracker, then into beaten egg, and again into the cracker. Fry in hot butter and drippings (half and half) until delicately browned on both sides. Drain and serve at once. Garnish with parsley.

BROILED OYSTERS.

Select large oysters, rinse in a little cold water, dry on a napkin; dip each into melted butter, then into cracker-dust, and broil over a good fire.

SCALLOPED OYSTERS.

Wash a quart of solid oysters in very little water to remove sand and shell. Strain the water, adding juice, and, if necessary water, to make a pint of liquor. Roll enough crackers to make a pint of crumbs. For seasoning use salt and pepper to taste and a half cup of melted butter. Mix the pepper, salt and butter with the crackers. Put a layer of crumbs in a buttered dish, moisten with a few spoonfuls of the liquor; then put in an even layer of oysters. Repeat until everything is used. The crumbs should be last. Cover and bake half an hour. If the top crumbs seem too dry, add a few bits of butter and a little hot water. Very nice for tea when something hot is wanted. MRS. V. T.

CORN CAKES FOR BREAKFAST.

One cup of Indian meal, two cups of flour, three eggs, yelks and whites beaten separately, a small teacup of sugar, half a cup of butter, two cups of rich sour milk, one teaspoonful each of soda and salt. Stir the butter until creamy, beat the yelks to a froth and the whites until stiff, and put together lightly. The salt and soda should be mixed thoroughly with the flour and meal. Next stir the butter into the middle, turn in the eggs and sugar and beat to a batter. Now, as this mixes, add the sour milk, stirring rapidly. Beat hard until smooth and light. Bake in hot gem-pans or small cake-tins. Excellent. MARY B.

QUESTIONS ANSWERED.

S. E. B., Buckeye Center, Ill., asks how to clean a granite kettle.

ANS.—We know of nothing better than filling the kettle with a strong, hot solution of washing-soda and water and letting it remain on the back of the range where it will keep hot for several hours. Afterwards rub with sapolio or brick-dust.

Miscellaneous.

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Agents wanted. $5 a Day made selling our NEW HOUSEHOLD ARTICLES and FAMILY SCALE. Weighs up to 25 lbs. Sells at $1.50. DOMESTIC SCALE CO., Cincinnati O.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co., Augusta, Me

Miscellaneous.

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THE ONLY MEDICINE
IN EITHER LIQUID OR DRY FORM
That Acts at the same time on
THE LIVER, THE BOWELS, AND THE KIDNEYS.
WHY ARE WE SICK?
Because we allow these great organs to become clogged or torpid, and poisonous humors are therefore forced into the blood that should be expelled naturally.
KIDNEY-WORT
WILL SURELY CURE
KIDNEY DISEASES,
LIVER COMPLAINTS,
PILES, CONSTIPATION, URINARY DISEASES, FEMALE WEAKNESSES, AND NERVOUS DISORDERS,
by causing free action of these organs and restoring their power to throw off disease.
Why suffer Bilious pains and aches?
Why tormented with Piles, Constipation?
Why frightened over disordered Kidneys?
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Use KIDNEY-WORT *and rejoice in health.*
It is put up in **Dry Vegetable Form,** in tin cans one package of which makes six quarts of medicine. Also in **Liquid Form, very Concentrated,** for those that cannot readily prepare it.
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GET IT OF YOUR DRUGGIST. PRICE, $1.00
WELLS, RICHARDSON & Co., Prop's,
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BRACKET SAWS
Children's Educators and Money-Makers.
Holly Bracket Saw $3, Demas Bracket Saw and Lathe $8.
We guarantee either of these machines to give better satisfaction than anything heretofore offered. Boys can make more money than anything else they can work at.
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In prizes, ranging from $25 to $200, are offered for the finest work on either machine. Prizes are so arranged that the beginner has just as good a chance as the expert. We make a special offer whereby any boy can get a
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Wheat lands bought and sold. Prices $5 to $10 per acre. No grasshoppers! No failure of crops. Railroads convenient. Money invested for Eastern parties at high rate of interest on first class real estate security. Send two stamps for map and information.
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IN SO. WEST MISSOURI
Short winters, low taxes, good society, convenient markets, superior schools, healthful climate. Excellent for Stock, Fruit, and Farming. ☞ The *best Tobacco Region in the West.* 1,000,000 acres well-watered Timber and Prairie Lands along the line of the St. Louis and San Francisco R. R. for sale at from $2.50 to $8 per acre on seven years' time. Free transportation from St. Louis to purchasers of land. *Send for maps and circulars.*
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Having struggled 20 years between life and death with ASTHMA or PHTHISIC, treated by eminent Physicians and receiving no benefit, I was compelled during the last five years of my illness to sit on my chair day and night gasping for breath; my sufferings were beyond description. In despair I experimented on myself by compounding roots and herbs and inhaling the medicine thus obtained. I fortunately discovered this WONDERFUL CURE for ASTHMA or CATARRH, warranted to relieve the most stubborn case of Asthma in FIVE MINUTES, so the patient can lie down to rest and sleep comfortably. Any person not fully satisfied after using one-third of a box can return the remainder to the proprietor and the money will be refunded, or send me your address for a trial package FREE OF CHARGE. Should your druggist not keep the remedy, I can send it by mail on receipt of the price $1.00. For sale by all Druggists. Address D. LANGELL, Proprietor, Wooster, Ohio, or ALBERT IMGARD, Manager, 46 Astor House Offices, New York City.

News of the Week.

HOME NEWS.

MONDAY, Nov. 14, 1881.

THE LATE ELECTIONS.—Election day was a very quiet one in this city as well as elsewhere. The revised returns from every county in this State show that the Republican State ticket with the exception of Husted for Treasurer, is elected, by a majority of 11,000. The Democrats will probably have a majority in the Legislature of six on joint ballot—that is two in the Senate and four in the Assembly. The Democratic majority for the State ticket in this city was about 40,000. In Brooklyn the Republicans elected a Mayor by over 4,000 majority when 14,780 majority was given to the Democratic candidate for State Treasurer. In MASSACHUSETTS the Republican State ticket, headed by Long for Governor, was elected by 36,000 majority. CONNECTICUT returns a reduced Republican majority in the Legislature, the Senate now standing Republicans 17, Democrats 7, and the House, Republican 149, Democrats 98, Greenbackers 1. PENNSYLVANIA gives the Republican candidate for State Treasurer about 7,000 plurality. The Independent vote in Philadelphia reached about 35,000. In VIRGINIA, Cameron, Readjuster candidate for Governor, is chosen by a majority of about 11,000. The Readjusters claim the legislature by 15 votes on joint ballot. WISCONSIN shows large Democratic gains for a Republican State. The Republicans elect their Governor by a fair majority, and will have a light majority in the Legislature. The temperance vote reached 25,000. MISSISSIPPI gives a Democratic majority of 15,000 or 20,000. In NEBRASKA only three State officers were voted for, the Republicans winning by from 15,000 to 18,000. They also elected their ticket in MINNESOTA by about 35,000, though there was a falling off of 40 per cent. in the entire vote. In New Jersey the Democrats made considerable gains but not enough to change the complexion of the State Legislature.

Two tenement houses in this city suddenly collapsed on the 9th inst, killing eight persons instantly and injuring about 25 others.

The trial of Guiteau begins to-day at Washington. It will probably continue for some time. A large number of witnesses have been summoned on both sides.

Ten boilers in the extensive lumber and salt manufactory of Hamilton McClure & Co., six miles below East Saginaw, Mich., exploded on the 13th, wrecking property valued at $26,000 and killing four firemen—Michael and Joseph Lehan, Frank Blanchard, and Charles Carpenter. Low water in the boiler caused the explosion.

The annexation of Northern Idaho to Washington is again agitated, and with it the question of the admission of the new State of Washington to the Union. The new State, with the addition suggested, would have an area exceeding eighty thousand square miles, or as great as that of New York and Ohio combined.

The increase of internal revenue receipts over the corresponding period last year is very large, and surprises even the internal revenue officials. The net increase during the months of July, August, September and October over the same months last year amounts to $7,299,337.26. At this ratio the receipts during the present year will amount to $150,000,000.

A full bench of Justices in a Massachusetts State court has decided that women are not eligible as lawyers in the Bay State.

All the personal effects of the late President, stored in 30 boxes, including books, pictures, etc., have been removed from the White House, at Washington, for shipment to Mentor. The Alderney cow presented to the late President was also placed on a train, and will be sent to Mrs. Garfield at Cleveland.

All the open country lying between the north end of the Sny Levee and south of Quincy, Ill., is to be leveed as soon as work can be commenced, and the damaged levees are to be repaired. The following are believed to be accurate estimates of the damage done by the recent flood:—Entire losses in the Warsaw Drainage district, $600,000; in the Indian Grove District, $750,000; in the Sny Island district, $1,000,000; on Quincy Bay and in the city, $30,000; in and about Alexandria, Mo., $250,000; to the Keokuk and St. Louis Railroad, $100,000; to all other railroads, $60,000; to open lands north of Sny Levee and immediately south of St. Louis, $150,000, making a total of $2,940,000.

The State House of Texas, at Austin, was burned on Thursday, with the Court reports and valuable portraits and library.

Illness has prevented Mr. Henry W. Longfellow from seeing visitors for three weeks past.

Josiah Henson, the original of the hero of "Uncle Tom's Cabin," died lately in Canada, leaving a mourning family of eleven children, forty-four grandchildren and six great-grandchildren.

Gov. Long, of Massachusetts, has made a new departure from the usual style of Thanksgiving proclamations. His announcement consists mainly of four verses of Scripture and four stanzas of poetry.

The total loss in the Canadian provinces by bush fires during the past season is estimated at between $10,000,000 and $15,000,000.

The proprietors of the Boston Herald, Messrs. Pulsifer, Haskell and Andrews, have started on a Southern tour in a special car. It is said that the yearly income of each from the newspaper is $50,000.

Mrs. Garfield, Miss Mollie and Masters Herbert and Abram are now comfortably quartered in their new Cleveland home, No. 1,106 Euclid avenue. They left Mentor for that city on Monday, and it is Mrs. Garfield's intention to reside in her present home until April next, she having made arrangements with Judge Burke to occupy the house until that time. She will probably make Mentor her Summer home.

To provide dinner for passengers on the new fast Chicago train, a man will daily accompany it from New York to take down numbers and letters indicating the kind and number of dishes of different sorts which passengers desire. These are enclosed in an envelope and thrown off at Poughkeepsie, whence they are telegraphed to the Albany restaurant. At Albany, men enter the train with baskets containing the dinner and serve it, remaining on the train till Yosts is reached, where water is taken. A stop of twenty minutes is made at Buffalo for supper.

Dakota Territory will apply for admission to the Union as a State during the next Congress. The territory is rapidly filling up at the present time. In 1880 it had a population of 135,180, which has increased since that time to 165,000 or 170,000. Arkansas, Florida, California, Oregon, Kansas, Nevada and Nebraska were admitted to the Union with a population ranging from 50,000 to 123,000 less than that of Dakota.

Lawyer Trude, of Chicago, finds that his legal engagments there will prevent his participation in the Guiteau trial, and he telegraphed Mr. Scoville on the 9th, to that effect. Mrs. Parker, who is considered an important witness by the Scovilles, applied to the United States Marshall yesterday for transportation to Washington, stating that she had no means to pay her own expenses. Mrs. Scoville has spent all her money already, and was provided with passes for herself and daughter by Trude.

At Madison, Ind., Mrs. Sarah Mosely has died at the age of 111 years. Her oldest child, Mrs. Renfrow, is 87 years old.

Smallpox having been carried to California by immigrants from Chicago, the State authorities have decided to inspect all immigrant trains and quarantine the passengers and cars where evidences of the disease are found.

At Spring Lake, Mich., 9,000,000 feet of lumber, worth $250,000, were burned on Wednesday.

Brilliant Results.

There cannot be found, in the journals of any school of medicine, an account of such brilliant cures as have been made, during the past ten years, in a *wide range of chronic diseases*, by the Compound Oxygen Treatment. In a single number of our quarterly journal, *Health and Life*, will be found a record of cures, some of which would make the reputation of any medical practitioner. Not a day in which our large correspondence with patients does not bring us new reports of cures, or ameliorations of distressing symptoms, or expressions of thankfulness and gratitude for relief from pains which have tortured for years, and for which no treatment had hitherto availed anything. Our Treatise on Compound Oxygen, containing a large report of cases, and full information, *sent free*. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, Nov. 14, 1881.

THE following items of agricultural news are condensed from telegrams received here from last Friday evening till noon to-day: Boston, Mass. Corn quiet; prices in favor of buyer. Oats ditto. Pork and lard stronger. Beef still dull with prices, if anything, still lower. Beans in less demand than usual. A fair trade has been done in wool, mainly in fine washed and unwashed fleeces. A remarkable steadiness still in values attests the general confidence in high prices in the future. Consumers, as a rule, are slightly stocked, and will need all the available wool before the new clip comes to market. Stocks at primary points in Ohio, Pennsylvania and Wisconsin are very light and held firmly at full prices. Texas and California clips are held above a parity with the seaboard rates, and supplies are accumulating.....Philadelphia, Pa.—Fair trade in flour and grain with prices ranging near last week's quotations. A good deal of speculation in canned goods. A steady market for choice lots of potatoes; trade in other sorts easier. Butter is firm with a good demand for choice quality for a high price. Wool sales the smallest of any week since July; but prices continue firm..... Cincinnati, Ohio.—The grain markets touched bottom last Monday, and have rallied since. To-day (Saturday) they are stronger with higher prices for wheat corn, and oats. Corn has advanced about five cents since Monday .....Evansville, Ind.—Some of the mills hereabouts are shutting down, not being able to buy more wheat; farmers are holding for higher prices.....Louisville, Ky.—Tobacco firm and steady.....Detroit, Mich.—Wheat market sensitive and unsettled, with a bullish drift. Bad roads checking movement of grain in the interior. Country collections therefore slow but satisfactory.....Milwaukee, Wis.—Receipts of cereals continue light, though sufficient to supply the demand—the impassable condition of interior roads prevents shipping. Flour still dull and weak; a considerable reduction in prices has been made to bring about a free movement. The millers here are trying to induce those at St. Louis, Minneapolis and other chief milling centers to suspend work until either wheat falls in price or flour rises. Negotiations still going on to this end.....St. Louis, Mo.—Pinkeye has nearly disappeared and the freight blockade is substantially lifted. Excellent hogs are arriving in large lots. Cattle market lively; but only light-weight stock is coming in. All grains are showing a downward tendency.....

Minneapolis, Minn.: Another week of rainy weather, with but brief intervals of sunshine, and colder to-day. Farm work has been at a stand-still owing to condition of the roads. But little thrashing has been done during the week. Considerable damaged wheat is offered for sale. Market dull; No. 1 wheat closed Friday at $1.16, a decline of 7c. Several of the mills have shut down. More will do so to-day (Saturday). All are purchasing wheat and hold about 1,500,000 bushels. Good flour is held firmly. Lumber market active; sawmills still in operation.....Kansas City, Mo.: Weather very favorable. A large movement of grain to the seaboard may be looked for if present reduced prices continue. The high prices heretofore ruling left no margin for shippers, hence transactions have been confined to consumers' wants, and a good deal of money has been locked up in grain, which is now being released.....Omaha, Neb.: More rains have kept the country back. Travel is bad and farmers are unable to market their crops as largely as they would otherwise. Collections poor for last three weeks, but a better condition of roads will improve matters. Corn is selling at 55@60c. Hogs are bringing $5.50 per hundred, and all produce commands high prices.....

Denver, Col.: Politics have engrossed all attention during the week. Partisan feeling very bitter. General trade rather quiet except fruit. Snowy weather prevailing. Much satisfaction that Denver has been selected to be the permanent capital of Colorado.....

San Francisco, Cal.: Wheat uncertain, but $1.75 is offered for primest shipping; second, $1.65½@1,67 per cental. Barley and oats on the upward grade. Ample tonnage in the harbor. Great trouble lately between farmers and hydraulic miners. The mighty streams of the latter washed away whole acres of bluffs, and when the rivers rose in the wet season the tailings, called "slickens," swept down on the rich farming bottoms, covering them with sand and debris and ruining them agriculturally. A committee of the Board of Trade has been examining the matter and recommends a compromise, the miners to build stone dams along the gulches to restrain the slickens. A joint convention of farmers has ratified the recommendation....

Baltimore, Md.: Wet weather until latter part of the week. Wool firm; demand good; supply only moderate. Breadstuff market quiet; tone in favor of buyers. Spot and December delivery of wheat steady; corn dull. Dealings in former more speculative. Cotton prices steady and firm. Provisions dull, but order trade active and steady. Butter commands high prices; demand for good grades increasing. Tobacco market quiet, but good grades find ready sale. Stock market has been dull.....Wilmington, N. C.: Weather cool, with rain. Cotton receipts and prices good. Provisions and general trade better. Rice receipts increasing. The mills here produce a first-rate article....Charleston, S. C.: Cotton coming in lively. Indications of cooler weather.....Savannah, Ga.: Cotton very firm, with an upward tendency. Demand strong at quotations. Weather very unseasonable.....Atlanta, Ga.: Owing to short cotton crop merchants are making greater efforts to collect debts than to sell.... ....Augusta, Ga.: Weather still warm and favorable for cotton picking. In adjoining counties nearly all the cotton has been gathered; but the bulk of it is still in the country, planters waiting for better prices whenever they are not too much in debt. Since Sept. 1, receipts have been 23,967 bales less than for the corresponding time last year.....New Orleans, La.: cotton firm and in demand. Receipts of sugar and molasses light; prices sustained. Warm weather is unfavorable for sugar and delays receipts.....Memphis, Tenn.: A good demand for hay and oats at higher prices. Cotton receipts 2,000 bales behind last year and are falling off steadily owing to the short crop and disposition of planters to hold for higher prices.....

Nashville, Tenn.: Grain and flour market dull; flour lower. General produce market active. Feathers in good demand and fair prices with a downward tendency. Wool dull; prices lower. Hogs in fair demand; but packing hasn't opened yet and packers are prudent in purchasing. Some decline in prices of lumber, especially of black walnut. Cotton receipts lighter, but sales good and market active.....

Halifax, Nova Scotia: Accounts from Prince Edward's Island are particularly good: farmers are getting high prices for their produce and though the crops are generally under the average of former years, yet the advance in price of exports will give the island a higher aggregate than for the past four years. Flour here is steady with a fair demand.....Winnipeg, Manitoba: Winter has set in here in earnest, with snow, frost and ice a week ago. Fall plowing has been well gotten through with, and the area under wheat next year in Manitoba and the Northwestern Territories will be largely in excess of previous years.... The Nashville American says that from 18 to 20 cents per pound are paid in that city for the kernels of black walnuts. They are used in the manufacture of fruit candies, and are brought to Nashville in large quantities from the Northwestern States, although in middle Tennessee alone thousands of bushels are permitted to rot on the ground every year.....

The Cotton Planters' Convention at Vicksburg, on October 25, adopted three resolutions of moment to Southern planters, requesting Congress to remove the tariff duties on cotton ties, pledging co-operation with the Iowa Farmers' Alliance in its war on the wire fences, and calling another convention of the farmers and planters of the cotton States, to meet at Atlanta on December 5 next. The Galveston News says that "in view of the fact that the American cotton tie manufacturers are already protected to the extent of 35 per cent., and are clamoring for 70, it behooves the producer to take immediate steps not only to prevent the increase, but, if possible, to get rid of the unjust tax of 35 per cent. on the ties.".....Advices from Buenos Ayres, dated September 14, state that rain has fallen almost continuously since the departure of the preceding mail. This was welcome, and the farmers were, consequently, hoping for a good crop year. The winter months were nearly over, and shearing will be now about beginning. According to the Buenos Ayres Standard, it was estimated that, in consequence of the great increase of the flocks, the yield of the wool will be 20,000 bales larger this season than last. There was, however, still a large quantity of last season's wool left on hand, and the severe weather had checked the export trade, so that the position generally was not favorable to an upward movement in prices, at least so far as Argentine wools were concerned.....

A peculiar real estate venture at Wayne, thirteen miles from Philadelphia, will bring together a population of 3,000 in another year. The company bought 600 acres for $250,000, and spent $100,000 in landscape gardening, $50,000 for a water supply, and enough in drainage to swell the total investment to $500,000. The building lots are an acre each, and the purchaser is bound to select one out of twenty striking designs for a residence, costing $2,000 to $8,000. Picturesqueness is further provided for by fixing the exact spot on which the house shall stand, and locating the trees to suit the landscape. A first payment of a third part of the cost of the land and improvement is all that is required, the rest remaining on mortgage on easy terms. There will be no bar-rooms.....A cable from Dublin says: "No fewer than 400 landlords have intimated that they are willing to sell their estates, but not a single tenant has expressed the wish to buy."

An ex-consul of Great Britain says that the Brooklyn Eagle related that Mr. Charles Townsend, Sedalia, Mo., was cured of rheumatism of the worst kind by St. Jacobs Oil.—Indianapolis (Ind.) Sentinel.

Habitual Costiveness

is the bane of nearly every American woman Every woman owes it to herself and to her family to use that celebrated medicine. Kidney-Wort. It is the sure remedy for constipation and for all disorders of the kidneys and liver. Try it now, either dry or liquid.—News and Courier.

Let the poor sufferers from female complaints take courage and rejoice that a painless remedy has been found. We refer to Lydia E. Pinkham's Vegetable Compound. It is prepared at 233 Western Avenue, Lynn, Mass. Send to Mrs. Pinkham for Pamphlets.

A Fine Hair Dressing.

COCOAINE dresses the hair perfectly, and is also a preparation unequalled for the eradication of dandruff.

THE superiority of BURNETT'S FLAVORING EXTRACTS consists in their purity and great strength.

The Markets.

SPECIALS FROM THE CHIEF CENTERS

Until Saturday, November 12.

CHICAGO.—WHEAT active, firm and higher, but unsettled; No. 2 Chicago Spring, $1.30⅛@1.30¾, cash; $1.30¾, November; $1.32@1.32⅛, December; $1.33@1.33⅛, January; sales at $1.30⅞@1.32¾, December; No. 2 $1.31⅝@1.33¾, January; No. 3 do., at $1.17; rejected, 92@94c. CORN active, firm and at 60c., cash and November; 60¾@60⅞c., December; 61⅛@61¼c., January; 65⅜c., May; sales at 60⅜@61¼c., December; 65¼@66¼c.; rejected, 58c. OATS moderately active and higher at 43⅜c., cash; 43⅞c., November; 41¼c., December; 40½c., May. RYE firmer at 96½@97c. BARLEY firmer at $1.07. FLAX-SEED weak and lower at $1.47 bid. PORK active, firm and higher, at $16.50, cash; $16.30@16.40, November, December and all the year; $17.45@17.47½, January; $17.67½, February. Lard active, firm and higher at $11.25@11.30, cash and November; $11.35@11.37½, December; $11.60@11.62½, January; $11.75@$11.77½, February. Bulk-meats firmer; shoulders, 6¼c.; short rib, $8.95; short clear $9.25. HOGS—market strong and fully 5c. higher than on Friday; fair mixed packing, $5.65@6.20; choice heavy, $6.25@6.60; light $5.75@6.10; culls and grassers, $3.50@5.40. CATTLE—market generally active and stronger, but export demand weak and supply meagre at $6@6.80; good to choice shipping, $5.40@5.90; common to fair $4@4.95; butchers' steady; inferior to fair $2.10@3; good to choice, 3.30@4.10; stockers and feeders very active and firmer at $2.60@3.80; rangers steady; Texans, $2.90@3.95; half-breeds and natives, $3.90@4.40.

ST. LOUIS.—WHEAT opened lower than yesterday, advanced, and closed lower; No. 2 Red Fall, $1.38⅝, cash; $1.40⅛, December; $1.42⅛, January; $1.45, February; sales at $1.39⅝, December; $1.42¼, January; $1.44¼, February; No. 3 do., $1.28¾; No. 4 do., $1.18½. CORN opened higher but declined; 63⅜c., cash; 65½c., December; 65⅝c., January; 66¼c., February; 69c., May. OATS better at 44c., cash; 45½c., December; 46½c., January; 49½c., May. RYE slow at 97c. bid. CATTLE—Supply too light to make a market; only a small retail trade done. SHEEP—Receipts, 300 head; shipments, 150 head; market very quiet and unchanged. HOGS about steady; light shipping, $5.10@5.60; Yorkers, $5.85@6.10; mixed packing, $5.50@6.15; butchers' to fancy, $6.20@6.60.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 12, 1881.

The business week has been materially interrupted by the interest in election affairs, and also by the excitement on the Produce Exchange respecting the adjustment of arrangements for the new and valuable edifice to be erected. Many cotton dealers are absent at the great Southern Cotton Exposition.

BEANS AND PEAS.—Outside of strictly choice marrows there is so little demand that a weak feeling has become positive. There are of course some strong holders, but more people are handling beans than usual, and some of them perhaps cannot stand a lull. Green peas vary in quality; best quoted $1.70; Southern N. E. peas again higher, quoted $3.30@3.25 ₱ 2 bushel bag.

Marrow beans, prime, $3.10; fair to good, $3.15@3.25; medium, choice, $3.20. fair to good, $3.00@3.10; pea, choice, $3.30@3.35; white kidney, $3.40@3.45; red kidney, $3.00; old, $2.00@2.85; turtle soup, $1.80@1.90.

Receipts of beans for the week, 10,712 bush.
Exports do. 351 bbls.

BEESWAX.—Quoted 21@22½c.

BUTTER.—Cool weather has enlarged the demand and fine creamery and selected half tubs are firm; very extra a shade higher than last week. The assortment of quality does not favor the increased attendance of buyers. Many distributors at this season want a sound, sweet, useful grade of stock that has not yet appeared in lots. In fact, there is a noticeable falling off in quality of heavy State dairies that have heretofore sold upon their brand. Fresh Western in good condition sells readily; poor and medium grades very dull and dealers are generally willing to make concessions even on the latter.

Creamery, State and Elgin, choice, 36c.; good to prime, 33@35c.; sweet cream, fresh, 32@33c.; fair to good, 28@30c.; State, June, good to prime, 25@28c.; Western, choice, 34c.; good to prime, 30@32c.; fair to good, 28@30c.; poor, 18@23c.; June, prime, 26@27c.; fair to good, 22@25c.; State firkins, dairies, choice, 28c.; good to prime, 25@27c.; fair, 22@24c.; poor, 18@20c.; dairies, half tubs, choice, fresh, 32@33c.; good to prime, 28@30c.; fair to good, 25@28c.; Welsh tubs, choice, fresh, 31@32c.; good to prime, 27@29c.; fair to good, 24@27c.; poor to fair, 18@23c.; Western imitation creamery, 30@30c.; Western dairy, fresh, choice, 26@27c.; good to prime, 23@25c.; fair to good, 20@23c.; poor to fair, 17@20c; factory and ladle-packed, Iowa, fine June, 17½c.; Ohio and Indiana, June, good, 17c.; late made, good, 16@16½c.; fair, 15@15½c.; poor, 14@14½c.

Receipts for the week, 20,821 pkgs.
Exports do. 1,570 do.

CHEESE.—The feeling is weak with an accumulated stock, especially of the under or sharp grades. Shippers' moderate purchases are directed to fine Fall and the outlook for other grades is not hopeful.

State fact'y, fine, Sept. 12½c.; good to prime, 11@12c.; fair to good, 10@11c.; poor to fair, 9@10c.; Ohio factory, flat, fine mild, —@——c.; good to prime, 10@11c.; fair to good, 9@10c.; creamery, partly skimmed, choice, 9@10c.; poor to good, 4@7c.; fully skimmed, 2½@3c.; full-skimmed factory, 2½@3c.

Receipts for the week, 31,562 lxs.
Exports do. 13,100 do.
Liverpool cable, 57s. 6d.
Steam to Liverpool, 128. 6d.@17s.

COTTON.—The week has not shown a marked improvement. Bureau reports confirming injury to the crop have caused much interest, with the natural effect of giving some strength to prices.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	8¾	9¼	9¼
Strict ordinary	9 7-16	9 11-16	9 11-16
Good ordinary	10¼	10¼	10¼
Strict good ordinary	10 11-16	10 15-16	10 15-16
Low middling	11 3-16	11 7-16	11 7-16
Strict low middling	11 7-16	11 11-16	11 11-16
Middling	11⅝	11¾	11¾
Good Middling	12	12¼	12¼
Strict good middling	12¼	12⅜	12⅜
Middling fair	12¾	13	13
Fair	13½	13¾	13¾

STAINED.

Good ordinary	8¼	Low Middling	10 3-16
Strict good ordinary	9⅛	Middling	11 3-16

Average of futures:—
November, 11.45@11.53c.; December, 11.66@11.71c.; January, 11.78@11.9 c.; February, 11.96@12.08c.; March, 12.13@12.25c.; April, 12.28@12.33c.; May, 12.38@12.49c. June, 12.50@12.59c.; July, 12.61c.; August, 12.70@12.75c.

Receipts for the week, 44,264 bales.
Exports do. 4,956 do.

DRIED FRUITS.—The following are the ruling quotations.

Apples, evaporated, new, 13½@14c.; fair to prime, 12@13c.; N. C. new, sliced, fancy, 8½@9½c.; fair to choice, 6½@8c.; Southern quarters, choice, 6@7½c.; State, old, fine-cut, choice, 7@7½c.; quarters, do. 6½@6 7c.; small lots, 6¾@6¾c.; Ohio and Mich. choice, 6½@6 7c.; Western, fair to good, 5¾@6¼c. Peaches, evaporated, peeled, old, 35@40c.; unpeeled, new, 18@20c.; N. C. peeled, fancy, 24@25c.; choice, 22@23c.; fair, 22@ 23c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, N. C. 8½@9c.; halves, Tenn. 8½c.; quarters, 8¾c.; Plums, State, black, 17c.; Southern Damson, 15@15½c. Blackberries, 13c. Cherries, Southern, dry, 19@20c. Raspberries, 28@29c. Huckleberries, 15@16c.

EGGS.—Receipts for the week, 8,576 bbls.; do. last week, 8,106 do. Eggs have held an upward course and all fresh lots close firm. Southern eggs turn out poorly; limed also firm. A number of stall eggs are offered at 23@24c.

Jersey, single barrels, 32@33c.; Pa. and State fresh mid, 28@29c.; Canadian, 26½@27c.; Western, 27c.; Western and Canadian, fair to good 23@26c.; limed State, 23c.; Canadian and Western 21@21½c.

FLOUR.—Another week of steady decline is reported liberal deliveries having weighed heavily on the market. Exporters have operated lightly and there is an accumulation in the good low shipping brands. For home use grades the market closes with some steadiness but only on the basis of easier figures. Buckwheat flour arrives from few points. Penn. will have little to spare.

No. 2, $3.25@4.30; State and Western, superfine, $4.30@5.25; city mills, XX, $6.00@7.85; Spring wheat, extra, $5.40@5.85; Spring XX and XXX, $6.00@6.75; patents, $6.50@8.50; Ohio round hoop shipping, $5.60@6.00; trade brands, $6.15@6.65; St. Louis extra, $5.70@6.10; do. double extra, $6.25@6.50; do. family, $6.65@7.00; Southern extra shipping, $4.85@6.40; do. XX and family, $6.60 @7.25. Rye flour, superfine, $5.10@5.40; buckwheat flour ₱ 100 ℔s, $4.70@4.90. Corn meal, Brandywine, ₱ bbl, $3.80@3.85; do. Western, $3.25@3.80; rye feed, ₱ ton $23@24.

Receipts of flour for the week, 121,503 bbls.; corn-meal 3,111 do.

Exports of flour for the week, 41,349 bbls.; corn-meal 2,289 do.

FRESH FRUITS.—Exports of apples for the week, 4,850 bbls. High prices have induced shipments and quality is very variable. Pears dull. Grapes are down to few sorts and prices are firm. Cranberries firm for prime. Florida oranges not yet attractive.

Apples, Baldwin and Greening, fancy, ₱ bbl, $3.37@3.50; good to prime, $3@3.25; N. Spy, State, $2.75@3; seconds, $1.75@2.25; mixed lots, State, prime, $2.75@3; do. seconds, $1.75@2; Phœnix, Jersey, ₱ round hoop bbl. $2.50. Pears, Duchess, State, ₱ bbl. $3.50@5.00; Lawrence, $3@4.50; Vicar of Wakefield, $2@3; cooking, $1.50@2.00; Boston bush. bxs, fancy, $4@5; poor to good, $1@3. Quinces, apple, prime, ₱ bbl. $3; No. 2, $2@2.50. Grapes, Catawba State, case of 18 3-℔, bxs, $1@1 5; bskts, ₱ ℔. 7@8c.; Concord, bskts, 2@5c.; Isabella, bskts, 3½@11c. Florida oranges, half-bbl. bxs, fancy, $4@5; good to prime, $3@3.50; inferior, $2.00@2.75; tidrds, fair to prime, $2.50@3; inferior, $2@ 2.25. Cranberries, Cape Cod, fancy, large, ₱ bbl. $9.50@10; prime to choice, $8@9; good to prime, $7.50@ 8; poor to fair, $5@6.50; frosted $3@3.50; ₱ crate, $2.50@ 3.25; New Jersey, fancy, $2.75@2.85; good to prime, $2.37@2.63; fair to good $2.12@2.37; poor to fair, $1.75@ 2.12; frosted, 50c.@$1.

Pecans, Va., hand-picked, ₱ ℔, 7@7½c.; fancy, 6½c.; extra prime, 5½c.; good to prime, 5¼@6c. shelled, 50@55c.; pecan nuts, 9@11c.; hickory, shell-bark, Northern, ₱ bu. $1.25@1.37; Western, $1.12@1.25; hull, 50@60c.; black walnuts, 30@40c.; chestnuts, Southern, $5@6; Northern, $6@7.

GRAIN.—Wheat has ruled weak, but at the close there is a stronger feeling owing to a lighter movement from the interior and some reduction of accumulations by an increased export demand.

Corn has not been largely dealt in, but prices hold up well.

Oats have fluctuated through speculative manipulation, but wind up about as well as at our last.

Wheat, Spring, $1.25@1.10; Spring No. 2, $1.36@1.38; red Winter No. 2, $1.42½@1.42¾; red Winter, $1.30@1.44; white Western and State, $1.30@1.31. Rye, 98c.@1.03; Oats, white No. 1, 53c.; No. 2, 51½c.; No. 3, 49@49½c.; mixed, No. 1, 48c.; No. 2, 47½c.; No. 3, 45@46½c; Corn, Western mixed, 69@70c.; No. 2, 68½@69c.; yellow, 68@72c.; white, 70@74c. Barley, Canada No. 1, $1.13@1.15; do. bright, $1.15@1.17; State 1-rowed, $1@1.02. Buckwheat, 90c.

Receipts for the week, wheat, 772,630 bush.; corn, 1,136,175 do.; oats, 183,900 do.; rye, 41,575 do.; malt, 55,100 do.; barley, 180,950 do.

Exports for the week, wheat, 557,650 bush.; corn, 267,100 do.; oats, 19,200 do.

HAY AND STRAW.—Exports for week 1,920 bales. There is no material change to report. Receipts have been light but business has been somewhat interrupted by the occurrences of election day and by rainy weather, and the supply has been sufficient. Only fancy Timothy reaches $1.10.

Prime Timothy hay, ₱ 100 ℔s., $1.00@1.10; medium Timothy, 80@95c.; shipping grades, 65@70c.; clover mixed, 70@80c.; clover, 60@70c.; Straw, long rye, 75@ 80c.; short rye, 50@60c. oat and wheat straw, 40@45c.

HONEY.—Quotations are:
White clover, fancy, 1-℔ bxs, ₱ ℔, 20c.; do. 2-℔ bxs, 18@19c.; good to choice, 1@2 ℔ bxs, 15@17c.; buckwheat 1-℔ bxs, 14@15c.; 2-℔ bxs, 12@14c.

HOPS.—The Producers' Price Current says: "The market is ruling generally quiet."

Crop of 1881, choice, 28@29c.; good to prime, 25@27c.; fair to good 22@25c.; eastern, 18@27c.; 1880, good to prime, 18@22c.; poor to fair, 10@15c.; 1879 fair to prime, 8@15c.

Receipts for the week, 2,770 bales,
Exports for the week, 900 do.

MILK.—Supplies have run light and a high week is reported. Commission lots opened at $2.75 and soon ran up to $4 ₱ can of 40 quarts. Average quoted $3.53¼. Price paid to farmers for October mainly 3½c ₱ qt.

POULTRY AND GAME.—Dressed poultry is not averaging good in quality and prices are easy. Thanksgiving stock should be here by Nov. 21st.

Turkeys, Phila. prime, 14@16c.; J'y 13@15c; State and W'n d.-p, 12½@14c.; scalded, 11½@13c. Chickens, Phila. spring, 16@18c.; Bucks Co. do. 15@16c.; Jersey, do. 13@15c.; State, do. 12@14c.; Western, do. 11@13c. Fowls, Phila. dry-picked, 14@15c.; Bucks Co. 13@14c.; Jersey, 12@14c.; State and Western, dry-picked, 1@2 13c.; scalded, pr, 10@12c.; inferior, 8@10c. Ducks, Spring, Phila. ₱ ℔, 16@18c.; Jersey and Bucks Co. 15@17c.; State, 14@15c.; old, fair to good, 10@12c. Geese, Phila, dry-picked, young, 13@14c.; do. old, 10@ 12c.; State and Western, old 9@10c. Squabs, white, ₱ doz. $2.75@3; dark, $1.75.

Cooped stock is firm at the moment, but with possible free receipts of dressed there is not much stability to the market.

Chickens, Jersey, spring, ₱ ℔, 11½@12½c.; State and Penn. 11@11½c.; Western, and Southern, 10c.; Fowls, 11@11½c; Jersey, State & Penn. 10@11c.; Western and Southern, 10@11c. Roosters, old, 5@6c. Turkeys, J'y and Penn. 10@12c.; Western, 8@10c. Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 60@75c.; Western, 45@55c.; Southern, 45@50c. Geese, Jersey, $1.50@1.75; N. Y. and Penn. $1.25@1.50; Western mixed $1@1.25; Southern, 75c@$1. Pigeons, large, strong birds, 25@30c.; young, 5@12c.

Wild ducks are quoted at $2.50@2.75 for Havre de Grace and $2 for Western canvasback; 80@90c. for Havre de Grace, and 75c. for Western redhead; 40@60c for Western mallards, according to quality, 30@60c, for teal and 30c. for common.

Quail, ₱ doz. $1.25@2.50; grouse, choice, ₱ pr 75c@$1; soft, 40@60c.; partridges, State and Western, $1@1.12½ Eastern & Minn, 50@60c.; soft, 40@50c.; Woodcock, choice, 65@75c.; inferior, 50@60c.; English snipe fresh-killed, ₱ doz. $2.00; plover, do. $2.00; rabbits, ₱ pair, 30@40c.; venison, Minn. short saddles, ₱ ℔. 15@16c.; Western, 14@15c; whole deer, 10@11c.

PROVISIONS.—A low tone has attended most hog products during the week and at the easier rates Continental and English buyers have taken rather large lots of lard. Barreled pork has ruled quiet, but at the close there were some speculative bids. Bacon is heavy under large Western stocks.

Mess pork $17.50@17.87; smoked hams 13@13½c; pickles 10½@11c; shoulders smoked 8½c; shoulders pickled 7½c. Lard—prime steam $11.35@11.37; bacon, long clear 9@9½c; beef unchanged.

Receipts for the week—Beef, bbls. and tcs. 2,544 pork, bbls. 11,925; cut-meats, pkgs 20,785; lard, do. 15,133,

Exports for the week—Beef, bbls. and tcs. 2,500; pork bbls. 3,175; cut-meats, ℔s. 4,210,039; lard do. 3,059,850.

SEEDS.—Clover seed arrives moderately and has a fair demand.

Clover, Western, 1881, car lots on track, 8¼@8¾c.; Timothy: job lots in store, $2.85@3.25; Flaxseed, American, rough, ₱ bu. $1.60@1.65.

Receipts for the week, 15,050 bush.
Exports do. 3,655 do.

TOBACCO.—The asking points of attractive stock are above the views of consumers. Buyers of seed leaf refuse to regard the strong quotations of the past few weeks as being positively established.

VEGETABLES.—Exports of potatoes for week 3,922 bbls. Potatoes are firm at the late shading for choice stock. Common are too close to full prices for trade.

Potatoes—Early Rose, Eastern, ₱ d.-h. bbl., $2.50@3; State, $2.25@2.75; bulk, ₱ bbl. $2.25@2.62; Prolific, Eastern, d. h. $2.50@2.62; Snowflake, State, $2.37@2.75; bulk, ₱ bbl. $2.25@2.62; Burbank, d.-h. $2.50@2.75; bulk, ₱ bbl. $2.25@2.62; Peerless, $2.25@2.37; Mercer Eastern, ₱ d.-h. bbl, $2.25; sweet potatoes, Va. yellow, ₱ bbl. $3.25@3.50; Del. River, $3.75@4; Jersey, $3@3.50.

Garden truck firm with cooler weather.

Onions, white bulk, ₱ bbl. $4.75@5; yellow, $2.25; red, rust, $2.25; red, Chester, $2@2.25; squash, Marrow, ₱ bbl., $2@2.25; Hubbard, $2.25@2.50; cabbage, ₱ 100, $6@10; beets, L. I. ₱ bbl. $2.25@2.50; carrots, $1.25; turnips, Russia, L. I. $2@2.25; cauliflower, fancy, $5@7. average quality, $1.75@2.50; inferior, 50c@$1; celery, ₱ doz., $1.25@2.

WOOL.—A fair degree of activity is to be noted. Holders of domestic fleeces feel encouraged with the limited chance of foreign coming into competition.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Nov. 12, 1881.

BEEVES.—Receipts for the week, 15,021 head; do. last week, 12,080 do. A good many poor droves have been on sale and Monday's market lost money for owners. Texans and Colorados sold at 7½@8¾c. to dress 55 ℔s.; poor to fair natives at 8@10½c. to dress 55@56 ℔s. good to choice do. at 10¾@12¾c to dress 56@57 ℔s.—outside figures for 12 picked Kentucky steers of 1,583 ℔s. average. Two car loads of fine Dutchess County cattle at 12c. to dress 57 ℔s. A half dozen car loads of State dry cows changed hands at $11@13 ₱ head.

MILCH COWS.—There is no special change in the range of $35@75 for common to choice, but there are more attempts at "bearing down" than for a few weeks past.

VEAL CALVES.—The season has run well for calves and prices continue strong.

Hog-dressed country, choice, 13½@14c; fair to good, 12@13c; grass, 5½@6½c; live calves, N. J. prime to choice, 9½@10c.; do. State, 9@9½c.; fair to good, 8½@ 9½c.; poor to fair, 6@8½c.; Mount Hollys, 7@9c.

SWINE.—Receipts for the week, 28,719 head; do. last week, 29,287 do. General price for live $6.75 ₱ 100 ℔s. New Jersey dressed light 9@9¾c.; other weight 8@ 9c.; city dressed, 8¾@8¾c. Pork tenderloins, 12½c.

SHEEP AND LAMBS.—Receipts for the week, 27,418 head; do. last week, 36,926 do. Prime stock was in demand at firm prices. Export goods $5.85 ₱ 100 ℔s, but 3½@5¼c, was the general range for sheep, with sales of lambs at 7¾@7¾c.

ALL the prize lots of butter, eighty-three in number, of the recent London Dairy Show were salted with Higgin's Eureka Salt. The Higgin process has revolutionized the dairy salt business of Great Britain.—American Dairyman.—*Adv.*

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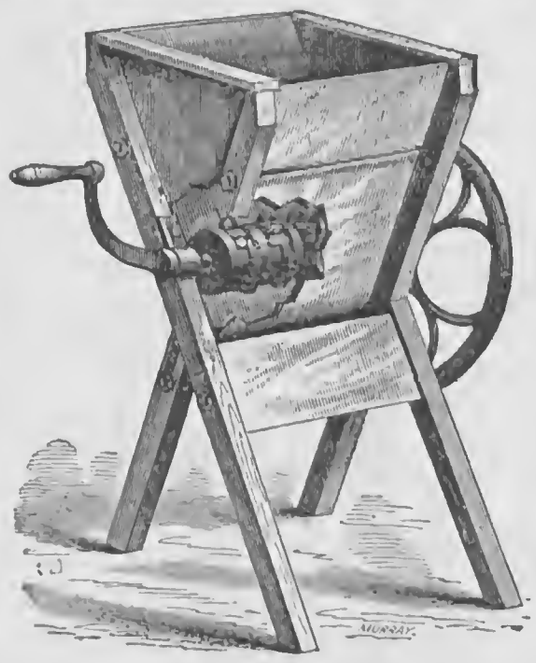

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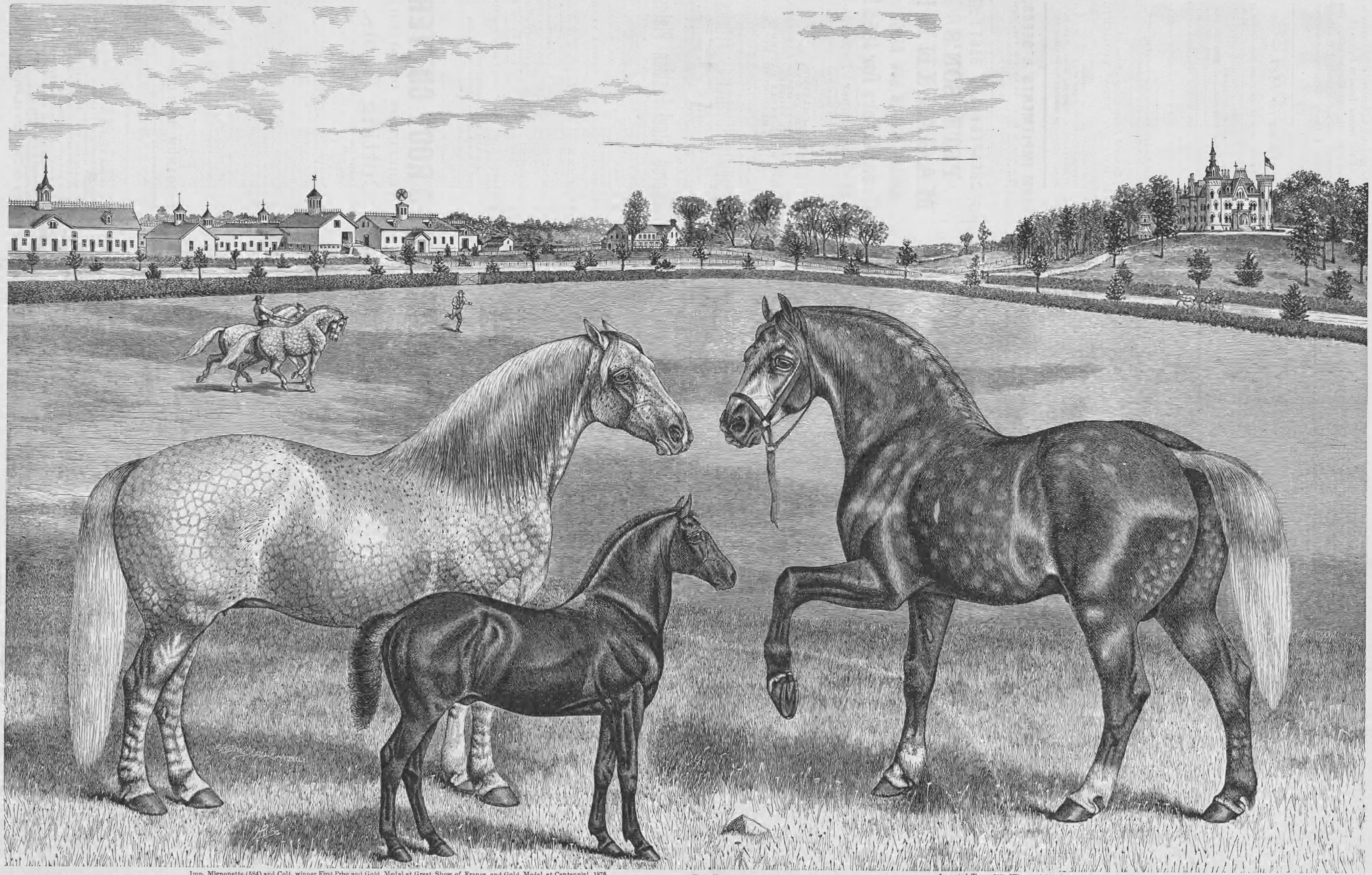

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PERSONALS.

General Burnside's estate was so heavily encumbered that his heirs will get nothing.

The late President's fiftieth birthday anniversary falls upon the 19th instant. It is proposed in Cincinnati to hold a semi-centennial observance.

Secretary Blaine, along with Justices Swayne and Bradley, have sons in the civil service. Four sons of Secretary Hunt are in the service of their country.

Thomas G. Alvord, of Syracuse, N. Y., recently received the 141st annual rental of a salt farm of 300 acres in the town of Schaghticoke. The farm has been in the Alvord family since 1740.

The Ottawa, (Kan.) Republican thus quotes: Mr. Harvey B. F. Keller, recorder of deeds, says: I have long been convinced of the merits of St. Jacobs Oil, and use it in my family for rheumatism successfully.—*Adv.*

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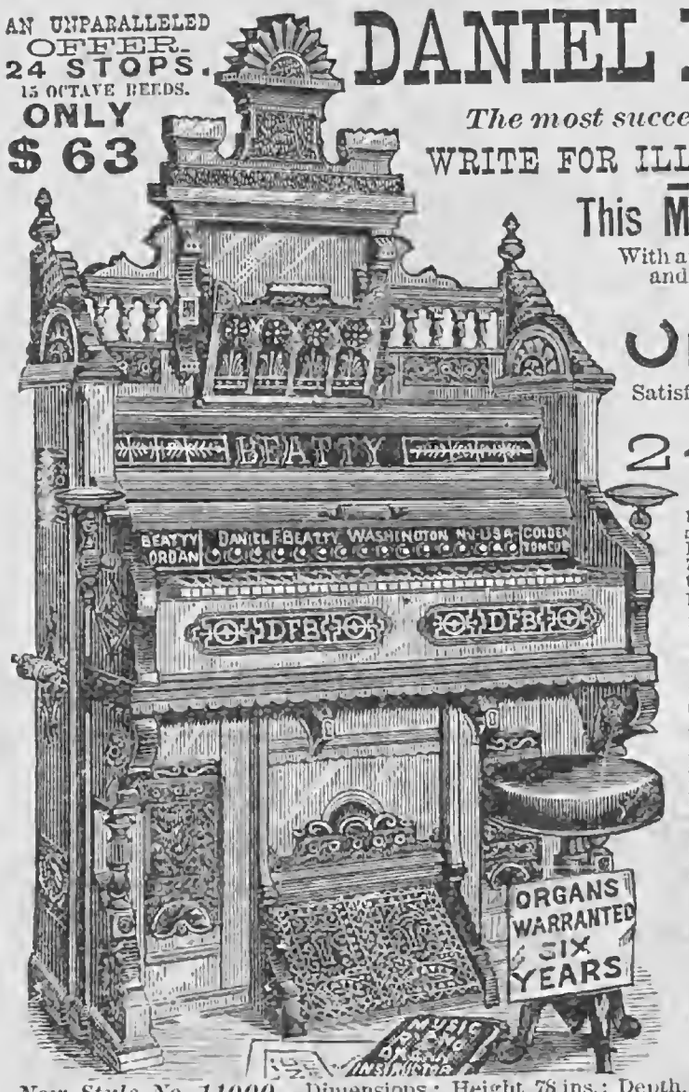

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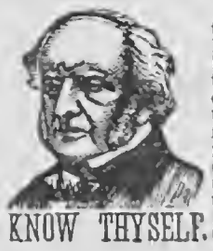

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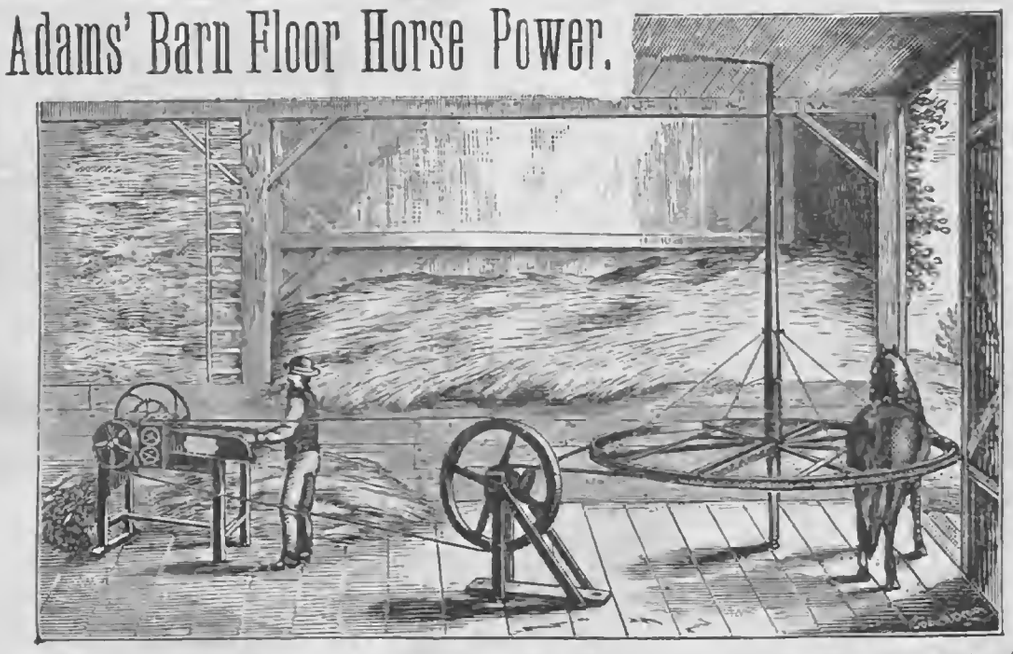

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Humorous.

A YOUNG man who didn't like the color of his hair wrote to a chemist asking, "What is the best dying receipt?" The chemist wrote back, "Fool with a loaded gun."

GRAMMARIANS are puzzled over the question whether "mumps" and "measels" are singular or plural. They often look singular, but that is no criterion on a question of this kind.

AN Iowa editor thus acknowledged a present of grapes: "We have received a basket of fine grapes from our friend W., for which he will accept our compliments, some of which are nearly two inches in diameter."—Cincinnati Gazette.

A SCOTCH packman, having paid some fruitless visits to one of his customers, called a few days ago for an installment of his debt. But the customer told her son, a lad of five years, to say she was "in the toon." Accordingly, when the packman called and asked, "Where is your mother the day?" the boy promptly replied. "In the toon?" "What toon?" asked the peddler. The boy having no further instructions from his mother, went to the next room and shouted, "Mither, what toon are ye at? He wants to ken!"—Weekly Free Press.

NATURE AND ART.

Youthful Artist (to Countryman).—"Might I go over there and paint those trees?"
Countryman—"Paint the trees, Maister! don't thee think they look very well as they are?"
[Punch.

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WAS THE FIRST
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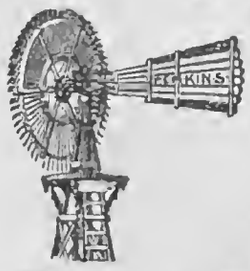

that governed itself successfully. The Best in the Market for the last Ten Years, and has received
More Premiums and Medals
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IT HAS NO EQUAL,
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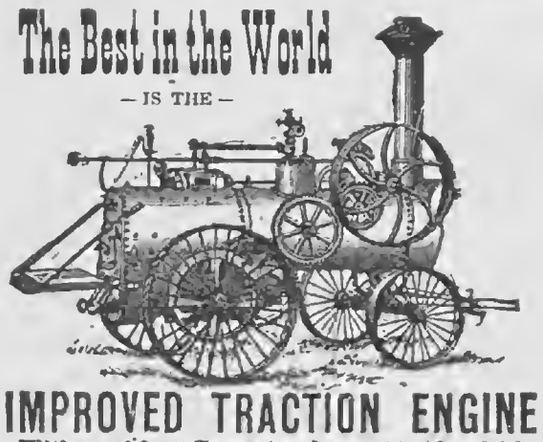

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The New Sheep Dip
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Is superior to all other Dips.
Is cheaper, for 1 gallon makes 100 gallons of mixture.
Is warm and protecting to the skin water-proofing it against wet weather, and perfectly safe to use in the coldest weather.
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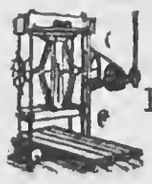

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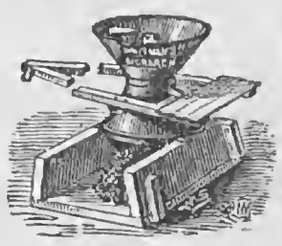

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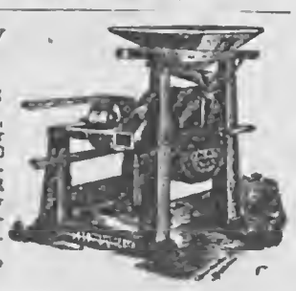

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NOTES FROM THE RURAL FARM.

Quack, Creeping Wheat, &c.—Triticum repens.

FIRST and last, a great deal has been said and written about Couch Grass—called also Quitch, Quick, Scutch, Rye, Dog, Chandler, Witch, Quake, Squitch and Quack Grass. It is called botanically Triticum repens, which signifies Creeping Wheat, and of all its "common" names this seems to be the most appropriate. As a wheat it is worthless, the grain being small and shriveled, while the heads, which in good soil are often over a foot in length, bear but few grains and many none at all. As to its value as a pasture grass or for hay, there is no difference of opinion, that we know of. It is conceded to be as valuable, or nearly so, as Timothy, while a greater quantity may be raised upon a given area. It will endure the severest droughts of the North; it will thrive in sandy or clayey soils; it is early to appear in the Spring; it is the first to carpet a field with green after it has been mown or closely cropped; it makes a compact sod for the door-yard or lawn, and will become as "velvety" under the frequent use of the lawn-mower as the Bent Grasses, Red Top or Poas. Its merits are many. We do not know of any true grass about which more may be said in its praise. The great fault with Quack is that it seems to be too much of a good thing. Upon this farm and, in truth, upon most portions of Long Island, this grass may be found in many fields and in almost every hedge. A field recently plowed for corn next Spring, which had been in grass for eight years or more, was nearly all Quack—Timothy having disappeared entirely, and the rest forming a small percentage of Blue Grass and Red Top. The cultivation which we shall give the corn will practically subdue the Quack unless the next Summer should prove unusually wet, so that when Timothy and clover are again sown upon the wheat at the end of the rotation there will be scarcely any to dispute their possession. But Quack would reappear in several years and if the land, as in the above case, were retained in grass for six years or more, the Quack would again largely predominate. As our lands are sandy with gravely sub-soil, they need frequent rains so that a season rarely passes without a drought of lesser or greater severity prevailing. It is then that Quack is easily destroyed. The shallow corn cultivator, always here used, exposes the Quack roots to the parching air and sun and destroys them. In retentive soils, we presume it is difficult to get rid of Quack and no surprise need be entertained that its general reputation is that of a pest. Upon this farm Quack is a blessing, though perhaps a troublesome one. We do not believe there is another grass which, when plowed under, will furnish a greater amount of suitable food for Indian corn while the cultivation given for suppressing its Summer growth is no more than that which a full corn crop needs.

Several engravings of this Quack, or Creeping Wheat, have appeared in the RURAL NEW-YORKER from time to time, but always reduced in size and not quite accurate. Our present illustrations (p. 795), are carefully drawn from life from specimens sent from this farm. The smaller A is the flowering or seed-bearing stalk; the smaller B a portion of the roots and lower sheaths. It creeps under the surface of the ground by subterranean stems or root-stocks from every joint of which roots issue establishing independent plants. Hence it is that any disturbance of the roots during wet weather or when the ground is at all moist serves as much to spread the plant as to suppress it. These root-stocks grow rapidly and persistently, preferring to grow through any permeable obstacle rather than turn aside. The potatoes, A and B (large) are two of many which might have been selected from our last crop through which the underground stems of the Quack had penetrated. It bloomed this year on June 25, and is later than Timothy in ripening its seeds. It varies a geat deal in size and color. In old fields, the heads are no longer than those of wheat, while in hedges or rich land we have seen them, as stated, over a foot in length. There is a tall variety (botanically nemorale) which bears awns, and a dwarf kind which is awnless. This grass is indigenous in the Northwest, and we should be glad to hear from our readers what is thought of it in that part of the country.

TOBACCO-GROWING NOTES.

TOBACCO cases should be made of dry, seasoned pine lumber, an inch in thickness, dressed on both sides. They should be made with hemlock or spruce corner-pieces two by two inches in size. The length of cases should be in accordance with the growth of the leaves to be packed therein. The usual size for the better grades of seed-leaf tobacco is as follows: Length, 3½ feet; width, 2½ feet; and depth, 2½ feet. For extra long wrappers the length should be three feet ten inches, and for fillers or domestic Havana three feet are sufficient. All cases should be carefully weighed and the weights plainly marked upon each end with red chalk or blue pencil.

THE Winter manipulation of tobacco furnishes for the tobacco-grower pleasant employment during the inclement weather, provided he has prepared a convenient and comfortable assorting or stripping room in which to perform the work of stripping, assorting, and packing his crop. Growers should spare no pains to put up their tobacco in the most satisfactory and workmanlike manner, whereby they will gain a reputation for careful handling, which is in itself a profitable attainment for those who intend following the business through coming years. There is as much necessity for care and painstaking in the handling of a crop of tobacco to prepare it for market as in the management of the crop during its season of growth. Carelessness in either case tells severely on the quality of the product and on the profits to the producer.

G. A. G. JR.

An Experiment in Potato Planting.

Last Spring when planting my Beauty of Hebron potatoes, I planted one row through the piece as follows: I took potatoes below medium size, cut off the seed and stem ends, cut out all the eyes but two; planted them and gave them the same care as the rest of the piece. The "seed" for the rest was of the same sized potatoes cut in two and planted one piece in a hill about 18 inches apart in the row. Now for the result: the first row, containing 70 hills, gave 195 pounds; one row by the side of it with 86 hills gave 143 pounds, a difference in yield per hill of over 50 per cent in favor of the whole potatoes with two eyes. This row could be distinguished from the rest as far as the piece could be seen, until the dry weather dried up the vines. The whole piece yielded a splendid crop as did a piece of Snowflake in another part of the field.

Schoharie Co., N. Y. "INCOG"

RED SIBERIAN WHEAT.

WITH this we have had no experience. The heads, one of which has been drawn from life and is here illustrated, were sent to us by Professor Blount, of Colorado. He tells us it came to him from Moscow. When received it was one of the poorest-looking grains he ever saw—shriveled, light, chaffy, dark and soft. The grain and straw grown from it excelled anything he ever raised, the longest head being

RED SIBERIAN—FROM NATURE.—FIG. 524.

7½ inches, the number of kernels 111, and the straw stiff and bright. The heads are smooth, as shown, and the chaff red. It is a Winter wheat. Such fine heads plainly show what a grand field there is for the improvement of wheats. We have faith that our next seed distribution may greatly aid in this direction.

Farm Topics.

THE FARM DIARY.

WALDO F. BROWN.

I believe there are more farmers to-day than at any previous time who desire to be something more than mere "clodhoppers," and who are willing to be at some trouble if thereby they can become better farmers and wiser and happier men. I wish to make a few suggestions to such, pointing out some means by which I have been greatly helped in my own experience. I began keeping a farm diary in 1857, and as I look back over the nearly quarter of a century which has elapsed since I began this work, I cannot point to any one thing which has been so helpful or given such large returns for a small outlay of time and trouble as this has done. The fact that the farmer sits down at his desk every evening to make an entry in his diary begets careful habits and is likely to lead him to keep his accounts more carefully and to keep up a correspondence with absent friends, and I think the practice would pay for these reasons if there were no other. The daily record should be brief, usually three or four lines are all that is needed, but it should include a record of the weather and what is done for the day. If any experiments are attempted on the farm, let them be noted down here, and any event of importance in the neighborhood or that your family are interested in should also be recorded—visits made or received, journeys by any member of the family, sickness, attendance at school, and, in fact, anything which will serve to give a complete history of the family.

If you keep a record of each day's work, you will have, of course, at the end of the year the dates of your planting and harvesting of all crops, both in the garden and on the farm; when the fruit trees blossomed, when the forests were in full leaf, the latest frost of Spring and earliest of Autumn, the time of turning stock to pasture in Spring, the birth of stock, and, in short, memoranda of all the operations of the farm, to which you can turn at any time to ascertain how many weeks it takes a certain crop to mature, to settle definitely the age of an animal, to enable you to determine if it is best to plant a certain crop late in the season, or to fix the disputed date of some event. The last day of each month note the prices of leading farm products. This will become exceedingly valuable when you have kept it for years, and can refer back to it, and it will often help you to determine whether to market a crop as soon as ready or hold for higher prices. You do not want a regular diary with printed headings and an allotted space for each day, for some days a single line about the weather will be all you will want, while occasionally there will be quite a lengthy entry to make.

The weather record can be kept in a single line, except occasionally when there is something so unusual as to require comment. I use abbreviations and make a record of the temperature twice a day, aiming to get the highest and lowest. I hang the thermometer in a northern exposure and where I pass it on my way to the barn, and look every time I pass it, the record for a day reading thus: F. 20°, F. 46°, C. and W., would show the temperature and that the day ended cloudy and windy. The next day as follows: 50°, Lt. R., 60°, var. 54°, F., would show light rain in the morning, variable weather at noon and fair at night. If you prefer, the daily record may be kept with a pencil, but at the end of each year a synopsis of each month should be copied with pen and ink into a separate book prepared for the purpose. This monthly record may be brief, but should give

a condensed history of the month and the prices of farm products should be given here. After this monthly synopsis is made out, while the events of the year are fresh in your mind, write a short history of the season under the following heads: First, Family—Tell here any events of interest which have occurred during the year, such as visits made or received, journeys, health, attendance at school or college, etc., etc. Next, Farm—State how much land you have cultivated in each crop, yield per acre, and when and at what price sold. If your crops have been poor, state the cause, if you know it. If unusually good, say whether it was from extra cultivation or an exceptionally good season. Make a general statement of the weather, as to whether it was wet or dry; Summer cool or hot; Winter mild or otherwise. Third, make a record of any improvements, such as ditching, repairing of, or putting up new, buildings planting fruit or shade trees, building new lines of fence, etc., etc. In addition to this take an inventory of your live stock, and then when the assessor calls on you keep a copy of his inventory and enter it here, and you will have a very fair history of your farm, family and business.

Perhaps it sounds rather formidable to read the directions I have given, but I assure you that an average of two minutes a day will keep the record, and one rainy afternoon or three or four evenings will make out the abstract at the end of the year. I hardly expect to induce a middle-aged farmer to begin such a work; but perhaps some of them will get a son or daughter to do it for them. I do hope, however, that many of our young farmers will begin a farm diary the coming year, and rest assured if they do that they will never regret it.

Pomological

NOTES IN A NORTHERN ORCHARD.

T. H. HOSKINS, M. D.

My orchard is on the shores of Lake Memphremagog, six miles south of the international boundary line, in latitude 45 degrees north, and is elevated 750 feet above the sea level. This territory lies fully open to the sweep of polar waves of low temperature, and there are no Winters in which our thermometers do not frequently register temperatures lower than minus 30 degrees. Fifteen years ago, when I began to plant an orchard, it was believed to be impossible to grow any kind of apples except the Siberian crabs in this section of Vermont and the adjoining parts of Canada. Many thousands of dollars had been expended in vain by our people for the purchase of fruit trees from Southern New England and Central New York. It has been proved at a heavy cost that the standard apples of the great apple regions to the south and west of us cannot be grown here. So far as I am aware no tree of the Baldwin, Rhode Island Greening, or Roxbury Russet ever lived to reach bearing age in Northeastern Vermont. Even such hardy kinds as Westfield Seek-no-Further, Blue Pearmain, Tolman Sweet, Fameuse, and Red Astrachan, succeed only locally and precariously, so that they cannot be grown profitably for market.

The task which I set myself 15 years ago was to test every hardy sort I could hear of and obtain, in order to see whether varieties did exist which could be planted here and in similar exposed localities with security. I have accomplished the work, after testing over 250 varieties, collected from the coldest localities in America. The result is that this part of New England, from having not a single variety of apple (outside of the crabs) which the people had confidence to plant, is now rapidly becoming a region of orchards, unsurpassed in any part of the country for vigor or fruitfulness.

The past season our orchards have fruited abundantly, and many of the newer sorts have shown decidedly, for the first time, what they could do. During successive previous seasons other kinds have been undergoing test and judgment, and I believe a few notes on some of them will prove useful to fruit-growers who read the RURAL, and especially to the many of them who inhabit the "cold belt" which extends from Dakota through Minnesota, Wisconsin, Northern Ontario, Quebec, Northern Vermont, New Hampshire, Maine and New Brunswick.

TOO TENDER.

In the first place, I will give a mere list of the varieties which have been utterly "wiped out" by Jack Frost. These embrace the William's Favorite, Yellow Bellflower, Black Oxford, American Summer Pearmain, Red Canada (not a Canada apple, notwithstanding its name), Morgan Sweet, McClellan, Grimes's Golden, Gravenstein, Granite Beauty, Fairbanks, Ramsdell Sweet, Canada Reinette (not grown in Lower Canada to any exten-

QUACK, COUCH OR QUITCH GRASS.—From Life. See 1st page.—Fig. 525.

Franklin Sweet, Fall Orange, Summer Hagloe, Colvert, Munson Sweet, Golden Sweet, Jewett's Fine Red, Fall Pippin, Moses Wood, Minkler, Mamie Cathead, Cooper's Market, Yellow Ingestrie, Whitney Russet, besides quite a number not "in the books." It will be noticed that there are many sweet apples in this list. My experience is that, as a rule, this class of apples is more tender than others. There are very few to be found in the Province of Quebec, so few, indeed, that the people have no taste for them, and they are not salable in the markets of the large towns. Now come the

"ALMOST HARDY,"

the most vexatious of all, because they neither thrive nor die. Some of them, indeed, do tolerably in favored spots, but none will do to plant extensively with a view to profit.

ST. LAWRENCE—Around the city of Montreal and on the hills which rise out of the flat country between Lake Champlain and the St. Lawrence River, this beautiful and excellent Fall apple is productive and profitable. It is doubtless a Fameuse seedling (as so many of the Lower Canada apples are), having a similar flavor and the same snowy-white flesh. Very few of these Fameuse seedlings do well in the more elevated country. Both parent and progeny develop the vice—inherent in them, but little seen under the more favorable conditions—of spotting, and to this the St. Lawrence adds cracking and shy bearing, together with some tenderness of tree. Not profitable here.

RED ASTRACHAN. — Tree tender; fruit smaller and less fair than in more favorable places. Not profitable.

FAMEUSE.—Bears young and well, but the fruit is not so large or so fair as at Montreal and the Champlain Valley, and the tree is plainly tender. Profitable, yet not safe to plant extensively.

BEN DAVIS.—Tree tender and short-lived; fruit hardly "good" elsewhere and no better here. Though a free bearer, not profitable.

POMME GRISE.—Tree tender, fruit small and knurly; not profitable, though the quality is fine.

NORTHERN SPY.—In protected spots this noble variety sometimes succeeds here as well as anywhere in the country. Our Spys took the first premium at the State fair this Fall. Nevertheless the tree is too tender for us.

RIBSTON PIPPIN.—Living at a poor, dying rate, it still bears well and bears fine fruit; but after a few years' struggle gives up the ghost.

FALL WINESAP OF THE WEST.—A good little apple, just now (November) in eating, but the tree is not hardier than Ben Davis, and is not productive.

SAXTON STRIPE.—A fine-flavored October apple; tree productive, but tender, and soon falls into a decline ending in death.

EARLY JOE.—Struggles along and bears some fruit, but survives only in an unhealthy state.

JONATHAN.—In the same category with Early Joe—the more's the pity.

SOPS OF WINE.—The most successful of those not entirely so. The tree suffers from the Winter, yet bears good crops and seems to get hardier with age.

TOLMAN SWEET.—This variety grows thriftily and bears well, and one would not for several years suspect it of wanting hardiness; but when it comes to full bearing, unless carefully propped up, it breaks down all round, and the breaks invariably reveal a rotten interior, with only a skin of healthy wood. Sorry to have to give up this excellent Winter sweet. These two lists of complete and partial failures might be considerably prolonged did space permit. I have given only the varieties best known and likely to be tried by others similarly situated.

HARDY AND GOOD.

The more pleasant list of kinds that have proved successful in point of hardiness and quality of fruit embraces also a considerable number of varieties. From these I select the best of those which add productiveness and general thrift to the first-named qualities, as follows:—

TETOFSKY.—With all the merits this apple has the fault of dropping a considerable part of its crop before it is ripe. Not recommended for market on that account.

YELLOW TRANSPARENT.—Of the same season (August) as Tetofsky, beautiful, very good, exceedingly productive, does not drop. Transports well for a Summer apple.

DUCHESS OF OLDENBURGH.—It is hardly necessary to praise this large, early-bearing, handsome and heavy-bearing September apple. Its only moderate quality is its sole defect, yet no apple of its season is more marketable or more profitable. It can be grown much more cheaply than potatoes, and never brings so low a price here. Still it is possible to have too many of an early apple, unless you are prepared to evaporate them.

WEALTHY.—This is the king of all the hardy apples. As productive, hardy, early-bearing, large and beautiful as the Duchess, it, in this region, keeps well until March, and outsells Baldwin or any apple brought here from the South.

MAGOG RED STREAK.—If it were not for the Wealthy this would stand at the head of our Winter apples. It is large, handsome and a good keeper until April. The tree is hardy, thrifty and a profuse bearer, but the fruit has too little red to compete with the splendid Wealthy as a market apple. And yet it is styled, in the report of the Iowa Horticultural Society, "the beautiful Magog Red Streak."

SCOTT'S WINTER.—This is the apple which well replaces, for us, the Roxbury Russet of a milder climate. It is of medium size, heavily striped and sometimes covered with red. It is "hard as a rock" until April—sour, and only useful for cooking. As the warmth of Spring begins to reach it, it mellows, becomes mild, aromatic and far better in quality for dessert than the Roxbury Russet. The tree is a true "iron-clad," a profuse bearer on alternate years, with a good crop in intermediate seasons. In my orchard of 1,400 trees the Wealthy and Scott head the list—400 of each. The Scott keeps well into July, and not only keeps, but keeps fresh and crisp, with almost no loss, when properly handled and stored.

Did not the reasonable limits of such an article forbid, I might enlarge this list with some excellent amateur sorts. But many of these have been separately described and illustrated in the columns of the RURAL during the past four years, and in time others may be added.

Newport, Vt.

A Plea for the Commercial Union of Canada and the United States.

In the shipping of Fameuse from Canada this season there has been a new departure consequent on the scarcity of apples throughout the United States. Dealers have been through all the apple sections buying up for the markets of the principal Northern cities, some being even sent as far south as Baltimore. Fifty barrels of our own apples were sent to New York and brought at wholesale four dollars per barrel. But the duty is heavy and causes shippers to be shy of forwarding. It is too bad that these two countries cannot agree toward their mutual good in matters of commerce. The Fameuse is the finest table apple the continent produces, and would supersede the Lady Apple if it could be exported, as nowhere does it grow in better quality than in the Province of Quebec, where many other apples do not succeed. It is in the cities of the Union our market should be for this fine fruit, and but for the duties its superior quality would always ensure remunerative prices. ANNIE L. JACK.

Horticultural.

RURALISMS.

I HEARTILY reciprocate Mr. Parnell's kind wishes. I should be right glad to take him by the hand and leave the "swords" to those who make the beautiful desolate, while we seek to make the desolate beautiful and fruitful, "which is far better,"

IT does seem a little odd to speak of slate and shingles as mulching materials. I will explain. Years ago, when the astonishing vegetable growth of California was a new wonder, she sent us, among other things, some large British Queen Strawberries, one of which measured 8½ inches in circumference, which at that time was remarkable, and furnished the press with not a little material for comment. The British Queen was at that time our "big" strawberry, and was much grown. The late Mr. Gustin, Mr. Boyden, myself and a few others tried to beat this big Queen. Mr. G. reached very nearly 8½, I reached 8¼, but the size of the others I cannot remember. Here is where the slate and shingles come in, for I used them to cover my strawberry bed. Experience had taught me that uniform moisture was indispensable to the production of large strawberries, and it occurred to me that slate was just the thing for my purpose, and better than litter (perhaps because they happened to be at hand). I had an opening two by four inches cut on one side of each slate, which enabled me to push two slates up to each plant, with an opening of four by four inches in the middle for the plant. This answered all the purposes of a mulch by keeping the soil moist and preventing the growth of weeds, besides materially aiding the ripening of the fruit and keeping it clean. I use shingles and tin in the same way. The other parties depended upon copious waterings and

thinnings out of the fruit. I used no water and did not thin out. I was beaten a trifle on the single berry, but I had much the largest crop of fruit. It was a very pleasant excitement while it lasted. I have used this kind of mulch more or less ever since, and alluded to it because a year or so since a clay disk with a hole in the middle was patented for the same purpose, and is really not so good because of its bevel form, besides that it is much dearer. My 12-inch Lincoln and nine-inch Sharpless were raised with shingles, an objection to which is that some kinds warp badly. This kind of mulch is well adapted for the garden. I hope this explanation will prove acceptable to Mr. Parnell.

IN regard to the Caroline Raspberry, I have tried it so thoroughly that I do not hesitate to recommend it as one of the best of raspberries. When the berry begins to color it is a pale yellow, which turns to a pretty salmon color when ripe. Among berries of its color it is equalled by none except the Brinckle, and it is but little inferior to that old standard when ripe. It is thoroughly hardy, a very strong grower and immensely productive. Its ability to bear long carriage has yet to be proved, but for a near market its value is already established. The amateur, at least, should accept the Caroline as a boon.

I FEAR it is a mistake to recommend keeping the crocus out of the ground till Spring (p. 743). No amount of cold will kill it, and it will be found very difficult to keep the bulbs sound during the Winter. I never could do it. Besides, the crocus should be cheering us with its modest but pretty flowers long before the ground is fit to dig in the Spring. Planted at the foot of a wall, I have had them push their flowers through two inches of snow. Last Spring they were covered with four or five inches of snow when in bloom, and came out unharmed. I should recommend planting them in the Fall about three inches deep, and let them remain undisturbed for two or three years. I have not disturbed mine for the past four years. I do not replant them till they have worked their way almost to the surface. The improved named kinds are to be preferred. The oxalis should be potted now. O. Bowiei has been in flower for several weeks.

OF all the grasses none responded so quickly to the beautiful rain as the Blue Grass (Poa pratensis). The farmers, however, too generally made a mistake in allowing their cattle to run in pasture lots to eat off and trample down the young growth before it was an inch high. This is what I call an unwise economy. After such a long drought pasture lots should have had a chance to recover from its effects. Late-sown rye has grown wonderfully. The recuperative powers of nature are remarkable, and beyond ordinary comprehension.

WHEN the long-prayed-for rain came it was a warm one, and thus in the first week in November the edible mushroom (Agaricus campestris) sprang up in old pasture lots and by the wayside in such quantities as I have never seen before. It was hardly possible, in some lots, to take a step without treading on them. The great, fat, white buttons set some people almost crazy with delight. Large quantities were boxed for market

HORTICOLA.

French Argenteuil and Giant Dutch Asparagus.

I planted the RURAL seeds of these two varieties very carefully last Spring and gave them as good a start as possible. Alongside of them I planted common seed gathered from one of my neighbor's plots the Fall before. A few days ago I was making a new bed to transplant them all. The roots of those received from the RURAL were especially fine. I gave them a plot that had been manured in the Spring with fresh stable manure; then in August a heavy dressing of well rotted bagasse was applied; then just before transplanting another heavy dressing of stable manure was put on and well spaded in, and the plants set in drills two feet apart one way and one the other. The universal and severe drought we had this Summer was very hard on all kinds of vegetables, but the asparagus seemed to grow right along. I shall give it a fair test along with the common, giving as nearly as possible the same treatment, as I regard this as the only true way of deciding how much better new varieties are than the old ones. So far as one year's growth of stalks and roots is concerned, the seed obtained from the RURAL proved decidedly the best. Another year will fully determine which is most desirable.

N. J. SHEPHERD.

The Vineyard.

MINER'S SEEDLING GRAPES.

In a recent number of the RURAL a correspondent inquired touching the grapes of the late T. B. Miner, of Linden, N. J. I have fruited several of them the past season when so few grapes ripened here, and the following named varieties all ripened their fruit perfectly: Antoinette, Adeline, Augusta, Belinda, Carlotta, Victoria, Lexington and Linden (the two last black grapes). The distinction between the white grapes is not great. They are all sweet, delicious. Their time of ripening varies and they vary in size and shape of bunch. My vines are not old enough yet to venture a special description. They all hold to the bunch for a long time tenaciously. Taking the Miner grapes together, I consider them the best collection of hardy, early, outdoor grapes in the market, and I have nearly all the leading varieties known.

This note is long and may seem to savor of unnecessary praise; but it is due to the widow of Mr. Miner, whose husband, with consummate care and patience has added so many valuable grapes to those in our market, and Mrs. Miner is entitled to the benefit, if any ensue. I first saw her advertisement in the RURAL. She sends out the best grown vines, differing in this respect from many dealers, so I wish to say a good word for her.

Mattapan, Mass. J. C.

Arboricultural.

ABOUT TREES.

Arbor-vitæ hedges in the neighborhood of Philadelphia are in some localities being totally destroyed by the "basket worm," which infests them in countless numbers.

"What will the harvest be" from the prevailing mania for planting simply shade and ornamental trees on small estates of from one to three acres? Where are to be the nutting grounds for the boys and girls of the future who are so unfortunate as to live in those thickly-settled portions of the country where the habits of suburban life abound? Granting the utility of ornamentation, what tree is more ornamental than the chestnut? The butternut, shell-bark and walnut have also a place as ornamental figures, and why either or any of them should be excluded from lawn and road-side planting is, in a way, incomprehensible. The oak, which is of slower growth than either, is not overlooked, and ought not to be, as it is, all in all, the handsomest of trees. Mulberry trees are very fine, while the fruit is greatly liked by many people. Certain sorts of apple trees are extremely picturesque, and when in full bloom, and again when in fruit, are lovely to see. Why exclude the mulberry and apple for the sake of the maple? And why not plant the road-sides with trees that bear the double blessing of fruit and shade? School children might be led to plant trees along the highways and become so identified with road-side orchards of fruit or nuts as never to lose interest in that sort of public philanthropy, while in after years it would be a source of pride and pleasure to them to mark the results of their early efforts as tree planters.

MARY WAGER-FISHER.

The Herdsman.

NOTES BY A STOCKMAN.

THE Governor of Illinois has put himself in a false position by issuing a proclamation which is dated Nov. 1, forbidding under severe penalties the importation of cattle into Illinois from certain counties in Connecticut, New York, Pennsylvania, New Jersey, Delaware and Maryland, after the 10th day of November, unless accompanied by a certificate of health properly signed by a duly authorized veterinary inspector.

THE Governor of Illinois, or rather the Legislature of that State, has undertaken, by its act of May 1881 by which this proclamation of the Governor was authorized, to regulate commerce between the States; and this is a function belonging solely to the National Government. Several Western States some years ago tried to prevent Texan cattle from being brought into their territory by passing prohibitory laws, but these were overruled by the U. S. Supreme Court as in conflict with the Constitution of the United States.

ONE of the counties scheduled is the place of my residence, and I know my county is free from pleuro-pneumonia, and the inspectors have found their occupation gone. With a large acquaintance among stock owners I have not heard of a case for three years past, and the traffic in stock is perfectly free from interference within the State. Not long ago the English Government did the same sort of a thing and the Western men did not rest until the U. S. Government interfered and exerted all its influence for their relief. They were quite ready to declare then that there was no pleuro-pneumonia in the United States in an epidemic form and now the Governor of Illinois declares there is a good deal of it.

THERE is a glaring inconsistency about this business.

THE coming boom in cattle is going to be in favor of the polled breeds. There is a good deal of ignorance in regard to these cattle. The Polled Angus is undoubtedly an excellent race for beeves and in places will compete favorably with the Short-horns and Herefords. Doubtless they may be more conveniently handled than the horned beasts, but it is an exaggeration to say more can be safely crowded in a car of the polled cattle than of the horned ones. There is a limit to the crowding of beasts in a car and some room for breathing is required. Practically the room gained about the heads of the poor beasts by their horns is all the breathing room they have, and if a lot of polled beeves become crowded in the cars some would be suffocated for want of air.

THE common opinion that polled cattle are entirely inoffensive is a great mistake. I have seen a man very quickly lifted over a fence by a polled cow and these beasts will push and strike with their heads in the manner of other cattle, quite as savagely. The proportion of cross or savage cattle will be found quite as great among the polls as among the horned. Let us have the truth anyhow, and give the polled cattle their due; but at the same time don't let us deceive ourselves. In the dairy these cattle will never be popular, and simply because they are not so profitable as the Jerseys, the Ayrshires, the Dutch, the Short-horns or good average natives, that is, considering the market value of these last.

BOOMS are something like boomerangs—they hit back every time. When a boom is coming sensible people should keep out of the way of it, or they may get hurt.

THE Short-horn breeders' convention recently held at Jacksonville, Ill., took some practical steps to secure control of the Herd Books by the National Short-horn Association. A capital of $50,000 is to be subscribed chiefly for the purpose of securing these books and of consolidating them into one under the immediate control of the breeders. This has been done in England and will be done here no doubt. It is naturally to be expected the breeders should wish to have the expense of recording their animals reduced as much as possible and object to be taxed by a private individual for his own profit any longer than they can avoid it. The breeders now have the power in their own hands and they will undoubtedly soon own their own Herd Book by one method or another.

"PINK EYE" is the popular name for an epizootic disease among horses which has been quite prevalent in Ohio and Western Pennsylvania. It is really a species of influenza in which all the symptoms which characterize this disease in the human subject are present. Languor, disinclination for exertion, head-ache, weeping from the eyes, redness of the conjunctiva, puffy eyelids, discharge from the nostrils and swelling of the legs, with much general fever, comprise the symptoms. There is no trouble with the lungs nor any cough, as in the aggravated or pulmonary influenza.

THIS disease lasts from three to ten days and with good nursing and rest disappears without any secondary complications. It fortunately spreads slowly and does not make a general onslaught upon the horses of a locality at a sudden swoop. One is taken, then another and another; and meanwhile the first is recovering. The horses in Cincinnati have suffered in this way very generally but without any particular inconvenience. A liberal dose of salts and warm gruels and warm blanketing with rest will soon bring a sick animal through his trouble.

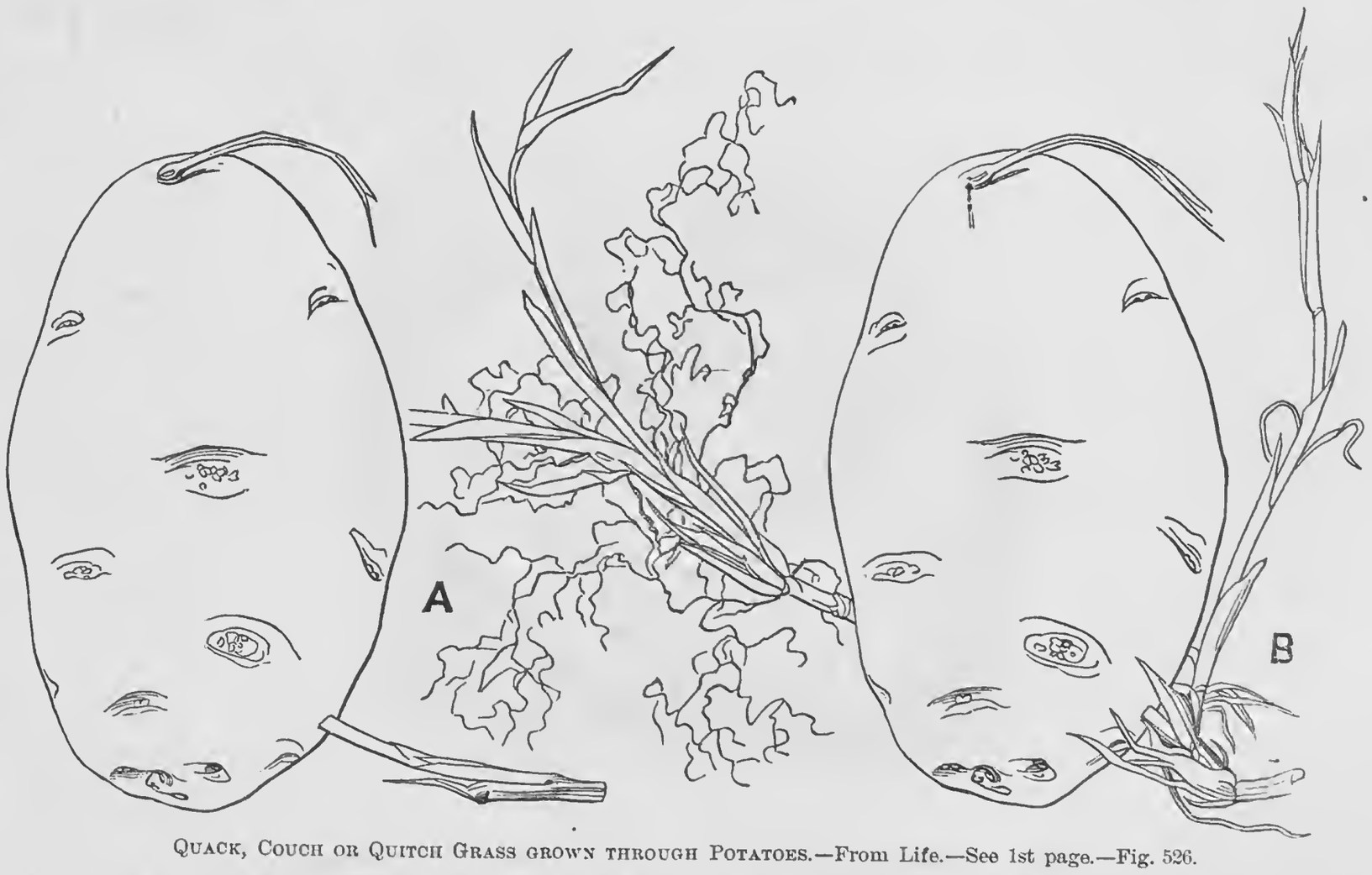
WINTER STOCK FEEDING

PROF. E. W. STEWART.

IN my first article, in the RURAL of October 15, I made suggestions applicable to the contingency forced upon farmers by the drought and some of the ways of getting through the Fall with cattle in unabated growth. We have now to consider some of the plans that may be adopted for winter-feeding. And first let us consider

ECONOMY IN FEEDING.

In the cold season our animals must be kept warm. That can be done, first, by putting them into a stable the temperature of which



QUACK, COUCH OR QUITCH GRASS GROWN THROUGH POTATOES.—From Life.—See 1st page.—Fig. 526.

never goes much below 50 deg., or, better still, if kept pretty evenly at 55 degrees, or a little more than 10 degrees below Summer temperature—when the food consumed to keep up animal heat will be reduced to a minimum for Winter. But if the stable boarding is full of broad cracks, giving only about the same protection from cold winds as a high board fence, allowing the manure to freeze solidly—then all the heat carried off by these numerous currents of cold air must be balanced by chemically burning just so much more food in the stomach. This is an extravagant way to produce the warmth which a good stable will furnish. Food is an expensive fuel. But some of our Western feeders think that *corn is cheaper than shelter*. Yet I think a few years of high prices for corn, like the present, will soon lead them to doubt this philosophy. When corn is only worth 15 cents a bushel it may, perhaps, come into competition with anthracite coal at $8 and $10 per ton, but not at 50 to 60 cents per bushel. But these feeders do not consider the whole case. Food is not given to growing or fattening animals simply to keep them warm and in their present condition, but also to make them grow and lay on flesh and fat, and increase in weight and value. From this increase must come all the possible profit. Yet in very severe Winter weather the best feeders under this system can only make the cattle hold their own. All the corn they can consume goes to furnish fuel and to supply waste of the system, and therefore this heavy feeding is lost—no profitable result comes from it. In mild Winters fair progress may be made in the open air with heavy feeding, but February and March often swallow up all the progress or profit made in December and January, and that must be called a very poor system which is liable to prove unprofitable oftener than successful. Time must work a revolution in Western Winter feeding, as two bushels of corn are required to produce the same result as one in a good system of Eastern barn feeding. Can the feeder afford to double the amount of food to save the expense of good shelter—good stables? Warm and permanent stables may be built almost anywhere for $10 per head of cattle protected. The interest on this investment would be 60 cents per head per year. Can all this extra corn be furnished for 60 cents?

Some of the best Western feeders on a large scale, prominent among them Mr. Gillett, of Illinois, wisely do their principal feeding in warm weather. In Mr. Gillett's magnificent Blue Grass pastures will be found, placed at short intervals, troughs of abundant corn, which is eaten *ad libitum* by the steers, so that they are ready for shipment in the Fall, or, if kept into Winter, are in such superb condition that the weather has less apparent effect upon them. This plan assists in disguising the losses of open-air feeding in Winter. Barn-feeding has never had a fair trial in the West because the cattle are there so unaccustomed to handling and restraint that when put in a barn they chafe under confinement so much as to neutralize all the benefits of warm shelter. They must be brought up to barn-feeding and handling from calf-hood before the benefits of good shelter can be appreciated.

REPAIRING COLD BARNS.

Great improvements may be made in cold barns at very little expense. The part devoted to the stable may be furred out on the inside with inch-and-a-half by four-inch stuff, and then boarded horizontally on the furrings. This will leave a space of four inches between the boardings, to be filled with sawdust, tan-bark, shavings or cut straw, well rammed in. Inclose a cold stable in this way on the inside and it will make it very comfortable for cattle in the coldest weather. This will cost the farmer much less than its advantages for a single Winter. This is one of the first economies to be considered and adopted.

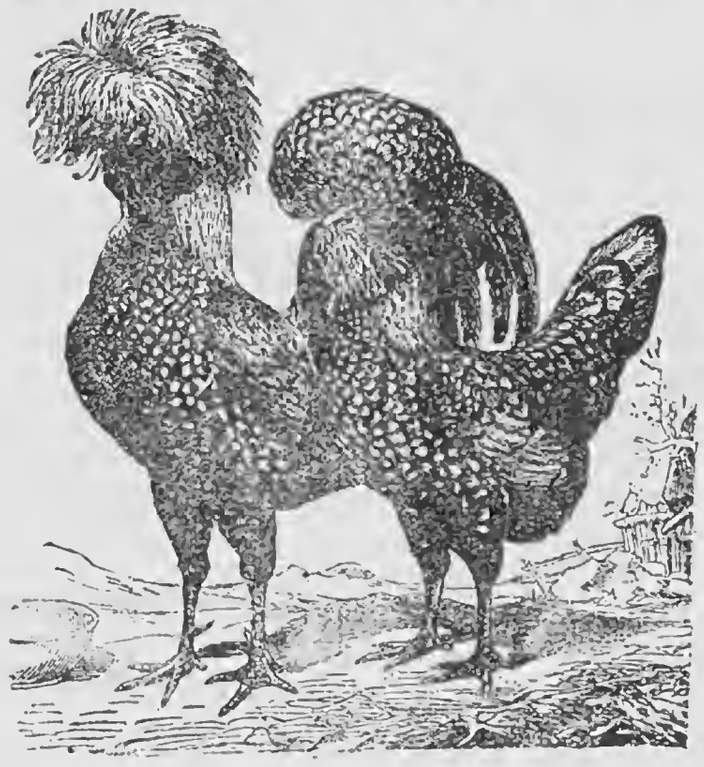
FEEDING STRAW, ETC.

In many parts of the country the hay crop was under an average, and then the drought drew upon this stock of hay, making the Winter supply still less. It will therefore be necessary to study the use of all the accessory fodders, such as the different kinds of straw, corn fodder, etc. Many people think straw has no feeding value except to give bulk in the stomach, etc. Let us see what chemistry says on this point. We will find how they compare with hay in the German experiments. And as this journal circulates over such a wide territory, I will give a pretty full list of straws, so as to be adapted to all parts of the country. I give only the proportion of digestible matter as found by actual experiment, giving meadow hay and clover for comparison:—

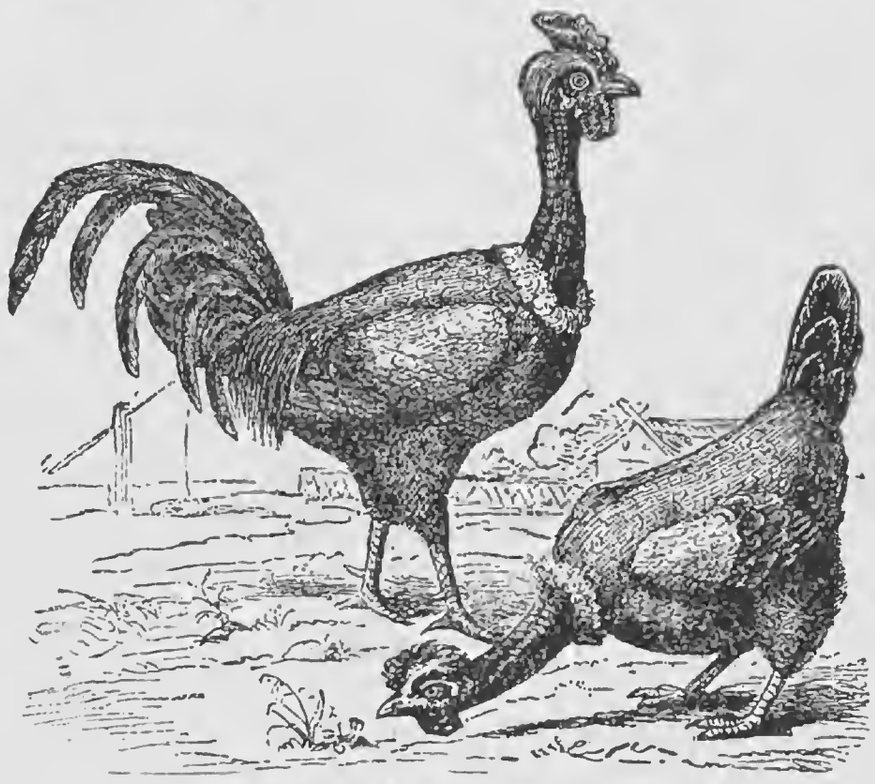
	Digestible nutrients.				Nutritive Ratio.	Compared with meadow hay. $
	Albuminoids.	Carbohydrates.	Fat.			
Meadow hay medium	9.5	41.0	1.0		8.0	1.00
Red clover hay "	7.0	38.1	1.2		5.9	1.08
New process linseed meal	27.	33.9	2.1		1.4	2.51
Cotton seed meal (decorticated)	33.2	17.6	16.2		1.8	3.60
Malt sprouts	20.6	43.7	0.9		2.2	2.08
Corn meal	8.4	60.6	4.3		8.6	1.73
Winter wheat straw	0.8	35.6	0.4		45.8	0.57
Winter rye "	0.8	36.5	0.4		46.9	0.55
Barley "	1.3	40.6	0.5		32.2	0.68
Oat "	1.4	49.1	0.6		29.9	0.69
Pea "	2.9	33.4	0.5		12 0	0.69
Bean "	5.0	35.2	0.5		7.5	0.86
Seed clover "	4.2	28.5	1.0		7 4	0.75
Corn stalks	1.1	47.0	0.3		31.4	0.61
Nicely-cured corn fodder	3.2	43.4	1.0		14.4	0.91
Corn-cobs	0.6	41.7	0.4		71.2	0.64
Salt marsh hay, good	3.7	38.4	0.9		11.1	0.84
Coarse salt grass	2.5	36.3	0.7		15.0	0.74
Fresh marsh hay, cut in June	4.5	38.4	0.6		8.9	0.90
" " " " " August	3.4	40.0	0.7		12.4	0.84

To those who have not studied the comparative value of grain with hay the above table will teach much. It shows that the poorest straw, Winter rye, is worth 55-100 as much as good meadow hay, and barley and oat straw 68-100 and 69-100, or more than two-thirds as much as hay. But all the straws, except pea and bean straw, are very poor in muscle-forming matter; but they all have a fair amount of digestible carbohydrates, or heat-and-fat-forming food. The skillful feeder must, therefore, combine other foods rich in albuminoids with straw, and thus balance the constituents in the mixed food. The nutritive ratio of Winter wheat straw, it will be seen, is very wide—1: 45.8—whilst for feeding growing stock, or fattening stock, it should be as narrow as 1: 6. If we make a ration of 15 pounds of Winter wheat straw, five pounds of clover hay, four pounds of corn meal and four pounds of new-process linseed meal, the nutritive ratio will be 1: 6, and young cattle may be grown rapidly or cattle be fattened upon it. By giving straw—all they will eat, say 20 pounds—with the linseed meal and corn meal, the same as above, cattle will keep in good condition and make a moderate growth; the nutritive ration will be 1: 7.18, or better than meadow hay, and the animal will do better than upon good hay. This grain food will cost in most places 10 cents per day, but not more than seven to eight cents in ordinary years; whilst 25 pounds of hay, at $12 per ton, would cost 15 cents per day, and produce a much less favorable result in feeding, showing that hay is dearer at $12 per ton than new-process linseed meal at $25 per ton, and if the reader will turn to the table he will find it estimated at 2½ times the feeding value of hay.

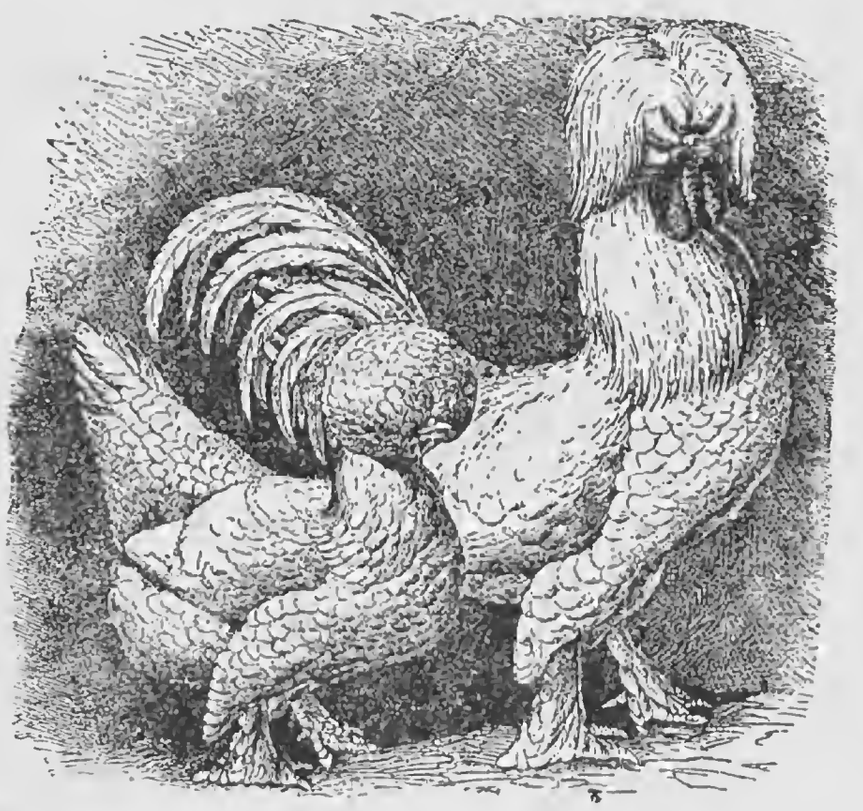
This table is intended to be supplementary to the table on page 699, and if the reader will turn back to the latter he will find most of the refuse grain foods explained, which can be used to feed with different kinds of straw. A great number of rations may be made up with straw and the different kinds of bran. It costs much less, when the farmer has straw to make up the deficiency, by buying wheat bran, rye bran, buckwheat bran, pea-meal bran, or the different grains, and feeding any or several of these with straw, instead of buying hay, the market price of hay generally being higher than that of these grain foods, according to the real feeding value. Straw has so considerable a feeding value that the farmer should always make the best use of it by feeding it all to his stock. The manure made from straw by passing it through cattle is not to any material extent reduced in value over that trod down in the yard; for the principal part digested by the cattle consists in carbohydrates, which have no manurial value, as, if these were burned, no ash would be left. Straw has an important quality of furnishing carbohydrates to keep cattle warm, and the nutriment is sought in the other foods fed with it. Those foods rich in albuminoids and in mineral elements also produce the most valuable manure, so that the farmer who feeds bran, new-process linseed meal, cotton-seed meal and such kinds of food, gets back a large part of their cost in the enriched manure.



GOLDEN-SPOTTED PADUAS.—FIG. 527.



TRANSYLVANIAN BARE NECKED FOWLS.—FIG. 528.



SULTAN FOWLS.—FIG. 529.

CORN FODDER.

It will be seen by our table that ordinary corn-stalks are not as good as barley or oat straw, yet a ration made of these and a small amount of corn is generally considered adequate to the wants of cattle. Indian corn, as will be seen by the table, is quite too poor in albuminoids to be used wholly to make up the deficiency of corn-stalks. Suppose 20 pounds of corn-stalks are fed with eight pounds of corn meal, it would only give 89-100 of a pound of albuminoids; 12.24 pounds of carbohydrates and 40-100 pound of fat. This is quite inadequate in muscle-forming matter. But if four pounds of cotton-seed meal be substituted for four pounds of the corn meal, it will make a better balanced ration. Such poor fodder must be balanced by food very rich in albuminoids, and those most usually found in market are linseed meal, cotton-seed meal, malt sprouts and the various kinds of bran.

If we take nicely-cured corn fodder, cut when it first tassels—the case given in the table was a sample of fodder corn raised by Mr. Webb, of Connecticut, and analyzed at the Connecticut Experiment Station—we find it very much better than common corn-stalks. If we take 25 pounds of such cured corn fodder and feed with it four pounds of linseed meal, the ration will have a nutritive ratio of 1: 6—a very good ration for wintering stock—or five pounds of wheat bran may be fed instead of the linseed meal. This will bring stock through the Winter better than hay.

By examining our tables the reader will see how he may feed all kinds of straw, marsh hay, in fact, all kinds of farm refuse, by judiciously mixing in a little grain. Farmers should not sell off the regular amount of stock their farms can keep, because they happen in a year like this to be short of hay. Sales, under such circumstances, must be made at a low figure, and, if they will purchase some of the foods mentioned in the table, and feed upon their course fodder, they will find their stock to come through the Winter in such fine condition that they will be well compensated for the outlay. I must not omit to say that a good cutter ought to be found on every considerable stock farm. Straw, corn fodder and poor hay are much increased in value by running through the cutter. In this condition, the ground linseed meal, cotton-seed meal, and all the various kinds of bran, can be mixed with the short-cut fodder, and the meal and straw or the fodder must be eaten together and all raised and re-masticated together—thus greatly aiding digestion.

The Poultry Yard.

SOME STRANGE BIRDS.

It should be gratifying to our poultry fanciers to know that there are yet other worlds to conquer and that the American Standard may in time enlarge its borders and its bounds and take in some strangers as yet unknown to the American public. Every new accession to the ranks of the fancy poultry should have some distinguishing and valuable characteristic; otherwise it is not deserving of notice. One of the most remarkable of fowls, which I beg leave to introduce to notice, has a peculiarity differing from any other known breed. We have fat and fleshy fowls, some with plump breasts, some with long shanks, and some with rotund rumps, and some again are made up inside wholly of eggs. But there is a fowl that is said to possess all these qualifications, with one more that is as valuable as all these together, viz., in that it offers to the smiter a neck already bare of feathers all ready to be twisted or to be amputated at a blow. This is the Transylvanian fowl of which the accompanying portraits are taken from the new German Illustrated Hand Book on Poultry Farming. How thoughtful is nature and how the fowl is evoluting towards the bare possibility of an entirely featherless bird that is always ready plucked for the pot. The specimen before us certainly seems an approach in this direction.

As a contrast to this ungainly bird may be mentioned the Sultan fowls which are nearly all feathers and in which the plumage boils over, as it were, at every extremity. Its toes and legs are feathered profusely; the head is a complete ball of feathers and the tail hasn't

room for another plume. Look at the two. The one looks like a tramp carrying as few clothes as can be hung about the limbs so that one may say they are not exactly bare, and the other is dressed out with all the excess of one of the votaries of fashion.

Then there are the gold-spotted Padua fowls of brilliant and graceful plumage and these too seem to be in a state of eruption about the head, and thus offer a striking contrast to the Transylvanian tramps.

The Transylvanian fowls are an example of modest merit. "Neat but not gaudy" in style and with nothing in outward show to strike the fancy, yet they have the excellent points of easy and rapid fattening and prolific production of eggs. With this, as I have before said, they offer a bared neck to the executioner and so much work is saved to the dresser. Like the bare-backed young Brahmas, this bare-necked Transylvanian thrives well in the coldest weather, is a moderate eater and the hens are the best of mothers. What more can be desired of a fowl except it be feathers? And these we have in the Sultan. This bird is wholly white with a delicate, creamy shade. A few of these birds were shown at the Centennial where the owner assured me, with a most solemn countenance, that he had his birds direct from the Sultan's harem, and that they were the only birds of the kind in America. This bird, like some other handsome creatures, is good for very little except good looks, is very tender, a very careless mother, and I must say that the specimens I saw at Philadelphia did not come up by any means to the style of the illustration given in the work from which it is borrowed.

The Padua fowls have value as well as beauty. They bear confinement very well, and can be kept cooped up without trouble. They are a popular fancy fowl and are kept as ornamental pets; they lay moderately well and make fair table fowls. I do not know that there are any of these fowls in the country, and if there are not some of the fancy poultry farmers will thank me for calling attention to them. X. U. P.

Dairy Husbandry.

PLAN FOR ICE-HOUSE AND CREAMERY.

In considering the cooling effect of ice it must he remembered that the low temperature is only gained by the expenditure of the ice and that it is a question if it is better to make use of an ice-house constructed in the most economical manner, or to so use the ice as to procure a continuous low temperature with the certain large waste of ice that would be inevitable. As a general principle waste s a loss although the thing wasted is cheap. Ice may be procured, perhaps, by the expenditure of some labor only, but no reasonable person desires to expend his labor for that which profits not. But the ice-house costs money and to store ice which is to be wasted for no good purpose is by no means advisable.

There may be some cases, however, in which the case of operating a cooling apparatus may be more convenient, although it may consume more ice, than to handle blocks of ice in carrying them from the ice-house to the creamery for use. Where ice is abundant this view of the question may be reasonably considered. A point that bears strongly upon it is that the ice may be stored in the Winter when the labor may cost comparatively nothing, because there is plenty of time and opportunity for the work, and in Summer time is more valuable and business presses closely upon opportunities, so that the handling of the ice in the Summer would, in fact, be more irksome and costly than the waste involved. For to open the ice-house, take out the blocks required, carry them to the creamery, wash from them the sawdust or other packing and dispose of them as may be required, is, we know from experience, work which occupies considerable time, when time is scarcely to be spared from other pressing duties. The good manager will aim to distribute his work so that it may be done in the easiest manner consistent with the best results, and as time is money, time gained when it is worth the most money, is equivalent to three or four times as much expended when it is very cheap. We will give a plan that will be suitable for each method, leaving those interested to choose between them.

A self-acting ice-house may be constructed in the usual manner, but requires the addition of ventilating tubes through which cold air may be brought into the cooling room; and drainage pipes by which the water produced by the necessary melting of the ice may be drawn off from the bottom into a cold pool where it may be utilized to the best advantage. A horizontal section through an ice-house of this kind is given at Fig. 530. Here the ice-house adjoining the creamery is shown. Through the body of the ice are four zinc or galvanized iron pipes or tubes having a number of holes bored through the covering at the top to admit the air. The spiral galvanized water spouting for buildings serves excellently for this purpose. These pipes are brought along the bottom, as shown at Fig. 531, which is an upright section, and open

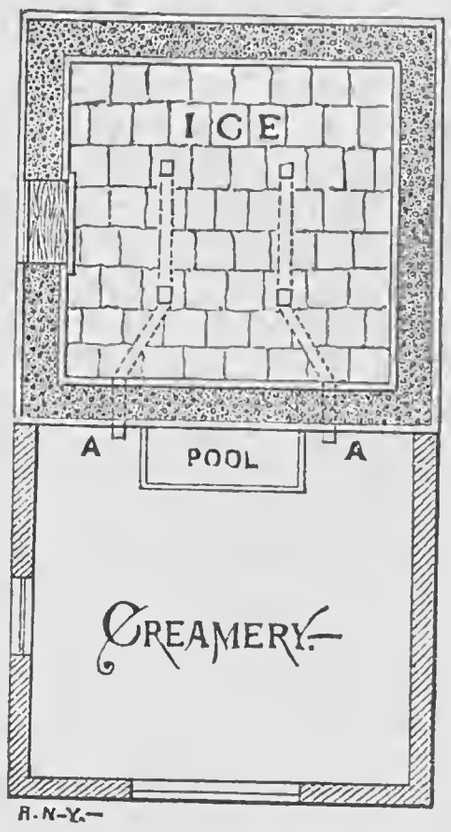


FIG. 530.

into the creamery on each side of the cold pool. The current of air which passes through these pipes, of course melts and uses up the ice and causes a quantity of cold water to be produced which must be drawn off, or the whole body of ice would rapidly waste. The floor of the ice-house is made to slope a little from each side to the center and the center

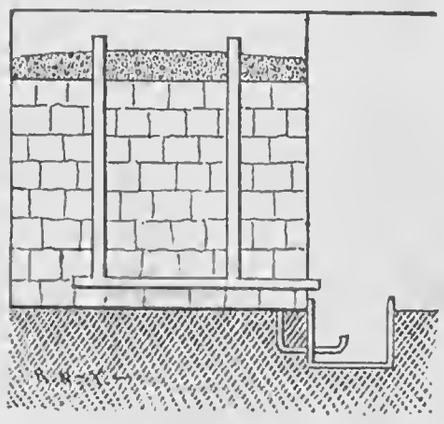


FIG. 531.

slopes to the front just enough to cause the drainage to flow into a pipe provided to receive it. This pipe is protected by a fine wire-gauze covering to prevent the packing from being washed away. The pipe is carried down through the ground and made to discharge at the bottom of the pool. This is important, for if it discharged into the top air

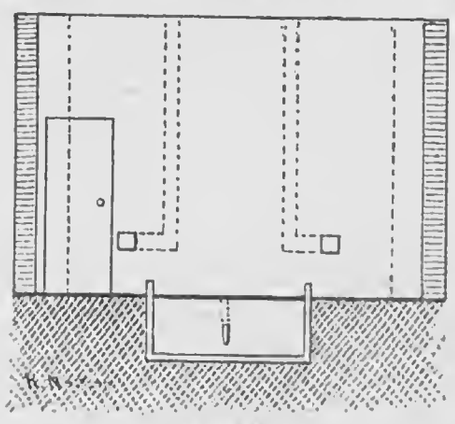


FIG. 532.

would pass into the ice through it and waste it considerably. The outlet of the pipe being always covered with water prevents any access of air through it. At Fig. 532 is shown the front view of the wall of the creamery with the openings of the cold-air pipes and the tank between them. On one side may be made a refrigerating closet for keeping butter in, or one may be made on each side if desired.

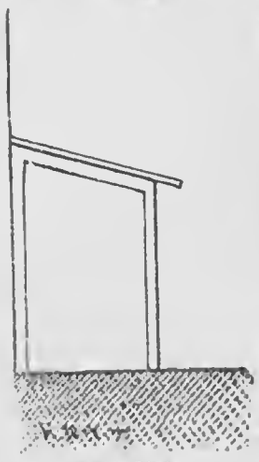


FIG. 533.

This may be made of sheet iron nailed on the inside and outside of the studding and also overhead, and painted outside with brown mineral paint and white within. The roof of this closet should slope considerably to the rear (see Fig. 533), and a metal gutter should be provided to catch the water of condensation which will gather on the roof, and this should be carried off outside through a pipe having an S trap in it to prevent air passing in. This arrangement provides in every way for economizing the ice and utilizing the water which wastes from it. It would be necessary to provide stoppers for the pipes, to regulate the flow of cold air and prevent a larger consumption of ice than is necessary; and also to use but one pipe at a time leaving the other for use when the ice which supplies one is exhausted. This would make it necessary to divide the ice-house so that one-half the ice could be kept intact for the latter part of the season when the other half has been used. This is better than having one large ice-house, and would be much more economical of ice. The door of the ice house is shown at Fig. 530. This is double. The outside is a tight-fitting door shutting upon wide jambs and fastened by keys or wedges in strong staples which come through the door (see Fig. 534), so as to draw the door tightly up to the jamb. This makes the best fastening for a door of an ice-house. The inner door is simply pieces of board, placed across the door-way and held fast by the inside packing. The door of an ice-house should be made in sections, one over another, all the way from the sill to the plate; and one section may be closed after another as the ice is put in, or opened as the ice is taken out.

FIG. 534.

An ice-house for ordinary use is made in the manner above shown, but, of course, without any of the pipes here described. The walls are double with a space of eight or ten inches between them and this is filled with sawdust, tan-bark, dry swamp muck, chaff, leaves from the woods or cut straw; these being preferable in the order in which they are named. If the inside is lined with close-fitting boards no inside packing is required except at the bottom and the top. The upper part of an ice-house should have abundant ventilation so that the covering is kept dry at all times. Dry packing is a perfect non-conductor; as soon as it becomes wet its effectivenes is reduced in proportion to the moisture it contains.

Miscellaneous.

CATALOGUES, ETC.

TEXAS AND HER CAPABILITIES. — This pamphlet of 60 pages is a paper read by Colonel W. W. Lang before the Farmers' Club of the American Institute. It contains a full and lucid account of the resources and capabilities of the youthful giant of the Southwest, together with a brief summary of the advantages of the State as a field for immigration. With an area of 274,356 miles or 175,587,840 acres, Texas offers a great diversity of soil and climate to those searching for suitable locations for any form of agricultural industry. The enormous increase of immigration of late years, not only from Europe but from the North and even West, and, more than all, from some of the other Southern States, amply demonstrates the high opinion entertained of the State's advantages. Between 1870 and 1880, the population has nearly doubled, having run up from 818,579 at the former date to 1,592,574 at the latter. In 1850 the production of wheat was less than 50,000 bushels, mainly in the extreme northern counties, where alone it was thought wheat culture could be successful. In 1878 the wheat crop amounted to 4,000,000 bushels, and its production was limited only by market facilities. In this little pamphlet is condensed a great deal of information about the State, which must be of much use to intending immigrants, and of not a little interest to the general public. The work will be furnished *gratis* by the Southwestern Immigration Co., Austin, Texas, or 243 Broadway, New York City; and we certainly advise all our readers to send for a copy which will prove instructive winter reading.

SOME POINTS IN THE LAW of interest and use to business men. This little pamphlet of 30 pages contains answers to some simple questions frequently put to lawyers by laymen. It is by Everett D. Barlow, Attorney and Counsellor, 206 Broadway, N. Y., and is furnished, we believe, *gratis*.

A TREATISE on the Insects Injurious to Fruit and Fruit Trees of the State of California, and Remedies recommended for their Extermination. By Matthew Cooke, Sacramento.

What Others Say.

FALL PLOWING.—At the last meeting of the Elmira Farmers Club, the advantages or disadvantages of Fall plowing were discussed. J. F. Becher said that he had tried in the same field, part plowed in Fall and the remainder in Spring, to see which plan brought a better crop, and invariably the Fall plowed portion had exceeded in yield. In some cases he got twice as much grain from one acre of Fall-plowed land as from an adjoining acre left to plow in Spring. Heavy uplands, he thought, could not be worked early enough in Spring for oats or barley without Fall-plowing. In some years when left to plow in Spring the seed must be put in three or four weeks late, simply because the land does not get into condition to work soon enough. That is reason enough, by itself, for doing as much of the work in Fall as can be done. Secretary Armstrong remarked that, after all the advantages of Fall plowing visible in his practice, he was aware that there are farmers who work land of similar composition who say that Fall plowing wastes fertility. He could not say how, yet they say after trial that their lands run down under the treatment. C. H. Lewis stated that if Fall plowing makes lands poor his farm ought to be in a very low condition, for that had been his practice a great many years. But, instead of impoverishing his soil, it had constantly improved—its fertility increased. A letter received after adjournment gave the experience of a Michigan farmer. It was in the fore part of August that he began to turn over an old pasture lot for wheat. It is not necessary to tell why this was done at so unseasonable a time. He had a strong team and went around the whole twelve acres, intending to re-seed it and have as few dead furrows as possible. The soil was the same as is found on all the burr-oak plains in Michigan—a dark sandy loam with gravelly subsoil. He plowed one day, but the soil got so dry and hard that he was obliged to give up the job. He had then about two rods in width plowed all around the field. The next Spring he plowed the remainder and planted the whole to dent corn. When it came up the cut-worms began to take the young plants, and he began to take them between a pair of hickory pincers which he had made. He killed 5,000 and then stopped counting. But not one did he find in the strip plowed in August. The corn on this strip came quicker, grew faster, ripened earlier and the grain was brighter and heavier. He was pleased with his Fall plowing that year.

CANE AND GRAPE SUGAR.—We find the following in the Boston Journal of Chemistry: There is no body or substance which has a distinct physical or chemical property which constitutes sweetness; or, in other words, sweetness as a *thing* does not exist. All we know about it is that certain molecules of matter grouped in certain forms have the power of producing upon the moist surfaces of the mouth and tongue the agreeable sensation called sweet. . . . Analysis shows the structure of sweet bodies, but nothing more. So far as science is capable of explaining things, it often fails at the most interesting stage of inquiry, and this is the case with sweets. It fails to show why a lump of sugar is sweet, and a drop of vinegar or acetic acid is sour; the point where light ceases to fall on the pathway of the investigator is that where curiosity and interest most intensely center. *Why* bodies are sweet, sour, or bitter can never be known: the mystery belongs to that department of organic life not open to human research . . . . The statement that the degree of sweetness in bodies is due to apparently slight modifications of molecular constitution is illustrated in a comparison of the chemical structure of several allied substances. In a molecule of cane sugar we have this grouping: $C_{12}H_{22}O_{11}$; in one of glucose, $C_6H_{12}O_6$; and lactose, the sweet principle in milk, has the same constitution. This affords a view of the molecular structure of the three principal sweets, as known and distinguished, the one from the other, by the distinctive degrees of sweetness each possesses. It will be observed that there is no difference whatever in the nature of the materials or atoms of which they are composed; each is made up of carbon, hydrogen, oxygen, and nothing else. The distinction is manifestly due to the grouping of the same elements in different proportions, or by different methods. We have in cane sugar a larger molecule, so to speak, it having nearly double the number of atoms, as compared with grape sugar, and it holds a maximum of sweetness; but if we had the power of doubling the molecule of grape sugar, it would not give us cane sugar. . . . Cane sugar, the noblest and best of all the sweets, is presented to us in the form of aggregated, well-defined crystals, permanent under all atmospheric changes, and elegant in luster and freedom from color when well refined. It is not only the *sweetest* of the sugars, but one of the indispensable gifts of a wise Intelligence to man. It is called cane sugar because it is produced spontaneously and abundantly in the cane grown in tropical climates. . . . While it is impossible, at the present stage of our knowledge, to make cane sugar artificially, it is quite easy to make grape sugar in vast quantities. We find it easy to make the sugar we do not specially want, but not easy to make that we so much need; and this is not a little tantalizing. Grape sugar is what is known as *glucose*, and this delicate organic product, elaborated from the fine

juices of the grape in nature, is now reproduced after the coarser methods of the chemical laboratory. It is almost or quite a pity that this new industry has sprung up and reached such proportions in our country, for it opens the door to a new kind of fraud which, although not necessarily dangerous to life, is of a most reprehensible character. . .

TUNIS AS A GRAIN-GROWING COUNTRY.—The Pall Mall Gazette says that the possibility of American wheat being eventually driven from the markets of Europe by grain from Tunis has been suggested. Land can be bought in Tunis, it is said, for half the price it costs in the Western States of the American Union, and it is so fertile that it will yield two crops in the year. The quality of the grain, moreover, is equal to that of the much-prized Hungarian wheat. Excellent horses, though of a lighter breed, can be bought for a fraction of the cost of horses in the United States, and draft oxen far less than one-half the American price. Finally, while the American product has to be carried hundreds of miles by rail to the coast, and has then to undertake a long sea voyage, the most remote Tunisian farms will be comparatively near the coast; and the port of La Goletta is only sixty hours distant from Marseilles, rather less from Genoa, and only twenty-four hours farther from Trieste and Fiume. The farmers, moreover, will be able to grow a vast amount of other produce, which will greatly increase the remunerativeness of their farms, and consequently decrease the cost of raising wheat. All that is required to develop this competition is the extensive immigration of industrious European settlers, with European capital and agricultural appliances; and the wealth waiting to be secured is so great that such immigration, we are informed, is sure to follow French annexation, and the security for life and property consequent thereon. It may be suggested that recent events in Algeria do not promise that security to life and property would necessarily follow French annexation. Leaving this consideration on one side, however, the argument is interesting as bearing on the future of the American farmer. Granted the full settlement and development of North Africa under a more liberal commercial *regime* than the French seem disposed to introduce where they set foot, the American farmer would soon find out the injury which the American tariff inflicts upon him.

PROFESSOR S. A. KNAPP, of the Iowa Agricultural College, is, says the N. Y. Tribune, more and more impressed with the great value of coal tar for timber. He thinks that coal tar does almost perfectly preserve our soft woods. "The vat for heating the tar may be made like an ordinary sap pan and of any length; put in a barrel of tar and dip the whole post or as much as desired. The most particular part to be covered is that just above and below the surface when set. Where great durability is desired the post should be boiled thirty minutes or more; ten minutes will answer for boards. A barrel of coal tar, costing $3 will cover 150 posts if boiled, or 200 if dipped one half length. The cost of boiling lumber in tar is estimated at $5 per 1,000 feet, and thus prepared even basswood is practically indestructible."

AS TO the practical value of good muck as a manure, Dr. Hoskins says that within a mile-and-a-half from his home there is a muck bed, originally of four or five acres, which has been worked for many years and has greatly aided to keep up the fertility of one of the best grass farms in the town. This muck has now been about one-third used (the depth in the middle of the basin being about four feet), and the owner will not sell a load of it, believing it to be worth to him as much as all the rest of the farm. In the 20 years he has been using it he certainly has had ample chance to make up his mind about it.

Dr. James R. Nichols in a recent address said: The whole theory of agricultural education is based on the idea that farmers' boys and the young men must be educated by attending some agricultural college, so-called, for a term of years; but the farmers themselves, the real workers in the field, may be left to obtain light and help from the profitless disputes and endless discussions common in farmers' clubs, or from the vapid talk of politicians at fairs and cattle shows . . . . The young men may attend the agricultural colleges or any other institutions of learning, and be greatly benefited by a prolonged course of study; but we need another kind of college, —*a farmers' college*, where the practical workers can be graduated without diplomas, at the end of a brief course of instruction extending over a few days or weeks . . . .

ON every farm, says the agricultural editor of the New York World, where hogs are butchered annually it pays to provide conveniences for this disagreeable work in form of a suitable scalding vessel, gambrels, scaffold and sharp knives. As soon as the animals are sufficiently fattened every preparation should be made, so that advantage may be taken of the first suitable weather without delay.

GENTLEMEN may cry cashier, and cash there, but when the board of directors wake up there is cash nowhere. . . . . New York Tribune:—Mary Amanda, quite fresh from town, made her rustic friends laugh the other day by innocently asking at dinner if the white and red beets both grew on the same stem. . . . . Western Rural:—One of the greatest dangers that threatens the American people to-day is their failure to act promptly in the redress of unmistakable wrongs. . . . . The Journal of Chemistry says that the following recipe makes a good pain-killer for external use in bruises, sprains, etc.:—

Spirits of camphor	2 ounces.
Tincture of capsicum	1 ounce.
Tincture of guaiac	½ "
Tincture of myrrh	½ "
Alcohol	4 ounces.

. . . . The Druggists' Circular gives the following formula for a liniment. Rub in twice a day:—

Kerosene	2 ounces.
Tincture of opium	4 drachms.
Tincture of arnica	5 "
Tincture of stramonium	4 "
Aromatic spirits of ammonia	6 "
Spirits of camphor	5 "
Oil of origanum	4 "
Chloroform	3 "

. . . . According to Bouchert's experiments, even the tape worm succumbs to the digestive action of pepsin. . . . .

A lover forsaken
A new love may get,
But a neck that's once broken
Can never be set. . . . .

Do you think it is because of the great improvement in spring beds and mattresses that people lie so easily?

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

DAYTON, Sebastian Co., Nov. 5.—My Rural seeds were an entire failure on account of the severe drought. Crops gener ; were great failures. Wheat is worth $2 per bushel: corn, 75c. to $1; bacon 14 16c; dressed pork 10c. per pound; cotton, . to 10½c. per pound. More wheat has been sown this Fall than any Fall since the war. Some are still sowing. Weather fine and pleasant; no frost yet to speak of. G. W. R.

Canada.

THE RIDGE, North Hastings, Ontario, Nov. 6.—Wheat crop abundant, b oats and peas and roots suffered from the drought. My Washington Oats surprised my neighbor greatly—they reached the hight of five feet seven inches, and the best heads were 17½ inches long. Mold's Ennobled Oats were greatly admired also and reached a hight of five feet four inches. The White Elephant Potato was very small—I cut it into twelve pieces and all grew. My soil (new) was not equal in kindness and I reckon I had only four good hills out of the 12. They stood the drought wonderfully, keeping green till the end of September. I harvested 80 potatoes, small and large. Would you recommend planting one set only in each hill next year. [Yes, for a large crop.-EDS.] Your Wheat Number was greatly admired. I was a competitor and was surpassed by none and only equalled by one in Russian Spring Wheat. I did not get a prize, but I have a substantial reward in the report I have to make as to the yield per ear of culls remaining from the ones I sent. I have counted as many as four spikelets with five grains each on a single ear, and 12 heads yielded exactly an average of 66 grains per head. Not bad for a bush farm! My Rural Branching Sorghum reached only a hight of 15 inches, I am too far north for it (lat. 45). My asparagus did not come up. H. T. M.

Florida.

STARKE, Bradford Co., Nov. 9.—It is still very warm and dry here—nearly 90 degrees in the shade most of the time. We have showers occasionally, but they are like angels visits, few and far between. Very hard to get plants started for winter gardens. A light frost was reported on the 4th and 5th in some places near us, but we had none here. Cotton is nearly all gathered; the season has been a fine one for picking it; it is very white, no rain having fallen on it, but the staple is short and seeds very heavy, so that it takes about a pound more of seed cotton to make one of lint than usual. Sugar cane and sweet potatoes are also light crops, owing to the dry season. Oranges are scarce, small and rusty. The dry weather coming after the severe cold last Winter would not bring a very liberal crop of fruit; we could not expect it, but we hope for better things next year. I. S.

Georgia.

HARMONY GROVE, Jackson Co., Nov. 9.—The corn crop of the State has been seriously injured by drought and to some extent by insects in many localities. Upland corn is almost a total failure, while in limited localities in every section of the State the crop is remarkably fine. The area under oats was reduced by the continued rains during the Fall, Winter and Spring, and the yield was reduced by drought in May. The area sown in wheat was small on account of the unfavorable weather for preparing the land and sowing during last Fall and Winter. The area sown was only 60 per cent of the average and much of that was sown in January and February; consequently it was more subject to rust on account of late ripening. Notwithstanding these disadvantages the yield is reported at 78 per cent of an average crop. The average condition of the cotton crop of the State on August 1 was 81, compared to an average crop. This was still reduced by the continued drought through August. The caterpillar cleaned the fields in this section, but too late to do much damage. My White Elephant Potato, owing to the drought and poor soil, did not yield well. The Washington Oats blasted somewhat but stooled well and gave a good yield. The Rural Branching Sorghum did not germinate well, but it continued green through the drought. I planted it March 26 on poor land and it had but little work. On Oct 1. it began to head, and the seed is now in the dough: if the frost will stay off another week. I will have plenty of seed. It is nine feet high. G. W. K.

Illinois.

WAUKEGAN, Lake Co., Nov. 14.—The small White Elephant Potato had five eyes and was planted in as many hills: yield, 28 pounds. The other seeds did finely. I have read the RURAL for 30 years, and never found it better than now. J. P. N.

Indiana.

LOGANSPORT, Cass Co., Nov. 6,—The Washington Oats were sown broadcast in the garden rather late and raked in; chickens scratched the ground over and no doubt ate many grains, but what was left came up and grew about four feet high and yielded four pounds and ten ounces of fine grain—no smut. The White Elephant had nineteen eyes; one end was sprouted; all the eyes that had more than one sprout I cut into two and planted 23 hills; 22 grew. The eyes that were cut into two made fine, thrifty hills. There was only one sprout in a hill three feet apart; manured with barn-yard manure. I hoed them frequently enough to keep the weeds down. I dug 44 pounds of fine potatoes though they seem inclined to rot, probably caused by wet weather of late. The Rural Branching Sorghum did well considering the excessively dry Summer. It grew seven feet high, but did not head out until the Fall rains set in—about the middle of September; consequently it was too late to ripen. I think for fodder or soiling it is superior to anything else, as the stalk is fine and the blades are large and dense. I planted it in rows three feet apart, one foot apart in the row, and it was a dense mass of green. The asparagus did tolerably well. The flowers were splendid. J. H. S.

NEW HOLLAND, Wabash Co., Nov. 10.—Wheat is injured by the fly. Corn is tolerably good in this part of the county. The same cannot be said of late potatoes, the weather having been too dry for them. I raised about a peck of White Elephants. I think they are the "boss" potatoes. The other RURAL seeds did well. J. H. W.

Iowa.

OLIN, Jones Co., Nov. 12.—My Elephant potatoes did well, and were admired by all who saw the growth they made. My Washington Oats lodged and smutted badly, but I saved some seed. The corn and oat crops are very light for this section, the former going about 40 bushels per acre, and the latter about 30 bushels. Owing to the scarcity of hay last Winter, fodders of all kinds (except ensilage) were pretty well looked after this season. Hogs, $5.25 to $5.50; corn, 50 cents; oats, 38 cents; cream, 25 cents per inch; butter, 20 to 25 cents. A. K. R.

Kansas.

NEW PITTSBURGH, Crawford Co., Nov. 6.—I planted the White Elephant late and got 18 small tubers—hope to have better success next time. The asparagus came up well; the drought was hard on it, but the late rains have started it to growing finely. The Rural Branching Sorghum came up well, branched out finely, but the chinch bugs made a vigorous attack on it and the extremely dry weather killed it all. I have a few seeds left, however, to plant next Spring; I feel confident it will be a fine fodder plant. The Washington Oats were planted late; but did well with but little smut. I shall give them one more trial. The flower seeds we did not plant, but I shall try them next Spring. We prize the RURAL highly for its valuable information. J. A. L.

ODEN, Barton Co., Nov. 10.—The White Elephant Potato grew nicely—13 hills of it—but at harvest, when we cut the wheat that grew near, the potato beetles left the bull nettles and made so energetic a raid on the Elephants that it was impossible to save them. The Washington Oats did well considering the unfavorable season. The Rural Branching Sorghum seems not to care a whit for dry weather; but the cold, wet weather in May kept it so far back that we got no seed from it. The asparagus promises well. We have had plenty of rain since October 1, and the prospect for a good wheat crop next year is encouraging. A. J. M.

PEORIA, Franklin Co., Nov. 8.—A great deal of rain this Fall; ground pretty well saturated. Very few vegetables have been raised here. Fruit very scarce, and what there is is of very poor quality. Very little wheat has been sown this Fall: that sown, however, has made a strong growth—it has to be pastured to keep it from jointing. M. P. B.

Michigan.

FREELAND, Saginaw Co., Nov. 8.—The RURAL seeds did splendidly for the dry season we had last Summer. The White Elephant Potato I cut into 21 pieces, planted one eye in a hill on May 6, and on Sept. 1, I dug 49 pounds. I shall save all of them to plant next Spring. From the one ounce of the White Washington Oats I harvested 6 pounds and 14 ounces of very nice grain. I sowed two ounces of the White Russian alongside of it, and received only 8½ pounds. The Washington Oats were ripe July 25 and the White Russian August 10. The asparagus seeds grew well and the plants stand about two feet high. The Rural Branching Sorghum I planted May 5, and about two-thirds grew, and all the fault my cows found with it was that they did not get enough. The flower seeds came up well and mostly all the pinks were double—they were beauties. In regard to crops about here: Wheat averaged about 12 bushels to an acre—better than was expected; quality good, selling now for $1.35 per bushel. Corn good. Potatoes about half a crop, selling from 75 to 80 cents a bushel. Oats good; 48 cents a bushel. Hay very light; baled selling from $18 to $20 a ton. H. B.

NORTH BRANCH, Lapeer Co., Nov. 7.—We have had a very unfavorable season here for nearly all kinds of crops. In the latter part of March the snow went off leaving the winter wheat exposed to alternate freezing and thawing for nearly two weeks, which greatly injured the crop. A great deal of the land that had been sown to wheat was put into Spring crops, or summer-fallowed; what was left yielded less than half a crop. The principal varieties are Clawson and Fultz. Oats are a very small crop and of light weight. Corn on low land is about two-thirds of an average crop; while that on dry upland will scarcely pay for the labor required to gather it. Hay is a light crop, but of good quality. Peas and beans almost a failure. Potatoes yield from 100 bushels down to 18 bushels per acre; generally the yield is nearer the latter number. Fruit of all kinds is very scarce. The few apples we have are very poor in quality. The main cause of the poor crops was the long-continued drought, which commenced about the middle of June and continued about three months. The Rural Branching Sorghum withstood the dry weather the best of any thing I had on my farm. It attained the hight of only four feet by the 5th of October, when it was singed by the first frost of the season that did any damage here. It looked fresh and green all through the dry spell, while sweet corn nearby it dried up almost entirely. If it is relished by stock and is as nutritious as fodder corn, I think it should take the place of it, for it stands the drought so much better after it gets fairly started. I received about four ounces of the White Elephant Potato from which I dug 33½ pounds, most of them being of a good market size; the largest one weighed 18 ounces. The Washington Oats did very well, but one quarter of the heads were smut. I have three good sheaves of them; have not thrashed them yet. I think they are the same as a kind my father had sent to him by the Agricultural Department at Washington about ten years ago, called Shonen. I had them growing side by side, and they looked alike in every particular. Are not Burbank's Seedling potato and the White Elephant sent out by the RURAL the same? [Not at all.—EDS.] The vines look just alike, ripen at the same time, and the tubers look so much alike that if placed side by side I do not think the best judges could tell one kind from the other. However, if they are distinct varieties they are both excellent, for they have yielded twice the quantity of any other potato raised around here this season. Winter wheat is doing exceedingly well. It has been very rainy for about five weeks and the ground is getting well soaked up again. The prices of farm

produce are as follows: Wheat, $1.20; corn, 75c; oats, 40c: potatoes, 75 to 90c; hay, $15 per ton; pork, $7; butter, 25c; eggs, 16c per dozen. D. W. C.

Missouri.

COLLINS, St. Clair Co., Nov. 6.—The RURAL seeds were planted in good time and condition and came up and grew finely, but the dry weather and chinch bugs ruined most of them. The sorghum has sprung up again and headed out; if warm weather lasts a few days longer I shall have seed. The fruit trees and red-bud bushes are in bloom. It has been raining for six weeks, more or less. W. V.

PLEASANT MOUNT, Miller Co., Nov. 7.—Farmers are not through sowing wheat as yet, being considerably behindhand. From the middle to the last of September is generally considered the best time to sow wheat; but last year wheat was more or less damaged by the fly. This fact, with the drought which prevented the preparation of the ground as early as usual, delayed sowing. The weather was all that could be desired; but the rainy days came and the ground soon got too wet, and very late sowing is the consequence. The weather is still very mild, though we had a hard frost on the 3d of this month, which killed tender plants, such as sweet potatoes, beans, etc. Corn in shucks and oats in the stacks are badly damaged, sprouting wherever exposed to the rain. Wheat that is still unthrashed is damaged very badly—so much so that thrashing it out is slow, laborious work. Farmers are marketing their stock as fast as possible, as the scarcity of feed and fears of another hard Winter are causing them to sell very close. N. J. S.

Montana.

TWIN BRIDGES, Madison Co., Nov. 10.—The Washington Oats did well, but there was some smut. The White Elephant Potato came too late, and was a failure in consequence. The flower seeds I gave to a neighbor's wife and she is much pleased with them. Crops of all kinds did well this season. Wheat went about 20 bushels to the acre; oats, 35; potatoes, 120 bushels. Wheat is worth $1 per bush.; oats, 72c.; potatoes, 60@80c.; hay, $10 @$25 per ton. Mining and stock raising are the leading pursuits in this country. I think the RURAL the best agricultural paper published, and would not be without it for double the subscription price. T. D. E.

New Jersey.

CLOVE VALLEY, Sussex Co., Nov. 12.—From the White Elephant sent me by the RURAL I had 65 potatoes weighing 32 pounds. Twenty-five of them weighed 20½ pounds. There were six hills altogether. J. J. W.

HAMILTON SQUARE, Mercer Co., Nov. 8.—The White Elephant Potato got frosted in the cellar before planting. The Washington Oats were sown on very poor ground and yielded only 1½ pound. The asparagus seeds all came up well and have grown nicely. Owing to the late and cold Spring the Rural Branching Sorghum did not grow very fast, and frost came too early for it, so I lost the seed. I am satisfied it will make a valuable fodder plant. I should be glad to pay for any seed which any of the RURAL family can spare. L. B. WELCH.

New York.

BEDFORD STATION, Westchester Co., Nov. 13—The asparagus seeds germinated very evenly and are all doing well. From the Washington Oats I harvested four quarts, weighing 4½ pounds; they were sown too thickly or the yield would have been greater. The sorghum seeds germinated well, but never seemed to thrive; the season was very wet and cold early and very dry later. The plants only attained a hight of two or three feet. The White Elephant Potato, cut to 15 single eyes and planted one eye in a place, yielded 24½ pounds of very fine potatoes. The main crop of potatoes, raised from whole seed and plowed and hilled up both ways, was hardly worth digging, though planted on much moister ground than the White Elephants. I am convinced that one eye in a hill is enough if one is particularly vigilant in protecting them from the beetles when they are first appearing above ground. "B."

CATON, Steuben Co., Nov. 7.—Crops were light in this section. Potatoes, corn, grain and hay were only half crops. Potatoes are worth from 80c@$1 per bushel; wheat, $1.45; oats, 50c.; buckwheat, 80c@$1; corn, 40@80c.; apples, a light crop, 50@60c. per bushel. Good Timothy hay about $14 per ton. H. W. M.

MIDDLE FALLS, Washington Co.—The Rural Branching Sorghum planted June 1, grew 10 feet high. It was cut the middle of August and fed to the cow; she liked fodder corn better. The Washington Oats grew well, but smutted badly. Dry weather nearly spoiled the White Elephant Potato. I. H.

SHARON, Schoharie Co., Nov. 5.—I read with a good deal of interest the crop reports from everywhere in the RURAL, and I think that one of the best features of the paper. Especially am I interested in the reports of the free seed distribution. While I cannot give as good a report as some of your readers, I am satisfied, and am led to inquire who can estimate the value of these distributions, spread out as they are over our whole country? One of the benefits I see already is this: We all seem to be interested in this one thing, and as such seem to be drawn together as a band of brothers with one common interest. [We hope so.—EDS.] I tell you it is becoming a power already in the land, let other papers ignore the fact or not. My Elephant yielded me 26 pounds of fine tubers, with no extra care. The Washington Oats, after the hens had taken a quarter of it, gave me 13 pounds of fine grain, and, as most reports say, there was quite a good deal of smut in them. The Branching Sorghum was a failure; only three or four hills came up. The asparagus has done very well. Of flowers we had a fine lot. While the drought has given us some short crops, prices are good for all we have to sell, so I don't see how the dry spell has been very detrimental to us after all. Winter wheat has given us an average yield, and is worth $1.40. Spring grains were good crops. Corn is the poorest for years, with few exceptions. Buckwheat is not one-half a crop; it is worth 80 cents a bushel and flour $3.75 a hundred. Hay right here was a heavy crop, and that is one of the exceptions; it is selling here, baled, for from $12 to $15 a ton. Dressed hogs $8.00 per hundred pounds. Working cattle are very high, selling for from $125 to $150. Stock of all kinds scarce and in demand. Butter is bringing 28 to 30 cents; cheese, 12 to 13 cents; eggs, 25 cents. Potatoes are a very short crop, and have been selling from 75 cents to $1 a bushel; apples are an unusually short crop, but are selling here at $1.50 to $1.75 per barrel. S. L.

WEST BROOKVILLE, Sullivan Co., Nov. 1.—The White Elephant Potato was planted in seven hills; we dug one peck of fine, nice-sized tubers. The Washington Oats did well until nearly ripe, when the chickens found them out and destroyed about half. We gathered about three pints; the seeds were good and full. The Rural Branching Sorghum we think the most valuable of all. It grew seven feet high; 17 stalks were the most we had from one seed. What was cut off August 1 grew right up and would have been a fine crop had it not been for the drought. The pinks were very pretty; there were eight kinds. The asparagus seeds grew well. We feel in debt to the RURAL NEW-YORKER for the seeds, as well as for the great agricultural information it gives us every week. M. W.

Ohio.

WAUSEON, Fulton Co., Nov. 5.—The free seeds sent to me were received in good condition. They were planted in our common black soil near a large ditch. As we had uncommonly high water last Spring they were twice under water for a few hours. The White Elephant Potato (a small one, which probably weighed about two ounces) had ten eyes, which were planted in as many hills, and yielded 9¾ pounds, or 74 times the weight of the seed—a good yield considering the chances, as it was better than other potatoes near-by. Potatoes were a poor crop here this year. The Branching Sorghum was not cut, and grew to the hight of 11 feet, looking like our common cane. A few stalks grew from a seed, therefore a few seeds produced many stalks. The oats, having beards, will probably not be a desirable kind here. The flower seeds grew, but were destroyed by chickens. M. E. D.

Oregon.

MONMOUTH, Polk Co., Nov. 4.—The White Elephant Potato weighed 2½ ounces, was planted June 9, in nine hills, on land which received no manure, and yielded 25 pounds of fine tubers—four of them weighed six pounds. The Rural Branching Sorghum failed to vegetate, and the oats were badly smutted. J.M.R.

Pennsylvania.

MUNCY, Lycoming Co., Nov. 9,—We have received the RURAL NEW-YORKER regularly and are always glad when it arrives. We are not farmers; at least our farm is on a small scale—our lot being only 150x182 feet. On this we have our buildings and door-yard, also 26 apple trees and six plum, eight peach, four quince and one pear, as well as 13 grapevines. Then in the rows of trees we have our small fruits, and, besides, we raise all our vegetables and sell quite a good deal of our surplus. We grow tomatoes, asparagus and celery in abundance. We excel in celery. The RURAL seeds came to hand in good order. The White Elephant had 16 eyes. I cut it to one eye in a piece. Then as my room was small I planted the 16 pieces in eight hills. When I lifted them I had 14½ pounds. The asparagus all grew and the stalks are now about 12 inches high. The Branching Sorghum was a failure. The Washington Oats grew well but about the time of heading they were beaten down flat, yet I got some oats better than what I sowed. I shall try it again. The dianthus, picotee, carnation and pink seeds all grew, and the dianthus bloomed and was very handsome. We were especially pleased with the description of the Perfection Golden Heartwell Celery, on page 586 of the Fair Number, and we shall be very glad to try it. I. R, B.

[Thanks for the communication. Our next seed distribution will be forwarded to all subscribers who apply inclosing two three-cent postage stamps. We send the entire collection to all, as it would be impossible for us, in so great an undertaking, to select for special needs.—EDS.]

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

TREATMENT OF TUBEROSES, ETC.

M. J., Wichita, Kansas, asks: 1, how to treat his tuberoses. He started them in boxes in the Spring, and set them out when warm enough. The Summer was very warm but dry, and copious rains have fallen lately; yet there hasn't been a single blossom, but, instead, copious foliage growing rapidly. He says: "Shall I dig them up as they are now growing thriftily, and let them dry in the shade? Will they be likely to flower next year? Why didn't they bloom? Should they be managed just the same in house culture as for out-of-doors? 2. How to grow smilax. 3. Is the Variegated Wax Plant as desirable as the plain, green-leaved sort, and does it bloom as freely?

ANS.—It would have been better to start your tuberoses in small pots instead of boxes, as you could then have transferred them to the ground without disturbing the roots. The drought was probably the cause of their not flowering, as was quite common during the past season; but it may have been owing to the fact that they were not flowering roots, many such being sold every year. If a tuberose be full and plump at the neck, it is pretty certain to flower, otherwise not. As your plants are now growing thriftily, they will no doubt flower well next year. Let them grow till the frost has killed the foliage, and then lift and trim them, and put them away for the Winter. The so called "small bulbs" are found growing on the large one, and are easily rubbed or broken off at the time of planting. These may be planted separately, and will in time make flowering bulbs. The tuberose should be grown in a rich soil. The same bulb, as a rule, will flower but once. If by "house culture" you mean tuberoses for Winter-flowering, you must buy bulbs that have been prepared for the purpose. Unless you have a good plant-house, with plenty of heat and moisture, you had better not attempt to force the tuberose in Winter, for it demands more than ordinary care and skill, and few succeed. You can have the plants in flower in the house in Fall and early Winter by planting good bulbs in five or six inch pots late in the Spring, plunging the pots in the ground during the Summer, lifting them in the Fall before frost, and taking them into the house (or sitting-room), where they will often remain in bloom for a month or more. This will probably suit you. We usually grow a few in this way. 2, Smilax will grow more readily from seed, though cuttings strike readily enough in a green-house. If you have an old plant you can easily multiply it by dividing the roots when the plant is dormant, say in August or September. 3, The variegated Wax Plant is very desirable, and much prettier than the plain kind, but does not grow or flower so freely as that. It is really a very handsome plant, but you must look out for mealy bug.

NINE-BARK.

T. G. T., Horn Brook, Pa., sends for name a stem, leaves, seeds and dried up flower of a plant found growing wild by a roadside running along a river at the foot of a neighboring mountain. It was taken up and transplanted to the garden, where it produced a handsome flower, white tinged with pink as it grows older. It grew about four feet high and blossomed in early Summer.

ANS.—It is Spiræa opulifolia or Nine-Bark. It is a native of rocky river banks especially westward. It is not a pretty shrub when small, but its form becomes rounded and the foliage ample when it gets older—say from four to six years. The leaves are three-lobed somewhat resembling those of the currant. The branches become recurved after a few years and plants often grow to the hight of 10 feet. The bark exfoliates—hence the name of Nine-Bark. The fruit consists of several inflated follicles of a reddish color forming in early June. These follicles are often showier than the flowers, as, when abundant, they give to the whole shrub a red color. The golden variety of the old-fashioned shrub is in all respects like the species except that when the leaves first unfold, they are of a bright golden color. Some of this reappears in the Fall.

THE SWEETEST STRAWBERRY?

W. F. K., Clinton, La., asks which is the sweetest strawberry without reference to size, season or productiveness.

ANS.—A question like this may be answered with much amplification or the simplest brevity, according to the point from which we look at it. If sweetness and flavor combined be meant, there are two or three claimants for the undesirable distinction, with little to choose between them when ripe, and all simply flat. If mere sweetness without flavor be meant, we should name the old Burr's New Pine; but this is now out of cultivation, and with all its goodness would only find a place in the amateur's collection. Size and productiveness have driven such kinds to the wall. Our correspondent, perhaps, refers to *quality* rather than to sweetness alone, and to kinds now generally grown. In that case he will open a question of some magnitude, and we will try again if he will make his point clear.

CAKED UDDER.

G. H., Hackettstown, N. J., has a three-year-old cow that dropped her second calf last May. She was milked immediately, but the next day the udder was caked and she refused to let down her milk. The bag was bathed with warm milk, etc., and for some time the swelling diminished a little, but the udder again swelled, now in one part and then in another, and our friend asks for some remedy.

ANS.—Give the cow 12 ounces of Epsom salts, and the day after one ounce of saltpeter, feed only dry hay: bathe the udder with warm water and knead it gently with the hands until it is softened. When it is better some bran slops may be given.

Miscellaneous.

H. S. B., Okolona, Miss., asks how to plant the pyracantha for a hedge.

ANS.—In your climate it may be planted now. Dig trenches two feet wide. Throw out the poor soil; add good. Place the plants two feet apart. Spread out the roots; pack the soil firmly over them. The habit of the pyracantha (Crataegus pyracanthus) is very straggling, so that to present a good appearance as a screen or hedge it should be trained against some support. Its growth, too, is not rapid and it is liable to be destroyed by the thorn-borer. It thrives best in a dry soil.

E. W. B., Factory Point, Vt., asks where can pots for potting strawberries be obtained, the price and the best size.

ANS.—Pots two inches across the top, known among florists and manufacturers as "Thumb" or "Verbena" pots, are the best for layering strawberry plants. F. Laufersweiler, 517 and 519 West 27th Street, New York City, and A. H. Hews & Co., North Cambridge, Mass., are extensive manufacturers of flower pots, and are reliable parties to purchase of. The price of Thumb pots ranges from five to six dollars a thousand.

D. W. C., North Branch, Mich., asks: 1, whether the Rural Heavy Dent Corn would be likely to ripen so far north—latitude 43 degrees; 2, how much earlier is it than the Rural Thoroughbred Flint Corn; 3, is the Flint white or yellow?

ANS. 1. Hardly, we fear. 2. About three weeks. 3. Yellow.

A. J. T., Washington, D. C., asks how should the dianthus, picotees and carnations that have not seeded be treated through the Winter.

ANS.—They may be taken up and kept in the window or conservatory to bloom, or they may be left out, with a slight covering.

C. C. D., Minnesota Junction, Wis., asks for a plan of an ice-house and creamery combined.

ANS.—See article on this subject under "DAIRY," in this issue.

C. B. P., Albany, Ill., sends a twig with red berries for name.

ANS.—It is Euonymus atropurpureus—Spindle Tree, Burning Bush. Found east of the Mississippi and often cultivated.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 19, 1881.

Mrs I S—E R A—Edgerton—J H W—E W B—E W S—L W S—D H H—B S—L B W—C A McC—N B B—G W R M F—H & S—N C—J M R—H C—Quinnipiac—R & J C—H B—J H—M P B—H S—N J S, S—S P, Jr—I R B—G L A—M W—T H R—T T L—M E D—J H S—W H T—S L, thanks—C McD, Westfork, Ind. Much of the information you ask for has been presented in these columns during the present year. The RURAL makes a specialty of new grapes and all pertaining to grapes in general.—D W C, Lapeer Co, Mich. We hope to hear from you often—P R—E N B, thanks—M B McL—J E S—T J—J W M, M D—G A G Jr—J. P N—S N D—A R R, thanks—O & J W—C B B—H S—M P—J B B—H N D—H F J—L S H—P B M—H S—C E P, thanks—W B H—H L C—A J C—C R S—J R—G W D—W W M—M L E—G O H—O P P—C M—H W M—H S—B E—P F—M J—J A—J & H McD—K C—W R—J P—M B—M P—F H—R & A B—E S—F M—K M—E H—A R—J R—E H—J A—L A—C L—E M—H M—I R—D L—H C—M F—E B—W B—C McC—L W S—E W B—E G—G B—T H W—O W—M P—J S—A M F—E F—A H—F L—T W—H F—M T G—G M—R H F—W J F—F G, Monroe, La., thanks—S B P, thanks—M S—T H H—H R T—S P H—E & R A—J H M | N B A—G W T—E F—W J R—C B.

THE
RURAL NEW-YORKER,
A National Journal for Country and Suburban Homes,
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Conducted by
ELBERT S. CARMAN.

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SATURDAY, NOV. 26, 1881.

ANNOUNCEMENT.

WE have in preparation a series of articles upon Bonanza Farming in Dakota, with original illustrations.

ALSO, a farm story entitled "The Story of Stony Brook Farm," by our distinguished contributor Henry Stewart, M. D. Our readers are sufficiently familiar with Dr. Stewart's writings to know that a rare treat is in store for them. The story is founded upon the TRUTH, and will be commenced when our present story is concluded.

SEVEN YEARLY SUBSCRIPTIONS WITH $14 ENTITLE THE SENDER TO THE RURAL NEW-YORKER FOR ONE YEAR FREE.

THE RURAL will be sent to new subscribers from now until January 1, 1883, for $2.00, that is, the balance of this year free. The RURAL NEW-YORKER has no club or second price. It is the same to all.

OUR crop of celery is the best, without exception, we have ever raised. The season West and East has been very unfavorable to the cultivation of this fine Winter vegetable, and it is, therefore, generally poor in quality and high in price. To make a long story short, we have raised our fine crop by giving the plants plenty of water daily. Whether it pays or not to do this depends upon the water supply and the distance it has to be carried.

NATIVE white grapes this year scarcely made an appearance in the leading markets West or East. At this time the Catawba is the only native that can now be purchased in a good, sound condition. We fear it will yet be a long time ere the markets will be bountifully supplied with a white grape as good in quality as the Catawba and that will keep as well. A white grape no better than the Concord and that will keep no better is really no acquisition. The color is popular at present, and that is all that can be said in its favor. Gratify this popular demand for mere color, and a white Concord is all that remains.

THE CHEAPEST METHOD TO MAKE BEEF.—On rich soils this is best done by taking the largest and most improved race of cattle, like the Short-horns, for example, and pushing them from calfhood to a reasonable state of maturity for the shambles. This is done by the time they are two to three years old, and not by overfeeding, but by giving the animals all such food as is most suitable for them, and which they can digest well. On rough and poor soils a smaller and more active race of cattle is most proper to breed and rear for feeding off the scantier herbage produced there. These do not mature so early, and are generally left till three to four or even five years old, according to circumstances, and are then brought on to rich pastures in the Spring, when they thrive rapidly, and are fitted as grass beef for the market by Autumn. Sometimes it is profitable to keep and stall-feed these on through Winter and market them in the Spring. This will depend, however, on the thriftiness of the cattle, and the price to be realized for beef.

OUR FUTURE GREATNESS.

THE recent census taken in British India shows the population of that empire to be more than 250,000,000. The supposed population of China is put down at twice this enormous number. India contains five times and China eight or ten times as many persons as the United States. But the steady growth of our population goes to indicate that some persons yet living may see our population reach the figures of the East Indian census. A decennial increase of 20 per cent., or less than two per cent. per annum, will bring the number to over 250,000,000 before the next centennial of our Independence. What then will be the condition of our descendants in whom at least, although so far removed, we should take the most lively interest? Will they have degenerated to the condition of the East Indian ryot or the Chinese cooley? Or will our country now possessing and exhibiting every element for the existence of so vast a number of persons, in an equally favorable condition as that of ourselves, have advanced in due proportion in all the arts of peace and all the enjoyments of wealth? This depends altogether upon the continued maintenance of our liberal institutions; upon public liberty and private virtue; upon the careful fostering of those principles of government and social order, not forgetting the family discipline and careful training, which have led us so far in safety and prosperity. It cannot be believed or supposed that with so glorious a history as lies behind us, the future course of our country can take any other direction than that in which our fathers have led and we have followed. The prospect may seem to be exaggerated by some who are cribbed up in the narrow East, but the mind expands and views enlarge when one stands upon the borders of the vast Western country and sees, yet unoccupied, a country to which the most populous of European nations might be transferred with plenty of room around them to spread in; the richest fields, as yet idle, and untilled; vast ranges of mountains in which are locked up treasures incalculable, and the nucleus of a population eminently fitted to deal with these elements of wealth, and turn them to the best uses for mankind.

THE BURDENS OF EUROPEAN FARMERS.

While we cannot dispute for a moment the fact shown by Mr. Lawes that the purchased fertility of English farms against the natural fertility of American lands is one great element which enters into the question of competition in the production of food, yet there is one other point which has an important bearing upon this subject. This occurs to us in considering the proceedings of the Congress of German agriculturists, which has recently been discussing the alarming condition of German farmers in view of the large importations of American provisions and breadstuffs. The existing and the inevitable further competition seems to make the case of European farmers desperate. There is no disguise which can cover up the conspicuous fact that American farmers can undersell the Europeans in every kind of agricultural produce. In the discussion of the subject one very important element has been ignored by the Germans, although probably it has been all the time very apparent to their minds. This is the enormous public burdens to which agriculture is there subjected. There is no truer or more indisputable fact in existence than that "the farmer pays for all." The soil bears all the burdens. Europe is a vast military camp. Five millions of men and as many horses are kept idle and unproductive, but yet expensively consumptive, in the armies and navies of Europe. A numerous aristocracy and a most costly royalty are maintained at a vast expenditure of the earnings of the farmers.

The soil pays for the whole of it. And all this man and horse power is withdrawn from agriculture. The German farmer sees his son taken from him by force of law and made to serve in the army or the navy, and the poor old man is taxed for his support and the costly trappings, "pomp and circumstance of war," by which he is accompanied. The effect is doubly disastrous. The German farmer who flees from his fatherland, and becomes an American, has the help of his son on his farm here and has no onerous taxes to pay to support an army and a royal establishment. What is the question of the fertility of the soil as compared with these burdens! It is the same in England and France, and the settlement of the "Land Question" in Ireland is fast developing the fact that this great evil was precisely what was the matter with that unhappy country. Here is the great point of the question to be considered, and it is one which seems to make the case of the European farmer hopeless and that of the American farmer impregnable. No law can long stand that increases the prices of bread and meat.

This fact was settled in 1846 in the repeal of the Corn Laws in England and the entire freeing of the trade in food from taxation. Without taxation, American bread, meat, butter and cheese cannot be kept out of European ports, and the question remains, how long starving populations will submit to the taxing of their food to maintain the despotic power of their rulers, whether these be soldiers, kings, emperors or nobles—all idle, unproductive and wasteful. Truly, there seems to be a great political shadow falling across those countries, and it is cast upon them by American agriculture, free, unburdened and prosperous.

HAVE WE DONE AN INJUSTICE?

The following note from the Secretary of the Treasury Cattle Commission reached us just too late for publication in our last issue.

U. S. TREASURY CATTLE COMMISSION,
CHICAGO, Ills., Nov. 10, 1881.

Referring to your paper of Nov. 12, page 768, bottom of last column, permit me to say you are greatly mistaken as to what this Commission recommended to the Governor of Illinois, and your article does us injustice. We recommended to the Governor just what he has done, no more and no less. We never thought of urging him to schedule any State entire. J. H. SANDERS.

Reference is here made to a "Brevity" in which occurs this sentence:

"The Treasury Cattle Commission *at first* recommended that the entire States should be scheduled in any part of which the disease existed; we protested against such an embargo as too sweeping, and we are pleased to see that Governor Cullom has prohibited importations only from the infected counties, thus greatly diminishing the embargoed area."

Our protest here alluded to was made in an editorial in the RURAL for September 24, in which, after stating some cogent reasons why restrictions should be placed on the Western movement of cattle from pleuro-pneumonia-infected districts in the East, we said:

Accordingly the Commissioners strongly urge the Governor to prohibit at once the importation of all cattle from New York, New Jersey, Pennsylvania, Maryland, Delaware and Virginia, or "if it can be legally done," from "so much of these States as lies east of the Alleghany Mountains." In order to prevent the hardship that would be caused by interference with the sale of calves of Eastern pure-bred herds, it is proposed that cattle from infected States may be admitted on the certificate of the State Veterinarian that the herd and district from which they came have been free from contagious pleuro pneumonia for at least the last six months.

We commented on this as follows:

"All reports of past investigations of pleuro pneumonia in the above infected States go to prove that when most prevalent it was confined to very limited districts; that its area has been greatly restricted, and that it has not been nearly so contagious as the European type. While very anxious—as our record amply demonstrates—that all needed measures should be taken to prevent danger from this fatal disease to the vast herds of the West, it seems to us that the proposed measure is a trifle too sweeping in its nature. Before the appointment of the Commission we would have made no objection to its adoption: but we had hopes that the investigations of this body would have discovered some less sweeping means of effecting the object."

Having been accused by the Chicago Tribune of personal feeling in our remarks in the above article, we disclaimed any feeling of the sort in an editorial in the RURAL for October 22, still further emphasizing our objections to the proposed Western general embargo on cattle from the above States. After stating our reasons for believing that the cases of the disease were few and far between within their borders, we said:

"If the disease is so prevalent in the Atlantic States as to justify such a sweeping measure as that recommended by the Commissioners, in justice to the farmers of the country these gentlemen should specify the places in which it prevails. Isolate affected herds or even sections rigorously; but for the sake of a sick cow or two at long intervals is it necessary or just to quarantine all the herds of so vast a territory? The Western herds must be protected at any cost, but justice and expediency demand that the cost should be made as light as possible to the stock-owners of the East who wish to sell their cattle, and to those of the West who wish to buy them."

It will be seen that if in that "Brevity" we were wrong in our statement of the recommendations made at *first* by the Commissioners to Governor Cullom, we had only repeated what we had said much more prominently nearly two months before and again a month later, so that the correction of our error was a long time coming.

But were we in error? Did we make a misstatement? On September 11, a special dispatch from Springfield, Illinois, the political capital, to the Chicago Tribune, gave eight points urged on the Governor by the Commissioners. The first six of these stated briefly the reasons for the seventh and eighth, which are the first published recommendations of the Commissioners. The seventh, which alone bears on the question, says:

"The State law empowering the Governor to schedule infected States and districts and debar all cattle drawn from such districts from entering Illinois, seems especially adapted to meet the present emergency, and the Commissioners believe that the Governor would confer a priceless boon on the West, and indirectly on the whole United States, in scheduling the States of New York, New Jersey, Pennsylvania, Maryland, Delaware and Virginia, or, if it can be legally done, so much of those States as lies east of the Alleghany Mountains. The great objection to such action, say the Commissioners, is that it would intefere with the sale of breeding-stock from the thoroughbred herds of the infected districts. To obviate such a hardship, they suggest that the provision need not be made absolute, but that provision might be made for the admission of cattle from the scheduled States on the certificate of the State Veterinarian that to his personal knowledge the herd and district from which they come have been free from contagious pleuro-pneumonia for the six months last past."

Our readers will see that in our article of September 24, in stating the gist of this recommendation, we adhered closely to the "wording" of it. A glance at the proclamation of Governor Cullom, given in full on Page 772 of the RURAL, shows that instead of scheduling the entire STATES as above recommended, he has scheduled only a few counties in each: and that instead of the State Veterinarian's certificate being needed to admit cattle from any part of the State, the certificate of a duly authorized veterinarian alone is needed to admit cattle from any part of the scheduled counties, while those from the rest of the State are admitted without any restriction or trouble.

But perhaps the dispatch of September 11 to the Chicago Tribune did not truly represent the suggestions of the Commissioners to the Governor? Inasmuch as Mr. Sanders is a resident of Chicago and an editor, to boot, it seems hardly possible that he could have failed to see this dispatch in one of Chicago's principal papers, especially as it professed to give the opinions of the Commission of which he was a member. Having seen the dispatch, if it misrepresented the suggestions of the Commissioners, it seems to us he would certainly have corrected the misrepresentation there prominently spread abroad, inasmuch as after this long interval he has thought it worth while to correct our statement in the matter founded on that dispatch and the general tone of the Western press in discussing the embargo. Since the receipt of Mr. Sanders's note, we have carefully looked over files of the daily and weekly Chicago Tribune from the date of the dispatch, but in neither have we been able to find any correction of it. If we have done an injustice to the Commission it has certainly been involuntary on our part, and the members themselves are more to blame for it than we, through their neglect to correct the first misrepresentation—but have we done an injustice?

BREVITIES.

WHY are farmers so negligent as to providing themselves with strong, warm mittens or gloves for Winter?

WE particularly call attention to Dr. Hoskins's article upon Apples Suited to Northern States. We receive many inquiries from Minnesota, Wisconsin, etc., which this article fully answers.

THE RURAL will be sent to new subscribers from now until January 1, 1883, for $2; that is the balance of this year free. The RURAL NEW-YORKER has no club or second price. It is the same to all.

WE are sorry to see the title of the Journal of the American Agricultural Association is to be changed to the Agricultural Quarterly and Journal of the A. A. A. The title was good enough and long enough.

PROF. BLOUNT, of Colorado, expresses his thanks in kindly words for the little present sent to him by the RURAL for his premium wheat heads. Prof. Blount is doing right good work, and we wish him a happy, long life.

THE INSECT recently received from a subscriber, and described as infesting peach trees, is a new species. It has been forwarded to an eminent entomologist, who is devoting special attention to these wood-boring species of insects. We shall give a full description of it soon.

"WE WISH you could impress on all your readers the great importance of putting the names of their post-office, county and State *clearly* on all their letters," write our friends, J. A. Field & Co., of St. Louis, Mo. "Every day we have to throw aside letters that we would gladly answer but for our inability to ascertain the address, or, sometimes, to read the names of the writers," and several instances are given. As our readers are aware from our previous cautions, carelessness about writing the name and address clearly on each letter is a frequent source of inconvenience to us and of delay to our friends in getting the paper for which they have subscribed or the answer for which they have written. This very morning a letter has come from "Fulton," the name of the State being omitted. Now there are 17 Fultons in as many different States—from which of them has this letter come? Unfortunately the post-mark on the envelope is too indistinct to give a clue.

Miscellaneous.

A NEW DEPARTURE.

Sketch of the Scenery, Products, Towns, etc., Along the Line of the St. Paul and Duluth Railroad.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

THE pencil of the traveling correspondent must, perforce, be even more versatile than the brush of the artist, describing, as it does, successively the plain, prairie, timbered region and craggy cliffs, the culture of corn, of flax, then, per chance, comes a chapter on wheat, followed by others on stock raising and kindred interests.

Those who know casually of the country traversed by the St. Paul and Duluth Railroad, know that, instead of the prairie common to other roads, it penetrates the extensive forests of White Pine and numerous groves of maple, oak, ash, elm, butternut and other hard woods lying in Northeastern Minnesota. "What is this country good for outside of its timber?" has been a question often asked, to answer which we made a trip of the entire line, stopping at all of the principal points.

First we found that these lands are not entirely covered with timber, but in places interspersed with natural meadows upon which the growth of grasses is abundant. It has been often said that it is with the greatest difficulty you can induce a farmer who has been used to a timbered farm in the East, to take a prairie farm in the West and *vice versa*; for every man who has tilled a cleared farm knows the difference in soil, which can be found there, the rich deposits of ages the accretions of time as the winds of each succeeding Autumn sweep the leaves from their parent stem, to become another stratum in the rich soil beneath them. While that difference does not exist in as great measure in the Northwest as in some other localities, it is equally true that it does exist, even here, as those who have cleared and cultivated farms can attest. Greater labor and more time are, of course, required to grub, clear, break and reduce to use timbered lands than to break prairie lands; but in selling these lands the owners (the Railroad Land Company) agree to purchase all the ties, piles, cord wood, etc., that may be cut from lands which may be cleared and cultivated; if one-fourth to one-half of the purchase is so cleared within four years they will also allow a rebate which will reduce the price to $1 per acre for the entire tract.

The farms in this region, although perhaps nearly as numerous as in the northwestern portion of the State, are none of them as large owing in a great extent to the labor and time required to place the land in condition to yield its first crop. However, from those who raised crops we learned that wheat did remarkably well this year, most of it ranging "No. 1 Hard" and with full heads, a good stand, and abundant yield. Oats, barley and rye did well, and in root crops, and especially potatoes, there has been a large yield of a very superior quality. Many of the farmers have wisely added to their other interests a little stock which, from the excellent grazing in Summer and ample protection in Winter, seem to do surprisingly well.

The Railroad Company have had for two years an experimental stock farm at Mahtowa, 36 miles from Duluth. The clearing is about 800 acres, with good fences, barns, dwellings, etc. They have about 100 Short-horns and grades, also herds of Berkshire, Poland-China and Chester White hogs and a flock of Lincoln sheep. As L. M. Ford, Esq., the former agricultural editor of the Pioneer-Press, is good authority, allow us one quotation from his able pen: "This same region will become celebrated some day for stock and dairy business. This opinion is based upon, the fact that, in spite of the large amount of apparently waste land there are thousands of the best natural meadows ever seen in any country. * * * The amount of pasturage is enormous, while every one has conceded that as for pure water for stock, no part of the world could be more favorably situated. * * * There is another advantage that Prof. Riley, of the National Entomological Commission claims for this part of the Northwest; viz., that the omniverous Caloptenus spretus (the Rocky Mountain Grasshopper) will never extend his ravages more than ten miles east of St. Paul."

The prices of lands in this region vary from $2.50 to $6.00 per acre, according to quality, location and character of the timber, and it is not now the labor of a life time to grub out the stumps of a forty-acre farm, as the improvements made in stump pullers have simplified the work to a great extent.

We were very much interested in noting the wonderful water power at the town of Thomson, where the railroad crosses the St. Louis River. Inquiry elicited the fac s that the minimum flow of water is about 2,500 cubic feet per second, the falls extending for a distance of 4½ miles, with a fall of 400 feet, rendering a power obtainable of 113,000 horses. Within the limit of the town site (about a mile) the fall is 80 feet, giving about 17,000 available horse power, or nearly twice that of Lowell, Mass. We may in a future letter give a detailed review of this power. The river for many miles above and below the town flows through a solid bed of slate rock of great depth, which neither time nor tide will ever wear away. All around these lakes and rivers is a "sportsman's paradise," there being, in season, abundance of geese, ducks and chickens with sometimes deer and bear. In regard to markets for grain and stock, farmers have a double advantage with Duluth (via the Great Lakes to Chicago and New York) on one side and St. Paul and Minneapolis on the other. Successful experiments have been made in growing apples, pears, plums and small fruits, and there is no question that for one who understands it, it would prove in this section a profitable pursuit.

The great interest of the entire region now, and for some years to come, is lumber. We did not see a town without a saw-mill and learned of many of notable importance a short distance off the line of road. At Knife Fall there is a superior water power and two of the largest saw-mills in the States. It is estimated that the pine timber on the river St. Louis and its tributaries exceeds 2,000,000,000 feet. There are 70,000,000 feet of lumber tributary to Barnum, and the immense amount of pine lumber transported by the St. Paul and Duluth R. R. testifies that the demand is still greater than the supply. After reaching the St. Louis, crossing its bubbling, boiling tide, hugging the hills and bluffs, the train speeds through "the Dalles," unfolding in its rapid flight down a grade of 600 feet in ten miles a panoramic scene of beauty, especially gorgeous when viewed resplendent in the rays of the rising or setting sun.

The waters of the swiftly-running stream, rock-encompassed, and thus compelled to leap in sportive glee from crag to crag, foaming and boiling in mad rivalry, with each and every wavelet crested with the purest *amber*, form an unusually beautiful sight. Yes! owing to the abundance of red clay, which is stiff and marly, intermixed with sand, the waters are positively red, the peculiarity extending far into the lake which receives the stream a few miles further down.

Duluth is the northern terminus of the road. It is known as the "Zenith City," and is the head of navigation for Lake Superior. Consequent upon this fact the grain receipts are enormous Elevator A, capacity 500,000 bushels, shipped last year over 2,000,000 bushels of wheat. Elevator B, capacity 1,000,000 bushels, shipped in the year ending October 1st, 1,925,289 bushels. Besides these elevators a new store-house of 1,100,000 bushels' capacity is being erected west of Elevator B.

Five steamboat lines are running in these waters, probably 60 boats, passenger and freight, which carry to Eastern markets grain, hides, furs, etc. (the latter from the Yellowstone country), and bring in coal, iron and merchandise. The Duluth Iron Co. has a blast furnace manufacturing pig iron only, bringing ore from Marquette and L'Anse, shipping to eastern and southern markets. Nothing but charcoal is used for fuel, turning out over 30 tons per day. There is an ore deposit about 80 miles north of Duluth, to which we learn a railway will be built next year. Besides the interests mentioned there are extensive lumber mills and trade, while the general business of this pretty city is excellent. There are several handsome business blocks and a general spirit of activity, enterprise and desire for improvement and progression. Along the line we made brief stops at Rush City and Pine City, both thriving towns, and White Bear Lake, Taylor's Falls and Center City having acquired much favor as resorts, especially the former, situated, as it is, within 12 miles of St. Paul, replete with good hotels, sail and row boats, a steamer or two, and having a reputation for beauty and excellent sporting second to none. St. Paul people are especially interested in the welfare of this convenient resort, as it is the nearest to their city, and are giving it each year an increased patronage. We gladly acknowledge courteous suggestions from J. G. Callahan, Land Commissioner, St. Paul, which rendered our trip far more pleasurable than it would otherwise have been.

BON SILENE ROSE.—FIG. 541.

Floricultural.

BON SILENE.

THE tea roses are not as a class so brilliant in color, so large or "double" as those known as hybrid perpetuals; neither will they endure so much cold. But in fragance and beauty of buds they are surpassed by none. They bloom profusely during the entire season until frost. Bon Silene, the subject of the accompanying sketch, is of a deep rose color, varying sometimes to a rosy crimson or to paler shades. It is justly esteemed for the great size and beauty of its buds which render them especially valuable for bouquets or personal ornament. The American Banner Rose is, we believe, a sport of Bon Silene the buds of which, though small, are striped with red upon a white ground.

Societies, &c.

THE GREAT CHICAGO FAT STOCK SHOW.

[RURAL Special Report.]

THE Chicago Fat Stock Show, which opened here on January 7 and closed on January 14, bids fair soon to eclipse its great English prototype, the Smithfield Fat Stock Show, held annually in London, a little before Christmas. This Western exhibition was inaugurated only four years ago, and already it has attained vast proportions and become an important and exciting event to stock owners not in Illinois alone, but throughout the whole West, and, indeed, throughout the whole Union. There is no doubt that the keen competition between the adherents of the various breeds of stock and the lessons annually taught by the results of the show have had a great influence in stimulating improvement in all classes of domestic animals exhibited and in fitting them for human food in the most expeditious and economical manner. To this show the most skillful and successful stock breeders and owners within a radius of a thousand miles bring their choicest animals for exhibition. Here people have a yearly opportunity of judging for themselves which class of stock pays best as meat animals, for the primary object of a fat stock show is to determine this question. Exhibitions of breeding stock and of cows for dairy purposes, are excellent in themselves, but these have no place in a fat stock show, for to fatten breeding animals or dairy cows is to greatly lessen their value for the special purposes for which they are intended. It is the "meat" breeds, therefore, that make up the vast bulk of the exhibits here and it is the rivalry between these in early maturity and rapid as well as economical fattening that excites most interest.

In the cattle department there were 148 entries—considerably more than in any previous year. Of these there were 16 Short-horns shown by seven exhibitors, and 86 Short-horn grades by 12 exhibitors; 15 Herefords by four exhibitors, and 15 Hereford grades by three exhibitors; 8 Devons by one exhibitor, and two Devon grades and a single Ayrshire steer named Jack, from the Illinois Industrial University. Jack was 1,094 days old and weighed 1,305 pounds, averaging a gain of 1.20 pound a day since birth, and the Devon grades were 987 and 917 days old, and gained respectively 1.33 and 1.22 pounds per day since birth. While the entries greatly outnumbered those of last year, there was also a marked improvement in the quality as shown by "handling" and general appearance. The excellent character of the Herefords and the comparatively large number on exhibition as compared with former years, attracted a great deal of favorable comment upon the skill and enterprise of those pushing this fine breed; while the very large number of excellent Short-horns engaged general admiration. The main interest in the cattle department of the exhibition lay in the rivalry between these two breeds, and between the Short-horn and Hereford grades even more than between the pure-breds. The reason for this is readily understood when we consider that the chief use of both these pure breeds in the West is to grade up the common native stock, and, of course, the adherents of each are especially anxious to show that their favorites are pre-eminent for this object. In view of the fact that the Short-horn grades were upwards of five times as numerous as their Hereford competitors, and that, therefore, they had more than five times their chances of carrying off the laurels, honors were pretty evenly divided between them. It is true a Short-horn grade took the sweepstakes prizes both for the best three year old steer and the best steer in the show, but there were hundreds of disinterested spectators who strongly reprobated the manner in which the latter prize was awarded.

The age in days, the weight, and the average gain in pounds per day since birth were given with regard to each head of stock, but the RURAL will probably have room for only a few specimens; accordingly I send these particulars of the prize winners alone:

Prem.	Breed	Name of animal	Age in days Nov. 4.	Weight Nov. 4.	Average gain per day since birth in lbs.	Exhibitor.
(2)	Short-horn	Muir	1085	1895	1.75	Morrow & Muir.
(3)	Hereford "	Airdrie Boy	1055	1-55	1.56	Dunlap Bros.
(2)	Devon "	Will Washington	1224	1965	1.60	T. L. Miller.
(3)	Short-horn "	Jerry	1242	1931	1.55	"
(2)	" Grade "	Tom	882	1020	1.16	L. Rawson.
(3)	Hereford "	Morris	969	975	1.00	"
(2)	Short horn "	Boynton	1,362	2200	1.62	John B. Sherman.
(3)	"	Red Lord	1,389	2150	1.55	"
(3)	"	Oakley	1,047	1765	1.68	T. W. Hunt.
(3)	"	Kansas	1,064	1755	1.65	"
(3)	"	Conqueror	1,054	1925	1.82	J. D. Gillett.
(3)	"	Talbot	1,190	2175	1.82	T. L. Miller.
(3)	"	Major	1,321	2075	1.57	"
(3)	"	Washington	719	1563	2.10	Morrow & Muir.
(3)	"		629	1250	2.01	J. H. Potts & Son.
						T. W. Hunt.

The sweepstakes prize for the best 2-y'r-old steer in the show was awarded to the grade Short-horn steer McMullen 1,237 days old, weighing 2,095, averaging a gain of 61 pounds a day since birth. His chief competitor was the Hereford grade Conqueror who, the day before, after a very protracted discussion and the summoning of three extra judges, had been awarded the first premium against McMullen among others.

On the following day Nov. 11, McMullen again bore off the highest honor of the show—the sweepstakes prize for the best steer of any age in the show. The Awarding Committee in this contest were T. Erwin, Bloomington, Ill., J. W. Dunn, Peoria, Ill., F. Gertiser, Springfield, Ill., James Pletz, Polo, Ill., and H. A. Heinemann, Bellville, Ill. Of these five the three first, constituting a majority of the committee, had also been among the judges who awarded the three year-old sweepstakes prize to McMullen the day before, and very properly, I think with all fair-minded visitors, the Hereford men at first refused to take their cattle into the ring, on the ground that it was manifestly unjust to allow the men who had acted in the ring the previous day when the same cattle were exhibited, to pass judgment now upon their judgment of the day before. After deliberation, however the Hereford men completed the ring, and of course, the prize was awarded to McMullen. Under the circumstances no other decision was possible; to award the blue ribbon to any other animal would be for the majority of the committee to stultify themselves. The Hereford men, of course, are loud in their complaints of unfairness, and for one, I agree with them. That the Short-horn influence should have recourse to such trickery looks very much as if the Short men were not tally afraid the chief honor of the show would have been awarded to their rivals by an impartial committee. It is ridiculous to insist on the uprightness and honor of the judges who consented to serve on both days—no man of a nice sense of honor would have done so under the circumstances and against the earnest protest of the Hereford men, and to make a righteous decision in such a case a nice sense of honor is essential.

H. W.

For Women.

CONDUCTED BY MISS RAY CLARK.

DESCRIPTION OF CUTS.

FIG. 534—AFTERNOON-DRESS.

The polonaise is of copper-red cashmere; the skirt, cuffs, and sachet are of stamped velvet of a darker shade; the scarf, draped

FIG. 534.

crosswise over the front of the skirt, is of surah, a kilting of which is placed under the skirt at the bottom, just showing under a kilting of lace.

FIG. 535.—WALKING-DRESS FOR LITTLE GIRL FROM SIX TO EIGHT YEARS OLD.

The dress is of light-brown cashmere, with a scarf and collar of shaded blue and brown striped material. A Mother Hubbard bonnet of brown cashmere, trimmed with kiltings; bows and strings of blue ribbon is suitable to be worn with the dress.

FIG. 540.—FLOWER-POT WITH COVER, ORNAMENTED WITH EMBROIDERY.

The framework of the cover is of bamboo, lined with crimson cloth; it is ornamented with a drape of olive-green cloth which is shown in the cut; it is pinked at the edge;

FIG. 535.

the embroidery is worked in chain and long stitches with crimson and two shades of olive silk. A tassel of wool ornaments the drape between each section.

FIG. 536.—SPRAY EMBROIDERY.

This spray is for disposing at intervals on flounces, drapes of dresses, &c.; chain, cording, coral, long and lace stitches, are employed in the design.

FIGS. 537 & 538.—Design in satin and long stitch.

FIG. 539.—Design in embroidery in satin and knot stitches.

TABLE ETIQUETTE.

"It is manners that win" respect for the lowest as well as the highest. In my opinion "manners" at the table, is one of, if not *the* leading point of etiquette to be observed.

FIG. 536.

Some people eat too rapidly, either for health or manners while some eat so slowly as to appear ridiculous. While some eat *too much* for health or manners, others pick at their food as daintily as birds. Of course there are some whose appetites are poor, and who make an appearance of eating, but I have seen young girls—plump, rosy, robust creatures, who in company would not eat enough to keep a cat alive. I once visited a family in which were two girls answering this description. I had dined and supped with them, but never in their own house. I had often smiled at their dainty appetites, so at variance with their plump bodies and rosy cheeks, and thought I should see some hearty eating at their own table, but really, I nearly starved during the few days I spent with them. They rarely ate a whole biscuit at a time and partook of other things in accordance, and I was ashamed to satisfy my hunger before them. At the end of my visit with them, one of the girls accompanied me to visit some mutual friends, and I was so amazed that I scarcely ate any myself, to see that girl eat, after the first meal.

It is really absurd to see a stout, healthy person sit down to a well-supplied table and eat esthetically. On the other hand it is not exactly absurd, but rather disgusting to refined tastes to see a person eat with such gusto so greedily and rapidly. One thing I have noticed, is, that many persons who have excellent table manners, will *make faces* every time food is conveyed into their mouths. I have often been amused at the ugly contortions of face practiced by some people—people who would have been dreadfully mortified had they realized what they did.

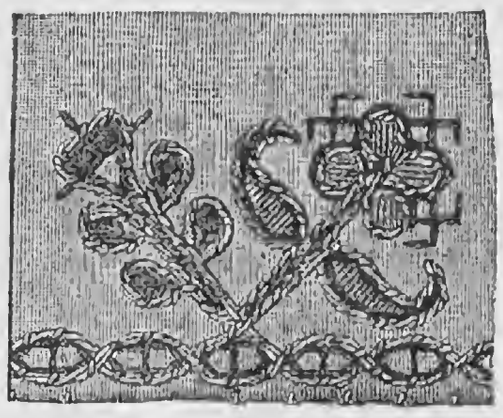

FIG. 537.

Mrs. Mary Wager-Fisher, gave some excellent hints and advice upon "Table Etiquette," a few months ago, but I noticed that several persons were disposed to criticise and question the sensibleness and practicability of certain points such as conveying the food to the mouth with the fork instead of the knife, drinking tea and coffee from the cup instead of the saucer, etc. Now, all these things have been sanctioned and adopted by people of refinement and education and have become immutable laws, and there is no use nor need of rebellion, for society will frown you down and your punishment is swift and sure, if you break these laws.

To a man who lives on a farm, remote from city, or town, these things seem silly and absurd, and he goes all his days, the same old way, scorning the new, eats with his arms akimbo, conveys his food to his mouth on his knife, drinks his tea and coffee from his saucer, and makes a loud, sucking sound in so doing. Dips his own knife into the butter and wipes his mouth on his handkerchief, the back of his hand, or perhaps on his sleeve. Of course the children, having no other example, do the same things; some of them after awhile are drifted into quite another sphere of life, there to be greatly mortified at their own ungraceful manners, and lose some of the respect they entertained for "Father and Mother," who taught them their ill-manners.

Nothing that tends to refine mankind, is senseless or useless. MRS. W. V. A.

EMBROIDERY OF THE MIDDLE AGES.

FROM the earliest times embroidery and fine needlework have been the occupation and amusement of women. We are told by William of Malmesbury that Saint Dunstan in his younger days assisted a noble lady in drawing a design for embroidering a Sacerdotal robe. The four daughters of Edward the Elder, also the sisters of King Athelstan, were distinguished on account of their great skill in spinning, weaving, and embroidery. In the tenth century, Elfrida, widow of the Duke of Northumberland, presented to the church of Ely, a curtain or veil on which she had worked the figure of the deceased Duke. Witlof, King of Mercia, presented to the Abbey of Croyland a golden curtain embroidered with the siege of Troy.

FIG. 538.

After the fall of the Roman Empire the art of tapestry-work appears to have been lost in Europe. It was again introduced from the Levant by the Crusaders. The celebrated needlework of Bayeux is supposed to have been the work of the Norman Matilda, the Queen of William the Conqueror, and her handmaids. It was presented to the Cathedral of Bayeux in Normandy, where it was sometimes exhibited. It was a continuous web of cloth, two hundred and twenty-seven feet in length, and twenty inches in width, including the border V. at the top and bottom. It represents the invasion and conquest of England by the Normans. It has five hundred and fifty figures in it.

It is most amusing to know that, owing to the period at which it was worked, the colors in which it is executed were of a most motley description, consisting of dark and light blue, green, red, yellow and buff. The skies were nearly always represented as blue or grey or brown; any foliage that was wrought in was generally green; but no attention at all was paid to the colors of the horses. They were veritable patchwork, as, for instance, a red horse had two blue and two buff legs, and a green or yellow mane. The hoofs of the horses were also worked of still another color. The faces of the figures are of the cloth the tapestry was worked on, the outline of the features being worked in tent-stitch or chain-stitch with any odd color that came the most readily to the hands of the fair lady at work on it. The borders of the tapestries were formed by a representation of the slain at the battle of Hastings, laid lengthways one after the other. It is said, nevertheless, that faded as this work now is, it excites great admiration at the industry that

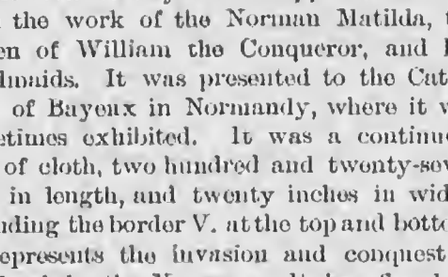

FIG. 539.

could chronicle by the aid of the needle such a series of events in history. Next to the work of Queen Matilda came that of Adelais, the daughter of Godfrey, Duke of Lorraine. Especial mention is made of a magnificent standard embroidered by her, and which was carried at the head of the army.

The first Queen of Henry VIII., Katharine of Arragon, gave all her leisure hours to embroidery. Shakespeare, in the 3rd Act of "Henry VIII.," represents Katherine at needlework with her women. Lady Jane Grey was a proficient in beautiful needlework. Anne Boleyn, educated at the Court of Francis I., devoted much of her time to tapestry work. Of the work of Queen Mary no traces are to be found. Queen Elizabeth was highly extolled for her needlework. In the Bodleian Library, at Oxford, may still be found a copy of the Epistles of St. Paul, the binding of which was worked in embroidery by the Queen when a Princess. Mary Stuart Queen of France and of Scotland, found tapestry-work a great resource, both in her happier days and during her imprisonments. Several pieces of the work of this most beautiful and accomplished Queen are still preserved. At Allanton House was formerly a splendid bed embroidered by her and her ladies. This was unfortunately burnt up by an accidental fire.

At Holyrood Palace in her chamber is shown a box covered with her embroidery. Other pieces of her work are preserved in the castles of some of the nobility of Scotland.

CORRESPONDENT'S CORNER.

TO COVER SLATE FRAMES WITH FLANNEL.—Noticing an inquiry "How to cover slate frames with flannel," I thought I would send my way.

The object is to avoid the noise made by sloving slates on the school desks. I have seen slates with little knobs like buttons on the corners of the frame; these worked very well. In the absence of these, flannel covers can be used. With a gimblet, bore two holes on each corner of the frame, cut the flannel in strips to fit the frame nicely on both sides, then slip a darning needle and some twine through the two holes so that the twine will reach, slanting, across the cloth. Tie the ends of the twine securely. Make another hole half way between, slip the needle through that and tie on the outside. The corners may be sewed neatly down with a needle and thread, but the covers will not stand school children's usage unless fastened on in the way above stated. Tacks would scratch a desk.

AUNT RACHEL.

Literary.

THORNS AND ROSES.

CHAPTER VIII.

(Continued from page 786.)

"Let us turn this way, Kate, and through that field!" he said.

And then I remembered that Brandon would never listen to his own praises,

FIG. 540.

"I have something to tell you," I said.

And he looked at me, smiling.

"Is it what Nevil told me last night? Then dear Kate, I congratulate you."

"Oh! Brandon, I am so happy!" I cried for seeing his kind face, I felt that I could speak more freely to him than to any other.

"I am so glad! How strange it seems for little Kate to be engaged!"

"I am little Kate no longer, brother!"

"I shall always think of you as my little companion, though. I pray that the future may be full of blessings for you two and as happy as the present."

"And now there is something else I must say to you, Brandon," I continued, letting the reins fall and stroking Diamond's mane.

"Yes!"

A certain eagerness in his eye struck me, but his glance fell beneath mine.

"Perhaps it will pain you, perhaps vex you, perhaps it is one of my foolish fancies."

"Perhaps you will tell me, and then I can judge. Be frank and fearless, and don't spare me."

"Dear Brandon, it is so selfish of me! But to speak with you will help me. Contrast our past with our present, and you may see what I mean; we are not to each other what I had hoped; I can't explain myself very clearly, but it is as though something had risen between us—a shade of I know not what. We have been apart for long; you are full of self-reliance, wise and firm, and so I would have you; but there is some restraint that I can't define!"

"Am I cold or unkind?"

"You could not be. But you are more reserved—no, I cannot explain myself; but tell me, dear, is it my imagination, or is there a shadow?"

He was silent a long time, and I thought he was pale and cold, as he gazed before him still and motionless; but he turned to me at length, laying his hand on my arm.

"I understand you perfectly; I know well what you mean; we are to each other distant relatives—not the brother and sister we once were. In old days we had no secrets from each other; you knew my every thought, and I knew yours; there was no trivial act of mine of which you did not hear; no fancy crossing my brain that you did not know; no dream in which you did not share; and now—even from you—I have my secrets."

"I did not mean that; it would be unjust as well as foolish to expect that you should tell me everything, Brandon!"

"Well, if there be a shade between us, Kate, it is through me it comes, not through you. I say if—not that there is. Since old days many things have happened; there have been clouds on my way that can never, that will never be yours; but shade or no shade, be assured of this, that in me you have a sincere and devoted friend. Do not fear speaking openly to me, even though I am reserved with you. Ah, my sister, it is better so!—how much better you will never know! I have had thoughts and visions that no one could share; I have my secrets! You are open as the day to me; I cannot be the same to you! Yes, I admit it; we are not now as we once were, and why we are not is better left unsaid; the change is not with you, but with myself. But you are ever dear to me, you ever will be—and you will believe that!"

"Oh! dear brother," I said, looking into his grave, earnest face, "there is no shadow, save what my own exacting spirit created."

He sighed faintly, but soon relapsed into his own composed manner.

"Come, Kate, no more sadness! We understand each other, my child. Now, tell me about Nevil."

CHAPTER IX.

The early Spring sunshine was wooing back to life the leaves and flowers. Winter had brought no changes to me; but I had now a new interest in life. Its hours were brighter, and filled with a deeper happiness than I had ever before known, for had I not Nevil's love? We two lived for each other. He was almost every evening at Lovel House, and in my rides and walks I was certain to meet him; and we galloped together over the moor or strolled through the lanes, "thinking and talking no doubt of the weather." It was strange to look back on the time when I had not known him or even heard his name, and now he filled the first place in my heart. He was devotion itself, and I found nothing in him that could change my love.

But when I tried to read my own character and to know myself, I wondered how it was that he could love me. Surely I was the most selfish, discontented and exacting girl on earth. I had Brandon's true affection, yet had found fault with it; and now, having this love—the crown of all humanity, the love that should fill life so full of joy and gratitude that no space be left for discontent—even with this I was seeking for something not yet mine—something more beautiful, without which life was incomplete. It was wicked ingratitude, I know, and I kept these vague longings, these unsatisfied desires, to myself. Nevil apparently had no such thoughts as these, and with all my faults I loved him. Where was the selfishness, the inconstancy of which my cousin had accused him?

Edith was yet with us; and since my engagement to Nevil she had not spoken of him, either in praise or disparagement, but rather avoided mentioning him at all. When he was present, it was as if she thought it too much trouble to notice him, and carelessly overlooked him. When he addressed her, she would reply with some sarcasm, and ere he could return it, become absorbed in her book, or aunt, or Brandon. Nevil looked at her curiously sometimes, as though inclined to be annoyed. But whether he sang or talked; whether he read Tennyson, or watched me sketch; whether he stood or sat beside me, her eyes rested on us with a gaze expressing literally nothing—neither interest, sympathy, nor scorn. She was a perfect enigma; Nevil said little about her to me, but he did not seem to like her any better than she liked him.

Mr. Edgar Dana visited us frequently, still retaining his place in aunt Dorothy's favor; and Edith treated him with sublime patronage; not the patronage of a superior to an inferior, but that which she would have bestowed on a school-boy, and received his homage with amused good temper. Beside her, in many things, he was a boy; and "had he but loved with a boyish love," it would have been a great deal better for him. His was a simple nature: but the stream was not so shallow as I had once thought; there were depths of passion in it which my cousin had not fathomed. Of whom did Mr. Dana make a friend but myself? and why I did not know, for I had hoped he would choose Brandon. I always tried to put him at his ease, and do any little kindness that came in my way, but certainly I had not expected him to make me his confidant, and lay the secrets of his mind before me; however, he did, and had told me of his love for Edith, of the old happy days, of the change in his fortunes, and had ended by declaring that he would win her yet. In vain I shook my head at this; with a boy's eagerness, and a man's passion, he would argue against me, always convincing himself.

This Spring evening he had called at Lovel House, and meeting me in the garden had stopped to speak; as usual, he began about Edith and old days.

"Dear Miss Lovel," he said, "I can't feel discouraged despite your arguments, for Edith loved me long ago, and though my fortunes changed, she will not!"

"You forget her relatives. You love her, and say you will win her. All her life she has been accustomed to wealth and luxury, and you can't give her these. Would you offer poverty?"

"Poverty! Ah, you are right! I am utterly beneath her—I can scarcely support myself—my life from day to day is a struggle—I have neither wealth nor position—and her friends are proud and high! But I can't crush my love; we were equals once, and I forget the change! She loves me I know! When I think of the past—when life looked fair and bright—when I had the right to call her mine—when friends smiled on us—ah, I can't help loving her as I did then, though now it is madness! Will you advise me?"

"The best advice I could give you," I said, "is—don't come here. It is the old fable of the moth and the candle over again."

"To be near her is my one glimpse of sunlight, and I can't shut it out, poor weak idiot as I am! And yet if to-morrow she would be my wife, I would not, in my present poverty, ask her; I love her too dearly to let her sacrifice herself! Yes, if I were brought to that test, I think I should stand it! You are the only one to whom I can say these things, and it is good to speak to you, though you are hard on me sometimes. Oh, if my poor old guardian had left a will how different all might have been!"

"He would have made you his heir?"

"Yes, I think so; but his illness and death were sudden, his affairs unsettled. He was very good to me, and provided for mamma—for my mother—until she died. He sent me to college, and then the Dana's offered me a home with them. He consented, and so I saw but little of my guardian.

I was with him when he took the fever that ended his life. After his death no will was found, his next of kin stepped into the property, and I was penniless and friendless. He had been very wealthy, too. A doctor in good practice, unmarried, and with simple tastes, he had saved a good deal."

"Who was he?" I asked.

"He was Dr. Lorimer."

"Dr. Lorimer! Why, Dr. Lorimer was a friend of my father's! What a singular coincidence! He was a great friend of Brandon's father, too!"

"Yes," returned Mr. Dana, very quietly. "It is not many years since he died."

"It cannot be, because he attended Brandon's father and was present at the funeral. How strange we did not know he was your guardian!"

"There was no necessity for my mentioning it—but there is something I want to tell you—a special favor I would ask."

"I will grant it if I can."

"You know that the one hope of my life is to win Edith. I would not offer her poverty, and I must first gain wealth and fame. I have much time on my hands, and sometimes I sit up at night working at this."

He produced a roll of manuscript, coloring as he did so, his hand trembling."

"I wrote—I have tried to write—a play, Miss Lovel, and hope to have it produced. What I want to ask is, that you would read it and give me your opinion. It may succeed, and there is fame."

The boy's dream was so wild that I looked at him in pity and wonder, saying:

"Do not build your hopes on this. Remember how many have failed before you."

"Those who failed had no Edith to win. I must succeed, Miss Lovel," he said, flushing again. "I know I have talent, and writing verses and dramatic scenes was always my favorite occupation. Now, if my play is accepted, and is successful, even my relatives would be pleased and proud of my fame. A friend of mine has promised to use his influence with the manager of the Prince's, so success is almost certain; but I may be too partial to my own work and blind to its defects, and thus I ask you to read it."

"I am willing to do so, and shall give a frank opinion, but I fear you rate my judgment to highly."

"But I fear you are hoping too much; even if this succeeds, how do you know that Edith either can or will wait, for some time must elapse ere you know if it be a success."

The sunny light left his eyes, and his head drooped; he saw as well as I did the fallacy of his hopes, yet he tried to shut out the vision.

"Do you believe in truth and fidelity?" he cried, suddenly. "Edith did not, of her own free will, break the vows that bound her to me. She will be true to me; I would stake my life upon her constancy. May I go to her?"

"Certainly!" I said, for I had heard Nevil's step, and was eager to meet him.

Edgar went away, and Nevil joined me.

"What had Dana to say to you!" was almost his first question.

"Poor fellow, Nevil, he loves Edith."

"Isn't that rather presumptuous, Kate?"

"They were once engaged to each other, Nevil, and I suppose he cannot help it."

"There is such a difference in their positions," pursued Nevil, "and he ought to see it. However, it's not our affair. He makes you his confidant?"

"Yes, but I'm not a very encouraging one."

Nevil smiled, and turned the conversation.

"You have never yet said when you will really give yourself to me, Kate, and I want our marriage to be soon. Why not? I have surely waited long enough."

"We have not been very long engaged, Nevil."

"What matter? We know and understand each other, and, best of all, we love each other. What is it? You doubt me, after all."

"Oh, no, dearest Nevil! but marriage is so very serious. Suppose we did marry, and you discovered my bad qualities, if you were to regret that you had married me?"

"I never should, my love! Am I to go on waiting for ever? I can't. I want you for myself, and you say farewell to the old life, and begin the new with me. Now, say you will soon enter your new home."

To be Continued.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

A DAIRY MAXIM.

If milk and butter you would have—
A right delicious treat—
Keep churn, and bowls, and milk pails
Most scrupulously sweet.
With boiling water, day by day.
Cleanse each with utmost care;
Then rear them at your doorway,
To dry in open air.
Twenty Golden Rules.

FACULTY IN HOUSEKEEPING.

ANNIE L. JACK.

THERE is no position in life that needs so much inventive and retentive faculty as in the many little trials and difficulties of housekeeping. If "order is Heaven's first law" it is also the law of Home. The place when nothing is to be found, the habit that is a series of careless acts; the uneven tenor of the ways of life, all conduce to make life what it ought not to be. Five times the amount of work can be done if there is a regular system in the doing, and any one who makes an apology for untidiness, ought to be aware of the fact that no housekeeper is blinded by it, for it is easy to understand that things can be more easily kept in place and less time be lost than is spent in the searching for and picking up, so prevalent in careless households. My boys have a very bad habit of laying down coat or hat wherever it may chance to happen. I endeavor to teach them that if each one would hang his hat on a nail, it would add to the tidiness of the room, and be less trouble to his sisters, while teaching the habit of "a place for everything." I know that natural characteristics have something to do with it, and that an innate neatness born in some children causes them to notice and care for their clothes more than others. But seeing the unhappiness caused by disorder in many families, I am forced to say that tidiness is a faculty that ought to be cultivated by every housekeeper and taught to her sons and daughters like every other lesson or training.

A woman has so much to do with a man's life, and can make home a paradise, or a foretaste of the most realistic inferno.

Regularity and routine are necessary parts of a housekeeper's duty, and in ordering a meal or cooking it, there is nothing that requires more faculty. Men know nothing of the many irons that have to be in the fire of the kitchen at once. A woman of faculty can manage them without trouble, but once let the machinery get in a muddle, the routine lag a little, and everything goes wrong, and viewing the matter from all stand-points, I am persuaded that there is more in faculty than in the manual labor—more than many women take the trouble to understand or demonstrate. A habit of order and looking ahead is of more value to children than half the education of the schools. It will give them a chance to get though life and miss many of its petty trials.

SETTING THE TABLE.

I was much pleased with Mary Wager-Fisher's article "Concerning the Table." It is true, as I well know from experience, that the best servants do not set a table properly. In fact, I dispensed with the servants' assistance entirely about my table, and performed that part of the work myself in order to avoid the jumping up for this and that while eating. But then, it is not always the domestics who are at fault, for the mistress and the "quick, bright farmers' daughters," however exact about other things, are often neglectful about this one matter. On some tables things are always lacking—a napkin, a fork or a spoon. Think of putting on one tablespoon for supper, when you know that two or three will be needed for the food which has been provided. And yet I know a lady (and she is not the only one I might mention) who does this invariably. She is neat, methodical, and an excellent cook, but her table is never set properly, and the *indispensable* table-ware is always in the closet. If one will only try she can easily remember the things which are needed for a meal, and so avoid the getting up (which is always unpleasant) for this and that which should have been on the table before the meal was served.

A FARMER'S DAUGHTER.

DOMESTIC RECIPES.

POTAO CAKES.

WORK cold mashed potatoes soft with a little milk and butter, knead in enough flour, with half a teaspoonful of baking powder sifted with it, to enable you to roll into a sheet half an inch thick. Cut into rounds and bake in a quick oven till well browned. Rub a little butter over each before taking out.

MACARONI.

Break half a pound of macaroni into inch lengths and boil in salted water until tender, but not broken. Put into a pudding dish, season with a large piece of butter, cover with grated cheese and set on the upper grate in the oven to brown. M. B.

QUAIL ON TOAST.

Dry-pick them, singe, cut off the heads, then the legs at first joint, split down back, draw, put into salt water for 15 minutes, drain, dry with a cloth, lard them with little pieces of bacon, and boil over a good fire. If one does not care for the bacon dip each into melted butter two or three times. Have ready as many slices of buttered toast as you have birds, and serve a bird breast up on each piece. Thin slices of broiled bacon are very good served with the quail. N. J.

FARMER'S FRUIT CAKE.

Soak three cups of dried apples over-night in warm water. Chop slightly in the morning and simmer two hours in two cups of molasses. Add two well-beaten eggs, one cup of sugar, one cup of butter, one dessert spoonful of soda, flour enough to make rather a stiff batter. Flavor with nutmeg and cinnamon to the taste. Bake in a quick oven.

TONIC.

The following is a very good medicine for old people or children when they are not feeling very well and their appetite fails: One ounce of valerian, one ounce of white root, one ounce of golden seal, one ounce of rhubarb. Get this pulverized and mixed at the druggist's. Put a teaspoonful into a teacup, fill the cup half full with sugar, then fill up with hot water. Let it settle. Take half of this at night and the other half in the morning; cover the remains with hot water again; let it settle and take again in the same way.

AUNT RACHEL.

News of the Week.

HOME NEWS.

MONDAY, Nov. 21, 1881.

LATEST ABOUT GUITEAU.—On Saturday as the prisoner was being conveyed from the Court House to the Jail, after the trial, a mounted horseman followed the prison van for some time and then rode up to its side and fired a pistol shot at Guiteau. The shot took effect in Guiteau's arm causing a simple flesh wound. A police officer who was in the seat with the driver of the van fired at the assailant but missed him. The clumsy van gave chase as soon as possible. The supposed assailant was finally arrested and confined in jail, but there is some doubt whether or not he is the man. The man arrested is one Jones who owns a farm near the city, but who is thought to be a "crank." Those who know him say he is half-witted rather than crazy. Guiteau wants his body-guard increased. Dr. Bliss was on the witness stand on Saturday, and a portion of the vertebræ injured by the ball was examined by the jury. Col. Rockwell and Gen. Swaim also testified. To-day Mr. Scoville will, it is reported, ask his associate Mr. Robinson to withdraw from the case, the latter having for the third time pursued a line of policy which Scoville did not approve. The Government expects to close its case to-day or to-morrow, but Mr. Scoville thinks the trial may yet be prolonged for six weeks.

Ex-Senator Roscoe Conkling has opened a law office in the Bank of Commerce building, New York—at Cedar and Nassau Streets. He, like Blaine and Grant, seems to have decided to live in New York. His law practice will no doubt be large.

Michigan University is to have a new museum which will cost $60,000.

J. A. Poorman, Paw-Paw, Mich., and two children, ate pancakes one morning, mixed with arsenic in mistake for baking powder. Mr. Poorman died and the children cannot recover.

A transfer of $45,000 of real estate in McLean County, Illinois, represents the losses of the former owner in two weeks of heavy play at poker.

A Virginia paper, to which perhaps the wish is father to the thought, says that the desirability of a reunion of Virginia and West Virginia is felt by many in both States, and it believes the question cannot long be kept out of the discussions during the political campaigns in Virginia.

(Continued on page 806.)

A Surprising Change.

"I take no other medicine whatever, therefore must attribute my improved condition to Compound Oxygen. Four weeks ago I was weak, *unable to sit up long at a time*, with paroxysms of coughing that would make my lungs feel sore and prostrate me very much. *The change has been so surprising to me and my family.*" Treatise on "Compound Oxygen" sent free. Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia Pa. —*Adv.*

AGRICULTURAL NEWS.

MONDAY, Nov. 21, 1881.

HERE are some items of agricultural news condensed from telegrams received here between Friday noon November 18 and noon today: Portland, Me.—The advance in railroad freights tends to depress breadstuffs. Dairy products dull. Produce in good supply; market more sluggish.....Boston, Mass.—Flour dull influenced by late downward movement of wheat at the West. Demand for provisions increasiug, a good trade for the time of year. Business of the week in wool has been good—sales 2,800,000 pounds, of which 350,000 pounds have been fine Ohio and Pennsylvania fleeces at 43@45c, mostly at 44@44½c. Michigan and Wisconsin fleeces have sold at 41½@42½c for X. Unwashed wools in demand, sales of all sorts 1,000,000 pounds, including considerable coarse at 17½@20c; fine at 25@30c; and medium at 24@34c per pound. Large lots of Missouri selling at 28@30c, and good to choice Western medium at 30@31c. Combing and delaine fleeces steady, delaine 45@49c, and Missouri, Kentucky and Illinois combing at 30@32c. California wools move slowly; some 336,000 pounds having been sold at 12@14c. Prices stiff; manufacturers run pretty close, but owing to nearness of time for taking stock and settlement, much stir in business isn't expected until after the holidays.....Philadelphia, Pa.—Flour and grain rule steady and firm. Owing to small demand for foreign shipment, the supply is fully up to the demand. A fair trade in hides at steady prices; goat skins in demand at high figures as the market is short of best grades. Choice potatoes command high prices, and general produce is firm. Supplies of fruit generally inferior; apples plentiful, prices favoring buyers except for fancy lots. Cheese quiet; very little trade in provisions. Cotton market more active with a rise of 3-16@¼c. Wool market firm; but little doing..... Cleveland, Ohio.—Grain market unsteady. No. 2 Red Winter wheat $1.36. Hog market active, receipts 4,000 a day. Sales $5.05@$6.-32½ per 100 pounds. Clover seed dull and down to $4.75 for prime medium or mammoth.....Cincinnati, Ohio.—The formation of a hide and leather exchange promises good results. Grain and its products have rallied and advanced, but got a set-back on Thursday. In Spite of warm weather the provision trade has been active especially for green meats..... Indianapolis, Ind.—Weather too warm for the season and considerable rain. Country roads in bad condition, all business greatly embarrassed therefore.....Minneapolis, Minn.—During the week the ground in the Northwest has been frozen so deeply as to stop plowing, leaving 20 per cent of the wheat land in this State not plowed. Thrashing wheat is progressing but much of the grain being thrashed is injured by wet. Wheat delivered here during the week shows considerable loss of grade; market unsettled but lower. More than half the flouring capacity of this city is shut down. Flour in light stock, and held firmly. Most of the lumber mills have shut down owing to running ice; all must soon close for the season, leaving 50,000,000 feet of logs on hand and light stocks of lumber. County collections generally good.....St. Paul, Minn.—Weather bright and cold. No snow except farther West; the North Missouri is frozen solid at Bismarck and navigation is closed to the upper country. The fuel problem for interior points is exciting great interest; the railroads find trouble in meeting calls for transportation.....

Chicago, Ill.: A good speculative trade in grain, but receipts light, with prices unsettled and irregular. Hogs coming in freely; an improvement in quality over last month, though some complain that they are not as solid and are not larding as well as expected. Mess pork on hand, 76,501 barrels of new Winter-packed, and 30,532 barrels of last season. Receipts of breadstuffs for the week are: 52,600 barrels of flour; 210,618 bushels of wheat; 1,164,555 bushels of corn, and 209.272 bushels of oats. Shipments, 53,145 barrels of flour; 170,358 bushels of wheat, 1,599,564 bushels of corn and 246,986 bushels of oats. No money to go into the country for grain, but considerable for hogs. Packers are borrowing more money than at any previous date this seasou.....Peoria, Ills.: The inclement weather is very unfavorable to packers who began operations recently. The Illinois River is rising rapidly here, but thus far no damage to property has been done..... Milwaukee, Wis.: The continued stormy and wet weather renders communication with the interior difficult and the transportation of produce and merchandise impossible. All the interior mills and factories have been shut down on account of floods. Receipts of cereals and produce light. Considerable damage to stacked grain reported owing to rains. Millers here have nearly all closed, and flour is dull.....Louisville, Ky.: Leaf tobacco firmer and strong both old and new grades. Flour dull, dealers having stocked up during the excitement. Corn in fair demand; receipts moderate. Considerable rye, corn and oats will be needed in the country tributary to Louisville, which must come from the West. Provisions are low. Only 4,000 hogs have been killed to date [Friday evening], the weather having been unfavorable. St. Louis, Mo.: All grains are declining. Packing hogs in demand and scarce on account of cold facilitating packing. Export steers scarce. Missouri plug tobacco abundant; Virginia leaf scarce.....Kansas City, Mo.: Grain market weak; prices lower. Cattle receipts small, cattle market quiet with downward tendency in sympathy with declining markets East. Hog receipts heavy; prices have declined 10c.....San Francisco, Cal.: Wheat market easier, several speculative holders having sold out. Farming work greatly helped by late rains. No compromise is probable on the "slickens" question pending the trial of a test case at Sacramento to force miners to stop deluging the lowlands with *debris*.....Baltimore, Md.: Flour now in good demand and prices firm. Western wheat active and fluctuating; Southern quiet. Corn market dull; good supply of new Southern. In stock: Wheat, 2,129,277 bushels; corn, 789,401 bushels. Cotton receipts large; market steady; sales limited owing to firmness of sellers. An active demand for prime steers' hides; Southern lights lower. Maryland tobacco is held firm. Provision jobbing trade active; prices firmer. Choice lots of butter in demand and scarce. .....Wilmington, N. C.: Weather pleasant. Cotton active at full prices. Provisions in good demand. Peanuts have a fair inquiry. Grain dull. Rice steady.....Savannah, Ga.: Cotton market very strong; one bale sold to-day (Friday) at 12c. per pound. Receipts, 5,278 bales; sales, 4,156 bales; stock on hand, 89,478 bales.....Augusta, Ga.: Cotton coming in rapidly; sales large at very satisfactory prices.....Atlanta, Ga.: Weather favorable for gathering cotton; picking season about over, though much of the crop is still in the hands of raisers who are holding out for better prices. Crowds daily attend the Exposition, which promises to be a success in all respects.....New Orleans, La.: Hay weak at $24 per ton for prime; choice, $26. Cotton steady: middling, 11½c.; low middling, 11⅛c.; good ordinary, 10⅝c.....Memphis, Tenn.: Provision and produce markets well supplied; a fair demand but prices weaker.....Nashville, Tenn.: Produce higher, except eggs, which bring 20@21c. from the wagon: a general egg scarcity in nearly all the country markets. Feathers have declined from 48c. to 46c. and have a downward tendency. Country collections, as a rule, are fair.....

From the Atlanta (Ga.) Sunday Phonograph: The editor for the Pikes county News has been cured of rheumatism by St. Jacobs Oil.

The New Carpets.

Messrs. J. & J. Dobson have in the course of the past year been adding new looms to their factories on the Schuylkill and have been otherwise enlarging their facilities for the manufacture of carpets, the evidences of which are shown in the great variety of rich fabrics exhibited in their vast salesrooms at Nos. 40 and 42 West Fourteeeth Street, New York. Though carpets of all grades are here shown, yet the stock is specially replete with the finer varieties, the Wiltons, the Moquettes, the Axminsters, etc., the Messrs. Dobson having of recent years carried the manufacture of these more costly fabrics to a degree of perfection rivaling the best European workmanship. They have introduced this Autumn many new designs conceived in accordance with the latest canons of decorative art. These designs consist for the most part of a combination of geometrical figures and flowers—the latter, however, not futile attempts at the reproduction of nature, but generalizations of natural forms. The firm is one of the most reliable in its branch of business, and out of-town people would do well, no doubt, to make an investigation of its goods, before purchasing elsewhere.

"The Doctor told Me

to take a blue pill, but I didn't, for I had already been poisoned twice by mercury. The druggist told me to try Kidney-Wort, and I did. It was just the thing for my biliousness and constipation, and now I am as well as ever." Sold both dry and liquid.—Detroit Free Press.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipatiou, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

BURNETT'S COCOAINE

Has Received Universal Endorsement.

No other preparation possesses such remarkable properties for embellishing and strengthening the hair and rendering it dark and glossy. It cures baldness and eradicates dandruff.

BURNETT'S FLAVORING EXTRACTS are the best.

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 19, 1881.

BEANS AND PEAS.—Marrow beans are rather firmer with a fair export call; mediums dull and weak. German stock is quoted very close to State and buyers prefer the latter. Fancy beans quiet; green peas not moving; quoted $1.40@1.70 poor to best Wis; Southern B, E. peas in fair demand at $3.35@3.40, which is higher.

Marrow beans, prime, $3.45@3.50; fair to good, $3.25@3.35; medium, prime, $3@3.10. fair to good, $2.75@2.90; pea, choice, $3.25@3.30; white kidney, $3.40@3.45; red kidney, prime, $2.90; fair to good $2.60@2.75; turtle soup, $1.80@1.90.

Receipts of beans for the week, 8,980 bush.
Exports do. 385 bbls.

BUTTER.—Confidence in fine butter still exists but low grades divide the business with oleo. Sellers are handling a good deal of high bought stock and a break in rates upper grades of stock would be severe upon such owners. Possible light supplies from the west this coming season helps to strengthen rates but there is a large quantity of medium class goods that must be unloaded before the market will ride free. Creamery is scarce and fine half tubs are quoted quite crisply. Entire dairies will make 30c. when every way right; an extra Delaware sold during the week at 32c. The bulk of State full dairies range at 26@29c, and 28c. is the top for firkin dairies. Stock is widely scattered this season.

Creamery, State and Elgin, choice, 37@38c.; good to prime, 32@35c.; sweet cream, fresh, 33@34c.; fair to good, 28@29c.; State, June, good to prime, 22@28c.; State firkins, dairies, choice, 28c.; good to prime, 26@27c; fair, 22@24c.; poor, 18@20c.; dairies, half tubs, choice, 33@35c.; good to prime, 30@32c.; fair to good, 27@30c.; Welsh tubs, choice, fresh, 32@33c.; good to prime, 28@30c.; fair to good, 25@28c.; poor to fair, 18@25c.; Western imitation creamery, 25@26c.; Western dairy, fresh, choice, 28@30c.; good to prime, 23@26c.; fair to good, 18@22c.; poor to fair, 17@20c; factory and ladle-packed, Iowa, fine June, 16½@17c.; Ohio and Ind. June, good, 15½@16½c.; late made, 18@20c.; fair, 10@16½c.; poor, 13½@12c.

Receipts for the week, 24,086 pkgs.
Exports do. 825 do.

CHEESE.—Exporters still operate only to a moderate extent. The home trade and coastwise wants are enlarging, but the general market is in poor form. Country prices weak.

State fact'y, fine, Sept. 12½@12¾c.; good to prime, 11@12c.; fair to good, 10@11c.; poor to fair, 9@10c.; Ohio factory, flat, fine mild, 12@——c.; good to prime, 10@11c.; fair to good, 9@10c.; creamery, partly skimmed, choice, 9@9½c.; poor to good, 4@7c.; fully skimmed, 2½@3c.; full skimmed factory, 2½@3c.

Receipts for the week, 45,437 bxs.
Exports do. 13,613 do.
Liverpool cable, 55@63s. the lower for Summer.
Steam to Liverpool, 12s. 6d.@17s.

COTTON.—With nearer complete agricultural reports for October it is shown that good weather for that month offsets in a great degree the damage noted in some former reports, and a really good top crop is now expected. There is consequently less hardiness to prices, but there is no real fall back in the main as a good speculative trade has been revived at the close.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 3-16	9 7-16	9 7-16
Strict ordinary	9¾	10	10
Good ordinary	10 9-16	10 13-16	10 13-16
Strict good ordinary	11	11¼	11¼
Low middling	11½	11¾	11¾
Strict low middling	11¾	12	12
Middling	11 15-16	12 3-16	12 3-16
Good Middling	12 5-16	12 9-16	12 9-16
Strict good middling	12 9-16	12 13-16	12 13-16
Middling fair	13 1-16	13 5-16	13 5-16
Fair	13 13-16	14 1-16	14 1-16

STAINED.

Good ordinary	8 13-16	Low Middling	10½
Strict good ordinary	9 13-16	Middling	11½

Average of futures:—
November, 11.85c.; December, 11.94c.; January, 12.16c.; February, 12.36c.; March, 12.55c.; April, 12.62c.; May, 12.79c.; June, 12.91c.; July, 12.99c.; August, 13.05c.
Receipts for the week, 44,264 bales.
Exports do. 4,956 do.

EGGS.—Receipts for the week, 10,500 bbls.; do. last week, 8,576 do. The supply of fresh is light for the increased wants of the coming festival, and prices are restrictively high. A good many held eggs are offering, but many prefer trustworthy parcels of fined at the relative prices.

New Jersey, Long Island and other near points, ₱ doz. 34@35c.; Pa. and State fresh, 27@30c.; Canadian, 26@27c.; Western, 27½@28c.; Western and Canadian, fair to good 26@27c.; fined State, 23@23½c.; Canadian and Western 21@21½c.

FLOUR.—A good local demand has prevailed for the high grades, including Minn. extras and patents, at full prices. Medium and lower sorts are in large supply and rule easy under a light exportation. There is no radical decline for the week, as a falling off in receipts is expected. It is alleged that many Western mills will shut down owing to the difficulty of obtaining suitable grades of wheat at safe figures.

No. 2, $3.50@4.50; State and Western, superfine, $4.50@5.25; city mills, XX, $5.90@7.35; Spring wheat, extra, $5.35@5.65; Spring XX and XXX, $5.85@6.75; patents, $6.50@8.70; Ohio round hoop shipping, $5.60@6.00; trade brands, $6.25@6.65; St. Louis extra, $5.75@6.25; do. double extra, $6.10@6.65; do. family, $6.75@7.00; Southern extra shipping, $6.00@6.10; do. XX and family, $6.50@7.25. Rye flour, superfine, $5.00@5.35; buckwheat flour ₱ 100 lbs. $3.80@4.00. Corn-meal, Brandywine, ₱ bbl. $3.80@3.85; do. Western, $3.25@3.80.

Receipts of flour for the week, 137,044 bbls.; corn-meal 5,050 do.
Exports of flour for the week, 70,650 bbls.; corn-meal 5,675 do.

FRESH FRUITS.—Apples are going abroad freely. New York 10,000 bbls., 6,100 went from Boston and 9,000 from Montreal. The offering is large and mainly of common mixed stock. Fine straight lines are being stored. Cranberries continue firm with more local call. Quinces slow; pears are weak and irregular; quality is not uniformly good as December comes nearer. Choice Catawba grapes are in good demand. The attempt to ice-house Concords and Isabella proved a failure. Florida oranges are not of commercial excellence.

Apples, Baldwin and Greening, fancy, ₱ bbl. $3.37; N. Spy, State, $2.50@3; straight lots seconds, $1.75@2; mixed lots, State, prime, $2.75@3; do. seconds, $1.75; Phœnix, Jersey, ₱ round hoop bbl. $2@2.50. Pears, Boston, bush. boxes, fancy $4.00@5.00; Lawrence, State $2.50@4.50; Vicar of Wakefield, $2@3.50; cooking, $2@3. Grapes, Catawba State, case of 18 3-lb. bxs, $1@1.50; bskts, ₱ lb. 7½@8½c.; Concord, bskts, 2@4c.; Isabella, State bskts, 8@10c. Florida oranges, half-bbl. bxs, choice, $1; good to prime, $3@3.50; inferior, $2.25@2.50; thirds, fair to prime, $2.25@2.50; inferior, $1.50@1.75. Cranberries, Cape Cod, fancy, large, ₱ bbl. $9.50@10; good to choice, $7.50@9; poor to fair $5@7.50; frosted $3@3.50; ₱ crate, $2.50@3.25; New Jersey fancy, $2.75@2.87; fair to prime, $2.12@2.62; poor to fair, $1.75@2.12; frosted, 50c.@$1.

Peanuts, Va., hand-picked, ₱ lb, 7@7½c.; fancy, 6¾c.; extra prime, 6¼c.; good to prime, 5¾@6c. shelled, 5@5c.; pecan nuts, 9@11c.; hickory, shell-bark, Northern, ₱ bu. $1.00@1.12; Western, $1.00; bull, 40@50c.; black walnuts, 40@50c.; chestnuts, Southern, $4@6; Northern, $6@7.

GRAIN.—The wheat market exhibits more tone under a freer export movement, while the visible supply at the points of collection is somewhat diminished. Corn is also doing better, shippers taking better grades than usual. Oats hold up well both cash and speculative interests receiving liberal attention.

Wheat, Spring, $1.27@1.31; Spring No. 2, $1.37@1.39; red Winter No. 2, $1.43@1.44; red Winter, $1.32@1.45; white Western and State, $1.33@1.45. Rye, 98c.@1.03; Oats, white No. 1, 53c.; No. 2, 51½c.; No. 3, 49@49½c.; mixed, No. 1, 48c.; No. 2, 47½@47¾c.; No. 3, 45@47c; Corn, Western mixed, 67@69c.; No. 2, 68@68½c.; yellow, 68@72c.; white, 70@73c. Barley, Canada No. 1, $1.14@1.16; do. bright, $1.17@1.18; State 4-rowed, $1.02½@1.05; 2 rowed 88@90. Buckwheat, 90c.

Receipts for the week, wheat, 934,700 bush.; corn, 1,495,900 do.; oats, 172,300 do.; rye, 85,588 do.; malt, 52,500 do.; barley, 233,851 do.
Exports for the week, wheat, 769,702 bush.; corn, 683,975 do.; oats, 1,992 do.

HAY AND STRAW.—Exports for week 1,050 bales. There is a good demand for hay and fine quality is quoted as before. Receipts abundant but not pressing the market; straw steady.

Prime Timothy hay, ₱ 100 lbs., $1.05@1.10; medium Timothy, 85c.@$1; shipping grades, 65@70c.; clover mixed, 70@85c.; clover, 60@65c.; Straw, long rye, 75@80c.; short rye, 55@60c. oat and wheat straw, 40@50c.

HOPS.—Beyond a fair brewers' demand the market is quiet. Prices are above exporters' views. Sellers, however, do not feel inclined to make much concession as the European markets are quoted strong and high prices are ruling in the interior.

Crop of 1881, choice, 28@29c.; good to prime, 25@27c.; fair to good 22@25c.; eastern, 18@27c.; 1880, good to prime, 18@22c.; poor to fair, 10@15c.; 1879 fair to prime, 8@15c.

Receipts for the week, 2,770 bales,
Exports for the week, 100 do.

MILK.—The demand is good, but prices have shown a wide range, at one time down to $2.25 ₱ can of 40 qts, and then up to $3.75 do. The average for commission cans made $3.07.

POULTRY AND GAME.—For dressed poultry the weather is not favorable. Dealers all hope for cool weather for Thanksgiving stock; when the weather is soft losses are frequent and a poor Thanksgiving trade has always spoiled the market for a long time. Prices easy.

Turkeys, Phila. prime, 14@15c.; Jy 13@14c; State and W'n pr. 12@12½c.; f'r to good, 10@11c. Chickens, Phila. prime, 14@16c.; Bucks Co. do. 14@15c.; Jersey, do. 13@14c.; State and Western, do. 11½@12c. Fowls, Phila. prime, 13@16c.; Bucks Co. 12½@13½c.; Jersey, do. 12@13c.; State and Western, do. 11½@12c.; fair to good, 9@11c.; inferior, 8@10c. Ducks, Phila. prime, ₱ lb, 15@16c.; Jersey and Bucks Co. 14@15c.; State and Western, 13@14c; fair to good, 10@12c. Geese, Phila, dry-picked, prime, 13@14c.; Jersey and Bucks Co. 12@13c.; State and Western, 10@11c.; fair to good, 9@10c. Squabs, white, ₱ doz. $2.75@3; dark, $1.75@2.

For what steady trade there will be for several weeks, cooped stock might be kept at home. Market very low and easily overstocked.

Chickens, Jersey, State and Penn. 10c.; Western and Southern, 8@9c. Fowls, Jersey, State & Penn. 10c.; Western and Southern, 8@9c. Roosters, old, 5c. Turkeys, Jersey and Penn. 10@11c.; Western, 8@10c. Ducks, Jersey, extra large, ₱ pair, $1@1.25; Jersey, New York and Penn. 60@75c.; Western and Southern, 45@50c. Geese, Jersey, $1.50@2; N. Y. and Penn.

FREE TO JANUARY 1ST.

The Fair Number of the **Rural New-Yorker** *(44 pages), which contains a full description of our* **Free Seed Distribution for 1882,** *also an account of the* **$2.000 worth of Presents** *offered to those subscribers who produce the best yields, and our Premium Lists for all who interest themselves in securing subscribers for the Rural New-Yorker, will be sent free to all applicants. Our new Posters are also ready and will be sent free to all. Our friends and agents are reminded that the present is, on many accounts, a more favorable season for securing subscriptions, or the promise of them, than later, when competition is keener.*

The Rural New-Yorker is for the North, South, East and West.

It knows no sectional prejudices. Everybody who is interested in a garden, vineyard, orchard or farm; in new plants, in farm or garden implements; everybody who is interested in Horticulture, and seeking through such means to increase the happiness of life and home, should subscribe. The Rural New-Yorker is the earnest friend of all who love nature and her works.

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The Rural New-Yorker is acknowledged, by those who should know, to have worked a new era in rural journalism. Five Hundred Illustrations from nature annually; the best writers; the best draughtsmen. Ask those who know.

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Milk, Butter, Cheese, Diseases of Animals, Bees, Injurious Insects, Grain, Grass, Small Fruits, all Ornamental and Useful Trees and Shrubs are among the prominent subjects treated in its columns.

No matter where you live, you cannot afford to be without the Rural New-Yorker. It is the progressive, aggressive, alert, original, conscientious rural journal of the age. Thousands of testimonials to this effect. Our **Everywhere Reports** are invaluable to the Farmer and Horticulturist. They have proven of great value to them in determining the best time to **Buy** or **Sell**. Our market reports are corrected by a special reporter up to the time of going to press. Our agricultural and general news embraces everything of interest to intelligent readers. Correspondents everywhere. Thirty-second year of its age: Fifth year under its present management. Try it—*Try it*—TRY IT—for one year. It will cost you but $2.00. It may save you hundreds. Try it as a measure of Economy.

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The Rural New-Yorker has no personal interests to subserve. It has neither seeds nor plants nor books nor anything whatever to sell. It is conducted purely in the interests of Agriculture and Horticulture and Stock-Keeping. Its tests of plants, seeds, manures, implements, are made regardless of individual interests or those of advertising patrons. It holds the interests of LAND CULTURE as above all others, and its aim is to benefit all who occupy themselves in the culture of land and its attendant industries, either for pleasure, profit or support.

The Rural New-Yorker earnestly labors to instruct the stockman and breeder; to introduce new fruits of improved quality; to make known the beneficent influences of the garden and of trees and shrubs about the home; to increase the comforts, refinement, health, and the general welfare of all who own and cultivate land. It tests all new vegetables, and makes known their value. It tells how to raise them in the greatest perfection. Shrubs and trees, flowers, plants of every description, the methods of cultivation to suit the varied and ever-changing conditions which arise, constitute prominent departments.

The insect enemies which infest our field crops, our fruit trees and small fruits as well as vegetables and flowers, and which seem to be rapidly increasing, are subjects of our most careful consideration, and entomology in general is treated in our columns by the ablest specialists in the country.

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Address RURAL NEW-YORKER, 34 Park Row, New York.

$1.25@1.62; Western mixed, $1@1.39. Pigeons, 20@25c. Game is in good demand and quality favors sales, though prices are higher.

Canvasback ducks, Havre de Grace, $2.75; Norfolk, $2, Western, $2@2.50; redhead Havre de Grace, 90c.@$1; Norfolk, 25@75c; Western, 75c.; mallards, 50@75c.; teal, 50@60c; common, 30@35c, all per pair

Quail, choice, ₹ doz. $1.50@3; inferior, $1.75@2; grouse, choice, ₹ pair $1.12@1.25; soft, 75@75c.; partridge, State and Western, $1.25@1.35; Eastern & Minn, 75@8 c.; soft, 50@70c.; woodcock, choice, 65@75c.; inferior, 50@60c.; rabbits, 35@40c.; venison, Minn. short saddles, ₹ lb. 15@17c.; Western, 13@15c.; whole deer, 9@11c.

PROVISIONS.—Hog products have taken a favorable turn for the seller; prices are higher and the market is active. The French Government has removed restrictions upon American provisions and the fact has revived action among continental shippers. The new phase of firmer rates have a very wholesome tone when the heavy deliveries of hogs at the West is considered. For several days the Western centers have reported arrivals of 100,000 head. Beef steady for the contracts that are to be filled.

Pork, prime mess, ₹ bbl. $15.50@18; extra prime, ₹ bbl. $16@16.25; Western mess new, $17.50@18.00. Lard, steam Western, ₹ 100 lbs., $11.50; prime city, $11.30 Hams, smoked city, ₹ lb. 12½@13c.; pickled Western and city, 10½@10¾c.; Shoulders, smoked city, 8¼@8½c; pickled, 7¼@7½c. Rib bellies, pickled, 9@9¼c. Bacon, long clear Western, 9½c. Beef, Western mess, ₹ bbl. $12; packet, $14; India mess, ₹ tcs. $23@25. Beef hams, ₹ bbl., $19.50@20.50.

Receipts for the week—Beef, bbls. and tcs. 2,818; pork, bbls 4,000 cut-meats, pkgs 31,450; lard, do. 12,400.

Exports for the week—Beef, bbls. and tcs. 2,514; pork bbls. 3 750; cut-meats, lbs. 4,466,020; lard do. 3,878,879.

RICE.—The movement is steady and fair and prices unchanged. We quote:—

Carolina and Louisiana, common to fair, 5¼@6¼c.; good to prime, 6¾@7¼c.; choice, 7¾c.

SALT.—The various brands are quoted as follows:

Ashton's at $2.50; Higgin's at $2.50; Phœnix superfine sifted dairy at $2.50; Holmes's extra sifted at $2 50 per sack and 85c per quarter sack; Deakin's at $1 40@1 50; Washington's at $1 40; Marshall's at $1 40; Virden's at $1 40.

SUGAR.—Refined shows slight change in prices, favoring buyers, with trade slack.

Cut loaf, 10¾@10¾c.; crushed, 10¾@10¾c.; powdered, 10c.; granulated, 9 11-16@9¾c.; mould A, 9¾c; confectioners' A, 9 7-16@9½c.; standard A, 9¼@9⅜c.; off A, 8¾@9¼c.; white extra C, 8⅜@8⅝c.; yellow extra C, 7⅞@8¼c; C, 7¼@7⅝c.; yellows, 6⅞@7⅛c.

TOBACCO.—The features of last week are the only prominent ones. Most fine grades of leaf are still above the views of manufacturers,

VEGETABLES.—Exports of potatoes for week 5,208 bbls. With lighter receipts of potatoes the market is steadier. Very choice marks are going in store for Winter use; sweet potatoes have advanced.

Potatoes—Early Rose, Eastern, ₹ d.-h. bbl., $2.50@3; State, $2.50@2.75; bulk, ₹ bbl. $2.37@2.62; Prolific, Eastern, d.-h. $2.50@2.62; Snowflake, State, $2.50@2.75, bulk, ₹ bbl. @ 2.62; Burbank, d.-h. $2.50@2.75; bulk, ₹ bbl. $2 37@2.62 Peerless, $2.25@2.37; Mercer Eastern, ₹ d.-h. bbl. $2.25; sweet potatoes, Va. yellow, ₹ bbl. $3 75@4.00; Del. River, $1@4 25, Jersey, $3.50@4.75

Onions, white bulk, ₹ bbl. $3.00@4; yellow, $2.25; red, east, $2.12@2.25; red, Chester, $2@2 12; squash, Marrow, ₹ bbl., $2.25@2.50, Hubbard, $2.75@3.75; cabbage, ₹ 10 $8@14; beets, L. I. ₹ bbl. $2.25@2.50 carrots, $1.25; turnips, Russia, L. I. $1 75@2, cauliflower, fancy, $5@7 average quality, $1.75@2.50; inferior, 50c@$1; celery, ₹ doz., $1.50@2.25.

WOOL.—Prices hold steadily, and though at the moment business is not large, holders express a determination and an ability to carry the unsold surplus.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Nov. 19, 1881.

BEEVES.—Receipts for the week, 13,848 head; do. last week, 15,021 do. With a dull, heavy dressed beef market, warm and muggy weather and a liberal supply of cattle trade was uncommonly slow and a large amount of stock will be carried over. Texans, Cherokees and Coloradoes sold at 8@8¾c. to dress 55 lbs.; poor to choice natives from 8c. to dress 55lb, up to 12c. to dress 57 lb.

VEAL CALVES.—Supplies run light and prices rule firm. Hog dressed have a steadier sale.

Hog-dressed country, choice, 13½@14c; fair to good, 12@13c; grass, 5@6c; fed 6@7c; live calves, N. J. prime to choice, 9½@10c.; do. State, 9c@9½c. fair to good, 8½@9c., poor to fair, 6@8½c.; Mount Hollys, 7@10c.; fed calves 4@4¾c; grass 3@3¾c.

SHEEP AND LAMBS.—Receipts for the week, 37,786 head; do. last week, 27,448 do. Market quiet and a little lower. Sales of sheep were mainly at 3¾@5¼c. for poor to good; with 5½c. for a load of Ohio wethers for export; also a carload of very choice do. home use at 6c. Lambs brough from 5½@6¼c; only a very choice lot would reach 6¾c.

MILCH COWS. For common cows the market is weak and easy. "Springers" are quoted at $30@35 ₹ head Common to choice range $40@75.

SWINE.—Receipts for the week, 38,710 head; do. last week, 28,713 do. Market easier, after good prices during the week. Live quoted $6.25@6.50 ₹ 100 lbs.; rarely above $6.37.

New Jersey dressed, light, 8¼@9¼c.; other weights, 7¾@8¼c.; city dressed, 7¾@8¼c. Pork tenderloins, 12@12½c.

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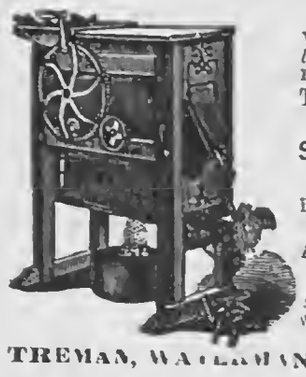
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Every Machine Warranted to do as good work
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For the Young.

CHILDHOOD.

THRICE blest oasis in life's desert, where
Oftimes amid our journeys we turn
With empty, longing hearts, and eyes that burn,
With feverish light, as we in fancy hear
The gurgle of its streams, and bathe therein
Our aching limbs and cool our heated brain.
Repose amid its grateful shades again,
Far from the busy world, its strife and din;
Hark! hark! that sound, that dear familiar bell—
Charmed by the sacred sweetness of its chime,
We listen now, as in the olden time,
As with the olden joys our pulses swell.
When lo! the mirage lifts itself in air,
And leaves us standing in the noonday glare.

MATTIE N. BROWN.

UNCLE SAM'S TIME-PIECE.

Perhaps some of the young readers of the RURAL have wondered how all the time-pieces in the country are, or may be, regulated to keep uniform time. At Washington, D. C., in the great Naval Observatory, stands Uncle Sam's big clock. It resembles somewhat those old-fashioned clocks that stood many years ago in our grandmother's kitchen, about which my young readers have doubtless read. But it has a more solid foundation than any time-piece of the early days; it is "founded on a rock," that is, it is fastened to a pier which rests upon a solid rock foundation. The fierce winds may blow never so hard, the rain-storms may beat never so strongly upon it, the great clock is unaffected thereby. It ticks, ticks, ticks, day in and day out, and how much do you suppose it varies in 24 hours? About 48 100 of a second! Wonder if any of our farmer boys have watches that vary as little as that!

Every day, at three minutes before 12, the regulator, as the clock is sometimes termed, is connected with the telegraph wires, and for these three minutes the track must be kept clear, and all messages, however important, must wait. Now then, in every village and city, indeed wherever there is a telegraph instrument in connection, the instrument records each tick of the clock, which occurs once per second, and just at 12 o'clock two ticks are made, and in an instant the "correct time" may be known throughout the country. Every noon people may be seen in the vicinity of the RURAL office holding their watches in hand and looking steadily at a great black ball suspended above the dome of the telegraph building. When the clock at Washington marks the hour of 12 this ball falls to the dome, and then the people can ascertain whether they have "ball time" or not.

It is probably not necessary for me to tell the boys and girls of the RURAL family that only those places situated on the same meridian with Washington have exactly the same time, and to get the *same* time in places in longitude east or west of Washington, the number of minutes it takes Old Sol (for after all he is the great time-piece) to pass these degrees must be added to, or subtracted from, 12. Remembering that he travels one degree, or about 69 miles, every four minutes, the exact time may be easily computed for any place.

UNCLE MARK.

AGRICULTURE.

AGRICULTURAL ARTS are amazingly ancient. Adam, Abel and Abraham all admired and adored agriculture. Alas! Adam ate an acrid apple, and all are accordingly accursed. Agriculture and associate allies, as arboriculture and apiculture, attract and astonish amateurs. Anger and anguish are alike arrested and assuaged at arable arts. American agricultural associations are annually advancing apace; and are assiduously active and assuredly assisting authoritative analyses. Acids and alkalies are already annexing arid areas, and apples, apricots, asparagus and artichokes appear as abundantly as acorns. Ardor and assiduity accomplish anything. Above all, arrant adulterations are awfully annoying, and abominable artificial articles are alarming all, and are alienating acceptable alliances. Adieu. TOM.

Hudson, N. Y.

NOTES.

ONE of the cousins tells how to prepare Autumn leaves for the Winter. Place them on a clean cloth, sprinkle powdered resin on them and press them out with a hot flat-iron which may be cleaned again with salt. She sews the leaves to paste-board cut in form of crosses, anchors, etc.

Keep the subject for the next Discussion in mind, and send in your comments soon. Let everyone tell what they know about keeping flowers in Winter.

Will Mable Walling, Carrie Heeny and Jenny Haresnape send their addresses. Always be particular about giving address in full.

A cousin wishes to know how to make rustic hanging baskets, vases, brackets, etc. Who will inform her?

"The Horticultural club is beginning to look like a club now, sure enough. The Discussions are splendid." So two Virginia girls write.

THE YOUNG QUERIST.

E. W. B., Factory Point, Vt., asks where books on sketching may be obtained.

ANS.—Write to Harper Bros., New York.

Jenny H., no address, asks why her double camellias do not seed like the single ones.

ANS.—Double flowers arise from the merging of stamens and pistils (the seed producers) into petals; hence when this merging is complete and fully double flowers are formed the organs which produce seed are simply leaves and can no longer perform their true function.

H. & C. J., Cohocton, N. Y., wish to know, 1, what ails their Hibiscus Syriacus plants; they cannot succeed in raising them, either out-of-doors or in the house; 2, where can cuttings of the Crab Cactus be obtained.

ANS.—1. The Hibiscus Syriacus is hardy with you, and should survive the Winter. Without particulars we can give you no more definite reply. 2. Cuttings of the Crab Cactus may be obtained of almost any florist.

M. S. W., Alden, N. Y., asks, 1, how long does it take seedling chestnut and black walnut trees to bear fruit after the seed is planted; 2, is there any possibility of a young horticulturist raising seedling gladioli.

ANS.—1. About ten years. 2. Certainly there is. The seeds are really little bulblets. If planted like other seeds flower bulbs may be produced in three years.

New Members of the Club for Week Ending Nov. 19.

Henry Cartwright, Minnie Fishell, Elmer Blanchard, Chester Blanchard, Lizzie Blanchard, Nellie Blanchard, Norah Bigelow, Carrie McCulley, Lucy Stevenson, E. W. Benedict, Edwin Guffin, Robert Guffin, Andrew Guffin, Geo. Brainard, Bessie Brainard, Jessie Brainard, Thomas Winfrey, Olive Ward, Junius Ward, Marine Putnam, Junia Strong, Anna Fleury, Effie Cross, Annie Harder, Fannie Langridge, Theo. Wilkinson, Herbert Freeman, Mary T. Gwinette, George Miller.

LETTERS FROM THE COUSINS.

An Experiment with an Acorn.

DEAR UNCLE MARK:—If you will let me I would like to tell the cousins how they can have a tree in the house this Winter. Select a large, well-grown acorn, and by the aid of a stout needle run a strong thread through it in such a manner that the acorn shall hang with the pointed end downwards. Now put the acorn in a clear glass bottle. Place the two ends of the threads over the opposite sides of the neck and secure them by tying them around the neck and fix the turns by tying the ends together. Now pour in a little water until it just reaches the point of the acorn. Then cut a small piece of card with vandyked edges, which can be turned down so as to form a loose cover. Keep the bottle in a warm sitting-room, and after a few days the acorn will open at the point and a white radicle or root will grow downwards into the water. This root will go on elongating for weeks, coiling round and round the inner side of the glass until a foot or more is packed away in the little bottle, and small rootlets grow forth profusely. At last the upper coverings of the acorn will split and the plumule, in the form of a little green stem, forces its way out, bearing delicate green leaves. These will grow with vigor, borne on a straight stem; the card covering will then have to be perforated to allow the little timber-tree to grow out. If at the end of the second Winter you plant it, it may flourish for a thousand years, perhaps. The seeds of other timber-trees may be used in similar manner, with such arrangements as are required by their size and form.

Your niece, CARRIE SPOONER.

Pottsboro, Texas.

DEAR UNCLE MARK:—We have taken your paper for a great many years, and like it very much. I would like to join the Club. We have quite a variety of flowers, viz: geraniums, dahlias, coleus, dusty millers, verbenas, and two orange trees. My dear sister Susie, who was an interested member of the Club departed this life on the 30th of July, in the 15th year of her age. We live on a farm about half a mile east of Williamsville. I am twelve years old, and, expect to attend school the coming term. This is my first letter to the RURAL.

Yours truly, SARAH E. SHISLER.

Williamsville, N. Y.

News of the Week.

HOME NEWS.

MONDAY, Nov. 21, 1881.

THE TRIAL OF GUITEAU.—The late President's assassin was brought to the bar of justice on the 14th inst. The counsel for the prosecution are District Attorney Corkhill Judge Porter, of New York, and Mr. Davidge, of Washington, and those for the defense are Mr. Robinson, of Washington, and Mr. Scoville, of Chicago. Guiteau's brother and sister were present when the trial began. The room was crowded with spectators. Owing to a misunderstanding about Robinson's employing additional counsel without Scoville's knowledge, Scoville objected to a continuance of the case. The result was that Robinson, Scoville and Guiteau were all trying to address the judge at once, the latter demanding that Robinson get out of the case. Five jurors were then selected and the prisoner was remanded to his cell. On Wednesday the remaining seven jurors were selected, one of whom is a colored man, and the case was duly opened on the 17th inst. by District Attorney Corkhill for the prosecution. He addressed the jury in a dignified manner, hastily running over the story of the assassination. Mr. Blaine, Secretary of State, was the first witness called. He was examined by the District Attorney and cross-examined by Lawyer Scoville for the defense. Camcho, Venezuelan Minister, was also called to the stand.

The Mormon tabernacle at Salt Lake city, which has been 28 years in process of construction and is not yet completed, has granite walls nine feet four inches thick, is 250 feet in diameter and seats 12,000 persons. It is a very perfect whispering gallery and the dropping of a pin or the rustle of a dress can be heard from one side to the other.

The New Lincoln National Bank of this city, has been inaugurated, to begin business January 1st. Thomas L. James, the present Postmaster-General, has been elected president by the stockholders.

Steinway Hall was thronged on the evening of the 16th by an audience of leading citizens of New York, the occasion being the concert by Adelina Patti and company in aid of the Michigan sufferers. The mayor presided. All the artists were accorded a kindly reception, and Patti was greeted with a storm of applause. The concert was a success, artistically and financially, and netted a good sum for the sufferers.

At a meeting of business men of Oshkosh and Fond du Lac, Wis., on the 16th, a memorial to the Secretary of War was drawn up setting forth the damage done to the cities of Fond du Lac and Oshkosh and the country round, and asking immediate relief by the removal of part of the Government dam at Menasha and Appleton. A committee was appointed to proceed immediately to Washington, consisting of Senators Sawyer and A. M. Paine, of Oshkosh, and A. K. Hamilton, of Fond du Lac. The damage already done by inundation is estimated at $600,000. The prospect is that the water will freeze before it lowers unless the Government interferes.

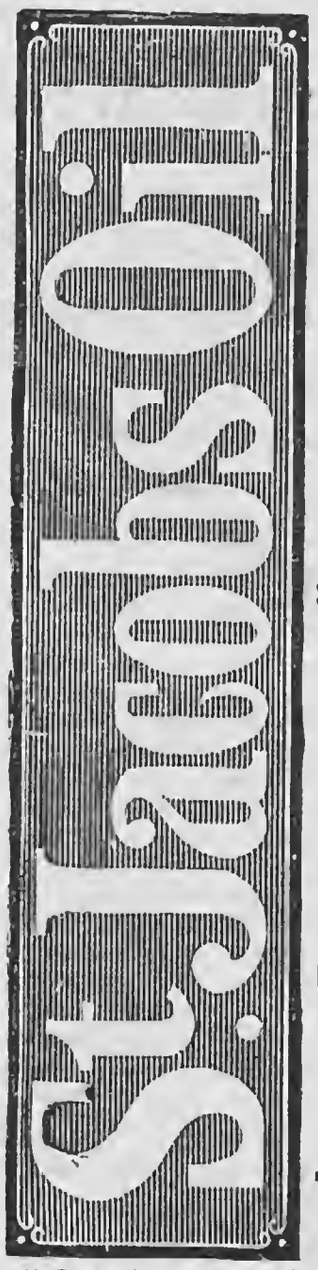
Secretary Kirkwood, in his annual report, recently submitted to the President, urges that the Indian schools be maintained and extended, and asserts that when the Indian has learned to speak and write our language, to earn his living by his own labor and to obey the law and aid in making and administering it, the Indian problem will be solved. He recommends that Congress be asked to create a commission of three or four eminent citizens to visit, during the next year, the reservation west of the Mississippi River, for the purpose of recommending to Congress, if they deem it wise to do so, the concentration of the Indians on four or five large reservations; or, if this is not deemed wise, then to recommend the concentration of existing small agencies where it can be done, and the reduction of the area of others.

One of the latest horrors related of the graveyard insurance business in Pennsylvania is to the effect that a poor, half-demented old man, upon whom a heavy policy had been taken out, was enticed to a hay loft, made drunk, and then by some ingeniously constructed trap precipitated to the stable floor below, where he speedily gave up the ghost as if by accident. We were at first inclined to doubt the credibility of this story, but since the disclosure of a still more startling and abhorrent performance at Scranton, Pa., which facts are not at all in dispute, the public can believe almost anything that is told of this abominable insurance traffic. In this case a son is under arrest for forging an application for insurance on his dying mother, 75 years old, and conspiring to take her life. It is one of the most heartless crimes of which we have ever heard.

Continued on page 804.

Miscellaneous.

The New York Clipper lately cited the case of Captain Jacob Schmidt, of Tompkinsville, Staten Island, N. Y., who had been a great sufferer with rheumatism for many years. He used St. Jacobs Oil with splendid success.



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PERSONALS.

Bismarck is in a state of irritability. He is suffering from neuralgia.

The estate of the late General A. E. Burnside is hardly sufficient to pay his debts.

Senator Anthony has served longer continuously in Congress than any other member of either house. He has been in the Senate for twenty-two years.

The Prince of Wales' two sons have arrived in Japan from Australia and are to be the guests of the government during seven days' festivities, the programme for which includes a banquet with the Mikado.

Ex-Governor Furnas has returned to Nebraska from his trip to the Pacific coast whither he was sent by the Department of Agriculture as one of a commission of three to investigate the fitness of some of the unoccupied public domain for agricultural purposes. He's delighted with California, especially as a fruit-bearing State.

John Merryman, the genial, whole-souled, bright, energetic John Merryman, of Cockeysville, Maryland, died last Monday. For years he has been prominently connected with the agricultural interests of the country, having been president of the American Agricultural Association, and also closely identified with several other agricultural organizations. He was widely known personally throughout the South, where he traveled a great deal, pushing the sale of the fertilizers known by his name. He had one of the finest herds of Herefords in the country. His death will be widely mourned, for to know him was to like him.

New Publications.

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Miscellaneous

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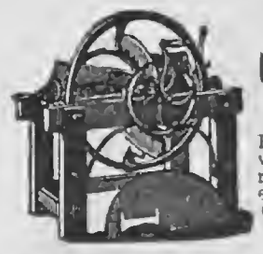

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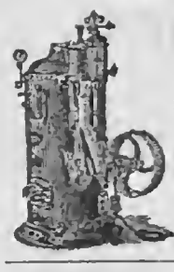

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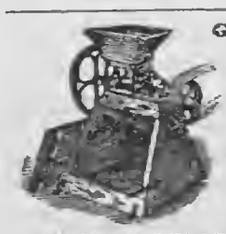

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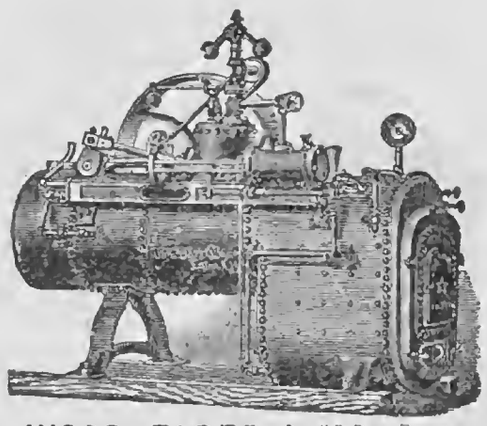

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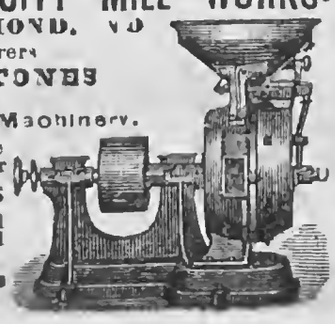

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FRUITS may be permitted to ripen in their native climate, and can be transported to any part of the world.

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The process is so simple that a child can operate it as well and as successfully as a man. There is no expensive apparatus or machinery required.

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Awaits Any Man who Secures Control of OZONE in any Township or County.

A. C. Bowen, Marion, Ohio, has cleared $2,000 in two months. $2 for a test package was his first investment.

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F. K. Raymond, Morristown, Belmont Co., Ohio, is clearing $2,000 a month in handling and selling Ozone. $2 for a test package was his first investment.

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J. B. Gaylord, 80 La Salle St., Chicago, is preserving eggs, fruit, etc., for the commission men of Chicago, charging 1½c. per dozen for eggs and other articles in proportion. He is preserving 5,000 dozen eggs per day, and on his business is making $4,000 a month clear. $2 for a test package was his first investment.

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These are instances which we have asked the privilege of publishing. There are scores of others. Write to any of the above parties and get the evidence direct.

Now, to prove the absolute truth of everything we have said in this paper, we propose to place in your hands the means of proving for yourselves that we have not claimed half enough. To any person who doubts any of these statements, and who is interested sufficiently to make the trip, we will pay all traveling and hotel expenses for a visit to this city, if we fail to prove any statement that we have made.

HOW TO SECURE A FORTUNE WITH OZONE.

A test package of Ozone, containing a sufficient quantity to preserve one thousand dozen eggs, or other articles in proportion, will be sent to any applicant on receipt of $2. This package will enable the applicant to pursue any line of tests and experiments he desires, and thus satisfy himself as to the extraordinary merits of Ozone as a Preservative. After having thus satisfied himself, and had time to look the field over to termine what he wishes to do in the future—whether to sell the article to others, or to confine it to his own use, or any other line of policy that is best suited to him and to his township or county—we will enter into an arrangement with him that will make a fortune for him and give us good profits. We will give exclusive township or county privileges to the first responsible applicant who orders a test package and desires to control the business in his locality. The man who secures control of Ozone for any special territory, will enjoy a monopoly which will surely enrich him.

Don't let a day pass until you have ordered a Test Package, and if you desire to secure an exclusive privilege we assure you that delay may deprive you of it, for the applications come to us by scores every mail—many by telegraph. "First come first served" is our rule.

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We refer, by permission, as to our integrity and to the value of the Prentiss Preservative, to the following gentlemen: Edward C. Boyce, Member Board of Public Works; E. O. Eshelby, City Comptroller; Amor Smith, Jr., Collector Internal Revenue; Wulsin & Worthington; Attorneys; Martin H. Burrell and B. F. Hopkins, County Commissioners; W. S. Cappeller, County Auditor; all of Cincinnati, Hamilton County, Ohio. These gentlemen are each familiar with the merits of our Preservative, and know from actual observation that we have without question

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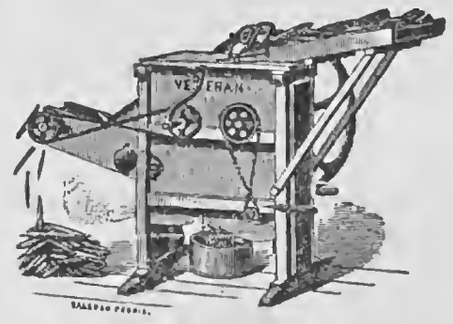

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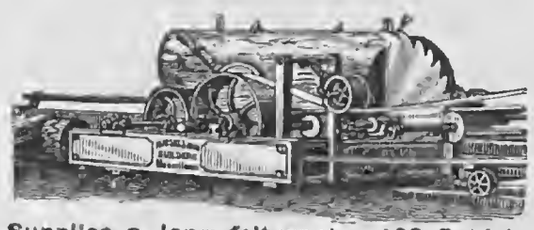

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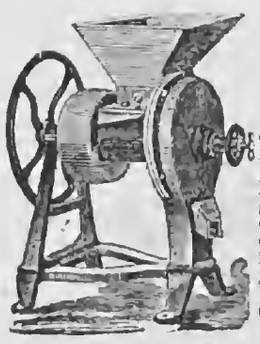

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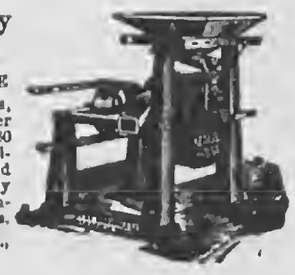

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

VOL. XL. No. 1662.} NEW YORK, DEC. 3, 1881. {PRICE FIVE CENT $2.00 PER YEAR

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Floricultural.

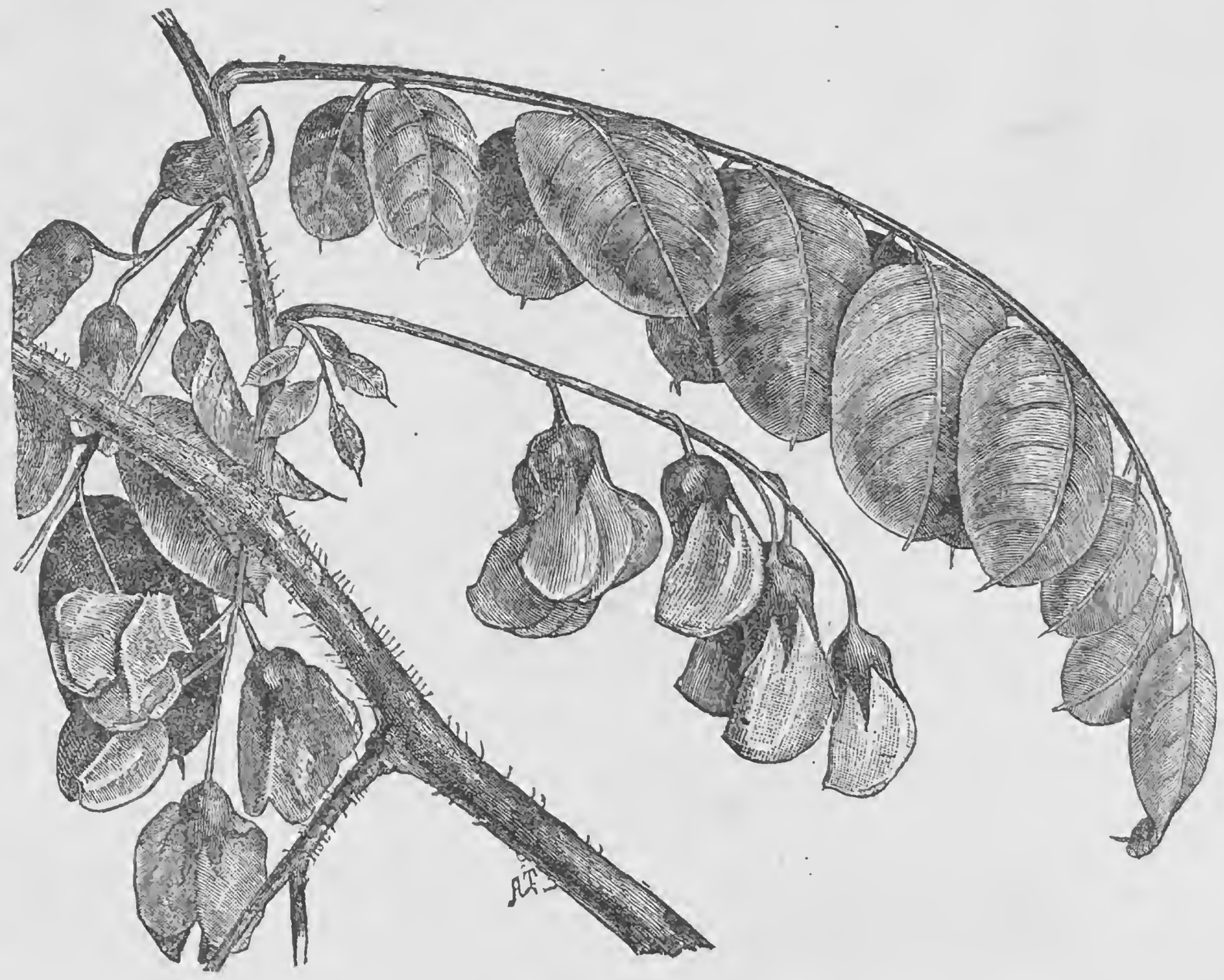
ROSE-ACACIA.—Robinia Hispida.

SAMUEL PARSONS, JR.

ACCORDING to so high an authority as Shakespeare, it matters little what we call our flowers, since a rose would smell as sweet by any other name. Rose, however, is a name surrounded with delightful recollections; and attributes of delicate grace and tropical charm are associated with the term acacia. Wise aphorisms therefore to the contrary, a pleasant interest is, perforce, aroused by the compound word Rose-acacia. The appearance of this shrub, in fact, suggests both the rose and acacia. It belongs, botanically speaking, among the robinias or acacias, and has the characteristic leaves of that genus, but in this case the leaves are peculiarly shaped or elongated so as to suggest at the same time the foliage of both the rose and acacia. Unlike the best-known hardy acacias, this species, as usually seen, is simply a straggling, trailing bush; in fact, its habit in this respect resembles that of the rose. The young wood, too, is not unlike that of some strong-growing roses, brown and mossy on young stem and twig.

One is particularly charmed, however, by the flowers of the Rose-acacia. They are rose-colored, but there all real resemblance to the rose ceases, for in all other ways they are true acacia blossoms, borne in racemes four inches long, pendent and very graceful. These flowers have the additional excellence of a long season, often nearly all Summer. Though an old shrub, having been introduced to European gardens from the Carolinas more than 100 years ago, the Rose-acacia does not, somehow, become as popular as it should. Its straggling, irregular habit is against it. The lovely flowers are trailed in the dust by heavy rain-storms, and at times its reputation has suffered unfairly on the score of an imputed tendency to succumb to the inroads of borers. To overcome this prejudice and secure a proper exhibition of the charms of this beautiful shrub, skillful pruning is necessary. There is need for the thinning out that renews and thickens the growth of young wood and consolidates the native straggling habit into the irregular bushiness that should characterize all well-grown shrubs.

A striking fashion of growing the Rose-acacia is found in the method that grafts its cions on the Robinia Pseudacacia, or Yellow Locust. By this means a great head of beautiful, pendent flowers and leaves is developed in two or three years about a stem, originally, when grafted, some five or six feet high. Here, however, intelligent pruning becomes still more necessary to prevent, during early and even later life, great masses of growing wood from being torn off during Spring and Summer gales. This method of treating the Rose-acacia has its special value for special purposes in landscape-gardening, just as budding high standard roses have secured a definite value for the attainment of certain effects on the lawn. Ordinarily, however, I believe the low, bushy form of the Rose-acacia does better, and shows its peculiar attractions in a more natural and satisfactory manner when properly disposed on the outskirts of other shrub groups or in colonies by itself.



THE ROSE ACACIA—ROBINIA HISPIDA—(AFTER THE LONDON GARDEN).—FIG. 542.

Horticultural.

RURALISMS.

APPLE trees and horse-chestnuts in flower in November are a rare sight. It is one of the curious results of the drought, of which quite an interesting list might be made. The wonderful crop of mushrooms formerly referred to was checked by a frosty night, but again made their appearance in [illegible] numbers. Cannas cut down by the frost and left in the ground have now (Nov. 11) made a new growth of three or four inches. At this time, too, salvias in sheltered places present a midsummer brightness, while roses have not looked so fresh since June, and so of other inmates of the garden. Plants, however, whose natural season for bloom is the Fall, such, for example, as the chrysanthemum, have flowered later than usual, and less abundantly. Persons curious in such things could make up a long list like the above.

THE present season will long be remembered by the gardener for its multitudes of mealy bugs. They have infested almost every thing, indoors and out. I have noticed, however, two remarkable exceptions worth noting, the Clerodendron Balfourii and Allamanda Hendersonii, two of our best hot-house climbers. I have looked in vain for a single mealy bug on either of them during the Summer, both at home and elsewhere. These two plants enjoy singular immunity from insects of all kinds that usually infest climbing plants, and I call attention to the fact for the benefit of those who love climbers, but do not grow them because of the trouble of keeping them free from insects. The Clerodendron and Allamanda require some heat to bloom them well. They are strong growers and should not be overpotted. They bloom profusely and long. I may add that they do not grow or flower well in rooms.

THERE seems now to be some doubts in regard to the real value of ensilage for feeding purposes. This is a vital point, and should be carefully looked to before going too largely into the building of expensive silos. I gather from notices in the press that ensilage is not popular in England and some farmers in Massachusetts and elsewhere report their dairy products as being unfavorably affected by its use. The RURAL, of course, will look after both sides of the question. It seems to be conceded that green fodder can be preserved in silos, and that cattle are fond of it; but what chemical changes it undergoes, and how far and in what manner it affects the products of the dairy, do not seem thus far to have received any great amount of attention.

I SHOULD judge, from the descriptions, that Mr. Parnell has the true Ott pear, and that Mr. Allen has not. It is an early pear, good to eat out of hand in its best condition, but is quite variable and only adapted to localities. It is now superseded by more desirable kinds of its season. I have known instances of variation more remarkable than Mr. Parnell's, which could only be referred to local causes. I know of several Seckel Pears (on quince stock) in the same garden, one of which always bears pears twice or three times the size of the others, the latter being of the usual size. It never produces so many flowers as the others, but the fruit is of such large size as can only be produced by thinning out. The only difference in the soil that I can perceive is the presence of a large quantity of leaf mold where this tree is planted. The soil naturally is a light loam. I have noticed a number of anomalies of this kind, for some of which I could find a plausible reason, and for others no reason that satisfied me. I could write a long chapter about such things. Who can tell me why one Chasselas Musqué grapevine should so far forget its nature as to refuse to crack and shank, while two others in the same house performed in the usual obstinate way in spite of all my care? But what a splendid grape it is when there is enough of it left to eat.

I SHOULD think the abutilon (insigne) referred to by Leon must be a beautiful plant. I have not grown it, but must now do so. A little timely pinching will doubtless keep its scraggy habit in reasonable subjection.

HORTICOLA.

NOTES AND COMMENTS.

I WOULD again call the attention of the readers of the RURAL to the editorial remarks on page 752, relative to the severe pruning which hedges often receive. I fully concur with the editor in his opinion, and to those who are so fortunate as to possess fine hedges the editor's remarks are invaluable; and one cannot but notice that the finest hedges are those that are not severely or annually pruned. While a hedge is young it, of course, must be pruned more or less, so as to obtain a uniformity of growth and increase of size; but after it has nearly attained the desired hight it should not be pruned severely, and at least three-fourths of an inch of the young wood should be allowed to remain. As soon as a hedge begins to show signs of injury, or of weakness of growth, it is an excellent plan to allow it to remain unpruned for one or two years. These remarks are especially applicable to the American Arbor-vitæ. It is worthy of remembrance that all severe pruning is a blow struck at the vitality of the tree.

IN pruning Arbor vitæ hedges it is well to remember that under no consideration whatever should a part of the tree be cut back to the old or leafless wood. I happen to know of an instance where this had been done on the side of a hedge a few years ago, and the result

is that on this side the branches are entirely dead, while the other side, that had not been severely pruned, has remained uninjured—not a break in its foliage can be seen. [Is not the reason of this that coniferous evergreens cannot push buds and form foliage soon enough to support the wood?—EDS.]

FOR an ornamental evergreen hedge there is nothing that can equal the American Arbor-vitæ (Thuja occidentalis), while for a dwarf hedge plant the Tom Thumb and Hovey's Arbor vitæ will be found indispensable. [Does not Mr. Parnell mean the feathery form of the common Arbor-vitæ? In most cases it loses these feathery leaves as the plants become old, returning to the species. Besides, this youthful form is not at all hardy at the Rural Grounds.—EDS.] The evergreen Thorn, the Yellow-fringed Cratægus pyracantha, is also a most valuable ornamental hedge plant.

A CHOICE and remarkably interesting plant for the lawn is Buist's Variegated Althæa—Hibiscus Syriacus foliis variegatis. It is of more compact habit and of dwarfer growth than the majority of the althæas. The flowers are small and insignificant, the beauty of the plant consisting in its leaves, which are curiously and beautifully marked with white. In a rich, deep soil this species grows freely and stands our hot, dry Summer weather without being injured in the least. It is, moreover, perfectly hardy. [Do the flower buds ever unfold with you?—EDS.] While the plants are small pinch back the strong-growing shoots occasionally during the season of growth. For this species this treatment seems, to me at least, far preferable to the severe annual pruning usually given the althæas.

WHILE speaking of the althæas, I desire to mention the fact that, of late, large plants die suddenly and in a manner unaccountable to me. Have any of the RURAL readers noticed this, and if so, what is the matter with them? [Asking pardon for so many interruptions, we would reply that in sandy soil, subject to drought, ours have been killed in the same way. Not so in clayey, moist soils.—EDS.]

THE Scarlet Oak—Quercus coccinea—is just now a remarkably attractive object among our forest trees. This is one of the most beautiful and distinct of oaks, on account of the leaves assuming a beautiful scarlet tint in the Autumn months, and on this account it is well worthy of being more extensively employed in planting ornamental grounds.

IT is a common opinion among most persons that deciduous trees and shrubs cannot be successfully removed while in full leaf. About the middle of June last I removed two large althæas, both being over eight feet high; they both lived and are doing well. When they were at first removed the ground was very wet; but since then it has been dry enough. The plants were very carefully taken up and replanted. They were severely pruned and as soon as dry weather set in they were well mulched, and occasionally given a good soaking of water. I do not suppose it would prove to be a very profitable operation on an extensive scale, but when it is necessary it can be done with entire success, provided a person will use a little skill and judgment. [True. We have at various times in the Summer during many years transplanted peach, apple, pear trees, deciduous and evergreen trees, grape-vines, blackberries, raspberries, etc. successfully.—EDS.]

ONE of the prettiest and most attractive green-house plants at the present time is the Catalonian jessamine—Jasminum grandiflorum. It is a plant easily cultivated, requiring good drainage and a compost composed of two-thirds well rotted sods and one-third well rotted manure, with a temperature of 50 during its season of bloom—which is from October to January. It is a plant with light, graceful foliage and deliciously fragrant, pure white, star-shaped flowers. The plants can be cut back into shape and planted out in the open air about the first of May, and taken up carefully and potted about the end of August. It is also an excellent window plant and as it is of climbing habit it can be trained in almost any desired form. It is very subject to the scale insects, and care must be taken to keep them in check. Propagation is effected by cuttings, but fine plants may be easily obtained by layers during the Summer months.

WITH me all the Winter pears are ripening much earlier than usual, I presume on account of the severe drought. One of the best in eating at the present time is that excellent sort, Dana's Hovey. In my opinion this is the highest-flavored pear in cultivation. On account of its small size, I presume, it is of little value as a market sort, but for amateurs it is without an equal. The tree is of vigorous, upright growth and is remarkably productive, retaining its foliage until late in the season. The fruit is of small size and of a greenish-yellow color, with a juicy, melting flesh and a rich, sugary, aromatic flavor.

OUT of 95 varieties of pears in my collection there are only three that have retained their foliage to the present time (Nov. 12), viz., Dana's Hovey, Michaux and St. Michael Archange. [The Kieffer still retains a few leaves with us.—EDS.]

WILL you please be so good as to inform me where I can obtain a plant of Abutilon insigne? I was of the opinion that this species was not in cultivation at the present time.

HAVE Schweidler's Purple-leaved and Weir's Cut-leaved Maples been tried at the Rural Grounds, and if so a few descriptive notes on their rapidity of growth, habit, etc. would prove of interest to me. [We have never tried Weir's, as it is simply a variety of the Silver Maple, which we have never liked as an ornamental tree. Schweidler's grows just about as fast as the species, the Norway. —EDS.] CHAS. E. PARNELL.

Field Crops.

SOME RURAL SEEDS.

WHITE ELEPHANT POTATO.—Rather late last Spring I received through the RURAL Seed Distribution two medium-sized White Elephant Potatoes, with some other seeds and packages empty from being torn open and the seed lost in the mail transportation. The potatoes were not weighed, but cut to pieces of one eye and planted with phosphate in a rich, loamy soil that had been manured with fine manure plowed in. It being late and the soil becoming considerably dry, the sets were some time in coming up, and it required vigorous fighting to protect them from the potato bug. They received ample attention and made an excellent growth of vines, but on the bottoming I was disappointed, although I obtained about one bushel of average tubers. They did not, however, quite come up to my expectations, and still I am inclined to think that their failure to do so was due to the place where they were planted rather than to any unfavorable quality of the potato itself; and here I will say that they were planted on a piece of ground that had been used several years for onions, and that was last year planted to potatoes and a portion of it was again planted this season, and it must be reported that on that portion the potatoes did not do at all well; so I am inclined to think that with more favorable conditions the White Elephant would have given very satisfactory returns. Perhaps right here I may be permitted to say that in my opinion no better soil or field can be used for the cultivation of potatoes than some old, outlying field that has not been under the plow for a number of years, and even though the soil looks thin, with a liberal dressing of manure incorporated with it and the use of phosphate in the hill, there need be no fear of a poor crop, and in such cases one will almost invariably have perfectly smooth tubers. Now one trouble with my potatoes grown on the old cultivated soil was that they were exceedingly rough and scabby, while others, grown upon a portion of old pasturing that had not been under the plow for 25 years or more, were as smooth and nice as could be wished.

RURAL BRANCHING SORGHUM.—I planted the seed of the Rural Branching Sorghum and it failed to germinate except a stalk here and there, but these, either from its being so extremely thin or from some other cause, did branch almost without limit. Judging from the indications of the little that came up I should imagine it would be a profitable plant to grow, if its saccharine qualities are equal to those of other varieties, because of the great number of stalks that would be produced, and yet there is a possibility that the number of these would be somewhat diminished in size because of an increased number from one germ. This seemed to be the case so far as my own was concerned. An important point in sorghum culture is to secure a variety possessing the highest degree of saccharine quality. A cane may furnish a large quantity of juice, but of so low a grade as to produce but little sirup and that of a low grade. [The Rural Branching Sorghum is a fodder plant rather than a sugar or sirup making cane.—EDS.]

POTATOES AND CARNATIONS.—These were taken in hand by my "better half" and carefully attended to and they rewarded her with many blossoms in great variety, richness and delicacy of coloring, that were much admired. It was a happy thought of the RURAL that prompted it to the distribution of the seeds of beautiful flowers so that the houses and gardens may be rendered attractive. There is no home, however humble, that may not be relieved of its gloom by the introduction of a few of these messengers of love—beautiful flowers. How the heart is made glad as they seem to smile upon the weary laborer, whether from the field or by the fireside, and the more there are the greater the blessing.

Tolland Co., Conn. WM. H. YEOMANS,

HUNGARIAN GRASS.

Fifteen years ago there were very few fields of tame grass in this part of Missouri, and farmers opening new prairie farms found in Hungarian and millet good substitutes for Timothy and clover. Prairie hay, unless well backed with corn, barely kept stock alive during the Winter. For several years I wintered 40 or 50 head of cattle and 15 head of horses on Hungarian without losing a calf or a colt or discovering any sign of disease. I believe it to be as valuable, ton for ton, as Timothy hay. My first crop of it was 25 acres on prairie sod broken late in the Fall and early Spring, sowed on the 1st of April, one peck to the acre; yield, 75 tons of clean hay.

I commenced cutting it on the first of July, while in the "milk." The last day's cutting, two weeks from commencement, was fully ripe. In raking the seed shelled badly on both early and late cuttings. The seed on the first cutting was small and light-colored, and though the Fall was favorable none of the seed sprouted. But the stubble of the early cutting grew, sending out several shoots to each that headed out. The following year Hungarian grew wherever it could find an unoccupied spot, all over the field mentioned, and wherever the cattle stood or fed. Around trees mulched with manure I gathered stalks six feet tall for exhibition. Hungarian has, I think, several advantages over millet. It is more hardy, can be sowed earlier, is surer to grow, stools out better, makes finer hay, and there is more blade and less stalk. It will stand more rain with less damage in the shock, stack or windrow than prairie hay or Timothy. When a badly finished stack of prairie hay rots to the ground Hungarian will suffer little.

The seed has had a bad name as food for stock; but, while I have seen no ill effects from it, I have observed that we never had eggs so plentiful in Winter until we commenced feeding it. I believe that cattle digest very little of the seed, and horses even do not digest it all, and as it yields as high as 70 bushels per acre sometimes, it would pay to thrash and grind the seed with corn and oats for stock. Early sowing is the surest. It needs moisture to give it a start; after that very few crops stand the drought better. It pays to prepare the ground well, leaving it very level, lest heavy showers wash the surface and bury the young blades. J. W. MULVEY, M. D.

Caldwell Co., Mo.

KANSAS NOTES.

Sorghum for Feed.

I have never raised sorghum for the purpose of sirup-making, but I have raised it two years for feed, and consider it superior to any other forage plant I have ever raised in any State for this purpose, Timothy and clover not excepted. I prepare the ground the same as for any other crop, and drill with my wheat drill half a bushel of seed to the acre. I sow it from April to August first. If it grows strong and tall, I cut it with a revolving-rake reaper, and, after allowing it to wilt for several days, I bind and shock it in large shocks until dried, then stack and salt it the same as corn-stalks. If it is finer and shorter, I cut it with a mower and cure it the same as hay. It takes a long time to cure and dry out, otherwise it will heat and spoil. The stacks should be long and narrow. The crop should stand until ripe enough for sirup before cutting. It will not bleach and spoil on the ground like hay or grain. Many let it stand without cutting and feed it on the ground, and cattle and sheep will eat it clean, even the butts and roots, leaving nothing. I am of the opinion that the large, coarse stalks are the best for working animals. My horses are working and driving on half rations of grain (rice corn), and are doing better than when I fed them hay and corn fodder, with full rations of corn chop. The seed is equal to corn, and will produce as much to the acre. I think when well cleaned it weighs 60 pounds to the struck bushel. It is superior to any other dry feed for milch cows. Our dry climate and winds make it easy to cure, and it stands drought better than any crop except the rice corn.

RICE CORN FOR FEED.

I have raised rice corn three years, and have had good crops each year—from 20 to 30 bushels per acre. I plant it in drills eight inches to one foot apart, one seed in a place, if the seed is good, and three to four feet between the rows. It yields well planted six to eight inches in the drill. I cultivate well while small, but after the heads are out they are liable to break off. I harvest it by cutting the heads off with a pocket knife and gathering them in baskets the same as corn, having my wagon along. Each man takes four rows, and will cut more than he could pull of Indian corn. It is liable to heat if put in too large cribs. Some thrash it with a common thrasher, and others feed it in the head. I prefer the latter method, pulling the heads apart and mixing them from bran. I have fattened hogs two years on this feed, and fed my work horses on it through wheat seeding until the corn was out in Spring, and think two bushels of it are equal to three bushels of the best Indian corn. I feed it to my sheep and rams with the same results, and have never seen any harm result from it. All stock must learn to eat it before they like it. Nothing will eat the young corn when growing. Sheep will take all the grass in the field without touching a leaf of the corn. The stalks are very hard and woody, and almost worthless for feed when dry. In early Fall the stalks will make a quarter to one-eighth as much sirup as sorghum—so I am told. It stands drought quite as well as sorghum, and I am told grasshoppers will not bother it. It makes splendid griddle cakes or puddings, when ground.

BROOM CORN.

I raised a few acres of broom corn one year for the purpose of shedding. In planting, I used my sulky plow, dropped the seed in the back side of the furrow and covered it with the next furrow, plowing wide so as not to cover it deep. It came up thick and was cultivated. I planted it July 3, the rows being about 3½ feet apart. It grew from eight to eleven feet high and the brush was of tremendous length and full of plump seed. I cut and shocked it the same as corn, and fed it to my sheep during the Winter with good satisfaction. I fed 1,500 bushels of light seed to my sheep the same Winter and they liked it for feed. My neighbors raise large quantities of it with only very little labor. The cutting is the most work. They get from 400 to 700 pounds to the acre of the brush, and 15 to 30 bushels of seed. The brush sells at $60 to $110 per ton, and the seed at 20 to 25 cents per bushel. It is used for feed for cattle, horses, sheep and hogs. H. J. COLVIN.

Farm Topics.

ICE-HOUSES ON THE FARM.

OF THE advantage of having a good supply of ice for family use in Summer it is hardly necessary to speak; yet, however much its advantages may be conceded, very many farmers forego much real enjoyment which they might have at little trouble and expense, and instead of refreshing themselves on ice-water, used moderately, and spreading their bread with nice, cool butter, they drink the warm water from the spring and cover their bread with an oil less healthful and pleasant to the taste. This is not because they do not recognize the good a little ice may do, but they "never get at the work," or "it is too much of an undertaking" to build an ice house.

Aside from the fact that ice in Summer makes living more pleasant when the mercury reaches 100 degrees in the shade, it has come to be a necessity for those who keep a dairy, if their butter products are to be first-class. But every farmer who now has none will find time and money well spent in building an ice-house, to be filled later in the season. It may be built above or below the surface of the ground, as seems desirable. I remember seeing one on a farm this Summer, which answered the purposes of a small dairy of 12 or 15 cows and furnished what ice was needed for domestic purposes. Not all ice-houses can be so favorably located as was this. Near the farm house a little fish-pond, fed by a never-failing stream, had been made some years ago. It was not more than 25 or 30 feet in longest diameter, yet when it was discovered that this might be turned to use as an "ice factory" in Winter, it afforded a sufficient quantity of ice to supply three neighboring families, whose ice houses were not so favorably located. On the lower side of this pond stands the ice-house. This, as we remember it, is not more than 10 feet by 12, with a hight up to eaves of, perhaps, 10 feet. It is built of common, smooth boards, a shingled roof and ventilator, and the joists to which the clap-boards are nailed without afford also, within, a place for nailing coarse boards, which, when fastened, form with the clap-boards a place for "packing" with chaff or straw. The door-sill is about on a level with the top of the embankment about the pond, so that the ice-cakes can be stowed away with but little labor. As I have said, this pond of small dimensions furnished this and three other families with a sufficient amount of ice for Summer use.

But, wherever the house be built, proper drainage and ventilation are indispensable. If

possible the sills should rest on a brick or stone foundation, and should incline towards a drain to secure dryness. The floor should be of cement, and upon this, when the ice is to be stored, poles, covered with straw, should be laid, so that all the water from melting ice may be carried away. For packing between the inner and outer walls, straw, saw-dust, chaff or shavings may be used. If the ice-house is to be of very large dimensions, it is much more convenient to have, say, three doors, one above the other. As to proper ventilation, various modes will suggest themselves to the builder, such as small ventilators upon the ridge of the roof, holes bored in the peaks, etc., etc., but ventilation in some way is necessary. J. W. D.

Rotten Bagasse for Manure.

I am trying well-rotted bagasse this year as a manure. A neighbor who had run a sorghum mill for several years had allowed the bagasse to accumulate until the rotting mass had spoilt his well of water near-by. He gave it all to me on condition that I would haul it away, as he did not believe it would pay to haul it out. I at once determined to test it, and hauled and spread a heavy dressing over my potato patch, which I intended to plant with potatoes again next year. On a part of this I shall apply no manure; on a part fresh stable manure, and on the balance nothing but bagasse, turning it all over this Fall and letting it lie until Spring. One thing I am satisfied of, and that is, that the bagasse is splendid for mulching. In hauling it in August, when the weather was hottest and when we had an extreme drought, I accidentally threw a pile near a citron vine that had nearly perished from the heat and dry weather and in a very short time it commenced growing, and although all the rest of the vines yielded nothing, this kept on growing and gave us a dozen fine citrons, and was full of blossoms when the heavy frost of November 3rd killed it. N. J. S.

Miller Co., Mo.

The Apiarian.

FACTS ABOUT BEES AND HONEY.

THERE are a few facts about bees and honey that ought to be generally known, and yet about which many people are ignorant. One fact is that bees inside of a building seldom sting. Among other apiarian implements and products that I once exhibited at our county fair, was a honey extractor. There were a few colonies of bees kept within a short distance of the fair grounds, and a few of the bees were not long in discovering that my extractor was not perfectly clean, that is, it was slightly "sticky" inside with honey, and soon a score or more of them were doing their very best in starting a "land office business." Every time a bee left the extractor there would be a dozen "Oh mys!" and a general stampede among the inspecting crowd; some of them, perhaps, getting their toes trodden upon, and others uncomfortably jostled. Whenever a man stood his ground and did not "dodge," I knew in a moment that he was a bee-keeper. There was not the least danger of any one's getting stung, but to prevent so much unnecessary alarm and annoyance I gave the extractor a thorough washing, and then there were fewer bees.

When a person is stung, the sting should be removed as quickly as possible; not, however, by taking hold of it and pulling it out, for, by so doing the poison sack is compressed and more poison is thus forced into the wound; but it should be *scraped* out, either with the finger nail or some instrument having a somewhat sharp edge. I have yet to find a better remedy for bee stings than alcohol; it should be freely applied immediately after removing the sting.

"Let's see—the drones are the ones that lay the eggs, are they not?" I could not begin to tell how many times the above question has been put to me by persons who were not bee-keepers. First, I suppress a smile, and then say: "Oh no, they are the male bees; it is the queen that lays the eggs. She is the only perfectly developed female in a colony of bees, while the workers are undeveloped females."

But if there is any one subject pertaining to bees and honey upon which the masses in general are ignorant, and upon which we bee-keepers have talked and written a great deal and upon which we shall probably have to talk and write a great deal more before it is fully understood, it is that of the difference between *strained* honey and *extracted* honey. I have no idea how many people at the fair asked me if my extractor was a *patent churn*. When honey is strained, the combs, with whatever they may contain, are mashed up, and the contents allowed to drain out. As the combs contain bee-bread or pollen, and brood, and sometimes dead and living bees and other rubbish get mixed in, the honey that drips, yes, and sometimes is squeezed from them, is, to say the least, pretty highly flavored. No wonder that it makes some folks sick when they eat it. In throwing honey from the combs with a honey extractor, nothing leaves the combs besides the pure liquid honey. As honey-comb is indigestible, extracted honey is more healthful than comb honey; and many who could not eat comb honey, because of the bad effects that followed, have found, upon trial, that they could eat extracted honey with impunity.

Every one should know that nearly all liquid honey will candy or crystallize upon the approach of cool weather; and that it can be again reduced to a liquid state by the application of a gentle heat. Let no one ever think that honey is adulterated or made from sugar because it is candied, as there is, perhaps, no better proof of its purity than this same crystallization. W. Z. HUTCHINSON.

Genesee Co., Mich.

Dairy Husbandry.

THE DAIRY COW.

HENRY STEWART.

Treatment of Diseases of the Udder.

AN attack of garget requires instant treatment; neglect may cause serious results, while immediate care may soon overcome the trouble. The treatment varies somewhat according to the peculiar character of the attack; and this differs greatly as the causes differ. The causes of garget, in which may be included all the forms of the disease, are constitutional tendency to inflammatory disease; overfeeding with stimulating food, such as cotton-seed meal, which readily provokes it; inflammation resulting from cold, as exposure to cold rains soon after calving, or by lying upon damp, cold ground; excessive muscular strain as by chasing around when the udder is filled; retention of milk, either purposely done by the owner, or by the cow withholding the milk; and lastly by a sort of reflex action upon the milk glands produced by a generally diseased condition of the cow which disturbs the circulation and forces it excessively in this direction, or which produces a diseased and irritant condition of the blood.

It is readily seen that each of these conditions may call for a different treatment, and that it would not be difficult for the owner of a cow to do mischief by adopting the advice of a neighbor or friend, who might have at one time, procured relief in a case having an entirely different origin, by the use of some particular treatment or remedial agent. In some cases it is very clear that medicine might be required; such as for instance, when the trouble is caused by some disease of the blood when this is removed the secondary effects may disappear. In some cases mechanical treatment only may be needed, as when the vessels and ducts have become engorged and the milk has clotted in them, and an alkaline injection would dissolve the solid caseous matter and enable it to be drawn away. In some cases both this treatment and medicine would be needed, as when the blood is in an acid condition during a feverish state of the system and alkaline salts may be given internally and injected into the udder as well.

Sometimes soothing outward applications may be requisite as when muscular strains or accidental blows have caused the trouble; and at other times when suppuration is probable some absorbent agent, such as iodine, may be applied and an antiseptic medicine given internally. In this case warm fomentations would be useful and it may even be advisable to apply hot poultices and to support the udder by a broad bandage carried under it and over the loins. When it is necessary to draw the milk from a disordered udder, a silver milking tube may be used, which is inserted in the teat and through which the milk flows by its own gravity. This would overcome any obstinate interference by the cow with the flow of milk, and bring it down in spite of her objections. When the milk is too ropy and clotted to be drawn in this way, an injection of one teaspoonful of carbonate of soda (common baking soda) or saleratus dissolved in a pint or half a pint of warm water may be injected into the udder through the teats. This will dissolve the thickened milk and enable it to be drawn either by the milking tube or by the hands or fingers. These methods will be applicable whenever the udder requires to be relieved of its contents, unduly retained from whatever cause.

When the cow is in a fevered condition, or the udder is greatly inflamed, tender and hot, a cooling saline medicine will be useful; this may be a pound of Epsom or Glauber salts, and if the fever is very considerable one ounce of saltpeter may be added. A saline diuretic, such as saltpeter, will always relieve an inflamed udder, as it increases the action of the kidneys and so reduces the activity of the milk-secreting glands.

When the udder is in a suppurative condition and the matter drawn from the teats is mixed with pus, hyposulphite of soda will be beneficial; this is an effective antiseptic and prevents danger from the absorption of pus into the blood. This salt is given in one-ounce doses daily and should be continued until all danger is removed. A mixture of four ounces of glycerine, with one dram of iodide of potassium, dissolved in as little water as is necessary to make the solution, will be useful to disperse a threatened abscess, or to soften the udder when it is very hard from an obstinately congested condition. The iodine is an active absorbent and has been used in such cases with the best effect. When a portion of the udder becomes tumefied, fomentations of hot water, or a hot poultice of linseed meal applied to the part by means of a broad bandage covering the udder and brought up over the back and securely fastened there and behind the buttocks will be advisable. These remedies are only suggested for the use of the owners of such cows as may be affected with garget. It is impossible to mention particularly the right treatment for every special case. Ordinary judgment and reason must be used to meet each particular case when treatment is found necessary.

In general it is easy to avoid the trouble by forethought and preventive precautions. These will do more good then a great quantity of remedies. To watch the cow, to use the best system of management, to be ahead of any difficulty, and should it come to be prompt to treat it, will usually be sufficient to avoid most of the troubles which afflict the careless, thoughtless, reckless and procrastinating dairyman.

Salt Marsh Grass for Dairy Cows.

I have seen it stated that this is not good food for dairy cows. Of course, it is not equal to upland grass, but if the cows are fed a quart or two of oil or cotton-seed meal per day, or a few quarts of wheat bran or shorts, it answers very well, and so also does fresh marsh grass. I know herds of Jersey cows that are pastured alone on such grasses all Summer, and they do well on them. Common cows will thrive in the same way. I cut such grass for hay, and during Winter my cows have no other fodder except a small quantity of corn-stalks per day. In addition to this, I give them a moderate ration of Indian meal and wheat bran, mixed half and half, also a pint each night of oil meal or cotton-seed meal. Be careful and get them *pure*, for dealers now *adulterate* them badly with plaster-of-Paris, or some other cheap, injurious stuff. If roots are on hand, they will answer very well instead of the meals and bran above. Sugar beets, parsnips and carrots are best, though mangel-wurzels do pretty well. Turnips give a bad taste to the milk. Fed as above, my cows average five to six pounds of first-rate butter per week per head. C.

The Horseman.

EASTERN MARKETS FOR WESTERN HORSES. No. 2.

L. S. HARDIN.

I HAVE gone somewhat over the ground of Eastern horse-breeding and pointed out wherein it does not keep pace with the market demand of the Eastern cities. There seems to be no doubt that the chief evil lies in the desire of farmers to raise small, fast horses instead of large draft horses. It is a question whether you will raise a horse to sell to a street-car company at $100 or one to sell to an express company or a merchant at $200 or $300. It needs but a short experience to prove to any man of average intelligence that the profit in raising fast horses depends far more upon chance than it does upon superlative judgment. It would therefore as a business be classed by insurance men as "extra-hazardous." I do not consider it a fair field for hard work and honest rewards.

When we come to the question of raising draft horses as a business we have altogether another matter to deal with. Here undoubtedly honest and intelligent work will meet with an appropriate and satisfactory reward. In order to tell how best to accomplish that end, we must first study well the market demands, and then the easiest and most profitable methods of supplying those demands. In relation to the market, I have studied the New York market particularly, and presume it to be a fair sample of what the demands are for draft and carriage horses in all the large cities of the East. Prices may vary somewhat as the city lies contiguous to, or far away from, the grazing sections of the country where horses are bred in the greatest numbers. The horses that I consider the most profitable to raise may be classified in accordance with the purposes to which they are put. They are carriage, street-car and express, or heavy draft horses. The first class of horses, or such as are used in omnibuses, street-cars and hacks, are of various weights from 1200 pounds down to the runt of a pony, and sell in the New York market all the way from $130 down to a song, the price depending more upon soundness and style than on any other feature. These horses are mostly raised in New York and the contiguous States and probably, as a rule, cost the farmer from $20 to $50 a head more to raise and market than they sell for. The ruling prices for this class of horses are from $100 to $110, the figure depending mostly upon the degree of soundness the horse possesses. Horses are bringing on an average, $10 more than mares; for there is always danger of mares proving to be in foal when purchased, and a mare in foal is a source of great loss and annoyance to city owners. They have no pastures to turn her on, and keeping dam and foal in a city stable and on grain is almost too expensive a method of colt raising.

There is a limited but high-priced demand for fine carriage or park horses. The prices range from $400 all the way up to one or more thousand dollars, depending more upon style, carriage and color than speed or size, though the weight must be upward of 1400 pounds. To meet this demand the horse should carry a high head without a check rein, and the higher he lifts his front feet when trotting, the more money he will bring. Why this style of horse is not specifically bred for, is a mystery in the history of horse breeding. I have known as high as $5,000 to be paid for just such an animal. The market for this style of horse being limited, it might not pay for large numbers of breeders, but at present it looks like a most inviting field for special breeding.

I now come to the most interesting branch of this subject; that is, furnishing the large cities of the country with first-class draft horses. To determine the best method for accomplishing this end, we should first find out what is wanted. I have interviewed several managers of the horse departments of large firms that use heavy draft horses. The horse that seems in most demand is heavy, chunky, pony-built, with rather short legs in proportion to his weight, and to meet these requirements the half-bred Percheron is most decidedly the favorite. The Clydesdale seems a little too leggy to meet the general demand. On all the favorites that were pointed out to the writer, the inevitable long hairs on the fetlocks were to be seen, as also the short neck and rounded ham of the Perche horse. These horses rarely stand over sixteen hands high, though they weigh over 1600 pounds. The favorite colors were dark bay and brown, which is a point the breeder should never overlook. The prices paid for this class of horses range all the way from $300 to $800 apiece. There has always been a lurking suspicion abroad that the Percherons had tender feet that would not stand our hard pavements. One of the managers with whom I talked had 55 large, splendid draft horses under his charge, and I looked them carefully over with him. He said he had had trouble enough with the feet of pure-bred Percherons, but the feet of half-breds were as sound as those of any other horses in his care. This statement was supported by my own close observation among his horses. Fully one-half of these 55 horses at work in a wholesale grocery showed decided signs of Percheron blood.

The Herdsman.

PURE-BRED DAIRY STOCK IN MISSISSIPPI.

ONE day last week, occurred one of the most notable indications of the great revolution the industries of the Southwest are undergoing. The event was the sale of thoroughbred acclimated Jerseys, Short-horns, Galloways, etc. This stock was from the herds of Alabama and Mississippi stock-raisers. It marks a great epoch, as it is the first sale of acclimated thoroughbreds ever made in the Southwest. Its results surpassed the most sanguine expectations of the promoters of the scheme; and prices were eminently satisfactory. I predict that Meridian will be the great mart for the annual sale of thoroughbreds hereafter; at least, it is in the power of the interested parties to so make it. Thither will resort all the foremost men to buy their stock, from Mississippi, Alabama, Louisiana, Texas, Georgia and Florida. East Mississippi is certainly the most prominent center for acclimated thoroughbred Jerseys in the Southwest. This is said in no spirit of derogation of Alabama or any other point. Certainly there are notable Jersey breeders in Alabama; and Mobile possesses as ambitious and discrimina-

ting breeders as any place in the Southwest, and the strides that are being made are wonderful. But East Mississippi "has got the bulge" (to use a Southern phrase) on Jerseys. She started in the business years ago when stock-breeding looked as chimerical to the masses as silk-raising does now; and she reaps the reward in her great reputation as the center, *par excellence*, of thoroughbred Jerseys.

How often have I predicted the day when our stock-breeders, particularly our Jersey breeders, would be selling their stock to Eastern breeders, and when we should have the monopoly of the sale of thoroughbreds to the Southwest, because of our acclimated stock, and yet how wild such a prediction must have seemed to the average reader! And now the day is here. Eastern breeders are paying fancy prices for thoroughbred Jerseys raised in East Mississippi. The demand is greater than the supply.

There is a "big boom" in Jerseys everywhere in Mississippi now. Let it run and swell and widen and sweep! It is the sure precursor of our cheese factories. In a few years, with this stock largely distributed, East Mississippi will be the center of the greatest cheese interest in the Southwest; will be furnishing most, if not all, the cheese for the South, and will be sending fancy cream-cheeses to Europe, if not to the North and West. Shorthorns, too, will soon command a more respectable status under the kindly auspices of the Stock-Breeders' Association of Mississippi. This organization, not three years old, has "done wonders" for stock-breeding in Mississippi and adjoining States.

Meantime, thousands of acres of the rich prairies of East Mississippi are being set in clover and Blue Grass. I know of one gentleman who has about 150 acres in clover and will sow 200 more. Some men, with farms of 1,000 acres or more, talk of seeding down the *whole* area to the cultivated grasses. Some are sowing Lucerne largely. Soon will be seen in East Mississippi large areas which will be green the year round and dotted with Jerseys, Short-horns, and sheep, and this will make a "most living landscape," indeed. There will then be no prairie lands, that once sold as high as $125 to $150 per acre, "going a-begging" as now at from $8 to $15.

Truly, the sale of thoroughbred acclimated stock at Meridian was a "red letter day" for the stock-breeders of Mississippi and Alabama. All hail to them for the beneficent success! M. B. HILLYARD.

Mobile Co., Ala.

STARTING STOCK-RAISING IN TEXAS.

I started here in the sheep business by herding a flock, as I could get nothing else to do. I herded one month for $15; I then went through the shearing season for a little pocket change, and then, as I was acclimating, I became a little sick, and fell into the hands of a hospitable family on the Nueces River. Here my board did not cost me any money, as I was rather handy around the house doing chores. When I recovered I took charge of a ranch on the Sabinal for the small sum of $20 a month. Here I worked seven months, and at the end of the first year I found myself in possession of 100 sheep, and so I have gone along until I have now 1,000 head of good young sheep, and if I had been a healthy man I could have doubled that number. The first thing is to get a ranch or range for the stock. The price of sheep depends upon their quality—from $2 to $4. There is a difference of opinion about the profits from the different sorts. Mine are Mexican ewes and the best Vermont Merino rams. The range of pasturage is good, but has now to be bought or leased. The natural increase of the flock is about 80 per cent. one year with another. The fleece sells for from 15 to 30 cents per pound. Our chief market is San Antonio and the net profit of the business is 33⅓ per cent. It is already of enormous extent, but nothing to what it will be in five years from now. The wool has to be taken to market by wagon for 100 miles. Muttons are generally sold at the ranches and driven by the purchaser; they generally bring $2 per head. They are now selling for from $1.75 to $2.25, and buyers are looking for them. It is hard to tell the best parts of Texas for sheep-raising, as the business seems to thrive all over the State. Everybody is going to raise sheep, and cattle are being neglected.

This is the greatest country in the world for horse raising. I do not see why some Eastern horse raisers do not come here. It does not cost $10 to raise a horse in Texas. The animals keep fat on the range the year round, and it is a business I would have started in had I capital to go North and buy large mares. It will pay here 33⅓ per cent. per annum. Horse stock does better here than any other stock, and with less care. This is just the country for such men as Powell Bros. with their Clydesdales.

Nueces Co., Texas. H. N. DIMICK.

TEMPER OF POLLED CATTLE.

"Stockman," in the RURAL of November 26, says he has seen a man quickly lifted over a fence by a polled cow, that polled beasts push and strike with their heads in the manner of other cattle quite as savagely, and that the proportion of cross or savage cattle among the polls will be found quite as great as among the horned. A juvenile visitor to a city "museum," the other day, saw there a couple of Zulus, one of whom was cross-eyed, and in writing an account of what he had seen, said:—"The Zulus are an ugly people, and half the race are cross-eyed." Hasn't "Stockman" been generalizing in somewhat the same liberal fashion with regard to the temper of polled cattle at large from the conduct of that particular excited polled cow? My acquaintance with hornless cattle began upwards of 30 years ago, during a lengthy boyish visit to County Limerick, Ireland. My host had among his other cattle half a dozen or so dark-red, low-bodied polls, good milkers and great favorites for their peaceable, quiet disposition. In the neighborhood there were several other polled beasts that had the same reputation. The common name for them there was "maiwls" as nearly as I can spell it phonetically after so many years. Whether it was merely a local name, or whether the word was Irish or meant for English I know not. Since then I have had considerable knowledge of polled cattle, both in England and Scotland, in herds, and where a few beasts were "mixed up" with horned cattle, and their general reputation has always been exceptionally high for a gentle, non-belligerent temper. Occasionally a naturally truculent beast could be found, and sometimes an animal would "show fight" from some temporary cause, but any display of ill temper in a poll was always regarded as something unnatural, and was, therefore, productive of special dislike towards the offender.

The writers of standard works on cattle supplement their own knowledge of the different breeds with that of others more intimately acquainted with their special characteristics. What, then, have well known writers who have spoken of polled cattle, said of their temper?

"The Galloway cattle are generally very docile. . . . It is rare to find even a bull furious or troublesome," said Youatt, 47 years ago. Of the Polled Angus he said, "Some of the first qualities which seem to have attracted the attention of breeders were the peculiar quietness and docility of the doddies, the few losses that were incurred from their injuring each other in the stalls, and the power of disposing of a greater number of them in a small space." It is a well-known fact that dishorned cattle feed better and are much quieter in disposition than horned beasts of the same breed, and this tendency to quiet and peace increases with the length of time the conditions favorable to it endure. Certainly therefore polled cattle have not grown more savage or pugnacious since Youatt, the first well known authority concerning the polled breeds, thus wrote of them. The latest authority on the various breeds of cattle is Professor J. P. Sheldon, author of that fine work "Dairy Farming," just completed. In it he says of the polled breeds:—

"Yet the mere fact that they have no horns is a most valuable recommendation of these cattle. Nature gave horns to cattle for purposes of defence and attack, and in a wild state the animals no doubt required them at times; but in a state of domestication horns are not only useless, but a source of danger, mischief and inconvenience. If, in the breeding of all kinds of cattle, horns could be abolished, the gain would be great. The Americans are turning their eyes wistfully in the direction of hornless cattle, because of their superior handiness for the cattle trade to England; and, indeed, there can be no question that in no single instance would the absence of horns be anything but an unmixed good. The cattle would be less spiteful toward each other if they had no weapons wherewith to put their spite into practice, and very little harm could be done by bare heads only. There has been an outcry against the cruelty involved in the practice of dishorning cattle—that is, cutting off the horns close to the head—but in some circumstances there may be less of cruelty in that than in leaving them in possession of weapons with which to rip each other up when they get a chance to do so. We do not, however, advocate cutting off the horns of cattle, but we do recommend the breeding of animals to whom a beneficent nature has denied those terrible weapons."

Were there room or necessity I could quote a dozen opinions of the same drift as the above, from writers well acquainted with the animals criticized. "Stockman" says, "Let us have the truth anyhow, and give the polled cattle their due." So say I, and to this end let some of those who know about them tell what they know to the RURAL. If Stockman's experience, or, rather, observation, has led him to believe that the proportion of savage animals among polled is quite as great as among horned cattle, the result of his observation is, I am sure, exceptional.

Cattle in Transit.

In the same column "Stockman" also belittles the advantages polled have over horned cattle in the matter of transportation by rail or on ship-board on the plea that the latter get more room—that their horns secure them ampler breathing space, and are therefore an advantage by preventing over-crowding. My observations both by rail and steamer have been different from his with regard to the packing of cattle. Wherever I've seen beasts crowded in transit the width of the body not that of the horns has gauged the room for each. If in this connection any regard is ever paid to the spread of the horns, it should be in case of the uncouth Texans: but with these I've seen the rule I've mentioned frequently exemplified on the cars between Abeline and St. Louis, and on ship-board between Indianola and Havana, and often also very considerably nearer "civilization." Who that has beheld cattle packed in transit has not pitied them for the evident inconvenience and misery resulting from the possession of horns! I speak of cattle closely packed—not as you always but as you often see them. They cannot move their heads without clashing or interlocking horns, and already irritable from hunger, thirst and general misery, what wonder that at each such contact they are apt to use their weapons offensively? And whenever a wretched beast falls or lies down, and straining and floundering is prodded to his feet again, what an inconvenience are not his horns to himself and what a cruelty to his neighbors. I've never seen polled cattle in transit either by rail or water, but in view of the wretchedness and injury caused by horns when their bearers are closely packed, very little logic or imagination is needed to see the great advantage of their absence. X.

NOTES ON THE CHICAGO FAT STOCK SHOW.

Believe what the papers say about the fat stock show, and you'll think it was a brilliant success in every respect—or nearly in every respect; for all agree that the sheep and swine exhibits were small and rather poor—but, then, all agree they were better than at any former show, There is a growing feeling against an excessive amount of fat in any animal whose careass is intended for human food in the shape of meat, however desirable an extraordinary quantity of fat may be in in a carcass which is to become human food in the shape of lard, butterine, oleomargarine or hog or bullock cheese. This growing feeling found vent at the show in a general expression of gratification that the steers exhibited were somewhat lighter than those shown last year; while the quality of the meat is pronounced to have been better.

Just as at every cattle show I have heard of or seen this year, the question of the appointment of the right sort of men as judges has here caused not a little bickering and heart-burning. This was most noticeably the case in regard to the sweepstakes prize for the best steer in the show awarded the grade Short-horn McMullen, as mentioned in my last communication. It is to be hoped for the sake of the success of such exhibitions, the due reward of merit, and the avoidance of recrimination and legitimate discontent, that more care and better judgment will in future be bestowed on the selection of judges for all the cattle shows throughout the country.

This show is held under the auspices of the State Board of Agriculture, and despite the loud boasts of its success, the attendance has always been so meagre that it has never paid expenses, and the managers have now to face an aggregate indebtedness of $4,000 at the close of the last brilliant triumph. The Board is at present pondering what additional attractions can be introduced at the next exhibition so as to render the fair self-sustaining. To attract city folks is the great object, and for this purpose it is probable that, if a suitable building can be found, the next show will be held in a smaller structure than the Exposition Building, which, unlike the latter, can be heated in case of such cold weather as prevailed during the show of 1880. A kennel show, a larger poultry show and several other attractions are projected, among which it is fortunate that there can hardly be a place for a "horse trot" that last disreputable recourse of agricultural fair managers.

The polled cattle about which one hears so much, were "noticeable by their absence." In view of the fact that the present "boom" in this sort of stock is largely due to their triumphs at the great Paris Exposition of 1878, it certainly seems advisable that their adherents in this country should prepare to make a fine exhibit of them here next year. It will be remembered that at the Paris show a polled Angus herd, which I recollect the RURAL illustrated at the time, won the grand prize of honor for the best group of foreign cattle, and also the French Agricultural Society's prize of 2,500 francs for the best lot of beef-producing beasts in the whole exhibition, against the best beef breeds of England, France, Italy, the Netherlands, and some of the German States. The triumphant herd has since been scattered to the winds or led to the block; their breeder, Mr. W. McCombie, of Tillyfour, Aberdeenshire, Scotland, fills an honored grave, but their joint victory in attracting the attention of the world to the great merits long possessed by the breed, has begun for it a "boom" which it would be wise to keep going by the same means by which it was started.

The Hereford men, although they have failed to secure the chief prize of the show—the sweepstakes for the best steer—have good reason to be contented with the measure of success they have achieved and the plausible grounds for discontent and grumbling, forced upon them. A well-grounded excuse for caviling at defeat, properly dwelt upon, is almost, if not quite, as good as a victory for advertising purposes, and the aptitude as well as the record for grumbling at premium awards, possessed by one or more of the Hereford men is so distinguished that the present opportunity will undoubtedly be turned to the very best advantage. The Herefords are certainly advancing rapidly in public favor for the purpose of "grading up" for beef the "native" herds of the country. Quite a considerable number of feeders and some breeders of Short-horns for this object have either taken the Herefords in preference or are now testing the relative merits of the two breeds by keeping some of each. Among these the latest convert to the merits of the White Faces of whom I have heard, is the Hon. Matthew C. Cochrane, owner of the famous Hillhurst herd of Canadian Short-horns—one of the best breeders on the continent. He has just received from Liverpool a lot of 86 pedigreed Hereford bulls selected by his son from the best English herds. He will place his new acquisition on his Bow River ranch where he has now 5,000 cattle which he intends to increase to 30,000 head within the twelvemonth. His success with Short-horns has been great, so that a strong opinion of their merits could alone have induced him to invest so heavily in Herefords.

I have just received a copy of the RURAL containing my report of the show and find a couple of mistakes in the account given of the Short-horn grade McMullen. He took the sweepstakes prize, not in the two-year-old class as therein given, but in the three-year-old class as stated in giving his age at 1237 days. His average gain per day was not 61 pounds, but 1.61 pound, as may also be seen by dividing his gross weight, as given, 2,095 pounds, by his age, 1,237 days. I am convinced my "copy" was correct, so that the errors must have some other source. H. W.

NOTES FROM CYDONIA RANCHE.

To Cure a Kicking Cow.

It was in the heat of Summer and the hight of fly time. I had just bought a cow and calf. She was said to be true, but she wasn't. As milk was what I wanted, the calf was taken away at once, and I proceeded to milk; but such a storm of heels as played about the stable for fifteen or twenty minutes never has been portrayed in prose or poetry! Fire flashed from her eyes, lightning from her tail and thunder from her hoofs. In short, she was a notorious kicker, and the owner knew it.

I tried hard to let patience have her perfect work, but it didn't work on the cow. Nearly disgusted I went to the house, picked up the RURAL, my eye caught the "Vices of Cows," by Dr. Stewart, and mentally I exclaimed, "Eureka!" But, alas! it suggested only a lesson in moral suasion. However, I tried it again and again to no purpose. It was not moral suasion that she wanted, but a lesson on the fitness of things, and I proceeded to fit her in *this* way: She was securely fastened in a stanchion, and a stout strap with ring and rope attached was buckled around her right leg. Her leg was drawn back to the natural position and the other end of the rope fastened a few feet in the rear. Of course, the kicking went on with vigor, but it did not interfere with the milking, as she could not get her foot forward of the perpendicular. She soon tired of that game, but commenced with the left foot, and she did it with such science that I could hardly keep the foot out of the pail. I then fastened that one back, and let her kick it out. To her great consternation she was mastered, and I milked her with the calm assurance that she couldn't kick me or put her foot in the pail. I continued to fasten the right leg for a while until, like the Western emigrant's hens, she came to rather like to have her foot fastened, and would put it back to position, when she felt the strap. And now she is as kind as any cow in the herd.

MORAL.—There is undoubtedly a place for everything; but moral suasion in a vicious cow's heels does not stick worth the trouble of putting it on. And yet I would not be understood to mean that kindness has no place in connection with power, for it has.

ANOTHER MAN THAT CANNOT SEE BEYOND THE PRESENT CONTENTS OF HIS POCKET-BOOK.

Col. Curtis's note about the man who could not go the extra dollar for a "blooded" boar reminds me of a neighbor's idea of the value of turkeys. One of my bronze gobblers had strayed over to his place and he proposed to buy him. He offered a dollar. As he was a neighbor I thought I would sell him for a dollar and a half, though I knew he was worth two. But he would not give more than a dollar for any turkey, which was all *his were* worth. I took the gobbler to town, and sold him by weight alive, 22 pounds at nine cents, and it did not cost much if any more to raise him than one of the dollar kind. W. S. C.

Washtenaw Co., Mich.

Atlanta Exposition Notes.

The second weekly show of cattle could not be called a success, as only two exhibitors put in an appearance. Col. R. Peters, of Atlanta, Ga., exhibited a fine lot of Essex swine in good condition. The Essex are great favorites in this section, as they mature early and fatten from 150 to 250 pounds. With proper care and attention they can be run up to 500 pounds at two years, but large, fat hogs do not seem to do as well here as smaller animals, and for that reason the Essex have taken the lead. Col. Peters also showed a flock of Spanish Merinos, small in size, finely bred, and with a fine quality of wool. They were exhibited fresh from the pasture, and therefore were not in very fine show condition. The Colonel is breeding off the neck folds, as he finds it hard to get good shearers in the South, and that a smooth sheep is therefore more easily handled. The Merinos do well here, but run very small alongside of their Northern compeers; they average about six pounds to the fleece, and from 85 to 100 pounds to the carcass gross. All the housing they get is in extremely cold rains. At other times they run at large.

A. H. Davenport, Lexington, Ky., showed a fine flock of South Downs—large, heavy sheep, with remarkably fine forms and wool. I failed to find anyone that could tell me anything about how this breed would succeed in the Cotton Belt.

The chief feature of the show was the Angora goats exhibited by Col. Peters, who has been breeding and importing them with success for the past 30 years. He bought out the original importation of Dr. Davis, of South Carolina. The large goats shear about eight pounds and kids and yearlings about five pounds each. The wool or hair is now worth from 70 to 90 cents per pound, and as the goats need but little more shelter than the Merino sheep, they will eventually prove a very profitable addition to the wool interest of the South. W. H. K.

Atl nta, Nov. 12.

The Swine-Herd.

HEALTHIER PIGS AND PIG MEAT.

COL. F. D. CURTIS.

YOUR contributor B. F. Johnson, in a recent article on corn feeding and its effects on pigs in producing disease and making over-fat pork, reflects my ideas expressed in the RURAL some time since. I am glad to see that so able a writer has taken up this subject which I consider to be very important in a sanitary point of view both in regard to the pigs and the consumers of pig meat. I know from experience that exclusive feeding on corn will produce inflammation of the bowels and cause pigs to die. I lost several at one time before I discovered the cause. After they were dead they turned black under their bellies, which led me to surmise the seat of the disease. Some of those living in the same lot upon examination were found to be quite red beneath the bowels and the surface under their bellies was felt to be hot, which plainly indicated an inflamed condition of the stomach and bowels. These pigs were saved by a complete change of diet to wheat middlings and vegetables. The pigs were about three months old.

I recollect that my father had a number of pigs about eight months of age that had been fattened entirely on corn and which became stiff (foundered) and refused to eat so that they were nearly worthless. This foundering was on account of fever or inflammation which affected the whole body. Old hogs will endure more of this kind of feeding without showing its effects; but it is evident that they must be more or less affected by it and the meat proportionately feverish; old hogs would not endure an extended feeding upon corn without evincing disease.

When potatoes yielded more abundantly then they do now, farmers used to fatten their pigs on them. They were boiled and mixed, while hot, with peas, which were raised extensively for fattening pigs. This was a healthful combination of food and made pork at a cheap cost. When the potato crop failed, corn was substituted. No one ever heard under the former system of hogs being foundered, or of hog cholera. These troubles will continue so long as corn is made the exclusive food of pigs. The remedy lies in lighter food or in a mixture of vegetables with corn. Mangels can be made to take the place of potatoes. We feel certain that with this combination, and cleanliness, there would be no hog cholera. We are quite sure that wheat middlings fed with corn, or alternately, would also keep pigs in a healthy condition and fatten them satisfactorily.

Another remedy, partial at least, could be inaugurated by not attempting to make pigs so excessively fat, requiring so long a diet. This is a practice which has grown with corn feeding to such an extent that modern pork is really unsuited for human food, as human stomachs have not kept pace with it, and have not been educated to digest lard. Less corn and less fat would make pork more desirable for food; and a shortening of the time of feeding would also reduce the amount of fever and liability to disease. Two hogs moderately fattened instead of one stuffed and gorged to the extent of helpless obesity would be a sensible solution of the problem, how can pigs be made healthier, and fitter for human food.

Entomological.

THE NEW INSECT PEST ON PEACH TREES.

IN reference to this fresh foe of the orchardist, first described by Mr. A. J. Caywood, in the RURAL of November 12, that gentleman again writes to us: "Since the date of my last communication I have given more particular attention to the insect which is preying hereabouts on peach trees. I now know positively that the egg is deposited in or on the bark of the tree, as I have discovered the larvæ in the bark, and it is now certain that it goes through the same changes that other insects of this class do—from egg to larva and from larva to fully developed insect; but the query is; after coming to the surface for what purpose does it bore a new hole and place itself under the bark again? I have seen them do this in great numbers. I found the larvæ in a dead tree, in the bark and also under the surface of the wood, but I have found none in the living trees, I supposed the reason for my failure to do so was that examination was not made earlier in the season. Their being found so late in the season in the dead trees and not in those alive, is proof that their transformation has been prolonged for the want of proper food which the dead trees did not afford. Most likely the eggs were deposited while the tree was living. Sections of living and dead trees containing insects and larvæ have been sent to several entomologists. I have examined many other kinds of trees during the past week and have found these beetles infesting the wild cherry, all of the cultivated varieties and plum trees. They do not seem to injure the cultivated cherries to any great extent." A. J. C.

Ulster Co., N. Y.

Miscellaneous.

What Others Say.

MORTGAGED FARMS.—We make the following extracts from an address delivered recently at an agricultural fair in San Antonio, Texas, by the Rev. W. H. H. Murray, better known as "Adirondac Murray," formerly a famous preacher of Boston:—"If I were to be asked what I consider one of the most necessary things for Texan development, I should say cheap money, and say to the financiers who are growing rich upon the high rates of interest upon the money they loan to agriculturists, that the agriculture of no State has ever succeeded, nor can it succeed when the interest paid for money loaned is over seven per cent., and whenever it exceeds that figure you will find the farms mortgaged; and farmers with mortgages are great drawbacks to any State's prosperity. The mortgages get foreclosed and the farms and the State suffer. I can take you through New England and the West and show you farmers who do not own their farms, and next to negro slavery I know of no slavery more accursed than that endured by the farmer whose farm is mortgaged. It is not endured by the one alone, but by three, five or seven, or all who compose the members of the family. I think I can feel for and have the most complete sympathy for the man who has his farm mortgaged, and I think I know something of the fight he has to make with it."

THE New Hampshire Patriot says that an insect is destroying spruce trees in northern Maine and the provinces. The female lays an egg in the bark, and the grub which hatches bores into the tree. The female is a deep blue-black, has a white spot behind each ear and a long horn, with a lance-shaped head, on her tail.

AN IDEA of the immensity of some of the cattle ranches of Texas, Colorado and New Mexico can be gained from a summary of the interests owned by Mr. J. Z. Prowers, of Bent County, Colorado. Mr. Prowers, we learn from the Chicago Tribune, has at different points on his ranch 40 Short-horn bulls and 34 of the same classes of pure-bred Herefords. From these stocks of thoroughbred cattle he supplies himself with enough bulls yearly to grade up his native cattle, which number nearly 18,000, and whose grazing facilities embrace 100,000 acres of arable pasture, all fenced, and the property of Mr. Prowers. The property has a water-front on the Arkansas River of 40 miles, and it is estimated that there are already erected over 100 miles of fences. Mr. Prowers has sold this year over 1,100 head of fat steers, averaging about 1,200 pounds each, and his sales of cattle this year are not less than $80,000.

HORSE SENSE.—The horse has the smallest stomach, in proportion to his size, of any animal, says a speaker before the Salem, Mass. Farmers' Club. Fifteen or sixteen quarts are its utmost capacity. This space is completely filled by four quarts of oats and the saliva that goes into the stomach with them. Horses are generally over-fed and not fed often enough. For a horse with moderate work, six or eight quarts of bruised oats and ten pounds of fine hay a day are sufficient. This should be fed in at least three meals, and is better if fed in four. A horse's digestion is very rapid, and therefore he gets hungry sooner than a man. When he is hungry he is ineffective, and wears out very rapidly. Water fills the stomach, lowers the temperature and dilutes the gastric juice; therefore, a horse should not drink immediately before eating. Neither should he be watered immediately after eating, because he will drink too much and force some of the contents of the stomach into the large intestines, which will cause scouring. Scouring is also caused by too rapid eating, which can be prevented by putting half a dozen pebbles half the size of the fist into the manger with the oats. Give only a moderate drink of water to a horse. A large drink of cold water before being driven will have a very quieting effect on a nervous horse. A race-horse always runs on an empty stomach. Digestion progresses moderately during exercise, if the exercise is not so violent as to exhaust the powers of the horse.

A FEW WORDS ABOUT CANARIES.—All birds at this season require extra food, says the Bird Magazine. Canaries should have, all through the year, German Summer rape, Sicily canary and millet seeds mixed in equal parts, and care should be taken to have the seeds fresh and of the best quality. In addition to the seeds, feed canaries daily one-fourth part of a hard-boiled egg, both yelk and white, and mix with it as much cracker dust as can be taken upon a ten-cent piece. Fresh water, both for drinking and for the bath, and plenty of coarse, washed gravel daily will usually keep a bird in health. Twice a week give a piece of sweet apple or lettuce. If the bird has not yet finished molting keep him in an even temperature of about 65 or 70 degrees and let him hang where there is no possibility of a draught blowing on him. If not yet in song, hang a half-inch strip of raw, fat, salt pork in the cage and let him pick at it for a week or so."—Except as to avoiding a draught, we do not agree with the above at all.

HOW TO GET RID OF MORNING GLORIES, ETC.—In a late RURAL, L. L. S., Kankakee, Ill., asks how to get rid of morning glories that cover a 10-acre lot, and to this question A. K. R., Olin, Iowa, answers: "Fence the lot off and allow some hogs to run in it. The more the better and the speedier the work. Of course, the hogs must not be rung or have their noses cut. They will root up a square rod two feet deep for a mouthful of the roots of morning glories. The above plan will be found a good riddance for bad rubbish, and it does 't take long. By having a sufficient number of hogs to turn in early in Spring the lot might be entirely cleaned in time for corn planting, if so desired. In answer to the query about a way to ditch without spades: the only ditch I ever made was done with a plow and a common road scraper, the ditch being about three feet deep and five feet wide."

Everywhere.

RURAL SPECIAL REPORTS.

Connecticut.

HUNTINGTON, Fairfield Co., Nov. 14.—The White Elephant had 13 eyes. I planted one eye in a hill in good soil—result, a good heaping peck of fine potatoes. Only one seed of the sorghum came up. The asparagus came up well and is looking fine. The Washington Oats I drilled in good soil; they grew rank and smutted a little. The pinks were beauties. Long may the RURAL prosper! G. D.

Georgia.

CEDAR TOWN, Polk Co., Nov. 15.—Our oldest people in this country never experienced such a drought as we have just passed through. I am satisfied with the Rural Branching Sorghum. I know it can stand a drought pretty well; but to show the severity of the dry weather with us, my sorghum did not mature its seed. I cut the stalks down not long ago for fear of a frost: thought a few heads would mature sufficiently to plant. My Washington Oats smutted badly. I saved about a quart for seed. The White Elephant Potato was washed up in early Spring by high water from a creek in my garden. I neglected to say that the Rural Branching Sorghum was cut and fed to stock repeatedly, except the few stalks left for seed. I have never given it to any kind of stock that refused to eat of it. Corn is worth $1 per bushel, cash. Usually at this season it can be bought at 50 to 60 cents. Dry salt pork, middlings, is worth 11 cents per pound, and everything else to eat is high in proportion. Cotton brings only about 11¼ or 11½ cents, and is not more than half a crop in this part of the country. Success to the RURAL NEW-YORKER! W. J. R.

Iowa.

ROCKFORD, Floyd Co., Nov. 20.—I have looked the RURAL over this last year pretty closely to see where the best things are grown and who grows them. I have been trying a good many varieties of vegetables of late years, as my chief care now is attending to the garden. I see the RURAL'S largest Cuban Queen Watermelon was 27¼ pounds. My neighbors went into watermelon raising considerably and were going to raise 80-pound melons besides getting a prize of $25; but they failed in both. After paying 25 cents for 15 seeds the largest, weighing 21 pounds, was raised by my nearest neighbor. In sending for my seeds last Spring I sent for a five cent package of what was called the Improved Cuban Melon. I planted them and the chickens scratched them all up except seven plants. From these seven I picked 10 melons that weighed from 30 to 34½ pounds; nine that weighed from 25 to 30 pounds, and 12 or 14 that weighed from 18 to 25 pounds; there were two or three quite small that did not get ripe, and every one that tasted them said they were the best melons they had ever tasted. I have given seed to all my neighbors and if you say so I will send you some. They are somewhat like the Cuban Queen but of a darker color. I have also a cucumber that was raised in England about six years ago, that beats anything I ever saw. I have raised it three years and it does well here. It will grow to the length of two feet, and is very handsome and as good as it is handsome. It is just fit for the table when from 12 to 18 inches long. It has scarcely any seeds. I will send you some of these also. [Would thank you for a few seeds.—EDS.] I have one other choice vegetable and that is a pea that was raised here about 12 years ago by accident from McLean's Advancer and a large very tall pea. It is larger than either, and better, and only grows to the hight of the Advancer. It is a very large, wrinkled pea of excellent flavor. I will send you a pint or quart of those if you say so. They are about as early as Advancer, but a great deal larger and better. These are three things that are extra-good and I would like others to have them. There is less trouble to get a dish of these peas than of any kind I ever saw. I have none to sell. A. W. [A small quantity of the peas would suffice for our trial. Please send name and history with them.—EDS.]

Kansas.

SMITH COUNTY, Nov. 22.—I planted the White Elephant Potato on May 10 on bottom land; it was cut to 12 eyes, and they did well all the time, although we had a very droughty Summer, with hot winds. I dug on Sept. 11 a little over a peck of very fine, big tubers. I planted the Branching Sorghum about the middle of June; it came up finely; the hot winds killed all but two hills, that did well

until Sept. 15, when the frost killed the stalks right down. I was very sorry. I sowed the Washington Oats in May, and they did splendidly; they grew about 2½ feet high. I cut them in July and put them into the granary. A trap-door was left open and the pigeons found the opening and destroyed them. I had one Cuban Queen Watermelon that weighed 43 pounds, so I have beaten the Rural Farm. We were very much troubled with chinch and potato bugs, but they couldn't stomach Paris-green and London-purple. Wheat averaged about eight bushels to the acre; it was a little damaged by the chinch bugs. Corn is about one-fourth of a crop. We are getting lots of rain this Fall, making plowing good. We have had three bad years, but hope to do better next. T. H.

WICHITA, Sedgwick Co., Nov. 19.—We had an excessively hot, dry Summer, which was a great drawback to success with the RURAL seeds. The Beauty of Hebron, Early Ohio and Burbank Potatoes have proved the best with me out of 28 different varieties, all treated alike. From the White Elephant we got only about a quart of late tubers, as it was planted very late and the season was unfavorable. The Rural Branching Sorghum was planted in two rows, three feet by one foot apart; almost every seed grew. Part of it was cut when about four feet high and my stock ate it greedily. It grew again six feet high, and what wasn't cut is now about nine feet tall and from 25 to 30 hills have ripened their seed. There were from 15 to 20 stalks from each seed. A. J. P.

Louisiana.

MONROE, Ouachita Parish, Nov. 14.—The drought has thoroughly succumbed to the Fall rains. Cotton has been very nearly all gathered, and will net but little more than half a crop—of a superior quality as compared with that for several years. We have had no killing frost yet, and but three slight frosts to-date. With the rains in October Spring vegetation clothed trees and plants—the heaviest hay crop harvested for years was the result from the grass seeds which had lain dormant during the unprecedented drought of the past Summer. The Bermuda was about the only grass which had not succumbed to the heat and dry weather. We have many fine indigenous grasses, and the Ouachita Valley is specially adapted to stock-raising. I think in the course of time, when capitalists take hold, cotton culture will be abandoned here and the finest stock farming in the world will succeed the dethroned king, who, like most kings, has pretty effectually kept his subjects' noses to the grindstone. I was pleased to read the good word spoken for the Iona Grape in the RURAL of November 12, on page 762. I have grown the Iona to the exclusion, almost, of all others for several years. It has been entirely free from disease of any kind and reasonably productive; the bunches large to very large and compact. Like Mr. P. B. Mead, in his book on grape culture, I place it at the head of the list. In truth, with Iona as the standard, I have found few other American grapes at all fitted for table use. Here, it is hardy, a good bearer, trains well, is handsome and luscious. Nearly all other varieties I have tried fail in several of these qualities, and all, except Iona, in our mild climate and long season, grow too rampantly. In the same issue of the RURAL an inquiry is made about a remedy for cabbage worms. Both the cut-worm and cabbage worm were unusually abundant here last Spring, and I fought them successfully with air-slaked lime profusely scattered over the cabbages and into the heads while the dew was on. The same treatment with the potato bug was successful. F. G.

Michigan.

MASON CO., Nov. 20.—I planted the White Elephant May 25, cut in 17 pieces which were put in nine hills; all grew and yielded 51¼ pounds. The Washington Oats yielded six quarts. The Rural Branching Sorghum grew about four feet high. I cut it once. I think the RURAL seeds have done as well as could be expected on account of the dry weather. R. H.

OWOSSO, Shiawassee Co., Nov. 16.—As a farming community we have no great complaints to make, for, taking everything together, the farmers of this county have received as much money this year for their wheat, oats, cattle and hogs as they did last year, and most of us tillers of the soil are pretty well prepared to maintain and enjoy life, and sit by the fire this Winter and read the RURAL NEW-YORKER. My White Elephant Potatoes turned out splendid. There were 87 of them, some of them very large. The Washington Oats were a failure—more smut than grain. The sorghum failed to grow; but the pinks were beauties. I am well pleased with the investment of $2.06 for the paper and the seeds. Either of them has been worth the money to me, and I shall promptly renew for 1882 and speak urgently to my neighbors of the paper's merits. N. B. A.

New York.

CALEDONIA, Livingston Co., Nov. 18.—My White Elephant Potato was cut to 12 pieces, one eye in a piece—yield, 43 pounds. The Rural Branching Sorghum did not mature. Yield of the Washington Oats 13 pounds; these oats were very free from smut. I have about 175 asparagus plants. The flower seeds were a failure. D. J. C.

Ohio.

BRISTOL, Trumbull Co., Nov. 18.—From my White Elephant Potato I raised 50 tubers that were large enough for eating, 30 smaller ones and a dozen or so of the smallest to throw in for good measure. The whole weighed 19 pounds, the largest weighing three-fourths of a pound. This yield does not come up to many others, but I think it is not so bad for a dry season. I only planted three hills of the Rural Branching Sorghum as I did not have ground suitable for planting more of it. It grew to about six feet in hight, but did not head out in time for the seed to ripen before the frost came. The Washington Oats did not do as well with me as some others have reported, on account of the rust. I will probably get two quarts of good, clean oats. I did not sow the asparagus until quite late, and it was so dry afterwards that the plants did not make a very good growth. I gave part of the dianthus and pink seeds away and planted the rest. Some of the dianthus did not come up, and some, I think, were destroyed after they came up. Part of them blossomed, and they were nice, I can tell you. The season here was pretty dry most of the time and very warm also. We had no rain worth speaking of from August 1 until September 16; since that time it has been wet enough. Wheat and grass came on very well after the rains began—better than for many years. Pastures and meadows that looked as if the grass in them would never start, soon looked as though the Spring time had just come. Railroad and other fires have done a great deal of damage to pastures, fences and woodland, but no buildings were burned. Corn is not much more than half a crop except once in a while some fields turned out first-rate. Wheat and oats were good crops with but few exceptions. Potatoes are a pretty light crop as a general thing, and are selling at $1@1.25 per bushel. We had an excellent crop of grass and splendid weather for making hay. I don't think people around here ever made hay of better quality than they did this year, taking the hay crop all through. Hands were pretty scarce through haying and harvesting and wages were $1.50@2.00 per day. J. S. B.

FAYETTE, Fulton Co., Nov. 18.—Our crops here have been about an average. The drought in May damaged the hay, corn and wheat. The small White Elephant had 10 eyes and was cut into 10 pieces and made 10 hills. We think the yield was good—nearly half a bushel. The Washington Oats were a failure—very smutty and rusty. The asparagus seed did not germinate, nor did the flower seeds come up. E. F.

Pennsylvania.

TITUSVILLE, Crawford Co., Nov. 20.—My White Elephant had a dozen eyes; one was buried in each of a dozen mounds, and altogether they produced 20 pounds of large, nice young Elephants. The asparagus all came up; it is now a foot high. I have four quarts of Washington Oats. I think they are worth more than the price of the RURAL. A. H.

Tennessee.

HUMBOLDT, Gibson Co., Nov. 16,—The White Elephant Potato I cut into eight pieces and planted in eight hills. The yield was 38 tubers, averaging as large as, or larger than, the one planted. Of the Rural Branching Sorghum nearly all the seeds came up. It is all you claim for it. I planted it in thin, clay land. It had no rain to speak of for 80 days. Towards the last it would wilt in the heat of the day, but always came out fresh and green the next morning. I saved seed from two stalks; the others I cut, and it is green where I cut it off and growing to-day. The asparagus has done very well. The flower seeds did well; nearly all of them came up. They commenced to bloom in July and are to-day full of beautiful flowers. R. H. F.

Texas.

DAYTON, Liberty Co., Nov. 14.—Our long dry spell was broken the first week in this month by a perfect deluge. No scarcity of water here now. My flowers and White Elephant gave way to the drought, but I have the Rural Branching and the asparagus all right. One of the magnolias, that took a year to germinate, also succumbed. It has been a delightful Fall for cotton picking. The cotton is about all picked now. G. G.

Vermont.

FACTORY POINT, Bennington Co., Nov. 7.—On May 25 I planted my White Elephant Potato, 19 hills, and in ground that the hogs rooted over a year ago, and only 16 hills came up, from which I harvested 59¾ pounds of tubers. On Sept. 19 I planted my Sorghum too thick, and it grew only six or seven feet high, and the seed did not quite ripen. I harvested about a piut of Washington Oats. I do not think they are as good as the Ennobled Oats sent out a year ago. The flowers were one mass of blossoms, of nearly all colors and combinations. E. W. B.

Wisconsin.

EAGLE, Waukesha Co., Nov. 18.—The season has been very changeable. Crops light except potatoes, of which there has been an extra large yield in this vicinity. The White Elephant fills the bill. I cut mine to single eyes of which there were 12. Planted one eye in a hill on May 16, and dug them September 20—yield, 45 pounds. The Rural Branching Sorghum I planted May 20, one seed in a hill three feet apart each way. I had from 10 to 20 stalks in a hill. I cut off two hills August 20. They afterwards only grew about one foot high. The rest I cut on Nov. 8; the seed did not get ripe. The sorghum is a good fodder plant. In the RURAL of Nov. 5, Z. M., of Darien, Walworth Co., Wis., says: "The Beauty of Hebron excelled all other potatoes with me." With me the Mammoth Pearl yielded twice as much as the Beauty did side by side, with the same cultivation, and Clark's No. 1 was a great deal better than either of them; from three pounds I raised 193 pounds. They were superior in every way to any other sort I raised and I had 13 different kinds. A. M.

HAMPDEN, Columbia Co., Nov. 20.—Frequent rains hinder all farm work. Corn husking nearly done. Hundreds of acres of seed clover not stacked. Frost began Nov. 14 and the ground is now quite hard. Corn is a good crop, but in rather bad order; some of it is sprouted; it was down badly. We have had a good season—showers nearly every week. It is the off year for fruit so we had very few apples; but a good crop of small fruit and fair crops generally. The sorghum seed matured. The asparagus grew two feet high and some of it blossomed. The oats produced eight pounds. The pinks were lovely and much admired. The White Elephant Potato, weighing 1½ ounce, yielded 40 pounds of not very large tubers. They were grown by the side of the Dunmore, and after these were ripe the bugs left them and killed the White Elephant vines, and I think that shortened the crop one-third. Their only fault is that they are late, and eternal vigilance is the price of late potatoes. We can manage the first generation of bugs but the second are too many for us. The Cuthbert Raspberry has produced a good crop for one vine, and there are 20 new sets, some of which are five feet high. It is a fine addition to my small fruit patch. The White Zealand Oats did better than the Washington. From about half as much seed I raised eight pounds of much nicer oats. The Golden Grains Wheat planted in the Spring stooled and made large bunches; three or four ears headed and the rest stood until October and then died, and I had less wheat than I sowed. What I got I have sowed this Fall. G. W. T.

HERSEY, St. Croix Co., Nov. 23.—From the W. E. Potato I made six hills, one piece in each. The soil was good and the potatoes were treated the same as other sorts—hoed but once. The vines grew five feet high, and I got one bushel of tubers from the one small one; several of them weighed 1½ pound apiece. The asparagus has done finely; some plants made a growth of three feet. The pinks were the finest I ever saw—of all colors that a person can name. F. S. H.

STOUGHTON, Dane Co., Nov. 13.—My White Elephant potatoes I cut into 25 pieces and planted them in 25 hills; 24 grew and I got about one-half bushel of very nice tubers. The Cuthbert Raspberries are doing finely; I have about 25 plants now. They bore a few berries the past season, which were very fine. The only trouble I can see will be to stop them from spreading all over the farm. The flower seeds did splendidly; my wife and little girl thought the pinks were worth all the RURAL costs. There were about 20 different kinds. We have rains here about every 24 hours; water very high; farmers very much behind with their work on that account. Grain in stack has been very much hurt by the wet weather. H. M. H.

The Querist.

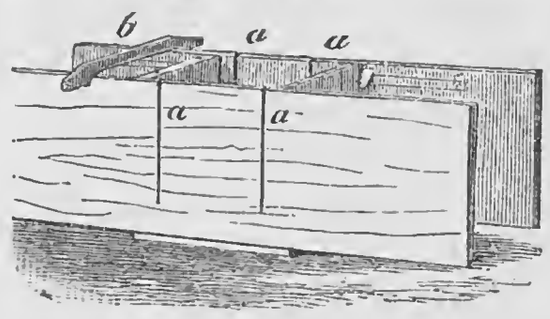
ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

"DOING UP" WOOL; SECOND GROWTH OF CLOVER.

J. S., Ithaca, Mich., asks, 1, what sort of machine is best for "doing up" wool; what part of the fleece should be exposed when it is "done up", and what twine should be used; 2, why does the second growth of clover make all animals that eat of it slobber.

ANS.—A fleece should be laid on a folding table with the outside down, the sides are turned in and the fleece is then rolled up and tied with as little string as possible; the twine used is a thin kind known as wool twine. The fleece is tied around each end of the roll and then lengthwise. A wool table for folding and tying fleeces commonly used in New York State, is made as follows: see Fig. 543. Three boards, one inch thick and 12 inches wide, are used. The center one is cut into three equal pieces and fastened together by butt hinges so that the ends turn up, as shown. The other two are hinged to the center-piece of the first board so that they turn up at each side, as shown. The box is used as follows:—The sides are all let down flat and the table is placed on a bench; two strips of the right length are laid across so as to come up when the sides are closed, as shown at *a. a.* The fleece is laid on the table and the ends of the center piece are turned up; then the sides are turned up and held by a wooden hook, shown at *b.* The fleece is then tied lightly with the strings and the sides are let down, leaving the fleece properly secured. A fleece may easily be tied in 15 seconds, with the help of this table. 2. Second growth of clover very often has some acrid weeds in it, as lobelia and St. John's-wort; and very little clover seed is free from these, so that when clover seed is sown these weeds are sown with it. They blossom and ripen their seeds with the second crop of clover, from which the seed is always taken. If a little lobelia is put in the mouth its effect in causing slobbering or salivation will be readily perceived, No doubt if the clover is examined these weeds will be found in it. Lobelia is easily recognized by its blue-bell-shaped flowers and its ovoid or egg-shaped seed capsules, also by its strong



A WOOL TABLE.—FIG. 543.

taste which is much like that of tobacco. This is Lobelia inflata or the common eyebright. The writer has proved in his own experience the truth of this circumstance and otherwise has never known second growth clover to cause this effect, although it commonly has the reputation of producing slobbering. This plant may also often be picked out of the clover hay and in this case also will produce the same effect. It grows only a few inches in hight. St. John's-wort (Hypericum perforatum) also produces the same effect; it is recognized by its yellows with five petals and a three-horned pistil which of course becomes the seed pod; this has three cells which, with the three diverging styles connected, contain the seed. This plant ripens the seed at the same time as clover, viz., in September and October. It is about 12 to 18 inches in hight.

"NEW-PROCESS" OIL MEAL.

R. C. K., Plempton, Ohio, asks what is meant by "new-process" oil meal.

ANS.—Oil cake is the residue that remains after the oil has been extracted from certain seeds—usually cotton seed, flax or linseed, and rape or colza seed. Flax contains from 30 to 40 per cent. of oil; rape, 35 to 45 per cent., and cotton about 30 per cent. The oil is generally obtained by subjecting the seeds to hydraulic pressure, by which a large proportion of the oil is forced out, while most of the albuminoids, or flesh-forming elements, remain behind The greater the pressure to which it is subjected the less oil and the more relatively of albuminoids will remain. A new method of extracting the oil consists in treating the ground seeds with benzol or bisulphide of carbon which dissolves the oil. Sulphuric acid is also used for the purpose of obtaining a larger quantity of oil from flax seed. The acridity of the acid soon becomes dissipated on exposure to air, and does not in any way injure the health of the animals fed on such "new-process" oil cake, or on the oil-meal made by grinding it. Such meal contains about eight per cent. less oil than the old style sort, and usually sells for about 25 per cent. less, though it is considered equally good for feed, inasmuch as the larger proportion of albuminoids it contains fully makes up for the greater loss of oil. The manufacturers can afford to sell it cheaper, however, for the extra oil they obtain is worth, commercially, eight cents a pound, and the quantity saved by the new process will pay about one-third the price of the flax seed.

NESTS IN A POULTRY-HOUSE.

A Subscriber, address mislaid, asks the best way to make nests in a poultry-house, so that fowls cannot sit on the roof.

ANS.—Nests of the kind desired may be

made as shown in the engraving annexed. The roof is made very sloping so that the fowls cannot stay on it. This is hinged and may be lifted up to remove the eggs. The openings are small so that when a hen is in a nest another cannot get into it. The nests may be made singly or in twos and portable

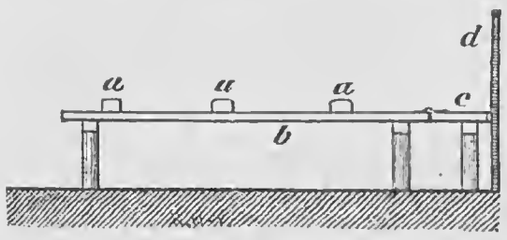


FIG. 544.

so as to be lifted about; or in a range along the house. The roosts are best arranged on a level so that the fowls do not fight to get on the top ones and not more than two feet from the ground, especially when the large heavy fowls are kept. The following plan shows a good arrangement.

The roosts a, a, a, Fig. 544, are fastened to the cross pieces and these rest on posts with strips from one post to another. The frame of roosts is fastened to a back piece c, near the wall d, so that it can be turned up for the floor to be cleaned under it. The roosts should be of 2x4

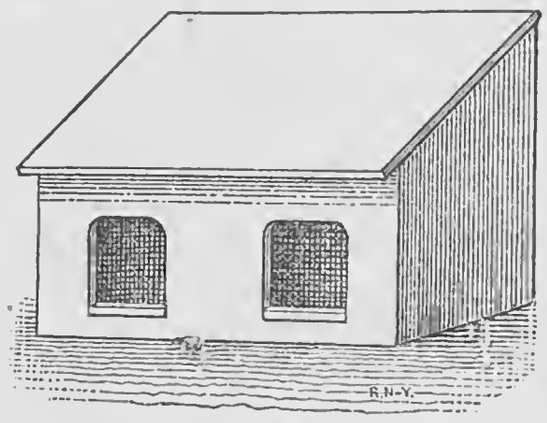


FIG. 545.

scantling with the tops round a little, or half-round poles.

PLAN OF A POULTRY-HOUSE.

A. J. G., West Hawley, N. Y., asks, 1, for a plan of a poultry-house; 2, is Fall as good a time as Spring for setting out fruit trees; 3, how to increase his stock of grapes.

ANS.—1. A good, simple and cheap fowl-house may be made as follows. See Figs 545 and 546. The front is eight feet high, the rear five feet, the roof sloping. The width 10 feet, the length 20 feet, for 50 or 60 fowls, which is enough to keep in one house under any circumstances. The roosts are at the rear and made on a level, and so that they can be turned up to clean the floor under them. The nests are at the front raised a foot from the ground with a bench in front and sloping tops to keep the hens from roosting on them. A few sash are put in at A in front over the nests, facing the south for warmth in the Winter. The floor should be of dry sand and never of boards.

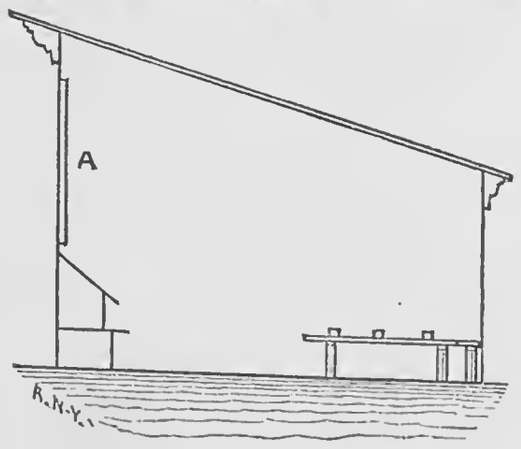


FIG. 546.

There is no place for lice or other vermin to hide in such a house. 2. For your climate we should prefer Spring. 3. By cuttings, as recently explained in the RURAL.

SOME PEACHES.

W. S. B., no address, asks for information as to the merits of the Steadly, Waterloo, Wager and Comet peaches.

ANS.—The Steadly originated with a man of that name in Bluffton, Mo. Tree is productive and healthy. It is a promising kind, of good quality—large, handsome, late. It is a free-stone, and the season is early October. The Waterloo is an early peach raised by Mr. H. Lusk, of Waterloo, N. Y. The tree is a prolific bearer. The fruit is of medium size. Adheres to the pit partially—of very good quality. Ripens late in July. The Wager originated in West Bloomfield, N. Y., with the late Benjamin Wager. Mr. Downing tells us that it is there valued as a market fruit and for canning. The tree is hardy and productive and bears good crops in unfavorable seasons. It is claimed that it often reproduces itself from seed. Fruit medium; skin of a golden yellow; flesh yellow, quite juicy, sweet, slightly vinous—not rich. Season the first of September, or a little later than Crawford's Early. The Comet is of large size—orange with a red cheek. It is said to be of good quality. It ripens in early October. Salway is a late English kind of good quality. See other numbers of the R. N.-Y.

MAKING POTASH.

G. H. T., Plainfield, N. J., having a large quantity of wood ashes asks, 1, whether there is any simple process for converting them into salable potash; 2, also whether ashes made by burning peat will produce potash.

ANS.—1. Potash is made by leaching the ashes and boiling down the lye until the water is evaporated. The solid matter thus produced is heated in the iron pots or kettles in which it has been boiled down until some impurities are burned out of it and a light gray, solid, crystalline cake is left. This is the "pot-ashes" of commerce and is broken into coarse lumps and packed in casks for sale. The ashes are leached in large, square wooden tubs or vats having the sides tapering towards the bottom, and each holding 100 or 200 bushels. The potash kettles are large, heavy cast-iron pots holding from 200 gallons down to 40 or 50 gallons. 2. Peat ashes contain so little potash, and the peat makes such light ash, and there is so little of it, that the potash made from it would not pay expenses. Only the best of hard wood, elm, maple, oak, beech and birch, and no soft wood, as pine or hemlock, is used for making potash.

WEAK EYES FROM MEASLES.

M. B., No address—asks for a remedy for weak eyes, the result of measles.

ANSWER BY T. H. HOSKINS, M. D.

Except in persons of a scrofulous constitution the affection of the eyes in measles does not often require active treatment. The eyes should be guarded from strong light, bathed occasionally with tepid water, and the bowels be kept freely open. If the symptoms are more than commonly severe, leeches may be applied to the temples, and blisters applied behind the ears, or the nape of the neck. Quinine sulphate may be given in small doses with good effect, and a few drops of the following solution should be dropped into the eyes morning and evening: Nitrate of silver, one grain, dissolved in distilled water, one ounce. This solution is better applied with a small camel's-hair brush to the inside of the lids, in severe cases, but it usually requires an experienced hand to do this properly. And, any way, it is better to have a good physician see the case, rather than to seek treatment through the newspapers.

TO REMOVE WARTS FROM A COW'S UDDER.

An old subscriber, Saybrook, Conn., asks what will remove a wart from a cow's udder.

ANS.—Apply caustic potash two or three times a week, and it will soon disappear, or, tie a silk thread tightly around the base so as nearly to cut into it and wholly stop the circulation, and it will come off in a few days. When the wart is broad and flat or crowded by others this may be impracticable, in which case it may be removed by cutting it off and touching the cut with a hot iron to stop the flow of blood; or by applying very strong pyroligneous acid to the wound. Lunar caustic in a strong solution is also recommended. As the operation is painful, only a small number of the warts—if there are many—should be treated at a time.

Miscellaneous.

A Reader, Niagara Co., N. Y., referring to the letters of Messrs. Holmes and Sweetland, asks, 1, can a young man do better in the West than in the East or South; 2, is Northern Dakota superior to Southern Dakota; 3, will sheep-raising and farming in Northwestern Iowa pay as well as sheep-raising in Kansas.

ANSWER BY MESSRS. HOLMES AND SWEETLAND.

1. This depends upon several considerations—the present surroundings of the party: the extent and class of farming proposed; the habits and characteristics of the individual, etc. Of these a person could the better judge individually. 2. Yes; if localities are selected affording shade and shelter and thus adapted to the enterprise. These should be considerations in either case. 3. It is not our mission to make comparisons. Read "Wheat Culture in Minnesota," published in the RURAL NEW-YORKER July 23; "Statements Substantiated," October 1; "Wheat is Queen," October 15; "Facts and Figures," October 29, and decide according to your choice and aim. 4. No. The climate is drier in Northern Dakota, hence less penetrating than the same temperature 300 miles south. 5. Read "Truths from Kansas," published September 10; "Beautiful Iowa," published in June, and "Statements Substantiated," October 1. If we knew the circumstances, tastes, means and habits of any individual we would willingly suggest where, in our judgment, he would be most likely to succeed. The West affords a wonderful variety in its adaptability to every department of agricultural pursuit.

T. G. T., Hornbrook, Pa., sends for name and habits two bulbs of a "lily" brought from South America, and which is known only by the name of "Spirit of Santi." It is white, shaped like a dove, and is reported to be very rare.

ANS.—The bulbs received are those of some Amaryllis, but from the two immature bulbs with leaves attached, before us, we are unable to say to which species they belong. We would require to see the flowers before we could decide the species. When they have finished their year's growth keep them dry for several weeks, then re-pot them into somewhat smaller pots, water sparingly at first, but more freely when there are lots of roots, and abundantly when in full growth; or the bulbs may be planted out in Summer in an open, sheltered spot in the garden, in light, rich soil, and lifted before frost hurts them. The *El Spirito Santo*, or Holy Ghost, or Dove Flower, as it is commonly called, is a large and strong-growing orchid from Panama, botanically known as Peristeria elata, and a vastly different plant from that which our friend has got. In orchid collections in pretentious gardens it is not rare; but as it requires a high temperature, moist atmosphere and green-house room to grow and bloom well, it is not a desirable plant for the dwelling-house or small conservatory.

G. W. K., Harmony Grove, Ga., referring to Tobacco Notes in the RURAL, says it has been the rule there to hang up tobacco by suspending it on sticks close together in the house until it becomes yellow, and then it is hung in the sun until it has dried: but this is too expensive a process, as it has to be housed and a fire has to be built under it in wet weather, and he asks, 1, what is the general plan of drying; 2, whether a tobacco grower can make and sell tobacco to the consumer or manufacturer without getting a license.

ANS.—1, The production of "fancy" or "yellow" tobacco requires artificial heat during the process of curing. The common grades of tobacco, whether seed-leaf or "cutting," rarely need this, and the usual method of curing is simply to hang the plants, when harvested, in curing barns, where they remain undisturbed until dry or cured. 2, A tobacco grower has no right to manufacture tobacco or retail it to consumers without a license.

J. E. S., Wellsville, Va., asks, 1, whether in selecting seed corn from stalks having two or more ears, one only should be taken, or more; 2, do pine needles contain potash, and are they of any value as manure: 3, where can seeds of the Rural Branching Sorghum be obtained.

ANS.—1, If both are about the same size as to ear and kernel and both equally well tipped, we should choose the topmost. If the lower were in essential particulars better than the top ear, we should choose the lower. 2, Pine leaves have a small per cent. of potash, a considerable per cent. of phosphoric acid and lime and a very little magnesia. They are of value as manure, though very slow to rot. We have seen well rotted pine leaves used with good results in vegetable gardens of the South. 3, Leading seedsmen, we presume, will procure seeds, if they can, of this very valuable forage plant.

J. J. W., Jamestown, R. I., asks, 1, whether Fall is a good time to move evergreens; 2, how to take up canna roots; 3, how to winter carnations—is it best to pot them or cover them in the garden.

ANS.—1. The Fall is the worst time, the Spring the best time to transplant all kinds of evergreens. 2. Canna roots should be taken up after the first frosts have harmed the leaves. The earth should be washed off, the roots dried in the sun and then placed in sand for the Winter. This is the best method of preserving them we know of. Keep the box or barrel in which they are stored in a temperture as near 40 degrees as may be. 3. You can do either. They should stand the Winter if covered *loosely* with straw or hay.

A. S. M., Peterborough, Canada, asks the name of some good work on gardening and small fruit culture, and says he did not receive the RURAL's last Free Seed Distribution.

ANS.—Peter Henderson's Gardening for Profit is as good as any we know of. But it does not treat of small fruits. Really for this, there is no better work than a year's file of the RURAL NEW-YORKER, which gives special attention to horticulture in all its parts. Roe's book on small fruits and their culture is an excellent guide. The seed distribution was this year and will be next, sent to all of our subscribers who apply, inclosing two three-cent stamps.

L. R., Paris, N. Y., asks, 1, in which location will the Laurel-leaved Willow thrive best—a wet or a dry one; 2, where should the Hardy Catalpa (C. speciosa) be planted.

ANS.—1. We have the Laurel-leaved Willow (Salix pentandra ?) growing within three feet of the house (high ground). It grows luxuriantly. We have one on a sandy hill, where it also thrives. We have it on our lake banks. Here it grows rapidly, but the bank is raised several feet above the surface of the water. In wet places it winter-kills. 2. The Catalpa speciosa seems to thrive almost anywhere. We have it in sand and clay. Probably it would not like a wet position.

R. M., York, Ohio, asks how much corn can be safely fed to sheep during the Winter?

ANS.—Two to three bushels per head form the common ration, where corn is depended on, though sometimes as high as six or seven bushels are fed without injury. The best results will follow where grain is fed as soon as the early frosts damage the pastures, gradually increasing the quantity as the weather becomes colder and the pastures scantier. Then if the flock is regularly and liberally supplied with hay, good straw or corn fodder and plentiful water, any amount that is consumed with seeming relish may be fed.

Incog., Sharon Centre, N. Y., asks, 1, whether slate roofs are not cheaper than shingles; 2, what are the best slates and how much do they cost.

ANS.—We can answer that, if well laid, they are lasting and cheaper than shingles. But a poorly laid slate roof is a perpetual torment and expense. 2, The Chapman slate is the best in market and costs about $11 per 10 feet square. This is not a smoothly-finished slate, but it will last long. Vermont slate is cheaper, but the quality is not as good.

R. M., Albany, N. Y., asks for a remedy for a leaking teat in his three-year-old Jersey cow.

ANS.—Place a soft India rubber band around the base of the leaking teat, and in order to prevent it from sinking too deeply as well as to facilitate its removal at the time of milking, wrap around the upper part of the teat a layer of linen or thin, soft leather for the band to rest on. At milking time the band may be easily removed.

J. C. McC., Tidioute, Pa., asks where can he obtain second-hand veterinary books.

ANS.—At any large second-hand book store in the large cities or through local book dealers, now and then, in the smaller places. Leggatt Brothers, Chambers Street, this city, are the largest dealers in that sort of books here, and could doubtless supply any work either right away from their stock or after a time by hunting it up.

E. H. N., Charlevoix, Mich., asks whether the Wagener apple tree is short-lived; and, if so, is it because it is an early bearer.

ANS.—The Wagener is an early bearer, but we were not aware it was specially short-lived. As a law of nature, however, it is not unreasonable to suppose that early maturity and early decay go together.

L. H., Atlantic, N. J., asks for a remedy for stringhalt in a mare.

ANS.—There is no remedy for stringhalt. No sort of treatment is of any avail. Horses so affected are able to do all sorts of work; but the affection is considered a form of unsoundness.

H. M. W., Georgetown, Texas, asks where can he get some White Elephant Potatoes and R. B. Sorghum seed.

ANS.—The White Elephant Potato is for sale by leading seedsmen. The R. B. S. will, no doubt, be offered in leading Spring catalogues.

T. J., Lyle, Minn., asks how much postage shall he send for a named selection of our next free seed distribution.

ANS.—We divide the postage with our subscribers, they paying us six cents. We send the entire list to all, as it would be impracticable to divide it.

J. M. Allen, Urbana, Neosho Co., Kansas, asks who has Oxfordshire Down Sheep for sale. From a late description of them in the RURAL he infers that they are just the sort he wants.

G. W. R., Dayton, Ark., asks what is the best pasture grass for that southern latitude.

ANS.—Bermuda Grass, if not objected to. Probably Kentucky Blue Grass next.

J. H., Lynchburg, Va., and others, ask where can the Marlboro Seedling Raspberry be bought.

ANS.—It is not yet for sale.

F. S. H., Hersey, Wis., asks whether the RURAL pinks will live all Winter and come up in the Spring.

ANS.—Yes, if lightly covered with straw or leaves.

M. H., Stoughton, Ill., asks where can he get the Early Ohio Potato?

ANS.—From any seedsman.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, NOV. 26, 1881.

W. F. P.—L. R.—A. S. M.—E. H. N.—H. & S.—A. M.—F. D. C.—J. M. H.—S. B. P., Michigan, thanks.—W. F. B., thanks.—W. H. K.—T. G.—W. F.—W. F. B.—W J. F.—H. S.—R. A.—E. A.—A. F. E. L.—D. C.—M. D.—E. B.—R. E.—T. E.—A. U.—G. U.—L. L.—C. B.—M. B.—S. D.—D. D.—O. & E. C.—A. L. J.—A. F.—J. S. B.—A. H.—A. B. A.—S. B.—R. H.—H. W., Floyd Co., Iowa, thanks.—G. A. G., Jr.—D. J. C.—M. A. D.—T. C. D.—A. J. P.—J. H. K.—W. W.—F. B. T.—S. C. H.—E. J. Mc.

THE
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AUSTRALIAN MEAT.

After all that has been said and done about this, it does not seem likely to come into any great competition in England with American fresh meat. In order to transport it fresh from Australia to so distant a port as any part of Europe, the meat must be frozen. On arrival, as soon as it is taken from the cold compartments of the vessel and exposed to the air, it almost instantly begins to lose taste, and soon becomes unsalable, the butchers declining to receive and undertake to keep it for their customers.

The methods of keeping meat from Australia, and that frozen in Russia and other countries of a high Northern latitude are entirely different. In the latter there is no thaw during Winter, but one continued, steady freeze. As soon as it becomes sufficiently cold, animals of all kinds are slaughtered, the carcasses dressed and piled up in heaps in the open air; and the beef, mutton, pork, poultry or wild game is taken from these heaps as wanted, care being used to consume all before a thaw sets in, which does not come till the last of March. In this way the meat is kept perfectly fresh, juicy and sweet. In fact it is improved by the freezing, becoming a little more tender and savory from the action of the frost on it. Thus it will be seen that our American breeders of domestic animals have little to fear from the competition of Australia or other countries very distant from Europe.

ENGLISH HAY AND GRAIN DRYING MACHINE.

Mr. Gibbs has improved this somewhat since using it last year, and has been more successful than ever with its performance. During wet weather he cut and cured 30 tons of hay in 23 hours, at a cost of 13s. 6d. per ton (about $3). He afterwards dried the product of 33 acres at a less relative cost. He has dried seven acres of a heavy crop of clover in nine hours, and so on, with regard to other crops of hay, in a longer or shorter time as the case might be, and at a greater or less expense according to the downfall of the rain, as it fell heavier or lighter and for a longer or shorter time.

In drying wheat and other grain crops he has been equally successful. We wish our mechanics would turn their attention to getting up a similar machine; for, although our climate is not nearly so rainy a one as that of England, still we have so much rain occasionally in June, July and August as to badly damage the hay, rye, wheat, barley and oats. The cost of drying here by machinery could not be as great as it usually is in England, because, even in quite rainy months, we are favored more or less by a bright sun. Our mechanics have been very successful in getting up mowing and reaping machines, hay spreaders also; let them now try their hands at hay and grain driers.

Kiln-drying has also been successful, the wheat being thrashed when the straw was quite wet, and the grain then put on to the kiln. One writer says he has a kiln 16 1-2 feet square, on which he can dry 45 bushels at a time, and the grain dried well in four hours. Then he put this with a bulk of one-and-a-half as much more of undried wheat, let it lie 48 hours in a heap, then turned it, and after 48 hours longer put it through the *blower* (fan mill we suppose he means), and it made a dry marketable quality, which no miller could have told was not all dried well in the sun.

INSANITY OR MORAL PERVERSITY.

The alarming increase of crime which is attributed to insanity, is a matter deserving the serious consideration of sensible people. The trial of the perverted creature who assassinated our late President, has brought this subject forward prominently as a question for public discussion and earnest private thought. What is insanity? The word itself means unhealthfulness or disease, and is by common consent applied to the mental system. An insane person is one whose mind is diseased. This view of the case leaves open a wide distinction of degree, for the disease may be temporary and mild, or it may be serious, permanent and incurable. Between these two points there may be a great many gradations, as in fact there are. But the most serious consideration is, how is insanity produced and is there any point in this disease which approaches very closely to, or may be considered as, moral perversity due to ungoverned disposition, or an actually cultivated and fostered malignity of purpose? Self-will, a natural disposition to ignore the rights of other persons, obstinacy, vanity, cruelty and an utter disregard of the rights or comforts of our fellow creatures, may all, by continuous cultivation and practice, soon produce those conditions in the mind of a man which will possess and exhibit all the symptoms of mental disease.

It is a fearful thought, but a most pertinent one, how much of this mischief has been done by the want of repression and training and the proper subjection of the minds of children to a due regard to the rights of others and the rigid control of the passions. The ungovernable fury of the manslayer; the insatiable desire for the possession of money that it may be squandered in the most senseless and stupid manner, may very easily be produced in a mind all unbalanced and perverted by a continued and unchecked practice of anger and malice in the one, or extravagant greediness and self-indulgence in the other. Without pursuing the question further we submit it as one deserving the most careful and earnest thought of those who are rearing children and young persons, and whose first care of their inestimable charges should be to encourage in them, by every possible means, by education, training and example, a sound mind in a sound body; and not in the care for the latter to neglect the far greater interests of the former.

OUR IMMIGRANTS.

We make no apology for a somewhat frequent reference to the large number of immigrants daily arriving at this port. The question which treats of the reception and care of nearly half a million people, with their social, religious and national prejudices, their habits of indolence or of industry, their political beliefs or disbeliefs, is one that cannot be slighted; its importance demands for it a thoughtful consideration. It is a problem affecting not this city or State only, but the whole country, especially the West, whither most of the immigrants finally go. In the first place the appropriations to the Commission of Emigration at this port are not sufficient. When but two or three hundred immigrants came here annually the sum of $500,000 was each year appropriated for their reception and care, and it was none too large, but now when over 400,000 annually arrive, as was the case last year, the sum of $150,000 is deemed sufficient, and from this must be deducted $8,000 a year for rent, which, with other expenses, brings the actual annual working capital down to $130,000.

Again, no Commission of Emigration made up as this one is of business men with other duties to attend to, can faithfully perform the duties devolving upon them. They need to give their whole time and attention to the work. Two bankers, one publisher, one capitalist, one dealer in hats and one in the insurance business, together with the Mayor and an agent, each, from two emigrant societies, make up this Board. Even with the necessary clerks the work is too great, and added to this the hospital on Ward's Island, with its 600 patients, is under their supervision. This latter difficulty may be remedied by increasing the number on the Commission, and by placing men there who can devote their whole time to the work, thus enhancing its efficiency.

As an aid to the solution of the "deficiency" problem, the one dollar tax on each immigrant arriving should be legalized. If it is not in the power of the State Legislature to do this, inasmuch as such action is at enmity with the Constitution, then let the Federal Government authorize such a tax. About seven-tenths of all immigrants to this country land at this port; this State, by its appropriations, assists these people to homes, mostly in the West; it obtains passage for them thither at reduced rates; it cares for them at the Ward's Island Hospital, if they arrive sick; any time within a year it will give the discouraged and home-sick a free passage outward again—and all this is done with the $150,000. Inasmuch as this State is not by any means the one most benefited by the money and labor of the immigrants, simple justice demands that such a tax as the one suggested, be authorized, thus removing from New York a large expense which she should not bear alone.

REPEAL OF THE FRENCH EMBARGO ON AMERICAN PORK.

The late change of ministry in France, by which Gambetta has been made premier, is likely to have a beneficial effect on exports of American hog products from this country and consequently on the prices of our live hog crop. It will be remembered that on February 18, last, an order was issued by the Government of France prohibiting the importation of American hog products within her borders on account of the grossly exaggerated reports of the prevalence of hog disease here. Later on it was demonstrated not only that these were false, but also that as lard is boiled in the process of manufacture and impurities are neutralized in the refining, there could be no risk of disease in the consumption of that article, even if there possibly might be from the eating of pork. The embargo was then modified so as to admit lard while still excluding other hog products. Even with this modification, however, our hog industries have suffered greatly from the action of France, the more so as several other European nations have followed her bad example. It was mainly owing to this that our exports of hog products were 280,000,000 pounds less between March 1 and November 1, in 1881, than during the corresponding period in 1880, although from the previous November 1 to March 1, there has been an increase of 110,000,000 pounds, so that there was a fair prospect that our exports of hog products this year would have exceeded those in any previous twelvemonth, had not France and the other European countries forbidden their importation.

Immediately on the issue of the prohibitory decree in France an influential movement for its abolition was set on foot by a group of French scientists, who showed the senseless nature of the scare about the exceptional prevalence of trichinæ in American pork. The Bordeaux Syndicate of Commerce also protested vehemently against it; and so did the large body of free-traders whose principal mouthpiece, M. Leon Choteau, has been persistently agitating for the repeal of the decree. The vigorous action of our own Government in relation to the embargo, and the agitation of the subject of trichinosis have led to a great deal of research. Hence it has been proved that the distribution of trichina spiralis is well-nigh universal. The recent report of M. Zundel, of the Society of Sciences, Agriculture and Art, of Alsace, shows that he found the proportion of affected hogs in Prussia as 1 in 2,500, while in some parts of Germany it was as high as in 1 in 770; in Southern Sweden 1 in 63; and in the United States 1 in 50. The pest was found not to be confined to hogs alone, but to infest every animal examined, wild or domesticated, except the horse; and it is still doubtful whether he is wholly exempt from it.

With the fact fully established that the dissemination of these parasites is practically universal, and that they infest not hogs alone, but nearly all other food animals to a greater or less extent, the idea of averting trichinosis by restricting trade in meat appears one of the greatest absurdities to which crude legislation, fostered by prejudiced clamor and imperfect scientific inquiry, has ever given rise. Accordingly the Gambetta ministry, which is much more strongly inclined to free trade than its predecessor, has decided to abolish the obnoxious embargo on American hog products; and this morning's cablegram informs us that freedom of importation of salt meats will be allowed after the speedy annullment of M. Tirard's decree restricting the importations. The repeal of the prohibition will doubtless give an extra impetus to our export trade and considerably enhance even the present high price of hogs by enlarging the market for them. Other European countries will probably soon follow the present example of France as they did her former one, although to-day's cable informs us that Roumania has just renewed for a year the prohibition of importations of pork from the United States and several European countries.

We have already heard of several large contracts for hams, shoulders, sides, etc., made during the past week for export to France in expectation of the raising of the embargo definitely announced to-day.

BREVITIES.

The Illinois Industrial University offers to those who cannot give longer time to agricultural study in schools four daily courses of lectures during its Winter term—eleven weeks from Jan. 4, 1882. The subjects are: General Farm Management; Animal Husbandry; Diseases of Animals, and Elements of Horticulture. The University library and museum will be open to those in attendance. The annual Agricultural Institute will be held the last week in January.

One more step has been taken toward securing a site for the New York Agricultural Experiment station. On November 23, the committee consisting of P. Barry of Rochester, N. M. Curtis of Ogdensburg, J. S. Woodward of Lockport, and James McCann of Elmira, commenced a tour through the State for the purpose of visiting farms offered for a site. The farms first examined were in the vicinity of Utica. They were accompanied by several prominent gentlemen interested in the movement.

The latest crop reports from the Agricultural Department give the average yield of wheat per acre for this year as 10⅝ bushels, against 13 1-10 last year. The severe Winter, the drought and insects caused a large falling off in the crop in the West, but the quality is generally reported good. Corn has yielded, on an average, 20⅝ bushels per acre, a falling off of about 25 per cent from last year's yield. The quality is not up to the average. The drought seriously affected the cotton crop in the South and the total yield will be a considerably less than last year. In Louisiana the decrease is about 33 per cent.; in Texas 40; in Arkansas 60; in Florida 15; in Tennessee 42; while in South Carolina, Mississippi and Georgia the crop will be about the same as last year.

During the past week we have received from all parts of the country a very large amount of information on the driven well question in answer to our published request and to a multitude of private letters of inquiry. Hitherto we have not had time to read, compare and systematize this mass of often discordant information: but from what we have already learnt, we feel pretty confident that if the case is skillfully presented, Green's patent will be declared invalid, if not by the United States Circuit Courts, at any rate by the United States Supreme Court. During the present agitation a very large amount of new evidence as to the antiquity of the method of well-making covered by that patent, has been collected, and it seems to us that the patent can be successfully assailed on another point also. Next week we shall begin to lay our share of the evidence in detail before our readers.

A committee appointed by the National Grange, which has lately been in session in Washington, called upon Commissioner Loring this day week to urge him to use his best efforts to elevate the Department of Agriculture to a higher rank, and to convey the protest of the National Grange against including in that Department any interest except that which it represents—agriculture. On both the points presented the Commissioner had views different from those pressed by the Committee. So far as he was concerned he could not urge any action looking towards making his a cabinet office. He advocated the enlargement of his Department so as to include those interests which are intimately and to a great extent inseparably allied to agriculture. There should be a bureau of manufacture where producers could find such information as would be for their best interests in the production of cotton, wool, etc. A bureau of mining should also be established. As to railroads, he thought something might be done by which the whole country might be benefited in the way of equalization of fares and transportation. All these, together with the present Agricultural Department, would be known as the Department of Industries, with which the Land Office also should be connected. His present office, he believes, has not yet risen to the dignity of a full Department. Too dignified and impartial to push any single interest, he intends to advocate what he thinks for the best interests of all.

Sugar Beets.—Some of the local papers in York, Pa., are a trifle too enthusiastic in their predictions of the advantages of starting a beet sugar factory at that lively little town. Neither 30 tons of beets nor $100 net profit per acre can be realized from the industry. There is some talk of organizing a sugar beet factory in Orange Co., N. Y., and meanwhile a number of farmers have planted a considerable amount of sugar beets to feed to stock. In Oswego Co., N. Y., the advisability of organizing a beet sugar factory is also being discussed, and a number of acres have been planted to beets which are intended for cattle feed. For this purpose they are valued at $5 per ton. The crop is reported good in spite of cold weather. The Standard Sugar Refining Company of Alverado, Cal., reports that the average yield of sugar beets in that State will this year be at least 15 tons per acre, of excellent quality. The company began work on August 27, and has averaged 80 tons a day. The beet sugar factory at Berthelr, Canada, is ready for work. It will work by "diffusion," using 300 tons of beets every 24 hours—double the amount used by any other Canadian factory. Fifty tons of coal will be used every 24 hours to produce steam; 3½ tons of coke for the lime kiln, and 2½ tons of limestone for the production of carbonic acid. The daily expenses are expected to be $200. The entire factory at Franklin, Mass., has been sold for $32,300. The Delaware Beet Sugar Company's crop will not average over nine tons per acre owing to dry weather and poor seed. It offers $3.50 per ton to farmers; but these are holding out for $5. The company expects to manufacture three or four times as much sugar this year as last. This and the California factory are the only two surviving in the United States. The Mohawk Valley Beet Sugar Company is still confining its efforts to talk—perhaps the safest thing.

Miscellaneous.

MOORHEAD, MINN.

Its Agricultural Surroundings, Commercial Interests and Railway Connections.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

MOORHEAD is especially happy in its locality and site. It is the county seat of Clay County, Minnesota, and here is the junction of those two great railroads, the St. Paul, Minneapolis and Manitoba and the Northern Pacific, ere they cross the Red River of the North. In several letters already written we have discussed the merits and given statistical information regarding the productiveness of this valley; hence we will only say of the country tributary to Moorhead, that it partakes of all the many characteristics in the general excellence and fertility of its soil. The average yield of wheat this year will doubtless exceeed 20 bushels to the acre. We learn from Messrs. Comstock & White that property in Clay Co. has appreciated in value from 30 to 35 per cent. the past year, being held now at from $3.50 to $10 per acre for wild land; improved farms bring from $3 to $5 additional.

Besides the railroads mentioned above, grading has been commenced upon the Moorhead & Northern R. R., which will be pushed to rapid completion. The Moorhead, Breckenridge and McAuleyville R. R. has been surveyed and will be soon built. Having also river connections by two lines with the north, thus giving outlets in every direction, this city bids fair to be an important railway center and receiving and distributing point.

Its site is high and dry, well drained (three "coolies" or natural drains through it) while the sewerage system now being put in is thorough and complete. An excellent feature we noticed is an organization called "The Moorhead Loan and Building Association," to aid persons of small means to acquire property and obtain a fair start Edw. E. Moore, cashier of the Merchants' Bank, is secretary. Such institutions should be promoted and encouraged in every growing city. The assessed value of property in Moorhead (on the basis of about one-third) is $501,000, while the value of permanent improvements for 1881 exceeds $400,000, against $300,000 for 1880. There is no city indebtedness. Business lots can be purchased for from $500 to $1,500 on the main streets, while residence lots bring $25 to $100.

Moorhead's population last census was 1,800; it is now estimated at between 2,500 and 3,000. There are Presbyterian, Episcopal, Methodist, Catholic, Lutheran and Baptist church organizations, all well housed except the last named, which expects to build soon. The valuation of church property is $17,000. The school building cost $25,000 and is considered the finest in this portion of the State, having high and graded school departments. The high school receives aid from the State by appropriation.

The Moorhead Argonaut, weekly, expects very soon to establish a daily. The social life is on a par with the business activity, the several civic societies having prosperous lodges. Like most progressive cities, Moorhead has complete telephone connections, with Fargo; and the street railway company recently organized intend to connect with their sister city, for which purpose and many others the necessities of a free bridge are keenly felt, and arrangements are perfected for an excellent one to be built of iron. The water-works are owned and controlled by the city; 7,000 feet of mains have been laid this season. The pumping is being done at present by the Moorhead Manufacturing Co. There are two banks (one recently opened), with an aggregate capital of $160,000; while the banking and exchange business of the one for the past year has been between five and six millions. During 1880 the wheat marketed in Moorhead was 700,000 bushels, and the elevators have received at this time double the quantity and 5,000 bushels more than last year. The grain storage capacity is: elevator, 120,000 bushels; warehouses, 30,000 bushels; St. Paul, Minneapolis and Manitoba Railway elevator (to be built this Fall), 150,000 bushels, and elevator for mill, 65,000 bushels; total, 365,000 bushels. At the time of our visit grain prices were: wheat, $1.33; oats, 60c.; flax, $1.05. The commerce of the city averaged, from statements of several leading citizens for the past year, over $5,000,000. Among recent improvements one which is of the greatest importance to Moorhead, as well as to the entire Northwest, is the building, by the Mayor, H. A. Bruns, of the Grand Pacific Hotel, opened to the public November 15. It is Athenian in architecture, has 120 rooms and 18 bath-rooms with hot and cold water and the same number of water closets. It is lighted with gas, except the office and dining hall, which will have electric lights. It has elevators, pneumatic calls, steam heating, steam laundry, etc., being complete in every detail. The waiting rooms, ticket and baggage rooms and land department of the Red River Valley division of the St. Paul, Minneapolis and Manitoba Railway will be in the building. These offices are simply complete in every detail, large, well ventilated and handsomely finished. Their perfect arrangement reflects great credit upon their designer, and the road certainly has just reason to be proud of its quarters in Moorhead. The cost of the building, with furniture, has been $166,000. Having also another excellent and well-kept hotel, the Jay Cooke House, Moorhead's reputation for caring for the traveling public is assured. The Mayor also built, in 1880, a neat and handsome opera house, seating 500, with all accessories of stage, etc., costing $16,000.

Briefly summing up Moorhead's manufacturing establishments and needs, we will close. The Moorhead Manufacturing Company have a roller flouring mill of 150 barrels daily capacity running night and day. There are a large brewery and four brick and tile companies, which burned 8,000,000 brick this year, and a steam saw-mill, capacity about 40,000 feet of lumber per day, is to be built at once by experienced parties. All steamboats of the Red, Saskatchewan, and Assineboine Rivers (with a few exceptions) were built here. There seem to be openings for manufacturers of linseed oil, tow, straw paper, and, perhaps, agricultural implements, and we are told of vacant niches for furniture, ladies' and gents' furnishing goods, and a tailor.

With this brief summary of the interesting points of Moorhead, we will once again visit "The Park Region," and write of its interests as we journey.

A VISIT TO A COUPLE OF NEW YORK SLAUGHTER HOUSES.

AT the foot of West Fortieth Street, N. Y. is the great West Side abattoir or slaughter-house. It is 425 feet in length and about 200 feet wide, and is of easy access to the river. This is the largest establishment of the kind in the city and the average number of beeves there killed and dressed for market is about 2,200 per week or something over 114,000 per year. The average weight of the cattle arriving at the abattoir is said to be about 1,200 pounds, though judging from those we saw in the stalls, we should think that figure a trifle too large.

The manner of killing the cattle and dressing them is similar to that pursued in all establishments of this kind. There are at this abattoir 12 pens or stalls into each of which, say five cattle are driven at a time, or just enough to stand without crowding. Corresponding with each of these pens and connected with them by a wide door-way, is the place where the beeves are dressed. When one of the animals is wanted for slaughter, a man steps into the stall, places a noose about the hind leg of the beast, attaches to this the pulley-rope and tackle and in an instant the animal is hanging by its hind leg, with its head just touching the floor. In another instant the "sticker" has drawn his long knife across the throat and the black blood pours out in streams. Three workmen, a "dresser" and two assistants, then lower the carcass, flay it and cut it up, and in less than 15 minutes from the time the struggling animal leaves the stall the warm, quivering flesh is dressed and rinsed and hangs in the shambles ready for market. There are, as we have said, a "dresser" and two assistants to each "critter," who are hired by the week. In some abattoirs the "sticker" gets 15 cents per head and the "dressers" about 60 cents.

While watching this interesting process o transforming live animals into beef, we noticed that a different mode of killing was practiced upon one victim. He was struck between the horns with an axe and a small aperture was made in the throat through which the dark blood flowed into a pail set beneath. On asking a young man who stood by, why this animal was made an exception to the rule, and his blood collected so carefully in a pail, he said "That's for me to make blood puddin' of." It seems that he is an *attache* of some neighboring German restaurant where it is said, "blood-puddin'" is considered a delicacy. When the day's butchering is done the floors are washed, and everything is made ready for a repetition of the work on the morrow.

THE PROCESS OF KILLING AND DRESSING HOGS

is still more interesting and in order to see this most satisfactorily, we crossed the street to the Western Stock Yards, the name by which these premises are known. The "porkers" are introduced to their fate in a manner quite similar to that practiced in the cattle department. They are driven from the pens outside up an inclined pathway to a platform elevated several feet above the main floor of the building. Here each hog is caught up by a hind leg and suspended, head downward, upon a horizontal iron rod along which it is passed until it comes before the "sticker" who is, indeed, a formidable-looking being, armed with a long, sharp knife, while his hands and leather apron are covered with the blood of his victims. By him the hogs are "stuck" in the throat, and they are then run along the horizontal rod until they arrive just over a chute into which they drop, one at a time, and slide down into the scalding vat in the basement. Here they remain until the workman in charge (who, by the way, has been in the business 21 years) pronounces the "scald" sufficient, then by an ingenious contrivance they are lifted out one by one, and thrown upon an adjoining table. Two men then attach a hook to the lower jaw of the hog and then to an endless chain which conveys the hog upward through a large cylinder provided within with scrapers which remove nearly all the hair as the hog passes up.

Arriving at the top it passes over another cylinder, is unhooked from the chain and falls upon slightly inclined tables, where stand eight men, four on either side, who complete the scraping and external dressing. Two men then insert the gambrel in the hind legs, by which the hog is suspended to a circular iron rod, and passes first to the "dresser" who, as we timed him by the watch, removes the intestines at the rate of four hogs per minute. He has acquired a high degree of skill in 16 years' continuous experience. The now nearly-dressed hog passes around to another who rinses the pork (for such we must now term it) and then to another who transfers it to the shambles, where it cools and is marketed.

"How long does it take for a porker to 'pass through the mill'?" we inquired of a workman. "Can't say exactly," he replied, "but with a full force we can get 200 of 'em through in an hour;" but a non-interested party informed us that 150 per hour was a good average, and so we thought.

We were also informed by the keeper of the yards that during the war a million and a half hogs annually passed through this slaughter-house to market, but owing to the fact that similar establishments are in operation in almost all the larger Western cities, much less than half that number are now slaughtered here.

Half Hardy Trees and Shrubs.

I think, after all, it is difficult to decide as to these, for the question is whether if any of our natives which are among the most hardy roses, were placed in the same circumstances as those which are considered half hardy, they would not be killed in the Winter. Nothing is more hardy than the Red Cedar, and yet every three or four years, more or less of these of various sizes are killed on my grounds, no matter how placed, whether standing singly, in groups, or, in a crowded forest.

The Japan Akebia (quinata) is reported as hardy in the Rural Grounds, but planted in mine about a degee and a half farther South, in a place exposed to the north wind, it invariably died every Winter whether mild or severe. I then planted it on the south side of my house basement, protected by a brick wall on the west. It grew well there for eight years, thickly covering the first-story veranda till the past Winter, when it was killed, the roots as well as the vines. A.

CATALOGUES, ETC.

FARMING FOR BOYS. What They have Done, and what Others may do in the Cultivation of Farm and Garden. How to Begin, how to Proceed, and what to Aim at. By the author of Ten Acres Enough. Illustrated. Boston: D. Lothrop & Co. Price $1.25. This excellent work, from the pen of the author of Ten Acres Enough, will be warmly welcomed especially by the young people who live in the country, and it should be the aim of parents to put some such book as this in the hands of their children. The author shows the advantages of farm life, its healthfulness, its freedom from temptation, and the sure reward it brings to intelligently directed industry. The book is in the form of a story, and will be read by those for whom it is intended with delight and profit.

ANNUAL CATALOGUE of the Columbia Veterinary College and School of Comparative Medicine, 217 East Thirty-Fourth Street, New York. This college is connected with the University of the State of New York, and this catalogue contains the names of 28 graduates and 41 of the matriculated class of 1880—1881. The faculty embraces the names of well-known veterinarians, and the course of study seems full. Alexander Hadden, M.D. is president, and applications for information should be made to him.

PROGRAMME of Eleventh Annual Meeting of the Michigan Horticultural Society, to be held in South Haven, Dec. 5, 6, 7, next.

Literary.

GREEN APPLES.

PULL down the bough, Bob! Isn't this fun?
Now give it a shake—there goes one!
Now put your thumb up to the other and see
If it isn't as mellow as mellow can be.
I know by the stripe
It must be ripe!
That's one apiece for you and me.

Green, are they? Well, no matter for that,
Sit down on the grass, and we'll have a chat,
And I'll tell you what old Parson Bute
Said, last Sunday, of unripe fruit;
"Life," says he,
"Is a beautiful tree,
Heavily laden with beautiful fruit.

"For youth there's love, just streaked with red,
And great joys hanging right over his head;
Happiness, honor and great estate,
For those who patient work and wait;
Blessings," said he,
"Of every degree,
Ripening early, and ripening late.

"Take them in season, pluck and ate,
And the fruit is wholesome, the fruit is sweet;
But, oh, my friends!" Here he gave a rap
On his desk, like a regular thunder-clap,
And made such a bang,
Old Deacon Lang
Woke up out of his Sunday nap.

"Green fruit," he said, "God would not bless;
But half life's sorrows and bitterness,
Half the evil, ache and crime,
Came from tasting before their time,
The fruits Heaven sent,"
Then on he went
To his fourthly and fifthly—wasn't it prime?

But, I say, Bob, we fellows don't care
So much for a mouthful of apple or pear;
But what we like is the fun of the thing,
When the fresh winds blow, and the hang birds bring
Home grubs and sing
To their young ones, a swing
In their basket nest, tied up by its string.

Like apples in various ways;
They're first-rate roasted before the blaze
Of a winter's fire; and, oh, my eyes,
Aren't they nice, though made into pies!
I scarce ever saw
One, cooked or raw,
That wasn't good for a boy of my size.

But shake your fruit from the orchard tree,
To the tune of the brook and the hum of the bee
And the chipmunks chirping every minute,
And the clear, sweet note of the gay little linnet,
And the grass and the flowers,
And the long Summer hours,
And the flavor of sun and breeze are in it.

But this is a hard one! Why didn't we
Leave them another week on the tree!
Is yours as bitter? Give us a bite,
The pulp is tough and the seeds are white,
And the taste of it puckers
My mouth like a sucker's!
I vow, I believe the old parson was right!

THORNS AND ROSES.

CHAPTER IX.

(Continued from page 803.)

My new home! I looked around at the old home and its garden—the home of my child hood—and a pang shot though my heart at the idea of leaving it even with him!

"Nevil, suppose you could not like me when I left home?"

"My dearest girl, some foolish fear seems to haunt you, but I can understand your feelings. Only, what am I to do without you? If you knew how lonely I am, you would pity me. At home, I fancy how bright it would be if you were with me.

"When will you come to me?"

"When you please. Nevil," I said; "I do not fear the future with you!"

We walked on silently. It was but one evening among the many happy evenings strung like golden beads on the rosary of memory.

When the guests were gone, my cousin announced with a yawn that she must return home.

"You are rather interesting at first, Kate, but you are getting tedious, and even Nevil has ceased to amuse me.

"Papa, too, will think I am going to live here altogether. I shall leave my interesting Edgar to your care, Kate. Like everyone else, he is boring and prosy."

I read Edgar Dana's play the following morning, and was not a little surprised by its beauty. The heroine was an idealized Edith, the hero himself, of course; but it was well written, and not wanting in dramatic force and power, though rather a poem than a play, and I certainly did not think it suited for the stage of present days. After reading I had little confidence in my own judgment, and feared either to praise or disparage.

CHAPTER X.

Since the day of Edith's departure I had seen nothing of Edgar Dana, and this surprised me not a little, as I thought he would have been eager to hear about his play; but I had not to wonder very long. He called one afternoon—an afternoon to me for ever memorable.

I was in the garden, in a shady little glen, where a seat had been erected under a droop-

ing tree, beside a miniature cascade, and the leaves were fresh and green. This was one of my favorite spots; and I was thinking of Nevil, when, to my surprise. Edgar Dana appeared.

"How did you find me?" I asked.

"The gardener told me where you were."

He looked pale and tired, and leaned with an air of weariness against the tree.

"I meant to have called before, but General Polwyn had a great deal of writing for me to attend to. Have you heard from Edith?"

"Yes, she has written once."

"Does she say anything about returning Miss Lovel?"

"She has scarcely gone yet," I said smiling, "and we don't expect her until Summer. I have read your play, and I like it very much.'

"Do you really?" he cried, brightening. "It is worth something, then; it will succeed!"

"I cannot say that. I think it rather a poem than play; but my judgment may be erroneous, for really I don't profess to be a critic. You should ask the opinion of some one else."

"But whom could I ask, Miss Lovel?"

"Mr. Verner!" I suggested rather dubiously, because Nevil and Edgar had not got on very well.

"No; I don't know him well enough!"

"Then who could be better than Brandon? He has passed nearly all his life in study; he has read a great deal, and he has a fondness for literature. He will understand this much better than I can."

"I don't like to ask him," said Mr. Dana, pulling leaves from the bough above him.

"Why not? He is happiest when he is pleasing others. I assure you he would be glad."

"I scarcely—we have not made friends—a——"

"Do you know, I quite expected you to like Brandon, your tastes being similar! Do ask him this, and you will thank me after."

"I'd rather not," he said, with the old nervousness.

"You might be afraid of him. I can't understand why you avoid him, for though grave, he is goodness itself, and he has shown you every kindness, hasn't he?"

"Yes—oh, yes, Miss Lovel!"

"You will understand me," he said, in a low voice, and coloring deeply, "when I tell you that you were right—I am afraid of him."

"Afraid of Brandon?" I almost laughed. "Is he so very terrible, then?"

"Please explain yourself. Why do you fear Brandon?"

"Dear Miss Lovel, I don't want to say anything that may pain you; only remember his father's death, and you will see that I can't make a friend of a—a man like that!"

"A man like that! Then you visit the sins of parents on children, and hold Brandon responsible for his father's follies?"

"Is it that you will not understand, Miss Lovel? I cannot make a friend of Brandon because I fear him; as you know, I have reason."

"Will you, for mercy sake, be clear? I do not know what you mean. You fear him—the gentlest of men! You cannot make a friend of him whose friendship I would not forfeit for all that the world could give!"

His expression changed at once to fear and horror.

"Is it possible you do not know? I should not have said this. Forgive me, and I will go——"

"You *must* speak out now! What is it that I do not know? I implore you to tell me!"

"Miss Lovel," he said, greatly distressed, "what I could tell you would only give you pain."

"Do you know something against Brandon?"

"Yes!" he said, very unwillingly.

"You must tell me! I demand an explanation!"

"And I—forgive me—will not give it."

"But I entreat you to tell me! In Edith's name, I ask it! It is cruel of you to leave me in torture!"

"You do not know what you are asking, Miss Lovel! If you insist on an explanation, I must give it: but believe me, that had I known you were ignorant of his story, I would never have spoken. I thought you all knew it, and was surprised when I found how cordially he was received; but I could not help fearing him, and shrinking from him. I suppose I am queerly constituted, but I did not like to take a hand stained with—stained with—blood!"

"Sir! he has not injured you that you need traduce him!" I cried, hotly.

"Unfortunately it is true!" he said, with sad compassion. "Do you know anything of his father?—does he ever speak of his death?"

"Not to me. I know the death was sudden."

"Father and son did not agree, and Brandon benefited by that death. Yes, it was very

"I cannot misunderstand you; but look at Brandon's life!"

"I have heard of men living lives of atonement, and unfortunately I know too much. My guardian was a firm friend of Brandon's father, and he had the secret. I have told you that I was with my guardian when he was ill. He was often delirious, and in one of these intervals I heard the name of Lovel, which immediately attracted me, because I knew he had lived in the same county as were Edith's relatives, and he had known them well,"

"Continue. He said something?"

"He had been muttering something, of which I could hear nothing, when suddenly he raised his voice, as if in entreaty, saying, 'Go away, Brandon! What, strike him to whom you owe your wretched life!' and seemed to struggle with someone. Then, pointing before him, he cried: 'Too late—too late! He is dead! Go away at once, Brandon. You have done enough!' Then he fell back, sighing: 'His own father! It is terrible! Don't fear, I will keep the secret, for it stains your name, and the world shall never know this. What did you do with the dagger?' Oh, Miss Lovel, I fancy I hear his voice now! Thank Heaven I was alone with him. That night he died. In his desk I found a fragment torn from a letter. There were other torn pieces, but this was larger than any, and on it were these words: 'Killed by my hand, the hand of his only son!' My guardian's lawyer wrote to Brandon, acquainting him with the death, and Brandon replied. I saw the letter, comparing it with the fragment I had, and found the writing exactly alike. The peculiar formation of the 'a's and 'e's could not be mistaken. I burnt that fragment. That day, when I was coming here as secretary to General Polwyn, Edith was in the same compartment, and she spoke of her relatives, of Brandon, saying that he had never been the same since his father's death. Is it any wonder that I fear him?"

"It cannot be true!" I cried.

CHAPTER XI.

"I have heard that Brandon's father was unkind to him; and the Lovels are thought hot and fiery," said Edgar Dana.

"Yes, we are hot and fiery, but pride is also ours! Does a proud man stoop to crime?"

"I cannot say. Forgive me, and believe that to no one else will I ever speak of this—on my honor!"

"Your guardian did say that? You saw those words?"

"Yes, I did indeed."

"Then please go!"

He bowed and left me; and when he had gone—when the echo of his footsteps had died away—I fell on my knees, sobbing in agony. Oh! why had memory been given me, for one by one words and scenes returned, piercing my heart as with a thousand swords.

There had been a mystery about Clarence Lovel's death. Though he had been ill, his illness had not been considered serious, and aunt had told me that the announcement of his death had come on her like a thunder-clap. He had not been kind to Brandon, I knew. I thought of the latter's gloom and melancholy, which had so long perplexed me, and Edith's words came back all too clearly: "I saw him a little while after his father's death, and he looked wretched; but there was no reason why he should break his heart over the loss of such a parent." And the evening when aunt had told him he would lose his memory he had answered, "I wish I could!" Why did he wish it? The shadow between us two—what was it? What had changed him? "If there be a shade between us, it is through me it comes. I am reserved with you: but it is better so—how much better you will never know! We are not as we once were, and why we are not is better unsaid!" These were his words, and they echoed in my ears again; but he led a good life. Was it indeed in atonement and expiation? I thought my senses were going, my agony was too great for tears, when I heard aunt Dorothy's voice calling me. She must not see a change in me or know this dreadful story, and I rose, straining every nerve to regain composure; and I retained it—I do not know how—throughout the day.

But in my own room there were none to see me, and in pain and misery I walked to and fro, thinking of what I had heard. Well indeed might there be a shade between us—black as night it rose; well indeed might he be melancholy and sad, though wealth and honor were his. I fought against the thought—I shrank from it in vain; and through the night I shuddered in solitude, hearing only those words, "Killed by my hand," seeing only his darkened face.

I tried to sleep at last, and then the flash of the diamond ring I wore roused a new train of thought. There was my refuge—the true, pure heart that was my own, the faithful love that crowned my life; but even the thought of him turned to bitterness. Suppose this story, which cast a stain on our name became known, would Nevil turn from me? and was this to be the test of his love?

The first ray of light woke me from a troubled slumber—from the brief forgetfulness to recollection; and I rose at once, gazing through the window, and thinking how dimmed was the glory of dawn. I stole from my room and went quietly to the gallery, looking at the portraits as I passed. The last of all was Brandon—Brandon as a boy; but a mist rose between it and my eyes, from which the tears fell quick and hot. I could not believe him guilty. The dear friend of my youth, the brother whom I reverenced above all, was not guilty!

Again I thought of Nevil; his love would be my shield; he would be true through sun and shade.

When breakfast was over I gladly went out to the garden, for it was as much as I could do to appear composed and cheerful before aunt Dorothy, and I would not have her see me depressed.

I must forget what I had heard, that was the only thing I could do; and I occupied myself with the flowers, I read and talked, and the morning passed away.

How long it seemed since yesterday! How slowly did the hours drag on! Try as I would to forget, my thought would go to Brandon and this story. Was it true? Could I believe it of him whose life had been so long linked with my own, and who had been to me the ideal of manhood? I had thought him as one of the old heroes of our house—that in him the virtues of our race were united, without its faults.

I heard a footstep on the gravel, and knew someone must be coming. Perhaps it was Brandon himself; and I felt cold and faint. I need not have distressed myself. It was not Brandon, but Edgar Dana who appeared. I hoped he had come to tell me that it was not true, and I spoke calmly enough, resolved not to let him see that I had doubted my kinsman.

"I will not stay," he said. "I left you looking so pale yesterday that I feared you would be ill. Oh! Miss Lovel, how grieved I am that I told you! When I got home, and thought over all, I felt ashamed and miserable. It was such a return to make for your goodness."

"Blame me for demanding the explanation," I said. "I am not ill though. What you told me yesterday you have promised to keep secret, and I will yet ask another favor. Never—never speak of it again to me. Let the subject forever rest—be as though you had not told me!"

"Miss Lovel," he said, with boyish eagerness, "the sight of me, after the forbidden subject, can only bring you pain. If we don't speak of it, we cannot help thinking of it, and it is better for me to keep away until you forget. I can plead my duties as an excuse."

Before I could reply he was gone. Perhaps he was right. I understood and appreciated his delicacy, thanking him for it mentally.

As I had expected, evening brought Nevil, and I banished all painful thoughts. He was quiet to-night, and when I remarked on his silence, said that he was tired.

"Oh! Nevil, dearest, are you ill?" I cried.

"Out of sorts, anyway. But you needn't alarm yourself. I shall be all right soon."

Nevil's visit did not give me the comfort for which I had longed, though why I could not tell. He had seemed weary and languid. Perhaps I was journeying to a new sorrow.

The next evening brought Brandon, and how easily and calmly we met, without change in our greeting. For a moment the feeling of dread and faintness had chilled me, but his dear, kind voice drove it away as clouds before sunlight; he had been so long associated with peace and sincerity in my mind that the meeting over which I had sighed brought relief.

As he sat with aunt Dorothy, moving the chess-pieces to and fro, I studied his face by the light of what I knew; the power of the firm lip, the eye with its piercing light, the straight, broad brow, every feature was familiar and dear, but need there be a cloud upon him? It was no fancy caused by Edgar Dana's story; the shadow had been seen by me before I knew that. And what were his secrets, to cast so deep a gloom upon him? Yet it had faded sometimes; the smile I had known in bygone days, that trembled on the lips and flashed in the eyes, had swept away that sadness, but oh, how rarely!

"You do not look well, Kate," he said, when he was bidding us good night. "Don't give Diamond too long a holiday. I have brought you a new book—a good one."

How ashamed I felt: how his kindly interest pained me when I remembered what I had thought of him!

Spring went by, and Summer, rich with flowers, crowned with stars, and robed with sunset glories, had returned. Spring had been darkened for me by Edgar Dana's revelation, but outwardly I was unchanged to Brandon—my affection had never for a moment faltered, even though my trust had been shaken.

Mr. Dana had kept his promise to me. We say very little of him now, and I knew why he kept away. Once he had called to ask about Edith.

Edgar's revelation must have had a greater influence on my mind than I had first supposed, and caused me to look on the world with a jaundiced eye, for I thought even Nevil strange.

I saw him often, and spoke as fondly to him; but he was silent, and weary, and cold. Or was it not my imagination? Troubled by thoughts of Brandon, depressed and sad, it was only natural that I should fancy things which could not exist; or Nevil might have some trouble which he could not tell me; so I tried to express in deeds the sympathy I could not in words."

"Nevil, have you some trouble that you can't tell me?"

"Why do you think so?" he said, surprised.

"You are so silent; not like what you used to be. I have even fancied something had come between us."

"What could? Surely you are growing fanciful, my dearest girl. I may have annoyances but how am I changed to you?"

"I cannot put it into words, Nevil."

"Can't you? Don't you think you were unkind to doubt me, for what you say means only that? What cause have I given you to do so?"

"Forgive me, dear; I had no thought to pain you; I only meant to be open and candid."

"Then, love, state your complaint openly and candidly."

"I thought you were troubled, or that I had vexed you in some way. Imagination, perhaps; but the least coldness on your part wounds me a thousand times more than could that of any other."

"We are moping too much, perhaps. At least, put these idle fancies away, Kate."

To be Continued.

NEW PUBLICATIONS.

The Wilderness Cure. by MARC COOK. Wm. Wood & Co., N. Y.

In this neatly bound, well printed book, is told the story of a young man's exploits in the wilderness in search of health. It tells all about camping out for health; how to do it; its cost, and what is requisite. It will be read with interest by all who peruse it.

Rules of Proceeding and Debate. By LUTHER S. CUSHING. Boston: Thompson, Brown & Co. Price 75 cents.

This manual of parliamentary practice is, by common consent, the accepted authority. It contains all the essential, practical points of Cushing's "Law and Practice" and is sufficient for all ordinary uses. Its extended circulation gives proof of its worth.

Food for the Invalid. By J. M. Frothergill, M. D. Edin. and Horatio C. Wood, M. D., of the University of Pa. New York, Macmillan & Co. Price, $1.00.

This little work of 157 pages is worthy of a place in every family. It is designed for the convalescent, the dyspeptic and the gouty. In the introduction much valuable information is followed by various recipes for food for the invalid.

The Diet Cure—The Relations of Food and Drink to Health, Disease and Cure. By T. L. Nichols, M. D., Editor of the London Herald of Health. M. L. Holbrook, publisher, 13 and 15 Laight St., N. Y. Price, 50 cents.

There have been, from Hippocrates to Gull, many sensible physicians and some of the best of them are quoted in "The Diet Cure," which teaches that pure food makes pure blood, and pure blood builds up a healthy body. It is full of information on various health-topics.

THE Sunday newspaper is published, but you need not read it. The Sunday excursion is advertised, but you are not compelled to go upon it. Your neighbor may employ the day over his business accounts, but that does not affect the question of your duty. He may spend it in idleness at home or in the entertainment of friends, but that does not close the church doors to you. The command is: "Remember the Sabbath day to keep it holy." You can obey the command.—Christian Weekly.

WHAT sunshine is to flowers, smiles are to humanity. They are but trifles, to be sure, but scattered along life's pathway, the good they do is inconceivable. A smile accompanied by a kind word has been known to reclaim a poor outcast, and change the whole current of a human life. Of all life's blessings none are cheaper, or more easily dispensed than smiles. Then let us not be too chary of them, but scatter them freely as we go, for life is too short to be frowned away.

THAT God is above all, and behind all, and beyond all, is what the Christian sees in every tiny blade and trembling petal, and in the song of every bird.—Christian at Work.

For Women.

CONDUCTED BY MISS RAY CLARK.

KISSED HIS MOTHER.

SHE sat on the porch in the sunshine,
As I went down the street—
A woman whose hair was silver,
But whose face was blossom-sweet,
Making me think of a garden
Where in spite of the frost and snow
Of bleak November weather,
Late, fragrant lilies blow.

I heard a footstep behind me,
And the sound of merry laugh,
And I knew the heart it came from
Would be like a comforting staff
In the time and the hour of trouble,
Hopeful and brave and strong,
One of the hearts to lean on
When we think that things go wrong.

I turned at the click of the gate-latch,
And met his manly look;
A face like his gives me pleasure,
Like the pages of a pleasant book.
It told of a steadfast purpose,
Of a brave and daring will—
A face with a promise in it
That God grant the years fulfill.

He went up the pathway singing;
I saw the woman's eyes
Grow bright with a wordless welcome,
As sunshine warms the skies.
"Back again, sweet mother,"
He cried, and bent to kiss
The loving face that was lifted
For what some mothers miss.

That boy will do to depend on,
I hold that this is true—
From lads in love with their mothers
Our bravest heroes grew.
Earth's grandest hearts have been loving hearts
Since time and earth began!
And the boy who kissed his mother
Is every inch a man!

EBEN E. REXFORD.

CONCERNING THE CARE OF CHILDREN.

MARY WAGER-FISHER.

I WAS a visitor at a house a short time ago where one of the members of the family, a little girl of four or five years, was the object of much solicitude by her parents. She was a bright and pretty child, but had suffered from attacks of "fits" or "spasms." The immediate guardians of the child seemed to be intelligent, sensible people, and I was amazed, while at dinner, to see the little girl served the same as an adult, with rich and hearty food, including even chow-chow, apple pie and coffee! It was no wonder the poor little creature had "fits," or whatever the nervous malady may have been that was so designated. The ignorance displayed in the diet of the child was too utterly abominable to be excused, and I was scarcely able to hold my tongue from crying out against it. But I eased my conscience in answering the question how I managed to give my little boy his look of superb health by emphasizing the fact that he had never so much as *tasted* coffee, or apple pie, or chow-chow, or various other things commonly allowed to children.

The other day an acquaintance complained to me of the dainty appetite of her children, of their leanness, their propensity to be "forever on the stretch," their total disinclination to take sufficient sleep and rest. The children were often guests at my house, and I knew that the most delicate one of them all had never been trained to drink pure milk. The stuff she daily drank was a mixture of warm water, milk and sugar. All the children ate candy, cakes, fine crackers, and were put to bed much later at night than they should have been. To my mind there was nothing surprising in the fact that a good appetite was a stranger to her little ones, or that they were lean and unduly active.

Another mother declares that her children always have "colds" from October until June. She dresses them daintily, in apparel both fine and costly, in sealskin coats, muffs, tippets and things of such ilk. Their frocks are worn very short, their drawers are of finest cambric, and their only "under flannel" consists of a fine and dainty knitted shirt, so that while the upper portion of the body is well protected and over protected in a sealskin garment, the lower part is very shabbily clothed so far as warmth goes. The cold scurries up the poorly clad legs, which the short petticoats—handsomely embroidered—fail to protect. With the clothing of the body so unevenly distributed, is it any wonder that the children always have colds? A good woolen undergarment, cut to fit the body, arms, legs and all, and worn next to the skin, would do more for the welfare of her children than all the sealskin coats, feathered hats and ornamented toggery in the universe. There is something atrocious in sacrificing a child's health to finery, or in being so ignorant and careless as not to know that it *is* being so sacrificed.

Every nine men out of ten that have achieved distinction in this country were in childhood inured to plain food and clad in cheap, often mean, apparel. Nobody looks for great men or great women from the homes of wealth where luxury abounds. A certain amount of hardship seems indispensable to the development of character. Who can imagine the brave man, (whose death we all so deplore, and upon whose coffin were heaped more honors than were ever before laid upon that of any person who has hitherto lived and died) as reaching his high place from a boyhood pampered in luxury, nursed and reared by a mother who coddled him with dainties and tricked out his body in furbelows!

What is it to us, who are grown to womanhood or manhood, that we wore broadcloth, or "linsey," or silk, embroidered or patched garments in our childhood, calico or India mull, whether we had ribbons, or laces, or sashes, or ruffles, or finery of any sort? It is of not the smallest real consequence. What is of real consequence, however, is that we had plain, nutritious food, so that our bones and our teeth were properly supplied with building material, that we were healthfully clad, that we were taught to breathe well, to chew our food well, to sit and walk erect, to be truthful, honest, clean, industrious, earnest, to read only *good* books, to take excellent care of our teeth, and—to speak good English. If I could be born again, and could have my parents perform but two duties for me, the one would be to make me a splendid animal physically, and the other, to have me taught to speak my native tongue finely. Given those two things at eighteen years of age, and after that, every other desirable earthly thing can be acquired if diligently sought.

If parents could only discern between important and unimportant things, and hold to the former and discard the latter, how immeasurably the welfare of the race would be advanced. But they waste and worry themselves over trifles especially the mothers, who will sit up o' nights and prick their fingers sore over some foolish bit of finery—and perhaps weep and sigh and be very unhappy because their little boys or girls can't have hats and frocks like certain other children. Oh me, how foolish! Or have money for a "start in life." How much money had Garfield or Lincoln, or Edison, or Howe, the inventor of the sewing machine, or Stephenson, or Fulton, or Christopher Columbus, or A. T. Stewart, or Vanderbilt, or Harriet Beecher Stowe, or Jenny Lind, or Rosa Bonheur, or Ida Lewis, or John Roper, or John Bunyan, or General Grant, St. Paul, or Michael Angelo, with which to make a "start in life." The best wealth to make a "start in life" on, for man or woman, is a good strong body, good principles, good character and industrious habits. Perseverance is genius, energy is talent, and industry and economy united with tend-to-your-own-business, mean competence.

To conclude for this time, I would like to put a few things plain. One of them is this: See to it that the children's teeth are well cared for, if they never have a "Sunday" garment. Give them plenty of oat meal, milk, good bread and fruit, and don't worry if they haven't meat once a year. Train them to grow erect, deep and broad-chested, hardy and fond of work, and never mind the fashionable cut of their clothes. Do these things and your children will not fail to "rise up and call you blessed."

"LOOKING OVER THE OLD PAPERS."

CARRIE V. SWEET.

GOING into a little-used but large and well-lighted clothes-press, a pile of old newspapers met the sight. Instantaneous with this view came the desire to look over those old papers; two, three and four hours found us bending eagerly over their various columns, perusing articles on all household subjects inclusive from cellar to garret.

There were recipes for cooking, baking, canning and coloring; instructions for knitting, crocheting, embroidering and painting, with hints upon visiting, reading and letter-writing. All written clear and concise, yet so full that one could follow them with little difficulty. It seemed as if the old papers had grown more interesting as they grew in years. Their contents embodied a good deal of matter, and undoubtedly the second reading brought to light much that had been merely glanced over at the first; or perchance the intervening days had been rife with an experience that had quickened our understanding. However, be that as it may, we fell to musing and querying as to what had become of the hands that had guided these several pens in the days gone by. Were they warm and active, or were they folded quietly and silently? It mattered little whether the pen was gold or not, the words it had traced were golden. Not light, trifling, airy nothings to amuse us for the hour only, but practical, good sentiments, so concise and clear that one seeing them could understand, feel and remember; thus they make an impression not easily erased. They were not sad, sombre nor dry, but they contained something, or things worth knowing. We felt we had learned much and were better able to work out our home-life more satisfactorily—better able to do or direct the doing of various household duties. Our wilted ambition had been refreshed, our tired flesh revived, and, withal, our silent visit with those old papers had done us good. We knew more of the practical side of life and could cope with more of its varying problems. We had learned how to set the table more skillfully, how to arrange articles in the parlor more tastily, how to renovate and renew furniture more deftly, and what to make over and how to make it. We had read various articles on various subjects and had learned a little from each one. Thanks welled from our hearts toward all these several writers, and we blessed the day we sat down to look over the "old papers."

"THAT CHIP."

I HAVE many doubts as to whether "that chip" is, as yet, knocked off by O. W. D.; certainly it was not by her last communication. Oh, no! I had no doubt whatever as to the location of the text which she hinted at and failed to correctly quote in her first communication but which in her "revised edition" of October 8, was correct. That's Bible, of course; but, "by the sweat of thy brow thou shalt earn thy bread" is not Gen. III, 19, nor Genesis anything else; but, as she was on the cars where she could not consult any authoritative Bible, an error in quotation from memory is quite excusable.

I have very carefully perused O. W. D.'s last article, and have been greatly puzzled in interpreting some parts of it. Here is one passage, "When the world through the eyes of Adam and Eve saw vice, become as gods knowing good and evil, choose the evil, they could not be left idle longer." What became "as gods," etc.; who knew "good and evil"; who "chose the evil" and who "could not be left idle longer!" Will O. W. D. parse and explain?

"I can agree with her that a curse was pronounced, but it was on Adam not on labor. Would labor have been less fatiguing to us if no curse had been pronounced on it as she asserts? Is it because it is accursed that it is hard for so many to bear with it. If we are to consider labor a curse what shall we do with such passages as Prov. xiii, 11; xiv, 23; Ecc. v, 12; Eph. v, 28?

O. W. D., says all vices are curses to humanity. True, but how came they to be so considered? By the evil effects and influences they have on mankind. Bring labor, as a curse, to this test, and ascertain its effects, its influences, its results. Does it degrade and impoverish man and render him but a little better than a brute. If so, then by our test, it may be classed as a curse with intemperance and other vices. But does it not tend to elevate and ennoble him? If so, then it should not be classed with intemperance and kindred vices, or curses in other words. Judging labor as we judge vice we find ever divergent effects, the results of the former as a general thing tending toward the good, of the latter toward the bad. O. W. D. intends to take her share of the curse cheerfully "though originally it was not intended for the woman." How comes it now that labor is a curse to her for whom it was not intended! If the curse lies in its pronunciation upon Adam, and not on Eve, then labor is not a curse for woman; but to draw such a distinction, is folly. O. W. D. exhibits remarkable magnanimity in thus assuming a curse which is not justly hers, and probably does it on the principle that what is her husband's is hers, and what's hers is her own. However, opinions will differ, and if O. W. D. wishes to consider the performance of her daily duties a curse to her, I shall no longer object. J. W.

CORRESPONDENT'S CORNER.

PLEASE tell a farmer's daughter, one who likes to keep up with the times, what kinds of head coverings are mostly worn. PANSY.

We should say *red* for color, though there can be seen dark olive, browns and navy blue. But shades of red, such as garnet, dark wine and maroon, dot our congregations and places of amusement very closely. And *four* long feathers are not out of place on one hat, as they are so very large. A milliner was heard to say that where last year one-half yard would cover a frame, this year she used one yard and a quarter. Of course the trimmings are in accordance. But unmistakably dame fashion orders the head covered with a spacious bonnet of any shape one may choose.

WILL you be so kind as to show through the columns of the RURAL some pretty styles for making ladies' dresses. I made one last Winter after a pattern you published, and liked it very much. E. A. S.

To E. A. S. We would refer you to cuts in the RURAL of last week for information desired.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

"I wonder who invented salsify?" I said to the amateur cook, for it is a vegetable that was not heard of in my young days. "I think," she answered profoundly, "it must have been in a year when oysters were scarce, or some one had a 'corner' in that delicacy," and she scraped the salsify for lunch, at the same time humming:

"If he's content with a vegetable love,
That would certainly not suit me——"

There was a simmer in the pot and the singing stopped, while she lifted the lid from the mock oyster stew. As this vegetable stays in season from early Autumn till asparagus is ready for the table, it is worthy of the cook's attention, and when cooked in a stew is relished by those who like oysters in that form. But in preparing it for the table there is a great deal of care necessary It requires thorough scraping and must be quickly placed in cold water, and from that into boiling and *cooked* to prepare it for anything. It is very palatable made into fritters, thereby imitating fried oysters. As the same plan is given for parsnips I will copy from Practical Cooking the method there employed for making parsnip fritters: Scrape, cut if large, and put into well salted boiling water. When tender, mash, adding to each four or five parsnips a heaping teaspoonful of flour, one or two eggs well beaten, pepper and salt to taste. Form the mixture into small cakes three-quarters of an inch thick and two and-a-half in diameter (They are smaller for salsify to imitate fried oysters.) Fry to a delicate brown on both sides with a little hot butter, and serve hot. I often think we do not pay enough attention to variety in vegetables, especially in Winter, and everything that contributes to a healthful change, should be made the best of by those who have to cater for a family with different appetites and needs. The long Winter without a supply of fresh vegetables, and with only a limited supply of fruit is calculated to leave the members of a household with impure blood and subject to the diseases consequent on such a condition.

NOTES.

IT is said that there is nothing that Americans are more ashamed of than economy. And shame upon them that it is so.

Never put pieces of raw pastry left from baking into the flour barrel—it causes the flour to become musty and sour.

When one has a large ironing to do, it is much better to iron the fine pieces first. One can then expend upon them the necessary amount of patience and strength to cause them to look nicely. If the laundress has tired herself over the coarser articles she will have little patience left for the shirts, collars, etc.

Phosphate of soda is recommended to remove ink stains from colored fabrics where there is danger of removing the color as well. The spots are moistened with warm water and rubbed with the phosphate and then covered with a thin layer of tallow. After this wash in warm water. If the first application does not remove the stains, repeat.

A Discovery.

The Medical Record gives to us a new remedy for chills and fever, namely that of swallowing a *live spider*. This is said to be a sure cure and we predict an everlasting fortune for the enterprising individual who will raise and encase these animals in gelatine capsules such as are now sold by druggists to cover quinine and other bitter pills. A word to the wise is sufficient.

Warts on the Hands.

The best remedy we know of for these unsightly excrescences is to pare off the hard part frequently and as closely as one can without bearing too much pain. A large wart on the inside of the writer's fore-finger, which was very annoying, especially after the finger had been in water for any length of time, was entirely cured by this treatment. Time six months.

Too Much of a Good Thing.

I admire thorough, methodical and neat housekeeping But it is often carried too far—it is allowed to interfere with the happiness of husband and children. The mother becomes petulant and careworn. Her life is a continual round of sweeping, cleaning and fault-finding. From such deliver me. I prefer a judicious mingling of dirt and happiness. E. K. R.

QUESTIONS ANSWERED.

CHICORY.

WE have a quantity of chicory. Please tell me how to prepare the roots for mixing with coffee, and oblige. MRS. E. B.

ANS.—Wash carefully and scrape. Cut into little bits, dry and brown in the same way you would coffee. Then grind in the coffee-mill.

News of the Week.

HOME NEWS.

MONDAY, Nov. 28, 1881.

THE GUITEAU TRIAL.—On the 21st inst, Mr. Robinson, the associate counsel for Guiteau, withdrew from the case. Owing to the "unpleasantness" existing between Mr. Scoville and Robinson, the latter thought it necessary for one or the other of them to leave the case, and as the relations which Scoville sustained to Guiteau were intimate and as he was indispensible to the defence, Mr. Robinson thought it were better to withdraw. Judge Cox gave him an honorable discharge. After the examination of Surgeons Barnes, Woodward and Lamb the prosecution rested their case. On the opening of the defence Guiteau made a short speech in his own behalf, and Mr. Scoville addressed the jury in a plain, matter-of-fact style and the court adjourned for the day. Tuesday the counsel for the defence continued his case, and endeavored to show to the jury that Guiteau had done much in the past that denoted a derangement of the mind. The instance of his attempt to kill his sister was among the citations. Mr. Scoville was frequently interrupted by the prisoner. The examination of witnesses for the defence took up the balance of the week, several experts in insanity having been summoned to testify, besides those who have been acquainted with him in various places. On Saturday Mrs. Scoville, (sister of the prisoner and wife of Mr. Scoville, Guiteau's counsel,) was put on the witness stand, and her testimony will be continued to-day. To-morrow Guiteau will take the witness stand.

On the 25th ult., the Grand Jury returned an indictment for assault with intent to kill against Jones, who shot at Guiteau in the prison van. The extreme penalty that can be inflicted upon Jones providing his guilt is proven, is imprisonment for eight years.

The Exposition at Atlanta on the 24th had its biggest day since the opening; 19,320 persons were registered at the turnstiles, among whom were over eight thousand college students and pupils of seminaries. Intense interest pervades the South as to the convention of planters, agriculturists and mill men that will meet December 6. All these great interests will be represented by thousands of persons, and the outcome is expected to be of vast benefit to every Southern industry. Thirteen thousand strangers are comfortably housed in Atlanta, with room for 10,000 more.

The pension rolls for the month of December amount to very near $8,000,000, and this bonanza is increasing in width and length, and depth too.

Preaching in first-class churches in New York pays almost as well as banking or the law. Rev. Dr. Dix, rector of Trinity, gets $12,000 a year and a house worth $4,000 a year, and Dr. Morgan gets $8,000 a year and a handsome house.

The postmaster general has decided that printed matter is not personal correspondence and may be enclosed with merchandise and mailed at the latter rates. Postal cards printed and directed to publishers may be sent as second-class matter.

At a special election in the First Congressional District in Rhode Island, Mr. H. J. Spooner was elected by 1787 majority to fill the vacancy caused by Mr. Aldrich's promotion to the Senate.

Gov. Cornell of New York has appointed Judge Charles Andrews of the Court of Appeals chief judge of that court to succeed Judge Folger, and Charles L. Benedict of Brooklyn to succeed Judge Andrews.

The Irish National Land League of America sent to Ireland the last quarter $127,835.

Insurance Commissioner Brooks of Connecticut has ordered the winding up of the Atlas Fire Insurance Company of Hartford. Its capital is only $100,000, and for several years it has been doing very little new business. With this small company retired there will be no stock fire insurance companies in Hartford with less than $1,000,000 capital each. The action of the Insurance Commissioner is in accord with a vote of the board of directors. The risks of the Atlas will be reinsured and the only loss falls on the stockholders.

The employees of the Executive Mansion expect the President will move into the White House Tuesday next. It is understood that the President will appoint F. J. Phillips private secretary as soon as Mr. Brown retires. Phillips has been the President's private secretary for a number of years. The President has appointed J. Samuel Frazier, of Ohio, interpreter to the legation in Japan.

A despatch from Springfield, Ill., states that the flood in Sagamond river damaged property to the extent of $250,000. Two hundred head of stock were drowned.

An interesting ceremony took place at the grounds of the Hebrew Hospital, at Baltimore, Md., on the 24th ult., consisting of the planting of a tree as a memorial to the late President and to be known as the "Garfield Memorial Tree." The contributions to the memorial were all made by prominent Hebrews.

It is said that Mr. McCormick, the reaper manufacturer of Chicago, and Mr. William N. Whitley, the reaper manufacturer of Springfield, Ohio, have formed a partnership, combining the improvements of each machine. It is reported that McCormick's capital is over $10,000,000 and Whitley's over $1,000,000. The firm will hold a monopoly in all the world in the reaper business.

In New York there are about 500 venders of sawdust, having a capital of $200,000 invested, and doing a business amounting to $200,000 annually.

Director Burchard announces that the United States Mint, at Philadelphia, coined $50,000,000 in gold during the last 12 months, or five times as much as during any previous year. Much of this was foreign gold recoined.

An iniquitous speculation has been unearthed by the trustees of the Hancock County Infirmary, at Findlay, Ohio. Several prominent men of that city have been securing insurance on the lives of paupers for the benefit of themselves. One old man was induced to sign the application by the statement that it was a call for a political caucus. The life of another very feeble pauper is insured for $75,000.

Maxwell, alias Williams, was lynched at Durand, Wis., Saturday. He had confessed in court that he had killed the Coleman brothers, asserting that it was done in self-defence. Immediately a rope was thrown around his neck and he was dragged through the aisle into the court house yard. Death, however, ensued from strangulation before a tree was reached.

A Pittsburgh glass manufacturer proposes to erect buildings of glass, manufacturing the material the size of a common brick. He says that the cost will not exceed that of a cut granite building, and with the material colored, fine effects can be gotten.

California yields the precedence to Colorado in the production of the precious metals. Last year the former State yielded $19,000,000, and the latter $23,000,000.

A Good Healthy Appetite.

A patient says: "I have taken a great many things, but never in my life took anything like the Compound Oxygen. *I feel so strong and well, and have such a good, healthy appetite.*" Treatise on Compound Oxygen, *sent free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa. —*Adv.*

AGRICULTURAL NEWS.

MONDAY, Nov. 28, 1881.

The following items of agricultural news have been condensed from telegrams received in this city between Friday noon, Nov. 25, and noon to-day: Portland, Me.: Produce market less active; prices off, especially for potatoes. Hay has advanced chiefly on account of bad roads. The prospect is that 50 per cent. more timber will be cut in this State than for several previous years.....Boston, Mass.: Flour market still dull. Provisions fair; prices firm.....Buffalo, N. Y.: Wheat dull; $1.52 asked for No. 1 Hard Duluth; red and amber Winter wheat, $1.38@1.40; corn, No. 2 mixed, 65¾c.; oats quiet; No. 2 mixed western, 49½c.; barley steady; Canada, 95c.@$1.15; six-rowed State, 80c.@$1.10.. Cincinnati, O.—Receipts of breadstuffs are light, and prices are downward. No. 2 Red Winter Wheat, $1.30@$1.37½. Corn strong, No. 2 mixed 47½. Receipts of hogs good, prices firmer.....Dayton O.—Very cold and raw; first snow storm of the season last Wednesday. Among hog owners there's a tendency to hold the hogs back for colder weather; but with corn at 55 cents per bushel there's not much ground for speculation when the owner can get 6½@7c for his stock. First-class cattle in demand; but the sheep market is decidedly dull.....Philadelphia, Pa.: No change here in wool market. It is said a great deal of wool is held in Boston, on which the banks have made advances, and should the late bank defalcations there, cause these loans to be called in, a large quantity of wool will have to be thrown on the market, which will cause a break in prices. Holders here, however, are firm, and so is the general tone of the market. Trade in flour and grain not active; prices about the same as last week. The supply of plump, heavy hides is not equal to the demand and prices are very firm. Green salted stock, too, sells freely at good figures.....Indianapolis, Ind.: Country roads in very bad condition. Weather cold. Wheat has declined but the prices of other staples are fairly maintained. .....Evansville, Ind.: Grain is beginning to move; corn is coming in briskly at 63@65c. for car-load lots; wheat quiet.....Chicago, Ill.: A good speculative business in grain but hardly anything done on shipping account. Receipts for the week, 55,000 barrels flour; 196,097 bushels wheat; 632,851 bushels oats. Shipments were 97,593 barrels flour; 213,465 bushels wheat; 955,827 bushels corn: 126,783 bushels oats. A much larger movement of money towards the country.....Detroit, Mich.: Large speculative transactions in wheat daily. Market unsettled and sensitive..... Milwaukee, Wis.: Inclement weather and very bad roads hindering work and business in country places. Recent cold not severe enough to harden the roads so as to allow the marketing of produce. The wheat market has been unusually dull and weak; receipts and shipments both meagre. Millers are idle..... ....Louisville, Ky.: Leaf tobacco still firm. Grain dull and easy. Weather clear and cold; pork packing consequently active. Hogs scarce, bringing $6@6.60—or about one-third above last year's prices. An increasing demand for currency from the country owing to pork-packing operations.....St. Louis, Mo.: Grain and flour still weak. Provisions declining. Hogs in demand and firm at $6.60; but they are of low quality. The river is falling, and trains have resumed their free movement of produce.....Kansas City, Mo.: Cattle receipts for week only moderate, owing to falling off in Colorado and Texas shipments. Market quiet. Receipts of hogs the heaviest of the season—one day's receipts the largest ever known here. Market well sustained. Bulk of sales at $5.35@6..... Omaha, Neb.—Weather for the week cold and clear. Roads frozen in a rough state, and travel therefore difficult. Coal reported very scarce throughout the State. Winter supply not yet received.....San Francisco, Cal.—Provisions lower than last week. Wheat weak; barley and oats higher.....Baltimore, Md.—Canned goods in demand; prices have an upward tendency. Can makers on a strike for 30c per 100—an increase of 5c. Cotton receipts heavy. During the week prices have advanced ¼c@½c; but the market now is easy. Brokers and commission men think prices will continue upward. Southern wheat dull; Western, heavy with a downward tendency. Corn market inactive; prices lower. Jobbing trade in provisions brisk with firm prices. There's an active inquiry for grain vessels since the decline in grain..... ..... Wilmington, N. C.: Cotton firm; picking retarded by scarcity of laborers. Provisions steady. Grain lower. Rice fair. Peanuts steady. Weather cold.....Charleston, S. C.: Cotton receipts very heavy during the week; a good tone to the market.....Savannah, Ga.: The decline in the cotton market at New York and Liverpool caused a depression here; but factors think this only a temporary lull, as the scarcity of cotton must stiffen prices. The shortness of the crop is more felt in business circles than was expected.....Augusta, Ga.: The cry of short crops and hard times has produced a general feeling of distrust among the merchants. All cotton manufactories here are paying regular dividends of 8@12 per cent. The stock of some of them is $70@$75 above par. Nearly all the $1,000,000 capital of the King Cotton Factory has been subscribed, and the building of the factory is now almost a certainty. Cotton picking about over for the season..... New Orleans, La.: Cotton quiet at a slight decline. Sugar and molasses receipts increasing but prices show a downward tendency on account of the inferior quality. Weather cold and favorable for sugar making..... The Texas sheep raisers have experienced great difficulty in shearing, on account of heavy and continued rain storms. Whole flocks are ranging about in a half-sheared condition..... .....Memphis, Tenn.: Cotton receipts larger than last week; prices better. Factors and jobbers are collecting closely and crediting prudently. This bespeaks better results for next year.....Nashville, Tenn.: Receipts and sales of cattle very active: good grades are high. Provisions for the week quiet. Little or no change in grain, flour or produce markets from last week. Packers are killing largely.

Mr. George Drake, 48 Oak Street, Indianapolis, Ind., suffered terribly with 'water' rheumatism. He used St. Jacobs Oil and was entirely cured.—N. Y. Spirit of the Times.

TROPIC-FRUIT LAXATIVE is the best and most agreeable preparation in the world for constipation, biliousness, etc. One-half to one lozenge is enough. Price 25 and 60 cents per box.

If You are Sick

Kidney-Wort will save you more doctor's bills than any other medicine known. Acting with specific energy on the kidneys and liver it cures the worst diseases caused by their derangement. Use it at once.—Union.

Let the poor sufferers from female complaints take courage and rejoice that a painless remedy has been found. We refer to Lydia E. Pinkham's Vegetable Compound. It is prepared at 233 Western Avenue, Lynn, Mass. Send to Mrs. Pinkham for pamphlets.

The People's World-Wide Verdict.

BURNETT'S COCOAINE has been sold in every civilized country, and the public have rendered the verdict that it is the *cheapest and best Hair Dressing in the world.*

BURNETT'S FLAVORING EXTRACTS are invariably acknowledged the purest and the best.

The Markets.

CHICAGO.—WHEAT unsettled, but generally lower; No. 2 Chicago Spring, $1.24½@1.24¾ cash; $1.22½ November; $1.24½@1.24⅝ December; $1.25½@1.25⅝ January; $1.26⅛@1.26⅝ February; No. 3 do.; $1.11½; rejected, 85@90c. CORN fairly active and a shade higher at 58⅝c. cash and November and bid December; 59c. January; 64c⅛. May; rejected, 57¼c. OATS unsettled and lower at 45¼c. cash and November; 44⅝c. December; 43¼c. January and February; 45⅜c. May. RYE easier at 97½c. BARLEY easier at 1.04½. FLAXSEED scarce and firm at $1.47. PORK moderately active at $16.25 for old; $16.85 for new cash; $16.10@16.85 November and December; $17.20@17.22½ January; $17.42½@17.45 February. LARD fairly active and a shade higher at 11.05c. cash; 11.07½@11.10c. December; 11.22½@11.25c. January; 11.37½@11.40c. February. Bulkmeats fairly active and a shade higher; shoulders, 6.35c.; short-rib, 8.90c.; short clear, 9.15c. CATTLE—Market steady and fairly active. Exports, $6@6.50; good to choice shipping, $5.30@5.75; common to fair, $4@5; mixed butchers' very plenty; all poor kinds weak; common to fair, $2@2.50; medium to good, $2.75@3.50; choice, $3.75@4; stockers and feeders plenty and lows; poor to choice, $2.40@3.75; milkers and springers, $25@60; Texans, $3@4; half breeds and native rangers, $4@4.90. SHEEP—Common to medium, $3.30@3.75; good to choice, $4@4.50; selected wethers, $4.75@5.25.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Nov. 26, 1881.

BEANS AND PEAS.—Marrow beans are steady, with prices quoted very full. Mediums quite active at the easier rate. Fancy beans plenty and weak. German beans have sold at $2.75 for prime. Green peas rather steadier for bbls. at $1.65@1.70; choice in store, $1.75; bag lots 10c. under bbls.

Marrow beans, prime, $3.45@3.50; fair to good, $3.25@3.35; medium, prime, $3.05; fair to good, $2.70@2.80; pea, choice, $2.93@3.25; white kidney, $3.30@3.45; red kidney, choice, $2.85@2.90; other, $2.50@2.75; black or turtle soup, $1.80@1.90.

Receipts of beans for the week, 10,200 bush.
Exports do. 317 bbls.

BEESWAX.—Dull at 21@22c. A good many substitutes have come forward of late years, and the market is not so certain as used to be. Exports little more than one-half for this date last year.

BUTTER.—A few cold days have enlarged the attendance of buyers, and as good to fine table grades are not in liberal supply those grades are firm, while extra marks of creamery and selections of half tubs are marked up a cent or so. Certain buyers have been holding off for a favorable turn, but as they begin to be in want of stock, they seem inclined to accept the situation, and a better wholesale tone prevails than has been noted for some time back. Single package buying for home Winter use is now a feature, but not so prominent as in former cheaper seasons. This run is generally for strictly first-class stock. When fine-quality half tubs are plenty, sellers like to furnish this line of trade, especially as 2 or 3c. can be added on to line prices and readily obtained. Most dealers, however, are rather forced to hold their few invoices of high-grade for customers who appear more than once or twice a year. As before, light supplies of Western table grades bolster up all desirable parcels of State; by table grades we mean qualities above Winter styles of export lots. Plenty of the latter arrive and have to be put into the secluded companionship of an old, unsold surplus.

Creamery, extra choice, 40c.; good to prime, 35@38c.; fair to good, 30@35c.; poor, 20@25c.; June, 29@29c.; State half tubs and pails, ch. fresh, 31@35c.; good to prime, 31@33c.; fair to good, 28@31c.; Welsh tubs, choice fresh, 31@34c.; good to prime, 29@31c.; fair to good, 25@29c.; poor to fair, 18@25c.; State dairies, firkins and tubs, choice, 32c.; good to prime, 29@30c.; fair to good, 27@29c.; firkins, dairies, choice, 30c.; good to prime, 28@29c.; fair to good, 21@27c.; poor to fair, 18@24c.; Western imitation creamery, 27@35c.; Western dairy, fresh, choice, 30@32c.; good to prime, 25@28c.; fair to good, 18@25c.; Western factory, late made, choice, 20@25c.; late made, good, 16@18c.; late made, 14½@15c.; Iowa, fine June, 16½@17c.; Ohio and Ind., June, 15½@16½c.; June, fair to good, 15@15½c.; factory, very poor, 13@14c.; roll butter, good to prime, 23@25c.

COTTON.—The market opened with a low tendency, but latterly strong Liverpool prices have brought forward exporters, and home spinners have purchased to a liberal extent. Crop reports still tend to stiffen quotations.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 3-16	9¼	9¼
Strict ordinary	9¾	10 1-16	10 1-16
Good ordinary	10 9-16	10⅞	10⅞
Strict good ordinary	11	11 5-16	11 5-16
Low middling	11⅛	11 13-16	11 13-16
Strict low middling	11¾	12 1-16	12 1-16
Middling	11 15-16	12¼	12¼
Good Middling	12 5-16	12⅝	12⅝
Strict good middling	12 9-16	12⅞	12⅞
Middling fair	13 1-16	13⅜	13⅜
Fair	13 13-16	14⅛	14⅛

STAINED.

Good ordinary	8 13-16	Low Middling	10¼
Strict good ordinary	9 13-16	Middling	11½

Average of futures:—
November, 11.80c.; December, 11.84c.; January, 12.04c.; February, 12.23c.; March, 12.42c.; April, 12.56c.; May, 12.66c.; June, 12.77c.; August, 12.96c.
Receipts for the week, 44,264 bales.
Exports do. 4 956 do.

FREE TO JANUARY 1ST.

The Fair Number of the **Rural New-Yorker** *(44 pages), which contains a full description of our* **Free Seed Distribution for 1882,** *also an account of the* **$2.000 worth of Presents** *offered to those subscribers who produce the best yields, and our Premium Lists for all who interest themselves in securing subscribers for the Rural New-Yorker, will be sent free to all applicants. Our new Posters are also ready and will be sent free to all. Our friends and agents are reminded that the present is, on many accounts, a more favorable season for securing subscriptions, or the promise of them, than later, when competition is keener.*

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Horses, Cattle, Sheep, Swine, Poultry,

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The Rural New-Yorker has no personal interests to subserve. It has neither seeds nor plants nor books nor anything whatever to sell. It is conducted purely in the interests of Agriculture and Horticulture and Stock-Keeping. Its tests of plants, seeds, manures, implements, are made regardless of individual interests or those of advertising patrons. It holds the interests of LAND CULTURE as above all others, and its aim is to benefit all who occupy themselves in the culture of land and its attendant industries, either for pleasure, profit or support.

The Rural New-Yorker earnestly labors to instruct the stockman and breeder; to introduce new fruits of improved quality; to make known the beneficent influences of the garden and of trees and shrubs about the home; to increase the comforts, refinement, health, and the general welfare of all who own and cultivate land. It tests all new vegetables, and makes known their value. It tells how to raise them in the greatest perfection. Shrubs and trees, flowers, plants of every description, the methods of cultivation to suit the varied and ever-changing conditions which arise, constitute prominent departments.

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CHEESE.—Only a light movement can be reported. Shippers purchase small lots of pure State only on orders and lower grades of stock scarcely receive attention. The market closes a fraction lower than for last week.

State fact'y, fine, Sept, 12½c.; good to prime, 10½@11½c.; fair to good, 9½@10½c.; poor to fair, 8@9c.; Ohio factory, fine mild, 11½@12c.; good to prime, 10@11c.; fair to good, 8@10c.; poor to fair, 6½@8c.; creamery, partly skimmed, choice, 8½@9c.; poor to good, 4@6c.; fully skimmed, 2½@3c.

Receipts for the week, 56,261 bxs.

Exports do. 15,479 do., part of which are Canadian.

Liverpool quotations, 55s. for Summer and 63s. for late.

Steam to Liverpool, 12s. 6d.@17s.

EGGS.—Receipts for the week, 12,235 bbls.; do. last week, 10,500 do. The market holds strong with the demand centered upon prime fresh marks. Good held stock that does not count loss too heavily has a fair trade. There is only a fair stock in store and with high prices at the West dealers look for good prices, especially if the weather hardens.

New J'y L., L. and near by 33c.; Pa. and State fresh 30c.. seconds, 29½@29c.; Western fresh, 28@28½c.; Western and Canadian held 27c.; poor, 24@26c.; limed State 21½@23½c.; W. and Canadian 20@22c.

FLOUR.—Prices have not shown much variation compared with last week. There has been a fair demand for shipping and local use brands, the latter closing with some solidity mainly for the reason ascribed last week. A reduction of milling at the West owing to the difficulty of obtaining suitable sort of wheat at compensating figures.

No. 2, $4.25@4.45; State and Western, superfine, $4.25@5.25; city mills, XX, $6.10@7.35; Spring wheat, extra, $5.25@6.50; Spring XX and XXX, $6.60@6.75; patents $6.50@8.50; Ohio round hoop shipping, $5.40@5.90; trade brands, $6.00@6.50; St. Louis extra, $5.50@6.00; do. double extra, $6.20@6.50; do. family, $6.65@7.00; Southern extra shipping, $6.00@6.40; do. XX and family, $6.50@7.25. Rye flour, superfine, $5.00@5.35; buckwheat flour ₱ 100 ℔s. $3.80@4.00. Corn-meal, Brandywine, ₱ bbl. $3.70@3.80; do. Western, $3.50@3.70. Wheat feed, 40 ℔ ₱ ton, $18.50@19.50; 100 ℔ ₱ ton, $19@20; 100 ℔ ₱ ton, $22@23; rye feed ₱ ton, $23.

This is one of the scarcest seasons for buckwheat ever known.

Receipts of flour for the week, 102,700 bbls.; corn-meal 1,630 do.

Exports of flour for the week, 33,658 bbls.; corn-meal 1,975 do.

FRESH FRUITS.—Exports of apples 6,000 bbls. The holiday sent a good many apples into use and the market is firm for fine red. Other fruits moderately firm at quotations.

Apples, Spitzenburg, fancy, ₱ bbl. $3.50@3.75; Greening and Baldwin, do. $3.37@3.50; Baldwin, Greening and Spitzenburg, fair to prime, $2.75@3.25; N. Spy, State, $2.50@2.75; mixed lots, State, prime, $2.75@3.25; do. fair to good, $2.25@2.75; seconds, $1.75@2. Pears, Boston, bush. boxes, fancy, $3.00@4.00; poor to good, $1@2.50; Lawrence, State, ₱ bbl. $2.50@4.50; Vicar of Wakefield, $2.50@3.50; cooking, $2@3. Grapes, Catawba State, case of 18 3-℔. bxs, $4; bskts, ₱ ℔, 8c.; Isabella, State bskts, 3@4c. Florida oranges, half-bbl. bxs, choice, $10@4.50; good to prime, $5@8.50; inferior, $2@2.50; thirds, choice, $2.75@3; fair to prime, $2.25@2.50; inferior, $1.50@1.75. Cranberries, Cape Cod, fancy, large, ₱ bbl. $10@11; good to choice, $8.50@9.50; poor to fair $5@7; frosted $3@3.50; ₱ crate, $2.50@3.50; New Jersey fancy, $2.75@3; fair to prime, $2.25@2.62; poor to fair, $1.75@2.25; frosted, 50c.@$1.

Peanuts, Va., hand picked, ₱ ℔, 6¾@6¾c.; fancy, 6¾c.; extra prime, 6¼c.; good to prime, 5¾@6c. shelled, 5@5¾c.; pecan nuts, 9@11c.; hickory, shell-bark, Northern, ₱ bu. $1.00@1.25; Western, $1.00; bull, 40@50c.; black walnuts, 50@75c.; chestnuts, Northern, $4@5.

GRAIN.—Wheat is not showing heavily at the main points of collection. The market opened with a low drift, which brought in some additional export orders and at the close there is a stronger tone to prices as quoted and a wholesome volume of spot business. Corn has gone out freely and prices hold up well. Oats have been good property all the week and both sides of the market indicate confidence. Buckwheat scarce and firmer. Barley and rye dull, consumers begin to make lower bids.

Wheat, Spring, $1.25@1.38; Spring No. 2, $1.35@1.37; red Winter No. 2, $1.40@1.40½; red Winter, $1.30@1.43; white Western and State, $1.32@1.41. Rye, 95c.@1.03; Oats, white No. 1, 53½c.; No. 2, 51½c.; No. 3, 49½c., mixed, No. 1, 49½c.; No. 2, 48½@49c.; No. 3, 45@47½c; Corn, Western mixed, 68@68c.; No. 2, 67@67¾c.; yellow, 68@72c.; white, 70@73c. Barley, Canada No. 1, $1.12@1.15; do. bright, $1.15@1.17; State 4-rowed, $1.00@1.05; 2-rowed 90. Buckwheat, 91@96c.

Receipts for the week, wheat, 635,700 bush.; corn, 914,000 do.; oats, 178,950 do.; rye, 159,750 do.; malt, 35,000 do.; barley, 283,800 do.

Exports for the week, wheat, 562,900 bush. corn, 685,675 do.; oats, 4,850 do.

HAY AND STRAW.—Exports for week 7,464 bales, do. since Jan. '81 71,350 do.; same time '80, 100,675 do. Supplies of hay are large and only exceptionally fine retailing make the extreme.

Prime Timothy hay, ₱ 100 ℔s., $1.05@1.10; medium Timothy, 80@85c.; shipping grades, 65@70c.; clover mixed, 70@90c.; all, 60@65c.; Straw, long rye, 75@80c.; short rye, 55@60c. oat and wheat straw, 40@50c.

HOPS.—The Producers' Price Current says: "Business is very light. An arrival of 300 bales (300 ℔ each) German, or rather Polish, hops, is exciting remark.

Crop of 1881, choice, 28@29c.; good to prime, 25@27c.; fair to good 22@25c.; eastern, 18@27c.; 1880, good to prime, 18@22c.; poor to fair, 10@15c.; 1879 fair to prime, 14@15c.

Receipts for the week, 770 bales,
Exports for the week, 869 do.
Receipts since Jan. '81, 88,857; do. last year, 41,964.
Exports corresponding periods, 34,279, against 17,650.

MILK.—The market has done well for commission lots averaging $2.57 per can of 40 quarts. Milk has sold out very clean every day.

POULTRY AND GAME.—The display of turkeys was remarkably common for the festival purposes of the week and the offering was comparatively light. Wednesday, the closing day for wholesaling, was stormy, but dealers were generally closed out by noon. The weather has not been encouraging for much enterprise on the part of poultry raisers, while short, high corn also checked fattening. The market being clean after Thanksgiving is in good shape for future supplies, and, all things considered, this is better than a glut of detained stock, which has often proved disastrous to shippers.

Turkeys, Phila. pr, 16@18c.; J'y 15½@16½c; State and W'n pr, 14½@14½c.; f'r to g'd, 13@14c. Chickens, Phila. prime, 14@15c.; Bucks Co. do. 13@14c.; Jersey, do, 12@13c.; State and Western, do. 11½@12c. Fowls, Phila. prime, 13c.; Bucks Co. 11@12c.; New Jersey, do. 11@12c.; State and Western, do. 10@11c.; fair to good, 9@10c.; inferior, 8@10c. Ducks, Phila. prime, ₱ ℔, 15@16c.; Jersey and Bucks Co. 14@15c.; State and Western, 13@14c; fair to good, 10@12c. Geese, Phila. dry-picked, prime, 12@13c.; Jersey and Bucks Co. 11½@12c.; State and West'n, 10@11c.; fair to good, 9@10c. Squabs, white, ₱ doz. $2.50@2.75; dark, $1.75.

Cooped stock depends upon merely a chance sale while dressed is in season and arrives regularly.

Chickens and fowls, J'y, State and Penn. ₱ ℔ 9@10c.; Western and Southern, 8@9c. Roosters, old, 5c. Turkeys, Jersey and Penn. 10@12c.; Western, 9@11c. Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 60@75c.; Western and Southern, 45@50c. Geese, Jersey, $1.50@2; N. Y. and Penn, $1.25@1.62; Western mixed, $1@1.37. Pigeons, 30@40c.

Thanksgiving sales gave prices for game considerable backbone and the market closes with a very good tone. Wild ducks are unusually popular this season.

Quail, choice, ₱ doz. $2.50@3; inferior, $1.50@2; grouse, choice, ₱ pair $1.00@1.12; soft, 65@75c.; partridges, State and W'n, pr. $1.12@1.25; Eastern & Minn, 90c.@$1; soft, 65@75c.; woodcock, choice, 75@80c.; inferior, 60@65c.; rabbits, 40@45c.; venison, Minn. short saddles, ₱ ℔. 16c.; State & Wn, 14@15c.; whole deer, 11@12½c.

Canvasback duck, Havre de Grace and Western, $3 Norfolk, $2.50; redhead $1@1.25 for Western and 75c. for Norfolk; the Norfolk lots are generally in bad order and some lots sold at 10c. per pair; mallard at 50@70c. for Western, the inside rate for Missouri; teal at 50@60c; and common, 30c., all per pair. Rabbits are scarce. Venison selling well, short saddles occasionally exceeding price.

PROVISIONS.—A very satisfactory turn has attended the market; exporters have bought freely in lard and bacon; when the latter hog-product moves steadily a good point has been obtained for the pork trade generally.

Pork, prime mess, ₱ bbl. $16.75@17; extra prime, ₱ bbl. $14.50@14.75; Western mess new, $17.25@17.50. Lard, steam Western, ₱ 100 ℔s., $11.25@11.30; prime city, $11.15@11.20. Hams, smoked city, ₱ ℔. 12½@13c.; pickled Western and city, 10@10½c.; Shoulders, smoked city, 8½@8½c; pickled, 7½@7½c. Rib bellies, pickled, 9@9½c. Bacon, long clear Western, 9¼@9½c. Beef, Western mess, ₱ bbl. $12; packet, $14; India mess, ₱ tcs. $23@25. Beef hams, ₱ bbl., $19.50@20.50.

Receipts for the week—Beef, bbls. and tcs. 1,452; pork, bbls 3,835; cut-meats, pkgs 28,488; lard, do. 16,426.

Exports for the week—Beef, bbls. and tcs. 2,308; pork bbls. 4,256; cut-meats, ℔s. 9,965,211; lard do. 5,579,802.

VEGETABLES.—Exports of potatoes for week 20,012 bbls. Receipts have moderated and prices are growing firmer. The crop shows an unusual percentage of small sizes; these are neglected for best even at the difference in prices. Sweets steady and firm.

Potatoes—Early Rose, Eastern, ₱ d.-h. bbl., $2.50@3; State, $2.62@2.87; bulk, ₱ bbl. $2.50@2.75; Prolific, Eastern, d.-h. $2.50@2.75; Snowflake, State, $2.50@2.87; bulk, ₱ bbl. $2.25@2.75; Burbank, d.-h. $2.62@2.87; bulk, ₱ bbl. $2.62@2.87; Peachblow, ₱ d.-h. bbl., $2.75@3.00; Peerless, bulk, ₱ bbl., $2.25@2.37; Mercer Eastern, ₱ d.-h. bbl. $2.25; sweet potatoes, Va. yellow, ₱ bbl. $3.75@4.00; Del. River, $1@4.50; Jersey, $3.75@4.00; inferior, $3@3.50.

Onions in good demand. Celery extremely scarce and high. Market almost bare of fine heads of cabbage. Pumpkins scarce; marrow squash have thereby a good market.

Onions, white bulk, ₱ bbl. $3.50@4; yellow, $2.25@2.50; red, east, $2.25@2.50; red Chester, $2@2.37; squash, Marrow, ₱ bbl., $2.75@3.00; Hubbard, $3.00@3.25; cabbage, ₱ 100, $8@16; beets, L. I. ₱ bbl. $2.00@2.25; carrots, $1.25; turnips, Russia, L. I. $1.75@2; Canada, $1.50; cauliflower, fancy, $5@7; average quality, $1.75@2.50; inferior, 50c@$1; celery, ₱ doz., $2.00@2.25.

WOOL.—Operations in this staple are largely connected with Eastern buyers, and as Eastern buyers are too devoted to their Thanksgiving traditions and celebration to give earnest attention to commerce, the market is in its customary lull of the last week of November. Prices nominally up to full former rates.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Nov. 26, 1881.

BEEVES.—Receipts for the week, 13,192 head: do. last week, 13,848 do. Clear, cold weather stimulated the early demand and butchers took hold pretty well early in the day; all the light common cattle were picked up at a fraction advance from yesterday and ½c. higher than on Wednesday. Medium and good grades were slow and show no improvement in prices. A car of very poor Tennessee oxen and bulls sold down to 3c. live weight, and a load of light Virginia cattle at 3¾c, but the range for common to prime steers was from 5¼c. to dress 55 ℔s to 11¼c. to dress 57 ℔s. Exporters operate only moderately.

MILCH COWS.—There is an active demand for fine cows suitable for family use. Extras would bring $80@85 per head; common to prime State stock was quoted during the week at $40@75 with sales.

SHEEP AND LAMBS.—Receipts for the week, 33,123 head; do. last week, 37,786 do. Market active and prices a trifle higher all round. From 4 to 5¾c. represents the range for sheep, and lambs sold from 5¼ to 6½c.—two cars of choice Canada lambs at latter prices. Western advices do not indicate a very heavy supply for next Monday, and the prospects are pretty good, particularly if the weather holds cool.

SWINE.—Receipts for the week, 37,134 head; do. last week, 38,700 do. Seasonable weather produces a better feeling in live both here and at the West; corn-fed quoted $5.75@6.12 ₱ 100.

Hogs, New Jersey dressed, light, 8¾@9¼c.; medium, 8¾@8¾c.; heavy, 7¾@7¾c.; city dressed, 7½@8c. Pork tenderloins, 11½@12½c.

VEAL CALVES.—Supplies continue light and prices favor producers and sellers. The market has had a long run of steadiness.

Hog-dressed country, choice, 13½@14c; fair to good, 12@13c; grass, 5@6c; fed 6@7c; live calves, N. J. prime to choice, 9½c.; do. State, 9@9½c.; fair to good, 8@9c.; poor to fair, 6@8c.; Mount Hollys, 6@10c.; live calves, fed, 4@4½c; grass, 3@3½c.

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HENRY STEWART.

Soiling Cattle.

THERE are some questions in the art of farming which are easily settled by simply reasoning about them ; and that regarding soiling cattle is one of these. There are but two ways of feeding cattle, or pasturing, or permitting them to take their food from the ground as it is growing ; and gathering the food crops and feeding them to the cattle in barn, stable or the yard. It is very easy to perceive, that, if horses, cows, pigs, sheep and poultry were allowed to run in the fields and eat the grass corn, oats, beets, turnips or potatoes, that were grown for them there would be an enormous waste, and the animals would have too much food at one time, and none at another, and would simply starve in the Winter. To avoid this waste and this starvation we gather and house the crops, and feed them to the stock in such quantities as are needful ; using our reason, instead of leaving them to their own instincts, which is very imperfect as compared with human reason.

The same principle applies to some extent to the method of soiling, which is the practice of growing crops to be cut green and fed to cattle in the Summer, in barns or stables, or in racks in the yards. If a farmer grows corn or oats, or peas for his cows, he dare not turn them into the fields to eat these crops, because the cows would trample down and destroy much more than they would eat. So he is forced to cut these crops and feed them to the cows in such a way as to prevent them from wasting the food. This is soiling. And it is one of the most economical ways of feeding animals.

Soiling is practiced either partially or completely, as may be found the most convenient for the farmer. A dairyman who has grass lands suitable for pasture, soils his cows, when the grass begins to fail in the hot, dry Summer months. He sows oats, and plants corn, and when the grass begins to dry up and becomes hard, he cuts and feeds the oats and corn. This is partial soiling. When a dairyman or farmer has no pasture, and wishes to keep cows for milk or for butter, he must soil the cows completely. He begins in the Fall to prepare for it by sowing rye which he cuts in April and May and feeds to the cows. He has a piece of clover or grass which is in full growth when the rye begins to get hard and nearly ripe. Then he cuts the clover and grass and feeds these, and cuts down the rest of the rye and cures it for feed in the Winter. Very early in the Spring, as soon as the ground can be made ready, some oats are sown, and in a few days some more are sown, and this is repeated every few days, until it is time to plant corn, early in May. When the clover and grass are used up, the first of the oats are ready, and the oats are fed until they begin to get ripe in July, when the first early corn is ready to cut. The oats are then cut and cured and put away for the Winter. A piece of ground is planted with beets or mangels in May, and another piece in June where the rye was taken off. The rest of the rye ground is planted with corn, and as the oats are cut, corn is planted on that ground too. For the first corn an early kind is planted, and sweet corn is preferred for this use, because it is much liked by the cows and is eaten without any waste. The corn is fed from the time it is first ready until it begins to ripen, when the second cutting of clover and grass is ready, or the first sown beets or mangels. When it is too late to plant corn on the last oat ground, millet or Hungarian grass is sown and this can be cut in about six weeks, either for feeding green or to be cured for the Winter. In the Winter the beets and mangels supply fresh food, and the cured crops dry fodder. In this way the cows may be fed all the year round without leaving the stables or yards, or a small lot, where they can take some exercise and get what water they need; and it is quite easy for one cow to be fed all the year from one acre of ground, while 10 acres are needed under the usual system.

The only question which needs to be considered, is, whether it is better to grow grass and let the cows pasture it, and take 10 acres for each cow; or to grow soiling crops and do the extra work required in feeding the cows and so make 10 acres keep 10 cows. There are farms where land is cheap and cannot be plowed and produces grass plentifully. On such farms pasturing must be practiced and will pay the best; but there are other farms where land is dear and does not produce good grass, but does produce rye, oats, corn and roots to perfection, especially when there is plenty of manure to put on the fields. On such farms soiling can be practiced with advantage. It is quite easy to see that a very large quantity of manure will be made, where cows are soiled, and this, too, is a point which is very important in considering this subject.

WHAT TO DO.

UNCLE MARK.

AN old fable runs somewhat as follows: A little rain drop during a shower one day crept under the cornice and very demurely watched its fellows as they went laughing and dancing along the gutter.

"Come and join us" said a gay fellow as he went leaping past.

"Can't do any good," the lonely drop replied, "besides there are enough of you without me and I shall get along quite as well, here by myself." Poor, unsuspecting little fellow! It was not long before the bright sun came out, and he was gone.

Well, we are all but drops in the great shower of human life, and sometimes, in our younger days, we think we are such small drops that we can do no good. But, can we not? If we begin right, we may.

Now how shall my young readers begin, if they have not already, to do something so that they may *not* be like the idle drop, unable and unwilling to join the great tide ever flowing; how shall they *not* be left behind in the race for all that is noble, true and good; how shall those who have decided to make farming their life-work, in it attain the best success?

The farmer can profit by education as well as anybody, and the young man who obtains the best education within his reach, has taken one grand step. A great many of our farmer boys cannot attend school in the Summer owing to pressure of work, but in the Winter season they have ample opportunity to study and improve their minds and this opportunity they should accept. First of all, then, get a good, sound, common school education, and if you have a desire, and your parents consent, to go still farther, do it!

Then, in addition to your studies this Winter procure some good books and papers on horticulture and agriculture and make them your companions during the coming long Winter evenings instead of the trashy literature too often found in the hands of the young. In this way you may learn something of the theories and practice of others, and be laying a good foundation for future work. The amount of information gained by a course of reading through the Winter, in connection with occasional conversations with those who have experience in farming, will be greater than you now suppose.

When Spring again opens and the time arrives for making preparation for next year's crops, keep both eyes open; put into practice something of which you have read; make Nature your instructor, and you may again be surprised at what you can do and how well you can do it. In this way you will not be "an idle, lonely drop" in the great tide of agricultural life, but as you grow older and become more experienced, you will hear others say "come and join us" in our attempts to promote each others', and our country's, welfare and you will not say like the little drop in the fable, "Can't do any good;" your education training and experience will place you where you cannot truly say it for a your influence must be felt.

LETTERS FROM THE COUSINS.

UNCLE MARK: We know your word is law, and not liking to have our names stricken from the list, will make the best effort we are able to. We had no success with the seeds sent out by you, but were more fortunate with the general distribution. The dianthus is a great addition to our flower garden, every seed producing different colored flowers. The pinks, which the carnations proved to be, are pretty, but one variety of large fringed flowers are especially beautiful. Cousins, imagine you are riding through a country where the barns are covered with prairie hay, the houses are generally a story-and-a-half high, about 16 feet wide and 24 feet long, without porches, and unpainted. There is usually a grove around them, but very seldom an orchard. The garden is not even fenced off, so if we have any at all we must scare hogs and chickens from the time it is planted till we gather the produce. We seldom have any help from the men after they plow it, for they consider working in a garden a waste of time, and only women and children's work. A corn-field of large area is the hight of their ambition. This may give a little idea of some of the homes on this Western prairie. ROSY AND ANDREW BENTON.

Grundy Center, Iowa.

DEAR UNCLE MARK:—I am now going to tell you how the seed that you sent grew. The oats, sorghum, asparagus and the White Elephant all grew nicely. There will be about a peck of oats after they are threshed. The sorghum ripened some seed. The White Elephant we planted in four hills. There were 25 potatoes dug, weighing 13 pounds; six of them weighed over a pound each. There were quite a number of "babies." The bugs ate two hills off after they got to growing nicely, but they grew again. If there are any cousins who had luck with the Japan Red Bud, I wish they would send me some seed, as mine did not grow. I planted them in a tub with my pinks, but they did not come out. I would like to have Alma Allen write to me. I see in a RURAL a while ago that anyone could become a member by sending their name and address, so please accept me as a member and I will try and do better with the next seed. I will have to close or this will reach the waste basket. Your niece,

Dexter, N. Y. ELLA PATRICK.

DEAR UNCLE MARK: I am a little boy nine years old, and would like to be enrolled as a member of the Horticultural Club. My papa is a farmer and takes the RURAL, which we all like very much. I love to read the letters from the cousins, and have wanted to join the Club for a long time, but have waited to tell you about my flowers and also about the seed you sent my papa last Spring. The White Elephant Potatoes were beauties. The potato you sent weighed four ounces; papa dug 42½ pounds, several of the tubers weighing over one pound each. I have a little plot of land papa gave me last year, where I cultivate flowers and vegetables. I have roses, dahlias, geraniums, asters, petunias, poppies and lilies. Mamma gave me the pinks you sent; they grew well and were all very double. I have eight kinds. Ought I to remove them to the cellar this Winter. [No; cover them a little.—U. M.] I also have some very nice Surprise Melons, and citron, pop-corn and beans in my little garden. I have no little brother or sister, but I have my flowers to amuse me. Mamma has a good many greenhouse plants. She has given me a few slips, so I shall have some flowers this Winter, and hope by reading the RURAL to learn more about cultivating them. Your nephew,

Milford, N. Y. ARTHUR CUMMINGS.

UNCLE MARK:—Pa subscribed for your paper last February and is well pleased with it; he takes five other papers, but says yours is the best of all. I and little brother Tommy wish to have our names enrolled in the Rural Horticultural Club. I am 13 and he is five years old. I help pa on the farm during the day and study my lessons at night. I can plough, harrow, hoe, pick cotton, pull peanuts and make myself generally useful. Pa says it is "root, hog, or die." I prefer rooting to dying. Pa intends giving us a plot of land to cultivate next year. I have three-fourths of an acre in peanuts and cotton this year, but owing to dry weather they made short crops. Peanuts in this section are about one-half a crop, cotton, two-thirds and corn three-fourths of an average crop. JOHN R. PEEBLES.

Disputanta, Va.

DEAR UNCLE MARK:—May I join your large band of Cousins? Pa has taken the RURAL ever so long. He took it when it was "Moore's RURAL NEW-YORKER." He received the seeds sent him, and gave me the dianthus, picotees and carnation seeds. All that I planted in the house and then transplanted grew nicely and are blooming. One bunch of dianthus had about 35 blossoms on it at once; another of picotees had about 24 blossoms. A question: Do we (in Iowa) have to take them out of the ground in Winter, or leave them in and cover them up? I should not like to lose them. I never had any flowers before this year, but I had splendid luck and hope to have better next year. If I do I will write and tell you of it. "COUNTRY GIRL."

Springville, Iowa.

[Your plants will live out-of-doors this Winter, if covered.—U. M.]

DEAR UNCLE MARK:—I shall be glad to join the Horticultural club. My father intends to take the RURAL, and the Detroit Free Press next year. We take the RURAL this year, and like it very much. It was almost too late in the season before we thought much about the seed that was sent free to subscribers. My father likes the looks of the Rural Dent Corn very much ; but he thinks we live too far north for it to mature. Do you not think it would be nice to have the photographs of all your nephews and nieces? [Most certainly I do. U. M.] I am willing to give you mine if the rest of my cousins are. I would like to know what you or my cousins think of it. Your niece. LIZZIE MILLER.

Frankfort, Ont.

New Members of the Club for Week Ending Nov. 26.

Hattie Stone, Ray Arbuckle, Ellen Arbuckle, Alma Feazell, Eva L. Feazell, Duncan Campbell, Mary Dowling, Elsie Bacon, Robert Easton, Thompson Easton, Anna Underwood, George Underwood, Lucia Lightfoot, Clarence Buckley, May Burris, Stella Davenport, Dewitt. Davenport.

Miscellaneous.

A Holyoke, Mass. exchange, alludes to the cure of D. O. Judd. Esq., U. S. Supervisor of Postal Card Manufactory, who was cured by St. Jacobs Oil of rheumatism and neuralgia. —Bridgeport (Conn.) Standard.

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The late Baron James de Rothschild, of Paris, was educated in the law and was a connoisseur of mediæval literature and art. He was but 37 at the time of his death, which occurred from the bursting of an aneurism said to have been caused by vexation at the loss of 85,000,000 francs in three weeks by speculating on the Paris *Bourse*.

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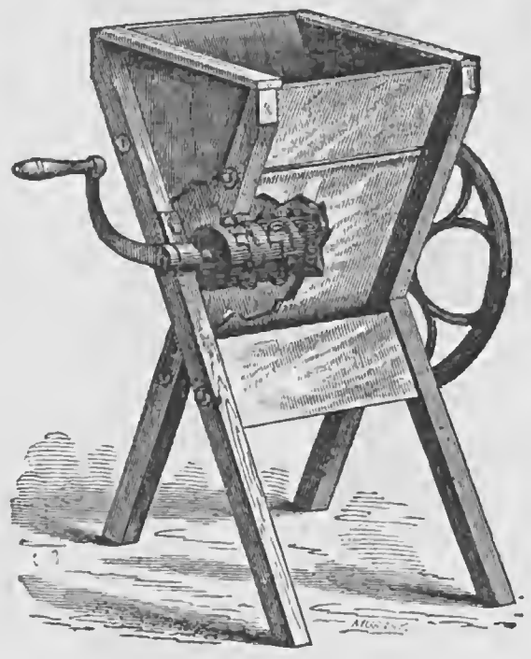

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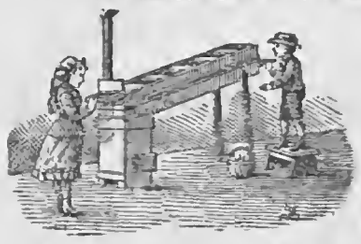

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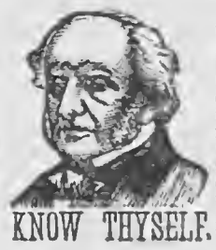

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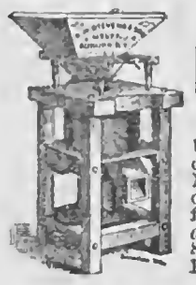

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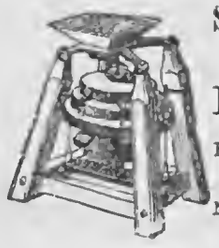

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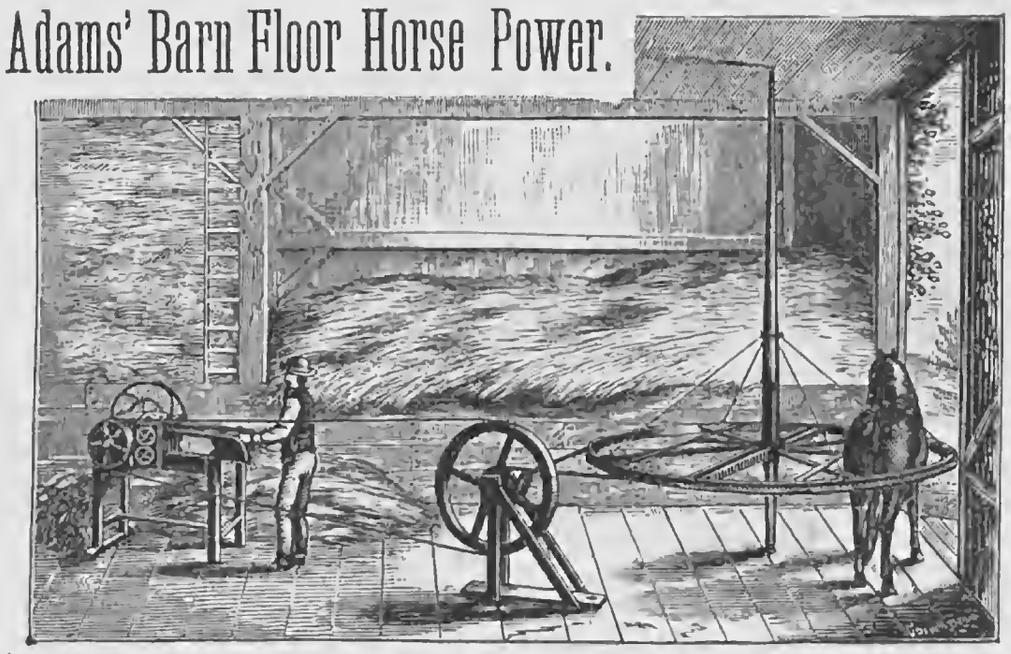

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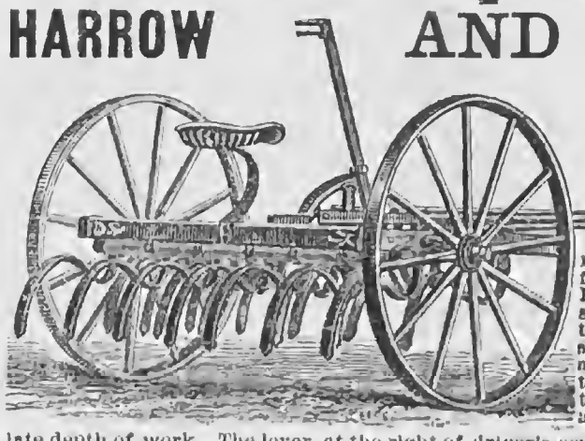

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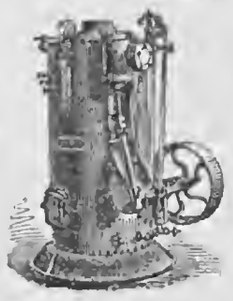

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME

VOL. XL. No. 1663.} NEW YORK, DEC. 10, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

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Horticultural.

NOOKERIES ON THE HOME GROUNDS

SAMUEL PARSONS, JR.

HOW SHALL we treat our gardens or lawn nookeries? to coin a phrase which means, I take it, an aggregation or congeries of nooks and corners combined into a single isolated picture. On general principles nooks of the garden attain a value not only because in them, as Lord Bacon quaintly puts it, "when the wind blows sharp, you may walk as in a gallery," but because these nooks afford the attraction of a surprise, that may be in the truest sense, when properly taken advantage of, a pleasurable surprise. In a word, there must be a succession of nooks, surprises in numbers, all within the limits of one small spot, to make your true nookery, for a bare corner is in no sense a nookery. Memory must surely recall to all of us such spots down in the orchard or behind the barn, and especially in some remote corner of the old-fashioned garden and in the edge of the woods at the back of the house. The old apple tree with the grape-vine trailing over it, down by the drinking-hole for cattle in the corner of the orchard, was a delightful nookery in its way, with its rich turf and charming wild flowers, or weeds as some would call them. Abounding, too, in nookeries of the pleasantest sort was the old flower garden, with its box-lined borders and lark-spur corn-hollyhocks where, for instance, in a far corner, we come suddenly on an old arbor festooned with grape-vine, honeysuckle and trumpet creeper. I think, though, according to my remembrance, the best nookery was to be found down on the edge of the grove, with its pool of water on one side and its bays of shrubby growth and aisles of tree trunks on the other. The rushes and lilies of those remote, still waters, and the wild flowers and climbing vines, Virginia Creepers and Bitter Sweets in the recesses of the woods, even now linger with me as types of what garden nookeries should be.

After recalling the constituent parts of such scenes, it ought not to be hard to adorn, and, if necessary, create, these pleasant nookeries in our gardens. It is not a question of extensive or even exquisite culture, but only a few well directed efforts from year to year and the place takes care of itself. Every one surely can find a secluded nook in the garden or lawn, and there are many things we can do of the easiest nature that will tend greatly to perfect these delightful surprises. Wild flowers can be fostered and even planted in such a way as to preclude all idea whatever of the working of the hand. Hardy shrubs, too, may be used in the most effective manner for this purpose, by planting them singly or in colonies in a thoroughly wild-wood manner. But, I believe, nothing will create such pleasant, artistic surprises in these nooks, and illustrate the proper way to treat them better than the intelligent employment of climbers and creepers. With them alone we can do wonders. Take that old stump before you and wreathe it with festoons of the long, crimson flowers of the Trumpet Creeper—Tecoma radicans. Nothing in its way can be finer except the employment of Tecoma grandiflora, with its great, orange-colored flowers. So vigorous and stout are these climbers that they soon grow into a tossing, wild mass of leaves and trumpet-shaped flowers, to the entire obliteration from view of the old trunk over which they grow. Don't confuse, however, these trumpet flowers with those of the scarlet trumpet vine or honeysuckle—Lonicera [illegible] leaves that often last nearly all Winter. Every one thinks of honeysuckle flowers as sweet-scented and yellow, white or red; but how many stop to examine the rich, glossy shades of honeysuckle leaves, so admirably adapted for carpeting bare spots or draping heaps of stone and stumps and tree trunks? There are scores of varieties of honeysuckles which are, every one of them, worthy of employment.

In some of these sheltered nooks we might even use the unequaled English Ivy, particularly if we use it as a carpet; but we certainly can have the so-called Japan Ivy, Ampelopsis Veitchii, or tricuspidata, in this country the most perfect of hardy creepers for clinging by rootlets to stone or wooden surfaces. Few plant effects can surpass in Summer the glossy color and artistic forms of the leaves and tendrils of the Japan Ivy, or the crimson and gold of its Autumn tints. But we must not forget the other varieties of Ampelopsis in contemplating the charms of the Japan Ivy, for few things are more effective in our tangled wild-wood corners than great masses of the common Virginia Creepers—A. bipinnata. How its piled-up leaves festoon the tree trunks with overlying masses of shining green in Summer and of scarlet and blood-red in Autumn every one familiar with Fall effects must remember. Of an entirely different, but none the less very effective, nature is the Virginia Silk—Periploca Græca—with long, pointed, shining leaves, small flowers and brownish-red stems, reaching out with almost unrivaled speed away up the stem of the tree, illustrating in a temperate zone and harmless manner something of the tree-murdering propensities of certain vines of the tropics. For the adornment of the upper part of the trees and rock masses we must not forget the rich clusters of foliage and charming garlands of flowers of the purple and white wistarias. Wistarias, allowed to reach out, flower and leaf most abundantly in their upper parts, and are, therefore, specially adapted for garlanding a tree or roof far up in the air without reference to covering its lower part. Then there is the neat-leaved akebia; the bold and picturesque, large, light-colored-leaved Dutchman's Pipe; the Autumn-crimsoned purple-berried Bitter Sweet, all lovely climbers for our purpose. But of all charming climbers, I verily believe the clematis must bear the palm. The variety of color and form of its [illegible] is endless, extending, as it does, from the [illegible] Jackmanii to the delicate, small, white and yellow flowers of C. flammula and C. apiifolia. And they are equally fine in the nookery whether carpeting bare spaces of ground or garlanding and draping rocks and trees.

Before leaving a subject thus closely allied to the very heart of nature I would note again, with increased emphasis, that one of the peculiarities of the proper treatment of these pleasant corners, whether in garden or woodland, is that it may be said, almost, that the more you plant and the less you cultivate and cut with the sickle, scythe and pruning knife, the more surely you attain the end desired. Conventional methods are all "beyond compare" any number of cart-loads of scentless bedding plants, mechanically arranged and ribbon-bordered.

RURAL GOLD AND CRIMSON TOMATO—FROM NATURE.—FIG. 548.

NOTES FROM THE RURAL GROUNDS.

The Rural Gold and Crimson Tomato.

WE are not positive as to the year when the "sport" ancestor of the tomato which we have drawn from life made its appearance. It was about five years ago, and certainly not less than four. Neither have we a positive remembrance as to the variety upon which it first appeared as a so-called "sport." We thought it was the Acme and that the "sport" was due to the contiguity of a yellow variety growing near it with which it had crossed the year previous. But Mr. Bliss points out to us that this could scarcely have been, since the Acme was introduced but four years ago.

The "sport" consisted of a faint yellow band about the stem, which gradually merged into crimson. Seed of this was sown the next year and again seed of the tomato most decidedly marked yellow and crimson was saved for the next, and so on every year since. The progress of "fixing" the two colors has been slow. Last season a majority were crimson; about one-quarter were irregularly streaked and the rest quite uniformly marked, as faithfully shown in the portrait. Not alone, however, have we had an object [illegible] of the two colors. Very little attention has ever been paid to improving the *keeping* qualities of the tomato—a consideration, as it has seemed to us, of the very first importance. Cultivators have worked chiefly for *earliness* and, as as a minor consideration, for size and smoothness. As to earliness, all endeavors have been futile, or nearly so. No real progress has been made in this respect for years, and those kinds which are a few days earlier than the earliest of 10 years ago, are watery, small and disposed to rot. For earliness, size and quality we have to-day no better kinds than the Conqueror, Canada Victor or Hathaway's Excelsior. From the very nature of the tomato plant we cannot preserve its best qualities and yet force it to an earlier maturity. Nor, since the art of preserving them in cans has been so perfected, is it desirable, since canned tomatoes are as good as the fresh fruit and far better than those which are forced out of their natural season of ripening. But, as we have said, any systematic attempt to improve their keeping qualities has been quite ignored in so far as we have heard.

Another object which was constantly borne in mind was, therefore, to breed a tomato by selection which should keep sound longer than any other variety. To this end all of those which showed progress towards establishing the two colors in one fruit were pulled as soon as ripe, placed in the sun, and a record kept of how many days they remained in a sound condition. From the longest keeper only has seed been selected during these four or five years for the following year's crop. Last Summer seed was selected from a tomato (distinctly marked gold and crimson, as shown in the engraving) which remained perfectly sound for 17 days. It is reasonable to hope for an improvement upon this, and that ultimately American tomatoes may become enduring enough to bear shipment to England and to be exposed in English markets, plump and sound as long as they are now exposed here. The climate of England is no more favorable to the culture of the tomato than it is to that of Indian corn

RAYS.

I AM not aware that any of your readers grow kale. In Canada, Nova Scotia and in cool, moist and mountainous parts of the United States it should do well. After it gets

the frost it is a good vegetable. It will bear a deal of cold, but hot sunshine and sudden thaws in Winter affect it badly. Besides the Scotch Curled and some improved varieties of the same for culinary purposes, there are kales with leaves most beautifully variegated with red, white and yellow, and crested, and which are used in European gardens in company with dwarf evergreens, daisies, primroses, bulbous plants and the like, to fill up for the Winter season the flower beds that have been vacated by the Summer bedding plants. And these pretty kales are also good to eat. If you want some for next year get your seedsman to order a packet of the Improved Variegated Kale. Sow it when you sow your main rop of turnips.

* *

AND the RURAL farmer watered well his celery and secured the finest crop he ever had in consequence. Celery is as thirsty as strawberry plants, and at no time during the period of its growth should it suffer for want of water, else its growth will be checked, its succulent stalks made stringy and there will be a prevailing tendency to "bolt." In the London market gardens, in that fat belt of land on the bank of the Thames at Fulham and at Woolwich, where the land is deep and black and from exceedingly heavy manurings every year, as fat as fat can be, perhaps the finest celery that enters the London market is grown. The land is naturally moist, the English climate is moister far than the American, still those gardeners almost deluge their celery plants while growing. Some have hydrants in their fields and lead the water through the rows with rubber hose, some have iron pipes and wooden leads, many fields are ditched and the water baled up into cisterns to run off in pipes and leads adown the rows. These gardeners pay from $50 to $100 of rent a year per acre, and still this labor pays them and their crops would not pay without a vast amount of labor. In Eastern Ohio some weeks ago I called upon a gardener whose place is on the bank of the Mahoning River. Last Spring the river overflowed its banks, flooded all his place, washed away his crops and killed the plants he had in his greenhouses. He suffered severely, still he seemed quite buoyant as he pointed out to me some thousands of plants of celery growing in that deep, black land, and told me he expected to get 10 cents a head for them before the Winter should go past. With a good market and such an easy crop as celery in rich, moist land, who would grow geraniums to sell if they wanted to make money?

* *

DR. WARDER, of Ohio, speaking at Boston of the hardy catalpa said: "It has a local habitat of a few hundred miles. It is of rapid growth and very valuable as an ornamental tree. It grows rapidly and the timber is very durable, there being many instances of fence posts of this wood lasting 75 years. * * * In twenty years, in a good soil, it will make three railroad ties per tree."

* *

MR. H. H. HUNNEWELL has contracted with Mr. Douglas, of Waukegan Ill., for the planting of 550 acres of this catalpa in Kansas. The soil is broken up and planted in corn one year before setting out the catalpas. They are planted four feet apart, taking nearly 3,000 to the acre, and Mr. Douglas contracts to take care of them for three cents each until they are old enough to take care of themselves.

* *

A FEW years ago the Double-flowered Sweet Alyssum was reintroduced to public notice. It was received favorably for it is an excellent thing either for the outdoor or window garden. Yesterday a friend showed me a variegated leaved form of it. The variegation is just as good as is that of the common, Single flowered Sweet Alyssum.

* *

THE same friend also called my attention to Tradescantia quadricolor which he was propagating. This is a variety of the variegated form of old-fashioned, green-leaved Wandering Jew; its leaves, besides having the deep white or pale yellow variegation, are also suffused and streaked with glowing red. As a basket or bracket plant or to grow on the surface earth in pots containing roses, callas, or other house plants, or even in bottles of water it is a sterling addition to our list of window plants, and so far it grows as freely as does the common Wandering Jew.

* *

A NEIGHBOR, a florist, built some cheap greenhouses a few years ago. The sides were of wood—spruce, tar-paper and clapboard, with red cedar posts. For the small house one inch spruce boards were set together closely and lined on the outside with tar-paper, outside of which were clapboards. This made a fairly good wall and is in middling condition still. The larger houses were double-boarded, then papered and clapboarded, and are now so rotton that they have to be removed. The damp got in between the double boards and kept them wet all through the Winter months; they rotted quickly in consequence. He is replacing them with single boards.

* *

I CALLED at a seed store the other day and asked if they had got anything new in the way of bulbs. Yes, they had Crocus speciosus, a big, blue Autumn flowering one. I said, "Why, that is as old as the hills!" They knew it, but nobody hereabout had imported it for sale and nobody wanted it till some one exhibited a clump of it last Fall; now there is quite a demand for it. The same was the case with the Spring Meadow Saffron (Bulbocodium vernum) or "Pink Spring Crocus" as they call it at the store. Now both of these are quite hardy and cheap, very pretty and worth growing. If too late this season, see that you have a few next year. LEON.

Franconia, Naomi, and Lost Rubies.

With regard to the identity of these, we have just received the following note from Mr. Charles Downing:—"You ask my opinion as to the identity of Franconia, Naomi and Lost Rubies Raspberries. I have grown the Franconia for 30 years or more, and the Naomi since its first introduction, and had plants of it from the original stock, and also afterward from F. R Elliott and M. B. Bateham and others who claimed them to be distinct, especially in hardiness. I have grown these side by side with Franconia for several years in succession, examined them carefully at different times in the season, not only the fruit, but the growth, foliage, canes, time of ripening, etc., and never could detect any difference; neither could the growers—experts—who came to examine them, and I am satisfied that they are identical. As to the Lost Rubies being the same, I am unable to say, having seen only plants of last season's growth, but the foliage, canes and spines appeared distinct; yet more time is necessary to give a decided opinion."

Pomological

THOUGHTS UPON THE SELECTION OF TREES FOR HOME PLANTING.

T. T. LYON.

THE season for the selection of trees for Autumn planting is now nearly or quite past, especially at the North; and the time is at hand when the plans should begin to take form for the operations of another Spring. To those, therefore, who have not already laid in a stock of trees for Spring planting, I remark that the Autumn is by far the better time to do so, since the Autumn purchaser usually gets "the cream of the stock," and with care may render his trees far safer by heeling them in, in suitable ground, well sheltered against the possible severities of Winter, with the very satisfactory assurance that they will be at hand in Spring at the time to him most convenient for planting.

To those, however, who have yet to procure trees for the Spring, I suggest:

AVOID CHEAP TREES.—Few men are fortunate enough to find opportunities to get something for nothing, or, indeed, to purchase anything for less than its real value. The man who attempts to do so will usually find his match, and will be very likely to discover too late that, like the dog with the bone, in trying to grasp too much he has lost the substance and secured only the shadow.

TALL TREES are generally grown by nurserymen for the reason that almost all buyers are so ill-informed as to demand them, and also for the further reason that they are more profitable, since, if crowded in the nursery, they naturally run up tall and straight, and thus economize space, cultivation, and loss of growth in pruning. Such trees, on the other hand, are in the worst possible condition to bear the shock of removal and free exposure in the orchard. Indeed, they may fairly be said to be much in the condition of the thousands of worthless trees annually removed from the dense shade of the forest to the open exposure of the street or highway, and hopelessly lost.

TREES OF ONE OR TWO YEARS' GROWTH may be planted out with comparative safety, since less of either root or top will be lost in the process, while the tree will have acquired little inherent tenderness, in nursery, from the protection of its neighbors, and, for both reasons, will the more readily recover its lost vigor and its hold upon the soil. Trees of all kinds are by nature more or less fastigiate, pushing their new shoots from near the terminus of last year's branches. Therefore, the planter should determine definitely, at what hight he prefers to branch his trees; and when one or two-year old trees are used head them back remorselessly to that hight, or at the most a very few inches above—just enough to afford room for a set of five or six branches to become a foundation for the future head of the tree.

ONE-AND-A-HALF OR TWO FEET, in locations exposed freely to wind and sun, are ample for the average hight of apples, and especially for pears, plums, cherries and peaches, since at that hight the trunk will soon come to be well shaded from the direct rays of the sun, which are the prolific cause of sun-scald, bark-burst, borers and other ills, to say nothing of the swaying of the tree and the loosening of its roots by the force of the wind.

WELL-BRANCHED TREES of three or more years' growth would doubtless be preferred by many if not by most planters; but to produce such it is indispensable that they each have a clear space, in every direction, of three or four feet, since without abundant side light a suitable set of branches cannot be produced, and hence a well-shaped head becomes impossible.

SIX OR EIGHT TIMES THE USUAL PRICE would be necessary to remunerate the nurseryman for the cost of trees grown in this manner, as compared with those generally grown. That such trees, even at the price suggested, would prove relatively cheap for the purchaser, I very confidently believe, but the prospect that any considerable number of purchasers could be induced to act upon such belief seems so very remote that few if any nurserymen will be likely to venture upon the production of this class of trees beyond what may be needful to meet orders actually given in advance.

ROOT-PRUNED TREES may be grown in this manner to almost any desired age and size, and may be transplanted from the nursery with comparative ease and safety, even after they have reached the age of bearing, if care be taken to repeat the root-pruning every second or third year after the first. Of course, the growing of trees in this manner must add greatly to their cost, and hence they are not likely to be sought except by those anxious to secure the earliest practicable results, with little regard to expense.

A TREE TWO YEARS OLD, from a root graft, or one year old from a bud, managed wisely, will, as the rule, at bearing age be found fully equal to a three or four-year-old tree, as usually managed, while it will ever afterwards be found far more satisfactory.

Arboricultural.

HONEY LOCUST,—Gleditschia Triacanthos.

PROFESSOR J. L. BUDD.

THIS fine native tree has received more attention in Europe than here. It has there sported into different varieties, with extremely varied habits of growth. This tendency to variation is exhibited in growing its seedlings, and we even notice that our native trees are varied in time of flowering, color of petals, habit of growth, and even in hardiness of trees when grown on the prairie. Our correspondence continually indicates a common belief, that this is a true Locust, and that like the Black Locust, it is noted for sprouting and liable to the attack of the borer. We wish to repeat, that it *does not sprout* any more than the maple, and that no form of insect has yet molested it, except a long necked beetle often found on potato vines, called by Harris, *Cantharis cinerea*. Plants in nursery and young hedges are sometimes set back by these hungry fellows at work on the foliage. The only effect observed, aside from a brief check in growth, is that the plants so treated, become more thorny than those unmolested. Several American writers, following Loudon more closely than is creditable, say: The wood of the Honey Locust, when dry, weighs fifty-two pounds to a cubic foot. It is very hard, splits with *great difficulty*, resembling in this and some other respects that of the common locust." London really wrote "*splits with great facility*," which agrees with my practical experience. I have experience with this timber as a fence material, dating back nearly twenty-five years. Fence rails of that age, made from tough native timber, nailed on posts, have outlasted three sets of posts and two sets of Red Oak rails, and the locust rails are yet mostly good. These rails were split and nailed on in June and July. Posts made from native timber, seasoned one Summer before setting, mixed with White Oak posts treated in the same way, lasted equally well. Some *long* Honey Locust posts in this fence, when rotted off, were inverted, and lasted ten years longer in a new fence. It is well to say, that young timber rapidly grown on our rich prairie soil, will in no case, prove as durable as that of our old native trees. But recent observation, in the groves of Illinois of twenty-five years' growth, makes the fact evident, that as growth is impeded by standing *thick*, and complete occupancy of the soil by roots, the proportion of sap wood becomes small, and the heart wood becomes firm and dry, as noted in thick growths of the poplars. As fuel, the Honey Locust rates in value with the Red Oak.

The seed ripens in Autumn, and may be gathered any time during the Fall or Winter. But the sooner pods are gathered after falling to the ground the better. In Cedar County, on Cedar River, and at many points on the Iowa, Des Moines, Missouri, and indeed most of the rivers of the State, pods may be gathered in quantity grown on thornless trees.

Before planting, scald the seeds severely. Part of them will swell. Sift these out with a coarse fanning-mill sieve. Scald the remainder again; repeatedly scalding and sifting, until all are swelled. The ground should be ready and the seeds at once planted. They will come up in two or three days if the weather be favorable, and their upright growth is so rapid that less care is needed in picking out weeds from among the plants, than with any other forest tree seedlings. Keep the weeds down carefully with good culture during the Summer. Take up the plants in the Fall and heel in carefully where water will not stand. If left standing in the seed bed, the plants are often injured during the Winter. After the first year the plants are perfectly hardy, if seeds from our native trees be used. We may here note that the seed sold in the Eastern markets is mostly imported. Many of the plants produced from the foreign Honey Locust seed, prove as tender in our climate as the peach tree. No valuable tree in our list bears transplanting with as little check to growth as the Honey Locust.

Agricultural College, Ames, Iowa.

The Apiarian.

VALUABLE HINTS IN BEE CULTURE

PROFESSOR A. J COOK.

IT has been my good fortune of late to spend two or three days with Mr. D. A. Jones, of Beeton, Ontario, Canada, who is perhaps one of the most successful apiarists in America, and who without doubt possesses a broader experience than any other bee-keeper in the world. He it is who went to Syria and Cyprus to procure and to introduce into America the bees of those far-off countries. He now has a large apiary in Cyprus, and another in Syria, both in charge of Mr. Frank Benton, a graduate of the Michigan Agricultural College, whom Mr. Jones secured to assist him in this great enterprise. Last Winter Mr. Jones, at a very great expense, sent Mr. Benton to Ceylon and the Indies, in hopes to get and introduce into America the famous Apis dorsata. Mr. Benton got the bees, but owing to severe hardships, he was prostrated with a serious illness, and so was not able to care for them, and as a consequence they died in transit. One colony, however, did not die till it had reached Palestine, showing, as Mr. Benton says, a remarakable endurance on the part of the bees. From the knowledge gained by this expensive experience, the procuring of this bee will now be not only possible but comparatively easy. I am most happy to report that Mr. Jones has the persistence to push the matter to a successful issue. This Winter he sends Mr. Benton with an assistant, and so we may be sure to see Apis dorsata at no distant day.

In conversation with Mr. Jones during his two days' visit at my house, I gathered so many rich and valuable hints from his wide experience with several apiaries and hundreds of colonies of bees, hints that were with slight exception exactly in accord with my own observation, that I am glad to give them to the readers of the RURAL.

FEEDING.

Mr. Jones is very emphatic in his advice to feed whenever the bees are not getting nectar from the flowers—just a little each day to stimulate them so that breeding may go vigorously forward. I and my students proved the importance of this by repeated and most careful experiments several years ago. I have always stoutly recommended it and emphasize its importance in my "Manual of the Apiary." Mr. Jones, however, has brought out two new points in connection with feeding: 1st, If the queen stop laying once, it is far more difficult to induce her to commence again than to keep her at work by judicious feeding, before she ceases to lay. Sometimes if she is forced to idleness from the entire cessation of storing on the part of the bees, during the latter part of Summer and in Autumn, it is impossible to get her to resume at all, even if we do feed. This adds new force to the advice; "Always feed, especially in late Summer and in Autumn, when the bees are not gathering." The second point is that this persistent idleness on the part of the queen, if once commenced late in the season, is much more marked in old queens than in young ones. This furnishes another reason

for the advice which I have repeatedly given, "Keep only young, vigorous queens." To be sure, some queens show a remarkable prolificness the second and even the third year, and such queens should not only be kept, but I would breed from them; but as a rule we gain by keeping only the young queens in our apiaries.

WHEN TO EXTRACT.

I proved long ago that the waiting for the bees to cap the honey before we extract, is not only expensive, as it involves much useless labor in uncapping, but is entirely unnecessary. Mr. Jones, who has as wide an experience as any one in the country, fully agrees with me in this opinion. Messrs. Muth, certainly, and I think Messrs. Hill and Doolittle are of the same opinion. The extracted honey, of course, must not be put into a damp or a cold room as then very likely it will ferment; nor must it be kept in a tight vessel, for in such cases it has no chance to "ripen" and in the latter case it will ferment and the vessel will, very likely, be burst. But if we put the honey in a warm, dry room, in an open-mouthed can or barrel, which, to protect the honey from the dust, should be covered with a piece of factory, we may save the immense labor of uncapping, get far more honey, as the bees will do more, and may be sure of honey of the first excellence. True, Mr. Bingham and others whose judgment is justly respected, urge that unless the honey is "ripened" in the hive, it has lost some of its flavor and so is inferior. I have honey now in our College apiary that is several years old, and though very thin when it was extracted, it is now thick and heavy, and all who have tasted of it pronounce it of the best quality.

It may generally be best to wait till just as the bees commence to cap the honey, as then very little pains are required to keep honey in good condition, while all of the labor of uncapping is saved. But to secure the most honey and so the best results, we must extract every second or third day, as then the bees will gather far more. But then, we must be sure that the honey is kept for some weeks in an open vessel in a room where the temperature is constantly up to near 100° Fahr. This course is safe, economical and very profitable. But if it is adopted, we must never put the honey in tight vessels till it is thick, and never put it in a damp, cool room, which is a totally unfit place for any honey at any time. Even comb honey, all capped over, will sour in a cool, damp cellar.

PERFORATED ZINC.

Mr. Jones has found great advantage in the use of perforated zinc in his apiary. This zinc is pierced with rectangular holes which are 3-16x9-16 of an inch in size. These will permit a worker bee to pass, but not a queen or a drone. By using this at the entrance, the queen can be kept in, and so the apiarist may leave the apiary with no danger of loss from the bees swarming out, and, further, he can keep all drones in, or, if he wishes, weed them out and kill them off, and by doing this to all his undesirable colonies, and those of his near neighbors, he can select his drones as well as his queens, unless there are drones in the forests near-by. These strips are so made that the banking up of the drones does not keep the workers out. By putting them at a hive a little after noon, all the drones that are out will be kept out at night and may be killed. This is the best way, as drones eat a great deal and are expensive hangers-on in any apiary. By keeping the strips before such hives as we do not wish to breed from, we may keep the drones in and so select our drones as to males as well as females.

In a future article I will explain how Mr. Jones uses the zinc as a division-board, and gets all the honey stored in the body of the hive at a great profit.

Field Crops.

DIFFICULTIES ENCOUNTERED BY THE EXPERIMENTER.

PROFESSOR W. J. BEAL.

IN the RURAL for November 19, you quote from the report of the Illinois Industrial University the results of cultivating corn three times and six times in the row, and give the summary showing an increase of eight per cent. for the extra cultivation. In four cases the figures show something in favor of cultivating three times over cultivating six times. In one of these the difference is nearly 40 per cent. In four cases the figures show something in favor of cultivating six times in the row.

"Incog," in the RURAL for November 26, speaks of an experiment in potato planting. He plants one row of 70 hills through a piece and cuts the seed in a certain way different from that for the rest of the field. It was compared with a row next to it, and showed a surplus of over 50 per cent.

The above reminds me of an experiment made the past Summer. In the College vegetable garden, we have a piece of flat, rich ground which almost every one would call quite even for productiveness. It has been planted to onions for several years past. In September of this year I asked my assistant in experiments to select a number of rows which were as nearly alike as he could find in the piece. He should avoid ridge-furrows and bed furrows and rows which might contain vacancies. The rows were 14 inches apart, and, so far as any of us know, were treated alike. The five rows were next to each other. Beginning at one side the first yielded 6½ bushels; second, 5¾ bushels; third, 6½ bushels; fourth, 4½ bushels; fifth, five bushels. If we take any two contiguous rows alone, or if we alternate the whole number, we find a great difference in the yield. This only shows one of the difficulties in making experiments in agriculture. I will not say more. Let any one figure on the onions as he may choose.

Mich. Ag. College.

FIG. 549.

BLOUNT'S NO. 10 SPRING WHEAT.

THIS is a cross of the Diehl, a New York Winter wheat, upon the Golden Straw, a Virginia Winter wheat, produced by Professor A. E. Blount, of the Colorado State College. It is now but three years old, and is a Spring wheat of great value, having very large, closely-formed heads, stiff straw and beautiful grain. It does not shell easily, nor does the straw fall, nor is it subject to rust in Colorado. The analysis of the grain shows it to be a strong wheat, having nearly 14 per cent. gluten. It is an enormous yielder. By cultivation the past year, and without any fertilizer, it produced over 1,800-fold. Seventy-six kernels, weighing 49 grains Troy, produced 10¼ pounds. The 76 kernels were planted one foot apart each way.

No. 10 has, as yet, received no name, not being fully standardized. Sown as a Winter wheat at the Rural Farm, we made the following notes:—"Straw heavy; heads average over four inches; eight breasts and three kernels to a breast. Cut July 16. Kernels shriveled. The heads vary in form, some more resembling the Diehl in being larger at the top, others being pointed. Promising as a Winter wheat." The portrait is from nature.

TOBACCO-GROWING NOTES.

AT the present rate of consumption there is little danger of an overstocked market of the better grades of seed-leaf tobacco. The increase in production has been very rapid, but it does not seem to be greater than the consumption. In 1845, when the variety of tobacco known as seed leaf was first grown as a marketable commodity, there were but 3,000 cases of 400 pounds each produced in all the United States. Since that time the production has increased, until in 1880, the product was 280,000 cases—an increase of from 12,000,000 to 112,000,000 pounds in 35 years.

ASSORTING tobacco is now in order and it would be well if growers of seed leaf tobacco everywhere could fully understand the importance of performing the work well. The tobacco growers of Lancaster County, Pa., have gained a world-wide celebrity for the tobacco which they produce, which is due largely to the systematic and painstaking manner in which they put up their crops. Seed leaf tobacco to suit the trade, should be assorted into from four to seven qualities, the latter number being much preferable to the former. The leaves should be selected as regards size, soundness and general quality.

IT is not only important that the assorting be done properly and each quality kept strictly by itself, but the "hands" or "hanks" should be made to present a neat appearance. Hands of wrappers should contain from twelve to fourteen leaves each and the tying should be done in a neat and careful manner, for there is no one thing which causes a crop of tobacco to appear so well as to have the "hands" of uniform size and tied in a neat, workmanlike manner.

WHEN a number of qualities are being made in assorting tobacco I have found it an excellent plan to divide up the table in which the work is done into apartments, one for each quality. This may be done by placing narrow strips of boards crosswise of the table and from eight to ten inches apart, or by placing pins of wood between the places allotted to the various qualities. This simple precaution prevents the assortments from becoming mixed on the table and also keeps the leaves in a neat, compact shape until tied into "hands."

G. A. G. JR.

Farm Topics.

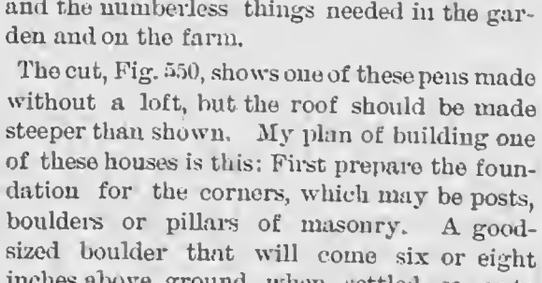
HOG HOUSES.

WALDO F. BROWN.

WHETHER few or many hogs are kept on the farm, one or more good hog houses are needed. We want them for the sows at farrowing time, to winter Fall pigs in, to confine our male hogs, to fatten small lots of hogs, as sleeping places for the store hogs in Winter and as fertilizer factories in which to make the hogs earn their board. A suitably built hog house will be found useful for all these purposes, and on any farm where hogs are kept at all it will soon pay its cost. I have made hog houses a study for more than 20 years, in which time I have examined many and have built six for myself. I believe that for economy and convenience I have a plan as nearly perfect as can be found and which combines cheapness and convenience. After trying different forms and sizes I have adopted the plan of a house eight feet wide with the roof sloping only one way, and I build it of a length to suit the number of hogs to be accommodated. If I make it more than 16 feet long I put in a permanent partition for every 16 feet, and I have movable partitions to divide it into sections of six, seven or eight feet in width.

If in building one of these pens you need a place to store corn, or loft room for any purpose, you can use longer posts and lay a floor overhead. The smallest of my hog houses is eight by twelve feet and the loft floor is five feet above the lower one, and I have put 100 bushels of corn in this loft at one time. I generally use it, however, to store seed corn, and as a kind of convenient "catch-all" to put away garden plows, seed drills, flower pots and the numberless things needed in the garden and on the farm.

The cut, Fig. 550, shows one of these pens made without a loft, but the roof should be made steeper than shown. My plan of building one of these houses is this: First prepare the foundation for the corners, which may be posts, boulders or pillars of masonry. A good-sized boulder that will come six or eight inches above ground when settled, so as to rest on the subsoil, is as good as any. Next place your sills, eight feet long, across the ends, and five joists the length of your pen from sill to sill. A sill six inches, if of oak or some other good wood, is heavy enough. If your pen is 16 feet long I would advise that you use joists two inches thick and twelve wide; but if not more than 12 feet long a width of ten or possibly eight inches will do for them. The joists should be bridged in the center. When they are in place lay the floor, and I find it cheaper and better to lay a double floor of inch boards than to use two-inch lumber.



PEN FOR HOGS.—FIG. 550.

In laying the floor the lining need not be laid close; in fact, I prefer to have cracks three or four inches wide, but take pains to lay it so that there will be good boards under the cracks of the upper boards. After the floor is laid, cut posts four inches square for the corners and set them on the floor, and for a pen such as is shown in the cut, without a loft, make the rear posts four feet long and the front ones seven. Spike a two-by-four studding flat on the top from one post to the other the length of the building. These are for plates. Put up your end rafters. Shiplap a nail tie across at each end and between the sills and end rafters put a two-by-four nail tie across in front, having the top of it at the hight you want the bottom windows—and you are ready to begin weather-boarding. You will make the end rafters stand flush with the sills, so that in boarding up and down, the bottom of the boards will be nailed to the sills, the top to the rafter and the middle to the tie. The front and rear boards will be nailed to the plate above and to the joist below. The rafters will be nailed down to the plates to prevent the building spreading. When completed, this building, although it has not a mortise or tenon, will be firm and substantial, and if hard wood is used for the frame, could be rolled down a hill without injury, for every board in it acts as a brace. In boarding a building of this size a board 14 feet long will make one cut for the front and one for the rear. Anyone that can use a square, hatchet and saw can make such a house and it will take two hands less than two days to complete one of them. The cost will vary with the cost of lumber, but it will be cheap. I have often seen a farmer get out a heavy frame of hewed timbers for a hog house and frame it together strong enough for an 80-foot barn, and his frame alone would cost as much or more than this house will complete. The following is the bill of lumber for a house eight by sixteen feet.

2 sills 6 inches square, 8 feet long	72	ft.
5 joists 2x12 in. and 6 feet long	160	
10 rafters 2x4 in. and 10 feet long	70	
Siding	336	
Floor	256	
Posts, plates and nail ties	80	
Sheathing	150	
Total	1,124	ft.

It would take about 1,000 shingles and not far from one dollar's worth of nails. No hog house is complete, neither can hogs be kept clean and comfortable in it without a floored yard attached to it, and this floor should be 12 to 18 inches lower than the other. If you let them out on the ground they will, in wet weather, make a slough hole which will emit foul odors and become a standing abomination but if your yard is floored so that they cannot get at the ground and you will supply them with straw, corn stalks, sawdust, sorgo bagasse, or any good absorbent, they will make a large amount of excellent manure and the pen will never become offensive. The floor on which you feed should be cleansed every day or two, and it is well to give the hogs each day a bundle of fodder, oats or clover hay for bulky food and to keep them employed. I think that where there is material to be had to keep the hogs employed they will make manure enough to pay for such a house in a few years. As these houses are used most in Winter, I prefer to make them front the south so that the sun will shine in and warm them. I think I have described this house so plainly that anyone can build it. If more than one is wanted they can be built connected in a line, with doors communicating one with another. At one end of the pen there should be an arrangement for loading the hogs into a wagon, a door so arranged that the wag on can be backed up to it and a chute with railing at the sides so that the hogs can be driven into the wagon-bed.

Butler Co,, Ohio.

The Vineyard.

THE IONA GRAPE.

S. B. PECK.

PROBABLY no grape was ever disseminated with more *eclat* than this, nor has any one with the history of which I have been conversant, created more disappointment. Some of the reasons for this disappointment I shall attempt herein to give—and, first, the claims set up for it were extravagant as well as the prices asked for it. It was never well adapted to general field culture, being too tender and too uncertain about bearing. It only bears fair crops in special local climates, special soils, and under special treatment. It partakes too much of the fitfulness of its immediate progenitor, the Diana, and does not possess the hardiness of its grandparent the Catawba. It is true that occasionally under ordinary treatment it will bear a tremendous crop, but then it will be sure not to ripen perfectly. This shortcoming it takes honestly from the Diana. The advice an experimenter gave to his neighbor was appropriate, "If you are not a good nurse you had better let it alone." When all things are right with it, it will yield a fruit in no way inferior to the claims set up for it by its originator and his coadjutors, and any man who does not admire its appearance and its flavor, may be set down as possessing no taste for beauty, or as having a depraved palate.

The causes of failure have generally been

from expecting too much; sometimes from giving it too strong a soil, too much manure, not protecting it in Winter and al lowing it to bear too much fruit. On all these points it is very sensitive. I speak from the standpoint of the Michigan Fruit Belt, the eastern shore of Lake Michigan, in the latitude of Milwaukee and where the Catawba never ripens, the Isabella and Diana seldom, but where the Delaware, Concord, Clinton, some of Rogers's and Eumelan prosper—soil a lightish sand but evidently abounding in potash and lime. I should advice to pruno early in the Fall, lay the vines down as flat as possible, lay a light covering of brush over them (I use branches of asparagus), and lay pieces of wood as weights to keep all in their places. I do not believe in covering with earth. The two past Winters mine have been left on the trellises. In the Fall of 1880 I had a big crop but they were not well colored. The crop of 1881 was small, many of the canes were killed down, but the few I had were perfect, so much so that on the twelfth of September I sent a sample, with samples of nine other kinds, to the meeting of the American Pomological Society at Boston, which exhibition is said to have done high credit to our State.

A word, in passing, as to the Israella, a contemporary of the Iona: With all the care I could ever give it I could never induce it to bear a decent crop. Like the Dutchman's horse, it has one bad fault—it is "good for nothing." It has the peculiarities of the Iona as to habitat, etc., "only more so."

The differences in reports coming from different persons showing different results from experiments on the same fruits, are probably mostly the effects of local causes. There are so many different plans used in pruning and training, and even in planting and cultivating; all possibly have their effects for good or ill, and so many that are hardly practicable without daily watching through the Summer, that one gets discouraged and perhaps disgusted with his own efforts to steer clear of mistakes and failures. If he finally gives up and relies solely on his own experience and judgment, he is as likely to be successful as those who follow set rules. It is most certain, however, that there are natural tendencies of the vines that must be in a measure indulged, and certain others that must be curbed in order to produce the best results.

Muskegon Co., Mich.

Scientific.

"OZONE" AS A PRESERVATIVE FOR MEATS, VEGETABLES, ETC.

PROFESSOR R. B. WARDER.

A COMPANY has recently been organized, with headquarters in Cincinnati, which announces the use of "ozone" for preserving all perishable articles, animal and vegetable, from fermentation and putrefaction, retaining their odor and flavor. The process appears to be simple and inexpensive. The articles are placed in an air-tight chamber and a small quantity of the "ozone-generator" is burned, by which the active gas is produced. Samples of mutton, eggs, apples and vegetables are exhibited, said to have been kept some two or three months already, without undergoing any marked change; but juicy fruits and vegetables are sometimes kept under "ozonized water" to prevent drying up. The agents of the company politely invite those who show an interest in the new (?) process to test it by bringing in such articles as they may wish to have "preserved" free of charge; and we may not blame them for not keeping a lunch always ready in proof of their claims of unchanged flavor.

To the practical fruit-grower or shipper the chemistry and histology of a preservative process may seem to be of little importance. Yet if a process is proved to be totally different from what is claimed, he should invest with caution: if it is old instead of new, he may save himself the expense of a costly patent right; and if the materials are known, he may purchase them at market price, instead of putting large profits into the hands of a limited company.

For these reasons, the writer has taken pains to examine a sample of the "ozonized water," which is a partly saturated solution of sulphurous acid. When sulphur is burned, the suffocating gas called sulphurous oxide is produced, which is very readily absorbed by water, forming sulphurous acid; and this is evidently an essential part of the process of making the "ozonized water." Sulphurous oxide is diametrically opposite to ozone in its chemical properties, the former being a reducing agent, the latter an oxidizing agent. Moreover, ozone is practically insoluble in water. Whatever else may have been present in the so-called "ozonized water," ozone is evidently absent. Fuller chemical papers on this subject may appear in scientific journals; but in the meantime any would-be investors who have been attracted by the glowing language of the circulars, are invited to consider the following facts: 1st. In the so-called ozone process, the fumes of burning sulphur are the active agent, rather than ozone. 2nd. Sulphurous oxide has already been used as an antiseptic for many years. 3rd. The use of fumes from burning sulphur is said to have been patented as early as 1868; the validity of any more recent patent claim for like process may well be questioned. 4th Those who have invested $2.00 in a sample package of the "ozone generator" in order to test the claims of a "new" process, will find it instructive to make a counter test with two cents' worth of sulphur.

Floricultural.

THE YAMABUKI--Rhodotypus kerrioides

[See page 829.]

THIS is a beautiful, hardy, deciduous, white-flowering shrub from Japan; the Japanese call it Yamabuki. It is of recent introduction to America, and still quite rare in our gardens and nurserymen's catalogues. It belongs to the rose order of plants and is nearly allied to the kerria, a Japanese shrub with yellow flowers, that is very common in our gardens. With us it comes into bloom in May, about the same time as kerria, hawthorn, bush honeysuckles and choke berry, and lasts for more than a month in good flowering condition. The pure white flowers are large, pretty and of good substance, and nestling closely to the leaves, as represented in the accompanying illustration, terminate every little twig. The Yamabuki is not so profuse as spiræas, deutzias or diervillas, but it is profuse enough, when coupled with its graceful habit, to be really pretty. Furthermore, not only does it bloom in the Spring and early Summer, but a few straggling flowers may be found upon it all Summer long. And somewhat ornamental is the multitude of glossy black "seeds" it bears. Many of these drop off towards Fall, but a lot of them stay on the bushes till Christmas, and we find some young plants—self-sown seedlings—are springing up around our parent plant. The Yamabuki is perfectly hardy with us. A warm, free soil, and sheltered, sunny situation, no doubt, will suit it best. The engraving, Fig. 548, is from a specimen growing at the Rural Experiment Grounds, where, on November 21, the leaves were still green.

Miscellaneous.

CATALOGUES, ETC.

JOURNAL OF THE AMERICAN AGRICULTURAL ASSOCIATION.—Nos. 3 and 4 combined in one, the last of Vol. 1st of the American Ag. Association, is now before us. As we shall have occasion to quote from its columns, we need only add, to what has already been said of it, that a copy should be in the hands of all who are interested in agriculture. It will hereafter be published quarterly (January, April, July and October), under the name of the Agricultural Quarterly and Journal of the American Agricultural Association. Each number will contain 150 to 200 pages. The terms will be $2.00 per year and, after January 1st, 50 cents per copy. Three dollars sent now will pay the annual dues for this year and next and entitle the new member to all the issues of the Journal for both years. Inquiries should be addressed to the Secretary and Editor, Joseph H. Reall, 127 Water Street, New York. The present Journal comprises 300 pages, 230 being filled with excellent articles by able writers, 30 with the thoughtful notes of the editor, and the rest with advertisements.

RURAL BRIEFLETS.

MR. A. M. PURDY writes us that if we pronounce the Lost Rubies Raspberry distinct from Naomi, he is confident we have not the real Naomi. That may be. Our statement is that if we have the true Naomi and the true Lost Rubies, then they are distinct, for the one has purple, the other green, canes.....

THIS we have from Secretary Garfield:—"I am now 'digging away' at my portfolio for 1881. Well, I must say this about your Tree and Shrub Number, and hope it won't 'set you up' any. *I just wanted to place the whole of it in my volume for '81. It was a rare number, indeed.* Over here in Michigan the 'commercial idea' is uppermost in the minds of the people, and I like to have that kind of a paper thrown in among them to lead them for a few moments to a higher plane of thought."....

AS EFFECTUAL a way as any to preserve gladiolus corms or bulbs is to keep them in bushel baskets in a temperature above freezing and less than 50 degrees. As to tuberose bulbs we have never yet known them to suffer by being kept too warm or dry. Canna and caladium bulbs should be thoroughly cleaned and dried and placed in dry sand and preserved in a dry air.....

IF we were going to plant a vineyard either for home use or market, we should not select the Concord with which to stock it. With many kinds of fruit very little real progress has been made during the past 10 years, though scores of new varieties have been announced from time to time as far superior to the old. Not so with the grape. Our progress has been real, and two or three years more will make it apparent. It is probable that we shall never have a grape that is at once more hardy, more prolific and adapted to a greater range of country than the Concord. But we believe among the grapes of recent origin are several that will equal it in those essential respects, while they are of decidedly better quality....

E. & O. Ward, New York commission merchants, tell us that to insure highest market prices for poultry they must be well fattened, the crops empty when killed. They should be killed by bleeding, but the head should not be removed. They should be well picked; the skin not broken or torn; the entrails should not be removed; they should be thoroughly cooled, but not frozen. Pack in boxes, with a layer of clean straw (rye straw being the best) between each layer of poultry, in the same posture in which they roost. Mark each box, specifying what it contains. Send the invoice by mail. Ship to reach their destination about the middle of the week. They should never reach market so late in the week as on Saturday.....

THE vigor of strawberry plants can perhaps be as well ascertained by their appearance now as at any other season of the year. Plants which cannot stand the Summer sun, or which have been injured by the grubs, are dry and brown, while those which have outgrown all harmful effects are green and thrifty. Of these the Manchester, Piper's Seedling, Sucker State, Hart's Minnesota, Sharpless, Duncan, Miner's Prolific and Bidwell are the most conspicuous.....

WE are pleased to know that the Home-Farm, of Maine, is an assured success. Maine has long needed a bright, original agricultural paper, edited by one who is in full sympathy with the farming community, and it now has such a journal in the Home-Farm.....

OUR friend "Edgerton" sends the RURAL the following:—

Said farmer Brown, as to his wife he turned,
"Each season brings its lesson to be learned.
The last we had it most exceeding dry,
And now we find corn rules outrageous high;
Now, if we only had the corn to sell,
This state of things might all be well,
But, somehow, when a product's awful high,
It mostly happens that we have to buy.
And this is why no money we have made—
Our plans have always been but poorly laid.
Now I'll lay down a rule this very morn,
That when the season's dry *raise stacks of corn*,
And so with almost any other truck—
We'll make a note of this and change our luck—
When any article is scarce and high
We want that article to sell, not buy.
How strange we never thought of this before!
No wonder we have always kept so poor!
Our knowledge we too often dearly earn;
But then, you know, we have to live and learn."

THE answer to the query as to which is the sweetest or highest flavored strawberry seems to have been mixed. To say that a berry "has sweetness and flavor" and is at the same time "simply flat" sounds odd enough. The true Burr's New Pine is remarkable for its delicious, *spicy* flavor and at the same time is sweet—much like a Seckel Pear. The mistake was made evidently by a transposition of the type lines.....

To the very many inquiries we have had as to where seeds of the Rural Branching Sorghum can be purchased for next season's use, we must reply that we do not know. The crop raised from the seed sent out in the RURAL'S last seed distribution has in many sections of the country matured seed—but the quantities so raised must necessarily be small—too small to offer for sale except at a very high price. We are fearful that inferior kinds of Sorghum will be offered under the name of Branching, so that for the present, it would seem desirable that the name of the "Rural Branching Sorghum" should be preserved. We have received several fine heads of seeds from California, Kansas, Florida, Nebraska, New York and Minnesota.....

IT is with much satisfaction that we announce the publication of a series of original illustrated articles on "Bonanza Farming." Mr. Oliver Dalrymple is an exceedingly retiring, modest man and has refused many applications for his portrait (as we happen to know) from the enterprising journals both East and West that have endeavored to procure it. The articles are written from notes taken on the ground and furnished by Mr. Dalrymple himself.....

DR. J. B. LAWES in a private note remarks: "I shall think you find some difference in your crops of corn this year as compared with those of last. Climate has a most decided influence upon the yield of our crops and it is this varying influence which makes it so difficult to settle what is the real influence of our various manures. I know of no other process to settle these questions except by the continued growth of the same crops with the same manures upon the same land."....

THE results of our corn experiments will be presented early in the new year. We have only to say now that, considering the drought—the severest, without exception, known to our oldest farmers—our yields of corn both on the manured and unmanured land, have proved to be greater than was anticipated. Concentrated fertilizers on high lands, were used without good effects, while the corn manured with farm dung was the first to burn.....

What Others Say.

THE EXPERIMENT FARM OF THE "RURAL NEW-YORKER."

[FROM the Journal of the American Agricultural Association, just published, we copy the following article, which, though the gist of it in different language may have appeared in our columns under Notes from the Rural Farm, we feel confident will prove of interest to our readers.—EDS. RURAL NEW-YORKER.]

SPECIAL WHEAT AND CORN CULTURE.

The farm of the RURAL NEW-YORKER is situated in Queens County, 20 miles from New York City, near the ocean. The soil is a sandy, sometimes gravelly, loam, with a gravelly sub-soil. The farm is conducted for the purpose of testing all new plants or seeds of promise which are offered to the public, the results being published as soon as arrived at; of originating new varieties: of improving old varieties by selection; of ascertaining the best methods of cultivation; and, finally, of comparing the effects of farm manure with those of concentrated fertilizers.

We propose at present to confine our remarks to corn and wheat. Twelve years ago Mr. A. E. Blount, now Professor of Agriculture in the State College of Colorado, began the improvement of a kind of white dent corn, with the special object of rendering it as prolific as possible. The land was well prepared and manured; the best ears only, from those stalks which bore two or more, were selected for seed, preference being always given to the topmost ear, which he usually found to be the best developed. By such means, and by others to which we shall allude further on, this strain of corn, as it may be termed, was changed, so as to ripen earlier, to bear a greater number of ears to the stalk, while the cob was made smaller and the grain of uniform size and color. Four years ago it was first raised on the Rural Farm. A plot of a quarter of an acre was planted, the grains 14 inches apart, the rows four feet, the cultivation *flat*. The yield was 18 bushels of shelled corn, or at the rate of 72 bushels to the acre. Several stalks bore six ears. The best of these were selected for the next year's seed-plot, while Prof. Blount's entire stock was purchased for free distribution to all who applied to the RURAL NEW-YORKER. What is meant by seed-plot may now be explained. A plot of land—perhaps one-fortieth of an acre—(33 feet square)—is spaded up, fertilized and raked. Rejecting the butts and tips of the best ears of the stalks bearing five ears or more, as above stated, the largest kernels left are planted 18 inches apart, the rows not less than four feet apart. The surface is kept mellow by shallow, flat cultivation, and, as soon as the sets appear, the tassels of all stalks not bearing a certain number—let us say *five*—are cut off. It will appear then that the silk of all the sets must receive pollen only from the most prolific stalks. The corn plant is monœcious (the same as the chestnut, alder, pine, spruce, castor-oil plant, melon), the male organs, or staminate, being contained within the flowers of the tassel, the female being the silk or pistils of which the fertilized ovary becomes the kernel or grain. It is plain, therefore, that if we desire to increase the number of ears to the stalk, it is just as essential that the seed to be planted should have had a fertile male as that it should have had a fertile female parent. When it is considered that all the varieties of corn—flint, dent, gourd-seed, pop—whether black, white, red, yellow, streaked—whether the plant grow two or fifteen feet in hight—whether it requires 60 or 160 days to mature—have all sprung from one kind, it will be seen how sensitive this plant and its fruit are to changes of climate and soil, and how respon-

sive to careful selection and breeding. Thus it has occurred that 134 bushels of shelled Blount's corn were produced on one acre of land at the Rural Farm during last year (1880), though no doubt this great yield was due to other causes as well. Of this the reader may himself judge. The facts are very briefly as follows:

The field had received no farm manure in seven years. It had been mown and in pasture during that time. The sod was plowed under in early Winter, and in the Spring was thoroughly harrowed, rolled and harrowed. The corn was drilled in 12 to 15 inches apart, the drills 4 feet 3 inches apart. One dressing of concentrated corn fertilizer, at the rate of 300 pounds to the acre, was given previous to the last harrowing. When the corn was several inches high it received another application of the same fertilizer, at the rate of 100 pounds per acre, and when 18 inches to two feet high another of 100 pounds of concentrated potato manure. The field was cultivated four times—twice with a cultivator that penetrated the soil scarcely two inches in depth, twice with a hoe, always flat, all hilling up whatever being carefully avoided.

The promise of a remarkable yield upon this field, as well as upon another, was so apparent before the corn was ripe, that it was deemed advisable to have it examined and measured by well-known persons, who could have no interest in misrepresenting the yield in any way. Accordingly, it was examined by no less than twelve gentlemen, all in one way or another prominently connected with agriculture. The following report is all tha need here be presented:

"Report on a field of corn near Hewlett's Station, Long Island, belonging to the RURAL NEW-YORKER, made October 12th, 1880.—Size of plot, 310 by 122.4 feet, or .87 of an acre of corn (Blount's White Prolific), sown by machine in rows 4 feet 3 inches apart, and each single kernel intended to be 15 inches from its neighbors; flat culture.—[Details as expressed above, here made in the report, need not be repeated.] From a judicious selection of stooks and careful measurement and weighing, we find the total yield was 227 bushel baskets of corn on the cob, or 261 bushels upon an acre. We also shelled and weighed a quantity, and ascertained the gross weight of three and seven-eighths bushels to be 136 pounds, or 35.1 to one bushel, and further, that 35 pounds of corn in the ear gave 28.95 pounds of grains and 6.05 of cob, and measured 17.1 quarts. This calculation showed that the equivalent of 261 bushels of corn on the cob was 139.4 bushels of grains, and about three bushels, or a little more, which Mr. Carman had selected from the most prolific stalks, and had already placed in the barn, or a grand total of about 142 bushels of shelled corn per acre. (Signed)

ROBERT J. DODGE, C. E.,
Pres. Farmers' Club, American Institute.
W. N. HABERSHAW, F. C. S.,
Chemist N. Y. State Ag. Society.
L. C. BENEDICT,
Ag. Ed. N. Y. World.

Husked not until some time afterwards, and measured as cribbed, the yield proved to be, as previously stated, 134 bushels per acre, or eight bushels less than the above estimate.

Upon an adjacent field of somewhat over four acres, a variety of yellow dent called the Chester County Mammoth was raised, the best acre of which yielded 150 bushels of shelled corn, while the entire field, though a portion was poorly drained, yielded 112 bushels to the acre. The soil of this field has always been considered the poorest of the farm, being gravelly and dry. It had received no manure of any kind in over twelve years. It was treated the same in all other respects as that upon which the Blount was grown, except that but 350 pounds of concentrated corn manure were sown before the last harrowing, and the seed was drilled in the rows 3 feet 10 inches apart.

As it was evident that these yields, which have never before been equaled upon considerable areas under inexpensive manuring and cultivation, could not alone have been due either to naturally rich land or to the liberal application of manures of any kind, the varieties of corn, the peculiar methods of planting and cultivating, must also be considered. To test these points has been made the object of an experiment field the present season. It contains about five acres, and has received no manure in at least eight years. The soil, as nearly as may be judged by the eye, is quite similar to that upon which the Chester corn was raised last year. The sod, a very poor one where it existed at all, was plowed under late in March. The soil was then repeatedly harrowed until it had become as mellow as that of a garden plot. The seed was drilled in, May 12 and 13, the rows 3 feet 10 inches apart. Except upon special plots no manure of any kind was used. Upon the middle portion, as that was thought to be a fair average of the soil of the entire field, one measured acre (132 by 330 feet) received 600 pounds of corn fertilizer previous to the last harrowing. In order to provide against sowing this fertilizer outside of the acre, a string was stretched about it and the fertilizer extended with damp earth until all dusty or dry portions were fixed. Now the difference in yield between this acre and the unmanured parts will not only tend to determine whether the commercial fertilizer pays for itself, but it should throw light upon the question to what extent the immense yields of last year were due to the commercial fertilizers then used.

Another series of experiments conducted on this field is the testing of special fertilizers upon plots of a twentieth of an acre. For example: No. 1 received 7½ pounds of nitrate of soda; No. 2, 35 pounds of phosphoric acid; No. 3, 7½ pounds muriate of potash; No. 4, nitrate of soda and dissolved bone-black combined; No. 5, nitrate of soda and muriate of potash; No. 6, bone-black and potash; No. 7, all combined; No. 8, sulphate of lime. The object of this experiment, which many others are also carrying on, is simply to determine what manurial constituent the land most needs. But Mr. Carman is of the opinion that such tests will, as a rule, prove little upon such small plots, and that even upon larger plots the same experiments should be carried on for a number of years.

RHODOTYPUS KERRIOIDES—FROM LIFE.—FIG. 548.

Several objections have been made to the Rural's methods of drilling in corn seed and flat cultivation. One is that the plant is more liable to fall under high wind. This is not admitted. It is true of the young plant before its roots have extended much; but young plants always right themselves, so that the objection can only apply to older plants. Both the Blount and Chester Co. Mammoth are tall-growing varieties, the former averaging eleven feet when fully grown, the latter over nine, which is considerably taller than the kinds cultivated by the neighboring farmers. Nevertheless, the Rural corn has stood high winds fully as well as theirs. It should be considered that the lateral roots of corn extend, late in the season, well across the rows, and, in hilling up, the soil is taken from the extended roots, where it is most needed, to heap about the stems, where it is less needed. Thus the weight, so to speak, is taken from the long lever and placed upon the short lever. Again, in plowing to hill up, some of the lateral roots are severed, and the plant is thus deprived of their support entirely.

Another objection made to flat cultivation is, that neither the cultivator nor plow can be run but one way, and that consequently the narrow belt upon which the plants grow *must* be hoed or the weeds suffered to grow. This objection is a valid one. Still, if the rows are straight, the cultivator may be run so near to the plants that very little hoeing is really necessary. This is the only objection to drill rows, that has been discovered, while, for the rest, it seems evident that corn planted one foot apart in the drill will thrive better and bear more grain than when three or four plants are crowded together, as in the old check or hill system. Root-pruning, that is, plowing corn after it has grown to any size, is very decidedly objected to at the Rural Farm. It is contended that the corn plant cannot have too many roots, and that they should be permitted to branch out in every direction, as nature intended they should. The fact that fruit trees growing too luxuriantly may be brought to fruitfulness by root-pruning does not here apply. The one is a perennial, the other an annual. One bears fruit for many years, the other but once. It is admitted that large crops of Indian corn have been raised though deep-plowing were practiced. But the question is asked, if those crops might not have been greater had the land been cultivated near the surface only? These experiments, now carried on for the third year at the Rural Farm, must the present season determine in a measure the relative value of the above peculiar methods as compared with the old. On every side of the Rural Farm are thrifty farmers. Their fields are well tilled and manured. And yet they have never equaled the above yields, produced with no farm, and but a small quantity of commercial, manure. If, now, an old field that has not been manured for eight years at least, can be made, under *any* otherwise economical system of planting and culture, to produce more grain than neighboring fields which have been richly manured, it must speak well for the methods which effect that result.

Many observations have been made during the past three years to ascertain whether the silk of a given stalk is, or may be, pollenated and the ovules fertilized by the pollen of the tassel of the *same* plant. The conclusion arrived at is that some ears are *never* so fertilized, the pollen ripening before the silk (pistil) is ripe. This is the case with many kinds of field corn, notably with that of Blount's White Prolific. In this variety, it sometimes happens that the pollen of a given stalk is shed before even the *sets* appear. It has been stated within the past year, by those who should know, that all kinds of Indian corn are proteraudrous. But Mr. Carman has pointed out that this is not so, and has shown that in many kinds (many of the sweet corns, for example) the silk is receptive at the same time that the pollen is mature.

WHEATS.

There were not less than 80 different varieties of wheat grown at the Rural Farm the past season. Most of these were new kinds, not yet offered for sale by seedsmen, many of them originating at the Rural Farm, through selection, through the changing of Spring into Winter varieties, and by crossing. While great and successful efforts have been made to improve our ornamental plants, as well as those cultivated for fruit, is it not surprising that the wheat plant, which stands foremost among the agricultural crops of this country—of the world, indeed—should have been so neglected?

Those visiting the farm express surprise that they should see so many different kinds of wheat, all apparently thriving, and many of them bearing heads and kernels of a size to which they had deemed wheats could never attain in the soil and climate of Long Island. True, they may not thrive elsewhere as well as there. Only a comprehensive test could determine this, and it will require several years ere these wheats can be distributed for this purpose. As wheats cannot inter-cross by natural agencies, their generative organs being confined within close-fitting envelopes, the origin of many new varieties of wheats, could it be known, would, no doubt, prove highly interesting.

* * * * * *

CROSSING WHEATS.

The many different varieties of wheat raised at the Rural Farm the past season gave excellent facilities for crossing. Where few kinds are raised, the selection of both parents is, of course, restricted, and it is often impossible to obtain pollen when needed. Crossing wheats, even to those who are skilled in crossing flowers in general, is a delicate operation, and requires both a steady hand and a fair share of patience. The outer husk, chaff or covering (botanically *glume*) may be compared to the calyx in other flowers. Within this husk are two other husks (botanically pales, palets or paleæ), which may be compared to the corolla or petals of other flowers. Between these palets, the first of which is awned in the bearded kinds and in the beardless kinds merely pointed, are the stamens and pistil. In crossing different kinds, the two pales which rest close together must, of course, be separated, so that the three stamens may be removed and others inserted in their place—stamens (anthers) from the kind with which it is desired to effect a cross. After the stamens of the head to be fertilized have been removed, which is easily effected by the use of a sharp-pointed stick, and other anthers introduced, it is best to wind a worsted yarn about the spikelets to hold the glumes and palets together, and so exclude the pollen from other flowers. The anthers should be selected when of a golden color, just before they are ready to burst. If used earlier the anther will dry up and the pollen become impotent.

The inner kernels of wheat spikelets are always smaller than the outer ones, and they are later in ripening. In establishing any new variety of wheat, therefore, by cross-breeding, the outer flowers should alone be operated upon, and the outer kernels alone be saved for seed. A breast and spikelet of wheat have the same signification, the first being the familiar name, the second the botanical name, of one of the sets in which a wheat-head is separated. Some breasts bear three, some five, flowers. In the three-flowered, the middle is generally abortive, as in the noted Clawson, which usually bears but two kernels in a breast or spikelet. In five-flowered, two are usually abortive, so that the breast bears but three kernels. Such differences, which seem never before to have been considered, make a great difference in the yield, and farmers should, by selection, endeavor to establish and to cultivate those varieties which bear three or four grains in a breast. It is urged, indeed, that in all seedsmen's catalogues the descriptions of wheats should state how many grains there are to a breast. Whether it contains two or three grains, all else being equal, makes a difference of one-third in the yield.

Most farmers are careful to shell off the butts and tips of seed corn. They should be just as careful in the selection of seed wheat to reject all but the outer seeds of every spikelet, and to cut off the "tip" and the "butt," so to speak, of the wheat ear. Those breasts that are just about the middle of the ear or head, or a little above, are the first to bloom, the first to ripen their grains. It is very evident that saving seed in this way in quantity would be absurd. But the RURAL advocates SEED PLOTS just the same for wheat as for corn. For this purpose plots 33x33 feet (one-fortieth of an acre) are plenty large enough. The seed, carefully selected from the largest, heaviest heads, while yet standing in the field—the butts and tips cut off with a pair of scissors—are *planted* a foot or less apart each way. This plot is cultivated once in the Fall, again in the Spring. So planted, only a little over 1,000 seeds are required, and these are furnished by about 75 heads. If an acre be be laid off in ten-inch squares, it will require about 67,500 grains to plant it. Now, if we suppose that each grain produces 20 heads (which is not excessive for grain so sowed or planted), and every head 20 grains, allowlowing 600,000 grains to the bushel, we have a crop of 45 bushels to the acre. The yield of these cultivated plots is, in most seasons, surprising, and the straws and heads are fully double the usual size. If we were to suppose that seed wheat yields but thirty-fold, one bushel of seed should produce 30 bushels of crop. But every seed produces, by tillering, more than one head, and every head will produce at the least estimate 20 grains. When, therefore, two or three bushels are sown to the acre, we may see what an immense waste of seed there is. When wheat is planted as above described, one grain every foot, it is found that nearly every grain germinates, and the plants so tiller as to cover the ground by mid-spring. In the usual methods of sowing wheat, either broadcast or by drilling, it has been found that for the soil of the Rural Farm not less than 1½ bushel will produce the best yield. As, however, the land is rich and well prepared, a less quantity should serve, and the same may be said of oats, rye, barley or corn.

,, IT is a good horse that never stumbles, and a good wife that never grumbles."..... Artificial milk is the latest. It is a French invention, and consists of a mixture of glucose, albumen, sal-soda, olive oil, or oleomargarine and water..... It is better never to order shelled seed corn of seedsmen..... Herald: There is more real religion in paying one hundred cents on the dollar than in some of the most eloquent prayers ever delivered..... When you are seated between a lawyer and a doctor you are in a very dangerous position, for it is either your money or your life..... There are some who fail to get rich, and so die poor; there are others who fail in order to get rich and succeed..... A writer in the American Rural Home thinks he can keep two acres of drilled corn clean as easy as one-and-a-half in hills.....

Everywhere.

RURAL SPECIAL REPORTS.

Canada.

UPLANDS, Township of Machas, Ontario, Canada.—Circumstanees having taken me from home the greater part of the past Summer, I have not been able to give to the cultivation of the Rural seeds the attention they deserved. The Rural Branching Sorghum I unfortunately planted too early for this latitude; it came up well, however, but was badly cut down by frost on the 6th of June. It recovered, however, and made fully as vigorous a growth as corn planted at the same time, making from three to four feet in hight, branching well all ro nd. My cow appeared to relish it very much, preferring it to corn. I think it would make a valuable fodder plant, and I would like to-try it again if I can get some seed. The Washington Oats grew well, but smutted badly. Both varieties of asparagus grew well, and I have some fine plants, and hope in due time to make some fiue beds of this valuable vegetable. My wife, who is very fond of flowers, is especially pleased with the picotee and carnation plants. The dianthus have been much admired; in fact, they, with her other flowers, have called forth the remark from more than one that the surroundings of our shanty hore in the forest were more like those of a suburbau city residenco, making them almost forget they were n the bush. R. C.

Indiana.

REMINGTON, Jasper Co., Nov. 21.—The Rural Branching Sorghum is a valuable acquisition to farmers as a fodder plant. It was planted May 21, on rich Blue Grass sod, about in the same manner as corn, three to four seeds in a hill. It all grew nicely and branched out so as to completely cover the ground when five feet high. I cut some in August but it did not make much growth after cutting, the weather being so very hot and dry at the time that it did not head out until very late. Still most of it ripened so that I shall have seed to spare. The Washington Oats I sowed April 21. They grew rank and stood up well, there was some smut and hens got in and damaged them badly. The White Elephant was a total failure. Only a few of the asparagus seed grew. The pinks were nothing extra. We have had a terribly hot, dry season. Corn was hurt by chinch bugs and dry weather; average 30 bushels per acre. Oats were hurt by the army-worm. Prices of produce are about as follows: Wheat, not much of it raised, $1.35 per bushel; rye, $1; corn, 50c; oats, 38c; buckwheat, $1; potatoes, $1.40; hogs, live weight, $5.50; butter, 25c; eggs, 25c; hay, $8 per ton. N. S.

ROANOKE, Huntingdon Co., Nov. 23.—We have rain here three to five days out of the week; roads very bad. Corn a fair crop—was shortened by Summer drought, and the wet has injured it somewhat. Potatoes a very light crop. Wheat is looking well, though the fly has damaged some fields and it is feared will do more harm in the Spring. The Rural Branching Sorghum ripened seed. I did not cut it; it grew six or seven feet high. Stock eat it well, but no better than Early Amber cane. The White Elephant did well for the season; we got about half a bushel from a very small potato with 18 eyes. The Washington Oats were late and rusted badly. Corn brings 60@65c.; eggs and butter, 20@25c.; potatoes, $1; wheat, $1.25@1.30. A. C. H.

Iowa.

HANSEL, Franklin Co., Nov. 21.—We have had a great deal of rain the last two months, and grain is badly damaged; but now we are having a cold spell. The ground is frozen hard and the roads which were almost impassable with mud are now very rough and traveling is quite bad. Crops are very good and prices for almost everything are quite fair, but farmers cannot get them to market on account of the condition of the roads. We like the RURAL well and the Agricultural News we prize very highly and also the seed and plant distribution. The White Elephant produced 33½ pounds of nice tubers. The asparagus has done nicely, and the flower seeds also. The Washington Oats rusted and smutted very badly—no seed saved. We did not plant the Branching Sorghum but intend to do so next year. W. F.

Nebraska.

ST. JAMES, Cedar Co ,Nov. 22—The Branching Sorghum was planted on a hillside and as the weather and the ground were extraordinarily dry it didn't amount to anything. In view of the dry weather the Washington Oats did first-rate. I got two pounds of clean seed. I like them well. Owing to the miscarriage of the first White Elephant Potato sent to me, I didn't get the second until June 8, and it was planted that day, cut to 15 pieces with an eye in each. There was just one row set 12 inches apart. It was cultivated with the hoe—soil a deep, rich, black loam. On Oct. 4, I dug 13 pounds of tubers, one of which weighed one pound. I think this variety will do well in this country. The flower seeds were planted in the same sort of soil as the potato. The pinks grew finely and of them we had a big bed with blossoms of over 40 different colors. The asparagus grew first-rate and I have nice beds of both kinds Both the potatoes and pinks got diplomas at our county fair. Indeed we got about 30 premiums at that fair, having exhibited 30 different kinds of flowers, fruits, vegetables, etc. The weather was very wet during the fair and our Agricultural Society came out about $200 behind. Our president "flew the track" and hired a brass band, and had a dancing hall on the fair gronnds. The money for the hire of the band and hall, and the premiums for horse running would have brought the society out all right, if used to promote the agricultural part of the show. J. N. S.

New York.

GLENVILLE, Schenectady Co., Nov. 25.—The past season has been very hot and dry, but it has generally been good for farmers. My White Elephant Potato was very small; I planted it in six hills and dug 10 pounds of very fine tubers. I think the quality No. 1; the yield was light on account of the drought. The Washington Oats grew very finely and I harvested 10 pounds of very nice grain. Too far north for Rural Branching Sorghum; I like sweet corn better for feed. Crops in my section were a good average. Farmers sowed a good acreage of wheat, which yielded from 20 to 30 bushels per acre the last season. Prices are good for all farm produce: Wheat, $1.25; corn, 75c.; oats, 48c.; rye, $1.05; potatoes, $2 per barrel; hay, $15 per ton; butter, 27c. per pound; pork, $8 per 100. J. H. C.

FLUVANNA, Chautauqua Co., Nov. 21.—The harvest is over and everything secure; crops have been an average except potatoes and corn. The hay crop was more than an average. Wheat, oats, barley, peas and buckwheat all good—fairly up to the yield of former years. The Washington Oats were sown in a drill 22 rods long and produced 15½ pounds of grain of fine quality. I have carefully labeled them for seed for the Spring of 1882. The weather has been fine for Fall harvesting. Winter wheat, though sown late, looks fully as promising as in previous years. Pastures and aftermath are more than usually good at this season. Hay is worth $14; oats, 50c.; corn, 70c.; butter, 28@30c.; pork, 8c.; beef, 6c.; milch cows, $25@35. There is in this county a lack of Jersey and Holstein cattle—only one herd of the latter. I am of the opinion that we may improve the milking quality of our cows by crossing with the Jerseys. Many farmers think there is nothing equal to Short-horns for milk and butter. I have failed to find those equal to the grades. I should be glad to hear from my old patrons—former subscribers to the RURAL—and will supply them as promptly as in former years. I should be glad to hear from those receiving the buckwheat as premiums what the result was. H. A. WHITTEMORE.

ONEIDA, Madison Co., Nov. 21.—The asparagus of both kinds did very finely. The Rural Branching Sorghum came up well and nearly all ripened. I have more seed than I shall sow next year. The White Elephant Potato was nearly a failure on account of the dry weather. The Washington Oats did very well. The pinks are the finest we have of several kinds. I have a very fine lot of seedling potatoes from seed sowed last Spring. J. L. W.

PENN YAN, Yates Co., Nov. 24.—From the White Elephant Potato I raised about a peck of fine tubers. They stood the drought better than other kinds. The Washington Oats did first-rate, yielding over one-half a bushel of very plump grain—no smut in them. N. W.

PORT JERVIS, Orange Co., Nov. 24.—My White Elephant weighed just two ounces, was cut into six pieces with an eye in each and planted in six hills in the garden. I dug 65 tubers, weighing 33 pounds; 25 of them weighed 25½ pounds—average weight, half a pound apiece. I had a splendid crop of potatoes and corn this season, and sold my potatoes for a good price—$1 per bushel. I'm glad the RURAL is distributing more garden and field seeds than formerly; for while farmers like to please the ladies of the family with flower seeds, they also like something that will pay themselves in cash for their trouble. J. W.

Oregon.

CANNON, Lane Co., Nov. 20.—The RURAL seeds I had gave good satisfaction. From the small White Elephant Potato I obtained 58 pounds, and there were three potatoes of good size that were not weighed and the ground was not manured or watered. A. D. H.

Wisconsin.

MT., IDA, Grant Co., Nov., 23.—The RURAL seeds did well. I raised 60 pounds of White Elephant and eight pounds of ripe Rural Branching Sorghum seed. C. R. S.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

FRUITS FOR TEXAS.

T. G., Trenton Falls, N. J., intending to move to Texas next month and there engage in fruit raising, asks what kind of berries, grapes and peaches can be successfully grown in the neighborhood of San Antonio.

ANS.—Most kinds of peaches do well in Texas. As the early varieties ripen in May, they are perhaps the most preferable; the cling-stones are in greater demand than free-stones for local markets. The trees grow well and come into bearing early: but they are not long-lived. Spring frosts or cold, wet "northers" often hurt the peach tree blossoms, and in that way shorten the crop, but taking everything into consideration Texas is an excellent peach State. Early Beatrice, Rivers, Tillotson, Amsden, Alexander, Troth's Early, Crawford's Early and Late, Large Early York, Coe's Early Red, Stump-the-World, Amelia, Columbia, Druid Hill, Yellow St. John, Lady Parham, Baldwin's Late, Mountain Rose, Picquett's Late, Smock, Susquehanna, Chinese Cling (the most favored of all), Indian Blood Cling, Lemon Cling, Old Mixon Cling, Heath Cling, Washington Cling, Rodman's Cling. Grapes are not such a certain crop as peaches are. The vines grow well for a few years, but in many cases soon become enervated. They often bear heavy crops of fruit and not infrequently the grapes rot before they ripen. It is evident we are in need of a set of grape-vines especially adapted for Texas. The Vitis vinifera or foreign grapes have not been grown very successfully in Texas; in fact, phylloxera often kills them there. Agawam, Concord, Delaware, Merrimac, Massasoit, Iona, Israella, Delaware and Hartford Prolific do fairly well in Southwestern Texas and very well in Eastern and Northern Texas, but the Herbemont is the very best of all grapes so far generally tried for Texas. For San Antonio we cannot recommend currants, gooseberries, or raspberries; with considerable trouble and pains some of the latter may be grown. Blackberries in moist places do fairly well. Triomphe de Gand and Jucunda Strawberries have been grown there, but the most satisfactory sorts so far tried are Charles Downing and Wilson's Albany. The neighborhood of San Antonio being rather dry, berries cannot well be expected to thrive there without shelter, a little shade and lots of water.

PARSNIP CULTURE.

C. C., Ontario, Canada, thinking that parsnips would be a valuable crop for feed in that northern latitude, asks how to grow them successfully.

ANS.—The parsnip is not so extensively cultivated for a farm crop as its value warrants. A yield of from 600 to 800 bushels per acre may be obtained on good soil free from stones. The roots are hardy and may be left in the ground all Winter and fed to stock in the Spring, or they may be "pitted" or put in the cellar for Winter feeding. Parsnips will yield best on a deep, rich loam. The ground should be plowed in the Fall, and in the Spring 15 or 20 loads of manure to the acre should be applied and turned under. The seed should be sown just as early in the Spring as the weather will permit and the ground is dry enough to work. The seed should be drilled in rows about two feet apart, so as to admit a horse cultivator. It is well to sow the seed thickly, say four or five pounds to the acre, and after the plants are two or three inches high, thin to three inches apart in the row. It is necessary to use great care in the selection of seed, as no dependence can be placed on seed over a year old.

WHAT AILS THESE APPLE TREES?

E. S. B., Attica, N. Y., says that a good many of the trees in his apple orchard have been killed by some insect that kills the bark at the surface of the ground. This is done in small patches and the surrounding live bark in trying to grow over them forms bunches full of holes. He attributed the condition to borers, but the wood is all sound, the bark only being affected. There are ant hills around the trees and he is inclined to blame the ants for the trouble. Some plum trees, however, are affected in nearly the same way although there are no ants near them, and he asks for the cause and a preventive.

ANS.—We know nothing of this disease personally nor have we been able to find out anything definite about it by inquiry of several well known pomologists. It would be well, however, for our friend to wash his trees in Spring with whale-oil soap or such soft soap as most farmers make, putting it on as thick as he can with a brush. This would be likely to prevent this disease. Or he might take away two or three inches of the earth about the tree and wind around the latter a piece of stiff paper a foot or so wide, which should be tied at the top, and then replace the earth at the bottom. This would probably prevent those trees not affected by the disease from taking it. To use both the wash and the paper would be the better plan.

ANTHRAX IN POULTRY.

W. B. McL., Hudson, Mich., asks what ails her chicks: one after another limp as if they were hurt, shed their feathers, lose the use of their legs and, finally, after tumbling about for five or six days they die. Appetite good; discharge thin; back weak.

ANS.—The disease is a species of anthrax similar to that which is known as black leg in calves. The lameness is the first indication of the trouble and this is caused by an inflamed condition of the muscles of the legs which soon changes to gangrene. As this comes on the feathers die and fall off. The disease proceeds from disorder of the liver; diarrhea and blood poisoning follow and death ensues very rapidly. The disease is too virulent for any hopeful treatment, and when the lameness occurs the case has progressed too far for cure. Preventives only are of any use. These are to avoid overfeeding; to keep the fowls perfectly clean, dry and warm, and to thoroughly ventilate the poultry house. The most perfect sanitary arrangements of every kind in fact are required.

RED AND WHITE WHEATS FOR MILLING.

P. R., Tom's River, N. J., says: "I have read that white Clawson wheat is not liked by millers, as it contains but a small quantity of gluten, and consequently makes a poor quality of flour. It is said red wheat contains more gluten than white and makes better flour. Where is the best red wheat to be had for seed and what is its name?"

ANS.—The percentage of starch in Winter wheats varies from 65 to nearly 77. Clawson probably contains about 74 per cent., and of albuminoids about 9¼. If our friend will refer to our Wheat Number, he will find quite a number of varieties of wheat classed with reference to their milling qualities by Prof. Thorne of the Ohio University. Tappahannock, a white flint, ranks first, followed closely by Lancaster and Red Mediterranean, both red. Either of these two last would, no doubt, suit Mr. R. as to their milling qualities. They can be had of many of the seedsmen who advertise in the RURAL. It would appear from analysis that Spring wheats ought to be more nutritious than Winter, as they contain, on an average, more gluten.

PREVENTING A HORSE FROM PULLING ON THE HALTER.

H. P., Ivanhoe, Ill., asks how to break a horse from pulling on the halter.

ANS.—The most effectual way to break a horse of pulling at the halter is to tie it by the tail. The crupper should be made strong with a ring sewed to the strap on top of the hips, which strap leads to the crupper. In this ring fasten the end of a rope which should be conducted to the head through one of the line rings and through the bit. When in the stable a crupper should be buckled around the tail and the tie rope attached to it by a ring sewed on it; and then passed through a ring fastened to a surcingle round the body and through a ring in the halter. A horse thus fastened will not pull more than once and cannot get loose. A horse in the habit of pulling at the head will break any halter, but when fastened by the tail, as described above a small rope will suffice to hold it.

THE RURAL DENT OR FLINT CORN—WHICH?

A. F. K., Wayne, Ills., says: "In offering premiums on corn the coming year, do the two kinds of corn compete for the same prizes or is there a prize for each variety?"

ANS.—Each subscriber is entitled only to one kind, as may be seen by reference to our first announcement of this Free Seed Distribution and the premiums therefor in the Fair Number, page 585. There we say that for the higher latitudes, the Rural Heavy Dent Corn is not suitable, and therefore the Rural Thoroughbred Flint, which is extremely early, will be sent instead to all who will kindly designate their preference in their applications for the Distribution. The offer of premiums applies to both alike—the best yield from either takes the first prize, and so on with the other premiums.

Miscellaneous.

J. S. B., Bristolville, Ohio, asks, 1, for a description of the Amorpha fruticosa, seeds of which were in our free seed distribution of 1878; 2, do the asparagus plants from our last distribution need any Winter protection; 3, are blue jays a benefit or injury to the farmer.

ANS.—1. This becomes a tall shrub, very variable in different soils and situations. It bears compound leaves with 8-12 pairs. In form and growth it is spreading and, unless cut back from year to year, somewhat rambling. The flowers are of purple color crowded in clustered, terminal spikes. The

THE RURAL NEW-YORKER PRESENTS

FOR THE

BEST YIELDS OF CORN AND WHEAT FROM THEIR FREE DISTRIBUTION of 1881-82

$2,000 Worth of Presents.

WHEAT PRESENTS.

For the BEST YIELDS of the new Cross-bred Wheat "Fultzo-Clawson" from the SEED of the RURAL NEW-YORKER FREE DISTRIBUTION. To be sown next Fall, (1882).

One of Walter A. Wood's latest improved Automatic Twine Self-binding Harvesters, presented by the RURAL NEW-YORKER, $300.

One of Higganum's Automatic Corn Planters, presented by the Higganum Mfg. Corporation, Higganum, Conn. $. 75.

One American Fruit Dryer, presented by the American Fruit Dryer Co., Chambersburg, Pa. $ 75.

One Weed Cabinet Sewing Machine, presented by the RURAL NEW-YORKER. $75.

Fertilizers from our stock of complete manures, pure bones &c., to the amount of fifty dollars, or FIFTY DOLLARS IN CASH, as winner may select, presented by Mapes Formula and Peruvian Guano Co., New York City. $50.

Collection of Flower and Vegetable Seeds and Bulbs, presented by J. M. Thorburn & Co., 15 John St., N. Y. $50.

One Cycle Ensilage Cutter, presented by New York Plow Co., 55 Beekman St., New York. $50.

One Silver-plated Tea Set, six pieces, Tea, Coffee and Hot-water Urns, Cream Pitcher, Sugar and Slop Bowls, presented by the RURAL NEW-YORKER. $48.

Victor One-Horse Grain Drill, presented by Ewald Over, Indianapolis, Ind. $25.

One handsome Silver-plated Ice Pitcher, presented by the RURAL NEW-YORKER. $14.

Collection of Flower and Garden Seeds, presented by R. H. Allen & Co., 189 and 191 Water St., N. Y. $10.

100 Skowhegan Raspberry Plants, presented by J. T. Lovett, Little Silver, N. J. $10.

Collection of New Grapes, one vine each, Pocklington, Jefferson, Prentiss, Duchess, Early Dawn, Vergennes, Highland, Lady Washington, Bacchus, presented by J. T. Lovett, Little Silver, N. J. $12.50.

One dozen Silver-plated Teaspoons, presented by the RURAL NEW-YORKER. $6.

One Keystone Washing Machine, presented by the RURAL NEW-YORKER. $6.

One Silver-plated Cup, presented by the RURAL NEW-YORKER, $4.

√ Special for "Surprise" Wheat.

T. D. Carman, for RURAL NEW-YORKER, for the five largest heads of SURPRISE WHEAT, (see description.) Cash, $25.

CORN PRESENTS.

For the BEST YIELDS of the RURAL DENT or THOROUGHBRED FLINT CORN, from the SEED of the RURAL NEW-YORKER FREE DISTRIBUTION. To be planted NEXT SPRING.

One Loring & Blake Palace Organ, presented by the RURAL NEW-YORKER. (See page 590) $205.

New Spring Tooth Sulky Harrow, with Force-Feed broadcast Seeder, presented by the Wheeler & Melick Co., Albany, N. Y. $60.

Big Giant Corn Mill, latest improved, size No. 2, presented by J. A. Field & Co., St. Louis, Mo. $60.

Farmers' Friend Two-Horse Corn Planter, with drilling attachment, presented by Farmers' Friend M'f 'g. Co., Dayton, Ohio. $55.

Fertilizers from our stock of complete Manures, pure bones, &c., to the amount of fifty dollars, or FIFTY DOLLARS IN CASH, as winner may select, presented by Mapes Formula and Peruvian Guano Co., New York City. $50.

Silver-plated Tea Service, six pieces, Tea, Coffee and Hot-water Urns, Cream Pitcher, Sugar and Slop Bowls, presented by the RURAL NEW-YORKER. $48.

Porter's Patent Wire Cable Derrick complete, with Champion Hay Carrier, presented by J. E. Porter, Ottawa, Ill. $45.

Veteran Corn Sheller complete with Table Crank and Band Wheel, presented by Sandwich M'f'g. Co., Sandwich, Ill. $33.

A selection of Vegetable and Flower Seeds and Bulbs, presented by J. M. Thorburn & Co., 15 John St., N. Y. $30.

Collection of Plants, presented by Peter Henderson, & Co., 35 Cortlandt St., N.Y. $25.

Collection of Vegetable and Flower Seeds and Bulbs, presented by J. M. Thorburn & Co., 15 John St., N. Y. $20.

One No. 3 Cornell Corn Sheller, presented by Treman, Waterman & Co., Ithaca, N. Y. $18.

Adamant Plow, presented by New York Plow Co., 55 Beekman St. $15.

Hoosier Corn Drill, presented by Hoosier Drill Co., Richmond, Ind. $15.

Planet Seed Drill, presented by S. L. Allen & Co., Philadelphia, Pa. $14.

One handsome Silver-plated Ice-Pitcher, presented by the RURAL NEW-YORKER. $14.

Collection of Flower and Vegetable Seeds, presented by Peter Henderson & Co., 35 Cortlandt St., N. Y. $10.

100 Manchester Strawberry plants, presented by J. T. Lovett, Little Silver N. J. $10.

Collection of Flower and Garden Seeds, presented by R. H. Allen & Co., 189 and 191 Water St., N. Y. $10.

One Silver-plated Cake-basket, presented by the RURAL NEW-YORKER. $9.

One Aquapult, (Force Pump,) presented by the RURAL NEW-YORKER. $9.

One Peerless Clothes Wringer, No. 2, presented by the RURAL NEW-YORKER. $8.

Patent Screw Wedge one-horse Cultivator, presented by the Wheeler & Melick Co., Albany, N. Y. $8.

Peter Henderson, four books, Gardening for Profit, Gardening for Pleasure, Practical Floriculture and Hand-book of Plants, presented by Peter Henderson & Co., 35 Cortlandt St. $7.50.

One Keystone Washing Machine, presented by the RURAL NEW-YORKER. $6.

One dozen Silver-plated Tea Spoons, presented by the RURAL NEW-YORKER. $6.

One Silver-plated Cup, presented by the RURAL NEW-YORKER. $4.

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common name is False Indigo. 2. No, they do not actually need any, but would be the better for it perhaps. A light spread of fine stable manure would be as good as anything. 3. The blue jay (Cyanura cristata) has never won many laurels as a farmer's friend, except in catching insects when it can't get at the farmer's corn-crib. It eats nuts, fruits, grain, sucks the eggs of other birds, tears the young to pieces, and is generally very quarrelsome.

S. G. M., San Francisco, Cal., makes inquiries which may be answered as follows:

The regular price of the Inter-Ocean is $1.15, that of the RURAL NEW-YORKER, $2.00. These we furnish for $2.75, and this *includes* the Free Seed Distribution. That is, all who subscribe for both papers need not *apply* for the Distribution, since it will be sent post-paid, without application. We know of no better weekly newspaper than the Inter-Ocean. All subscriptions for it in combination with the R. N.-Y. are promised immediate attention. Specimen copies will be furnished free to our subscribers, but the application must be made to the Inter-Ocean, Chicago, Ills.

C. P., Springville, Iowa, asks if those who wish to compete for the RURAL'S corn and wheat prizes have to make application in any particular way.

ANS.—We have not decided about it yet. Probably those who so desire will be requested to send in their names and addresses so that they may be regularly entered and so that we may see that all who compete are actually subscribers. Such a list would also prove desirable in case an examination of the competing crops were deemed necessary. Ample time in any case will be given to all. We do not quite understand the question as to the manure-spreader.

G. L. R., Napoleon, Ohio, asks which is the better corn—the Chester County Mammoth or the RURAL Dent; and where can each be purchased and at what price.

ANS.—We have never prized the Chester County Corn very highly, though it gave us one of the greatest yields on record—the greatest, perhaps, all things considered. As to the RURAL Heavy Dent, we do not care to say much at present. It will be thoroughly tested over the entire country next season. It is not yet for sale. Chester County Mammoth Corn will be offered for about $3.00 the shelled bushel.

G. W. H., Toledo, Oregon, asks 1, when should alsike and white clover be sown; 2, where can he obtain the Marlboro Seedling and Souhegan Raspberries; 3. what is the difference between English and Kentucky Blue Grass and when should the latter be sown—climate temperate.

ANS.—1. We should think Fall would be preferable. 2. They will be offered for sale next year we presume. 3. We do not know what is meant by English Blue Grass. Fall for your climate.

W. H., Hanwell, Ia., asks, 1, whether the Rural Dent Corn will mature there; 2, are the Rural wheats all Winter wheats—Winter wheats can't be grown there.

ANS.—1. Probably the Dent will mature; but why not be on the safe side and try the Flint? 2, The wheats have hitherto been grown as Winter wheats, but it will be well to try them as Spring wheats where Winter wheat cannot be raised. We have had good results from growing Spring wheats as Winter wheats on the Rural Farm, and the reverse may prove equally satisfactory elsewhere.

J. T. J., Oakland, Oregon, sends for name a head of wheat and asks whether it is a profitable sort to sow.

ANS.—This is the Egyptian or Seven-headed Wheat. We have never heard it praised either for quality or yield. At the Rural Farm we have raised it as a Winter wheat for two years with indifferent success. The heads mildew, bend over and often rest upon the ground or the straw breaks. See the wheat number for illustration and remarks.

N. S., Remington, Jasper Co., Ind., asks RURAL readers living in that part of Michigan south and west of Lansing to state in "Everywhere" the price and quality of the land there, both improved and timbered; also the kind of timber and the climate, and the sort of commerce carried on in the neighboring towns.

"*Reader.*"—There is no bumble bees' honey in the trade. It would be difficult to get much of it, and then it would be for the most part exactly like common honey.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, Dec. 3, 1881.

J. P. R., thanks—H. S.—S. R. M.—J. S. C., thanks—G. F. T., thanks—W. F.—A. J. C., retained—B. F. & E. R.—L. S. P.—G. A. G., Jr.—F. M.—G. C.—P. A. T.—G. G.—J. H. C.—E. P.—A. C.—C. E. T.—I. J. B.—A. D. H.—S. A. T.—C. E. A.—J. L. D.—E. B. D.—O. E. P.—A. C—C. C. B.—M. E. A, thanks—N. S.—H. S.—M. B. McL.—R. J. R., thanks—G. N. H.—A. J. R.—W. F. B.—G. F. R.—S. B P.—A. C. H., we shall endeavor to answer all.—A. L. J.—N. R., thanks.—F. D. C.—J. F., Oakfield, we shall investigate.—H. L. W.—Mrs. E. R.—A. J. C.—J. N. L., thanks—J. T. J.—J. L. W.—T. T. L.—E. L. McG.—H. A. W.—J. L. B.—C. W. H.—W. H.—C. H. G.—R. B. W.—R. C.—B. F. C.—G. F. F., next week.—G. C. DeB.—J. R. P. G. R.—J. S. C.—H. S.—J. I. M.—R. C.—G. A. G., Jr.—J. M. C.—F. K. M., we shall endeavor to give a series of articles upon the subject you name.—J. N. C., Emporium, Pa., we are glad to receive bad as well as good reports. Farmers should give their experiences to the RURAL NEW-YORKER.—G. W. W., thanks.

Six Valuable Christmas Presents Free to All!

YOU CAN SECURE ALL THE BEAUTIFUL AND USEFUL HOLIDAY GIFTS NAMED IN THIS ADVERTISEMENT AT NO COST WHATEVER! *Read the Conditions!* We publish a splendid Eight-page, 82-column Agricultural and Home Paper entitled **The Rural Home Journal**, at the low price of *Fifty Cents per Year!* It is handsomely illustrated, and is filled with instructive and useful reading matter for every member of the rural household. Its contents embrace Agriculture, Horticulture, Household Topics, Ladies' Fancy Work, Stories, Poetry, News, Wit and Humor, Exposures of Humbugs, etc., etc. It is in every respect a complete family paper, and every number contains hints and suggestions alone worth the subscription price. Wishing to obtain 100,000 new subscribers at once, we make this great offer: Upon receipt of only **Fifty Cents** in postage stamps we will send **The Rural Home Journal** for **One Year**, and to every subscriber we will send, Free and post paid, **Six Valuable and Useful Premiums**, as follow: 1. **A Handsome Autograph Album**, bound in leatherette, or imitation leather, with embossed design on cover—a neat and serviceable book. 2. **Gold-Plated Finger Ring**, a plain ring of good quality of gold plate, durable, and suitable for either lady or gentleman. 3. **Imitation Coral Breast Pin**, of a new and very handsome design, which will be much admired. 4. **Buckner's Musical Chart**, by the aid of which any one may learn to play upon the Piano, Organ or Melodeon in a short time. 5. **Ten Perforated Card Board Mottoes**, for working with worsted or silk into book-marks or other souvenirs. 6. **The Mechanical Grasshopper**, a new and amusing Christmas toy, which will delight the whole family with its antics. Remember, we send all of these valuable and useful articles *absolutely free* to all who send fifty cents for a year's subscription to *The Rural Home Journal*. We make this great offer simply to introduce our paper and obtain thousands of new subscribers. It is one chance in a life-time to get a very large return for a very small sum of money. Think of it! a splendid paper a whole year for only fifty cents, with six valuable and useful premiums *free!* We offer no cheap trash, but only articles of genuine value and usefulness, and a paper excelled by none. All orders filled promptly, and perfect satisfaction guaranteed or money refunded. As to our reliability we refer to any publisher in New York, likewise to the Commercial Agencies, as we have been long in business, are well-known, and our reputation is established. If you will show this advertisement and get up a club of four, we will send you an extra copy with the premiums free for your trouble. Send at once for this unprecedented bargain. Address, 1

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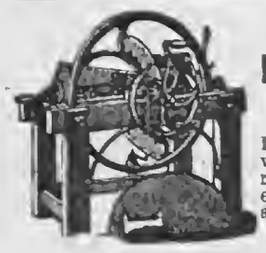

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It has no equal for good, rapid work and durability. Can be run by wind power. It suits every time. Send for circular and name this paper.
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Cheap, Durable and Effective; She is 12 to 14 bushels per hour. It is the best corn sheller made, and I warrant them for five years Price $5, or, handsomely nickel-plated, $6.
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If there is no agent in your vicinity, I will send Sheller prepaid on receipt of price. Send for circular.
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Mention Rural New-Yorker

EVAPORATING FRUIT.
SENT FREE | Treatise on improved methods. Tables, yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa

WATCH BUYERS, ATTENTION!
THE CELEBRATED
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were awarded a gold medal at the Paris Exposition in '78, for greatest accuracy in performance and adjustment. These watches have all modern improvements in watch making, being stem-winders, adjusted to heat and cold and for R.R. use. By reason of improved machinery they are manufactured at a great reduction from former prices. All are warranted. "*No time, no money.*" Ask your jeweler and see them before purchasing those of other manufacturers.
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A National Journal for Country and Suburban Homes,
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Conducted by
ELBERT S. CARMAN.
Address
THE RURAL NEW-YORKER,
No. 34 Park Row, New York.

SATURDAY, DEC. 10, 1881.

Seven Yearly Subscriptions with $14 entitle the sender to the Rural New-Yorker for one year free.

BONANZA FARMING---AN ANNOUNCEMENT.

The series of articles under the general title of Bonanza Farming will be presented in the following order. First, a portrait of Mr. Oliver Dalrymple. It is due to this gentleman to say that he promised to furnish our Western special correspondents his photograph only after several peremptory refusals, and finally with great reluctance. The second of the series of illustrations will be Breaking; the third Back-setting; the fourth Seeding; the fifth Harrowing; the sixth Harvesting, and finally Thrashing. The illustrations, with carefully-prepared articles, will be begun, if possible, December 31st. Our correspondents wrote us: "We received our notes for an exhaustive review of all the bonanza farming interests under Mr. Dalrymple's management, which, he informs us, 'is the *first time' he* has 'ever given them to the public'; that 'all other writings touching upon the subject have been from desultory information, and most of it wide from the truth.' He remarked, upon separating, that 'having yielded to our solicitations on behalf of the Rural New-Yorker, he believed the forthcoming series of articles would prove the most interesting and profitable of anything upon the subject yet published.'" Mr. Dalrymple is doubtless the largest wheat raiser in the world, and as such the commercial as well as agricultural world must feel much interested in the proposed illustrations and articles. Mr. Dalrymple's portrait will be executed in the best manner and printed upon heavy supercalendered paper as a supplement, similar to that which accompanies the present number of our journal.

We give this week as a full-page supplement an excellent original drawing by our artist, Mr. Scranton, of the head of the Jersey cow Lady Rushmore. It is worth preserving as an ideal type-head of this beautiful and popular breed of animals.

Judging at this time, we shall be enabled to send out our present Free Seed Distribution in time to meet the needs of all.

The Rural New-Yorker controls the greater part of the seed of the new variety of celery, which has been named Golden Heartwell, offered in our next Free Seed Distribution. The value set upon it by the single firm which owns the balance may be judged from the fact that it will be offered for $18.00 per pound and *no less.*

Attention is called to Professor Warder's communication as to the "Ozone"(?) method of preserving food, advertised in our columns and in those of the newspaper press generally by the Prentiss Preserving Company of Cincinnati, Ohio. Professor Warder is excellent authority. Our readers will await a reply to his criticism from the above company before they permit themselves to be influenced by the company's advertisement.

All are invited to send for our Fair Number of 44 pages of this size. This explains our Free Seed Distribution—our two thousand dollars' worth of premiums offered for the best yields therefrom. It presents a number of original illustrations of cattle, swine, new fruits, etc., and finally our premium lists for 1882. The new Rural posters and specimen copies will also be forwarded free to all applicants.

Many of our friends in renewing their subscriptions have occasion to remark upon the crop prospects or to send us other valuable notes for publication. We would thank them to write such matter on a page separate from that which renews their subscriptions, with name and address on each page. Then one page may be handed to the subscription clerks and the other to the editors. When both communications are written together, one or the other has to be neglected or rewritten.

The attention of all our readers is called to the discussion of the regular meeting of the Youths' Horticultural Club of the Rural New-Yorker in this number. Parents should be especially interested, and we call on them to encourage the children in the work in which so lively an interest is shown. Is there a better way in which a love for horticultural pursuits can be created? Horticulture and agriculture are but different forms of the same thing, and the Rural's aim is to present teachings in such an agreeable form to our young people as to create an early fondness for the pursuit. This done, life upon the farm will be viewed as something besides drudgery and young men will stay upon the farm for other reasons than that they cannot find employment elsewhere.

Our arrangements for giving prompt attention to entering names upon our subscription lists are now as perfect as we can make them. Of course, the Rural cannot be responsible for the mistakes of others, or enter names when they are not written legibly or—as in some cases—not at all. Those who subscribe for the Inter-Ocean, New York World or Detroit Free Press and Household in connection with the Rural New-Yorker, may feel assured that their names will be forwarded to those journals at once. It will be remembered that by arrangement with the publishers, all who subscribe for such combinations are not required to forward us the six cents for the seed distribution. The Rural New-Yorker and the Inter-Ocean for one year, $2.75; the Rural New-Yorker and the New York World for one year, $2.75; the Rural New-Yorker and the Detroit Free Press and Household, $3.00.

Country Roads.—Our country roads are by no means such as one can point to with pride. There is money enough spent over them to make them passable, if not excellent, roads. The system is at fault. The annual road work has been done, and the roads are now left to take care of themselves until next Spring. In most cases repairs have been made with ditch scrapings, sods, or soft earth from the road-sides; the loose stones which plentifully cover the roads have been left on them, and occasional water bars—those horrible arrangements for draining the slopes safely—have been made to offer more obstacles for comfortable travel. But the Fall and Winter are the very worst seasons for the roads, and they require more repairs or precautions then, to prevent damage, than at any other season. With our wretched road system no work will be done now or during the Winter, nor until next Spring, when a few neighbors will gather to work out their road tax, and ten men will manage to do one man's work in the very worst manner possible. And this is why we have such miserable roads everywhere, and especially where the country is at all hilly. Pray, let us give this matter a little of the attention it merits.

THE RURAL'S EXPERIMENT GROUNDS.

At the Rural Experiment Farm we have now growing 80 different kinds of wheat. Of the 77 different kinds grown last season, all were rejected that seemed to be inferior to the well-known kinds now in cultivation, while new kinds not yet offered for sale were placed under trial in their stead.

At the "Rural Grounds" (Bergen Co., New Jersey) we have now 106 different kinds of strawberries; 56 different kinds of grape vines; 28 of raspberries; all of the old and promising new kinds of currants and blackberries. As to ornamental trees, shrubs and hardy herbaceous plants, it would be quite a task to count them. Our object is to test everything of promise that is hardy enough to endure the trying climate of the valley in which the Rural Grounds are situated. As to the value of the reports thus made from experience, those who have read our special numbers and the paper in general attentively are the best judges. It is always a cause of regret to us that information so presented is not accessible to our new subscribers.

GREAT DECLINE IN OUR EXPORTS OF DAIRY PRODUCTS.

Last year our average export of cheese was something over 2,000,000 pounds a week; the average this year is scarcely over 1,000,000 pounds a week. Last year the exports of butter averaged from 450,000 to 500,000 pounds a week; this year the average does not reach 250,000 pounds a week. For the week ending November 24, 1880, our exports of butter averaged 324,967 pounds; of cheese, 2,094,577 pounds; of oleomargarine, 455,780 pounds. For the week ending November 23, this year, our exports of butter were 148,630 pounds; of cheese, 1,234,760, and of oleomargarine, 208,530. Even of the above amounts of butter and cheese exported this year, there is no doubt that a large proportion consisted of bogus products. The enormous decline in our exports of dairy products dealers here attribute chiefly to three causes: first, the very wet weather across the Atlantic has been very favorable for pastures there, and consequently the home supply of butter and cheese has been unusually large; second, the drought here has had the opposite effect upon the production of butter and cheese, and the supply having thus been cut short, prices have risen too high to admit of free exportation; third, adulteration in the manufacture of both our cheese and butter with lard or oleomargarine has had a very demoralizing effect upon the sale of even the genuine products in Europe; while the large exportations of butterine and oleomargarine under their real names have competed with our genuine products in Great Britain and the Continent.

THE AMERICAN HOG VICTORIOUS.

How great the evils a fool in high office can cause is shown by the results of the recent war on the American Hog waged by the lately superseded "America-hating" French Minister of Agriculture and Commerce, M. Tirard. In February he began the campaign and straightway about half a dozen other wiseacres in high places in other countries joined him in his warfare. In face of their denunciations and embargoes the exports of the American Hog began seriously to decline in April, as may be seen by the following table of exports for the three months ending June 30, last, as compared with those for the corresponding period last year.

	April, May, June.	
	1881.	1880.
Bacon and hams ,lbs	100,702,010	222,607,111
Pork (middlings)	19,900,983	24,672,051
Lard	68,565,698	125,970,368
Beef, fresh	26,847,180	25,018,721
Beef, salt or cured	7,679,085	13,303,926
Cheese	35,137,232	33,258,056

Inasmuch, however, as the decrease in our exports coincided in a great measure with a shortage in the domestic hog crop, the prices of hog products, instead of falling off on account of foreign ill-will, rose from seven to nine cents a pound for bacon and ham; from seven to eleven cents per pound for lard and from six to eight cents a pound for pork middlings. The greater the opposition to the American Hog abroad, the higher the value patriotically set upon him at home. While half the governments of Europe were carrying on active hostilities against this splendid animal, not only by forbidding his entrance, but by grossly vilifying him among their own subjects, the latter, far more sensible of his merits because better acquainted with him, had soon reason to bemoan his absence, for in June last Mr. Bridgland, our consul at Havre, reported that prices of all meats in France had advanced from 25 to 60 per cent. within six weeks after the embargo on American pork. Small wonder therefore that on the stupid Tirard's exit from official life, the American Hog should have been invited back to France as he had already been invited to Spain on July 10. Thus the two chief foes of this noble beast have already welcomed him as a friend to their tables, and the day cannot be far distant when in other hostile lands, in spite of ignorance, prejudice and stupidity, the American Hog shall be equally triumphant.

We naturally look to those who in the past have been pleased with this journal to speak favorably of it to their acquaintances on fitting occasions. Those who are really interested in agricultural progress are ever ready to advocate the good cause and to this class we are indebted in a great measure for the influence which the Rural New-Yorker now enjoys. We have labored in the past to make it a medium of trustworthy information to all; we have labored to render it worthy of the respect, confidence and friendship of all; and the success which has attended our efforts will enable us for 1882 to maintain the Rural as good in all respects as it has been during the present year and, we trust, in some respects conspicuously better. This we may promise without *any increase* of circulation. It is yet too early to hazard any estimate as to whether our circulation for another year will largely increase or not, The "straws" all point graciously, but such early indications are not always trustworthy. It is now or never, however friends of the Rural, that the work is to be done. We have sown our seed and we have now to await the harvest—anxiously? Yes, very anxiously. A decided falling off in our subscription list would sicken the heart and chill us through and through! If the efforts which we have made through the past to instruct and please our readers have been ineffectual, then we confess our inability to please and instruct them. If the hundreds of reassuring, friendly words we have received mean nothing, we should pray in the future to be delivered from our friends—for their praises do but lead us astray. As the success of a general is determined by the battles he wins, so is the merit of an agricultural paper determined by the number and intelligence of its subscribers, unless indeed a circulation is gained by mere advertising, in which case the patronage—always of a fugitive class (where there is little real worth to hold it)—costs more than it is really worth. While, therefore, we shall confidently expect to hold our present circulation, and to be contented if we do, we yet indulge the fond hope that occasion will enable us to feel very happy over a considerable increase. Then we shall *know* that our readers really care for the Rural, and then, like good school children, who leave their school for the bright Summer vacation, we shall throw up our hats and clap our hands in joy, while with every encouragement we pursue the work of another year. Once again we bespeak the kindly aid of such of our readers as can feel that in aiding the Rural they are engaged in a good work. The single subscriptions sent in by our old subscribers are one of our most powerful aids. It costs them little personal effort to secure a single subscription, while the results to the Rural in the aggregate are immense.

BREVITIES.

Professor Beal says he has found two tubers in one hill pierced by June Grass in the manner recently figured in the Rural for Quack Grass.

In the Editor's Department of the present number of the Journal of the American Agricultural Association is the following: "The Experimental Farm of the Rural New-Yorker—an article on which we print in this issue—is under the direct personal management of the editor and publisher of that journal, who resides upon it. The work which he is doing is of the most practical and useful kind, and we know of nothing being done of more importance to the general agriculture of the country. It is performed in the most painstaking, intelligent and scientific manner and for the public good.

An oppressive patent monopoly has just been exploded by the decision of Judges Drummond and Blodgett in the United States Court at St. Louis on November 25, in the case of the Wilson Packing Company and Libby, McNeil & Libby against the Chicago Packing Company and the St. Louis Beef Packing Company. The question at bar was the validy of certain patents for preserving meat in cans, notably the William J. Wilson patent and the John J. Wilson patent, the former reissued in 1875, and the latter 1877. The former patent was for a process of packing meats by cooking and removing the bones, pressing the meat into cans so as to form a solid cake, and then making the cans air tight. The other patent was for a can of pyramidal form and peculiar construction which facilitated the discharge of its contents. The court held both patents to be invalid; the first for want of novelty, as the process of packing cooked meat by pressure is old; the second because the kind of can patented was a matter of selection not invention; nor was it novel. By this decision the business of canning meats in any shape or style is open to free competition, and so it may be practiced by the farmer as well as by the regular packer. Let the driven well extortionate monopoly go next "where the woodbine twineth."

Miscellaneous.

THE PARK REGION.

Minnesota's Grain and Stock Country Cities, Towns and Pleasure Resorts.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

THE "Short Line" of the St. Paul, Minneapolis and Manitoba Railway, built to secure through traffic from St. Paul to the West, passes through a very delightful portion of the State, a full description of which with its crop statistics was given in our correspondence "Wheat is Queen" in the RURAL NEW-YORKER of Oct 15. The entire region is rich in wealth of golden grain, the yield in wheat being large and the price proportionately greater nearing the commercial centers. A grand feature of this region is the pure water which is everywhere abundant, and the shelter afforded by the timbered banks of the many lakes together with the abundance of pastnrage for stock. Though Minnesota is in a high northern latitude, possessing an elevation of from 950 to 1800 feet above the sea level, its climate is remarkably healthful and invigorating. The distance is so great to the coast that the ocean's influence cannot be felt, thus rendering the atmosphere dry and pure.

FERGUS FALLS, 54 miles from Fargo, southeast but upon the Red River which curves up in that direction, was our first stopping place. As we intend that our next letter shall deal exclusively with its interests, we will only briefly summarize in this. We found a busy, active town, well built, but evidently upon a hasty plan. Evidences of continued improvement and thrift met us upon every hand. In one direction dirt for a new railroad was flying; in another numerous houses were in process of constructiou; mills and manufactories of lumber, furniture, flour, etc., were utilizing part of their mammoth water power, the best in Northwestern Minnesota. The hotels were crowded—here is something the city really needs, a first-class hotel. The business men were busy, stocks selling as fast as they can be replaced and everybody expressing the utmost confidence in the certain and rapid development of their city. Schools, churches, societies, newspapers, elevators and all the concomitants of refined civilization we will review in our next.

EVANSVILLE, 27 miles east from Fergus Falls, has a population of over 400, business of all lines being well represented by live, active and energetic men. There is a steam elevator here having 110,000 bushels' capacity. Last year 140,000 bushels of wheat were marketed here, and it is expected that more than 200,000 will be marketed, thus showing it to be an excellent grain market. There is a good school for which a new building is being erected now. Norwegian, Lutheran and Union church societies have regular meetings. Adjacent to the town are two brick-yards and a lime-kiln, which will add materially to the future development of the place.

BRANDON, five miles east, has about 200 population, a good school for which a building is in course of erection, several stores, two elevators and the kind of business men who make their example felt. The town is prosperous and improving; it shipped 112,000 bushels of wheat last year, which is a good showing for the market facilities.

ALEXANDRIA, 141 miles from St. Paul, has acquired quite a reputation as a summer resort as well as a commercial point. It is the county seat of Douglas County, has now about 1,500 population, two excellent weekly papers, a graded school of five departments, six church edifices, another in course of construction, and a good hotel. The Bank of Alexandria whose exchange account for the year ending November 1, was over $700,000, and whose aggregate business for same time was $1,800,000, affords ample financial facilities. Here are also stores and stocks of various kinds to supply the demand. Town property sells at reasonable rates, with the prospect of a steady rise in valuation. There are also a good mill and elevator. Above all else, the town is so situated as to be the center of a vast lake region. Lakes Agnes and Winona lie to the north and west, the city overlooking them. Lakes Darling, Latoka, Mary, Lobster, L'Homme Dieu, Carlos, Ida, Chippewa, Christina, Red Rock and Oscar are all within from two to ten miles of the city, all affording excellent fishing and good hunting. Douglas County is out of debt, having neither bonded nor floating indebtedness. The receipts of wheat for this county have been for the year 695,000 bushels, of which 400,000 have been marketed in Alexandria. Being considered a place of headquarters for sportsmen as well as a business center, the future welfare of the city seems assured.

OSAKIS, the Indian for "I like it," takes its name from the lake upon the shores of which it stands. It has a population of between 400 and 500, who have been attracted by its beautiful surroundings and business interests. Quite a brisk little trade is done here, not only on account of its being a pleasure resort, but also owing to the farming country surrounding it. We found a good flouring mill, a sawmill at each end of the lake, a bank, a good local newspaper, "The Observer," several general stores, and dealers in hardware, drugs and groceries. Two trains take dinner at Osakis each day, the Park House being well kept and giving good satisfaction. From the St. Paul Pioneer-Press we will quote concerning Lake Osakis:—"It is in the heart of what is known as the Park Region, a most beautiful and attractive section composed of a succession of lakes, streams and timber lands, forming the most lovely pastoral landscape. In a circle of 20 miles, including all of Douglas County and parts of Todd, Otter Tail, Pope and Grant Counties, are located over 300 lakes, the most important of which is Osakis, which has a shore line of 37 miles, fringed with heavy hard-wood timber and with a smooth and pebbly beach. In this vicinity great quantities of pheasants, water fowl, prairie chickens, snipe, geese, ducks, turkeys, deer and bear are found, affording plenty of sport for the hunter." "Fairview Place Hotel" and cottages, owned and managed by K. Kneutson, we have had occasion to speak of before. They are replete with comforts both for land and water—plenty of boats (steam, sail and row)—and they are crowded with guests during the entire Summer season. Mr. K. informed us of his intention to put up several more cottages in the Spring. Osakis—"I like it"—Well, we liked it well enough to make it our headquarters during our stay in this region, and we could write a column upon our pleasure did space permit.

SAUK CENTER, 13 miles east, is a charming little city of about 1,500 inhabitants, of whom we wrote a special letter, published in the RURAL NEW-YORKER Oct. 8. For some time there has been more or less inactivity in building and improving, but recently the certainty of the Little Falls and Dakota Railroad, now graded, giving them a wheat outlet *via* the great lakes and a direct communication with the magnificent lumber regions of the North has awakened an intense interest, which will give their city a new "boom" and a more lasting one than ever before. Besides this, there is a survey being made for the Sauk Center and Northern Railway, while several other lines are projected.

What the future of a town will be depends to a great extent upon the character of the surrounding country. Stearns County is considered of unusual agricultural excellence. It is well settled as is evidenced by the marketing of 500,000 bushels of wheat in Sauk Center, as well as large quantities at St. Cloud, Melrose and other stations. There have been some experimeuts in Amber Cane which seems to do very well here. We would like to see the Rural Branching Sorghum introduced. Being located in the center of an extended radius, near numerous lakes, thus with the purest water, having well established business houses, good manufacturing facilities, abundant banking capital, excellent newspapers, conveniences for education and religious exercises, appropriate and business acumen, there then is a certainty of rapid improvement and enlargement of the city.

MELROSE we found to be a promising town, nine miles from Sauk Center. It has a large and increasing trade. Its population is nearly 500. The citizens are erecting a fine brick school-house to contain four departments, at a cost of $5,000. Episcopal, Methodist, German and Irish Catholic societies have substantial churches. The Melrose Mills, with a capacity of 100 barrels per day, are doing a large business and draw trade to Melrose, which has good stores, mostly operated by Germans.

ST. CLOUD was next visited. It is the largest city on "the Short Line" between Minneapolis and Fargo, having some 3,000 population. It is handsomely located 75 miles from St. Paul, on the west bank of the Mississippi River, the first point below the pineries upon the edge of the vast prairie region we have written of. The place enjoyed a trade of over $3,200,000 last year. Its principal interest is manufacturing, there being two saw mills, three planing mills, sash, door and blind factories, one novelty works (wood), three foundries, one steam furniture factory, one chair factory, two plow works, one seeder factory, five wagon manufactories and one hub and spoke factory. There is an existing demand and need for large flouring mills, woolen mills, paper mills (straw and rag), agricultural implement works, and numerous other manufacturing industries. C. Bridgman informed us that he sawed 5,000,000 feet of lumber and made 5,000,000 shingles during last year.

THE WATER POWER,

if improved according to the plans of one of the government engineers, would reach 25,000 horse power. This could be done at an expense of one-sixth the cost of the Minneapolis power, and would equal all in use there now. An act of the State Legislature enables Stearns and Sherburne Counties to vote aid for this purpose, and the city of St. Cloud offers a bonus of $50,000 cash for its development.

A vein of granite, gray, blue and red, capable of high polish, extends southwest from Duluth and near the city, while along the river banks are found large amounts of hard wood timber. Besides the St. Paul, Minneapolis & Manitoba Railway, St. Cloud has the Northern Pacific, Duluth Railroad expected, St. Cloud and Lake Traverse now being graded, the Osseo branch being finished within 12 miles, and others projected, thus giving abundant railway facilities. St. Cloud has six handsome churches, two of brick; two brick school buildings costing $40,000, with graded schools of 11 departments; also one of the three State Normal Universities, which has a faculty of eight experienced and capable teachers, and an enrollment of 265 pupils from all parts of the State. Their handsome building is worth $60,000. Add to this three prominent newspapers—Journal-Press, Times, and Nord-Stern (the latter German)—four civic societies, an adequate banking capital, stores and stocks of metropolitan aspect and substantial improvements of brick and stone (both materials being close at hand). Imagine yourself in this busy county seat of Sterns County, mingling with a mixed social element about equally divided between Americans and Germans, standing perchance near a fine new opera house or by the banks of the Father of Waters, watching its turbulent flow, and gazing at the many manufactories which now use its mighty power, and you have a pen-picture of St. Cloud to-day.

Between this city and St. Paul are several towns, the principal of which is Anoka, which manufactures many million feet of lumber annually. In fact, the region east of St. Cloud is principally timber. As a supplement to this sketch, which covers such a diversified scope of country, it will serve best as showing the immigration to the Northwest *via* the St. Paul, Minneapolis and Manitoba Railway to give a statement of James B. Power, their land commissioner, concerning their sales:—During the months of September and October, 41,517 acres were sold to 210 purchasers, at an average price of $5.70 per acre; 25,850 acres were contracted to be improved. During the same time 25,385 acres were sold in the contested limits (which includes Otter Tail and Clay Counties). At this rate it will not take long to dispose of the entire land grant, and the prospects for the coming year's improvement all along the line are certainly very flattering.

The Herdsman.

OUR SUPPLEMENT.

OF ALL the various breeds of neat cattle there is none that surpasses the Jersey in deer-like grace and high-bred appearance. Under the fostering influence of a genial climate, a fertile soil, kiud and generous treatment, and a scrupulous watchfulness as to purity of blood, the Jersey cow has ripened into a small, gentle and exceedingly useful animal, "famous alike for meekness and for milk; for butter and for beauty." It is this thoroughbred aspect that renders a herd of Jerseys in a gentleman's park in England almost as ornamental as a herd of deer. Just look at this head and say whether you have ever seen a handsomer one belonging to any other breed; and in the Jersey the head is by far the most characteristic feature. How well, too, are the "points" in the scale of this breed illustrated in the head, which, by the way, is by no means merely a typical one, originating in the artist's imagination or memory, but a real flesh-and-blood head borne by a very excellent cow, "Lady Rushmore. "Head small, fine and tapering. Cheek small. Muzzle fine and encircled by a light color. Nostrils high and open. Eye, full and placid. Horns smooth, crumpled, not too thick at the base, and tapering. Ears small and thin, of a deep orange color within. Throat clean. Neck straight, fine and placed lightly on the shoulders." So pithily runs the "scale of points." It might also have said, if it were not confined to essentials, that the nose is either dark-brown or black, though occasionally of a yellowish shade; that the face is slightly dished, clean of flesh, mild and gentle in expression; that the clear, full eye is usually encircled by a ring of the same color as the nose; that the inward-curving horns are waxy in color, with black tips in animals enhanced in price by the possession of the "black points;" and that the neck is often somewhat depressed, or what is frequently called "eye-necked." The whole head, as seen, is original and eminently blood-like in appearance.

Lady Rushmore, No. 11812 in the American Jersey Herd Register, was imported in October 1880 from the Island of Jersey by her present owner, Mr. Aaron A. Degrauw, of Long Island, New York. She was bred by Nicholas Le Rossignol Baumont, of St. Peters, out of the "foundation" stock of the island, and was dropped September 15, 1878. She dropped her first calf on December 3, 1880, after which she gave an average of 18 quarts of milk daily on ordinary feed, producing 15½ pounds of butter in seven days. In July, six months after calving, on testing her milk it was found to yield 35 per cent. of cream. She is solid fawn with full black points and a fine escutcheon. Her pictured head is worthy of a nice frame, not only for its high artistic merits, but still more as a fine typical representation of this deservedly popular breed.

NOTES BY A STOCKMAN.

THERE must be something radically wrong in a system of agriculture under which, while a population is increasing and business and money wealth yearly grow larger, the farmers are impoverished and their live stock are rapidly diminishing. Vicissitudes of weather and season are not sufficient to account for this condition of the live stock in England, which is shown by the official returns for 1881 to have decreased enormously in number and value during seven years past. The following table shows the difference.

NUMBER OF LIVE STOCK IN GREAT BRITAIN AND IRELAND.

	Cattle	Sheep	Pigs
In 1874	10,281,036	34,837,397	3,537,354
In 1881	9,904,003	27,899,737	3,149,675
Decrease	377,033	6,937,660	387,679
Decrease in value	$22,620,180	$69,376,600	$2,905,000
Average value per head	$60	$10	$7.50

THESE figures are interesting to compare with those of our own stock. There are more cattle in Texas than in the whole of Great Britain and Ireland (? EDS.). In regard to sheep we now surpass Great Britain considerably. There were 7,000,000 pigs slaughtered last year in Chicago alone, leaving the great pork centers, Cincinnati, St. Louis, Kansas City, Milwaukee and several other large towns out of the question.

BUT what is the reason that the live stock interests of our mother country are in a state of decadence? Is it the system of landlordism and the burdens of taxation required to support a costly government that is at the root of this evil? I don't like to hazard a solution of this question. But I feel safe in believing that the difficulty is one of slow and gradual growth and cannot be removed without some radical change, and that the consequences implied and which affect our interests as competitors with England will be permanent.

CATTLE and fences are co-incidents. Fences are made to keep out cattle and as the fields under crops are many times larger than the pastures, so the fences required are many times more numerous than they need be were the cattle fenced, and not the crops. Here is something that needs consideration as an element in the economical working of the farms. One cow loose upon the roads makes a thousand dollars' worth of fence necessary to keep her out of mischief. And yet farmers permit their neighbors to let this one cow run at large.

THE Fat Cattle Show at Chicago has been the great sensation of the period among Western cattle men. The contest for superiority between the Short-horns and Herefords has been close and it may be said that it has been a drawn battle between them. A Short-horn steer bred by J. D. Gillett, of Elkhart, Ill., carried off the principal prize as first in the sweepstakes for steers three years and under four years old. A Hereford, owned by T. L. Miller, Beecher, Ill., came second.

THE ages and weights of the three prize cattle, first, second and third of this class are as follows:

	Age in days.	Weight.	Average gain per day since birth.
Shorthorn	1,237	2,095	1.61 lb
Hereford	1,190	2,035	1.71
Grade Short-horn	1,324	2,085	1.57

The Short-horn steer was subsequently awarded first premium as the best animal shown of any class or age.

THE Hereford breeders gained the prize of $250 for the best herd of five animals of any age or breed. T. L. Miller & Co. took this prize with five Herefords which weighed 10,000 pounds exactly, or an average of 2,000 pounds each.

THE competition between these two breeds runs very close and will probably stay so, for the Herefords have a long history behind them and have been too long a first-class established breed to be thrown into the background now even by a Short-horn. The good points and profitable excellencies of these two breeds are so nearly balanced and the scale trembles and oscillates so much, that it is never certain which is to stand first in such contests as this fat stock show. Hereford cattle carried off the first prize for slaughtered beef in the grand sweepstakes for any age or breed; also for three-year-old steers and for one-year old; the prize for two-year-old going to a Short-horn. [Other "Notes by a Stockman" are crowded ont of this issue.—EDS.]

Literary.

THORNS AND ROSES.

(Continued from page 818.)

CHAPTER XII.

SINCE the evening on which I had spoken to Nevil of the fancied change I had not seen him; but this did not alarm me, as I thought he would be staying with his mother rather more after having lately devoted so much time to me.

I resolved without further delay to see Brandon, and be put at rest for ever; as I had no opportunity of speaking to him in aunt Dorothy's presence, I would seek him at his home, there being nothing unusual in my wandering through the forest, and possibly I would meet him.

So this sunny afternoon rode out. Diamond, after his long rest, enjoyed the fresh air, speeding through the lane and over the common in a wild gallop; and my spirits revived as I felt the wind against my cheek, and saw the beauty of Summer.

But when we neared our destination my heart sank again; though it was better to be straightforward with Brandon, and I could have no peace until I had spoken to him. I felt afraid. Why should I? He would clear himself, and I should feel ashamed of having let the word of a stranger influence me against him. I left Diamond in charge of the lodge-keeper, and went towards the forest on foot. I remember as I walked slowly on how I had met Braudom first; after my return, how happy I had been, how little I had known of sorrow. To what was I going now? To hear him tell me of his father in his own kind way, or what? As I thought of him, his face with its look of sadness rose before me, and the horror of the bygone Spring days returned.

The sorrow seemed to pass away as the outer world melted from my gaze, and the old mossy trees arched over me "voiced with the voice of centuries." I loved the forest; its stillness, its peace ai d freedom, were dear to me; it was good to be here alone in the holy of holies of earth's temple. I leaned against the ivied trunk of a tree, and a wandering breeze swept over my head like the passing touch of a light, cool hand. I stood silent when Brandon appeared.

"So you are the trespasser, Kate?"

"Trespasser! I have a right of way through these woods from time immemorial."

"True! Why didn't you call at the house?"

"I think I came here for peace; the forest has some soothing influence for me as it ever had."

"You loved it as a child," he said, supporting himself against a gnarled trunk. "Is aunt Dorothy well? Any letters from Edith!"

"None; she is not going to write again, I think."

"And Nevil—how is he?"

"Very well. Are you wondering why I came?"

"Not I; you are so often here, and so fond of the woods. I was thinking of you when I heard Nero's bark; but perhaps you want me for something."

"Only to talk, Brandon."

"Only to talk!" he repeated. "What wonderful 'talks' we two have had! No more shadows, I hope? Talk of Nevil, or old days."

"In old days I often came here, Brandon."

"Didn't we pretend to be outlaws, and Robin Hoods, and Ivanhoes? All pleasant memories belong to you, sister of my youth, and you alone can wake them. It is good to look back on bright hours."

"Our early days were bright, brother. Even now you stand apart from all others to me. Like me, you love the past; like me, you recall its joys; like me, you are an orphan!"

He looked at me quickly, but I did not meet his eyes.

"Oh, yes, Brandon! And I love the past; I love to trace, step by step, my life and yours, for they were as one. You know all mine; I know all yours save one part, which is ever veiled."

"And what part is that?"

"You know all mine, and of all who came in it; I can speak to you of those dear to me whom I have lost—my father, my mother. You have spoken of your mother, but not of him. I can remember seeing him before I went to school, and have often wondered why you never spoke of him. Was there something painful about his death, dear, of which you would not tell me?"

"Good Heaven!"

Shall I ever forget the instantaneous change—the look of fear, horror, and dismay, all blended in his eyes? Every vestige of color had left his face, and for one moment he looked thus at me; then, turning away, clasped his hands over his eyes with a sob of agony.

What had I done?—what had I said? Trees and flowers melted into an indistinct mass; the pain at my heart was so intense that I could hardly breathe; fear and terror swept over me like a torrent.

"Brandon!" I cried, in a voice that startled myself, "speak to me for mercy's sake! Dear Brandon, only say a word!"

He held out his hand as though to bid me be silent; but I could not obey him.

"Brandon, do speak! I did not know what I was doing! Only say you forgive me!"

I looked at him with streaming eyes, but he turned now, still white, yet calmer:

"Forgive me, Kate. I should not have frightened you so, but I could hot help it; I was—I——"

"Oh, don't? Only say you forgive me!"

"You did not know that you were touching a wound still bleeding, dear; and I was wrong to let you see it. You did not mean to pain me."

Humbled and sorrowful I stood before him, the quiet words hurting me more than would have the bitterest reproaches.

"There was something about my father's death of which I cannot tell you; I cannot bear to speak of it. It is one of my secrets. Sister you will not ask more; you will not speak of it again. You cannot know the feelings it wakens in my heart—shame, dread, remorse——"

"I wish I had died before I spoke of it, Brandon. I never wounded you until now."

"Never mind," he said, clasping my cold hand; it is over, and we will say no more."

"You know I would not ask you from mere curiosity, or——"

"I know you asked me in your sisterly love and sympathy; but say no more. I shall never forgive myself for having frightened you so."

I leaned against the tree, and closed my eyes; never before had I seen Brandon so affected, and my hand had struck him, my words had so pained him—mine, whose life was made beautiful by his love! How should we meet after this? With embarrassment, coldness, and restraint? He would look on me with something akin to dislike. Why had the hateful words escaped my lips? Sisterly love and sympathy! My face burned with shame.

"I must go. Would you walk with me, Brandon?"

For an answer he gave me his arm, and silently and sadly we passed through the forest. I did not speak until we reached the garden, and a brighter light shone upon us.

"Brandon, do not be angry! Oh, my brother, I had no thought, no intention! Try to think so!"

He laid his hand on my shoulder, and bending, he kissed my forehead for the first time in his life.

"I need not try, my child. But you are making too much of this; it has passed forever, and shall be forgotten To be angry with you is impossible. Nearly all have a buried sorrow, and you unconsciously walked over the grave of mine, that is all. Not another word. I shall be at home to-morrow or the day after."

I gave him my hand, and with the old kind words we parted.

I had come to him in search of peace; but I bore away another burden—another shade was added to my darkness! I might have known that he would keep nothing from me unless he had a strong motive for doing so; and when he had shrunk from all mention of his father, in kindness I might too have been silent. How could I ever seek him again? How speak again of the dear old days?

On arriving home I hastened to my room to efface the tear-stains, I threw off my habit, and thought, as I was thus occupied, over that scene. When the very mention of his father's death had so completely shaken him, I could not have continued, and told him what I had heard. But—was this another proof of his guilt? When my thoughts came thus far I stopped myself. From this hour I would banish that story and all connected with it. I had made this resolution before, and had broken it; this time I would keep it, though my struggle were life-long.

I went down stairs to aunt's parlor, to find Nevil alone, pulling the leaves from a yellow rose; and overjoyed to see him, I hastened in

"You're dreadfully pale," he said,; "and after a ride you shouldn't be. I came to tell you something. I am going away."

"Going away, Nevil? Will you be away very long? You'll write?"

"Yes, but it is pressing business to which I must attend."

"Your mother will be lonely, but I shall go to see her; and your letters, dear, will be so precious."

"Yes; I must say good-bye to day, because I shan't have time to call to-morrow."

Once again we had a "twilight tea," aun talking to Nevil, I watching the birds flying home across the sky; once again I walked with him down the long avenue, the scented wind ruffling my hair, and I pulled a deep red rose as we passed the fragrant bushes. When he said "Good-night" I gave it him; he fastened it in his coat, and before leaving the garden looked back, waving his hand as I stood in the shadows.

So we parted—our first separation—and I saw not our meeting; it lay hidden in the mist of the future, and what it would be I did not know.

To be Continued.

For Women.

CONDUCTED BY MISS RAY CLARK.

MY TRUNDLE BED.

As I rummaged through the attic, listening to the falling rain
As it pattered on the shingles and against the window pane,
Peeping o'er the chests and boxes, which with dust was thickly spread,
Saw I in the farthest corner what was once my trundle bed.
So I drew it from the recess, where it had remained so long,
Hearing all the while the music of my mother's voice in song,
As she sang in sweetest accents what I since have often read,
"Hush, my dear lie still and slumber, holy angels guard thy bed."

As I listened, recollections that I thought had been forgot,
Came with all the gush of memory rushing thronging to the spot;
And I wandered back to childhood, to those merry days of yore,
When I knelt beside my mother, by this bed upon the floor.
Then it was, with hands so gently placed upon my infant head,
That she taught my lips to utter carefully the words she said.
Never have they been forgotten, deep are they in mem'ry riven,
"Hallowed be thy name, oh! Father, Thou who art in heaven."

This she taught me, then she told me of its import great and deep,
After which I seemed to utter "Now I lay me down to sleep."
Then it was with hands uplifted and in accents soft and mild,
Then my mother asked our Father, "Father, do Thou bless my child."
Years have passed, and that dear mother long has mouldered 'neath the sod,
And I trust her sainted spirit revels in the home of God.
But that scene at Summer twilight, never has from mem'ry fled,
And it comes in all its freshness when I see my trundle bed

THE PRESENT MAN.

A CORRESPONDENT says: "We can put up with a good deal of simpering nonsense from a pretty girl." You can, hey? and how does that redound to the glory of man. What in the mental calibre of one who entertains such ideas! Could a gentleman of intellect enjoy the society of a girl who has nothing but her pretty *face*? Can he feel that he has been paid for exerting himself to entertain one upon whom it is all lost. Cares he for no response, save perhaps a simpering "why ain't you awful, or "you horrid man!" (for these words are heard in what is considered fashionably society,) and an empty hollow giggle, from between the beautifully outlined lips, which reminds one of cupid's bow. We have met with those who so thoroughly enjoy *themselves* that no need ever arises for help from an outside source. To such, a companion like the one described would be a *rich gift*.

Our correspondent goes on to say that "a pretty woman knows that she is so," and asks "is it not strange that she never knows when she is the *other?*" and affirms that "a homely damsel must deport herself with straight-laced decorum, or she makes herself ridiculous." What a statement! How many of those who have adorned the literary world were handsome? The sweet spirited and pure minded Cary sisters were far from possessing handsome faces, but who can deny their being radiantly beautiful when lighted up by the soul-life that dwelt within and was always visible to one who looked into their eyes, so gentle and kind; no one would think of applying the word "ridiculous" to them. These do not stand alone; we could mention such almost *ad infinitum*.

But is it a fact that men prefer a pretty face and are ready to "put up"—for a lifetime, remember!—with that which has only the one thing, beauty; to one that is plainer, though crowned with an intellectual forehead, has a bright soul-lit eye, and from whose lips come words indicative of thought and culture, and whose mind is a storehouse of beautiful things.

No! no! we are glad to believe that the day has not yet come when the masculine heart and mind can be satisfied to bestow itself where it cannot *grow* and receive nourishment. Take courage, homely damsel, you will be loved by the strong and *noble*, only see to it that you have as much to give in return.

DESCRIPTION OF CUTS.

FIGS. 552 and 553 — BACK AND FRONT VIEW OF GIRL'S DRESS.—We give cut of a dress for a girl from five to ten years of age, and

FIG. 552.

take pleasure in so doing, because we know how difficult it is for mothers to get the right kind of pattern, one that an old dress can be remodeled by, and made to look as good as new. A princess dress can be converted into such an one as the cut describes, by a little ingenuity. When made from new material, we would suggest navy blue cashmere, and satin the same shade, using this for the puffed piece that forms the back and front; also, for pipings around the overdress or polonaise.

FIG. 553.

Another, somewhat more dressy, can be made of dark maroon, or wine color, with sat in same shade, using pink satin for pipings, all around, and a box pleating about one-half inch wide, when finished, around the bottom edge of skirt.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

Christmas Gifts.

WE have just been to the city and brought back some ideas regarding little gifts that every one wants at the time of "good-will" near at hand.

In one house where we made a call, the lady was very busy making up tidies as a present to a young housekeeper. The centers were of blue satin with wild rosebuds painted by hand. Next came an insertion of lace; then a quilling of ribbon of the same shade as the satin, and a deep lace edging. The latter and the insertion can be either hand-made or bought. Another friend was covering a small table as a gift. The cover was crimson velvet, the border worked in crewels was white azaleas with tassels in white and crimson chenille. This was an elaborate piece of work. A little girl was working very quietly at a satchel of velvet, for wearing at the side, lined with satin, the only cost of the satchel being the cord and clasp, as she had the velvet in her piece bag. She was also making a fichu of lace and velvet for a kind aunt. A young lady who had charge of a library was using her spare moments working in fleecy zephyr a white hood for her first neice, and a pair of tiny mittens to match.

Whisk-holders are plentiful in the decorative art rooms, and easily made. If one has

an artist in the family (and a voice says "Most people have nowadays") it is easy to make up cheap gifts by the aid of a little taste. Christmas cards, hand-painted with an appropriate motto, give pleasure to the worker and bring out many pretty sentiments. Penny fans can be covered with scraps of satin or silk from the piece bag, and gaily painted—the larger size making good hand-screens. A plant in bloom is an acceptable gift to one who loves plants and does not possess many blossoms, while a tastefully arranged assortment of Autumn leaves is sure to find favor. Gentlemen are always pleased with knitted suspenders and slippers. They are things that are sure to be needed for they are always wearing out.

A friend who had spent the Summer at the seaside was busy making up splint baskets, and filling them with the treasures she had collected from sea and shore. "Every-day House" has had a side view of the home taken, and is making it a Christmas card to give to a few friends. This is always an acceptable gift, especially to the absent. For children cheap boxes can be bought and covered with some bright goods, afterward filling them with good candy, or if for a little girl, a stock of gay spools and some needles will be better appreciated. People in the country can often give their city friends pleasure at Christmas time by a gift of something their friends have to purchase at high prices. I remember one year when I did not feel inclined to go to the city, or spend much money, we gathered the various lycopodiums in the woods, some Bitter Sweet and a few wild everlastings, with here and there an acorn or a lichen. These were made into wreaths, anchors, crosses, and, with a pretty Christmas card attached, were well received, and valued more than if we had bought some trifling gift with money.

A pretty basket lined with moss and filled with rosy apples sent to a city friend is sure to find favor. In the hall of one house I saw a bag made of fine lace used for holding a clothes-brush. It was a gift of last Christmas, as was also a knitted skirt and slippers in a pretty box sent to an invalid lady. Sets of dinner cards hand-painted are very pretty, as are some of the mats for finger glasses done in charming Kate Greenaway figures. Where there is a fret sawyer, what pretty things can be made in brackets and picture frames, and I know a family of boys who with a turning lathe made a set of croquet mallets and balls that were valued highly as a Christmas gift. And in your gifts do not forget the poor—to children who have not much pleasure or riches the present of a last year's toy will carry with it a message of "good will."

HINTS.

WHEN ice is required at night for a sick person, break it into small pieces, and if it be scarce and care must be taken to prevent its melting, put into a soup plate, cover with another plate and put between two feather pillows.

Never wear a good woolen dress into the kitchen without the protection of a large apron.

No flannel that has not been carefully washed and is not perfectly soft and fleecy should ever touch the skin of an infant.

We never had any patience with a mother or nurse who would stick pins carelessly into her dress, collar or ribbon thereby inflicting painful wounds on her innocent victim. Not a pin excepting a safety pin should be used about a child, and when buttons will perform the office of pins they should be made to do so.

To mothers, aunties or sisters who do up the school luncheon for the youngsters; pray make it as attractive in appearance as possible. There is truly nothing very inviting about a thick piece of dry bread and butter and a cookie, all rolled in a piece of coarse brown paper, washed down by a drink from the cup that "goes the rounds." Such a lunch will often impair the appetite of a fastidious or delicate child and he will go without rather than eat it. A little care in the cutting of the bread; the doing up of the cookies or crullers in tissue or white paper; the sauce or custard put into a pretty cup and all wrapped in a clean white napkin within a *bright* tin pail, or, better still, a pretty lunch basket, will by the pleasure it gives the child, well repay the extra care and thought.

BUTTER LADLE PAPERS.

MAY MAPLE.

"WHAT miserable butter Mrs. Long does make!" was the exclamation of Mrs. Gray, as we wended our way homeward one Summer evening from the house of our mutual friend. "I have often wondered why it was, for in most things Mrs. L—— is as tidy about her work as are the generality of housewives."

Now, Mrs. Gray was not given to fault-finding or general gossip, but we were old school-mates and confidential friends, and sometimes expressed our thoughts in strong language.

The butter placed upon the tea table was white, frothy stuff; quite unworthy the name, and I had never seen anything better on Mrs. Long's table when of her own manufacture. But there came a time when to me, at least, the mystery of that "miserable butter" was solved, and I have no doubt a like fault is the cause of hundreds of pounds of the miserable stuff that not only finds its way to the table at home, but is thrown upon the market as well. Several weeks later I had occasion to call on Mrs. Long, and was invited to take a seat in the kitchen, which was as clean and airy as need be, until she could put the cream in the churn, that Helen might do the churning before going to school. While we were talking I was taking observations, or, as our old Professor used to say, "taking field notes," for I like to learn modes and manners of doing work.

"Have you done one churning this morning?" I inquired, as I saw the lady turning very sour buttermilk from the old-fashioned, wooden churn.

"Oh, no!" said she, laughing at the idea. "I seldom have occasion to use the churn oftener than once a week, unless we have a run of company, and get out of butter. We have but one cow and, of course, do not have large quantities of cream on hand at any time."

The conversation soon turned upon other subjects, but I continued to take notes mentally. The cream that had been nearly or quite a week collecting was put into that sour buttermilk churn, the sour dasher and soiled, musty cover were soon adjusted, and the work of bringing the butter was ready for Helen, while her mother and myself adjourned to the cool, pleasant sitting-room, where order and neatness reigned. In something less than half an hour Helen called her mother to take up the butter; and I arose to take my departure. But people in farming districts are seldom formal, and when Mrs. L. offered to go walking with me if I would wait till she could take the butter out of the churn and salt it, I could not well refuse, so we returned to the kitchen and I seated myself near the door that opened into the garden.

"What desperate weather to make butter," said Mrs. Long, "the cream doesn't more than half separate, and the little butter that does come, is very soft. I shall be glad if the weather ever does get cooler, then we can make more butter with less labor; but by that time I suppose the butter will be bitter with the herbs the cows get by the side of the fences."

I did not tell my friend that the reason why she made poor butter and but little of it, was because she did not skim the milk as soon as it was sour; or that she ought to wash and scald her churning utensils immediately after using them. Even the butter bowl, containing the last batch of butter, had stood for several days in the cellar, and this was also used without washing, and it was damp and musty as I very well knew; but the new butter was put into it and salted and put back in the cellar before a quarter of the buttermilk had been worked out. To me there was no longer any wonder that poor butter was the rule and not the exception in that dining-room.

CULLINGS.

CARROTS make excellent pies when sifted and made up like squash or pumpkin.

The taste of iron can be taken out of new kettles by boiling hay in them for several hours.

In starching black calico use glue, or if starch is preferred, make it with coffee instead of water, and iron on the wrong side.

To remove fruit stains from the hands, rinse in clean water and rub tartaric acid on the discolored places.

If things will get scorched in ironing, the discoloration can be removed by laying in the sunshine, if not too deeply burned.

Light kids may be cleaned in this way: put on one glove at a time and with the ungloved hand wring a clean towel through skim-milk and wipe off the soiled glove.

Sweet clover, lavender or rose geranium leaves, put away into bureau drawers are a sweeter perfume than many bought extracts.

A. L. J.

Fernwood Butter.

We received from Fernwood Farm, Cazenovia, N. Y., two pounds of butter made from imported Guernsey cows. The butter is formed into little bricks, three-and-a-half inches long, two-and-a-quarter wide, not quite two inches thick and known as "Fern Leaf Print." Accompanying the butter was the statement: "Made on hay and uncolored." It is of a true, golden color, and, as to quality, it seems to us perfect in all respects.

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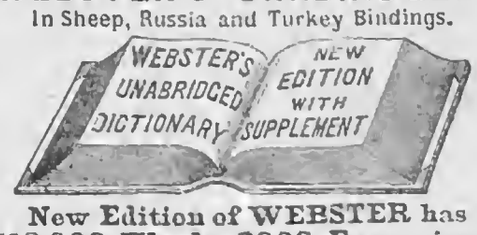

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News of the Week.

HOME NEWS.

MONDAY, Dec. 5, 1881.

THE GUITEAU TRIAL.—And still it continues. On Monday the prisoner was put on the witness stand to identify certain letters that he had written, and on Tuesday his regular examination began. Several experts in insanity watched, and listened to Guiteau very attentively to discover any signs of insanity. Judge Porter for the prosecution, conducted the cross-examination of Guiteau. Throughout the prisoner insisted on making the Deity responsible for his act, and under all the severe questioning of Judge Porter he never deserted the position he had taken on the question of his own responsibilty. Whenever the words "murder," "malice" "intent to kill" were introduced the prisoner almost invariably refused to reply. On Friday the cross-examintion was closed. Though Guiteau was driven to the wall several times by the sharp questioning of Judge Porter, he maintained to the end that the responsibility was God's not his own. Mr. Scoville then proceeded with the re-direct examination of Guiteau and other witnesses.

A silver star marks the spot on the floor of the Baltimore and Potomac Railway station where President Garfield fell when shot. A beautifully carved marble tablet was placed on the wall above it on Wednesday. An eagle, holding in its claws arrows and laurels surmounts the stone, on which is inscribed: "James Abram Garfield, President of the United States, shot July 2, 1881."

At Rock Island, Ill., the coroner's jury in the case of the steamer Jennie Gilchrist wrecked a short time since, finds that the boat was run at night in violation of law. She was properly equipped, and the engineer did his duty, yet the master and pilot were incompetent. There was no lookout required by law and no word was sent to the passengers of their danger, and no efforts made to save helpless women. The action of the mate, James Heir, in not making an effort to save the women and children is denounced as cowardly. The jury declares the duties of master and pilot should not be vested in one person on any steamer authorized to carry passengers.

At Decatur, Texas, the court house burned, Monday; loss $15,000. All the cattle brand records of the county were destroyed. It is feared this will throw the cattle business into inextricable confusion and lead to many crimes of violence. It is suspected that the fire was started by persons interested in having certain brand records lost.

A memorial of the late Thomas A. Scott is to be raised in Philadelphia in the shape of a handsome church, the pews, of which are to be free.

"Doing Wonders for Me."

A lady at Royalton, Vt., says, after using Compound Oxygen for three weeks: "I was very weak and low when I first inhaled. I had to be helped to rise from the bed, and could only sit in the chair while inhaling. The second night after inhaling I rested better than I have for two years. Ever since, I have gone to sleep early; rested well and waked early, feeling rested and refreshed. Have been gaining in strength; can now walk about some, and sit up nearly half the time. I rode two miles on Saturday, and was not as tired as I expected to be. My friends think it is doing wonders for me." Treatise on Compound Oxygen, *sent free*. DRS. STARKEY & PALEN, 1109 and 1111 Girard Street, Philadelphia, Pa. —*Adv.*

AGRICULTURAL NEWS.

MONDAY, DEC. 5, 1881.

THE following items of agricultural news are condensed from telegrams received here from Friday noon December 2, to noon today: Boston, Mass.—No improvement in flour market. Demand light; prices unchanged..

Philadelphia, Pa.—Thursday and Friday cotton went up ⅛@¼c, and prices are now firm with an active market. General tone of the wool market firm and quiet. Good demand for choice lots of fruit. Butter steady; creamery, Extra Pa., 41c; do. Western, 41c; good to choice, 36@39c; N. Y. extra tubs, 32@33c. Eggs in good demand at 33@34c for Pa., and 31@32c for Western. Potatoes firm. Green salt hides dull; a decline of ¼@½c per pound. Calf skins in demand. Choice sheep skins scarce and prices higher. Little or no variation in flour or grain since last advices, though wheat is a trifle higher, and corn too a shade stiffer.................. ....

Utica, N. Y: Butter: Creamery 32@35c. Cheese 12@14c.........Cincinnati, Ohio: Weather still unfavorable for pork packing, but prices are well sustained. Common and light hogs $5@6.50: sales in the week 13,000; exports light. Business in grain larger; prices weak—No. 2 red winter wheat $1.38. No 2. mixed corn 65⅛. No. 2 mixed oats, 48¼@49c. Rye $1.04½. Tobacco in good demand with satisfactory offerings. Transportation lines south have advanced prices a little........Louisville, Ky.: Leaf tobacco steady; bright grades strengthening. Country collections slow; many merchants paying more attention to collecting debts than to the sale of goods........Chicago, Ill: An improved speculative demand in grain and provisions. Receipts of breadstuffs during the week 79,359 barrels flour; 194,711 bushels wheat; 822,498, of corn; 371,377, of oats. Shipments, 60,366 barrels flour; 175,994 bushels of wheat; 898,242, of corn; 152,805 of oats—a great falling off in the last. Cattle and hogs in good supply. Receipts of hogs for Nov. 250,000 less than for Nov. last year........Detroit. Mich: Cold weather has made country traveling better and augumented interior traffic. Prices of staples firm and likely to be. November was in wheat the biggest speculative month of the year, sales of options aggregating 12,800,000 bushels. The month's receipts were the smallest reported, being 516 cars against 2,600 last year. Receipts of corn and oats were the largest in five years................ Milwaukee, Wis.—Rainy weather and very bad roads still continue to materially retard the shipment of merchandise and crops. Wheat market unsettled and prices have been fluctuating sharply. Receipts and shipments of grain very light. The majority of mills continue idle. No. 2 Milwaukee Soft wheat $1.31; No. 3 Milwaukee, $1.11½. Corn firm, No. 2, 61c. Oats higher, No. 2, 43½@44c. Rye, 97c. Barley No. 2, Spring 97c........St. Louis, Mo.—Excellent weather during the past week has enlivened all sorts of business. Provision market beginning to show strength. Packing hogs have sold slowly on account of warm weather; but the present cold weather has made the hog trade brisker. Cattle market still dull. Grain is tending upward and flour is a trifle higher. Tobacco very quiet. Prices compared with last year's are good. A few comparisons:—Twelve months ago medium, wrapping leaf tobacco was worth $9.50@$12.50; now it sells for $15@$18. Choice flour stood at $4.90@5.05; now it brings $6@$6.25. No. 2 white mixed corn brought 39c. then; now, 65c., and a few weeks since 71½c.@72c. No. 2 red wheat was then sold at $1@$1.02; it sells now at $1.34 and has been higher. No. 2 oats then, 29c.; now, 44¼c. Mess pork then, $14.25; now, $17.25. Creamery butter then, 30c.@32c.; now, 36c.@37c. Potatoes then, 45c.@50c.; now, $1.15@$1.20 per bushel. Shipping steers the same now as then. Choice mutton sheep then, $3.50; now, $4.50. Packing hogs then, $4.65; now, $6.10............... .... Minneapolis, Minn.: Weather a decided improvement on that in any former week in two months. Ground frozen solid and country roads in fine condition, causing a free movement of country produce. Condition of wheat in elevators unsatisfactory. A large percentage will not inspect at as high grade as the receipts issued. Calls for heavy losses will fall on somebody, owing to lax inspection when received and damp weather, which prevented curing in store. Buyers refuse to purchase warehouse receipts. Good, sound wheat in demand. Other produce moving freely at high prices. An increased number of hogs are being marketed at high figures, and these sales with others put a great deal of money in the hands of producers. Flouring mills more than two-thirds shut down, reducing the daily production of flour to about 8,000 barrels. At 4 o'clock yesterday (Sunday) morning a fire broke out at the Pillsbury flouring mill, destroying that as well as the Excelsior, the Minneapolis and the Empire mills, together with a cotton mill. Capacity of the burnt mills, 2,500 barrels a day; that of all the mills here, 25,000 barrels a day. Total loss about $416,000. Four men certainly killed and at least five severely hurt......................

It is useless to groan with rheumatism when a bottle of St. Jacobs Oil will cure it, as everybody knows.—Columbus (Ohio) Daily Times. —*Adv.*

Prof. Horsford's Baking Powder.

M. H. HENRY, M. D., the celebrated family physician of New York, says: "The use of Prof. Horsford's Baking Powder, offers admirable means for the introduction of a valuable element into the system, with the food of every-day life.—*Adv.*

Why are you Bilious?

Because you have allowed your bowels to become costive, and liver torpid. Use Kidney-Wort to produce a free state of the bowels, and it will stimulate the liver to proper action, and cause new life in the blood.—Hawkeye.—*Adv.*

Lydia E. Pinkham's Vegetable Compound will at all times, and under all circumstances, act in harmony with the laws that govern the system. Address Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for circular.—*Adv.*

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The superiority of BURNETT'S FLAVORING EXTRACTS consists in their perfect purity and strength.—*Adv.*

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 3, 1881.

BEANS AND PEAS.—Standard white beans have taken an upward move again and a fair rate of trade is reported. Good lots of foreign beans are coming. German are quoted regularly at $2.65@2.75. Some Italian and Russian stock was showing; peas of all kinds above steady.

Peas, green, prime, in bbls., $1.65@1.70; green, fair to good, $1.40@1.60; Southern b. e., per 2-bu. bag., $3.45@3.50.

Beans, marrow, prime, $3.45@3.50, fair to good, $3.25@3.35; medium, choice, $3.15@3.20; fair to good, $2.75@3.00; pea, choice, $3.20@3.25; fair to good, $2.90@3.00; white kidney, choice, $3.40; good, $3.20@3.30; red kidney, choice, $2.85@2.90; fair to good, $2.50@2.75: turtle soup, $1.75@1.80.

Receipts of beans for the week, 8,000 bush.

Exports do. 235 bbls.

BUTTER.—Prices settled into a very strong position early in the week, and choice and fancy grades have ruled quick at the advance. High rates have perceptibly enlarged the receipts and sellers' look upon the next few days as a test period for the endorsement of the new scale. There are reputable dealers who predict a dull December unless prices break into more popular ranges. Retailers complain that their business does not show the volume it should at this date.

Creamery, extra choice Elgin and Iowa, 41@42c.; good to prime, 37@40c.; fair to good, 33@37c.; poor, 20@25c.; sweet cream, fresh, 34@38c.; State dairy, half tubs and pails, ch. fresh, 35@37c.; good to prime, 32@34c.; fair to good, 28@32c.; Welsh tubs, choice fresh, 34@36c.; good to prime, 31@33c.; fair to good, 27@31c.; poor to fair, 20@25c.; State dairies, firkins and tubs, choice, 32@33c.; good to prime, 29@30c.; fair to good, 27@29c.; firkins, dairies, choice, 31@32c.; good to prime, 28@30c.; fair to good, 25@28c.; poor to fair, 18@25c.; Western imitation creamery, 30@36c.; dairy, fresh, choice, 32@34c.; good to prime, 27@32c.; fair to good, 20@27c.; factory, late made, choice, 25@28c.; late made, good, 16@18c.; fair, 14@15c.; Iowa, fine June, 16½@17c.; Ohio and Ind., June, 15½@16½c.: June, fair to good, 15@15½c.; factory, very poor, 13@14c.; roll butter, good to prime, 24@26c.

Receipts for the week, 31,450 pkgs.

Exports do. 1,900 do.

CHEESE.—Early in the week the market was animated by a number of sales to exporters but prices even for best late marks had to be named as extreme. Fine stock is scarce; an unusual supply of stock—weakened cheese has come forward, and the fact has intensified the noted dullness of the past.

State f'ty, fine, Sept. 12½@12¾c.; good to prime, 10½@11¾c.; fair to good, 9½@10½c.; poor to fair, 8@9c.; Ohio factory, flat, fine mild, 11¾@12c.; good to prime, 10@11c.; fair to good, 8@10c.; poor to fair, 6½@8c.; creamery, partly skimmed, choice, 8@8½c.; poor to fair, 4@6c.; creamery, partly skimmed, choice 8@8½c.; export styles 5@6½c.; skimmed 2½@3c.

Receipts for the week, 70,329 bxs.

Exports do. 41,030 do.

Liverpool cable 63s. 6d.@65s.

Steam to Liverpool, 55@63s. for Summer to Fall makes.

COTTON.—The week has been a fluctuating one, but there have been no violent reactions, the sway being from 2 to 5 points and closing prices show some gain for the week.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 7-16	9½	9½
Strict ordinary	10	10 5-16	10 5-16
Good ordinary	10 13-16	11⅛	11⅛
Strict good ordinary	11¼	11 9-16	11 9-16
Low middling	11 11-16	12	12
Strict low middling	11 15-16	12¼	12¼
Middling	12⅛	12 7-16	12 7-16
Good Middling	12½	12 13-16	12 13-16
Strict good middling	12¾	13 1-16	13 1-16
Middling fair	13¼	13 9-15	13 9-16
Fair	14	14 5-16	14 9-16

STAINED.

Good ordinary	9	Low Middling	10 11-16
Strict good ordinary	10	Middling	11 11-16

Average of futures:—

December, 12.07c.; January, 12.25c.; February, 12.44c.; March, 12.63c.; April, 12.80c.; May, 12.91c.; June, 13c.; July, 13.09c.; August, 13.19c.; October, 11.85c.

Receipts for the week, 84,107 bales.

Exports do. 13,180 do.

DRIED FRUITS.—For apples the tendency is lower, and holders would be willing to meet buyers on lower bids for either evaporated or sun-dried. Peaches are in few hands and nominally firm. Small fruits are steady.

Apples, evaporated, rings, f'y 14c.; fair to prime, 12@13c.; N. C. new, sliced, fancy, 7½@8½c.; fair to choice, 6@8c.; Southern quarters, choice, 6@6½c.; Southern, fair to prime, 5¼@6c; do. ordinary, 5@5½c.; State, old, fine cut, choice, 6¼@6½c.; quarters, do. 6@6¼c.; small lots, 6¼@6¾c.; Ohio and Mich. choice, 6¼c; Western, fair to good, 3¾@6¼c. Peaches, evaporated, peeled, old, 35@37c.; unpeeled, new, 16@17c.; N. C. peeled, fancy, 23@24c.; choice, 22@—c.; Ga. 21@22c.; Southern, peeled, fair to good, 18@20c.; unpeeled halves, 6¾@7c.; halves, Tenn. ——c.; quarters, 6½@6¾c.; Plums, State, black, 17@17½c.; Southern Damson, 14c. Blackberries, 13c. Cherries, Southern, dry, 18@19c. Raspberries, pr 28c. Huckleberries, pr 14½@15c.

EGGS.—Receipts for the week, 7,008 bbls.; do. last week, 12,235 do. Supplies are light, and there is enough demand to keep prices firm, especially for strictly fresh parcels. There is also a good use of stored fresh and reliable limed stock.

New J'y L. I. and near by 34@35c.; Pa. and State fresh, 29@33c.; Western fresh, 30c.; Western and Canadian held, prime, 28@28½c.; other, 24@27c.; State, limed, 24c.; W. and Canadian 21½@23½c.

FLOUR.—Low or export grades have been wanted all the week at better prices, but such low lines have shown liberally in the receipts. High grades are fairly plenty and not specially changed.

No. 2, $3.75@4.75; State and Western, superfine, $4.50@5.25; city mills, XX, $6.90@7.35; Spring wheat, extra, $5.25@5.60; Spring XX and XXX, $5.65@5.75; patents $6.50@8.50; Ohio round hoop shipping, $5.30@5.90; trade brands, $5.10@5.50; St. Louis extra, $5.50@6.00; do. double extra, $6.20@6.50; do. family, $6.65@7.00; Southern extra shipping, $6.00@6.40; do. XX and family, $6.50@7.25. Rye flour, superfine, $4.90@5.30; buckwheat flour ₩ 100 lbs. $3.75@4.00. Corn-meal, Brandywine, ₩ bbl. $3.75@3.85; do. Western. $3.35@3.75. Wheat feed, 40 lb ₩ ton, $19.00@20.00; 60 lb ₩ ton, $19@20; 100 lb ₩ ton. $22@23.

Receipts of flour for the week, 97,013 bbls.; corn-meal 2,660 do.

Exports of flour for the week, 72,150 bbls.; corn-meal 4,275 do.

FRESH FRUITS.—Exports of apples for week, 4,300 bbls. Choice apples are firm, and few would be released from store at the quotations. Common lots slow and cheap. Cranberries rule strong. Florida oranges improving in quality.

Apples, Spitzenburg, ₩ bbl. $3.50@4; Greening, fancy, $3.50; Baldwin, do. $3.50; Baldwin, Greening and Spitzenburg, fair to prime, $3@3.25; mixed lots, State prime, $2.75@3.25; do. fair to good, $2.25@2.75; seconds, $1.75@2. Pears, Boston, bush. boxes, poor to good, $1@3.50; Lawrence, State, ₩ bbl. $2.50@4.50; Vicar of Wakefield, $2.50@3.50; cooking, $2@3. Grapes, Catawba State, case of 18 3-lb. bxs, 3.50@$4; bskts, ₩ lb. 7@8c.; Isabella, State bskts, 3@3½c. Florida oranges, half bbl. bxs, choice, $3.75@4; good to prime, $3@3.50; inferior, $2@2.50; thirds, choice, $2.75; fair to prime, $2.25@2.50; inferior, $1.50@1.75. Cranberries, Cape Cod, fancy, large, ₩ bbl. $11@11.50; good to choice, $9@10; poor to fair $6@8; ₩ crate, $3@3.75; New Jersey fancy, $3.12@3.25; fair to prime, $2.50@3; poor to fair, $2@2.50; frosted, 50c.@$1.

Peanuts, Va., hand-picked, ₩ lb, 6¾@7c.; fancy, 6¼@6½c.; extra prime, 6@6¼c.; good to prime, 5¼@6c. shelled, 5@6c.; pecan nuts, 10½@11½c.; hickory, shellbark Northern, ₩ bu. $1.00@1.12; Western, $1.00; bull nuts, 40@50c.; black walnuts, 50@60c.

GRAIN.—Quite a steady export demand for wheat has prevailed and prices are higher at the close. The market obtains some strength, as well by the strong "bullish" feeling at the West and moderate receipts at this point. Corn has had an active trade for export and with contracts to be covered for November prices are of an upward tone. Oats strong and active.

Wheat, Spring, $1.23@1.39; Spring No. 2, $1.32@1.38; red Winter No. 2, $1.41½@1.42½; red Winter, $1.33@1.31; white Western and State, $1.35@1.42. Rye, 96c.@$1.01. Oats, white No. 1, 53½c.; No. 2, 51½@51¾c.; No. 3, 50c.; mixed, No. 1, 49½c.; No. 2, 49¼c.; No. 3, 47@48½c. Corn, Western, mixed, 66@71c.; do. No. 2, 70½@71c. yellow, 70@73c.; white, 71@76c. Barley, Canada, No. 1, $1.10@1.12; do. "bright," $1.14@1.15; State, 4-rowed, $1; 2-rowed, 88c. Buckwheat, 95@98c.

Receipts for the week, wheat, 696,232 bush.; corn, 780,483 do.; oats, 198,446 do.; rye, 71,666 do.; malt, 62,330 do.; barley, 448,000 do.

Exports for the week, wheat, 630,650 bush. corn, 791,300 do.; oats, 1,600 do.

HAY AND STRAW.—Exports for week 3,450 bales. The market is lower. Receipts of hay by boat and rail have been excessive and a large stock is accumulating. Better trade and firmer may occur after the close of navigation. Straw steady.

Prime Timothy hay, ₩ 100 lbs., $1.05@1.10; medium Timothy, 80@95c.; shipping grades, 65@70c.; clover mixed, 70@80c.; all, 60@65c.; Straw, long 75@80c.; short 55@60c. oat and wheat straw, 45@50c.

HONEY.—Demand moderate. Strained honey quoted at 9@10c. for white, pure, and 7@8c. for dark.

White clover, fancy, 1-lb bxs, ₩ lb, 19@20c.; do. 2-lb bxs, 18c.; good to choice, 1@2-lb bxs, 15@17c.; buckwheat, 1-lb bxs, 14@15c.; 2-lb bxs, 12@14c.

HOPS.—The Producers' Price Current says: "The market is decidedly dull; brewers continue indifferent and exporters are not in the market. Some lots are arriving on commission and offering at current rates but cannot be sold without naming concessions. Some lots of German hops arrive and as the continental markets are reported lower there is some apprehension of farther considerable arrivals. London mail advices to Nov. 15 report strictly choice American in small supply and fair demand; £8 8s. obtained in a few rare instances. Shipments of strictly choice are advised, and of sound useful low grades to be used in place of old, which are very scarce. Grades a little below choice will, it is thought, find slow sale."

Crop of 1881, choice, 28c.; good to prime, 25@26c.; fair to good 22@25c.; eastern, 18@26c.; 1880, good to prime, 18@22c.; poor to fair, 10@15c.; 1879 fair to prime 7@15c.

Receipts for the week, 1,767 bales,

Exports for the week, 419 do.

MILK.—Sales of commission milk have again ruled steady at very good prices. The average was $2.93 per can of 40 quarts; sales largely at $3 per can.

POULTRY AND GAME.—Supplies of dressed poultry have been fairly abundant, but not of a quality to promote quick sales. Prices are lower for all lots, Western showing the weakest range. Settled cold weather is needed, however, to give snap to trade, as stock will unpack more attractively.

Turkeys, Phila. pr, 15@16c.; Jersey pr. 13c; State and W'n pr, 11@12c.; f'r to g'd, 10@11c. Chickens, Phila. prime, 14@15c.; Bucks Co. do. 13@14c.; Jersey, do. 12@13c.; State and Western, do. 10@11c. Fowls, Phila. prime, 13c.; Bucks Co. 11@12c.; New Jersey, do. 10@12c.; State and Western, do. 9@10c.; fair to good, 8@9c.; inferior, 8@10c. Ducks, Phila. prime, ₩ lb, 14@16c.; Jersey and Bucks Co. 13@14c.; State and Western, 12@13c; fair to good, 10@11c. Geese, Phila. dry-picked, prime, 12@13c.; Jersey and Bucks Co. 11@12c.; State and West'n, 10@11c.; fair to good, 8@9c. Squabs, white, ₩ doz. $2.50@2.75; dark, $1.50@1.75.

Live poultry hardly pays for transportation. The supply has run large; high corn perhaps induces many to thin out coops.

Chickens and fowls, J'y, State and Penn. ₩ lb 9@10c.; Western and Southern, 8@9c. Roosters, old, 5c. Turkeys, Jersey and Penn. 9@10c.; Western, 7@9c. Ducks, Jersey, extra-large, ₩ pair, $1@1.25; Jersey, New York and Penn. 60@75c.; Western and Southern, 45@75c. Geese, Jersey, $1.50@2; N. Y. and Penn. $1.25@1.62; Western mixed, $1@1.37. Pigeons, 20@30c.

Canvasback duck, Havre de Grace $2.75; choice Western, $2.50; Norfolk, $2.25@2.50; redhead 80c@$1 for Western and 50@75c. for Norfolk. Mallards are seldom good enough to exceed 40c, but a few choice go up to 50c. Blue winged teal are quoted at 40@50c. green winged at 30@40c, and common ducks at 25c. all per pair. Rabbits in good demand; a few choice Jersey sold at 50c. Venison in fair demand and steady.

Quail, choice, ₩ doz. $1.75@2.00; inferior, $1.25@1.50; grouse, choice, ₩ pair 87c@$1.00; soft, 65@75c.; partridges, State and W'n, pr. 87c@$1.; Eastern & Minn 85@87c.; soft, 65@75c.; woodcock, choice, 75@87c.; inferior, 65@75c.; rabbits, 40@45c.; venison, Minn. short saddles, ₩ lb. 17@18c.; State & Wn, 14@16c.; whole deer, 11@12c.

PROVISIONS.—Quotations for hog products are on a good foundation there being free shipments abroad of both lard and bacon. The Cincinnati Price Current estimates a decrease of 1,000,000 lbs. of pork for this year compared with the packing of '81.

Pork, prime mess, ₩ bbl. $16.75@17; extra prime, ₩ bbl. $14.25@14.50; Western mess new, $17.75@18.00. Lard, steam Western, ₩ 100 lbs., $11.40@11.45; prime city, $11.30@11.35. Hams, smoked city, ₩ lb. 12½@13c.; pickled Western and city, 9¾@10¼c.; Shoulders, smoked city, 8¼@8½c; pickled, 7¼@7½c. Rib bellies, pickled, 9¼@9¾c. Bacon, long clear Western, 9¼@9½c. Beef, Western mess, ₩ bbl. $12; packet, $14.50@15.00; India mess, ₩ tcs. $24.00@27.00. Beef hams, ₩ bbl., $21.00@21.50.

Receipts for the week—Beef, bbls. and tcs. 2,350; pork, bbls. 8,330; cut-meats, pkgs, 38,270; lard, do. 15,150.

Exports for the week—Beef, bbls. and tcs. 2,100; pork bbls. 3,823; cut meats, lbs. 5,083,662; lard do. 4,291,478.

RICE.—Quotations are:

Carolina, choice, 7¾@8c.; good to prime, 7@7½c.; common to fair, 5¾@6¾c.; Louisiana, good to prime, 7@7½c.; low fair to fair, 5½@6¼c.

SEEDS.—Clover is held about ¼c. higher, but moves very slowly. Dealers ask about ¼c. above quotation for lots selected for export but make little progress in selling.

Clover, Western, 1881, car lots on track, 8¼@9c.; Timothy. job lots in store, $2.85@3.25; Flaxseed, American, rough, ₩ bu, $1.62½@1.65.

SUGAR.—We quote as follows:

Crushed, per lb, 10c.; powdered, 9¾@10c.; granulated, 9¾c.; cut loaf, 10@10¼c.; confectioners' "A," 9¾c.; coffee "A," 9½@9¾c.; off "A," 8¾@9c.; white extra "C," 8¾@8⅞c.; extra "C," 7⅞@8¼c.; "C," 7½@7¾c.; yellow, 7@7¼c.

VEGETABLES.—Exports of potatoes for week 1,801 bbls. Receipts of potatoes are light and prices are firm for choice. Under grades slow as many are in stock.

Potatoes—Early Rose. N. S., ₩ d.-h. bbl., $2.75@3; State. $2.75@3.00; bulk, ₩ bbl. $2.62@2.87; Prolific, N. S. per d.-h. $2.62@2.75; bulk ₩ bbl. $2.50@2.75; Snowflake, State, ₩ d.-h. bbl. $2.75@2.87; bulk, ₩ bbl. $2.62@2.75; ₩ d.-h. bbl. $2.75@3; bulk, ₩ bbl. $2.62@2.87; Burbank, d.-h $2.75@3; bulk, ₩ bbl. $2.62@2.87; Peachblow, ₩ d.-h. bbl., $2.75@3.00; Peerless, bulk, ₩ bbl., $2.25@2.50; Mercer P. E. Island ₩ bbl. $1.75@2.25; sweet potatoes, Va. yellow, ₩ bbl. $4@4.25; Del. River, pr. $4.50@4.75; Jersey, ₩ bbl. $3.75@4.00; Inferior, $2.50@3.50.

Onions steady but rather quiet. Squash scarce and firm. Cabbage selling high when of choice quality. Cauliflower very irregular.

Onions, white bulk, ₩ bbl. $3.00@4; yellow. $2.25@2.50; red, east, $2.25@2.50; red Chester, $2@2.37; squash, Marrow, ₩ bbl., $1.00; Hubbard, $1.00; cabbage, ₩ 100, $8@18; beets, L. I. ₩ bbl. $2.25@2.50; carrots, $1@1.25; turnips, Russia, L. I. $1.75@2; Canada, $1.50@1.62; cauliflower, fancy, $5@7; average quality. $1.75@2.50; inferior, 50c@$1; celery, ₩ doz., $1.75@2.00.

WOOL.—The market is only moderately attended, some of the chief manufacturing buyers indicate that they will wait until New Year opens before they will carry larger stocks.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Dec. 3, 1881.

BEEVES.—Receipts for the week, 12,460 head; do. last week, 13,192 do. Sales have been large during the week and the close was a dragging one. Some 24 car loads of Texans and Colorados sold at 7½@8½c. to dress 55 lb, and very common to choice native steers took the range of 7¾c. to dress 55 lb to 12½c. to dress 57 lb. Cattle for export are slow; the passage at this season is apt to be rough and detrimental to the quality of the beeves.

MILCH COWS.—The demand is good at a very paying range—$40@80 ₩ head.

SHEEP AND LAMBS.—Receipts for the week, 48,920 head; do. last week, 33,123 do. The retail meat markets are dull. The small business reported up to noon was 3¼@5½c. for poor to prime sheep and 5@6½c for poor to very good lambs. The offerings con-

tain many culls which farmers wish to avoid wintering.

SWINE.—Receipts for the week, 33,467 head; do. last week, 37,134 do. Live steady at full rates.

Hogs, New Jersey dressed, light, 8½@9c.; medium, 8@8½c.; heavy, 7½@7¾c.; city dressed, 7¾@8c. Live hogs, corn-fed, ₹ 100 lbs, $6@6.50. Pork tenderloins, ₹ lb, boxed, 11½@12½c.

VEAL CALVES.—Supplies of dressed are more liberal and prices are not so stiffly quoted for live.

Hog-dressed country, choice, 13@13½c; fair to good 11½@12½c; grass, 5@6c; live calves, N. J. prime to choice, 9½c.; do. State, 9@9½c.; fair to good, 8@9c.; poor to fair, 6@8c.; Mount Hollys, 160 to 220 lbs 9@10c.; 220 to 280 lbs 8@8c.; 280 to 400 lbs 6@8c.; live calves, fed, 4@4½c; grass, 3½@3¾c

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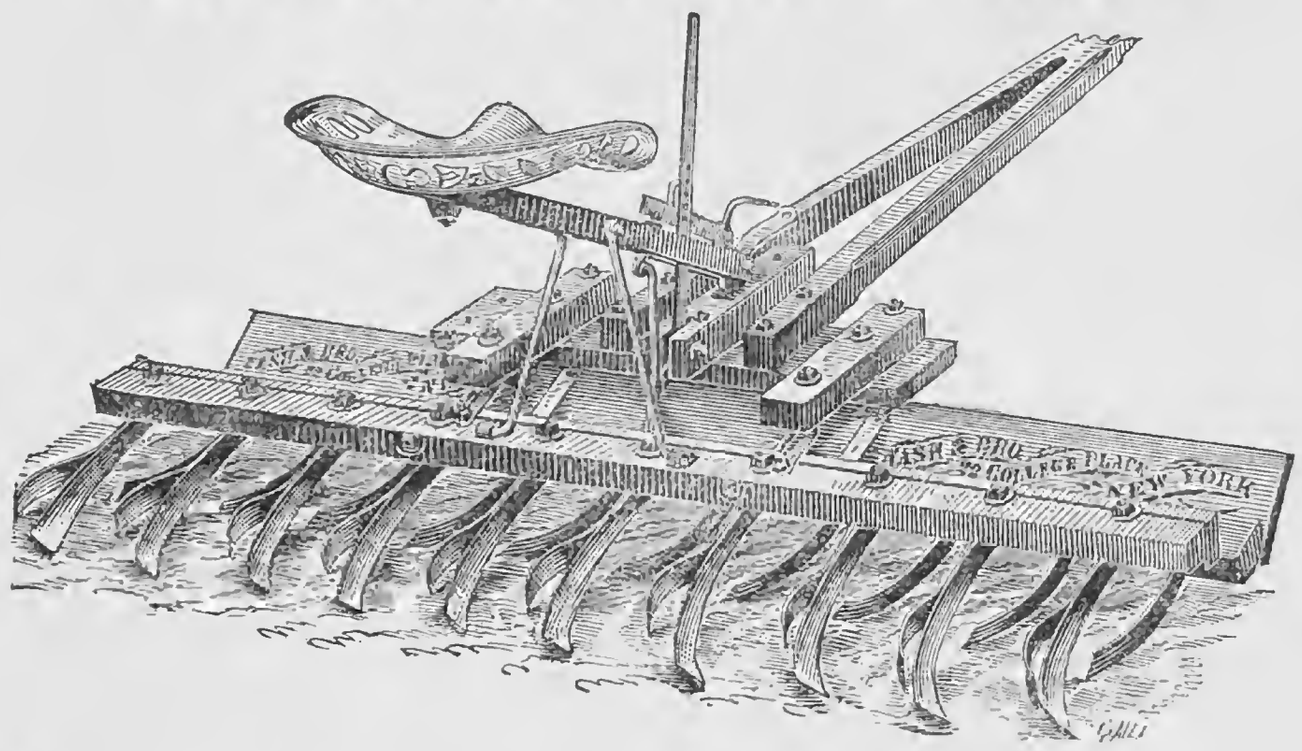

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REGULAR DISCUSSION
OF THE
Youths' Horticultural Club.
OF THE RURAL NEW-YORKER.

TOPIC: "Winter Flowers for the Parlor; How and What to Cultivate."

THE third monthly meeting of the Horticultural Club was called to order, Uncle Mark in the chair. He remarked, concerning "Winter Flowers," that no home was quite complete in Winter without the presence of beautiful plants and flowers. How much we enjoy them in the Summer time, when every breeze is laden with their fragrance, but if we can keep with us, through the cold and snowy Winter, these reminders of Summer days, how much more their beauty and fragrance delight us. They cheer us when the wintry blasts beat hard against the window pane, and without them one charm of home is gone. But if the plants are weak, straggling and infested with insects, the effect they have on us is quite different. We are apt to kill our Winter flowers with kindness. We are to study the precise needs of each plant to ascertain how much of light, or water, or heat they require, and by so doing we shall have the best success. Let us remember that—

"The careful florist tends his sheltered plants,
Studies their natures, and supplies their wants."

The geranium (properly pelargonium) is one of the most satisfactory of Winter flowers. It requires only a little sun and a temperature of over 60° to bloom incessantly. But to do this it must be "slipped" in Summer, or the old plants potted in August. There have been great improvements in this plant within the last ten years. We now have double flowers from white to rose, to maroon, while many of the single kinds bear flowers of the most exquisite shades.

EDDIE GUFFIN.—We have quite a number of plants for this Winter, such as geraniums, verbenas, cannas, pinks and others. We have them in south windows where they have plenty of sun aud light. We water them once a week thoroughly, and occasionally give them a good washing with warm water; at times we find little white worms in the pots among the roots, then we give them fresh soil or sometimes stick some matches around the plants which seem to help them a good deal. Our plants are all looking very well now, and we hope they will be a pleasure to us this Winter.

OSCAR CHAPMAN.—I think the following plants are nice for Winter cultivation: The Wax plant is well worth the time one will have to wait to see it bloom from cuttings. We do not cut a bloom often for the old burr blooms year after year and grows larger. Smilax is grown from seed by keeping the soil moist. The Asa Gray Geranium we all know and love. In our yard there was a bush, one foot high, that had in September 18 clusters of blossoms, and buds, not expanded, at one time, and in October thirteen more and it is now full of blossoms. We have several for Winter blooming; mamma says they give double the bloom of any other variety she has. Our Winter blooming plants have just commenced to bud. Some have their first clusters just opening, having been carefully repotted for the second time, about six weeks ago. We do not let our Winter plants grow in the yard but give them rest, as we call it, in boxes and keep the buds picked off. We have a Justishus Cactus (budding now) lantannas, geraniums, a Lemon Verbena, etc.

THE CHAIRMAN.—We should bear in mind that geraniums bear seeds plentifully in the house. If these seeds are planted at once, they will sprout in two weeks and produce flowers next Summer. Abutilons are splendid Winter flowers. They will thrive well in the same window with geraniums and bloom almost incessantly.

IDA DEMAREST.—We have many kinds of Winter flowers but I think the different varieties of pelargoniums, including those with handsome foliage, also callas, heliotropes, and a few vines of ivy make the best plants for Winter, and they are easily cultivated.

LIZZIE ABDILL.—My knowledge of the care of flowers is rather limited, but I have a nice stand full in my room aud I intend to Winter them unless old Jack Frost thinks they would look prettier with a coat of silver dust upon them. We covered the earth in our flower pots with moss from the woods. Never put flowers near a window, unless you want them to freeze. We found that out last Winter. We think it is best not to keep the earth very wet arouud the flowers when it is extremely cold as the frost will be sure to find the water at the roots of the plant. But water them enough—not too much. Our assortment consists of geraniums of different sorts, a tuberose, a cactus, dianthus and carnations and a lovely plant called The Forbidden Fruit.

THE CHAIRMAN—The surface soil of the pots should be stirred often. It should not be allowed to become solid or soggy. This is evidence that the pots are not well drained, and there are no plants—except, perhaps, Calla Lilies—that will do well unless the drainage is perfect. A sandy loam or leaf-mold is best for window plants. If such a light, porous soil is used, and the drainage is good, there is little chance of watering them too much.

"QUINNIPIAC"—As to "Winter Flowers for the Parlor," if I could have but one plant, the Calla would be that one. It blossoms better than anything else with me, where our plants have to fight against gas and furnaces. I let the roots dry up through the Summer and in August pot them in fresh soil and water well, and they soon start and grow finely. But we have other plants besides the Calla. I think the hyacinth is a good plant for city homes. I pot mine about the middle of September and then place them in the cellar, where it is dark and cold, for about two months, or until the roots have made a growth to the bottom of the pots. It is very interesting to me to watch them grow after they are brought out into the warmth and light. They blossom well for two years, but after that I place them out-of-doors in the border. I have grown crocuses in the same way as the hyacinth, and have tried tulips, but never had very good success with them. Another fine plant for winter-blooming is the geranium in its different varieties. I usually take off slips from the old plants in August and root them in sand. I think a great many persons wait too long before they think of making cuttings, and when cold weather comes on they are not ready for it. They then have to take cuttings which will not bloom until the next Spring or Summer, or else take up the old plants, which surely will not do well. But if cuttings are taken and rooted in August they will be just getting ready to bloom when cold weather comes. Right here I wish to say that I saw some cuttings rooted in nothing but damp saw-dust There are many other plants which are useful for Winter-blooming, such as primroses, fuchsias, etc., but I like only two or three kinds, and these well-grown, rather than to have a window full of poor-looking things. I have also a very nice fern-case that I arranged myself, and feel quite proud of it; also an English Ivy about eight feet long, trained on the side of the room.

THE CHAIRMAN—As a moist atmosphere and equal temperature cannot be easily preserved in the sitting-room or parlor, it is useless to attempt to cultivate the rarer, tenderer plants. Bouvardias are easily cared for, and bloom continually; so do fuchsias. Among vines the smilax and ivy should not be forgotten. Among broad-leafed plants the India Rubber tree is one of the best. Its tropical aspect lends a peculiar beauty to the greenhouse.

C. A. BUTTERWORTH—No one can be successful in the cultivation of plants, as the chairman has said, who does not study their wants and adapt things, as far as possible, to the conditions favorable to their growth. Persons who are not very familiar with flowers should select those which are not very tender and which are free-blooming. Young, vigorous plants give more satisfaction than those which have outgrown their thrifty youth, and have become too unwieldy to handle with ease. Plants which can stand a dry atmosphere and high temperature are best suited for in-door culture. A rich, sandy loam is probably the best for plants in general, and this, with sunlight and judicious watering, will usually insure plenty of flowers, that is, not omitting pure air, which is as necessary for plants as for animals.

THOMAS WINFREY—Tulips, hyacinths, crocuses and many others are nice for window gardening. Tulips should be planted about the last of October or first of November, in five-inch pots, about five bulbs to each pot. Use sandy soil and cover one inch. Place in a cool cellar. When started they should be placed in a cool, light window. Hyacinths, for glass culture, start in damp sand, in a warm closet; then transfer to glasses, and place in a light room. Crocuses may be planted in pots with tulips and other flowers.

THE CHAIRMAN.—Unless there is plenty of sunlight and a growing temperature is maintained, it is best not to manure potted flowers. A scanty diet is best for plants that live under unfavorable conditions. Only those that are in a vigorous, healthy growth will be benefited by a strong diet. Lime water is good for most plants as it sweetens the soil.

JOSIE MARQUIS.—Our plants are few and common, but we think none the less of them on that account. We have different colors of both double and single geraniums. I have a "Pearl" tuberose that I got last Spring, but it hasn't bloomed yet. My favorite is the fuchsia, but ours were killed last Winter. My brothers say they like geraniums for they are the hardiest. Sister has two varieties of ivies, hardy and parlor ivy. In the Fall we let the soil get dry and set them in a cellar and do not water. In the Spring we set them out in the sunlight and not one in 10 fails to grow again. When the soil gets too wet and that little white wire worm gets to working at the roots, a weak solution of tobacco water is the best remedy that we ever tried and the best use for tobacco, too. What is a good remedy for green flies and the mealy bug?

THE CHAIRMAN.—Tobacco smoke is good (or bad) for the green flies, or aphides so prevalent in Winter plant houses. Care must be taken or this will injure the leaves of many species. The mealy bug is the worst pest of all. It is quite as well to throw an infested plant away as to try to exterminate these bugs. Alcohol, applied with a camels-hair brush will kill the bugs with which it comes in contact. If the air is too moist, the green fly will appear; if too dry, look out for the red spider.

CLARE BRAMHALL.—The collection of plants that we want is one that will give the most flowers in the Winter under ordinary accommodations or treatment. Chrysanthemums usually do well and come into bloom when there is the greatest scarcity of flowers, and for a display of flowers in the Winter, lantanas, pyrethrums, heliotropes, primroses, abutilons and callas, with young plants of fancy leaf geraniums. Verbenas, fuchsias, double and single petunias are among the best. Do not forget a hanging basket of oxalis—it will brighten the window all Winter. Add a few vines and scented geraniums, and I think the above collection will give better satisfaction than many more costly plants. Start slips in August, give them a sunny window, and keep free from insects by the use of soap suds with a very little carbolic acid added, and I think any one who loves plants will succeed and have plenty of flowers all Winter.

O. F. FULLER.—The plants for Winter blooming that I should recommend are the daisies, carnations, geraniums, petunias, fuchsias, heliotropes, lantanas, smilax and begonias. Those that require a very rich soil or a more liberal use of manure the callas tea roses, and smilax. Plants grow in small pots bloom more freely than those grown in large ones, but are more liable to injure from drying of the earth. Should one be so unfortunate as to have plants slightly frozen, the proper thing to do is to get the frost out as quickly as possible, for many plants will not be injured by freezing for a short time, which would be destroyed if kept in a frozen condition for several hours. To remove the frost most quickly, if the plant be small, dip it into a pail of cold water; or if large, place in the sink and give it a good showering. The best soil for house plants is one containing some undecayed organic matter, like leaf mould or partly decayed sods, with a small mixture of sand. In potting, the soil must be pressed firmly around the roots of the plant, and the pot filled to the top, within one-half inch of the surface; then apply a dressing of some kind. It is well to wash all plants occasionally with soapsuds or whale-oil soap, and particularly the ivy, which needs washing every few weeks to do well; but in all cases the plant should be rinsed in clear water if much soap is used.

THE CHAIRMAN.—In closing I wish to say to the members: Try your hand at crossing flowers. Rub off the anthers of one flower and apply pollen from the anthers of other flowers to the pistils of those from which the anthers have been removed. The results may be beyond your expectations—the interest in these Discussions is increasing I am glad to say. The subject for the next Discussion will be announced next week.

THE YOUNG QUERIST.

Lillie VanB., Stockport, N. Y., asks how to grow pinks in the house this Winter.

ANS.—Pot them the same as any other plants for Winter-blooming.

Josie M., Cross Creek Village, Pa., asks if seedling pinks will be of the same color as the pinks from which the seed was raised.

ANS.—They will vary, sometimes more and sometimes less.

S. A. B. wants to know what is the best root that can be fed to a milch cow—one that will not flavor the milk.

ANS.—The Yellow Globe Mangel is good, or the common sugar beet. Roots are valuable Winter feed for stock in connection with hay, etc.

L. A., Chase City, Va., wishes to know if moss from the woods is beneficial or detrimental to potted plants.

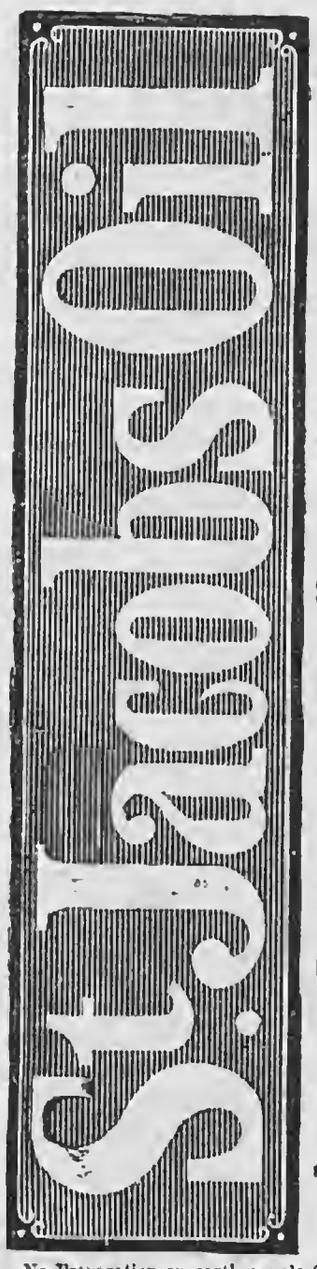
ANS.—Moss is good to keep the ground moist, as it retards evaporation and tends to prevent the surface from baking.

New Members of the Club for Week Ending Dec. 3rd.

Myrtle Rube, Josie Marquis, Eddie Marquis, Flora Marquis, Rosa Marquis, Calvin Reed, Alice Conde, Lillie Van Buren, Phebe Townsend, George Gordon, Earl Peters, Gracie Coykendall, Roy Blunt, Amy Blunt, Alida Brewett, George Aiken, Inda Aiken, Anna E. E. Shrub, Lizzie E. Porter, Bertha Robbins, Etti Robins, Ella Josslyn, Flora Roorda, Charles Neithercoat, Jas. Milton.

Miscellaneous.

The Des Moines (Iowa) Tri-Weekly Tribune says: "A Harrisburg, Pa., journal mentions that Mr. D. Bensinger, No. 4 Market Square, that city, was cured by St. Jacobs Oil of a violent attack of rheumatism.



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Vanilla Chocolate,

Like all our chocolates, is prepared with the greatest care, and consists of a superior quality of cocoa and sugar, flavored with pure vanilla bean. Served as a drink or eaten dry as confectionery, it is a delicious article, and is highly recommended by tourists.

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AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the Twombly Knitting Machine Co., 142 Tremont Street, Boston, Mass.

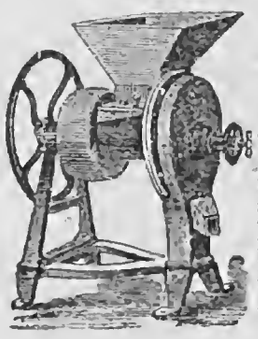
PERSONALS.

Secretary Folger seems to be trying to earn his salary. He is at his desk in the Treasury building in Washington before any of the clerks and doesn't leave it until late in the day.

Senator Williams, of Kentucky, recently sold in Cincinnati his crop of tobacco, raised on less thon 90 acres, and it netted him more than $23,000. To the purchasers he, on Thanksgiving eve, sent about four dozen turkeys.

Representative Carpenter, when not at Washington, passes his time upon his farm near Fort Dodge, Iowa. He wears a hickory shirt and overalls and works from sun to sun. His ambition is to own the best farm and the best herd of Short-horns along the Des Moines River.

Implements and Machinery.



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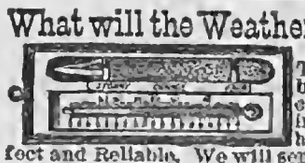

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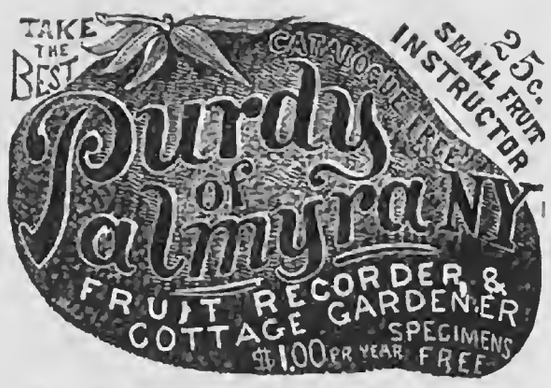

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40 Clydesdale Stallions

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FARM FOR SALE

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Miscellaneous

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This preservative is not a liquid, pickle, or any of the old and exploded processes, but is simply and purely OZONE, as produced and applied by an entirely new process. Ozone is the antiseptic principle of every substance, and possesses the power to preserve animal and vegetable structures from decay.

There is nothing on the face of the earth liable to decay or spoil which Ozone, the new Preservative, will not preserve for all time in a perfectly fresh and palatable condition.

The value of Ozone as a natural preserver has been known to our ablest chemists for years, but, until now, no means of producing it in a practical, inexpensive, and simple manner have been discovered.

Microscopic observations prove that decay is due to septic matter or minute germs, that develop and feed upon animal and vegetable structures. Ozone, applied by the Prentiss method, seizes and destroys these germs at once, and thus preserves. At our offices in Cincinnati can be seen almost every article that can be thought of, preserved by this process, and every visitor is welcome to come in, taste, smell, take away with him, and test in every way the merits of Ozone as a preservative. We will also preserve, free of charge, any article that is brought or sent prepaid to us, and return it to the sender, for him to keep and test.

FRESH MEATS, such as beef, mutton, veal, pork, poultry, game, fish, &c., preserved by this method, can be shipped to Europe, subjected to atmospheric changes, and return to this country in a state of perfect preservation.

EGGS can be treated at a cost of less than one dollar a thousand dozen, and be kept in an ordinary room six months or more, thoroughly preserved; the yolk held in its normal condition, and the eggs as fresh and perfect as on the day they were treated, and will sell as strictly "choice." The advantage in preserving eggs is readily seen; there are seasons when they can be bought for 8 or 10 cents a dozen, and by holding holding them, can be sold for an advance of from one hundred to three hundred per cent. One man, with this method, can preserve 5,000 dozen a day.

FRUITS may be permitted to ripen in their native climate, and can be transported to any part of the world.

The juice expressed from fruits can be held for an indefinite period without fermentation—hence the great value of this process for producing a temperance beverage. Cider can be held perfectly sweet for any length of time.

VEGETABLES can be kept for an indefinite period in their natural condition, retaining their odor and flavor, treated in their original packages, at a small expense. All grains, flour, meal, etc., are held in their normal condition.

BUTTER, after being treated by this process, will not become rancid.

Dead human bodies, treated before decomposition sets in, can be held in a natural condition for weeks, without puncturing the skin or mutilating the body in any way. Hence the great value of Ozone to undertakers.

There is no change in the slightest particular in the appearance of any article thus preserved, and no trace of any foreign or unnatural odor or taste.

The process is so simple that a child can operate it as well and as successfully as a man. There is no expensive apparatus or machinery required.

A room filled with different articles, such as eggs, meat, fish, etc., can be treated at one time, without additional trouble or expense.

☞ In fact there is nothing that Ozone will not preserve. Think of everything you can that is liable to sour, decay or spoil, and then remember that we guarantee that Ozone will preserve it in exactly the condition you want it for any length of time. If you will remember this, it will save asking questions as to whether Ozone will preserve this or that article—it will preserve anything and everything you can think of.

There is not a township in the United States in which a live man cannot make any amount of money, from $1,000 to $10,000 a year, that he pleases. We desire to get a live man interested in each county in the United States, in whose hands we can place this Preservative, and through him secure the business which every county ought to produce.

A FORTUNE Awaits Any Man who Secures Control of OZONE in any Township or County.

A. C. Bowen, Marion, Ohio, has cleared $2,000 in two months. $2 for a test package was his first investment.

Woods Brothers, Lebanon, Warren County, Ohio, made $6,000 on eggs purchased in August and sold November 1st. $2 for a test package was their first investment.

F. K. Raymond, Morristown, Belmont Co., Ohio, is clearing $2,000 a month in handling and selling Ozone. $2 for a test package was his first investment.

D. F. Webber, Charlotte, Eaton Co., Mich., has cleared $1,000 a month since August. $2 for a test package was his first investment.

J. B. Gaylord, 81 La Salle St., Chicago, is preserving eggs, fruit, etc., for the commission men of Chicago, charging 1½c. per dozen for eggs and other articles in proportion. He is preserving 5,000 dozen eggs per day, and on his business is making $3,000 a month clear. $2 for a test package was his first investment.

The Cincinnati Feed Co., 498 West Seventh Street, is making $5,000 a month in handling brewers' malt, preserving and shipping it as feed to all parts of the country. Malt unpreserved sours in 24 hours. Preserved by Ozone it keeps perfectly sweet for months.

These are instances which we have asked the privilege of publishing. There are scores of others. Write to any of the above parties and get the evidence direct.

Now, to prove the absolute truth of everything we have said in this paper, we propose to place in your hands the means of proving for yourselves that we have not claimed half enough. To any person who doubts any of these statements, and who is interested sufficiently to make the trip, we will pay all traveling and hotel expenses for a visit to this city, if we fail to prove any statement that we have made.

HOW TO SECURE A FORTUNE WITH OZONE.

A test package of Ozone, containing a sufficient quantity to preserve one thousand dozen eggs, or other articles in proportion, will be sent to any applicant on receipt of $2. This package will enable the applicant to pursue any line of tests and experiments he desires, and thus satisfy himself as to the extraordinary merits of Ozone as a Preservative. After having thus satisfied himself, and had time to look the field over to termine what he wishes to do in the future—whether to sell the article to others, or to confine it to his own use, or any other line of policy that is best suited to him and to his township or county—we will enter into an arrangement with him that will make a fortune for him and give us good profits. We will give exclusive township or county privileges to the first responsible applicant who orders a test package and desires to control the business in his locality. The man who secures control of Ozone for any special territory, will enjoy a monopoly which will surely enrich him.

Don't let a day pass until you have ordered a Test Package, and if you desire to secure an exclusive privilege we assure you that delay may deprive you of it, for the applications come to us by scores every mail—many by telegraph. "First come first served" is our rule.

If you do not care to send money in advance for the test package we will send it C. O. D., but this will put you to the expense of charges for return of money. Our correspondence is very large; we have all we can do to attend to the shipping of orders and giving attention to our working agents. Therefore, we can not give any attention to letters which do not order Ozone. If you think of any article that you are doubtful about Ozone preserving, remember we *guarantee that it will preserve it, no matter what it is.*

REFERENCES: We desire to call your attention to a class of references which no enterprise or firm based on anything but the soundest business success and highest commercial merit could secure.

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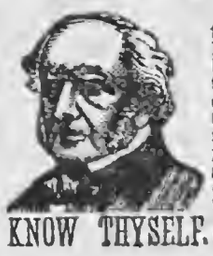

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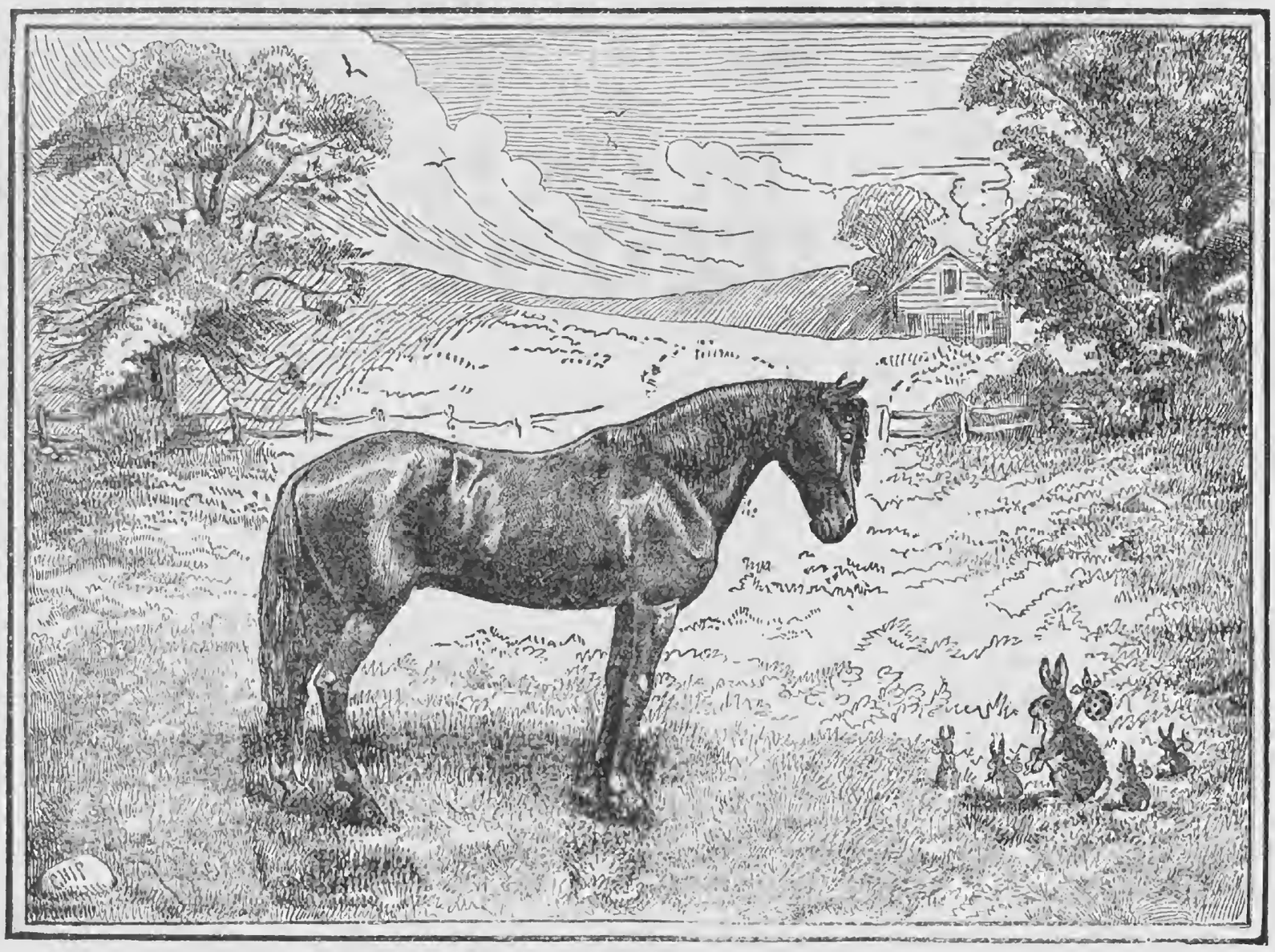

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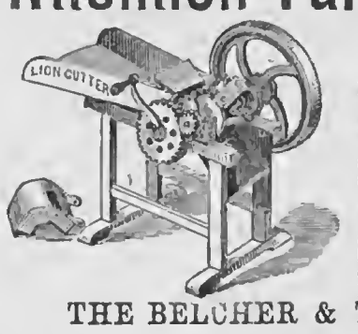

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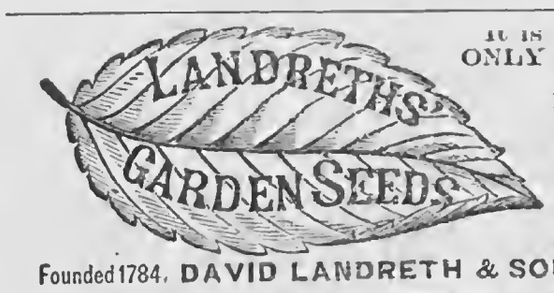

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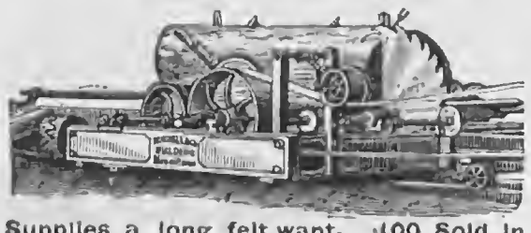

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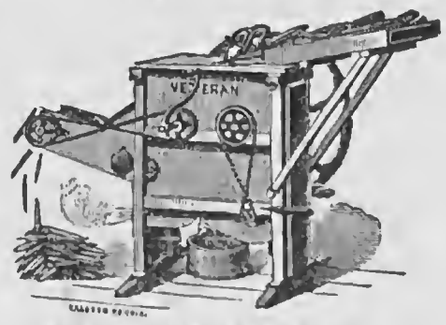

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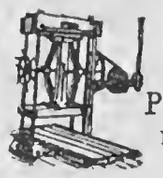

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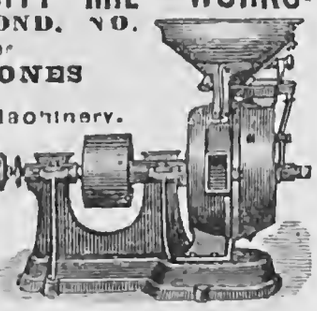

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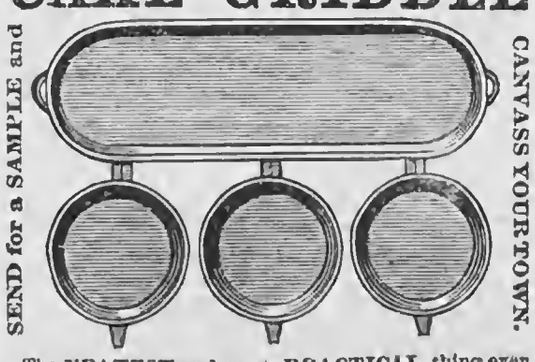

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Ralph Evans

Vol. XL. No. 1664.} NEW YORK, DEC. 17, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

[Entered according to Act of Congress, in the year 1881, by the Rural New-Yorker, in the office of the Librarian of Congress at Washington.]

Horticultural.

THE BROAD BELL FLOWER—PLATYCODON.

THE broad bell flowers are near of kin to the campanulas, as Harebells, Canterbury Bells, and the like, and include some of the finest hardy herbaceous plants in cultivation. They are natives of Siberia and China, and perfectly hardy in our Northern gardens. In open, sunny places, sheltered from strong winds, and in a rich, light and open soil well drained, they attain their greatest perfection. In wet and retentive soils they are apt to perish. According to their situation and treatment they grow from 1½ to three feet in hight; several stems arise from each crown and are terminated, as you will observe in the accompanying illustration, by a number of loosely arranged, large, open blossoms. The flowers are single and double, blue, very pale blue or pure white in color, and are produced from July to September. There are two or three reputed species in our gardens, differing from each other mainly in stature and time of blooming. They go under the names of Platycodon grandiflorum, Chinense and autumnale, but, so far as we can perceive, the first named is the only one entitled to recognition as a species, and the others we believe to be but varieties of it. But all are beautiful and well worth growing. They bear any quantity of seeds and are easily raised from the same, either from sowings in the Fall when the seeds have just ripened, or in Spring. A few will blossom the first year, and all should bear a full crop of flowers the next year. And as they advance in age they grow in strength and size. Choice varieties, as the double white, are usually increased by division of the crowns. The roots are fleshy, long and in tap-root style. Our illustration was drawn from a specimen growing in the Rural Experiment Grounds.

BROAD BELL FLOWER—PLATYCODON.—FIG. 554.

RURALISMS.

IF raspberries and black berries have not yet been pruned, it should be done now, at least to the extent of cutting out all the old wood. It has been a matter of observation with me for many years that farmers (and a good many others) in all parts of the country leave this kind of work to be done in the Spring. There is enough, and more than enough, to be done at that time, without doing work that can be better done in the Fall. The old wood may be cut out at any time during the Fall and Winter, and there is no reason why the whole pruning may not be done at this time. The really proper time, however, to cut out the old wood is immediately after the fruit has been gathered. That, too, is a good time to select the new canes for fruiting the following year; but these things are seldom done.

I AM much pleased with the remarks of W. G. W. (p. 755) on the subject of planting fruit trees on the lawn. He states fairly, and in the best of taste, about all that can be said against the use of fruit trees on the lawn, and at the same time he has views broad enough to see how some kinds at least can be introduced with propriety and without offense to good taste. Now will not others follow the good example set by W. G. W. and give us their views on this subject? When I say W. G. W's good example, I mean that they look at the subject from both sides and all sides, and state the result candidly and fairly, whatever it may be. This, to be sure, is not by any means so easy as to look at a subject from one point of view only, and that the one of fault-finding, which perhaps is one of the easiest things in the world to do, but by no means the most conducive to good. This is a subject which should interest everybody who owns an acre of ground, or even less. By-and-by I will submit for criticism (or information if you please) a list of fruit trees that I have used and found to be good for the purpose (including some of the nuts, such as the Madeira or English Walnut, the Shellbark Hickory, the Spanish or Italian Chestnut, the Hazelnut, or Filbert, etc.) with the positions given them. I think the dwarf Japan Chestnuts (one of Mr. Thomas Hogg's introductions) will find a suitable place here in the future. [This bears fruit very early—does it not?—EDS.]

I THINK I have on a former occasion alluded to the Epiphyllum truncatum and its varieties (often called Crab's Claw or Lobster Claw Cactus) as among the best of winter-blooming plants for the sitting-room. They are easily grown, bloom profusely, and succeed well in the usually hot, dry atmosphere of the living-room. A large plant needs to be elevated or placed upon an inverted pot, or, better still, suspended like a hanging basket. They should be grown in a light, sandy soil and regularly watered when in bloom. A little weak manure or ammonia water occasionally when the buds begin to appear, will strengthen both the plant and the bloom. Cuttings strike readily in sand. E. truncatum, the species, is good, but the variety E. violaceum is much better and one of the best on the list. These two (and perhaps Russelianum) may be had of some of our leading florists, but a collection is very hard to get. Carmineum is a very desirable variety, aside from its beautiful flowers, the whole plant being aglow with the rich color from which it takes its name. These remarks may be useful and interesting to H. and C. J. in the "Young Querist's" column on page 806, as well as to others.

IT may not be out of place to say that many amateurs (and especially beginners) make a great mistake in neglecting to "pot off" their cuttings till the roots have become such a tangled mass that it is impossible to separate them without breaking them and seriously injuring the plants. Almost without an exception, cuttings should be potted as soon as they have become thoroughly callused, and in no case should they be left till the new roots are more than a quarter of an inch long. Potted at this time, growth goes on without any apparent check and the young plant soon becomes vigorous and strong and fitted for the performance of all the functions of plant life, placed under proper conditions. If potting be left too long and the roots of the cutting in consequence become mangled and broken, a serious check is given to future plant growth, and many become so much enfeebled as to be put back for weeks, while others die a lingering death. These hints are intended for those who put in cuttings in the Fall with the expectation of having young flowering plants in Winter, as I suggested some weeks back.

I WOULD like to supplement Mr. Bensell's excellent advice on p. 755 in regard to cutting for pear blight. He says, "Cutting far below the outward appearance of disease is necessary," and it certainly is: and to this I would simply add, keep cutting till you come to thoroughly sound and healthy wood, if you have to cut the tree down; for after the sap has once become vitiated nothing will save the tree; and it therefore becomes necessary to cut on the first appearance of the disease, and before it has had time to spread.

HORTICOLA.

A SUCCESSFUL EXPERIMENT.

S. Q. LENT.

FOR some time the Michigan Horticultural Society in its quarterly meetings and in its printed "transactions" has given a good deal of attention to the embellishment of country school grounds. This agitation of the subject has evidently met with very general approbation, for the press has quoted quite largely from these papers and discussions. The Society, however, was not contented simply to talk over the subject and discuss what ought to be, or what might have been; but sought at once through the agency of a committee to interest the State department of education and if possible institute a co-operative movement, by which the educators and the horticulturists should unite in active measures that would result in the immediate accomplishment of practical results. This proved a failure. As now constituted, our department of education goes very little beyond mere statistical work, and is unwilling to take hold of any work not directly contemplated in the law and provided for by appropriations.

In February last at a meeting of the Society the failure was discussed, and a second attempt essayed in a different direction. A committee was chosen to interview seedsmen, and ascertain if a donation of flower seeds could not be secured for school purposes. D. M. Ferry & Co, of Detroit, responded favorably and an arrangement was made by which the first five schools in any county making formal application signed by the school director and teacher, should have returned to them a selection of flower seeds *provided* an agreement should be properly executed by which the State Horticultural Society should secure a report of success with suggestions, made to the secretary in the following October and November.

Prof. W. W. Tracy, whose name I see occasionally connected with valuable articles in the RURAL, took a lively interest in this experiment, and prepared with the greatest care detailed directions to be inclosed with each school collection of seeds; while D. M. Ferry & Co., did more than they agreed by furnishing in each collection 25 varieties of seeds, selected especially with regard to the use intended for them.

About eighty schools applied and received seeds and nearly all have reported progress. Michigan suffered terribly from drought the past Summer, especially in June; in many parts of the State no rain fell for four weeks during the last of May and in June. Each report mentions this difficulty and in some cases the trial proved nearly a failure because of this obstacle in the outset. In all cases the work was done very largely by the pupils, and many reports say the flower seeds cleared the school ground, fenced, plowed, graded it; and in every instance the arrival of the seeds led to a clearing up of the yard and planting of trees, shrubs and perennial plants at the time of sowing the flower seeds. A number of teachers report the use of the flowers in connection with oral botany lessons; others speak warmly of the good accomplished by the flowers in the school as an embellishment to the room, and a means of educating a taste for beautiful things.

One teacher says the experiment at the school yard bore fruit throughout the whole district, as each pupil who had a bed or portion of a border to care for at school employed the experience there gained in securing further results in the home yard. Another school reports the use of the flowers grown, as kindly tokens sent to the sick, and of bouquets in abundance culled for public entertainments.

A large number speak of the attempt as less successful than they might wish, but that seeds have been saved for another year when by means of the experience already gained and perhaps a more propitious season, the work will certainly be more satisfactory. In one case reported, the teacher found no fence about the yard, and could not get the school board to erect one. But the seeds came and they must be protected if sown. The dilemma was placed before the pupils and solved by them, for all took hold, and from a saw-mill about a mile away secured "edgings" enough to make the fence, which, although not very ornamental in itself, was made so before the closing of the season by the aid of pretty climbers furnished in the collection of seeds. Several schools reported the designs of the flower beds; others detailed their efforts at irrigation; still others reported with justifiable pride, how the satire of the school patrons was turned to warm commendation by the argument of success.

It is impossible in this short sketch to give more than a suggestion of results accomplished by this venture of the State Horticultural Society. I have not had my sympathies more effectually appealed to in a long time than in the reading of the reports of these schools which have been made to Secretary Garfield. I am quite aroused to the notion that a grand work could be done by a State department of education, if once entered into with the proper spirit and knowledge. I am certain that better results would be accomplished by work of this kind than in poring over tables of tardiness, accounts of attendance, or bulletins of behavior.

I have gleaned a few points from the reported results of this venture, that may be of use to others.

1. There is no question but pupils, large and small, will unite in the ornamentation of school premises if teachers will only make the attempt and awaken enthusiasm in regard to it.

2. The time thus spent is of real value in the education of pupils upon matters that will have more influence upon their future than the study of algebra, grammar and many other things that are given prominence in the district school.

3. To succeed in the enterprise of adding beauty to school grounds, it is of the highest importance that the matter be brought home to the teachers in such a way as to command their interest. This can be done by giving the subject a leading place in teachers' institutes; and by *examining* and grading the applicants for certificates upon the care and adornment of school-houses and grounds. As the terms of school are most generally arranged, a long vacation occurs in the Summer months, when flowers need special attention. This fact presents a difficulty which has two solutions: As increased importance can be given to ornamental trees and especially shrubbery, using such annuals as require the least attention and give the least returns in July and August.

If annuals are employed largely and require care during vacation, arrange by committees of pupils to care for them during the recess in such a way as to stimulate their pride in the undertaking, rewarding them, perhaps pecuniarily by a subscription fund, or by allowing a certain amount of freedom in gathering flowers from the borders.

4. Work of this character successfully carried on at the school premises, is an educational force which acts indirectly but effectively upon the whole neighborhood, creating an atmosphere of good taste of inestimable value in the home life of the residents.

Grand Rapids, Michigan.

The Horseman.

EASTERN MARKETS FOR WESTERN HORSES. No. 3.

L. S. HARDIN

IN the two preceding papers I have outlined the system of horse breeding at the East that has led to an almost entire abandonment of breeding for style and strength. At the same time I have shown that the market for this kind of noble and useful animal is the only truly profitable commercial market for horses at the East. While the Eastern farmer has been wasting his opportunities, the farmer at the West has, with a keener eye to the useful and profitable in horse flesh, been putting his farm in order to supply this growing demand. It is only necessary to stand on the curb-stone of one of the business streets of New York City and mark with a critical eye the heavy draft horses as they pass to learn what lines of breeding have been used in nearly every instance to form the grand physiques of these noble beasts. The short neck, rounded body, heavy legs and shaggy fetlocks, with long, flowing mane, tell the tale of Norman origin beyond a doubt, though the infusion of home-made blood may be so great that the prevailing colors of the pure-breds may have entirely passed away.

Many years ago the horse breeders of several Western States, and of Illinois particularly, determined to try the French Norman horse, and in keeping with this idea many large importations of this blood were made, and these have been quite systematically kept up down to the present time. The effect of these importations has been a very general dissemination of Norman or Percheron blood throughout the Western States, that in a diluted form has accomplished a vast deal of good which might never have been done had the blood remained in a pure state, as there has been considerable prejudice against the pony shape and reputed soft feet of the pure Percherons.

The fact that larger horses are grown at the West than at the East may in a measure be attributed to the generally larger scale on which everything pertaining to the farm is carried on at the West; also to the natural effect of a more bountiful soil where no stint of feed is known. There all animals grow to a greater size than they do upon the inhospitable hills and sand valleys of the Northeastern States. Then again, farmers with large cribs of grain feed far more generously than those with smaller cribs, even when the corn costs just as much labor and risk in the one instance as in the other. The man with an abundance on hand is never so economical in its use as he whose stores are smaller, though the aggregate amounts may be equal. A farmer at the East seems to be frightened when he sees one of his colts taking on a massive form, for he thinks the animal is going to eat him out of house and home, and he consequently takes immediate steps to get rid of him. Then again, none of the Eastern farmer's tools are fitted to the large horse. No collar will fit him. The shafts and wagon poles are too short. The stalls are all too narrow, and even the small bridges on and about the farm are too weak for him. Everything is built on a smaller scale, and the large horse is therefore an awkward animal to have about the farm.

It is to be hoped that the Clydesdale will be more fully introduced and thoroughly tried at the West than it has been. The chief objection to this breed is a want of style. The French Percheron has the advantage that if the size of the colt is not sufficient to make a first-class draft horse, the chances are that there will be sufficient style to make a good carriage or park horse. The Clydesdale, as a rule, is large, massive and wonderfully strong, but he is rarely useful for any other purpose beyond the dray or truck, which is not by far the most profitable use he might be put to. This fault could, of course, be remedied, and often is by judicious selection in choosing a stallion to breed from, though I know not how the long legs could be gotten rid of.

It, however, is by no means certain that either the Percheron or Clydesdale breeds would in the end be the most profitable, if a man should set himself regularly to work to create a regular line of breeding to produce large and stylish draft horses. There are many families of American-bred horses, from which, if properly selected, crossed and coupled, by feeding and training a new and distinct family might be created possessing all the virtues and few of the vices of the present foreign breeds that are now solely depended upon for blood on the sire's side. This fashion of running to Europe for blood, when just as good can be found in this country, is foolish in the extreme outside of the fictitious value that the term "imported" creates. It is to be hoped that this fashion will soon run its course, and breeders will turn their attention more earnestly to home-bred animals. Animal life is so plastic that the skilled hand can mold it at will, and with judicious selection and manipulation a few generations will fix the types desired and prove a permanent source of profit to the originator.

In summing up the question of profit and loss in furnishing Western horses for an Eastern market, the question of transportation cuts an important figure. There is no point about the business that will require more skill in manipulation to save the shipper from gross imposition. In the first place, suitable cars are hard to secure, and here the question of season is of much importance, as a lot of horses may be permanently injured if put in an open car in rough and inclement weather, while a close car may do almost as much damage in hot, dry weather. In coming from Chicago to New York the horses should be taken out of the car at Buffalo or some other intermediate point, as it is impossible for some horses to respond to the demands of nature while on board cars. I have known many fine animals permanently injured by overlooking this precaution.

The subject of freight is a serious one. Upon examination I find the prices range all the way from $30 to $100 per car-load from Chicago to New York. This matter is entirely within the control of the railroad companies, and there is no way to get uniform rates. Each shipper must use all the wits he possesses and not forget to call in the aid of any friend he may have who stands in high favor with the railroad authorities.

In preparing horses for the market, care should be taken to see that they are freshly shod and well groomed, and it is quite the thing in this city at present to have the tai[illegible] nicely docked. These small points add materially to the profits and expedition of the sales, and should by no means be underrated by the seller.

Farm Topics.

A CATTLE-FEEDING EXPERIMENT.

PROFESSOR G. E. MORROW.

IN the Spring of 1880 eight young steers were purchased for the experimental farm of the Illinois Industrial University. Two were full-blood Ayrshire, two seven-eighths Devon, two one-half Hereford—the dams being "common" cows—one a full-blood and one about three-quarters Shorthorn. They were in ordinary condition, the younger Hereford and the grade Short-horn being in best flesh. They were counted fair specimens of the different breeds, except the older Hereford, which was small for age, and not of especially good form.

It was purposed to compare the different breeds under ordinary treatment, rather than to secure largest development. May 1, 1880, one of each breed—numbers 1, 2, 4 and 6 of table—was placed in pasture with other cattle, until October 1, when they were turned into a corn-stalk field. The other four were kept in a small pasture, which proved quite poor during a part of the Summer, having also corn each day. They were placed with the others in October, and all were wintered in an open yard, with unthrashed oats, much injured from lodging and rains, thrashed Timothy straw, corn-stalks and a very little corn at the last. From May 1 they were all on pasture, Timothy, Blue-Grass and clover, with full feed of shelled corn, averaging about 200 pounds per day for the eight head, until September 1; after this they were fed new corn in the ear, about one-half bushel each per day. From July until cool weather they were on pasture only at night, having shelter during the day in a rather dark shed. There was severe drought both Summers, especially in 1881, the pastures becoming very short. The Winter was a trying one on stock exposed to the storms and mud.

In August one Ayrshire steer met with an accident and had to be killed. November 4 the remaining seven were shipped to the Chicago fat-stock show, where they were slaughtered November 12.

The accompanying table gives the ages, weights at different times, and results of the slaughter test. The home weights are "full weights"; those at slaughter are after being without food or water about eighteen hours. A committee of butchers examined the carcasses and their judgment is given in column "Quality of Carcass."

Number.	Name.	Breed.	Calved.	Weight May 1, 1880.	Weight November 1, 1880.	Weight May 1, 1881.	Weight November 4, 1881.	Weight at slaughter.	Weight of dressed carcass.	Per cent. of carcass to live weight.	Fore-quarters.	Hind-quarters.	Hide.	Tallow.	Quality of carcass.
1	Jo	Ayrshire	March 1, 1879	565	780	765	1,305	1,220	733	60.08	286	317	[illegible]	71	[illegible]
2	Jack	Ayrshire	Feb. 3, 1879	605	835	920	…	…	…	…	…	…	…	…	…
3	Thomas	7/8 Devon	March 1, 1879	490	830	850	1,300	1,175	707	60.00	374	333	[illegible]	56½	[illegible]
4	May Duke	7/8 Devon	May 1, 1879	495	710	800	1,215	1,185	677	59.63	365	312	[illegible]	[illegible]	[illegible]
5	Burnham	1/2 Hereford	Oct. 1, 1878	565	1,175	1,190	1,670	1,545	965	62.45	510	455	[illegible]	[illegible]	[illegible]
6	Junior	1/2 Hereford	Aug. 20, 1879	540	730	840	1,335	1,250	750	60.00	397	355	[illegible]	[illegible]	[illegible]
7	Ezra	Short-horn	April 1, 1879	635	980	1,100	1,565	1,400	880	62.85	467	413	[illegible]	[illegible]	[illegible]
8	Oscar	3/4 Short-horn	March 1, 1879	725	940	915	1,480	1,300	815	62.60	420	395	[illegible]	[illegible]	[illegible]

Tables are not interesting reading, but some suggestive facts can be learned from this one. It is noticeable that no one of the steers fed grain the first Summer made as much gain as his mate on better pasture, without grain. It is evident that "rough wintering" was not profitable with these cattle. No one made a good gain, and two lost slightly. The steers were weighed, as a rule, each 60 days during the whole time, and the record shows

that no one of them progressed uniformly. The large shrinkage at slaughter is accounted for by the fact that the home weight was after eating and drinking; the slaughter weight after fasting.

While no one of the steers was excessively fat, the percentage of carcass to live weight is satisfactory. The Short-horns stand first in this respect, one Hereford next. The committee complimented all the carcasses as being more profitable for consumption than those of the excessively fat animals slaughtered with them. The highest percentage of carcass among the latter was 67.56. The showing made by the Ayrshire steer is very creditable for an animal belonging to a distinctively milk breed. It happens that the order of merits of the carcasses is placed in the same order as the proportion of "improved blood" in the different animals. Singularly enough, the carcass pronounced best had, relatively, the lightest hindquarters. This steer was the favorite of almost all who saw the cattle when alive. The steer with largest percentage of tallow was placed last in merit of carcass; the next to him in tallow were placed first and second in merit of carcass. The grade Herefords had heaviest hides in proportion to live weight.

It is expected to continue like experiments. The results of one must not be considered conclusive.

THE FARM DIARY.

UNDER the above head, on page 793, W. F. Brown presents an article that ought to be read by every farmer in the land. It is strange, not to say unwise, that so many persons allow their years to pass by without a semblance of a record to which they might often refer with both pleasure and profit. Our passing life is of too much importance to be left behind forgotten and unrecorded, and it seems to me that every person should keep some other record of his passing life than the feeble and inaccurate one which naturally impresses itself upon the memory.

But I believe there is a slight practical error in the article referred to. Experience has proven to me that to keep an accurate daily record of one's passing years, giving each day an account of the weather and the work done, requires more time and trouble than most farmers are willing to give to the work; besides, such a record kept up for a time, though of much use in the way described by Mr. Brown, becomes somewhat monotonous. I have frequently in former years undertaken to keep a diary upon the general plan of this correspondent; but after a time the work was always given up, not, however, without sorrow; for I was always fully impressed with the importance of keeping some kind of a record of my doings. I think my experience in diary keeping has not been an exception; if it has, my writing here is out of place.

Being unwilling to keep no account of my passing time, I thought upon the plan of keeping a weekly record—a sort of a weekly retrospect, which I immediately put into practice and which I have since continued. I find little difficulty in recalling, once a week, the incidents worthy of record, including the character of the weather and kind of work I have been doing, and the exercise of such recalling has strengthened my memory and thus benefited me.

Such a record or retrospect kept through a term of years, and containing, besides the valuable practical information which every farm record should contain, many little incidents and reminiscences of one's passing years, cannot be re-read without interest. My own plan of writing is to make each weekly record a little essay in itself, giving therein the tone of my thoughts, and the principal kind of work performed during the week. Any happenings of personal interest or of general importance are recorded, and it is sometimes my lot to note the death of a dear friend or relative.

It is good for a person to stop the wheel of business once a week and review the work and note the happenings of the time. Once in a year it has been my custom to review the year's record, and make a yearly retrospect, embracing the important incidents of the year past, together with a record of the results of the farm, and the general character of the season, whether favorable or otherwise. The prices of the important farm products are recorded frequently during the year and all experiments with their results are carefully noted.

Such a record, I believe, is a means of great improvement to all young men. The work, if carefully performed, teaches one by the practice it gives in the art of penmanship and composition.

How can we estimate the value of such a record carefully kept and preserved through the working period of one's life? What pleasure and interest could be taken in retracing the pages and noting the incidents of years long past, and the record of one's life's doings? Aside from the pleasure and comfort which might be derived from such a record, a great deal of practical information could be gathered from the pages. One's future is shaped largely by past experiences and if the experiences have been recorded they are much less likely to be forgotten.

I have usually chosen as a time for writing my little weekly retrospects, the quiet and leisure of Sunday afternoon or evening. Those who may think this an inappropriate pastime for the Sabbath could substitute another time, and devote the day of rest to more satisfactory occupation.

It is well for us to look back occasionally and review the experiences and incidents of past years, to see wherein we have erred in judgment or missed golden opportunities. A record of the past is a partial guide for the future.

G. A. G. JR.

EARLY HISTORY OF AGRICULTURE.

LESTER A. ROBERTS.

AGRICULTURE may be defined as the working of the ground in such manner as to fit it for the production of articles necessary or desirable for the food of man.

The earliest want of man or animal is food. In the primeval ages of human existence, before the dawn of intellect, the race doubtless existed on the spontaneous products of the country in which they lived. Fruits, herbs, berries and roots each contributed their share. As the race improved, the brain increased in size, and thought, reason, contrivance and invention gradually assumed their places. Eating, besides being merely a life-sustaining operation, came to be a pleasure. What was before a need grew to be a want—a desire, to gratify which Man gave his time and labor, and before the period to which even traditional history extends, we may reasonably suppose there were many Cains who were husbandmen and Abels who were shepherds.

Although it is doubtless true that the historical traditions of Eastern Asia extend much further into the days of antiquity than do ours, we learn but little from them relative to the pursuits and occupations of the people. We may reasonably infer, however, that the early history of one nation is in most respects the same as that of another. Probably Moses, who wrote more than 3,600 years ago, is the earliest authority in agricultural literature. From him we learn that more were engaged in pastoral pursuits than in tillage. But in one or the other all took part. Industry, or perhaps occupation would be the better word, seems to have been expected of all. Noah planted a vineyard, Abraham had great numbers of cattle, while his brother Lot had flocks and herds. Gideon is mentioned as having been found thrashing, and Saul, a king, as driving the cattle home from pasture. David fed his ewes, and Elisha plowed with 12 pairs of cattle. Moses himself was a shepherd.

The land of Canaan was better adapted to grazing than to tillage, while the fertile lands of Egypt gave back to the planter better rewards for his labor. It is supposed that wheat was first raised in the valley of the Nile, and we may readily believe the invention of agricultural implements was the work of the Egyptians, the first of which, the plow, seems to have been evolved from something like a pick—the earliest instrument used in tillage. Representations of the primitive plows are found on some ancient sculptures.

There is no doubt that the Egyptians carried agriculture nearer perfection than any others of the ancients. True, the country bordering on the Nile four or five miles in width and as many hundreds in length, needed no culture. To scatter seed at the time of the overflow and reap the harvest when the waters subsided, were in some cases all that was required. But the immense works constructed for irrigating large tracts of country at a distance, remains of which still exist, are proofs of the enterprise and energy of these early farmers. Hundreds of canals of great length served to carry the flood waters of the Nile to immense reservoirs in the midst of unwatered plains, which were thereby made fertile and productive. Hydraulic works of ingenuity and power were constructed by means of which the water was carried to the very hill tops to be distributed at will among the fields and gardens below.

But the race that once inhabited Egypt has gone. Barbarians overran the country. Great winds from the desert bore on their wings clouds of sand which covered thousands of square miles that were once cultivated fields, and the Genius of Agriculture took her way to other lands.

More than a thousand years before the Christian Era the Greeks had made considerable progress in agriculture. It had doubtless been introduced to them, as were many of the arts and sciences, by immigrants from Egypt. Not naturally well adapted for agricultural purposes, the working of the soil presented many obstacles to be overcome, but persistent effort won the victory, and the most uninviting places were converted into productive fields.

The fullest account of Grecian agriculture is probably to be found in the writings of Hesiod. A poem entitled "Works and Days" contains not only a treatise on agriculture, but is intended to cover the whole domestic economy as well. We learn much also of the condition of agriculture in Greece in their times from the writings of Xenophon, Herodotus, Theophrastus and others. Of these named those of Theophrastus were the most extensive, embracing a work on natural history wonderful considering the time in which it was written, and instructive on many points to students of the present time.

The Greeks understood and practiced the application of manure, the use of which Pliny ascribes to a king named Augeas. Theophrastus gives a list of six different manures, and adds that a mixture of soils will produce the same effect as the application of manure thereto, as, for instance, the application of sand to clay soils, or of clay to sandy ones. It is true that the strongest love of the Greek was for art rather than agriculture; for building up cities rather than improving fields. But, nevertheless, great improvement was made in agriculture. We know they had fine breeds of cattle and horses, and raised most of the grains and legumes at present in cultivation as well as the vine, fig, olive, apple, date and other fruits at the time when Greece became a Roman colony—about B. C. 100. During all these years other nations were, we know, making some progress in agriculture, but history gives us little that is definite concerning them.

The Jews took with them from Egypt many ideas that were valuable, and followed them so far as they were applicable in a country so different. Babylon had a rich soil that was cultivated to a considerable extent. Cyrus, King of Persia, is recorded as having distributed with his own hands prizes for excellence in agricultural results. The Phœnicians gave more attention to manufactures than to tillage. The Carthagenians were among the earliest agriculturists, and their example spread into Spain, France and Southern Italy. But as Egypt may be said to be the cradle of the Sciences and Greece of the Arts, so is Rome of Agriculture.

Among the early Romans farming was fashionable. The lands were occupied and cultivated by their proprietors. This was undoubtedly one reason of success, but another doubtless was that the amount of land each one could occupy was limited to a few acres. Commerce was thought degrading. War and agriculture were the chief pursuits, and when the warrior returned to his farm he brought with him some of the habits of the camp. Pliny says "they plowed their fields with the same diligence as they pitched their camps, and sowed their corn with much the same care as they formed their armies in battle."

Small farms well worked will ensure success in any age.

But this state of things did not always continue. When the victorious armies of the Romans made extensive conquests and became possessed of large territories, the rich among them purchased large estates, the cultivation of which was entrusted to farmers, but still under the direct supervision of the proprietor. Cato gives us an illustration of what is the duty of a landlord on visiting his villa from his city residence, in which he supposes him to be not only perfectly acquainted with all the work necessary to be done on a farm, but the time and manner in which it should be done.

Varro complains that in his time, B. C. 50, the strict supervision of former times was wanting, and that the proprietors employed themselves too much with the circus and theater, and too little with corn-fields and vineyards.

Columella, who wrote in the first century of the Christian era, complains that in his time agriculture was almost entirely neglected. He says that while there are professors of almost everything else, even of gluttony, there are no professors of Husbandry. But it seems from the minute and valuable directions he gave he believed there were some left who would profit by instruction.

Of the many voluminous writers on agricultural subjects in early Roman times, the productions of none have come down to us save some of the works of Cato, Varro, Virgil, Columella, Pliny and Palladius. But these are sufficient to instruct us relative to the general management of lands, and of the progress of invention and discovery in agricultural implements and appliances. An abridgement or compilation of the works of all these writers was made by a Scotch clergyman named Adam Dickson, and published in 1788 under the title of "The Husbandry of the Ancients."

Whatever improvement, if any, was made in agricultural processes by the Romans, it was probably in the early years of the Empire, and it is doubtful if in its best days it was much further advanced than with the Jews, the Babylonians, Egyptians and other ancient nations. The conquests of the Romans, however, opened new fields and introduced to new peoples agricultural processes that were readily received and greatly improved upon.—To be continued.

Farm Economy.

ACCOUNTS WITH FARM CROPS.

WALDO F. BROWN.

THE keeping of a farm diary will be a good preparation for beginning a system of farm book-keeping, for the greatest difficulty in the way of keeping accounts with crops is the want of a regular habit of writing, and this the farmer who keeps a diary will soon acquire. I have for five years past kept an itemized account with each field on which I have grown wheat, and have found the matter so easy and requiring so little labor, that I propose extending it to all the crops grown on the farm. A very few moments' time, and less than a page of space in an ordinary account book, will keep the account for a year with any field. I think it better to keep the account with each field than with the crop, because there will be items to charge to the field occasionally, which ought not to be deducted from the crop of that particular year. For example, if you grow a crop of wheat, you ought always to sow clover with it, but it would not be just to add the cost of seed and sowing to the expense of the wheat crop which it does not benefit, but it should be added to the cost of the succeeding crop of wheat or corn grown on the clover stubble. If not put down at the time it is sown, however, it is likely to be forgotten, and so I charge it to the field at the time, and then in striking a balance to see what the wheat costs, I omit this item and add it when I strike a balance on the crop grown on the clover stubble.

The first thing to be done when you determine to begin keeping farm accounts, is to put a value on each field, for it would not be equitable to value all the fields alike. If a farm of 100 acres costs $6,000—which would be $60 per acre—I should expect some fields on it to be valued at but little more than half this. The buildings, orchard and garden I would call number one, and on many farms the value of four or five acres here would be $2,000. Then 50 acres of the best plow land might be valued at $50 per acre, $2,500, and the remaining 45 acres at $33.33⅓ would make the $6,000. This estimate would, of course, vary with different farms; but the intelligent farmer would have no trouble in putting a fair value on each field. At the head of each page on which an account with a field is kept, enter the name or number of the field with the number of acres and its valuation. I have adopted the rule of charging each field with eight per cent. interest on its valuation, this including taxes, and I charge all labor at one dollar per day for each man and horse, and let this include board of hands and keep of horses. In harvesting I charge by the acre for cutting the grain the same as it would cost to hire a reaper with hand and team, and in drilling the wheat the same plan is followed. I think this simplifies the keep of accounts, as it saves separate items for board, wear of machinery, etc. I practice a three-year rotation—wheat, clover and corn—and the account begins with a wheat crop. With a field running through these three years I would begin after the corn was cut up in the Fall, for I never sow wheat in standing corn. I use the disc harrow to prepare this corn land for wheat, as the use of it makes just the seed-bed I want, and is a cheap way of preparing the seed-bed. I will now give the account with a ten-acre field running through this rotation.

1878. Account with field No. 5, ten acres, valued at $500. Crop wheat.

To interest on capital		$40.00
" twice harrowing with disc harrow		8.00
" rolling or smoothing with plank drag		3.00
" 40 loads of stable manure		20.00
" 1,000 ℔s bone meal at $36 ℙ ton		18.00
" 10 bush. seed wheat at $1.25		12.50
" drilling at 50 cents ℙ acre		5.00
" 14½ bushel clover seed		9.00
" sowing clover seed		1.00
" harvesting, total expense		20.00
" cost of wheat in shock		$136.50
By 250 bush. wheat at $1.10	$275.00	
Deduct cost	136.50	
Net profit		$138.50

Cost of wheat ℙ bushel, 56 1-5 cents

This wheat cost per acre $13.85, and if, through poor preparation of the soil and withholding the $38 of fertilizers which are charged, the crop had been reduced to twelve bushels an acre, the cost of the wheat would have been more than doubled, and this is what is done by a majority of farmers who sow wheat in corn; if the yield of this wheat should reach 35 bushels per acre the cost would be less than 40 cents a bushel. The reader

will notice that I have made no allowance for hauling and thrashing, for I think the straw worth enough to balance this. The account with this field the next year, if pastured, would show no charge but the $40 interest on capital, unless it might be for repairs on fences. It should be credited with the usual price per month for pasturing stock. If it was cut twice—once for hay, and once for seed—the cost should be charged, and the field credited with the hay and seed. Suppose our account to stand as follows:

Interest on capital		$40.00
Cutting, curing and hauling clover		20.00
Cutting clover seed at 60c. ₱ acre		6.00
Hauling to machine		6.00
Thrashing 20 bush. seed at 75c. ₱ bush		15.00
Hands and board		5.00
Total expense		$92.00
By 12 tons of hay at $7 ₱ ton	$ 84.00	
" 20 bush. seed at $5.25 ₱ bush	105.00	
Total	$189.00	
Deduct expense	92.00	
Net profit		$97.00

The next year of our rotation brings this field into corn and the account stands.

Interest on capital		$40.00
Breaking, at $1.50 ₱ acre		15.00
Harrowing and rolling		10.00
Marking out and planting		7.50
Seed		1.00
Plowing 4 times at 50c. ₱ acre each time		20.00
Cutting up at $1.25 ₱ acre		12.50
Husking, $1.50 ₱ acre		15.00
Total		$121.00
By 450 bushels of corn at 35 cents	$157.90	
" 10 tons corn fodder at $4 ₱ ton	40.00	
Total	$197.50	
Deduct expense	121.00	
Profit on field		$76.50

In the back part of the book I set apart a page for each field, where I simply put down results, as I want this page to show the profit or loss for a number of years. The entry on that page for these three crops would be as follows:

Field No. 5, 10 acres, value $500.

1878. Crop wheat sold at $1.10 in Aug.	Profit	$138.50
1879. Crop clover cut for hay and seed.	"	97.00
1880. Crop corn, yield 45 bushels ₱ acre.	"	76.50

Each of these entries should give the page on which the itemized account is kept so that it could be referred to. I have written enough to show that keeping accounts with the fields is an easy matter requiring but little time or space and I hope if any of my readers can suggest a better plan they will do so.

Field Crops.

EXPERIMENTS WITH POTATOES AND OATS IN KANSAS.

THE seeds sent all grew. I regard the potatoes and oats as having great value. Having tried experiments with small amounts of seed before and generally not having had good success, I procured a bushel of the White Elephant Potatoes and two bushels of Washington Oats. This was a poor year in one sense, and also a good one in another, to try experiments. It showed the ability to withstand drought, but productiveness could not be properly judged.

The potatoes had large vines and grew vigorously until the drought got to the severest point, when they perished. I planted them the second week in May, which was a mistake; they should not be planted here until the last of May or the first of June. The yield was 10 bushels; none were as large as the seed. They were badly rotted at the stem ends caused by drought. I may be mistaken, but I think they are not very valuable. They are too rough and deficient in quality—at least mine were. I had 16 acres of potatoes and experimented with most of the new varieties. I think you are wrong about the Burbank and Saint Patrick being identical. I planted the Burbank last year and this year I planted the two varieties side by side; no difference could be observed in the growth of the vines or time of ripening, but the Saint Patricks yielded better, grew larger, are somewhat closer in the hill, smoother and of a little better quality. [The RURAL has never tested the Saint Patrick.—EDS.] The Beauty of Hebron yielded best—150 bushels per acre, tubers large, but many rotted at the stem ends. The Early Rose, Early Vermont and Alpha had the same fault. The Orange Co. White is a great yielder and is of good quality, but it is the hardest potato to dig I ever had; it refuses to grow in hills like others. The Early Ohio is a great yielder and second to the Alpha in ripening; quality good; grows close in the hill, but was scarcely salable here this year or last; its fault is it has hard, black spots in it; these spots are not next to the skin but often all through, so as to make it worthless. On being cooked and mashed the spots drop out. Would like to know the cause of this. [The Early Ohio is not thus affected at the Rural Farm.—EDS.] The Mammoth Pearl is a great yielder and so far has not been subject to any disease; the vines do not grow so vigorously as is claimed by some seedsmen, and it is of second quality. Dunmore resembles the Pearl, is of the same quality, fully as productive; but not quite so large. Queen of the Valley has the largest and thriftiest vines of any tried; tubers very large; quality good; but it is not a heavy yielder; there are apt to be one or two very large potatoes to the hill. American Magnum Bonum was not as large this year as represented; the yield was poor; the tubers were rough and only of second quality. Watson's Seedling had the same fault as the White Elephant, but was of better quality. It resembles the White Elephant in growth of both vines and tubers and is about a week later than the Early Rose. The Genesee Co. King resembles the Peachblow, but is earlier, more productive and of as good a quality. Perfection I regard as one of the best grown—good first, last and all the time; a vigorous grower, productive and three weeks later than the Early Rose. North River Beauty is not worth cultivation. Victor is a seedling of the Peachblow; color blue, which hurts its sale; of third quality here. A grower can't fool a consumer the second time on it.

The two bushels of Washington Oats produced 65 bushels which weighed 43 pounds per bushel. It smutted badly, but stood up well, and was remarkable for its dark green color while growing. Four bushels of Mold's Ennobled Oats produced 162 bushels; weight, 33 pounds per bushel. This is a black side oat and ripened a week later than the Washington or any other sown. It rusted a little and went down in a few spots; straw a foot longer than that of any other variety. The White Belgian produced from two bushels of seed 35 bushels; weight, 45 pounds per bushel. Stood up well: no smut or rust. Of the White Canadian two bushels produced 40; weight, 42 pounds per bushel; some smut and rust; lodged in places. Of Red Rust-Proof two bushels were sown; yield, 52 bushels; weight 32 pounds per bushel; the grain has a heavy husk and a long beard at the end; stools out more than any other variety sown, but the straw is entirely too short. The oats were raised on a field which had been sown with wheat in the Fall of 1880, but the wheat was winter-killed.

Long live the RURAL for it doeth a good work. I. O. MILLER.

Johnson Co., Kansas.

TOBACCO-GROWING NOTES.

PARTIES building or repairing tobacco-curing barns should by all means provide top and bottom ventilation, which is probably best secured by means of a continuous ventilator extending lengthwise of the roof, and doors at least one foot wide hinged beneath the sills. The roof ventilator should extend the greater length of the building and should be provided on either side with horizontal doors, which should be carefully fitted and arranged to be opened or closed from below by means of ropes and pulleys.

DURING the leisure of Winter tobacco growers should, as far as possible, prepare for next year's plant growing. Sash for covering the plant-beds, which is considered a necessity for the production of early plants in most of the seed-leaf producing sections, should be made or repaired, and everything be made ready, as far as practicable, for the sowing of the seed, so that no valuable time may be unnecessarily spent when Spring opens.

GLASS is the only reliable material for covering the "cold-frames," although canvas, while not a substitute for glass, is preferable to no covering when the seeds and plants are starting. The sash should be made of convenient size for handling: three 8x10-inch lights wide and seven lights in length being about right. The plant-beds should have windbreaks on the north side; a strong, high, tight board fence answers for a good protection.

IN preparing frames and sash for plant-beds growers should bear in mind that an abundance of plant-bed room is a point of great importance in tobacco growing. I have found it an excellent plan to endeavor to raise twice as many plants as will be needed for my own setting. With this management a grower obtains strong, early plants for his own use, which allows him to have his own tobacco early and even, and if when the work of planting is finished there is a surplus of plants, they can usually be sold for enough to cover a large part of the cost of raising the whole. G. A. G., JR.

The Vineyard.

Iona Grafted on Isabella.

I have a grape and peach farm on the banks of Keuka Lake, and during the past season I have had a little experiment which may interest some of the RURAL'S army of readers. The man living on my place is an expert grafter of fruit trees, and in the Spring I requested him to set some cuttings from Iona grape-vines in some old Isabella stocks as an experiment. He did so, and the result was to me quite surprising. They all lived and flourished, making from six to ten feet of strong, ripe wood, and on nearly all of them there were bunches of ripe fruit. From one cane my boy picked and weighed two pounds of ripe Iona grapes. N. W.

Penn Yan, N. Y.

Dairy Husbandry.

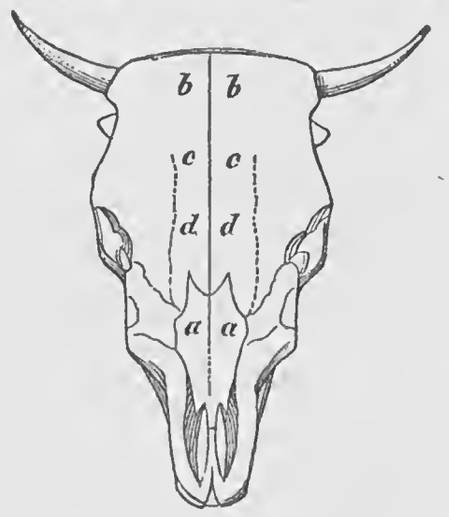
THE DAIRY COW.

HENRY STEWART.

Catarrh (Hollow-Horn.

MANY writers and other persons have "made merry" and have used sarcastic remarks in regard to the popular belief in "hollow-horn." A man needs to live and keep his wits about him and observe and study for half a century sometimes, before he comes to learn that nearly all popular beliefs have some basis of truth for their foundation. And so "hollow-horn" or "horn-ail" is really and truly a matter of fact. The only mistake about it is that the popular name indicates the effect of the disease and not its original source. This is, in fact, catarrh of the living mucous membranes of the nasal and frontal sinuses of the head. This disease is so frequent and so often serious that it is worthy of particular notice for its own sake, and more especially to help to remove the popular ignorance about it by which the troubles arising from it are left without remedy because they are ignored. A description of the head of an ox or cow may be useful for this purpose.

At Fig. 555 is an outline of the skull of a cow upon which the letters *a*, *b*, *c*, *d*, show the positions of the sinuses or interior cavities of the skull, which serve to greatly strengthen the frontal bones and enable the skull to resist the concussions which are common with horned animals. The line down the center is the median suture of the frontal bones. At *a*, *a*, are the bony plates which cover the nasal sinuses; at *b*, *b*, *c*, *c*, and *d*, *d*, are the localities of the divisions of the frontal sinuses. In the ox the frontal bone, which in fact forms the foundation of the face, is largely developed, and is of great thickness.



SKULL OF A COW.—FIG. 555.

From this bone proceeds at each side of the upper extremity the bony cores which support the horns, which, however are not the horns but important portions of the skull. These horn cores are filled with small vascular channels and canals, to such an extent as to render their substance extremely spongy in appearance. The frontal sinuses are prolonged into these horn cores. The horns themselves are attached to the skin only, and are merely the protecting covers of the cores which are extremely sensitive and extensively supplied with veins, arteries and nerves. The horn itself is wholly insensible, as is the hair, being, in fact, in structure nothing more nor less than hair compressed into a solid form, so to speak.

This explanation of the structure of the horn and its immediate connection with the interior of the skull, should be sufficient to show how easy it is for the horn cores to be affected by any disease which involves the membranes lining the cavities of the skull. Exposure to cold or to sudden changes of the weather almost invariably produces inflammation or catarrh of these membranes; and, of course, the horn cores are affected at the same time because the membranes reach into and entirely through their substance, which being extremely cellular on account of the numerous canals and passages, is covered by a very large surface of the sensitive membranes.

Inflammation soon leads to suppuration, and the passages which lead from one sinus to another may soon be partly or wholly closed by the swollen condition of the membranes and the accumulation of the secreted mucus with whatever pus may have formed. Here then are sufficient causes for the extreme uneasiness and distress which mark this disease and produce the weakness and emaciation common to it. The appetite is lost; the whole system is feverish and disturbed; the circulation is disorganized; the patient suffers the most violent pains in the head from the compression of the mucus and the pus in the cavities as well as from the congestion of the blood vessels. The owner, under the advice of some neighbor, bores into the horns with a gimlet and the pus is discharged, giving instant but temporary relief. Perhaps under the continuous effect of the disease the bony cores have entirely sloughed away and have passed through the nostrils in the shape of a fetid, purulent discharge, and when the horns are bored they are found completely hollow. We may thus see how the popular idea of hollow-horn has originated, and that it is justified to a great extent by the facts.

The treatment of this disease is somewhat difficult from its deep-seated locality. Prevention, by careful attention to the warm, dry, comfortable lodging of the stock, will avoid it. When it occurs, and the inflammation has spread to the horns, the case may be treated by blisters or other counter-irritants upon the poll, and even by boring the horns and injecting soothing and antiseptic liquids, which may wash out the affected cavities and restore the condition of the membranes. Warm water with 10 or 12 drops of carbolic acid to the pint would be employed beneficially. But medicines should also be used. A strong cooling purgative, for instance, one pound of Epsom salts, with an ounce of nitrate of potash (saltpeter) added might be given and repeated the third day. After that, a daily dose of one ounce of hyposulphite of soda should be given until recovery is assured. Warm mashes and gruels would be very beneficial; warm clothing; steaming the nostrils, and washing them with the carbolated warm water would also tend greatly towards a recovery. By neglect, the disease may become chronic, when the distress suffered would greatly lessen the value and profit of the animal, and it is very probable that the disease would prove infectious or contagious in a herd, and is therefore all the more serious on that account.

The Herdsman.

NOTES BY A STOCKMAN.

SOMEBODY, I think a correspondent of the RURAL, stated recently that in regard to sheep, in England mutton was considered first and wool last. This is not correct, although mutton is there an important consideration in the business of keeping sheep. An English writer on this subject recently said: "The high price of wool changed my views." . . "An Oxford Down should have the poll well covered with wool, adorned with a top-knot on the forehead, a good fleece of wool, not too curly, a well-formed barrel on short, dark legs, with good firm mutton." Now, if we take this writer, who is a prominent sheep breeder, as an example, wool is first and mutton last; and this is the case every time. Sheep are classed in England by their wool and not their mutton, and as long-wools, medium-wools and short-wools; and the mutton is entirely a secondary consideration.

A LARGE sale of Short-horns from the Bow Park herd (Canada) was held on the 10th ult. at Waukegan, Ill. Some high prices were obtained. Grand Duchess of Oxford 29th brought $4,025; Duchess of Horton, $2,030; Waterloo 38th, $1,700; Kirklevington Duchess 17th, $1,270. Six bulls and bull calves averaged $584 each and 32 cows and heifers averaged $583.

THE annual meeting of the American Clydesdale Association was held at Chicago the 10th of the last month. A scale of points was submitted and some preliminary measures taken to establish a stud book. This is a necessary precaution, considering the increasing favor with which these horses are received here and the fact that in Scotland and England a stud book is kept for the record of pure-bred animals. [The above notes have been left over for some time.—EDS.]

AN extraordinary comparison of the increase in our export trade of live stock and its products during a dozen years past is given in the following figures.

	1868.	1881.	Increase.
Export of live stock	$733,395	$16,412,398	$15,670,003
" cattle products	14,833,291	70,169,611	55,336,320
" hog products	18,502,660	105,791,231	89,291,591

TOO much mutton is said to have been the cause of the death of 17 shearers during the shearing of a flock of nearly 100,000 sheep in New Mexico, the men not having been used to eating this kind of meat. Perhaps this mutton may have been of the "lantern" kind and not easily digestible even to a New Mexican ranchero, who can sometimes digest a piece of broiled rawhide.

THE State Veterinarian of Illinois has had a hard time of it recently in attending to calls from different parts of the State to investigate cases of supposed pleuro-pneumonia. He has found nearly every case to have been Texan fever, and the others to have been due to inflammation caused by the presence of parasitic worms, Strongylus filaria, in the lungs and air passages. As this parasitic disease is very frequent in calves there is little

doubt the same kind of pleuro-pneumonia affected the young calves from the East which have created such a rumpus in Illinois; that is, if any at all were really found sick, of which no sufficient evidence has yet been given.

In the "Great West," where everything is so lavishly supplied by nature, one is apt to scorn ideas of economy. It does not pay to stand there over trifles; one has not time to stoop to pick up a corn ear, for while he is stooping a whole shock of corn may be gathered in the arms and cast into the crib. This is the popular Western faith. But the Great West, that was, a few years ago, the "Great West," has come down to ideas of economy and feeds corn in troughs and fodder in racks, and no longer turns the steers into the fields to do the harvesting and husking for themselves; while the present "Great West" is going through the old experience.

Every one sympathizes with this lavish style of management. It is like the great, generous heart of the West, where the latch string is always on the outside, and the unbidden but always welcome stranger is never questioned as to whence he comes or whither he is going. But it is not business; and E. W. S., in his article on "Winter Stock Feeding," touches the very point when he writes (page 796) of the waste of out-door feeding and the cheapness of comfortable shelter. But stables are not required, nor need the wild, untamed Western steer be reduced to the ignoble necessity of going under shelter of a roof.

Some years ago, during the life of the late Mr. George Grant, I suggested to him to put up for the protection of his large herds and flocks in Western Kansas, some cheap and easily made, open shelters after the manner of the Scotch mountain graziers, in which the rough, hardy Highland cattle take comfort in the worst of those fearful storms which sweep over their exposed pastures. These "stells," as they are called, are mere circular or curved walls of rocks and turf, or even heather or brush interlaced among stakes driven into the ground, with the hollow side turned from the direction of the storms. Protection for a thousand head of cattle may easily be put up at a cost of 25 cents a head, or even less where the materials are so plentiful as on the great prairies; for nothing is better than sods turned up by a breaking plow. Even a quantity of cornstalks packed in between a double row of stakes would serve the purpose exceedingly well.

A story with a moral comes anent a bull taken out to water after dark by the light of a lantern. The bull attacked its attendant, broke the lantern and set fire to the barn which was consumed. There are, indeed, several morals attached to this sad story. No bull should ever be let loose when a lantern is about. The glare makes the quietest animal furious, and he will rush upon it, not seeing the person who is holding the light. No person should be watering his stock by lamp-light. That argues carelessness, neglect and irregularity, and when one commits these sins, his sin always finds him out.

Regularity in feeding and watering stock of all kinds is indispensable to economy and success. Animals worry when the time passes at which they should have been attended to. "At what hours do you feed?" I once asked a farmer who had a fine flock of fat sheep nearly ready for the market. "Five in the morning, ten, three in the afternoon and eight in the evening; and I have not missed a meal at these hours one day this Winter," he replied. And his fine sheep showed that his attention had been well rewarded.

Cross-breeds and grades are the butchers' animals—necessarily so in one sense because pure breeding animals are too valuable for beef. But yet when one never sees or hears of a pure-bred steer, ox or heifer being fattened for beef, it tends to show that breeders are not careful enough in the selection of their breeding animals. There are always some beasts, even among the pure-bred animals, that would do better service on the block than in the pens, and breeders ought to show what is the intrinsic value of their stock by exhibiting a fatted steer or heifer now and then. A leading Western paper, reporting on the Chicago Fat Stock Show, remarked that Short-horn breeders had not made any advance in the quality of their stock since 1817, for the best Short-horns at the show traced back to the "seventeens." The statement is scarcely worthy of consideration, although some of the descendants of the "seventeens" may be hard to beat. But breeders of modern strains should prevent these criticisms by showing what they have to offer, and the excuse that their stock is too valuable is not justified for the reason above stated.

Among sheep at Chicago it should be noted that some of the prize animals were Cotswold and Oxford Down, Cotswold and Shropshire, and Cotswold-Merino crosses. The last kind, which was recently illustrated and described in the Rural, is one of our best crosses, if not *the* best, for lambs and mutton, and wool also. It is one of the most convenient, too, and should become a popular sheep.

What is the cost of a colt? Mr. Hardin's figures are excessive. Let us put the service at $50, for which a first-rate horse can be engaged. The first year, the colt can be well kept for about $15 or $20, all expenses told. The second year the cost of a Summer's run in a pasture will hardly be worth estimating, and the Winter's feed may cost $30. The next year the colt will earn its feed, and the fourth year will do better, and in fact pay by its work for the first and second years' feeding. If the owner gets then $150 or $200 for the colt he has done much better than any dairyman can do with a cow, although it may be a high-bred Jersey with a long pedigree.

The most profitable horses that are raised are those used in the cities and towns for light hauling and for street cars, and in the country for general work and for the road. These will sell readily when four years old for $150 to $250 or $300. A large number of them are raised in Ohio and Western Pennsylvania, Indiana, Michigan and Canada, and I aver that they make more money for the farmers who breed them than any cow in the world would do. And they have paid for every dollar of their cost by their work before the dealer picks them up. These are the progeny, too, of cross-bred stallions, for whose service only $10 or $20 are paid, the former price being most usual.

Pure blood is very good and excellent, in fact, and its use is to be encouraged. But the stream is too small to be tapped at every farm, and although I may be committing a grand heresy in saying it, I declare that *the farmer* cannot afford to have much to do with it on account of its cost. A few may who have means to turn the expenditure to good account.

There are exceptions—with sheep, for instance, and with pigs—because this class of stock comes to profit so quickly. A pure-bred Hampshire Down ram, in a flock of 50 ewes, will return a cost of $50 in a year, and for several years after that will return the same amount from the lambs only. The same with a pure Merino ram on a flock of light "lantern-skinned" Western ewes; and the same with a Berkshire or Poland-China boar.

So, too, it has paid handsomely to improve the Texan, Cherokee and Colorado cattle by the use of Short-horn and Hereford bulls; but it should be observed that it is not the fancy stock, high-priced bulls, that are used in these herds. Some drops, or "dashes," of the best blood may flow in the bulls used, but it is the working, every-day herds that supply the stock which does the improvement.

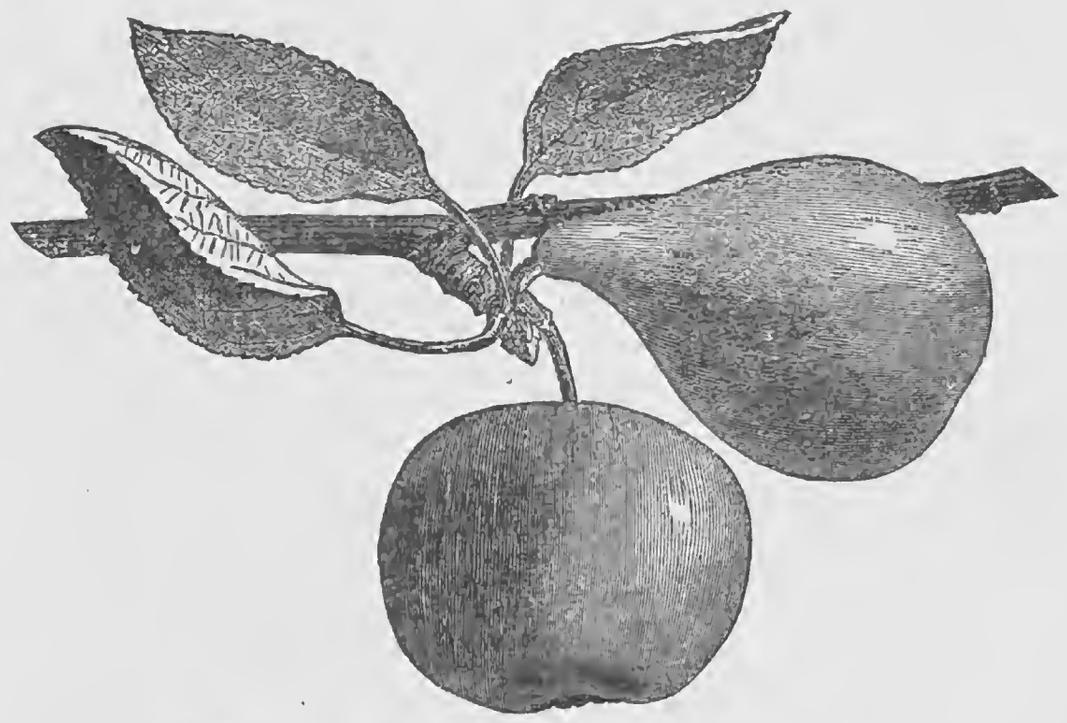
We can hardly say that we have got down to that point yet in some other branches of breeding stock for profit.

Pomological

TWO FORMS OF APPLE UPON THE SAME TREE.

In the Revue Horticole we find an account of a heteromorphous apple-tree, with an illustration which we have thought worthy of having re-engraved for our columns. The tree grows in an orchard belonging to M. Meril, of Deville, near Rouen. It was first observed in 1878, and again in 1880; on the latter occasion, by a mower who was cutting the grass, and who, having stopped under the tree, was surprised to see on it fruits so distinct in form.

The diverse fruits were found intermingled on the branches in the proportion of four or five apples of normal form to one of those recalling a pear. The origin of this singular variety seems to be unknown. It is, however, only the shape of the fruit which is affected, for its character and flavor are those of an apple, and do not resemble those of the pear. This seems to exclude the hypothesis of fertilization by a pear-flower, which many would adopt; probably the tree proceeds from a natural seed, and has always borne fruits thus differing in form, but which have been hitherto overlooked. The tree which has borne these curious diverse fruits is about forty years old.



HETEROMORPHOUS APPLE.—AFTER THE REVUE HORTICOLE.—FIG. 556.

Societies, &c.

NOTES FROM THE ATLANTA COTTON EXHIBTION.

[Rural Special Report.]

Every department of the cotton industry is fully shown at this exposition and none attracts more attention than that of the spool cotton manufacturers. The Willimantic, O. N. T., and Coates Companies have gone to great expense in showing up their different methods for making the fine, linen-finish cottons—bleached, unbleached and in all colors, showing up, in fact, in the main building every thing except the dyeing processes. The rapidity with which the cotton is taken from the field and put through the several processes is fully and thoroughly illustrated. The Willimantic Company has the largest and finest exhibit of cottons and machinery on the grounds. Here we see the Sea Island, or long-staple cotton, which is the only material used in their goods, first placed on the knife cotton gin which grasps the fiber, draws it easily until the seeds reach the edge of a polished pressure bar, where a light blow knocks off the seed, thereby not breaking or straining the fiber. Then the cotton goes to the picker, where after being weighed and distributed upon the feeding apron of the picker to a certain uniform depth to make the required weight, it is rapidly wound into laps which resemble a huge roll of batting. Now the cotton is ready for the cards. Those used by this company are the largest size of any in this country, are of great capacity and contain the latest improvements. From the cards the cotton is delivered to the "railway," and from this it passes to the "railway head," where the band of cotton is reduced in size to the form known as the railway drawing. Next it goes to the comber doubler where several of these drawings are combined together and brought out in the shape of a lap known as the comber lap. Then it is fed into the comber, and though the cotton at this point looks at its best, about 25 per cent of it is taken out as waste, leaving the remainder drawn out in long, fine, strong and perfectly clean fiber. All the short fiber is eliminated as waste and goes off to be sold as clean short-staple cotton. Next the prepared cotton goes to the first drawing frame where the comber strands are drawn eight into one and this finishes what is called the first drawing.

At the second drawing frame, which comes next, the fiber is still further drawn, eight strands into one, each drawing lengthening the strand about in that proportion and condensing the fiber. Then it goes, two strands into one, to what is known as the slubbing frame where it receives its first twist, is still further lengthened, and is wound on a bobbin ready for the intermediate frame where the strands are again doubled two into one, drawn and twisted, then drawn still finer and twisted two into one on the "roving" frame; then it goes to the ring spinning frame where the strands are again spun and drawn two into one in sizes from No. 20 to No. 120 yarn. Here is the point where the drawings stop and the yarn is now in a condition that prevents any further extension.

It is now ready to make two, three or six cord cotton at will, and our readers should remember that two, three or six cord cotton represents the number of strands of the above yarn. Six cord, of course, is the best, as the twist on the six strands makes a more even surface and this thread is especially used for sewing machines, and is much stronger in proportion, and more uniform in size.

The process of making the yarn into cotton is now shown: First the yarn goes to the two-ply doubler where two threads of yarn are wound on a spool. This machine has a very fine device by which, should a thread break, the spool is stopped at once, making it impossible for the yarn to get mixed. After leaving this frame the bobbins are placed on the first twisting frame, where the thread is made into two cord cotton; next it goes to a bobbin spooler where two ply threads are spooled on to new bobbins for delivery to the three-ply doubler which spools the threads up to six cords and has the same device as the two-ply doubler for stopping the machine. Now the threads are ready for twisting and go to the second twisting frame where a perfect six cord unbleached or "gray" thread is completed. There it is reeled off in skeins, and bleached, colored, or finished with Reid's silk or linen finish, which is the celebrated smooth surface that has made these cottons noted all over the world. After the skeins are returned from the finishers, they are placed on the skein spooler and wound on large bobbins, and then comes that interesting machine known as the automatic spooler which puts on 200 yards to the spool at the rate of 120 spools an hour. One operator attends each machine.

Then comes another very interesting machine known as the ticketing machine, which cuts, pastes and puts the label on both ends of the spool at the same time, at the rate of 95 per minute. Then the cotton is boxed and put up in the different shapes to meet the demands of the markets of the world.

In another exhibit one of the spoolers at work, attended by a single operator, spools 6,000 a day, by winding eight at a time. This machine lifts the spool automatically to its position, winds just 200 yards, and, at the right point of time and place, cuts the spool, draws the end of the thread tightly in the slit, cuts it off and drops the finished spool in the tray. Many of the readers of the Rural will probably be astonished to find out the number of processes the cotton has to go through before it is ready for the market, and at the low price it is sold for after all these manipulations; but if they could only see the handiwork of the American machinist, as represented in the improved machinery exhibited on these grounds, they could easily see how it is done. Of all the machinery in this line there is only one foreign machine used, and that is the English knife roller gin used for ginning the long-staple cotton. An improvement will be made on this by some Yankee within a very short time. This exhibition will, from an educational point, be an immense benefit to the Southern people. It will show them what they can do on their own ground, how to keep and manufacture their raw material instead of sending it away from home, and also give them a much needed lesson in what their Northern brothers are doing and have done to create markets for their produce all over the world.

W. H. K.

Miscellaneous.

What Others Say

Mr. J. J. Thomas decides that Lost Rubies, though about the size of Franconia, is unlike it in character. Franconia and Naomi are generally thought to be the same, so that Mr. Thomas's decision is that Lost Rubies and Naomi are different varieties. Mr. Purdy, we believe, does not deem Franconia and Naomi identical, however: so that he may still insist upon the identity of Lost Rubies and Naomi..

Last Winter a writer in the London Agricultural Gazette had 25 lambs out of 140 taken with what shepherds call the white scour, which is very fatal. What comes from the lamb is about the color of soapsuds, and of about the same consistency. He gave each one a tablespoonful of dry common table salt. The next morning all but one were dry; to that one he gave a second dose, and it recovered. He did not lose one. He has used dry salt with calves in scour with the same success.

PROSPERITY everywhere. Truly ours is a favored land. The Pacific Rural Press says: "There has probably never been a more buoyant spirit awaiting the opening of the planting and growing season, and the alacrity with which chosen plans are pushed forward will be charming to contemplate. The State was never in so good shape to go forward. All legitimate trades and industries are alert, expectant and confident. The season has been a good one in trade even during the period when dullness usually prevails, and now that the spell of idleness is broken, the quickening will be general.

ORCHARD GRASS.—Professor D. L. Phares, of the Mississippi Agricultural College, speaks very highly of Orchard Grass:—Of all grasses it is one of the most widely diffused, growing in Africa, Asia, every country of Europe and all of our States. It is more highly esteemed and commended than any other grass, by a larger number of farmers in most countries—a most decided proof of its great value and wonderful adaptation to many soils, climates and treatments. . . . It will grow well on any soil containing sufficient clay and not holding too much water. If the land be too tenacious, draining will remedy the soil; if worn out, a top-dressing of stable manure will give a good send-off, and it will furnish several good mowings the first year. It grows well between 29° and 48° latitude. It may be mowed from two to four times a year, according to latitude, season and treatment, yielding from one to three tons of excellent hay per acre on poor to medium land. In grazing, and as hay, most animals select it in preference among mixtures with other grasses. In lower latitudes it furnished good winter grazing, as well as for Spring, Summer and Fall. After grazing or mowing, few grasses grow so rapidly (three to six inches per week), and are so soon ready again for tooth or blade. It is easily cured and handled. It is readily seeded, and catches with certainty. Its long, deeply penetrating, fibrous roots enable it to sustain itself and grow vigorously during droughts that dry up other grasses, except tall Oat Grass, which has similar roots and character. It grows well in open lands and in forests of large trees, the underbrush being all cleared off. He has had it grow luxuriantly even in beech woods where the roots are superficial, in the crotches of roots and close to the trunks of trees. The hay is of high quality, and the young grass contains a larger per cent. of nutritive digestible matter than any other grass. It thrives well without renewal on the same ground for 35, may 40 years. How much longer the Professor is not able to say. It is easily exterminated when the land is desired for other crops. Is there any other grass for which so much can be said?

THE N. Y. Sun is responsible for the following: "In a recent trial of a butcher for selling bad meat in a town in England, it came out that a great deal of horseflesh was sold to poor people. But the selling of horseflesh as beef was not the worst feature in the case, for it was shown that the horse died a natural death, and was not butchered for his flesh. In commenting on this case an English agricultural contemporary says that it is the practice of some butchers in England to procure aged and diseased horses and slaughter them for food; then, in order to attract custom, they put a low price on the stuff and label it American or Australian beef, on account of its uninviting appearance. This is meanness of the lowest type.

IT is generally maintained, remarks Dr. Voelcker of England, that you can only get richness in the small breeds, like the Jerseys and the Alderneys; and it is generally true that the Alderney and Jersey cows produce richer cream than cows of the larger breeds; but, nevertheless, it is a fact that by proper selection you may get a cow which produces not only rich milk, but also much milk; and on the occasion of the last dairy show there was a Short-horn cow which gained the milking prize, and which not only produced a great deal of milk, but milk that was actually as rich as that of some of the Guernsey cows that were then exhibited.

PROF. ARNOLD in the New York Tribune, says that cows which have a moderate feed of meal while grazing will give more and better milk and hold out longer than those which live exclusively on grass. This is more especially true with large milkers. So large a share of their food is converted into milk that their bodies fail to be properly supported. With such cows a moderate feed of meal daily while at grass gives a fuller development of vigor without undue excitement, and contributes to the duration of the milk-producing function as well as to an improvement in the quality and quantity of milk. Exhaustion, or a failure to fully sustain vital functions, is as fatal to duration as over-excitement or over-exertion, and from this cause more cows have their time of profitable milk-producing shortened from the lack of meal than from getting too much while at pasture.

GETTING RID OF QUACK GRASS.—Mr. Simmons, a member of the Farmers' Club said, according to the Rural Home, that he had a piece of Quack in one of his fields. He planted it to potatoes last year, and cultivated them well, and thought he checked the Quack decidedly. This year he sowed it to oats, grew a very large crop, and could see nothing of the Quack in the stubble. Turned it under and sowed wheat, and cannot, as yet, see anything of the Quack. Mr. Ives did not believe that Mr. Simmons would see much more of the Quack. He had handled a great deal of Quack, and finds it will give in to thorough tillage. The thorough cultivation of the potatoes last year, followed by the Spring crop, and then the cultivation for wheat, when so dry, was hard upon it, and then the wheat will help keep it down.

THE New England Farmer remarks that farmers living near villages can make the most from their hogs if they will retail them out at butchers' prices. It is very seldom that a hundred pounds of cut pork will not bring $4 more than a 100 pounds of whole hog. Salt pork, hams, lard, roasting pieces, head cheese, pickled feet, and the trimmings,

"In linked sweetness long drawn out,"

are always salable in every Christian market, and the different parts are not difficult to cure, while the waste from pork carcass is less than from any other animal, except sardines.

IT says also that a swill barrel on the farm, where every waste substance is thrown to sour and rot, is a piece of furniture that it has little respect for. There is no place for it in the house, nor in the dairy room, nor at the barn, nor have we found quite enough room for it out of-doors. It draws flies, breeds mold and maggots, smells bad, and not unfrequently spoils the good food put into it.

DR. HOSKINS says that he began his present sandy farm fifteen years ago when it was called a "run-out" place, and having chiefly used ground bone and hard-wood ashes as fertilizers, he now has it in first-rate condition. There is not an acre of it that has received this treatment that is not good for two or three tons of hay, 300 to 400 bushels of potatoes, 30 bushels of wheat, or 60 bushels of corn at a crop. Some of the land has never had a particle of stable manure applied to it since it came into his hands, and none has had muck. He uses some nitrogenous fertilizer, usually sulphate of ammonia, with such crops as he thinks need it, but this is applied rather to the crop than to the land, and none is supposed to be left in the soil when the crop is harvested. This work has all been done at a profit. The Doctor is not a "fancy farmer," and has had no money to use except what has come out of the land while in process of improvement. He is still using from one to three tons of bone and all the ashes he can get every year, and is satisfied with this method of farming on sandy land.

THE Sweet Potato must be kept dry and warm, says the Sun, as cold even above the freezing point is often destructive to its vitality. In warm climates it is only necessary to bury the tubers in dry soil in the autumn, in order to have them come out sound in Spring; but in cool climates, as in our Northern States, a little artificial heat during the Winter months is required. Packing in dry chaff or kiln-dried sand is perhaps the best method, after which place the barrels or boxes in a dry room or cellar where a fire can be occasionally kindled to drive out moisture and raise the temperature to 60 or 70 degrees. The tubers will not sprout eve at a higher temperature unless considerable moisture is present in the materials used for packing.

PROPERLY viewed in his plans and objects, says Mr. F. D. Moulton, in the Journal of the American Agricultural Association, the man who does the most to promote the best system of agriculture is a philanthropist who sets an example to every tiller of the soil, stimulating others to accomplish the best results, encouraging all who view his work to aim high, and showing the world how attractive agriculture may be made. Such a man shows his followers how much of beauty and enjoyment may be found in farm life; and when we stop to reflect that agriculture is the great industry of our country, and that more persons are directly engaged in prosecuting it than in all other pursuits, it must be admitted that too much cannot be done to lighten its burdens, to increase its comforts and to improve its products

IN the same Journal Professor McBryde says that there is a weighty reason why the history of agriculture should have a foremost place in the curriculum of the agricultural college. In these days of advanced thought and arrogant self-assertion it is well to compare the pretensions of the present with the deeds of the past. Such study and comparison will almost induce the belief that modern discoveries are but the rehabilitation of truths, or the resuscitation of processes and arts, long forgotten or neglected, and our present civilization simply retrogression towards the primeval. And surely it will make us all the humbler and better to remember that human nature has from the beginning been ever the same; that the mind of man has always been engaged with the problem of his being and surroundings; and that intellects as mighty, and in all probability civilization as advanced, as any our century boasts of, have appeared and disappeared, again and again, since the advent of our race upon earth. * * * After a careful examination of the works of all the old Roman authors, Professor McBryde has but little hesitation in asserting that the agriculture of Rome was characterized by the skill and thoroughness for which her people were so justly renowned, and that it was superior to all but the very best systems of husbandry prevalent as late as 40 years ago, and fully equal to nine-tenths of the present. * * *

Thorough cultivation was always aimed at, and the necessity of manuring well understood. It was held that soils, like animals, needed rest at stated intervals; hence the fallow system was generally adopted, and the land kept clean and mellow during the season by repeated plowings. This fallow formed part of a regular rotation in which different kinds of crops were grown.

Leguminous plants, more particularly the clovers, lucern, sainfoin, etc., were considered especially valuable in such rotations as good preparations for wheat and the other cereals. They were therefore grown for turning under green, as well as for forage, for Columella writes of them as follows: "If the lupins, vetches, lentils, etc., are cut down green and immediately plowed under and covered before they wither, they fully supply the place of barnyard manure." He adds, however, that if grown for their seeds, such leguminous crops as beans, peas, etc., injure the fertility of the soil, and that the only safe and sure remedy in such cases is farm manure. Columella and Palladius both give full directions for the culture of lucern.

Much attention was paid to the making and composting of manure, and the relative amount and value of that voided by the different kinds of farm animals carefully determined. On certain crops it was applied green; for others it was well fermented. The time and mode of application demanded by different soils also received due consideration. Leaves, ferns, straw, the sweepings of the courtyards and roads, ashes, natron, lime and chalk, salt, etc., were all freely used as fertilizers. Burning was another method adopted for improving unproductive fields.

A NEW BLACK CURRANT called Black Champion, raised by Mr. Dunnett, of Dedham, England, is said by the Florist and Pomologist to be the finest variety yet known, being extremely prolific, with large berries, ripening simultaneously in the same cluster. It will be quite an acquisition, the Pomologist thinks, among new hardy small fruits, and will be especially valuable for market-growers, on account of its free bearing habit.

MR. GEDDES (N. Y. Tribune) finds red clover, sown thickly, the very best thing to dispute possession with and keep Canada thistles down. . . Mr. Cheever, of Massachusetts, states that he has kept hornless bulls for the past 15 years, in all as many as eight mature animals, and "not one, as yet, has shown signs of viciousness." . . . . . Experiments made by Professor Beal and reported in the N. Y. Tribune, show that nothing is gained by placing posts in the ground top-end down. . . . . Dr. Hoskins thinks that there is no machine so poorly understood by the majority of those who run it as the plow. . . . . Mr. Cheever says that a carpenter who should use tools as far behind the age as are some of the plows that are still in use, would find it difficult to obtain employment. . . . . Professor S. W. Johnson says that it is often said of a machine that it was good in theory, but failed in practice. This is as untrue as untrue can be. If a machine has failed in practice it was because it was imperfect in theory. It should be said of such a failure, the machine was good, judged by the best theory known to its inventor, but its incapacity to work demonstrated that the theory had a flaw. . . . . Secretary Chamberlain forcibly says, in the Ohio Farmer, that poor soil cannot be brought up to fertility in a season simply by an immense amount of manure, any more than a lean horse can be fattened in a week by an immense amount of feed. The soil needs time to assimilate the manure and improve in texture. It takes time to "fat it up," just as it does to fatten the lean horse. And time requires patience on the part of the farmer. . . . . It is not always safe to give a piece of your mind to an erring friend, because you live so close to your income that any expenditure of that kind may bankrupt you. . . . . One thousand shingles, laid four inches to the weather, will cover 100 square feet of surface, and five pounds of shingle nails will fasten them on. . . . . One fifth more siding and flooring is needed than the number of square feet of surface to be covered, because of the lap in the siding and matching of the floor. . . . . One thousand laths will cover 70 yards of surface, and 11 pounds of lath nails will nail them on. . . . . Eight bushels of good lime, sixteen bushels of sand and one bushel of hair will make enough good mortar to plaster 100 square yards. . . . . A cord of stone, three bushels of lime and a cubic yard of sand will lay 100 cubic feet of wall. . . . . Five courses of brick will lay one foot in hight on a chimney; six bricks in a course will make a flue four inches wide and twelve inches long; and eight bricks in a course will make a flue eight inches wide and sixteen inches long.

Everywhere.

NOTES FROM ARKANSAS.

THIS southwestern land may be considered a land of promise, as its resources in a great measure are yet to be developed. The first really sharp frost of the season occurred on November 20. Our forest trees had previously assumed a golden hue and among our "up-west" mountains the scene for several days past had been beautiful—exquisitely picturesque. Our fruit trees this season are going into winter-quarters with fine prospects for a crop next season, the wood, notwithstanding the warm, wet weather of two months past, having thoroughly ripened, so that all liability to injury from Winter is over. Last year was one of great disaster to fruit trees throughout this State. A Summer and Autumn of showers followed by a fall of temperature unprecedented both for suddenness and severity, destroyed at least fifty per cent of all bearing trees. The damage, however, was confined mainly to low lands. All high points escaped with but slight injury.

The interest in horticulture is destined to grow into immense proportions in this State. That which retards it most will doubtless be overcome in a few years. Men who have already made a success have labored under great disadvantages. First, commencing without capital in the woods, they have had to expend a great deal of capital in the shape of labor to prepare the ground by removing the dense forests of oak and other growths. Second, most men engaging in the business have immigrated within the past eight years with a good knowledge of the fruit business in States north, and have found from experience that the list of varieties with which they had been familiar were largely a failure here. This is so especially with the apple and pear. The writer of this has brought to fruiting more than 100 varieties of apples alone, and now could not recommend for Winter keeping more than one dozen and these mainly of Southern developing. Years of time, toil and labor have been lost. In addition to this want of experience by this first generation of horticulturists, our State legislators fail to give aid or even encouragement to her agricultural enterprises. A young man from abroad goes into a law office and reads six weeks. He looks west to find a suitable location to develop his hidden genius. He has always understood that Arkansas is one great big "mullet-head." He comes and finds that the field for success in his line is preoccupied. He cannot with his limited knowledge of law earn enough to meet his current expenses. He strikes for the legislative halls of the State and by wiring and pulling he gets in. A legal term of 60 days's session is occupied in discussing defunct issues about "*old bonds*" and the embezzlements of former State officials, when a committee is raised at the close of the session and left "*ad interim*" to draw $18.00 a day and contingencies to detect a discrepancy in the Treasurer's books. Thus fifty thousand dollars are expended on discrepancies supposed to exist and the young man returns home, full of currency and self-complacency; exhilarated over the wonderful achievements made and the wisdom displayed at the capitol. Such men are after the "dear people's" money. They get what they are after, and all public enterprises of the State are lagging. An agricultural college in the State educates the sons of *well-to-do* merchants, officials and professionals at the expense of the people of the United States and of the State and returns them to their homes—to do what? Engage in agricultural pursuits after the most modern improved style? No. This is drudgery, only to be performed by the ignorant.

Thus the intelligent farmers and we have many of them—is left without encouragement. That we have resources equal to those

of any and inferior to no other State in the Union cannot be denied. C. H. G.

RURAL SPECIAL REPORTS.

Illinois.

WAUKEGAN, Lake Co., Dec. 2.—I received all the seeds on the 16th of May and planted them next day, excepting the oats and sorghum, which I planted later. I dug the potatoes the 20th of September; they yielded seven pounds. I think they would have done better if I had received the seed in time to have planted them earlier. I planted the Washington Oats and the Branching Sorghum May 26th The oats came up and grew nicely until the 26th of July, when they were badly lodged by a heavy rain and also struck with smut, so they didn't amount to anything. But the sorghum did first-rate. I cut some up and fed it to a cow, with green corn stalks, and she appeared to like the sorghum as well as the corn, so I think it first-rate fodder. I saved 22 stalks for seed, which I think ripe enough to grow, though I think ordinary seasons are too short for it to ripen here. I was much pleased with the dianthus, but the picotees and carnations, which I took especial pains with, proved also to be dianthus. The asparagus seed came up and did well. J. D.

Maine.

WINTHROP, Kennebec Co. Nov. 28.—I planted the little White Elephant about the 20th of May cut into 15 pieces, one piece in a hill, and dug on the 1st of September 43 pounds of nice tubers, eight of the largest weighing 10 pounds; six weighed 6¼ pounds, five, 5½, four, five pounds, three, four pounds, two, 2½, and one 1¼ pounds. The pinks came up well and were the wonder of Winthrop, admired by all. J. S. P.

Maryland.

BURTONVILLE, Montgomery Co., Nov. 28.—We had the driest season for many years. Our hay was good; corn about two-thirds—early good, but late poor; wheat and potatoes about half a crop. Wheat is worth $1.35 @1.50 per bushel; potatoes, $1@1.10; hay, 90c. @1.20 per 100 pounds; apples from $2.50@3.50 per barrel. W. S D.

Massachusetts.

LOCKS VILLAGE, Nov. 21.—From the White Elephant Potato I raised 36 pounds of handsome tubers; all were large enough for table use, one weighing a little over two pounds. From the Washington Oats I raised one-half bushel of nice grain. The asparagus is doing nicely. We have over 100 plants. The Rural Branching Sorghum, I think, is a failure; it grew to be about eight feet high and seeded well, but I think the frost killed it. F. S. MCF.

Michigan.

SODUS, Berrien Co., Dec. 3.—The White Elephant was very small; I cut it into 11 pieces, 10 of which grew and did fairly, producing 57 tubers, mostly marketable. They had a poor chance, as I planted them alongside of, and only 20 inches from, the Washington Oats, which grew so large as to shade the potatoes too much. I saved all and intend to find out next year what there is in them. The Washington Oats I sowed in drills 20 inches apart, two inches in the row; they made a splendid growth, but smutted badly. The drill for about 20 feet was injured by a shade tree and the cows got in and ate off nearly one-third of the heads. I thrashed six pounds of very small seed—not more than half as large as the Boughton raised in the same field. The Rural Branching Sorghum did well. It was planted the first of June. I cut it when about seven feet high, but it was so late as to make only a feeble growth afterwards. I left a few canes of the first growth and have about half a pound of matured seed. The asparagus seed I planted just before a severe drought in the latter part of May, and it was a long time before it came up, but we have between 75 and 100 plants. The drought and neglect nearly caused a failure in the flower seeds, but a few came up and bloomed and were very nice. The drought all through this section was very severe—no rain to do any good for 10 weeks; but since the rain commenced it has been very wet, from the middle of October up to the present time. We have had no severe cold weather yet, the mercury going no lower than 14 degrees above zero; the frost now is nearly all out of the ground; we have had only about two inches of snow. Wheat a light crop; oats good; corn medium; tomatoes were injured badly by drought—only about half a crop, and these are rotted badly. Apples and all small fruits fair crops. I think the RURAL NEW-YORKER the best agricultural paper I have ever read. Long may it live to do good! F. M. B.

New Hampshire.

PORTSMOUTH, Rockingham Co., Nov. 28.—Notwithstanding the very cold, wet Spring, followed by a long, severe drought, I have had some success with the Rural seed. A very small percentage of the Branching Sorghum sprouted; those that did, sent up from a single seed 12 to 16 stalks which grew splendidly and by not cutting back some of it, I am satisfied I can ripen the seed in open field culture. Indeed I have done so this year without transplanting from the house, as our Pa. "brother" did. The asparagus came up well and plants have made a fine growth. Now as to its value, compared with Conover's Colossal for market, do the stalks grow any larger with the same treatment? [We cannot answer the question. We do not know that these kinds (the Argenteuil and Dutch) have been raised in America. Eds.] The Washington Oats grew well but did smut badly, and those that did not, the black birds gathered while in the milk: so ended the crop. The young Elephants did well for the season. I have 52½ lbs. of good, even-sized tubers. In regard to the Perfect Gem Squash: I purchased and planted a packet of seed and succeeded in saving nine plants on which grew 144 squashes. As many as 23 grew on a plant, but they are so small that not one in the lot will weigh two pounds, but quality may offset quantity, for they are first-class—no humbug about it. The late rains and warm weather have put a fine top on our Winter grain. We do not grow much, however, our principal crops being confined to small fruits, melons, etc. Berry crops in this section were good. Asparagus good; but the growth slow, owing to cold; for that reason the prices have kept good. Early potatoes fine; of late kinds none were planted for the grower would have to fight the bugs all Summer. Water and citron melons and sweet potatoes were about two thirds of a crop; but they brought better prices than usual; therefore we get about the same amount of money as usual and there was less labor to market the crops; corn from one-half to two-thirds of a crop. J. S. C.

The Queries.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

PLANTING BLACK WALNUTS.

C. H. E., Blossburg, Pa., wishing to plant five acres of black walnuts, asks, 1, would they be likely to do well there—plenty of butternuts thrive there; 2, how far apart should they be planted; 3, should the nuts be put in the ground now; 4, would it do to plant them in the garden and transplant them a year from next Spring; 5, would black walnuts pay.

ANS.—1. If the ground is rich they should. 2. Six to eight feet, according to the nature, cleanliness and shelter of your ground. 3. They had better, or you may bed them in earth, sand or sawdust till Spring and then plant them; at any rate, do not let them get very dry at any time before planting. 4. Yes, you may sow them thickly in rows or beds in your garden and let them remain there for one or two years before transplanting them. 5. That depends upon many things. If your ground is poor, black walnuts will grow but slowly in it. European Larch might pay you better. If deep and rich, in so small a plot agricultural crops might be more remunerative. Before setting out a plantation of young trees the ground should be well and deeply worked and cleaned. The young trees should be planted thickly so as to shelter one another and in due time overcome the weeds; but until they grow big enough to be beyond the reach of injury by being choked by the weeds the ground must be kept clean, else success need not be expected. In so small a space as five acres a wooden fence or hedge would be of great benefit in affording shelter, but in the event of large plantations their influence as shelter would scarcely be perceived except in those trees growing near them. But as a young plantation should not be a pasturing field as well, a fence is indispensable. In after years timely attention must be exercised in thinning; the trees should not be allowed to overcrowd one another. The thinnings may be used for fire-wood, light work, as tool handles, fence posts and the like.

MAKING A PERMANENT PASTURE.

E. L. McG., Chestertown, Md., has a piece of land he desires to get into permanent pasture—soil a light sandy loam, bordering on a river, and he asks: 1, what kind of grasses should be sown and how much to the acre; 2, what kind of fertilizers should be used, for the land is too poor to grow any sort of grass without some kind of manure; 3, how long could it be kept as a pasture by means of manuring and top-dressing.

ANS.—It is a poor business to try to get a permanent pasture on poor soil; one might as well try to live luxuriously on hard-tack and water. Good soil is needed, and the common failures of grass-seeding are due to the fact that persons seem to think any kind of land is good enough for grass. Our advice in this matter is: Don't try this plan which is sure to fail unless you wait and get the ground in good condition; but try the following: Plow the ground early in the Spring and plant corn in rows as usual, but close in the row; use 300 pounds per acre of good artificial fertilizer or as much wood ashes as you can get. When the corn is in tassel plow it under, across the rows, using a chain on the plow to draw the corn into the furrow. Then harrow repeatedly to kill weeds, but with a light harrow and with sloping teeth so as not to disturb the corn. In August or September, early, sow rye, with six pounds of Timothy, twelve pounds of Red-top, five pounds of Yellow Oat Grass, five pounds of Meadow Fescue, and 12 lbs. of Kentucky Blue Grass per acre. When the rye is high enough pasture it down in the Fall, and pasture it close in the Spring, and keep it pastured. In the meantime the grasses will be coming on and in the Fall will occupy the ground. Then keep the grass top-dressed with fine compost each year until there is a good sod. With care you can have a good permanent meadow. It costs—but then so does every good thing.

A. C. H., Roanoke, Ind., asks, 1, where can he get Canada or field peas; 2, how do they compare with corn as hog feed; 3, a remedy for kidney worms or "weak back" in hogs—a neighbor recommends arsenic.

ANS.—1. Seed peas are usually obtained from Canada where they are much freer from the fly than in the States. The soil and climate in the Dominion seem to be peculiarly adapted for growing peas and large crops are produced. R. H. Allen & Co., 191 Water St., New York, always have them for sale and we presume large Western seed dealers in Chicago, Detroit, Indianapolis and other places also keep them on sale. 2. Peas are better for fattening pigs than corn, as they are not so heating and consequently not so liable to produce inflammation of the stomach and bowels. Pigs will fatten as fast on peas as on corn. 3. The most effectual remedy for "kidney worms or weak back in hogs" is spirits of turpentine. It should be rubbed on the loins and administered at the mouth; dose, from a teaspoonful to a tablespoonful diluted in milk. The dose should vary according to the size of the pig. Two or three doses given every other day with the outer application, will generally suffice. We would not recommend arsenic.

HOW MANY TONS OF HAY IN A MOW?

J. R. B., Rillman, O., asks for a rule for measuring hay in the mow. He has heard of one which says that 8x8 will make a ton of Timothy, 8x9 a ton of clover and Timothy and 8x10 a ton of all clover.

ANS.—Your rule would be nearly right if you had made it 8x8x8, that is, 8x8=64x8=512 cubic feet, which is the normal quantity estimated for a ton of Timothy hay in a mow or stack. If hard-pressed by grain on the top, or if in the bottom of the mow, or if loose, allowance must be made; about 600 cubic feet of mixed Timothy and clover, or 8x9x9, and 800 feet of clear clover or 8x10x10 are the usual estimates. Varying circumstances must be allowed for, as they may affect bulk and weight. A common rule is: Multiply the length in yards by the hight in yards and that by the width in yards and divide the product by 15; the quotient will give the number of tons.

WINTER FEED FOR SHEEP.

J. M. C., South Jefferson, N. Y., asks what would be a good feeding ration for 30 ewes from one to three years old, of a medium grade of wool, and that are to drop their lambs after the middle of March—is barley a good grain to feed.

ANS.—For each ewe, one pint per day of mixed corn, oats, rye and buckwheat in equal quantities will make a cheap and good ration. Occasionally the same quantity of wheat bran may be given for a change. Clover hay should form the staple feed, and about three pounds per head daily will be required. Barley is too dear a feed for sheep. A feed of oat straw is relished now and then.

Miscellaneous.

A. J. A., North Paris, Me., sends for name two apples, both of them Fall apples—one, sour and red-striped, ripens in September; the other, a sweet apple, ripens later on.

ANS.—The apples were forwarded to Mr. Charles Downing, who replies:—"I do not recognize either as any kind I am acquainted with, except the sweet apple may be "King Sweet," which originated in Sidney, Me., where it is highly prized for its rich, honey sweet flavor. It is some time since I saw the apple, and I may be mistaken. The specimen is over-ripe and has lost its best flavor. The striped apple is also over-ripe and has no flavor left. I do not know it from its appearance." In this connection let us again state that fruit to be sent by mail should not be sealed or pasted or sewed. The spaces around the fruit should be filled closely to prevent it from shaking and bruising. These apples were very much bruised and spoilt.

A. C. H., Roanoke, Ind., asks where ozier willow cuttings may be obtained; 2, are they tough enough to tie corn fodder; 3, what will render a rather flat, new, pine shingle roof most durable—coal tar? 4, how to make manure pots intended to dissolve and gradually fertilize the melons, etc., planted in them.

ANS.—1, From A. J. Hinds, Patchogue, Long Island. 2, Yes. 3, No, not coal tar, but a coat of mineral (oxide of iron) paint and boiled oil. 4, Take good garden loam and cow dung clear of litter, except a little chopped straw. Mix these into a thick paste, working it until it is tough; then mold it into a rough sort of pots and put them to dry in the shade and a cool but frost-proof place. These melt down when put in the soil.

L. D., Belmont, Nova Scotia, asks for good recipe for water-proof blacking for boots and shoes; 2, is ozone as good a food preservative as the Prentiss Preserving Co. say it is; 3, would it be well to haul swamp muck this Winter on to an onion-bed on which onions have been grown for three years, and which has been manured and plowed this Fall, the muck to be used as a top-dressing in Spring and well harrowed before the seed is planted; the best commercial fertilizer for onions.

ANS.—1. See Domestic Economy. 2. See Prof. Warder's article last week. 3. It is impossible to say, so much depends on the quality of the muck. 4. We would as soon use bone flour as anything.

A. J. R., Harper, Kansas, asks the name of a manufacturer of water-wheels suitable for a small stream. There is a fall of 15 feet, and the stream would fill a three-inch pipe.

ANS.—For water-wheels write to the Leffel M'f'g. Co., Springfield, Ohio, who will send a circular giving information about powers, etc. Your water supply is too small, however, to do any work of the kind. The whole contents of the 15 foot, three-inch pipe would be less than one cubic foot, weighing less than 60 pounds, which would give scarcely power enough to turn a wheel without doing any work. By making a dam and collecting the water you might do a little work once a month, perhaps, but would that pay you?

J. W. B., Girard, Kansas, asks, 1, is there a hay loader that will lift hay or millet from the windrow to the wagon; 2, where can Bermuda Grass seed be obtained.

ANS.—1. Yes; it is the Forest Hay Loader, made by the Keystone M'f'g Co., Sterling, Ill. 2 Seed of Bermuda Grass seldom if ever ripens in any part of the United States, and it cannot, therefore, be obtained. Instead of seed cuttings of the roots are sown. These can probably be obtained from either P. J. Berckmans, Augusta, Ga., or Dr. W. B. Jones, Herndon, Ga.

J. C. A., Winchester, Ill., says he does not care much for hollyhocks and celery, and would therefore like to obtain from the Free Distribution an extra quantity of wheat and corn instead of these.

ANS.—We would gladly oblige our friends by complying with such requests were it possible; but in view of the extra labor such selections would entail in so vast a distribution, to do so would be really quite impracticable.

A. J. R., Kansas, and many others desire to know where the seeds of the Rural Branching Sorghum may be obtained.

ANS.—We can only answer that, if seed can be procured, leading seedsmen will offer it for sale. At present there seems to be some doubt as to the supply.

W. D. Van S., Old Chatham, N. Y., asks whether Molds and the Norway Oats are identical.

ANS.—We believe Mold's Ennobled Oats are an improvement upon the Black Tartarian by selection and by other means which Mr. Mold holds as a secret.

J. H. G., Salina, Kansas, asks where he can get Witch Grass seed.

ANS.—We are not aware that seeds are anywhere offered for sale.

W. C. G., Mentor, Ohio, asks what nursery has control of Fay's Currant.

ANS.—G. S. Josselyn, of Fredonia, N. Y., we believe.

W. B. S., Melrose, N. Y., asks where cotton-seed meal is for sale in this city, and its price.

ANS.—Hollister & Co., 92 Broad Street, New York; price about $35 per ton.

What constitutes a well-regulated farm? is the query propounded by E. W. G. to RURAL readers.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, Dec. 10, 1881.

C. E. P.—A. M.—G. W.—C. V. R.—J. L. M.—O. J. S.—G. C.—O. C.—G. W. S.—E. R. B.—J. W. B.—C. S.—A. J. C.—S. H. C.—C. J. H.—J. B. G.—F. W.—S. M. J.—F. L. C. W.—E. J. A.—F. M. B.—A. J. A.—L. D.—I. S.—J. D.—E. W. G.—C. W. G., many thanks.—J. O. M., Kansas, thanks.—J. W. B.—M. E. C., thanks of U. M.—W. S. D.—H. & S.—John Payne, potatoes received, thanks. Have you the name.—J. Alton, Cal, Rural Branching Sorghum received.—N. Shurb, Ind., seeds received. E. G.—J. G.—J. H.—W. H.—D. D.—C. D.—G. H. B.—A. B.—A. F.—J. F.—M. W.—C. M. W.—O. P.—I. D.—J. L.—A. C.—M. E. C.—L. B.—D. B.—E. B.—C. J.—W. M.—M. M.—L. W.—G. R.—M. R.—E. D.—E. J. M.—E. W.—C. W.—D. C. F.—G. H. D.—E. D.—V. T.—W. W.—G. A. G., Jr.

THE
RURAL NEW-YORKER,
A National Journal for Country and Suburban Homes,
PUBLISHED EVERY SATURDAY.
Conducted by
ELBERT S. CARMAN.
Address
THE RURAL NEW-YORKER,
No. 34 PARK ROW, NEW YORK.

SATURDAY, DEC. 17, 1881.

WE hope our readers will not neglect to put their implements and farm tools of all sorts in good repair. Farm implements are expensive and the farmer cannot *afford* to neglect them. Neither can he afford to tinker over a broken seed drill, mower, harrow or cultivator when it is needed for use, and every hour is more valuable to him than three hours are at this season. Paint or oil the frames of harrows and all exposed iron-work. Sharpen the knives, oil the bolts and screws of those parts which need to be removed. We have known farm hands, when work was most pressing, to spend an hour in vainly endeavoring to loosen a screw. Certainly it is poor economy not to attend to such matters during the dull season.

WHILE the present high price of butter is very satisfactory indeed to farmers and dairymen, there is one drawback attached to it which should not be lost sight of. Although the exports of oleomargarine fell off from 5,999,036 pounds between May 1 and November 23, 1880, to 4,220,573 pounds during the corresponding period this year, still the manufacture of the stuff, instead of diminishing, has increased. Good butter at 35 to 45 cents per pound is beyond the reach of the laboring population as well as of the vast majority of the salaried classes and of the population of towns and cities. These will have "butter," however, even if in the shape of oleomargarine, butterine, or the adulterated dairy product which there is reason to believe is becoming far commoner than in the days of cheap butter. There is little doubt that the high price of genuine butter is very favorable to the extensive sale of the spurious article, and when the price of the former sinks, as it must inevitably do in the course of time, it is likely to find in the latter a much more formidable rival than heretofore on the tables of the working classes—the vast majority of the population.

AMONG the 350 bills introduced in the United States Senate during the four days' session of the past week, two introduced by Senator Plumb of Kansas are of special interest to agriculturists. The first provides for the forfeiture of lands granted to railroads that have not been completed within the time specified in the act of incorporation, and for the opening of these to public settlement. The passage of this bill would restore to the public domain many million acres of unearned land now controlled by unfinished Pacific railroads. The second bill introduced by Senator Plumb provides that all lands granted to railroad companies under the original Pacific Railroad act of July 1, 1862, and all acts amendatory thereof, and to which the companies would have become entitled on payment of costs of surveying, selecting and conveying, shall be subject to all legal taxes, the same as they would have been had such costs been paid and the lands conveyed to the companies. Under existing laws lands granted to railroads are exempt from all taxation until surveyed and conveyed to the companies, and in order to avoid taxation these have been deferring the transaction. Efforts have been made in previous Congresses to pass a bill of this kind, but railroad influence has always been too powerful.

As we have endeavored in every way to engage the interest of our readers in the progress of the RURAL NEW-YORKER we propose from now until the end of the subscription season to furnish an *accurate* monthly statement as to the increase or decrease in our circulation for 1882. We say "accurate." Possibly many of our readers would rely upon any statement we might make without this emphasis. Still, as a rule, we have not found publishers' and editors' statements trustworthy when touching upon this vital question of circulation, and we know of one monthly agricultural journal that, though it has been "doubling" its circulation for many years, has at this time a smaller circulation as a matter of fact than it had five years ago. As evidence of our desire to be trustworthy in the statements we propose to place before our subscribers, we beg to say that our subscription books are at any time open for their inspection. Beginning with November, we find that our list shows an increase of thirty-three-and-one-third per cent over November of 1880 and three subscribers over. We may say that during the entire year not a single copy of the RURAL NEW-YORKER has been sent out that has not been applied for, except the Fair Number, unless it may be to personal friends of the editors or clerks or to advertisers whose attention has thus been called to special articles or to advertisements. We shall make our next report early in the New Year, for the present month.

OUR AGRICULTURAL EXPORTS.

THE amazing growth of the export of provisions and breadstuffs during the past few years is beyond doubt the sufficient cause of our agricultural and industrial prosperity. For the past six years our exports of wheat have been greater than during the previous fifty years, and they have nearly trebled in amount during those six years. In 1876 we exported fifty-five million bushels of wheat, and in 1881 one hundred and fifty million bushels. Of wheat and flour the exports were in 1874 equivalent to seventy-five million bushels, valued at $93,000,000, and in 1881 to one hundred and eighty-five million bushels worth $211,000,000. Adding the value of corn and meal to these figures we have the magnificent sum of $280,000,000 as the product of the export business of 1881 in these staples alone.

This vast sum by no means represents the actual pecuniary benefits which we as a nation have enjoyed. This business thus created has been like a rushing torrent, which down its lengthened course from the far West to the extreme East, has been harnessed to many industrial enterprises and has been turning this wheel here and setting in motion the boom of industry in this place, and then passing on to turn another there, and so on everywhere. In a thousand ways has labor been put in action for the production of wealth. Every dollar of this money has gone into the hands of industrious workers, has passed from them to others, and by a never-ending circulation has comforted and enriched thousands who have never recognized the source of the blessing.

OUR MERCHANT MARINE.

THE position which America has taken in the carrying trade between this and foreign nations is far beneath her dignity as a great commercial country. While our foreign commerce has increased nearly a hundred per cent. within the last fifteen years, it is now principally carried on in foreign ships. In 1856 the tonnage of foreign vessels entered at seaports of the United States was 3,117,034, and in 1881 it is 12,711,392 tons—an increase of 308 per cent., while American tonnage entered for foreign ports, in 1856, was 1,891,453, and in 1881 it is 2,919,149 tons—an increase of only 54 per cent. The ascendency of the British merchant marine service may be noted in this connection. Of the total foreign tonnage entered at our ports during the last fiscal year *i. e.* 12,711,392 tons, England entered 8,457,797 tons—or over 66 per cent. of the whole. Her system of paying large subsidies to various steam-ship lines to carry her freight and mails has resulted in giving her far more numerous and finer steamers than are those which fly the American colors.

In a series of resolutions passed by the Tariff Convention recently held in Chicago, bearing upon this question, two important recommendations occur. First, that American vessels should be made the carriers of American mails at rates proportionate to the value of the service performed, regardless of the rates that foreign subsidized vessels may ask for carrying them. Secondly, that the United States should discriminate in favor of American vessels so that they may enjoy a fair and lucrative share of the carrying trade proportionate to the dignity and power of the country in other respects. These resolutions will doubtless have weight with our national legislature now in session when the subject comes up for consideration. It is hardly conceivable that this country, with more miles of seacoast, with better harbors and ports, and with greater facilities for the establishment of a superior merchant service than any other, should, in the last fiscal year pay the immense sum of $110,000,000 to foreign vessels for transporting our merchandise; but such is the fact.

Even old, sleepy, opium-eating China, one of the least progressive nations of the globe, is bidding for her share of the carrying trade. Last week the first of a regular line of Chinese steamers entered the Thames with flying colors. Thus, under her own flag, China is shipping her products to England, and will, doubtless, in a few years send out her own vessels in large numbers to our shores. On the other hand, America, generally energetic and progressive, sits quietly by and allows other nations to send their craft hither to be laden with the rich products of our fields and factories, and does naught to regain even an honorable position on the high seas where once she was accustomed to acknowledge no superior.

BREVITIES.

ALL who desire that their children should love flowers and learn something; all who are in favor of improving the country school grounds should read the article by Mr. S. Q. Lent, in this issue.

PROF. JOHNSON gives this definition of the art and science of agriculture. The *art* of agriculture consists in certain practices and operations which have gradually grown out of an observance and imitation of the best efforts of nature or have been hit upon accidentally. The *science* of agriculture is the rational theory and exposition of the successful art. Other qualifications being equal, the more advanced and complete the theory of which the farmer is master, the more successful must be his farming. The more he knows, the more he can do. The more deeply, comprehensively and clearly he can *think*, the more economically and advantageously can he work.

THE delegate to Congress from Dakota proposes to introduce a bill providing that any person who shall sink an artesian well in that Territory in such a way as to produce an abundant flow of water upon any part of the unoccupied lands, shall be entitled to 640 acres of such land. Should the proposed bill pass, its provisions will, of course, be so modified as to be applicable to all the Western arid region. The worst of all such measures is that while they are always ostensibly in favor of the agriculturist or herdsmen, experience has shown that they are, in reality, nearly always prompted by capitalists who in nearly every case derive the lion's share of benefit from their adoption.

EARLY in the season the failure of the corn and cotton crops in Barnwell County, South Carolina, threatened the farmers with bankruptcy and ruin from which they have been saved by the success of a new industry forced upon them by their mishap. After the ruin of corn and cotton by the drought, when the rain came on Crowfoot Grass started a fine, spontaneous growth, and from it farmers have gathered a fine hay crop of excellent quality. Moreover, many of them plowed up their damaged corn and cotton fields and sowed oats which has turned out a fine crop. These two crops have lifted the farmers out of their extreme trouble and will in future be much more extensively cultivated. There certainly is such a thing as a blessing in disguise.

PROFESSOR F. B. HOUGH, head of the Division of Forestry of the Department of Agriculture, has just returned from Europe where for the last seven months he has been studying the operations of the schools of forestry in various Continental countries. Having brought back a large collection of material, he intends to make recommendations to Congress for planting and preserving forests on the prairie and desert lands of the West. In view of the rapid denudation of our timber lands by fire and the woodman's ax, prompt and efficient measures should be at once adopted to prevent the wasteful destruction of our forests and to provide for the growth of timber to replace that cut for industrial purposes.

OF the public lands ten million acres passed from the control of the government during the past fiscal year into the hands of settlers and corporations. Moreover, eight hundred thousand acres of Indian lands were sold and the price—a trifle over a million dollars—was placed in the Treasury for the benefit of the Indians. Of this vast area of land, more than twice the size of Massachusetts, only about five million acres—less than half—are credited to "homestead entries." Most of the rest was disposed of under various statutes which will enable its owners to hold it for high prices in large blocks without actual settlement. The railroads, of course, grabbed immense slices, the Pacific roads alone obtaining 200,000 acres. With such wholesale squandering of the public domain, little of it, if any, of agricultural value either for pasture or tillage will remain in a few years.

AT a largely attended meeting of the National Cotton Planters' Association held at Atlanta, Ga., on Wednesday last, December 7, Commissioner Loring delivered an address on the mutual relations of American industries. The home consumption of cotton during the past decade has increased 828,741 bales, the total during the past year having been 1,938,937 bales. It is a matter of no small importance that we should increase the domestic consumption of the staple, inasmuch as the loss on American cotton sold in England is about two cents a pound, due to freight, port charges, loss of weight in bagging, etc., and the Commissioner says the average price in the American market in 1880-81 was nearly two cents in favor of the producer—an important difference that must increase as the demand enlarges. The remark that the Cotton Belt needs a variety of crops to employ its vast area to the best advantage was met with universal applause. This would indicate that the necessity of the more extensive cultivation of other crops with cotton, is being realized throughout the Cotton States.

DURING the present session of Congress it is likely more than usual attention will be given to the subject of opening up the Indian Territory, or at least a part of it, to settlement. The irrepressible Captain D. L. Payne, however, has anticipated Congressional action, and at last got as many as about 5,000 settlers into Payne County, Oklahoma. These men have been despatched chiefly from Texas across a strip of the Indian Territory 55 miles wide, and are taking up claims and building houses as fast as they can. It is expected that the county will be fully organized and county officers elected within a fortnight. The site of Oklahoma City is one of great beauty, with springs, natural groves, etc, descending gently to a square of 15 acres on the center. Payne, as our readers know, has made several desperate attempts to colonize the rich, pleasant valleys of Oklahoma, but has been prevented by the United States troops, arrested, imprisoned and fined; but the present settlement does not expect to be molested by the government or Indians.

GREAT BRITAIN, the champion of Free Trade, levies a tax "for revenue only" on importations of some kinds of foreign goods—generally those which are commonly known as "luxuries" or "non-necessaries," among which is tobacco. By an act of Parliament of March 27, 1863, a duty of 3s. 6d, or 85c, per pound is imposed on unmanufactured tobacco in the ordinary state; if it contains more than 10 per cent. of moisture, the duty is 3s. 1½d. Since 1863 the imports of this commodity have largely increased, the revenue from the unmanufactured tobacco having grown from $157,649,734 for the five years 1864-1868, to $218,529,838 for the five years 1873-1877, according to late parliamentary returns, and the quantity from 181,941,105 pounds during the former period, to 255,717,459 pounds, during the latter. In addition to this, 2,065,600 pounds of manufactured tobacco and cigars were imported, the duty on the first being 4s. 6d, or about $1, and that on the second, 5s. The vast bulk of these importations are from this country, so that it is calculated that the revenue of the United Kingdom receives upwards of $40,000,000 yearly from the customs duties on American tobacco

IT is understood that several bills will be introduced during the present session of Congress providing for the enlargement of the scope of the Department of Agriculture in accordance with the views of Commissioner Loring, as condensed in a RURAL "Brevity" in our issue of December 3. The same opinions are urged at length in his late report to the President. The enlarged Department is, according to the latest accounts, to be called the Department of Agriculture and Statistics, and the Commissioner will organize a Bureau of Geological Survey; a Bureau of Transportation, for the collection of facts relating to the cost of "plant" and construction, rates of freight and fares, and such other information as may be important to the industries of the country; a Bureau of Manfactures for the collection of statistics of the cost of manufacture, persons employed, amount and nature of raw material, etc, and a Bureau of Education and Labor. It is not proposed to change the organization of the Department, but to add to it the above Bureaus representing industries connected with agriculture—more or less. If the enlargement shall be made, the head of so important a Department will, as a matter of course, soon take a place in the Cabinet, so that nothing is at present to be said on this matter.

AMONG the cotton mills of England there has been for some time a good deal of complaint of dishonest practices in packing American cotton. Sand and other foreign matters have, it is said, been largely used in the bales to add to their weight. Another mode of swindling is reported to have been lately detected at Oldham where a company that receives large consignments of cotton from this country determined to test how far dampness had been employed, and the staple having been dried, it was found to have lost seven per cent of its weight. So much excitement has been caused by swindling in baling American cotton that the manufacturers have petitioned government to give more encouragement to cotton raising in India so that the English mills may be less dependent on the American product. While emphatically condemning all dishonest packing at home, we would gently remind our transatlantic cousins of the loud complaints that have been repeatedly made of the various adulterations of cotton practiced in times past by the wily Hindoos. Hasn't there also been a great deal of complaint about the dishonest practices of British cotton manufacturers in "adulterating" the manufactured goods for the foreign and especially the "heathen" market?

IT is officially announced that the authorities know of 520 agrarian crimes committed in Ireland during the month of November. They range from the murder of an agent or process-server, to the maiming of the cattle or the burning of the grain stacks or hay mows of some farmer who had incurred the enmity of his neighbors by paying long-due rent or taking a farm from which the former tenant had been evicted. A Property Defense Association has been formed by the landlords, and the English people are entreated to support it by liberal contributions. So difficult is it to obtain a conviction of notorious offenders in the island, that it is proposed to try in England those accused of agrarian crimes in Ireland. But witnesses to convict are as hard to obtain as juries, and how are these to be provided? There is a report that the government offers a reward of $500 and the faithful concealment of the informer's name, to every one who will furnish evidence enough to convict in case of agrarian crimes; but it is hardly likely that the government would offer such an inducement to cowardice, treachery and perjury. It must be borne in mind, too, that every petty trouble in the obscurest Irish village or bog is at once heralded to the world as "Another Irish Outrage."

Biographical.

THOMAS ALVA EDISON.

WHILE MR. EDISON has, as yet given to the agricultural interests of the country but little, if any, direct benefit from his inventions, agriculturists, as well as others, will doubtless like to know something of the man and of his works; so we present, in connection with his portrait, a very brief and necessarily incomplete sketch of his eventful life. Thomas Alva Edison was born February 11 1847, at Milan, a little villag in Erie County, Ohio. His boyhood life was largely spent at Port Huron, Mich., whither his parents had removed shortly after his birth. He early manifested a desire for a letter education than the obscure country village afforded, but the moderate circumstances of his parents forbade his seeking knowledge in the higher schools, and, like many another youth, he found his best instruction in the few books at his command.

Young Edison early manifested a love for experimenting, his first attempts in this line being made on the incubation of goose eggs. At 12 years of age he became a train boy on a railway in Michigan, and when not peddling peanuts, candy and papers to the passengers he was experimenting in the rudiments of chemistry in the baggage car. One day the car caught fire, presumably from his chemicals, and his experimentation was brought to an abrupt end. After this he set about acquiring practical knowledge in telegraph offices, railway shops and newspaper press rooms. He seemed to have a peculiar liking for telegraphy, and for performing experiments in electricity, and while employed as a regular telegraph operator on the line, he was ever on the lookout for possible improvements in the art. A fortunate circumstance at last brought him into fellowship with the Western Union Telegraph Company, so that he had broader opportunities to improve his talent for investigation and invention, and now Edison, though only 34 years of age, has given to the world numerous testimonials of his indefatigable energy and perseverance, and his name, in connection with the electric light and Menlo Park, is now of world-renown. To give a list of the patents Mr. Edison has already taken out for inventions in telegraphing or telephoning, in electric lighting and the transmission of electric energy, would cover a page of the RURAL NEW-YORKER, and yet his brilliant inventive powers seem but to gather new strength with each new conception wrought into practical use.

THOMAS A. EDISON.—Fig. 557.

Miscellaneous.

FERGUS FALLS, MINN.

An Important Grain Market---Magnificent Water Power--A Growing City.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

AGREEABLY to the promise made in our last letter, we will furnish the many thousand readers of the RURAL with an epitome of the growth, improvement, present prospects and various elements of real worth which came under our observation during our short but pleasant visit to the city of Fergus Falls.

It has increased in population from 1,635 in 1880 to nearly 3,000, dwelling houses and places of business being built much faster than they can be painted and finished. The principal part of the population is American, many from New England. We found a handsome school building costing $6,000, graded with five departments, and were not surprised to learn that it was inadequate, $15,000 in bonds having been voted for a new brick school-house to be built in 1882. More churches than are usually seen in a new Western town turn their graceful spires heavenward here. The societies represented are Congregational, Presbyterian, Episcopal, Methodist, Swede Baptist and Norwegian Lutheran. The press is able, conservative and fearless. The Journal, both weekly and semi-weekly, has a power press run by water. The Independent is also semi-weekly and weekly—both are 7-column folios. The Normanna Banner is a Scandinavian weekly. The various secret societies have prosperous lodges, numbering among their members many of the leading citizens. The railroad interests of this city are doing much toward its rapid development. It is the terminus of two divisions of the St. Paul, Minneapolis and Manitoba Railroad, having, of course, round-houses, machine shops and division offices. It is also an important point on the Fergus Falls and Black Hills division of the Northern Pacific, almost completed, with a branch of the same road from here to Pelican Rapids, and the prospect of still greater progress another year.

Fergus Falls is upon the Otter Tail River, which merges into the Red at its junction with the Bois de Sioux, and boasts

THE FINEST WATER POWER

in Northwestern Minnesota; the natural fall within the city limits and vicinity exceeds 85 feet, and maintains a remarkable uniformity of stage, never varying a foot in its rise and fall. The present development is from three crib and bent dams furnishing 4,000 horse power, of which only about 700 is now used by the present manufacturing interests. The power is held for sale or lease in any quantity desired, with or without building improvements, and its early utilization portends a large increase in the business importance as well as population of the city.

We learn that Mr. Jas. H. Hill, President of the Manitoba line, has, since our visit, made some large investments in the power, with a view to improve it immediately.

The present manufacturing interests of the city are: The Red River roller flouring mills, of large capacity, working now both night and day, and still unable to supply the demand; two other large flouring mills, the three turning off 550 barrels of flour daily; a large saw-mill, capacity 30,000 feet daily, whose business for the year just past has been $84,950; two furniture factories, a wool-carding mill, a foundry, one plow shop and two machine shops, while openings present themselves for almost any branch of manufacturing interest, especially paper mill, flax mill, tow and oil, agricultural implements and oat meal mill.

The value of permanent improvements for the year ending October 1st, is estimated at above $300,000, fully $50,000 of it being in manufacturing industries. The commercial business, carefully estimated, foots up $2,000,000. The banking capital is $75,000; the exchange business is very large and the bank is a credit to the city.

The only hall is Sundhall's Opera House, 50x75, with stage and scenery. Fergus Falls needs a large hotel very much indeed, and we hope on our next visit to see one, as well as some very necessary improvements in the post-office. The city indebtedness is bonded $3,000 at 7 per cent. There is a storage capacity for 168,000 bushels of wheat, which will doubtless be augmented the succeeding year. Too many of the structures are frame, especially as we are told that brick clay of fine quality is found near at hand.

Fergus Falls is the county seat as well as principal city of Otter Tail County, 186 miles from St. Paul, in the western part of the Park Region, where it merges into the Red River Valley. This county is an exceptionally fine agricultural district, being dotted with many lakes, furnishing pure water for stock and abundant precipitation during the short nights of the growing season. Thus, with a rich surrounding country, capable of producing both grain and stock, good railway facilities with outlets in all directions, the water power mentioned, and the right kind of citizens, we see no reason why Fergus Falls should not continue to hold her place in the front rank of Northwestern cities.

THE series of Bonanza farming articles with original illustrations will be begun the last of the year or the first of the New Year.

THE TUBE WELL TROUBLE.

THE uncertainty of the law is proverbial and judging from the very curious and unexpected decisions often given in patent trials, of all forms of law the patent laws seem the most uncertain. Owing chiefly to this uncertainty it is seldom that a real friend advises recourse to the law unless in an important case; for besides being uncertain, the law is very expensive, and here again of all forms of litigation that about patents seems to be among the most burthensome. In the case of the patentees of the driven well against Theodore S. Carman (really against the Pump Manufacturers' Association), decided by Judge Benedict, in April, 1876, in the U. S. Circuit Court for the Eastern District of New York, the plaintiffs' taxed costs amounted to $3,070, which the defendents had to pay in addition to their own costs which were, at the very least, as great. This was the expense of a trial merely in the United States Circuit Court, from whose decision an appeal always lies to the United States Supreme Court, and of course a patent appeal is always more expensive than the first trial. Where the case is not so vigorously contested the costs, of course, are lighter; for instance, in the case of the same patentees against George B. Wright, decided by Judge R. R. Nelson, in 1878, in the U. S. District Court for Minnesota, the plaintiffs' taxed costs were only $622.40, which the defendant had to pay in addition to his own, together with $15, in contesting which all the expense was incurred. Had Wright paid a royalty of $5 at the outset all the worry and expense of this preliminary trial would have been avoided, besides the far greater worry and expense of the appeal, which we understand has been made in this case to the United States Supreme Court.

But here Wright is merely the representative of upwards of a million driven-well owners who are harassed by the exactions of the patentees of this well, and accordingly his troubles and expenses are lightened on account of being shared in by most of the well owners of his State. While litigation, like war, should be avoided whenever honorably possible, still in both cases it often happens that while the immediate cause of one or the other appears trivial there is back of it a principle in support of which the money of the public or the blood of the nation should be freely expended. The American people are steadily opposed to this driven well patent which seeks to tax one of the great necessities of life—pure water. They are impatient of the idea of paying to extortionate strangers a tax on the water they get out of their own wells. Such earnest, widespread movements of public sentiment are never dishonest, and in a Republic, where the voice of the people is paramount, must always have a dominant influence on legislation. Nothing has ever impressed on the American people the necessity of an amendment of our patent laws so forcibly as has this driven-well agitation.

With the exception of four States and a few counties, W. D. Andrews & Bro., of this city, jointly with Green, own the tube well patent in all the States. They sell no patent rights, but grant licenses for wells either directly or through agents. Before the United States Senate Committee on Patents, Mr. W. D. Andrews declared, in March last year, that it was their intention thenceforth to press vigorously their claims for "royalty" in every part of the territory in which they still owned the patent, and that those who owned it elsewhere were in full sympathy with them in this and other matters. The increased agitation since then shows that the above declaration was not an idle threat. If the patent remains valid every driven-well owner in the country will soon be forced to pay from $5 to $10, or as much more as the patentees or their agents may, later on, choose to exact, for every 1¼-inch well, and a greater sum for larger wells. It, therefore, behooves every man who owns, or may hereafter own, a driven well, as well as all haters

of patent extortions, to show interest in this question not only by supporting an amendment of the patent laws, but also by contributing to the cost of a test case as to the validity of the Green patent for this *process* of well-making. His patent is not on any device, but on the *process*. There are upwards of 150 patents on various devices for executing the process, which cannot be done without infringing on one or more of these auxiliary patents, so that, in addition to the tax payable to Green for the *process*, every well owner is liable to be forced to pay another tax to one or more of these other patentees for the "points," "filters," "drive-heads," etc., needed to render that "*process*" effectual. The validity of this and all other patents is ultimately decided only by the United States Supreme Court. The decisions of the examiners of patents, of the Commissioner of Patents, of the U. S. Court of the District of Columbia, and of the U. S. Circuit Courts, all of which have decided on this subject, do not settle the matter. That can be done only by the court of final arbitrament—the U. S. Supreme Court. Once that has decided, either all harassment from the patentees or all objections from the well-owners must cease.—To be continued.

The Apiarian.

HONEY REPORT FOR 1881.

G. M. DOOLITTLE.

WINTER seemed loath to give place to Spring so it was April 20th before our bees had a chance to fly to any amount. At this time I found the severe Winter had made sad havoc with the little laborers, and above half of them were unable to respond to the roll-call, while many colonies were so weak as to be of little value unless united with others. When I had finished uniting I found I had just 30 colonies left to commence the season with.

May 1st pollen came in quite plentifully from elm and soft maple, and the bee season of 1881 was fairly commenced. Golden Willow bloomed May 12 and invited the bees to a feast of new honey, an invitation they were not slow in accepting. On the 21st the odor of apple blossoms filled the air, and prepared for the bees another banquet. The month of May was very warm and consequently white clover commenced to bloom about the 1st of June—nearly 15 days earlier than usual. I expected much from this source as it was uncommonly abundant (owing to the steadily cold Winter); but I was doomed to disappointment, for on the 5th the weather changed and the morning of the 6th found everything white with frost. Cold, wet weather followed with more frost, and not till the 29th did the weather become favorable so the bees could work to any advantage. By this time the clover bloom was nearly past; but we succeeded in obtaining a small surplus just at the last.

Basswood opened July 8 and yielded very sparingly for about eight days. Basswood is our main dependence for a honey crop, but at its close this year we had taken scarcely a box of honey, and feared the honey season was to be a failure in this locality. Red clover had failed to blossom here for some years, so I was quite surprised in the latter part of the basswood season to see the fields growing bright with bloom. As the bloom increased and continued, we began to hope we might yet obtain some surplus, but had no expectation of the yield we really obtained. The few acres of teasles within reach of our bees commenced to yield honey, and the 17th of July found the bees rushing out of their hives and hastening to the fields of red clover and teasles at a rapid rate. This was kept up for about 10 days, when the honey yield gradually came to an end. Acres of buckwheat were white with bloom the latter part of August, but no surplus was obtained Thus the season of 1881 was ended; for we have no Fall flowers. It is now four years since we obtained any surplus from buckwheat, so I conclude that a yield of honey from that source (in this locality) is the exception rather than the rule.

As a result of the season's operation, I have taken in comb honey 3,317 pounds, and of extracted, 718 pounds—in all, 4,035 pounds, or an average yield of 134½ pounds to the colony. I had only one really good stock in the Spring and concluded to work that for extracted honey. To give the reader a knowledge of the yield from each source, I will give the result in pounds as taken from the different sources. Willow gave 5½ pounds; apple, 19¼ pounds; white clover, 58½ pounds; basswood, 97 pounds; red clover and teasles, 232 pounds, making in all 412 pounds,

For the past nine years I have kept a correct account with the bees, and I find, by looking over the same, that the average yield from each colony has been 92 pounds each year, most of which has been box honey. The 30 colonies I had in the Spring have increased to 80 and are all in good condition for Winter. I have also raised and sent out 83 tested queens, which of course lessened the honey crop. I noticed with pleasure that each colony gave about an equal yield of honey. For years I have been breeding from those colonies that gave the best results in honey, and I am glad to see that progress has been made. When whole apiaries can be made to produce as good results as we have formerly obtained from the best stocks, we shall have no need of importing bees, as Apis Americana will be the best in the world. In addition to my own I have worked this season an apiary of 15 colonies away from home, which gave a yield of 874 pounds of box honey and 150 pounds of extracted, making a total of 2,274 pounds, or 151½ pounds per colony.

Borodino, N. Y.

Literary.

THORNS AND ROSES.

(Continued from page 818.)

CHAPTER XIV.

TRUE to his promise, Brandon came the evening after I had parted from Nevil. When I heard his voice I felt sorry that he had come, and could not help the rush of color to my cheeks, the tears filling my eyes. But neither in look, tone nor manners was there the slightest change: and if this cost him an effort, there was no visible sign of that effort; and his serene composure restored me to myself.

He stood beside aunt Dorothy, mending some broken article in her workbox, and at the same time talking to her, whilst I gazed out at the garden feeling profoundly grateful to him for not reminding me of yesterday, until he broke in on my thoughts.

"Aunt is saying, Kate, that gravity is infectious, and you have caught it from me."

"Well, my dear," said aunt Dorothy, "you have been very grave lately. I suppose Brandon wants to make you a student like himself."

"One wise Lovel is enough," he said; "and at present the wisdom of the family is concentrated in me."

"Is it really wise to bury yourself over books?" said aunt Dorothy, "until you look old and worn? But then you live like a hermit."

"My deeds upon my head, aunt Dora. Though I am a hermit, I am as free as air, and as empty."

He crossed the room, and leaned on my chair, looking down at me as he spoke.

"So Nevil has gone, Kate?"

"Yes; business of some kind called him away."

"You will have his letters to look for, and I suppose he will soon return. No news from Edith? I thought she was to come this summer?"

"She may have changed her mind—— Who's this?"

For a moment I thought it was Nevil coming for a second good-bye, but as the new-comer advanced, I recognized Edgar Dana and shivered.

"Are you cold?" said Brandon, quickly.

"Oh, it is nothing! Is he—do you——"

All too conscious of my confusion, I stopped, and Brandon for a moment gazed steadily at me, then turned to welcome Edgar, who had by this time been admitted.

He was greatly embarrassed, and as it was the first time he had met my kinsman since he had told me that story, I did not wonder; indeed, it was an unpleasant position for us both, even though Brandon were unconscious of it.

Edgar did not remain very long, seeming remarkably anxious to get away.

"Our ways are the same," said Brandon; "shall we go together, and the walk will be less lonely?"

"I—a—I go the other way," said Mr. Dana coloring. "I like walking alone—don't let me disturb you."

"Could you tell when a person disliked you, Kate?" asked Brandon, when he had gone.

"Yes; I think so. Why?"

"Nothing; only I have the same instinct."

He stayed some time with us, and when he did go he said good night kindly, and the sorrow of yesterday, and the fear of to-day, left me.

This Summer week would have been to me quite happy but for one thing—the inevitable one thing wanting in all human happiness—I had had no letter from Nevil. The mysterious silence puzzled and distressed me not a little, because he had promised to write, and he must know how anxiously I should wait for his letter. What could it mean? Was he ill? Had some accident happened? We had not parted coldly or angrily, or I might have accounted for his silence. I grew alarmed when a week had gone by; and resolved to call and ask if Mrs. Verner could give me any explanation, for he must surely be ill.

As I rode on, I tried to solve the mystery. He did not care for writing, and he might have little time for it, but he could have sent me a word, if he were not ill. Ill among strangers, and so far away! Suppose it were fever, suppose it were—— Sickened by the dreadful thought, I urged Diamond to a gallop, eager to see Mrs. Verner praying, hoping that all was well.

When I reached the house, the servant looked curiously at me, for I felt, perhaps looked, faint with terror. I hastened to Mrs. Verner, knowing that if anything were wrong her face would at once tell me. But the first glance showed me that it was serene and calm as ever.

To be Continued.

NEW PUBLICATIONS.

LIKE A GENTLEMAN. By a popular author. Boston: Lee & Shepard. Price, $1.00.

A book "written for a purpose," as the author announces, and we think for a good one. It is a temperance work of a high order, showing that champagne makes as much havoc with stomach and brain as cheap rum. The characters move in the best society and are wealthy; so the darkness of poverty makes no appearance in the story. It is well worth reading, and should be in the library of every Sunday-school.

GOLD FOIL. By J. G. HOLLAND. New York: Chas. Scribner's Sons. Price, $1.25.

This is a revised edition of one of Holland's best works. The immense circulation of the first edition is good evidence that it held a lofty place in the estimation of the reading public. The work consists of 28 essays on vital truths relating to morals and society and to the common life of man. They are replete with good counsels, and with "truths that have been verified and vitalized by human experience."

HERE COMES CHATTERBOX for Xmas, 1881! One would think that no improvements could be made in it, yet each number is still finer and fuller than the one before. In this year's we are treated to a tour around the world, and if the little folks will study each picture they will learn very much of the customs and characteristics of the people. The reading matter is of the kind that suits the young, and will do them no harm to read. Published by Estes & Lauriat, Boston, Mass.

MAGAZINES.

THE ATLANTIC MONTHLY for December contains, Chapter's 11, 12 of Dr. Breen's Practice, Origin of Crime in Society Shakespeare and Berlioz. The Portrait of a Lady; The Parting of the Ways; The Habitant of Lower Canada; British State Assassins and the Defence of Insanity; Hester Dower; Socialists in a German University; At Canterbury; Caste in American Society. Pyrrhus Ring; East of the Jordan and other books of Travel; Buddha and Early Buddhism; The Contributors Club; Books of the Month and Mark Twain's New Departure, which so far as the author is concerned is fully verified in the writing of the book. We quote, "the same public is called upon to welcome its old favorite in a new guise as the author of a tale ingenious in conception, pure and humane in purpose, artistic in method, and with barely a flaw, refined in execution." The article upon the "Defence of Insanity," will be read by the public just now, with unusual interest, also that on "Origin of Crime in Society." We thus acknowledge, Scribner's, Harper's Lippincott's, Appleton's Magazines for December. They are full of the choicest reading, and it seems to us never were better.

For Women.

CONDUCTED BY MISS RAY CLARK.

IMPROMPTU DECORATIONS AND ADORNMENTS FOR CHRISTMAS.

MRS. C. S. JONES.

LAST year owing to an unusual amount of church decorative work, we found our feet upon the very threshold of Christmas eve and no preparations made for the customary home beautifying, upon which the enjoyment of its inmates so greatly depended.

Loving hearts and ready fingers can accomplish a vast amount of this home-brightening however, and for the benefit of some other "house-wife" or "house-mother" similarly situated we will describe some of the means to which we resorted in our emergency, especially as we believe them to be novel and yet capable of imparting a vast amount of beauty and brilliancy.

There are many ways of getting up impromptu adornments from materials within reach or readily obtained, and which afford more real satisfaction than costly and studied arrangements, for inasmuch as Christmas festivities are "but for a season," it must appear to the wise and conscientious expender of household finances, that to use inexpensive yet tasteful adornments is not only sensible but a duty, as thereby we may have the more for "sending portions to those for whom nothing is prepared." Besides the usual cordons festooned round walls and windows nothing imparts such a genial feeling as a silent, but no less pronounced welcome, imparted by cheery mottoes and words of greeting, and the hall as the "entrance-chamber" to the house, should at once speak its mistress' effort as "on hospitable deeds intent," easily effected in this case by simple but striking imitations of illuminations in the genial WELCOME, or old-wold SALVE, in colors; yet bringing "The pine tree, the fir tree and the box together to beautify the place," and using evergreen frames and a large proportion of green, in varied shades, on the lettering, scrolls or other tracery. Cut large ornamental letters from card board, or taking a long, narrow strip of the same mark them out upon it; then cover with flat sprigs of evergreen or leaves, such as laurel, box or holly, making distinct lines of color with "everlastings," Autumn leaves, scarlet berries or any legitimate Christmas material. Thus each letter will stand out boldly from the ground, and from a distance will appear like some handsome illumination.

Another pretty fancy is also to thus form the name, monogram or initial of the house-mother and place it either upon a covered frame, securely fastened against the back of her table-chair and rising sufficiently to appear above her head; or against the wall behind her; in the latter case appearing in form of a plaque and made by covering a large circular piece of wood (such as the lid of a cheese-box) with putty or clay, upon which while plastic fasten mosaic designs as a grounding with suitable border, and the name MOTHER or her monogram in the center. With colors carefully arranged this can be made a striking ornament.

There is nothing more attractive in room adornment than the ever-graceful hanging-basket, which is most easily made and with inimitable beauty in this hasty adorning of the home.

Various are the discarded articles which may be "pressed into service" and perform effective work in this particular branch; pans, bowls, goblets, lamp and gas shades, bird-cages, and indeed many articles connected only with certain households may be disentombed and appropriated to this especial case.

Thus in one house, where called upon to aid in such impromptu dressing, we found several old gas-chandeliers which, when entirely covered with green, made wonderfully beautiful supports for our hanging baskets, consisting of five repaired vegetable dishes, painted green and varnished with glue, upon which, having used our supply of moss, we covered with fine shreds of shaded wool, supplied by ravelling green Brussels carpet, the lovely shades of which gave an imitation of moss so rich and vivid that all who examined it were deluded. Indeed, we know of no better imitation of velvety moss than this. The large central basket and four smaller, suspended from the arms and pendant ornaments by wire handles, passed through the China ones, when filled with white paper lilies, pink roses and buds and evergreens, with outside tracery of graceful grasses and ferns, were lovely; while above, a circle of candles fastened on tin sockets, formed it into a brilliant chandelier suspended over the table. Old bird cages, reversed and filled with shavings, likewise form baskets as pretty as they are peculiar. Moss, flowers and plumes of grasses introduced between the bars and covering the top have a charmingly airy appearance.

We cover mantels, brackets and shelves with white muslin, edged with evergreen sprays and lines of ivy, laurel or holly leaves above. The lambrequins, curtains and portieres we cover with white muslin, applying the bordering in waved lines and in some cases introducing lines of vivid scarlet braid or Autumn leaves between.

Beautiful snow-white baskets are made by boiling and scraping cattle horns, then forming card-board foundations, sewing the scrapings on in rows, each one covering the stitches of the preceding. For such impromptu occasions these are not only appropriate, but extremely lovely in appearance, especially when filled with clear pink, deep crimson or brilliant scarlet blossoms. A sprinkling of frosting adds vastly to the pretty effect.

In the dining-room the buffet or side-board is an important point, inasmuch as upon it

certain portions of the table are placed. Across the back a handsome arch should be fixed, and we would here suggest to the flower loving housewife that this arch should be an institution of the dining-room, and to secure its constant adornment that four jardinieres should be kept in constantly growing and healthy condition, changing them from time to time. In our own case we have a living arch, covered with luxuriant Cobœa Scandens, Variegated Ivy, Mausandya and Madeira vines. The rustic hanging basket, containing Tradecantia, Smilax, and in the center a Carl Holt Fuchsia. One Winter a mass of morning glories, in every color and shade, made a glorious show the entire season. In lieu of this, however, use similar means as suggested for mantels. The entire room should be made as bright, festive and joyons as possible by means of abundance of light and brilliant color.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

ECHOES FROM EVERY DAY HOUSE.

ANNIE L. JACK.

SANTA CLAUS, with his wonderful pack, is just now the hope of the children, who are joyously counting the days, and looking forward without a doubt or fear. Happy, happy faith of childhood! We, on the other hand, knowing life's delusions, are constantly thinking, "What if he does not come—if anything should happen?" but they are not to be daunted by thoughts of failure.

In the meantime cooking goes on. The holidays are a busy time to every housekeeper, especially in the country when New Year's callers or unexpected guests are likely to drop in, and no confectioner is near at hand. We have, on such occasions, made a very nice cake as follows: It is

VARIETY CAKE.

One cup of butter, three cups sugar, five eggs, one cup of sweet milk, four cups of flour, one teaspoonful of soda, two of cream-of-tartar, flavored with lemon. This makes the white part, and the following mixture for the dark part gives the name to the cake—(to be put into one half of the mixture above given: One cup of raisins, two tablespoonfuls of molasses and spice to taste. This will make three good-sized cakes. Butter the cake pans, put in first the dark, and the light on top, and bake in a quick oven. It is better for children than the richer spiced cake, and pleases them just as well.

At this season of the year when there is a general slaughter among the fowls and one gets tired of the regular roast or broil, a simple and palatable dish can be prepared by boiling the fowls in as little water as possible until the bones separate from the meat. Remove all the skin, slice and mix together the light and dark parts, season with pepper and salt. Boil the liquid down a little and mix with the meat. Place in a mold, or wrap in a cloth and press with a heavy weight. When served it is cut into slices, and, as an epicure not long since remarked, is "handy to have in the house." If any of my readers have a surplus of celery I would just suggest that they cook it the same as asparagus and serve it for lunch or dinner with fowl prepared according to the above recipe, and they will enjoy the variety and flavor of this excellent vegetable in a new way.

Apple Marmalade.

Ingredients: Six pounds of peeled apples, three pounds of sugar; cinnamon or lemon, or both tied in a close faggot; half a pint of water. Time: about three-quarters of an hour. Peel, core, and slice up the apples into a preserving pan; add half a pint of water and the flavoring. Cover, and place the whole on the fire to boil until dissolved, then add the sugar, and stir the marmalade with a spoon, over a brisk fire, until reduced to a thick paste, running rather slowly off the spoon when lifted out of the pan. The marmalade must be immediately removed from the fire, and poured into pots or molds. S. R.

DOMESTIC RECIPES.

CHRISTMAS DESSERT.

Two or three days before wanting this dessert make and bake a medium sized, round sponge cake. Cut the top from the cake in one piece and lay it aside. With a spoon take out the inside of the cake leaving side walls and a bottom an inch thick. Spread the inside with jelly or jam. Make a boiled custard of a pint and a half of milk, three beaten eggs (reserve one white), a teaspoonful of corn-starch and sugar to taste. Crum very finely the cake you have scooped out and beat it with the hot custard. When nearly cold, flavor and fill the cake with it. Spread the inside of the top of the cake with the jell or jam and fit neatly into its place. Beat the reserved white stiff, spread over the top of the cake and sprinkle thickly with powdered sugar. Set in a cool, dry place until wanted.

FROSTED ORANGES.

Six large, sweet oranges peeled and every particle of white skin removed. Take a cup of powdered sugar, divide, and stir into one part a few drops of liquid cochineal. Spread on a dish in the sun to dry and if lumpy roll to powder. Beat the whites of two eggs to a stiff froth, dip half of the lobes into the whites and then roll in the pink sugar, the other half into the egg and white sugar. Place upon a piece of white paper to dry. Arrange in a pretty glass disk and garnish with lemon leaves if you can get them.

QUESTIONS ANSWERED.

WATER-PROOF BLACKING.

L. D. Belmont, Noria Scotia would like a good recipe for making water-proof blacking for boots, shoes and harness.

ANS.—The following recipes are the best we have at hand. If any of our readers know of a better formula we shall be glad to publish it. No. 1. Melt together two ounces of mutton suet and six ounces of beeswax. Add six ounces of sugar, two ounces of soft soap, two-and-a-half ounces of lamp-black and one-half ounce indigo in fine powder. When thoroughly mixed add one-fourth pint of oil of turpentine. No 2. Melt one pound beeswax, one ounce of Prussian-blue ground in two ounces of linseed oil, one-fourth pound ivory black, three ounces oil of turpentine and one ounce of copal varnish. Mix well and form into cakes while warm.

To apply this blacking spread a very little evenly on the surface of the leather and polish by rubbing with a brush or a bit of linen cloth.

NEW-YEAR'S CAKE.

E. R., would like recipe for New Year's cakes such as are sold at professional bakers.

ANS.—A pound and a half of sugar, a pound of butter, three eggs, one half pint of cold water, one teaspoonful of soda dissolved in *warm* water, four or five tablespoonfuls of caraway seed, flour for a soft dough. Cream the butter and sugar, stir in the beaten eggs, then the flour and seed and last the soda. Roll into a sheet less than quarter of an inch in thickness, cut into diamonds, stamp and bake in a moderate oven.

NEW YEAR'S BASKET OF KISSES.

Miss A. B. wishes to know how to form a basket of macaroons or kisses for her New Year's table and what should be the filling.

ANS.—One pound (more if you wish a large basket) of macaroons or kisses, a coffeecup of white sugar, a large tablespoonful of gum arabic in the dry form, one half cup of boiling water. Put the gum into the hot water and let stand. When dissolved—every bit—stir in the sugar and boil gently until quite thick. Set into a dish of boiling water while using. Take a round, deep tin basin, butter thickly on bottom and sides. Dip the edges only of each little cake into the hot sirup, and place in close rings on the bottom of tin until it is covered. Let get perfectly dry and see that they adhere firmly to each other before you begin the lower row of the sides. Build the sides one row at a time, letting each harden before adding the next. Make loop handles with four or five macaroons or kisses stuck together. When firm, lift carefully from the tin. If for a permanent ornament for the table fill with fringed, pink tissue paper, same as motto candies are wrapped in. If to be eaten, fill with whipped cream, and if you please, dot with comfits.

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New Publications.

ANNOUNCEMENT.

YOUTH'S COMPANION

1882

THE PUBLISHERS

Have spared no effort to present an Announcement of new features for 1882, that shall represent the best ability in entertaining literature. The names of a few of the writers and a selection from the topics are given below.

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A Live Story for Boys. Illustrated. . . . . By J. T. Trowbridge.
An English Story. Illustrated. . . . . By William Black.
Witchcraft at Deacon Wiggins'. . . By Mrs. Harriet Beecher Stowe.
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Tales of Old New England Taverns. . . . By Rose Terry Cooke.
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A Pioneer School Mistress in the Far West: Her experiences—amusing, often thrilling—related to her Eastern friends. By Adeline Hall.
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Perils of a Linesman's Life: Guarding a Telegraph Wire in Sumatra. Illustrated. . . . . By Lieut. Grinnell.
On Recent Battle Fields. Illustrated. . By Archibald Forbes.
A Story of South Africa. A Serial Story. By Capt. Mayne Reid.

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The Ministers of the English Government during the Revolution, By E. P. Whipple.
The Beginning of Great Industries, ... By James Parton.
Life Scenes, as a Clergyman sees them, . . By Rev. Henry Ward Beecher.
Success and Failure in Life, ... By Canon F. W. Farrar.
Other Recollections of Authors, . . . By the late James T. Fields.

Illustrated Travel.

China.—Incidents and facts connected with ten years of official residence in China; in which personal adventures, incidents of social intercourse with the people; and detailed views of every-day life in China will be given. By Hon. Chester Holcombe, U. S. Legation, Pekin.
Russia.—Life in the out-of-the-way Nooks and Corners of Russia, given in a picturesque and striking series of articles. The author has been sent to Russia by the *Companion* especially for this purpose. By Mrs. A. H. Leonowens.
Mexico.—A Naturalist's Adventures on the Mountains of Mexico, by one who is travelling in that country for Scientific Societies. By Fred A. Ober.

The Editorials, as heretofore, will be prepared by the most qualified pens, and all current topics will be treated clearly and fundamentally.

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News of the Week.

SEVEN YEARLY SUBSCRIPTIONS WITH $14 ENTITLE THE SENDER TO THE RURAL NEW-YORKER FOR ONE YEAR FREE.

HOME NEWS.

MONDAY, Dec. 12, 1881.

THE GUITEAU TRIAL.—Eight doctors who have made a study of mental diseases have testified as witnesses for the defence in the Guiteau trial. A hypothetical question, in which the points relating to the prisoner's mental condition as set forth by the defence, including the insanity in his family, and his alleged belief that he acted upon inspiration, were assumed to be true, was read to them, and they were asked whether upon that state of things they thought Guiteau was insane. Seven of them replied that if the propositions were true the man was insane. Dr. Worcester, of Salem, Mass., would not express an opinion, because he wanted a clearer explanation of the word inspiration than Mr. Scoville gave him. Guiteau constantly interfered in the proceedings. He began by saying that he wanted the experts to pass upon the question whether when a man claims he is impelled to do an illegal act by a power beyond him he is sane or insane. He showed a pretty clear understanding of the testimony given, and once pointed out how well it fitted his case. As usual, he was sensitive on the question of his mental powers, and was angry when a witness spoke disparagingly of his Garfield speech, declaring that he would rather be hanged as a sensible man than acquitted as a fool. He was also offended by a question implying that he was a vulgar criminal. There was nothing vulgar about this case, he exclaimed; it was all high-toned. At the end of the day's proceedings, when Mr. Scoville announced that he expected to have President Arthur as a witness, Guiteau insisted that General Grant, ex-Senators Conkling and Platt, ex-Governor Jewell, and others should be called to show what was the political situation before the assassination. Most of the witnesses for the prosecution were from Freeport, Ill., and their evidence went to prove that there was no insanity in the Guiteau family, and that the father of the assassin, instead of being a religious lunatic, was a sane and worthy citizen, much respected and trusted by his neighbors.

CONGRESS IN SESSION.—Both Houses of Congress met at noon on Monday the 5th inst. The Senate, having no officers to elect, proceeded at once to regular business. Mr. Beck introduced a bill providing for the retirement of the trade dollar from circulation, Mr. Sherman a bill providing for the issue of three per cent. bonds to replace the three and a half per cents, Mr. Logan a bill to place Gen. U. S. Grant on the retired list, and Messrs. Morrill and Garland bills providing for commission to raise the tariff. In the House the entire day was occupied in effecting an organization. Mr. Keifer, the Republican caucus nominee, was elected Speaker. The Democrats complimented Mr. Randall by giving him their votes, and the eight Greenbackers voted for Mr. Ford. The two Mahone Congressmen from Virginia voted for Keifer. On Thursday the President sent in his first message to Congress which, on all hands, is conceded to be an able document. In opening he paid an eloquent tribute to his predecessor, the late President Garfield. Secretary Folger who was recently appointed to the Treasuryship has submitted his report.

In one respect St. Louis is almost twice as great as Chicago. Her debt, funded and floating, is $22,400,000, while that of Chicago is only $12,700,000. The balance in favor of St. Louis is $9,700,000—but it is on the wrong side.

Mr. John Davis, nephew of Bancroft Davis, and son-in-law of ex-Senator Frelinghuysen, will be President Arthur's private secretary, and Mr. Davis's wife will be hostess at the White House. She is the daughter of ex-Senator Frelinghuysen.

Judge Advocate General Swaim says he has completed his review of the Cadet Whittaker court martial case and will submit the papers with his opinion thereon, to the Secretary of War this week. The report will not be made public until passed upon by the President.

A freight train of thirty-two cars, several of them loaded with live stock, was precipitated eighty feet into the Missouri River, through the giving way of a bridge.

General Judson Kilpatrick, late United States Minister to Chili, is dead. He was born near Dockertown, New Jersey, Jan. 14, 1836, and was consequently 45 years of age.

A bill has been introduced in the Senate to admit Dakota as a State.

The trial of Guiteau will be a very costly affair. The United States Marshal's fees for one day amounted to $175 for summoning talesmen alone. Beside this he has fees from all the other courts, civil or criminal. The cost of witnesses will be immense. Already the Government has twenty-five witnesses present from other cities. They receive transportation fees of five cents per mile, going and coming, besides daily attendance fees of two dollars per day. They are kept at the expense of the Government at any hotel that they select. The prisoner being a pauper, the witnesses for the defence are brought to Washington at the expense of the Government, paid and boarded. There are about thirty or forty asked for by the defence, and about thirty-five more will come. The contingent fund, as well as the other funds in the control of the court, is already expended, and Congress will soon be asked to make an appropriation to settle the bills. Of the jurors, six are Methodists, one of them a Methodist local preacher. They are all more than middle-aged, and but one has ever mixed in politics much or holds place under the Government.

Senator Saunders introduced a bill in the Senate Monday to extend the northern boundary of Nebraska to include 600,000 acres in Montana.

A terrible calamity befell the occupants of a boarding house at Gibson Station, Pa., several persons having lost their lives. The victims of the fire were exhumed and buried Sunday. The injured survivors are being cared for in the hospital, and a fund has been set on foot to aid them.

The Governor of Kansas has issued a proclamation offering rewards for the arrest and conviction of persons who may be found selling intoxicating liquor; also for the arrest and removal of sheriffs, county attorneys, city marshals and policemen who shall fail to perform the duties imposed upon them by the law to prohibit the manufacture and sale of strong drink.

It is announced that Mr. Scoville, the counsel for Guiteau, is about to deliver a lecture on the subject of the trial in Washington, and that he is driven to this course to secure means to support his family until he can resume the practice of his profession at home.

The Prohibitionists of Mississippi are again active, and will try to induce the Legislature at its coming session to submit to the vote of the people at the next election a prohibition amendment to the Constitution of the State.

Secretary Blaine has stated positively that he expects to retire from the Cabinet this week. It is intimated that the name of his successor will be sent to the Senate to-day.

The State of Iowa has nearly completed its new Capitol at a cost of $1,800,000.

A new counterfeit silver dollar has made its appearance, which is pronounced by the sub-Treasurer to be the best counterfeit silver coin ever seen. It is beautifully made and has a slight appearance of iron, which is often found in a genuine standard dollar. It is silver-plated and acid does not hurt it unless the surface is scratched up. The weight is the marvelous point in the deception. The counterfeit, as it stands, would pass in size easily, and its weight would not be detected on any but a fine scale. The date upon the coin is 1878.

The town of Augusta, Ark., on White River, was destroyed by fire recently. Only three buildings were left standing. The scenes in the streets were reported as being terrible. Several persons were fatally burned and injured by falling walls. Loss $300,000.

The commissioners appointed to inquire in to the feasibility of an underground railway on Broadway, New York, report that the cost would be $2,000,000 a mile, and the damage to property much greater.

Restoration of Appetite.

A Physician writes in regard to one of his patients: "The effect of Compound Oxygen was to give him an appetite. Within three days from his first inhalation he was obliged to get his dinner two hours before the usual time." Treatise on Compound Oxygen, *sent free*. Drs. STARKEY & PALEN 1109 and 1111 Girard Street, Philadelphia, Pa.—*Adv.*

AGRICULTURAL NEWS.

MONDAY, DEC. 12, 1881.

Here are some items of agricultural news condensed from telegrams received here between Friday noon Dec. 9, and noon to-day: Portland, Me: Weather still mild. Country collections are excellent, showing farmers are in easy circumstances. Lumbering active; and all artisans are fully employed affording good markets for produce.....Boston, Mass: Provision trade good: demand for export increasing; prices tolerably firm. Flour stiffer on account of advance in wheat at the West; a further improvement in the market is looked for. Steady demand for most kinds of wool, and no change in prices—sales of the week 2,250,000 pounds of all kinds including X and XX Ohio and Penn., fleeces at 42½@44c. with 50,000 choice at 45c. Michigan and Wisconsin fleeces 41@42c for X. Medium and No. 1, 55@48c. Fine unwashed 25@33c; medium grades 25@35c. and choice medium 30@35c. Combining and Delaine quiet with sales at 46@49c. for fine delaine. Large business in pulled wools, sales of 35,000 pounds at 33½@51c. largely at 40@43½c.....Philadelphia, Pa: Cotton has declined 1-16 since Wednesday: wool dull, a weakening in prices reported in some grades. Feed stiffer: Winter $21@21.50 against $20 last week. Spring wheat bran goes from $18 last week to $19@20 now. Prices of wheat about 1c. per bushel higher. Rye dull. Corn firm and in good demand. Provisions steady at last week's rates. Apples, chiefly inferior lots, freely offered; choice lots high. Home supply of potatoes light; but heavy shipments from Canada have a tendency to lower prices.....Cleveland, Ohio.—Grain has ruled firm for several days, No, 2 red winter wheat is selling at $1.37. Provision market a trifle weak; mess pork $17.50. Live hogs active at $6.20 for medium. Collections good.....Cincinnati Ohio,—Little or no change in farm products. Grain, provisions, flour and hogs remain about the same. Cotton trade for the year the best in the history of this city; receipts have aggregated 325,371 bales, against 312,319 bales for the previous year. Ordinary cotton has averaged 7.59c during the year, against 9.64c last year; good ordinary 8.99c, against 10.56c; low middling 10.75c, against 11.27c; middling 10.97c, against 11.68c; good middling 11.50c, against 12.06c; middling fair 12.81c. against 12.66c; fair 12.94, against 13.62c. The Price Current from 88 per cent. of the pork-packing points estimates there is a shortage of 1,000,000 hogs in the hog crop this year—the popular estimate put the shortage at 1,725,000 hogs. Compared with a year ago live hogs here are worth about $1.60 per 100 pounds higher or 35 per cent.; mess pork is $4.15 higher, or 31 per cent.; lard 2¾c per pound higher, or 32½ per cent.; sides, 2.20c per pound higher, or 33 per cent. At such an advance the supply is expected to be ample.....Louisville, Ky.—Pork packing will be closed (?) to-morrow (Saturday) with about 100,000 hogs less than last year, and prices from $1.75 to $2 per 100 pounds higher. Receipts of leaf tobacco increasing. New crop burleys bringing extravagant prices. Cotton receipts liberal; demand brisk; but offerings scant, as holders want better figures.....Chicago, Ill.—Considerable improvement in hog trade; receipts for week foot up about 90,000 more than for the corresponding week last year. Quality now about the same as then. Fair speculative trade in grain with unusual excitement.....Peoria, Ill.: Grain trade good; receipts and shipments average better than last week. Prices for farms and real estate generally are better than at this time last year.....Evansville, Ind.: Pork packing has begun and hogs are coming in quite freely. Buyers are paying 5½@6c gross and 7½@8c. net.....Detroit, Mich.: Weather more settled and the interior movement good. Considerable calls for money to handle pork products. Prices for all staple goods are firm in spite of the prospect of a mild Winter. Lumber and other building materials are firm, with contractors still pushing work. Navigation is practically closed; the season's shipments of wheat have aggregated 1,990,000 bushels. Farmers not selling wheat freely; interior mills are buying here. The average price of salt in the Saginaw market this year has been 95c.; the lowest previously were 75c. and 85c .....

Milwaukee, Wis.: Prices of grain and provisions have declined considerably. A perceptible increase in wheat receipts and some of the local mills are again grinding.....Minneapolis, Minn.: A week of fine weather: good country roads and free deliveries of country produce, except wheat, which is held back for higher prices. The loss of the flouring mills by fire will not materially affect the wheat or flour markets, as the capacity left is enough to grind all the available good wheat. The mills will be rebuilt. Less than 10 per cent. of the total capacity was destroyed. Flour stronger. Full returns of cut lumber of mills for the season, show 235,000,000 feet; stock in yards, 82,000,000 feet. Collections satisfactory.....St. Louis, Mo.: Provisions for cash and immediate delivery are higher and hard to obtain. Grain unsettled and higher for future delivery. Flour and meal unchanged. As to live stock, local buyers have offered to sell at a sacrifice.....Kansas City, Mo.: Local wheat market weak and lower. Corn, ditto. Cattle market dull; prices unchanged. Hog receipts for week ending Tuesday 30,766; market quiet with a downward tendency. Prices range from $5.30@6.10. .....

Omaha, Neb.: Open Winter yet. Collections much better. Prices of produce and poultry have dropped since Thanksgiving, and no shipments of the latter are being received owing to very low prices. Corn has fallen off a few cents, but sells at 45@50c., and farmers are generally taking advantage of good weather and prices to market their crops. The probability of a mild Winter tends to lower the price of corn, as not so much of it will be needed for feed.....San Francisco, Cal.: Wheat weak with a falling market. Orders for the delivery of wheat overland at New Orleans have been received, and if this first shipment turns out a success much grain and other produce will seek a foreign market by that route.....Baltimore, Md.: Cotton trade grown enormously. Storage facilities crowded: a new press constantly employed. Inactivity in the grain market has restricted exports. Southern wheat 1@2c. lower and demand moderate. Western wheat slow but steady; prices unchanged. Southern corn active; prices steady; arrivals liberal. Western corn firm, with a slight advance in prices. Owners of vessels are firm as regards freight rates, in the belief of the early resumption of grain shipments. Receipts of potatoes very light; good sorts bring $1.10@1·20 per bushel, Canned goods firm.....Norfolk, Va.: Cotton receipts large; market firm but quiet. Peanuts coming in freely; prices rule low; quality ordinary. Collections fair; weather good.....Wilmington, N. C.: Weather cooler with occasional rains. Receipts of cotton have increased 2,000 bales. Rice and grain firmer. Provisions quiet but steady. Lumber wanted at an advance.....Savannah, Ga.: Merchants seem uneasy at reports from the country and do not like to risk selling goods there. Cotton is not overbrisk, but factors are cheerful, selling on a basis of 11¼c. for middling. Rice market dull; demand light .....Augusta, Ga.: Farmers and store-keepers are holding back their cotton expecting an advance in price, selling only enough to raise money to pay pressing debts. They are buying only such goods as they are obliged to have. Jobbers are making greater efforts to collect than to sell.....New Orleans, La.: Cotton in demand and steady. The latest estimates of the total cotton crop vary from 5,014,170 to 5,700,000 bales. Receipts of sugar and molasses small; demand moderate. Rice quiet.....Memphis, Tenn.: Cotton receipts heavy so far this month and prices satisfactory to producers. Provision and produce markets well supplied; demand moderate. Collections fair.....Nashville, Tenn.: No change in quotations of grain and flour. General produce market steady. Eggs quite active at 29@30c. Collections good.

A Maryland exchange refers to Mr. Thos. G. Forward, of Blair, that State, who was cured by St. Jacob's Oil of rheumatism.—Rochester, (N. Y.) Sunday Morning Tribune. *Adv.*

Lydia E. Pinkham's Vegetable Compound will at all times, and under all circumstances, act in harmony with the laws that govern the system. Address Mrs. Lydia E. Pinkham, 233 Western Avenue, Lynn, Mass., for circular.—*Adv.*

The Youth's Companion,

of Boston, is a sprightly, entertaining paper, deservedly popular, and is, without exception, the best of its kind published in America. It is filled to overflowing with the choicest original matter, of so diversified a character that it never fails to interest, instruct and amuse, and is welcomed in the household by young and old alike.—*Adv.*

Don't Get the Chills.

If you are subject to Ague you must be sure to keep your liver, bowels and kidneys in good free condition. When so, you will be safe from all attacks. The remedy to use is Kidney-Wort, either in dry or liquid form.—*Adv.*

A Fine Hair Dressing.

COCOAINE dresses the hair perfectly, and is also a preparation unequalled for the eradication of dandruff.

THE superiority of BURNETT'S FLAVORING EXTRACTS consists in their purity and great strength.—*Adv.*

The Markets.

CHICAGO.—WHEAT unsettled but generally lower, closing firm; No. 2 Chicago Spring, $1.28@1.28⅛ cash; $1.28, December; $1.29@1.29⅛, January; 1.30⅛, February; No. 3 do. at $1.15½@1.15¾; rejected, 85@90c.; sales No. 2 Chicago Spring at $1.28@1.29⅛, January. CORN unsettled, closing firm at 60⅞@61¼c., cash and December; 61⅛@61¼c., January; 61¾@61⅞c., February; 66½@66⅝c., May; sales at 66@66¾c., May; rejected, 59½c. OATS strong and higher, especially for cash, at 46¾c., cash; 46⅞c., December; 45½c., January; 44¼@44⅝c., Feb. BARLEY easy at $1.06. FLAX-SEED dull at $1.35@1.37. DRESSED HOGS firm at $6.80@7.05. PORK in fair demand but lower, at $17, cash and December; $17.10@17.12½, January; $17.32½@17.35, February; $17.55 March. Lard in fair demand but lower at $11.05, cash; $11 22½, December; $11.23½, January; $11.37½@11.40, February; $11.50@$11.52½, March. Bulk-meats in fair demand but lower; shoulders, $6.50; short rib, $8.95;

short clear $9.25. HOGS—market active and prices 5c. higher than yesterday; common to good mixed, $5.60@6.10; light; $5.75@6.00; heavy packing and shipping, $6.20@6.40; Philadelphias and lard hogs, $6.45@6.55; skips and culls, $4@5.25. CATTLE—market fairly active; fat cattle 10c. stronger than yesterday; Christmas beeves, $7.25@7.65; exports, $6.20@$7; good to choice shipping, $5.40@6; poor to to fair, $4@5; mixed butchers' firm; poor to medium, $2@3; good to choice, 3.20@4; thin Texas cows and mixed lots, $2.75@3.50; Wyoming natives, $4.65@5; stockers and feeders steady, with a fair demand, at $2.60@4. SHEEP—market firm, on best a little stronger; inferior to fair, $2@3.25; medium to good, $3.60@4; choice, $4.50@5.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 10, 1881.

BEANS AND PEAS.—There is more activity and all white have a better tone, including foreign. The latter range at $1.90@1.95 when fine. Red kidney dull but held with more confidence. Turtle soup beans are merely nominal. Green peas are quiet and unchanged. Southern B. E. peas are in fair request.

Beans, marrow, prime, $3.50; fair to good, $3.25@3.40; medium, choice, $3.30; fair to good, $2.90@3.10; pea, choice, $3.25@3.30; fair to good, $2.90@3.00; white kidney, choice, $3.40@3.45; good, $3.30@3.30; red kidney, choice, $2.85@2.95; fair to good, $2.50@2.75; turtle soup, $1.75@1.80.

Peas, green, prime, in bbls., $1.65@1.70; green, fair to good, $1.40@1.60; Southern b. e., per 2-bu. bag., $3.45@3.50.

Receipts of beans for the week, 6,770 bush.
Exports do. 488 bbls.

BUTTER.—Free supplies of the finer grades have taken off the strong feeling that prevailed last week. Last prices for creamery held up to Tuesday; since then the tone has been weak, and if dealers would speak candidly it would be found that all desirable grades have to be shaded to make business. Western imitation creamery is showing an excellence of quality that suits some of the best buyers. The weather is cold and useful cheap grades are expected to move faster.

Creamery, choice, 40c.; good to prime, 37@39c.; fair to good, 32@37c.; poor, 20@25c.; sweet cream, fresh, 34@35c.; State dairy, half tubs and pails, choice, fresh, 34@35c.; good to prime, 32@33c.; fair to good, 28@32c.; Welsh tubs, choice, fresh, 33@34c.; good to prime, 31@32c.; fair to good, 27@31c.; poor to fair, 25@25c.; State dairies, firkins and tubs, choice, 32c.; good to prime, 29@30c.; fair to good, 27@29c.; firkins, dairies, choice, 31c.; good to prime, 28@30c.; fair to good, 24@28c.; poor to fair, 18@24c.; Western imitation creamery, 30@36c.; dairy, fresh, choice, 31@33c.; good to prime, 25@28c.; fair to good, 20@25c.; factory, late made, choice, 25@28c.; late made, good, 16@18c.; fair, 14@15c.; Iowa, fine June, 16½@17c.; Ohio and Ind., June, 15½@16½c.; June, fair to good, 15@15½c.; factory, very poor, 13@14c.; roll butter, good to prime, 20@22c.; fair to good, 20@22c.

Receipts for the week, 29,582 pkgs.
Exports do. 390 do.

CHEESE.—Shippers have brought high grades of factory sparingly and there is no quotable change in prices. Some choice Ohio are in stock held close to best State. Good skims are in demand for home use as prices are attractively low.

State f't'y, fine, Sept. 12¼@12½c.; good to prime, 10½@11¾c.; fair to good, 9½@10½c.; poor to fair, 8@9c.; Ohio factory, flat, fine mild, 11¾@12¼c.; good to prime, 10@11c.; fair to good, 8@10c.; poor to fair, 6½@8c.; creamery, partly skimmed, choice, 8@9c.; partly skimmed, for export 6@7½c.; full skimmed 3@4c.

Receipts for the week, 69,662 bxs.
Exports do. 30,750 do.
Liverpool cable 128. 6d.@15s.
Steam to Liverpool, 5s. 6d@6s. for Summer to late makes.

COTTON.—Port arrivals have run unexpectedly heavy and prices have bent under them. Easy figures have led to the sale of some full lines of spot for export, but home spinners have purchased moderately and may not appear importantly until after Jan. 1

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9¼	9 9-16	9 9-16
Strict ordinary	9 13-16	10⅜	10⅜
Good ordinary	10⅜	10 15-16	10 15-16
Strict good ordinary	11 1-16	11⅜	11⅜
Low middling	11⅜	11 13-16	11 13-16
Strict low middling	11¾	12 1-16	12 1-16
Middling	11 15-16	12¼	12¼
Good Middling	12 5-16	12⅝	12⅝
Strict good middling	12 9-16	12⅞	12⅞
Middling fair	13 1-16	13⅜	13⅜
Fair	13 13-16	14⅛	14⅛

STAINED.

Good ordinary	8 13-16	Low Middling	10½
Strict good ordinary	9 13-16	Middling	11⅛

Average of yesterday's forward deliveries as officially reported on the bulletin, were as follows:

December, 11.85c.; January, 12.07c.; February, 12.27c.; March, 12.46c.; April, 12.61c.; May, 12.74c.; June, 12.86c.; July, 12.99c.; August, 13.05c.; September, 12.38c.; October, 11.72c.

Receipts for the week, 46,378 bales.
Exports do. 8,912 do.

EGGS.—Receipts for the week, 6,041 bbls.; do. last week, 7,008 do. Prices are something in buyers' favor, but all good, reliable, fresh marks are quoted with strong tone. Most of the supply has been held. Limed not moving so freely, but holders feel safe.

New J'y L. I. and near river, single bbls., per doz., 34@35c.; Pa. and State, fresh laid, 30@31c.; do., fair to good, 28c.; Western, fresh laid, 29@30c.; do. and Canadian held, prime, 26c.; inferior, 24@25c.; southern, fresh laid, 29@30c.; limed, State, 23½@24c.; Canadian and western, prime, 23@23½c.; fair to good, 21½@22½c.

FLOUR.—Low grades and No. 2 have been wanted daily, especially for provincial use, and prices have held up well. High and family brands have been largely included in the receipts and prices close easy. Buckwheat flour is in larger supply, and the market is dull at the easier prices. Corn meal steady.

No. 2, per bbl., $3.90@4.50; State and Western, superfine, $4.50@5.10; city mills, XX, $6.50@7.35; Spring wheat, extra, $5.15@5.50; Spring XX and XXX, $5.65@6.75; patents, $6.50@8.50; Ohio round hoop shipping, $5.35@5.75; trade brands, $5.85@6.50; St. Louis extra, $5.40@5.90; do. double extra, $6.10@6.50; do. family, $6.65@7.00; Southern extra shipping, $6.00@6.40; do. XX and family, $6.50@7.50. Rye flour, superfine, $4.85@5.20; buckwheat flour ₱ 100 lbs. $3.75@4.00. Cornmeal, Brandywine, ₱ bbl. $3.75@4.00; do. Western, $3.35@3.75. Wheat feed, 40 lb ₱ ton, $19.50@20.00; 60 lb ₱ ton, $20.00; 100 lb ₱ ton, $21.00@23.00; rye feed, $22.00@23.00.

Receipts of flour for the week, 42,958 bbls.; cornmeal, 3,750 do.

Exports of flour for the week, 42,960 bbls.; corn-meal 4,200 do.

FRESH FRUITS.—The mild weather has been severe upon stored lots and many have been repacked at this early date. A good many have gone abroad, though the market across the water has not a favorable tone. It is expected, however, that the holidays will enliven the trade, and some very choice marks have gone out. Exports from New York for the week, 5,300 bbls.; from Boston, 6,000 do.; from 1,500 do. Pears and grapes are hardly asked for. Florida oranges are not running in regular good quality yet. A few fancies make $4.50 per half bbl. box. Cranberries firm at a new advance.

Apples, Spitzenburg, ₱ bbl. $3.50@4; Greening, fancy, $3.50@3.75; Baldwin, do. $3.50; Baldwin, Greening and Spitzenburg, fair to prime, $3@3.25; Seeks, prime, $3.00@3.50; northern spy, prime, $2.75@3.00; russet, prime, $2.75@3.00 mixed lots, State, prime, ₱ bbl., $2.75@3.25; do. fair to good, $2.25@2.75; seconds, $1.75@2.00. Pears, Boston, lush. boxes, poor to good, $1.50@3.50; Vicar of Wakefield ₱ bbl., $2.50@3.00; Grapes, Catawba State, case of 18 3-lb. bxs. 3.00@4.00; baskets, ₱ lb., 6@8c.; Isabella, State baskets, 3@3½c. Florida oranges, half-bbl. boxes, choice, $4.00; good to prime, $3.00@3.50; inferior, $2.00@2.50; thirds, choice, $2.75; fair to prime, $2.25@2.50; inferior, $1.50@1.75. Cranberries, Cape Cod, fancy, large, ₱ bbl. $11.00@12.00; good to choice, $9.50@10.00; poor to fair $6.00@8.00; ₱ crate, $3.25@3.75; New Jersey fancy, $3.25@3.50; fair to prime, $2.75@3.25; poor to fair, $2.25@2.75; frosted, 50c.@$1.

NUTS.—Peanuts are firm and in fair demand. Pecans steady. Hickory nuts dull and little more than nominal. Black walnuts quiet.

Peanuts, Va., hand-picked, ₱ lb, 6¾@7c.; fancy, 6¼@6¾c.; extra prime, 6@6¼c.; good to prime, 5½@6c. shelled, 5@6c.; pecan nuts, 10½@11¼c.; hickory, shellbark, State, ₱ bu. $1.00@1.12; Western, $1.00; bull nuts, 40@50c.; black walnuts, 50c.

GRAIN.—The interior movement in wheat is light and with an enlarged export call prices are ruling strong and better. Corn has been rather neglected by exporters and prices have weakened under liberal supplies. Oats have wavered some, but close steady with the filling of contracts and the increased local demand of Winter.

Wheat, Spring, $1.25@1.39; Spring No. 2, $1.32@1.37; red Winter No. 2, $1.42½@1.41; red Winter, $1.35@1.45; white Western and State, $1.35@1.45. Rye, 96c.@$1.00. Oats, white No. 1, 54@54½c.; No. 2, 52@52½c.; No. 3, 51c.; mixed, No. 1, 51½@52c.; No. 2, 51@51½c.; No. 3, 48@50c. Corn, Western, mixed, 69@69½c.; do. No. 2, 71½@72c. yellow, 70@73c.; white, 72@75c. Barley, Canada, No. 1, $1.10@1.12; do. "bright," $1.13@1.15; State, 4-rowed, 93c.@$1; 2-rowed, 88c. Buckwheat, $1@1.05.

Receipts for the week, wheat, 909,350 busn.; corn, 263,567 do.; oats, 125,950 do.; rye, 70,492 do.; malt, 52,400 do.; barley, 112,950 do.

Exports for the week, wheat, 395,707 bush. corn, 263,299 do.; oats, 1,775 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Dec. 3. bush.	1880. Dec. 4. bush.	1879. Dec. 6. bush.
Wheat	18,876,127	26,930,859	27,850,685
Corn	18,817,521	15,753,676	10,337,866
Oats	2,820,015	3,587,563	2,798,930
Barley	3,165,974	2,861,443	4,673,970
Rye	1,253,216	913,014	1,191,683
Total	44,932,883	50,046,595	46,860,634

HAY AND STRAW.—Receipts of hay are unusually heavy. The railroads are running to their best capacity, and the accumulations have reduced prices while the tendency is to still lower figures.

Prime Timothy hay, ₱ 100 lbs., 95c.@$1.00; medium Timothy, 75@85c.; shipping grades, 60@65c.; clover mixed, 70@75c.; all, 60@65c.; Straw, best 70@75c.; short 55@60c. oat and wheat straw, 40@45c.

Exports for week 1,876 bales.

HONEY.—Quiet; prices would have to be shaded before a large business would ensue.

White clover, fancy, 1-lb bxs, ₱ lb, 19@20c.; do. 2-lb bxs, 18c.; good to choice, 1@2-lb bxs, 15@17c.; buckwheat, 1-lb bxs, 14@15c.; 2-lb bxs, 12@14c.

HOPS.—The Producers' Price Current says: "Brewers' wants are light and they bid very low prices. Small lots steadily arrive."

Crop of 1881, choice, 26@27c.; good to prime, 23@25c.; fair to good, 18@23c.; eastern, 16@20c.; 1880, good to prime, 17@20c.; poor to fair, 10@15c.; 1879, fair to prime 7@15c.

Receipts for the week, 1,776 bales,
Exports for the week, 399 do.

MILK.—The market for surplus or commission cans has again done well. The opening was $2.50 and the close $3.50; average about $2.45 per can of 40 quarts. Many farmers are receiving 3½c. per quart.

POULTRY AND GAME.—Bad weather and excessive supplies have caused a rough market for dressed poultry and it will take some days for the market to recover. Stale lots are selling very low.

Turkeys, Phila. pr, 12@14c.; J'y pr. 12@13c; State and W'n pr, 10@11c.; poor to good, 4@8c. Chickens, Phila. prime, 12@14c.; Bucks Co. do. 12@13c.; Jersey, do. 11½@12½c.; State and Western, do. 9@10c. Fowls, Phila. prime, 10@11c.; Bucks Co. 9@10c.; New Jersey, do. 9@10c.; State and Western, do. 8@9c.; poor to good, 4@6c.; inferior, 8@10c. Ducks, Phila. prime, ₱ lb, 12@13½c.; Jersey and Bucks Co. 12@13c.; State and Western, 10@12c; poor to good, 5@8c. Geese, Phila. dry-picked, pr, 11¼@12½c.; Jersey and Bucks Co. 10@12c.; State and West'n, 9@10c.; fair to good, 8@9c. Squabs, white, ₱ doz. $2.00@2.25; dark, $1.25@1.50.

Cheap dressed has made a low, dull market for live worse than before. Ducks in a small way are an exception.

Chickens and fowls, J'y, State and Penn. ₱ lb 8@9c.; Western and Southern, 7@8c. Fowls, New Jersey and State, 9@10c.; W'n, 8@9c.; Roosters, old, 4@5c.; Turkeys, Jersey and Penn. 9@10c.; Western, 8@10c. Ducks, Jersey, extra-large, ₱ pair, $1@1.25; Jersey, New York and Penn. 75@87c.; Western and Southern, 55@65c. Geese, Jersey, $2@2.25; N. Y. and Penn. $1.75@2; Western mixed, $1@1.50. Pigeons, 20@25c.

Game is moving well at very satisfactory prices. Quail have advanced for large choice birds. Venison sells well as restaurants begin to name it regularly. Rabbits scarce and high. It is an objection to send them drawn.

Canvasback duck, Havre de Grace $2.75@3; and $2.25@2.50 for Norfolk; no Western arriving; redhead are out of the market, the last Western sold at 75c. Mallards are plenty; south-western are not generally selling above 30c, but prime Western sell at 40c, and rarely up to 50c. for very choice. Blue-winged teal are quoted at 30@50c. and green winged at 30@35c.

Quail, choice, ₱ doz. $2.00@2.25; inferior, $1.25@1.75; grouse, choice, ₱ pair $1.00; drawn, 60@75c.; partridges, State and W'n, prime, $1.; Eastern & Minn 75@87c.; soft, 65@75c.; woodcock, choice, 75c.@$1; hares, 35@40c.; rabbits, 30@40c.; venison, Minn. short saddles, ₱ lb. 15@16c.; State & Wn. 13@14c.; whole deer, 10@11c.

PROVISIONS.—English and Scotch buyers have operated to a good extent, but the market is not in the good form shown when it was thought that France had removed obstructions to commerce. The decision of several weeks ago, if it was a decision, has been indefinitely revoked, and Continental trade at the moment is unsettled. The bulk of the trade has been in lard and bacon, and the belief in a shortened hog crop may possibly lead to some speculative holding; at the moment, however, there are numerous free sellers. Beef and beef hams very firm.

Pork, West. mess, old, ₱ bbl. $17.25@17.50, do. new, $18@18.25; prime mess, $16.50@17; extra prime, $13.75@14. Lard, steam Western, ₱ 100 lbs, $11.25@11.30; prime city, $11.20. Hams, smoked city, ₱ lb. 12½@13c; pickled Western and city 9¾@10¾c. Shoulders, smoked city, 8¼@8½c; pickled, 7¼@7¾c. Rib bellies, pickled, 9½@9¾c. Bacon, long clear Western, 9¾@9¾c. Beef, Western mess, ₱ bbl. $12; packet, $14.50@15.00; India mess, ₱ tce. $25@27. Beef hams, ₱ bbl., $21@22.

Receipts for the week—Beef, bbls. and tcs. 1,621; pork, bbls 8,911; cut-meats pkgs 36,850; lard, do. 27,410.

Exports for the week—Beef, bbls. and tcs. 2 917; pork bbls. 4,025; cut-meats, lbs. 6,852,638; lard do. 1,899,141.

RICE.—The market shows firmness and is fairly active. We quote:—

Carolina and Louisiana, common to fair, 5½@6c.; good to prime, 6½@7c.; and choice, 7¼@7¾c.; Rangoon at 5¾@5¾c., duty paid, and 2⅝@2¾c., bond; Patna at 6¾@6½c.

SALT.—Quotations are:—

Ashton's, $2.50; Higgins's, $2.50; Phœnix superfine sifted dairy, $2.50; Holmes's extra sifted, $2.50 ₱ sack and 65c. ₱ quarter sack; Deakin's, $1.10@1.50; Washington's, $1.40; Marshall's, $1.40; Virden's, $1.40; Worthington's, $1.40; Turk's Island, 25@30c.; Mediterranean, 25@28c.

SEEDS.—Clover is dull. The lots arriving have chiefly been bought to arrive. Export business very dull. Timothy offered from store at easier prices; a car lot on track of seed below prime, off color sold at $3.50. Rough flaxseed decidedly lower; offered at $1.10 in Chicago and $1.55 here.

Clover, Western, 1881, car lots on track, 8¼@9c.; Timothy, job lots in store, $2.60@3.10; car lots, on track, $2.10@2.70; Flaxseed, American, rough, ₱ bu. $1.50@1.55.

SUGAR.—We quote as follows:

Cut loaf, per lb, 9⅜@9⅝c.; crushed, 9⅜@9⅝c.; powdered, 9⅛@9¾c.; granulated, 9¼c.; mould "A," 9¼@9⅜c.; confectioners' "A," 9@9⅛c.; standard "A," 8⅞@9c.; off "A," 8¼@8⅞c.; white extra "C," 8⅛@8⅜c.; yellow extra "C," 7⅝@8c.; "C," 7¼@7½c.; yellows, 6⅜@7¼c.

TOBACCO.—There is no export interest. Sales are mainly for home manufacture and run upon leaf stock.

VEGETABLES.—Exports of potatoes for week 7,800 bbls. The market is hardening again, as receipts are light and the demand is fairly active.

Potatoes—Early Rose, N. S., ₱ d.-h. bbl., $3@3.25; State, ₱ bbl $2.87@3.12 bulk $2.75@3.00; Prolific, N. S. per d.-h. $2.75; bulk ₱ bbl. $2.50@2.75; Snowflake, State, ₱ d.-h. bbl. $2.75@3.00; bulk, ₱ bbl. $2.62@2.87; ₱ d.-h. bbl. $3@3.12; bulk, ₱ bbl. $2.87@3.00; Burbank, d.-h $3@3.12; bulk, ₱ bbl. $2.87@3.00; Peachblow, ₱ d.-h. bbl., $2.75@3.00; Peerless, bulk, ₱ bbl., $2.50@2.62; Mercer P. E. Island ₱ bbl. $1.50@2.00; sweet potatoes, Va. yellow, ₱ bbl. $3.75@4; Del. River, pr. $4.50@4.75; Jersey, ₱ bbl. $3.50@4.00; inferior, $2.50@3.25.

Onions have declined; cabbages unprecedentedly high. A dealer remarked: "There's not enough for cold slaw." Squash firm.

Onions, white bulk, ₱ bbl. $2.50@3.50; yellow, $2.00; red, east, $2.00; red Chester, $1.75@2.00; squash, ₱ bbl., $2@3.50; cabbage, ₱ 100, $10@20; beets, L. I. ₱ bbl. $3.25; carrots, $1@1.25; turnips, Russia, L. I. $1.75@2; do. Canada, $1.50@1.62; cauliflower, fancy, $5@7; average quality, $1.75@2.50; inferior, 50c@$1; celery, ₱ doz., $1.50@2.00.

WOOL.—Business is quiet, but prices are nominally strong. Holders express themselves assured that there will be no pressure of stock and that business will open with a good support to as full if not better quotations than are now current. This may not strictly apply to low grade wool, as a long neglect may induce concessions. A good point of reliance for holders is the fact that foreign markets are high, and there is not much danger of competing importations.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Dec. 10, 1881.

BEEVES.—Receipts for the week, 12,095 head; do. last week, 12,460 do. The closing tone of the market was better than on any previous day this week. Colder weather has improved the demand for dressed beef, and slaughterers were willing to make extra purchases to day, presuming that prices are likely to be higher on Monday. The offerings were not excessively large, yet ample for all requirements. Prices were generally rated about the same as at the opening on Wednesday and from $1 ₱ head to ¼c. ₱ lb higher than the finish on Wednesday; but the close was rather dull and late sales were not up to the early ones. Five cars of light Cherokee cattle sold at 7½c. to dress 55 lbs.; 5 cars of Texans at about 7½c. to dress 55 lb; several loads of Colorados at 7¾@8¼c. to dress 55@56 lb; common to fair natives at 7¾@8¼c. to dress 55@56 lb; good to really prime do at 8¾@11¾c. to dress 56@57 lb, and a few head of choice at 12c. to dress 57 lb.

VEAL CALVES.—Annexed prices for live calves have only been current for a few days. Choice Mt. Hollys very firm.

Hog-dressed, choice, 12¼@12c.; dressed, fair to good, 10@12c; do., grass, 4½@5½c; live calves, N. J. prime to choice, 9c.; do. State, 8¾@9c.; fair to good, 8@8¾c.; poor to fair, 6@8c.; Mount Hollys, 160 to 220 lbs 9@10c.; 220 to 280 lbs 8@9c.; 280 to 400 lbs 6@8c.; live calves, fed, 4@4½c; grass, 2¾@3½c

MILCH COWS.—The market for most of the offering has ruled easier, and many lots have gone to Long Island dairymen. State cows have sold at $40@55 ₱ head; a few singles $70.00@75.00.

SHEEP AND LAMBS.—Receipts for the week, 28,285 head; do. last week, 45,330 do. The market had a firmer tone, but slaughterers had no urgent wants. The small business was at slightly advanced prices for good stock, but there is scarcely any improvement in common stock lots. Sales of sheep were at 3@5c. for poor to very good; several car loads of light Michigan sheep and lambs mixed sold at 4@4½c., and a few State and Canada lambs at 6@6.70. A real choice lot of lambs, would have brought 6¾c.

SWINE.—Receipts for the week, 36,300 head; do. last week, 31 467 do. High hogs at the West give our market a firm tone.

Hogs, New Jersey dressed, light, 8½@8¾c.; medium, 7¾@8c.; heavy, 7½@7¾c.; city dressed, 7¾@7¾c.; pigs, 8c.; live hogs, corn-fed, ₱ 100 lbs, $6.00@6.25; pork tenderloins, ₱ lb, boxed, 7@10c.

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HENRY STEWART.

Pasturing.

We are told in sacred history, which is the oldest record of events which we possess, that Abel became a keeper of sheep while his older brother, Cain, became a tiller of the ground. Thus farming and pasturing were the first occupations of mankind. It is true that Adam was a gardener, or rather kept a garden, which produced in the period of his innocence and happiness all the fruits abundantly, and so supported him without the necessity of his laboring, but after his fall it is reasonable to suppose that he continued to gather such fruits as he could and never really tilled the ground. Pastoral life is the second step towards civilization. The savage hunts and gathers fruits and roots for his living, and wanders from place to place without any settled home. When he begins to accumulate property, which is the first indication of civilized life, he keeps sheep and cattle and lives in a tent, moving from place to place as his stock demands fresh pasture. This of course requires much space and a good deal of ground, and as men become more numerous they are crowded, and some necessarily have to become farmers and live in houses.

This very course of things is happening the great West to-day. Flocks and herds roam over the vast plains: but by-and by the sheep and cattle get too numerous and the pasture too scanty, and one man and then another takes to farming, and by-and by the prairie is dotted over with houses and wheat and corn fields and the flocks and herds go farther off, for pasturing requires a large space of ground, but yet it is a very cheap and easy way of keeping sheep, cattle and horses where land is cheap and abundant, or where it cannot be turned to other and better uses. Where land costs only a dollar or two per acre one can afford to pasture. Where it costs a hundred dollars per acre one cannot afford to use it for this purpose unless the pasture is made very rich and productive and able to support more animals than the wild pastures. Thus pasturing and the care of pastures become a branch of farming which calls for great skill and knowledge of the kinds and value of the best pasture grasses and the best soils for this use, as well as the best methods of managing such soils.

Most of us, when we think of the pasture, recall to mind a rough piece of ground at the back of the farm covered with stones and rocks and brush, with a brook running through it, in which, when boys, we used to try and catch small fish with a bent pin: and a swamp where we used to love to wade in the mud with bare feet; and so wasted our time while our parents were waiting for us to bring the cows home. And then how we used to run those poor cows home with their full udders swinging from side to side, to make up for lost time, and make believe that we had been very busy in fetching them up. Or sometimes we would coax the girls to go and gather chestnuts with us or pick up hickory nuts in the woods. Those were the days when our first little experiences in farming came to us without labor or care and which we now look back upon with pleasure and regret.

But that kind of pasturing is only a makeshift, and no good farmer now is content to keep his cows in that way. He must have a pasture in which his cows can eat and be filled in a short time, and lie down to rest and chew their cuds, and fill their udders with rich milk from the rich, sweet grass. Such a pasture requires that the soil be of the best kind, and not a piece of waste land that is good for nothing but to produce weeds and worthless plants. It does not require that the land be smooth or level, or free from stones or trees or swamp. A rough, uneven surface, with rocks here and there jutting from the sward; a few trees; a brook and a swamp even, if it be drained; will all be valuable adjuncts to a pasture. For an uneven, sloping field is generally dry and healthful in its influences on the cows or sheep; rocks and stones merely take up so much of the ground and generally the herbage around them is the sweetest; the shade of a few spreading trees is worth a good deal of money in their agreeable effects upon the cows, a rippling brook supplies the best and purest of water, and a drained swamp will produce a heavy growth of the richest grasses.

THOSE BOYS.

MARY E. COLE.

I READ in the RURAL of the rearing of pigs and of poultry, but my theme is, the rearing of boys. I think they are much more neglected than pigs or poultry, or even *farmers wives*. Farmers' boys are more frequently cared for with a view to the profit they shall bring, than to their present welfare or future manhood. Judging from appearances, they are not considered the ornamental part of the family, and though their services are frequently called into requisition the fact is seldom acknowledged. When household help is required, the boy is called in to do the weekly wash on rainy days. Some one suggests that he even peel the potatoes or sweep etc, when not employed out of doors! This being done, where is the boy's leisure? What girl has no time for books or embroidery, or an afternoon for gossip each week. When the boy is old enough he follows the plow all day, and to meet him with the empty water-pail or kindling basket is simply barbarous. If help in the house is insufficient, do not make the boy pay the penalty of that: every boy, after he goes to the field, earns more than it will cost to hire a woman to do the work of the house. The excuse that such help cannot be had, is fallacious. "The poor ye have always with you," and in every neighborhood may be found, at a light expense, those who will do the washing and ironing at their own homes.

Farmers' boys do not have any great advantages of education, and this is a good reason why their evenings and rainy days should be given them for the improvement of their minds. Let books and papers be put within their reach, and let them be encouraged to read them, and there will be less noise around the barn, less pitching of horse-shoes, less lounging in village stores on rainy days.

Again, the boys' clothing does not favorably compare with their sisters'. Not unfrequently they are left to spend their Sundays with the colts and calves, while the girls are dressed up and taken to church. I know families where the girls spend one day out of the week pulling to pieces some dress and changing its appearance for some special occasion, who cannot find time to make and starch collars for their brothers' every-day shirts or make mittens for corn husking days. It is in these boyhood days that seeds of bitterness are sown that wives reap in after years. No wonder some of the boys grow to be "barbarians," and occasionally one has no better sense than to scrub the kitchen after he has done his day's work.

NOTES.

ABOVE we give an interesting article entitled "Those Boys," in which there are many solid facts, and it has suggested to my mind a good subject for our next Discussion. It is this: "*Is it advisable to oblige children under 12 or 14 years of age to do farm work?*" I will explain a little. Some children are more mature both in body and mind at 12 than others are at 14 years of age. Some are far better able to do physical work at the former, than others are at the latter, age. What we wish to consider is, should boys and girls generally, when about the ages above mentioned, be compelled to do hard work, either on the farm or in the house. Is it best for their intellectual and physical development? Will it tend to cause in them a love or a dislike for farming? Do they, or do they not, need all these early years for education and for play? This will serve to give an idea of the way to treat the subject. Now, members of the club, make ready for a good discussion of this question, and let's see if we cannot do better than ever before. The last Discussion was a very good one, we know, but the members of the Horticultural Club should never be content with present attainments, and, therefore, let "Improvement" be our motto. What we want is a few words to the point from all, and then the meetings cannot fail to be interesting. The next Discussion will take place about the middle of January, 1882.

I receive sometimes quite a number of letters intended for the Discussions after it is too late to put them in type for that issue. Such I shall endeavor to publish, if they are interesting, the succeeding week, but it would be much better to have all letters for our Discussions in on time, say about a week before publication. U. M.

LETTERS FROM THE COUSINS.

UNCLE MARK.—My first choice of plants for the parlor in Winter would be the ivies. The English Ivy with its rich dark green leaves for decorating is a beautiful plant, it is strong and will live through almost any treatment. The ivies do not seem to mind whether the sun shines or not, or in what direction you train them. They should not be excessively watered though. I read in the Floral Cabinet that English Ivies growing over the walls of a building, instead of promoting dampness are said to be a remedy for it. I have also read that in a certain room where dampness had prevailed for a length of time the affected parts inside had become dry when they had grow up to cover the opposite exterior side So we have in the English Ivy the beautiful and the useful. The German Ivy with its smooth, glossy, light green leaves is a very rapid grower and is nice for the parlor or sitting room. Now, cousins, (I am now speaking to the girls) don't let us allow the boys to beat us in the Discussions which I think may be of real benefit to us if we take hold of them in earnest. JESSIE GURNEE.

Cottage Grove, Wis.

DEAR UNCLE MARK.—You wish us to tell what we know about house plants in Winter. It isn't much. We have not been well situated for keeping plants in cold weather. Our rooms with south and east windows best suited for them are large and heated with fire-places. We find it difficult to keep them from freezing with fire all night. We have some petunias, slips cut and rooted in the Summer. We find they do best in sandy soil and require considerable moisture. We have some choice pansies cut from last Summer's plants; they root quite easily in the house. Then we have some of the Tradescantia or Wandering Jew in a hanging basket. The two latter seem to have ceased to grow since the cold nights have commenced. We will try house plants more extensively when we are able to withstand Jack Frost better.

CHARLEY AND ALICE TAYLOR.

Deer Valley, Col.

DEAR UNCLE.—I see by the RURAL (which I carefully peruse every week), that any one can, if a subscriber, or a child of a subscriber, become a member by sending you their address, and writing you a letter twice a year. As I want to be a member, put my name on your list. My father has been a subscriber to your paper from its first issue. He has the bottom of a large book-case full of RURALS for reference, and the information he derives from them on all horticultural and agricultural matters is worth to him, he says, ten times the annual subscription. My father went to Texas last Winter to see my two brothers who are on a ranch in Bosque county. He planted the RURAL seeds there. The pinks were splendid. The asparagus good. The sorghum he thinks too coarse for the sheep, and would prefer cane or corn sown thickly. The White Elephant Potato did very well considering the drought. The oats rusted and were short and stunted, owing, I suppose, to the unusually dry weather.

Goderich, Ont. DAISY JOHNSTON.

UNCLE MARK.—I would like to tell you how we keep our apples. Living on the flat prairies our cellars are too damp for them, so we bury them in the ground (freezing does not hurt them if covered with six inches of dirt.) Last Fall we buried our apples the 14th of November. The 15th of April we took up some which were in good condition. They looked as fresh as if just picked from the trees. They were Yellow Bellflower, Rome Beauty, Rhode Island Greening, and Rawles' Janet. The 17th of May we took out the last of the Rawles' Janet and they were perfect yet. EDGAR B. SHAFFNER.

Wellman, Iowa.

DEAR UNCLE MARK.—I have not seen any letter from this place so I thought I would write one. Council Grove has about 1000 inhabitants, is the County seat of Morris County and is situated in the Neasho. The M. K. and T. railroad passes through here, and we are expecting another from the east soon. We live on a farm about a mile from town. We came here from Illinois about three years ago, and although the crops have been as large as we could have wished, still papa has faith in Kansas and hopes for better times. I would like to join the Club. MINNIE AIKEN.

Council Grove, Kas.

DEAR UNCLE MARK.—I am ten years old, and they all say I am quite a farmer. I raise corn, potatoes, beans and a little of everything that is raised on the place. I have a little field of Winter rye now. Pa takes the RURAL and I think I shall enjoy reading it the long Winter evenings. My sister sowed the flower seeds but the drought killed all of them except some lovely pinks. I would like to join your club if I am not too late. Yours truly, GEORGE GROVER.

Clover, Wis.

New Members of the Club for Week Ending Dec. 10th.

Edgar Dyson, Ezra J. Morse, Ernest Wolger, Clintie Wolger, Della C. Fisher, Geo. H. Driskill, Eddie Driskill, Vernie Tyler, Carl Foersterliug, Ida A. Clapp, Ollie Van Fleet, Adela Stephens, Emma Gurnee, Jessie Gurnee, Jessie Hubbard, Wilda Hosack, Della Davis, Charlie Davis, George A. Brown, Allie Benton, Allie Fay, James Fay, William Ward, Cora M. Ward, Ollie Pike, Ira Dearmond, Jennie Liese, Annie Crouse, Mary E. Cole, Lulie Burtram, Della Burtram, Eddie Becker, Porter Preston, Clarence Johnson, William Market, Minnie Market, Lenora Wise, George Redington, Mary Redington.

Miscellaneous.

Mr. E. G. Gartman, the business manager of the Evening Dispatch, of York, Pa., was cured of neuralgia by three applications of St Jacobs Oil.—Boston (Mass.) Saturday Evening Express.

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THE GREAT
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FOR
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BAKER'S
Vanilla Chocolate,

Like all our chocolates, is prepared with the greatest care, and consists of a superior quality of cocoa and sugar, flavored with pure vanilla bean. Served as a drink or eaten dry as confectionery, it is a delicious article, and is highly recommended by tourists.

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Agents wanted. $5 a Day made selling our NEW HOUSEHOLD ARTICLES and FAMILY SCALE. Weighs up to 25 lbs. Sells at $1.50. DOMESTIC SCALE CO., Cincinnati, O.

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the **Twombly Knitting Machine Co., 168 Tremont Street, Boston, Mass.**

PERSONALS.

Major William Arthur, the President's only brother, has accepted a position on Gen. Hancock's staff.

Louis Pasteur, the celebrated scientist, was elected member of the French Academy last Wednesday, Dec. 7.

Gen. Hugh Judson Kilpatrick, United States Minister to Chili, died at Santiago on Sunday last, Dec. 4.

Jefferson Davis, wife and daughter arrived here from Europe on Wednesday, the 7th. He is 74, and looks hardly over 50.

Senator Beck says that Kentucky has the fastest horses, the prettiest ladies and the purest democracy in the Union. Beck, however, is often contradicted in the U. S. Senate—and out.

M. Renan in these days looks like a comfortable French priest, an occupant of some quiet village pulpit. His face is round and would be coarse were it not for the noble brow and thoughtful, searching eyes. He is a small man, thick-set and clumsy, and looks as if he liked the good things of this earth.

Implements and Machinery.

HOLLY and DEMAS BRACKET SAWS

Children's Educators and Money-Makers. Holly Bracket Saw $3, Demas Bracket Saw and Lathe $3. We guarantee either of these machines to give better satisfaction than anything heretofore offered. Boys can make more money than anything else they can work at.

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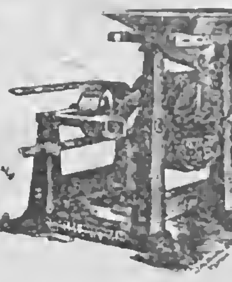

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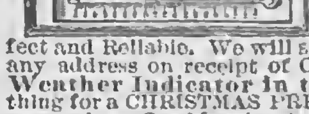

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SENT FREE Treatise on improved methods. Tables, yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa.

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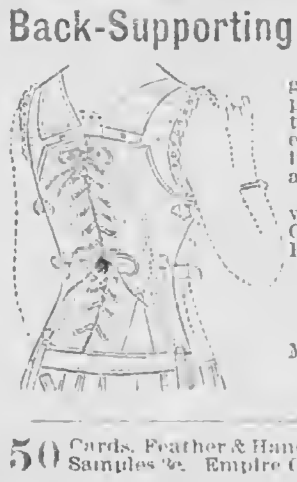

Is so constructed that it gives a strengthening support to the back, and draws the shoulders back, so as to expand the chest, throwing the body into an erect and graceful position.

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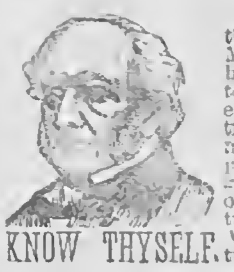

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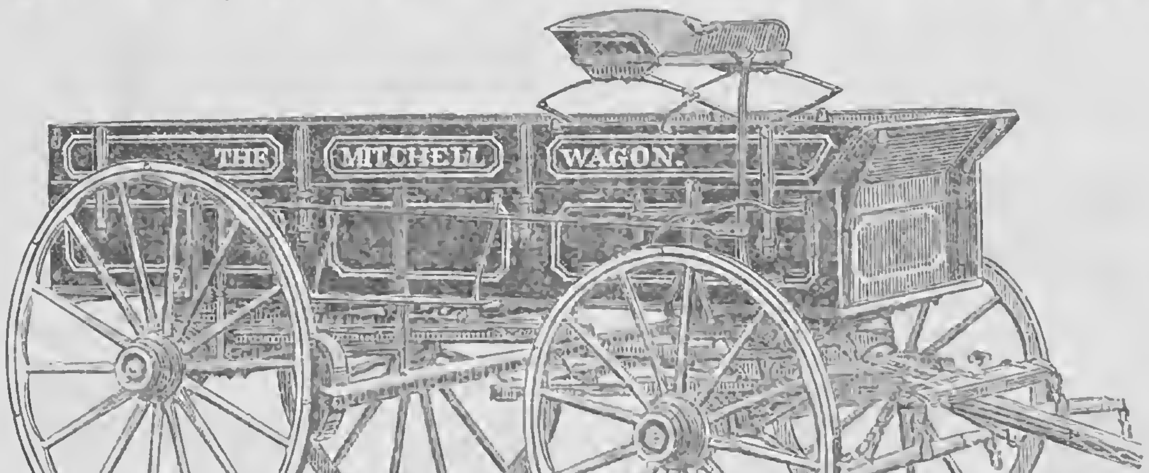

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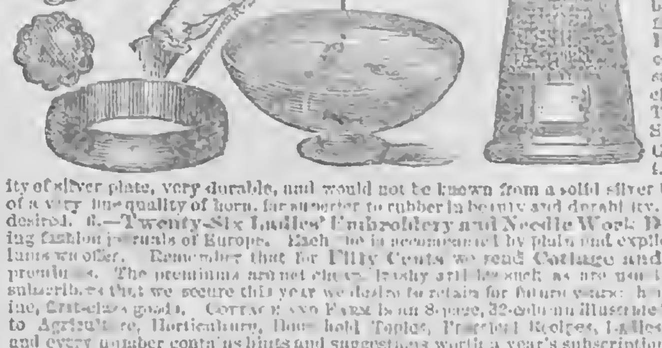


Humorous.

AN exchange says: "The bicycle is a great thing to put flesh on a man's legs." It is also a great thing to take flesh off a man's nose and other portions of his face.—Norristown Herald.

"TOMMY," said a mother to her seven-year-old boy, "you must not interrupt me when I am talking with ladies. You must wait till we stop, then you can talk." "But you never stop," retorted the boy.

"DOES our talk disturb you?" said one of a company of talkative ladies to an old gentleman sitting in a railway station the other afternoon. "No, ma'am," was the naive reply, "I've been married nigh on to forty years."—Hartford Times.

PLAYING BARNYARD.—New Haven Journal: One day Billy and Sammy were playing in a mud hole, and Bill said:

"Now, Sammy, les play we was a barnyard. You be the pig, and lie down and waller, and I'll be a bull and beller like everything."

So they got down on their hands and knees, and Sammy he went into the dirt and wallowed, while Billy bellowed like distant thunder. By-and-by Sammy came up muddy—you never saw such a muddy little fellow—and he said:

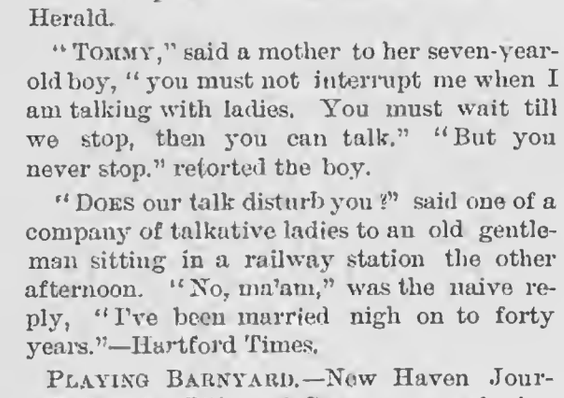
'Now, you'll be the pig, and let me beller."

But Billy said: "I ain't a very good pig except for dinner, and it'll be time nuff for you to beller when your mother sees yer close."

"ROTATION OF CROPS."

DEAN.—"Tut-t-t! Oh, I don't like this! This is very——Tell the Rector that I strongly object to his putting the Churchyard to this use. I'm really surprised——"

SEXTON.—"'Zactly what I said, Sir! I've spooke to 'm oover an' oover again! 'Lor' bless me,' I says, 'You keep a wheatin' on 't an' a wheatin' on 't! Why don't you 'Tater it?' I says!!"—(Punch.)



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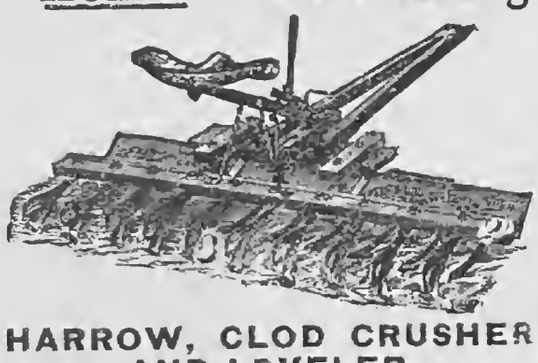

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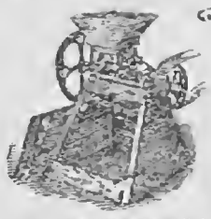

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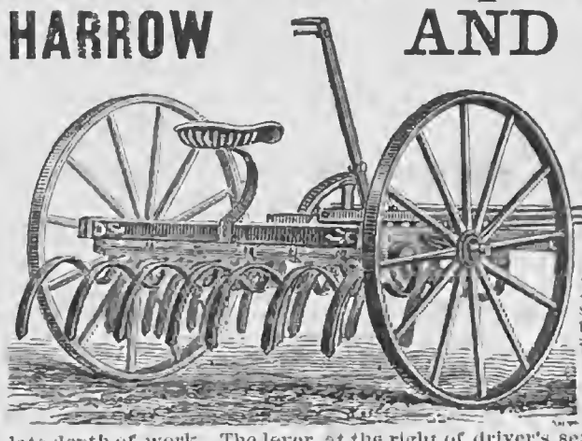

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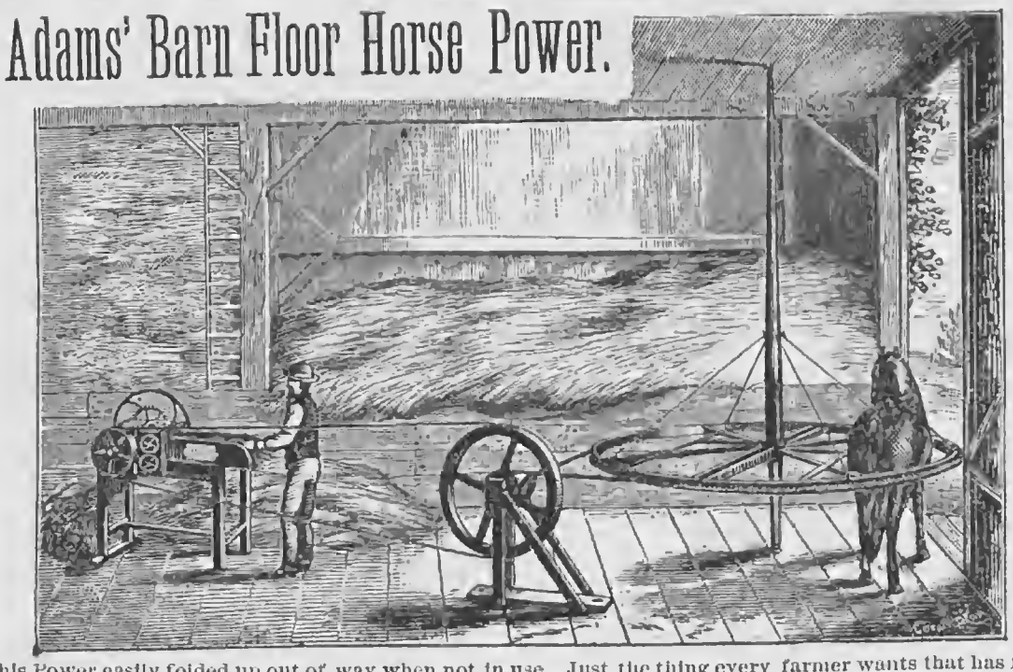

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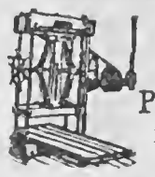

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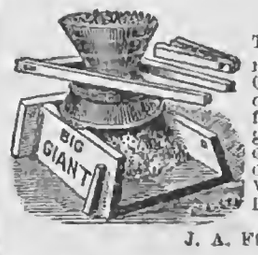

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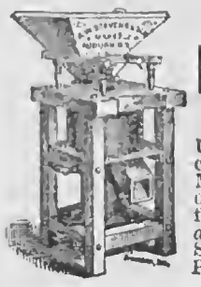

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

Ralph Evans

Vol. XL. No. 1665.} NEW YORK, DEC. 24, 1881. {PRICE FIVE CENTS $2.00 PER YEAR

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The Herdsman.

A GROUP OF POLLED CATTLE.

Much space and a good deal of information have been of late given in our columns about the Angus Polled cattle. We have given them such prominent notice because we believe that a more general knowledge of their characteristics and value would be useful, and because we do not in any way sympathize with the popular prejudice against them on account of their want of horns; indeed we should rather say absence of horns, because the word want would tend to indicate that the horns were something needful and valuable, whereas we believe they are neither. The great requirement of American agriculture for many years to come will be beef cattle of the best breeds, and as the Scotch polled breed has met the best of Short horns and Herefords in the ring, and has occasionally beaten them and taken the blue ribbon from them, it has certainly a right to some recognition from an agricultural journal as well as from breeders and graziers. We present the accompanying portraits of our heifers belonging to the herd of Mr. Ferguson of Cowper-Angus, Scotland, as worthy of study as typical animals showing the points of the breed in an excellent manner. The engraving is from a photograph, and as a work of art alone, is worthy of commendation. The discussion of the merits of Polled Cattle in the succeeding columns obviates the necessity of a lengthy account of them from us in addition to our former articles

POLLED CATTLE.

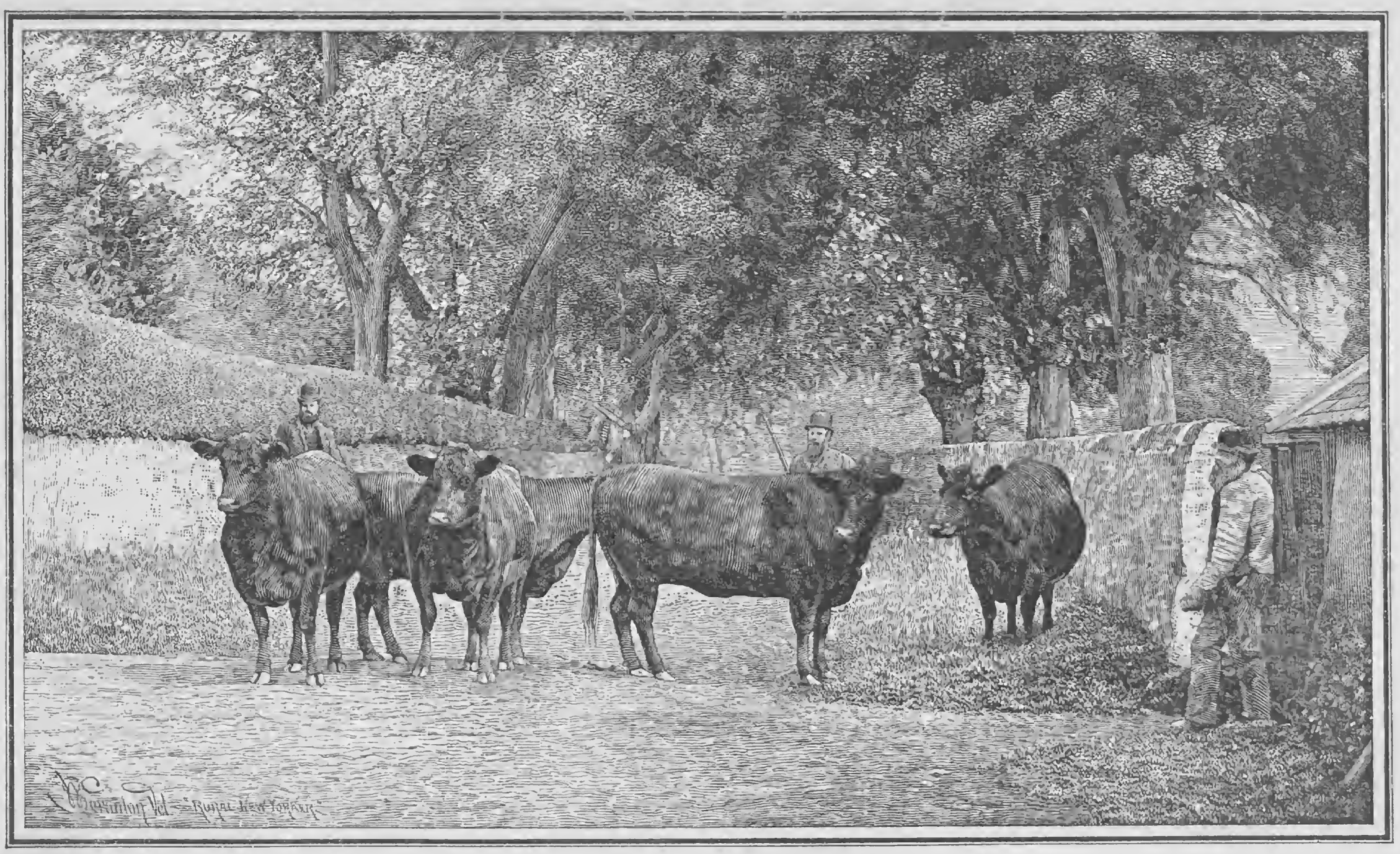
G. F. FABER.

My attention has been called to some statements with reference to polled cattle contained in the Rural of Nov. 26 in "Notes by a Stockman" which are certainly erroneous in some particulars and reveal in regard to these cattle somewhat of the prevailing ignorance of which the writer makes mention, and he might truthfully have added that a great deal of prejudice accompanies the ignorance. I very much doubt if the writer of that article has ever owned polled cattle; if so his experience differs greatly from that of others who have them. Admitting his assertion that "the proportion of cross or savage cattle will be found quite as great among the polls as among the horned cattle," of the two I think he would prefer to take the risk of an encounter with the polled animal. But with my experience I cannot admit this assertion. I have owned several aged polled bulls, none of which have been vicious. In leading them I use nothing but a rope tied to the ring in the nose. I never owned an aged horned bull that I felt safe in leading so. I have never heard of any person receiving serious injury from an encounter with a polled animal, while probably all know of such injuries having been inflicted by horned beasts in their own vicinity. Again, my experience with the cows of the two varieties has been as follows: For many years I owned horned cows and during the time quite a number were entirely ruined for dairy purposes in consequence of injuries received from the horns of others. My neighbors have been more unfortunate, losing the lives of the animals injured. During the last eight years, I have had polled cows and to my knowledge they have never done the slightest injury to any animal on the farm.

"Stockman" closes his remarks with the assertion that "in the dairy these cattle will never become popular, and simply because they are not so profitable as the Jerseys, the Ayrshires, the Dutch, the Short-horns or good average natives, that is, considering the market value of these last." In the experience of others as well as of myself this is far from true. There are families of polled cattle that for the production of butter, both as to quantity and quality, are fully equal to the far-famed Jerseys. The red or dun polled cows of Suffolk County, England, have long been noted for their superiority as milch cows, while in the adjoining county of Norfolk the red polled cattle, there designated as "Home-breds" are little, if any, inferior in this respect. At the Suffolk County (England) Fair of June 30, 1881, the red polled cow "Wild Rose" received the prize for the best milch cow. She was placed in charge of the steward of the fair and produced thirteen quarts of milk in twelve hours, which was less than she had given on named above. The milk from the Red Polled cow showed one-and-one-fourth inch of cream, as did also that from the native cow, this being considerably in excess of that on the other samples tested.

Native cows are referred to above and their market value brought into consideration. Have we not native polled cows of no greater market value fully their equal for dairy purposes? In conversation with farmers I find that they have a very high opinion of the native polled cows or "muleys" as milkers, and in speaking of them I have often heard the question asked, "Did you ever know of a "muley" cow that wasn't a good one?"

Our author above quoted adds: "Let us have the truth anyhow and give the polled cattle their due." That is the only favor that breeders of polled cattle will ever ask of their competitors of the horned breeds, and that their stock shall not be subjected to the premature judgment of persons so strongly prejudiced as to be unable to detect any good quality in them. It may be, as this writer predicts, that there is going to be a polled cattle boom, and if so there may be a great depreciation in the values of horned stock; but let not the advocates of horned cattle despair. It is not impossible that there may



GROUP OF POLLED ANGUS OR ABERDEEN CATTLE—(From a Photograph)—Fig. 561.

eventually be a demand for those specimens of the breed extant, that shall cause them to realize large prices. I note that at a recent sale of menagerie stock a two-horned rhinoceros sold for the large sum of $17,100, it being the only one of the kind in the country. It is perhaps not altogether improbable that at some future date a similar demand may arise for one-horned and two-horned speci-

mens of the bovine species, now so common in the country.

TEMPER OF POLLED CATTLE.

FRANK B. REDFIELD.

IN an article under the above caption in the RURAL NEW-YORKER for December 3, those who have had experience with polled cattle are requested to furnish information on the subject to the RURAL.

My intimate experience with polled cattle covers but the past two years, my first importation of Angus cattle having been made in 1879. First, on the subject of "temper," I will say that polled cattle are much more quiet, particularly in their treatment of each other, than horned cattle. I can show every day my water-trough full of polled heads, as many as can get up to it at one time to drink and there is no fighting and crowding. *They know they have no horns.* But grant in some cases a disposition to do injury, and what does it amount to in comparison with the same temper in an animal with a pair of ugly, sharp horns? It is enough to say—and I think without exception all who have tried polled cattle will say the same—that I will never have any more horned animals on my farm. I have had my share of experience in the last 20 years with horned cattle in the way of injury, very serious injury, to man and beast, and *I mean to have no more of it.*

I have had a few imported Angus cattle that had never been handled before shipment, and they have been and are very timid and wild, making them hard to handle. But with all their wildness in their intercourse with their fellows they show the characteristic mildness of almost all hornless cattle. Those of much experience with cattle of any variety know that all animals allowed to run unhandled as calves and longer, will be very wild and in many cases untamable. I have had horned cattle possessed of the very devil simply because they were not handled while young, and I know the difference between them and polled cattle. Again, I say only experience is necessary to determine one to have none but polled cattle. Why, it is a well known fact that in the countries where polled cattle are best known the *removal* of the horns from animals having them has been much practiced and it has been found necessary to pass laws forbidding the cruelty—although the most suffering in the end may be caused by not removing them. To me one fact is very significant, and that is the wonderful prepotency of polled bulls when bred upon horned cows. Why should this be so if it were not a provision for some all-wise purpose?

On the subject of the superior feeding qualities, etc., of polled cattle, the article in the RURAL of Nov. 5 leaves me little to say. On the subject of transportation it hardly seems necessary to say anything. The disadvantage of horns is patent to any one. It is only necessary to watch a few lots of cattle undergoing transportation on rail and shipboard to appreciate this fact. I am sanguine enough to believe that the next 25 years will see the horns bred off from a large majority of the cattle of the country and that breeders generally will wish for horns on their *horses* about as much as they would wish to have them on their cattle.

Batavia, N. Y.

NOTES BY A STOCKMAN.

THE extent of the great cattle interests of the West may be realized in part perhaps by considering the operations of a few individuals. A private ranch in Colorado formerly owned by Jones Brothers was sold recently to a stock company for the sum of $625,000. Another in Texas owned by a Captain Kennedy was purchased by the same parties for $1,250,000. This Texas ranch covers 300,000 acres of land and is stocked with 50,000 cattle and 3,000 horses and mules. These transactions are the largest cattle sales ever made; but by and by they may appear trifling when compared with future transactions; for the reason that the business is rapidly concentrating in a few hands and in wealthy joint stock companies, many of them composed of foreign capitalists.

ONE can scarcely realize what a crowd of cattle 50,000 would make up. If they were placed in line head to tail they would reach 100 miles; and if packed in a drove with comfortable room to move they would occupy 100 acres of ground. But there are many larger stocks of cattle owned by single individuals than this particular one.

THE editor of the RURAL has charged me to tell the truth in these notes, without regard to consequences, believing that no interest is served by deceit and misleading. As a matter of course truth telling will not fail to involve a good deal of criticism from persons who have strong opinions, prejudices, and hobbies; not to mention special interests to serve. I desire to do strict justice, and when adverse criticism proves to me that I am mistaken, I will most cheerfully acknowledge the corn. But as I write nothing that I do not firmly believe, and little but what I know, I promise my critics that nothing short of the clearest evidence and matters of fact can have sufficient weight to alter my judgment and views of things.

FOR instance, X (page 812) takes me to task in regard to polled cattle, and denies my statement that these cattle will fight as savagely as other cattle and that the absence of horns does not change their disposition, however much it may prevent them from wounding each other. He also objects to my statement that the frequently offered claim that more of these cattle can be put in a car than of horned beasts is unfounded; and yet in both these cases he fails completely to refute my assertions which are based on actual knowledge. I too, like X, made the acquaintance of these cattle many years ago. They were then not all naturally polled, but some of them had horns which were sawn or knocked off when a drove was put on the road for the English market. A third of a century ago I knew these cattle, and during a residence in England of five years often saw them in their native homes, and droves of them on the road to the London market. Part of the time I spent on a Norfolk farm where "black cattle," as they were called, were fed for a while on turnips and straw to gain flesh which they had lost in their 400-mile journey on foot before going to market. I have seen repeated fights among these cattle and the drovers have had as much difficulty in managing them as other cattle. X admits all I claim or stated when he says "occasionally a naturally truculent beast could be found and sometimes an animal would show fight" etc. etc.; and no more than this can justly be said against horned cattle, which, as a rule, are *not* naturally vicious.

BUT in regard to crowding these in a car, Youatt, 47 years ago, never dreamt of a railroad car when he wrote of these cattle, and his evidence must be ruled out as irrelevant. Again, dishorned cattle are not polled cattle, and a poor beast which has had his horns sawn or knocked off, naturally would feel much more gentle and docile, with his sore head, than a naturally polled one. This evidence also should be ruled out as irrelevant. Then Prof. Sheldon when he says "Americans are turning their eyes wistfully in the direction of polled cattle," mistakes most awfully, for there is no such wistful desire on the part of the Americans for these cattle, especially for dairy purposes. A few newspaper writers and a few importers and breeders are trying to get up a boom, and a few quiet business men are experimenting with them, and that is all. I don't care much for opinions, for these can be had by the cord or by the thousand; as everyone, however little he may know, has his opinion; but opinions never changed a man's belief. Facts are what I am after and not opinions.

AND X gives me a fact which just suits me, when he says "the width of the body and not that of the horns has gauged the room for each animal." Precisely. That is just what I stated, at least in substance; that horned cattle were so closely packed that if polled cattle were packed any closer they would be suffocated. How can space be gained, when even now, the width of the body gauges the room for each animal? Would the drovers use a press to pack these animals because without horns they could be squeezed a little closer. I grant the advantage and comfort gained by the absence of horns to the poor beasts. But that is not what is claimed. The claim is that more can be packed in a car, and while I admit that it might be done, I aver that it would be at the risk of suffocation. And X bears me out completely in my statement.

THERE are many points of value about the polled cattle; but they don't excel all other kinds. They can find a place here, which they can fill with great profit. This has been pointed out in the RURAL already and I need not say anything on the subject further. Let us avoid, however, getting into a craze about these cattle and putting up the notions of Scotch breeders who may think we are looking wistfully for their stock and as they think we are overflowing with wealth, they may on that false ground, mark up their prices 200 per cent, just as the Jerseymen have done with their cattle. Whenever a boom is got up we have to pay the piper, and the other fellows do the dancing, which is what I object to.

ANOTHER sale of Jersey cattle has come off and the prices paid are again unprecedented. A bull, Farmers' Glory, was bought by the "Sugar King" for $3,500, and a cow for $2,100; another bringing $1,400. There is no objection whatever to this kind of business, any more than to a rich man paying his thousands for a diamond or a picture. But it is not agriculture; only playing at it.

I NOTICE that a writer in that diletante agricultural publication called the Journal of the American Agricultural Association, is of the opinion that Mr. Havemeyer is showing us how to farm in the most approved style and most meritorious manner. It would be a most instructive comment on that extraordinary article, if Mr. Havemeyer would give an account current of his farm operations, showing precisely the cost of a pound of butter made from the cows in his dairy. Mr. H. is a sensible man and, doubtless, would cheerfully admit that he farms for amusement, and not to show "how fields are won" for the instruction of farmers who have to make a living by their farms and never could afford to pay more than $100 for the best cow that ever breathed or milked solid cream or lumps of butter.

The Swine-Herd.

VICTORIA PIGS.

COL. F. D. CURTIS.

THE Victorias may be classed among the American families or breeds of swine. They originated at Kirby Homestead, Charlton, Saratoga County, New York. A quarter of a century ago the writer, who is the son of a large farmer, conceived the idea of establishing a breed of swine which should meet the requirements of Eastern farmers for early fattening and at the same time be better adapted to the extremes of heat and cold than any of the white English breeds. He had the notion then as now that American breeders should strike out for themselves, and produce stock which would be adapted to their climate and markets, and not be dependent upon the skill of Great Britain.

With this feeling of home pride and independence he began the improvement of the pigs inherited from his father, which combined the blood of the Irish Grazier and pigs known as Byfield of which his father had obtained a cross. The latter were probably of English origin and with the Irish Graziers have long since been bred out in this country as distinctive breeds. With this foundation crosses were made with the best white boars with erect ears, to be found in the country. About 20 years ago the improved stock were named Victoria in honor of the Queen of England.

Subsequent crosses followed of Yorkshire and Suffolk and of a boar obtained in Westchester County, N. Y., of a Mr. Miller, said to be of imported stock, a remarkably well coated animal. In these various crosses several families were established which have been crossed upon each other for a number of years, resulting in the establishment of a uniformity of characteristics which now entitles these hogs to be classed as thoroughbred. Like all other white hogs, they have a few bluish or black spots in the skin, the hair upon them being white. These spots often increase in number as the pigs become aged. Several boars were kept in the herd on the farm at Kirby Homestead, and their progeny carefully selected for breeders as they came the nearest to the standard of the proprietor. One boar, the Crown Prince, on account of his superior excellence was kept until nearly nine years of age when he was castrated and slaughtered and attracted general commendation on account of the softness of his skin and his good appearance as a porker.

A son of Crown Prince is now in use and is considered to be very near, if not quite perfection. Both of these boars have obtained first prizes at the fairs of the New York State Agricultural Society.

Readers of the RURAL undoubtedly have noticed the remarks of "Stockman" in a recent number, which may be appropriately quoted as from a disinterested authority. He says: "The Victoria breed of swine is an improved Suffolk and an improved Yorkshire; at the same time it has the fineness of the Suffolk without its tenderness and its excessive tendency to fat, and the size and fleshiness of the Yorkshire without its coarseness. Its skin is thin and fine; the hair is fine and abundant; it has length of body with depth of side and shoulder and an excellent ham * * * * At the recent fat cattle show some Victorias from Indiana were exhibited, which are reported to have averaged 360 pounds of weight for pigs from six to ten months old."

These pigs have been distributed quite extensively over the United States, and at the National Swine Breeders' Convention held at Indianapolis in 1872, the following standard of characteristics was adopted: The color is pure white with a good coat of fine soft hair. The head thin, fine, closely set on the shoulders; face slightly dishing. The snout short; the ears erect, small and very light or thin. The shoulders bulging and deep; legs short and fine. The back broad, straight and level, and the body long; the hams round and swelling and high at the base of the tail with plaits or folds between the thighs The tail fine and free from wrinkles or rolls. Feathers or rosettes on the back are common. The skin is thin, soft and elastic. The flesh fine-grained and firm with small bone and thick side pork.

WHAT! CORN NOT GOOD FOR PIGS.

I SEE by a late RURAL that our friend Col. F. D. Curtis objects very much to feeding corn to swine. Corn is the natural food of the hog; there is nothing the animal prefers to it and it will eat no kind of food when it refuses corn. In my experience for 40 years I have never had a pig or hog affected with fever or inflammation from feeding corn. I have had sick pigs, but their ailment was due to filthiness in feeding or to a lack of charcoal, sulphur or salt to keep the stomach and digestion in a healthy state. I have yet to learn of good healthful meat being made from any animal unless it was in condition to thrive rapidly. I know of a litter of nine pigs in Hyde Park last Summer that had no other feed but clear corn meal and cold water; they were washed every day with hydrant water and kept perfectly clean. They weighed at eight months old 250 pounds apiece and brought 10 cents per pound dressed for market. Whoever wants lean, slab-sided pork can have it by getting some kinds of swine that never will fatten; but their meat is never wholesome as food for man, whereas a good, thriving pig that eats corn or any other food and thrives at the rate of one pound a day or even a little less, makes healthful meat for those that like pork as I do. I was raised on pork and Johnny-cakes and boiled dinners.

Tioga Co., N. Y. A. COLVIN.

A Heavy Young Pig.

I notice in reports of the Chicago Fat Stock Show that a pig 198 days old, weighing 293 pounds, is thought very heavy. I shut up four Poland-China pigs to feed when they were 130 days old; the best one weighed 158 pounds. Twenty-three days afterward I weighed it again and it had gained 70 pounds, weighing then 228 pounds. At 180 days it weighed 299 pounds. I killed it November 15, being then 195 days old, and it dressed 270 pounds; live weight, 335 pounds. Thus it dressed a trifle over 80 per cent. of live weight. The feed before shutting it up was skim-milk swill. After shutting it up it was fed corn and oat screenings ground together, mixed up with sour swill one mess beforehand. The four were fed together, and the others were nearly as good as this. It gained some of the time over three pounds per day; average gain, 1¾ pound per day. R. J. R.

Springwater, N. Y.

Dairy Husbandry.

IS THE CREAMERY ALL GAIN.

DAIRYMEN have been used to claim that one great advantage of the creamery system was that it relieved the women from the care of the dairy and from the labor of attending to the cream and making the butter. This claim is undoubtedly well founded, but it may be questioned if this relief is all gain or if it is not accompanied by a serious loss to the dairymen and farmers without any adequate advantage. Now we completely abjure the theory or belief that freedom from such labor or care as may be well and easily undertaken by women, is an unmixed benefit. There is a good deal of nonsense and foolish gush about this business, and sensible, practical women have no desire to abandon all employment of such light kinds as will not overtax their strength or interfere with household and family affairs, and their opportunities for study and intellectual pursuits and other recreations. The dairy is especially well suited to the feminine disposition and capability. A man may manage the cream and make butter as well as a woman can—sometimes; but he rarely possesses those instincts of neatness, order, regularity, deftness, cleanliness in details, and those other little niceties which go to make up the best quality of butter, and which are the especial characteristics of the feminine mind and hand. And it is a question if the women who are still burdened with the drudgery of butter making; the slopping over pans, pails, and uteasils, have not more abundant work laid upon them in this way through the want of neatness common to the men.

We have observed much of this and especially how a man will not hesitate to plump down the milk pail in his off-hand manner quite neglectful of the fact that it may rest

upon a quantity of filth; while a women will carefully gather a handful or two of clean litter to protect the bottom of the pail. In the after washing of the milk pails this difference is a serious item in the labor of cleansing the utensils in that it brings into the sink the foulest and most penetrating odors of the stable. But market reports tell the tale in the most convincing manner; and just now we find that creamery, June packed butter is quoted at 18 cents per pound; while the top of the market is over 40 cents. When the woman was queen of the dairy, June-packed butter brought the highest prices. Then the butter buyer thrusting his tryer into the firkins and tubs, fetched up a sample of butter, not "gilt-edged" only, but golden all through and of that delicious, nutty flavor which told of the fresh June grass, "the sweet breath of the heifers," and the perfect manipulation of the neat and skillful dairywoman. What a falling off is there when June creamery is only four cents above the value of "all sorts," grease included. If this is all the creamery has done or can do for June butter, it is a pertinent question to ask, "is the creamery all gain?"

Remedy for a Kicking Cow.

I think that the success F. S. C. met with in the management of his kicking cow (see page 812) was something marvelous. I have handled hundreds of cows, but there was not one among the number that would not, if tied in the style he describes, have thrown herself, and perhaps broken either her legs or neck, or both. If a kicking cow cannot be managed by "moral suasion," fasten her by the head in some manner, then tie a large cord or rope around the body just back of the fore-legs, with a stick twist the cord tightly, and the cow cannot kick. Milk as quickly as possible, and remove the cord, as it evidently gives the cow considerable pain. After a few times it will only be necessary to slightly tighten the cord, and in a short time the kicking propensity will disappear. NELSON RITTER.

Onondaga Co., N. Y.

Field Crops.

NOTES FROM THE EXPERIMENT GROUNDS OF THE RURAL NEW-YORKER.

A POTATO RACE.

IN order to test the yield and quality of some of the new kinds of potatoes which have come to us very highly commended, all were planted, manured and cultivated in the same manner in a well drained clayey-loam soil that seldom suffers from drought. A thin spread of stable manure on the surface spaded under was all the fertilizer used. The drills were two-and-a-half feet apart—the pieces or eyes placed one foot apart by measure.

ANDREWS' WHITE ROSE, sent to us by Mr. W. L. Bishop, Le Roy, Genessee Co., N. Y. Planted April 19. Eighteen tubers were cut into 215 (single) eyes, weighing 9¼ pounds. Of these 200 grew, the first sprouts appearing May 9. The plants bore no blossoms. The yield was 389 pounds, or six bushels two pecks and six quarts. The vines died August 25th. The quality of this potato is the same as that of Early Rose.

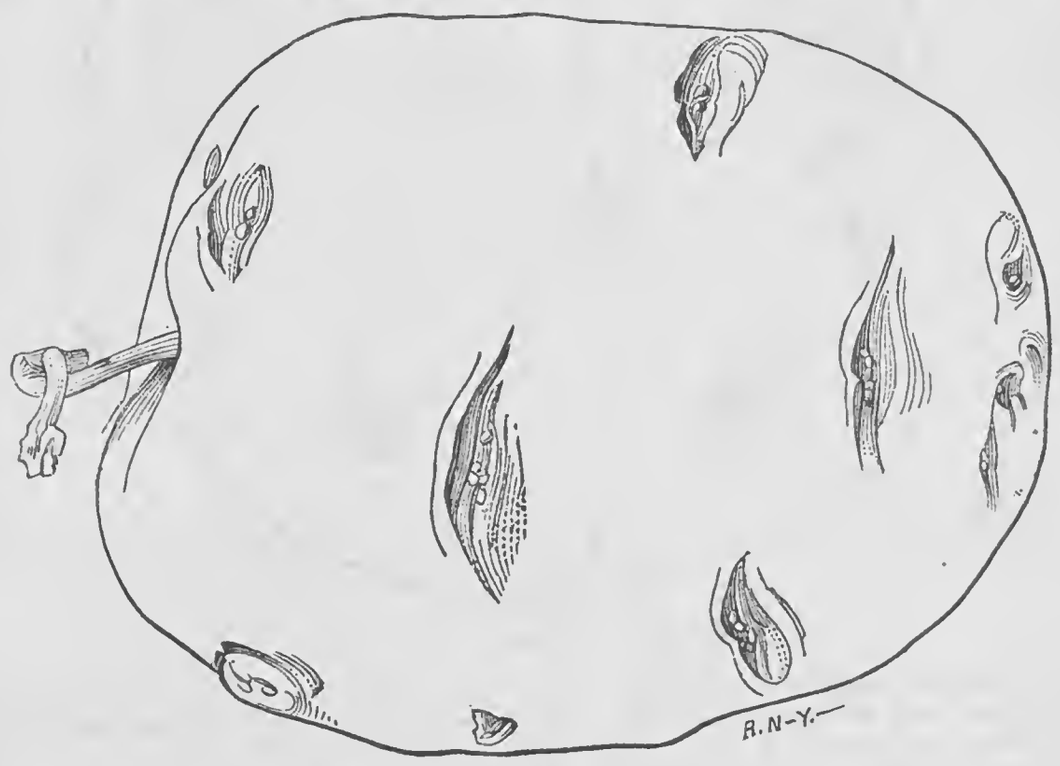
PRIDE OF AMERICA, from B. K. Bliss & Sons, were planted the same date (April 19). Thirteen tubers were cut into 155 (single) eyes, the weight of which was four-and-a-half pounds. Of these 125 grew. First sprouts appeared May 8th. Blossomed June 25. Ripened September 5. Yield 193 pounds, or three bushels and one peck. The flavor of this potato is the same as that of the Early Rose—fine-grained and mealy.

ROSE MAGNUM BONUM Potatoes were sent here by Mr. Rose, the originator, whose address has not been retained. They were planted April 20—10 tubers, 114 eyes (single), weight four pounds. Of these 102 grew, the first sprouts appearing May 8. They blossomed June 20, and ripened Aug. 26. Yield 104½ pounds, or one bushel three pecks and four quarts. Eyes are deep, skin white, roundish in shape, potatoes uniformly of large size cooking mealy; quality good, having more of the potato or nutty flavor than those of the Early Rose class.

ENGLISH MAGNUM BONUM.—We reported very favorably upon the *quality* of this variety last year from having eaten imported potatoes. They were judged to possess a rich, oily flavor, all their own. Our soil, however, does not suit them. They cook soggy, with none of the characteristic flavor of the imported tubers. Planted April 20, 27 potatoes, 190 eyes, weighing four pounds, of which 165 grew First shoots appeared May 11, blossoming June 26, ripening Sept. 5. Yield 160 pounds, or two bushels, two pecks and seven quarts.

WHITE ELEPHANT.—Planted April 20, 10 tubers; 179 single eyes, weighing 4¾ pounds, of which 176 grew. First sprouts appeared May 11, blossoming June 13. They ripened Sept. 20. Yield 279 pounds, or four bushels and three pecks. Comments upon the quality of this potato are unnecessary, as it was sent to all the subscribers of the RURAL NEW-YORKER who applied, in its Free Seed and Plant Distribution of 1880-81. The reports from nearly every part of the country show that it will probably become one of the most popular late potatoes in cultivation.

MAMMOTH PEARL, sent to us by J. M. Thorborn & Co., of New York, was planted April 20. Ten tubers, 145 eyes, weighing four pounds seven ounces. Of these 118 grew, the first shoots appearing May 9. No blossoms. Ripened Sept. 14. Yield 191½ pounds, or three bushels and six quarts. Same quality as potatoes of the Rose class.



MAMMOTH PEARL.—FROM LIFE.—FIG. 559.

BELLE POTATO was sent to us by Isaac F. Tillinghast, of La Plume, Pa. Planted April 20. Four tubers, 78 eyes, weight 3¼ pounds, of which 73 grew. First sprouts appeared May 8, blossomed June 7, ripened August 20. Yield 68 pounds, or one bushel and six quarts. Though in flavor we could not distinguish this from Rose potatoes, it did not boil so mealy. The flesh is rather coarse.

JORDAN'S PROLIFIC.—Sent by J. Woodruff & Son of Ripon, Fond du Lac Co., Wis. One tuber, 19 eyes, weighing half a pound, of which 18 grew. First sprouts appeared May 8. Blossomed June 25, ripened August 27. Yield, one peck four quarts, or 20½ pounds. Quality of the best of the Rose class.

The yields, beginning with the greatest, are given in the following order: 1, Andrews' White Rose; 2, Mammoth Pearl; 3, White Elephant; 4, Pride of America; 5, Jordan's Prolific; 6, Rose Magnum Bonum; 7, English Magnum Bonum; 8, Belle.

REMARKS.—Rose Magnum Bonum is the most uniform in size and shape. White Elephant is the next most uniform in size and shape—Belle next. Jordan's Prolific and Mammoth Pearl were the least uniform in *shape*. Pride of America and Andrews' White Rose were least uniform in *size*. The largest in size were, first, White Elephant; second, Mammoth Pearl; third, Andrews's White Rose. The best keepers, judging at this date, are, first, Rose Magnum Bonum; second, Mammouth Pearl; third, White Elephant. The poorest keepers are Andrews' White Rose and Pri e of America.

Our illustrations of Mammoth Pearl, Belle, Rose MagnumBonum, and Andrews' White Rose are from medium-sized potatoes which seemed to be typical in shape, number and depth of eyes, etc. The other kinds of potatoes tested have already been illustrated in the RURAL NEW-YORKER. The Pride of America was most injured by grubs, Andrews' White Rose next. The Mammoth Pearl was the least injured by grubs, and next, the Rose Magnum Bonum.

Farm Economy.

THE BEST CROPS TO RAISE?

THE five-field system of rotation is general in this section, commencing with corn one year, and the second year oats, followed in the Fall by Winter wheat, Timothy seed being sown with the wheat in the Fall, clover in the Spring; fourth year, grass for pasture; fifth year, mow for hay, and aftermath used for pasture. Probably this is as good a selection of crops as can be grown in this latitude. I think where land is suitable for potatoes that they pay better than oats where a market is convenient and the necessary force is on hand to plant and cultivate them. They are a crop that will not admit of delay in cultivating, and the bug warfare must be decisive or the crop is lost. Flax may pay, but I have had no experience with it. I believe a better rotation would be six fields, letting the grass grow three years instead of two, the last crop being used as a fertilizer for the succeeding crop of corn, this being equal to a dressing of manure that would cost at least $10 per acre. To benefit the land it should be left to decay without mowing or pasturing, the shade being of as much benefit to the soil as the decaying grass. As a matter of profit, it will not pay to let grass fall on the ground with hay at $20 per ton. The whole matter is a question of dollars and cents. If the rent of the land is more than the cost of fertilizers, it will not pay to let the ground lie idle to reinvigorate itself for the coming crop. With high-priced labor to hire and manure to be bought, land being cheap, the fallow system is surely the cheaper.

I would suggest that 100 acres could be cropped economically in this way: Say two acres for buildings, gardeu, small lawn, etc.; two acres for road; five acres for timber; five acres for apple orchard; one acre for pears and cherries; one acre for peaches—leaving six 14-acre fields, making one for corn, one for oats and potatoes, one for wheat, and one for pasture where land is cheap (it may pay better to soil the stock where land sells high), one to mow and one for grass to fall on the ground as a fertilizer, excepting in years when hay is high. Where the manure is bought and the labor hired there is not much profit on a field of corn at ordinary prices, with corn 60 cents per bush., and an average crop not over 50 bushels per acre. Corn is now worth 75 cents per bushel for old; but the crop does not average 30 bushels. so that the extra cost per bushel equals the extra price. Everything on the farm ought to be well done to make farming pay.

One object in raising different crops is that less force can keep the work up. In the five-field system the first work in the Spring is to get the potatoes planted and the oats sown; next comes corn planting, which should be done by the time the potatoes are up ready to be "worked." Then the corn is ready to be "worked," and in working corn while young it saves hoeing to plow close, but not deep. A man running his plow or cultivator through the middle of the rows does not earn his board. By the time the potatoes are "finished up" or before, the grass is to be mown and taken care of. Then the wheat claims attention, and by the time it is cared for the oats are ripe, and if the potatoes are early varieties they are ready to be lifted and sent to market. Now the harvest is over, except the corn, apples, cabbage and roots of all kinds. If late cabbages are grown, they should have been set the last of June and have received their share of attention; and cabbage is a good crop for a young apple or other orchard. and may follow very early potatoes or early cabbage.

It is now time to prepare for sowing wheat, thrashing, etc. Where potatoes are raised, no preparation or manure is needed if the potatoes were properly handled. With September comes wheat sowing, corn cutting and apple picking. The latter part of October brings husking corn and finishing up the apples. In November it is proper to prepare for Winter, so that the farmer may have his vacation after nine months of labor that has demanded his attention all the time. In Winter, too, the manure is to be carted, stock to be looked after, and during the short days there can always be found something to do if the farmer wishes to work.

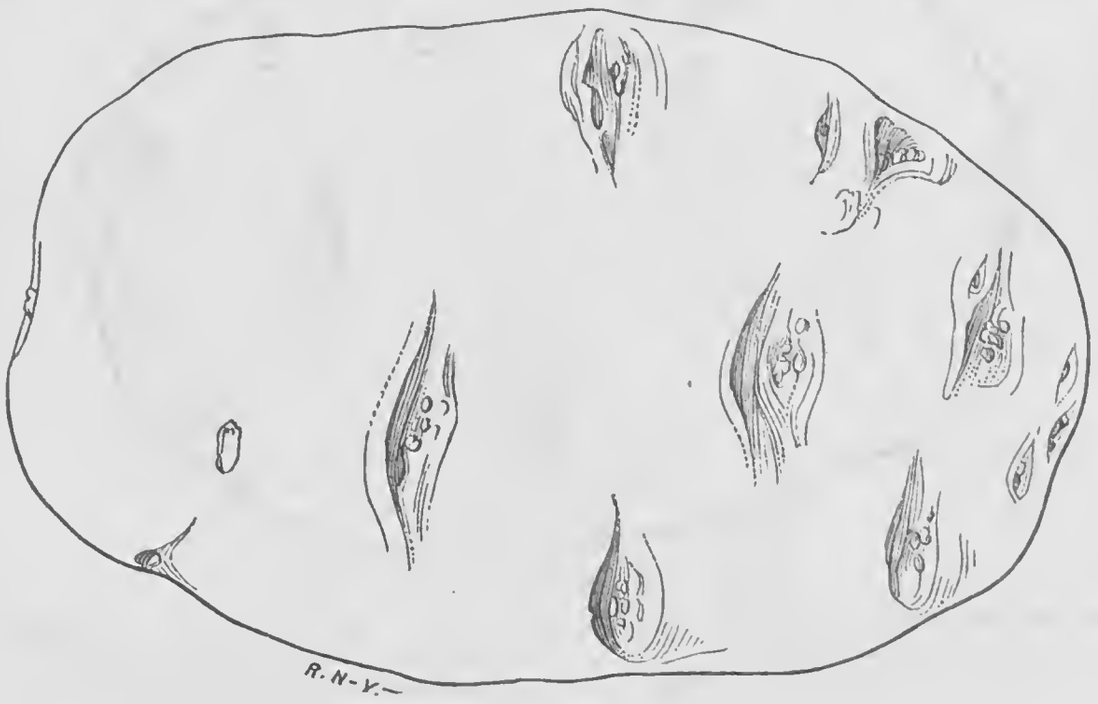
The second object in raising different crops is that if the corn fails the oats may be unusually good, as is the case this year. If the crop is all potatoes, and they rot, the prospect is bad. If half the potato field is under oats, there is something to feed the horses. The third object is that the variety of crops grow better than where corn follows corn and wheat follows wheat. This rule is thought to hold good with most crops, excepting onions.

Mercer Co., N. J. IRA J. BLACKWELL.

Horticultural.

MR. PARNELL'S remarks on hedges remind me that the Osage Orange is quite largely used as a hedge in portions of New Jersey, that I have lately visited, especially in Mercer County, where miles of it may be seen taking the place of the common farm fence. It seems to be very much liked, and will, when properly formed and well kept, turn almost anything, from a hare to an ox. I also noticed many new hedges from one to two years old; but their general management does not seem to be as well understood as it should be. Many of them manifestly received their first clipping when quite four feet high, and they are consequently too open at the bottom. This results from an impatient desire to get a hedge too soon at the expense of its usefulness. For manifest reasons the first year's growth should have been cut back to a foot, and the hedge carried up to the desired hight by degrees. Many of the hedges I saw I would cut down almost to the ground, and form anew. There is too much growth at the top and too little at the bottom. Not a few, however, were well formed, and presented such a delightful contrast to the common rail fence that I cannot help wishing that the usefulness of the Osage Orange as a farm hedge were better and more generally known. The RURAL could hardly do a better thing than give its readers a good practical article on the value and formation of Osage Orange hedges as a substitute for the common unsightly and costly farm fence, especially on the public highway.

I HAVE recently seen a notable instance of the value of thoroughly stirring the soil. On a former occasion I alluded to a new potato digger, and its great fault of bruising the potatoes badly. When this was discovered its use was suspended. It had the merit, however, of thoroughly stirring and pulverizing the soil. The lot was subsequently, at the end of the drought, sown to wheat, and I have seen it several times. On the strip where the pota-



BELLE POTATO.—FROM LIFE.—FIG. 560.

to digger had been used the wheat came up first, grew fastest, and can still be distinguished as far as the eye can see. From this, as it seems to me, a useful lesson may be drawn.

I WISH to say to the lady who presides over the Domestic Department of the RURAL, that I have recently, and for the first time, eaten of tomatoes stewed till somewhat dry, and then served with real cream. The combination was rich and delicious. I hope she will try it and tell her numerous family how she likes it. The cream, as I understood, was added as soon as the tomatoes were taken from the fire.

THE destruction of the cabbage crop by drought and the worms was something melancholy to contemplate; and equally melancholy is the almost universal indifference to the destruction of the worms so largely concerned in the loss of this important crop. I have walked over acres and acres of cabbage during the past month (November), or rather cabbage stumps, on which the worms were fairly piled on top of each other, and no effort whatever had been made for their destruction. It does seem surprising that these pests should be left to increase themselves a thousandfold another year, when a large proportion of them could be so easily destroyed. The stumps could be collected and thrown into the pig-pen or the chicken-yard; many of the worms would be destroyed in the act of doing this, and many more by the pigs and chickens. I induced a friend to throw a barrow load into the poultry yard and the worms were soon consumed; besides, the cabbage is an excellent green food for poultry of all kinds. He is no friend, either to himself or his neighbors, who does not do something to mitigate this terrible infliction. It is still not too late to do something in this way, for all the worms will not have changed to the chrysalis state while the weather continues mild.

THE Variegated-leafed Althæa deserves all the praise that Mr. Parnell bestows upon it. It has been in cultivation a good many years, but, notwithstanding, has not yet become common. It does not propagate kindly, and grows slowly, especially when young, and nurserymen do not generally bother themselves with plants that do not propagate and grow rapidly, for the reason, as many have told me, that it does not pay to do so. This plant is a very slow grower, and is consequently dwarf. In reply to the editor's query I will say that I have not had or seen a perfect flower on it in more than thirty years. There is no beauty in the flower, but there is much in the plant. To prevent disappointment, I will add that a variegated althæa is offered in some catalognes, the variegation, however, such as it is, being in the flower and not on the leaves. Further, my experience and observation coincide with the editor's remark, that the althæa is least enduring in a sandy soil. It is, however, such a fine and useful rub, and generally accommodating, that I ould plant it almost anywhere.

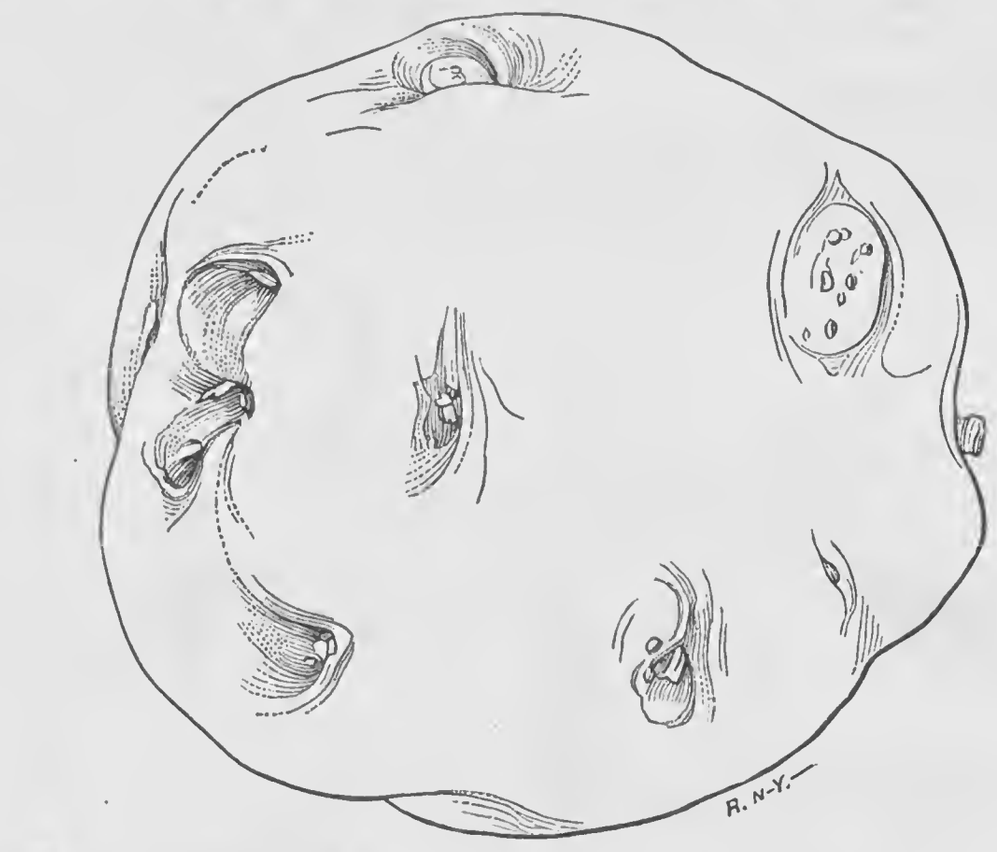
HORTICOLA.

NOTES AND COMMENTS.

A BED of Sweet Alyssum, Koniga maritima is just now (November 12) a perfect mass of bloom, and, as one can well imagine, the fragrance is almost overpowering. Of this charming species we have several very pretty and distinct varieties, viz., Koniga maritima variegata, the leaves of which are prettily and distinctly margined with white and single flowers; double white, with double white flowers, and the new double white with variegated leaves. These varieties are all desirable additions to our collection of greenhouse and bedding plants; but for the window garden, the old single-flowering variety will be found to be the best on account of the ease with which it can be increased, as well as its profuse flowering qualities.

IN reply to Mr. A. B. Allen, who asks for information concerning the Ott pear (see page 771), I would say that my Ott pears commenced to ripen about August 10, and by the 15th they were ripening so rapidly and droping so fast that I gathered them. They ripened so quickly, however, that I could not keep them longer than September 5. Mine have a very thin skin, and as for baking I do not think any one would use them on account of their small size. I do not hesitate to say, however, that Mr. Allen has not got the Ott, but some other sort under that name, as the time of ripening shows it to be distinct from the Ott. I do not think the location has any thing to do with the difference in the time of ripening, but some of the readers of the RURAL may have fruited the Ott and I trust that some of them will give us their experience with it. I will with pleasure send Mr. Allen some cions if he desires them.

THANKS to Mr. Mead for his excellent paper on the cultivation of the Persian Cyclamen. Without desiring to become critical, I desire to offer a few remarks on the Summer treatment of these beautiful plants. After their blooming season is over, I give them water freely until the first of May when I plant them out in a well prepared, shady border, placing the corms about half an inch beneath the surface of the ground. All the attention they require after this is to keep them clear of weeds. No watering is required. They can be taken up



MAGNUM BONUM—FROM LIFE—561.

and potted about the end of August. I give the pots good drainage and also cover the drainage with moss so as to prevent the soil from obstructing it. I also mix a little bone dust with the potting compost. I do not approve of keeping the cyclamen in pots during the Summer season, for the reason that in watering they are apt to be forgotten and sometimes they are given either too much or too little, the result being that the corm becomes injured, and as soon as this happens the plant may as well be thrown away.

LEON, page 773, has very truthfully described the pyracantha as an ornamental shrub for the lawn. I have had no experience with it as a hedge plant, but I have always had the impression that it was perfectly hardy, standing our severe Winters without sustaining any injury. I may also add that the finest ornamental pyracantha hedge that has come under my observation is at the nurseries of the Parsons & Sons Co., at Flushing, L. I. As I have always advised its use as a hedge plant, I should like to hear from Messrs. Parsons concerning its hardiness.

THE editor remarks (page 800) that his crop of celery is the best he ever raised—I wish I could say the same of mine; but, considering the severe drought we have experienced, I do not think that I can complain. I did not give my plants any water. They are rather small in size but of excellent quality.

FOR your explanation of the use of slate and shingles in mulching strawberries, Horticola, please accept many thanks.

CHARLES E. PARNELL.

The Truth and the Whole Truth.

No variety of fruit yet grown is perfect in every respect. Some kinds are very hardy and productive, while the fruit is only passable in quality; others give us fruit of the best flavor, while the quantity is insufficient, etc., etc. With many reports upon new fruits we get only their good qualities, their faults being kept carefully in the background.

As an instance, take most of the reports of the Crescent Strawberry. This variety is generally reported as a rampant grower, a profuse bearer, the fruit shipping well, etc., etc. The above conclusions I cordially indorse, but it is not all of the story. It is a pistillate, and must be fertilized with some other variety. This is not, however, a very serious objection. The great fault with this variety is its poor quality. I know of no other kind so poor in flavor. Still it is a "strawberry," and will probably sell for a few years at least, but I anticipate that it will finally be rejected by buyers. Already a few of our city dealers refuse it. People who have been complaining of the poor quality of the Wilson will hardly accept the Crescent as a substitute.

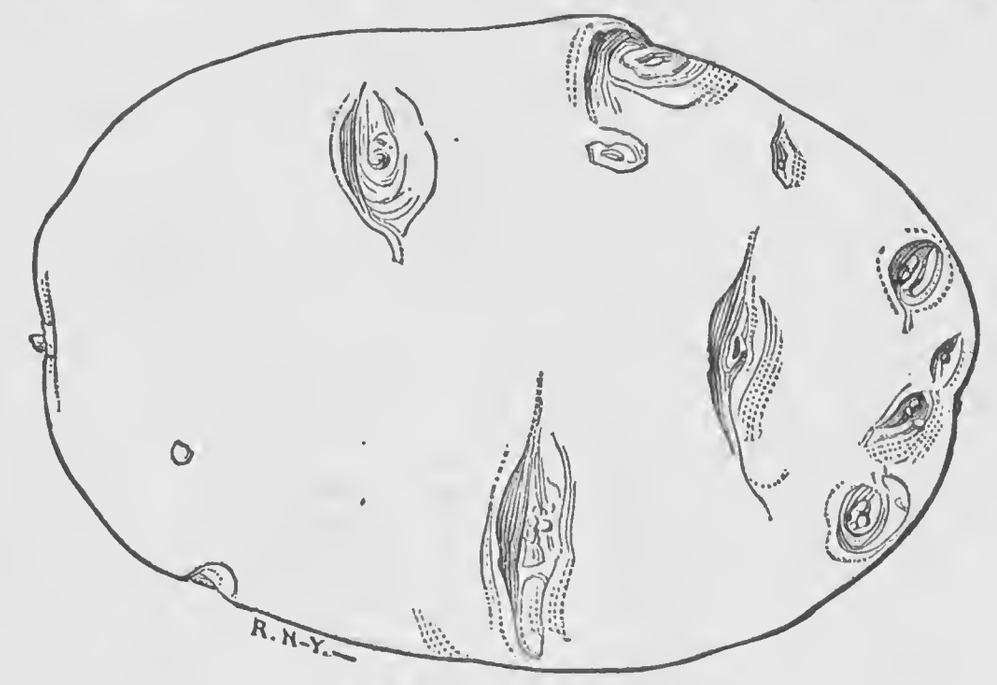
While we are describing fruits, it is best to give all the facts, then those persons thinking of purchasing can govern themselves accordingly. While no kind of fruit is in all respects perfect, there are particular faults that are insurmountable. For instance, a grape that drops from the stem, be it ever so desirable in other respects, will never do for a market grape. A grape that is subject to mildew (like the Iona on my grounds) is worthless. Several kinds of pears that are the most subject to blight should not be planted. I have a decided preference for varieties of fruit that are hardy and good bearers, if the fruit is of fair quality. Give us all the facts, so that of all evils we can choose the least.

NELSON RITTER.

Asparagus Culture.

The frequent recurrence of the asparagus question in the columns of the RURAL is evidence not only of the importance of the subject itself but of the practical usefulness of the journal and the attend-to-your-own-business habits of its readers. There is one phase of the subject which I do not remember to have seen discussed, viz. should we allow asparagus to bear seed? Does the law of "bear fruit and die" apply to it as to some other plants? Too much cutting is exhaustive and would ultimately kill the plant, hence we cease cutting and allow it to put forth its recuperative energies. It is held by some that even florescence is exhaustive and still more is seed-bearing. I can afford—for the sake of my bees—to let mine blossom, but I am not so sure as to allowing it to seed. There seems to be no law that I have observed governing the seed-bearing effort of the plant. Sometimes a very strong stem, and again a very weak one seeds. Will some of the RURAL family respond?

G. W. THOMPSON.



ANDREWS' WHITE—FROM LIFE—FIG. 562.

[Seed or fruit-bearing unquestionably exhausts the plant and weakens the root. If the flowers of asparagus could be removed without more tronble than their removal would be worth to the plant it would be desirable to do so. Such is not the case, however.—EDS.]

Watering Sweet Peas.

Leon's note on his neighbor's sweet peas expresses a donbt whether their luxuriant and lasting condition is due to deep planting of the seed or mainly to rich soil, watering and the suppression of seed pods. I have usually planted early and deep—four inches, which is deep enough in all conscience for my heavy soil—but I never knew what sweet peas were capable of, or saw the admirable and continuous display they can make, until last year, when, having some growing near a copiously watered oleander, they grew grander and grander until frost interfered. This dry season they collapsed until I irrigated by leading in the waste water out of a street rill. That soon restored them, and late in September they were glorions. Who can tell what the perennial peas require? They are still finer to the eye, but don't live long with me. W. G. W.

Tyrone, Pa.

The Vineyard.

MR. MARVIN'S GRAPES AT BOSTON.

I WOULD like to add a few words to Mr. Marvin's remarks, in the RURAL of November, about his new grapes exhibited at Boston at the late meeting of the American Pomological Society. I was much interested in these seedlings, and regard them as a decided advance in the way of improvement of our pure native American varieties. These grapes were exhibited with specimens of the foliage of each variety; and although the appearance and quality of some of the grapes might have led to a suspicion of foreign parentage, the foliage certainly indicated that they were of unmixed, native origin. The following notes were made at the time, of my impression of the different varieties as they appeared September 15, and I shall test these grapes with much interest as soon as they are offered for sale.

CENTENNIAL.—Large, long, pointed, medium, compact clusters; color, pink; berries small; seeds large; skin thin but tenacious; not quite ripe, but pure-flavored and promising to be quite good when fully matured.

CORPORAL.—Medium, rather loose cluster; berries of medium size, black; pulp, tender, pure-flavored and good; not foxy.

RUTLAND.—Very handsome, compact, medium-sized cluster; berries of medium size, black, rich, vinous and pure-flavored. Good. Foliage thick, tomentose, apparently perfectly healthy. A promising grape.

SHARON.—Of Southern Æstivalis type. Dark red or chestnut color. Appears to be quite early. Quality fair; with a peculiar aromatic flavor.

LAURA.—Northern Æstivalis type. Small, compact clusters, not shouldered. Peculiar, high-flavored, sweet, rich and good. Foliage large, thick. Apparently very healthy.

WATERTOWN.—Rather small cluster; white or light greenish-yellow; sprightly, pure-flavored and good. To my taste the best of the collection; skin quite thin but tenacious; and will probably bear carriage well. Leaf large, thick and healthy, somewhat resembling that of Hartford. A promising grape.

I think much credit is due Mr. Marvin for his experiments; and his success is certainly very gratifying in the way of improvement of the native American grapes. The foliage of all appeared strong and healthy, and I regard them all as decidedly better in character and flavor than the Concord. Successive seedlings, or careful crossing of these varieties with our best natives may be productive of the most important and valuable results.

Delaware, O. G. W. CAMPBELL.

Grape Notes, Etc.

The number of feminine names given to Miner's seedling grapes (p. 795) is an example of the general disposition to attribute female characteristics to the clinging and dependent vine. There is a fitness in this, which is so generally perceived that from the times when we first had Isabellas and Dianas to our latest days of Marthas, Ladies, Marys, Adelines, and Antoinettes, the majority of our grapes get their names out of the woman's list, and the number of new sorts is so great as to make it quite likely that the list will not prove long enough.

It is a pity that the Iona is refractory upon the Rural Grounds. In heavy clay soil and warm exposure here, by the Juniata, its quality and productiveness, year after year,

are all that Mr. Green described them to be on page 762. It is one of the very handsomest in form of bunch and color, and is an excellent keeper, retaining the vivacious sprightliness of its abundant juice well on till Christmas. It rotted badly one year. This year I used paper bags, and most of the bunches remain in them yet (Nov. 25) on trays indoors, their bloom and plumpness quite intact. I prune and lay the vines down in November, as with most other kinds. W. G. W.

A New Feature in our Native Grapes.

It has been thought doubtful if a raisin grape could be developed from any of our native classes, but judging from a seedling of V. Æstivalis origin (fruiting the first time this season), this object can be brought about. I have the size of berry and to all appearances the pulpiness necessary to attain this desired object. The pulp adheres to the skin, instead of to the seeds, as it should, and there is generally but one seed, the grape differing from all other native varieties in this particular, and it is of the right color. S. S. MARVIN.

Floricultural.

CASSIAS.

WE are all familiar with the little sensitive or partridge pea that grows so abundantly in dry and sandy lands in the Atlantic States, especially from New York southwards. It is an annual with bright yellow flowers, about a foot or more high, and, although a weed, very pretty in late Summer. There are other common species, as the small sensitive pea of the East and South and the Styptic-weed of the West, and handsomer and more important than either of these is the Wild Senna(C. Marilandica), a perennial plant common in the North. It is often grown as a garden plant, but in the face of Japanese and Plantain Lilies, Seibold's Sedum, larkspurs, evening primroses, perennial peas, golden columbines, and other flowers that are in season at the same time as it, it is hardly worth cultivating.

Among green-house or tender cassias are some highly decorative kinds, and none more so than C. corymbosa, from Brazil. This makes a large bush or shrub, which in September becomes a mass of bright yellow blossoms; indeed, in its season it is one of the most conspicuous plants in our garden. Plants one year old blossom freely. Propagate by seeds or cuttings of the young wood. Before sowing we steep the seeds in hot water. In May we set out our plants in the garden, where they soon take root and grow vigorously. They like rich soil and a warm, open, sunny place, and some good soakings of water in prolonged dry weather. About the end of September or early in October, rather than get them injured by frost, we lift them, cut them back a deal and pot them. We winter them in a greenhouse, but they would survive well enough in a tight, frost-proof cellar, providing they are never allowed to get dry. If, instead of planting them out in Summer, the pots containing them are plunged out-of-doors and lifted up and set back again once or twice during the Summer, to check the roots escaping from the bottom of the pots, they may be brought under cover before frost overtakes them, without being shortened back, and thus their flowering period may be prolonged and seeds ripened if required.

Cassias are of great economic value. The medicine known as senna leaves is obtained from some of the exotic species, and consists of the leaflets. In commerce they are distinguished by the name of the port or country from which they are exported, and the different kinds are readily known by the shape of their leaves. The Egyptian or Alexandrian senna is Cassia acutifolia, and the East Indian, C. elongata. These two are considered the best. Our own wild senna has similar medicinal properties.

Cassia Marilandica grows everywhere in the low grounds of the Rural Farm, and during its season of bloom is very showy among the wild flowers of July. From one of these our very accurate drawing was made.

Miscellaneous.

CATALOGUES, ETC.

THE KLEJ GRANGE.—The name represents a tract of land of about 5,000 acres in Worcester County, Md., within 10 hours, by rail, of New York. The plan of the colony originated with Rev. John Dooly, 134 Bowery, New York City, and he has interested a gentleman of means in it to such a degree that he has bought the tract, made some good improvements, and hopes by selling it cheaply to benefit many families. Persons in search of homes wishing to visit the Grange, can go by steamer at half rate. Address for information Rev. John Dooly, 134 Bowery, New York City.

THE COTTON GOODS TRADE OF THE WORLD.—This pamphlet of 382 pages consists of reports from Consuls of the United States on the trade in cotton yarns and twist and cotton manufactures in their several districts, with an introductory letter by the Secretary of State. It is valuable to those especially interested in cotton products for its statistical information.

PEDIGREES OF SHORT-HORN CATTLE owned by Richard Gibson, Ilderton, Ontario, Canada. These cattle were imported in November, and will be sold at Chicago next Spring.

PROGRAMME of 24th annual meeting of the

WILD SENNA—FROM LIFE—FIG. 563.

Missouri Horticultural Society, to be held December 20-22, 1881, at the Missouri Agricultural College, Columbia, Mo., S. M. Tracy, Secretary.

VICK'S (Rochester, N. Y.) FLORAL GUIDE for 1882. This is one of the handsomest Seed Catalogues ever published. It is profusely illustrated with fine wood cuts and two colored plates. Mr. Vick is early with his catalogue. We usually begin to receive them not until the New Year. All should send for it. The price (ten cents) is less than one-quarter of its cost.

REPORT OF THE UNITED STATES ENTOMOLOGIST to the Department of Agriculture for 1880. By J. Henry Comstock. Illustrated.

CATALOGUE OF POLLED ANGUS AND ABERDEEN CATTLE AND TROTTING HORSES. The property of F. B. Redfield, Batavia, N. Y.

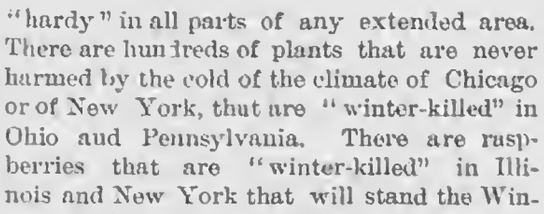
SPECIAL REPORT No. 38 Department of Agriculture upon condition of crops.

RURAL BRIEFLETS.

ALL farm journals unite in advising that the leaves be gathered to use in the pig-pen, cow-yard or stable or composted with other material. As an absorbent of liquid manure, such advise is no doubt good where there is not a plenty of other material which answers the same purpose already at hand. That writers should be of the opinion that it pays to collect leaves to be rotted into soil and at the same time reject muck as of little value seems inconsistent. It would probably require a good-sized load of leaves to make a good-sized shovelful of muck. But is the soil resulting from decayed leaves essentially the same as muck?.....

IT is a matter to be jubilant over that the agricultural press shows signs of strength and prosperity rarely seen in years agone. Some journals promise an enlargement for 1882 during the busy portions of the year at least—one has raised its price and all promise better papers than heretofore. We hope their prosperity may continue and that they will be enabled to fulfill their promises without sacrifice. For ourselves, we prefer not to make promises. Then if we should improve the RURAL, our readers will feel the more pleased; while, if we fail to do so, there will be no disappointment.....

OF all the words used in horticulture and agriculture the word "hardy" is the most misleading. The word is generally accepted as meaning that a given plant will endure the climate, soil and situation of a given section; whereas there is not one plant on the face of the earth that can be said in this sense to be "hardy" in all parts of any extended area. There are hundreds of plants that are never harmed by the cold of the climate of Chicago or of New York, that are "winter-killed" in Ohio and Pennsylvania. There are raspberries that are "winter-killed" in Illinois and New York that will stand the Winters of Canada. The injurious effects of the Summer upon certain plants, which are not apparent until the ensuing Spring, are often attributed to the cold of Winter. So also many plants which are injured or killed by the sharp changes of early Spring are supposed to have been affected by the Winter. Even upon restricted areas, as, for instance, the acre home grounds, it will often be found that in one part a plant is hardy; in another tender. We are first to ascertain whether a given plant can endure the cold of a given climate and then to ascertain whether it requires more or less sun; a sandy, clayey, dry or moist soil; shelter or exposure. And even when all this has been ascertained, exceptional seasons will sometimes reverse the conditions we had hoped to supply. Whenever a plant from an unsuitable soil or situation is restricted in its season of growth, that plant must in some way suffer. But as the damage is not apparent until it has passed through the trying seasons of Winter and Spring, the remote causes thereof are lost sight of while the severity of Winter is alone held accountable.....



DR. VOELCKER does not entirely agree in the statement that the best butter is made from slightly soured cream. As a matter of fact, he knew that good butter can be made from slightly soured cream; but nevertheless, he maintains that the best and finest-flavored butter is made from sweet cream. Indeed, the sweeter the cream the more delicate the flavor of the butter. He does not deny that butter made from slightly acid cream may keep better than butter made from perfectly sweet cream. Sweet cream should be consumed at once; and perhaps this is a difficult question. But if one has a local market for fresh butter, he says, don't let the cream get sour, but churn it fresh and sell the butter as fresh butter at a high price. In point of delicacy of flavor, there can be no doubt that it is better than butter made from sour cream.

AGAIN Dr. Voelcker remarks that in some milk which came from Holland he found, not boracic acid, but salicylic acid. This acid is largely used on the Continent as a preservative of milk, and he believes also of fish and meat intended to be kept fresh for weeks. It certainly does preserve milk, but at the same time it is used as a most powerful remedy in cases of acute rheumatism. A member of his family took it when suffering from that complaint, and it certainly had the effect of temporally alleviating rheumatic pains. Unfortunately salicylic acid is apt to take away the appetite, and to cause deafness and singing in the ears. Now as this acid has such an effect on full-grown human beings, it must have—though perhaps in minor degree—an injurious effect when used in very minute quantities on the constitutions of infants; and it is certainly very objectionable to introduce into milk a material which has such powerful medicinal properties as salicylic acid certainly has.

WE make a few extracts from a very interesting address delivered before the Elmira Farmers' Club by the Hon. H. H. Rockwell as reported in the Husbandman. He has passed several weeks during the past Summer in Utah and Iduho. One evil which he found everywhere existing, and to a much greater extent in the West than in the East, was the propensity of the farmers to run in debt, and put themselves in the power of usurers and capitalists, and the consequent tendency to the concentration of farms, whether for wheat or corn or cattle-raising, into larger and larger estates. . . . . Leaving aside the great wheat farms of the Grandins, Dalrymples and others, and taking the average farmer of the West with from eighty to three hundred and twenty acres of prairie land, he was of the opinion that, as compared with the "side-hill" farmers of his own section, the average of comfort and prosperity is with the latter. The Western farmer, with his rich land, raises larger crops and handles more money than his brother in the East, but he uses too much expensive machinery; he pays too high prices for labor and for building and fencing material. He is careless and wasteful. What he wastes of grain would make a fair crop for some of our farmers. His house is poor and barns poorer. He does not raise a variety of crops or of fruits. The country is monotonous, marked up with section roads like a checker board. The railroads fix the prices of his crops so as to leave him just enough for a living and to pay interest and taxes. . . . . The time for making fortunes by individuals with small capital in sheep and cattle raising has, he thinks, passed. Consolidated capital is monopolizing the business.

KEEPING BUTTER.—Brining butter is a very usual process, remarks the agricultural editor of the N. Y. World. In this plan rolls of butter in canvas wrappers are packed in jars or tubs containing brine. In the report of the Vermont Dairymen's Association Mr. X. A. Willard stated that he knew from actual experience that good butter put up after the following directions will keep in sound condition one year: Use for a package a tub somewhat tapering, with heavy staves and heads provided at both ends, so as to make a package that will not leak. In packing the tub is turned on the small end and a sack of cotton cloth is made to fit the tub, and into this the butter is packed until it reaches to within an inch of the groove for holding the upper head. A cloth is next laid upon the top of the butter and the edges of the sack brought over this and neatly pressed down; then the head is put in its place and the hoops driven home. The package is now turned upon the large end and the sack of butter drops down, leaving a space on the sides and top. Strong brine is then poured through a hole in the small end until it will float the butter. The hole is tightly corked, and the butter is pretty effectually excluded from the air. Where only a small quantity of butter is to be preserved, L. B. Arnold advises packing it in self-sealing fruit-jars. By this plan a little brine is put into the jar, which is then packed not quite full of granulated butter. Some bleached muslin is laid over the butter, then the little space above filled with salt, and finally enough strong brine, made from butter-salt, poured in to fill the can. Mr. Willard advises when packing roll butter in jars that the brine be made strong enough to bear an egg. To three gallons of this brine he suggests adding a quarter of a pound of white sugar and one tablespoonful of saltpeter. Boil the brine, and when it is cool strain carefully. Make the butter into rolls and wrap each roll separately in white muslin cloth. Pack the jar full, weight the butter down and submerge in brine.

MR. CHARLES A. GREEN (in the N. Y. Tribune) states that he has discovered that by the use of strong manilla bags grapes may be kept on the vines in splendid condition long after the season for grapes out-of-doors has gone by. Passing through his vines on October 31, three weeks after the frosts compelled him to gather the crop, and after the leaves had all fallen, he found a few clusters protected by bags that had been overlooked, beneath the leaves. The Brighton opened as fresh, bright and beautiful as he had ever seen it, with bloom undisturbed, the color dark rich maroon. He never ate such rar specimens of this fine grape, and yet the freezing had been severe. They were the nearest approach to a raisin he ever saw on vines. The juices near the skin had condensed and there was a temptation to chew the skin to secure the rare flavor. It would seem that by the use of such stout paper bags we may keep grapes on the vines several weeks later than otherwise would be possible, and that we may enjoy ripe specimens in this way, from varieties not usually fully matured in this latitude. . . . He says that raspberry plants will endure much more hardship in transit than strawberries. He has sent them by mail to England with perfect success. . . . . Mr. Green scattered a little straw over Lady Washington vines last Winter and they came out safe, while where not protected they were injured. We have already stated our Lady Washington (not protected) wa killed nearly to the ground. It has made a surprising growth the past season.

THE Michigan Farmer says that the "polled" breeds could be used with great advantage on the Western plains to put symmetry and quality into the present style of Texan or Western cattle. It would shorten up their horns, make them better feeders, and the meat would be far superior to what it is at present. It would also enable feeders to put their stock into market in ripe condition fully six months earlier. . . . . The gardeners of Kalamazoo, Mich., have adopted a very different method of raising celery from that of the Eastern gardeners. The Prairie Farmer says there is being more raised from the same land each year, as the gardeners become proficient in raising it, for it is a comparatively new industry for Kalamazoo. Instead of the rows being five or six feet apart, as the books advise, they are raising it successfully three feet apart, and instead of five and six inches apart in the rows, it is raised half that distance, and as close as one's fingers for the last or Winter crop, so double the crop is raised from the same land. . . . . The London Mark Lane Express comments approvingly on the growing feeling in America in favor of polled cattle. It suggests that good results might be obtained by breeding off the horns of native stock—by searing in calfhood, or similar means to start with. There are well-authenticated instances, it says, in which mutilations and injuries have been inherited. . . . . One of the best things in the world to give a horse after he has been driven is a quart of oat-meal stirred in a pail of water It refreshes and strengthens him, relieves his immediate thirst and prepares his stomach for more solid food. So says Joseph Harris, after 20 years' trial of it, as the N. Y. Herald reports.

A WHITE ELEPHANT POTATO.—We find the following in the Boonesville (Va.) Herald: Mr. Ed. J. Hayes planted one potato last Spring, weighing some two ounces, and dug from the fourteen hills planted, one eye in each hill, thirty-five pounds and two ounces. He showed us twelve potatoes of the crop which weighed eleven pounds and a-half. The variety of potato is called the "White Elephaut," and was sent him by the editors of the RURAL NEW-YORKER. We have heard of large yields before, but this should surely take the prize. We did not learn the excellence of this variety, but the yield was certainly enormous. . . . . The farmer that "ran rapidly through his property" wore a red shirt and had his brindle bull behind him. . . . . Said the lecturer: "The roads up these mountains are too steep and rocky for even a donkey to climb; therefore I did not attempt the ascent." . . . . . A Massachusetts farmer who has cultivated an acre of onions this year, reckons that he has crawled twenty-two miles on his hands and knees weeding them. A kneesy way to get a living, but weed rather not adopt it.—Boston Transcript. . . . . Says an exchange: "So much space is to-day given to editorial matter that a large amount of interesting reading is crowded out." The editor is frank, at all events, and should be honored accordingly. . . . . Old Pete's wisest remark: "Ef de descendante ob de rooster what crowed ot Peter was to make a noise ebery time a lie is told dar would be sich a noise in de world dat you couldn't heah de hens cackle. . . . . The man who can see sermons in running brooks is most apt to go after them on Sundays when trout are biting.

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

POTEAU, Scott Co., Dec. 3.—We are being blessed with a very mild Winter here thus far. Cattle are in good condition and will require very little feed this Winter. Hogs are so poor that all that are not fed will die. There is generally a mast here every year which keeps hogs in fine condition all Winter, but this year there is none. Prices are about as follows: Corn, $1 per bushel, wheat, $2; oats, 60c: flonr, $3.50 per cwt.; pork, 6 to 8c; beef, 3½ to 4c; cotton, 10½c. H. C. B.

Canada.

QUEBEC, P. Q., Dec. 9.—I was much pleased with the dianthus and Chinese pinks, and had some very fine varieties. I expect the carnations to do well next Summer. I regret that the White Elephant Potato did not do well. The bugs were too many for it. My whole crop of potatoes was a total failure. W. M. M.

Dakota.

SWAN LAKE, Turner Co., Dec. 5.—The Washington Oats rusted and lodged; did not do as well as the White Belgian in the same field. The flower seeds I gave away. The asparagus did splendidly. The Rural Branching Sorghum made a most astonishing growth In locations where fodder is an object it must be a most desirable acquisition, but native grasses fill the bill here. H. L.

Illinois.

BAILEYVILLE, Ogle Co., Dec. 5.—The drought ended here about the 10th of September; since then wet weather has prevailed most of the time; pleasant now, and some are plowing. Roads are muddy. Corn husking began about the middle of October and is nearly finished; the yield varies greatly, but is below an average, though better than appearances indicated during the drought. Most of the corn that was planted early and well cultivated produced well, the late and weedy was light both in yield and quality—a lesson worth remembering. Early potatoes also did better than the late ones. My Beauty of Hebron potatoes did well—better than the Early Rose; my Peachblows (late) were small and scarce. Some late potatoes failed entirely in this section. My White Elephant Potato was cut into 16 pieces, with one eye each, and planted carefully May 13; yield fair of medium-sized tubers, but not so great as some of your correspondents have reported; will plant them next season, as I have enough seed now to test them fairly. Fall seeding begun the middle of September and lasted till in October. A large acreage of rye was sown, but only a small amount of Winter wheat. These crops have a very promising appearance now. Pasturage has been very good this Fall since the rains set in, and farm animals are entering Winter in fine condition. I have heard of no serious complaints of disease among stock this Fall, except that a few cattle have died, after being turned into the corn-stalk fields, from eating too much corn and husks. Thrashing has been prolonged on account of the wet weather, and some damage has resulted to grain in stack, but it is about all thrashed now. The Winter wheat nearly all failed and Spring wheat was light; rye a fair yield but small acreage; barley an average yield but discolored; oats varied greatly, but were mostly light; some fields were entirely destroyed by Army-worms. Business has been, and is yet, brisk; prices fair; wages remunerative. Success to the good RURAL NEW-YORKER. Allow me thus early to wish you and your hosts of readers a Merry Christmas and Happy New Year. W. B. D.

SPRINGFIELD, Sangamon Co., Dec. 5.—The seeds I received from the RURAL NEW-YORKER last Spring came in good order, and all grew nicely, but owing to the drought they did not do well except the asparagus, which did very finely and made good plants. The White Elephant and Rural Branching Sorghum did poorly, but I will give them another trial next season. I prize the RURAL NEW-YORKER very highly. W. H. L.

Indiana.

LEESBURG, Kosciusko Co., Dec. 5.—My White Elephant Potato I cut into seven pieces one eye to the piece, planted in good, sandy soil in May and dug in September half a bushel of very nice tubers. My Washington Oats did well; so did the pinks. The sorghum did all that was claimed for it; plenty of seeds got ripe. T. J. W.

Iowa.

STANWOOD, Cedar Co., Dec. 5.—The method that seems to me best for the West at present is to feed out hay under cover to unconfined cattle, allowing the manure to lie in the shed where it is made until the following Fall; then spread it on clover sod or stubble ground and plow it under as soon after spreading as possible. Land thus treated is to be planted in corn the next Spring. I see that some Eastern farmers do not plow their sod in the Fall, but wait till Spring. My method is to sow only clover; cut it one season for hay—sometimes two cuttings, generally but one—then plow in the Fall. This plan gives me winter forage for my cattle and is of great benefit to the ground. My rotation is three or four crops of corn; a crop of oats; clover one crop, and three of corn again; manure on clover sod before planting. W. T. R.

Kansas.

EDGERTON, Johnson Co., Dec. 5.—This has been a very poor crop year in this part of Kansas; corn not more than half a crop; wheat not half a crop; oats good; early potatoes fair; late ones, not half a crop. I planted my White Elephant on April 25, cut to 13 eyes, one eye to the hill. Only nine came up; they grew finely but the drought dried the vines up in August. I dug them in September and got 30 good-sized tubers and several small ones. The Washington Oats I planted with great care on good land I put them a good way from the house lest the chickens should destroy them, and they came up nicely but the rabbits eat them off as fast as they grew and only two heads ripened. The asparagus I planted in April; it came up and grew well; there are two long rows of it nearly two feet high. I can see no difference as yet between the two kinds. The pinks grew well; but they were put on low ground and there came a heavy rain soon after they came up which washed a layer of dirt on them two inches deep; I saved two which were very double and beautiful. The Rural Branching Sorghum I planted in May; it grew about six feet high branching wonderfully; but it never headed out. A year ago last Spring, I got three pounds of Beauty of Hebron potatoes for which I paid $1. From these three pounds, cut to one eye, I raised a little more than six bushels of as nice tubers as I ever saw. Wheat is worth $1.20 per bushel; oats, 40c; corn, 57c; butter, 25; eggs, 20c; potatoes, $1; apples, $1. J. C. B.

Minnesota.

MANSFIELD, Freeborn Co., Dec. 5.—I planted the White Elephant Potato May 10, on new land. It was cut to seven eyes and all did well. I dug them on October 15, and got 50 pounds of good sized tubers; some of them weighed 2½ pounds apiece. H. T.

New York.

WESTHAMPTON, Suffolk Co., Dec. 5.—The asparagus grew finely. Of the Rural Branching Sorghum there was a large growth of stalks, but no seed. A hard frost on the night of October 5 killed it; it was just beginning to blossom. I do not like it, because, first, one has to wait too long for the ground to get warm enough for the seed to come up; secondly, one has to plant more seed than is needed, so that it has to be thinned to one stalk in a place; third, it takes too much work to keep the weeds out before the plants get started, as they start very slowly. I have tried every kind of corn I could get, and I believe the chicken or pop corn—some call it rice corn—is the best for fodder. The stalks are tall and small, and have more and larger leaves than any other corn that I have tried. I believe fodder corn is best for feed or ensilage when it has the most sugar in it. I think it is put in the silo too soon, if it will keep as well if stored when nearer maturity, as there would be more sugar in the stalk. My calves would eat the pop-corn fodder better than the sorghum. People I have advised to try the pop corn this season say it is the best they ever saw for fodder. When the sorghum is in blossom the stalk gets hard and flinty. I think that I should plant the rows three feet apart and from a foot to a foot-and-a-half in the rows, eight to twelve kernels in the hill, and use plenty of manure, and some in the hill or drill. Try it. N. C. J.

Pennsylvania.

RAMY, Clearfield Co., Dec. 6.—My luck with the RURAL seeds is not very flattering in comparison with the results reported from other places; but I would not take the price of the RURAL to-day for my White Elephant Potatoes and asparagus. The potato I received weighed 1⅛ ounce and had nine eyes, which I planted in three hills about the middle of May. Eight pieces grew and, between bugs, frost and drought, they had a hard time of it; but by picking bugs, covering the plant against frost and watering them against drought, I had six pounds of tubers—eight large and twelve small ones. The asparagus has done well; I believe every seed grew and made a growth of a foot. The sorghum grew about four feet, when the drought set in and water got scarce and we let it go in order to have water for more valuable crops; it dried up where it stood. The Washington Oats grew 4½ feet, smutted badly, and when in the milk the blue birds went for them and took every grain. C. C. B.

Virginia.

DISPUTANTA, Prince George Co., Dec. 4.—I am so well pleased with the RURAL that I expect to renew annually as long as I can raise $2. We have had short crops in this section; peanuts about half a crop; cotton, two-thirds; corn, three-fourths of an average crop. We have not had rain enough yet to start the country mills. Wheat and Winter oats are looking well. Quite warm for the season. Many good wishes for the continued prosperity of the RURAL. G. W. P.

Wisconsin.

SPAFFORD, Lafayette Co., Dec. 4.—The season with us has been a favorable one compared with the experience of many others throughout the country. Our Spring was late, the snow lying on the ground late in April, but it left under the influences of mild weather and warm suns. Our last frost was on May 3 and the first frost on October 5. Corn a fair crop, except on low, flat lands, where, on account of frequent rains, it could not be worked. Oats an average yield. Very little wheat or barley was sown, as the chinch bug is very destructive to them. Prices have been very good; live hogs have sold as high as $6.30 to $6.40 per 100 lbs.; oats, 40c. per bushel; butter, 30c. to 44½c. per lb. The Rural seeds have done very fairly. The White Elephant Potato I cut into 12 pieces with an eye in each, and planted in 12 hills; 11 grew and yielded an even half bushel of tubers. We had a dry and hot spell that ripened them off prematurely or I think there would have been a larger crop. I used no manure and gave them two hoeings, just to keep the weeds down. The Rural Branching Sorghum I planted the last day of May, putting four or five seeds in a hill; they came up readily, but only one in a hill, except that in two hills there were two plants, and there were from five to 10 or 12 stalks to a hill. No manure was used, except a handful of ashes thrown around each hill. I planted one row on very poor ground, another on better; that on the poor ground was from five to six feet high; that on good ground, eight feet high. I cut two hills near the ground; one put out 19, the other 20 sprouts. I was experimenting with it. The Washington Oats grew well; no smut. The flower seeds I divided into four parcels and gave to as many lady friends, who are well pleased with them. The asparagus seeds have done well, many of the plants having put up a second set of sprouts. I am well satisfied with the seeds, and also with the paper. W. S.

The Queries.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

ACTION OF A SIPHON, ETC.

F. L. L., Smithfield, Va., asks, 1, what is the motive power in a siphon; will it draw water from a well in which the water varies from eight to twelve feet from the top.

ANS.—1. The pressure of the atmosphere, which amounts to about 15 pounds to the square inch at the level of the sea, when water boils at 212 degrees. Under such conditions the atmospheric pressure is capable of sustaining a column of water 33.8 feet high. The siphon acts on the principle that the flow will be in the direction of the leg which contains the greatest vertical hight of liquid. It will act only when the bend at the top is not higher above the level of the water in the reservoir than the column of liquid which the atmospheric pressure at the locality is capable of sustaining. For water this could be only a trifle over 33 feet at the sea level, and less than 20 feet at a hight of 15,700 feet, for the higher one goes the less is the pressure of the superincumbent atmosphere. In practice the outer or discharge leg is usually longer than the one immersed in the liquid; but the only requirement is that the discharging orifice shall be lower than the level of the liquid. The air in the siphon must be exhausted before it operates so as to allow the pressure of the atmosphere on the surface of the reservoir to act as a motive power in raising the water into the siphon from which the counter-balancing atmospheric pressure has thus been removed. For this purpose it is convenient to have a pump attached to the outer leg of the siphon, the lower orifice of that leg being closed while the action of the pump is producing exhaustion.

THE PIOSCOPE.

M., Polo, Ill., referring to the description and cut of the Pioscope milk tester lately published in the RURAL, supposes that a "close-fitting cap covers the central cavity like a ball and socket, as it were," and that when the milk is put in the cavity the ball presses out all but a thin film, so that the more milk left in the cavity, the lighter-colored will the black vulcanite appear through it; and he objects that if the "ball" is not made uniformly close-fitting, through bad material or workmanship, the film of milk will be either

thick or thin to show the proper quality of the milk tested. He also objects that it would require very keen eyesight to distinguish the shades indicative of different grades.

ANS.—The description given of the Pioscope should be sufficient to prevent any such mistake regarding a ball. The vulcanite plate has a shallow cell about one-fortieth of an inch in depth. The glass cover laid over this presses out all the milk but the thin film that lies under it in this shallow cell, and the black substance of the vulcanite, of course, shows through the milk in proportion to its density or depth of color and richness in cream. There is no difficulty about the shades of color. Any eye that can distinguish the color of a lemon from that of an orange can distinguish the shades of color in the milk. The instrument is very cheap, and, so far as the writer has experimented with it, it is as accurate a test of the quality of milk as can well be devised.

SMUT IN THE WASHINGTON OATS.

R. C., Ontario, Canada, asks whether the large amount of smut in the Washington Oats was due to faulty seed; and how to avoid it in the next oat crop raised from the seed saved from the RURAL'S Free Seed Distribution.

ANS.—Close breeding, in plants and animals alike, tends to produce constitutional weakness and an aptness to become affected by diseases of various kinds. It is made worse by high feeding—and manuring is feeding. These oats have been got by selection of seed, which is close breeding, and have doubtless been well manured, which is high feeding. These are the causes of the tendency to smut in them. It is the same with corn, wheat, potatoes, and other plants which gradually weaken and become diseased, and fail in course of time. To remedy it we would steep the seed in a solution of sulphate of copper, four ounces to the gallon of water and use mineral fertilizers only. Lime would be advisable also. This would destroy the smut spores and tend to strengthen the constitution of the plant.

ROUP IN POULTRY.

A Subscriber, Maspeth, N. Y., has some chickens thus affected:—a corner of one of the eyes of each and the roof of the mouth are filled with hard, yellow matter; the eye is closed with scales of the "stuff" which hold the lids together, while a watery substance runs from them. The fowls sit still, moving only when driven.

ANS.—This is a case of roup or malignant catarrh. The cause may be cold or diseased blood from want of ventilation or other insanitary causes. The cure is to wash the eyes with warm water in which a small pinch of sulphate of zinc is dissolved. Do this by injecting the wash with a small syringe. Also wash the mouth and thoroughly cleanse it with the same solution. Then drop a pinch of chlorate of potash down the throat and give the fowls some warm, soft food, bread and milk or corn-meal mush, for a few days. Keep the house perfectly clean and fumigate it with burned sulphur.

Miscellaneous.

J. W. F., Daretown, N. J., says: "What are your prices for Perfection Golden Heartwell Celery and Challenger Lima Bean?"

ANS.—The above is an instance of many similar applications which come to the RURAL NEW-YORKER. The Perfection Heartwell Celery and Challenger Lima Bean are not yet for sale. If they prove superior to other kinds of celery and Lima beans they will, of course, be offered by seedsmen. But the RURAL never sells seeds or plants under any circumstances whatever. We are obliged to make this rule imperative. If we were to *sell* seeds and plants, we should no longer hope to command the confidence of our readers in our professed disinterestedness in the RURAL'S Free Seed Distribution.

O. H., Golden City, Mo., asks what strawberries would be likely to do best there; 2, where can the two cherries, Montmorency Ordinaire and Montmorency Large-fruited, spoken of by Mr. W. C. Barry in the Fair Number, be obtained; 3, what is a good, cheap early potato; 4, the best early field corn.

ANS. 1. It would be mere guesswork for us to give a list of strawberries that would thrive in a given locality. The only way is to procure the best kinds in small lots and *test them.* 2. Of Ellwanger & Barry, Rochester, N. Y., we presume. 3. Beauty of Hebron, Early Rose, Early Ohio, Early Vermont. 4. The eight-rowed yellow flint.

G. W., Ithaca, N. Y., asks how many quarts of raspberries are required to make a pound of dried ones.

ANS.—That depends very much on the condition of the fruit and the manner of drying them. Of Black Caps, if cured in an improved, quick-drying evaporator, the proportion is as follows:—Davidson's Thornless and Mammoth Cluster three-and-a-half quarts; Doolittle and Gregg, three quarts, if picked daily as soon as they turn black. If over-ripe, from three-and-a-half to four quarts will be needed. If the fruit is sun-dried or dried slowly by artificial heat, the juices are all evaporated, and from a pint to a quart more at least will be needed.

A. C. H., Roanoke, Ind., would like to know, 1, where and by whom the Davis Vertical-feed Sewing Machine is for sale; 2, where he can get the Early Ohio Potato for seed; 3, would salt sown next Spring on Winter wheat destroy or drive away the Hessian fly; 4, when and how often must sulphur be dusted on grape-vines to prevent mildew or grape-rot; he has 500 grape-vines but has not had 100 pounds of whole bunches in two years.

ANS.—1. Of the Davis Sewing Machine Co., Watertown, N. Y. 2. Of any seedsman, 3. No. 4. As often as the mildew appears. Other questions will be answered in due time.

J. W. C., Chester, S. C., wishing to test good varieties of wheat in that section, asks us to send small quantities of Clawson, Surprise and other good sorts.

ANS.—Clawson was distributed *free* by the RURAL years ago. Surprise and Fultzo-Clawson will be distributed in our present seed distribution which will be begun in a few weeks. We sell no seeds or plants of any kind—have never sold them and do not ever propose to. The object of the RURAL Free Seed Distributions is to introduce valuable new varieties without cost to the farmer or gardener.

F. M. B., address mislaid, asks whether D. F. Beatty, of Washington, N. J., will fill orders sent to him for pianos; our inquirer sent one in before the late fire at Beatty's factory and the instrument has not yet been forwarded.

ANS.—We referred the matter to Mr. Beatty and he assures us that since the fire he has been exerting himself as hard as possible to "catch up" with orders, and that he will fill every one so soon as he can.

C. W., Shell P. O., W. Va., asks the lowest cash price for the Czar Revolver advertised in our Fair Number, and says he understands we guarantee the weapon to be equal to any made.

ANS.—The RURAL NEW-YORKER sells nothing whatever except papers. We do not guarantee anything.

W. H. M., Beaver Crossing, Neb., asks where can "listing" plows be obtained.

ANS.—B. D. Buford & Co., Rock Island, Ill.

G. C. DeB., Penn, Yan, N. Y., asks for the address of A. W. Livingston, the originator of Livingston's Perfection Tomato.

ANS.—No. 705 Tenth Street, Des Moines, Iowa.

M. V. C., Gibbon, Neb., asks whether there is any periodical treating of veterinary practice.

ANS.—The Veterinary Review, a monthly, price $2 a year, published and edited by Prof. A. F. Liautard, M. D. V. S., 141 West 54th Street, New York, is the only thing of the sort we know of.

E. B. S., Warren, Pa.—Skeletonized leaves are usually made by dissolving the succulent portions by a hot solution of caustic soda and then whitening the skeleton of fibers remaining by bleaching powder—chloride of lime. "Skeletons" may also be prepared by steeping vegetable matter in a mixture of chlorate of potash and dilute nitric acid for several days.

J. M. Allen, Kansas, asks, in the RURAL of Dec. 3, who has Oxfordshire Down sheep for sale, and E. W. M., Verden, Ill., hereby informs him that Cooper, Maddox & Co., Reading, Ohio, have sheep of this breed for sale. Our friend bought a pair last Fall, and believes they are the "coming sheep" for profit both for wool and mutton.

E. C. H., Hobart, Ind., asks whether the "so-called hay loaders are serviceable devices, and if so, which would be of use to farmers.

ANS.—Yes; hay loaders are certainly useful to farmers. Foust's hay loader, made by the Keystone Manufacturing Company, Sterling, Ill., is a practical device highly recommended.

H. R. R., Atlantic, Iowa, asks whether the Right Speedy Corn Sheller is what it claims to be.

ANS.—It is a good cheap sheller, made by a reliable concern.

Mrs. L. M. Hoffman, Madisonville, Ohio, asks where she can obtain Oxford Down sheep.

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, Dec. 17, 1881.

M. W. F.—J. L. B.—S. P. Jr.—J. C. B.—H. A. M.—E. B.—C. V. R.—W. B. D.—J. W. C.—W. J. R.—L. W. H.—W. S.—O. H.—H. T. (Mansfield, Minn.) No, thank you—we have tried it.—S. B. P.—S. H. M.—W. L. D.—T. H. H.—J. W. F.—W. R.—J. A. S.—A. R.—A. C.—May Maple, thanks always.—W. B. N.—M. B. McL.—S. B. P.—D. R.—C. A. G.—D. E. S.—G. G. B.—F. G. T.—W. Z. H.—G. W. C.—M. E E.—T. McC.—D. J.—E. J. G.—E. M.—C. E. W.—I. M. C.—F. J—A. D. C.—M. C.—F. L. Jr.—J. E. B.—M. S. F.—J. J. B.—H. J. C.—J. E. A.—F. G. M.—B. W. C. E. L. D.—I. J. D.—W. C. L.—O. F. C.—O. W. M.—W. S. D.

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The Rural New-Yorker has no other than the true interests of agriculture to subserve. It has neither seeds nor plants nor books nor anything whatever to sell. It is conducted purely in the interests of Agriculture and Horticulture and Stock-Keeping. Its tests of plants, seeds, manures, implements, are made regardless of individual interests or those of advertising patrons. It holds the interests of LAND CULTURE as above all others, and its aim is to benefit all who occupy themselves in the culture of land and its attendant industries, either for pleasure, profit or support.

No matter where you live, you cannot afford to be without the Rural New-Yorker. It is the progressive, aggressive, alert, original, conscientious rural journal of the age. Thousands of testimonials to this effect. Our **Everywhere Reports** are invaluable to the Farmer and Horticulturist. They have proven of great value to them in determining the best time to **Buy** or **Sell.** Our market reports are corrected by a special reporter up to the time of going to press. Our agricultural and general news embraces everything of interest to intelligent readers. Correspondents everywhere. Try it—*Try it*—TRY IT—for one year! It will cost you but $2.00. It may save you hundreds. Try it as a measure of Economy.

The objects of the Experiment Farm of the Rural New-Yorker are to test all kinds of new seeds and to present the results to our readers; to produce new varieties of grain by cross-breeding; to test new farm implements and methods of culture, with a view to producing the greatest yields at the smallest cost; to disseminate among its readers seeds of varieties which, from our own tests, have proven of unusual worth without cost to them, and thus advance the agricultural interests of the whole country. The Rural New-Yorker has no personal interests to subserve.

The most vigorous and able combination of Practical Writers ever collected together in the columns of any Agricultural Journal. Here is a partial list for 1881.

Dr. J. B. Lawes, Rothamsted, England.	Charles Shinn, Cal.
Prof. J. P. Sheldon, Hants. & Wilts. Agl. Col., "	W. C. L. Drew, "
William Robinson, F. R. S., Editor and Founder of the London Garden, "	J. B. Armstrong, "
Prof. S. W. Johnson, Sheffield Scientific School, Yale College, Conn.	Luther Burbank, "
Gen. W. H. Noble, "	Prof. J. L. Budd, Iowa,
Prof. F. H. Storer, Bussey Institute, Mass.	Prof. G. C. Caldwell, Cornell University, N. Y.
Levi Stockbridge, Pres. Agr'l Col., "	Prof. I. P. Roberts, Farm Manager " "
Hon. Marshall P. Wilder, Boston, "	Prof. L. B. Arnold, "
William Falconer, Cambridge University, "	W. C. Barry, "
Richard Goodman, Pres. J. C. C., "	Charles Downing, "
Richard Goodman, Jr., "	Samuel B. Parsons, "
Prof. W. J. Beal, Agricultural College, Mich.	Samuel Parsons, Jr., "
Prest. T. T. Lyon, Pom. Society, "	A. B. Allen, "
Sec'y C. A. Garfield, "	Prof. E. W. Stewart, "
S. B. Peck, "	Col. F. D. Curtis, "
C. E. Thorne, Farm Manager State Ag'l Col., Ohio.	Peter B. Mead, "
Dr. John A. Warder, "	L. S. Hardin, "
W. I. Chamberlain, "	Jonathan Talcott, "
Waldo F. Brown, "	Lorenzo Rouse, "
B. F. Johnson, Illinois.	Nelson Ritter, "
Prof. G. E. Morrow, State Ag'l Col., "	L. A. Roberts, "
Prof. Cyrus Thomas, "	D. S. Marvin, "
Prof. G. W. French, "	G. D. Hopkins, Vet. Surgeon, N. Y. City, "
Prof. K. M. Shelton, Agricultural College, Kan.	D. E. Salmon, D. V. M., N. C.
Prof. Elbridge Gale " " "	M. B. Prince, "
Prof. Thomas Meehan, Author of Native Flowers and Ferns, Pa.	Mrs. Annie L. Jack, Can.
Mrs. Mary Wager-Fisher, "	J. F. Forfar, "
W. G. Waring, Sr., "	Richard Gibson, "
Henry Stewart, M. D., N. J.	Prof. S. M. Tracy, Mo.
E. Williams, "	Adeline E. Story, "
Col. M. C. Weld, "	H. W. Ravenel, S. C.
James Taplin, "	Hugh L. Wysor, Va.
Ex-Gov. Robert W. Furnas, Neb.	Prof. W. C. Bellamy, Ala.
S. Rufus Mason, "	M. B. Hillyard, "
Prof. C. C. Georgeson, Agr'l College, Texas.	Prof. A. E. Blount, Farm Manager Agr'l Col., Col.
	T. H. Hoskins, M. D., Vt.
	Prof. F. A. Gulley, Farm Manager Agr'l Col., Miss.

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The insect enemies which infest our field crops, which seem to be rapidly increasing, and entomology in general are treated in our columns by the ablest specialists in the country. To aid in

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is always our earnest endeavor. Such efforts as these have brought the Rural New-Yorker to the position it now occupies. The Price of the **Rural New-Yorker is $2.00 a Year,** payable *invariably in advance.* We have no club or second price. It is alike to all.

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SATURDAY, DEC. 24, 1881.

A merry, merry Christmas to all!

ANNOUNCEMENTS.

THE Bonanza Farm series of articles and illustrations will be begun in our first issue of January, beginning with the portrait of Mr. Oliver Dalrymple and a sketch of his life. The portrait will be printed upon heavy supercalendered paper as a supplement. The second of the series of illustrations will be Breaking; the third Backsetting; the fourth, Seeding; the fifth, Harrowing; the sixth, Harvesting, and the last Thrashing. Mr. Dalryn.ple informed our special correspondents that this is the first time he has ever given comprehensive notes of his methods of farming to the public, and that all other writings upon the subject have been from desultory information, and most of it wide of the truth.

WE take much pleasure in announcing to our readers that the distinguished American horticulturist, Dr. John A. Warder, is preparing a series of articles for the RURAL NEW-YORKER on Forestry. The following subjects will be specially treated:

Water-Supply of a Country—How affected by Forests; Results of Clearing. Torrents; Overflows.

Where to Plant—Preparation of the Land.

Planting—What and How; Massing; Mingling; Grouping.

Cultivation—Protection—Fencing—Fires.

After-Treatment—Thinning, &c.

Felling—Harvesting.

Systems of Management.

Secondary Products—Bark, Pitch, etc.

Conservation or Planting Anew.

Natural Reproduction.

Coppice Wood—Management; Time for Cutting.

Cheap and Hardy Trees—Pioneers for the Prairies.

Soft-Woods—Poplars, Willows, etc.

Catalpas.

Hard-Woods—Oaks, Hickories, Walnuts.

Maples, Ash, Cherry, Elms, Buttonwood, Beeches, Birches, Iron-woods, Alders, Honey-Locust, Ailanthus, Black-Locust, Chestnuts, Magnolias, Tulip-Tree, Sassafras, Sumac, Thorns, Plums, Crabs, Viburnums, Mountain Ash, etc., etc.

Miscellaneous and Novelties from Abroad.

Conifers and Evergreens.

Our Pines; Spruces; Firs; "Cedars;" Larches; Cypresses; Thujas, etc.

Undergrowth—Dogwood, Hazel, etc.

Insects and Enemies.

Local Plantations already started—Larch Dale, Illinois; Messrs. Fay's Estates in Massachusetts; Pine Forests of Cape Cod; Scofield's, Elgin, Illinois; Larch Wood, Iowa; Col. Whiting's, Iowa.

Shelter Belts—Wind-Breaks.

Black-Locust Groves of Ohio.

Dr. Warder's Experiments, etc., etc.

PROFESSOR A. E. BLOUNT will commence early in the New Year a series of articles on Colorado farming, wheat growing, etc.

MR. WALDO F. BROWN, the veteran farmer of Butler County, Ohio, will shortly begin a series of articles in the RURAL NEW-YORKER upon the following topics:

How to Raise Pigs—Illustrated.

How to make Cheap Pork, adapted especially for the corn farms of the West.

Breeds and Crosses.

Recollections of Hog Driving.

MR. HENRY STEWART, as has already been announced, will begin his farm novel, founded on fact, entitled "The Story of Stony Brook Farm," as soon as our present story closes.

THE well-known Professor A. J. Cook begins with the New Year a series of articles on bees and honey. Professor Cook has for 14 years been an earnest student of apiculture, carrying forward for the entire period experiments that had for their object the development of the science and improvement of the art. For the past thirteen years he has been a lecturer on bee-keeping at the Michigan Agricultural College, Superintendent of College Apiary, which has paid from 100 to 500 per cent. on the capital invested; President of the Michigan State and of the National Bee-Keepers' Associations. He is the author of what everywhere is acknowledged as the most complete work on apiculture in the world, and his Manual of the Apiary is thought, both in Europe and America, to be the most complete work extant on this subject.

WHAT ARE WE COMING TO?

A THOUGHTFUL person may well put the above stated conundrum to himself. For indeed the progress of invention and enterprise is such that one stands bewildered when he considers the changes that are daily and hourly occurring. If one should study the records of the patent office, or spend a few hours in the office of a patent lawyer, or rather a lawyer who devotes his attention to the business of procuring patents for inventors, he will speedily come to the conclusion that the two great productive arts of industry in the future will be electricity and chemistry. Hitherto chemists have been analyzing, and now they have taken to synthesis; that is, while heretofore they have been taking things apart and discovering the elements of which they are made, they have now turned their attention to putting these elements together and producing substances from them. They have produced diamonds from carbon; and other gems from their elements; they are making sugar and sirup from C^{12} H^{20} O^{10} by the addition of $2H^2$ O, materials which are abundantly found in nature and by-and-by they may be able to produce these elements without the intervention of the farmer who at present supplies them in the shape of corn, or the lumberer who furnishes them in the form of sawdust. Butter is no longer necessarily the product of the cow, nor, for that matter, of the ox or the pig either, which at present furnish the requisite C. H. O. in the desired proportions.

But even this indirect aid from the farmer may be found unnecessary and the miner may gather from the bowels of the earth what is now scraped from the bowels of animals, and the agriculturist find his occupation gone to this extent. We cannot doubt that science, having conquered this difficulty, will continue to make further discoveries; indeed it has already found a substitute for milk, and as milk is a complete food and mankind could exist comfortably and healthfully upon it without any other nutriment, the only question which now distresses the chemist is how to procure enough of it. This difficulty may vanish in time before enterprize and perseverance. We see an approach to this consummation in the present production of meat. Formerly we waited five to six years for our ox or steer to reach maturity, and now two years are found ample time; and even one-year-old beef was found at Chicago cattle show to be all that could be desired. So that we have already nearly eliminated time as an element in producing beef and that little difficulty, too, may soon be disposed of. All that then remains is the bread question. This may be thought to be a poser. But one Tanner recently showed that it was possible to live 40 days without food, and how many Tanners would be required to show how a man can live for a whole century without nourishment, excepting the chemically combined milk and butter, and, of course, cheese, with sugar and glucose sirup and honey, to help to sweeten the uses of any adversity which might happen, is only a question of figures. But we see no reason for borrowing trouble in regard to this business. It may, after all, be but the approaching period which some persons believe in as the millenium, when all trouble and sorrow and labor will be banished, and all that mankind will be called upon to do will be to enjoy themselves, practice all the virtues and be happy.

AGRICULTURAL COLLEGES.

WE frequently feel indignant when reading the flippant, ignorant, and unjust remarks in undeserved derogation and contempt of Professors of Agricultural Colleges, that are far too commonly made by writers and some editors of so-called agricultural journals. An agricultural college, and, indeed, any other institution intended for the benefit of agriculture, and the gentleman placed in charge of such institutions, are made the butts for weak pleasantries and pitiful sarcasms by persons who are themselves totally incapable for a moment of filling any of the responsible positions in these educational institutions. They are comparatively new, and no precedents exist by which their control and management could be organized and made effective. A new field, like an uncleared farm, was to be occupied and reduced to profitable culture. By untiring and skillful labor an inchoate, if not chaotic condition of affairs has been brought into order and actual work; and several of these institutions have become models of success. The professors deserve the greatest credit for what they have achieved, and for the modest and disinterested manner in which they have worked and surmounted obstacles and difficulties which can be realized by few persons who have not given much thought to the subject of teaching agricultural practice and science. That many farmers may not have sprung, all armed, as it were, for the fray, from these colleges, is no cause for objection; for the truth is, there is such a general demand for agricultural teachers that many of the graduates have been drawn into this useful industry and most of them are doing good service in it. One of the most serious drawbacks which the colleges and the professors have had to contend with, has been the constant carping and unfavorable criticisms to which we have referred. It is a satisfaction to know that this unjust treatment is not now so common as it has been, but still there are persons who lose no opportunity of demanding why the colleges do not do this thing or that thing, and of hinting that the reason is that the professors know nothing about their business. There is no class of useful men that are more deserving of praise for what they have done under much difficulty than the professors of agricultural colleges, and we take pleasure in thus expressing this as our sincere belief based on a knowledge of what they have done and are doing. We know something ourselves of the time and labor required for experimenting and its necessarily slow process, and also how little time can be spared from the arduous work of teaching.

WE find that several seed houses have sent out what they call "Branching Sorghums" since the Rural Branching Sorghum was announced. We have tried them and find that after being cut back their growth is entirely checked or a fresh shoot appears only here and there. Most of them bear *drooping* seed heads. Our readers may accept this one characteristic as positive evidence that the variety is not the Rural Branching Sorghum, as the seed heads of this variety are always upright.

THE RURAL NEW-YORKER of next next week will contain a second article upon ensilage by Dr. J. B. Lawes. It throws a wetter blanket upon the "new dispensation" than did his first. Dr. Lawes in a private note accompanying the article remarks that "although ensilage is perhaps useful for some purposes, it does not merit the extravagant praises which it has received."

BREVITIES.

OF late a great deal of capital is being invested in sheep and cattle raising in Cuba, and the importation of choice sheep, cows and bulls for breeding purposes is largely increasing, no less than 1,000 head having been lately delivered at Cienfuegos alone in a single week.

PROFESSOR BUDD, of the Iowa State College, writes us that his offer to send his pamphlet on forestry has brought out over 100 applications from parties in Dakota and Nebraska who report seeing the notice in the RURAL NEW-YORKER.

"THE RURAL IS NOW THE BEST PAPER." So said Prof. Beal of the Michigan Agricultural College in 1878. Under date of September 25, 1881, he says: "I am willing, in your case, to change the date of the compliment to the present."

WILL our friends, in making application for seeds, kindly state which variety of corn they prefer. The Flint is best suited to the higher latitudes perhaps. When no choice is made we send the variety which, in our opinion, is best adapted to any given locality, but we prefer to have our subscribers designate their choice.

WE have been much pleased with a visit from Mr. R. S. Saunders of the Southern Planter, who has lately bought the Southern Cultivator and Dixie Farmer, which will in future be united with his former paper under the name of the Southern Planter and Farmer, published weekly at Richmond, Va., and the Southern Cultivator at Atlanta, Ga., and under the genial and able management of Mr. Saunders they have a bright prospect of success.

UNTIL the accession of the Gambetta Ministry to power a single Cabinet Minister represented Agriculture and Commerce in the French Government. Gambetta, however, in making up the Cabinet of which he is Premier, assigned to M. Rouvier the portfolio of Commerce alone, intending to press the passage of a law creating two new Cabinet officers—Ministries of Agriculture and Fine Arts. Last Thursday the French Senate voted to create both, and as the Ministry have a larger majority in the lower than in the upper House, there is little doubt that Agriculture will soon have a separate representative in the French Cabinet.

THERE is a good deal of agitation among millers at the West with regard to grading of wheat. Last Wednesday an important meeting was held at Indianapolis composed of the grain dealers of Indiana and representatives of the Millers' Association for the purpose of securing a stricter grading and greater care in buying wheat at the elevators and to prevent loss from having the grades of wheat reduced when it reaches Chicago. On the same day a meeting of the representatives and millers of Minnesota took place at Minneapolis to adopt a system of grading uniform with that at Chicago. It is not at all improbable that a very decided discrimination will soon be made against soft wheats also.

FOREST LEAVES.—Before the ground is covered with snow, the leaves in the wood lots, should be raked up and either brought to the barns and put under cover or left in heaps to be drawn as soon as possible. Now that the leaves are slightly moist from rain, they can be raked and carried with ease. An easy way of handling them is to gather them in a basket made of gunny bagging sown a little loosely around a light hickory hoop pole. A large quantity can be lifted at once in such a basket and turned out into a wagon. Leaves make the best and safest possible litter for brood sows with young litters, and are useful for littering other animals and in the poultry house. The value of leaf mold is well known and leaves used for litter are the raw material of leaf mold and therefore well worth gathering.

Mr. H. I. Kimball, Director-General of the Atlanta Cotton Exposition, announces that the great show will close, without fail, on the evening of December 31, although hundreds of letters are received daily begging the managers to keep it open through January. The last week is expected to be the most interesting and important of the exposition, and we would urge all our friends who have not yet seen this grandest show of the kind ever held anywhere, not to lose this opportunity of seeing it at its best, if they can make the trip without too much inconvenience. Mr. Kimball exultingly proclaims that it has been a magnificent success, which he gratefully attributes more to the untiring and unstinted support of the Press than to all other causes combined. Well, yes, we have certainly done what we thought for the best interests of the country in the matter.

WE learn from Washington that owing to the vast number of encroachments by homesteaders on the public timber lands between Wyoming and Duluth, Minn., the government has sent agents throughout the country to make up cases of trespass. Although urgently in favor of the conservation of our timber lands, still we strongly deprecate the adoption of any harsh measures against the pioneer cultivators on our Western frontier for having used timber from the public lands for buildings and other improvements on their own homesteads. Honest homesteaders have a hard battle to fight in extending the limits of civilization and husbandry and should receive every reasonable indulgence from the general government. While the first settlers endure the greater part of the hardships incident to the opening up of a new country, it is seldom they reap the reward of their labors to the same extent as those who come later. For those who engage in stealing the public timber to sell it, however, we have no more sympathy than for other dishonest depredators.

NEARLY a year ago we spoke here of vast frauds in forging titles to Missouri lands, and told of the arrest of some of the conspirators who had been guilty of the crime. One of them was convicted at St. Louis about a month ago, and is now in the State Penitentiary at Jefferson; two others, William and Addison F. Burns, were tried last week at Clarion, Pa. They were the most extensive dealers in the country in the fraudulent titles by which the Government was swindled out of upwards of $3,000,000, unless it decides to extort from the innocent purchasers of the lands the amount lost in part by its carelessness. The evidence showed that the income of the accused from this dishonest source during the past eight years had been over $800,000. Every means that money and influence could command, from employing the best legal counsel to tampering with the witnesses for the prosecution, was used in favor of the defendants, but both were convicted on every count. The trials of three more of the gang, D. S. Bingham, J. F. Richards, and S. L. Custer, will begin at St. Louis on Dec. 20.

Miscellaneous.

A ROCK GARDEN.

SAMUEL PARSONS, JR.

I NEED hardly ask the reader whether it has ever been his good fortune to light on such a scene as heads these few remarks on the artificial construction of natural scenery. It is sufficient to know that hardly any one not city-bred to an inconceivable degree has failed to come across similar nooks in the course of his Summer rambles. The fact that few realize, however, is that such quaint, broken landscapes can be made, out of whole cloth as it were, by piling rocks and earthand plants together along an otherwise uninteresting stream and hillside. It is true we scarcely ever see such work really executed even on lawns, much less in back yards of farm-houses; but there is no reason why, by a moderate expenditure of money, such places should not often be thus ornamented. It is only necessary to learn the way nature tumbles rocks together, piles earth in interstices, and sets out trees, shrubs and wild flowers over the whole.

ROCK GARDENS.—(After the London Gardeners' Chronicle.)—FIG. 554.

Work of this character has been done, though very seldom, in this country. Gardeners do not fail to give us ribbon borders of coleus and other bedding plants, but not wild gardens, and we all, for want of interest and originality, follow suit. Why it is I cannot say, but we seem wonderfully tied down to conventional rules of gardening in America. Everybody does the same thing. We are so fertile and original in our devices in other ways that it is evident we must lack greatly in genuine love for gardening, or we could not rest satisfied with so much conventional work of this character. Nor can we find excuses in the non-existence of good instances of natural rock-work in America that the masses can reach and study, for just such nooks as we are now considering have been made upon certain parks, both West and East, from entirely extraneous materials, and any one who will take the trouble and time can readily find out how the effect has been accomplished. But the expense of making such rocky nooks is, it will be said, too great for ordinary folks. Let it be so, though the expense is not really beyond the means of many owners of real estate in this country; but how about the nooks throughout all hill countries, where the work is already nearly done by nature and only needs a little planting, adjustment of rocks and turf, and a few hidden paths to make the loveliest of rock gardens. Surely it is not right to neglect such opportunities.

But let us study the parts of our picture in detail. The first thing we notice with pleasure is a copious stream; but the dash and play of its gliding and foaming waters are made particularly effective by the rocks. These support, characterize and modulate it to such a degree that neither the picture nor the waterfall would be anything without the rocks under and on either side. This way and that the rocks turn the water, and beneath the stress of their guiding power the stream, like a living thing, dances and murmurs and surprises us in a thousand delightful ways. But if we expect to succeed in putting these rocks together as we find them here, or as nature would pile them, it must be no haphazard piling. If we would only discern the spirit and intention of the work, we should find in full action definite principles of structure that must invariably govern the conformation of a similar, but really artificial mass. The rocks, we should find, have fallen chiefly from some one direction, and always, evidently from above downwards; or they show broad faces for the lichens and mosses or the exquisite painting of time and weather to ornament. Like the detailed effect of the finest painting, no stone of the natural rock pile has fallen in its place without a definite dynamic as well as artistic reason.

But to get mere rocks together in this fashion would be of little more value after all than to collect the heaps of stones that deform prominent spots on many lawns with their chaotic and obtruding nakedness. To construct a natural piece of rock-work like that of the picture, it is necessary to unite turf and plants with the rocks in definite, artistic proportions. Of a natural, and therefore properly made, piece of rock-work at least two-thirds should be of turf and soil; and the molding of this turf and soil to the valleys and slopes of the rocks requires a feeling for the ways of nature that can only be obtained by the study of nature itself. Rules are useless. It is well to remember, too, for convenience of construction, that the upper surface of the rock is all that shows above the turf, and that consequently it matters little if the rock section descends no more than a few inches below the surface, provided that it be well bedded. The rustic bridge is perhaps the easiest feature of all to contrive. If we look at the plants we shall find them consisting of trees, shrubs and herbaceous plants or wild flowers. Notice how they all, every one in its own way, play an equally important part in the scene. First, the background of large trees, oaks, maples, elms and chestnuts to individualize, emphasize and seclude the scene; then the trees and shrubs, upper and lower growths, that should always in some degree go together, flanking and masking the extremes of the bridge on either side of the water-fall. The pleasant surprise of entering on a bridge in this way is always peculiarly effective. Birches, alders, spruces, hemlocks, cedars commingle in these spots.

An occasional single tree of similar kind strays down the hillside, sometimes partially bare and sometimes completely clothed at the base with shrubbery, elders, dwarf willows, spiræas and the picturesque foliage of the sumach. Broad spaces of turf and bold obtrusion of rock surface extend throughout dotted with wild flowers. As we approach the edge of the main water in the foreground, tufts of wild grasses grow up and thick masses of shrubbery stream down and dip into its flowing surface. The grasses, yuccas and wild flowers spring up alongside the rocks, the climbers creep over their surface and the entire grouping of sky and sky-line, bridge, waterfall, rocks, trees, shrubs, wild flowers and climbers fall in definite proportions into a charming artistic whole that nature best knows how to create. We can only follow, not imitate, such natural features with any considerable degree of success, if we put aside conventional rules and study the very spirit of nature as displayed among rocks, water, trees, shrubbery and wild flowers.

DIVERSIFIED HUSBANDRY.

The Prairie, Park and Timber Belts of Central Minnesota. Their Prominent Commercial Center.

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

DURING the past three months we have written nearly a dozen letters for the many thousands of readers of the RURAL, giving pen-pictures of the topography, information about the soil and climate, glimpses of the development, and statistics of crops, products, etc., in Northwestern Minnesota and Northeastern Dakota. The kindly admonition to deal with facts rather than fancies, and give figures as a substitute for the fiction indulged in by many journalists in writing for the Eastern press, has been constantly in view and closely adhered to; and yet, as a legitimate result of our travels, we are impressed with the fact that Minnesota is in many respects the most attractive State in the Union; and doubtless many who have perused carefully the correspondence referred to are similarly impressed, and the reading of this will obviate the necessity of recapitulation here. This letter briefly sketches the section of the State from the head of the Red River of the North, easterly to the Mississippi at Minneapolis and St. Paul, a region near the geographical center of the most densely populated part of the State. It includes a combination of the prairies, of the valley world-renowned for its wheat product; the park region dotted with groves, meadows and lakes, inviting the culture of cereals, root crops, and fruit, and affording every facility for stock-raising and dairy business; and the timber belt abounding in lumber, ties and fuel, with numerous thrifty farms and herds, in the good-sized openings and clearings with which it is interspersed. Here are combined beautiful topography, fertile soil, healthful climate, ample railway privileges, good schools, cultured society, and busy, prosperous towns.

At the junction of the Otter Tail River with the Bois de Sioux, whose united currents form the Red River of the North, on the line between Wilkin County, Minn., and Richland County, Dakota, are Breckinridge and Wahpeton; the former the county seat of Wilkin with semi-annual terms of court. The population last census was 321, now estimated at 500. A school building to cost $5,000 is in process of construction to supply graded schoolfacilities, and the Congregational Society will build a church edifice in the Spring.

The Wilkin County Record, published weekly, supplies the necessity of a local press, and would prove valuable in responding to inquiries. The A. F. & A. M. have a prosperous organization; and the hotels, stores, comely residences, grain elevators, rich agricultural surroundings, and the advantage of being a division point for terminal train service on the St. Paul, Minneapolis and Manitoba Railway, which here has a roundhouse as well as machine shops, turn-table, etc., give assurance of growth and permanency. Another road from Moorhead *via* McCauleyville on the *tapis*, and the Wadena Branch of the Northern Pacific is assured. The annual grain market is about 150,000 bushels. Lots range from $40 to $250 each; and land in the vicinity from $4 to $25 per acre. We incidentally learned that upon three acres, 1½ mile from town, there were grown this year 600 bushels of potatoes, marketed for $400.

WAHPETON, the county seat of Richland county, Dakota, is one of those Western marvels which are occasionally, but rarely, seen in the new Northwest; its population in June, 1880, was 100; and the census which has just been completed again for election purposes, shows 618. There are two churches, two newspapers, good schools, prosperous civic organizations, ample banking and business capital, stores well stocked and busy, lumber yards, grain elevators, and rich agricultural surroundings. The commercial business during the past year aggregated $500,000, and 150,000 bushels of grain were marketed here. The St. P., M. & M. R. R., branching from Breckenridge, across the river, really has its base for Dakota trade at Wahpeton, and the section of country to the northwest which it penetrates is very rich and productive, as also is almost the entire area of Richland County. Two other projected roads are coming to Wahpeton, of which we shall write more in detail next week, as the space we can devote here is entirely inadequate for an extended review of the interests of the town and county. There are many Eastern people here, and their æsthetic characteristics are finding expression in cozy residences and social and intellectual entertainments, as also in ornamenting the broad streets, planning for future lawns with trees, shrubs and flowers, and in many ways presenting special attractions fo the town.

WALCOTT, 27 miles from Wahpeton, on the St. P., M. & M. R. R., with its 100 population, was platted only last Spring by Mr. Frank E. Walcott. Nearly thirty buildings have since been erected on the site, most of them since July last. The location is high and pretty, being near the Cheyenne, Wild Rice, and Red Rivers, all of which are bordered with timber. The place has a prominent, handsome hill to the northwest. Its growth is notable; there are four stores for general merchandise, besides one each for

hardware, furniture and millinery, together with two blacksmith shops and other industrial interests; but a harness-maker, shoemaker, and representatives of other trades are needed. There is also a good opening for a bank, but the greatest necessity is a hotel, and a man who knows how to keep it. Lots are offered at reasonable prices, and such as will insure a profit on the investment. A good school building, church edifice, and several residences will be built next Spring, and the handsome depot to be erected will be a great addition. The country around is pretty well settled by Americans and Scandinavians, who are thriving and happy. No bonanza farms in the vicinity, but each owns his quarter or half section.

There are several other embryo towns on this extension of the St. P. M. & M., which we had not the time to visit, and cannot speak of their outlook, except that, being located in a section rich in natural resources, the growth and development incidental to immigration which is large and steadily increasing, will doubtless insure their future development.

Turning Eastward from Breckenridge, on the main line of the St. P. M. & M., we halted at

CAMPBELL, a nicely situated town of 100 population: the streets were full of farmers and teams, and business was lively. There are two hotels, three general stores, one each of hardware, drugs, and agricultural implements, a lumber yard, a round elevator of 30,000 bushels' capacity (run by steam) and a warehouse for 25,000 bushels, the two handling this season about 75,000 bushels of wheat.

A $2,000 school-house will be built the coming Spring, and other important improvements are contemplated. There is a good opportunity here for a furniture store, tailor, shoemaker and barber.

The farmers in the vicinity are of the best class of Americans, many of them coming from about Ottawa, in La Salle County Illinois, men of means, who are opening large farms, and are giving Campbell their patronage; but it is not to their credit that they are importing oats for feed and seed into a country where they can grow 75 bushels to the acre. Diversify your crops, gentlemen.

NOR CROSS (Gorton Station) about 20 miles further East on the line is not a yearling yet, but has the business and promise of many older towns, begotten of its rich surroundings and the energy of it proprietors. A feature is the high and handsome site, affording good, dry cellars, and excellent well water. Stores, elevators, and lumber yards are all busy. A hardware stock is needed and a desirable store-room just completed could be rented for the business. A hotel, harness maker, cabinet maker, and other workers in industries are also required. The rapid development of the surrounding country tributary to Nor Cross, will force other towns near-by to look sharply to their business laurels.

MORRIS, is the next place we visited. It is the county seat of Stevens County, and has a population of 1,150, showing an increase of nearly 400 in 18 months. It is beautifully located with attractive environs, lakes, groves undulations, farms, meadows and railways forming a picturesque landscape. Here are many substantial business buildings, home-like residences; churches; schools; an able press; civic societies; a public hall; several incipient manufacturing interests; water powers only partially developed; a superior quality of building material; three elevators with a total capacity of 16,000 bushels; a post office (of the third class) with an annual business of over $3,000 in stamps and postal cards, and over $10,000 in money orders; a market for 350,000 bushels of wheat within a year; a live driving-park association, and county agricultural society; a wide-awake board of trade; an annual commercial business of over $1.000,000. The place is on the main line of the St. P. M. & M., at the point where the Brown Valley branch diverges to the West. The many other points of interest needing discussion render it necessary to devote an exclusive letter to Morris and Stevens Counties, which we will endeavor to write within a couple of weeks. The population is largely composed of Eastern people, and the intelligence and refinement of their earlier homes are bearing fruit in the social and intellectual entertainments now organized under the auspices of the board of trade, and others in a general way; while the natural resources of the county for a multiform interest in husbandry assure a rapid and lasting prosperity.

BENSON is the county seat of Swift County adjoining Stevens on the southeast. It commands an attractive site, is nicely laid out with wide streets well graveled. It has a thorough system of sewerage east and west on either side of the railroad, emptying into the Chippewa River, which, with the healthful climate, affords almost entire immunity from sickness—only three adult deaths since 1876. There are a good graded school, three churches, and a live, seven-column folio paper, under the charge of Edward Thomas.

Here are two large elevators, and a wheat market for about 400,000 bushels per annum. The handsome hotel, the "Aldrich Brothers' House," is a three-story brick structure of 42 rooms, well furnished and well kept; an ornament and benefit to the town.

Land in this county is worth from $3 to $7.50 per acre. It is well adapted to tame grasses and stock-raising, as well as to the usual variety of crops, and the farmers should avail themselves more fully of these advantages. The United States Land Office here finds its principal attention to be required in "proving up" claims and a few entries of contested tracts. The banking business of Benson is estimated at $700,000 (?), and the commercial trade at the same figure.

WILLMAR, the county seat of Kandiyohi County, has a good school, a live newspaper, a few good business buildings, elevators, a mill, and a rich county surrounding it. The population of town and county is almost entirely Scandinavian, and the leading business man (so-called) in the town (and an American at that) told us they did not want Eastern people to settle in the county, and significantly added, "We could not get them if we did." Hence, as we are writing for Eastern readers, we will desist from further comment.

LITCHFIELD, 77 miles from St. Paul, with a population of about 1,500, is the county seat of Meeker County, which, by the way, is one of the choicest in Central Minnesota. Prettily located, with every accessory for thrift in both town and county, it, of course, depends largely on the spirit and enterprise of its citizens to solve the problem of future distinction, and these are by no means deficient. The happy combination of the American and better class of the foreign elements keeps all enterprising and progressive. Churches, schools, civic organizations, banks, a board of trade, newspapers, manufactories, elevators, lumber yards, good stores and stocks, and hotels (notably the new Howard House), all attest the commercial importance of the place. Three weeks hence we shall give our readers the details of this town and county in a special letter. There are several large, prosperous towns east of Litchfield, on the line, of sufficient importance to merit a visit and extended notice, and we regretted our inability to stop, but time precluded.

Nearing Minneapolis we come to Lake Minnetonka, becoming world-renowned, and upon the attractions of which volumes have been published from more able pencils than ours. It has an entire length of 17 miles, 208 miles of shore line, and embodies about 82 square miles, with 10 islands, varying in size from one to 600 acres. Large hotels, several spacious boarding houses, numerous cottages, large steamers, sail and row boats, are among the conveniences which this wondrous resort adds to its marvelous beauty. Those in quest of health, rest, recreation or sporting are everywhere turning to Minnetonka, as shown by its 20,000 visitors in 1881.

A word in conclusion: Nearly the entire country under notice is specially adapted to stock-raising and dairying, yet the attention to both these is far below the possibilities offered. Rich, nutritious grasses, pure water, an abundance of timber for Summer shade and Winter shelter, a pure, invigorating atmosphere, a rich soil for producing feed of any variety desired, all exist in profusion; and why do not the farmers emulate the example of those in other localities, Iowa, for instance, and acquire for themselves a reputation abroad for their creamery butter and cheese?

Entomological.

PEACH TREE BARK BORER.

Important Note from Professor C. V. Riley.

MR. A. J. CAYWOOD has been kind enough to send me specimens of the beetle which is doing such injury to his peach trees, and which he referred to in his communication of November 13 as a new insect. The beetle proves to be an old acquaintance (Phloiotribus liminaris, Harris), long known to injuriously affect peach trees. It is referred to by Harris under the old generic term Tomicus, on page 88 of his well-known work on Insects Injurious to Vegetation and has been supposed to be the cause of yellows (see Miss Morris in Downing's Horticulturist. vol. IV., page 502). That the injury of the insect would produce an unhealthy, yellow appearance of the tree, or that it will most abonnd in trees affected with yellows is natural, but that it is the first cause of yellows there is no reason to believe, but, on the contrary, every reason to doubt. In regard to the doubt existing in Mr. Caywood's mind as to the mode of propagation of the species I would remark that as with other species of this family (Scolytidæ) the eggs are laid under the bark the beetle first boring into the bark for this purpose.

It is very difficult to prevent the injury of this class of bark-borers. From experiments made with a view of preventing injury from other boring beetles, I feel satisfied that a good coating of a mixture of lime, sulphur and Paris-green will protect a healthy tree that is not yet attacked as long as the coating lasts; and, judging from a specimen which Mr. Caywood has sent, a coating of black varnish will destroy all the borers, though whether or not it will injure the tree can only be decided by actual test in the orchard.

WASHINGTON, D. C.

THE PEACH TREE BARK BORER.

THE peach tree bark beetle, "gum bug," noticed by your correspondent, Mr. Caywood, in two very interesting articles in the RURAL, is quite abundant in this vicinity, causing the "yellows" and very soon killing the tree—generally in two years, I think—precisely as observed by Miss Morris, in 184-, as recorded by Harris in "Insects Injurious to Vegetation." I think this must have been first seen and described by Dr. Harris before 1840, as he says it was recorded in his catalogue. It must have been injuring peach trees as early as 1843, at least, for he says in 1854, in a paper to the Massachusetts Horticultural Society, that it had been eleven years since the peach trees had been noticed to be affected by "yellows." He also says, "I cannot find any Tomicus liminaris at work in the bark," still I think they must have been present there. Generally, no extra scrutiny is required to detect the burrows in the bark, but the examination should always be made at the ground, near the roots, to be certain in regard to their presence in an orchard. When we see a tree at this time of the year with its fruit (or some of it) still on its branches in a "mummified" form, we may be quite sure the bark borer is at work in its trunk. This beetle is a much more serious pest than any of the other injurious insects, attacking and burrowing in the trunk and branches of the peach tree.

This beetle—Phloiotribus liminaris—(Harris) is very closely allied to the clover root borer, Hylesinus trifolii (Mull.) with which it would be confounded by any casual observer, as it is colored and shaped exactly like it; though a very little smaller. It actually differs only slightly in its structure as seen under a microscope, as noted by Le Conte in a foot-note of Harris's work. If Mr. Caywood is right, it resembles the clover-root borer, too, in its habits, viz., attacking, healthy, vigorous and growing plants.

Now a great many of the members of this family attack plants and trees which are sickly, or in incipient decay. Hylesinus opaculuo—(LeC.) is found in soft maple trees, which are partly dead. These beetles are always found in boundary sections, between the decaying and living tissues of the tree. H. aculeatus bores in the bark of all ash trees felled the previous Winter. The female and her mate burrow into the bark in May, the former laying the eggs as they channel along. Thus the larva channels at right angles, forming that delicate curving we see on ash rails, after the bark peels off.

Wayne Co., N. Y. W. L. DEVEREAUX.

Gas Tar a Protection from Tree Borers.

In the RURAL of Nov. 10th Mr. A. J. Caywood asks how to protect his peach trees from the new insect boring in the bark. In reply I would inform him that eight years ago I made an experiment in coating some wild trees from the roots to branches with gas or coal tar, and finding after one year the trees uninjured and in full vigor, I made the same application to my peach trees, by removing the earth from around the trunk for a few inches and coating the exposed part below the ground to a foot above ground with gas tar, after which I replaced the earth, and to this day no borer has ever touched one of these trees, and they have made a fine growth and produced plenty of fruit each year since, while the peach trees of all my neighbors are half-dead, and the other half is dying, showing a thick band of exuding gum at the surface of ground, where girdled by the borer. I would advise Mr. Caywood to try the gas tar, extending the coating up into the main branches. It will surely clean out the insects, and instead of injuring the bark it preserves it from mosses and vegetable as well as animal parasites. Apply on the bark directly with a paint brush. If the tar is too thick warm it a little, and whatever the entomologists may name the pests, they will never trouble your trees again. A. ROST.

Suffolk County, N. Y.

Chalcid Parasites on Orange Scale-Insects.

Professor C. V. Riley sends us the following extract from the diary of Mr. H. G. Hubbard, as indicative of the condition of the orange scales at this season in Florida, Mr. Hubbard being stationed there to make observations on orange-tree insects:—"Nov. 25th. Visited several orange groves to inspect the condition of scale and rust louse. The Coccidæ continue to breed, and young are seen crawling about as well as males. There is, however, no marked sudden increase, as at the time of the October brood. The present appears to be a period of greatest increase of the Chalcid parasites, and many trees are seen upon which the scales are attacked by the Chalcidæ to such an extent that the branches present the same appearance seen in the majority of infested trees during the last week of October and first of November. That is, the scales, particularly on the leaves and twigs of new growth, are nearly all one-third of full size, and have, in the case of long scale, the bright color of young scales of a late brood. This is due to the arrested growth from attacks of parasites, which have not yet issued from the scales. The above refers to Long Scale more particularly, as in the case of Chaff Scale the Chalcid parasites do not invariably confine their attacks to immature scales, but appear to infest even those which are adult and full of eggs; in these cases they feed either upon the eggs, or the coccid itself, or on both."

Veterinary.

NOT PUERPERAL FEVER IN THE COW.

THE case mentioned by a correspondent in the RURAL of Nov. 5, page 748, is not one of puerperal fever at all. It might have developed into this disease or into some other kind of fever; but in the case mentioned it was simply a chill brought on by exposure to cold rain. It was a case requiring an active stimulant, and the cayenne pepper produced precisely the action required. The other case mentioned is quite as reasonable, and saltpeter, a cooling refrigerant and febrifuge, is quite often beneficial in a case of true fever.

These cases show how important it is for persons owning valuable cows to make a study of their ailments, and also how easy it is for a person who really knows nothing of medicine and the nature of popular rough-and-ready remedies to make serious mistakes; also how sometimes a person may hit a "bull's eye" without aiming at it. Had the cayenne been given to a cow suffering from true puerperal fever, with the circulation excited to its highest point, the stimulant would probably have killed the cow in a short time. Puerperal fever occurs nine times out of ten from internal causes, and not from exposure, although in some cases exposure to cold or excess of heat, or nervous excitement is the proximate cause of it. In the case mentioned the old dairyman was right; a pint of whisky or gin might have had the same effect. The only error made was in mistaking a chill for a fever, which may result from a chill, but is a very different thing from the chill itself. H. S.

For Women.

CONDUCTED BY MISS RAY CLARK.

WAITING FOR MOTHER!

MARY D. BRINE.

"THE old man sits in his easy chair,
Slumbering the moments away,
Dreaming a dream that is all his own,
On this gladsome, peaceful day.
His children have gather'd from far and near,
His children's children beside,
And merry voices are echoing through
The "Homestead"s hall so wide.

But far away in the years long flown
Grandfather lives again;
And his heart forgets that it ever knew
A shadow of grief and pain,
For he sees his wife as he saw her then—
A matron comely and fair,
With her children gathered around his board
And never a vacant chair.

O! happy this dream of the Auld Lang Syne
Of the years long slipped away!
And the old man's lips have gather'd a smile
And his heart grows young and gay;
But a kiss falls gently upon his brow,
From his daughter's lips so true:
"Dinner is ready; and, Father, dear,
We are *only waiting for you.*"

The old man wakes at his daughter's call,
And he looks at the table near,
'Ther's one of us missing,' my child, he says
'We will wait till MOTHER is here.'
There are tears in the eyes of his children, then,
As they gaze on an empty chair;
For many a lonely year has passed,
Since "MOTHER" sat with them there.

But the old man pleads still wistfully:
We must *wait for Mother*, you know!"
And they let him rest in his old arm chair
Till the sun at last sinks low,
Then leaving a smile for the children here,
He turns from the Earth away,
And has gone to MOTHER, beyond the skies,
With the close of the quiet day.

CONCERNING CHRISTMAS GIFTS.

MARY WAGER-FISHER.

THE wise gift-maker at Christmas time prepares all her gifts as early as October, and so avoids the hurry that attends the making and purchase of them on the eve of the Christmas holiday. But from a multitude of reasons very few of us may be counted among the

"wise." We either have not the money or the leisure, or we forget about the annually-recurring event which puts a large part of the Christian world in a state of excitement until it is fairly upon us. I long ago came to this conclusion, which every Christmas time tends to confirm, that the sweet saying of Christ, "It is more blessed to give than to receive," is rapidly losing its significance. I see so many hundreds of women driven half distracted at holiday time in their efforts to make one dollar do the work of ten; so many hundreds of shop girls, too, nearly "worked to death" in the crowded shops in an endeavor to answer the demands of the eager shoppers, that I weary at the sight, and deplore the gift-making mania that makes Christmas anything but a joyous holiday. A great many people spend more on gifts than they can afford to spend, and money is often put into purchases that are of no use to the recipients of them. People who have plenty of money have no difficulty in choosing their gifts; the products of thousands of deft fingers, the world over, are temptingly arrayed in the small and great shops of every large town. But with people whose means are small, it is often difficult for them to choose. They are usually concerned, too, that their offerings possess the merit of utility, which is an important factor in gift-making. The taste and condition of the persons to whom the gifts are to be given must also be taken into account. A standard gift is books, but from my own experience I should say that no gift-making is so hazardous as that of books. How many people look at their book shelves and sigh at the sight of some of the volumes. Unless I knew that my friend wished such or such a book, I should not waste my money upon it. There are certain standard books that people with good literary taste always find satisfactory, as Shakespeare, Plutarch's Lives, Motley's Rise of the Dutch Republic, Green's History off England, and certain leading poets of the day, as Emerson, Longfellow, Tennyson, Holmes, Whittier, Lowell, etc. I should not advise novels as gifts, except in rare instances. People seldom read a novel more than once or twice. There are a few that are great, and may be re-read many times with both pleasure and profit. One of these is the interesting story, Vicar of Wakefield, by Oliver Goldsmith. Some people are very fond of Dickens's novels; other like Hawthorne's. All volumes of Emerson's Essays is delightful to the better class of readers. Of biographies, Boswell's Life of Samuel Johnson is a famous and very interesting book. Trelawney's Life of Lord Macauley is very good, Trollope's Life of Cicero is to be commended to the studious people who have a liking for the history of famous people in the times gone by. If your friend's birthday happens to come on Christmas or New Years, nothing is more fit than for a gift than the Longfellow, or Emerson, or Whittier Birthday Book. The gift of a year's subscription to a good journal like the RURAL, for example, is one of the best of gifts, as it brings down upon the head of the giver fifty-two blessings a year.

A good picture is always an acceptable gift. But unless you are a competent judge of artistic work, don't put your money into a chromo. There are a few good chromos in the world, and thousands that are atrociously bad. It is much safer to choose prints, as photographs, lithographs, heliotypes and steel engravings. Avoid colored prints, unless, as I say, you are a judge of what is good. The heliotyes from the old masters, published by Osgood & Co. of Boston, are very fine, and they cost but fifty cents apiece. A catalogue will be sent gratuitously on application. A good steel engraving is costly, but it is a thing to last for generations, if well framed and well cared for. Some of the art publications contain in each issue three or four good engravings or etchings.

Emerson says something to the effect that a gift should be of one's self, the work of one's hands or brains. If you paint a cup or vase, or a picture, or embroider a lady, or make a mat, cushion, or quilt, you give of yourself, of your handiwork, and the sincerest of such gifts possesses a specific value. A copy of the Revised Edition of the New Testament would be acceptable to almost any adult who is not already provided with one. Very good copies, with the old and new versions on opposite pages, can be had for fifty cents. To a housewife interested in cookery a cook book would form a pleasant gift. One of the best of the new ones is Miss Parloa's. A thermometer costs from fifteen cents up. Everybody does not have one of those. A thrifty potted plant forms a nice gift. A basket of apples, of nuts, or of vegetables to such as have none, with many people would not come amiss.

Children suffer most, probably, at Christmas from the foolish giving of friends who would more properly be styled "enemies." Candies, raisins and such sorts of sweetmeats are abominable to give a child. Kindergarten blocks and building blocks form endless amusement for the little folks. Avoid all colored blocks, unless they are in *oil* colors. A box of paints, tools, tin cars, things which can be used to fashion into other things, to be talked about, over which the imagination lingers, are all good. A stout lead pencil, with a quire of writing paper to scribble on would delight some children. Things to go into the stomach have an evanescent value, except to the poor whose hunger is uppermost of all wants. And in Christmas giving it is better to remember the poor in the neighborhood than your "relatives." They feel neglect so keenly, and it is far harder for "Santa Claus" to remain away from the homes of the poor than the rich. People who are in comfort and health enjoy Christmas, whether it brings gifts or not. To fully enjoy the day it is better to expect no gifts, and not to overburden one's self in trying to make them. A happy face and cheery words are the brightest and best things any Christmas can be blessed with, and one can give expression to good wishes, that cost nothing and may be worth much. With people of limited means it is better to confine gift-making to one day in the year. Among married people there is the yearly anniversary of the wedding day. The birthdays of the children it is well to celebrate in some way, and most children take great delight in celebrating the birthdays of their parents. The "blessedness" of a gift at any time is its spontaniety. There is nothing "blessed" in giving because you think you "ought" to give. If you can't give with pleasure, why then do not. "Compulsory" gift-making is a nuisance either at Christmas or at a wedding.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

CONCERNING HOUSEHOLD SERVICE.

MARY WAGER-FISHER.

THERE are certain sorts of household service for which it is next to impossible to procure proper persons. For instance, if I wish my table set for a small dinner party, flowers arranged, closets and rooms put in my required order, my child's health intelligently looked after during my absence of a day or a week, the mending of clothes, the temperature and ventilation of rooms justly attended to, and the thousand and one things connected with housekeeping that require good common sense, taste and intelligence, I should not know whither to turn to find such a person male or female. There are hundreds of women, in ill health or burdened with the care and wants of a large family, to whom such help would be invaluable and for which service they would gladly pay wages ranging from $2 to $5 per week, and still for this demand there is *no supply*. Between mistress and cook there is *a gap* so difficult to fill that many families break up housekeeping in order that the wife and mother may be relieved of the burden she is obliged to carry as mistress of a house. The sort of help required goes under the name of "house-maid," but she is so rarely well equipped for her office in this country, that the name itself is almost a misnomer. Grown-up daughters and dependent relatives often perform these services for the mistress, but there are thousands of families in which there are no such "spokes" in the family wheel.

My object in alluding to this matter is to enlist, if it be possible, the interest of country girls in this kind of work. It is an employment that is healthier, more respectable and better paid than that of factory or shop girls and I believe I may truly add, more profitable than dress or bonnet making or any sort of sewing, and to my mind, quite as respectable. I honor all workers who do their work well, no matter what it may be, save that it be honest, useful work. And so does everybody whose respect and esteem are worth having. If there is any reason why "hire-girls" are imbued with the idea that their occupation is regarded as very inferior, it is solely because they have been so outrageously ignorant, unskilled and unfit for the position. Almost any servant whom I might wish to hire to do my housework would demand from $3 to $4 per week for her services and still she would never be able to see whether or not she had the rugs straight on the floor or whether a picture frame was left askew after she had dusted it.

My husband had occasion one time to advertise for a maid for me to do very light work, but she must be trustworthy, and her wages were to be $2 a week, "a good home and kind treatment." There came upwards of 40 applicants for the situation, and among the number were several shop girls. I remember one in particular; she was a very a nice-looking young woman who had been a clerk for several years in a Philadelphia dry goods house at a salary of $6 a week. She found that her expenses consumed all her earnings, that she lived shabbily in a boarding house, that she had not really good society and that being so much on her feet and oftentimes in an impure atmosphere was killing her. She was heartily tired of it, and looked forward to a quiet home, in a quiet family, with a great sense of relief. Then, too, in such a position she would have no expenses but for her dress, and at the most she could put half her earnings every year in bank.

Employers know, if employees do not, that domestic service is the best paid, comparatively, of any sort of work, and it is a matter of wonder, as well as of surprise, that so few American girls fit themselves for such work; and of regret, too, as the quality of the deftness and intelligence of American girls is much superior to that of those of foreign birth and training. Now why is it that country girls who have their own way to make, turn aside from housework to seek other employment? Wherein lies their dislike of it, their repugnance to it? I wish some of them who may read this would frankly tell *why*.

I know of no occupation that is not attended with some unpleasant features, and it should be remembered that the unpleasant features of household service are often more than over-matched by disagreeable features in other occupations that they know nothing about because they have never experienced them. For instance, I have known "hired-girls" of mediocre intelligence, who for the life of them could not earn over 50 or 75 cents a week beyond their board, refuse to work in families where they were not admitted to the family table like a member of the family. "I am just as good as they are," they angrily argue, while it is not a matter of "goodness" at all; neither of social equality, for that matter, but simply a matter of family privacy. Employers hire help to do work; they don't hire them for their "society," delightful as such society may be, or otherwise society is a gratuitous sort of article that nobody likes to have imposed upon him against his will, which he *does* like to have when he seeks it, but which is not always to be had for the seeking. It is not at all of a commercial character, and the persons unquestionably whose society is most honored and courted are those who have the least of the spirit of caste. Caste, which is the brief expression for "I-am-decidedly-rather-better-than-you-are," is most marked in the lower grades of society and diminishes as one rises in the social scale. Great men and women never feel it and never think of it in connection with themselves, but they certainly do care for family privacy and will have it at all cost.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

DURING a week's absence from Every-day House, with seldom two meals at the same table, I had opportunity for noticing the different methods and manners of serving dishes practiced by various housekeepers. In one family, where everything in the parlor is dubbed "æsthetic," the bone of yesterday's leg of mutton was put upon the table in all its bareness. Plenty to eat there was, but it lacked the little touches that go so far to make food appetizing. Cold mutton was the substance of another lunch, but it lay in thin slices on a large platter, with a few pickles here and there around the edges, and a few sprigs of parsley were an added decoration.

At another house, where chicken had been the dinner of the day before, we were served with what the French call *Vol-au-vent*, a sort of patty of light crust, filled with hashed chicken. These, besides being a nice relish, were meant evidently to help out the dinner, otherwise rather short for unexpected guests. One morning at breakfast I noticed that the children, who were of rather dainty appetite, passed their plates several times for a dish of what looked like peculiar doughnuts. After they had gone to school I found that their mother moistened all the stale bread first in milk, then in the yelk of eggs beaten lightly, afterward sprinkling each piece with pulverized sugar, and frying it crisp. It was very palatable. One afternoon for tea a friend treated me to cheese cakes, and when I praised them as something I had never relished before since my childhood days, she laughed very pleasantly, and gave me the following recipe, which the amateur cook intends soon to try at Every-day House:—Potato Cheese Cakes.—Two cups of mashed potatoes, half a cup of cream, four eggs, one-fourth of a cup of currants, one-half a cup of butter, one-half a cup of sugar. Mash the butter, eggs and cream with the potatoes hot; stir till scalding hot, remove from the fire, and stir in the washed currants and sugar. Fill your patty pans, after lining them with puff paste, and bake in a steady oven ten or twelve minutes.

At one pleasant fireside where I spent a day I felt the influence of a woman's dainty touch and innate refinement at every meal. Going in after the table was set, and no guest expected, I found the table linen spotless, the glass shining, and if flowers were few, they were interspersed with sprays of trailing green that added to their beauty. Fancy bits of pottery held the different articles of food, and though not rare or old, they were in exquisite taste and of pretty design. The cooking was always done to a turn and seasoned to delight an epicure, and all with the assistance of one girl. But I observed that everything was convenient—the rooms on one floor, so that no extra steps were required. The children had been taught that there was a place for everything, and the boys expected to help in many little ways in the household as well as the girls. The "help" was strong and capable, with a contented look that only comes from being well treated and cared for in a pleasant home.

What a diversity of character one meets in a few days' travel, each intent on his or her own round of duties and pleasures. The habit of observation is developed by seeing new faces, and we are sure to draw conclusions and make comparisons that become memories when once more we are settled down to the routine of home life.

WAS IT INDEPENDENCE?

MAY MAPLE.

"I AM going to earn the money wherewith to purchase my Christmas gifts, and I am determined that whatever I get for my husband it shall be something really elegant," said a young wife, and her snowy fingers drew the needle back and forth through the dainty wool, stitch by stitch adding to the pretty fabric that would shape itself into a warm, comfortable hood. It was still early Autumn; but when the winds and snows of Winter should make their appearance these becoming hoods would have increased to a goodly number, and then she would bring them forth for sale; and this was the way the fair little woman was to earn her pin-money for the Christmas holidays. "Of course," she continued, "he gives me all the spending money I need for myself and the baby, and would give me more if I wanted it, but I won't take his earnings to buy presents for himself. I like to be independent."

At first thought, this pretty independence seemed very laudable, and I almost envied her the leisure so much at her disposal; yet I could but wonder how she would gain time enough from the little family cares to make very elegant presents. To be sure her family was small—herself and husband and a six-months-old baby (but that really needed a great deal of care, as the child was far from well), and then her husband was a professional man, and there was always more or less company. So the cares of the little household were necessarily numerous.

But the child-wife (for after all she was but little else, notwithstanding her year and a-half of married life) soon informed me that she had become worn out with doing the work, and so her husband had hired a girl to do the kitchen work, and she was so glad, for she did dislike the drudgery. But then, too, she hated to eat from dirty dishes, and she had been half tempted to turn the girl away for her slovenly habits; and then came the usual flow of gossip concerning servant girls, which the little woman had learned to perfection.

Presently her husband came in desiring an early supper, as he had business in another part of the town requiring his presence. There was neither bread nor meat in the pantry. The girl had just come in from an afternoon visit, and could do nothing till she changed her handsome gown for an all-work affair; and then she could not possibly build a fire, make warm bread and get the supper ready on such short notice, so, with a contemptuous "Pshaw!" the husband sent a street boy to the bakery for bread and cake and to the butcher's for meat, while he built a fire in the kitchen stove. Meanwhile "the girl" made slow preparation to prepare the evening meal. The white table linen was all soiled or in the basket of unironed clothes, and the mistress was obliged to use colored napery, much to her dissatisfaction.

While all this hurried commotion was going on in the domestic department I began to wonder which the husband would most appreciate, an elegant Christmas gift from his wife, purchased with her own earnings, or a well-ordered house, whose pantry could give forth an abundance of well cooked food at a moment's warning, and a simple token of love for the holidays. Would the gift she proposed to purchase be her own independent earnings when, to do the work proposed, she must take the time that should be spent in overseeing the work in every department of her home? Was it true independence to do fancy work to please the eye and replenish the purse, and at the same time purchase bread at the bakery, when one kept a hired girl to do the housework for a family of three or four persons?

News of the Week.

SEVEN YEARLY SUBSCRIPTIONS WITH $14 ENTITLE THE SENDER TO THE RURAL NEW-YORKER FOR ONE YEAR FREE.

HOME NEWS.

Saturday, Dec. 17, 1881.

GUITEAU TRIAL.—Nothing out of the usual course of events has happened in the great trial or farce, we hardly know which to term it, during the past week, except the indisposition of two of the jurymen. Owing to the overcrowding of the court room the health of all present is placed at risk. The room is but 50x70 feet in size, and into this the crowd presses, the spectators bringing their lunch with them and consuming the pure air which is barely sufficient to keep those who belong in the court room in good breathing material. Considering the fact that the protracted sickness or death of one of the jurors would necessitate a new trial, or rather a repetition of a farce of which the whole country has already had enough, proper precantion, even to the exclusion of the spectators, should be taken.

For another week Guiteau has been insulting the judge, jury, witnesses and nearly every one else who has anything to do with the case. His divorced wife testified that she had never observed indications of insanity in his conduct. Two experts deposed that careful examinat ons failed to reveal any malformation, and one of them, Dr. A. McLane Hamilton, declared he thought the prisoner while in court was playing a part. Mr. Scoville will attempt to break down the testimony of the witness who recently testified that he had heard Guiteau say that he would make himself notorious by killing some great man, as Booth did. After the court adjourned on Friday a mysterious box, which had arrived by express for Guiteau, was opened and found to contain a hangman's rope sent from Myersville, Pa. Mr. Scoville also received a postal card notifying him to watch the van on Dec. 21, as men had been detailed to take Guiteau's life. Mrs. Scoville is very apprehensive that her brother will be assassinated.

The special committee appointed by Congress to arrange memorial services in honor of the late President recommended that some eminent citizen and orator who has been on terms of intimacy with Gen. Garfield, be invited to deliver the principal eulogy, and Mr. Blaine has been since selected, with two members of each House to follow with brief speeches, the services to be closed by prayer. It will be remembered that the memorial oration upon Mr. Lincoln was delivered by George Bancroft.

The fund for the monument to Garfield at Cleveland may very likely reach $100,000 in time. It is now about $72,000, of which Ohio has given nearly $60,000 and the rest of the Union about $12,000; and of Ohio's portion about $50,000 were contributed by Cleveland. Expectations are raised that the relics constructed from the wood, cloth, and other material used around the catafalque will net a handsome sum for the building fund, to which the proceeds are to be devoted. These relics have lately appeared in several cities, including New York, and are advertised with the holiday goods, the authenticity of each memento being duly certified.

Mr. Frelinghuysen of New Jersey has been nominated and confirmed to be Secretary of State *vice* Mr. Blaine resigned. He will assume the duties of office on Monday.

Mr. Scoville, Guiteau's brotherin-law and counsel, lectured in Washington on the case and complained of the general disposition to consign his client to the gallows regardless of the open question as to his sanity. He stated his belief that the prisoner will be assassinated before the end of the trial.

In the House of Representatives on the 13th 752 bills and joint resolutions were introduced by 113 members, the call resting with the State of Massachusetts. Had the call continued until all the Representatives and Delegates had been afforded an opportunity to unload themselves, the titles of about 2,000 bills and joint resolutions would have appeared upon the first calender of the session. The bills brought in relate to a vast variety of subjects, including internal revenue, the tariff, coinage and currency, Indian affairs, reapportionment, etc.

Some weeks ago a number of business men of Cincinnati, desiring to compliment Atlanta, and especially the Exposition in progress there, prepared a floral ship called the "Atlanta," and, with a party of ladies and gentleman, bore it to Atlanta and made a formal presentation of it to the managers of the Exposition. On the 15th inst. it was returned in charge of a party of ladies and gentlemen of Atlanta, not as a floral ship, however, but freighted with Southern products. Its sheathing was of cotton, and it was profusely bur-dened with all manner of Southern products. It was a pleasant exchange of courtesies between the two cities.

It is stated on good authority that the following remuneration is to be made to the physicians and nurses of President Garfield:—Congress will be asked to retire Surgeon General Barnes with the rank and pay of a major-general instead of a brigadier as he now is. Dr. Woodward, now holding the rank of major in the Medical Corps, is to be advanced by act of Congress to the special rank of colonel, to be created for him in recognition of his services to the wounded President. Under the act to pay all the expenses incident to and incurred by President Garfield's illness and death, bills to the amount of $110,000 or even $125,000 will come in. Of this appropriation Doctors Bliss, Agnew and Hamilton are to receive two-thirds, which would give to each about $24,000 or $27,000. The physicians say that under no circumstances will they present bills either to Mrs. Garfield or against the estate of her deceased husband. The four nurses are to receive $2,500 each. Dr. Lamb, of the Surgeon General's Office, is to receive $100 for the autopsy which he made. Dr. Reyburn, who was Dr. Bliss' assistant, will also receive a reasonable sum for his constant attendance.

Mr. B. H. Brewster of Philadelphia was nominated on Friday by President Arthur to be Attorney-General. He is an able man and a ready orator.

A colony 5,000 strong, invading Indian Territory from the Texas border, has laid out a town site, Oklahoma City, and does not anticipate expulsion.

"Feel Like a New Person."

A patient, after giving Compound Oxygen a trial, writes: "Headache all gone; good appetite, and can sleep well at night without coughing, a thing I have not been able to do for a year. I feel like a new person. I can breathe now." Treatise on Compound Oxygen, *sent free*. DRS. STARKEY & PALEN 1109 and 1111 Girard Street, Philadelphia, Pa. —*Adv.*

AGRICULTURAL NEWS.

Saturday, DEC. 17, 1881.

The following items of agricultural interest have been condensed from cablegrams received here between yesterday noon and noon to-day:.....

Portland Me: County produce continues to maintain good prices. Boston, Mass: A better feeling in wool, with an increased demand. Sales of the week 2,350,000 pounds of all kinds. Sales of Mich. Fleeces 405,000 pounds at 40@43c, the latter for choice; principally 41@42c. for average lots. Ohio and Penn. fleeces bring 42@43½ for X, and 43@44c. for XX and above. Combing and delaine fleeces quiet at 49@50 for fine; coarse dull at 36@42½; unwashed combing 27½@34c.....Utica, N. Y. Creamery butter 32c@35c: dairy, 25@30c. Cheese 12@14c; eggs, 28@29c; limed 24c. per dozen. Loose hay, $13@15; baled, $16@17; oat straw, loose, $8@9; baled, $10@12.....Philadelphia, Pa. During the past few days there have been a better feeling and a greater inquiry for wool than for some time previous. Should this result in large sales, the market will be strengthened, but at this late season many holders are disposed to accept present prices rather than hold much into the new year. Buyers of cotton are well stocked—a decline of ⅛c. from last week's rates reported. Breadstuffs not very active; prices on several grades a trifle lower than a week ago. Rye and corn dull, demand nominal. Buckwheat meal slow at $4@4.30. Demand for apples less than supply—principally inferior sorts. not sought for. Butter and cheese, prices unchanged. Eggs, too, firm. Supply of potatoes good; best stock selling at former prices.....

Cleveland, Ohio.—Mess pork, $17.50; weather cold and clear.....Cincinnati, Ohio.—Tobacco in fair supply. Grain and flour light. Hogs coming in fairly.....Toledo, Ohio.—On account of mild weather, heavy rains, and bad roads, not much country movement of late. Grain market weak with a downward tendency.....Louisville, Ky.—Mild weather continues. Receipts and shipments of grain, good. An active demand for corn for distillers and feeders; No. 2 white, 72c.; do. mixed, 68c. Wheat, $1.35. The wheat prospect in Kentucky is reported excellent. A material increase of cotton receipts here over those last year. The cotton section tributary to this place has suffered severely from drought, and the yield is less, but local factors are covering much larger territory than heretofore. Country collections good.....Chicago, Ill.—Only a moderate business in grain. Receipts of breadstuffs for the week: 95,491 barrels flour; 218,408 bushels of wheat; 660,465 bushels of corn, and 345,766 bushels of oats. Shipments 85,640 barrels flour; 142,193 bushels wheat; 607,280 bushels of corn and 230,963 bushels of oats, leaving on hand 3,800,000 bushels of wheat; 5,550,000 bushels of corn; 554,000 bushels of oats; 363,560 bushels of rye and 221,960 bushels of barley. At same date last year there were in store 6,412,929 bushels of wheat, 4,208,575 bushels of corn; 1,378,853 bushels of oats; 297,219 bushels of rye and 230,663 bushels of barley. Travelers just returned from Iowa and other points in the Northwest report that a large amount of wheat is still stacked, farmers holding it in expectation of better prices in Spring: prices are expected to reach the top in May.....

Peoria, Ill.—Country roads getting in better condition, and country selling and buying are much brisker.....Detroit, Mich.—Business here and in the interior of the State quiet. Lumber market growing stronger and stronger owing to the prospect of an open Winter checking logging operations. Pork packing very active, but the movement in dressed hogs is light. Grain trade entirely speculative. Wheat unsettled. No. 1 white, $1.34 cash; $1,40½ for April delivery. Corn steady; No. 2, 66½c. Lake navigation just closing.....Burlington, Ia.—Country roads bad; but collections fair.....St. Louis, Mo.—Provisions weak and fluctuating. Leaf tobacco is dragging badly and the weather is unfavorable for a new stock. For the week grain has been notably dull, but it is now strengthening. Demand for cattle exceeds supply; but no advance in prices. Two cold days have caused an average advance of 10c. per 100 pounds in hogs;.....Milwaukee, Wis.—Weather throughout the week stormy but variable, finally clearing off cold and bracing. A liberal out-put of currency has gone to the country, as the improved condition of country roads has resulted in a liberal movement of produce and grain, the wheat receipts averagiug nearly 5,000 bushels daily. Grain shipments small. Much of the wheat received is said to be damp and damaged. Flour still quiet. City mills run a few hours daily for local consumption. Wheat No. 2, Milwaukee Soft, $1.28⅛, cash; $1.32, May. Provisions strong at an advance of 5c. on last week. Receipts largely in excess of those at this time last year. .....

Minneapolis, Minn.: Weather still fair and mild throughout the Northwest with a free movement of produce. Wheat is disappointing, as a large percentage of the crop has been badly injured by continuous rains during September and October. This has demoralized the market and checked deliveries, as millers and dealers have no faith in the keeping qualities of the grain. The country cannot rely on any large amount of milling wheat from the Northwest—millers here cannot procure a full supply. Lumber market will be quiet until after New Year's.....

Omaha, Neb.: Country roads now in good condition. Poultry scarce and high-priced. Grain and produce have advanced slightly.....San Francisco, Cal.: Copious rains are now falling throughout the State. Pork products lower. Rice going up. Heavy exports of wheat at dull, declining rates. Sales of shipping wheat 7½ per ceutal below last week's quotations.....Baltimore, Md.—Corn and wheat too high for exportation. Market for spot cotton dull and weak. Wheat inactive and prices lower. Southern corn in active demand at steady prices; Western dull and lower. Fruit market very active on account of approaching holidays.....Wilmington, N. C.—Weather cold and rainy. Cotton firm. Spirits of turpentine and resin advancing. Provisions steady.....Charleston, S. C.—Cotton receipts good. Weather now quite cool.....Savannah, Ga.—Cotton for the week has been quiet, but a number of brokers have been forced to sell, owing to stringency in the money market. A fair demand for better grades; lower neglected and accumulating. Rice supply limited; prices keep up still.....Augusta, Ga.—All cotton factories running on full time with orders ahead. All of the $1,000,000 capital of the King Cotton Manufactory has been subscribed. Cotton continues to come in rapidly; receipts since September 1, 118,230 bales against 141,080 bales at the same date last years. Money still tight in town and country places.....Memphis, Tenn.—Produce and provision markets well supplied; indications of a decline in prices.....Nashville, Tenn.—Receipts of cattle very light, with scarcity of good grades. Hog market considerably depressed; weather too warm for packing. Feathers have advanced to 48c. Eggs 28c. from first hands. Limited demand for wheat at steady figures. Collections fair.....

An association of St. Louis millers has purchased a large wheat farm in Dakota, and propose to raise their own wheat, instead of buying from middlemen. The project seems feasible. The Chicago Inter-Ocean commends the project, and hopes that millers in other localities will adopt it. The danger is pointed out that the farm business of a great association will not be managed as well as it would be by a single farmer.....Florida oranges will soon be plentiful. The crop this year is stated to be larger than ever, and the quality superior. None have been injured by frost. The Palatka Journal of a late date, shows that 8,283,000 are produced in its district alone, and says: "This is clearly the bearing year for this section. The yellow *pommes* of Florida may substitute in some degree the usual supply of apples at the North..... Before the civil war the exports of pecan nuts from Indianola, Tex., were reported at $100,000; now it is estimated that the amout annually gathered exceeds $2,000,000 in value. But little care, however, has been taken of the trees; in fact, in many localities, trees 50 to 100 years old have been cut down to secure the nuts. With proper care of the treee and systematic gathering of the crop, it is believed that $10,000,000 could be annually realized.....Holland is shipping kraut to the United States by the ton; 2,000 barrels reached this country last month. The occasion is this year's short cabbage crop. Cars that last year were unloaded here with 4,000 head of cabbage now hold 12,000, so much smaller is the growth. The quality of cabbage which is this year sought after at 25 and 30 cents a head was a drug in the market in the Fall of 1880.

The Pittsburg Sunday Leader quotes:—Mr. Martin Karg, Silver Creek, Minn., cured a badly wounded horse with St. Jacobs Oil.—*Com.*

Shan't I Take a Blue Pill?

No, don't take it and run the risk of mercurial poisons, but when bilious and constipated get a box of the celebrated Kidney-Wort and it will speedily cure you. It is nature's great remedy for constipation, and for all kidney and liver diseases.—*Adv.*

The ladies who sometime since were unable to go out, having taken Lydia E. Pinkham's Vegetable Compound, are quite recovered, and have gone on their way rejoicing.—*Adv.*

A Pure and Effective Hair Dressing.

COCOAINE, a compound of Cocoanut Oil, beautifies the hair and is sure to allay all itching and irritation of the scalp.

The superiority of BURNETT'S FLAVORING EXTRACTS consists in their perfect purity and strength.—*Adv.*

The Markets.

SPECIALS FROM THE CHIEF CENTERS.

Until Saturday, December 17.

CHICAGO.—WHEAT unsettled; No 2 Chicago Spring, $1.26½@1.27 cash; $1.26¾, December; $1.2?¾, January; $1.28⅜@1.28¼, February; No. 3 do. $1.12½; rejected, 80@86c. CORN fairly active at 60¾@61c. cash; 60¾c. December; 61@61½c., January; 61⅝@61⅞c., February; 67⅝@66¾c., May; rejected, 59c. OATS fairly active and a shade higher at 46¼c., cash and December; 44⅜c., January; 44⅝., Febrnary; 46⅝@46¾c., May. FLAXSEED $1.34@135. PORK unsettled. Old, $16.50: New. $16.87½, cash and December; $16.80@16.82, January; $17.02½, February; $17-25, March. Lard active but a shade lower at 10.90@10.95c., cash; 11.07½@11.10c,, January; 11.22½c., February; 11.37½@11.40c. March. Bulkmeats easier; Shoulders; $6.25; Short Rib, $8.85; Short Clear, $9.11. HOG market generally weaker, except for choice; light bacon sold at $5.90@6.05; common to good mixed weak and prices 5@10c. lower at $5.70@6.20; heavy packing and shipping, $6.25@6.65, including Philadelphias and lard hogs; skips and culls, $4@5.25. CATTLE market dull, weak and 10c. lower than yesterduy, few Christmas cattle offered; quotations nominal at $7@7.50; exports, $6@6.65; good to choich shipping, $5.15@5.60; common to fair, $4@5; Mixed butchers' steady; poor to good cows, $2.25@$4; bulls $2.50&4; oxen, $3.50@4.50; Texans nominally $3@4.35. SHEEP market steady generally firm; common to medium, $2.75@3.50; good to choice, $4@5. Extra, $6.

CINCINNATI.—WHEAT dull; No. 2 Red Winter, $1.36@1.37. CORN firm; No. 2 Mixed, 64½@65c. OATS firm; No. 2 Mixed, 49c. RYE dull at $1.05½. BARLEY dull at $1.05. PORK dull at $17@17.25. Lard dull at 10.90c. Bulkmeats heavy; Shoulders, 6¾c.; Clear Rib, 8¾c. Bacon dull and unchanged. HOGS.—Common and Light, $5@6.10; Packing and Butchers', $6@6.50. BUTTER—Fancy creamery sells at 40@41c.; good to prime do., 33@38c.; fancy dairy, 28@30c.; prime to choice Western Reserve, 25@28c.; medium do., 20@23c.; prime to choice Central Ohio, 20@23c.; common, 15@18c.; inferior 12@13c. per pound. CHEESE has been in light demand all the week, but prices are firm for prime to choice factory at 11½@12½c. per pound. EGGS.—

The receipts have been light and prices have advanced to 31c. per doz. for fresh. HAY.—The receipts have been large, and prices rule lower. Common mixed sells at $15@17, and No. 1 Timothy at $17@18 per ton in bales on arrival; prairie hay sells at $13; wheat and rye straw is easier at $10@11, and oats straw at $11 yer ton. HEMP.—There is little offered, but the demand is light for rough and fair for dressed. Rough Kentucky sells at $125 per ton on track; singled dressed sells at 8½@9c., and double do. at 10@10½ per pound from store. MILL FEED.—The receipts are scarcely equal to the demand and prices are higher. Bran sells at $20.50; shipstuffs at $21@22, and middlings at $23@28 per ton in bulk, and 50c. more in sacks on track.

ST. LOUIS.—No. 2 Red Fall Wheat, $1.33½, cash; $1.35½, January; $1.38⅝, February; $1.40¼, March; $1.43⅝, May; sales at $1.35¼, January; $1.38, February; $1.40, March; $1.43¼, May. CORN steady, but slow at 62⅞c., cash; 64⅜c., January; 65⅝c., February; 66½c., March; 68¾c., May. OATS, 47½c., cash; 47¼c, January; 47¾c., February; 50c., May. RYE slow at 98c. bid. PORK and bulk meats very dull, and nothing doing. Bacon lower; shoulders, 7½c.; clear rib, $10.10; clear sides, $10.20. Butter and eggs nominally unchanged. CATTLE—Demand fair for good butcher stock and feeding steers, but other grades slow; medium to choice butcher's steers, $3.75@4.90; good cows and heifers, $3.50@4; do., Texans and Indians, $3.50@4; feeding steers, $3.40@4; shipping steers scarce and demand light; medium to fair, $4.57@5.25. Sheep—Good to fancy muttons wanted at $4@5; low grades slow. HOGS—Yorkers higher; other grades unchanged; very light, $5.25@5.50; Yorkers, $5.90@6; packing, $6.30; butcher's to fancy, $6.35@6.70.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 17, 1881.

BEANS AND PEAS.—A confident feeling prevails for standard white beans. The new and stronger prices have produced some feeling of caution on the part of buyers, but rates as a rule are supported for all whites. Red beans quiet, but well held.

Green peas generally quiet; $1.65 in bbls. and $1.50 in bags. Southern B. E. peas $3.25@3.40 ₱ 2-bush bag, mostly ordered.

Beans, marrow, prime, $3.52½@3.55; fair to good, $3.25@3.45; medium, choice, $3.25; fair to good, $3@3.20; pea, choice, $3.25; fair to good, $2.90@3.05; white kidney, choice, $3.45@3.50; fair to good, $3.20@3.35; red kidney, choice, $2.85; fair to good, $2.50@2.80; turtle soup, $1.75@1.80.

Peas, green, prime, in bbls., $1.65; green, in bags, $1.50@1.55; Southern b. e., per 2-bu. bag, $3.25@3.40.

Receipts of beans for the week, 6,770 bush.

Exports do. 488 bbls.

BUTTER.—High rates at the West for Elgin have given that brand a special place in the market, and 42@45c. is quoted. Of other styles of Western creamery and half tubs there is a free offering and prices are regarded as very full, never in a large way reaching the extremes. Westerns is running so close to State that it receives no special attention. The demand is so purely local that sellers have to humor trade more or less as there is no outlet in a foreign way.

Creamery, fancy, 44@45c.; choice, 40@42c.; fair to good 35@39c.; ordinary, 28@34c.; State half firkins, fancy, fresh, 34@35c.; choice, 32@33c.; prime, 28@32c.; fair to good, 23@27c.; firkins, choice, 31c.; fair to good, 25@30c.; ordinary, 20@22c.; State dairies, entire choice, 31@32c.; fair to good, 27@30c.; State Welsh tubs, choice 33c.; fair to good, 29@31c.; Western imitation creamery, 28@30c.; dairy choice, 32@33c.; good to prime 25@31c; ordinary to fair 18@22c.; special marks, June 16½@17c.; prime to choice do. 15@16c.; choice, current make, 20@22c.; fair to good do. 15@18c.; inferior 12@14c.

Receipts for the week, 25,533 pkgs.

Exports do. 1,542 do.

CHEESE.—Fancy factory is held with more confidence. Shippers are well filled up, but at this season the local wants are apt to run upon a better style of cheese than usual and consequently some parcels are held a shade above 12½c. There is a fair trade in good skims.

State factory, fancy, 12½c.; choice, 12@12¼c.; prime, 10½@11¾c.; fair to good, 10@11¼c.; ordinary, 9@9¾c.; Ohio, cheddar, fair to good 10@11c.; prime 10@11c., fair to good, 9@10c.; creamery part skims choice 9@9½c.; fair to good 7@8c.; ordinary, 4@5c.; full skims 2@3c.

Receipts for the week, 47,131 bxs.

Exports do. 39,600 do.

Liverpool cable 12s. 6d.@15s.

Steam to Liverpool, 54s. 6d@63s. for Summer to late makes.

COTTON.—There has been a strong and partly successful attempt to push up prices up prices this week with the basis of Agricultural Bureau report. The estimate is down to 3,000,000 bales. The condition of the crop is said to not have been so bad since 1866. Among dealers there has never been a season when opinions as to the outcome of the crop have been so varied.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 5-16	9⅝	9⅝
Strict ordinary	9¾	10 3-16	10 3-16
Good ordinary	10 11-16	11	11
Strict good ordinary	11¼	11 7-16	11 7-16
Low middling	11 9-16	11¾	11¾
Strict low middling	11 11-16	12⅛	12⅛
Middling	12	12⅜	12⅜
Good Middling	12¾	12 11-16	12 11-16
Strict good middling	12⅞	12 15-16	12 15-16
Middling fair	13¼	13 7-16	13 7-16
Fair	13⅞	14 3-16	14 3-16

STAINED.

Good ordinary	8⅞	Low Middling	10 9-16
Strict good ordinary	9⅛	Middling	11 9-16

Futures fairly active, closing buoyant at an advance of 12 to 17 points; sales, 165,200 bales; prices paid: December, 11.98@12.10c.; January, 12.11@12.27c.; February, 12.32@12.49c; March, 12.53@12.69c.; April, 12.70@12.88c.; May, 12.83@12.97c.; June, 12.94@13.08c.; July, 13.15c.; August, 13.15@13.26c.; September, 12.55c.; October, 11.85@11.87c.; November, 11.61@11.69c.

Receipts for the week, 46,578 bales.

Exports do. 8,912 do.

DRIED FRUITS.—No quotable variation for evaporated apples. Sun-dried easier.

Apples, evaporated, rings, f'y 13½@14c.; fair to prime, 11@12c.; N. C. new, sliced, fancy, 7½@8c.; fair to choice, 6@7c.; Southern quarters, choice, 6¼@6¾c.; Southern, fair to good, 5@5¾c; do. ordinary, 4½@5c.; State, old, fine-cut, choice, 6@6¼c.; quarters, do. 5¾@6c.; small lots, 6@6¼c.; Ohio and Mich. choice, 5¾@6c; Western, fair to good, 3¾@6¼c. Peaches, evaporated, peeled, old, 35@37c.; unpeeled, new, 16@—c.; N. C. peeled, fancy, 22@23c.; choice, 20@21c.; Ga. 20@21c.; Southern, peeled, fair to good, 16@18c.; unpeeled halves, 6½@7c.; halves, Tenn. 6c.; quarters, 6¼@6½c.; Plums, State, black, 16@17c.; St'n Damson, 13½@14c. Blackberries, 13c. Cherries, Southern, dry, 18@20c. Raspberries, pr 27@28c. Huckleberries, pr 14@15c.

EGGS.—Receipts are light, and though trade is not sharp the weather gives sellers considerable independence, and prices are steady.

Choice stock, ₱ doz. 33@34c.; State and Pa. 30@31c.; Western, choice, fresh laid, 28@29c.; do. and Canadian fine, held, 26@ 27c.; Southern, fresh fine, 27@29c.; Western, Southern and Canadian, fair to good, 24@ 26c.; limed eggs, State, 23@24c.; Canada and Western, prime, 22@23½c.; fair to good, 21@22c.

FLOUR.—The close of the year is usually a dull time for high grades of flour, and this date is no exception. Receipts are largely composed of family brands, and in the endeavor to make prompt sales the market is declining. Export sorts not plenty and are making steady quotations. Buckwheat flour scarce and tending higher.

No. 2, per bbl., $3.40@1.45; State and Western, superfine, $4.40@4.90; city mills, XX, $6.90@7.35; Spring wheat, extra, $5.00@5.35; Spring XX and XXX, $5.50@6.75; patents, $6.50@8.50; Ohio round hoop shipping, $5.25@5.65; trade brands, $5.75@6.50; St. Louis extra, $5.40@5.90; do. double extra, $6.10@6.50; do. family, $6.65@7.25; Southern extra shipping, $6.00@6.40; do. XX and family, $6.50@7.50. Rye flour, superfine, $4.75@5.10; buckwheat flour ₱ 100 lbs. $3.60@3.90. Cornmeal, Brandywine, ₱ bbl. $3.75@3.85; do. Western, $3.35@3.75. Wheat feed, 40 ℔ ₱ ton, $19.00@20.00; 60 ℔ ₱ ton, $20.00, 100 ℔ ₱ ton $31.00@25.00.

Receipts of flour for the week, 42,958 bbls.; cornmeal, 3,750 do.

Exports of flour for the week, 42,960 bbls.; corn-meal 4,200 do.

FRESH FRUITS.—Large quantities of apples have saved badly, and there is a large offering of inferior or spotted in market. Prices irregular for all but fine stock; this is not pressed for sale. Virginia shipping some costly Albemarles to Europe. Cranberries extremely firm, and extra hard Eastern fruit is tending higher. Grapes have little inquiry. Fine Florida oranges are in demand. Buyers prefer to pay top rates for holiday purposes.

Apples, Spitzenberg, ₱ bbl. $3.50@4.50; Greening, fancy, $3.50@3.75; Baldwin, do. $3.50; Seeks, prime, $3.25@3.50; Baldwin, Greening and Seeks, fair to prime, $3.00@3.25; Northern Spy, prime, $3.00@3.25; Russet, prime, $3.00; seconds, $1.75@2.00. Lady apples, choice clear, ₱ keg, $1.00@6.00; poor to good, $1.50@3.00. Pears, Boston, bush. boxes, poor to good, $1.50@3.50; Vicar of Wakefield ₱ bbl., $2.50@3.00; Grapes, Catawba State, case of 18 3-lb. bxs, 3.00@3.00; baskets, ₱ lb., 6@8c. Florida oranges, half-bbl. boxes, choice, $4.00; good to prime, $3.25@3.75; inferior, $2.50@2.75; thirds, choice, $2.75; fair to prime, $2.25@2.50; inferior, $1.75@2.00. Cranberries, Cape Cod, fancy, large, ₱ bbl. $12.50@13.00; good to choice, $10.00@12.00; inferior, $6.00@8.00; ₱ crate, $3.25@4.00; Jersey, choice, ₱ crate, $3.25@3.50; fair to prime, $2.75@3.25; poor to fair, $2.25@2.75; frosted, 75c.@$1.

Peanuts in very small supply and higher. Pecans firm. Hickory nuts quiet. Black walnuts in small supply; few are wanted.

Peanuts, Va., hand-picked, ₱ lb. 7½@7¾c.; fancy, 7c; extra prime, 6¾@6¾c.; good to prime, 6¼@6½c; shelled, 5@6c.; pecan nuts, 10@12c.; hickory, shell, bark, Northern, ₱ bu. $1.00@1.25; Western, $1.00; bull nuts, 40@50c.; black walnuts, 50c.

GRAIN.—Supplies at all points of collection continue to be light, and with a good export call prices have a stronger tendency and close fairly firm. The visible supply 1,000,000 bushels less than last week. Corn is 1,800,000 bushels less in sight than a week ago, and prices rule strong with a trade for use. Oats have a fair demand and prices tend easier.

Wheat, Spring, $1.25@1.38; Spring No. 2, $1.32@1.37; red Winter No. 2, $1.40@1.42; red Winter, $1.35@1.41; white Western and State, $1.32@1.41. Rye, 91c.@97c. Oats, white No. 1, 51¾@52c.; No. 2, 50½@51c.; No. 3, 50c.; mixed, No. 1, 50@51c.; No. 2, 49½c.; No. 3, 47@48½c. Corn, Western, mixed, 66@70¼c.; do. No. 2, 69¼@70¼c. yellow, 69@71c.; white, 72@73c. Barley, Canada, No. 1, $1.09@1.10; do. "bright," $1.12@1.14; State, 4-rowed, 95c.@$1; 2-rowed, 80@85c. Buckwheat, $1@1.02.

Receipts for the week, wheat, 399,350 bush.; corn, 363,567 do.; oats, 125,950 do.; rye, 70,492 do.; malt, 52,400 do.; barley, 112,850 do.

Exports for the week, wheat, 395,507 bush. corn, 263,299 do.; oats, 1,775 do.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Dec. 3. bush.	1880. Dec. 11. bush.	1879. Dec. 13. bush.
Wheat	18,876,107	28,673,491	27,688,539
Corn	18,817,521	15,257,056	10,079,363
Oats	2,820,045	2,816,749	2,612,661
Barley	3,165,971	2,963,941	4,730,815
Rye	1,253,216	932,633	1,161,970

HAY AND STRAW.—Supplies are large and prices are weak. Fancy Jefferson Co. may make $1.05, but there is an abundant offering of useful retail at $1.00. Straw in fair demand.

Hay, retail quality, fine, ₱ 100 lbs., 95c.@$1.05; do., fair to good, 80@85c.; shipping quality, 60@70c.; clover mixed, 70@80c.; clover, 60@65c. Straw, best, 70@80c. ₱ 100 lb; short rye, 55@60c.; oat and wheat, 40@50c.

HONEY.—Quotations are:

White clover, fancy, 1-lb bxs, ₱ lb., 19@20c.; do. 2-lb bxs, 17@18c.; good to choice, 1@2-lb bxs, 15@17c.; buckwheat, 1-lb bxs, 14@15c.; 2-lb bxs, 12@14c.

HOPS.—A fair amount of business exists, but no spirit to operations on the part of any class of buyers. Cable advices from London report an active business there on the basis of previous prices. The bulk of American hops there is understood to have been taken up, and the prospects are considered favorable for higher figures after the holidays, providing no extensive amounts are shipped from this market in the meantime. We hear of considerable buying at interior points, with prices paid above what most dealers claim can be obtained here; besides this, the interior holders are said to be displaying more firmness.

New York State crop of 1881, prime to choice, 26@30c.; do., mediums, 23@25c.; do., low grades, 20@22c.; do., 1880, good prime, 18@22c.; do., low to fair, 12@15c.; do., 1879, fair to choice, 16@20c.; do., olds, 7@15c.; Eastern, crop of 1881, fair to choice, 20@26c.; Wisconsin do., 20@27c.

MILK.—Most of the common cans have sold on plat form at $2 per can of 40 quarts. Demand not sharp.

POULTRY AND GAME.—It has been a low, unsatisfactory week for dressed. The market has been so glutted with poor or stale stuff that shipments this way had to be discouraged. The weather has improved and shipments of fresh stock may improve.

Turkeys, Phila., choice, dry picked, 14c.; Jersey, choice, 13@13½c; State and Western, choice, 12@13c.; fair to good, 8@10c.; poor, 5@6c.; Chickens, Phila., 12@14c.; do., small, 11@13c.; Jersey, choice, 11@12c.; State and Western, 10c.; scalded, poor to fair, 3@7c. Fowls, mixed State and Western, 8@10c.; Bucks Co. and New Jersey, prime, 11c.; Long Island and New Jersey, fair to good, 9@10c.; Phila. dry picked, prime, 12@13c.; State and Western, 8@10c.; do., poor to fair, 8@9c.; old roosters, ₱ lb. 4@5c. Ducks, Phila., ₱ lb, 13@14c.; State and Western, choice, 12@13c.; do., fair to good, 8@10c. Geese, Phila., choice, 12@14c.; State and Western, prime, 10c.

Live poultry is not wanted.

Spring chickens, large Jersey, 8@9c.; do., light, 7@8c.; Western, ₱ lb, 7@8c. Fowls, Pa. and Jersey, ₱ lb, 8@9c.; State, 8c.; Western, ₱ lb, 8c. Roosters, old, ₱ lb, 4@5c. Turkeys, Jersey and Pa. ₱ lb, 8@10c.; Western, 7@8c. Ducks, State, Pa. and Jersey, ₱ pair, 50@70c.; Western, ₱ pair, 40@50c. Geese, Western, ₱ pair, 90c.@$1.12; State, Pa. and Jersey, ₱ pair, $1.25@1.50.

Game is in good demand and prices have favored sellers.

Quail, choice, ₱ doz. $2.50@2.75; small and soft do. $1.50@2; prime undrawn, ₱ pair, $1@1.12; grouse, prime undrawn, ₱ pair $1.00@1.12; drawn, 80@90c.; partridges, State and choice Western, ₱ pair, 90c.@$1; Eastern and ordinary Western, 60@75c.; wild ducks, canvas back, ₱ pair, $2@3; red-head, 75c.@$1; mallards 40@90c.; teal and wood, 35@50c.; common, 25c.; venison Minn. short saddles, ₱ lb. 15@16c.; other Western and State, 13@14c.; whole deer, 10@12c.; rabbits, ₱ pair, 30@40c.; hares, 40@45c.

PROVISIONS.—French reports look glowing, in fact many parcels of bacon bought on French and Continental account have been turned on our market for resale. This is a bad feature as the English trade is comparatively at a pause. Lard is quiet and the general tone of hog products is easy.

Pork, West. mess, old, ₱ bbl. $17.00@17.25; do. new, $17.75@18; prime mess, $16@16.50; extra prime, $13.00@14. Lard, steam Western, ₱ 100 lbs., $11.17½@11.20; pr city, $11.10@11.12½. Hams, smoked city, ₱ lb. 12@12½c.; pickled Western and city 9½@10c. Shoulders, smoked city, 8@8½c; pickled, 7@7½c. Rib bellies, pickled, 9@9½c. Bacon, long clear Western, 9¼@9½c. Beef, Western mess, ₱ bbl. $12; packet, $14.50@15.00; India mess, ₱ tce. $25@26.50. Beef hams, ₱ bbl. $21@21.50.

Receipts for the week—Beef, bbls. and tcs. 1,621; pork, bbls. 8,911; cut-meats, pkgs 36,850; lard, do. 27,410.

Exports for the week—Beef, bbls. and tcs. 2,917; pork bbls. 4,025; cut-meats, lbs. 6,852,638; lard do. 1,899,141.

VEGETABLES.—Potatoes strong and firm.

Potatoes—Early Rose, N. S., ₱ d.-h. bbl., $3@3.25; bulk, ₱ bbl. $2.75@3; State, ₱ d-h bbl $2.87@3.12; bulk, per bbl, $2.75@3.00; Prolific, N. S. per d.-h. bbl, $2.75@2.87; bulk ₱ bbl. $2.50@2.75; Snowflake, State, ₱ d.-h. bbl. $2.75@3.00; bulk, ₱ bbl. $2.62@@2.87; Burbank, ₱ d.-h.bbl. $3@3.12; bulk, ₱ bbl, $2.87@3.00; Peerless, bulk, ₱ bbl., $2.50@2.75; Mercer P. E. Island, ₱ bbl. $1.50@2.25; sweet potatoes, Va. yellow, ₱ bbl. $3.75@4; Del. River, $4.50@4.75; Jersey, ₱ bbl. $3.50@4.00; Inferior, $2.50@3.25.

Good quality garden stuff steady. Many off-grade lots arrive since high prices have been current.

Onions, white bulk, ₱ bbl. $2.50@3.50; yellow, $2.00; red, east, $2.00; red Chester, $1.75@2.00; squash, L. I. ₱ bbl., $2.50@3; State Hubbard, $1.75@2; cabbage, ₱ 100, $8@18; beets, L. I. ₱ bbl. $2@2.25; carrots, $1; turnips, Russia, L. I. $1.75@2; do, Canada, $1@1.50 cauliflower, fancy, $5@7; average quality, $1.75@2.50; inferior, 50c@$1; celery, ₱ doz. bunches, $1.00@1.75.

WOOL.—There are no new features and prices are nominally firm for all fine domestic. No trade if moment expected until the New Year sets in.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Dec. 17, 1881.

BEEVES.—Receipts for the week, 12,340 head; do. last week, 12,135do. The offerings on the market were rather more than butchers wanted, and the yards were not clear at a late hour. The extreme range for very poor to premium cattle was from 6c to dress 55 lbs to 14c to dress 60 lbs, with the greater part of the sales at 8¼@12½c to dress 55@58 lbs, and includes common to choice.

COWS AND CALVES.—Market dull and lower. Good cows $35@60; prime to fancy, $65@75.

SHEEP AND LAMBS.—Receipts for the week, 28,375 head; do. last week, 28,285 do. Very little trade at either market place. Butchers want to work off the stock which has accumulated on their hands before making fresh purchases, and the few odd lots bought yesterday were to fill out prompt wants. Should the run continue light through next week, as now seems probable, a further improvement is inevitable. Sixty-two choice Ohio sheep, 152 lbs average, sold at 6½c.; otherwise the range for sheep was from 4 to 5½c, and for lambs from 5¾ to 6¾c.

SWINE.—Receipts for the week, 29,206 head; do. last week, 36,300 do. Market in good form, as the local demand is brisk for light hogs.

Hogs, New Jersey dressed, light, 8¼@8¾c.; medium, 8@8¼c.; heavy, 7½@7¾c.; city dressed, 7¾@8c.; live hogs, corn-fed, ₱ 100 lbs, $6.20@6.40; pork tenderloins, ₱ lb, 7@9½c.

VEAL CALVES.—Market lightly supplied and all choice live or dead doing well.

Hog-dressed, choice, 12@12½c.; dressed, fair to good, 10@11½c; do., grass, 5@6c; live calves, N. J. prime to choice, 9c.; do. State, 8½@8¾c.; fair to good, 7½@8c.; poor to fair, 6@7½c.; Mount Hollys, 160 to 220 lbs 8½@9½c.; 220 to 280 lbs 7½@8½c.; 280 to 400 lbs 5½@7½c.; live calves, fed, 4@4½c; grass, 2¾@3½c

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For the Young.

THE BABY'S PETITION.

ANNIE L. JACK.

THE baby has seen but one Christmas,
And now she is trying to walk;
But her steps are as slow and uncertain
As is her endeavor to talk.
But she knows—for the little ones told her—
(How soon children *do* understand),
That the kind Christmas saint is soon coming
To fill stockings all over the land.

So she fights with her nurse every morning,
And covers her dear, chubby feet,
Holds tightly the gay colored stocking
No matter how much we entreat.
We wonder at curly-head's meaning
Till one day the chimney she sees,
And shouts with her wide-opened stocking,
"Bing sumfin, dood man, if 'oo please."

It was only a baby's petition,
And passed with a tear and a smile;
The sweet infant graces of childhood
The coldest of hearts can beguile.
But it touched on a cord in our being
The thought is so truly our own,
When we reach out our hands for a "sumfin."
And ask it in prayer at the Throne.

THE COLD, COLD SNOW.

THE cold, cold snow! the snow that lies so white!
The moon and stars are hidden, there's neither warmth nor light;
I wonder, wife—I wonder, wife—where Jeanie lies this night!

'Tis cold, cold, since Jeanie went away;
The world has changed, I sit and wait, and listen night and day;
The house is silent, silent, and my hair has grown so gray;
'Tis cold, cold, cold, wife, since Jeanie went away.

And tick! tick! tick! the clock goes evermore;
It chills me, wife—it seems to keep our child beyond the door!
I watch the firelight shadows as they float upon the floor,
And tick! tick! tick! wife, the clock goes evermore

'Tis cold, cold, cold!—it were better she were dead,
Not that I heed the minister, and the bitter things he said,—
But to think my lassie cannot find a place to lay her head;
'Tis cold, cold, cold, wife—better she were dead!

The cold, cold snow!—the snow that lies so white!
Beneath the snow her little one is hidden out of sight:
But up above the wind blows keen; there's neither warmth nor light;
I wonder, wife—I wonder, wife—where Jeanie lies this night!

DAISY'S YEAR IN SOUTHERN CALIFORNIA.

ALICE P. ADAMS.

Up the Coast.

SAN GABRIEL, Cal., Nov. 8, 1881.

MY DEAR MOTHER: We have just come back from the nicest kind of a trip, and I will tell you as much as I can about it in this letter. Mr. Erman found that he was obliged to go to Santa Barbara on business, and as none of us except his wife had ever been there, and he dislikes to travel alone, he agreed to take us all with him if we would "be good." Violet and I promised immediately, but you must correspond with Mr. Erman if you would know how we "kept the faith." I am certain we were not very *sober-minded*. I am losing all my reputation for dignity, but there is so much to enjoy here that I cannot "preserve a calm and unruffled demeanor," as the precise Miss Briggs would say.

Santa Barbara is 110 miles from Los Angeles, making it nearly 120 from here. Mr. Erman drove us up in the spring wagon, (which is one of the completest carry-alls I ever saw) and Bert rode his pony. We started early Monday morning, and reached Los Angeles before half the city had finished their breakfast. Such a drive as we had the first day! Sixty miles! and then the horses did not seem very tired! They are quite small, but appear to be very tough, and Mr. Erman says they can travel further and endure more than large American horses.

The scenery we passed through is quite different from that about San Gabriel. Here the hills and mountains inclose a broad valley, but there were hills and hills—nothing else. We were riding "among the hills," as some one remarked, and immediately Mrs. Erman repeated several verses from Whittier's poem. (I mean to read it as soon as I finish my letter.) Some of the steep hills Violet and I walked up, for it was a pretty heavy pull for the horses. I remember the first long hill we went down. The road was cut out at the side, and wound in and out so that you could only see a little way ahead. It was very narrow, usually just wide enough for a single track, but every now and then were places where teams *could* pass if necessary.

We met four going down that one hill—great six-horse teams carrying loads of grain to Los Angeles. Mr. Erman had the outside track, so each time he had to get the wagon out as far over the edge as he possibly could, and hold the horses' heads while the great wagons came creaking by us; and the Mexican drivers usually took occasion to crack their long whips when about even with us, causing our horses to shy and start. I thought once that wagon and all would go down over the steep precipice.

They had considerable sport at my expense, for there was a mule tied behind one of the loads, and I was afraid of him and crawled down the bank as far as I could to be out of harm's way. And the animal appeared equally frightened, for he tried to climb the hill which rose up from the road like a perpendicular wall. Failing in this, he slunk around behind the wheels, and I believe he was more scared than I—though the rest do not agree with me.

After awhile the hills separated and we drove through valleys again. For miles the road lay through a beautiful park—Newbury Park I think it is called—and the whole section is a vast wheat field. It seemed strange to sow grain where there are so many trees. Live-oaks they were—just like these at San Gabriel but some of them were covered with gray-green moss; I never saw anything like it before. The branches were draped and festooned, and the moss hung down for over six feet from some of the limbs. Mrs. Erman says it is formed by the action of the sea-air. Whatever is the cause it makes the trees look much prettier, and I wish it grew on all the oaks. We brought some back with us, and Mr. Erman found me an especially nice piece that I expect you will see some day, for I put it with the rest of my *curiosidads*. (Please take notice that I am studying Spanish.) We spent the first night at a country hotel in the Conejo (Co-nay-ho,) which being interpreted is "The Rabbit Ranch." We didn't see any rabbits, and I think the name ought to be changed to something that would mean the abiding place of *roosters*, for I hope that I may never again listen to such crowing as I heard there, as Violet and I (especially I,) were dreadfully tired and cross, and those miserable fowls woke us up before daylight, and it was impossible to get another wink of sleep I hoped they would split their throats, but instead each note was clearer and louder than the last; so we gave up all thoughts of returning to the land of nod. And I remembered once reading of a young city gentleman stopping in the country whose morning nap was disturbed by roosters, and he told the farmers people that they "raised the early crocus!"

The next day's ride of 30 miles to Ventura was not as pleasant. We came down a very long, steep mountain grade; all walked, and Mr. Erman put on the brake as far as he could, and tied the hind wheels of the wagon, and we reached the foot without any accident.

I saw a wonderful old man's face on the mountain side. It looked like the head of a giant, and the features were perfect—particularly the long nose and flowing beard. I pointed it out to the others and they all saw it plainly. After that I was continually finding faces or images, which I could see distinctly, but the rest thought I was possessed of a very strong imagination.

We passed through several settlements with peculiarly unsuitable names, for the springs at Springville were conspicuous for their absence, and of all the miserable little dirty places I ever saw New Jerusalem carries off the honors!

I think I will leave the description of Ventura and other places for another letter.

Your loving daughter, DAISY.

NOTES.

KEEP the subject of the next Discussion in mind.

A member of the Club has asked us to print some pieces suitable for declamation, so this week we give a piece of poetry entitled "The Cold, Cold Snow." In the course of the Winter we shall publish other pieces.

We are much gratified at the manner in which our attempts to profit and please, are received by the members of the Club, but especially glad to see them interested in the Discussions and in letter writing.

Lest some should think that no names will be received for the Club after Jan. 1st, I will say that we shall be glad to enroll at any time the names of any of our young friends who take a lively interest in our work.

I hope none of the cousins will be discouraged if their letters do not appear in print. Where so many are received we can publish only the best; but be assured Uncle Mark reads them all, and so knows just what each one writes. It is a good thing to have practice in composition and penmanship, and all should do the best they can to say good things in plainly written letters. U. M.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK.—I have delayed writing to you about the seeds you sent us. My brother Robert and myself sowed them and cared for them. All have done well. We have taken much pleasure in seeing how nicely they grew, and in having something different from the neighbors near us, for none of them take the RURAL and of course, cannot have them unless we give them some. We had the best bed of celery I know of in this town and a bed of Japan Judas tree plants. My brother had quite a plot of the Dolly Dutton corn this year and the Surprise Musk Melons were excellent. We lost the Okra from frost. The pinks you sent were very handsome. We had about thirty different kinds, some double, some single, some large, and some dwarf—all handsome. We have a box of carnations in the house yet to bloom. The radish you sent two years ago we have saved and have had a good supply of seeds. We try to save all the seeds sent us so in time we will be well supplied. We would like to be classed as members of the Club if you will accept us. We will try to fulfill all requirements. I received the prize for best attendance at school last term, and the term before a prize for spelling.

Harwinton, Conn. JENNIE COLT.

DEAR COUSINS:—With Uncle Mark's permission I will write this letter to you. We are all looking forward to the Christmas week, knowing that of all the days Christmas is the children's day. We shall then expect to see many of our letters published, if Uncle Mark will be so kind, and we hope the cousins will readily respond to Uncle Mark's kind invitation to write at least twice a year. Won't we keep him busy, though, reading letters, for already there are quite an army of us. But just think of the waste paper which some of our letters may make if they are not published. However, each one must strive to write newsy letters, or they will become monotonous and uninteresting, and write only on one side of the paper. Bear in mind there are three things to look forward to; first, that Uncle Mark will surely read them; second, that some will most assuredly find their way to the waste basket, and, third, they may be published and make us surprisingly happy. P. H. B. LEIKEM.

DEAR UNCLE MARK.—I had no garden this Summer, but I had a flower-bed. It was so dry that nothing but my gladiolus bloomed. I watered all my flowers, but it didn't do any good. I wrote last January, but did not see my letter in print, and was nearly discouraged, but as you say, try, try again. I will try once more. I should like to tell the cousins about my pet cat. He is a year-and-a-half old, and is called Buff. Last Spring, after his mother was shot for catching chickens (she seemed to think them the only game fit for cats) Buff seemed to adopt the little orphan kittens, always sharing his dish of milk with them. Mamma says she has often heard him calling them in the night. Strangers who saw them supposed the group a mother and her family. EMMA L. REDRAH.

Fountain Green, Ill.

DEAR UNCLE MARK.—Papa takes the RURAL and I want to join the Club. I am a little adopted daugther, and 10 years old. My home is a good home, I love my parents and try to be a good girl. My papa is a farmer. We live eight miles from Port Townsend on Port Discovery Bay; I study physical geography and arithmetic, read in the fourth reader, and I am learning to play on the piano. I have a little vegetable and flower garden, and I have also a cow and calf, some chickens and a nice little canary bird. I have written several letters to you, but have never sent them because I was afraid you would not print them. I wish you could come out to to see us, but we are so far away. Your friend, ANNIE G. WEBBER.

Port Townsend, Washington Territory.

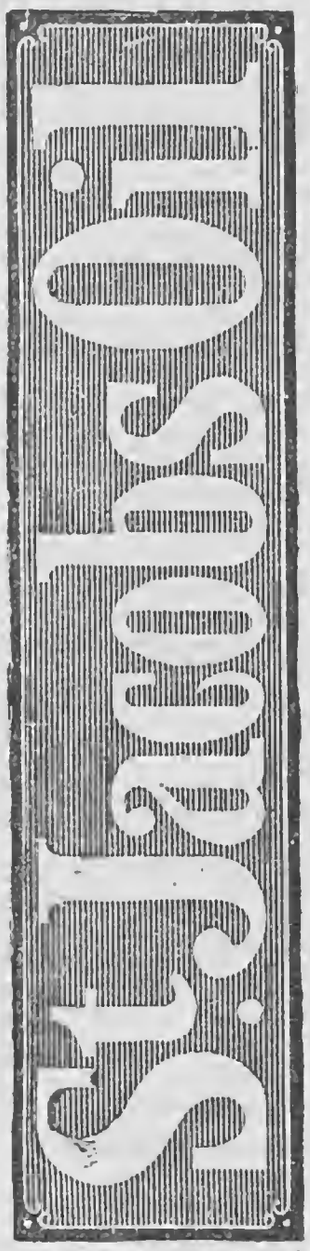
DEAR UNCLE MARK: I have been delighted with the letters from the cousins ever since papa commenced taking the RURAL. I am a little girl ten years old, and I am sure I should feel very proud to have a new uncle so kind-hearted as I really think Uncle Mark is. And then the seed distribution! How pleased I should be to get some nice flower-seeds. We had a nice large, orchard on our farm, but the canker worms have nearly destroyed it, as well as our neighbors' orchards, too. I was much interested in reading the discussion on house plants, for I do love plants, they look so cheerful in the windows and the vines look so pretty climbing around the house.

Cottage Grove, Wis. EMMA J. GURNEE.

UNCLE MARK.—I have wanted to join the Club all Summer. I am a little girl 11 years old. My brother Clarence takes the RURAL, which I like to read. I have been to school this Summer, and have only staid out one day. I have two flower beds of my own, and I enjoy flowers very much. I had very pretty pansies, verbenas, snapdragons, white marigolds, Princess feathers, petunias, two kinds of yellow marigolds, red Washington plant, white lilies and larkspurs.

Williamson, N. Y. LILLIE PRATT.

Miscellaneous.



THE GREAT GERMAN REMEDY FOR RHEUMATISM, NEURALGIA, SCIATICA, LUMBAGO, BACKACHE, GOUT, SORENESS OF THE CHEST, SORE THROAT, QUINSY, SWELLINGS AND SPRAINS, FROSTED FEET AND EARS, BURNS AND SCALDS, General Bodily Pains, TOOTH, EAR AND HEADACHE, AND ALL OTHER PAINS AND ACHES.

No Preparation on earth equals ST. JACOBS OIL as a SAFE, SURE, SIMPLE and CHEAP External Remedy. A trial entails but the comparatively trifling outlay of 50 CENTS, and every one suffering with pain can have cheap and positive proof of its claims. DIRECTIONS IN ELEVEN LANGUAGES.

SOLD BY ALL DRUGGISTS AND DEALERS IN MEDICINE.

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PROFESSOR HORSFORD'S PHOSPHATIC BAKING POWDER

Made from Professor Horsford's Acid Phosphate.

Recommended by leading physicians.

Makes lighter biscuit, cake, etc., and is healthier than ordinary Baking Powder.

In cans. Sold at a reasonable price.

The Horsford Almanac and Cook Book sent free.

Rumford Chemical Works, Providence, R. I.

GOLD MEDAL, PARIS, 1878.

BAKER'S

Vanilla Chocolate,

Like all our chocolates, is prepared with the greatest care, and consists of a superior quality of cocoa and sugar, flavored with pure vanilla bean. Served as a drink or eaten dry as confectionery, it is a delicious article, and is highly recommended by tourists.

Sold by Grocers everywhere.

W. BAKER & CO.,

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Agents wanted. $5 a Day made selling our NEW HOUSEHOLD ARTICLES and FAMILY SCALE. Weighs 1 lb to 25 lbs. Sells at $1.50. DOMESTIC SCALE CO., Cincinnati O

AGENTS WANTED EVERYWHERE to sell the best Family Knitting Machine ever invented. Will knit a pair of stockings, with Heel and Toe complete, in 20 minutes. It will also knit a great variety of fancy work for which there is always a ready market. Send for circular and terms to the Twombly Knitting Machine Co., 163 Tremont Street, Boston Mass.

EVAPORATING FRUIT.

SENT FREE | Treatise on improved methods. Tables, yields, prices, profits and general statistics. Am. Drier Co., Chambersburg, Pa

80 SAMPLE CARDS, ALL New, name on 10c. Agts Outfit 6c. CARD WORKS Birmingham, Ct.

PERSONALS.

President Arthur's children will remain in New York for the present.

W. D. Howells, the novelist, is ill at Belmont, Mass., from overwork.

Attorney-General and Mrs. MacVeagh have been visiting Mrs. Garfield at Cleveland.

Gen. Simon Cameron is going to spend the Winter in the City of Mexico, and will leave his Pennsylvania home in a few weeks.

The charming Princess of Wales has just passed her thirty-seventh birthday, and Maud, her youngest child, has attained her twelfth.

The young Duke of Portland, one of the wealthiest of English noblemen, is said to have an income of about $950,000 a year; and his predecessor, the eccentric Duke, left him $7,250,000 in cash.

Sir Thomas Gladstone, the English Prime Minister's eldest brother, has returned twenty per cent. of this year's rents to his tenants, and has promised a remission of ten per cent. next year, whether the crops be good or bad.

"The threatened litigation between the Baroness Burdett-Coutts and her relatives has been averted. All the counsel consulted considered that she married a foreigner, which she could not do under the terms of the will of the Duchess of St. Albans without renouncing her interest in the Coutts Bank. The Baroness has therefore rescinded her half share in the bank, but will continue to receive a small annual allowance as compensation.

"By actual merit the famous substance, St. Jacobs Oil, has steadily won its way until it is to-day the national remedy for rheumatism. Lawyers, physicians, clergymen—all use it."—Cincinnati (Ohio) Daily Enquirer.—*Com.*

Trees, Seeds, Plants, &c.

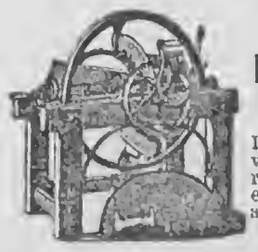
SMALL FRUITS.
Plants of all kinds. Manchester Strawberry, Sauhegan and Cuthbert Raspberries specialties. Illustrated Catalogues free
J. T. LOVETT, LITTLE SILVER, N. J.

ROOT GRAFTS. APPLE, choice assortment, packed, 1,000, $5. YEARLING root grafted Apple for Spring, 1 to 1½ ft., packed, 100, $4; 1,000, $30. F. K. PHŒNIX, DELAVAN, WIS.

BLOOMINGTON (PHŒNIX) NURSERIES.
650 ACRES. } ESTABLISHED 1852. { 13 GREENHOUSES.
We have for sale this season a very large and fine stock of apple Seedlings, 1 and 2 year, Pear, do., one year, Plum, do., do., Cherry, do., do. We also put up Root Grafts of Apple, Pear, Plum and Cherry in very large quantities. Prices on application. Address
SIDNEY TUTTLE, Agent, Bloomington, Ill.

GRAPE VINES.
All Leading Varieties in large supply. Warranted true to name. Prices low. Also, the celebrated
NEW WHITE GRAPE,
PRENTISS
Send stamp for Price and Descriptive List. Also Trees, Small Fruits, etc.
T. S. HUBBARD, Fredonia, N. Y.

Implements and Machinery.

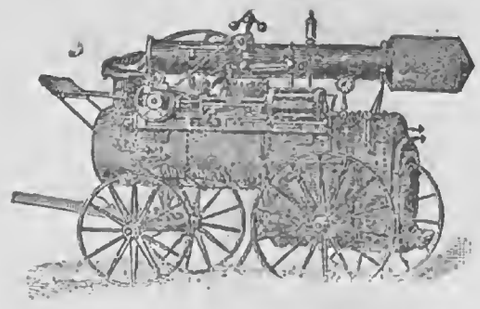


The Belle City
ENSILAGE AND FEED CUTTER.
It has no equal for good, rapid work and durability. Can be run by wind power. It suits every time. Send for circular and name this paper.
DAVID LAWTON Racine, Wis

THE
RIGHT SPEEDY Corn Sheller.
Cheap, Durable and Effective; She is 12 to 14 bushels per hour. It is the best corn sheller made, and I warrant them for five years. Price $5, or, handsomely nickel-plated, $6.
AGENTS WANTED.
If there is no agent in your vicinity, I will send Sheller prepaid on receipt of price. Send for circular.
CURTIS GODDARD
ALLIANCE, OHIO.
Mention Rural New-Yorker

Paganini Violins.
Celebrated for fine tone, finish. Italian strings, fine pegs, inlaid pearl tail-piece, fine long bow, with ivory and silvered frog, in violin box. Book of Instruction, with 353 pieces music, by express for $3 50. Satisfaction guaranteed, or money refunded. A better outfit cannot be purchased elsewhere for $10.
G. HL W. BATES & CO., Importers, Boston, Mass.

Implements and Machinery.



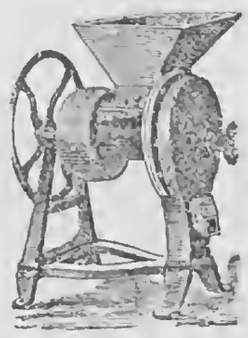
WOOD, TABER & MORSE,
Eaton, Madison Co., N Y.,
MANUFACTURERS OF
PORTABLE AND AGRICULTURAL
Steam Engines
Of the HIGHEST STANDARD in every respect of materials, and workmanship. Were pioneers in the manufacture of
Practically Portable Steam Engines,
And with determined policy to build only the BEST MACHINERY from the BEST MATERIALS, and in the BEST MANNER OF CONSTRUCTION, and with continued improvements have attained the HIGHEST STANDARD in excellence of workmanship, simplicity of design and capacity of power. For a quarter of a century have maintained their manufacture, the
Standard Portable and Agricultural Engines
of the world. Descriptive Circulars sent on application. Mention this paper

COMMON SENSE ENGINE.
Simple, durable of the best workmanship and material. Solid Wrought Iron Boilers. Engine complete on board cars at Springfield, O., at following prices: 3-horse power, $275; 5 horse power, $300; 7-horse power, $375, 10-horse power, $500. These engines fully guaranteed in every respect Address Common Sense Engine Co. Springfield, Ohio

WATCH BUYERS, ATTENTION!
THE CELEBRATED
B 'REL & COURVOISIER WATCHES

were awarded a gold medal at the Paris Exposition in '78, for greatest accuracy in performance and adjustment. These watches have all modern improvements in watch making, being stem-winders, adjusted to heat and cold and for R.R. use. By reason of improved machinery they are manufactured at a great reduction from former prices. All are warranted. *"No time, no money."* Ask your jeweler and see them before purchasing those of other manufacturers.
QUINCHE & KRUGLER, 17 Maiden Lane, N. Y.,
Our wholesale agents in the U. S.

Feed your Stock
WITH THE
Waste on Your Farm.
PRINDLE STEAMER
FOR COOKING FOOD FOR STOCK
Just the thing.
PRICES REDUCED.
BARROWS, SAVERY & CO., Limited
PHILADELPHIA PA.



THE VICTORY CORN MILL.
The only mill that is a complete success in grinding corn and cob together. We defy competition on this kind of grinding. It also grinds shelled corn and all other kinds of grain, coarse or fine, as desired. Capacity *ten to twenty bushels per hour.* Self-sharpening plates, and warranted in every respect. Address
THOMAS ROBERTS,
Springfield, Ohio.

Stock.

40 Clydesdale Stallions
AND MARES—Mostly Imported,
60 Hambletonian Stallions,
AND MARES OF THE FINEST BREEDING
Largest Herd of
HOLSTEIN CATTLE.
With largest milk records in America
Separate Catalogues of each class of stock with milk record of cows Denote which is wanted
☞ Correspondence solicited
SMITHS & POWELL,
Lakeside Stock Farm,
SYRACUSE, N Y

VIRGINIA CO-OPERATIVE STOCK FARM and POULTRY YARDS.
Registered Jersey Cattle of best butter strains a specialty. The largest herd in the State, kept on three farms, and most successful at Virginia State Fairs. Young stock for sale. Also Cotswold, Shropshire and South Down Sheep. Berkshire, Essex and Jersey Red Swine, and all the leading varieties of pure-bred Poultry. Address A. P. or M. B. ROWE,
Lock Box 34, Fredericksburg, Va.

Imported Jerseys.
For sale at Reasonable prices, 30 head of Imported
Jersey Cows and Calves,
of all ages, registered in A. J. C. C. H. Register, of the finest breed and selected stock. Apply to
AARON A. DEGRAUW, JR., Jamaica, L. I., N. Y.

New Publications.

HOLIDAY MUSIC!

Send the price mentioned below, and receive by return mail one of these splendid new Music Books for Holiday Presents:

Norway Music Album, $2.50 plain; $3.00 cloth; $4.00 gilt
Beauties of Sacred Song. 58 Songs. Elegant.
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Rhymes and Tunes, $1.50. Charming Nursery and Kindergarten Songs.

PRICE OF EACH BOOK
$3.00 Fine Gilt.
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PIANO SCORES, containing all the airs of
Olivette. 50 cents.
Mascot. 50 cents.
Patience. 50 cents.

OLIVER DITSON & CO., Boston.
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CHEAP NEWSPAPERS & MAGAZINES.
Send 6 cents for Catalogue of 3,000 Newspapers and Magazines at Club Rates. ☞ *Agents Wanted.*
H. A. KENYON, P. M., DWIGHT, ILL.

PAPERS. 2,000 Periodicals at wholesale rates. Harper's Monthly, $3.10; N. Y. Tribune, 95c.; others at like low rates. 24-p. list free. Undoubted reference given. W. H. MOORE, Brockport, N. Y.

Real Estate.

SOUTH Don't locate before seeing our James River Settlement. *Illustrated Catalogue free.*
J. F. MANCHA, Claremont, Surry Co., Va.

A GENTLEMAN HAVING
60 ACRES
of land, on high ground, Staten Island, of which about 20 are arable, the rest wooded, offers to lease for a term of years at nominal rates. Suitable for Dairy, Kitchen Garden or plain farming. Ready access to New York markets, no buildings now on property. For a suitable tenant every inducement will be offered and buildings erected. Apply to
WM. WHITLOCK,
140 *Nassau St., New York City.*

Stock or Dairy Farm Wanted.
Parties having a good Stock or Dairy Farm for sale containing not less than three hundred and from that to one thousand acres, within easy reach of Railroad, can find a purchaser (if they can fill the bill) by writing the undersigned, giving very full particulars and price.
R. W. E.,
Yale Box 5, Olean, N. Y.

GENESEE VALLEY FARMS FOR SALE.—Some of the finest residences in the Valley, near R. R. Inquire soon of JOHN SHELDON,
Fort Collins, Colorado

WANTED—500 Agents. Splendid Photo Family Record Picture. Best paying thing now offered to Agents. C. F. SHORT, CHICAGO, ILL'S.

300 Choice Poetical Selections for Autograph Albums, neatly bound; 250 spicy Motto Verses, and 25 popular Songs, all for 12 cts., post-paid. PATTEN & WADE, 49 Barclay St., N. Y.

$72 a week, $12 a day at home easily made. Costly outfit free. Address True & Co. Augusta, Me.

Miscellaneous.

To any suffering with Catarrh or Bronchitis who earnestly desire relief, I can furnish a means of Permanent and Positive Cure. A Home Treatment. No charge for consultation by mail. Valuable Treatise Free. "His remedies are the outgrowth of his own experience; they are the only known means of permanent cure."—*Baptist*
Rev. I. P. CHILDS, Troy, O.

IMPERIAL EGG FOOD.
MAKE YOUR HENS LAY.
Packs mailed for 50c. and $1.00. 6 pound boxes, $2.00. 25 pound kegs, $6.25, by Express or Freight.
Wholesale Agents.
O. H. Leach & Co., Boston. | B. K. Bliss & Sons, N. Y. Benson, Maule & Co., Phila | J. C. Long, Jr., New York. Greensfelder Bro., St. Louis; Geo. A. Kelly & Co. Pittsburgh; McCarthy & Osborn, Denver, Col.; Geo. G Wickson, San Francisco.
CHAS. R. ALLEN & CO.,
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70 Your Name in Handsome Script Type on Beautiful Chromo Cards, 10c. Latest Styles. Sentiment, Friendship, Scroll and Motto Series, 13 packs $1.00. Prompt Returns. **70**
ROYAL CARD CO., P. O. Box 21, NORTHFORD, CONN.

40 Large Chromo Cards, Feathers, Hands with Name 10c. Postpaid. GEO. I. REED & CO., Nassau, N. Y

$66 a week in your own town. Terms and $5 outfit free. Address Hallett & Co., Portland, Maine.

KNOW THYSELF. GOLD MEDAL AWARDED the Author. A new and great Medical Work, warranted the best and cheapest, indispensable to every man, entitled "The Science of Life, or Self-Preservation;" bound in finest French muslin, embossed, full gilt, 300 pp., contains beautiful steel engravings, 125 prescriptions, price only $1.25, sent by mail; illustrated sample, 6 cents; send now. Address Peabody Medical Institute or Dr. W. H. PARKER, 4 Bulfinch St., Boston.

PENSIONS For SOLDIERS, widows, fathers, mothers or children. Thousands yet entitled. Pensions given for loss of finger, toe, eye or rupture, varicose veins or any Disease. Thousands of pensioners and soldiers entitled to INCREASE and BOUNTY. PATENTS procured for inventors. Soldiers land warrants procured, bought and sold. Soldiers and heirs apply for your rights at once. Send 2 stamps for Pension and Bounty laws, blanks and instructions. Fees fixed by law. We can refer to thousands of Pensioners and Clients. Address E. H. Celston & Co., U.S. Claim Atty's, Lock Box 425, Washington, D. C.

MAKE HENS LAY.
An English Veterinary Surgeon and Chemist, now traveling in this country, says that most of the Horse and Cattle Powders sold here are worthless trash. He says that Sheridan's Condition Powders are absolutely pure and immensely valuable. Nothing on earth will make hens lay like Sheridan's Condition Powders. Dose, one teaspoonful to one pint food. Sold everywhere, or sent by mail for eight letter stamps. I. S. JOHNSON & CO., Boston, Mass., formerly Bangor Me

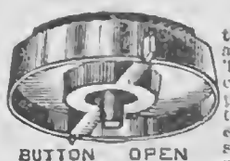
$777 a Year and expenses to agents. Outfit free. Address P. O. VICKERY, Augusta, Me.

HOPE FOR THE DEAF
Dr. Peck's Artificial Ear Drums
PERFECTLY RESTORE THE HEARING and perform the work of the **Natural Drum.** Always in position, **but invisible to others.** All Conversation and even whispers heard distinctly. We refer to those using them. Send for descriptive circular with testimonials. Address,
H. P. K. PECK & CO., 853 Broadway, New York.

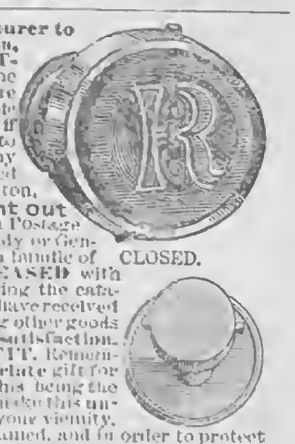
80 CARDS *Elegant new styles,* Hand series, Bouquet, Friendship, Bird series, etc., 10c. Best Pack Chromo cards ever sold. For a club of 10 names we will give, FREE, 6 silver-plated Teaspoons. Agents Album full of samples 25c. Great inducements to agents. CARD WORKS, Birmingham, Conn.

12c "A Violet from Mother's Grave," & 49 other popular Songs, words and music entire, all for 12c. PATTEN & CO., 47 Barclay St., N. Y

ASTHMA *Quickly and Permanently*
CURED
Dr. Stinson's Asthma Remedy is unequaled as a positive Alterative and Cure for **Asthma and Dyspepsia,** and all their attendant evils. It does not merely afford temporary relief, but is a permanent cure. Mrs. B. F. Lee, of Belmore, O., says of it. "*I am surprised at the speedy effects of your remedy. It is the first medicine in six years that has loosened my cough and made expectoration easy. I now sleep all night without coughing.*" If your druggist does not keep it, send for treatise and testimonials to
H. P. K. PECK & CO., 853 Broadway, New York.



☞ **CUT THIS OUT, IT IS VALUABLE!** Manufacturer to the Consumer direct. Rolled Gold Separable Collar Button, also Latest Style **SEPARABLE INITIAL SLEEVE BUTTONS. SEPARABLE BUTTONS** are far superior to the old style. Our new style Separable Collar and Sleeve Buttons are patented, are easily adjusted, simple in their action, not liable to get out of order, and they overcome all trouble with stiff cuffs and we warrant them to give satisfaction. In order to secure new customers for our firm we will send **post paid,** to any address in the U. S. or Canada A pair of the above described **Sleeve Buttons, bearing any Initial desired,** and one Collar Button, as shown in illustrations, provided you **cut this advertisement out** and mail to us before **MAY 1st, 1882,** accompanied by 66 cents in Postage Stamps (22 three cent stamps). The Buttons are suitable for either Lady or Gentleman. At the same time we send your buttons we will mail you a bundle of our catalogues and feel sure that you will be so **HIGHLY PLEASED** with goods sent and that they will give such satisfaction that you will oblige us by distributing the catalogues among your friends, at the same time showing them the **Beautiful Jewelry** you have received from us, you will in this way **favorably advertise** our firm, and thus assist us in selling other goods of **standard quality,** manufactured from new designs and which we **guarantee to give satisfaction.** We can only make this liberal offer expecting our **FUTURE SALES to be OUR PROFIT.** Remember the buttons we send you are **first-class** in every respect. A more **useful or appropriate gift** for a lady or gentleman could not be obtained. Being **manufacturers ourselves** and this being the headquarters for the manufacture of jewelry in this country is one reason why we can make this **unparalleled offer,** the other is we wish to introduce our goods and catalogues in your vicinity. However we can only afford to send out a **limited number** of these buttons at price named, and in order to protect ourselves against **Jewelers** and others ordering in quantities we will insert this advertisement but **one time** in this paper, hence require you to **cut it out** and return to us with your order that we may know you are entitled to the benefit of this offer. After your buttons are received, if others are desired, we will furnish our 18 karat Solid Gold Sleeve Buttons at $6.75 per pair, or Collar Buttons at $1.50 each. In ordering state what initial you desire on sleeve buttons. **CUT THIS OUT and order before MAY 1st, 1882.** Satisfaction guaranteed. Send stamps in ordinary mail at our risk. Address, J. W. RICHARDSON & CO., Manufacturing Jewelers, North Attleboro, Mass.



ASK FOR
Wells, Richardson & Co's
PERFECTED BUTTER COLOR
It Gives Butter the gilt-edged color the year round. The largest Butter Buyers recommend its use. Thousands of Dairymen say **IT IS PERFECT.** Used by all the best Creameries. Awarded the International Diploma at N. Y. Dairy Fair. Ask your druggist or merchant for it; or write to ask what it is, what it costs, who uses it, where to get it. **WELLS, RICHARDSON & CO., Proprietors, Burlington, Vt.**
USE ONLY THIS THE FIRST AND THE BEST

Humorous.

AMBITIOUS MAN: "Is there any fixed rule for writing poetry?" There is! Don't!—Boston Post.

THE why and wherefore; "Love is blind," and that's why they managed to keep right on with the gas turned down.

THERE is a good deal of human nature in a canary bird. He always begins to chatter as soon as the piano commences to play.

"SHE stoops to conquer." Can this refer to the fond mother who bends over her wayward boy with a number-five slipper?

THERE is a whistling buoy anchored off Block Island. Oh, that all the whistling boys could be anchored in deep water far away.—Boston Globe.

THE only thing a lady dislikes about a postal card is that it is hardly large enough to allow her to show what she can do in the matter of postscripts.

AN advertisement reads: "Wanted—A young man to be partly out door and partly behind the counter;" and the Cleveland Leader asks: "What will be the result when the door slams?"

THE father of a St. Louis bride presented his son-in-law with 80,000 head of cattle. "Papa, dear," exclaimed his daughter, when she heard of it, "that was so kind of you; Charley's awfully fond of ox-tail soup."

"No, ma," said a Harlem maiden, "I don't like Charley Jones coming every night. But I don't like to tell him so yet. He is so fat and heavy that by placing my Autumn leaves on his chair I'm getting them nicely pressed."

"I WISH I were you for about two hours," she said to her husband with great tenderness. "And why, my dear?" he asks. "Because," she said, toying affectionately with his watch chain—"because then I would buy my wife a new bonnet."

A miller in Peru, Ind., fell asleep in his mill and bent forward until his hair got caught in some machinery and was yanked out; and, of course, it awoke him, and his first bewildered exclamation was: "Durn it, wife, what's the matter now.—Boston Post.

"How are you, Brown?" exclaimed Fenderson. "I have been on a regular wild goose chase, and I'm glad I've found you at last." Fenderson supposed he must have said something pretty smart the way the boys laughed, but he can't for the life of him tell what it was.

TURN TO THE LEFT.—"Is there any opening here for an intellectual writer?" asked a seedy, red nosed individual, of an editor. "Yes, my friend," replied the man of quills, "a considerate carpenter, forseeing your visit, left an opening for you. Turn the knob on the right."

A HUNGRY lawyer, who was dining at a hotel, shoveled the food into his mouth with his knife till he accidentally cut his mouth, which was observed by a wag seated opposite, who bawled out: "I say, Mister, don't cut that hole in your countenance any larger, or we shall all starve."

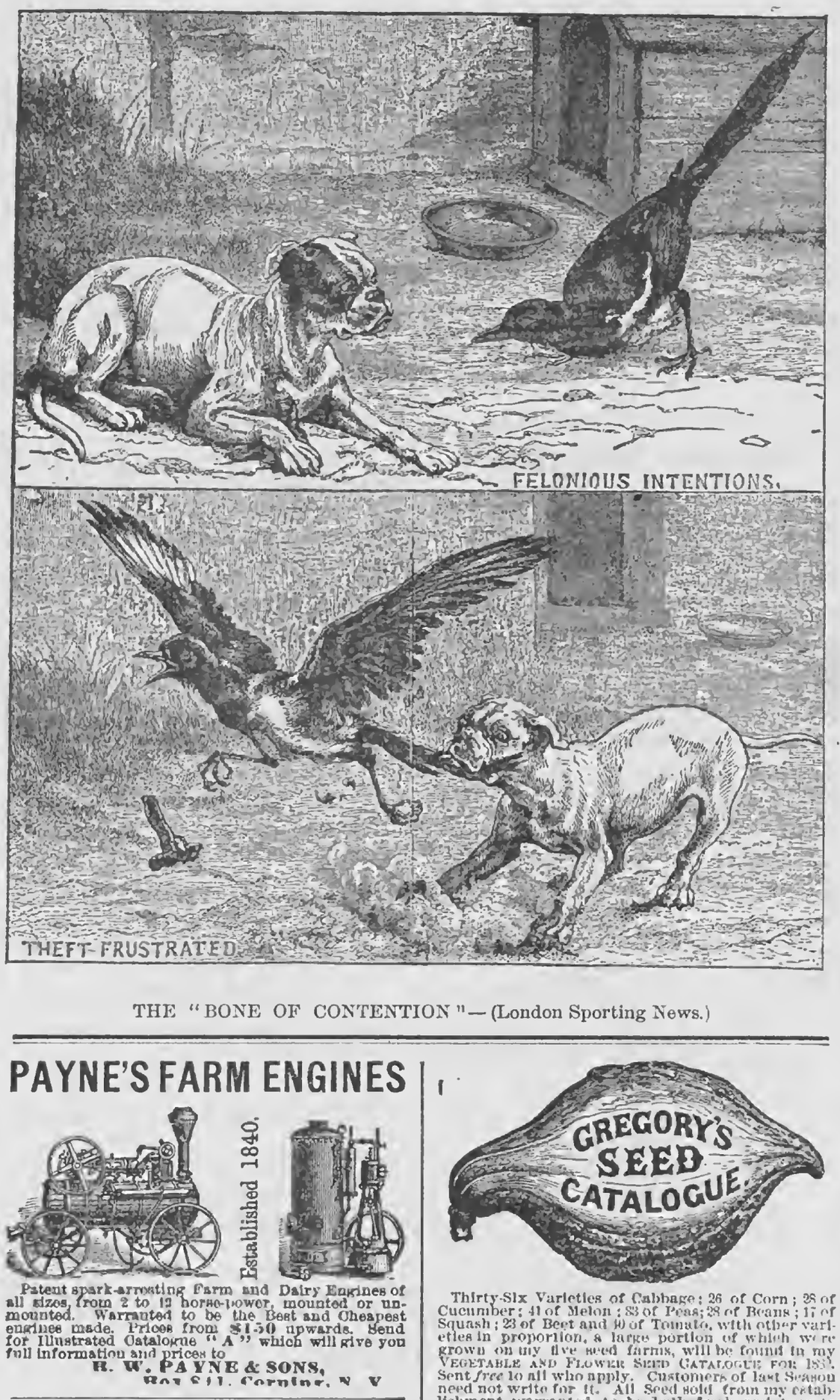
"FELLOW citizens," said the street-corner orator, standing on a dry-goods box amid the glare and smoke of many torches, "my position upon this question is a peculiar one." And just then, when the box caved in and let him down in the shape of a letter V, gripped by the neck and heels, the crowd rather thought it was.

"THEN you think you can leave your beautiful home and share a humble cot in the far West with the man you love?" "Yes, I would leave them all without a pang. Oh, Harold, you have made me so happy." "All right, then: I have a friend who is going to do that sort of thing, and I will mention it to him."

A NEW JERSEY widow couldn't earn six dollars a week at the washtub. She became a clairvoyant, and her income increased to sixty. It just shows that a man begrudges the quarter he pays for washing his shirt, while he will cheerfully give a dollar to stick his nose into the other world before the show begins.

"A YOUNG man from the country" writes to a city editor asking if authorship pays better than the theatrical profession. The editor has not given an answer, and if he wants to do the rural person a kindness we advise that he urges him to embark in the business of discovering comets. They are worth from $200 to $500 apiece, wholesale.—Norristown Herald.

BRIGGS hired a lively horse the other day to take a little exercise. He got more exercise than he wanted; and as he limped to the side of the road to rest himself, a kind friend asked him: "What did you come down so quick for?" "What did I come down so quick for? Did you see anything up in the air for me to hold on to?" he asked, grimly.



THE "BONE OF CONTENTION"—(London Sporting News.)

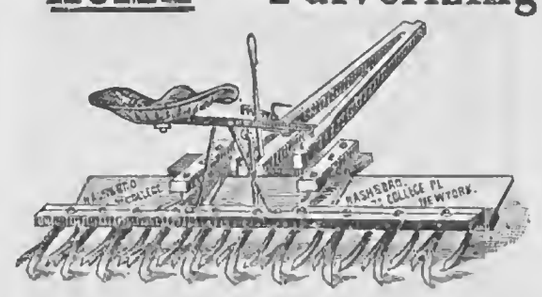
PAYNE'S FARM ENGINES

Established 1840.

Patent spark-arresting Farm and Dairy Engines of all sizes, from 2 to 12 horse-power, mounted or unmounted. Warranted to be the Best and Cheapest engines made. Prices from $150 upwards. Send for Illustrated Catalogue "A" which will give you full information and prices to

R. W. PAYNE & SONS,
Box 511, Corning, N. Y.

"ACME" Pulverizing



HARROW, CLOD CRUSHER AND LEVELER.

The "ACME" subjects the soil to the action of a Crusher and Leveler, and at the same time to the Cutting, Lifting, Turning process of double rows of Steel Coulters, the peculiar shape and arrangement of which give immense cutting power. The entire absence of Spikes or Spring Teeth avoids pulling up and scattering of rubbish. It is especially adapted to inverted sod, hard clay and "slough land" where other Harrows utterly fail, and also works perfectly on light soil.

Sent on trial to responsible farmers anywhere in the United States. Agents wanted. Send for circular.

NASH & BROTHER, Sole Manufacturers,
HARRISBURG, Penn., and 22 COLLEGE PLACE, New York City.

$5 to $20 per day at home. Samples worth $5 free. Address Stinson & Co., Portland, Me.

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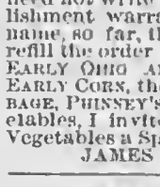

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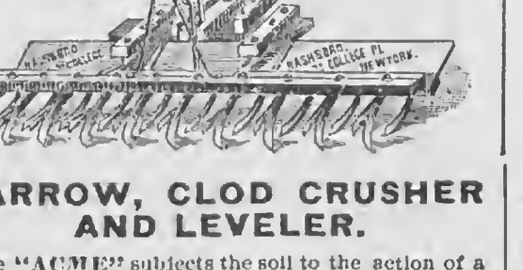

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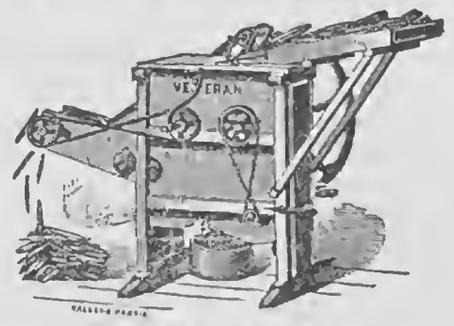

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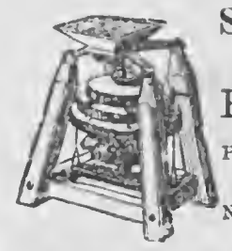

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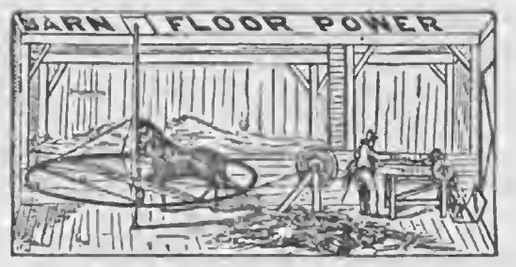

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THE RURAL NEW-YORKER

A JOURNAL FOR THE SUBURBAN AND COUNTRY HOME.

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Farm Topics.

ENSILAGE.

J. B. LAWES, LL. D., F. R. S.

It is stated by a writer on the subject of ensilage that grass contains a greater amount of nutrition when in blossom than at any time before or afterwards; and that what is true of grass is also true of grain.

While I am quite prepared to accept the fact as regards grass, I do not think it follows as a *necessary* consequence that the same is true as regards the ordinary grain crops, and at all events the subject is worthy of a few minutes' consideration.

The main function in the life of a plant is to provide seed for its reproduction. The seeds of most of the grasses are exceedingly light, and form but a very small portion of the weight of the whole plant; at the time of blooming therefore all the sugar and starch required to perfect the seed is already stored up in the stem and leaves, and the crop, if allowed to ripen its seed, will produce woody matter instead of more starch and sugar.

In the cereal grains the seed bears a considerable proportion to the whole crop. In some the seed and straw are of the same weight; in others, as, for example, in wheat, the proportion may be 60 or 70 pounds of grain to 100 pounds of straw, and in all cases the seed forms an important item in the whole weight of the plant.

I think there is evidence also to show that a considerable portion of the starch found in the seed, is not to be found in the leaves and stem at the time when the plant is in full bloom.

At Rothamsted in 1847, we selected a very level acre of wheat, which was divided into five portions, and cut at five separate periods, commencing with the 21st of June when the plant was in bloom, and ending when the wheat was ripe. During this period the dry weight of the crop had doubled itself.

Professor Anderson also carried on some experiments; he did not, however, destroy a whole crop of wheat for the purpose, as we had done at Rothamsted, but operated upon a certain number of carefully selected specimens. Between the time of blooming and maturity he estimated the increase of dry matter per acre at 2,000 pounds.

A very large addition is therefore made to the solid matter of the crop in the interim between the two periods; the sugar in the stem is converted into starch, more woody matter is formed in the stem, and it would appear quite certain that a considerable proportion of the starch, which is deposited in the seed, did not exist in the stem, in any form at the time of blooming. We have no means of knowing how much was stored up in the roots and how much was derived from the atmosphere; it would therefore be a mistake to say that at the time of blooming a corn crop contains as much nutritious matter as when it is ripe.

In the former stage the nutritious matter is more soluble, and more equally diffused throughout the whole of the plant, but the total amount is less than when the corn is ripe. In Mr. Bailey's book on Ensilage he gives the chemical composition of the corn plant in the milk, and of the same corn as ensilage. Calculated upon the dry matter, the corn in the former state contained five-and-a-half per cent of mineral matter, while the dry matter of the silo corn contained more than nine per cent: this, if correct, would indicate that about 40 per cent of the dry organic matter of the corn had been lost by fermentation.

At Rothamsted I have about 54 cows in milk, and about 30 head of young stock. Their main supply of food until next May will consist of mangels. More than half of the whole dry matter of these mangels consists of sugar, and this sugar is the most valuable of all the ingredients which they contain. Now if I were to subject these mangels to fermentation in a pit until the sugar was converted into alcohol and carbonic acid, I should be destroying that valuable element of food, which I had been at so much cost to obtain!

In the clamps where our mangels are stored, their quality improves rather than the contrary, and a farmer would give a preference to roots which had been stored up for six months. If succulent food for Winter is so valuable in the States, some comparison should be instituted between the relative advantages of corn and mangels.

As regards ensilage I must confess that I do not altogether like a process which appears to be so destructive of food.

Rothamsted, England, Dec. 6., 1881.

EARLY HISTORY OF AGRICULTURE.

LESTER A. ROBERTS.

The ages following the fall of the Roman Empire saw little progress in agricultural matters, which were kept alive mainly by the religious institutions, which were also the repositories of most of the knowledge of the arts and sciences that were preserved for us. The first revival appears to have been in Italy. But idleness seemed to prevail until the time of Pope Sixtus, who, in 1584, acting on the principle that "a people not pressed by taxes are apt to grow indolent, and that industry is the only source of riches and plenty to a State," forced his subjects to labor, to their advantage and his gain, raising them from sloth and poverty to industry and comparative wealth. In Tuscany and Lombardy the culture of the vine and olive was improved, their products were demanded for export, and the profits therefrom enabled the people to improve their estates. The richness of the pastures, especially in Lombardy, and the fact that the temperature was such that cattle could thrive in them through the Winter and water was plentiful for irrigation aided materially in stock culture. This in turn furnished manure for other crops, and for a time this section showed greater improvement in agriculture than any other country in Europe.

While Spain was a portion of the Roman Empire it was second to no province in agricultural advancement. During the fifth century it was overrun by hordes from Northern Europe, and finally came under the dominion of the Goths, in whose possession it remained until conquered by the Moors in the eighth century. The Goths were too much engaged in the chase and in wars to pay much attention to agriculture, but with the advent of the Moors it revived and continued to improve until their expulsion near the end of the fifteenth century, when it again declined. The Moors brought with them from Africa various new plants, as well as their methods of culture, which were before unknown in Spain, and during their dominancy agricultural interests materially improved. Particular attention was given to the culture of fruits, of which they introduced most of the best kinds now grown there. Irrigation was practiced to a considerable extent and much attention was paid to saving and applying manures. The Moors were an industrious people, and although they paid much attention to manufactures, agriculture was considered by them the most honorable occupation, and under their continued administration Spain would doubtless have been the leading agricultural State in Europe. But the "Christian" and the "Infidel" could not live together in harmony, and the Moors were expelled, taking with them the industry and leaving the pride and indolence of the country. During the next century America was discovered under Spanish patronage, and attention was directed to the New World that was supposed to abound in gold and silver and precious stones. Albyterro, a Spanish author of the seventeenth century, wrote truly, "the people who sailed for America in order to return laden with wealth would have done their country much better service to have stayed at home and guided the plow." With the nineteenth century a general improvement seems to have sprung up, but wars and internal discords checked it, and bad government and priestcraft combined have done much to keep Spain from being what, under other circumstances, it might have been, the garden of Europe.

All that is known of agriculture in France, previous to the ninth century, is gathered from the laws, which appear to have been favorable thereto. Charlemagne in the ninth century encouraged the culture of vines and orchards. Horses seem to have been more common than in Italy, which, with cattle and sheep, were pastured in commons and forests. After this time civil wars were prevalent and agriculture declined, but revived again before the close of the twelfth century. The best lands were under the control of the Church, and were made to pay considerable revenues. In the thirteenth century we find wind-mills for grinding corn introduced. From this time little progress was made until about the middle of the sixteenth century, when considerable enterprise was displayed, and the first agricultural work produced in France, a short tract by Bernard de Pallisy, was published. Later we find Duhamel's New Husbandry. The Government seems to have favored general cultivation of the soil, and France is said to have abounded with "corn, grain, pulse, wine, cider, flax, hemp, salt, wool, oil, dyeing drugs, cattle, great and small, and everything else, whether necessary or convenient for life, both for home consumption and exportation."

The nations of Europe north of the Rhine and the Danube were, previous to the seventeenth century, so much engaged in civil wars and invasions into neighboring countries that but little attention was paid to agriculture. In about the middle of the sixteenth century the Elector of Saxony planted the first vineyard that was known within the country over which he ruled, and seems to have been considerably interested in the cultivation of the soil for other purposes.

When Britain was invaded by the Romans they carried with them such agricultural knowledge as had become common in the Empire, and considerable progress was made during the 400 years of their occupancy; but they left and were followed by the Anglo-Saxons, cultivation ceased and the people subsisted on game caught in the chase, and the flocks and herds that found abundant pasturage, and especially on the swine, for which the seeds of the oak and beech furnished large quantities of food.

The Welsh at this period mainly depended on their cattle and sheep for subsistance, but we find some curious laws relative to cultivation. Plowing with any other animals than oxen was prohibited. None were allowed to guide a plow who could not make one, and the driver should make the twisted willow ropes by which it was drawn. Certain privileges were allowed to him who should manure land, clear a field from wood, or fold his cattle on another's land for a year. In Ireland and Scotland progress in cultivation was, if possible, far less than in Britain and Wales.

The Saxons found, however, that the raising of field crops contributed to their comfort, and although working the ground was thought a menial employment, only fit for slaves, it became after a while an apparent necessity, and the princes and other large landholders divided their estates into inlands and outlands, the former near their houses, which were worked under their own directions, the latter more remote and let out for rent, which was very small, established by law, and usually paid in kind.

When the Saxon rule in Britain was overthrown by the Normans a marked improvement in agriculture commenced. The thousands who came from Normandy, France and Flanders brought with them the knowledge those countries possessed, and it was not long before the best men in the land were interested in the cultivation of such crops as were then known. Laws were made in the interests of the farmers, implements of husbandry were improved, manuring practiced, fruit trees and vines became common, and the whole country bore a different aspect from what it had ever borne before. This progress continued during the thirteenth and fourteenth centuries, but was stayed about the middle of the fifteenth century by the civil wars that then raged. The peace that followed the accession of Henry VII., in 1485, again gave opportunity for the improvement of landed possessions, but the great demand for wool from the Netherlands induced the proprietors to turn their attention to sheep raising, and to such an extent was this carried that laws restricting the number of each flock to 2,000, were made. Certain causes thereunto working, however, after a while compelled the changing of the pastures into cultivated fields, and the herdsmen resumed the plow.

The first English treatise on husbandry appeared in 1534. It was written by Sir A. Fitzherbert, a lawyer and judge. This was followed by Thomas Tusser's Five Hundred Points of Husbandry, and still later we find Jethro Tull's Horse-Hoeing Husbandry, an argument in favor of higher cultivation, showing the effect of more thoroughly intermingling particles of soil.

About this time much attention was given to the breeding of horses, and singular laws were enacted. One enjoined on all prelates, nobles and others whose wives wore velvet bonnets to have stallions of a certain size for their saddles. The legal standard was 15 hands for horses and 13 for mares. "Unlikely tits" were executed.

From the beginning of the sixteenth century agriculture partook of the general improvement that was being made by the invention of the printing press, the revival of literature and the more settled authority of Government, and during the reign of Elizabeth it had attained a considerable degree of respectability.

Many circumstances combined to retard agricultural progress in Scotland. The general surface of the soil and the climate are not conducive to culture, and the civil dissensions that prevailed took men from the plow to engage them in the almost continual strifes. Many laws were made looking to the protection and encouragement of husbandry, but they were of little avail.

The seventeenth century is marked by some important improvements in English husbandry. At this time works on agriculture had become more common and seem to have exerted favorable influence. Clover and turnips which had been long and profitably cultivated in Flanders, were introduced, and potatoes, that had been known there since 1565, but only to be neglected, began to receive the attention they deserved.

While in most parts of Europe agricultural interests and knowledge advanced almost constantly from the earliest period of which we have definite knowledge, they seem to have made little progress in the East. There is no perceptible advance in the processes of China and Japan, which may be said to be curious rather than successfully practical. Central Asia was little known and Western Asia, including Persia, Palestine, the African shores of the Mediterranean

and all the countries under the Turkish dominion, seem to have retrograded rather than advanced. In such portions of Southern Asia as India, where European influences have been felt, the culture of the land has received much attention. But in European countries the beginning of the seventeenth century seems to have commenced a new era in agricultural history, and before its close much improvement could be seen in every section not only in the variety of crops raised but in the means employed to improve them and to obtain a larger production from the same area of land. Little by little scientific knowledge increased and was, cautiously at first, but as familiarity grew by acquaintance, more generally applied to agricultural processes with advantage. It was found that something besides the mere putting of the seed into the ground and waiting for it to grow was necessary to insure the best result, and experiments, few and rude as they were at first, soon showed the intelligent that to obtain the best result he must combine thought with labor. The number who were at first able to comprehend this situation were few, for even then the majority were not easily convinced that the old ways were not the best. It may be said that the study of agriculture as a science commenced with the seventeenth century, although the students were few. But an atom of truth once set free must at some time accomplish its work. Looking back from our present standpoint and observing the processes and the implements used by the farmers of the olden time, we are more inclined to be astonished at the results obtained than to wonder why they were not greater.

As population increased the needs of the people increased in proportion, and civilization and education contributed both to increase those needs and add thereto many wants unknown to savagery. Needs and wants felt act as incentives to their fulfillment, and we can plainly trace growth and improvement in agricultural affairs to these causes. Besides, when a country becomes densely populated it becomes necessary, in order to raise food for its support, either to put more land under cultivation or to increase the productiveness of that already cultivated, or both.

It would be interesting and instructive to follow the progress of husbandry in different nations from the time of which we have spoken to the present, and to watch the development of many of the different productions of both the animal and the vegetable kingdoms from their natural conditions to those in which by culture, they are now found. But this would require volumes instead of the brief space afforded in these columns.

Horticultural.

RURALISMS.

THE pleasant holidays have come again, to many, especially the young, the happiest of all the year. There are few at this time whose minds are not more or less perplexed with what to select as a suitable present for father, mother, brother, sister, or friend. It has occurred to me that in not a few cases this perplexity might be happily overcome by making choice of the RURAL NEW-YORKER as a useful and appropriate holiday gift. For example, what could be a more suitable present from a denizen of the city to his country cousin or friend, to whom he is indebted for many days (and perhaps weeks) of healthful pleasure, with, it may be, only a "thank you" in return? Your country cousin or friend would be quite certain to obtain from the RURAL such valuable hints and suggestions as would add increased warmth to your reception next Summer. That would be a substantial pleasure cheaply purchased. It would also be doing good, which is a point worthy of consideration. It is the nature of many presents that they must be so placed that we see them only occasionally, and they are therefore only occasional reminders. If you send the RURAL as a present, it will serve as a pleasant weekly reminder of your thoughtfulness and good will, and more than one will be sure to exclaim, "Tom is a splendid fellow for sending me the RURAL," or a feminine voice may be heard saying in subdued tones, "How good Aunt May was to send father the RURAL," and you are made happy in the consciousness of having given a useful pleasure. There is really a double pleasure in this case, and you may prolong it by prolonging the term of subscription to the RURAL. So may it be. [We are greatly obliged to Horticola for his very sensible suggestion. Eds.]

HORTICOLA does not forget his RURAL friends in the midst of his cares, and he sends to one and all a "Merry Christmas" and a "Happy New Year."

I HAVE noticed during the past month, in different parts of the country, a faulty and wasteful application of manure to the apple orchard. In a ride of nearly a hundred miles I saw only one instance of its application with any apparent knowledge of the growth of the tree. The manure, in all these cases, except one, was heaped around the trunk of the tree and extending perhaps two or three feet from it. These orchards I should judge to be from 15 to 40 years old. This manner of applying manure to orchards I believe to be quite common, and it ought to be known that it is wasteful and does but little good; it not only does little good, but is sometime productive of evil. The feeding roots have by this time wandered many feet away from the trunk of the tree. If the manure were mostly spread around and a few feet within the circumference of the branches, thousands of hungry little mouths would be found there ready to take it up and convert it into delicious fruit and a healthy growth of leaves. The really proper way to manure an orchard in grass is to spread manure over the whole of it, using it most liberally under the spread of the trees. Treated faithfully in this way at proper intervals, we should be spared the doleful sight of so many orchards "running out" before their time. A large percentage of orchards die from starvation and neglect, and not from old age. How many farmers, in any part of the country, give half as much labor and attention to their orchards as they do to a crop of corn, for example? There are, I am happy to say, some notable exceptions to this, and they have their reward in long-lived and productive orchards, and very handsome fruit.

THE new Tradescantia referred to by Leon is a very beautiful plant. It is, however, less robust than T. zebrina or Buchanani. With me it has shown a tendency to revert to the green type, from which it is a sport, which does not yet seem to be well established. The green growth should be cut off as it appears, and the plant propagated only from selected shoots. I forget whether it has yet been offered for sale, but it deserves a place in any collection.

THE double-flowered, variegated sweet alyssum, to judge from one year's experience, is an improvement on the single-flowered variegated variety, being more strongly marked and a more robust grower. There are two or three more new sweet alyssums. Tom Thumb is a very dwarf, compact grower, and blooms profusely. Colossus, on the contrary, is a strong, rampant grower, with larger flowers than the species. I have not yet made up my mind how much I shall like it, but I propose to use it as a pedestal two or three feet high, on the top of which to place Tom Thumb. I think it may at least be prettily utilized in that way. HORTICOLA.

RAYS.

ORDINARY roses, as Isabella Sprunt, Safrano, Bon Silene, and Perle des Jardins are selling in Boston for $3 to $4 per hundred buds, whereas Bennett's hybrid tea, Beauty of Stapleford, is fetching a dollar a dozen, and his Duke of Connaught a dollar and a-half a dozen. Some of the florists around Boston, declare that Duke of Connaught will be the most profitable rose they can grow, its fine, long buds and brilliant, velvety, crimson color render it a great favorite with customers, and so far it is profuse, but only moderately free in growth. Beauty of Stapleford fades to lilac a little too quickly, but this is only visible in daylight; in gaslight it looks beautiful. It is very free and profuse. Duchess of Westminster, bright cerise, because of its fragrance and finely formed buds, is a favorite with customers, but the growers think it wants too much heat for them to grow it profitably. Jean Sisley is too double; the buds don't open perfectly.

* *

I TELL you what it is, Mr. Editor, it does me good to see men stand up, and, heedless of opposition, speak out their honest convictions. You say you never liked the silver maple as an ornamental tree. Neither have I, but I have caught it smartly more than once for saying so. In a pamphlet, "Ornamental Trees for Massachusetts Plantations," by John Robinson, of the Arnold Arboretum, which was kindly sent to me by the author, I find: "We have a long line of golden oaks, golden ashes, golden lindens, striped-leaved, silver-leaved, or golden-leaved varieties, hideous to any lover of nature. Looking upon these sickly plants, each seems, by turn, more ugly than its neighbor. All should be sent to the rubbish-heap together, and permanent natural productions planted in their places."

DEUTZIA-PARVIFLORA is a new shrub from Northwestern Asia, and, my word for it, it is a pretty one. It has an upright growth like a Deutzia crenata, but it is not quite so rank, and it comes into blossom at the same time as Deutzia gracilis, which is about two weeks earlier than crenata. Its flowers are white, in dense clusters like those of a spiræa, and, in fact, when in bloom, the whole plant has more the appearance of a spiræa than of a deutzia. It is perfectly hardy: indeed, with me, it is hardier than crenata. Very few nurserymen have got it for sale, but I find it advertised in Parsons' catalogue at 35 cents a plant.

* *

BERMUDA GRASS is not hardy in the Northern States, and I am glad it isn't, else once at home I never could remove it. But as a hanging-basket plant for the window, it is "just lovely." Start it in August or September in a pot or basket in turfy loam and manure, half-and-half, and never let it lack for water, and it will grow so rankly that it will not only hide your basket beyond view, but hang down past it for a foot or two.

* *

I CERTAINLY admire the progressive spirit that characterizes the work of the RURAL. Its principal aim seems to be the benefit and instruction of the people, and not only does it seek and publish the unreserved opinions of its near and distant readers, but especially wishes to know the dark side as well as the bright side of the subjects of which it treats; and I am sure we can all bear testimony that its editorial reports are exceptionally beneficial, they are so impartial.

* *

MOST of you must be familiar with the little partridge berry plant that grows so abundantly in our woods. It is a pretty little evergreen vine that forms tufts or mats about tree roots or in broad patches upon the ground under trees, and is studded over with scarlet berries that remain on the vines over Winter. Now this little plant is a first-rate window plant, and will grow well, like moss, on the surface of the soil in pots containing callas, fuchsias, or other plants; it delights to associate with ferns, and in a fern case thrives amazingly well.

* *

LAST Summer they had masses of large plants of Chinese Hibiscuses planted in the garden of the Soldiers' Home at Dayton, Ohio, and they were about the showiest thing in the garden. Their large cerise and scarlet flowers were very conspicuous. Now any one can grow these plants. Plant them out in a sheltered but sunny place in the garden in May, and lift and pot them in the Fall, when, if they have grown beyond the bounds you can accommodate, you may cut them in as much as you please. You may winter them in the house, in a light, airy, frost-proof cellar or pit, but at no time should they be allowed to get as dry as you would have a dormant fuchsia or lemon-scented verbena; they must be kept moist. There are many shades of red among them, but the glowing, velvety scarlet is the prettiest, and there are yellowish ones, too. They may be propagated by seeds and cuttings.

* *

SPEAKING of Arbor-vitæ hedges being rendered bare on one side, page 810, reminds me of a hedge at Waukegan, Illinois. The branches all along the bottom on one side had died out or were sickly and had been cut out, and a row of young Arbor-vitæs was planted right up close to the old hedge to hide the nakedness. They took kindly to their new quarters and were pruned to suit the occasion, and when I saw the hedge a little while ago I did not perceive that it had been patched till Mr. Douglas called my attention to the fact.

* *

THE Arbor-vitæ as an ornamental hedge plant cannot, in my opinion, compare with the Hemlock Spruce. True, the Arbor-vitæ succeeds in many places where the Hemlock fails. The shears denude the hemlock of its beauty, but the knife will save its graceful form. The chamæcyparises (retinosporas) make, I think, the prettiest little hedges. They are used at Wellesley as such and to form borders about a foot in hight, just as a European would dwarf box. The tree box makes a fair little hedge with me, but gets disfigured by red spiders in the Summer time. It is hardier than the dwarf one. The Norway Spruce is the evergreen hedge plant mostly used about Boston, but it is not as pretty or as good in this way as our native White Spruce, nor does it live as long. The White Pine, begun with early, makes a soft and warm-like hedge, and it endures pruning better than any of the pines I have known to be tried.

* *

HEAVY snows in Winter sometimes break open Arbor-vitæ hedges, retinosporas, and other evergreen bushes. Now you can easily avert that. With a piece of stout cord tie the limbs in such a way that although the snow may bend the little twigs, it cannot open apart the bushes. And tie up the retinosporas lightly, loosely, but firmly into conical form; this not only preserves them from being broken by the snow, but saves them somewhat from the inclemency of the weather.

* *

WITH me the variegated althæa retains the whiteness in its leaves the season through, grows but slowly, and forms lots of flower buds, but never fully opens any of them.

* *

IF you have some choice evergreen trees, large or small, do not touch them, nor cause nor allow them to be touched in hard, frosty weather, else in Spring you may find that the parts that were handled will present a seared appearance, as if injured by the severity of the weather, whereas it was the handling that did the mischief.

* *

IF your ground is poor, lay a good mulching of rotted manure around your evergreens, as pines and spruces, and let it lie there till Spring, when you may fork it over into the soil very lightly; or, if not unsightly, let it remain on the surface during Summer. At any rate, do not dig it in. The best feeding roots are near the surface of the ground, and if you dig them up you destroy them and materially hurt your trees. Pines and the like like something good to eat, and in vigorous condition well repay such care. LEON.

PRAIRIE CLIMATE.

PROFESSOR J. L. BUDD.

THE notes I have furnished the RURAL on the relative adaptation of trees and plants to our prairie climate have elicited an unexpected number of queries from parties east of the lakes, who are looking westward for future homes. These letters mainly ask about the special climatic peculiarities to which we so often refer in connection with tree and plant growth. It is too large a subject to deal with in a letter or readable newspaper article, yet I will try to give some of the distinctive features of the climate we have to deal with in Iowa north of the 42d parallel, and some of the reasons for the popular Eastern belief that this can never become a reliable fruit-growing section.

The first thing that strikes the newcomer as peculiar is the absence from our groves and the timber along our rivers and streams of the conifers, kalmias, rhododendrons, fox grapes, narrow-leaved crab, beech, and many other trees and plants of the coast and lake regions. He also will note the significant absence of the mosses he has noticed in Eastern States pendent from trees, and even attached to fences, shingles and the sides of houses. In connection with these sign-manuals of prevailing aridity of air, he will notice a luxuriant development of Indian corn and all half-tropical plants of an annual character, indicating a higher Summer temperature than is known east of the lakes.

A brief residence here will give the further lesson that we are subject to sudden extremes of temperature and of atmospheric moisture. In Summer, after days and even weeks of westerly winds of desert-like aridity, which drink up with hungry avidity moisture from earth and plant surfaces, we may have a period of southerly winds loaded to saturation with moisture from the Gulf of Mexico. In Summer such changes are only injurious to thin-leaved trees and plants native to permanently moist climates. In Winter, however, the extreme changes in temperature and moisture, dependent upon a change of wind, are a very serious matter. In the midst of Winter a south wind may bring us days of Spring-like softness. Without warning, unless it come from the Signal Service dispatches, we may have the premonitory howls of a northwestern "down-pour," with a dry, biting air 25 to 30 degrees below zero.

A longer residence will disclose the fact that our seasons are extremely variable as to rainfall and variations of temperature and humidity. A period of three or four years may be so equable and mild as to permit the healthy growth of what we term the tender list of fruits. Then follows what we call a "test year," meaning an excessively hot Summer with little rainfall, followed by an intensely cold, dry Winter. The havoc and destruction of the extreme years are the grand checks to the wild planting of our thousands of settlers who come here biased in favor of fruits they knew most favorably in their old haunts in the Eastern or Southern States. With this very hasty glance at the main distinctive peculiarities of prairie climate, a few notes on the slow advances we have been able to make in adapting fruits, trees, and shrubs to the prairie requirements will be better understood.

When the prairies in the interior sections were not dotted with a tree or a cabin, ob-

serving scientists, such as Henry, Maury, Knapp, Russell, and Dr. Kennicott, reiterated the opinion that all successful tree planting upon the Northern prairies must be of a character to endure such extreme seasons as that of 1842-3, when the intensely hot, dry Summer was succeeded by a Winter freezing the Mississippi solid in November above the Des Moines rapids, and when every day in March exhibited the thermometer from one to 30 degrees below zero.

But not one in a thousand of our settlers read, or, if they read, believed such predictions, and tree planting went on until 1855 with relatively few drawbacks, when the great drought of 1854 and the terrible Winter of 1855-6 left scarcely a trace of the widespread folly of the people in planting the Baldwins, the Greenings, the foreign pears, plums, cherries, and oven peaches. A few hopeful enthusiasts now began to talk of the few varieties unscathed by the "test Winters," and of the introduction of varieties from the home of the Oldenburg. In 1868 we began to hear again the talk of ameliorated climate. By this time the great herds and the golden harvests had brought plenty to thousands of prairie homes, and a grand harvest for the Eastern tree peddlers began. Again, in 1872-3, the "test Winter" wrought ruin to the petted young orchards.

This hasty sketch gives an idea of our drawbacks in horticultural operations, and of our failure with most of the obtainable fruits popular in the Eastern and Southern States. Purposely the discouragements and hindrances have alone been noted. The good things sifted out by our broad-gauge system of experimentation will be noted at another time, not forgetting to boast of the many compensating advantages which Nature has given to dwellers in the great prairie garden.

Ag'l Coll., Ames, Iowa.

LINDLEY'S THEORY OF HORTICULTURE.

PROFESSOR J. L. BUDD.

I AM glad to hear that a publisher of New York have just brought out an edition of this very valuable work in neat form at the low price of $1.50. It should be in the hands of every intelligent plant and tree grower in the United States, not already supplied with the old English edition. What A. J. Downing said of it will apply to-day: "It is the only treatise of the kind extant, at least in the English language. It is at once remarkably simple and highly philosophical; free from superfluous technicalities, and at the same time truly scientific.

Without entering into tedious subordinate details, it offers a lucid explanation of the general nature of vegetable actions, and of the important principles which lie at the foundation of all the operations of horticulture, and which the intelligent gardener or amateur can readily apply for himself to each particular case."

The work has many valuable notes by A. J. Downing. It was written by Dr. Lindley when Secretary of the Royal Horticultural Society of England, when the gardens of this Society were annually enriched with contributions from all portions of the world. It was revised by him when editor of the Gardeners' Chronicle, in which weekly appeared every advance in modes and methods, and every advance in vegetable biology. Since that time a few changes and modifications have been made, slightly affecting some of the statements as now published. But these changes in general principles are so slight, and the explanations to be made so few, that they offer no barrier to the use of the work in advanced horticultural classes in the agricultural colleges.

Agricultural College, Ames, Iowa.

ON Nov. 21, I took in the smaller tea roses; the variegated Japan Euonymus; the always admired Poinciana (which deserves a place wherever there is cellar room for a few half-hardy shrubs), the roots of the white pond lily, and some rows of fine celery. A large sunken pot holding nearly a bushel, which had had its drainage plugged and puttied up, and been hooped with tarred iron to serve as a pond for the lily, seemed to be an excellent thing to store a lot of the celery in on the new plan, viz, to stand in a few inches of water. So, having a pit or ditch about three feet deep in the lower part of the garden, which is always wet during Winter, I put the lily roots down in the bottom of that; marked the place by a tall stake, white-painted and lead-penciled on the top, and I found that I could store in the pot a surprisingly great quantity of the celery, the roots being comparatively much less bunchy now than when the plants are young. Having three sorts of celery, all duly labeled, for we are all given to the amusement of experimentation at our house, I loaded up two four-gallon stone-ware crocks for two dwarfed sorts, and found them just the thing. I left the roots in these, with a little damp soil attached, without water for about three days, the leaves scarcely flagging any in the rather damp cellar, which is pretty well lighted. This was done in accordance with an old secret among gardeners—that of leaving roots or cuttings in merely damp and still air for awhile to heal over before they are soaked by watering. The air in the interstices of soil or moss is still and damp, and so very favorable for this healing or callu-ing. How proud the old gardeners used to be of their trade secrets! and how careful not to tell them! But the modern newspaper thrusts its lantern into every corner, and in its penetrating light nothing is hidden that does not become revealed. All the secrets of garden culture that are worth knowing are opened secrets now. W. G. W.

Pomological

CAUSES OF COLOR AND FLAVOR IN FRUITS.

T. T. LYON.

Color.

THE popular belief seems generally, if not always, to have been that the warm climate and long seasons of the South are the cause both of high color and superior flavor in fruits. I well recollect the comments made more than 20 years since at a meeting of the American Pomological Society, held at Philadelphia, upon some fine specimens of apples coming from North Carolina, whose rich, high color was characterized as unapproachable under a Northern sun. I also, not unfrequently, find the dream of the enthusiast, and the imagery of the poet employed to depict the wonderful effect of fervid Southern suns in this respect.

More recently, with the rise of pomological interest and the wonderful dissemination of knowledge on the subject, consequent upon more modern facilities for its interchange and transmission, we find abundant occasion to doubt the strict correctness of this still popular notion. It is within the recollections of most adult persons that, after the gold excitement of California when, among other pursuits, the attention of many was turned to fruit culture, we came to learn that, while their milder climate developed fruits to an enormous size, there was not a corresponding development of color; but, on the contrary, a very decided deficiency in this particular. This is not true of California fruits alone; but is also measurably true of nearly or quite all other fruit-growing localities, as we come eastward and northward, the color hightening nearly as the latitude increases, till we reach very nearly the northern limit of fruit culture, and especially of the cultivation of the larger fruits in the region of Northern Michigan and Ontario, where, also, we are surprised to find the maximum of color. I confess that this result was a surprise to me; but to establish its correctness I need only refer to any observing connoisseur of fruits who at the Centennial Exhibition had occasion to compare the fruits of our whole country as there brought together. Nothing connected with the pomological exhibit at that time was more noticeable than the fact that none of the exhibits there shown equaled in brilliant, rich colors the fruits of the British Provinces and of Northern Michigan, Wisconsin and even Minnesota.

It might, to be sure, have been alleged with some show of propriety, that there was a noticeable diminution of such coloring as we proceeded westward. Such was, in fact, clearly true of the chief exhibits of Michigan, Illinois, Iowa, Nebraska, Kansas and California; but as we are at the same time tending southward, we clearly have an equal warrant for charging the result to that cause.

An exception to such rule may be claimed in the case of the Fallawater, which in its native region puts on a fine red cheek, while farther north it is often wholly destitute of red. The exception, however, is only seeming, since even this fruit when gathered wholly without color, may usually be given a brilliant red cheek by exposing it for some time to the direct light of the sun after gathering, showing that it merely requires a longer season.

The potency of the long-continued sunlight of the far north for the development of color was also very noticeable in the collections of apples from Montreal and from the Grand Traverse region of Northern Michigan, at the recent meeting of the American Pomological Society, at Boston.

The facts above narrated seem to lead very naturally to the conclusion that abundant and long-continued light rather than great heat, is the dominant factor in the development of brilliant colors in fruits.

FLAVOR,

on the other hand, while it can by no means be held to be independent of the influence of light, seems, in an increased degree, to demand the elaborating influences of warmth.

The Summers of the North are often extremely warm; and experience has long since demonstrated that upon the transmission of a variety of fruit northward, there can be no doubt of its equal success in its new location, if only the season is of sufficient length to bring it to maturity before the development of flavor shall be checked by the chill of Autumn. The Fallawater apple in the climate of the States north of Pennsylvania loses not color only, but also flavor, and while exposure to light, as above stated, has the effect to develop its color, the same can by no means be said of its flavor. That must be matured in a good degree, at least, before removal from the tree, since if picked before the requisite stage is reached, it will remain hopelessly immature.

It is also true, however, that very few fruits, if we except those maturing quite early in the season, can be expected to retain their full quality when removed northward. The consequence of this is that very few of the long-keeping fruits of the Ohio Valley and Pennsylvania are found satisfactory in New York, Southern Michigan and Wisconsin; although it is an apparently inexplicable fact that trees of such origin invariably prove more hardy northward than those of indigenous origin there. There are, however, exceptions to this rule, among which I may name Grimes's Golden, Oconee Greening, Jefferis, Vandevere and some others, which seem to lose little if any flavor in coming northward.

The Apiarian.

POLLEN.

PROFESSOR A. J. COOK.

IN articles written for other journals, and in my "Manual of the Apiary," I have stated that the old bees could live for long periods without pollen. As honey, however, is a hydro carbon, and so contains no nitrogen, it is to be presumed that the old bees need and do eat some pollen during the active season, to supply the waste of tissue, consequent upon all physical activity.

I have further stated that pollen was an indispensable requisite to brood-rearing; that it is an essential element in the food of the larval bees. As a scholium under this last proposition, I have expressed the opinion that in some conditions the presence of pollen in the hive in Winter is a positive injury, and that in all cases it is unnecessary. But I would remark, and with emphasis, that this pollen is very valuable as soon as the bees commence to fly the following Spring, and then any frames that contain it should be given to the bees.

These facts have lately been called in question by several writers in the bee journals. I think most of the critics object simply because they do not understand my position. One writer, however, who, whatever else may be said of him, puts forth very original ideas, and contradicts nearly every well grounded fact in apiculture, calls for proofs.

1. I have wintered bees on food which was made wholly of cane sugar, and which I had analyzed, and which gave no trace of nitrogen. This was fed on clean combs which, so far as we could see, contained not a trace of bee-bread. New combs are so transparent that they cannot contain more than the faintest trace of pollen, at least without showing it. I have fed bees, right in the busy season of the year, this same kind of food and have had them so shut up that they could get at no other, and they have lived in this way for weeks and have built large combs, and when given their liberty were in good condition. It is impossible to prove that bees need and must have nitrogenous food when they are actively storing, but this position is sustained by all analogy.

2. In the last experiments the bees would have enough pollen in their stomachs and on their pollen baskets, so that they would put quite a little in the cells after first building the comb, and so would commence rearing brood, but the brood-rearing would soon be discontinued. After the brood-rearing had ceased, I could set it to going at once, by giving the bees a frame of bee-bread. In such cases we must not feed honey, as there is often quite a little pollen in the nectar which the bees have brought to the hive. Some honey, as bass-wood, often contains quite a trace of this. This would give enough pollen to rear a little brood. Again, for several Winters I have praticed giving half our bees pollen, and the other half, frames with no pollen. In all cases we have noticed that those without pollen would always be without brood in the Spring, while in the other hives we almost always found brood. Those without pollen would go to gathering very fast as they could get pollen the first of April and would then, or as soon as we would supply the lack of pollen in the hive, go rapidly to breeding.

These last experiments have satisfied me that bees are often better off with no pollen in Winter. In the best condition they will eat little or no pollen, as they breed very little, and in these circumstances the presence of pollen would do no harm. So in just the best cellar or in any condition where the bees are kept just right, no harm will result from the presence of pollen. In the South, too, where the bees fly out often, there is no danger from the presence of pollen in the hive. Here in the North, on the other hand, we often have a warm time in January, and the bees, unless so protected that they do not feel the warmth, will commence breeding if they have pollen. They may get a large area of brood. Now if there is no chance for them to fly, or if the weather becomes cold they are injured by this activity which came, we may say, as the result of the presence of pollen. The next Spring they are in feeble condition, and there is more of a tendency to dwindle away as the warm days incite them to fly forth.

If bees can be kept perfectly quiet in Winter, they eat nothing but honey, and do not need to void their fæces. With activity comes more food-taking, perhaps, too, they take some of the nitrogenous food, and as a result they become diseased and die. I have never found any support of the theory of the late Mr. Quinby, that bees excrete a dry powder in Winter. The facts that I observed in our colonies wintered with and without pollen have led me to the above theory. The theory may not be correct, but the facts are still to be explained. I am so much convinced that I remove all of the pollen if I can as I prepare the bees for Winter.

WASTED SWEETNESS.

THERE is sufficient power in the winds to do all of the labor that is performed upon the earth, but only a very small portion of this power is utilized; there is, also, probably, enough *honey* that goes to waste for want of bees to gather it, to sweeten all of the pies, cakes and cookies that are ever baked. Upon nearly every eighty-acre farm there is enough honey secreted by the flowers each year to furnish its owner with "sweetening power" from honey harvest to honey harvest. It is admitted by our best apiarists that a few colonies in a place give better results than a large number; therefore, if the bees were scattered about, a few colonies at each farm, there would not be so much of this sweetness wasted. To be sure, there are, and probably always will be, people who make a specialty of bee-keeping, owning their hundreds of colonies; and this is all right; it is to such persons as these that we are indebted for the improvements that have made bee culture the safe, pleasant and profitable pursuit it now is; but this need not deter any farmer from keeping a few colonies of bees that will supply his table with that most delicious and healthful of sweets, pure honey.

I presume that many do not keep bees who otherwise would if they did not fear the stings. Let all such procure a colony of pure Italian bees, in a good, movable-comb hive, a good "bee book" that will tell them how to manage them, a "smoker" and a bee-veil, and, if very timid, some rubber gloves. Thus equipped, they will have no trouble in learning scientific bee-culture without receiving even a sting; and, if they will commence in this way and be thorough in their work, they will probably find bee-keeping to be one of the most fascinating occupations in which they were ever engaged, and I should not be surprised if they found that the bees were the most profitable stock on the farm. W. Z. HUTCHINSON.

Genesee Co., Mich.

Field Crops.

POTATOES.

Originating; Propitious Surroundings, Etc.

WILL you please request the originator of the White Elephant Potato to give the public a careful history of its origin? I am sure it will be instructive, and illustrate the incidents of the comparative experiment given below. The very small tuber of the White Elephant received from the RURAL was cut into thirteen pieces; at the same time I planted with it thirteen eyes of the Grange Potato from a tuber of the same weight, each kind 18 inches apart in the rows, and the rows three feet apart. The treatment, culture, soil and conditions were as nearly alike as I could make them—fairly propitious. No extra manure was given either, and both received simply common field culture. I have weighed to day the product, and eaten for my dinner one tuber of each variety. The yield of the White Elephant weighed 37 pounds; that of the

Grange, 41 pounds. I have grown hills weighing ten pounds, three feet each way; of each there were really only 12 hills; for one W. E. hill having failed, I pulled up one of the Grange to make the experiment even. While the White Elephant is certainly a fine potato, it falls short of the quality of the Grange: as in most long potatoes, one end is deficient in starch. Though the yield is in favor of the Grange, the experiment repeated next year might result the other way. It is evident that there is something extraordinary in the vigor and yield of these two varieties, and this induces me to call for the history of the White Elephant.

The Grange having originated with me, I here give the history of its origin: A year or two after the Rose was sent out, in digging a patch of them, I discovered a hill that had sported, and was two or three weeks later than the Rose: weight six pounds. I cultivated the product several years, and finally discarded the variety, because, although it was healthier and yielded more than Thorburn's Rose, it lacked the beauty and smoothness of that variety. The last season on which I grew them, I found a small seed-ball, and from this I originated the Grange in the following manner: While burning, in the Spring, brush that had been used to cover beds of grape-vines in my nursery, I conceived the idea of throwing on soil and burning it, and with its aid growing my seedling potatoes when transferred from the hot-bed. The burned soil was mixed freely in the hills, and I am of the opinion that the Grange owes much of its vigor and health to this burned soil.

Here comes up the important question—what is manure? Mainly the gases generated and left in the soil by oxidation, which is a slow fire. The feeding roots of plants cannot take up actual manure, but only the minerals and gases left after decay, dissolved and absorbed by rain water. Here were the conditions and propitious surroundings that resulted in producing one of these extraordinary potatoes. During the two months of drought here this season, the Grange stood up and grew right along, better than any of the fifteen varieties with which it was tested. It does much better in dry, than wet seasons. The reason for this is found in the nature of its foliage. The leaves are small, very tough, and durable; so much so that the beetles work less upon it than upon any other variety; they leave it for more succulent foliage. Towards the tops of the vines the leaves are small; near the ground they are larger, and spread out so as to shade the soil completely. It will be seen that here is a lesson for farmers in utilizing brush and rubbish. May it not be that the same manures can be obtained from burning rubbish and securing the gaseous products by impregnating the soil with them, as by rotting stable manure, with the exception of the larger amount of mineral matter from the stable refuse? I think the creosote left in the soil also aided in warding off both insects and sporadic diseases. The fact of the parent plant being a sport probably also added an impulse that may well be carefully considered. To confirm my own impressions I will add that a short time ago I met Mr. Skeels, ex-Secretary of the American Agricultural Society, and he remarked that if he had planted all Grange instead of Rose and some others, he would have had 100 bushels to sell, instead of, as now, buying for his own use.

A. M. Purdy, of Palmyra, has grown the Grange several years, and says he has grown largely of the leading sorts, but not one of them begins to yield such a crop of large, fine, uniform tubers as the Grange. We believe it to be *the most productive potato in existence*. It is for the benefit of our farmers that I commend these two potatoes for a main crop. They seem to be our best dry-weather potatoes. I have not a single cent's interest in the dissemination of either.

D. S. MARVIN.

The Herdsman.

NOTES BY A STOCKMAN.

THE fruits of an exhibition of live stock cannot be justly measured by the profits made directly by the show. If this were the chief end of the exhibitors the show would degenerate into a sort of hippodrome; a show-ring not a bit more elevated in character than Barnum's exhibition of his fat woman, or his woolly horse. A live stock exhibition is a sort of mutual-improvement association for the benefit of stock owners. And it is a right result of the recent Chicago fat cattle show that the breeders of high-class cattle are filled with a spirit of emulation and a desire to achieve greater things in the future.

I HAVE already mentioned that to prove what a breed of cattle is really worth, a number of choice specimens should be fed for slaughtering. This is the chief end of a Short-horn, Hereford, or a polled beast, and any other purpose for which they may be put on exhibition degenerates them to mere fancy stock—playthings for millionaires. It is a gratifying thing to note that the principal breeders of Herefords have pledged themselves to "steer" 50 of their best bull calves and 200 of their best grade calves for future exhibitions. This is the right course, and these men will certainly find their reward in it.

SHORT-HORN breeders are also taking this course, and those of Ohio are reported as having formed an association for the purpose of preparing some of their best stock for exhibition, to compete with the Kentucky and Illinois breeders. And these may find in the cattle from the rich Ohio pastures and corn fields, some beeves that will tax all their efforts to beat. This will put the finishing stone on the edifice begun by the old importing association of Ohio of many years ago.

THE Canadian Short-horn breeders, too, are restive under the control of the publishers of the private herd book of the Ontario Agricultural and Arts Association. A private association, or a party, who publishes a herd-book has an interest conflicting with those of the breeders. This should be obvious, because the profits are measured by the number of entries, and to augment this number, there is always a temptation to let in entries of a doubtful character; and this is antagonistic to the breeders' interests. The inevitable result is already near at hand in the Dominion, as it is in the United States, and as it has already been consummated in England: viz., that the breeders will control their own herd-books. The Canadians have already resolved "that it is necessary to publish a herd-book completely under their own control," and have declined to entertain any offers looking to a different conclusion, from the present herd-book publishers.

HOG CHOLERA is making frightful ravages in the West. The hog crop of Iowa, for instance, is reported as being 40 per cent. deficient from these losses. How long will Western farmers continue to ignore the plain teachings of experience? The prophet's prescription, "go wash and be clean," applies to this case. Cleanliness is the patent remedy needed, and farmers may call upon the makers and compounders of nostrums and physic until doomsday, in vain, while they neglect the necessary sanitary precautions. It is a case for prevention, and not one for cure. No medicine will cure a contagious or infectious disease like this which is akin to the dreaded human cholera, and other epidemics produced by poisonous filth. A radical change must be made in keeping and feeding swine before hog cholera can be abolished. The nature of the disease is so well known that no other opinion can be justly formed, and the offers of fortunes to the discoverers of remedies that will cure it will be without result and futile, because that is working at the wrong end: at the fruit and leaf instead of at the root. And the means used must be general, or they will be ineffective. No sporadic attempts at prevention will avail; every hog owner and feeder must enter into the necessary combination, for the work of a portion only will utterly fail. The disease must be stamped out.

THE Northern Pacific Railroad has become a feeder of the Eastern cattle markets. Thousands of Montana sheep are now being shipped eastward; and Eastern sheep owners must look for increased competition from this direction, and prepare to meet it, or they, too, must go West.

THE demand for mutton for Summer consumption in every town and village is a thing to be cultivated by farmers. A flock of sheep is safe to pay 100 per cent. profit in the hands of a competent manager. Every week a few head of fat sheep might go to the butcher for local consumption during the hot weather, when beef is less salable, and in this way the surplus of a considerable flock might be worked off. But the dogs! When sheep are more numerously kept than dogs, the dog question will be satisfactorily disposed of.

THE question of the most profitable stock in proportion to the quantity and kind of feed consumed has never yet been definitely settled. It is quite certain, however, that swine consume more food, and a more valuable kind of food, under our present system of feeding them, than any other of our domestic animals. It has been said over and over again that 60 pounds of corn will or should produce 10 to 15 pounds of pork. But this is a partial statement, and requires revision. What amount of corn is required to bring a hog from its birth up to a weight of 300 pounds? This is a question upon which we have no decisive information, but yet it is a very important one. Again, how much cheaper could the 300-pound hog be produced if half its food consisted of roots, mangels, or sugar beets, for instance, for the growth of which the American climate is admirably suited. And further, how much less cholera would there be among Western hogs if half their food consisted of these roots? The facts are, doubtless, that in general, a bushel of corn will not or does not produce 10 pounds of pork, and that continuous corn feeding is one of the chief causes, if not *the* chief cause, of the losses by cholera.

SOME of the Illinois papers are hard set to find excuses for the recent embargo placed upon the entry of cattle into that State by the Governor. They are going as far as England for an excuse for the foolish and ineffective mistake that has been made: and "the dreaded foot-and-mouth disease" is the text of the excuse. There never has been a week and never a parish in the whole of England, but foot and-mouth disease has prevailed then and there for years past. But we have none of it here, simply because it cannot exist here from climatic conditions. Our dry climate and less luxuriant feed, and the absence of the common stall-feeding, or keeping on manure heaps in covered yards, are all antagonistic to this disease, and it is not at all dreaded here. And it would never trouble Illinois if a thousand or two "foot-and-mouth" calves were turned loose on the prairies, for that in itself would cure this dreaded disease.

Miscellaneous.

What Others Say.

Dr. James R. Nichols kindly calls our attention to a paper read by him before the Massachusetts State Board of Agriculture, in answer to several questions which we had occasion to ask him in relation to the muck controversy The entire address is well-considered and instructive. We regret that, in the crowded state of our columns, we can find space only for the more important parts. The RURAL hopes to be able to put before its readers additional evidence as to the actual value of muck.

MUCK PROPER.—Muck, considered as the most advanced of all bog deposits, is easily recognized by its peculiar physical conditions, and we have now to consider its value as a manurial agent. The large amount of water mixed with muck in its natural state, is a most serious obstacle to its farm employment. It may be stated to hold a minimum of 60 per cent., and a maximum of 92 per cent., the average being, in New England mucks, not far from 85 per cent. of water. To cut out a water-soaked substance like this, from a treacherous, spongy bog, lift it into carts, and carry it long distances, involves great labor and expense. If it is allowed to air dry on the spot where exhumed, some advantage is gained, but it must be remembered that under the most favorable weather and conditions for drying, much water remains to be transported. Experiments at my farm upon air-dried mucks, extended over five seasons, showed that water remained in the material to an extent varying from 30 to 47 per cent. It is probable that not many farmers have ever seen a specimen of absolutely dry muck; that is, such specimens as the chemist has in hand in making his analysis in the laboratory. The absolute water-free muck is a light substance usually, which the wind will scatter as it does a handfull of feathers. . . . . It is plain that a substance so under the constant influence and action of water can contain no ingredients *soluble* in that fluid; and hence we fail to find in the ash of muck, any of the soluble forms of plant food. None of the valuable soluble salts of potash, soda, or phosphoric acid are present in the muck bed, unless in extremely minute quantities. In soils on higher lands, the humus and ash contain all those soluble agents derived from the decay of vegetation. It must be kept in mind that vegetation decays *in water* under different conditions from that when exposed to air, or in the presence of oxygen, and a different condition of the resultant mass must be expected.

The greater portion of the inorganic material of muck is lime in its insoluble form, silicia, iron, alumina, and often magnesia. Of the alkaline earths, lime is present in greatest abundance. From a careful consideration of the results of analyses of a large number of specimens of muck, made during the past quarter of a century, under my observation, I have no hesitation in saying *that the ashes of muck are practically worthless to the farmer as a source of plant food.* I say *practically* worthless, meaning by this, that the inorganic constituents of mucks contain so little of valuable, available, plant nutriment, that if they held no other forms, they would be utterly unworthy of attention, even under the most favorable conditions. This view is sustained by the investigations of Kane, Sullivan, Vaux, Regnault, Mulder, Baer, Peterson, Anderson, Wagner, and many other eminent chemists in Europe, and Johnson, Storer, and other chemists in this country; in short, it is sustained by the analysis of every competent chemist whose researches have extended in that direction.

NITROGEN IN MUCK.—As regards the other forms of valuable plant food contained in muck, I have only to consider *nitrogen*. All analyses prove the presence of potential nitrogen in mucks, and in some it is found in considerable quantities. The form in which it exists is in combination with organic acids, the humic, ulmic, crenic and apocrenic. It has been alleged that free ammonia has been found in some bogs, but I have failed to detect it in any specimens coming under notice, and no reliable chemist, so far as I can learn, has declared its presence. Nitrogen is the most costly, and, indeed, the most valuable, of all forms of nutriment needed by plants, and the question of its value, as found in mucks, is one of high importance in this discussion.

ANALYSIS OF MUCKS.—In the table of analysis presented below, a clear view is given of the amount found in three typical specimens of muck, one of which is from a bog on my farm at Winnekeni, one from a remarkable deposit in Boxford, Mass., the other from a well known bog in Plaistow, N. H. The equivalent in ammonia (NH_3) is also presented.

	Nitrogen.	Ammonia.
Winnekeni farm, per cent.	0.56	0.68
Plaistow, N. H., " "	0.31	0.37
Boxford, Mass., " "	0.50	0.61

The above is as found in the *wet* condition. In the *water-free* state it stands as follows:

	Nitrogen.	Ammonia.
Winnekeni farm, per cent.	2.47	3.00
Plaistow, N. H., " "	2.13	2.55
Boxford, Mass., " "	2.12	2.59

The average of fifteen determinations of nitrogen in wet mucks, by Prof. Johnson, is.....0.42
Water-free.....2.31

. . . . Taking muck beds as they are found in the Northern States, it will be safe to assume that they hold on an average, in the absolutely dry condition, about two and a-quarter pounds (2¼ lbs.) of potential nitrogen in each one hundred pounds. . . . . A specimen from my farm meadow contains in each ton (2,000 pounds), of *water-free* muck, 49.40 pounds; this at 15 cents (a fair price), gives a money value of $7.41 for the nitrogen. The value of all the mineral and nitrogeneous plant food it contains may be stated as follows:

Nitrogen	7.41
Lime	.30
Other salts	.10
	$7.81

The cost of procuring one ton of absolutely dry muck, may be understood from the fact that *ten tons* of the wet mass are required, estimating the water at 90 per cent., which is a fair average for successive seasons. A ton of wet meadow muck of the best quality, is thus shown to have a value of seventy-eight cents (78 cents) as fertilizing material for farm crops, estimating its mineral plant-food constituents as we estimate that found in cow dung.

ANALYSIS OF COW MANURE.—With the view of affording a comparison of muck with fresh dung, a sample taken from my barn stalls, the droppings from cows in milk, is here presented. It contained of

Water	81.08
Organic matter	15.96
Ash	2.96
	100.00

The result of this examination may appear somewhat startling inasmuch as it shows that the fresh cow dung from the barn, contains *more* water and *less* organic matter and ash than is found in muck on the farm 40 rods distant. It would appear (other things being equal) that the muck is as valuable, or even more valuable than the dung, but important considerations come in to dispel this illusion. A complete analysis gave, as contained in each ton of the fresh dung, the following amounts of valuable constituents.

Nitrogen	5.11 lbs
Phosphoric acid	3.55 "
Potash	2.00 "

The nitrogen in manure has a higher value than that in muck, but estimating it the same, with the phosphoric acid, potash, etc., the value stands as follows:

5 1-10 lbs. of Nitrogen	15	76
3½ lbs. of Phosphoric acid	12	42
2 lbs. of Potash	7	14
Lime and other salts		33
		$1.65

ANALYSIS OF LIQUID EXCREMENT.—The nitrogenous and mineral value of muck stands to fresh cow dung as 78 cents to $1.65 per ton, water-soaked; or nearly three to one in favor of the latter; but it must be remembered that fresh cattle droppings do not represent *manure* as found in farmers' barn cellars. This consists of a mixture of the *liquid* excrement with the solid. A ton of fresh urine, as determined in analysis from specimens collected at my barn, gave the following results:

Nitrogen	17.5 lbs.
Phosphoric acid	10.12 "
Potash	15. 9 "

This result indicates the very high value of liquid manures, giving a value per ton of about $5, the estimate being made in accordance with that for muck and for solid excrement. A ton of well mixed manure, containing equal proportions of the solids and liquids, has a money value of not far from *four dollars*, or, this is the value of the manure stored in the barn cellar at Winnekeni farm, as learned from analysis.

W. W. TRACY, in answer to a question how best to preserve onions, has this to say in the Michigan Farmer: The onions are stored one to two feet deep on the tight floor of some barn or shed (the loft of a barn is frequently fitted up for the purpose), but kept at least two feet from the sides of the building. They are left exposed until chilled or actually frozen, and then covered with about one foot of straw or marsh hay, the space between the wall and the onions being tamped solid. In putting on the hay care is taken not to disturb the onions in the least by stepping on them, but the hay is thrown on from the outside. As the cold increases more covering is added, until by mid-Winter it is three or four feet thick and the onions are left severely alone until the approach of Spring, when the covering is gradually removed and the bulbs are usually found in the best of condition. The object in this method is to have the onions as dry as possible and then to chill or freeze them and keep them frozen until wanted, at the same time protecting them from the warm damp weather of a thaw, and preventing their being moved when frozen; this last is considered very important.

THE Massachussetts Ploughman reasons that if the potato was the true seed there would be but little doubt that planting the largest and best specimens would result in the improvement of the quality of the product. But as they are not the true seed, are not a new life secured through the principle of reproduction, but simple a continuation of the old life secured by a continuation of vegetable growth, there is but little more certainty of getting large potatoes, by planting large ones for seed, than there would be of getting large apples by setting large cions.

COTTON-SEED MEAL, says Prof. Atwater, if decorticated (the tough husk of the seed taken off) and in good condition, is a very valuable food. But it must not be fed in large quantity—not more than four to six pounds can profitably be given to a steer or cow per day. It ought to be purchased anywhere in the West for $1.25 per 100 pounds. It is exported in large quantities to England, and used as a fattening food for cattle. If mixed with corn and bran, let the proportions be 100 pounds corn, 80 pounds bran, and 69 pounds cotton-seed meal, or 60 pounds of flax-seed meal, and then feed of the mixture all the cattle require. Glucose meal is better if mixed with some corn, this meal having about the same composition as bran.

No finer English fruit than mine goes to Covent Garden, says a writer signing himself "A Victim to Pomona," in the London Chronicle. Twenty-five years have I now been a fruit-grower, and in one season only has the produce paid the wages, let alone manure, repairs, interest on capital, etc. . . . . .

"MAMMA, where do the cows get their milk?" inquired Willie. "Where do you get your tears, my son?" "Mamma, do the cows have to be spanked?" thoughtfully inquired Willie.

Farmers' Colleges.

I was much interested and pleased with Dr. J. R. Nichols's remarks on "Farmers' Colleges" November 26. p. 798. It is evident to farmers that his "head is level." We also need some such schools for farmers' sons of 20 and near that age or older, who would like to get more light; but cannot spend four years studying algebra, geometry, and military drill, etc., while if they could attend a course in the Winter, taking up some of the studies closely connected with practical farming, like chemistry, etc., many who could not leave the farm in the Summer, would gladly spend part of one or even more than one Winter in attending such a practical course. I am glad that some of these scientific fellows like Dr. Nichols are awaking up to what we farmers need. Those who expect to hold the plow and also themselves drive some of the time cannot afford to spend much time on superfluities. Let us hear more on the subject. In closing I will say that I read six agricultural papers, but the RURAL NEW-YORKER is decidedly the *best*. EVERETT E. BROWN.

Windham County, Connecticut.

A Suggestion.

To dig a ditch with a uniform grade on the bottom, in land that is uneven on the surface, is very difficult unless one knows how. I will give you a plan that I originated myself. It has never been in print. At the head of the ditch drive a stout stake, and at a distance of ten or twenty rods farther up, and on a line with the ditch, drive another. Nail a narrow strip—a lath will answer—across the first stake, on the side next the outlet, just as high above the bottom of the ditch as the eyes of the digger. Then let him who is to dig the ditch go to the outlet and look across the lath and direct his assistant to nail another strip on the second stake, in a line with the first. Now, to find the grade in any part of the ditch, it is only necessary for the man to stand up straight and look at the two strips. If they are in line, his feet are on grade.

In cases where there is not an opportunity to sight in this manner, as in digging a cellar drain, I have adopted the following method: Stretch a line at a certain distance above the bottom of the ditch and at one side, so as not to be in the way, and with your measure you can keep just so far below the line. If at any place the ditch should be inadvertently dug too deep, it is important that it be brought to a true grade and tamped, lest the tile settle and become filled. M. CRAWFORD.

Summit Co., O.

Everywhere.

RURAL SPECIAL REPORTS.

Arkansas.

WALNUT RIDGE, Lawrence Co., Dec. 10.—Times are hard here on account of last season's drought. Prices of everything in the food and feed line are high: corn, $1.15@1.25 per bushel; Irish potatoes, $2; sweet potatoes, $1.25 per bushel; turnips, 60c. per bushel, and eggs, 20c. per doz.; butter, 25@35c. per pound; pork, 8c. per pound and beef 5@6c. W. S.

Indiana.

INDIANAPOLIS, Marion Co., Dec. 12.—Not an asparagus seed came up. Sowed Washing-Oats April 22, in drills 110 feet long; grew very well, but smutted badly. [This seems to be the general report.—EDS.] May 11, planted three rows of Branching Sorghum 110 feet long, four feet apart; hills, 18 inches asunder; one to three seeds in hill Came up exceedingly well; when three to four inches high, thinned to one plant in a hill. Owing to our extreme and unparalleled drought from June 8 to Aug. 31, it made slow growth, at latter date not much of it having attained a hight of three feet. At that time we had a drenching rain, which caused it to shoot up wonderfully, some of it reaching a hight of eight to nine feet in the next two months. One hill made 23 *heavy* branches, the whole averaging 10 to 12 stalks; but few stalks showed any signs of seed; none matured. On Oct. 27 I cut an average hill of 10 stalks: weight, 7½ pounds—an average of over 27 tons per acre. Not a blade curled during our long period of more than 10 weeks of terrible drought and heat, while evergreen corn alongside curled every day as tight as a paper lamp-lighter. About Aug. 20 some bottom leaves began to dry, and fearing it was all going the same way, I began cutting and feeding to my cow a few hills daily, and the way the new shoots started after our rain on Aug. 20 was a surprise to all beholders, as was the whole crop, which has been cut at intervals since Oct. 15, and fed to and devoured with apparently keen relish by my cow and horses, not five pounds of the coarsest stalks having been refused. Perhaps it should be stated that the heavy, hard stalks were cut short with a lever cutter. What would my crop have been with timely rains! I have spun this Sorghum matter to a considerable length, for I regard it as an exceedingly valuable fodder plant, especially for soiling. On May 18, brought White Elephant from cellar; removed five sprouts and planted them; cut potato to 14 eyes; planted them 15 inches apart in drill slightly scooped out, leaving the bed rather firm; put on the eyes and covered with half a peck of thoroughly decomposed chip manure sifted, then some short litter, then loam. Two sprouts and seven eyes grew. Hoed and kept clean. After I had overcome the ravages of the beetle and the rains came, the vines grew vigorously and were very green on Oct. 18, when I dug five pounds, mostly very small potatoes; there was but one fair-sized and handsomely formed tuber in the lot. W. B. P.

Iowa.

LADORA, Iowa Co., Dec. 10.—I divided the White Elephant with a neighbor. From the four eyes I had left, I got a peck measure about even full of very handsome potatoes. Last Winter was very hard on the Cuthbert Raspberries. I had one (Cuban Queen) melon that weighed 29 pounds, another 33 pounds. Corn, wheat and potatoes in this neighborhood each about one-fourth of a crop J. W.

Kansas.

GARDEN PLAIN, Sedgwick Co., Dec. 13.—Both kinds of asparagus grew splendidly. It was too dry for the flower seeds. The oats I did not sow, neither did I the Sorghum. I gave A. M. George half of the White Elephant Potato. He cut it into six pieces, one eye in a piece, and put the pieces into a small stone jar filled with sand. When they sprouted, he took the sprouts off, and set them out. The weather being very dry, they did not all grow. He dug them the 19th of October and got 34 pounds. One weighed 1¾ pound; another 1¼ pound. Some were cooked and proved excellent. He thinks if he had received the potato in February he could have increased the crop half or two-thirds as one potato out of a hill planted in July weighed 1¾ pound. The product of my half was destroyed before maturing. H. E. S.

NORTON, Norton Co., Dec. 15.—This has been a harder season on the settlers of this county than last. A railroad that is being built through the county has enabled many to earn money to "keep a-going," but few have anything to sell. Flour, $3.50; wheat, 85c.; corn, 75c.; meal, $2.20—so little of the corn is fit to grind. My corn averaged 2½ bushels per acre! I cut my "Elephant" into 10 pieces; planted them in two hills; watered the hills during the driest part of the season, and when I dug them (the hills) I did not find a potato, not even the size of a pea! I think if any set, some grub or worm must have eaten them. Only two of the Rural Branching Sorghum seeds grew. The Doura, which I had kept over from last year's distribution, did much better—grew higher and larger. During the latter part of the season the chinch-bug attacked both, and when they were dead to about 18 inches above the ground I cut them up for fodder. A hill that I had previously cut—to see it sprout again—never sprouted, owing to the chinch-bug, probably. The asparagus and flowers did reasonably well, but I think that our soil, while fertile, is almost too "raw" yet for small seeds. D. E. S.

Michigan.

JONESVILLE, Hillsdale Co., Dec. 12.—The White Elephant Potato weighed two ounces; from it I raised 20 pounds of very nice tubers. I would not take five dollars for them. H. B.

Minnesota.

CEDAR MILLS, Meeker Co., Dec. 14.—The Rural Branching Sorghum was planted about May 10. The seeds all came up and grew finely from the start. Did not look yellow. The cows ate it greedily, preferring it to green corn fodder. It is undoubtedly a good fodder plant, but not needed here, where natural meadows are so plentiful. I noticed that it remained green for two or three weeks after the frost had withered the corn blades. Only six stalks matured seed. The Washington Oats grew well, but rusted badly and the stalks fell down before the seed ripened. The White Elephant Potato under the circumstances has done well, as I did not expect even one pound after I found that the Colorado beetles had killed the vines before they had blossomed, but there were nearly eight pounds when I dug them. I think that every asparagus seed came up, and all have grown nicely. The picotees and carnations germinated well, though planted very late, when the weather was hot, about the middle of June, but I drenched the bed well and covered it with boards to keep it moist. This enticed the ants and I had to make war on them with boiling water, losing a few plants in this way; but I have a nice lot of plants and the picotees bloomed finely all the Fall. They were mostly very double, and even the single ones were very large and fine. I found that my pentstemon and iris seeds planted in the open ground late last year, came up last Spring, and are now fine plants. I feel quite sure that all the failures I have ever had with RURAL seeds (and they are not many) have been from too much water in the boxes or pots. Once they were too dry. John wishes me to say that he prizes Blount's Corn and considers it the most prolific of any variety that he has cultivated. The first year the seed did not mature, but grew all right. The second year a part only matured, but this year it all ripened well, some of it as early as the first of September. M. E. M. B.

NEW YORK MILLS, Otter Tail Co., Dec. 12.—My White Elephant Potato had six eyes five of which grew, making five hills. Had a great fight with the potato bugs, but got one peck of nice tubers; several weighed a pound and one two pounds; have not tried any yet as I am keeping all for seed next year. It is a race between the Elephant and the Beauty for the first place in my regard. The Washington Oats grew finely but turned out just half smut, which I pulled up as fast as it headed. I have half a peck of oats for seed. The Rural Branching Sorghum grew eight feet high; two stalks headed out. The asparagus grew about two feet high. The flowers are fine. My land is black loam with a clay subsoil. It is new ground, the last being the first crop. We are all homesteaders here on the Northern Pacific R. R. T. D. A.

New York.

CARTHAGE, Jefferson Co., Dec. 14.—The RURAL free seeds came in good condition. I planted the White Elephant Potato, cut into 12 pieces, an eye in each piece. At the time of planting there were two sprouts grown from it, about three or four inches in length, and I planted these one in a hill, making 14 hills. The sprouts grew as strongly and thriftily as the other hills, and the yield was about the same. From the 14 hills I had 48 pounds of nice, large tubers. The Branching Sorghum did not ripen any seed, but grew well. The oats gave a good yield, and the asparagus did finely, although the dronght was quite severe in this vicinity. The flower seeds were not sown on account of our inability to prepare the beds until too late; for, as the Spring was later than usual, we were extremely busy. J. V.

CASTLETON, Renssalaer Co., Dec. 9.—The Mold's Oats I consider very valuable. The Cuthbert Raspberry I consider something extra and quite hardy. I have now about 30 plants from the two. The pentstemons and willows are very fine. I have over 30 iris plants. The Washington Oats were badly smutted but the White Elephant made up for them. I received a two-ounce potato which was smashed in the mail; but I cut it into 13 pieces with one eye in each, and planted them with the main crop, the hills three feet apart, and dug 25 pounds of tubers. The pinks and picotees were elegant. F. O.

Pennsylvania.

HORN BROOK, Bradford Co., Dec. 12.—The melons from last year's Free Seed Distribution were splendid, and the hollyhocks bloomed finely this year. The hibiscus did not do well. Two of the evergreens came up, but that was all. They died; so did the Man-root. The magnolias did not come up. This year the melons were nice. The pinks were very pretty and are looking fine now, but mine were not as handsome, nor was there such a variety of them, as I saw in the garden of another RURAL reader. The celery is the best I ever saw. The tomatoes were good, but were affected with the rot, and I have one of the tree seeds that came up and grew about four inches. I hope it may live. We have had hardly enough snow to cover the ground, and it melted off the next day; but now the ground is freezing and it looks like snow. Some of the flower seeds did not come up in consequence of not being planted early enough to get a start before the dry weather came upon us. But, taking them all together, I feel very well satisfied; but I hope to do better next year. T. G. T.

Tennessee.

NASHVILLE, Davidson Co., Dec. 12.—I got *nearly* (not quite) a barrel of White Elephants—*good ones*. J. J. P.

Wisconsin.

CASSVILLE, Grant Co., Dec. 8.—My White Elephant Potato I planted in good garden soil in ten hills. It yielded about half a bushel of nice tubers; one weighed eighteen ounces, and three weighed one pound each. I planted Early Rose and Victor potatoes at the same time and in the same manner. The Early Rose yielded less, and the Victor more than the White Elephant; but the Victor is not a first-class potato. I have sufficient asparagus plants to set out a good-sized bed. Winter wheat all killed out, rye nearly so. Oats one-third of a crop. I had 70 acres; yield 1,112 bushels. Of corn I had 50 acres; yield 40 bushels per acre. Flax seed turned out eight to eleven bushels per acre. Hay was a good crop; I had about 40 tons from 18 acres of bottom land. Very little Spring wheat sown, but what was sown the chinch bugs killed. There was a large amount of clover cut for seed, but wet weather spoiled three-quarters of it. Dairying is fast taking the place of wheat raising hereabouts; quite a considerable number are fattening cattle; others turn their attention to sheep, while all fatten hogs more or less; but the hog cholera has been troublesome for two years. A good many farmers are raising "half grade" Percheron horses. Heavy horses sell well here. This is a good stock country. There is plenty of good water, and stock generally are healthy. I show the RURAL to my neighbors, which is as good a recommendation as I can give it. All who have seen it are pleased with it. I have always taken an agricultural paper, but the RURAL which I subscribed for the first time a year ago, pleases me better than any I have ever seen. J. W. T.

MINERAL POINT, Iowa Co., Dec. 16.—Planted the White Elephant Potato one eye in a hill; 16 hills; yield half a bushel of nice tubers. The oats grew four feet high, and yielded two quarts of good grain. The Rural Branching Sorghum grew 10 feet high with 10 to 16 stalks in a hill; seed matured on a few heads. The asparagus did not all grow, but there is enough to give it a fair trial next season. The flower seeds grow into handsome flow-ers. E. G. R.

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ANNOUNCEMENTS.

THE Bonanza Farm series of articles and illustrations will be begun early in January, beginning with the portrait of Mr. Oliver Dalrymple and a sketch of his life. The portrait will be printed upon heavy supercalendered paper as a supplement. The second of the series of illustrations will be Breaking; the third Backsetting; the fourth, Seeding; the fifth, Harrowing; the sixth, Harvesting, and the last Thrashing. Mr. Dalrymple informed our special correspondents that this is the first time he has ever given comprehensive notes of his methods of farming to the public, and that all other writings upon the subject have been from desultory information, and most of it wide of the truth.

WE take much pleasure in announcing to our readers that the distinguished American horticulturist, Dr. John A. Warder, is preparing a series of articles for the RURAL NEW-YORKER on Forestry. The following subjects will be specially treated:

Water-Supply of a Country—How affected by Forests; Results of Clearing. Torrents; Overflows.

Where to Plant—Preparation of the Land.

Planting—What and How; Massing; Mingling; Grouping.

Cultivation—-Protection—-Fencing—-Fires.

After-Treatment—Thinning, &c.

Felling—Harvesting.

Systems of Management.

Secondary Products—Bark, Pitch, etc.

Conservation or Planting Anew.

Natural Reproduction.

Coppice Wood—-Management; Time for Cutting.

Cheap and Hardy Trees—Pioneers for the Prairies.

Soft-Woods—Poplars, Willows, etc.

Catalpas.

Hard-Woods—Oaks, Hickories, Walnuts.

Maples, Ash, Cherry, Elms, Buttonwood. Beeches, Birches, Iron-woods, Alders, Honey-Locust, Ailanthus, Black-Locust, Chestnuts, Magnolias, Tulip-Tree, Sassafras, Sumac, Thorns, Plums, Crabs, Viburnums, Mountain Ash, etc., etc.

Miscellaneous and Novelties from Abroad.

Conifers and Evergreens.

Our Pines; Spruces; Firs; "Cedars;" Larches; Cypresses; Thujas, etc.

Undergrowth—Dogwood, Hazel, etc.

Insects and Enemies.

Local Plantations already started—Larch Dale, Illinois; Messrs. Fay's Estates in Massachusetts; Pine Forests of Cape Cod; Scofield's, Elgin, Illinois; Larch Wood, Iowa; Col. Whiting's, Iowa.

Shelter Belts—Wind-Breaks.

Black-Locust Groves of Ohio.

Dr. Warder's Experiments, etc., etc.

PROFESSOR A. E. BLOUNT will commence early in the New Year a series of articles on Colorado farming, wheat growing, etc.

MR. WALDO F. BROWN, the veteran farmer of Butler County, Ohio, will shortly begin a series of articles in the RURAL NEW-YORKER upon the following topics:

How to Raise Pigs—Illustrated.

How to make Cheap Pork, adapted especially for the corn farms of the West.

Breeds and Crosses.

Recollections of Hog Driving.

MR. HENRY STEWART, as has already been announced, will begin his farm novel, founded on fact, entitled "The Story of Stony Brook Farm," as soon as our present story closes.

THE well-known Professor A. J. Cook begins with the New Year a series of articles on bees and honey. Professor Cook has for 14 years been an earnest student of apiculture, carrying forward for the entire period experiments that had for their object the development of the science and improvement of the art. For the past thirteen years he has been a lecturer on bee-keeping at the Michigan Agricultural College, Superintendent of the College Apiary, which has paid from 100 to 500 per cent. on the capital invested; President of the Michigan State and of the National Bee-Keepers' Associations. He is the author of what everywhere is acknowledged as the most complete work on apiculture in the world, and his Manual of the Apiary is thought, both in Europe and America, to be the most complete work extant on this subject.

WE DID NOT DO AN INJUSTICE.

IN the RURAL of November 12, in commenting on Gov. Cullom's restrictions on the importation of cattle into Illinois from certain scheduled districts in the Atlantic States, we said:

"The Treasury Cattle Commission at first recommended that the entire States should be scheduled in any part of which the disease existed; we protested against such an embargo as too sweeping, and we are pleased to see that Gov. Cullom has prohibited importations only from the infected counties, thus greatly diminishing the embargoed area."

In reference to these remarks the following note from Mr. J. H. Sanders, Secretary of the Treasury Cattle Commission, appeared in our issue of November 26.

"Referring to your paper of Nov. 12, page 768, bottom of last column, permit me to say you are greatly mistaken as to what this Commission recommended to the Governor of Illinois, and your article does us injustice. We recommended to the Governor just what he has done, no more and no less. We never thought of urging him to schedule any State entire."

In the editorial in which this note was published we pithily stated our action with regard to the laudable desire of Western men to protect their herds from possible contagion, and we concluded the article with the same inquiry with which it began—"Have we done an injustice?"

Curiously enough two of the Commissioners who, of all men, know best what measures were really recommended to the Governor, have decided that we were *not* guilty of an injustice in the above statement, and these two are Prof. James Law, the President of Commission and Mr. J. H. Sanders, its Secretary. In the issue of Dec. 15 of the Breeder's Gazette, owned and edited by the latter, is a long article by the former on "Contagious Pneumonia—Cattle Owners and Congress." On page 55, first column, in speaking of the impossibility of impressing those in authority with the stringency and comprehensiveness of the measures needed to suppress the disease, Prof. Law says:

"Even Gov. Cullom, of Illinois, who, at the instance of the Treasury Cattle Commission so nobly came out with a proclamation forbidding the introduction of cattle into his State from the infected counties in the East, yet failed to see the importance of proscribing an area wider than the individual counties infected. * * * Had he, *as advised by the Commission*, proscribed all parts of the infected States lying east of the Alleghanies, or if that is illegal, the whole area of each infected State, he would have instituted a sound protective measure."

Mr. J. H. Sanders, Secretary of the Commission, indorses this statement of the case by allowing it to appear in his own paper without the protest which, had Prof. Law misstated the case, he would certainly, under the circumstances, have editorially made, especially as particular attention is called to the article in the leading editorial, on page 60, of the same issue. If the omission is due to courtesy, absence, forgetfulness, oversight, carelessness or policy, then the statements made by the President and Secretary, of what measures were really recommended to the Governor, differ so widely that it will not be easy even for the acknowledged ability of these gentlemen to reconcile them; if, on the other hand, the omission is due to a clearer comprehension or a better recollection of the recommendations made, then we are certainly exonorated from the inconsiderate charge of having done an injustice to the Commission whose appointment and composition we approved.

OUR INDEX FOR 1881.

WITH this issue we present the index to the Fortieth Volume of the RURAL NEW-YORKER, which is brought to a successful close this month. We hardly need to speak of the convenience of such an index in a journal like the RURAL. Any periodical devoted to the consideration of practical or scientific subjects is sadly incomplete without a carefully arranged index by the aid of which the reader may turn at once to the subject on which he seeks information, and thus the tedious, and often hopeless, task, of looking through an entire volume, is avoided. But there is a difference in indexes. A properly arranged index is of the first value in facilitating the search for a particular article, while one hurriedly and carelessly thrown together may be quite as bad as none at all.

The one which accompanies this issue of the RURAL we can confidently say belongs to the former class. The compilation of it, as of those of the past three years, has required a great deal of painstaking labor, and it has been thus conveniently and carefully arranged by an expert ho for four years has had this matter in charge. Few journals give such attention to their annual indexes, and we feel assured that our endeavors to give our readers such a means of ready reference will be appreciated by them, and, if so, we shall feel that whatever skill and labor it has demanded will be amply rewarded. We have devoted the entire index space to the practical departments only, inasmuch as the contents of the literary and other departments cannot have for the farmer the permanent value which the consideration of practical topics possesses, and we have aimed to classify the subjects discussed in each article rather than the mere *title* of the same, and whenever it has seemed necessary to promote ease of reference or to avoid ambiguity, the same topic has been placed in the index under more than one heading.

In the above remarks we have gone on the supposition that most of our subscribers preserve the numbers of the RURAL as they come to them from week to week and, in some way, bind them for use. In what book could so much and so authentic information on so large a variety of farm topics be found as in a single volume of the RURAL! It is as a work of reference, as, in brief, an encyclopædia of agricultural and horticultural facts, theories and experiences that the RURAL is especially valuable, and as such it should find a permanent place on every farmer's book-shelves.

OUR UNUSUALLY HIGH TEMPERATURE.

LAST Tuesday the Signal Service reported a "warm wave" averaging 30° to 40° above the mean temperature of the month and extending to the south and east from its central position in Dakota and Minnesota. This "warm wave" is only one of a series which have recently been developed in that "weather manufactory" Manitoba, Montana and Dakota. On the 6th inst, a "warm wave moving in a southeasterly track entered the United States from Dakota and Montana." Again, on December 17, a "warm wave" extending from Dakota "to the south and east" was announced with a temperature 20° above the average for the month in Minnesota and Iowa, and 30° above the average in Dakota. This anomalous weather has extended nearly all over this country, and appears to have extended even to Europe. From all quarters come predictions of an exceptionally mild Winter, and there certainly is a hopeful prospect that the "clerk of the weather" will verify the "weather seers'" cheering vaticinations. "Cold waves" will no doubt soon alternate with "warm waves," but the persistency of the latter implies the existence of very unusual causes of heat, the influence of which will probably be still felt even through January. This protracted spell of warm weather is likely to be very beneficial to the Winter wheat crop, enabling it to attain a good growth before severe cold, although owing to the drought it was sown unusually late in most parts of the country. With a snowfall sufficient to cover the crops and a moderate mean Winter temperature, the grain crops of the United States bid fair to reach an unusually high aggregate next harvest.

JUDGING at this time we shall enter upon the New Year with a full measure of encouragement. Though, for various causes, many of our old readers drop out of our lists with every recurring subscription season, we yet hope the great mass of them will continue with us through 1882 and, indeed, for many a year thereafter. With every reason to feel thankful; with every reason to feel deeply grateful to our readers who have so heartily supported us in the past, we extend to all a Happy New Year and we promise our best endeavors to make the RURAL NEW-YORKER for 1882, the thirty-second year of its age, as trustworthy, as original, as enterprising as it has ever been during any preceding year, while we shall aim to surpass all previous efforts.

THOSE who wish to ascertain the true value of ensilaged food should read the second article on this subject with which Dr. Lawes has favored us. It will be found on page 877. He concludes this article as follows: "*As regards ensilage I must confess that I do not altogether like a process which appears to be so destructive of food.*" We have as yet no reason to regret the conservative course the RURAL NEW-YORKER has followed regarding the ensilage craze.

WE have received a reply from the Prentiss Preserving company to Prof. Warders's strictures upon the Ozone advertisement. The reply is not satisfactory, and so the advertisement is rejected.

OWING to the fact that the holidays are this year celebrated on the days we go to press, the numbers for Dec. 31 and Jan. 7. will be mailed a day later.

OUR readers will bear in mind that we do not *promise* to furnish back numbers of the RURAL NEW-YORKER for any part of the new year.

SEVEN YEARLY SUBSCRIPTIONS WITH $14 ENTITLE THE SENDER TO THE RURAL NEW-YORKER FOR ONE YEAR FREE.

BREVITIES.

THE RURAL NEW-YORKER is very careful to exclude all advertisements of an uncertain or fraudulent character from its columns. Our readers would oblige us if they would mention the RURAL in all correspondence with our advertisers. Our chief reason for making this request is that our advertisers may know how well it pays them to patronize a trustworthy agricultural journal.

ACCORDING to the Department of Agriculture's report of the cotton crop, just received, the condition of the crop is lower than in any season since 1866. The general average of the condition of the crop in October, which, within certain limitations, affords the best indication of the ultimate product, was 66. The nearest approach to this condition in 15 years was in 1874, when the average was 72. In June and July the crop was within five points of the standard of last year, but when rains came, after the drought, the second crop was too late to produce much fruit. Boll worms and caterpillars also did some injury. In view of all the reports of the season up to December 1, indications point to an aggregate crop of 4,900,000 bales, with a possibility of a slight increase on this estimate.

IN the case of Carr vs. Bartlett the facts were these: Certain persons subscribed to build a cheese factory, subscriptions for which purpose were made payable to the building committee who were named in the subscription paper and who were also subscribers. One of the subscribers having refused to pay after some of the subscriptions had been paid in, the building committee sued him. The defendant pleaded that the committee had no authority to sue, and also that, as the subscription was voluntary, he was under no legal obligation to pay it. The Supreme Court of Maine in giving judgment against him the other day, through Judge Peters, said that while the undertaking was incomplete it was not binding on the defendant; it was without consideration; for it was not a sufficient consideration that others had joined in the same promise, relying on his promise. The defendant might then have withdrawn from the project, or he could continue in it until it was completed and subscriptions paid in, as in this case, but then he would be bound. The building committee were competent to sue for the subscription. Under the agreement they were to be paid, and, being themselves subscribers, they represented the association.

THE Commissioner of Agriculture in his annual report to the President says that on assuming office on July 1. last, he found an elaborate plan of operations for the year already laid out by his predecessor. Such of the investigations as he thought valuable he has been pushing forward. The Commissioner says:—"Provision had been made for investigating the agricultural condition of the Pacific coast; for continuing the work on the artesian wells in Colorado; for proceeding with the experiment in the cultivation of the tea plant; for concluding the investigation into the manufacture of sugar from sorghum; for observations of the existence of pleuro-pneumonia and other contagious diseases of animals, both in this country and in those English ports to which American cattle are exported; for continued examinations into the necessities and opportunities of American forestry; for tests of textile fibers, both animal and vegetable; for a scientific investigation of the habits of insects injurious to vegetation, and of the best methods of destroying them and for the usual work of the various divisions of the Department for which appropriations had been made by Congress." All these subjects have received careful attention, and the Commissioner is also resolved to make the crop reports more accurate and exhaustive than heretofore.

Miscellaneous.

WAHPETON, D. T.

Its Surprising Growth, and Flattering Prospects. Richland County; Rapid Settlement and Railways Bespeak Superior Natural Advantages

MESSRS. HOLMES AND SWEETLAND.

[Special Correspondents of the RURAL NEW-YORKER.]

LAST week we made brief mention of Wahpeton, promising in this issue more extended comment upon this comparatively new candidate for public favor and commercial honors. Its name and reputation have not become well known abroad, nor are they familiar even to many nearer its locality because the town is in its infancy as a railroad center, and because there has not been an effort in the "booming" process resorted to by some Western towns driven to this expedient by a deficiency of genuine attractions.

As a trading point, it became the county seat of Richland County about eight years since, and acquired but little growth until the completion of the St. P. M. & M. Railway, to the town, in 1880; but since then its development has been steady and rapid. The population at that time (June 1880), by the national census, was 100, while an enumeration completed for election purposes on November 16 of the present year, gave 613. The Congregational and Catholic societies have attractive and commodious church edifices, able pastors and good congregations; while the religious and moral sentiments of the people will find further expression in the erection of houses of worship by the Methodist, Episcopal, and Lutheran societies the coming year. There is a very happy commingling here of Eastern refinement and culture with Western nerve and enterprise, which develops itself in business and social life alike, giving to each character and permanent thrift. A school property valued at $1,500, with efficient teachers, affords requisite educational privileges The local newspapers; the Gazette semi-weekly and weekly, by E. K. Morrill; and the Times, weekly, by George P. Garred, are well edited auxiliaries to the business and educational interests of the place. The town has had a commercial business of over $500,000 the past year. An elevator, a planing mill, a bank, well stocked stores, hotels, lumber yards, a machine shop, and a brewery, are all found here. A wheat market of over 150,000 bushels the past year and permanent improvements exceeding $140,000 give one an idea of the present condition and future prospects of Wahpeton.

The site, on the western bank of the Red River of the North, which heads here by the junction of the Otter Tail River and the Bois de Sioux, is pretty, somewhat elevated, very slightly undulating, timber-skirted upon one side, while the other is rolling prairie as far as the eye can reach, presenting, as the setting sun kisses the horizon and sets in its sea of gold, a scene of surpassing beauty. The streets are broad, regularly laid out, and attention has already been given to setting trees and providing other adornments for both streets and residences. The Richland County Bank will become a National Bank in the Spring, and possibly have a competitor in the field; while 1882 will witness the completion to this point of the Northern Pacific, Fergus Falls and Black Hills Railroad, a branch of the Northern Pacific Railroad, diverging at Wadena, running to Wahpeton and thence southwest. The Fargo and Southern Railroad from Fargo to Sioux City, will also pass through the town, and also a western branch of the St. P. M. & M. Railroad, running from here to the Black Hills, giving the place the advantage of being a large railway center, as it will then have no less than eight railroad outlets running to nearly all the chief points of the compass.

The Head-Quarters Hotel, mine host, D. H. Smith, is excellent in all respects, but nevertheless, the rapid growth of the town demands another large, well kept hostlery. A furniture, carpet, wall-paper, and boot and shoe store, are also needed, and all branches of business could be much improved by parties dealing in special lines of goods, and keeping full, well assorted stocks. Industrial pursuits, capital, labor, or suitable light manufacturing, would find both a pleasant and profitable location in this prodigy of Western towns, which promises to become a jobbing mart for points further West.

RICHLAND COUNTY

adjoins Minnesota and is the furthest county south, lying in the famous Red River Valley. It contains over 1,400 square miles, principally the rich, fertile soil characteristic of the valley, but interspersed with streams, and small bodies of water, usually fringed with timber; dotted here and there with good thrifty farms, frame buildings, etc., and along the line of the St. P. M. & M. Railway by small villages which are shipping and trading stations. There are still some lands in the southern and western parts of the county subject to entry under the homestead, pre-emption, and timber-culture acts of the Government. Aside from these, lands can be bought at prices ranging from $4 to $15 per acre, and owing to the diversity previously mentioned, they extend the advantages requisite for varied husbandry. Appreciating this, a number of the farmers in the county are giving increased attention to stock-raising, with good success. The western part of the county is more varied in its surface, and has a number of low, sandy mounds or ridges, while the intervening valleys are very fertile; but to the south, the lands between the Sheyenne and Wild Rice Rivers—perhaps a sixth of the area of the county—are undesirable for cultivation. With this exception, the climate is healthful, crops reliable, markets convenient, schools accessible, society congenial, the present prosperous and the future promising.

The county is rich in resources, abundant in yield, grazing nutritious, range unlimited, water good and abundant, hay of fine quality, cheaply secured, game plentiful, and the settlers contented and prosperous. A good quality of brick clay is abundant, and limestone is found in the southwestern portion of the county.

Richland County was organized only six years ago; in June 1880 the population was 3,300, and now it is estimated at fully 5,000, consisting of both Americans and foreigners, who work harmoniously in promoting all public interests. The bonded indebtedness is $17,000 at 7 per cent., with only a nominal floating debt. The county warrants are at par. In January 1882 the new Court House at Wahpeton, a structure in every way creditable to the county, will be occupied. Wheat, corn, oats, barley, beef, sheep, pork and dairy products are the main sources of wealth in Richland County. Industry, integrity, patience, skill and capital are sure here of a munificient reward. The railway advantages we have alluded to above, and when the roads are completed, this county will have available markets, by rail, lake and river, to all the great commercial centers of the Union.

THE TUBE WELL TROUBLE.

EDITOR RURAL NEW-YORKER:—

I noticed, under the above caption, in the RURAL of Dec. 17, quite an interesting article on the subject of Nelson W. Green's invention (?) which should demand the earnest and universal condemnation of all the farmers of this country. If your space will allow I would like to have you publish, in addition to your former fine article, the facts following:

In the Summer of 1879 suits were commenced in the U. S. Circuit Court of the Northern District of N. Y., by W. D. Andrews, G. H. Andrews and Nelson W. Green, against many persons: among them were some 40 residents of Lansingburgh, N. Y., and one case was selected, viz., Thomas Richardson's as a test case, and Counselors Calvin E. Keach, of Lansingburgh, and C. A. Waldron, of Waterford, commenced the fight in good earnest. Mr. Keach proposed to fight the patent on its merits, as he was convinced no meritorious case had ever yet been fought to a final decision, and he therefore stipulated into the case all the proofs in chief of the complainants and admitted the method of constructing the well as an infringement, thus to speed the case and save complainants' cost, allowing all this to be done without the complainants calling a single witness.

Then came the defense, and on May 6, 1880. Mr. Keach put upon the stand Anson Atwood of Dunellen, N. J. (who now has an office at 57 Astor House, N. Y.,) and in two hours and by propounding only 37 questions, proved that while Mr. Atwood was superintendent of the machinery and agricultural department of the N. Y. State Agricultural Society, and at their annual fair held near Albany, N. Y. in the year 1859 (Green claims he invented this method *after* the war broke out, etc.) a well was constructed on the ground by the same method as now, and as patented. This proof was fully corroborated by the next two witnesses, viz.: James E. Kirwan, of East Albany, N. Y. and Elisha Waters, the renowned paper boat manufacturer, of Lansingburgh, N. Y.

Then commenced the filibustering practice of complainants and the 37 questions put to Atwood by Mr. Keach in two hours, called forth from complainants a cross-examination of over a whole week and more than 700 questions. Then came next Mr. Kirwan, who told his story for defendants in six hours and about 80 questions. This called out proof of the construction of numerous wells by witness at Wauconda and Waukegan, Ill., Janesville and Beloit, Wis., etc. in 1848 and 1849. The complainants still continued their course of pettifogging, and asked Kirwan more than 1,200 questions, keeping him on his cross-examination for 9½ days without shaking his evidence in the least.

This practice was becoming very monotonous as well as expensive to the defendant, and Mr. Keach cited the complainants on motion before Judge Wallace, and on the argument soon convinced the Judge that the intention of the complainants was to *tire out* the defence, and he promptly made an order that the complainants pay to defendant within 10 days the sum of $140, the Examiner's fees for conducting such prolix examinations, and further provided that ever afterwards in the trial the complainants pay the expense of the cross-examination of defendant's witnesses. This proved a "cooler" on them, and they seldom after kept a witness more than one day on cross-examination. This Albany fair ground well was seen by numbers of others, among whom were Alexander Gregory, of Albany; Horace L. Emory, of Cleveland, Ohio; Richard Spicer and John Chapman, of Lansingburgh; Wm. Vergo. of N. Y. City and scores of others. Then next came the witness, Joseph Brott, of 1,051 Fulton Street, Brooklyn, N. Y., who swore to a well put down in front of his father's (Andrew Brott's) hotel, at Waterford, N. Y. about the time his first child was born, which was April 1, 1860. This date was fully established by other witnesses from Waterford, among whom were James P. Vosburgh (since deceased), David T. Lamb, Wm. Hamilton, Wm. H. Fox. E. B. Honsinger, Lewis Wells, and others who saw it put down before they enlisted and went to the war some time about the first of 1861. They also said the man who put it down put one down for Henry Steenburgh at the same time, and since then the heirs of Mr. Steenburgh have found among his old papers a receipt as follows:

$21.50 Received of Henry Steenburgh the sum of twenty-one dollars and a half for driving one well in his place in Waterford. GEORGE MALLER.

Dated April 13, 1860.

[We have now in this office a photograph of this receipt.—EDS.

This was not found until June, 1881, and is fully corroborated by the royalty receipt given by the agents of Wm. D. Andrews & Bro. (Grant & Knight) in 1877, which said the well "was driven in 1860 by one Maller." Both of them will be put in evidence in the case.—To be continued. LEGIS.

Domestic Economy

CONDUCTED BY EMILY MAPLE.

HELPS.

HEAD-WORK will lighten labor; for the housekeeper it will save valuable time and give many an hour for study or recreation.

Beef drippings are better than lard for frying potatoes, mush, etc.

Over-worked people, we think, are not so miserable as those who have nothing to do.

Don't teach an infant to suck its thumb.

Markings or spots of indelible ink can generally be removed by washing the place first with a solution of salt and afterward with ammonia water.

A bit of black court-plaster is a very good thing to mend a small tear in black silk or any kind of black goods. Moisten the plaster, put underneath the tear, sticky side up, and press the frayed edges of the goods down upon it.

ECHOES FROM EVERY-DAY HOUSE.

ANNIE L. JACK.

ONE of the pleasures attending the holiday season is the pleasure of giving. The time occupied in providing little gifts for those we think will appreciate them, and the labor attending such work, anticipating the results, give the donor a feeling of exaltation that proves the truth of the Scriptural verse, "It is more blessed to give than to receive." It is a good thing to teach children to share with their poorer neighbors, to allow them to purchase material and make up small articles of usefulness for others, and thus they learn the blessedness spoken of.

The wheels of the household machinery jog steadily on without meeting many "stumbling-blocks" during the long Winter. Unlike the Summer, when work crowds, one feels a leisure that no other season brings. Then the sewing of the future begins to take shape with hands and brain, and we find time to read the perhaps uncut magazines, and are glad that Winter comes with its rest and quiet.

What funny things one finds out by little experiments even at the kitchen fire. I was cooking some onions the other day, and at the same time scalding vinegar to put over some pickles. The smell of the cooked onions is very objectionable to one member of the family, and we were quite astonished to find the vinegar had absorbed all the odor. I afterward saw the same thing in a Western paper, and realized that "there is nothing new under the sun."

Speaking of giving, reminds me that I went into the house of a fashionable lady in the city lately and found in her dining-room a table set out with molds, and bowls of jelly. During conversation I found it was for the sick of her neighborhood, prepared by her own hands, to be sent not only to rich acquaintances, but to the poor as well, with a few choice flowers. I asked for and received the recipe which was so simple and resulted in such a pretty and tempting dish that I transcribe it here, for the dish is pleasant to take to those who are well, whatever it may be to the sick:

Two pounds of sugar; one pint of sherry; one pint cold water; one package Coxe's gelatine; juice of two lemons; one quart of boiling water; a trifle of cinnamon. Soak the gelatine two hours, add sugar, lemons and flavoring. Pour over all a quart of boiling water and stir thoroughly. When the gelatine is dissolved put in the wine. Strain through a double flannel bag without squeezing, and wet your molds with cold water, and set the jelly away to cool after filling the molds about three parts full.

FELON CURE.

M. B. MCLOUTH.

A SENSIBLE cure for a felon is a small plaster as large as the finger nail, spread with the salve used for fly blisters. Keep it on 12 hours, then where the finger is puffed up, prick with a *needle* and let out the water. (Never use a pin to open a sore, for often very serious consequences ensue, as brass is very poisonous.) There is nothing painful about the process, but the finger will be *very* tender. The skin that is separated by the blister keep on just as long as possible, or until it comes off itself. The flesh underneath will be exceedingly sensitive, and will need washing with cream oil or sweet oil.

To Make Cream Oil.

Put a cup with a spoonful of sweet cream on the stove-hearth and let stand, without stirring, until a clear oil rises. Of course, the sooner applied after the felon begins to prickle, the more certain the cure.

The Best Known Recipe for Corning Beef.

Cut the beef in small pieces, leaving out the large bones, pack solid in a six-gallon crock with a weight on top. Pour over the beef boiling-hot brine made as follows: Two gallons of water, three pounds of salt, one ounce of salt-peter, a pound of sugar and two large spoonfuls of baking soda. After two weeks, heat and skim the brine, and repeat the process whenever you think necessary, but never put the brine on hot after the first time. If the weather is hot you can add a handful of salt and soda at any time, and like all pickling be sure the brine covers the beef. If packed in a barrel, a large cloth should be securely tied over it in Summer, to secure its contents from flies. The nicest vessel to put it into is a half-barrel earthern jar.

Pillow Shams.

Make of the size required out of book-muslin (plain or dotted), or organdy. Line the shams with Turkey-red. Make a ruffle five inch deep of the muslin, hem on each side and finish with a very narrow valenciennes edge. Gather, leaving a heading an inch deep, and stitch to the sham. The muslin should be a little larger in every way than the Turkey-red lining, so that the muslin can be turned under and hemmed down on the lining.

MARY B.

Excellent Apple-sauce.

Pare, half and quarter nice stewing apples, put into a baking dish, strew thickly with sugar, and add a little nutmeg or lemon peel. Cover the dish with a plate, set into a pan having an inch or so of hot water in the bottom and place in a hot oven. Bake until the pieces are clear and tender. This sauce when eaten with a little sweet cream makes a very good dessert. Plain cake in this case may be served with it. C. G.

QUESTIONS ANSWERED.

That Black Tea-kettle.

Mrs. McL. writes that she is very much annoyed with a black tea kettle, and notwithstanding she has used sand, ashes and kerosene upon it, she can not make it look well.

ANS.—We can sympathize with Mrs. McL. because we once owned such a kettle. We at last blackened and polished it with stove-blacking which answered after a fashion, but when in careless hands the lid was broken off we were glad to replace the objectionable kettle with one less offending to the eye.

The Milwaukee (Wis.) Evening Wisconsin says: "In all our experience we have never heard so many favorable reports from all classes as we have concerning St. Jacobs Oil." —*Com.*

A Healthy State.

People are constantly changing their homes from East to West and from North to South or *vice versa*, in search of a healthy State. If they should learn to be contented, and to use the celebrated Kidney-Wort when sick they would be much better off.—Translated from the New Yorker Zeitung.—*Adv.*

BURNETT'S COCOAINE

Has Received Universa Endorsement.

No other preparation possesses such remarkable properties for embellishing and strengthening the hair and rendering it dark and glossy. It cures baldness and eradicates dandruff.

BURNETT'S FLAVORING EXTRACTS are the best.

The ladies who sometime since were unable to go out, having taken Lydia E. Pinkhams Vegetable Compound, are quite recovered, and have gone on their way rejoicing.

"Wonderful, Wonderful Medicine!"

So exclaims a patient, Rev. J. S. Fesperman, of Statesville, North Carolina. Writing June 2d, 1880, he says: "In the providence of God I owe my present state of health to your Oxygen. I was near the gate of the grave, and, as I believe, close to the great portals of eternal life, when I commenced taking what I now consider the greatest of all healing agents, Compound Oxygen. I cannot refrain from saying, '*Wonderful, wonderful, wonderful medicine!*' Physician and friends had believed that I could not live any length of time, and I am here yet, with my large family of children, and able to walk three to four miles every morning. I cannot speak in terms too high of your remedy." Our Treatise on Compound Ovygen, containing large reports of cases and full information *sent free.* Drs. STARKEY & PALEN, 1109 and 1111 Girard St., Philadelphia. Pa.—*Adv.*

The Markets.

PRODUCE AND PROVISIONS.

NEW YORK, Saturday, Dec. 24, 1881.

BEANS AND PEAS.—A good steady trade attends the bean market, and prices are well supported, though extra marrows are a trifle off from the early part of the week. German stock has sold liberally to go West. Red kidneys are in good, though not large, demand. Green peas sell fairly at quotations. Black-eyed peas quiet but firm for choice.

Beans marrow, prime, $3.50@3.55; fair to good, $3.25@3.45; medium, choice, $3.20@3.25; fair to good, $3@3.15; pea, choice, $3.25@3.30; fair to good, $2.90@3.05; white kidney, choice, $3.45@3.50; fair to good, $3.20@3.35; red kidney, choice, $2.85; fair to good, $2.50@2.80; turtle soup, $1.75@1.80; German in bags, $2.50@3.00. California Lima, $4.70@4.75.

Peas, green, prime, in bbls., $1.55@1.60; green, in bags, $1.40@1.50; Southern b. e., per 2-bu. bag, $3.25@3.40. Canadian peas in bond, 95c.

Receipts of beans for the week, 6,816 bush.

Exports do. 311 bbls.

BUTTER.—There is no marked activity in any grade. Sellers, however, do not look for a free business at this part of the year, and besides the weather is soft and unfavorable for the exhibition of many lines of stock. There are some coastwise orders for nice yellow firkins, but not to be filled at full prices. State butter as a rule is quoted at last rates, and extra Western creamery is not up to the points noted last week. Western butter is about as active as any style and nice imitation creamery sells as readily as fine half tubs of State. Rolls hold a line of trade, though their old popularity is diminishing yearly, especially since the introduction of so many substitutes for butter, as dishonest dealers are allowed an extra chance of swindling under cover of muslin.

Creamery, fancy, 42@43c.; choice, 40c.; fair to good 35@38c.; ordinary, 28@33c.; State half-firkins, tubs, fancy, fresh, 34@35c.; choice, 32@33c.; prime, 25@30c.; fair to good, 22@24c.; firkins, choice, 30@31c.; fair to good, 25@28c.; ordinary, 20@23c.; dairies, entire choice, 30@32c.; fair to good, 27@29c.; State Welsh tubs choice 32@33c.; fair to good, 25@31c.; Western imitation creamery, 28@32c.; dairy choice, 30@33c.; good to prime 25@30c.; ordinary to fair 18@24c.; Western factory, special marks, June 16@17c.; general run do. 13@15c.; choice, current make, 25@28c.; fair to good do. 15@18c.; common butter, 12@14c.; roll butter, fine, 25@27c.; ordinary, 20@24c.

Receipts for the week, 21,075 pkgs.

Exports do. 578 do.

COTTON.—The wide difference of opinion as to the possible crop has checked earnest movement, and it would seem as if large operators are not inclined to enter the market with vigor until the interior movement of stock affords a clearer impression as to the quantity.

CURRENT PRICES FOR SPOT COTTON.

Quotations based on American standard of classification and on cotton in store, running in quality not more than half a grade above or below the grade quoted.

	Uplands.	N. Orleans and Gulf.	Texas.
Ordinary	9 5-16	9⅝	9⅝
Strict ordinary	9⅞	10 3-16	10 3-16
Good ordinary	10 11-16	11	11
Strict good ordinary	11⅛	11 7-16	11 7-16
Low middling	11 9-16	11⅞	11⅞
Strict low middling	11 11-16	12⅛	12⅛
Middling	12	12 5-16	12 5-16
Good Middling	12⅜	12 11-16	12 11-16
Strict good middling	12⅝	12 15-16	12 15-16
Middling fair	13⅛	13 7-16	13 7-16
Fair	13⅞	14 3-16	14 3-16

STAINED.

Good ordinary	8⅞	Low Middling	10 9-16
Strict good ordinary	9⅜	Middling	11 9-16

Futures.—December, 11.96@12.00c.; January, 12.05@12.14c.; February, 12.31@12.39c.; March, 12.51@12.60c.; April, 12.68@12.78c.; May, 12.82@12.93c.; June, 12.95@13.04c.; July, 13.13@13.15c.; August, 13.17@13.20c.; September, 12.48@12.56c.; October, 11.79@11.80c.; November, 11.37@11.59c.

Receipts for the week, 45,076 bales.

Exports do. 11,314 do.

CHEESE.—Supplies have run out pretty freely and holders of fine factory have been emboldened to add a shade. The 12¾c. price, however, is not responded to, and sales are mainly on the basis of last week's figures.

State factory, fancy, 12½@12¾c.; choice, 12@12¼c.; prime, 11½@11¾c.; fair to good, 10@11½c.; ordinary, 9@9¾c.; Ohio, cheddar, fair to good 10@11c.; prime, 10@11c.; fair to good, 9@10c.; creamery part skims choice 9@9½c.; fair to good 7@8c; ordinary, 4@5c.; full skims, 2@3c.

Receipts for the week, 44,673 bxs.

Exports do. 32,901 do.

Liverpool cable 5ls. 6d.@63s. Summer to Fall makes. Steam to Liverpool, 12s. 6d.@17s. 6d.

EGGS.—Receipts are moderate, and as strictly fresh lots are pretty well used up the market is firm for them. Stored and held lots are only steady. Limed hold their former good place.

Near points, ₩ doz. 33@35c.; State and Pa. 31@32c.; Western, choice, fresh laid, 28@30c.; do. and Canadian fine, held, 26@26½c.; Southern, fresh fine, 28@30c.; Western, Southern and Canadian, fair to good, 20@25c.; limed eggs, State, 23@24c.; Canada and Western, prime, 23½@23½c.; fair to good, 21@22c.

FLOUR.—The week has been dull and tame, with more sellers than buyers, and prices for upper and lower grades are in buyers' favor.

No. 2, per bbl., $3.40@4.35; State and Western, superfine, $4.20@4.50; city mills, XX, $6.90@7.35; Spring wheat, extra, $5.00@5.35; Spring XX and XXX, $5.50@6.75; patents, $6.50@8.50; Ohio round hoop shipping, $5.25@5.65; trade brands, $5.75@6.50; St. Louis extra, $5.40@5.90; do. double extra, $6.10@6.50; do. family, $6.65@7.25; Southern extra shipping, $6.00@6.40; do. XX and family, $6.50@7.50. Rye flour, superfine, $4.70@5.00; buckwheat flour ₩ 100 lbs, $3.60@3.90. Cornmeal, Brandywine ₩ bbl. $3.75@3.85; do. Western, $3.35@3.75. Wheat feed, ₩ ton, $19.00@23.00.

Receipts of flour for the week, 109,174 bbls.; corn meal, 3,100 do.

Exports of flour for the week, 44,050 bbls.; corn-meal 5,671 do.

FRESH FRUITS.—The market is quite as active as is usual preceding Christmas. The demand is greatly divided up at that time as there is so much use for foreign items. Apples have sunk badly in quality this open month. Many dealers now have to repack to fill a fine order; cranberries active. Peanuts are higher. Lady apples scarce and high, but they sell quickly. Florida oranges active, the trade is in more hands than usual and prices are a little irregular.

Apples, Spitzenberg, ₩ bbl. $3.50@4.50; Greening, $3.50@3.75; Baldwin, do. $3.00@3.50; mixed lots, good to prime, $2.75@3.25; ordinary $1.75@2.00. Lady apples, choice, ₩ keg, $5.00@7.00. Pears, choice varieties, ₩ box, $2@3.50. Cranberries, Cape Cod, choice $12.50@13.00; good ₩ bbl. $10.00@12.00; poor to fair $6.00@8.00; Jersey fancy, ₩ crate, $3.25@3.50; prime, $2.50@3.00; fair to good $2.00@2.25; Florida oranges, half-bbl. case, $2@2.50; do. ⅜ bbl. case, $1.50@2.75.

Peanuts, Va, hand-picked, ₩ lb. 7¾@8c.; f'y, 7¼@7½c; extra prime, 6¾@7c.; good to prime, 6¼@6½c.; shelled, 4@6c.; pecan nuts, 10@12c.; hickory, nuts, State, ₩ bush. $1; Western, 75c@$1.

GRAIN.—Prices for wheat have dropped to a point on which many orders were based, and the result shows an active week for export. Corn has been fairly dealt in; the drift of prices, however, is easier. Oats fairly active.

Wheat, Spring, $1.30@1.36; Spring No. 2, $1.26@1.28; red Winter No. 2, $1.39½@1.40; red Winter, $1.30@1.40; white Western and State, $1.30@1.40. Rye, 95@96c. Oats, white No. 1, 51@51½c.; No. 2, 49¾c.; No. 3, 49c.; mixed, No. 1, 48¾@49c.; No. 2, 48½@48½c.; No. 3, 45@47c. Corn, Western, mixed, 65@70½c.; do. No. 2, 69@69c. yellow, 68@70c.; white, 70@75c. Barley, Canada, No. 1, $1.10; do., "bright," $1.13@1.15; State, 4-rowed, 97c.@$1; 2-rowed, 82@85c. Buckwheat, $1@1.02. Barley malt, State 2-rowed, 95c@$1; do. 4-rowed, $1.07@1.10; Canada, $1.20@1.25.

The visible supply of grain, comprising the stocks in granary at the principal points of accumulation at lake and Atlantic ports, and on rail, on lakes, on canal and on Mississippi River:

	1881. Dec. 17. bush.	1880. Dec. 18. bush.	1879. Dec. 20. bush.
Wheat	18,783,725	29,701,288	27,857,889
Corn	18,399,914	16,465,285	9,377,730
Oats	2,719,047	3,783,061	2,672,165
Barley	3,124,265	3,167,781	4,608,584
Rye	1,232,041	940,918	1,127,831

Receipts for the week, wheat 206,882 bush.; corn, 265,200 do.; oats, 110,800 do.; rye, 29,852 do.; malt, 31,761 do.; barley, 46,770 do.

Exports for the week, wheat, 706,000 bush. corn, 237,745 do.; oats, 2,418 do.

HAY AND STRAW.—The market for hay has stiffened some, but sales are not large, as buyers took good sized parcels during the late easy rule of prices. Straw steady and firm.

Hay, retail quality, fine, ₩ 100 lbs., 95c.@$1.05; do., fair to good, 80@90c.; shipping quality, 60@70c.; clover mixed, 70@80c.; all clover, 60@65c.; Straw, best, 70@80c.; short rye, 55@60c.; oat, 40@50c.

HOPS.—Brewers seem to be in want of supplies, but do not bid up to the views of sellers, and an export call is also in view. Country market reported firm.

New York State crop of 1881, prime to choice, 26@30c.; do., mediums, 23@25c.; do., low grades, 20@22c.; do., 1880, good prime, 18@22c.; do., low to fair, 12@15c.; do., 1879, fair to choice, 10@20c.; do., olds, 7@15c.; Eastern, crop of 1881, fair to choice, 20@26c.; Wisconsin do., 20@27c.

Receipts for week ending Dec. 23d, inclusive, 1,618 bales; since Sept. 1st, 50,285 bales. Exports for week ending Dec. 22d, inclusive, 280 bales; since Sept. 1st, 15,509 bales.

MILK.—The average for the week was $2.10½, opening at $1.75 and closing at $2.50 ₩ can of 40 qts. Market lively and all commission lots have sold out clean.

POULTRY AND GAME.—Near point shippers of dressed have held back stock late and at the close are doing well in prices for Christmas. A good deal of cheap stock is here owing to the mild weather, but it will likely go out, as the holiday embraces two days to be provided for.

Turkeys, Phila., 15@16c.; Bucks Co., prime, 15@16c.; Jersey, prime, 15@16c; State and Western, prime, 14@15c.; poor to good, 12@13c. Chickens, Phila., 13@15c.; Bucks Co., prime, 12@13c.; Jersey, prime, 12c.; State and Western, prime, 10c.; poor to good, 7@9c. Fowls, Philadelphia, 10@12c.; Bucks Co., prime, 10@11c.; Jersey, prime, 10@11c.; State, Western and prime, 8@9c.; poor to good, 6@8c.; Phila., prime, 14@15c; Jersey and Bucks Co., prime, 13@15c. Ducks, State and Western, prime, 13@14c.; poor to good, 10@12c.; Phila. dry picked, 12@14c.; Geese, Jersey and Bucks Co., prime, 11@12c.; State and Western, prime, 11@12c.; poor to good, 9@10c.

Live poultry is hardly asked for, with the exception of a few turkeys that are good enough to be dressed for imitation wild.

Spring chickens, large Jersey, 8@9c., do., light, 8c.; Western, ₩ lb, 7@8c. Fowls, Pa. and Jersey, ₩ lb, 8c.; State, 8c.; Western, ₩ lb, 7@8c. Roosters, old, ₩ lb, 4@5c. Turkeys, Jersey and Pa. ₩ lb, 10@12c.; Western, 10@11c. Ducks State, Pa. and Jersey, ₩ pair, 50@70c.; Western, ₩ pair, 40@50c. Geese, Western, ₩ pair, 80c.@$1. State, Pa. and Jersey, ₩ pair, $1.25@1.50.

The approaching holidays give a good deal of snap to trade, and all fine stock is soon absorbed. Sellers dare not ask the sharp rates they might if the weather was cold, still fair compensating prices are ruling.

Quail, choice, ₩ doz. $2.25@2.50; small and soft do. $1.50@2; prime undrawn, ₩ pair, $1@1.12; grouse, prime undrawn, ₩ pair $1.00@1.25; drawn, 80@90c.; partridges, State and choice Western, ₩ pair, $1.00; Eastern and ordinary Western, 50@75c.; wild ducks, canvas-back, ₩ pair, $2.50@2.75 red-head, 50c.@$; mallards 40@50c.; teal and wood, 30@40c.; common, 25c.; tame squabs, light ₩ doz. $2.50; dark, $1.25@1.50; tame pigeons, live, ₩ pair 25@30c; venison, Minn short saddles, ₩ lb. 15c.; other Western and State 13@15c.; whole deer, 10@12c.; rabbits, ₩ pair, 30@40c.; hares, 35@40c.

PROVISIONS.—The week has been in the aggregate a satisfactory one. Large blocks of refined lard have been taken and dealings have been liberal in Western steam. The movement in bacon has been the largest of the season chiefly on continental account outside of France. At the close shippers are out of market and prices have naturally eased off.

Pork, West. mess, old, ₩ bbl. $16.50@15.0; do. new, $17.50@18; prime mess, $16@16.50; extra prime, $13.50. Lard, steam Western, ₩ 100 lbs., $11.10@11.15; pr city, $11.00@11.05. Hams, smoked city, ₩ lb. 11@12c.; pickled Western and city 9½@10c. Shoulders, smoked city, 8@8½c; pickled, 7@7½c. Rib bellies, pickled, 8½@9½c. Bacon, long clear Western, 9@9¼c. Beef, W'n mess, ₩ bbl. $11.50@12.50; packet, $14.50@15.00; India mess, ₩ tce. $25@26.50. Beef hams, ₩ bbl. $21@21.50.

Receipts for the week—Beef, bbls. and tcs. 1,124, pork, bbls 7,500; cut-meats pkgs 41,713; lard, do. 15,500

Exports for the week—Beef, bbls. and tcs. 3,000; pork lbs. 5,000; cut-meats, lbs. 9,866,187; lard do. 6,797,700.

VEGETABLES.—Potatoes are firm, with no oppressive receipts.

Potatoes—Early Rose, N. S., ₩ d.-h. bbl., $3@3.25; bulk, ₩ bbl. $2.75@3; State, ₩ d-h bbl $2.87@3.12; bulk, per bbl, $2.75@3.00; Prolific, N. S. per d.-h. bbl, $2.75@2.87; bulk ₩ bbl. $2.50@2.75; Snowflake, State, ₩ d.-h. bbl. $2.75@3.00; bulk, ₩ bbl. $2.62@2.87; Burbank, ₩ d.-h.bbl. $3@3.12; bulk, ₩ bbl. $2.87@3.00; Peerless, bulk, ₩ bbl., $2.50@2.75; Mercer P. E. Island, ₩ bbl. $1.50@2.25; sweet potatoes, Va. yellow, ₩ bbl. $3.75@4; Del. River, $4.50@4.75; Jersey, ₩ bbl. $3.50@4.00; inferior, $2.50@3.25.

Garden truck is firm for prime lots.

Onions, white, ₩ bbl. $2.50@3.50; yellow, $2.00@2.12. red, Eastern, $2.00; Chester red, $1.75 beets, L. I., $2.25; cabbage, L. I., ₩ 100, $10.00@18.00; cauliflower, Jersey and L. I., ₩ bbl., $1.00@7.00; white turnips, $1.25@1.50; Russia do., $1.50@1.75; squash, L. I., $2.50@3.00; do., State Hubbard, $1.75@2.00; carrots, $1.25 ₩ bbl.; celery, ₩ doz. bunches, $1.00@2.00.

WOOL.—The indications are that stocks will show lighter than was expected by the first of the new year, and strong prices are anticipated by the trade.

LIVE STOCK MARKETS.

NEW YORK, Saturday, Dec. 24, 1881.

BEEVES.—Receipts for the week, 11,529 head; do. last week, 12,340 do. The demand from all sources was moderate, but in view of the light arrivals to-day and prospects of small receipts on Monday, drovers endeavored to crowd prices up. A few early sales were undoubtedly above the low figures at the close on Wednesday, but early prices could not be sustained, and much of the business was at lower prices than the average on Wednesday. A pretty good clearance was made, but the warm, muggy weather had a depressing influence, which was only partially offset by the predictions of colder weather to-morrow. A number of car-loads of light native cattle sold at 8½@12½c. to dress 55 lb; medium to fair do at 9½@10c. to dress 55@56 lbs; good to prime do at 10½@11½c. A car-load of Illinois steers sold to Mr. Adolf Edlemuth at 12c. to dress 56@60 lb, and the New York Provision Co. paid 13@13½c. to dress 60@70 lbs. for a few selected cattle. In answer to inquiry we would state that exports as a rule take the very best cattle.

MILCH COWS.—Market slow at last decline. The quotable range is $35@75 ₩ head for poor to best. Sales have been chiefly at $45@65.

SHEEP AND LAMBS.—Receipts for the week, 25,671 head; do. last week, 28,875 do. There was no demand of any consequence at the close, and hardly eight carloads of stock had changed hands up to 12 m. A car-load of choice Ohio sheep sold at $6.45; a load of poor culls at 3c. ₩ lb and four cars of Ohio and Kentucky sheep at 4¾@5½c. And a load of Canada lambs & Western ewes mixed sold at 5¾c., and $5 on the lot.

SWINE.—Receipts for the week, 32,116 head; do. last week, 29,206 do. Market dull for live and prices are weak. Good demand for useful light dressed country.

Hogs, New Jersey dressed, light, 8½@8¾c.; medium, 8@8½c.; heavy, 7½@7¾c.; city dressed, 7½@8c.; live hogs, corn-fed, ₩ 100 lbs, $6.10@6.30; pork tenderloins, ₩ lb, 5@10c.

VEAL CALVES.—The demand is good for prime calves; trade is not as brisk as it would be if the weather were more seasonable.

J'y dressed, choice, 12@12½c.; dressed, fair to good, 10@11½c; do., grass, 5@6c; live calves, N. J. prime to choice, 9@9½c.; do. State, 8¾@c. fair to good, 7½@8½c.; poor to fair, 6@7½c.; Mount Hollys, 160 to 220 lbs 9@10c.; 220 to 280 lbs 8@9c.; 280 to 400 lbs 6@8c.; live calves grass, 3@3½c

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Up the Coast.

SAN GABRIEL, Cal., Nov., 15, 1881.

MY DEAR MOTHER:—I closed my last letter as I was about to describe San Buenaventura, or Ventura, as it is usually called. It is a very commonplace little town. I did not like it at all. We walked all through it—which did not take long. They have a Mission church which is more modern-looking than the one at San Gabriel (though of course there is no comparison between them) and has eight bells. The doors were locked so we did not go inside. There was one pretty place there; it had a beautiful lawn, and a good many Monterey cypress trees trimmed in fanciful shapes—one was in the form of an old arm chair, and the gentleman, who saw us looking at it over the fence, invited us to come in and try it, which we did, and found it quite comfortable.

Violet was so provoked at some of the people at the hotel who had never been in Los Angeles, and asked all manner of questions about it, and thought it must be very unpleasant to live in such a hot place. "They act as if we came from the torrid zone!" she cried. "I'm sure I'd a good deal rather live right on the equator than in this stupid old town!"

"Oh tranquilize your ruffled spirits I beg of you," said Bert in his tantalizing way, "and reflect on all the bliss these misguided people have foregone by refusing to go one hundred miles further south." But Violet will never be able to see any good in Ventura.

We girls got up early the next morning and went down to the beach right after breakfast, while Mr. Erman was attending to his business. A schooner was anchored at some distance from the wharf, and as we looked through the field-glass we could see the men on board bustling around. They let down a small boat which a man rowed back and forth from the wharf to the schooner, apparently without accomplishing anything. We saw such strange sea-birds flying and swimming about; the head and bill looked as long as the body. I think they must have been pelicans, for with the glass I could see they had a large pouch under the bill which they occasionally swelled out after diving. When they were swimming they looked very much like swans. There were a great many smaller birds flying about with them, and we could hear their shrill cries above the roar of the breakers.

We did not start till late on account of the tide, as the drive from Ventura to Santa Barbara is on the beach the greater part of the way, and there are two points where it is covered with water at high tide. I enjoyed the drive very much. The tide was going out and left the beach so smooth. I love to watch the breakers. It seems as if I could sit and look at them for hours. The horses were very much frightened at first, but sobered down when they found that the great noise did not hurt them, and the water barely wet their hoofs. Bert was determined to make his pony go in the water, and master Jim was equally determined not to go; so they had quite a struggle. Jim slipped on the wet sand, and Bert narrowly escaped a ducking in the great Pacific ocean.

About ten or twelve miles from Santa Barbara is a pretty little valley called Carpenteria, and we stopped here for a short time at a Mr. Cadwell's with whom Mr. Erman was acquainted. He has a large fruit ranch, and we found him engaged in packing specimens to send to the Los Angeles fair. He kindly took us through his orchards, however, and such luscious fruit as he gave us! His is an old place, and he has a great many varieties of seedling apples and pears that he raised himself.

Mr. Cadwell does not irrigate any, neither does he trim his trees—nearly all of them had branches loaded with fruit lying right on the ground. He lets them grow in this way for a windbreak, but it looked odd after being accustomed to the San Gabriel orchards which are all trimmed up high.

Here we saw the moss draped oaks again, but I don't think they were as pretty as at Newbury Park I think the people of Santa Barbara and Carpenteria ought to "know beans" if they improve their opportunities for observation. There are fields and fields of beans, and the same might be said of flax. These two—flax and beans—appear to be the principal crops raised in this vicinity.

We reached Santa Barbara safely, though I cannot tell you one word about it now, for my letter is already very long. But I know you will read it through because it is from

Your loving daughter, DAISY.

LETTERS FROM THE COUSINS.

DEAR UNCLE MARK.—I will write once more as I did not see my last letter in print. I would like to join the Club. The pink seeds you sent my father were perfectly beautiful, and were in blossom all through October. Will they live out over the Winter. (Yes.—U. M.) I have a pair of silver duckwing game bantams which are very handsome, and a pretty little seabright rooster; he weighs just one pound and he feels very smart.

New Haven, Conn. EDDIE C. JONES.

UNCLE MARK:—I desire to become a member of the Horticultural Club, and will do my "level best" with all seeds that you may send me. I wonder that you do not tire of being praised so much; but, I, too, must add my mite, and say that pa takes your paper and we think it is excellent, and that it certainly has a big kind heart, or it would never make such liberal distributions of seeds, often no doubt to fall into careless or inexperienced hands. We have discovered springs in this county that, rumor says, possess rare medicinal properties—the Blanchard and Britt Springs. Arkansas may yet become famous for her health-giving waters. I hope you will allow me to take my place with the "cousins," and subscribe myself as Your niece,

Hillsboro, Ark. LUCY W. STEVENSON.

New Members of the Club for Week Ending Dec. 24th.

Mary Ball, Martin Ball, Annie Taylor, Arba J. Marsh, Charles Demotte, Addison Reynolds, T. G. Towner, Jennie Pherrin, Maggie Piche, Mollie Weed, Emma Janney, Ella Finney, Harry Finney, Teresa Hogan, Mamie Silter, Guy C. Barnard, Gertie Chapman, Lizzie Kelley, Margie Kelley, Ruby Leete, May Lynes, Jennie Spaulding, Harley Matthews, Ella Matthews, Earl Matthews, Homer Bull, Rose Loomis, Frank Loomis, Willis Perkins, Arthur Haines.

The Querist.

ANSWERS TO CORRESPONDENTS.

[Every query must be accompanied by the name and address of the writer to insure attention.]

COTTON-SEED MEAL, ETC.

H. A. M., Ocala, Fla., referring to our remarks on "new-process" oil meal in the RURAL of Dec. 3, asks, 1, how the cotton is separated from the seed; what proportion of acid or other chemical is used; how is the oil separated from the cake; is there any patent on the process; 2, what hedge plant would spread and turn cattle and hogs.

ANS.—1. The cotton (we suppose you mean the adhering lint after the cotton has been ginned) is removed with the hulls and separated by a small machine called a cotton seed huller. The kernels, coarsely broken, are screened from the hulls and lint. They are then finely ground into meal, and the meal is pressed between hot iron plates. Cotton seed is not treated by the new process, but linseed is. This consists of the use of benzine and other substances to dissolve out the oil of the seed, and the oil is separated from the spirit by distillation. There are different processes, but all are patented. Copies of the specifications can be procured from the Patent Office at Washington for one dollar each. These will give the whole process in detail. 2. Osage Orange, Honey Locust, Japan Quince. A barbed-wire hedge won't spread, but it will turn cattle and hogs.

BLACK TEETH IN PIGS, ETC.

C. E. DeG., Egan, D. T., having seen it stated that the Victoria Grape, one of the seedlings of the late T. B. Miner, is hardy, asks whether we could furnish him with a dozen cuttings for the purpose of testing the grape there; 2, whether "black teeth in pigs" will prevent the animals from growing, and how to get rid of them.

ANS. -1. The best kinds of the late Mr. T. B. Miner's grapes were sent to us to be tested several years prior to his death. Of course, we have no right to dispose of roots or cuttings. Several of our nurserymen offer Miner's grapes for sale. Mrs. T. B. Miner, of Linden, N. J., could furnish them, no doubt. 2. "Black teeth" is not a disease, but a sign of ill-health, indigestion, sour stomach and acid secretions. The teeth will be all right when the pig is made right by right treatment. Give it one teaspoonful each of sulphur and carbonate of soda daily for a week and be careful not to over-feed; over-feeding is the prevalent bane of young pigs, which are crammed with food they cannot digest.

SHIP-STUFFS.

"Subscriber," Walesville, N. Y., asks how much better shipstuffs is than shorts for feeding cows, and whether eight quarts a day of either with hay would keep cows in full milk and prevent them from losing flesh after calving until grass comes in Spring.

ANS,—Shipstuffs is the generic name for bran, middlings and shorts, also called mill stuffs. Shorts is the next product of the grain to middlings and comes next to the flour in fineness. It contains the coarsest part of the flour and most of the inner coating of grain, and this consists largely of gluten. Shorts is not made in the new process of grinding, being nearly all contained in the No. 3 and No. 2 flour. Shorts alone would not be a good food for cows. If mixed with as much corn meal it would be an excellent food, and four to six quarts a day of the mixture would be ample to keep a cow in full milk.

Miscellaneous.

B. F. H., Galesburg, Ill, asks, 1, whether we have used the Mapes Special Potato Manure; 2, if so, do we think it the best that can be had for the price; 3, is its effect permanent; will it pay to use it on land rented for one year.

ANS.—1, Yes. 2. That we cannot state. Of all farm crops we know the least about potatoes and what is best for them. That is our experience after several years of right hard work with careful experiments. 3. We do not know. 4 That would depend upon the character of the soil and the season. Perhaps the soil does not need some of the kinds of plant food of which this potato fertilizer is composed. Really you can only ascertain by experiment. The effects of commercial fertilizers, however, are much less lasting than those of farm-yard manure.

S. B. P., Berien, Pa., asks for a remedy for worms in a horse. The pests are about five inches long and for half their length are almost as thick as a darning needle and for the other half as thin as a hair.

ANS.—This worm is known as Ascaris Megacephala and is a very common worm in the small intestines of the horse. The usual remedy is to give first a purgative, as four drachms of Barbadoes aloes, and after this has operated one pint of linseed oil with two onnces of turpentine, may be given every second day for eight days, and repeated after an interval of a week.

M. E. M. B., Cedar Mills, Minn., sends a "worm" for name.

ANS.—It is a centipede or myriapod. Dr. Leach assigns these to the class *myriopoda* and to the genus *scolopendra*. Professor Agassiz considered them the lowest order of the class of insects, the other orders comprising arachnids and insects proper. They generally avoid light and live under stones, under the bark of old trees, in old timber, etc. They are said to feed on both dead and living animal substances.

M. E. M. B., Cedar Mills, Minn., asks, 1, what area of land will be required for the Rural flint corn; 2, when should the RURAL wheat seeds be planted on the prairies of Minnesota. Fall-sown wheat thrives there only in very rare cases under very exceptional conditions.

ANS.—1. One-fortieth of an acre, *i. e.* thirty-three feet square. 2. We hope that in Spring-wheat sections they will be sown and tested as Spring wheats.

H. B., , Jonesville, Mich., asks whether the Rural Heavy Dent Corn is likely to mature there.

ANS.—We should think it would mature. Whichever sort gives the most satisfactory results there—flint or dent varieties—should be chosen.

J. V., Carthage, N. Y., not having planted the RURAL flower seeds last Spring, asks whether they will be likely to grow, if planted next Spring.

ANS.—Yes.

A. S., Fluvanna Co., Va., asks the price of Yellow-wood—Cladrastis tinctoria-and whether it is adapted to that latitude.

ANS.—Yes, it is well adapted to Virginia. The price at retail is about one dollar for each plant.

W. S., Walnut Ridge, Ark., asks the name of some reliable Southern nurseryman that propagates the Scuppernong Grape.

ANS.—P. J. Berckmans, Augusta, Ga.

David F. Hyre, Ripley, West Virginia, announces that he has about a gallon of the Rural Branching Sorghum seed that he will sell at a reasonable rate

COMMUNICATIONS RECEIVED FOR THE WEEK ENDING SATURDAY, Dec. 24, 1881.

C. E. P.—J. B.—C. T.—C. A. G.—L. A. S.—A. C.—A. L. C., samples received.—C. N., we shall endeavor to begin the Bonanza series in our next. Dr. Stewart's story will be begun after our present story concludes. It is founded on facts.—G. T.—H. Wadey (Iowa) seeds received. Many thanks. We have now forgotten the history of the peas. Kindly advise us.—S. B. P.—D. S. M.—Incog.—S. L.—G. M.—E. K.—A. J C., thanks for good report.—E. P. C.—H. M. W.—V. S. H.—C. L. R—R. C. C., thanks.—G. A. A.—A. B. A.—S. M. S.—R. P.—P. B. M.—A W.—J. J. R.—J. S.—J. G. R.—R. S., thanks.—E. L. R.—G. R. H.—A. L. S.—A. W. H.—I. M. G.—D. F. H.—A. J. C.—C. T. W.—E. Douglass Shaw. When so many matters are treated on the same sheet, the chances are some will be overlooked. Thanks. The insect not yet received.—Mrs. A. S—B. B. C.—C. R.—C. L. G., thanks.—R. L. G.—T. T. B.—

Miscellaneous.

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PERSONALS.

Speaker Keifer's name in German means "scold."

Prince Bismarck is again an invalid from inflammation of the veins.

Governor Long, of Massachusetts, and Mayor Prince, of Boston, are both poets.

General Franz Sigel is now a School Inspector in the Eighth district of New York city.

One of Colonel R. G. Ingersoll's daughter's is said to have become a member of the Presbyterian Church.

The young Duke of Portland, one of the wealthiest of English noblemen, is said to have an income of $950,000 a year.

Dr. H. G. Glenn, of California has put thirty thousand acres in wheat and expects to cultivate twenty-five thousand more.

John G. Whittier was seventy-four years old week before last. His birthday anniversary was celebrated in the public schools in several Western towns.

Mr. James Russell Lowell is said to have looked remarkably well during his recent visit to Rome and to have worn a robust, John Bull sort of look.

Mr. Arthur has planned to keep bachelor's hall at the White House this Winter, it is said. There will be no ladies in the building except those who may be invited to preside on social occasions.

The Babylon (L. I.) South Side Signal quotes from a Missouri paper: Mr. Wm. F. Quinlan, Crystal City, Mo., suffered occasionally from rheumatic pains in his knees, for which he successfully tried St. Jacobs Oil.—*Com.*

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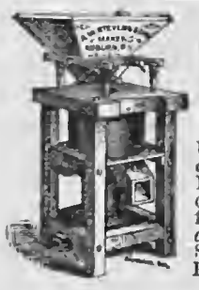

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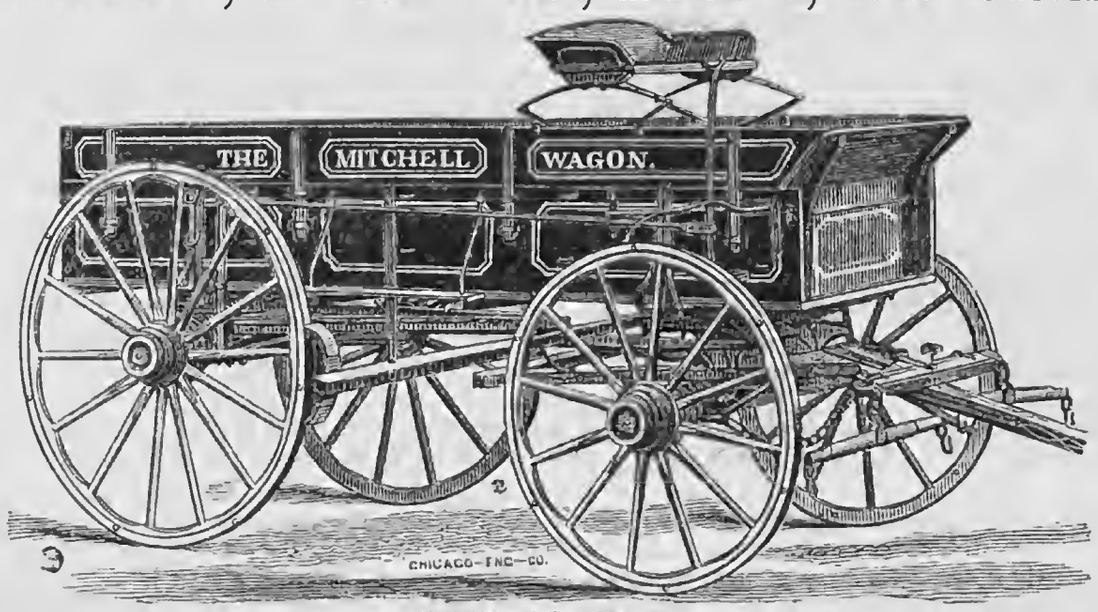

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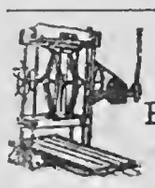

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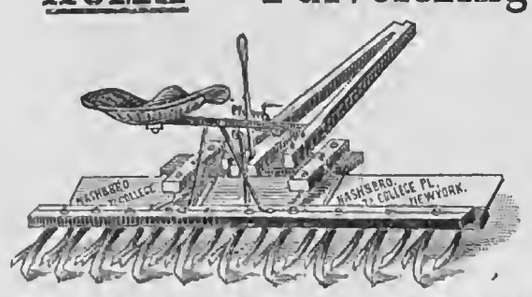

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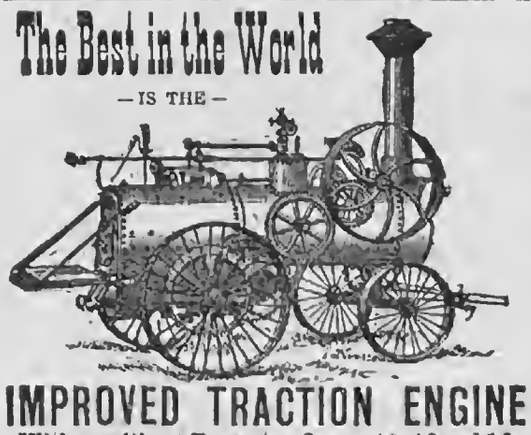

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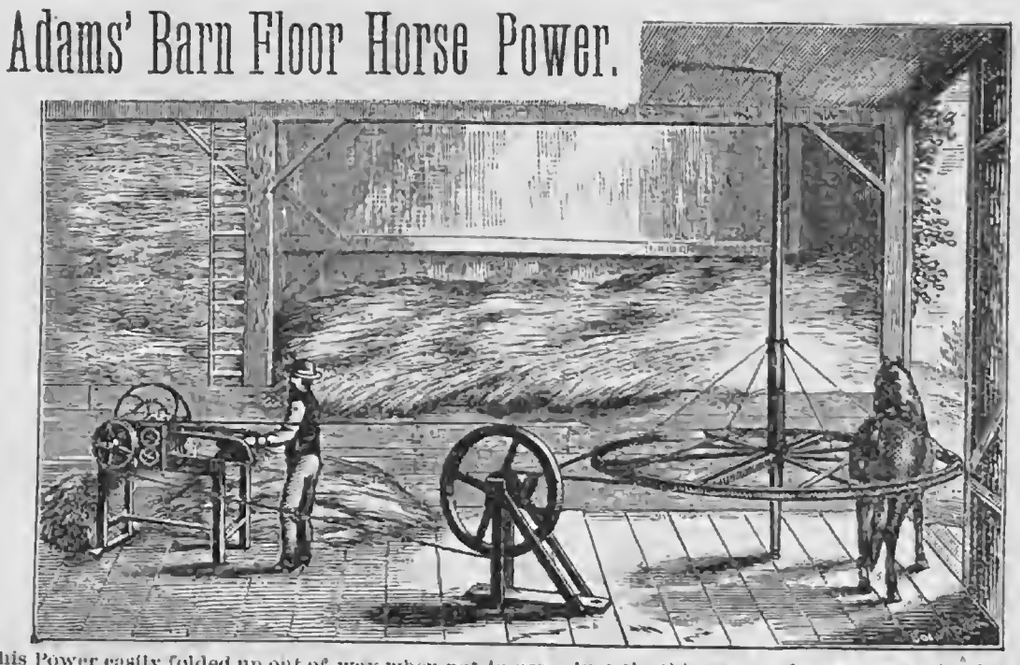

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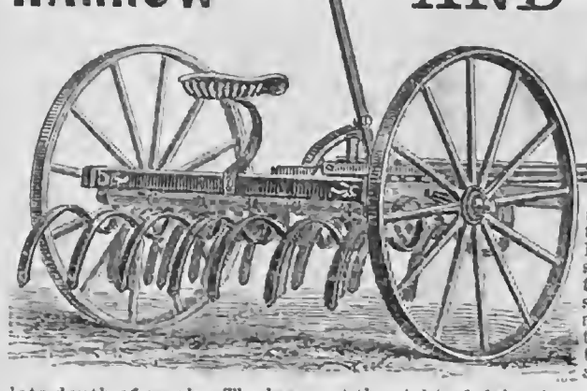

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News of the Week.

HOME NEWS.

Saturday, Dec. 24, 1881.

Ex-Senator T. O. Howe, of Green Bay, Wis., was, on the 20th inst., appointed Postmaster-General in place of Thomas L. James. Mr. Howe, it will be remembered, was appointed early this year as one of the delegates to the Paris Monetary Conference.

Judge Horace Gray, of Massachusetts, has been nominated and confirmed Associate Justice of the Supreme Court.

Congress adjourned on the 21st until Jan. 5th. The President will pass the Christmas holidays in New York, and the members of the Cabinet will also visit their homes on that occasion.

Owing to the death of a wife of a juror the Guiteau trial was adjourned for two days. On the 21st inst., it was resumed again, Dr. Allan McLane Hamilton, of New York, and Dr. Worcester, of Salem, Mass., giving testimony that went against the theory of the defence. Guiteau's former wife was recalled to the witness-stand for a moment. The assassin apparently realized his growing danger of being hanged and threw the responsibility upon Mr. Scoville, whom he annoyed and humiliated by his abuse. He called his counsel a consummate idiot, said he had no sense and no wit, asserted that he was compromising the case, and ordered him to get out of it. He said: "If I were indicted for manslaughter, and Scoville defended me, I would be hanged for murder;" and "I expect that the Almighty, notwithstanding Scoville's asinine character, will see that I am protected."

Newark N. J., is getting its name up for high-toned embezzlements. A few weeks ago a bank cashier absconded with a large sum of money which he had "appropriated" and now comes Newark's City Auditor who confesses to the defalcation of about $125,000. Frederick A. Palmer is the man and his present address is the Erie County Jail.

The recent terrible disaster in a Vienna theater has set the authorities to thinking on the condition of theaters and their arrangements for exit in case of fire in this and other cities. The matter is being investigated by the personal inspection of officials of the Fire Department. The Mayor of Chicago and sub-committees of the Citizen's Association are also inspecting Chicago's theaters. A thorough investigation should be made by the proper authorities in every city.

Mr. Blaine has verbally accepted the invitation of the Joint Committee of the two Houses to deliver the oration at the Garfield Memorial service. The invitation can only be formally given by the action of both Houses, and no formal acceptance will be given until then.

They had a pretty close contest for Mayoralty in the election at Holyoke, Mass, recently. The Democratic candidate received 1,024 votes, and was elected by only three majority.

By the sudden opening of a drawbridge at Chicago on the 21st., a locomotive and tender plunged into the Chicago River. The conductor was crushed to death and the engineer had one of his lower limbs cut off.

The counsel of Sergeant Mason, who shot at Guiteau, states that he is ready and anxious for trial, and is awaiting the action of General Hancock. The defence is insanity.

The Hudson River is free from ice as far north as Albany. Last year at this time it was filled with heavy masses of ice from shore to shore.

A box weighing 96 pounds was recently received at the Post Office at Galveston, Texas. It was addressed to the postmaster at that place, with a letter requesting him to deliver it to a person in Galveston. There was only a nominal amount of stamps affixed, and the proper postage would be over $90.

A body of masked men, calling themselves "Regulators," or "Knights of the Switch," have been going about Corydon, Ind., at night switching such persons as they deemed deserving of correction. They have operated in Harrison County. A few nights ago they whipped severely a Mr. Borden, and on the following night returned to his house and took out his step-daughter, nineteen years old. Putting a rope around her neck, they led her to a tree and demanded that she should reveal certain secrets which they declared she knew. She refused, and they hanged her by the neck twice, until she was nearly dead. Not succeeding in getting a confession, they rode away and left her. The outrage excites deep indignation.

Another theater is burned, the Grand Opera House of Columbus, O. It took fire, probably, soon after midnight on the 16th from a furnace beneath the entrance door. A few hours earlier the theatre was crowded. Apparently here was a narrow escape from a panic, if not a disaster of the Brooklyn and Vienna sort.

The Mexican Kickapoos, semi-civilized Indians in the Indian Territory, are on the point of starvation through the failure of crops and the disappearance of game.

Mr. J. C. Bancroft Davis, one of the most experienced and able of our few trained diplomatists, is to be Assistant Secretary of State. Mr. Davis began his career in diplomacy very early in life as Secretary of Legation in London, where he served from 1849 to 1852. He became Assistant Secretary of State in 1869, when Mr. Fish took control of the State Department.

It is reported on good authority that the review of the Whittaker case confirms the former decision and finds him guilty of self mutilation.

Our readers may be interested to know how the new Cabinet and the old compare:

	Under Pres. Garfield.	*Under Pres. Arthur.*
Sec. of State.	J. G. Blaine,	T. F. Frelinghuysen.
Sec. of Treas.	Wm. Windom.	Charles J. Folger,
Sec. of War.	Robt. T. Lincoln.	Robt. T. Lincoln.
Sec. of Navy.	Wm. H. Hunt.	Wm. H. Hunt.
Sec. of Int.	S. J. Kirkwood.	S. J. Kirkwood.
Post'r Gen.	Thos. James.	Timothy O. Howe,
Att'y-Gen.	Wayne MacVeagh.	Benj. H. Brewster.

The three remaining nominations to fill Lincoln's, Hunt's and Kirkwood's places will probably be made soon after the holidays.

Red Bank, N. J., was visited by a conflagration last night which swept through the business portion of the town and destroyed a large amount of property. The loss, so far as could be ascertained, will reach nearly $100,000.

Half a million emigrants are said to be already booked by the steamship agents for passage to this country next year.

Stewart, the notorious train robber, incendiary and bank robber, has been arrested at Houston, Texas. It is said that he robbed a Chicago and Alton train of $10,000. Detectives have been looking for Stewart for seven years. He has been taken to Kansas City, where ten indictments stand against him.

Mayor Carleton, Chairman of the Port Huron Executive Committee, estimates that $200,000 are needed for the Michigan sufferers by the fire last Fall.